469 & 509 Rice Road
Welland, ON
Transportation Impact Study

Paradigm Transportation Solutions Limited

2024-11
240626

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Project Summary

Project Number:

240626

Date and Version:

2024-11
1.0.0

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Executive Summary

Content

Paradigm Transportation Solutions Limited (Paradigm) was retained to conduct this Transportation Impact Study (TIS) for a proposed residential development at 469 & 509 Rice Road in Welland, Niagara Region.

The study aims to assess current traffic and the additional traffic generated by the proposed development, analyze the traffic impact on the adjacent roadway network and provide the municipality and owner with any improvements required to mitigate the identified effects of the site-generated traffic.

Conclusions

This study evaluates the impacts of background traffic growth and projects the impacts of the development with the construction of 60 single-family dwellings and 346 townhouse units of various types. Vehicular access is proposed via two new street connections to Rice Road, located approximately 195 metres and 460 metres north of the Rice Road and Quaker Road intersection (curb return to curb return). The proposed development is anticipated to be fully built by 2028 for this report.

Under full-build out, the development is projected to generate approximately 177 new vehicle trips during the weekday AM peak hour and 230 new vehicle trips during the weekday PM peak hour.

The traffic analysis conducted as part of this assessment indicates that development volumes will result in minor increases in the surrounding study area intersection volumes under peak conditions, which should not be perceptible.

Critical movements are forecast to occur at the intersection of Rice Road and Highway 20 with the addition of site-generated traffic on the northbound right-turn movement during the PM peak hour and on the westbound left-turn movement during the AM peak hour.

A critical movement is forecast to occur at the intersection of Rice Road and Port Robbinson Road with the addition of site-generated traffic on the shared northbound through/right-turn movement during the AM peak hour.

With future growth in general traffic, the signalized intersection of Rice Road at Highway 20 and Port Robbinson Road will experience

increased demand. Improvements to the signal timing could be provided as an interim solution. Ultimately, the future extension of Merrit Road between Rice Road and Cataract Road will be required to provide increased capacity through other alternative routes. Based on the Merritt Road/Rice Road Class EA estimates, volumes along Rice Road could be reduced by approximately 25%.

The all-way stop-controlled intersection of Rice Road and Quaker Road is also projected to experience increased demand due to the general traffic growth projected for the area. The proposed improvements associated with the planned EA improvements are forecast to resolve the forecasted congestion. The increased delay is tolerable until the intersection is widened and upgraded to traffic control signals.

A left-turn lane warrant analysis was conducted at the proposed development street connections to Rice Road and determined that a northbound left-turn lane with 15 metres of storage is warranted during the 2028 total traffic horizon along Rice Road at the proposed Street A/450 Rice Road connection with full build-out of the development. A northbound left-turn lane, however, is not warranted at the Rice Road intersection with Street E under the 2028 total traffic horizon.

It is understood that the Region proposes constructing a centre two-way left-turn lane along Rice Road in 2031. As constructing a left-turn lane in the interim would be considered a throw-away cost, Paradigm has reviewed the number of units that could be built without triggering the need for a northbound left-turn lane along Rice Road at Street A/450 Rice Road connection during the 2028 total traffic horizon.

Based on our assessment, a northbound left-turn lane would not be warranted with the build-out of 160 townhouse units or a combination of single-family and townhouse units (for example, 118 townhouses and 15 singles) where the total weekday PM peak hour trips do not exceed 91 vehicles.

Recommendations

Based on the findings of this study, the following recommendations are identified:

- With future growth in general traffic, the signalized intersection of Rice Road at Highway 20 and Port Robbinson Road will experience increased demand. Improvements to the signal timing could be provided as an interim solution.
- A temporary northbound left-turn lane with 15 metres of storage is required along Rice Road and the proposed Street A/450 Rice Road connection with full development build-out.
- A unit cap is recommended as an interim solution to avoid constructing the temporary left-turn lane, which would be considered a “throw-away” cost.
- Based on the assessment completed, the unit cap would have an upper limit of 160 townhouse units or a combination of singles and townhouses where the total weekday PM peak hour trips do not exceed 91 vehicles (example: 118 townhouses and 15 singles).
- If the Applicant proceeds to construct additional units over the proposed unit cap before the Rice Road EA improvements are implemented, a temporary northbound left-turn lane will be required along Rice Road at Street A/450 Rice Road connection.

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1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) was retained to conduct this Transportation Impact Study (TIS) for a proposed residential development at 469 & 509 Rice Road in Welland, Niagara Region.

The study aims to assess current traffic and the additional traffic generated by the proposed development, analyze the traffic impact on the adjacent roadway network and provide the municipality and owner with any improvements required to mitigate the identified effects of the site-generated traffic.

More specifically, the scope of this study is to:

- Forecast traffic from the proposed development;
- Assign the projected volumes to the surrounding road network based on the existing traffic patterns at the new street connections;
- Assess total future traffic within the study area.
- Identify operational concerns and any mitigation measures that may be required to improve operations and

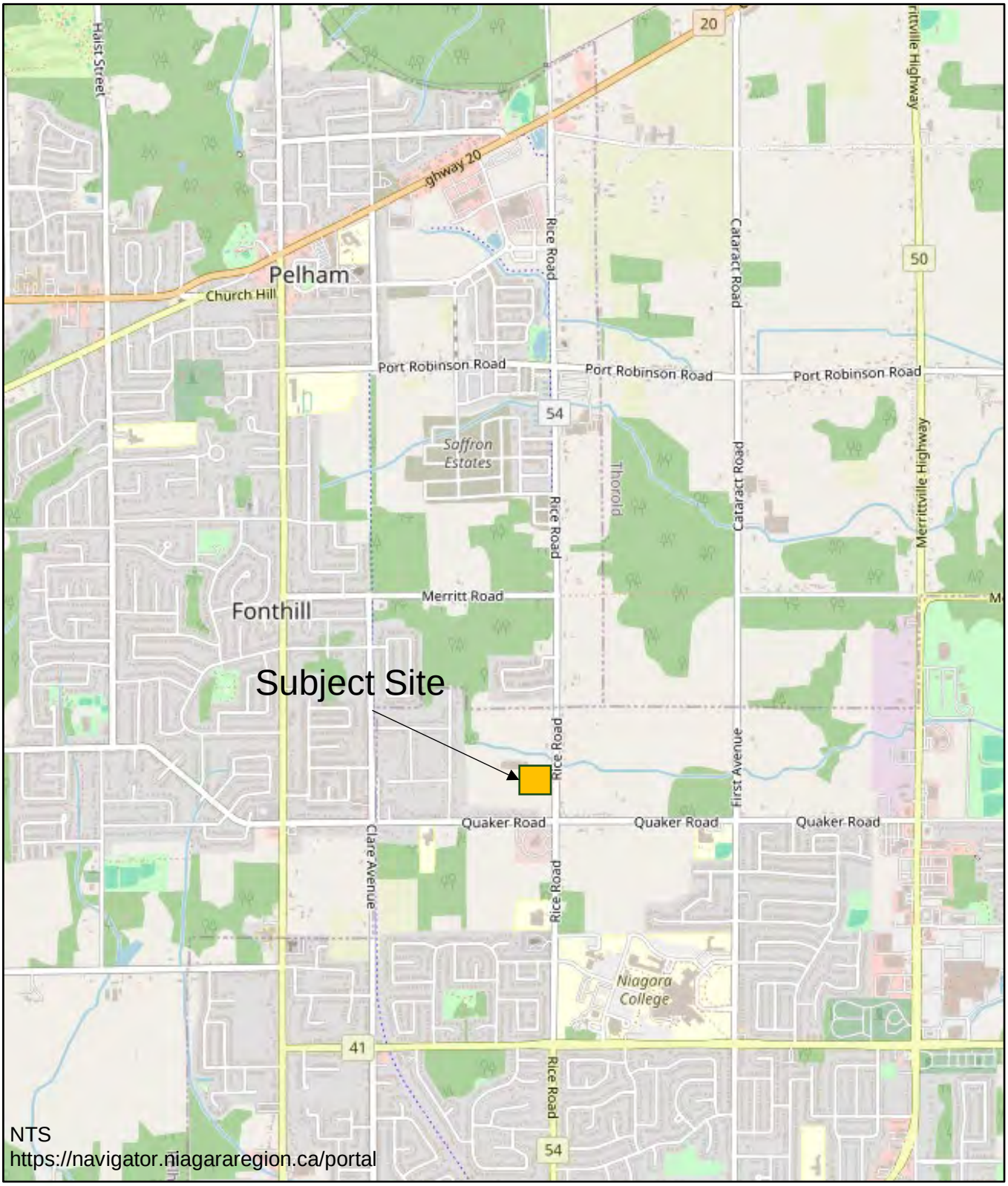
This report adhered to the terms of reference Paradigm and Niagara Region developed. **Appendix A** contains the pre-study consultation material.

1.2 Study Area

The study area intersections assessed in this study include:

- Rice Road at Quaker Road (unsignalized);
- Rice Road at Merrit Road (unsignalized);
- Rice Road at Highway 20 (signalized);
- Rice Road at Woodlawn Road (signalized);
- Rice Road at Port Robbinson Road (signalized); and
- Two new street connections (unsignalized).

Figure 1.1 illustrates the study area location.



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Study Area

469 & 509 Rice Road
240626

Figure 1.1

2 Existing Conditions

2.1 Roadway Characteristics

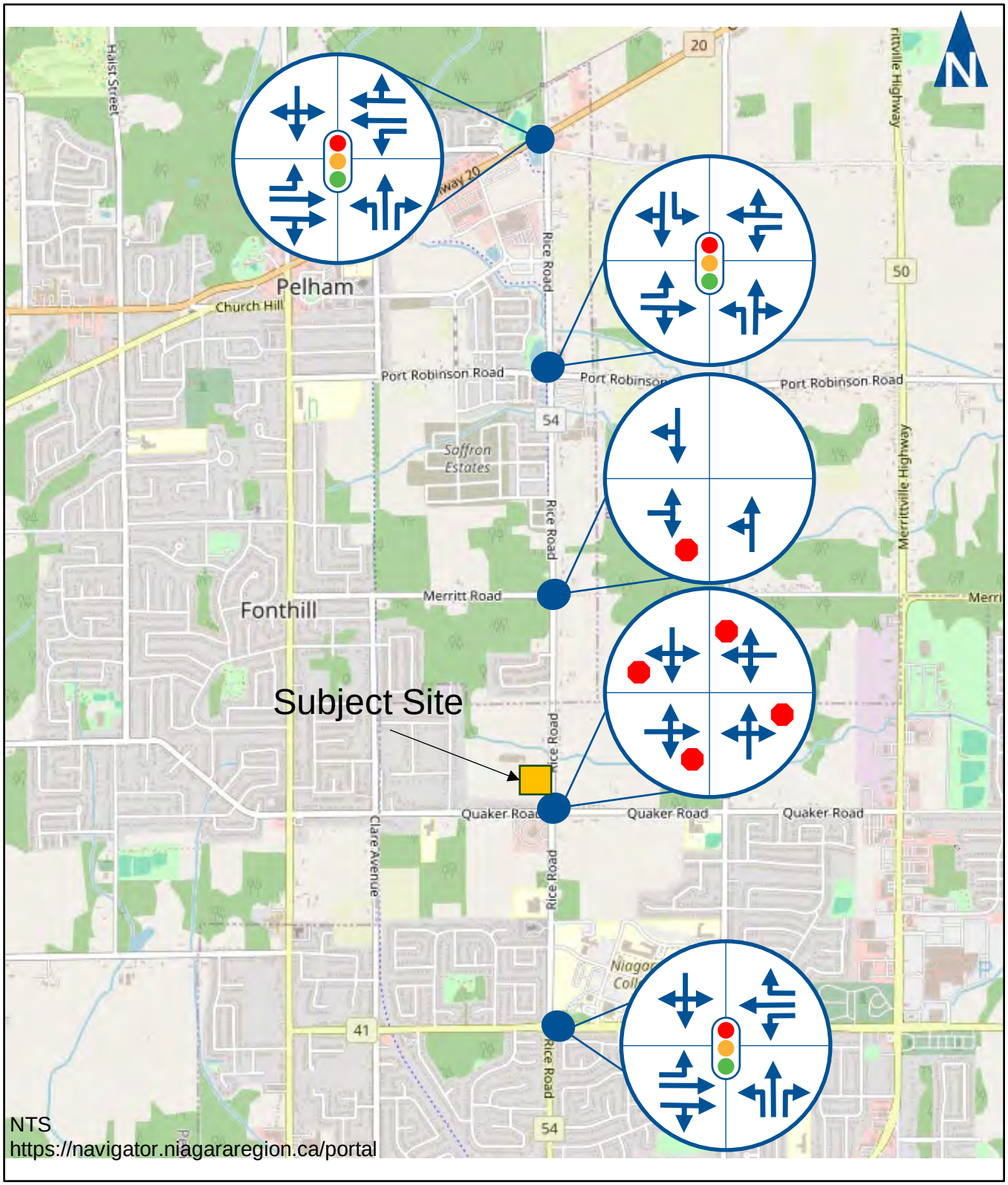
The roadways of interest within the study area include:

- **Port Robbinson Road** is a two-lane, 50 km/h arterial roadway under the jurisdiction of Niagara Region. Sidewalks are provided on both sides of the roadway west of Rice Road. No cycling lanes are provided on either side of the roadway adjacent to the proposed development.
- **Merrit Road** is a two-lane, 50 km/h arterial roadway under the jurisdiction of Niagara Region. No sidewalks or cycling lanes are provided on either side of the roadway adjacent to the proposed development.
- **Rice Road (Regional Road 54)** is a two-lane arterial roadway under the jurisdiction of Niagara Region. The roadway has a speed limit of 50 km/h south of Rosewood Crescent and speed limit of 60 km/h north of Rosewood Crescent (south).

  An asphalt multi-use path is provided on the west side of the roadway between Walker Road and Highway 20. Concrete sidewalks are provided on the west side of the roadway from Seneca Trail to Woodlawn Road and Rosewood Crescent (south) to Rosewood Crescent (North). Concrete Sidewalks are also provided on both sides of the roadway south of Woodlawn Road. No cycling lanes are provided on either side of the roadway adjacent to the proposed development.
- **Quaker Road** is a two-lane, 50 km/h arterial roadway under the jurisdiction of the City of Welland. No sidewalks or cycling lanes are provided on either side of the roadway within the study area.
- **Woodlawn Road (Regional Road 41)** is a two-lane road west of Rice Road and a four-lane road east of Rice Road. The speed limit is 50 km/h and is an arterial road under the jurisdiction of the Niagara Region. Sidewalks are located on the south side of the road throughout the study area, while a sidewalk on the north side is located for the portion east of Rice Road. No cycling lanes are provided on either side of the roadway within the study area.
- **Highway 20** is a five-lane road west of Rice Road and a four-lane road east of Rice Road. The speed limit is 50 km/h and is an arterial road under the jurisdiction of the Niagara Region. Sidewalks are located on the north and south sides of the road

for the section of Highway 20 west of Rice Road. No cycling lanes are provided on either side of the roadway within the study area.

Figure 2.1 illustrates the study area's existing land configuration and traffic control.



Existing Lane Configuration and Traffic Control

469 & 509 Rice Road
240626

Figure 2.1

2.2 Existing Transit Service

Transit service in Welland is provided by Niagara Region Transit (NRT). NRT is the result of an effort from the Niagara Region and the 12 local municipalities to connect all of Niagara by combining the existing Niagara Region Transit, Niagara Falls Transit, St. Catharines Transit, Welland Transit and Fort Erie Transit systems into one transit operator that began on January 1, 2023.

NRT operates local transit routes within the city and regional services between various municipalities. The following routes, which provide connections with proximity to the subject site, are as follows:

- **502 Rice Road** operates along Rice Road between Talbot Trail and Fitch Street. Headways are approximately 30 minutes. Service is provided Monday to Friday, approximately 6:00 AM to 11:00 PM.

Figure 2.2 illustrates the existing public transit network within the study area. The closest bus stops are approximately 750 metres south of the proposed development at the intersection of Rice Road and Talbot Trail.

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Existing Transit Network

469 & 509 Rice Road
240626

Figure 2.2

2.3 Traffic Volumes

Turning movement counts (TMC) quantify vehicle movement through the area to assess intersection operation. Existing traffic data at an intersection or road section forms the foundation for analysis. The counts are usually taken during peak periods at an intersection to complete the level of service analysis. **Appendix B** contains the traffic data utilized in this report.

2.3.1 Traffic Data

The Region provided existing traffic counts at the intersections of Rice Road with Highway 20 and Woodlawn Road. With respect to the intersection of Rice Road at Quaker Road, Port Robbinson Road, and Merrit Road, Paradigm completed traffic counts. **Table 2.1** provides a summary of traffic count locations and dates**.**

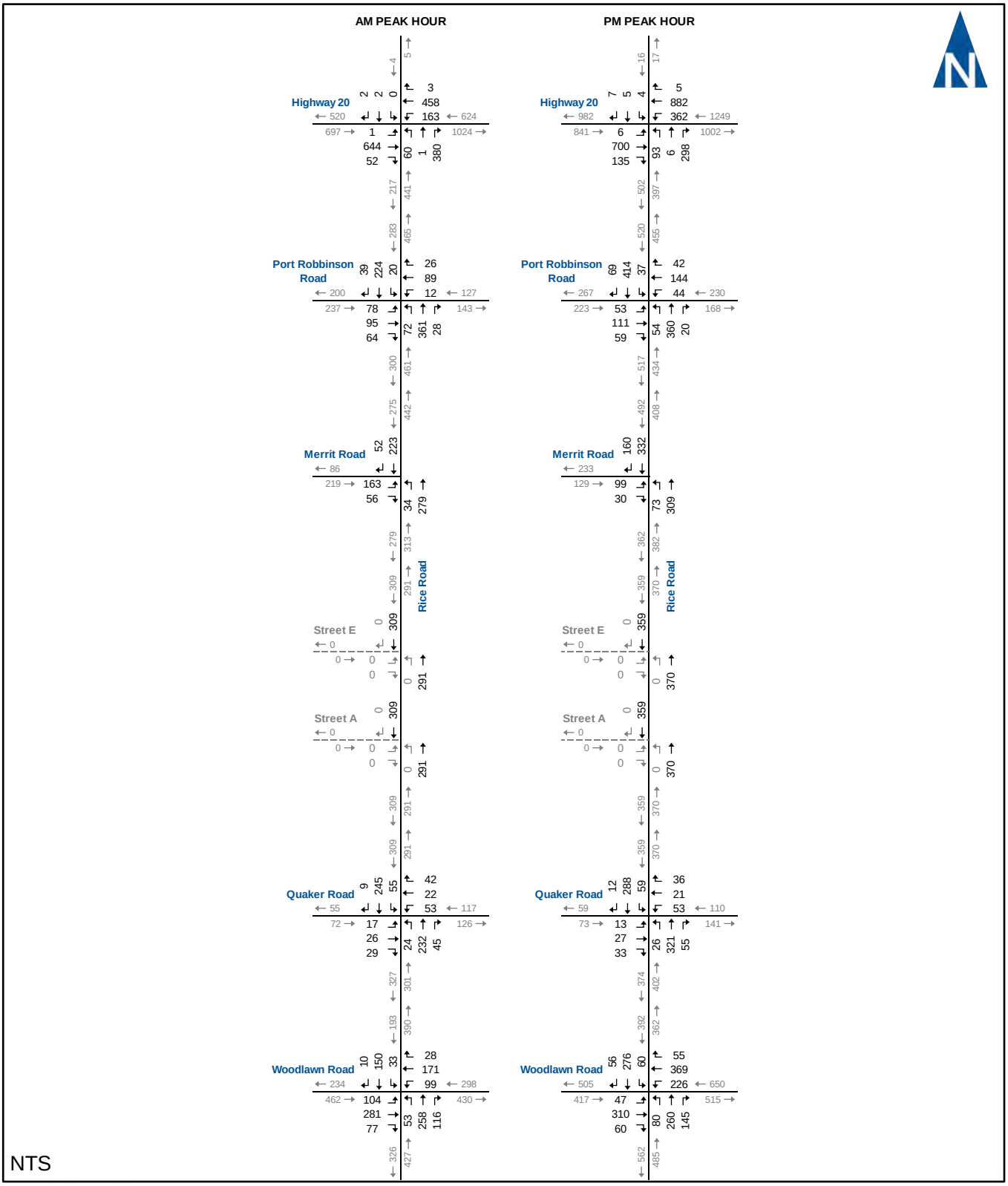
TABLE 2.1: TRAFFIC COUNT SUMMARY

Intersection	Count Date
Rice Road at Quaker Road	September 10, 2024
Rice Road at Highway 20	August 9, 2023
Rice Road at Woodlawn Road	August 9, 2023
Rice Road at Port Robbinson Road	November 7, 2024
Rice Road at Merrit Road	November 7, 2024

2.3.2 Volume Adjustments and Balancing

As several major intersections exist between the study area intersections, volume balancing has not been accounted for between the various intersections.

Figure 2.3 illustrates the adjusted base year traffic volumes during the weekday AM and PM peak hours.



Base Year Traffic Volumes

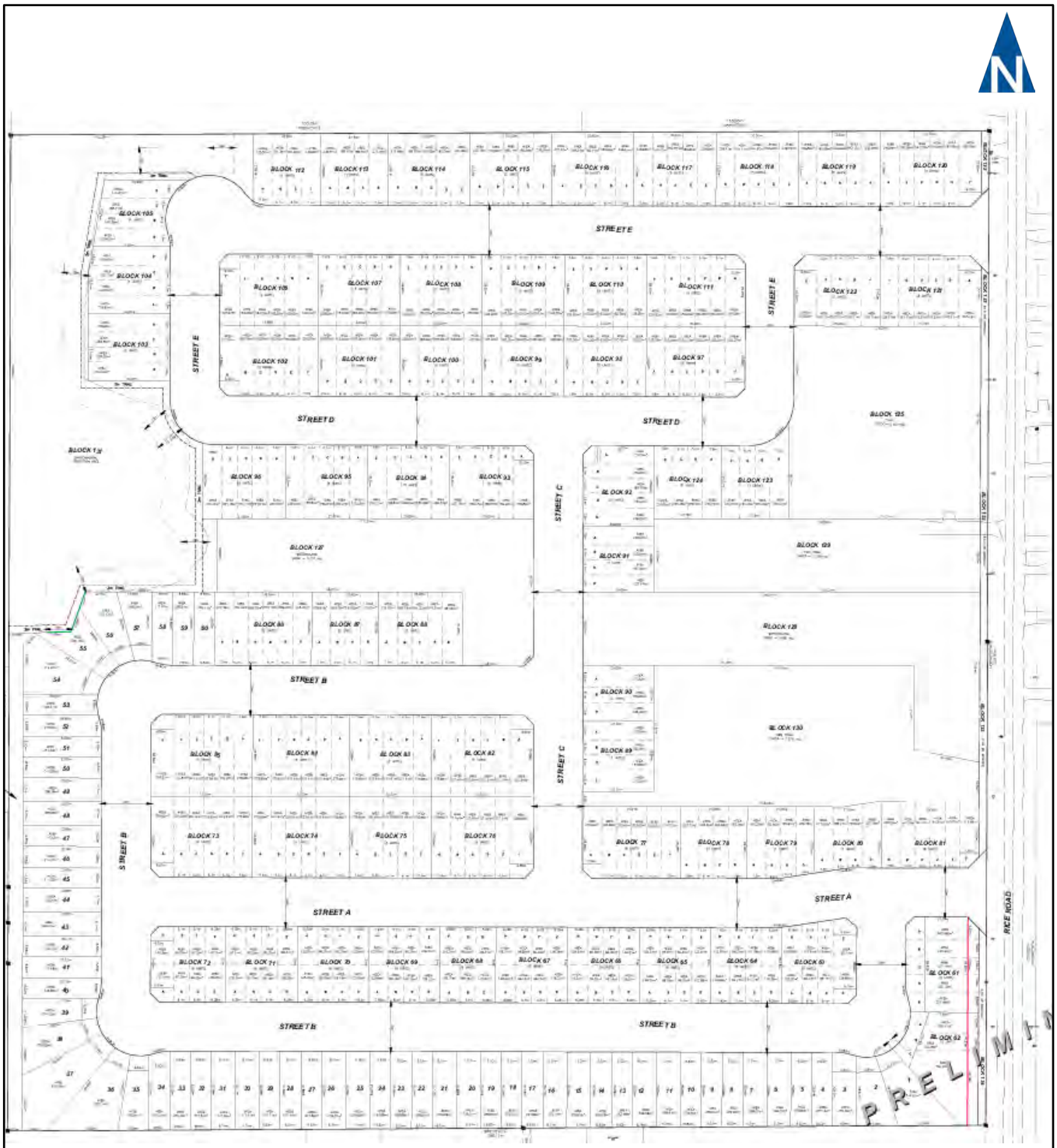
469 & 509 Rice Road
240626

Figure 2.3

3 Development Proposal Review

3.1 Development Description

The subject site is to be developed into a residential development with 60 single-family dwellings and 346 townhouse units of various types. Vehicular access is proposed via two new street connections to Rice Road, located approximately 195 metres and 460 metres north of the Rice Road and Quaker Road intersection (curb return to curb return). The proposed development is anticipated to be fully built by 2028. **Figure 3.1** illustrates the site plan.



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Site Plan

469 & 509 Rice Road
240626

Figure 3.1

3.2 Development Trip Generation

Trip generation information is used to forecast the anticipated level of traffic activity because of the development. Trip generation for each land use type was summed to establish total site trip generation for the respective peak hours.

The rate at which any development generates traffic depends upon several factors, such as size, location, and concentration of surrounding developments. To estimate the traffic volume generated by the development components, traffic projections were based on trip generation data published in the Institute for Transportation Engineer's (ITE) Trip Generation Manual, 11th Edition[1]. The following land uses (LUC) have been used:

- **LUC 210 – Single-Family Detached Housing**
- **LUC 220 – Multifamily Housing (Low-Rise)**

The estimated total trip generation for the proposed development is displayed in **Table 3.1**, which indicates that 177 and 230 new vehicle trips are forecast to be generated during the AM and PM peak hours.

[1] Trip Generation Eleventh Edition, Institute of Transportation Engineers, Washington D.C., 2021

TABLE 3.1: ESTIMATED TRIP GENERATION

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
LUC 220[1] - 346 units	31	99	130	106	63	169
LUC 210[2] - 60 units	12	35	47	38	23	61
New Trips	**43**	**134**	**177**	**144**	**86**	**230**

[1]AM - T = 0.31(X) + 22.85, PM - T = 0.43(X) + 20.55

[2]AM - Ln(T) = 0.91 Ln(X) + 0.12, PM - Ln(T) = 0.94 Ln(X) + 0.27

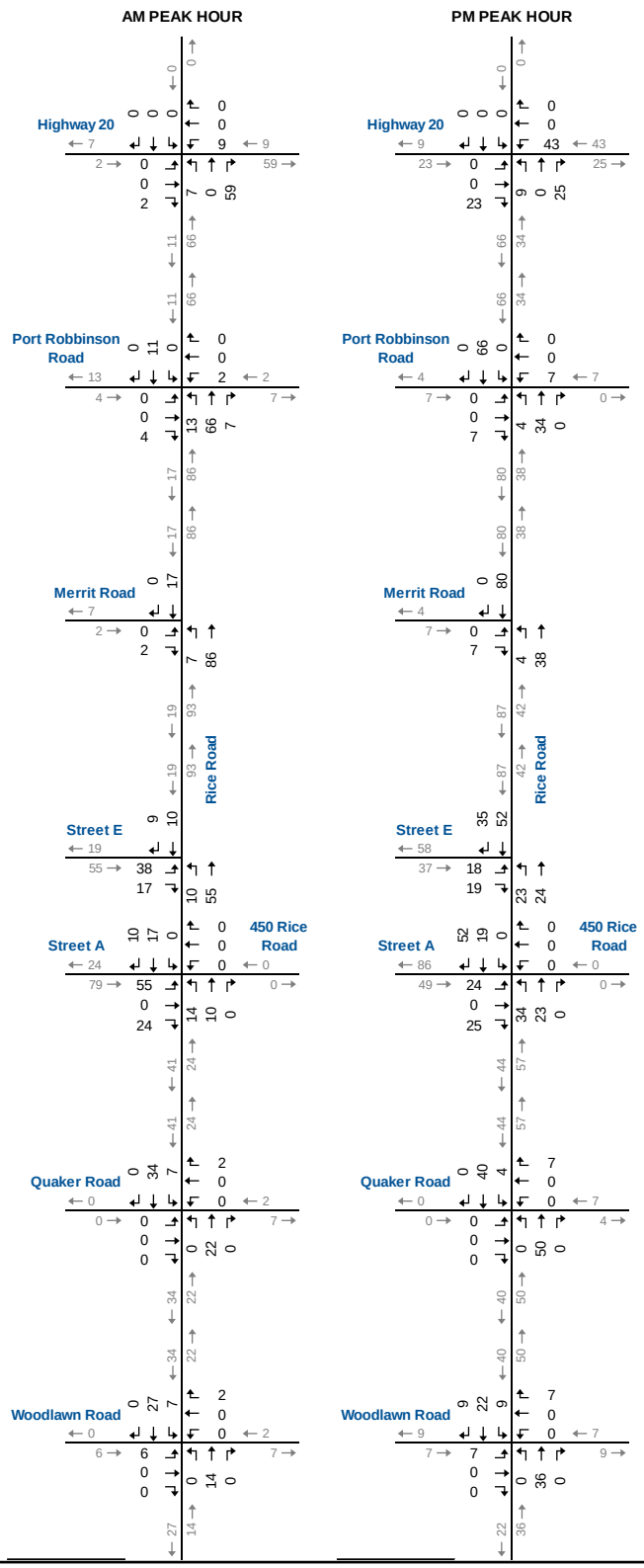
3.3 Development Trip Distribution

The directional distribution of traffic approaching and departing the development is a function of several variables: population densities, existing travel patterns, and the efficiency of the roadways leading to the site. Trip distribution for the proposed development was estimated based on a review of the existing trip patterns within the study area. A 40%/60% distribution was assumed for the Street “A” and Street “E” access distribution. **Table 3.2** summarizes the trip distribution used in this study.

TABLE 3.2: TRIP DISTRIBUTION

O/D	AM		PM	
	IN	OUT	IN	OUT
North via Rice Road	0%	0%	0%	0%
South via Rice Road	30%	20%	25%	25%
East via Highway 20	20%	45%	30%	30%
West via Highway 20	5%	5%	15%	10%
East via Port Robbinson Road	5%	5%	5%	0%
West via Port Robbinson Road	10%	10%	5%	5%
West via Merrit Road	5%	5%	5%	5%
East via Quaker Road	5%	5%	5%	5%
West via Quaker Road	0%	0%	0%	0%
East via Woodlawn Road	5%	5%	5%	10%
West via Woodlawn Road	15%	0%	5%	10%
Total	**100%**	**100%**	**100%**	**100%**

The trips projected from the proposed development have been assigned to the roadway network based on the trip distribution noted above. **Figure 3.2** illustrates the site traffic volumes.



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Site Traffic Volumes

469 & 509 Rice Road
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Figure 3.2

4 Future Conditions

The assessment of future conditions in this section includes the following components:

- Future background traffic estimates;
- Level of service analysis for background traffic (pre-development);
- Future total traffic estimates; and
- Level of service analysis for total traffic (post-development).

4.1 Future Traffic Growth

Traffic growth on area roadways is a function of the expected land development, economic activity, and demographic changes. A frequently used procedure estimates an annual percentage increase and applies that increase to the study area traffic volumes. An alternative approach is to identify estimated traffic generated by specific planned significant developments that would be expected to affect the project study area roadways. For this assessment, an annual percentage has been utilized in conjunction with site traffic for the adjacent 450 Rice Road development.

4.1.1 Horizon Years

The following horizon years were assessed in the operational analysis:

- The base year traffic volumes (Year 2024)
- Opening year of the development (Year 2028)
- Five years after the opening year (Year 2033).

4.1.2 General Growth Rate

Niagara Region has completed a Municipal Class Environmental Assessment Study to identify improvements to Merritt Road and Rice Road as a result of proposed developments in the Town of Pelham, the City of Thorold and the City of Welland. Through the Class EA, growth rates along Rice Road and Quaker Road have been developed based on travel demand forecasting model output from the Region's

EMME model[2]. Utilizing this information, the following growth rates have been assumed:

Base Year (2024) to 2031

AM Peak Hour

- Rice Road – 3.2% Northbound, 1.5% Southbound
- Quaker Road – 3.0% Eastbound, 1.9% Westbound
- Merritt Road – 1.5% Eastbound, 2.2% Westbound
- Port Robbinson Road – 1.7% Eastbound, 3.0% Westbound

PM Peak Hour

- Rice Road – 3.0% Northbound, 1.5% Southbound
- Quaker Road – 3.0% Eastbound, 1.5% Westbound
- Merritt Road – 3.0% Eastbound, 3.0% Westbound
- Port Robbinson Road – 2.1% Eastbound, 1.5% Westbound

Year 2031-2033

AM Peak Hour

- Rice Road – 1.5% Northbound, 1.7% Southbound
- Quaker Road – 1.5% Eastbound, 1.5% Westbound
- Merritt Road – 2.7% Eastbound, 2.0% Westbound
- Port Robbinson Road – 1.5% Eastbound, 2.7% Westbound

PM Peak Hour

- Rice Road – 1.5% Northbound, 1.5% Southbound
- Quaker Road – 1.5% Eastbound, 1.6% Westbound
- Merritt Road – 2.8% Eastbound, 1.5% Westbound
- Port Robbinson Road – 1.5% Eastbound, 2.7% Westbound

As the Class EA did not provide any growth projections for Woodlawn Road or Highway 20, a growth rate of 2% per annum has been utilized for these roadways.

[2] Schedule 'C' Municipal Class Environmental Assessment for Merritt Road (Regional Road 37) and Rice Road (Regional Road 54) in the Town of Pelham, the City of Thorold and the City of Welland, Transportation Assessment Report, February 2024

4.1.3 Background Development

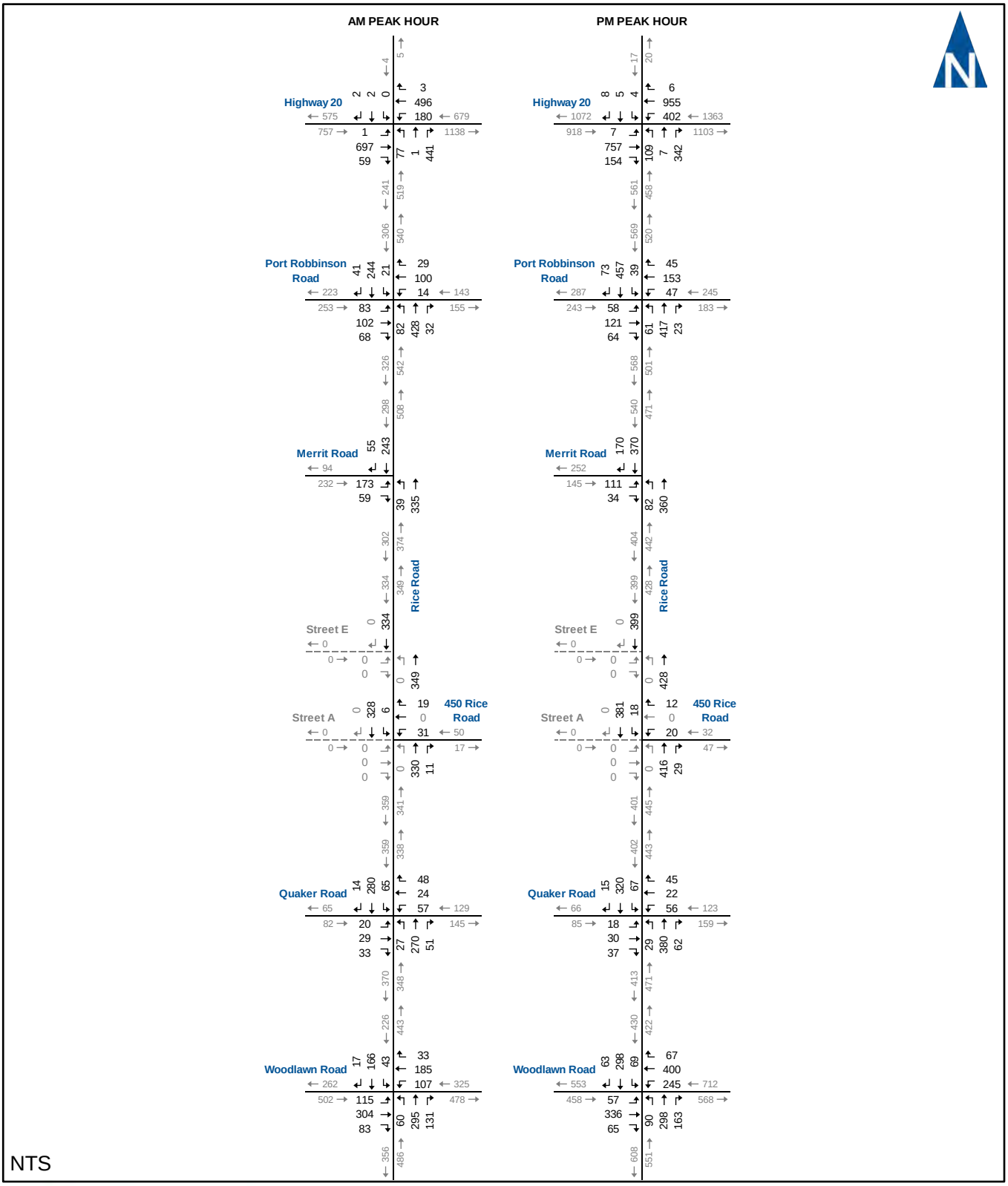
In addition to the generalized background traffic growth, the development located at 450 Rice Road has been identified as an adjacent inline development. The estimated traffic volumes and five-year background traffic volumes were included in the opening date. Paradigm completed a TIS for the proposed development in September 2024.

450 Rice Road is proposed to consist of approximately 139 townhouse units. The site's trip generation is estimated to consist of 67 and 79 new vehicle trips, which are forecast to be generated during the AM and PM peak hours. The estimated site traffic volumes included in the TIS were applied directly to the study area. **Appendix C** contains the detailed site traffic assignment.

Figure 4.1 illustrates the opening-year background traffic volumes, and **Figure 4.2** illustrates the five-year background traffic volumes.

4.1.4 Total Projections

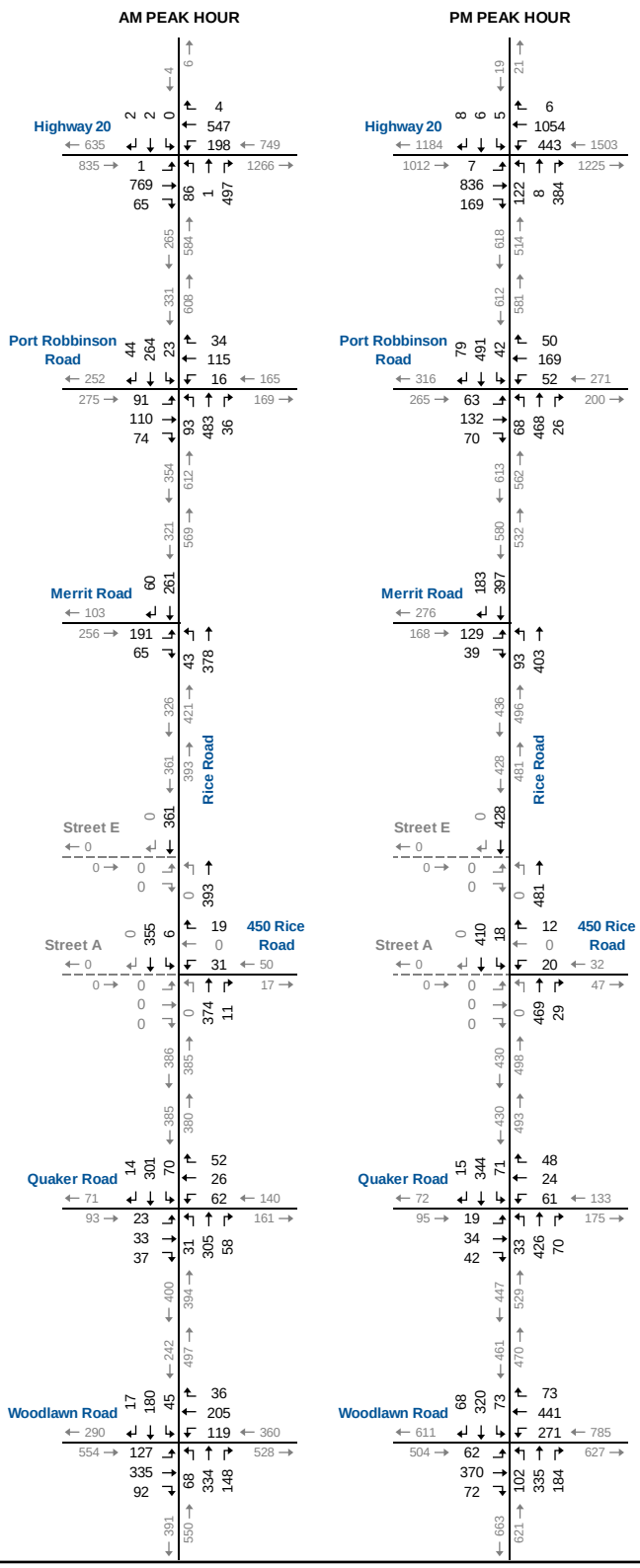
The projected site-generated traffic volumes were added to the background projections to develop the total traffic volume. **Figure 4.3** illustrates the total traffic volumes for the opening year, and **Figure 4.4** illustrates the total traffic volumes for the five years.



Opening Year Background Traffic Volumes

469 & 509 Rice Road
240626

Figure 4.1



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Five-Year Background Traffic Volumes

469 & 509 Rice Road
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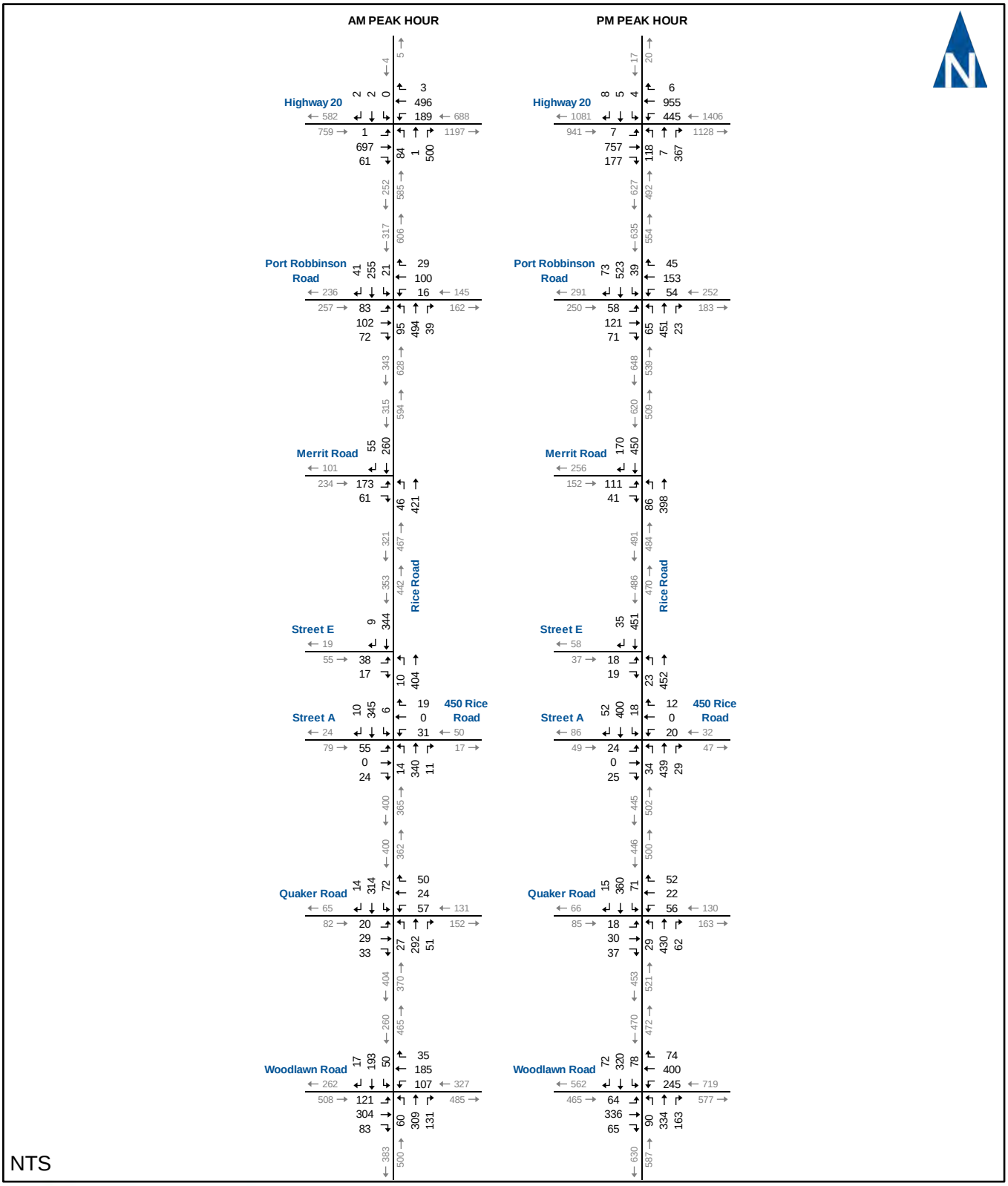
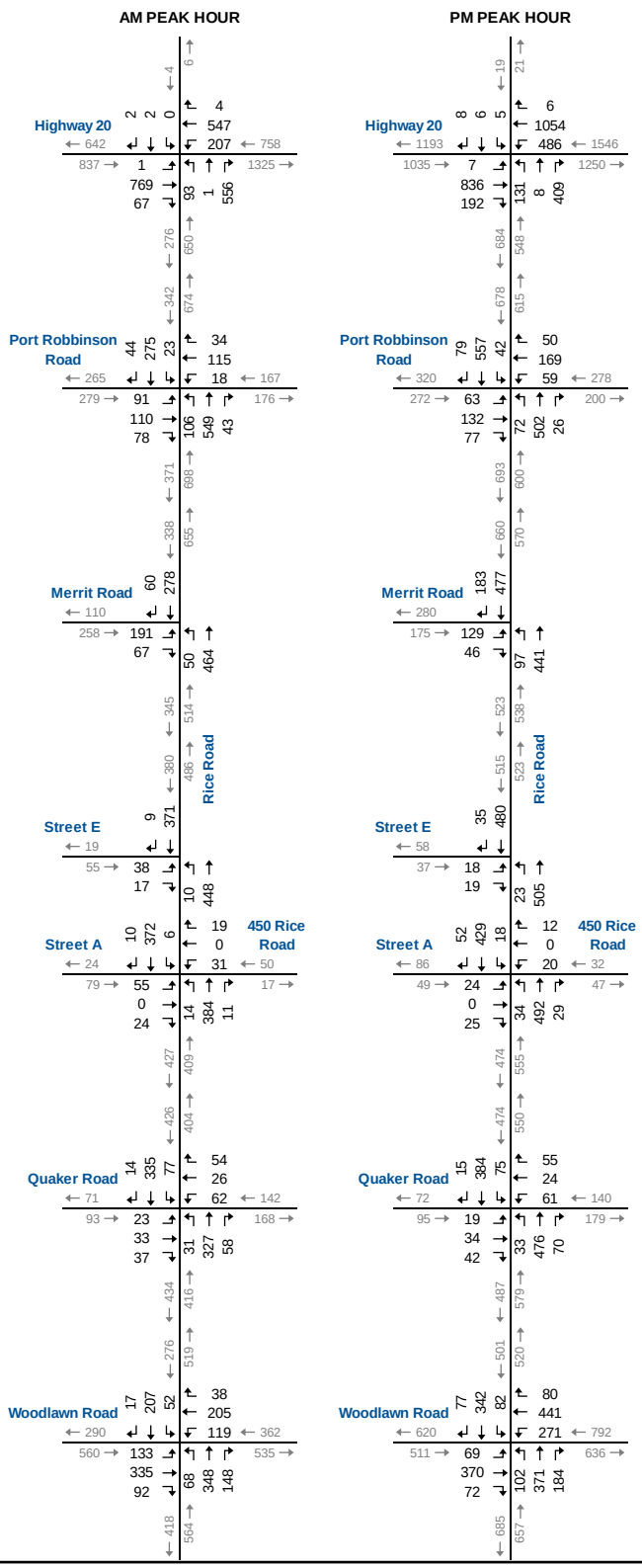
Figure 4.2



Opening Year Total Traffic Volumes

469 & 509 Rice Road
240626

Figure 4.3



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Five-Year Total Traffic Volumes

469 & 509 Rice Road
240626

Figure 4.4

4.2 Roadway Improvements

As part of the Class EA completed for Rice Road, the following improvements have been identified for the study area:

- Rice Road Corridor
  - Five Lane Cross-Section (Merrit Road to Quaker Road)
- Rice Road at Quaker Road
  - Signalization of Intersection (optimized signal timings)
  - Separate Left-Turn lanes for all approaches
- Rice Road at Merrit Road
  - Signalization of Intersection (optimized signal timings)
  - Separate Left-Turn lanes for all approaches

During pre-consultation, the Region of Niagara staff identified an expected horizon year of 2031 for the proposed improvements. The improvements listed above were included in the five-year traffic horizon. Signal timings were optimized for the newly proposed signalized intersection of Merrit Road and Quaker Road intersections with Rice Road.

5 Operational Assessment

5.1 Level of Service Criteria

Level of service (LOS) is used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that indexes the operational qualities of a roadway segment or an intersection with designations ranging from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

For signalized intersections, the analysis considered the operation of each lane or lane group entering the intersection and the level of service for the overall conditions at the intersection. At signalized intersections, intersections with movements operating with a v/c ratio of 0.84 or less are classified as within capacity, a v/c ratio of 0.85-1.00 as approaching capacity and a v/c ratio over 1.00 as exceeding capacity. At signalized intersections, intersections with movements operating with a delay in the LOS A-B range are classified as within capacity, a delay in the LOS D-E range is approaching capacity, and a delay in the LOS F range is considered over capacity.

For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by the traffic on the side streets. The level of service is only determined for left turns from the main street and all movements from the minor street. At unsignalized intersections, an overall LOS between A-C is classified as tolerable delays; an overall LOS D-E is classified as an increased delay and an overall LOS F is classified as Significant Delays.

The evaluation criteria for analyzing intersections are based on the 2000 Highway Capacity Manual (HCM)[3].

[3] Transportation Research Board, Highway Capacity Manual, Washing, D.C. 2003.

5.2 Intersection Capacity Analysis

Intersection capacity analyses were conducted at all intersections in the study area. Analyses were conducted for the base conditions, opening year (2028) and five years after build-out (2033). Optimization of signal timings has occurred between the various horizon years.

Tables 5.1 through **5.7** summarize the capacity analyses for the study area intersections for all horizon years. The capacity analysis results are included in **Appendix D**. The following sub-sections outline the critical movements of the study area intersections.

5.2.1 Rice Road at Highway 20 (Signalized)

The following critical movements are noted to occur during the base year (2024) traffic horizon:

PM Peak Hour

- EBT/EBR: A v/c ratio of 0.85, 32-second delay, LOS C.
- WBL: A v/c ratio of 0.86, 34-second delay, LOS C.

Beyond the critical movements noted above, additional critical movements are forecast to occur during the opening year (2028) background and/or total traffic horizons:

AM Peak Hour – Background Traffic Horizon

- EBT/EBR: A v/c ratio of 0.88, 39-second delay, LOS D.

AM Peak Hour – Total Traffic Horizon

- NBR: The 95th percentile queue is forecast to exceed the current available storage (65 m) by approximately 16 m.

Beyond the critical movements noted above, an additional critical movement is forecast to occur during the five-year (2033) total traffic horizon:

AM Peak Hour – Total Traffic Horizon

- WBL: A v/c ratio of 0.87, 45-second delay, LOS D.

Critical movements are forecast to occur at the study area intersection without the addition of site-generated traffic on the westbound left-turn movement during the PM peak hour and on the shared eastbound through/right-turn movement during the AM and PM peak hour.

Critical movements are forecast to occur at the study area intersection with the addition of site-generated traffic on the northbound right-turn movement during the PM peak hour and westbound left-turn movement during the AM peak hour.

TABLE 5.1: RICE ROAD AT HIGHWAY 20 OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																
					Eastbound				Westbound				Northbound				Southbound				Overall
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Highway 20	TCS	2024 Base Year	LOS	C	D	>	D	C	B	>	B	B	B	C	B	<	B	>	B	C
				Delay	22	36	>	36	22	16	>	17	17	15	20	20	<	15	>	15	25
				V/C	0.00	0.84	>		0.65	0.37	>		0.14	0.00	0.39		<	0.00	>		0.59
				Q	1	87	>		31	41	>		17	1	31		<	2	>		
	Rice Road & Highway 20	TCS	2028 Background	LOS	C	D	>	D	C	B	>	B	B	B	C	C	<	B	>	B	C
				Delay	22	39	>	39	28	16	>	19	18	16	24	23	<	16	>	16	28
				V/C	0.00	0.88	>		0.74	0.39	>		0.18	0.00	0.53		<	0.00	>		0.69
				Q	1	104	>		47	44	>		20	1	53		<	2	>		
	Rice Road & Highway 20	TCS	2028 Total	LOS	C	D	>	D	C	B	>	B	B	B	C	C	<	B	>	B	C
				Delay	22	39	>	39	30	16	>	20	18	16	29	27	<	16	>	16	29
				V/C	0.00	0.88	>		0.77	0.39	>		0.20	0.00	0.66		<	0.00	>		0.76
				Q	1	104	>		52	44	>		22	1	81		<	2	>		
	Rice Road & Highway 20	TCS	2033 Background	LOS	C	D	>	D	D	B	>	C	B	B	C	C	<	B	>	B	C
				Delay	22	46	>	46	39	16	>	22	19	17	30	28	<	17	>	17	33
				V/C	0.00	0.94	>		0.83	0.42	>		0.21	0.00	0.68		<	0.00	>		0.80
				Q	1	122	>		60	50	>		22	1	84		<	2	>		
	Rice Road & Highway 20	TCS	2033 Total	LOS	C	D	>	D	D	B	>	C	B	B	D	D	<	B	>	B	D
				Delay	22	46	>	46	45	16	>	24	19	17	38	35	<	17	>	17	36
				V/C	0.00	0.94	>		0.87	0.42	>		0.22	0.00	0.81		<	0.00	>		0.87
				Q	1	123	>		65	50	>		24	1	121		<	2	>		
PM Peak Hour	Rice Road & Highway 20	TCS	2024 Base Year	LOS	B	C	>	C	C	A	>	B	C	C	C	C	<	C	>	C	C
				Delay	18	32	>	32	34	9	>	16	29	23	27	27	<	24	>	24	23
				V/C	0.04	0.85	>		0.86	0.49	>		0.35	0.02	0.26		<	0.03	>		0.74
				Q	4	102	>		81	53	>		32	5	25		<	7	>		
	Rice Road & Highway 20	TCS	2028 Background	LOS	B	D	>	D	D	A	>	B	C	C	C	C	<	C	>	C	C
				Delay	19	37	>	37	42	8	>	18	34	26	31	32	<	26	>	26	27
				V/C	0.05	0.90	>		0.90	0.50	>		0.44	0.02	0.30		<	0.03	>		0.81
				Q	4	126	>		110	59	>		36	5	28		<	7	>		
	Rice Road & Highway 20	TCS	2028 Total	LOS	B	D	>	D	D	A	>	C	D	C	C	C	<	C	>	C	C
				Delay	20	42	>	41	54	8	>	23	38	28	33	34	<	28	>	28	31
				V/C	0.05	0.93	>		0.96	0.49	>		0.50	0.02	0.32		<	0.04	>		0.88
				Q	4	131	>		131	59	>		39	5	29		<	7	>		
	Rice Road & Highway 20	TCS	2033 Background	LOS	B	D	>	D	E	A	>	C	D	C	C	C	<	C	>	C	C
				Delay	20	52	>	51	56	9	>	23	39	28	34	35	<	28	>	28	34
				V/C	0.06	0.98	>		0.97	0.54	>		0.53	0.02	0.34		<	0.05	>		0.89
				Q	4	148	>		131	68	>		41	5	30		<	8	>		
	Rice Road & Highway 20	TCS	2033 Total	LOS	B	E	>	E	E	A	>	C	D	C	C	D	<	C	>	C	D
				Delay	20	60	>	60	76	9	>	30	41	29	34	36	<	29	>	29	41
				V/C	0.06	1.01	>		1.04	0.54	>		0.57	0.02	0.36		<	0.05	>		0.96
				Q	4	153	>		151	68	>		43	5	32		<	8	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
< / > - Shared with through movement

5.2.2 Rice Road at Quaker Road (AWS/Signalized)

No critical movements are noted during the base year (2024) traffic horizon.

Critical movements are forecast to occur during the opening year (2028) total traffic horizon:

PM Peak Hour – Total Traffic Horizon

- NBL/NBT/NBR: A v/c ratio of 0.87, 35-second delay, LOS D.
- SBL/SBT/SBR: A v/c ratio of 0.77, 26-second delay, LOS D.

Beyond the critical movements noted above, no additional critical movements are forecast to occur in the five-year (2033) traffic horizon.

The traffic control signal proposed in the EA study is forecast to resolve the critical movements noted during the 2028 horizon year.

TABLE 5.2: RICE ROAD AT QUAKER ROAD OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																
					Eastbound				Westbound				Northbound				Southbound				Overall
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Quaker Road	AWS	Existing	LOS	<	A	>	**A**	<	A	>	**A**	<	B	>	**B**	<	B	>	**B**	
				Delay	<	10	>	**10**	<	10	>	**10**	<	12	>	**12**	<	12	>	**12**	
				V/C	<	0.13	>		<	0.20	>		<	0.45	>		<	0.47	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	AWS	2088 Background	LOS	<	B	>	**B**	<	B	>	**B**	<	B	>	**B**	<	C	>	**C**	
				Delay	<	10	>	**10**	<	11	>	**11**	<	14	>	**14**	<	15	>	**15**	
				V/C	<	0.15	>		<	0.23	>		<	0.54	>		<	0.57	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	AWS	2028 Total	LOS	<	B	>	**B**	<	B	>	**B**	<	C	>	**C**	<	C	>	**C**	
				Delay	<	11	>	**11**	<	11	>	**11**	<	16	>	**16**	<	18	>	**18**	
				V/C	<	0.16	>		<	0.24	>		<	0.59	>		<	0.65	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	TCS	2033 Background	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	A	A	>	**A**	**A**
				Delay	10	10	>	**10**	11	10	>	**11**	4	4	>	**4**	4	4	>	**4**	**5**
				V/C	0.11	0.19	>		0.30	0.16	>		0.08	0.24	>		0.19	0.22	>		**0.25**
				Q	4	6	>		7	6	>		4	11	>		7	10	>		
	Rice Road & Quaker Road	TCS	2033 Total	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	A	A	>	**A**	**A**
				Delay	10	11	>	**11**	11	10	>	**11**	4	4	>	**4**	4	4	>	**4**	**5**
				V/C	0.11	0.19	>		0.30	0.16	>		0.09	0.25	>		0.21	0.25	>		**0.27**
				Q	4	6	>		8	6	>		4	12	>		8	12	>		
PM Peak Hour	Rice Road & Quaker Road	AWS	Existing	LOS	<	B	>	**B**	<	B	>	**B**	<	C	>	**C**	<	B	>	**B**	
				Delay	<	10	>	**10**	<	11	>	**11**	<	16	>	**16**	<	15	>	**15**	
				V/C	<	0.14	>		<	0.20	>		<	0.61	>		<	0.57	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	AWS	2088 Background	LOS	<	B	>	**B**	<	B	>	**B**	<	C	>	**C**	<	C	>	**C**	
				Delay	<	11	>	**11**	<	12	>	**12**	<	23	>	**23**	<	19	>	**19**	
				V/C	<	0.18	>		<	0.24	>		<	0.76	>		<	0.67	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	AWS	2028 Total	LOS	<	B	>	**B**	<	B	>	**B**	<	D	>	**D**	<	D	>	**D**	
				Delay	<	12	>	**12**	<	12	>	**12**	<	35	>	**35**	<	26	>	**26**	
				V/C	<	0.19	>		<	0.27	>		<	0.87	>		<	0.77	>		
				Q	<		>		<		>		<		>		<		>		
	Rice Road & Quaker Road	TCS	2033 Background	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	A	A	>	**A**	**A**
				Delay	11	11	>	**11**	12	11	>	**11**	3	4	>	**4**	4	4	>	**4**	**5**
				V/C	0.10	0.22	>		0.30	0.15	>		0.09	0.32	>		0.21	0.24	>		**0.32**
				Q	3	7	>		8	6	>		4	16	>		8	12	>		
	Rice Road & Quaker Road	TCS	2033 Total	LOS	B	B	>	**B**	B	B	>	**B**	A	A	>	**A**	A	A	>	**A**	**A**
				Delay	11	12	>	**12**	12	11	>	**12**	3	4	>	**4**	4	4	>	**4**	**5**
				V/C	0.10	0.22	>		0.31	0.15	>		0.09	0.35	>		0.23	0.26	>		**0.34**
				Q	4	8	>		8	7	>		4	18	>		8	13	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
AWS - All-Way Stop Control
< / > - Shared with through movement

5.2.3 Rice Road at Woodlawn Road (Signalized)

The following critical movements are noted to occur during the base year (2024) traffic horizon:

AM Peak Hour

- EBL: The 95th percentile queue is forecast to exceed the current available storage (25 m) by approximately 9 m.

Beyond the critical movements noted above, additional critical movements are forecast to occur during the opening year (2028) background traffic horizon:

PM Peak Hour – Background Traffic Horizon

- WBL: A v/c ratio of 0.91, 52-second delay, LOS D. The 95th percentile queue is forecast to exceed the current available storage (55 m) by approximately 5 m.

Beyond the critical movements noted above, an additional critical movement is forecast to occur during the five-year (2033) total traffic horizon:

PM Peak Hour – Total Traffic Horizon

- EBL: The 95th percentile queue is forecast to exceed the current available storage (25 m) by approximately 2 m.

The 95th percentile queue length for the eastbound and westbound left-turn lanes are forecast to be contained within the existing left-turn lane tapers. The addition of site-generated traffic is not forecast to result in any additional critical movements.

TABLE 5.3: RICE ROAD AT WOODLAWN ROAD OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																
					Eastbound				Westbound				Northbound				Southbound				Overall
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Woodlawn Road	TCS	2024 Base Year	LOS	D	C	>	C	C	C	B	C	A	B	B	B	B	B	>	B	C
				Delay	36	33	>	33	22	22	19	22	10	12	10	12	15	17	>	17	22
				V/C	0.60	0.62	>		0.39	0.34	0.02		0.11	0.32	0.10		0.10	0.30	>		0.42
				Q	34	42	>		22	38	0		12	52	10		12	43	>		
	Rice Road & Woodlawn Road	TCS	2028 Background	LOS	D	C	>	C	C	C	B	C	B	B	B	B	B	C	>	B	C
				Delay	37	33	>	34	21	22	19	21	10	13	11	12	18	20	>	20	22
				V/C	0.64	0.64	>		0.42	0.36	0.03		0.13	0.37	0.12		0.15	0.37	>		0.46
				Q	37	46	>		23	41	0		13	61	12		15	49	>		
	Rice Road & Woodlawn Road	TCS	2028 Total	LOS	D	C	>	C	C	C	B	C	B	B	B	B	B	C	>	C	C
				Delay	39	32	>	34	21	21	19	21	11	14	11	13	18	21	>	21	22
				V/C	0.67	0.63	>		0.42	0.36	0.03		0.13	0.39	0.13		0.17	0.43	>		0.49
				Q	39	46	>		23	41	1		13	64	12		17	58	>		
	Rice Road & Woodlawn Road	TCS	2033 Background	LOS	D	C	>	D	C	C	B	C	B	B	B	B	C	C	>	C	C
				Delay	40	34	>	36	20	20	18	20	12	16	13	15	20	24	>	23	24
				V/C	0.68	0.68	>		0.42	0.36	0.03		0.15	0.44	0.15		0.17	0.43	>		0.52
				Q	41	51	>		25	45	1		14	70	14		16	54	>		
	Rice Road & Woodlawn Road	TCS	2033 Total	LOS	D	C	>	D	C	C	B	C	B	B	B	B	C	C	>	C	C
				Delay	42	34	>	36	20	20	18	20	12	17	13	15	21	25	>	24	24
				V/C	0.71	0.67	>		0.42	0.36	0.03		0.16	0.46	0.16		0.20	0.49	>		0.54
				Q	43	51	>		25	45	1		14	74	15		18	62	>		
PM Peak Hour	Rice Road & Woodlawn Road	TCS	2024 Base Year	LOS	C	D	>	D	C	C	B	C	B	B	B	B	B	C	>	C	C
				Delay	33	38	>	37	30	26	19	27	13	14	12	14	20	28	>	27	26
				V/C	0.35	0.69	>		0.73	0.65	0.05		0.22	0.33	0.13		0.18	0.64	>		0.68
				Q	19	49	>		50	88	5		16	50	10		19	97	>		
	Rice Road & Woodlawn Road	TCS	2028 Background	LOS	C	D	>	D	D	C	B	C	B	B	B	B	C	C	>	C	C
				Delay	34	38	>	38	36	28	19	30	14	16	13	14	21	32	>	30	28
				V/C	0.42	0.72	>		0.81	0.70	0.06		0.27	0.38	0.15		0.22	0.71	>		0.75
				Q	22	53	>		60	98	7		17	58	12		22	111	>		
	Rice Road & Woodlawn Road	TCS	2028 Total	LOS	C	D	>	D	D	C	B	C	B	B	B	B	C	C	>	C	C
				Delay	35	38	>	38	36	28	19	30	14	16	13	15	22	35	>	33	28
				V/C	0.47	0.72	>		0.81	0.70	0.06		0.28	0.43	0.17		0.26	0.77	>		0.78
				Q	25	53	>		60	98	8		17	66	14		24	126	>		
	Rice Road & Woodlawn Road	TCS	2033 Background	LOS	C	D	>	D	D	C	B	D	B	B	B	B	C	D	>	C	C
				Delay	34	41	>	40	52	29	18	36	15	17	14	16	22	36	>	34	31
				V/C	0.45	0.77	>		0.91	0.75	0.06		0.33	0.44	0.19		0.25	0.78	>		0.83
				Q	24	59	>		72	110	8		19	67	15		23	124	>		
	Rice Road & Woodlawn Road	TCS	2033 Total	LOS	D	D	>	D	D	C	B	D	B	B	B	B	C	D	>	D	C
				Delay	35	41	>	40	52	29	18	36	15	18	14	16	23	41	>	38	32
				V/C	0.51	0.77	>		0.91	0.75	0.07		0.35	0.48	0.20		0.29	0.84	>		0.87
				Q	27	59	>		72	110	9		19	75	17		26	139	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
< / > - Shared with through movement

5.2.4 Rice Road at Port Robbinson Road (Signalized)

The following critical movements are noted to occur during the base year (2024) traffic horizon:

AM Peak Hour

- EBL: The 95th percentile queue is forecast to exceed the current available storage (20 m) by approximately 1 m.

Beyond the critical movements noted above, no additional critical movements are forecast to occur in the opening year (2028) or five-year (2033) traffic horizon.

A critical movement is forecast to occur at the study area intersection without the addition of site-generated traffic on the eastbound left-turn movement during the AM peak hour.

A critical movement is forecast to occur at the study area intersection with the addition of site-generated traffic on the shared northbound through/right-turn movement during the AM peak hour.

TABLE 5.4: RICE ROAD AT PORT ROBBINSON ROAD OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																
					Eastbound				Westbound				Northbound				Southbound				Overall
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Port Robinson Road	TCS	2024 Base Year	LOS	C	C	>	C	C	C	>	C	A	A	>	A	A	A	>	A	B
				Delay	26	27	>	27	24	26	>	26	5	8	>	7	5	6	>	6	13
				V/C	0.45	0.54	>		0.07	0.42	>		0.13	0.42	>		0.04	0.30	>		0.45
				Q	21	31	>		5	25	>		10	48	>		4	30	>		
	Rice Road & Port Robinson Road	TCS	2028 Background	LOS	C	C	>	C	C	C	>	C	A	A	>	A	A	A	>	A	B
				Delay	26	27	>	27	23	26	>	25	6	9	>	8	5	7	>	7	14
				V/C	0.46	0.56	>		0.08	0.46	>		0.15	0.51	>		0.04	0.33	>		0.52
				Q	22	33	>		6	28	>		12	63	>		4	34	>		
	Rice Road & Port Robinson Road	TCS	2028 Total	LOS	C	C	>	C	C	C	>	C	A	B	>	A	A	A	>	A	B
				Delay	26	28	>	27	23	26	>	25	6	10	>	10	5	7	>	7	14
				V/C	0.45	0.56	>		0.09	0.45	>		0.17	0.59	>		0.05	0.34	>		0.59
				Q	22	33	>		6	28	>		13	80	>		4	36	>		
	Rice Road & Port Robinson Road	TCS	2033 Background	LOS	C	C	>	C	B	C	>	B	B	C	>	C	B	B	>	B	C
				Delay	20	21	>	21	18	20	>	20	14	25	>	23	13	17	>	17	21
				V/C	0.24	0.31	>		0.04	0.26	>		0.24	0.75	>		0.09	0.46	>		0.56
				Q	22	34	>		6	30	>		19	111	>		6	54	>		
	Rice Road & Port Robinson Road	TCS	2033 Total	LOS	C	C	>	C	B	C	>	B	B	C	>	C	B	B	>	B	C
				Delay	20	21	>	21	18	20	>	20	15	32	>	29	13	17	>	17	24
				V/C	0.24	0.32	>		0.05	0.26	>		0.28	0.85	>		0.11	0.47	>		0.62
				Q	22	34	>		6	30	>		22	152	>		7	57	>		
PM Peak Hour	Rice Road & Port Robinson Road	TCS	2024 Base Year	LOS	C	C	>	C	C	C	>	C	A	A	>	A	A	B	>	B	B
				Delay	24	26	>	25	23	29	>	28	7	9	>	9	6	11	>	11	15
				V/C	0.28	0.54	>		0.23	0.64	>		0.14	0.46	>		0.08	0.58	>		0.59
				Q	16	36	>		13	42	>		10	57	>		7	79	>		
	Rice Road & Port Robinson Road	TCS	2028 Background	LOS	C	C	>	C	C	C	>	C	A	B	>	A	A	B	>	B	B
				Delay	24	27	>	26	23	30	>	28	7	10	>	10	6	12	>	12	16
				V/C	0.31	0.58	>		0.24	0.66	>		0.17	0.53	>		0.09	0.64	>		0.64
				Q	17	39	>		14	44	>		12	72	>		8	95	>		
	Rice Road & Port Robinson Road	TCS	2028 Total	LOS	C	C	>	C	C	C	>	C	A	B	>	B	A	B	>	B	B
				Delay	24	27	>	26	23	30	>	28	8	11	>	11	6	15	>	14	17
				V/C	0.31	0.60	>		0.28	0.66	>		0.21	0.57	>		0.10	0.72	>		0.70
				Q	17	40	>		16	44	>		13	80	>		8	135	>		
	Rice Road & Port Robinson Road	TCS	2033 Background	LOS	C	C	>	C	C	C	>	C	A	B	>	B	A	B	>	B	B
				Delay	24	27	>	26	23	31	>	29	8	12	>	12	7	15	>	14	18
				V/C	0.35	0.61	>		0.26	0.69	>		0.22	0.61	>		0.11	0.70	>		0.70
				Q	18	43	>		16	49	>		14	91	>		9	120	>		
	Rice Road & Port Robinson Road	TCS	2033 Total	LOS	C	C	>	C	C	C	>	C	A	B	>	B	A	B	>	B	B
				Delay	24	28	>	27	23	31	>	29	9	13	>	13	7	18	>	17	19
				V/C	0.35	0.63	>		0.31	0.69	>		0.27	0.65	>		0.12	0.78	>		0.75
				Q	18	44	>		17	49	>		16	101	>		9	156	>		

MOE - Measure of Effectiveness
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Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
< / > - Shared with through movement

5.2.5 Rice Road at Merrit Road (TWSC/Signalized)

No critical movements are noted during the base year (2024) traffic horizon.

Critical movements are forecast to occur during the opening year (2028) total traffic horizon:

AM and PM Peak Hour – Background Traffic Horizon

- EBL/EBR: A v/c ratio of 0.6, 26-second delay, LOS D.

Beyond the critical movements noted above, no additional critical movements are forecast to occur in the five-year (2033) traffic horizon.

The addition of site-generated traffic is not forecast to result in any additional critical movements.

TABLE 5.5: RICE ROAD AT MERRIT ROAD OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																
					Eastbound				Westbound				Northbound				Southbound				Overall
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Merrit Road	TWSC	Existing	LOS	C		>	C					<	A		A		A	>	A	
				Delay	20		>	20					<	1		1		0	>	0	
				V/C	0.50		>						<	0.03				0.17	>		
				Q	22		>						<	1				0	>		
	Rice Road & Merrit Road	TWSC	2088 Background	LOS	D		>	D					<	A		A		A	>	A	
				Delay	26		>	26					<	1		1		0	>	0	
				V/C	0.60		>						<	0.04				0.19	>		
				Q	30		>						<	1				0	>		
	Rice Road & Merrit Road	TWSC	2028 Total	LOS	E		>	E					<	A		A		A	>	A	
				Delay	36		>	36					<	1		1		0	>	0	
				V/C	0.70		>						<	0.05				0.20	>		
				Q	40		>						<	1				0	>		
	Rice Road & Merrit Road	TCS	2033 Background	LOS	A	A	>	A	A	A	>	A	A	A	>	A	A	A	>	A	A
				Delay	10	8	>	10	0	0	>	0	6	7	>	7	0	6	>	6	7
				V/C	0.43	0.05	>		0.00	0.00	>		0.19	0.37	>		0.00	0.29	>		0.49
				Q	21	0	>		0	0	>		7	17	>		0	13	>		
	Rice Road & Merrit Road	TCS	2033 Total	LOS	B	A	>	B	A	A	>	A	A	A	>	A	A	A	>	A	A
				Delay	11	9	>	10	0	0	>	0	6	7	>	7	0	6	>	6	8
				V/C	0.44	0.05	>		0.00	0.00	>		0.21	0.43	>		0.00	0.30	>		0.53
				Q	23	0	>		0	0	>		8	22	>		0	14	>		
PM Peak Hour	Rice Road & Merrit Road	TWSC	Existing	LOS	C		>	C					<	A		A		A	>	A	
				Delay	24		>	24					<	2		2		0	>	0	
				V/C	0.42		>						<	0.07				0.30	>		
				Q	16		>						<	2				0	>		
	Rice Road & Merrit Road	TWSC	2088 Background	LOS	D		>	D					<	A		A		A	>	A	
				Delay	33		>	33					<	2		2		0	>	0	
				V/C	0.55		>						<	0.09				0.33	>		
				Q	24		>						<	2				0	>		
	Rice Road & Merrit Road	TWSC	2028 Total	LOS	E		>	E					<	A		A		A	>	A	
				Delay	47		>	47					<	3		3		0	>	0	
				V/C	0.68		>						<	0.10				0.38	>		
				Q	34		>						<	3				0	>		
	Rice Road & Merrit Road	TCS	2033 Background	LOS	B	B	>	B	A	A	>	A	A	A	>	A	A	A	>	A	A
				Delay	14	12	>	14	0	0	>	0	5	4	>	4	0	5	>	5	6
				V/C	0.44	0.03	>		0.00	0.00	>		0.31	0.29	>		0.00	0.36	>		0.45
				Q	21	0	>		0	0	>		12	16	>		0	19	>		
	Rice Road & Merrit Road	TCS	2033 Total	LOS	B	B	>	B	A	A	>	A	A	A	>	A	A	A	>	A	A
				Delay	17	14	>	16	0	0	>	0	5	4	>	4	0	4	>	4	6
				V/C	0.48	0.03	>		0.00	0.00	>		0.33	0.29	>		0.00	0.40	>		0.48
				Q	24	0	>		0	0	>		13	17	>		0	24	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
< / > - Shared with through movement

5.2.6 Rice Road at Street E (TWSC)

Individual movements at Rice Road and Street E intersection are forecast to operate with acceptable levels of delay during the AM and PM peak hours throughout all horizon years. The Street E intersection with Rice Road is forecast to operate with a v/c ratio of less than 0.20 and less than 17 seconds of delay (LOS C) during all horizon years.

5.2.7 Rice Road at Street A/450 Rice Road (TWSC)

Individual movements at Rice Road and Street A/450 Rice Road intersection are forecast to operate with acceptable levels of delay during the AM and PM peak hours throughout all horizon years. The Street A/450 Rice Road intersection with Rice Road is forecast to operate with a v/c ratio of less than 0.25 and less than 21 seconds of delay (LOS C) during all horizon years.

TABLE 5.6: RICE ROAD AT STREET E OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																Overall
					Eastbound				Westbound				Northbound				Southbound				
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Street E	TWSC	2028 Total	LOS	C		>	**C**					<	A		**A**		A	>	**A**	
				Delay	16		>	**16**					<	0		**0**		0	>	**0**	
				V/C	0.15		>						<	0.01				0.23	>		
				Q	4		>						<	0				0	>		
	Rice Road & Street E	TWSC	2033 Total	LOS	B		>	**B**					A	A		**A**		A	>	**A**	
				Delay	11		>	**11**					8	0		**0**		0	>	**0**	
				V/C	0.09		>						0.01	0.14				0.16	>		
				Q	2		>						0	0				0	>		
PM Peak Hour	Rice Road & Street E	TWSC	2028 Total	LOS	C		>	**C**					<	A		**A**		A	>	**A**	
				Delay	17		>	**17**					<	1		**1**		0	>	**0**	
				V/C	0.12		>						<	0.02				0.31	>		
				Q	3		>						<	1				0	>		
	Rice Road & Street E	TWSC	2033 Total	LOS	B		>	**B**					A	A		**A**		A	>	**A**	
				Delay	12		>	**12**					9	0		**0**		0	>	**0**	
				V/C	0.07		>						0.02	0.16				0.20	>		
				Q	2		>						1	0				0	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio
Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal
TWSC - Two-Way Stop Control
< / > - Shared with through movement

TABLE 5.7: RICE ROAD AT STREET A/450 RICE ROAD OPERATIONS

Analysis Period	Intersection	Control Type	Horizon Year	MOE	Direction/Movement/Approach																Overall
					Eastbound				Westbound				Northbound				Southbound				
					Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Rice Road & Street A/450 Rice Road	TWSC	2028 Background	LOS	<	A	>	**A**	<	B	>	**B**	<	A	>	**A**	<	A	>	**A**	
				Delay	<	0	>	**0**	<	15	>	**15**	<	0	>	**0**	<	0	>	**0**	
				V/C	<	0.00	>		<	0.13	>		<	0.00	>		<	0.01	>		
				Q	<	0	>		<	4	>		<	0	>		<	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2028 Total	LOS	<	C	>	**C**	<	C	>	**C**	<	A	>	**A**	<	A	>	**A**	
				Delay	<	19	>	**19**	<	17	>	**17**	<	0	>	**0**	<	0	>	**0**	
				V/C	<	0.25	>		<	0.15	>		<	0.01	>		<	0.01	>		
				Q	<	8	>		<	4	>		<	0	>		<	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2033 Background	LOS	<	A	>	**A**	<	B	>	**B**	A	A	>	**A**	A	A	>	**A**	
				Delay	<	0	>	**0**	<	11	>	**11**	0	0	>	**0**	8	0	>	**0**	
				V/C	<	0.15	>		<	0.09	>		0.00	0.16	>		0.01	0.15	>		
				Q	<	0	>		<	2	>		0	0	>		0	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2033 Total	LOS	<	B	>	**B**	<	B	>	**B**	A	A	>	**A**	A	A	>	**A**	
				Delay	<	12	>	**12**	<	12	>	**12**	8	0	>	**0**	8	0	>	**0**	
				V/C	<	0.15	>		<	0.10	>		0.01	0.16	>		0.01	0.16	>		
				Q	<	4	>		<	2	>		0	0	>		0	0	>		
PM Peak Hour	Rice Road & Street A/450 Rice Road	TWSC	2028 Background	LOS	<	A	>	**A**	<	C	>	**C**	<	A	>	**A**	<	A	>	**A**	
				Delay	<	0	>	**0**	<	18	>	**18**	<	0	>	**0**	<	1	>	**1**	
				V/C	<	0.00	>		<	0.11	>		<	0.00	>		<	0.02	>		
				Q	<	0	>		<	3	>		<	0	>		<	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2028 Total	LOS	<	C	>	**C**	<	C	>	**C**	<	A	>	**A**	<	A	>	**A**	
				Delay	<	21	>	**21**	<	23	>	**23**	<	1	>	**1**	<	0	>	**0**	
				V/C	<	0.19	>		<	0.15	>		<	0.03	>		<	0.02	>		
				Q	<	5	>		<	4	>		<	1	>		<	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2033 Background	LOS	<	A	>	**A**	<	B	>	**B**	A	A	>	**A**	A	A	>	**A**	
				Delay	<	0	>	**0**	<	12	>	**12**	0	0	>	**0**	9	0	>	**0**	
				V/C	<	0.00	>		<	0.07	>		0.00	0.20	>		0.02	0.17	>		
				Q	<	0	>		<	2	>		0	0	>		0	0	>		
	Rice Road & Street A/450 Rice Road	TWSC	2033 Total	LOS	<	B	>	**B**	<	B	>	**B**	A	A	>	**A**	A	A	>	**A**	
				Delay	<	12	>	**12**	<	14	>	**14**	9	0	>	**0**	9	0	>	**0**	
				V/C	<	0.10	>		<	0.08	>		0.04	0.21	>		0.02	0.18	>		
				Q	<	3	>		<	2	>		1	0	>		0	0	>		

MOE - Measure of Effectiveness
LOS - Level of Service
Delay - Average Delay per Vehicle in Seconds
V/C - Volume to Capacity Ratio

Q - 95th Percentile Queue Length (m)
Stor. - Existing Storage (m)
Avail. - Available Storage (m)
TCS - Traffic Control Signal

TWSC - Two-Way Stop Control
< / > - Shared with through movement

6 Mitigation

6.1 Intersection Improvements

Critical movements are forecast to occur at the intersection of Rice Road and Highway 20 with the addition of site-generated traffic on the northbound right-turn movement during the PM peak hour and on westbound left-turn movement during the AM peak hour.

A critical movement is forecast to occur at the intersection of Rice Road and Port Robbinson Road with the addition of site-generated traffic on the shared northbound through/right-turn movement during the AM peak hour.

With future growth in general traffic, the signalized intersection of Rice Road at Highway 20 and Port Robbinson Road will experience increased demand. Improvements to the signal timing could be provided as an interim solution. Ultimately, the future extension of Merrit Road between Rice Road and Cataract Road will be required to provide increased capacity through other alternative routes. Based on the Merritt Road/Rice Road Class EA estimates, volumes along Rice Road could be reduced by approximately 25%.

The all-way stop-controlled intersection of Rice Road and Quaker Road is also projected to experience increased demand due to the general traffic growth projected for the area. The proposed improvements associated with the planned EA improvements are forecast to resolve the forecasted congestion.

6.2 Auxiliary Left-Turn Lane Requirements

The proposed new unsignalized intersections with Rice Road were assessed to determine if the future traffic volumes warrant the installation of a left-turn lane along Rice Road. The warrants for left-turn lanes follow the Ministry of Transportation's (MTO) Design Supplement to the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads* (GDGCR)[4] requirements, which provides guidance on the assessment of and/or need for auxiliary left-turn lanes at unsignalized intersections. The warrant analysis to determine if a left-turn lane is required is based on the following criteria:

[4] Transportation Association of Canada, *MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads – Appendix 9A*, Ministry of Transportation of Ontario, 2023.

- Design speed of the road (posted speed + 10 km/h[5]);
- Advancing Volume;
- Opposing Volume; and
- Percent of advancing vehicles performing a left-turn maneuver.

The percentages of left-turning vehicles in the approaching volume were rounded to the nearest five percent, as warrant nomographs are only provided for five percent increments. It is understood that the Region proposes constructing a centre two-way left-turn lane along Rice Road in 2031, so the 2033 total traffic horizon was not analyzed.

Table 6.1 summarizes the results of the left-turn lane warrant analysis. **Appendix E** provides the left-turn lane nomographs. The nomographs indicate:

- At Rice Road and Street E, a northbound left-turn lane is not warranted under the 2028 total traffic horizon.
- At Rice Road and Street A/450 Rice Road, a northbound left-turn lane with 15 metres of storage is warranted under the 2028 total traffic horizon.

TABLE 6.1: LEFT-TURN LANE WARRANT SUMMARY

	Rice Road at Street E		Rice Road at Street A	
Approach Direction	Northbound		Northbound	
Design Speed	60 km/h		60 km/h	
Horizon	2028 Total		2028 Total	
Peak Hour	AM	PM	AM	PM
Advancing Volume	353	486	361	470
Opposing Volumes	414	475	365	502
Left Turning Traffic	10	23	14	34
% of Left Turning Traffic	2.8%	4.7%	3.9%	7.2%
Figure Used*	9A-7 (5%)	9A-7 (5%)	9A-7 (5%)	9A-7 (10%)
Warranted	**No**	**No**	**No**	**Yes**
Storage Length Required	-	-	-	15

Based on MTO Design Supplement for TAC Geometric Design Guide for Canadian Road - 2023

[5] Niagara Region, Schedule 'C' Municipal Class Environmental Assessment for Merritt Road (Regional Road 37) and Rice Road (Regional Road 54), Table 8-3, March 2024

As constructing a left-turn lane in the interim would be considered a throw-away cost, Paradigm has reviewed the number of units that could be built without triggering the need for a northbound left-turn lane along Rice Road. To be conservative, it was assumed that 100% of the site trips would use Street A.

A maximum of 160 townhouse units or a combination of single-family and townhouse units where the total weekday PM peak hour trips do not exceed 91 vehicles (for example, 118 townhouses and 15 single-family) is supportable without needing an auxiliary northbound left-turn lane at the ice Road intersection with Street A/450 Rice Road.

However, if the Applicant proceeds to construct additional units over the proposed unit cap before the Rice Road EA improvements are implemented, a temporary northbound left-turn lane will be required along Rice Road at the proposed Street A/450 Rice Road connection.

7 Conclusions and Recommendations

7.1 Conclusions

This study evaluates the impacts of background traffic growth and projects the impacts of the development with the construction of 60 single-family dwellings and 346 townhouse units of various types. Vehicular access is proposed via two new street connections to Rice Road, located approximately 195 metres and 460 metres north of the Rice Road and Quaker Road intersection (curb return to curb return). The proposed development is anticipated to be fully built by 2028 for this report.

Under full-build out, the development is projected to generate approximately 177 new vehicle trips during the weekday AM peak hour and 230 new vehicle trips during the weekday PM peak hour.

The traffic analysis conducted as part of this assessment indicates that development volumes will result in minor increases in the surrounding study area intersection volumes under peak conditions, which should not be perceptible.

Critical movements are forecast to occur at the intersection of Rice Road and Highway 20 with the addition of site-generated traffic on the northbound right-turn movement during the PM peak hour and on the westbound left-turn movement during the AM peak hour.

A critical movement is forecast to occur at the intersection of Rice Road and Port Robbinson Road with the addition of site-generated traffic on the shared northbound through/right-turn movement during the AM peak hour.

With future growth in general traffic, the signalized intersection of Rice Road at Highway 20 and Port Robbinson Road will experience increased demand. Improvements to the signal timing could be provided as an interim solution. Ultimately, the future extension of Merrit Road between Rice Road and Cataract Road will be required to provide increased capacity through other alternative routes. Based on the Merritt Road/Rice Road Class EA estimates, volumes along Rice Road could be reduced by approximately 25%.

The all-way stop-controlled intersection of Rice Road and Quaker Road is also projected to experience increased demand due to the general traffic growth projected for the area. The proposed improvements associated with the planned EA improvements are forecast to resolve the forecasted congestion. The increased delay is

tolerable until the intersection is widened and upgraded to traffic control signals.

A left-turn lane warrant analysis was conducted at the proposed development street connections to Rice Road and determined that a northbound left-turn lane with 15 metres of storage is warranted during the 2028 total traffic horizon along Rice Road at the proposed Street A/450 Rice Road connection with full build-out of the development. A northbound left-turn lane, however, is not warranted at the Rice Road intersection with Street E under the 2028 total traffic horizon.

It is understood that the Region proposes constructing a centre two-way left-turn lane along Rice Road in 2031. As constructing a left-turn lane in the interim would be considered a throw-away cost, Paradigm has reviewed the number of units that could be built without triggering the need for a northbound left-turn lane along Rice Road at Street A/450 Rice Road connection during the 2028 total traffic horizon.

Based on our assessment, a northbound left-turn lane would not be warranted with the build-out of 160 townhouse units or a combination of single-family and townhouse units (for example, 118 townhouses and 15 singles) where the total weekday PM peak hour trips do not exceed 91 vehicles.

7.2 Recommendations

Based on the findings of this study, the following recommendations are identified:

- With future growth in general traffic, the signalized intersection of Rice Road at Highway 20 and Port Robbinson Road will experience increased demand. Improvements to the signal timing could be provided as an interim solution.
- A temporary northbound left-turn lane with 15 metres of storage is required along Rice Road and the proposed Street A/450 Rice Road connection with full development build-out.
- A unit cap is recommended as an interim solution to avoid constructing the temporary left-turn lane, which would be considered a “throw-away” cost.
- Based on the assessment completed, the unit cap would have an upper limit of 160 townhouse units or a combination of singles and townhouses where the total weekday PM peak hour trips do not exceed 91 vehicles (example: 118 townhouses and 15 singles).

- If the Applicant proceeds to construct additional units over the proposed unit cap before the Rice Road EA improvements are implemented, a temporary northbound left-turn lane will be required along Rice Road at Street A/450 Rice Road connection.

Appendix A

Terms of Reference

Creighton Chartier

From: Creighton Chartier
Sent: November 13, 2024 10:02 AM
To: Wilson, Josh
Subject: RE: (240626) 469 & 509 Rice Road - TIA

Hi Josh,

Thank for the feedback.

I was mistaken with the improvements, we are assuming Rice Road will be widened to a five-lane cross-section (2031) not Quaker Road.

Regards,

Creighton Chartier
Transportation Consultant
(He/Him)

5A-150 Pinebush Road, Cambridge ON, N1R 8J8
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w: www.ptsl.com

Office Hours: 07:30 – 17:30 M-T, closed Fridays

From: Wilson, Josh <Josh.Wilson@niagararegion.ca>
Sent: November 5, 2024 4:55 PM
To: Creighton Chartier <cchartier@ptsl.com>
Cc: Adam Makarewicz <amakarewicz@ptsl.com>
Subject: RE: (240626) 469 & 509 Rice Road - TIA

Creighton,

A couple quick points of follow up:

If you require any Regional traffic data, request can be made online using the following link: https://www.niagararegion.ca/living/roads/permits/traffic-data-requests.aspx. If the TIS determines there are improvements required to the Regional road or intersection the TIS is to include a functional design of the improvements for review and approval by Regional staff.

Josh Wilson, P.Eng
905-980-6000 ext. 3336
Mobile: 289-668-2971

Niagara Region

From: Wilson, Josh
Sent: Tuesday, November 5, 2024 4:22 PM
To: Creighton Chartier <cchartier@ptsl.com>
Cc: Adam Makarewicz <amakarewicz@ptsl.com>
Subject: FW: (240626) 469 & 509 Rice Road - TIA

Hi Creighton,

Our Transportation's group provided their input on the ToR below in red.

On the highlighted item identifying widening on Quaker, I am wondering if this was meant to refer to Rice Road.

Let me know if you have any questions or concerns.

Thanks

Josh Wilson, P.Eng
905-980-6000 ext. 3336
Mobile: 289-668-2971
Niagara Region

From: Creighton Chartier <cchartier@ptsl.com>
Sent: Tuesday, October 15, 2024 4:11 PM
To: Dunsmore, Susan <Susan.Dunsmore@niagararegion.ca>
Cc: Adam Makarewicz <amakarewicz@ptsl.com>
Subject: (240626) 469 & 509 Rice Road - TIA

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Hello Susan,

Paradigm has been retained to prepare a traffic impact assessment for the proposed development of 469 & 509 Rice Road in Welland. The conceptual site plan is attached. The applicant proposes an Official Plan Amendment to develop the property with 406 residential units (low-density). Vehicle access to the site is proposed through two new street connections to Rice Road, located at the northern and southern limits of the property.

It is understood that the Niagara Region has completed a Schedule C Municipal Class Environmental Assessment, including a detailed transportation assessment of Merritt Road (Regional Road 37) and Rice Road (Regional Road 54) in Pelham, Thorold, and Welland. Based on the completed EA, the preferred design is to widen Rice Road north of Quaker Road from a two-lane cross-section to a five-lane cross-section. Based on the pre-consultation that has occurred for this development application, the Region has requested a Transportation Impact Assessment for the short-term condition where the road remains as a two-lane cross-section to determine what facilities/improvements will be required in the interim.

Build-out is anticipated to occur by Year 2028.

Proposed Terms of Reference – [TIA]

Study Guidelines:

- Generally follow the Niagara Region Transportation Impact Assessment Guidelines – July 2023

Study Area Intersections:

- Rice Road at Quaker Road (unsignalized) (TMC – PTSL – Sep 2024)
- Rice Road at Highway 20 (signalized) (TMC – Region – Aug 2023)
- Rice Road at Woodlawn Road (signalized) (TMC – Region – Aug 2023); and
- Two new street connections to Rice Road (unsignalized).
- Rice Road at Merritt Road
- Rice Road at Port Robinson Road

Analysis Periods:

- Weekday AM peak hour
- Weekday PM peak hour

Horizon Year:

- Existing Year
- Anticipated build-out year (2028)
- Five-years post build-out (Year 2033)

Please complete the traffic assessment with the assumption that the Environmental Assessment recommended improvements will be implemented staring 2031. If there are any capacity deficiencies in the interim time between the development anticipated buildout year and the EA anticipated start of implementation year, the consultant should consider the required road improvements to support the traffic conditions of this development. Please note that the EA improvements construction timing is subject to Council approval and budget availability.

Analysis:

- Synchro 11 with HCM 2000 analysis

Traffic Forecast:

- Generalized growth rate will be based on the growth rates contained in the Merritt Road/Rice Road EA (2024-02-15)
    - Quaker Road – 3% EB, 1.9% WB
    - Rice Road – 3% NB, 1.5% SB
    - Assumed 2% general growth rate for roadways not included in the study.

- Included in-line background development – 450 Rice Road
    - **Please identify any other approved developments to include in background traffic analysis.**

Trip Generation:

- ITE Trip Generation Data 11th Edition
- No modal split reductions.

Trip Distribution:

- Existing Traffic Patterns

Future Road Improvements:

- Quaker Road from a two-lane cross-section to a five-lane cross-section

Can you please provide more information on the improvement above on Quaker Road? Was this improvement confirmed by the City of Welland?

- **Please identified any additional improvements.**

Please review the EA recommended improvements as per the Transportation Assessment Report.

Remedial Measure:

- Left-Turn lane warrants

Report:

- Report documenting the study methodologies, findings and conclusions.

Regards,

Creighton Chartier
Transportation Consultant
(He/Him)

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Appendix B

Existing Traffic Data

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Merritt Road
Site Code: 240626
Start Date: 11/07/2024

Turning Movement Data

Start Time	Merritt Road Eastbound						Private Driveway Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	21	0	7	0	0	28	0	0	0	0	0	0	6	35	0	0	0	41	0	17	6	0	0	23	92
7:15 AM	33	0	6	0	0	39	0	0	0	0	0	0	6	47	0	0	0	53	0	26	8	0	0	34	126
7:30 AM	51	0	12	0	0	63	0	0	0	0	0	0	6	64	0	0	0	70	0	45	8	0	0	53	186
7:45 AM	40	0	16	0	0	56	0	0	0	0	0	0	11	65	0	0	0	76	0	48	6	0	0	54	186
Hourly Total	145	0	41	0	0	186	0	0	0	0	0	0	29	211	0	0	0	240	0	136	28	0	0	164	590
8:00 AM	48	0	12	0	0	60	0	0	0	0	0	0	7	75	0	0	0	82	0	47	9	0	0	56	198
8:15 AM	43	0	9	0	0	52	0	0	0	0	0	0	6	60	0	0	0	66	0	71	10	0	0	81	199
8:30 AM	40	0	20	0	0	60	0	0	0	0	0	0	13	69	0	0	0	82	0	48	17	0	0	65	207
8:45 AM	32	0	15	0	0	47	0	0	0	0	0	0	8	75	0	0	0	83	0	57	16	0	0	73	203
Hourly Total	163	0	56	0	0	219	0	0	0	0	0	0	34	279	0	0	0	313	0	223	52	0	0	275	807
9:00 AM	23	0	10	0	0	33	0	0	0	0	0	0	16	52	0	0	0	68	0	67	12	0	0	79	180
9:15 AM	30	0	12	0	0	42	0	0	0	0	0	0	6	53	0	0	0	59	0	59	11	0	0	70	171
9:30 AM	21	0	5	0	0	26	0	0	0	0	0	0	8	48	0	0	0	56	0	35	10	0	0	45	127
9:45 AM	21	0	11	0	0	32	0	0	0	0	0	0	4	52	0	0	0	56	0	48	14	0	0	62	150
Hourly Total	95	0	38	0	0	133	0	0	0	0	0	0	34	205	0	0	0	239	0	209	47	0	0	256	628
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	22	0	9	0	0	31	0	0	0	0	0	0	19	58	0	0	0	77	0	60	32	0	0	92	200
3:15 PM	19	0	12	0	0	31	0	0	0	0	0	0	17	78	0	0	0	95	0	80	39	0	0	119	245
3:30 PM	11	0	14	0	0	25	0	0	0	0	0	0	15	98	0	0	0	113	0	73	41	0	0	114	252
3:45 PM	18	0	4	0	0	22	0	0	0	0	0	0	15	88	0	0	0	103	0	96	46	0	0	142	267
Hourly Total	70	0	39	0	0	109	0	0	0	0	0	0	66	322	0	0	0	388	0	309	158	0	0	467	964
4:00 PM	20	0	12	0	0	32	0	0	0	0	0	0	20	67	0	0	0	87	0	75	40	0	0	115	234
4:15 PM	24	0	11	0	0	35	0	0	0	0	0	0	17	67	0	0	0	84	0	76	35	0	0	111	230
4:30 PM	28	0	6	0	0	34	0	0	0	0	0	0	18	101	0	0	0	119	0	87	31	0	0	118	271
4:45 PM	29	0	6	0	0	35	0	0	0	0	0	0	20	73	0	0	0	93	0	85	40	0	0	125	253
Hourly Total	101	0	35	0	0	136	0	0	0	0	0	0	75	308	0	0	0	383	0	323	146	0	0	469	988
5:00 PM	18	0	7	0	0	25	0	0	0	0	0	0	18	68	0	0	0	86	0	84	54	0	0	138	249
5:15 PM	15	0	13	0	0	28	0	0	0	0	0	0	11	54	0	0	0	65	0	72	47	0	0	119	212
5:30 PM	20	0	7	0	0	27	0	0	0	0	0	0	10	64	0	1	0	75	0	67	59	0	0	126	228
5:45 PM	21	0	6	0	0	27	0	0	0	0	0	0	4	41	0	0	0	45	0	77	27	0	0	104	176
Hourly Total	74	0	33	0	0	107	0	0	0	0	0	0	43	227	0	1	0	271	0	300	187	0	0	487	865
Grand Total	648	0	242	0	0	890	0	0	0	0	0	0	281	1552	0	1	0	1834	0	1500	618	0	0	2118	4842
Approach %	72.8	0.0	27.2	0.0	-	-	0.0	0.0	0.0	0.0	-	-	15.3	84.6	0.0	0.1	-	-	0.0	70.8	29.2	0.0	-	-	-
Total %	13.4	0.0	5.0	0.0	-	18.4	0.0	0.0	0.0	0.0	-	0.0	5.8	32.1	0.0	0.0	-	37.9	0.0	31.0	12.8	0.0	-	43.7	-
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	0	5	0	0	-	5	8

% Motorcycles	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.2	-	0.0	-	0.2	-	0.3	0.0	-	-	0.2	0.2
Cars & Light Goods	640	0	236	0	-	876	0	0	0	0	-	0	274	1514	0	1	-	1789	0	1454	610	0	-	2064	4729
% Cars & Light Goods	98.8	-	97.5	-	-	98.4	-	-	-	-	-	-	97.5	97.6	-	100.0	-	97.5	-	96.9	98.7	-	-	97.5	97.7
Buses	6	0	5	0	-	11	0	0	0	0	-	0	6	12	0	0	-	18	0	21	8	0	-	29	58
% Buses	0.9	-	2.1	-	-	1.2	-	-	-	-	-	-	2.1	0.8	-	0.0	-	1.0	-	1.4	1.3	-	-	1.4	1.2
Single-Unit Trucks	2	0	1	0	-	3	0	0	0	0	-	0	1	19	0	0	-	20	0	15	0	0	-	15	38
% Single-Unit Trucks	0.3	-	0.4	-	-	0.3	-	-	-	-	-	-	0.4	1.2	-	0.0	-	1.1	-	1.0	0.0	-	-	0.7	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	3	0	0	-	3	0	5	0	0	-	5	8
% Articulated Trucks	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.2	-	0.0	-	0.2	-	0.3	0.0	-	-	0.2	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.1	-	0.0	-	0.1	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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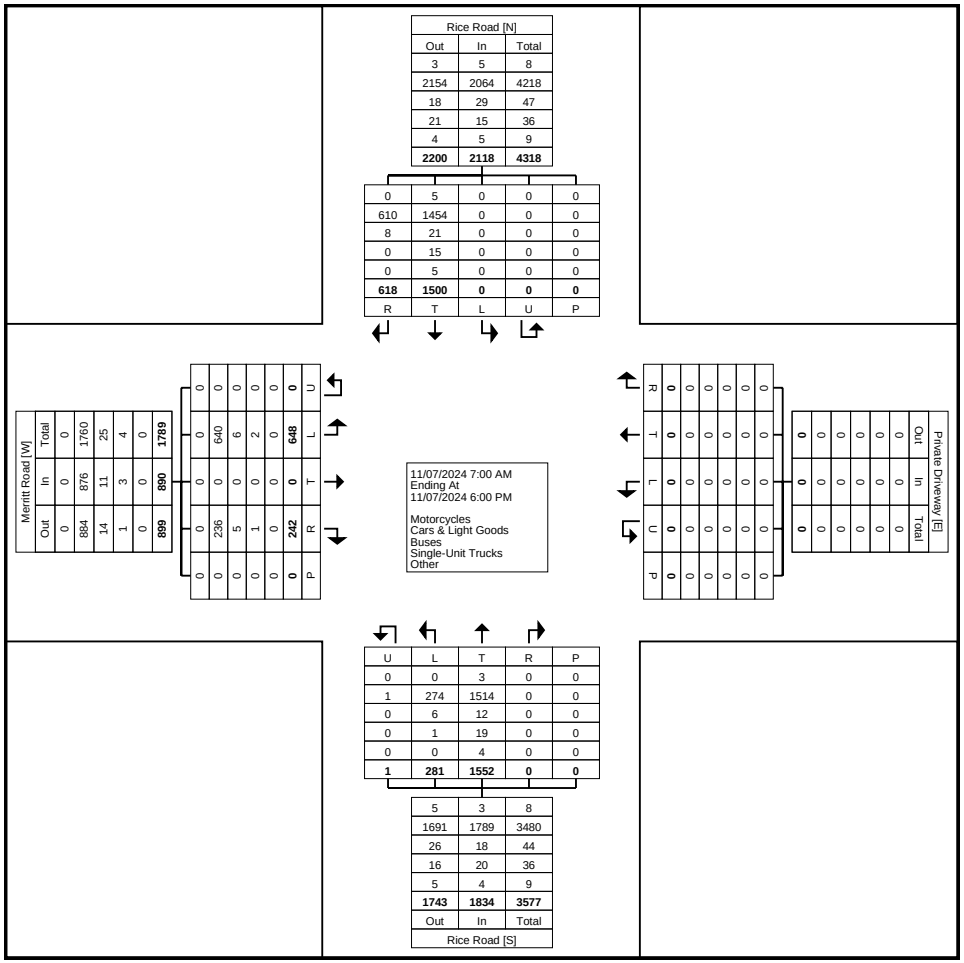

Turning Movement Data Plot

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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Merritt Road Eastbound						Private Driveway Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	48	0	12	0	0	60	0	0	0	0	0	0	7	75	0	0	0	82	0	47	9	0	0	56	198
8:15 AM	43	0	9	0	0	52	0	0	0	0	0	0	6	60	0	0	0	66	0	71	10	0	0	81	199
8:30 AM	40	0	20	0	0	60	0	0	0	0	0	0	13	69	0	0	0	82	0	48	17	0	0	65	207
8:45 AM	32	0	15	0	0	47	0	0	0	0	0	0	8	75	0	0	0	83	0	57	16	0	0	73	203
Total	163	0	56	0	0	219	0	0	0	0	0	0	34	279	0	0	0	313	0	223	52	0	0	275	807
Approach %	74.4	0.0	25.6	0.0	-	-	0.0	0.0	0.0	0.0	-	-	10.9	89.1	0.0	0.0	-	-	0.0	81.1	18.9	0.0	-	-	-
Total %	20.2	0.0	6.9	0.0	-	27.1	0.0	0.0	0.0	0.0	-	0.0	4.2	34.6	0.0	0.0	-	38.8	0.0	27.6	6.4	0.0	-	34.1	-
PHF	0.849	0.000	0.700	0.000	-	0.913	0.000	0.000	0.000	0.000	-	0.000	0.654	0.930	0.000	0.000	-	0.943	0.000	0.785	0.765	0.000	-	0.849	0.975
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.4	0.0	-	-	0.4	0.1
Cars & Light Goods	160	0	55	0	-	215	0	0	0	0	-	0	32	270	0	0	-	302	0	207	50	0	-	257	774
% Cars & Light Goods	98.2	-	98.2	-	-	98.2	-	-	-	-	-	-	94.1	96.8	-	-	-	96.5	-	92.8	96.2	-	-	93.5	95.9
Buses	2	0	1	0	-	3	0	0	0	0	-	0	2	6	0	0	-	8	0	10	2	0	-	12	23
% Buses	1.2	-	1.8	-	-	1.4	-	-	-	-	-	-	5.9	2.2	-	-	-	2.6	-	4.5	3.8	-	-	4.4	2.9
Single-Unit Trucks	1	0	0	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	0	5	0	0	-	5	9
% Single-Unit Trucks	0.6	-	0.0	-	-	0.5	-	-	-	-	-	-	0.0	1.1	-	-	-	1.0	-	2.2	0.0	-	-	1.8	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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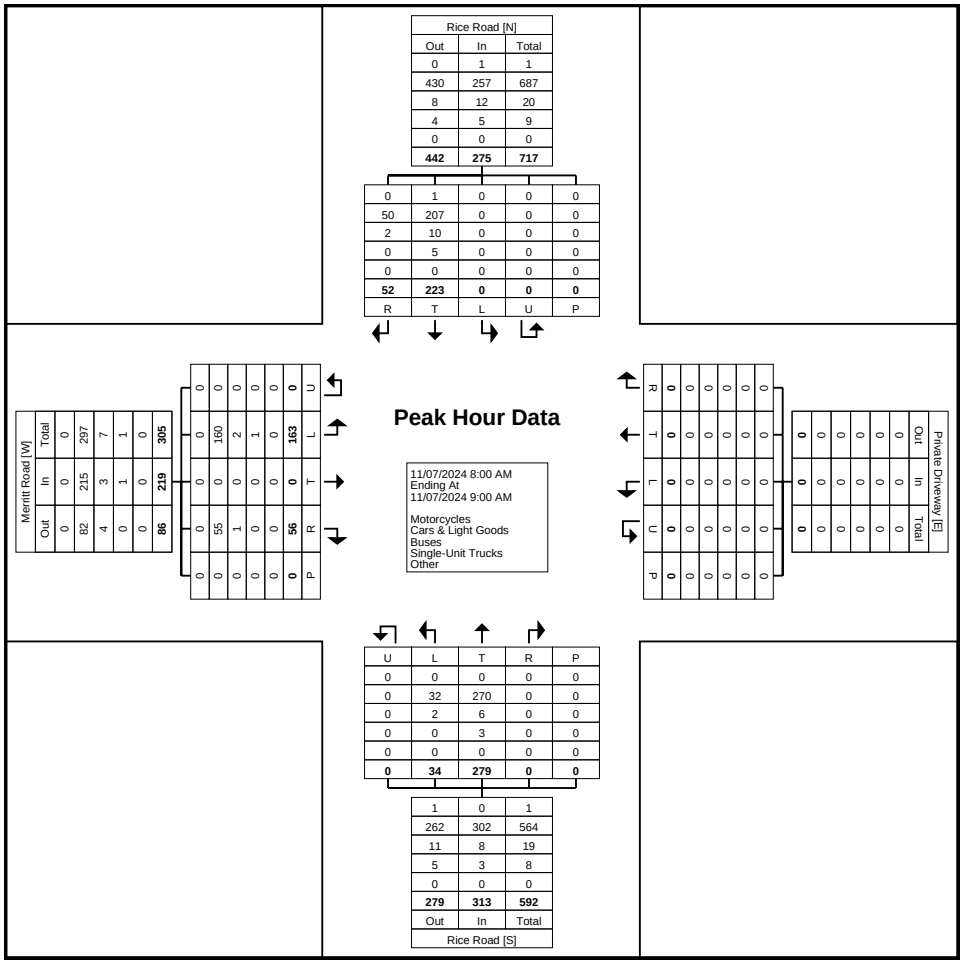

Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
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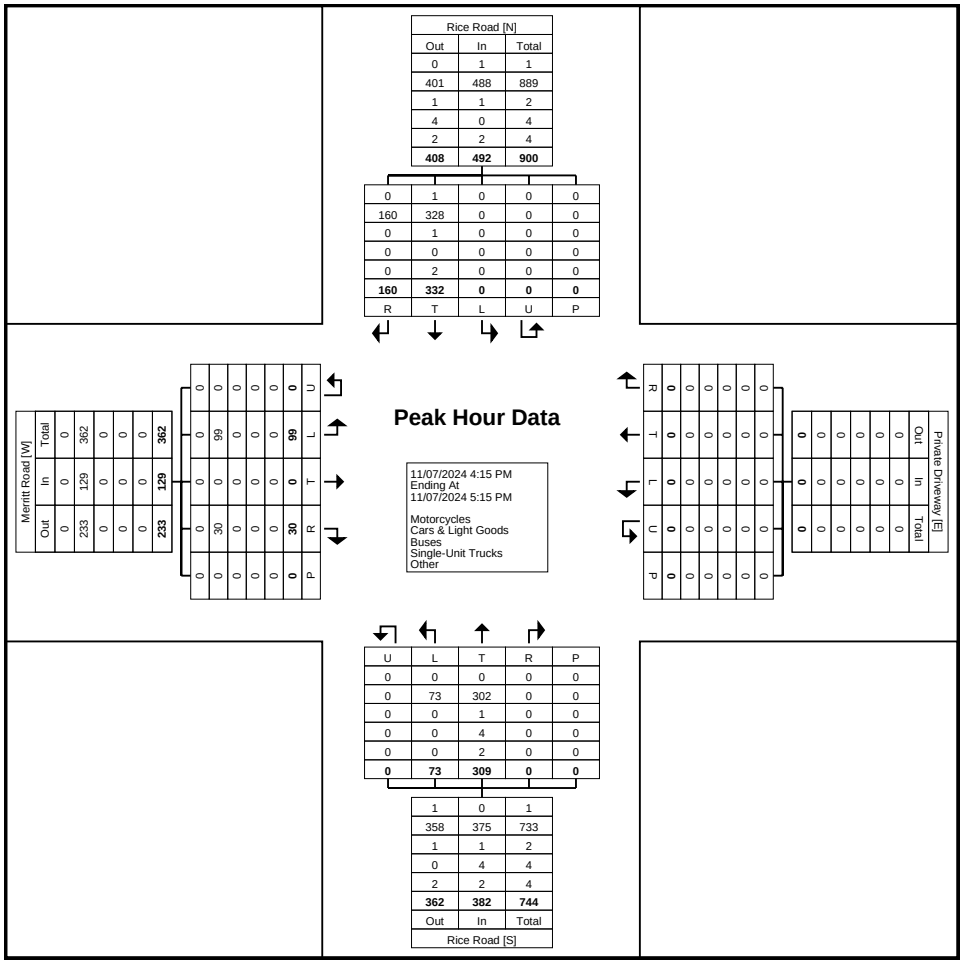
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Merritt Road Eastbound						Private Driveway Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:15 PM	24	0	11	0	0	35	0	0	0	0	0	0	17	67	0	0	0	84	0	76	35	0	0	111	230
4:30 PM	28	0	6	0	0	34	0	0	0	0	0	0	18	101	0	0	0	119	0	87	31	0	0	118	271
4:45 PM	29	0	6	0	0	35	0	0	0	0	0	0	20	73	0	0	0	93	0	85	40	0	0	125	253
5:00 PM	18	0	7	0	0	25	0	0	0	0	0	0	18	68	0	0	0	86	0	84	54	0	0	138	249
Total	99	0	30	0	0	129	0	0	0	0	0	0	73	309	0	0	0	382	0	332	160	0	0	492	1003
Approach %	76.7	0.0	23.3	0.0	-	-	0.0	0.0	0.0	0.0	-	-	19.1	80.9	0.0	0.0	-	-	0.0	67.5	32.5	0.0	-	-	-
Total %	9.9	0.0	3.0	0.0	-	12.9	0.0	0.0	0.0	0.0	-	0.0	7.3	30.8	0.0	0.0	-	38.1	0.0	33.1	16.0	0.0	-	49.1	-
PHF	0.853	0.000	0.682	0.000	-	0.921	0.000	0.000	0.000	0.000	-	0.000	0.913	0.765	0.000	0.000	-	0.803	0.000	0.954	0.741	0.000	-	0.891	0.925
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Motorcycles	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.0	-	-	-	0.0	-	0.3	0.0	-	-	0.2	0.1
Cars & Light Goods	99	0	30	0	-	129	0	0	0	0	-	0	73	302	0	0	-	375	0	328	160	0	-	488	992
% Cars & Light Goods	100.0	-	100.0	-	-	100.0	-	-	-	-	-	-	100.0	97.7	-	-	-	98.2	-	98.8	100.0	-	-	99.2	98.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	2
% Buses	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.3	-	-	-	0.3	-	0.3	0.0	-	-	0.2	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	4
% Single-Unit Trucks	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	1.3	-	-	-	1.0	-	0.0	0.0	-	-	0.0	0.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	2	0	0	-	2	3
% Articulated Trucks	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.3	-	-	-	0.3	-	0.6	0.0	-	-	0.4	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0	0.3	-	-	-	0.3	-	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Merritt Road
Site Code: 240626
Start Date: 11/07/2024



Turning Movement Peak Hour Data Plot (4:15 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024

Turning Movement Data

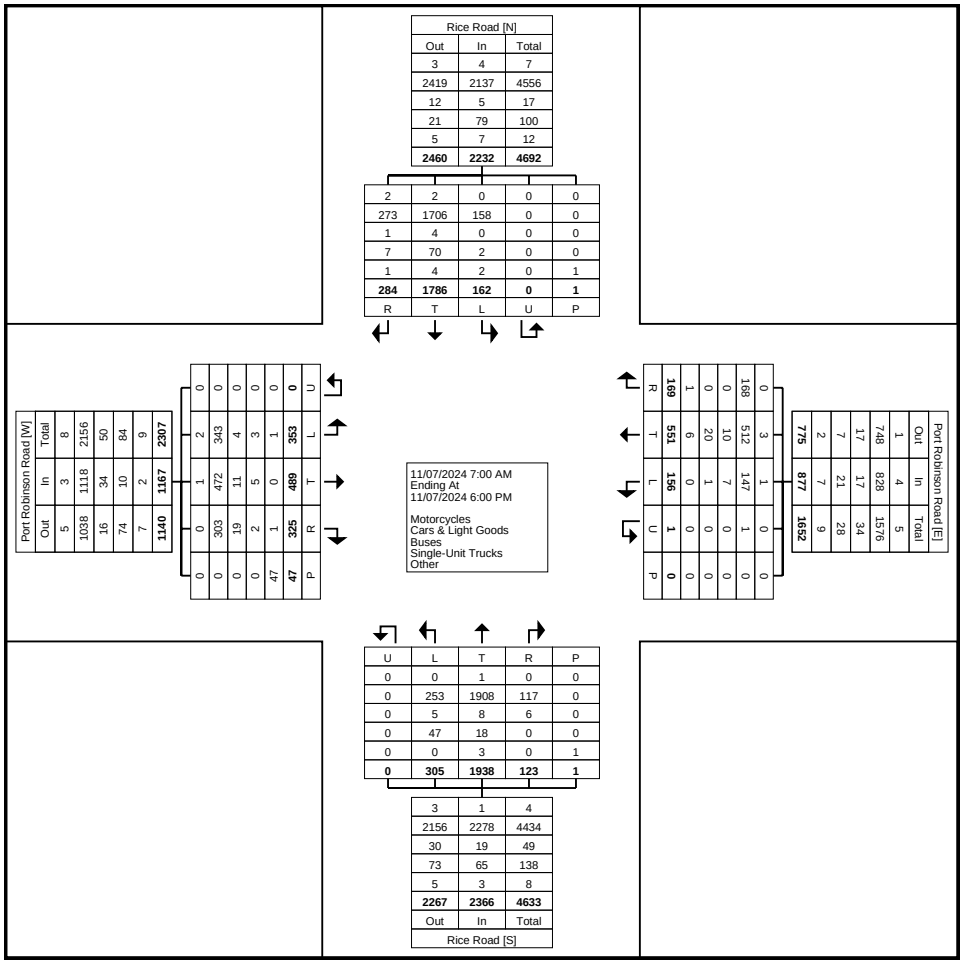
Start Time	Port Robinson Road Eastbound						Port Robinson Road Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	10	10	5	0	2	25	1	11	3	0	0	15	2	56	0	0	0	58	2	21	2	0	0	25	123
7:15 AM	14	6	7	0	3	27	7	10	0	0	0	17	3	71	9	0	0	83	5	28	10	0	0	43	170
7:30 AM	17	21	10	0	1	48	4	16	6	0	0	26	10	109	6	0	0	125	4	41	7	0	0	52	251
7:45 AM	12	14	13	0	2	39	1	14	3	0	0	18	12	106	6	0	0	124	5	45	4	0	0	54	235
Hourly Total	53	51	35	0	8	139	13	51	12	0	0	76	27	342	21	0	0	390	16	135	23	0	0	174	779
8:00 AM	17	17	9	0	12	43	3	22	5	0	0	30	12	103	6	0	0	121	5	56	10	0	0	71	265
8:15 AM	14	26	26	0	2	66	4	32	7	0	0	43	27	81	7	0	0	115	6	56	8	0	0	70	294
8:30 AM	32	35	16	0	1	83	4	13	6	0	0	23	18	95	8	0	0	121	5	52	8	0	0	65	292
8:45 AM	15	17	13	0	1	45	1	22	8	0	0	31	15	82	7	0	0	104	4	60	13	0	0	77	257
Hourly Total	78	95	64	0	16	237	12	89	26	0	0	127	72	361	28	0	0	461	20	224	39	0	0	283	1108
9:00 AM	16	22	23	0	3	61	5	13	11	0	0	29	9	77	8	0	0	94	1	60	6	0	0	67	251
9:15 AM	19	20	10	0	2	49	4	7	9	0	0	20	10	71	4	0	0	85	5	54	4	0	0	63	217
9:30 AM	16	10	11	0	1	37	2	11	3	0	0	16	7	73	2	0	0	82	9	42	6	0	0	57	192
9:45 AM	11	13	10	0	1	34	5	19	4	0	0	28	14	64	2	0	0	80	4	63	9	0	1	76	218
Hourly Total	62	65	54	0	7	181	16	50	27	0	0	93	40	285	16	0	0	341	19	219	25	0	1	263	878
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	7	25	15	0	1	47	9	27	5	1	0	42	18	67	7	0	0	92	16	65	10	0	0	91	272
3:15 PM	14	19	13	0	1	46	11	31	7	0	0	49	22	73	4	0	0	99	9	103	21	0	0	133	327
3:30 PM	17	15	20	0	2	52	8	31	6	0	0	45	17	88	10	0	0	115	8	106	18	0	0	132	344
3:45 PM	14	18	18	0	0	50	11	32	9	0	0	52	13	90	5	0	0	108	11	93	14	0	0	118	328
Hourly Total	52	77	66	0	4	195	39	121	27	1	0	188	70	318	26	0	0	414	44	367	63	0	0	474	1271
4:00 PM	19	20	14	0	0	53	10	30	4	0	0	44	16	73	7	0	0	96	11	109	16	0	0	136	329
4:15 PM	16	29	15	0	0	60	10	33	12	0	0	55	13	80	4	0	0	97	9	93	17	0	0	119	331
4:30 PM	9	21	18	0	2	48	12	37	8	0	0	57	14	120	4	0	0	138	7	100	15	0	0	122	365
4:45 PM	14	29	8	0	1	51	12	31	12	0	0	55	13	86	10	0	1	109	7	111	22	0	0	140	355
Hourly Total	58	99	55	0	3	212	44	131	36	0	0	211	56	359	25	0	1	440	34	413	70	0	0	517	1380
5:00 PM	14	32	18	0	6	64	10	43	10	0	0	63	14	74	2	0	0	90	14	110	15	0	0	139	356
5:15 PM	11	28	12	0	2	51	11	24	10	0	0	45	8	74	1	0	0	83	6	103	13	0	0	122	301
5:30 PM	15	23	11	0	1	49	8	18	6	0	0	32	13	60	1	0	0	74	3	114	17	0	0	134	289
5:45 PM	10	19	10	0	0	39	3	24	15	0	0	42	5	65	3	0	0	73	6	101	19	0	0	126	280
Hourly Total	50	102	51	0	9	203	32	109	41	0	0	182	40	273	7	0	0	320	29	428	64	0	0	521	1226
Grand Total	353	489	325	0	47	1167	156	551	169	1	0	877	305	1938	123	0	1	2366	162	1786	284	0	1	2232	6642
Approach %	30.2	41.9	27.8	0.0	-	-	17.8	62.8	19.3	0.1	-	-	12.9	81.9	5.2	0.0	-	-	7.3	80.0	12.7	0.0	-	-	-
Total %	5.3	7.4	4.9	0.0	-	17.6	2.3	8.3	2.5	0.0	-	13.2	4.6	29.2	1.9	0.0	-	35.6	2.4	26.9	4.3	0.0	-	33.6	-
Motorcycles	2	1	0	0	-	3	1	3	0	0	-	4	0	1	0	0	-	1	0	2	2	0	-	4	12

% Motorcycles	0.6	0.2	0.0	-	-	0.3	0.6	0.5	0.0	0.0	-	0.5	0.0	0.1	0.0	-	-	0.0	0.0	0.1	0.7	-	-	0.2	0.2
Cars & Light Goods	343	472	303	0	-	1118	147	512	168	1	-	828	253	1908	117	0	-	2278	158	1706	273	0	-	2137	6361
% Cars & Light Goods	97.2	96.5	93.2	-	-	95.8	94.2	92.9	99.4	100.0	-	94.4	83.0	98.5	95.1	-	-	96.3	97.5	95.5	96.1	-	-	95.7	95.8
Buses	4	11	19	0	-	34	7	10	0	0	-	17	5	8	6	0	-	19	0	4	1	0	-	5	75
% Buses	1.1	2.2	5.8	-	-	2.9	4.5	1.8	0.0	0.0	-	1.9	1.6	0.4	4.9	-	-	0.8	0.0	0.2	0.4	-	-	0.2	1.1
Single-Unit Trucks	3	5	2	0	-	10	1	20	0	0	-	21	47	18	0	0	-	65	2	70	7	0	-	79	175
% Single-Unit Trucks	0.8	1.0	0.6	-	-	0.9	0.6	3.6	0.0	0.0	-	2.4	15.4	0.9	0.0	-	-	2.7	1.2	3.9	2.5	-	-	3.5	2.6
Articulated Trucks	1	0	1	0	-	2	0	1	1	0	-	2	0	3	0	0	-	3	2	4	1	0	-	7	14
% Articulated Trucks	0.3	0.0	0.3	-	-	0.2	0.0	0.2	0.6	0.0	-	0.2	0.0	0.2	0.0	-	-	0.1	1.2	0.2	0.4	-	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	5	0	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	5
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.9	0.0	0.0	-	0.6	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	6.4	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	-	44	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	93.6	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024

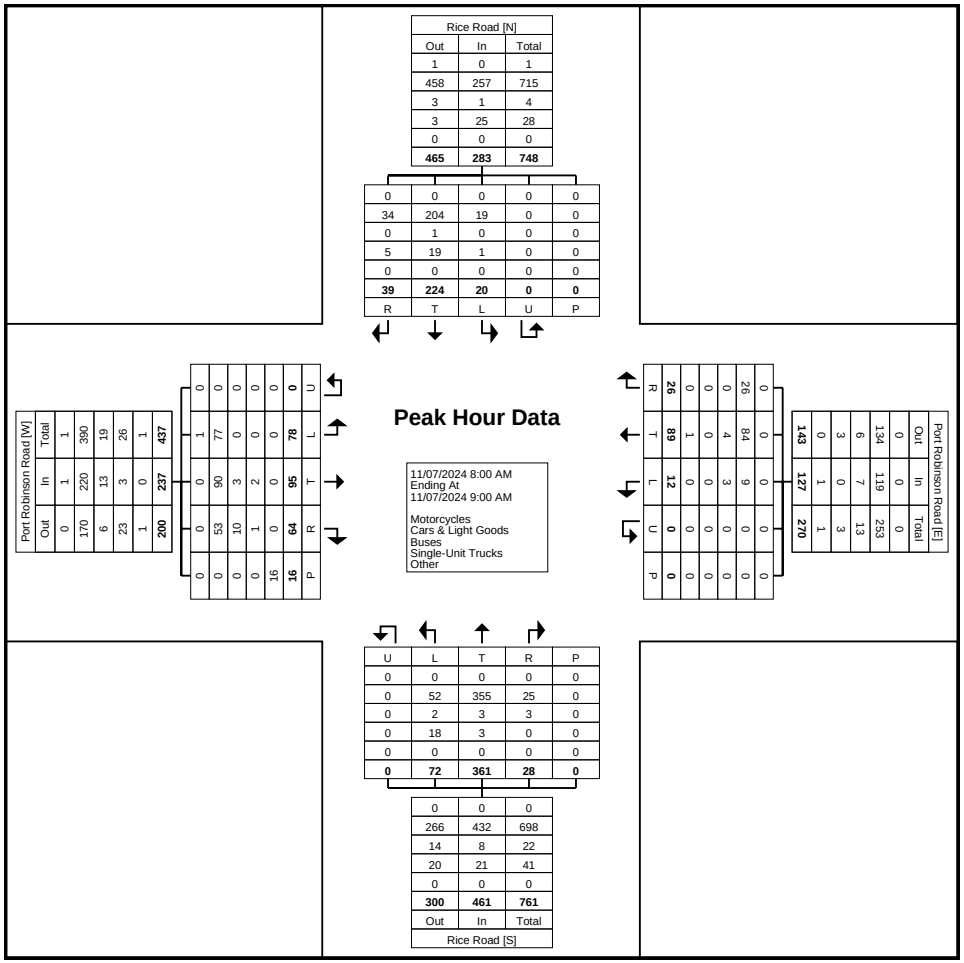
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Port Robinson Road Eastbound						Port Robinson Road Westbound						Rice Road Northbound						Rice Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	17	17	9	0	12	43	3	22	5	0	0	30	12	103	6	0	0	121	5	56	10	0	0	71	265
8:15 AM	14	26	26	0	2	66	4	32	7	0	0	43	27	81	7	0	0	115	6	56	8	0	0	70	294
8:30 AM	32	35	16	0	1	83	4	13	6	0	0	23	18	95	8	0	0	121	5	52	8	0	0	65	292
8:45 AM	15	17	13	0	1	45	1	22	8	0	0	31	15	82	7	0	0	104	4	60	13	0	0	77	257
Total	78	95	64	0	16	237	12	89	26	0	0	127	72	361	28	0	0	461	20	224	39	0	0	283	1108
Approach %	32.9	40.1	27.0	0.0	-	-	9.4	70.1	20.5	0.0	-	-	15.6	78.3	6.1	0.0	-	-	7.1	79.2	13.8	0.0	-	-	-
Total %	7.0	8.6	5.8	0.0	-	21.4	1.1	8.0	2.3	0.0	-	11.5	6.5	32.6	2.5	0.0	-	41.6	1.8	20.2	3.5	0.0	-	25.5	-
PHF	0.609	0.679	0.615	0.000	-	0.714	0.750	0.695	0.813	0.000	-	0.738	0.667	0.876	0.875	0.000	-	0.952	0.833	0.933	0.750	0.000	-	0.919	0.942
Motorcycles	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Motorcycles	1.3	0.0	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	77	90	53	0	-	220	9	84	26	0	-	119	52	355	25	0	-	432	19	204	34	0	-	257	1028
% Cars & Light Goods	98.7	94.7	82.8	-	-	92.8	75.0	94.4	100.0	-	-	93.7	72.2	98.3	89.3	-	-	93.7	95.0	91.1	87.2	-	-	90.8	92.8
Buses	0	3	10	0	-	13	3	4	0	0	-	7	2	3	3	0	-	8	0	1	0	0	-	1	29
% Buses	0.0	3.2	15.6	-	-	5.5	25.0	4.5	0.0	-	-	5.5	2.8	0.8	10.7	-	-	1.7	0.0	0.4	0.0	-	-	0.4	2.6
Single-Unit Trucks	0	2	1	0	-	3	0	0	0	0	-	0	18	3	0	0	-	21	1	19	5	0	-	25	49
% Single-Unit Trucks	0.0	2.1	1.6	-	-	1.3	0.0	0.0	0.0	-	-	0.0	25.0	0.8	0.0	-	-	4.6	5.0	8.5	12.8	-	-	8.8	4.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	1.1	0.0	-	-	0.8	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024



Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024

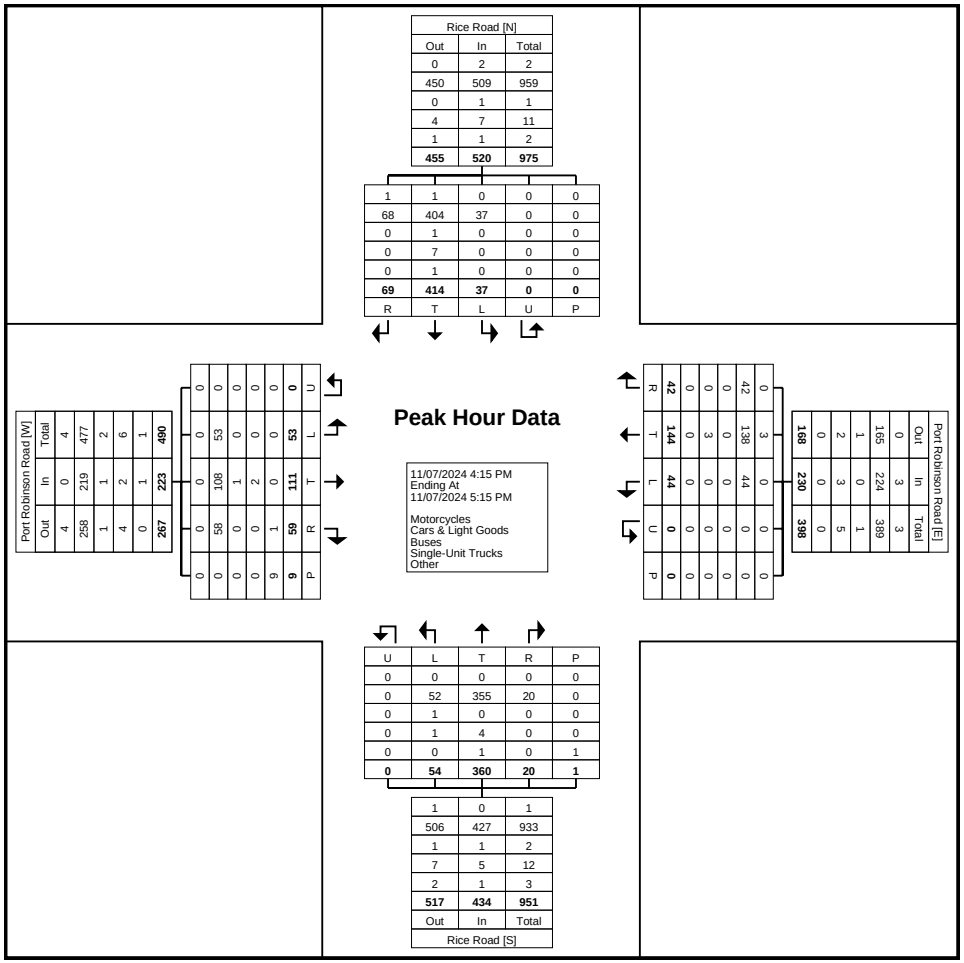
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Port Robinson Road Eastbound						Port Robinson Road Westbound						Rice Road Northbound						Rice Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:15 PM	16	29	15	0	0	60	10	33	12	0	0	55	13	80	4	0	0	97	9	93	17	0	0	119	331
4:30 PM	9	21	18	0	2	48	12	37	8	0	0	57	14	120	4	0	0	138	7	100	15	0	0	122	365
4:45 PM	14	29	8	0	1	51	12	31	12	0	0	55	13	86	10	0	1	109	7	111	22	0	0	140	355
5:00 PM	14	32	18	0	6	64	10	43	10	0	0	63	14	74	2	0	0	90	14	110	15	0	0	139	356
Total	53	111	59	0	9	223	44	144	42	0	0	230	54	360	20	0	1	434	37	414	69	0	0	520	1407
Approach %	23.8	49.8	26.5	0.0	-	-	19.1	62.6	18.3	0.0	-	-	12.4	82.9	4.6	0.0	-	-	7.1	79.6	13.3	0.0	-	-	-
Total %	3.8	7.9	4.2	0.0	-	15.8	3.1	10.2	3.0	0.0	-	16.3	3.8	25.6	1.4	0.0	-	30.8	2.6	29.4	4.9	0.0	-	37.0	-
PHF	0.828	0.867	0.819	0.000	-	0.871	0.917	0.837	0.875	0.000	-	0.913	0.964	0.750	0.500	0.000	-	0.786	0.661	0.932	0.784	0.000	-	0.929	0.964
Motorcycles	0	0	0	0	-	0	0	3	0	0	-	3	0	0	0	0	-	0	0	1	1	0	-	2	5
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	2.1	0.0	-	-	1.3	0.0	0.0	0.0	-	-	0.0	0.0	0.2	1.4	-	-	0.4	0.4
Cars & Light Goods	53	108	58	0	-	219	44	138	42	0	-	224	52	355	20	0	-	427	37	404	68	0	-	509	1379
% Cars & Light Goods	100.0	97.3	98.3	-	-	98.2	100.0	95.8	100.0	-	-	97.4	96.3	98.6	100.0	-	-	98.4	100.0	97.6	98.6	-	-	97.9	98.0
Buses	0	1	0	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	0	1	0	0	-	1	3
% Buses	0.0	0.9	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	1.9	0.0	0.0	-	-	0.2	0.0	0.2	0.0	-	-	0.2	0.2
Single-Unit Trucks	0	2	0	0	-	2	0	3	0	0	-	3	1	4	0	0	-	5	0	7	0	0	-	7	17
% Single-Unit Trucks	0.0	1.8	0.0	-	-	0.9	0.0	2.1	0.0	-	-	1.3	1.9	1.1	0.0	-	-	1.2	0.0	1.7	0.0	-	-	1.3	1.2
Articulated Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	1	0	0	-	1	3
% Articulated Trucks	0.0	0.0	1.7	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.0	0.2	0.0	-	-	0.2	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Port Robinson Road
Site Code: 240626
Start Date: 11/07/2024
Page No: 7



Turning Movement Peak Hour Data Plot (4:15 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024

Turning Movement Data

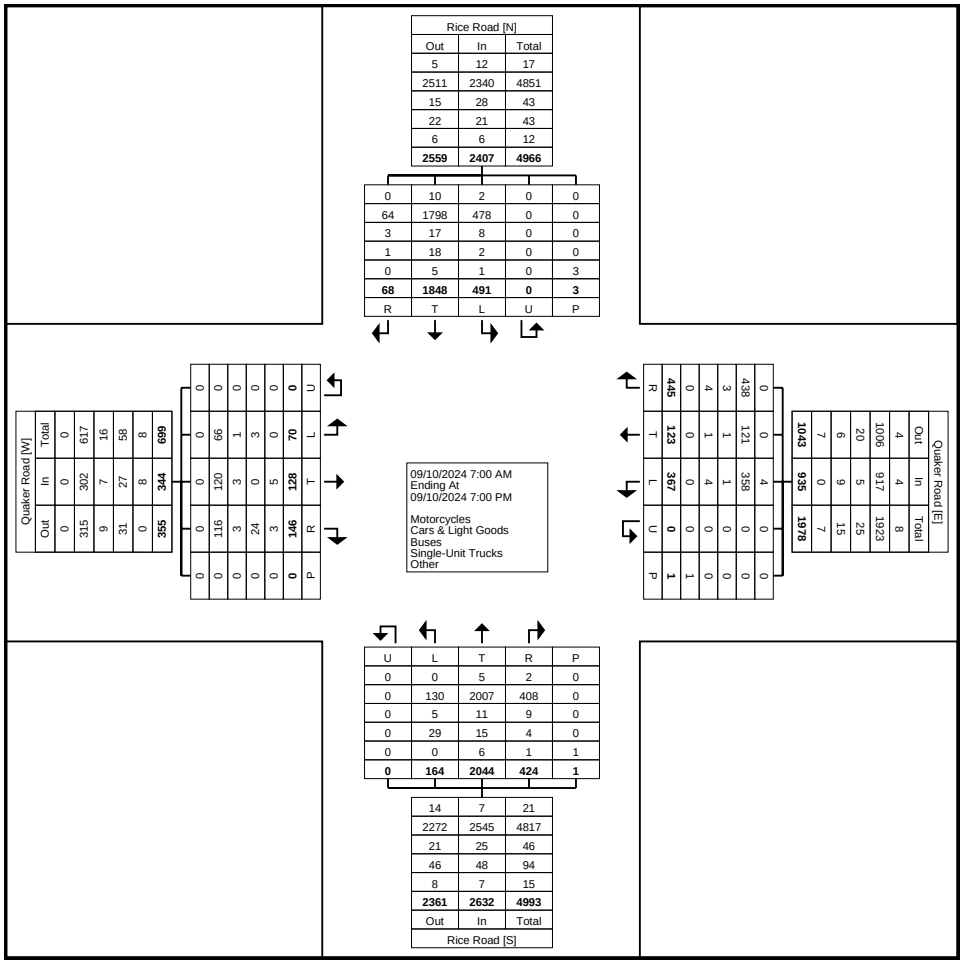
Start Time	Quaker Road Eastbound						Quaker Road Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	6	2	0	0	8	3	2	1	0	0	6	3	19	6	0	0	28	5	23	0	0	0	28	70
7:15 AM	1	3	6	0	0	10	5	3	3	0	0	11	6	47	10	0	0	63	5	24	1	0	0	30	114
7:30 AM	4	4	5	0	0	13	8	3	5	0	0	16	7	53	7	0	0	67	11	31	4	0	0	46	142
7:45 AM	6	5	0	0	0	11	3	6	7	0	0	16	7	53	10	0	0	70	12	49	5	0	0	66	163
Hourly Total	11	18	13	0	0	42	19	14	16	0	0	49	23	172	33	0	0	228	33	127	10	0	0	170	489
8:00 AM	8	17	16	0	0	41	9	14	10	0	0	33	14	66	10	0	0	90	15	56	2	0	0	73	237
8:15 AM	4	7	7	0	0	18	14	5	12	0	0	31	5	57	10	0	0	72	8	75	1	0	1	84	205
8:30 AM	2	1	1	0	0	4	12	0	7	0	0	19	3	53	11	0	0	67	16	58	2	0	0	76	166
8:45 AM	3	1	5	0	0	9	18	3	13	0	0	34	2	56	14	0	0	72	16	56	4	0	1	76	191
Hourly Total	17	26	29	0	0	72	53	22	42	0	0	117	24	232	45	0	0	301	55	245	9	0	2	309	799
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	1	1	0	0	3	7	2	17	0	0	26	2	45	10	0	0	57	13	41	2	0	0	56	142
11:15 AM	1	2	1	0	0	4	10	1	12	0	0	23	5	57	15	0	0	77	17	47	0	0	0	64	168
11:30 AM	1	3	2	0	0	6	11	2	20	0	0	33	4	52	16	0	0	72	12	43	2	0	0	57	168
11:45 AM	2	3	3	0	0	8	12	2	20	0	0	34	9	51	7	0	0	67	14	31	1	0	0	46	155
Hourly Total	5	9	7	0	0	21	40	7	69	0	0	116	20	205	48	0	0	273	56	162	5	0	0	223	633
12:00 PM	0	6	5	0	0	11	11	1	21	0	0	33	2	47	8	0	0	57	16	39	1	0	0	56	157
12:15 PM	1	2	2	0	0	5	12	2	13	0	0	27	8	61	13	0	0	82	19	61	2	0	0	82	196
12:30 PM	0	2	4	0	0	6	6	1	17	0	0	24	4	59	20	0	0	83	15	46	0	0	0	61	174
12:45 PM	0	1	6	0	0	7	16	5	8	0	0	29	3	45	13	0	0	61	12	56	3	0	0	71	168
Hourly Total	1	11	17	0	0	29	45	9	59	0	0	113	17	212	54	0	0	283	62	202	6	0	0	270	695
1:00 PM	2	2	2	0	0	6	8	5	15	0	0	28	0	46	9	0	0	55	19	50	0	0	0	69	158
1:15 PM	2	3	1	0	0	6	13	2	20	0	0	35	1	48	9	0	0	58	16	51	1	0	0	68	167
1:30 PM	0	4	3	0	0	7	7	3	17	0	0	27	8	38	9	0	0	55	12	47	0	0	1	59	148
1:45 PM	3	3	0	0	0	6	14	2	13	0	0	29	3	37	10	0	0	50	18	49	1	0	0	68	153
Hourly Total	7	12	6	0	0	25	42	12	65	0	0	119	12	169	37	0	0	218	65	197	2	0	1	264	626
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	3	1	4	0	0	8	19	3	16	0	0	38	4	63	12	0	0	79	16	46	0	0	0	62	187
3:15 PM	1	1	4	0	0	6	17	4	12	0	0	33	5	79	19	0	0	103	21	69	3	0	0	93	235
3:30 PM	1	3	5	0	0	9	15	5	17	0	0	37	5	90	31	0	1	126	18	57	2	0	0	77	249
3:45 PM	1	5	2	0	0	8	4	5	24	0	0	33	12	80	18	0	0	110	12	57	3	0	0	72	223
Hourly Total	6	10	15	0	0	31	55	17	69	0	0	141	26	312	80	0	1	418	67	229	8	0	0	304	894
4:00 PM	6	3	11	0	0	20	14	8	6	0	0	28	7	69	16	0	0	92	15	64	2	0	0	81	221
4:15 PM	4	7	6	0	0	17	15	5	7	0	0	27	6	80	15	0	0	101	20	77	0	0	0	97	242
4:30 PM	2	8	4	0	0	14	17	8	5	0	0	30	7	93	21	0	0	121	8	66	6	0	0	80	245

4:45 PM	5	6	14	0	0	25	10	4	5	0	0	19	8	81	9	0	0	98	19	67	4	0	0	90	232
Hourly Total	17	24	35	0	0	76	56	25	23	0	0	104	28	323	61	0	0	412	62	274	12	0	0	348	940
5:00 PM	2	6	9	0	0	17	11	4	19	0	0	34	5	67	10	0	0	82	12	78	2	0	0	92	225
5:15 PM	0	2	8	0	0	10	5	3	16	0	0	24	2	52	9	0	0	63	8	71	5	0	0	84	181
5:30 PM	1	3	3	0	0	7	12	2	11	0	0	25	2	78	7	0	0	87	8	61	2	0	0	71	190
5:45 PM	1	0	0	0	0	1	4	2	14	0	1	20	0	47	8	0	0	55	13	35	1	0	0	49	125
Hourly Total	4	11	20	0	0	35	32	11	60	0	1	103	9	244	34	0	0	287	41	245	10	0	0	296	721
6:00 PM	0	5	2	0	0	7	8	3	10	0	0	21	1	42	8	0	0	51	14	50	3	0	0	67	146
6:15 PM	0	0	0	0	0	0	11	1	12	0	0	24	2	47	12	0	0	61	16	45	0	0	0	61	146
6:30 PM	1	1	0	0	0	2	3	1	13	0	0	17	1	41	4	0	0	46	10	38	1	0	0	49	114
6:45 PM	1	1	2	0	0	4	3	1	7	0	0	11	1	45	8	0	0	54	10	34	2	0	0	46	115
Hourly Total	2	7	4	0	0	13	25	6	42	0	0	73	5	175	32	0	0	212	50	167	6	0	0	223	521
Grand Total	70	128	146	0	0	344	367	123	445	0	1	935	164	2044	424	0	1	2632	491	1848	68	0	3	2407	6318
Approach %	20.3	37.2	42.4	0.0	-	-	39.3	13.2	47.6	0.0	-	-	6.2	77.7	16.1	0.0	-	-	20.4	76.8	2.8	0.0	-	-	-
Total %	1.1	2.0	2.3	0.0	-	5.4	5.8	1.9	7.0	0.0	-	14.8	2.6	32.4	6.7	0.0	-	41.7	7.8	29.2	1.1	0.0	-	38.1	-
Motorcycles	0	0	0	0	-	0	4	0	0	0	-	4	0	5	2	0	-	7	2	10	0	0	-	12	23
% Motorcycles	0.0	0.0	0.0	-	-	0.0	1.1	0.0	0.0	-	-	0.4	0.0	0.2	0.5	-	-	0.3	0.4	0.5	0.0	-	-	0.5	0.4
Cars & Light Goods	66	120	116	0	-	302	358	121	438	0	-	917	130	2007	408	0	-	2545	478	1798	64	0	-	2340	6104
% Cars & Light Goods	94.3	93.8	79.5	-	-	87.8	97.5	98.4	98.4	-	-	98.1	79.3	98.2	96.2	-	-	96.7	97.4	97.3	94.1	-	-	97.2	96.6
Buses	1	3	3	0	-	7	1	1	3	0	-	5	5	11	9	0	-	25	8	17	3	0	-	28	65
% Buses	1.4	2.3	2.1	-	-	2.0	0.3	0.8	0.7	-	-	0.5	3.0	0.5	2.1	-	-	0.9	1.6	0.9	4.4	-	-	1.2	1.0
Single-Unit Trucks	3	0	24	0	-	27	4	1	4	0	-	9	29	15	4	0	-	48	2	18	1	0	-	21	105
% Single-Unit Trucks	4.3	0.0	16.4	-	-	7.8	1.1	0.8	0.9	-	-	1.0	17.7	0.7	0.9	-	-	1.8	0.4	1.0	1.5	-	-	0.9	1.7
Articulated Trucks	0	0	3	0	-	3	0	0	0	0	-	0	0	6	0	0	-	6	1	5	0	0	-	6	15
% Articulated Trucks	0.0	0.0	2.1	-	-	0.9	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.2	0.3	0.0	-	-	0.2	0.2
Bicycles on Road	0	5	0	0	-	5	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	6
% Bicycles on Road	0.0	3.9	0.0	-	-	1.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.2	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	66.7	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024



Turning Movement Data Plot

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024

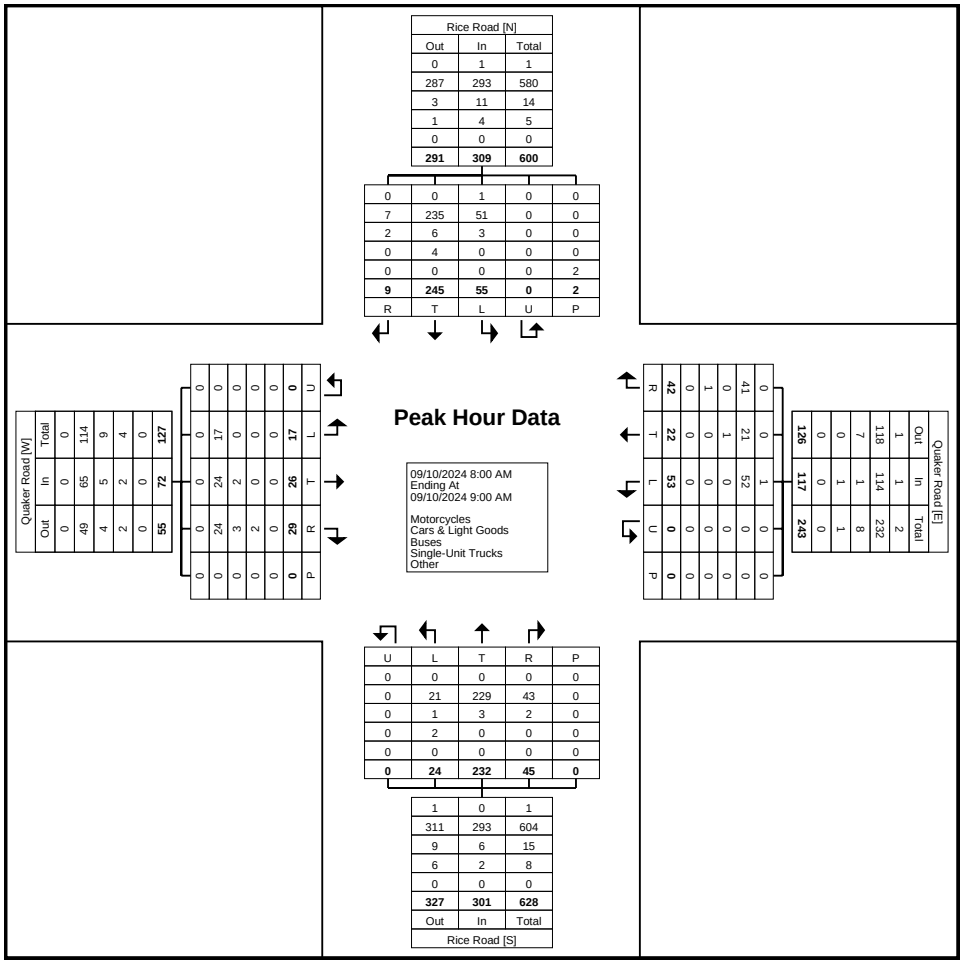
Turning Movement Peak Hour Data (8:00 AM)

Start Time	Quaker Road Eastbound						Quaker Road Westbound						Rice Road Northbound						Rice Road Southbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
8:00 AM	8	17	16	0	0	41	9	14	10	0	0	33	14	66	10	0	0	90	15	56	2	0	0	73	237
8:15 AM	4	7	7	0	0	18	14	5	12	0	0	31	5	57	10	0	0	72	8	75	1	0	1	84	205
8:30 AM	2	1	1	0	0	4	12	0	7	0	0	19	3	53	11	0	0	67	16	58	2	0	0	76	166
8:45 AM	3	1	5	0	0	9	18	3	13	0	0	34	2	56	14	0	0	72	16	56	4	0	1	76	191
Total	17	26	29	0	0	72	53	22	42	0	0	117	24	232	45	0	0	301	55	245	9	0	2	309	799
Approach %	23.6	36.1	40.3	0.0	-	-	45.3	18.8	35.9	0.0	-	-	8.0	77.1	15.0	0.0	-	-	17.8	79.3	2.9	0.0	-	-	-
Total %	2.1	3.3	3.6	0.0	-	9.0	6.6	2.8	5.3	0.0	-	14.6	3.0	29.0	5.6	0.0	-	37.7	6.9	30.7	1.1	0.0	-	38.7	-
PHF	0.531	0.382	0.453	0.000	-	0.439	0.736	0.393	0.808	0.000	-	0.860	0.429	0.879	0.804	0.000	-	0.836	0.859	0.817	0.563	0.000	-	0.920	0.843
Motorcycles	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1	0	0	0	-	1	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	1.9	0.0	0.0	-	-	0.9	0.0	0.0	0.0	-	-	0.0	1.8	0.0	0.0	-	-	0.3	0.3
Cars & Light Goods	17	24	24	0	-	65	52	21	41	0	-	114	21	229	43	0	-	293	51	235	7	0	-	293	765
% Cars & Light Goods	100.0	92.3	82.8	-	-	90.3	98.1	95.5	97.6	-	-	97.4	87.5	98.7	95.6	-	-	97.3	92.7	95.9	77.8	-	-	94.8	95.7
Buses	0	2	3	0	-	5	0	1	0	0	-	1	1	3	2	0	-	6	3	6	2	0	-	11	23
% Buses	0.0	7.7	10.3	-	-	6.9	0.0	4.5	0.0	-	-	0.9	4.2	1.3	4.4	-	-	2.0	5.5	2.4	22.2	-	-	3.6	2.9
Single-Unit Trucks	0	0	2	0	-	2	0	0	1	0	-	1	2	0	0	0	-	2	0	4	0	0	-	4	9
% Single-Unit Trucks	0.0	0.0	6.9	-	-	2.8	0.0	0.0	2.4	-	-	0.9	8.3	0.0	0.0	-	-	0.7	0.0	1.6	0.0	-	-	1.3	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024



Turning Movement Peak Hour Data Plot (8:00 AM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024

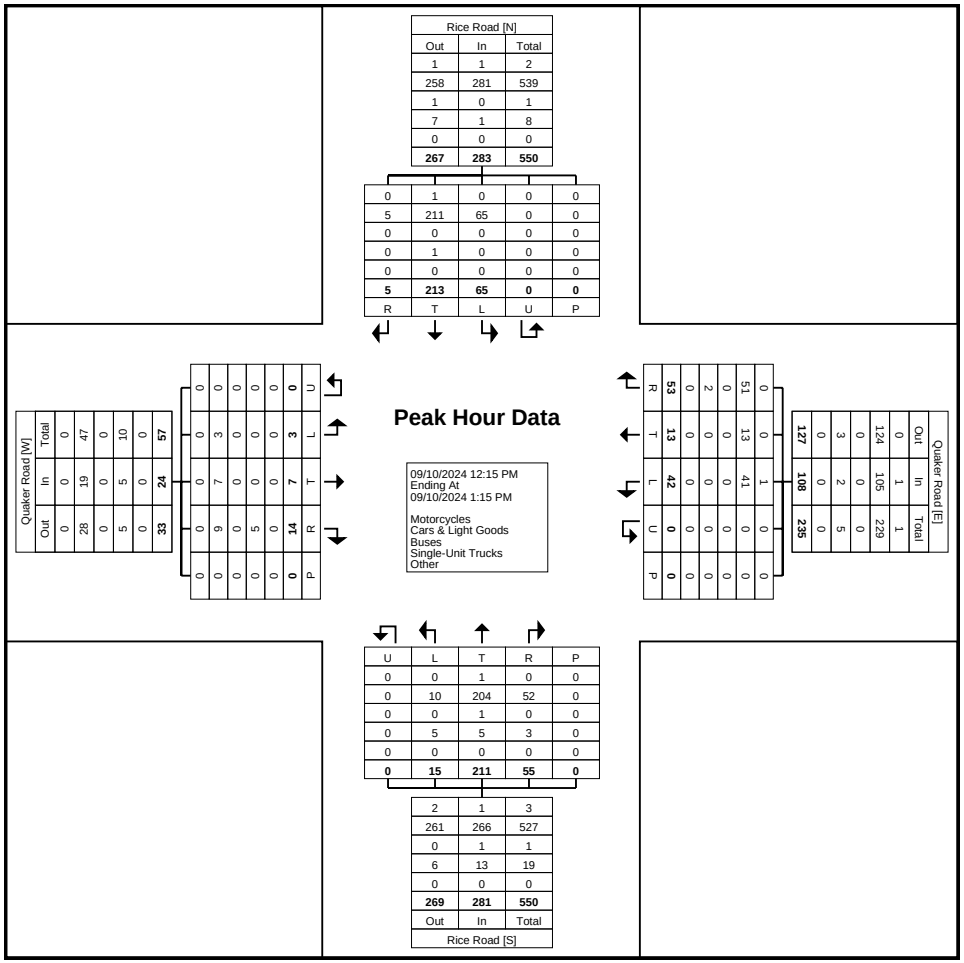
Turning Movement Peak Hour Data (12:15 PM)

Start Time	Quaker Road Eastbound						Quaker Road Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
12:15 PM	1	2	2	0	0	5	12	2	13	0	0	27	8	61	13	0	0	82	19	61	2	0	0	82	196
12:30 PM	0	2	4	0	0	6	6	1	17	0	0	24	4	59	20	0	0	83	15	46	0	0	0	61	174
12:45 PM	0	1	6	0	0	7	16	5	8	0	0	29	3	45	13	0	0	61	12	56	3	0	0	71	168
1:00 PM	2	2	2	0	0	6	8	5	15	0	0	28	0	46	9	0	0	55	19	50	0	0	0	69	158
Total	3	7	14	0	0	24	42	13	53	0	0	108	15	211	55	0	0	281	65	213	5	0	0	283	696
Approach %	12.5	29.2	58.3	0.0	-	-	38.9	12.0	49.1	0.0	-	-	5.3	75.1	19.6	0.0	-	-	23.0	75.3	1.8	0.0	-	-	-
Total %	0.4	1.0	2.0	0.0	-	3.4	6.0	1.9	7.6	0.0	-	15.5	2.2	30.3	7.9	0.0	-	40.4	9.3	30.6	0.7	0.0	-	40.7	-
PHF	0.375	0.875	0.583	0.000	-	0.857	0.656	0.650	0.779	0.000	-	0.931	0.469	0.865	0.688	0.000	-	0.846	0.855	0.873	0.417	0.000	-	0.863	0.888
Motorcycles	0	0	0	0	-	0	1	0	0	0	-	1	0	1	0	0	-	1	0	1	0	0	-	1	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	2.4	0.0	0.0	-	-	0.9	0.0	0.5	0.0	-	-	0.4	0.0	0.5	0.0	-	-	0.4	0.4
Cars & Light Goods	3	7	9	0	-	19	41	13	51	0	-	105	10	204	52	0	-	266	65	211	5	0	-	281	671
% Cars & Light Goods	100.0	100.0	64.3	-	-	79.2	97.6	100.0	96.2	-	-	97.2	66.7	96.7	94.5	-	-	94.7	100.0	99.1	100.0	-	-	99.3	96.4
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	1
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.1
Single-Unit Trucks	0	0	5	0	-	5	0	0	2	0	-	2	5	5	3	0	-	13	0	1	0	0	-	1	21
% Single-Unit Trucks	0.0	0.0	35.7	-	-	20.8	0.0	0.0	3.8	-	-	1.9	33.3	2.4	5.5	-	-	4.6	0.0	0.5	0.0	-	-	0.4	3.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024



Turning Movement Peak Hour Data Plot (12:15 PM)

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024

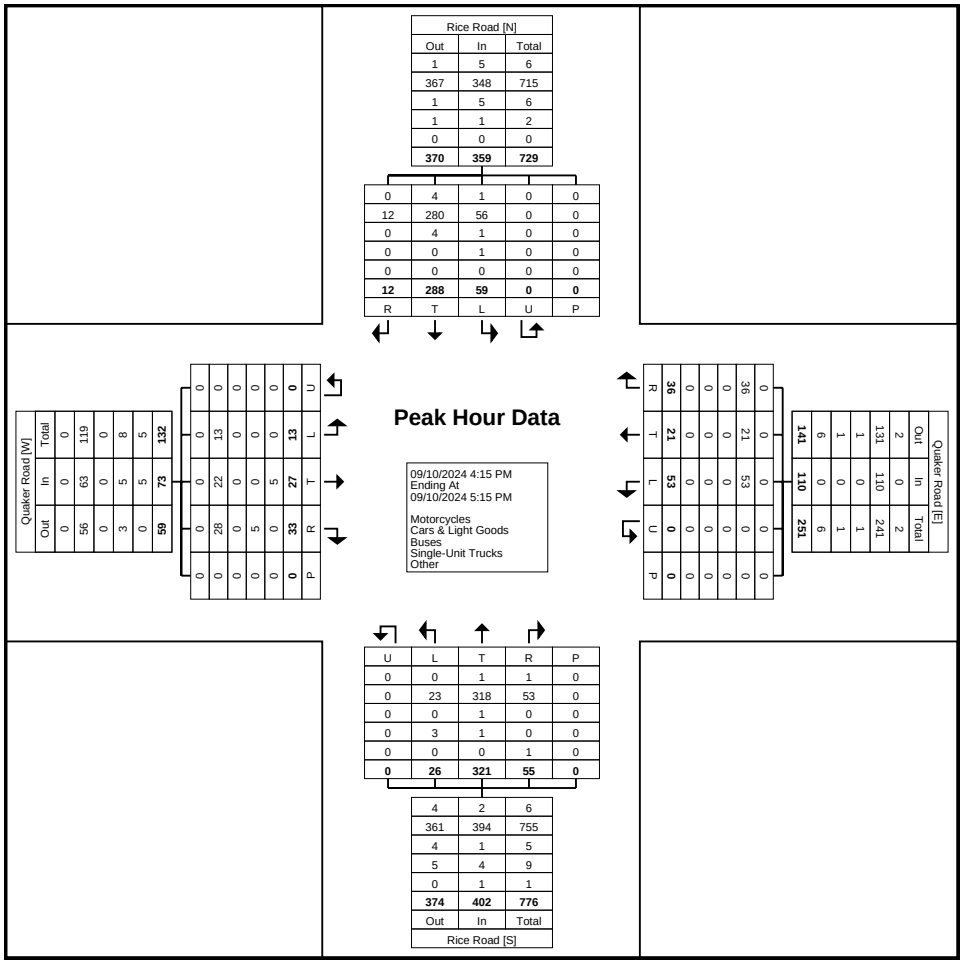
Turning Movement Peak Hour Data (4:15 PM)

Start Time	Quaker Road Eastbound						Quaker Road Westbound						Rice Road Northbound						Rice Road Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:15 PM	4	7	6	0	0	17	15	5	7	0	0	27	6	80	15	0	0	101	20	77	0	0	0	97	242
4:30 PM	2	8	4	0	0	14	17	8	5	0	0	30	7	93	21	0	0	121	8	66	6	0	0	80	245
4:45 PM	5	6	14	0	0	25	10	4	5	0	0	19	8	81	9	0	0	98	19	67	4	0	0	90	232
5:00 PM	2	6	9	0	0	17	11	4	19	0	0	34	5	67	10	0	0	82	12	78	2	0	0	92	225
Total	13	27	33	0	0	73	53	21	36	0	0	110	26	321	55	0	0	402	59	288	12	0	0	359	944
Approach %	17.8	37.0	45.2	0.0	-	-	48.2	19.1	32.7	0.0	-	-	6.5	79.9	13.7	0.0	-	-	16.4	80.2	3.3	0.0	-	-	-
Total %	1.4	2.9	3.5	0.0	-	7.7	5.6	2.2	3.8	0.0	-	11.7	2.8	34.0	5.8	0.0	-	42.6	6.3	30.5	1.3	0.0	-	38.0	-
PHF	0.650	0.844	0.589	0.000	-	0.730	0.779	0.656	0.474	0.000	-	0.809	0.813	0.863	0.655	0.000	-	0.831	0.738	0.923	0.500	0.000	-	0.925	0.963
Motorcycles	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	-	2	1	4	0	0	-	5	7
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.3	1.8	-	-	0.5	1.7	1.4	0.0	-	-	1.4	0.7
Cars & Light Goods	13	22	28	0	-	63	53	21	36	0	-	110	23	318	53	0	-	394	56	280	12	0	-	348	915
% Cars & Light Goods	100.0	81.5	84.8	-	-	86.3	100.0	100.0	100.0	-	-	100.0	88.5	99.1	96.4	-	-	98.0	94.9	97.2	100.0	-	-	96.9	96.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1	4	0	0	-	5	6
% Buses	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	1.7	1.4	0.0	-	-	1.4	0.6
Single-Unit Trucks	0	0	5	0	-	5	0	0	0	0	-	0	3	1	0	0	-	4	1	0	0	0	-	1	10
% Single-Unit Trucks	0.0	0.0	15.2	-	-	6.8	0.0	0.0	0.0	-	-	0.0	11.5	0.3	0.0	-	-	1.0	1.7	0.0	0.0	-	-	0.3	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	5	0	0	-	5	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	6
% Bicycles on Road	0.0	18.5	0.0	-	-	6.8	0.0	0.0	0.0	-	-	0.0	0.0	0.0	1.8	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Paradigm Transportation Solutions Limited
5A-150 Pinebush Rd

Cambridge, Ontario, Canada N1R 8J8
519-896-3163 cbowness@ptsl.com

Count Name: Rice Road & Quaker Road
Site Code: 240535
Start Date: 09/10/2024



Turning Movement Peak Hour Data Plot (4:15 PM)

Signal Code: 054PRT

Intersection: RR54 (Rice Road) & Port Robinson Road

Municipality: pelham

Owner: region

Last Modified: 2021-05-14 9:21:43 AM

Timing Parameters	NBD & SBD THRU RICE	EBD & WBD THRU PORT ROBINSON	n/a	n/a	n/a	n/a
Min Green	10	8	0	0	0	0
Walk	11	11	0	0	0	0
Ped Clearance	19	19	0	0	0	0
Vehicle Ext.	2.5	2.5	0	0	0	0
Max Green	40	30	0	0	0	0
Yellow	4.1	4.1	0	0	0	0
All Red	2.9	2.7	0	0	0	0

		Offset
Minimum Cycle	31.8	0
Pedestrian Cycle	73.8	
Maximum Cycle	83.8	0
Operation	FA	
Installed On:	--/--/----	
Count Date:	--/--/----	

FA = Fully Actuated SA = Semi Actuated FT = Fixed Time

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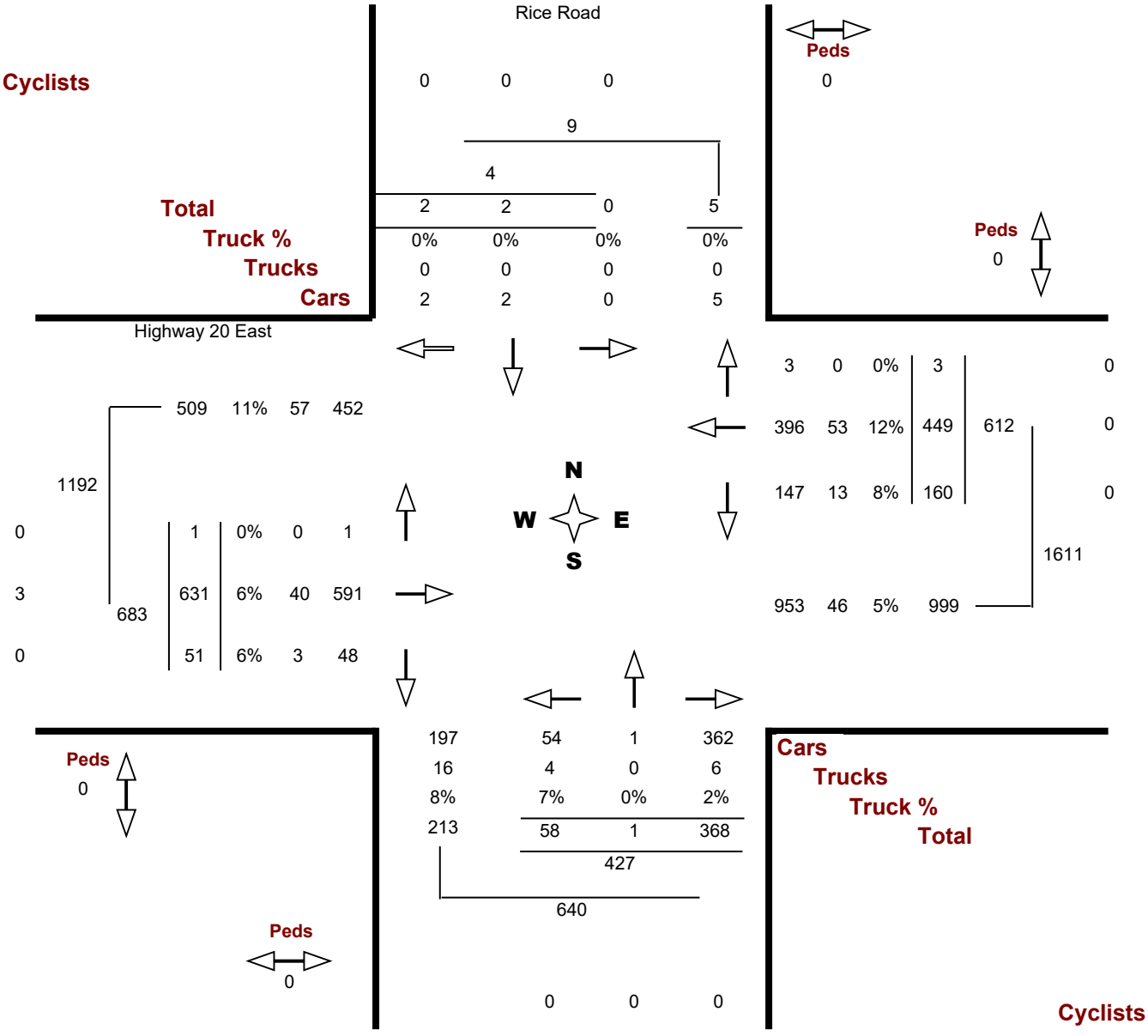
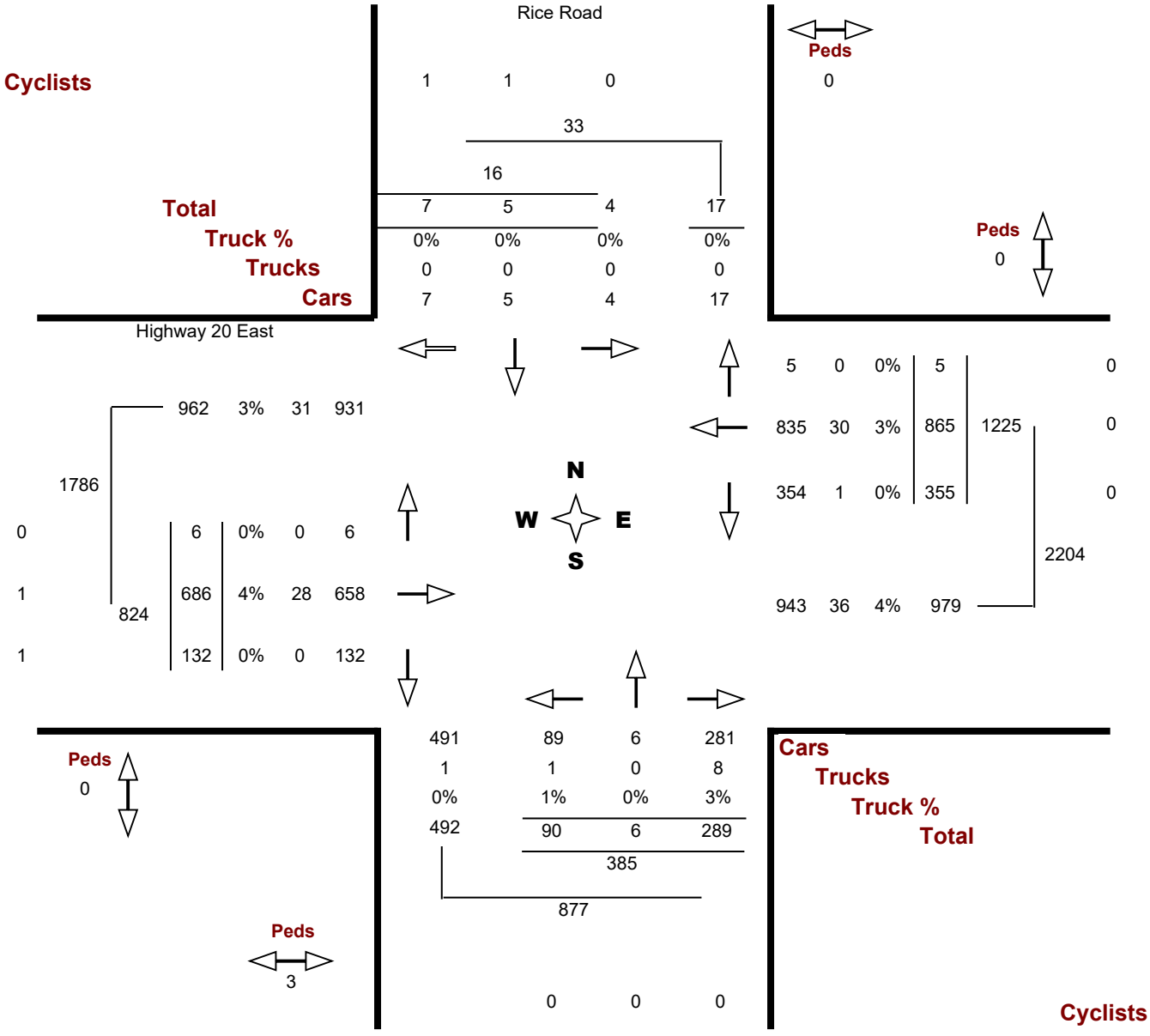
Turning Movements Report - AM Period

Location.....	Highway 20 East @ Rice Road	**GeoID.....**	00389
Municipality.	PELHAM	**Count Date.**	Wednesday, 09 August, 2023
Traffic Cont.	Traffic signal	**Count Time.**	07:00 AM — 09:00 AM
Major Dir.....	East west	**Peak Hour..**	08:00 AM — 09:00 AM



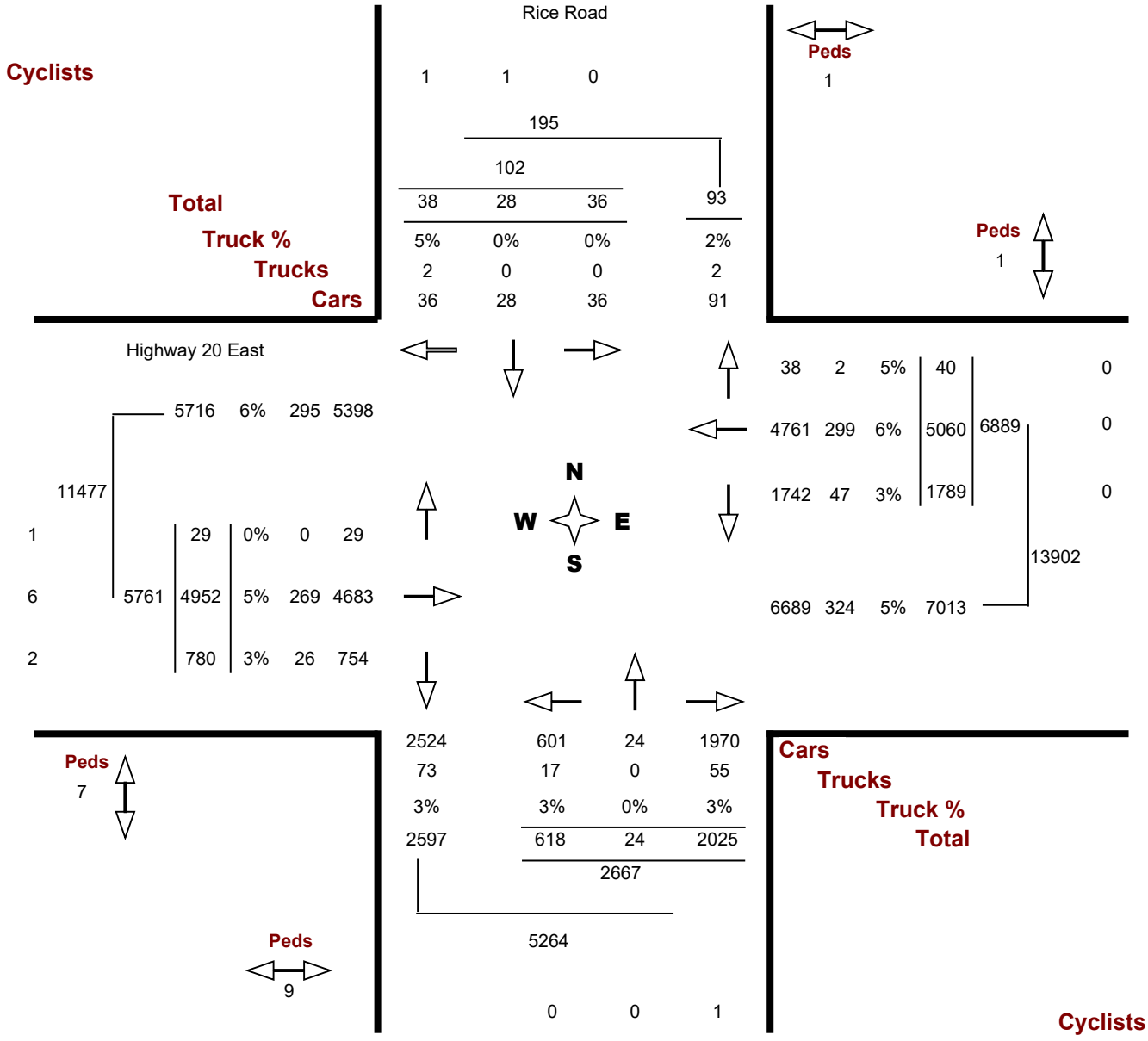
Turning Movements Report - PM Period

Location.....	Highway 20 East @ Rice Road	**GeoID.....**	00389
Municipality.	PELHAM	**Count Date.**	Wednesday, 09 August, 2023
Traffic Cont.	Traffic signal	**Count Time.**	03:00 PM — 06:00 PM
Major Dir.....	East west	**Peak Hour..**	04:00 PM — 05:00 PM



Turning Movement Count Report
Full Study

Location..... Highway 20 East @ Rice Road
Municipality..... PELHAM
GeoID..... 00389
Count Date..... Wednesday, 09 August, 2023



Turning Movement Count - Details Report (15 min)

Location..... Highway 20 East @ Rice Road

Municipality..... PELHAM

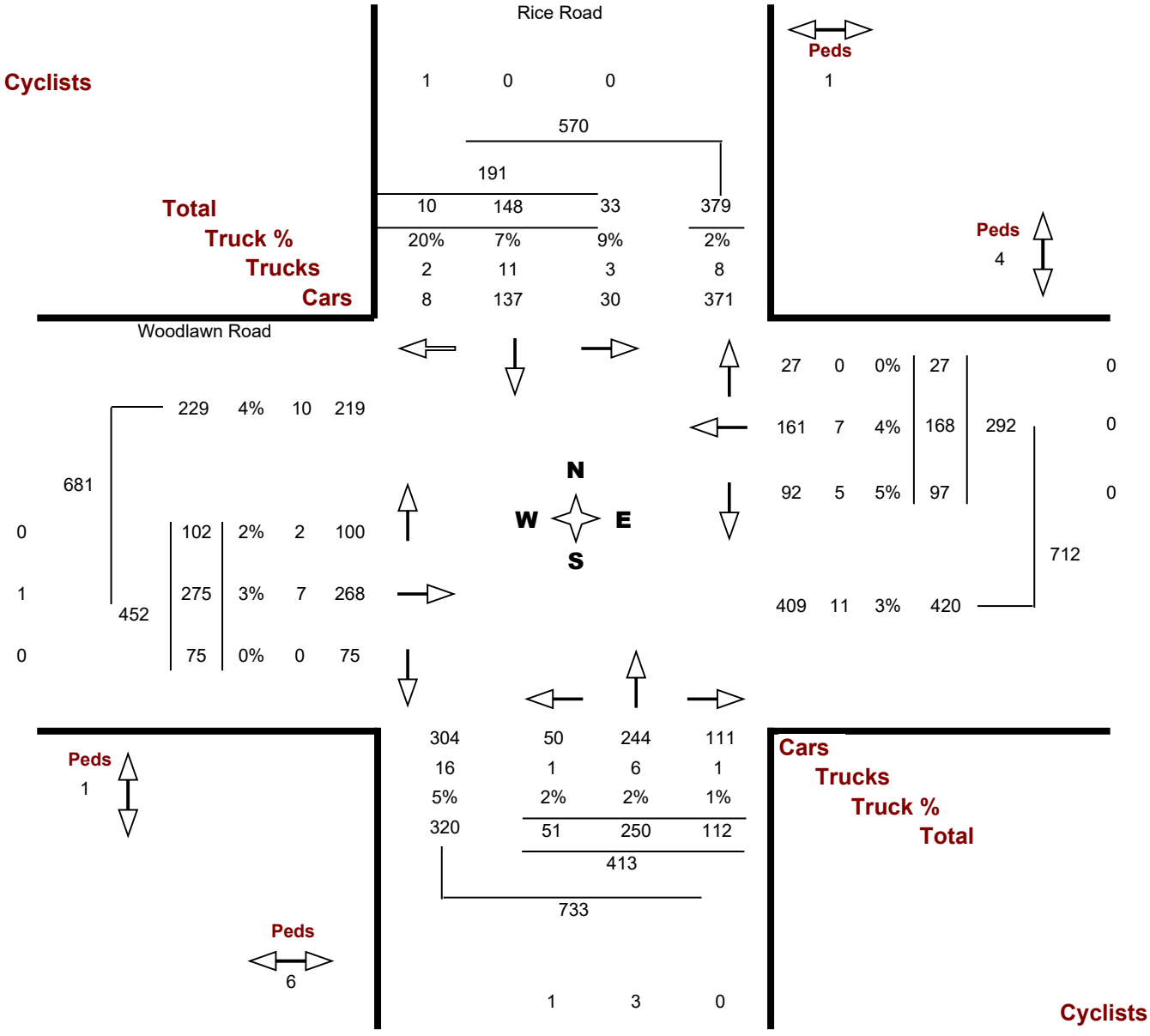
Count Date..... Wednesday, August 09, 2023

		Rice Road										Highway 20 East									
		North Approach					South Approach					East Approach					West Approach				
Time Period		LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
07:00	07:15	0	0	0	0	0	4	0	56	0	60	30	55	0	0	85	0	88	10	0	98
07:15	07:30	0	0	0	0	0	3	0	72	0	75	30	71	1	0	102	0	115	13	0	128
07:30	07:45	0	0	0	0	0	5	2	72	0	79	31	94	0	0	125	0	153	5	0	158
07:45	08:00	0	0	1	0	1	10	0	87	0	97	39	113	3	0	155	1	131	12	0	144
Hourly Total		0	0	1	0	1	22	2	287	0	311	130	333	4	0	467	1	487	40	0	528
08:00	08:15	0	0	0	0	0	9	0	105	0	114	38	81	0	0	119	0	148	7	0	155
08:15	08:30	0	0	2	0	2	10	0	81	0	91	39	116	1	0	156	0	166	11	0	177
08:30	08:45	0	1	0	0	1	17	0	98	0	115	50	130	1	0	181	0	178	16	0	194
08:45	09:00	0	1	0	0	1	22	1	84	0	107	33	122	1	0	156	1	139	17	0	157
Hourly Total		0	2	2	0	4	58	1	368	0	427	160	449	3	0	612	1	631	51	0	683
11:00	11:15	0	0	1	0	1	18	2	48	0	68	42	145	3	0	190	1	135	18	0	154
11:15	11:30	0	1	2	0	3	17	0	49	0	66	31	119	0	0	150	0	144	22	0	166
11:30	11:45	1	1	1	0	3	25	0	49	0	74	54	173	0	0	227	3	161	20	0	184
11:45	12:00	0	0	2	0	2	25	0	67	0	92	49	155	1	0	205	1	174	32	0	207
Hourly Total		1	2	6	0	9	85	2	213	0	300	176	592	4	0	772	5	614	92	0	711
12:00	12:15	1	0	0	0	1	18	0	52	0	70	49	161	1	0	211	1	150	26	0	177
12:15	12:30	4	0	2	0	6	20	3	51	0	74	36	158	4	0	198	2	154	30	0	186
12:30	12:45	1	0	3	0	4	23	0	43	0	66	53	157	1	0	211	1	169	31	0	201
12:45	13:00	3	0	1	0	4	35	3	54	0	92	45	170	0	0	215	1	152	30	0	183
Hourly Total		9	0	6	0	15	96	6	200	0	302	183	646	6	0	835	5	625	117	0	747
13:00	13:15	0	1	0	0	1	16	1	57	0	74	46	135	2	0	183	1	167	35	0	203
13:15	13:30	2	2	2	0	6	20	0	53	0	73	48	157	4	0	209	0	176	25	0	201
13:30	13:45	0	1	2	0	3	25	1	52	0	78	39	169	0	0	208	3	155	25	0	183
13:45	14:00	4	3	0	0	7	28	1	41	0	70	61	138	1	0	200	1	154	32	0	187
Hourly Total		6	7	4	0	17	89	3	203	0	295	194	599	7	0	800	5	652	117	0	774
15:00	15:15	2	2	2	0	6	14	0	63	0	77	50	176	2	0	228	1	153	22	0	176
15:15	15:30	1	1	2	0	4	19	0	46	0	65	62	180	1	0	243	1	132	28	0	161
15:30	15:45	4	3	2	0	9	24	1	65	0	90	63	192	0	0	255	1	153	28	0	182
15:45	16:00	1	0	1	0	2	20	2	55	0	77	67	214	3	0	284	0	163	32	0	195
Hourly Total		8	6	7	0	21	77	3	229	0	309	242	762	6	0	1010	3	601	110	0	714
16:00	16:15	1	3	1	0	5	20	1	95	0	116	71	203	3	0	277	1	193	36	0	230

		Rice Road										Highway 20 East									
		North Approach					South Approach					East Approach					West Approach				
Time Period		LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
16:15	16:30	2	0	1	0	3	22	2	68	0	92	91	217	2	0	310	1	180	32	0	213
16:30	16:45	1	1	1	0	3	22	1	62	0	85	91	231	0	0	322	2	153	32	0	187
16:45	17:00	0	1	4	0	5	26	2	64	0	92	102	214	0	0	316	2	160	32	0	194
Hourly Total		4	5	7	0	16	90	6	289	0	385	355	865	5	0	1225	6	686	132	0	824
17:00	17:15	2	2	0	0	4	27	0	64	0	91	90	214	2	0	306	1	166	27	0	194
17:15	17:30	3	1	3	0	7	26	0	61	0	87	95	187	2	0	284	1	176	29	0	206
17:30	17:45	1	1	1	0	3	15	1	66	0	82	90	232	1	0	323	1	175	35	0	211
17:45	18:00	2	2	1	0	5	33	0	45	0	78	74	181	0	0	255	0	139	30	0	169
Hourly Total		8	6	5	0	19	101	1	236	0	338	349	814	5	0	1168	3	656	121	0	780
Grand Total		36	28	38	0	102	618	24	2025	0	2667	1789	5060	40	0	6889	29	4952	780	0	5761
Truck %		0%	0%	5%	0%	2%	3%	0%	3%	0%	3%	3%	6%	5%	0%	5%	0%	5%	3%	0%	5%

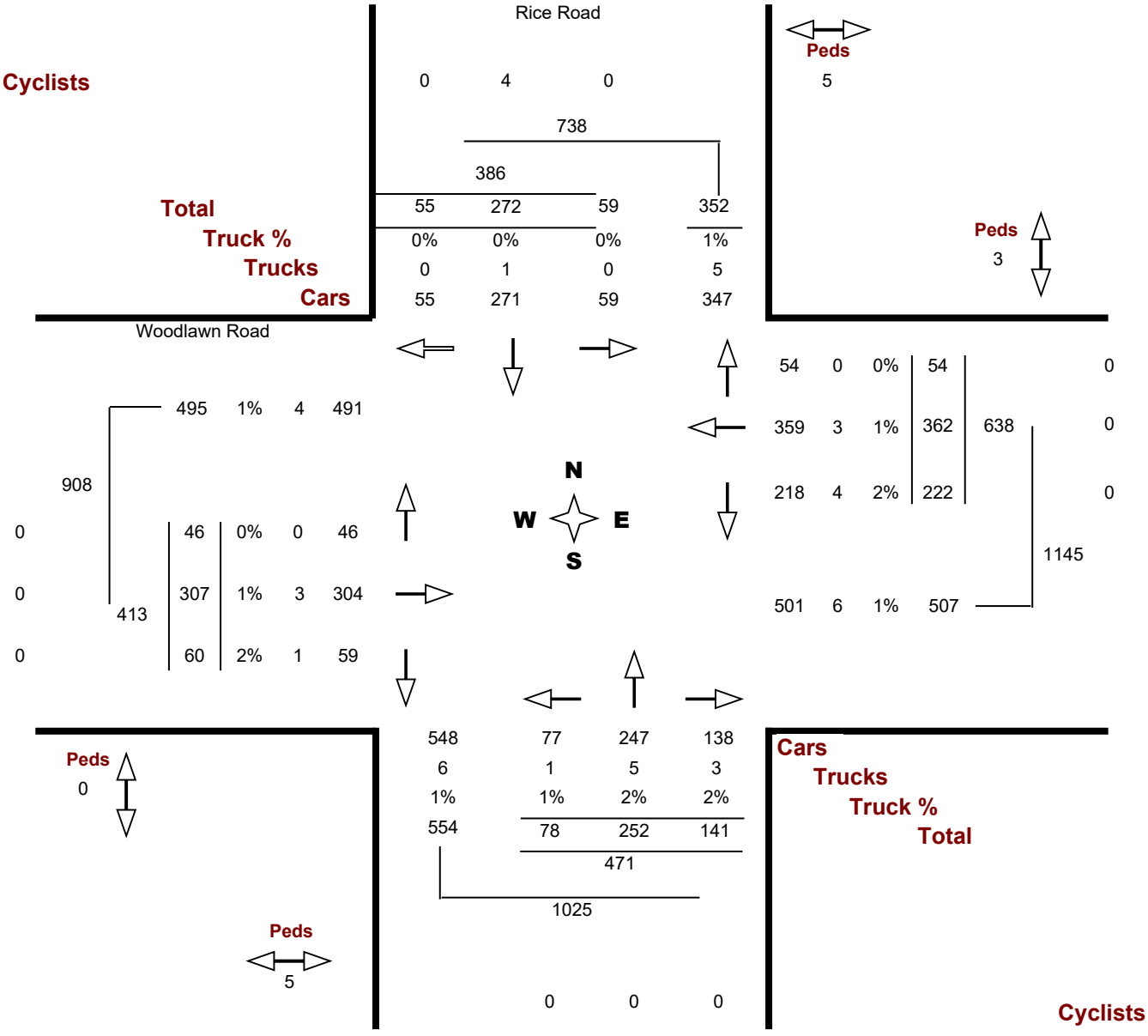
Turning Movements Report - AM Period

Location.....	Rice Road @ Woodlawn Road	**GeoID.....**	00265
Municipality.	WELLAND	**Count Date.**	Wednesday, 09 August, 2023
Traffic Cont.	Traffic signal	**Count Time.**	07:00 AM — 09:00 AM
Major Dir.....	East west	**Peak Hour..**	08:00 AM — 09:00 AM



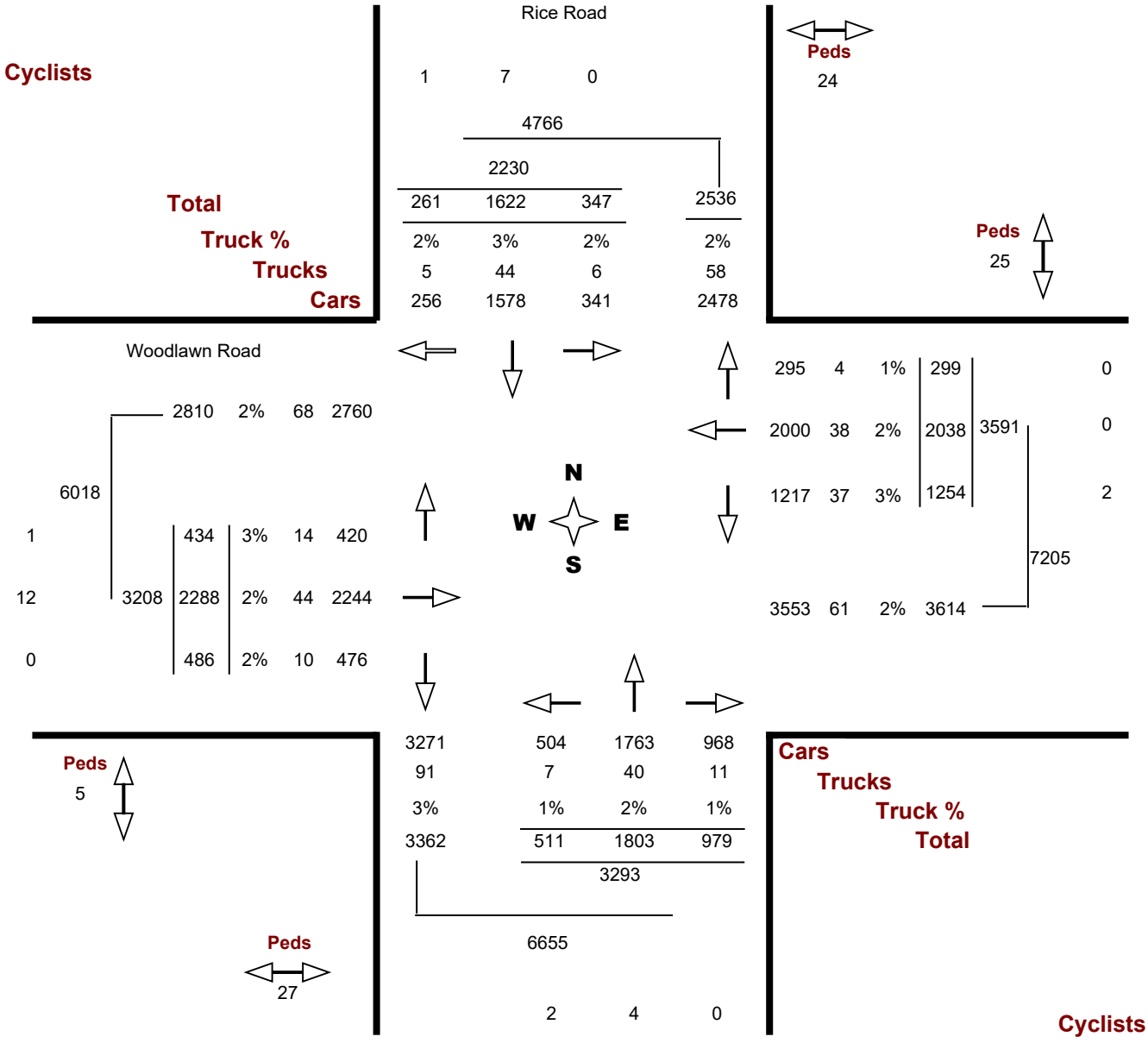
Turning Movements Report - PM Period

Location.....	Rice Road @ Woodlawn Road	**GeoID.....**	00265
Municipality.	WELLAND	**Count Date.**	Wednesday, 09 August, 2023
Traffic Cont.	Traffic signal	**Count Time.**	03:00 PM — 06:00 PM
Major Dir.....	East west	**Peak Hour..**	04:00 PM — 05:00 PM



Turning Movement Count Report
Full Study

Location..... Rice Road @ Woodlawn Road
Municipality..... WELLAND
GeoID..... 00265
Count Date..... Wednesday, 09 August, 2023



Turning Movement Count - Details Report (15 min)

Location..... Rice Road @ Woodlawn Road

Municipality..... WELLAND

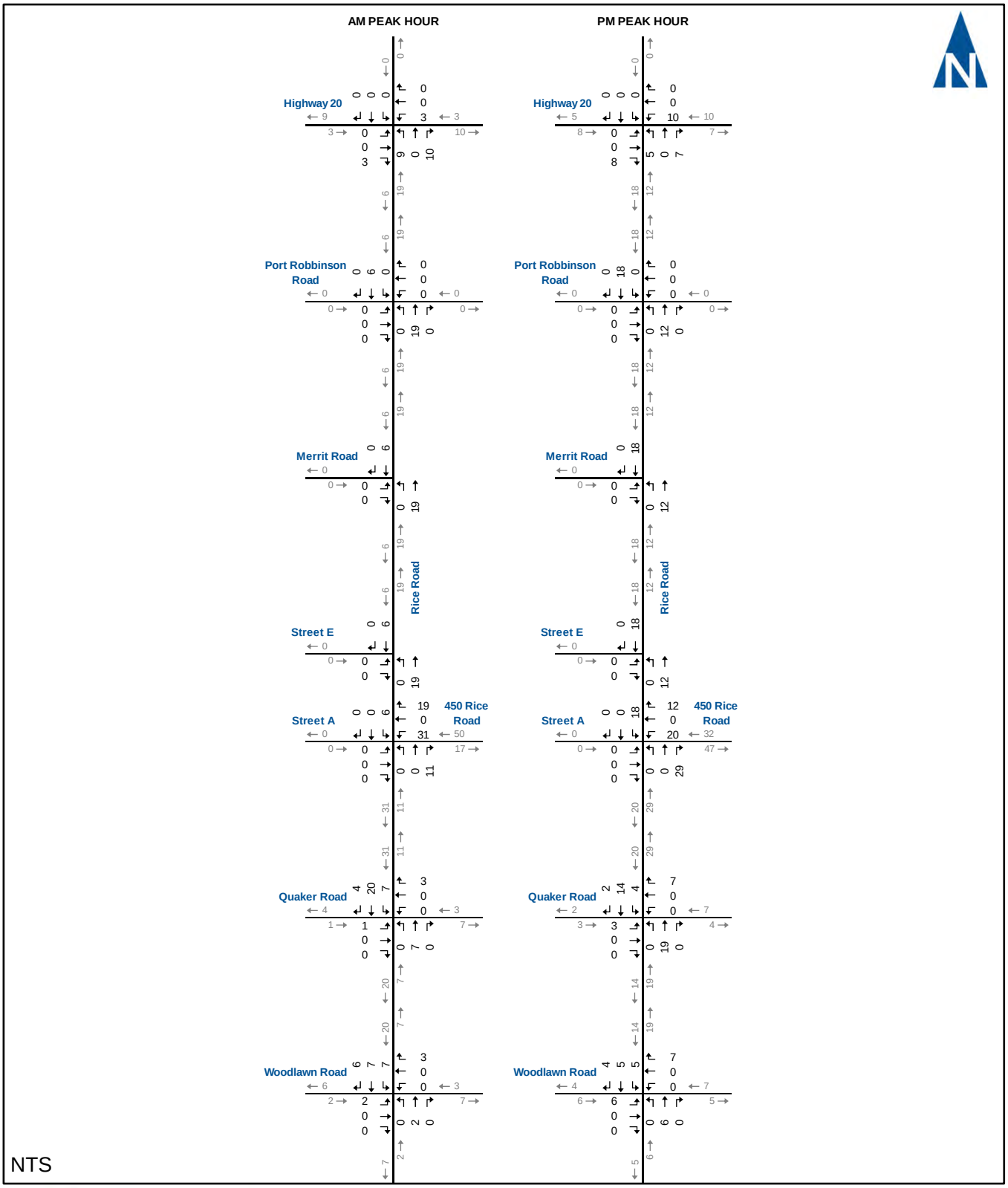
Count Date..... Wednesday, August 09, 2023

		Rice Road										Woodlawn Road									
		North Approach					South Approach					East Approach					West Approach				
Time Period		LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
07:00	07:15	4	15	2	0	21	7	32	17	0	56	15	14	3	0	32	12	38	6	0	56
07:15	07:30	4	18	1	0	23	8	31	23	0	62	12	28	1	0	41	7	56	6	0	69
07:30	07:45	6	34	1	0	41	15	60	24	0	99	16	25	4	0	45	10	68	15	0	93
07:45	08:00	8	27	5	0	40	11	53	21	0	85	14	35	4	0	53	15	75	14	0	104
Hourly Total		22	94	9	0	125	41	176	85	0	302	57	102	12	0	171	44	237	41	0	322
08:00	08:15	9	42	2	0	53	11	66	18	0	95	19	37	5	0	61	34	66	18	0	118
08:15	08:30	6	30	5	0	41	11	53	34	0	98	25	51	7	0	83	24	65	21	0	110
08:30	08:45	12	35	3	0	50	15	69	34	0	118	26	43	6	0	75	17	60	14	0	91
08:45	09:00	6	41	0	0	47	14	62	26	0	102	27	37	9	0	73	27	84	22	0	133
Hourly Total		33	148	10	0	191	51	250	112	0	413	97	168	27	0	292	102	275	75	0	452
11:00	11:15	8	51	8	0	67	14	40	31	0	85	31	63	8	0	102	14	55	12	0	81
11:15	11:30	15	46	10	0	71	9	47	26	0	82	28	54	8	0	90	10	79	17	0	106
11:30	11:45	17	47	5	0	69	19	47	38	0	104	33	52	12	0	97	11	67	15	0	93
11:45	12:00	10	50	8	0	68	18	58	30	0	106	48	55	10	0	113	9	77	13	0	99
Hourly Total		50	194	31	0	275	60	192	125	0	377	140	224	38	0	402	44	278	57	0	379
12:00	12:15	9	36	13	0	58	14	54	37	0	105	34	69	8	0	111	15	97	12	0	124
12:15	12:30	13	53	10	0	76	12	55	26	0	93	46	57	13	0	116	9	74	14	0	97
12:30	12:45	7	51	5	0	63	19	64	32	0	115	42	47	14	0	103	21	88	17	0	126
12:45	13:00	14	54	10	0	78	18	65	38	0	121	51	64	7	0	122	14	77	16	0	107
Hourly Total		43	194	38	0	275	63	238	133	0	434	173	237	42	0	452	59	336	59	0	454
13:00	13:15	12	55	15	0	82	22	50	31	0	103	50	63	13	0	126	14	70	19	0	103
13:15	13:30	9	62	10	0	81	13	67	40	0	120	42	59	6	0	107	13	64	13	0	90
13:30	13:45	10	57	8	0	75	13	56	38	0	107	38	64	7	0	109	22	72	8	0	102
13:45	14:00	10	57	6	0	73	15	56	25	0	96	27	69	8	0	104	13	69	29	0	111
Hourly Total		41	231	39	0	311	63	229	134	0	426	157	255	34	0	446	62	275	69	0	406
15:00	15:15	12	51	4	0	67	20	51	41	0	112	51	82	12	0	145	10	74	8	0	92
15:15	15:30	15	62	10	0	87	23	62	33	0	118	49	83	9	0	141	17	84	13	0	114
15:30	15:45	18	60	6	0	84	18	51	34	0	103	56	67	10	0	133	8	71	11	0	90
15:45	16:00	10	46	8	0	64	21	64	40	0	125	56	107	8	0	171	9	62	10	0	81
Hourly Total		55	219	28	0	302	82	228	148	0	458	212	339	39	0	590	44	291	42	0	377
16:00	16:15	15	67	14	0	96	21	61	41	0	123	54	70	15	0	139	9	65	16	0	90

		Rice Road										Woodlawn Road									
		North Approach					South Approach					East Approach					West Approach				
Time Period		LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT	LT	TH	RT	U-Turn	TOT
16:15	16:30	17	65	15	0	97	20	61	33	0	114	63	99	15	0	177	14	85	13	0	112
16:30	16:45	13	77	14	0	104	16	59	36	0	111	64	92	12	0	168	8	74	19	0	101
16:45	17:00	14	63	12	0	89	21	71	31	0	123	41	101	12	0	154	15	83	12	0	110
Hourly Total		59	272	55	0	386	78	252	141	0	471	222	362	54	0	638	46	307	60	0	413
17:00	17:15	13	69	12	0	94	27	79	34	0	140	39	86	5	0	130	5	59	16	0	80
17:15	17:30	13	65	17	0	95	17	59	21	0	97	58	99	13	0	170	9	75	27	0	111
17:30	17:45	9	57	9	0	75	21	53	22	0	96	48	72	16	0	136	10	83	17	0	110
17:45	18:00	9	79	13	0	101	8	47	24	0	79	51	94	19	0	164	9	72	23	0	104
Hourly Total		44	270	51	0	365	73	238	101	0	412	196	351	53	0	600	33	289	83	0	405
Grand Total		347	1622	261	0	2230	511	1803	979	0	3293	1254	2038	299	0	3591	434	2288	486	0	3208
Truck %		2%	3%	2%	0%	2%	1%	2%	1%	0%	2%	3%	2%	1%	0%	2%	3%	2%	2%	0%	2%

Appendix C

450 Rice Road



450 Rice Road Traffic Volumes

469 & 509 Rice Road
240626

Appendix

Appendix D

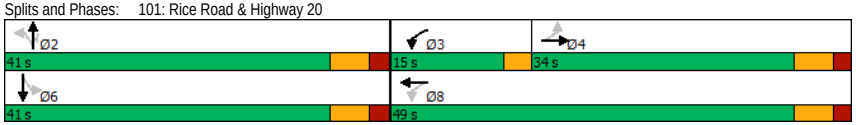
Operational Reports

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	644	52	163	458	3	60	1	380	0	2	2
Future Volume (vph)	1	644	52	163	458	3	60	1	380	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1568	3148	0	1452	3012	0	1466	1776	1248	0	1519	0
Flt Permitted	0.468			0.175			0.755					
Satd. Flow (perm)	773	3148	0	268	3012	0	1165	1776	1248	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				365		2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1143.0			100.9	
Travel Time (s)		21.8			38.3			82.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	700	57	177	498	3	65	1	413	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	757	0	177	501	0	65	1	413	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	30.0	30.0	
Total Split (s)	34.0	34.0		15.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	37.8%	37.8%		16.7%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	27.8	27.8		12.0	42.9		34.6	34.6	34.6	34.6	34.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	24.3	24.3		41.6	38.5		34.7	34.7	34.7		34.7	
Actuated g/C Ratio	0.28	0.28		0.49	0.45		0.40	0.40	0.40		0.40	
v/c Ratio	0.00	0.84		0.63	0.37		0.14	0.00	0.57		0.01	
Control Delay	22.0	38.2		23.5	16.3		18.6	17.0	7.1		14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	22.0	38.2		23.5	16.3		18.6	17.0	7.1		14.2	
LOS	C	D		C	B		B	B	A		B	
Approach Delay		38.2			18.2			8.7			14.3	
Approach LOS		D			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 85.7			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	1	757	177	501	65	1	413	4
v/c Ratio	0.00	0.84	0.63	0.37	0.14	0.00	0.57	0.01
Control Delay	22.0	38.2	23.5	16.3	18.6	17.0	7.1	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	38.2	23.5	16.3	18.6	17.0	7.1	14.2
Queue Length 50th (m)	0.1	64.1	17.1	28.7	7.3	0.1	5.3	0.2
Queue Length 95th (m)	1.3	86.9	31.4	40.6	16.6	1.1	30.7	2.4
Internal Link Dist (m)		278.4		507.3		1119.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	251	1030	296	1512	471	718	722	616
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.73	0.60	0.33	0.14	0.00	0.57	0.01

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	644	52	163	458	3	60	1	380	0	2	2
Future Volume (vph)	1	644	52	163	458	3	60	1	380	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1568	3147		1452	3012		1466	1776	1248		1520	
Flt Permitted	0.47	1.00		0.17	1.00		0.76	1.00	1.00		1.00	
Satd. Flow (perm)	773	3147		267	3012		1165	1776	1248		1520	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	700	57	177	498	3	65	1	413	0	2	2
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	217	0	1	0
Lane Group Flow (vph)	1	750	0	177	500	0	65	1	196	0	3	0
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	24.3	24.3		38.5	38.5		34.7	34.7	34.7		34.7	
Effective Green, g (s)	24.3	24.3		38.5	38.5		34.7	34.7	34.7		34.7	
Actuated g/C Ratio	0.28	0.28		0.45	0.45		0.40	0.40	0.40		0.40	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	219	892		273	1353		471	719	505		615	
v/s Ratio Prot		c0.24		c0.08	0.17			0.00			0.00	
v/s Ratio Perm	0.00			0.21			0.06		c0.16			
v/c Ratio	0.00	0.84		0.65	0.37		0.14	0.00	0.39		0.00	
Uniform Delay, d1	22.0	28.9		16.5	15.6		16.1	15.2	18.0		15.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	7.2		5.2	0.2		0.6	0.0	2.2		0.0	
Delay (s)	22.0	36.1		21.8	15.8		16.7	15.2	20.2		15.2	
Level of Service	C	D		C	B		B	B	C		B	
Approach Delay (s)		36.1			17.3			19.7			15.2	
Approach LOS		D			B			B			B	

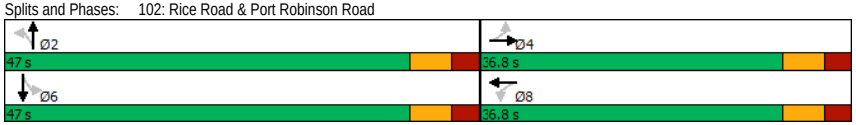
Intersection Summary				
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	74.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	95	64	12	89	26	72	361	28	20	224	39
Future Volume (vph)	78	95	64	12	89	26	72	361	28	20	224	39
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940			0.966			0.989			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	1431	0	1568	1483	0	1480	1477	0	1568	1409	0
Flt Permitted	0.681			0.654			0.594			0.528		
Satd. Flow (perm)	1102	1431	0	1080	1483	0	925	1477	0	872	1409	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			20			6			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		334.8			263.4			124.4			1143.0	
Travel Time (s)		24.1			19.0			9.0			82.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Adj. Flow (vph)	80	97	65	12	91	27	73	368	29	20	229	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	162	0	12	118	0	73	397	0	20	269	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	10.9	10.9		10.9	10.9		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.63	0.63		0.63	0.63	
v/c Ratio	0.45	0.60		0.07	0.46		0.13	0.43		0.04	0.30	
Control Delay	32.3	27.4		22.8	25.9		6.6	8.6		6.0	7.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.3	27.4		22.8	25.9		6.6	8.6		6.0	7.1	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		29.0			25.6			8.3			7.0	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 66.7			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 102: Rice Road & Port Robinson Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	80	162	12	118	73	397	20	269
v/c Ratio	0.45	0.60	0.07	0.46	0.13	0.43	0.04	0.30
Control Delay	32.3	27.4	22.8	25.9	6.6	8.6	6.0	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	27.4	22.8	25.9	6.6	8.6	6.0	7.1
Queue Length 50th (m)	9.2	13.5	1.3	11.2	3.2	21.2	0.8	12.4
Queue Length 95th (m)	20.9	30.6	5.4	25.0	9.9	48.1	3.8	29.8
Internal Link Dist (m)		310.8		239.4		100.4		1119.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	497	670	487	680	582	932	549	892
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.24	0.02	0.17	0.13	0.43	0.04	0.30

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	95	64	12	89	26	72	361	28	20	224	39
Future Volume (vph)	78	95	64	12	89	26	72	361	28	20	224	39
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1431		1568	1482		1480	1477		1568	1408	
Flt Permitted	0.68	1.00		0.65	1.00		0.59	1.00		0.53	1.00	
Satd. Flow (perm)	1102	1431		1080	1482		925	1477		872	1408	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	80	97	65	12	91	27	73	368	29	20	229	40
RTOR Reduction (vph)	0	38	0	0	17	0	0	2	0	0	5	0
Lane Group Flow (vph)	80	124	0	12	101	0	73	395	0	20	264	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	10.8	10.8		10.8	10.8		42.0	42.0		42.0	42.0	
Effective Green, g (s)	10.8	10.8		10.8	10.8		42.0	42.0		42.0	42.0	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.63	0.63		0.63	0.63	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	178	232		175	240		583	931		549	887	
v/s Ratio Prot		c0.09			0.07			c0.27			0.19	
v/s Ratio Perm	0.07			0.01			0.08			0.02		
v/c Ratio	0.45	0.54		0.07	0.42		0.13	0.42		0.04	0.30	
Uniform Delay, d1	25.2	25.6		23.6	25.1		4.9	6.2		4.7	5.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.8		0.1	0.9		0.4	1.4		0.1	0.9	
Delay (s)	26.5	27.4		23.8	26.0		5.4	7.6		4.8	6.4	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		27.1			25.8			7.3			6.3	
Approach LOS		C			C			A			A	

Intersection Summary					
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	66.6	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	62.9%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	163	56	34	279	223	52
Future Volume (vph)	163	56	34	279	223	52
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.975	
Flt Protected	0.964			0.995		
Satd. Flow (prot)	1442	0	0	1305	1364	0
Flt Permitted	0.964			0.995		
Satd. Flow (perm)	1442	0	0	1305	1364	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	218.2			551.5	920.1	
Travel Time (s)	15.7			39.7	66.2	
Confl. Peds. (#/hr)			16			16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	17%	28%	2%	9%	13%
Adj. Flow (vph)	173	60	36	297	237	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	233	0	0	333	292	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	163	56	34	279	223	52
Future Volume (Veh/h)	163	56	34	279	223	52
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	173	60	36	297	237	55
Pedestrians	16					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	650	280	308			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	650	280	308			
tC, single (s)	6.4	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.5	2.5			
p0 queue free %	58	92	97			
cM capacity (veh/h)	416	714	1104			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	233	333	292
Volume Left	173	36	0
Volume Right	60	0	55
cSH	466	1104	1700
Volume to Capacity	0.50	0.03	0.17
Queue Length 95th (m)	21.9	0.8	0.0
Control Delay (s)	20.2	1.2	0.0
Lane LOS	C	A	
Approach Delay (s)	20.2	1.2	0.0
Approach LOS	C		

Intersection Summary				
Average Delay		6.0		
Intersection Capacity Utilization		66.1%	ICU Level of Service	C
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	26	29	53	22	42	24	232	45	55	245	9
Future Volume (vph)	17	26	29	53	22	42	24	232	45	55	245	9
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.945			0.951			0.980			0.996	
Flt Protected		0.989			0.978			0.996			0.991	
Satd. Flow (prot)	0	1381	0	0	1478	0	0	1555	0	0	1531	0
Flt Permitted		0.989			0.978			0.996			0.991	
Satd. Flow (perm)	0	1381	0	0	1478	0	0	1555	0	0	1531	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			74.2			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Adj. Flow (vph)	18	28	32	58	24	46	26	252	49	60	266	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	128	0	0	327	0	0	336	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.8%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	17	26	29	53	22	42	24	232	45	55	245	9
Future Volume (vph)	17	26	29	53	22	42	24	232	45	55	245	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	28	32	58	24	46	26	252	49	60	266	10

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	78	128	327	336
Volume Left (vph)	18	58	26	60
Volume Right (vph)	32	46	49	10
Hadj (s)	-0.02	-0.08	-0.03	0.10
Departure Headway (s)	5.8	5.6	4.9	5.1
Degree Utilization, x	0.13	0.20	0.45	0.47
Capacity (veh/h)	536	564	698	682
Control Delay (s)	9.6	10.0	11.9	12.5
Approach Delay (s)	9.6	10.0	11.9	12.5
Approach LOS	A	B	B	B

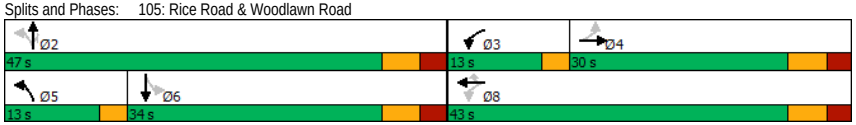
Intersection Summary				
Delay		11.7		
Level of Service		B		
Intersection Capacity Utilization		54.8%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	281	77	99	171	28	53	258	116	33	150	10
Future Volume (vph)	104	281	77	99	171	28	53	258	116	33	150	10
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00		0.98	1.00	1.00	
Frt		0.968				0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	3167	0	1538	1741	1261	1494	1708	1273	1439	1409	0
Flt Permitted	0.640			0.384			0.594			0.588		
Satd. Flow (perm)	1034	3167	0	617	1741	1232	932	1708	1251	887	1409	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				85			126		4	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			50.8			74.2	
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Adj. Flow (vph)	113	305	84	108	186	30	58	280	126	36	163	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	389	0	108	186	30	58	280	126	36	174	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	30.0	30.0		13.0	43.0	43.0	13.0	47.0	47.0	34.0	34.0	
Total Split (%)	33.3%	33.3%		14.4%	47.8%	47.8%	14.4%	52.2%	52.2%	37.8%	37.8%	
Maximum Green (s)	23.2	23.2		10.0	36.2	36.2	10.0	40.0	40.0	27.0	27.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	14.8	14.8		28.6	24.7	24.7	44.6	40.6	40.6	33.3	33.3	
Actuated g/C Ratio	0.19	0.19		0.36	0.31	0.31	0.56	0.51	0.51	0.42	0.42	
v/c Ratio	0.59	0.63		0.32	0.34	0.07	0.10	0.32	0.18	0.10	0.29	
Control Delay	43.1	31.7		18.8	21.7	0.3	11.0	14.7	3.6	21.5	21.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.1	31.7		18.8	21.7	0.3	11.0	14.7	3.6	21.5	21.8	
LOS	D	C		B	C	A	B	B	A	C	C	
Approach Delay		34.3			18.7			11.2			21.8	
Approach LOS		C			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 79.3			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	389	108	186	30	58	280	126	36	174
v/c Ratio	0.59	0.63	0.32	0.34	0.07	0.10	0.32	0.18	0.10	0.29
Control Delay	43.1	31.7	18.8	21.7	0.3	11.0	14.7	3.6	21.5	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	31.7	18.8	21.7	0.3	11.0	14.7	3.6	21.5	21.8
Queue Length 50th (m)	17.1	28.2	11.4	22.1	0.0	4.2	26.0	0.0	4.0	20.7
Queue Length 95th (m)	34.0	42.3	21.7	37.7	0.0	11.9	52.3	9.8	12.3	43.4
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	306	965	340	805	616	596	873	701	371	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.40	0.32	0.23	0.05	0.10	0.32	0.18	0.10	0.29

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	281	77	99	171	28	53	258	116	33	150	10
Future Volume (vph)	104	281	77	99	171	28	53	258	116	33	150	10
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1535	3167		1534	1741	1233	1492	1708	1251	1434	1408	
Flt Permitted	0.64	1.00		0.38	1.00	1.00	0.59	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	1035	3167		620	1741	1233	933	1708	1251	887	1408	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	113	305	84	108	186	30	58	280	126	36	163	11
RTOR Reduction (vph)	0	30	0	0	0	21	0	0	61	0	2	0
Lane Group Flow (vph)	113	359	0	108	186	9	58	280	65	36	172	0
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	14.8	14.8		25.4	25.4	25.4	41.9	41.9	41.9	33.3	33.3	
Effective Green, g (s)	14.8	14.8		25.4	25.4	25.4	41.9	41.9	41.9	33.3	33.3	
Actuated g/C Ratio	0.18	0.18		0.31	0.31	0.31	0.52	0.52	0.52	0.41	0.41	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	188	577		279	545	386	520	882	646	364	578	
v/s Ratio Prot		c0.11		c0.04	0.11		0.01	c0.16			0.12	
v/s Ratio Perm	0.11			0.08		0.01	0.05		0.05	0.04		
v/c Ratio	0.60	0.62		0.39	0.34	0.02	0.11	0.32	0.10	0.10	0.30	
Uniform Delay, d1	30.4	30.6		20.7	21.4	19.3	9.9	11.3	10.0	14.7	16.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.3	2.1		0.9	0.4	0.0	0.1	0.9	0.3	0.5	1.3	
Delay (s)	35.8	32.7		21.6	21.8	19.3	10.0	12.3	10.3	15.2	17.4	
Level of Service	D	C		C	C	B	B	B	B	B	B	
Approach Delay (s)		33.4			21.5			11.5			17.0	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.42			
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	64.1%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

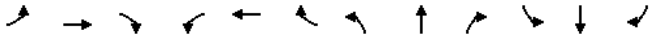
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	291	309	0
Future Volume (vph)	0	0	0	291	309	0
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1598	0	0	1348	1505	0
Flt Permitted						
Satd. Flow (perm)	1598	0	0	1348	1505	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	92.0			246.6	551.5	
Travel Time (s)	6.6			17.8	39.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	316	336	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	316	336	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	291	309	0
Future Volume (Veh/h)	0	0	0	291	309	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	316	336	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	652	336	336			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	652	336	336			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	433	706	1223			

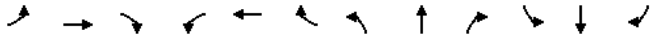
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	316	336
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1223	1700
Volume to Capacity	0.00	0.00	0.20
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	291	0	0	309	0
Future Volume (vph)	0	0	0	0	0	0	0	291	0	0	309	0
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1598	0	0	1598	0	0	1598	0	0	1598	0
Flt Permitted												
Satd. Flow (perm)	0	1598	0	0	1598	0	0	1598	0	0	1598	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		91.3			169.9			235.8			246.6	
Travel Time (s)		6.6			12.2			17.0			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	316	0	0	336	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	316	0	0	336	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	291	0	0	309	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	291	0	0	309	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	316	0	0	336	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	652	652	336	652	652	316	336			316		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	652	652	336	652	652	316	336			316		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	381	387	706	381	387	724	1223			1244		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	316	336
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1223	1244
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

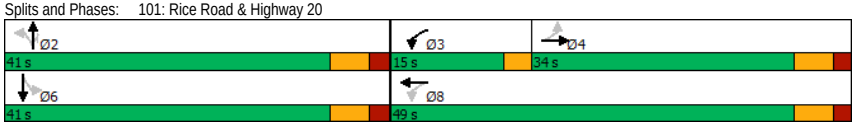
Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		22.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	697	59	180	496	3	77	1	441	0	2	2
Future Volume (vph)	1	697	59	180	496	3	77	1	441	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1568	3145	0	1452	3012	0	1466	1776	1248	0	1519	0
Flt Permitted	0.450			0.149			0.755					
Satd. Flow (perm)	743	3145	0	228	3012	0	1165	1776	1248	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				357		2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1143.0			100.9	
Travel Time (s)		21.8			38.3			82.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	758	64	196	539	3	84	1	479	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	822	0	196	542	0	84	1	479	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	30.0	30.0	
Total Split (s)	34.0	34.0		15.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	37.8%	37.8%		16.7%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	27.8	27.8		12.0	42.9		34.6	34.6	34.6	34.6	34.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	25.9	25.9		43.4	40.3		34.6	34.6	34.6		34.6	
Actuated g/C Ratio	0.30	0.30		0.50	0.46		0.40	0.40	0.40		0.40	
v/c Ratio	0.00	0.88		0.72	0.39		0.18	0.00	0.68		0.01	
Control Delay	22.0	41.0		31.5	16.3		19.6	17.0	11.5		14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	22.0	41.0		31.5	16.3		19.6	17.0	11.5		14.2	
LOS	C	D		C	B		B	B	B		B	
Approach Delay		41.0			20.4			12.7			14.3	
Approach LOS		D			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.5			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 26.3		Intersection LOS: C	
Intersection Capacity Utilization 81.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	1	822	196	542	84	1	479	4
v/c Ratio	0.00	0.88	0.72	0.39	0.18	0.00	0.68	0.01
Control Delay	22.0	41.0	31.5	16.3	19.6	17.0	11.5	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.0	31.5	16.3	19.6	17.0	11.5	14.2
Queue Length 50th (m)	0.1	72.2	19.1	31.7	9.9	0.1	14.9	0.2
Queue Length 95th (m)	1.3	#103.8	#47.3	44.2	20.5	1.1	52.8	2.4
Internal Link Dist (m)		278.4		507.3		1119.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	236	1007	281	1479	461	703	709	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.82	0.70	0.37	0.18	0.00	0.68	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	697	59	180	496	3	77	1	441	0	2	2
Future Volume (vph)	1	697	59	180	496	3	77	1	441	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1568	3146		1452	3012		1466	1776	1248		1520	
Flt Permitted	0.45	1.00		0.15	1.00		0.76	1.00	1.00		1.00	
Satd. Flow (perm)	743	3146		228	3012		1165	1776	1248		1520	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	758	64	196	539	3	84	1	479	0	2	2
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	216	0	1	0
Lane Group Flow (vph)	1	815	0	196	541	0	84	1	263	0	3	0
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	25.9	25.9		40.4	40.4		34.7	34.7	34.7		34.7	
Effective Green, g (s)	25.9	25.9		40.4	40.4		34.7	34.7	34.7		34.7	
Actuated g/C Ratio	0.30	0.30		0.46	0.46		0.40	0.40	0.40		0.40	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	219	930		264	1389		461	703	494		602	
v/s Ratio Prot		c0.26		c0.10	0.18			0.00			0.00	
v/s Ratio Perm	0.00			0.24			0.07		c0.21			
v/c Ratio	0.00	0.88		0.74	0.39		0.18	0.00	0.53		0.00	
Uniform Delay, d1	21.8	29.3		17.1	15.5		17.2	16.0	20.2		16.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	9.3		10.7	0.2		0.9	0.0	4.1		0.0	
Delay (s)	21.8	38.6		27.9	15.7		18.1	16.0	24.3		16.0	
Level of Service	C	D		C	B		B	B	C		B	
Approach Delay (s)		38.6			18.9			23.4			16.0	
Approach LOS		D			B			C			B	

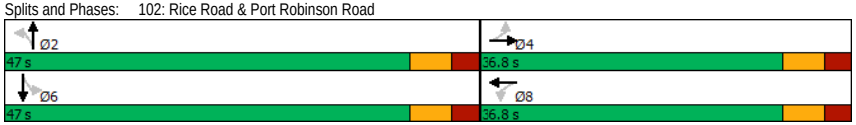
Intersection Summary				
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	81.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

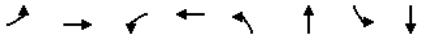
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	102	68	14	100	29	82	428	32	21	244	41
Future Volume (vph)	83	102	68	14	100	29	82	428	32	21	244	41
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940			0.966			0.989			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	1431	0	1568	1483	0	1480	1477	0	1568	1409	0
Flt Permitted	0.673			0.648			0.582			0.471		
Satd. Flow (perm)	1089	1431	0	1070	1483	0	906	1477	0	778	1409	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			20			6			14	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		334.8			263.4			124.4			1143.0	
Travel Time (s)		24.1			19.0			9.0			82.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Adj. Flow (vph)	85	104	69	14	102	30	84	437	33	21	249	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	173	0	14	132	0	84	470	0	21	291	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	11.3	11.3		11.3	11.3		41.1	41.1		41.1	41.1	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.62	0.62		0.62	0.62	
v/c Ratio	0.46	0.62		0.08	0.49		0.15	0.51		0.04	0.33	
Control Delay	32.2	28.3		22.7	26.8		7.1	10.1		6.4	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.2	28.3		22.7	26.8		7.1	10.1		6.4	7.7	
LOS	C	C		C	C		A	B		A	A	
Approach Delay		29.6			26.4			9.7			7.6	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 66.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

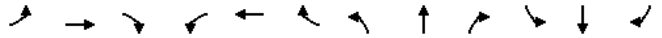
Splits and Phases: 102: Rice Road & Port Robinson Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	85	173	14	132	84	470	21	291
v/c Ratio	0.46	0.62	0.08	0.49	0.15	0.51	0.04	0.33
Control Delay	32.2	28.3	22.7	26.8	7.1	10.1	6.4	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	28.3	22.7	26.8	7.1	10.1	6.4	7.7
Queue Length 50th (m)	9.8	15.1	1.5	12.9	3.8	27.8	0.9	14.2
Queue Length 95th (m)	22.0	32.9	5.8	27.6	11.6	63.1	4.1	33.9
Internal Link Dist (m)		310.8		239.4		100.4		1119.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	494	673	485	683	562	918	482	879
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.26	0.03	0.19	0.15	0.51	0.04	0.33

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	102	68	14	100	29	82	428	32	21	244	41
Future Volume (vph)	83	102	68	14	100	29	82	428	32	21	244	41
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1432		1568	1483		1480	1478		1568	1409	
Flt Permitted	0.67	1.00		0.65	1.00		0.58	1.00		0.47	1.00	
Satd. Flow (perm)	1089	1432		1070	1483		906	1478		778	1409	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	85	104	69	14	102	30	84	437	33	21	249	42
RTOR Reduction (vph)	0	36	0	0	17	0	0	2	0	0	5	0
Lane Group Flow (vph)	85	137	0	14	115	0	84	468	0	21	286	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.3	11.3		11.3	11.3		41.1	41.1		41.1	41.1	
Effective Green, g (s)	11.3	11.3		11.3	11.3		41.1	41.1		41.1	41.1	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.62	0.62		0.62	0.62	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	185	244		182	253		562	917		483	874	
v/s Ratio Prot		c0.10			0.08			c0.32			0.20	
v/s Ratio Perm	0.08			0.01			0.09			0.03		
v/c Ratio	0.46	0.56		0.08	0.46		0.15	0.51		0.04	0.33	
Uniform Delay, d1	24.7	25.2		23.1	24.7		5.2	7.0		4.9	6.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	2.2		0.1	1.0		0.6	2.0		0.2	1.0	
Delay (s)	26.0	27.4		23.2	25.6		5.8	9.0		5.1	7.0	
Level of Service	C	C		C	C		A	A		A	A	
Approach Delay (s)		26.9			25.4			8.5			6.8	
Approach LOS		C			C			A			A	

Intersection Summary					
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	66.2	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	80.1%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	173	59	39	335	243	55
Future Volume (vph)	173	59	39	335	243	55
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.966				0.975	
Flt Protected	0.964			0.995		
Satd. Flow (prot)	1445	0	0	1307	1364	0
Flt Permitted	0.964			0.995		
Satd. Flow (perm)	1445	0	0	1307	1364	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	218.2			551.5	920.1	
Travel Time (s)	15.7			39.7	66.2	
Confl. Peds. (#/hr)			16			16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	17%	28%	2%	9%	13%
Adj. Flow (vph)	184	63	41	356	259	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	0	0	397	318	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	173	59	39	335	243	55
Future Volume (Veh/h)	173	59	39	335	243	55
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	184	63	41	356	259	59
Pedestrians	16					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	742	304	334			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	742	304	334			
tC, single (s)	6.4	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.5	2.5			
p0 queue free %	50	91	96			
cM capacity (veh/h)	365	692	1079			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	247	397	318
Volume Left	184	41	0
Volume Right	63	0	59
cSH	415	1079	1700
Volume to Capacity	0.60	0.04	0.19
Queue Length 95th (m)	30.0	0.9	0.0
Control Delay (s)	25.7	1.2	0.0
Lane LOS	D	A	
Approach Delay (s)	25.7	1.2	0.0
Approach LOS	D		

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	73.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	29	33	57	24	48	27	270	51	65	280	14
Future Volume (vph)	20	29	33	57	24	48	27	270	51	65	280	14
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.946			0.950			0.980			0.995	
Flt Protected		0.988			0.978			0.996			0.991	
Satd. Flow (prot)	0	1383	0	0	1477	0	0	1555	0	0	1527	0
Flt Permitted		0.988			0.978			0.996			0.991	
Satd. Flow (perm)	0	1383	0	0	1477	0	0	1555	0	0	1527	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			74.2			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Adj. Flow (vph)	22	32	36	62	26	52	29	293	55	71	304	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	140	0	0	377	0	0	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	62.0%	ICU Level of Service B	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	29	33	57	24	48	27	270	51	65	280	14
Future Volume (vph)	20	29	33	57	24	48	27	270	51	65	280	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	32	36	62	26	52	29	293	55	71	304	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	90	140	377	390
Volume Left (vph)	22	62	29	71
Volume Right (vph)	36	52	55	15
Hadj (s)	-0.02	-0.09	-0.03	0.10
Departure Headway (s)	6.2	6.0	5.2	5.3
Degree Utilization, x	0.15	0.23	0.54	0.57
Capacity (veh/h)	486	521	659	654
Control Delay (s)	10.3	10.8	14.1	15.1
Approach Delay (s)	10.3	10.8	14.1	15.1
Approach LOS	B	B	B	C

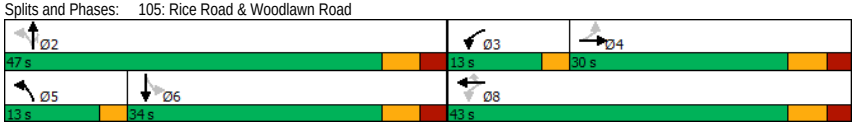
Intersection Summary				
Delay		13.7		
Level of Service		B		
Intersection Capacity Utilization	62.0%	ICU Level of Service		B
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	304	83	107	185	33	60	295	131	43	166	17
Future Volume (vph)	115	304	83	107	185	33	60	295	131	43	166	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00		0.98	1.00	1.00	
Frt		0.968				0.850			0.850		0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	3167	0	1538	1741	1261	1494	1708	1273	1439	1396	0
Flt Permitted	0.632			0.359			0.577			0.566		
Satd. Flow (perm)	1021	3167	0	577	1741	1232	906	1708	1251	854	1396	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				85			131		6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			50.8			74.2	
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Adj. Flow (vph)	125	330	90	116	201	36	65	321	142	47	180	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	420	0	116	201	36	65	321	142	47	198	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	30.0	30.0		13.0	43.0	43.0	13.0	47.0	47.0	34.0	34.0	
Total Split (%)	33.3%	33.3%		14.4%	47.8%	47.8%	14.4%	52.2%	52.2%	37.8%	37.8%	
Maximum Green (s)	23.2	23.2		10.0	36.2	36.2	10.0	40.0	40.0	27.0	27.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	15.6	15.6		29.4	25.5	25.5	44.6	40.6	40.6	30.7	30.7	
Actuated g/C Ratio	0.19	0.19		0.37	0.32	0.32	0.56	0.51	0.51	0.38	0.38	
v/c Ratio	0.63	0.65		0.35	0.36	0.08	0.11	0.37	0.20	0.14	0.37	
Control Delay	45.0	32.3		19.2	21.9	0.3	11.4	15.7	4.2	23.3	24.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	45.0	32.3		19.2	21.9	0.3	11.4	15.7	4.2	23.3	24.2	
LOS	D	C		B	C	A	B	B	A	C	C	
Approach Delay		35.2			18.8			12.1			24.0	
Approach LOS		D			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 80.1			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	125	420	116	201	36	65	321	142	47	198
v/c Ratio	0.63	0.65	0.35	0.36	0.08	0.11	0.37	0.20	0.14	0.37
Control Delay	45.0	32.3	19.2	21.9	0.3	11.4	15.7	4.2	23.3	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	32.3	19.2	21.9	0.3	11.4	15.7	4.2	23.3	24.2
Queue Length 50th (m)	19.3	31.1	12.3	24.2	0.0	4.8	31.5	0.9	5.4	24.2
Queue Length 95th (m)	37.3	45.9	23.1	40.7	0.3	13.1	60.9	11.6	15.4	49.4
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	300	956	333	798	610	579	865	698	327	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.44	0.35	0.25	0.06	0.11	0.37	0.20	0.14	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	304	83	107	185	33	60	295	131	43	166	17
Future Volume (vph)	115	304	83	107	185	33	60	295	131	43	166	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1535	3168		1534	1741	1233	1492	1708	1251	1434	1397	
Flt Permitted	0.63	1.00		0.36	1.00	1.00	0.58	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	1021	3168		581	1741	1233	906	1708	1251	854	1397	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	330	90	116	201	36	65	321	142	47	180	18
RTOR Reduction (vph)	0	30	0	0	0	24	0	0	64	0	4	0
Lane Group Flow (vph)	125	390	0	116	201	12	65	321	78	47	194	0
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	15.6	15.6		26.2	26.2	26.2	41.3	41.3	41.3	30.7	30.7	
Effective Green, g (s)	15.6	15.6		26.2	26.2	26.2	41.3	41.3	41.3	30.7	30.7	
Actuated g/C Ratio	0.19	0.19		0.32	0.32	0.32	0.51	0.51	0.51	0.38	0.38	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	195	607		276	561	397	515	867	635	322	527	
v/s Ratio Prot		c0.12		c0.04	0.12		0.01	c0.19			0.14	
v/s Ratio Perm	0.12			0.10		0.01	0.05		0.06	0.06		
v/c Ratio	0.64	0.64		0.42	0.36	0.03	0.13	0.37	0.12	0.15	0.37	
Uniform Delay, d1	30.3	30.3		20.4	21.1	18.8	10.3	12.1	10.5	16.7	18.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.0	2.3		1.0	0.4	0.0	0.1	1.2	0.4	1.0	2.0	
Delay (s)	37.3	32.6		21.4	21.5	18.9	10.5	13.3	10.9	17.6	20.3	
Level of Service	D	C		C	C	B	B	B	B	B	C	
Approach Delay (s)		33.7			21.2			12.3			19.8	
Approach LOS		C			C			B			B	

Intersection Summary					
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.46				
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	19.8		
Intersection Capacity Utilization	66.5%	ICU Level of Service	C		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	349	334	0
Future Volume (vph)	0	0	0	349	334	0
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1598	0	0	1348	1505	0
Flt Permitted						
Satd. Flow (perm)	1598	0	0	1348	1505	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	92.0			246.6	551.5	
Travel Time (s)	6.6			17.8	39.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	379	363	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	379	363	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	349	334	0
Future Volume (Veh/h)	0	0	0	349	334	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	379	363	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	742	363	363			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	742	363	363			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	383	682	1196			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	379	363
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1196	1700
Volume to Capacity	0.00	0.00	0.21
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	31	0	19	0	330	11	6	328	0
Future Volume (vph)	0	0	0	31	0	19	0	330	11	6	328	0
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.948			0.996				
Flt Protected					0.970						0.999	
Satd. Flow (prot)	0	1598	0	0	1469	0	0	1592	0	0	1596	0
Flt Permitted					0.970						0.999	
Satd. Flow (perm)	0	1598	0	0	1469	0	0	1592	0	0	1596	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		91.3			169.9			235.8			246.6	
Travel Time (s)		6.6			12.2			17.0			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	34	0	21	0	359	12	7	357	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	55	0	0	371	0	0	364	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.7%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	31	0	19	0	330	11	6	328	0
Future Volume (Veh/h)	0	0	0	31	0	19	0	330	11	6	328	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	34	0	21	0	359	12	7	357	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	757	742	357	736	736	365	357			371		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	757	742	357	736	736	365	357			371		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	90	100	97	100			99		
cM capacity (veh/h)	313	342	687	333	344	680	1202			1188		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	55	371	364
Volume Left	0	34	0	7
Volume Right	0	21	12	0
cSH	1700	414	1202	1188
Volume to Capacity	0.00	0.13	0.00	0.01
Queue Length 95th (m)	0.0	3.6	0.0	0.1
Control Delay (s)	0.0	15.0	0.0	0.2
Lane LOS	A	C		A
Approach Delay (s)	0.0	15.0	0.0	0.2
Approach LOS	A	C		

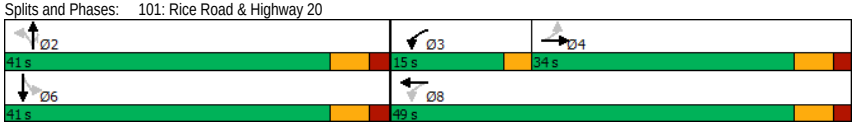
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	697	61	189	496	3	84	1	500	0	2	2
Future Volume (vph)	1	697	61	189	496	3	84	1	500	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1568	3145	0	1452	3012	0	1466	1776	1248	0	1519	0
Flt Permitted	0.450			0.148			0.755					
Satd. Flow (perm)	743	3145	0	226	3012	0	1165	1776	1248	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				357		2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1143.0			100.9	
Travel Time (s)		21.8			38.3			82.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	758	66	205	539	3	91	1	543	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	824	0	205	542	0	91	1	543	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	30.0	30.0	
Total Split (s)	34.0	34.0		15.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	37.8%	37.8%		16.7%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	27.8	27.8		12.0	42.9		34.6	34.6	34.6	34.6	34.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	25.9	25.9		43.6	40.5		34.7	34.7	34.7		34.7	
Actuated g/C Ratio	0.30	0.30		0.50	0.46		0.40	0.40	0.40		0.40	
v/c Ratio	0.00	0.88		0.75	0.39		0.20	0.00	0.77		0.01	
Control Delay	22.0	41.2		34.5	16.3		19.8	17.0	16.6		14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	22.0	41.2		34.5	16.3		19.8	17.0	16.6		14.2	
LOS	C	D		C	B		B	B	B		B	
Approach Delay		41.1			21.3			17.0			14.3	
Approach LOS		D			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.7			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 27.5		Intersection LOS: C	
Intersection Capacity Utilization 86.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	1	824	205	542	91	1	543	4
v/c Ratio	0.00	0.88	0.75	0.39	0.20	0.00	0.77	0.01
Control Delay	22.0	41.2	34.5	16.3	19.8	17.0	16.6	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	41.2	34.5	16.3	19.8	17.0	16.6	14.2
Queue Length 50th (m)	0.1	72.4	20.2	31.7	10.8	0.1	27.8	0.2
Queue Length 95th (m)	1.3	#104.4	#51.9	44.2	22.0	1.1	#81.3	2.4
Internal Link Dist (m)		278.4		507.3		1119.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	235	1005	280	1476	460	701	709	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.82	0.73	0.37	0.20	0.00	0.77	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	697	61	189	496	3	84	1	500	0	2	2
Future Volume (vph)	1	697	61	189	496	3	84	1	500	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1568	3145		1452	3012		1466	1776	1248		1520	
Flt Permitted	0.45	1.00		0.15	1.00		0.76	1.00	1.00		1.00	
Satd. Flow (perm)	743	3145		226	3012		1165	1776	1248		1520	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	758	66	205	539	3	91	1	543	0	2	2
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	216	0	1	0
Lane Group Flow (vph)	1	817	0	205	541	0	91	1	327	0	3	0
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	25.9	25.9		40.5	40.5		34.7	34.7	34.7		34.7	
Effective Green, g (s)	25.9	25.9		40.5	40.5		34.7	34.7	34.7		34.7	
Actuated g/C Ratio	0.30	0.30		0.46	0.46		0.40	0.40	0.40		0.40	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	219	928		265	1390		460	702	493		601	
v/s Ratio Prot		c0.26		c0.10	0.18			0.00			0.00	
v/s Ratio Perm	0.00			0.26			0.08		c0.26			
v/c Ratio	0.00	0.88		0.77	0.39		0.20	0.00	0.66		0.00	
Uniform Delay, d1	21.8	29.4		17.3	15.5		17.4	16.0	21.7		16.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	9.8		13.1	0.2		1.0	0.0	6.9		0.0	
Delay (s)	21.8	39.2		30.4	15.7		18.3	16.0	28.6		16.1	
Level of Service	C	D		C	B		B	B	C		B	
Approach Delay (s)		39.2			19.7			27.1			16.1	
Approach LOS		D			B			C			B	

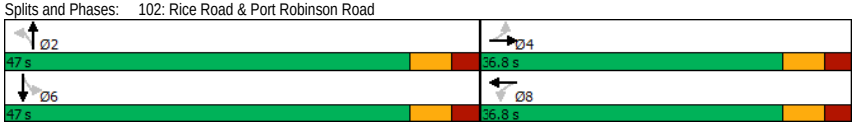
Intersection Summary				
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	86.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

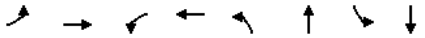
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	102	72	16	100	29	95	494	39	21	255	41
Future Volume (vph)	83	102	72	16	100	29	95	494	39	21	255	41
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.938			0.966			0.989			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	1428	0	1568	1483	0	1480	1477	0	1568	1410	0
Flt Permitted	0.673			0.646			0.576			0.417		
Satd. Flow (perm)	1089	1428	0	1067	1483	0	897	1477	0	688	1410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			20			7			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		334.8			263.4			124.4			1143.0	
Travel Time (s)		24.1			19.0			9.0			82.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Adj. Flow (vph)	85	104	73	16	102	30	97	504	40	21	260	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	177	0	16	132	0	97	544	0	21	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	11.4	11.4		11.4	11.4		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.62	0.62		0.62	0.62	
v/c Ratio	0.45	0.62		0.09	0.49		0.17	0.59		0.05	0.34	
Control Delay	32.0	28.0		22.9	26.6		7.3	11.7		6.6	7.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.0	28.0		22.9	26.6		7.3	11.7		6.6	7.9	
LOS	C	C		C	C		A	B		A	A	
Approach Delay		29.3			26.2			11.1			7.8	
Approach LOS		C			C			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 66.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 85.2%		ICU Level of Service E	
Analysis Period (min) 15			

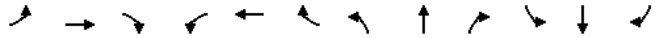
Splits and Phases: 102: Rice Road & Port Robinson Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	85	177	16	132	97	544	21	302
v/c Ratio	0.45	0.62	0.09	0.49	0.17	0.59	0.05	0.34
Control Delay	32.0	28.0	22.9	26.6	7.3	11.7	6.6	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	28.0	22.9	26.6	7.3	11.7	6.6	7.9
Queue Length 50th (m)	9.8	15.2	1.7	12.9	4.5	35.1	0.9	15.1
Queue Length 95th (m)	22.0	33.2	6.4	27.6	13.4	79.7	4.2	35.7
Internal Link Dist (m)		310.8		239.4		100.4		1119.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	494	673	484	684	555	916	425	877
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.26	0.03	0.19	0.17	0.59	0.05	0.34

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	102	72	16	100	29	95	494	39	21	255	41
Future Volume (vph)	83	102	72	16	100	29	95	494	39	21	255	41
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1428		1568	1483		1480	1477		1568	1410	
Flt Permitted	0.67	1.00		0.65	1.00		0.58	1.00		0.42	1.00	
Satd. Flow (perm)	1089	1428		1066	1483		897	1477		689	1410	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	85	104	73	16	102	30	97	504	40	21	260	42
RTOR Reduction (vph)	0	39	0	0	17	0	0	3	0	0	5	0
Lane Group Flow (vph)	85	138	0	16	115	0	97	541	0	21	297	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.4	11.4		11.4	11.4		41.0	41.0		41.0	41.0	
Effective Green, g (s)	11.4	11.4		11.4	11.4		41.0	41.0		41.0	41.0	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.62	0.62		0.62	0.62	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	187	245		183	255		555	914		426	873	
v/s Ratio Prot		c0.10			0.08			c0.37			0.21	
v/s Ratio Perm	0.08			0.02			0.11			0.03		
v/c Ratio	0.45	0.56		0.09	0.45		0.17	0.59		0.05	0.34	
Uniform Delay, d1	24.6	25.1		23.0	24.6		5.4	7.6		4.9	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	2.4		0.2	0.9		0.7	2.8		0.2	1.1	
Delay (s)	25.9	27.5		23.2	25.5		6.1	10.4		5.2	7.1	
Level of Service	C	C		C	C		A	B		A	A	
Approach Delay (s)		27.0			25.3			9.7			7.0	
Approach LOS		C			C			A			A	

Intersection Summary					
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.59				
Actuated Cycle Length (s)	66.2	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	85.2%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	173	61	46	421	260	55
Future Volume (vph)	173	61	46	421	260	55
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.976	
Flt Protected	0.964			0.995		
Satd. Flow (prot)	1442	0	0	1308	1366	0
Flt Permitted	0.964			0.995		
Satd. Flow (perm)	1442	0	0	1308	1366	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	218.2			551.5	920.1	
Travel Time (s)	15.7			39.7	66.2	
Confl. Peds. (#/hr)			16			16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	17%	28%	2%	9%	13%
Adj. Flow (vph)	184	65	49	448	277	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	249	0	0	497	336	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	173	61	46	421	260	55
Future Volume (Veh/h)	173	61	46	421	260	55
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	184	65	49	448	277	59
Pedestrians	16					
Lane Width (m)	3.6					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	868	322	352			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	868	322	352			
tC, single (s)	6.4	6.4	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.5	2.5			
p0 queue free %	40	90	95			
cM capacity (veh/h)	305	676	1062			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	249	497	336
Volume Left	184	49	0
Volume Right	65	0	59
cSH	356	1062	1700
Volume to Capacity	0.70	0.05	0.20
Queue Length 95th (m)	40.5	1.2	0.0
Control Delay (s)	35.6	1.3	0.0
Lane LOS	E	A	
Approach Delay (s)	35.6	1.3	0.0
Approach LOS	E		

Intersection Summary				
Average Delay	8.8			
Intersection Capacity Utilization	81.0%	ICU Level of Service	D	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	29	33	57	24	50	27	292	51	72	314	14
Future Volume (vph)	20	29	33	57	24	50	27	292	51	72	314	14
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.946			0.949			0.981			0.995	
Flt Protected		0.988			0.979			0.996			0.991	
Satd. Flow (prot)	0	1383	0	0	1477	0	0	1558	0	0	1528	0
Flt Permitted		0.988			0.979			0.996			0.991	
Satd. Flow (perm)	0	1383	0	0	1477	0	0	1558	0	0	1528	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			74.2			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Adj. Flow (vph)	22	32	36	62	26	54	29	317	55	78	341	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	142	0	0	401	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	20	29	33	57	24	50	27	292	51	72	314	14
Future Volume (vph)	20	29	33	57	24	50	27	292	51	72	314	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	32	36	62	26	54	29	317	55	78	341	15

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	90	142	401	434
Volume Left (vph)	22	62	29	78
Volume Right (vph)	36	54	55	15
Hadj (s)	-0.02	-0.10	-0.03	0.10
Departure Headway (s)	6.4	6.2	5.3	5.4
Degree Utilization, x	0.16	0.24	0.59	0.65
Capacity (veh/h)	462	499	647	647
Control Delay (s)	10.7	11.2	15.6	17.6
Approach Delay (s)	10.7	11.2	15.6	17.6
Approach LOS	B	B	C	C

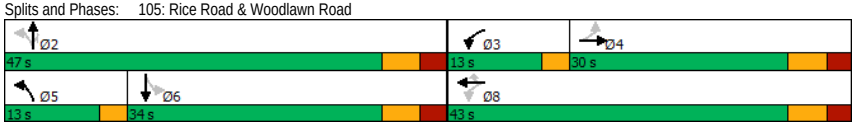
Intersection Summary					
Delay		15.4			
Level of Service		C			
Intersection Capacity Utilization	67.6%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	304	83	107	185	35	60	309	131	50	193	17
Future Volume (vph)	121	304	83	107	185	35	60	309	131	50	193	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00		0.98	1.00	1.00	
Frt		0.968				0.850			0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	3167	0	1538	1741	1261	1494	1708	1273	1439	1401	0
Flt Permitted	0.632			0.362			0.554			0.558		
Satd. Flow (perm)	1021	3167	0	582	1741	1232	870	1708	1251	842	1401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				85			126		5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			50.8			74.2	
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Adj. Flow (vph)	132	330	90	116	201	38	65	336	142	54	210	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	420	0	116	201	38	65	336	142	54	228	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	30.0	30.0		13.0	43.0	43.0	13.0	47.0	47.0	34.0	34.0	
Total Split (%)	33.3%	33.3%		14.4%	47.8%	47.8%	14.4%	52.2%	52.2%	37.8%	37.8%	
Maximum Green (s)	23.2	23.2		10.0	36.2	36.2	10.0	40.0	40.0	27.0	27.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	15.9	15.9		29.7	25.8	25.8	44.7	40.6	40.6	30.7	30.7	
Actuated g/C Ratio	0.20	0.20		0.37	0.32	0.32	0.56	0.50	0.50	0.38	0.38	
v/c Ratio	0.66	0.64		0.35	0.36	0.08	0.12	0.39	0.20	0.17	0.42	
Control Delay	46.5	31.9		19.1	21.8	0.6	11.5	16.1	4.5	23.9	25.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	46.5	31.9		19.1	21.8	0.6	11.5	16.1	4.5	23.9	25.5	
LOS	D	C		B	C	A	B	B	A	C	C	
Approach Delay		35.4			18.6			12.5			25.2	
Approach LOS		D			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 80.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	420	116	201	38	65	336	142	54	228
v/c Ratio	0.66	0.64	0.35	0.36	0.08	0.12	0.39	0.20	0.17	0.42
Control Delay	46.5	31.9	19.1	21.8	0.6	11.5	16.1	4.5	23.9	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	31.9	19.1	21.8	0.6	11.5	16.1	4.5	23.9	25.5
Queue Length 50th (m)	20.5	31.1	12.3	24.2	0.0	4.9	33.9	1.3	6.4	29.3
Queue Length 95th (m)	39.4	45.9	23.1	40.7	0.8	13.1	64.2	12.1	17.2	57.5
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	299	953	335	795	609	562	862	694	321	537
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.44	0.35	0.25	0.06	0.12	0.39	0.20	0.17	0.42

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	304	83	107	185	35	60	309	131	50	193	17
Future Volume (vph)	121	304	83	107	185	35	60	309	131	50	193	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1535	3168		1534	1741	1233	1493	1708	1251	1434	1402	
Flt Permitted	0.63	1.00		0.36	1.00	1.00	0.55	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	1021	3168		584	1741	1233	871	1708	1251	843	1402	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	330	90	116	201	38	65	336	142	54	210	18
RTOR Reduction (vph)	0	30	0	0	0	26	0	0	62	0	3	0
Lane Group Flow (vph)	132	390	0	116	201	12	65	336	80	54	225	0
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	15.9	15.9		26.5	26.5	26.5	41.3	41.3	41.3	30.7	30.7	
Effective Green, g (s)	15.9	15.9		26.5	26.5	26.5	41.3	41.3	41.3	30.7	30.7	
Actuated g/C Ratio	0.19	0.19		0.32	0.32	0.32	0.51	0.51	0.51	0.38	0.38	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	198	617		278	565	400	498	864	633	317	527	
v/s Ratio Prot		0.12		c0.04	0.12		0.01	c0.20			c0.16	
v/s Ratio Perm	c0.13			0.10		0.01	0.05		0.06	0.06		
v/c Ratio	0.67	0.63		0.42	0.36	0.03	0.13	0.39	0.13	0.17	0.43	
Uniform Delay, d1	30.4	30.2		20.3	21.0	18.8	10.5	12.4	10.6	17.0	18.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.2	2.1		1.0	0.4	0.0	0.1	1.3	0.4	1.2	2.5	
Delay (s)	38.6	32.3		21.3	21.4	18.8	10.6	13.7	11.0	18.1	21.4	
Level of Service	D	C		C	C	B	B	B	B	B	C	
Approach Delay (s)		33.8			21.1			12.6			20.8	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	81.6	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	67.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	17	10	404	344	9
Future Volume (vph)	38	17	10	404	344	9
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959				0.996	
Flt Protected	0.966			0.999		
Satd. Flow (prot)	1480	0	0	1347	1499	0
Flt Permitted	0.966			0.999		
Satd. Flow (perm)	1480	0	0	1347	1499	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	92.0			246.6	551.5	
Travel Time (s)	6.6			17.8	39.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	18	11	439	374	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	0	450	384	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	38	17	10	404	344	9
Future Volume (Veh/h)	38	17	10	404	344	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	18	11	439	374	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	840	379	384			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840	379	384			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	97	99			
cM capacity (veh/h)	332	668	1174			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	59	450	384
Volume Left	41	11	0
Volume Right	18	0	10
cSH	392	1174	1700
Volume to Capacity	0.15	0.01	0.23
Queue Length 95th (m)	4.2	0.2	0.0
Control Delay (s)	15.8	0.3	0.0
Lane LOS	C	A	
Approach Delay (s)	15.8	0.3	0.0
Approach LOS	C		

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	50.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	0	24	31	0	19	14	340	11	6	345	10
Future Volume (vph)	55	0	24	31	0	19	14	340	11	6	345	10
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.948			0.996			0.996	
Flt Protected		0.966			0.970			0.998			0.999	
Satd. Flow (prot)	0	1480	0	0	1469	0	0	1588	0	0	1590	0
Flt Permitted		0.966			0.970			0.998			0.999	
Satd. Flow (perm)	0	1480	0	0	1469	0	0	1588	0	0	1590	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		91.3			169.9			235.8			246.6	
Travel Time (s)		6.6			12.2			17.0			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	0	26	34	0	21	15	370	12	7	375	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	55	0	0	397	0	0	393	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	0	24	31	0	19	14	340	11	6	345	10
Future Volume (Veh/h)	55	0	24	31	0	19	14	340	11	6	345	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	0	26	34	0	21	15	370	12	7	375	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	822	806	380	826	806	376	386			382		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	822	806	380	826	806	376	386			382		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	100	96	88	100	97	99			99		
cM capacity (veh/h)	280	309	667	276	310	670	1172			1176		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	86	55	397	393
Volume Left	60	34	15	7
Volume Right	26	21	12	11
cSH	339	356	1172	1176
Volume to Capacity	0.25	0.15	0.01	0.01
Queue Length 95th (m)	7.9	4.3	0.3	0.1
Control Delay (s)	19.2	17.0	0.4	0.2
Lane LOS	C	C	A	A
Approach Delay (s)	19.2	17.0	0.4	0.2
Approach LOS	C	C		

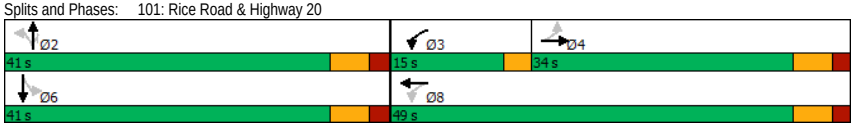
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	43.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	1	769	198	547	86	1	497	2
Future Volume (vph)	1	769	198	547	86	1	497	2
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		4	3	8		2		6
Permitted Phases	4		8		2		2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	8.0	8.0	10.0	8.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.2	24.2	13.0	24.1	24.4	24.4	24.4	30.0
Total Split (s)	34.0	34.0	15.0	49.0	41.0	41.0	41.0	41.0
Total Split (%)	37.8%	37.8%	16.7%	54.4%	45.6%	45.6%	45.6%	45.6%
Yellow Time (s)	4.2	4.2	3.0	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	2.0	2.0	0.0	2.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	3.0	6.1	6.4	6.4	6.4	6.4
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	27.1	27.1	44.9	41.8	34.6	34.6	34.6	34.6
Actuated g/C Ratio	0.30	0.30	0.51	0.47	0.39	0.39	0.39	0.39
v/c Ratio	0.00	0.94	0.81	0.42	0.21	0.00	0.77	0.01
Control Delay	22.0	48.5	42.6	16.6	20.1	17.0	17.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	48.5	42.6	16.6	20.1	17.0	17.3	14.2
LOS	C	D	D	B	C	B	B	B
Approach Delay		48.4		23.5		17.7		14.3
Approach LOS		D		C		B		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 88.9
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 31.5 — Intersection LOS: C
Intersection Capacity Utilization 88.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	1	907	215	599	93	1	540	4
v/c Ratio	0.00	0.94	0.81	0.42	0.21	0.00	0.77	0.01
Control Delay	22.0	48.5	42.6	16.6	20.1	17.0	17.3	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	48.5	42.6	16.6	20.1	17.0	17.3	14.2
Queue Length 50th (m)	0.1	82.7	22.5	35.8	11.1	0.1	29.1	0.2
Queue Length 95th (m)	1.3	#122.3	#60.3	49.6	22.5	1.1	#83.8	2.4
Internal Link Dist (m)		278.4		507.3		1119.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	220	990	270	1454	453	691	698	592
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.92	0.80	0.41	0.21	0.00	0.77	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

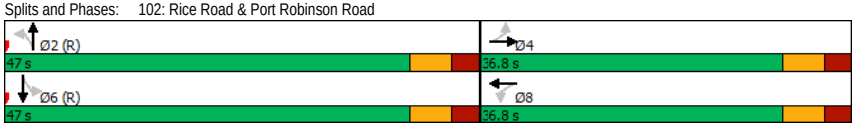
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	769	65	198	547	4	86	1	497	0	2	2
Future Volume (vph)	1	769	65	198	547	4	86	1	497	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1568	3146		1452	3012		1466	1776	1248		1520	
Flt Permitted	0.43	1.00		0.13	1.00		0.76	1.00	1.00		1.00	
Satd. Flow (perm)	703	3146		202	3012		1165	1776	1248		1520	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	836	71	215	595	4	93	1	540	0	2	2
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	213	0	1	0
Lane Group Flow (vph)	1	900	0	215	598	0	93	1	327	0	3	0
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.1	27.1		41.8	41.8		34.6	34.6	34.6		34.6	
Effective Green, g (s)	27.1	27.1		41.8	41.8		34.6	34.6	34.6		34.6	
Actuated g/C Ratio	0.30	0.30		0.47	0.47		0.39	0.39	0.39		0.39	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	214	959		258	1416		453	691	485		591	
v/s Ratio Prot		c0.29		c0.11	0.20			0.00			0.00	
v/s Ratio Perm	0.00			0.28			0.08		c0.26			
v/c Ratio	0.00	0.94		0.83	0.42		0.21	0.00	0.68		0.00	
Uniform Delay, d1	21.5	30.1		19.1	15.6		18.0	16.6	22.5		16.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	16.1		20.0	0.2		1.0	0.0	7.3		0.0	
Delay (s)	21.5	46.2		39.1	15.8		19.0	16.6	29.8		16.6	
Level of Service	C	D		D	B		B	B	C		B	
Approach Delay (s)		46.2			21.9			28.2			16.6	
Approach LOS		D			C			C			B	

Intersection Summary				
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	88.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	91	110	16	115	93	483	23	264
Future Volume (vph)	91	110	16	115	93	483	23	264
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	10.0	10.0	10.0	10.0
Minimum Split (s)	36.8	36.8	36.8	36.8	37.0	37.0	37.0	37.0
Total Split (s)	36.8	36.8	36.8	36.8	47.0	47.0	47.0	47.0
Total Split (%)	43.9%	43.9%	43.9%	43.9%	56.1%	56.1%	56.1%	56.1%
Yellow Time (s)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
All-Red Time (s)	2.7	2.7	2.7	2.7	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	6.8	6.8	7.0	7.0	7.0	7.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	30.0	30.0	30.0	30.0	40.0	40.0	40.0	40.0
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.48	0.48	0.48	0.48
v/c Ratio	0.24	0.35	0.04	0.28	0.24	0.75	0.09	0.46
Control Delay	21.1	17.0	18.1	18.3	15.0	25.8	13.2	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	17.0	18.1	18.3	15.0	25.8	13.2	16.7
LOS	C	B	B	B	B	C	B	B
Approach Delay		18.3		18.3		24.1		16.5
Approach LOS		B		B		C		B

Intersection Summary			
Cycle Length: 83.8			
Actuated Cycle Length: 83.8			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 84.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 102: Rice Road & Port Robinson Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	188	16	152	95	530	23	314
v/c Ratio	0.24	0.35	0.04	0.28	0.24	0.75	0.09	0.46
Control Delay	21.1	17.0	18.1	18.3	15.0	25.8	13.2	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	17.0	18.1	18.3	15.0	25.8	13.2	16.7
Queue Length 50th (m)	10.8	16.9	1.7	15.4	9.0	68.6	2.0	32.2
Queue Length 95th (m)	22.5	33.9	5.9	30.2	19.3	110.7	6.5	54.5
Internal Link Dist (m)		310.8		239.4		100.4		1119.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	382	540	377	543	400	708	263	680
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.35	0.04	0.28	0.24	0.75	0.09	0.46

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	110	74	16	115	34	93	483	36	23	264	44
Future Volume (vph)	91	110	74	16	115	34	93	483	36	23	264	44
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1430		1568	1482		1480	1478		1568	1409	
Flt Permitted	0.66	1.00		0.64	1.00		0.54	1.00		0.34	1.00	
Satd. Flow (perm)	1069	1430		1055	1482		837	1478		554	1409	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	112	76	16	117	35	95	493	37	23	269	45
RTOR Reduction (vph)	0	29	0	0	13	0	0	3	0	0	7	0
Lane Group Flow (vph)	93	159	0	16	139	0	95	527	0	23	307	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.48	0.48		0.48	0.48	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Grp Cap (vph)	382	511		377	530		399	705		264	672	
v/s Ratio Prot		c0.11			0.09			c0.36			0.22	
v/s Ratio Perm	0.09			0.02			0.11			0.04		
v/c Ratio	0.24	0.31		0.04	0.26		0.24	0.75		0.09	0.46	
Uniform Delay, d1	18.9	19.4		17.5	19.1		12.9	17.8		11.9	14.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.6		0.2	1.2		1.4	7.1		0.6	2.2	
Delay (s)	20.4	21.0		17.7	20.3		14.3	24.9		12.6	16.9	
Level of Service	C	C		B	C		B	C		B	B	
Approach Delay (s)		20.8			20.0			23.3			16.6	
Approach LOS		C			C			C			B	

Intersection Summary					
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.56				
Actuated Cycle Length (s)	83.8	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	84.9%	ICU Level of Service		E	
Analysis Period (min)	15				

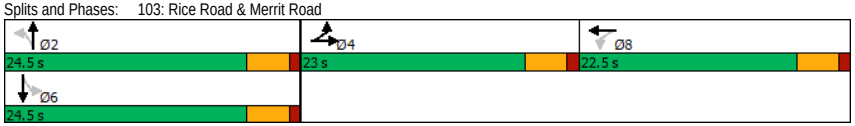
c Critical Lane Group

Lane Group	EBL	EBT	NBL	NBT	SBT	Ø8
Lane Configurations						
Traffic Volume (vph)	191	0	43	378	261	
Future Volume (vph)	191	0	43	378	261	
Turn Type	Split	NA	Perm	NA	NA	
Protected Phases	4	4		2	6	8
Permitted Phases			2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	23.0	23.0	24.5	24.5	24.5	22.5
Total Split (%)	32.9%	32.9%	35.0%	35.0%	35.0%	32%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	Min	None
Act Effct Green (s)	10.2	10.2	14.1	14.1	14.1	
Actuated g/C Ratio	0.30	0.30	0.42	0.42	0.42	
v/c Ratio	0.43	0.08	0.19	0.37	0.31	
Control Delay	11.9	0.2	9.6	8.5	7.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	11.9	0.2	9.6	8.5	7.2	
LOS	B	A	A	A	A	
Approach Delay		8.9		8.7	7.2	
Approach LOS		A		A	A	

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 33.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 8.3 — Intersection LOS: A
Intersection Capacity Utilization 42.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 103: Rice Road & Merrit Road



Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	203	69	46	402	342
v/c Ratio	0.43	0.08	0.19	0.37	0.31
Control Delay	11.9	0.2	9.6	8.5	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	0.2	9.6	8.5	7.2
Queue Length 50th (m)	6.8	0.0	1.4	7.0	5.0
Queue Length 95th (m)	20.9	0.0	6.9	17.3	13.4
Internal Link Dist (m)		194.2		527.5	101.3
Turn Bay Length (m)	40.0		50.0		
Base Capacity (vph)	859	1062	355	1582	1596
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.06	0.13	0.25	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	0	65	0	0	0	43	378	0	0	261	60
Future Volume (vph)	191	0	65	0	0	0	43	378	0	0	261	60
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Total Lost time (s)	4.5	4.5					4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00					1.00	0.95			0.95	
Frpb, ped/bikes	1.00	1.00					1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00					0.99	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.97	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1533	1380					1011	2561			2566	
Flt Permitted	0.95	1.00					0.55	1.00			1.00	
Satd. Flow (perm)	1533	1380					581	2561			2566	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	203	0	69	0	0	0	46	402	0	0	278	64
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	203	21	0	0	0	0	46	402	0	0	319	0
Confl. Peds. (#/hr)							16					16
Heavy Vehicles (%)	1%	2%	17%	2%	2%	2%	28%	2%	2%	2%	9%	13%
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	10.2	10.2					14.2	14.2			14.2	
Effective Green, g (s)	10.2	10.2					14.2	14.2			14.2	
Actuated g/C Ratio	0.31	0.31					0.43	0.43			0.43	
Clearance Time (s)	4.5	4.5					4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	468	421					247	1088			1090	
v/s Ratio Prot	c0.13	0.02						c0.16			0.12	
v/s Ratio Perm							0.08					
v/c Ratio	0.43	0.05					0.19	0.37			0.29	
Uniform Delay, d1	9.3	8.2					6.0	6.5			6.3	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	0.6	0.0					0.4	0.2			0.2	
Delay (s)	9.9	8.2					6.4	6.8			6.5	
Level of Service	A	A					A	A			A	
Approach Delay (s)		9.5			0.0			6.7			6.5	
Approach LOS		A			A			A			A	

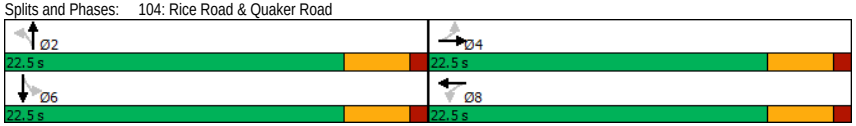
Intersection Summary				
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	33.4	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	23	33	62	26	31	305	70	301
Future Volume (vph)	23	33	62	26	31	305	70	301
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	7.0	7.0	7.1	7.1	16.3	16.3	16.3	16.3
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.62	0.62	0.62	0.62
v/c Ratio	0.07	0.20	0.18	0.20	0.07	0.21	0.16	0.19
Control Delay	7.6	5.9	8.6	5.1	6.3	4.7	6.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	5.9	8.6	5.1	6.3	4.7	6.8	5.2
LOS	A	A	A	A	A	A	A	A
Approach Delay		6.3		6.6		4.9		5.5
Approach LOS		A		A		A		A

Intersection Summary			
Cycle Length: 45			
Actuated Cycle Length: 26.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.21			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 38.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 104: Rice Road & Quaker Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	76	67	85	34	395	76	342
v/c Ratio	0.07	0.20	0.18	0.20	0.07	0.21	0.16	0.19
Control Delay	7.6	5.9	8.6	5.1	6.3	4.7	6.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	5.9	8.6	5.1	6.3	4.7	6.8	5.2
Queue Length 50th (m)	0.6	0.9	1.7	0.7	0.8	4.3	1.8	4.2
Queue Length 95th (m)	3.5	6.0	7.1	5.8	3.8	10.7	7.2	10.3
Internal Link Dist (m)		532.9		669.9		83.7		211.8
Turn Bay Length (m)	60.0		30.0		40.0		30.0	
Base Capacity (vph)	937	930	937	998	641	2406	636	2370
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.08	0.07	0.09	0.05	0.16	0.12	0.14

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	33	37	62	26	52	31	305	58	70	301	14
Future Volume (vph)	23	33	37	62	26	52	31	305	58	70	301	14
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1518	1332		1518	1424		1383	2969		1446	2936	
Flt Permitted	0.85	1.00		0.85	1.00		0.55	1.00		0.52	1.00	
Satd. Flow (perm)	1360	1332		1360	1424		795	2969		790	2936	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	36	40	67	28	57	34	332	63	76	327	15
RTOR Reduction (vph)	0	33	0	0	47	0	0	28	0	0	6	0
Lane Group Flow (vph)	25	43	0	67	38	0	34	367	0	76	336	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	4.7	4.7		4.7	4.7		14.4	14.4		14.4	14.4	
Effective Green, g (s)	4.7	4.7		4.7	4.7		14.4	14.4		14.4	14.4	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	227	222		227	238		407	1521		404	1504	
v/s Ratio Prot		0.03			0.03			c0.12			0.11	
v/s Ratio Perm	0.02			c0.05			0.04			0.10		
v/c Ratio	0.11	0.19		0.30	0.16		0.08	0.24		0.19	0.22	
Uniform Delay, d1	9.9	10.1		10.2	10.0		3.5	3.8		3.7	3.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.4		0.7	0.3		0.1	0.1		0.2	0.1	
Delay (s)	10.1	10.5		11.0	10.3		3.6	3.9		3.9	3.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		10.4			10.6			3.9			3.9	
Approach LOS		B			B			A			A	

Intersection Summary					
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.25				
Actuated Cycle Length (s)	28.1	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	38.7%	ICU Level of Service		A	
Analysis Period (min)	15				

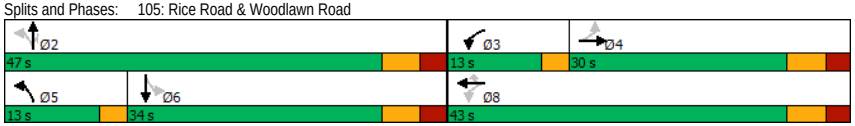
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	127	335	119	205	36	68	334	148	45	180
Future Volume (vph)	127	335	119	205	36	68	334	148	45	180
Turn Type	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA
Protected Phases		4	3	8		5	2			6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	4	4	3	8	8	5	2	2	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0
Total Split (s)	30.0	30.0	13.0	43.0	43.0	13.0	47.0	47.0	34.0	34.0
Total Split (%)	33.3%	33.3%	14.4%	47.8%	47.8%	14.4%	52.2%	52.2%	37.8%	37.8%
Yellow Time (s)	4.1	4.1	3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1
All-Red Time (s)	2.7	2.7	0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.8	3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lead			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes			Yes			Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	17.2	17.2	34.1	30.2	30.2	44.1	40.1	40.1	29.9	29.9
Actuated g/C Ratio	0.20	0.20	0.40	0.36	0.36	0.52	0.48	0.48	0.36	0.36
v/c Ratio	0.68	0.69	0.39	0.36	0.08	0.14	0.45	0.24	0.17	0.43
Control Delay	47.8	33.8	19.6	21.4	0.7	12.1	17.8	5.2	24.3	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	33.8	19.6	21.4	0.7	12.1	17.8	5.2	24.3	26.1
LOS	D	C	B	C	A	B	B	A	C	C
Approach Delay		37.0		18.7			13.7			25.8
Approach LOS		D		B			B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 84.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 69.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	138	464	129	223	39	74	363	161	49	214
v/c Ratio	0.68	0.69	0.39	0.36	0.08	0.14	0.45	0.24	0.17	0.43
Control Delay	47.8	33.8	19.6	21.4	0.7	12.1	17.8	5.2	24.3	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	33.8	19.6	21.4	0.7	12.1	17.8	5.2	24.3	26.1
Queue Length 50th (m)	21.6	35.3	13.8	27.2	0.0	5.8	38.2	2.5	5.8	27.5
Queue Length 95th (m)	41.3	51.1	25.4	44.9	1.0	14.5	70.1	14.4	16.1	53.6
Internal Link Dist (m)		565.4		852.0			682.2			898.7
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	276	901	330	750	579	534	813	665	291	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.51	0.39	0.30	0.07	0.14	0.45	0.24	0.17	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	335	92	119	205	36	68	334	148	45	180	17
Future Volume (vph)	127	335	92	119	205	36	68	334	148	45	180	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1535	3167		1535	1741	1233	1492	1708	1251	1434	1400	
Flt Permitted	0.62	1.00		0.32	1.00	1.00	0.56	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	1000	3167		520	1741	1233	879	1708	1251	822	1400	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	364	100	129	223	39	74	363	161	49	196	18
RTOR Reduction (vph)	0	29	0	0	0	25	0	0	68	0	3	0
Lane Group Flow (vph)	138	435	0	129	223	14	74	363	93	49	211	0
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	17.2	17.2		30.2	30.2	30.2	40.8	40.8	40.8	29.9	29.9	
Effective Green, g (s)	17.2	17.2		30.2	30.2	30.2	40.8	40.8	40.8	29.9	29.9	
Actuated g/C Ratio	0.20	0.20		0.36	0.36	0.36	0.48	0.48	0.48	0.35	0.35	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	202	642		304	620	439	480	821	601	289	493	
v/s Ratio Prot		0.14		c0.05	0.13		0.01	c0.21			0.15	
v/s Ratio Perm	c0.14			0.10		0.01	0.06		0.07	0.06		
v/c Ratio	0.68	0.68		0.42	0.36	0.03	0.15	0.44	0.15	0.17	0.43	
Uniform Delay, d1	31.3	31.2		19.5	20.2	17.8	12.1	14.5	12.3	18.9	20.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.2	2.8		1.0	0.4	0.0	0.2	1.7	0.5	1.3	2.7	
Delay (s)	40.4	34.1		20.5	20.5	17.8	12.2	16.2	12.9	20.2	23.6	
Level of Service	D	C		C	C	B	B	B	B	C	C	
Approach Delay (s)		35.5			20.2			14.8			23.0	
Approach LOS		D			C			B			C	

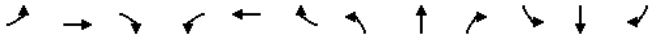
Intersection Summary				
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	84.8	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	69.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	393	361	0
Future Volume (Veh/h)	0	0	0	393	361	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	427	392	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	606	196	392			
vC1, stage 1 conf vol	392					
vC2, stage 2 conf vol	214					
vCu, unblocked vol	606	196	392			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	597	812	1163			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	214	214	261	131
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.00	0.13	0.13	0.15	0.08
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	18.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	31	0	19	0	374	11	6	355	0
Future Volume (Veh/h)	0	0	0	31	0	19	0	374	11	6	355	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	34	0	21	0	407	12	7	386	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)								236				
pX, platoon unblocked												
vC, conflicting volume	624	819	193	620	813	210	386			419		
vC1, stage 1 conf vol	400	400		413	413							
vC2, stage 2 conf vol	224	419		207	400							
vCu, unblocked vol	624	819	193	620	813	210	386			419		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	94	100	97	100			99		
cM capacity (veh/h)	534	483	816	539	487	796	1169			1137		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	55	0	271	148	7	257	129
Volume Left	0	34	0	0	0	7	0	0
Volume Right	0	21	0	0	12	0	0	0
cSH	1700	615	1700	1700	1700	1137	1700	1700
Volume to Capacity	0.15	0.09	0.00	0.16	0.09	0.01	0.15	0.08
Queue Length 95th (m)	0.0	2.3	0.0	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	0.0	11.4	0.0	0.0	0.0	8.2	0.0	0.0
Lane LOS	A	B				A		
Approach Delay (s)	0.0	11.4	0.0			0.1		
Approach LOS	A	B						

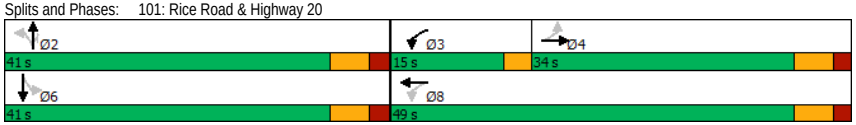
Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	22.5%	ICU Level of Service	A	
Analysis Period (min)	15			

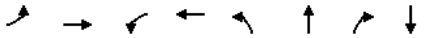
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	769	67	207	547	4	93	1	556	0	2	2
Future Volume (vph)	1	769	67	207	547	4	93	1	556	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1568	3145	0	1452	3012	0	1466	1776	1248	0	1519	0
Flt Permitted	0.426			0.132			0.755					
Satd. Flow (perm)	703	3145	0	202	3012	0	1165	1776	1248	0	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			1				348		2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1143.0			100.9	
Travel Time (s)		21.8			38.3			82.3			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Adj. Flow (vph)	1	836	73	225	595	4	101	1	604	0	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	909	0	225	599	0	101	1	604	0	4	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	30.0	30.0	
Total Split (s)	34.0	34.0		15.0	49.0		41.0	41.0	41.0	41.0	41.0	
Total Split (%)	37.8%	37.8%		16.7%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	
Maximum Green (s)	27.8	27.8		12.0	42.9		34.6	34.6	34.6	34.6	34.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	27.2	27.2		45.1	42.0		34.6	34.6	34.6		34.6	
Actuated g/C Ratio	0.31	0.31		0.51	0.47		0.39	0.39	0.39		0.39	
v/c Ratio	0.00	0.94		0.85	0.42		0.22	0.00	0.87		0.01	
Control Delay	22.0	48.8		46.9	16.6		20.3	17.0	25.5		14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	22.0	48.8		46.9	16.6		20.3	17.0	25.5		14.2	
LOS	C	D		D	B		C	B	C		B	
Approach Delay		48.8			24.9			24.8			14.3	
Approach LOS		D			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.1			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 92.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20

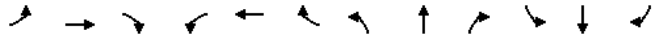




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	1	909	225	599	101	1	604	4
v/c Ratio	0.00	0.94	0.85	0.42	0.22	0.00	0.87	0.01
Control Delay	22.0	48.8	46.9	16.6	20.3	17.0	25.5	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	48.8	46.9	16.6	20.3	17.0	25.5	14.2
Queue Length 50th (m)	0.1	83.1	24.6	35.8	12.1	0.1	45.6	0.2
Queue Length 95th (m)	1.3	#123.0	#65.0	49.6	24.2	1.1	#121.2	2.4
Internal Link Dist (m)		278.4		507.3		1119.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	219	988	270	1451	452	689	697	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.92	0.83	0.41	0.22	0.00	0.87	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	769	67	207	547	4	93	1	556	0	2	2
Future Volume (vph)	1	769	67	207	547	4	93	1	556	0	2	2
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1568	3145		1452	3012		1466	1776	1248		1520	
Flt Permitted	0.43	1.00		0.13	1.00		0.76	1.00	1.00		1.00	
Satd. Flow (perm)	703	3145		202	3012		1165	1776	1248		1520	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	836	73	225	595	4	101	1	604	0	2	2
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	213	0	1	0
Lane Group Flow (vph)	1	902	0	225	598	0	101	1	391	0	3	0
Heavy Vehicles (%)	0%	6%	6%	8%	12%	0%	7%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm		NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	27.2	27.2		42.0	42.0		34.6	34.6	34.6		34.6	
Effective Green, g (s)	27.2	27.2		42.0	42.0		34.6	34.6	34.6		34.6	
Actuated g/C Ratio	0.31	0.31		0.47	0.47		0.39	0.39	0.39		0.39	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	214	960		259	1419		452	689	484		590	
v/s Ratio Prot		0.29		c0.11	0.20			0.00			0.00	
v/s Ratio Perm	0.00			c0.30			0.09		c0.31			
v/c Ratio	0.00	0.94		0.87	0.42		0.22	0.00	0.81		0.00	
Uniform Delay, d1	21.5	30.2		20.2	15.5		18.3	16.7	24.3		16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.0	16.2		25.1	0.2		1.1	0.0	13.5		0.0	
Delay (s)	21.5	46.4		45.2	15.7		19.4	16.7	37.8		16.7	
Level of Service	C	D		D	B		B	B	D		B	
Approach Delay (s)		46.3			23.8			35.2			16.7	
Approach LOS		D			C			D			B	

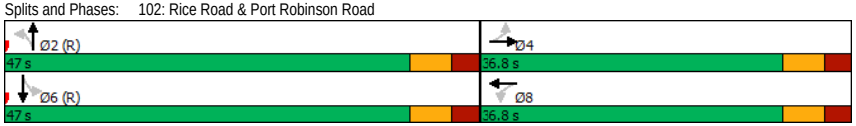
Intersection Summary				
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	89.1	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	92.9%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

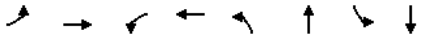
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	110	78	18	115	34	106	549	43	23	275	44
Future Volume (vph)	91	110	78	18	115	34	106	549	43	23	275	44
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.937			0.965			0.989			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	1426	0	1568	1481	0	1480	1477	0	1568	1410	0
Flt Permitted	0.660			0.637			0.526			0.271		
Satd. Flow (perm)	1068	1426	0	1052	1481	0	819	1477	0	447	1410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			20			6			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		334.8			263.4			124.4			1143.0	
Travel Time (s)		24.1			19.0			9.0			82.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Adj. Flow (vph)	93	112	80	18	117	35	108	560	44	23	281	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	192	0	18	152	0	108	604	0	23	326	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.48	0.48		0.48	0.48	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.24	0.35		0.05	0.28		0.28	0.85		0.11	0.48	
Control Delay	21.1	16.9		18.2	18.3		15.6	33.2		13.8	17.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.1	16.9		18.2	18.3		15.6	33.2		13.8	17.2	
LOS	C	B		B	B		B	C		B	B	
Approach Delay		18.2			18.3			30.5			16.9	
Approach LOS		B			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 83.8			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 90.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 102: Rice Road & Port Robinson Road

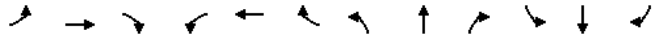




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	192	18	152	108	604	23	326
v/c Ratio	0.24	0.35	0.05	0.28	0.28	0.85	0.11	0.48
Control Delay	21.1	16.9	18.2	18.3	15.6	33.2	13.8	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	16.9	18.2	18.3	15.6	33.2	13.8	17.2
Queue Length 50th (m)	10.8	17.0	2.0	15.4	10.5	85.0	2.0	34.0
Queue Length 95th (m)	22.5	34.3	6.5	30.2	21.9	#151.9	6.8	57.3
Internal Link Dist (m)		310.8		239.4		100.4		1119.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	382	541	376	543	390	708	213	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.35	0.05	0.28	0.28	0.85	0.11	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	110	78	18	115	34	106	549	43	23	275	44
Future Volume (vph)	91	110	78	18	115	34	106	549	43	23	275	44
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1538	1427		1568	1482		1480	1477		1568	1410	
Flt Permitted	0.66	1.00		0.64	1.00		0.53	1.00		0.27	1.00	
Satd. Flow (perm)	1069	1427		1051	1482		819	1477		448	1410	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	112	80	18	117	35	108	560	44	23	281	45
RTOR Reduction (vph)	0	31	0	0	13	0	0	3	0	0	7	0
Lane Group Flow (vph)	93	161	0	18	139	0	108	601	0	23	319	0
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	6%	3%	0%	0%	7%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.48	0.48		0.48	0.48	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Grp Cap (vph)	382	510		376	530		390	705		213	673	
v/s Ratio Prot		c0.11			0.09			c0.41			0.23	
v/s Ratio Perm	0.09			0.02			0.13			0.05		
v/c Ratio	0.24	0.32		0.05	0.26		0.28	0.85		0.11	0.47	
Uniform Delay, d1	18.9	19.5		17.6	19.1		13.2	19.3		12.1	14.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	1.6		0.2	1.2		1.8	12.4		1.0	2.4	
Delay (s)	20.4	21.1		17.8	20.3		14.9	31.7		13.1	17.2	
Level of Service	C	C		B	C		B	C		B	B	
Approach Delay (s)		20.9			20.0			29.2			16.9	
Approach LOS		C			C			C			B	

Intersection Summary				
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	13.8	
Intersection Capacity Utilization	90.1%	ICU Level of Service	E	
Analysis Period (min)	15			

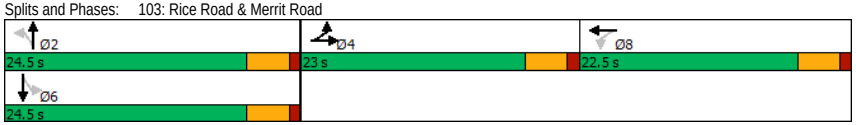
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	0	67	0	0	0	50	464	0	0	278	60
Future Volume (vph)	191	0	67	0	0	0	50	464	0	0	278	60
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Storage Length (m)	40.0		0.0	80.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							0.98				0.99	
Frt		0.850									0.973	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1533	1380	0	1863	1863	0	1021	2561	0	1863	2563	0
Flt Permitted	0.950						0.537					
Satd. Flow (perm)	1533	1380	0	1863	1863	0	566	2561	0	1863	2563	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		645									37	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		218.2			238.2			551.5			125.3	
Travel Time (s)		15.7			17.2			39.7			9.0	
Confl. Peds. (#/hr)							16					16
Peak Hour Factor	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Heavy Vehicles (%)	1%	2%	17%	2%	2%	2%	28%	2%	2%	2%	9%	13%
Adj. Flow (vph)	203	0	71	0	0	0	53	494	0	0	296	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	71	0	0	0	0	53	494	0	0	360	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes				
Headway Factor	1.22	1.00	1.22	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	23.0	23.0		22.5	22.5		24.5	24.5		24.5	24.5	
Total Split (%)	32.9%	32.9%		32.1%	32.1%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	18.5	18.5		18.0	18.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	10.5	10.5					15.6	15.6			15.6	
Actuated g/C Ratio	0.30	0.30					0.44	0.44			0.44	
v/c Ratio	0.45	0.08					0.21	0.44			0.31	
Control Delay	13.0	0.2					9.7	8.8			7.1	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	13.0	0.2					9.7	8.8			7.1	
LOS	B	A					A	A			A	
Approach Delay		9.6						8.9			7.1	
Approach LOS		A						A			A	

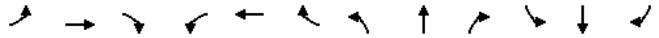
Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 35.2			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 103: Rice Road & Merrit Road



Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	203	71	53	494	360
v/c Ratio	0.45	0.08	0.21	0.44	0.31
Control Delay	13.0	0.2	9.7	8.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	0.2	9.7	8.8	7.1
Queue Length 50th (m)	7.6	0.0	1.7	9.3	5.6
Queue Length 95th (m)	23.3	0.0	7.7	21.5	14.1
Internal Link Dist (m)		194.2		527.5	101.3
Turn Bay Length (m)	40.0		50.0		
Base Capacity (vph)	816	1036	334	1514	1530
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.07	0.16	0.33	0.24

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	0	67	0	0	0	50	464	0	0	278	60
Future Volume (vph)	191	0	67	0	0	0	50	464	0	0	278	60
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Total Lost time (s)	4.5	4.5					4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00					1.00	0.95			0.95	
Frpb, ped/bikes	1.00	1.00					1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00					0.99	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.97	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1533	1380					1011	2561			2571	
Flt Permitted	0.95	1.00					0.54	1.00			1.00	
Satd. Flow (perm)	1533	1380					571	2561			2571	
Peak-hour factor, PHF	0.94	0.92	0.94	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.94	0.94
Adj. Flow (vph)	203	0	71	0	0	0	53	494	0	0	296	64
RTOR Reduction (vph)	0	50	0	0	0	0	0	0	0	0	21	0
Lane Group Flow (vph)	203	21	0	0	0	0	53	494	0	0	339	0
Confl. Peds. (#/hr)							16					16
Heavy Vehicles (%)	1%	2%	17%	2%	2%	2%	28%	2%	2%	2%	9%	13%
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	10.5	10.5					15.6	15.6			15.6	
Effective Green, g (s)	10.5	10.5					15.6	15.6			15.6	
Actuated g/C Ratio	0.30	0.30					0.44	0.44			0.44	
Clearance Time (s)	4.5	4.5					4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	458	412					253	1138			1142	
v/s Ratio Prot	c0.13	0.02						c0.19			0.13	
v/s Ratio Perm							0.09					
v/c Ratio	0.44	0.05					0.21	0.43			0.30	
Uniform Delay, d1	9.9	8.8					6.0	6.7			6.2	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	0.7	0.1					0.4	0.3			0.1	
Delay (s)	10.6	8.8					6.4	7.0			6.4	
Level of Service	B	A					A	A			A	
Approach Delay (s)		10.2			0.0			6.9			6.4	
Approach LOS		B			A			A			A	

Intersection Summary					
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.53				
Actuated Cycle Length (s)	35.1	Sum of lost time (s)		13.5	
Intersection Capacity Utilization	45.5%	ICU Level of Service		A	
Analysis Period (min)	15				

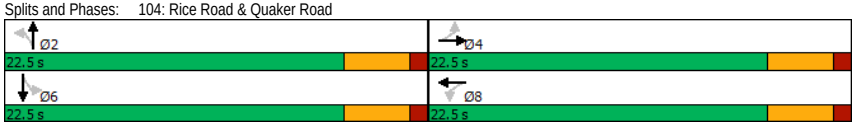
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	33	37	62	26	54	31	327	58	77	335	14
Future Volume (vph)	23	33	37	62	26	54	31	327	58	77	335	14
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	60.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt		0.921			0.898			0.977			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1518	1332	0	1518	1422	0	1383	2972	0	1447	2940	0
Flt Permitted	0.833			0.833			0.527			0.507		
Satd. Flow (perm)	1331	1332	0	1331	1422	0	767	2972	0	771	2940	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			59			54			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			107.7			235.8	
Travel Time (s)		40.1			50.0			7.8			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Adj. Flow (vph)	25	36	40	67	28	59	34	355	63	84	364	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	76	0	67	87	0	34	418	0	84	379	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane											Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.1	7.1		7.2	7.2		16.7	16.7		16.7	16.7	
Actuated g/C Ratio	0.26	0.26		0.27	0.27		0.62	0.62		0.62	0.62	
v/c Ratio	0.07	0.20		0.19	0.21		0.07	0.22		0.17	0.21	
Control Delay	7.9	6.1		9.0	5.2		6.2	4.8		7.0	5.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	7.9	6.1		9.0	5.2		6.2	4.8		7.0	5.2	
LOS	A	A		A	A		A	A		A	A	
Approach Delay		6.5			6.9			4.9			5.5	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 26.8			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.22			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 104: Rice Road & Quaker Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	76	67	87	34	418	84	379
v/c Ratio	0.07	0.20	0.19	0.21	0.07	0.22	0.17	0.21
Control Delay	7.9	6.1	9.0	5.2	6.2	4.8	7.0	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	6.1	9.0	5.2	6.2	4.8	7.0	5.2
Queue Length 50th (m)	0.6	0.9	1.8	0.7	0.8	4.7	2.1	4.8
Queue Length 95th (m)	3.7	6.3	7.5	6.2	3.8	11.7	8.1	11.5
Internal Link Dist (m)		532.9		669.9		83.7		211.8
Turn Bay Length (m)	60.0		30.0		40.0		30.0	
Base Capacity (vph)	904	917	904	984	612	2383	615	2349
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.08	0.07	0.09	0.06	0.18	0.14	0.16

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	33	37	62	26	54	31	327	58	77	335	14
Future Volume (vph)	23	33	37	62	26	54	31	327	58	77	335	14
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1518	1332		1518	1422		1383	2974		1446	2940	
Flt Permitted	0.83	1.00		0.83	1.00		0.53	1.00		0.51	1.00	
Satd. Flow (perm)	1332	1332		1332	1422		767	2974		772	2940	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	36	40	67	28	59	34	355	63	84	364	15
RTOR Reduction (vph)	0	33	0	0	49	0	0	26	0	0	5	0
Lane Group Flow (vph)	25	43	0	67	38	0	34	392	0	84	374	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	2%	8%	17%	2%	5%	2%	12%	1%	4%	7%	4%	22%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	4.8	4.8		4.8	4.8		14.8	14.8		14.8	14.8	
Effective Green, g (s)	4.8	4.8		4.8	4.8		14.8	14.8		14.8	14.8	
Actuated g/C Ratio	0.17	0.17		0.17	0.17		0.52	0.52		0.52	0.52	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	223		223	238		396	1538		399	1521	
v/s Ratio Prot		0.03			0.03			c0.13			0.13	
v/s Ratio Perm	0.02			c0.05			0.04			0.11		
v/c Ratio	0.11	0.19		0.30	0.16		0.09	0.25		0.21	0.25	
Uniform Delay, d1	10.1	10.2		10.4	10.2		3.5	3.8		3.7	3.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.4		0.8	0.3		0.1	0.1		0.3	0.1	
Delay (s)	10.3	10.7		11.2	10.5		3.6	3.9		4.0	3.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		10.6			10.8			3.9			3.9	
Approach LOS		B			B			A			A	

Intersection Summary					
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.27				
Actuated Cycle Length (s)	28.6	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	39.8%	ICU Level of Service		A	
Analysis Period (min)	15				

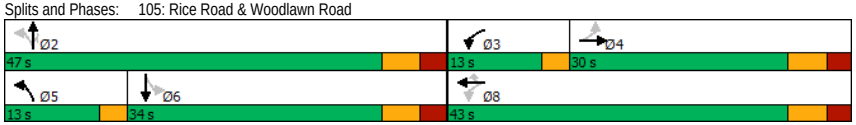
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	335	92	119	205	38	68	348	148	52	207	17
Future Volume (vph)	133	335	92	119	205	38	68	348	148	52	207	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.99		0.98	1.00		0.98	1.00	1.00	
Frt		0.968				0.850			0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1538	3167	0	1538	1741	1261	1494	1708	1273	1439	1404	0
Flt Permitted	0.619			0.324			0.523			0.537		
Satd. Flow (perm)	1000	3167	0	521	1741	1232	821	1708	1251	810	1404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37				85			126		5	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			922.7	
Travel Time (s)		42.4			63.1			50.8			66.4	
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Adj. Flow (vph)	145	364	100	129	223	41	74	378	161	57	225	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	464	0	129	223	41	74	378	161	57	243	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	30.0	30.0		13.0	43.0	43.0	13.0	47.0	47.0	34.0	34.0	
Total Split (%)	33.3%	33.3%		14.4%	47.8%	47.8%	14.4%	52.2%	52.2%	37.8%	37.8%	
Maximum Green (s)	23.2	23.2		10.0	36.2	36.2	10.0	40.0	40.0	27.0	27.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	17.5	17.5		34.3	30.5	30.5	44.1	40.1	40.1	29.9	29.9	
Actuated g/C Ratio	0.21	0.21		0.41	0.36	0.36	0.52	0.47	0.47	0.35	0.35	
v/c Ratio	0.70	0.68		0.39	0.35	0.08	0.15	0.47	0.24	0.20	0.49	
Control Delay	49.5	33.4		19.5	21.3	0.9	12.3	18.3	5.5	25.1	27.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	49.5	33.4		19.5	21.3	0.9	12.3	18.3	5.5	25.1	27.6	
LOS	D	C		B	C	A	B	B	A	C	C	
Approach Delay		37.3			18.6			14.2			27.1	
Approach LOS		D			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 84.5			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	145	464	129	223	41	74	378	161	57	243
v/c Ratio	0.70	0.68	0.39	0.35	0.08	0.15	0.47	0.24	0.20	0.49
Control Delay	49.5	33.4	19.5	21.3	0.9	12.3	18.3	5.5	25.1	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	33.4	19.5	21.3	0.9	12.3	18.3	5.5	25.1	27.6
Queue Length 50th (m)	22.9	35.3	13.8	27.2	0.0	5.9	41.0	3.1	7.0	32.6
Queue Length 95th (m)	43.4	51.1	25.4	44.9	1.3	14.5	73.6	15.2	18.2	61.6
Internal Link Dist (m)		565.4		852.0			682.2			898.7
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	275	898	332	748	577	508	811	660	286	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.52	0.39	0.30	0.07	0.15	0.47	0.24	0.20	0.49

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	335	92	119	205	38	68	348	148	52	207	17
Future Volume (vph)	133	335	92	119	205	38	68	348	148	52	207	17
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1535	3167		1535	1741	1233	1493	1708	1251	1434	1404	
Flt Permitted	0.62	1.00		0.32	1.00	1.00	0.52	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	1000	3167		524	1741	1233	821	1708	1251	811	1404	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	364	100	129	223	41	74	378	161	57	225	18
RTOR Reduction (vph)	0	29	0	0	0	26	0	0	66	0	3	0
Lane Group Flow (vph)	145	435	0	129	223	15	74	378	95	57	240	0
Confl. Peds. (#/hr)	1		6	6		1	1		4	4		1
Heavy Vehicles (%)	2%	3%	0%	2%	2%	1%	5%	4%	0%	9%	7%	20%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	17.5	17.5		30.5	30.5	30.5	40.8	40.8	40.8	29.9	29.9	
Effective Green, g (s)	17.5	17.5		30.5	30.5	30.5	40.8	40.8	40.8	29.9	29.9	
Actuated g/C Ratio	0.21	0.21		0.36	0.36	0.36	0.48	0.48	0.48	0.35	0.35	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	205	651		306	623	441	456	818	599	284	493	
v/s Ratio Prot		0.14		c0.05	0.13		0.02	c0.22			0.17	
v/s Ratio Perm	c0.14			0.10		0.01	0.06		0.08	0.07		
v/c Ratio	0.71	0.67		0.42	0.36	0.03	0.16	0.46	0.16	0.20	0.49	
Uniform Delay, d1	31.4	31.1		19.4	20.1	17.7	12.3	14.8	12.5	19.3	21.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.6	2.6		0.9	0.4	0.0	0.2	1.9	0.6	1.6	3.4	
Delay (s)	42.0	33.7		20.4	20.4	17.8	12.4	16.7	13.1	20.8	25.0	
Level of Service	D	C		C	C	B	B	B	B	C	C	
Approach Delay (s)		35.7			20.1			15.2			24.2	
Approach LOS		D			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	85.1	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	71.1%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	38	17	10	448	371	9
Future Volume (vph)	38	17	10	448	371	9
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Storage Length (m)	0.0	0.0	30.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.959				0.996	
Flt Protected	0.966		0.950			
Satd. Flow (prot)	1480	0	1281	2561	2848	0
Flt Permitted	0.966		0.950			
Satd. Flow (perm)	1480	0	1281	2561	2848	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	92.0			246.6	551.5	
Travel Time (s)	6.6			17.8	39.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	18	11	487	403	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	11	487	413	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	38	17	10	448	371	9
Future Volume (Veh/h)	38	17	10	448	371	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	18	11	487	403	10
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	674	206	413			
vC1, stage 1 conf vol	408					
vC2, stage 2 conf vol	266					
vCu, unblocked vol	674	206	413			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	98	99			
cM capacity (veh/h)	569	800	1142			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	59	11	244	244	269	144
Volume Left	41	11	0	0	0	0
Volume Right	18	0	0	0	0	10
cSH	624	1142	1700	1700	1700	1700
Volume to Capacity	0.09	0.01	0.14	0.14	0.16	0.08
Queue Length 95th (m)	2.5	0.2	0.0	0.0	0.0	0.0
Control Delay (s)	11.4	8.2	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.4	0.2			0.0	
Approach LOS	B					

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	27.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	0	24	31	0	19	14	384	11	6	372	10
Future Volume (vph)	55	0	24	31	0	19	14	384	11	6	372	10
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	0.0		0.0	0.0		0.0	30.0		0.0	30.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.959			0.948			0.996			0.996	
Flt Protected		0.966			0.970		0.950			0.950		
Satd. Flow (prot)	0	1480	0	0	1469	0	1518	3024	0	1518	3024	0
Flt Permitted		0.966			0.970		0.950			0.950		
Satd. Flow (perm)	0	1480	0	0	1469	0	1518	3024	0	1518	3024	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		282.3			169.9			235.8			246.6	
Travel Time (s)		20.3			12.2			17.0			17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	0	26	34	0	21	15	417	12	7	404	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	55	0	15	429	0	7	415	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	26.8%	ICU Level of Service A		
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	0	24	31	0	19	14	384	11	6	372	10
Future Volume (Veh/h)	55	0	24	31	0	19	14	384	11	6	372	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	0	26	34	0	21	15	417	12	7	404	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)								236				
pX, platoon unblocked												
vC, conflicting volume	683	882	208	695	882	214	415			429		
vC1, stage 1 conf vol	424	424		453	453							
vC2, stage 2 conf vol	260	459		242	429							
vCu, unblocked vol	683	882	208	695	882	214	415			429		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	100	97	93	100	97	99			99		
cM capacity (veh/h)	507	458	799	492	456	790	1140			1127		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	86	55	15	278	151	7	269	146
Volume Left	60	34	15	0	0	7	0	0
Volume Right	26	21	0	0	12	0	0	11
cSH	570	575	1140	1700	1700	1127	1700	1700
Volume to Capacity	0.15	0.10	0.01	0.16	0.09	0.01	0.16	0.09
Queue Length 95th (m)	4.2	2.5	0.3	0.0	0.0	0.1	0.0	0.0
Control Delay (s)	12.4	11.9	8.2	0.0	0.0	8.2	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.4	11.9	0.3			0.1		
Approach LOS	B	B						

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	26.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	700	135	362	882	5	93	6	298	4	5	7
Future Volume (vph)	6	700	135	362	882	5	93	6	298	4	5	7
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt		0.976			0.999				0.850		0.936	
Flt Protected	0.950			0.950			0.950				0.988	
Satd. Flow (prot)	1568	3172	0	1568	3273	0	1553	1776	1236	0	1507	0
Flt Permitted	0.297			0.142			0.746				0.958	
Satd. Flow (perm)	490	3172	0	234	3273	0	1219	1776	1236	0	1462	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			1				324		8	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		302.4			531.3			1140.0			100.9	
Travel Time (s)		21.8			38.3			68.4			6.1	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	7	761	147	393	959	5	101	7	324	4	5	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	908	0	393	964	0	101	7	324	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	24.4	24.4	
Total Split (s)	37.0	37.0		28.0	65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	41.1%	41.1%		31.1%	72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	30.8	30.8		25.0	58.9		18.6	18.6	18.6	18.6	18.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	26.4	26.4		51.7	48.5		19.0	19.0	19.0		19.0	
Actuated g/C Ratio	0.33	0.33		0.64	0.60		0.24	0.24	0.24		0.24	
v/c Ratio	0.04	0.86		0.85	0.49		0.35	0.02	0.60		0.05	
Control Delay	20.7	34.1		34.1	9.4		33.4	28.3	9.1		21.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	20.7	34.1		34.1	9.4		33.4	28.3	9.1		21.4	
LOS	C	C		C	A		C	C	A		C	
Approach Delay		34.0			16.5			15.1			21.4	
Approach LOS		C			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 80.2			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 74.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	7	908	393	964	101	7	324	17
v/c Ratio	0.04	0.86	0.85	0.49	0.35	0.02	0.60	0.05
Control Delay	20.7	34.1	34.1	9.4	33.4	28.3	9.1	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	34.1	34.1	9.4	33.4	28.3	9.1	21.4
Queue Length 50th (m)	0.8	69.8	42.3	40.0	14.5	0.9	0.0	1.2
Queue Length 95th (m)	4.1	102.0	#80.7	52.7	31.7	4.7	24.7	6.9
Internal Link Dist (m)		278.4		507.3		1116.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	191	1257	574	2449	288	420	539	351
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.72	0.68	0.39	0.35	0.02	0.60	0.05

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	700	135	362	882	5	93	6	298	4	5	7
Future Volume (vph)	6	700	135	362	882	5	93	6	298	4	5	7
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00		1.00	1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1568	3172		1568	3274		1553	1776	1236		1509	
Flt Permitted	0.30	1.00		0.14	1.00		0.75	1.00	1.00		0.96	
Satd. Flow (perm)	490	3172		234	3274		1220	1776	1236		1462	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	761	147	393	959	5	101	7	324	4	5	8
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	247	0	6	0
Lane Group Flow (vph)	7	890	0	393	964	0	101	7	77	0	11	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	26.4	26.4		48.5	48.5		19.0	19.0	19.0		19.0	
Effective Green, g (s)	26.4	26.4		48.5	48.5		19.0	19.0	19.0		19.0	
Actuated g/C Ratio	0.33	0.33		0.61	0.61		0.24	0.24	0.24		0.24	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	161	1046		458	1984		289	421	293		347	
v/s Ratio Prot		0.28		c0.20	0.29			0.00				
v/s Ratio Perm	0.01			c0.32			c0.08		0.06		0.01	
v/c Ratio	0.04	0.85		0.86	0.49		0.35	0.02	0.26		0.03	
Uniform Delay, d1	18.2	25.0		18.8	8.8		25.4	23.3	24.8		23.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	6.8		14.7	0.2		3.3	0.1	2.2		0.2	
Delay (s)	18.3	31.7		33.5	9.0		28.7	23.4	27.0		23.6	
Level of Service	B	C		C	A		C	C	C		C	
Approach Delay (s)		31.6			16.1			27.3			23.6	
Approach LOS		C			B			C			C	

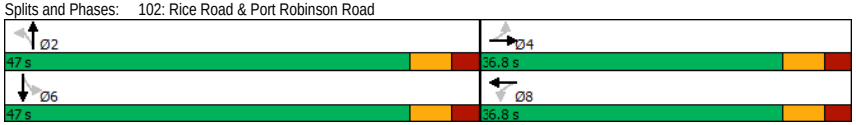
Intersection Summary					
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.74				
Actuated Cycle Length (s)	80.0	Sum of lost time (s)		15.6	
Intersection Capacity Utilization	74.9%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

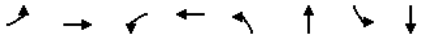
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	111	59	44	144	42	54	360	20	37	414	69
Future Volume (vph)	53	111	59	44	144	42	54	360	20	37	414	69
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948			0.966			0.992			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	1455	0	1568	1483	0	1568	1494	0	1568	1490	0
Flt Permitted	0.632			0.643			0.426			0.510		
Satd. Flow (perm)	1043	1455	0	1062	1483	0	703	1494	0	842	1490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			19			5			14	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		272.2			408.2			137.7			1140.0	
Travel Time (s)		19.6			29.4			8.3			68.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	57	119	63	47	155	45	58	387	22	40	445	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	182	0	47	200	0	58	409	0	40	519	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	13.1	13.1		13.1	13.1		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.60	0.60		0.60	0.60	
v/c Ratio	0.28	0.59		0.23	0.66		0.14	0.46		0.08	0.58	
Control Delay	26.1	27.3		24.9	33.1		8.2	10.3		7.5	12.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.1	27.3		24.9	33.1		8.2	10.3		7.5	12.2	
LOS	C	C		C	C		A	B		A	B	
Approach Delay		27.0			31.5			10.0			11.9	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 67.1			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			

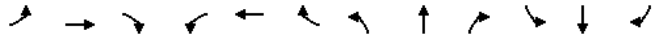
Splits and Phases: 102: Rice Road & Port Robinson Road





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	57	182	47	200	58	409	40	519
v/c Ratio	0.28	0.59	0.23	0.66	0.14	0.46	0.08	0.58
Control Delay	26.1	27.3	24.9	33.1	8.2	10.3	7.5	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	27.3	24.9	33.1	8.2	10.3	7.5	12.2
Queue Length 50th (m)	6.4	17.4	5.2	21.9	2.9	25.6	1.9	35.5
Queue Length 95th (m)	15.8	35.5	13.4	41.7	9.8	56.7	7.1	79.2
Internal Link Dist (m)		248.2		384.2		113.7		1116.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	468	672	476	676	420	896	503	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.27	0.10	0.30	0.14	0.46	0.08	0.58

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	111	59	44	144	42	54	360	20	37	414	69
Future Volume (vph)	53	111	59	44	144	42	54	360	20	37	414	69
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1568	1455		1568	1483		1568	1494		1568	1489	
Flt Permitted	0.63	1.00		0.64	1.00		0.43	1.00		0.51	1.00	
Satd. Flow (perm)	1044	1455		1061	1483		703	1494		843	1489	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	119	63	47	155	45	58	387	22	40	445	74
RTOR Reduction (vph)	0	28	0	0	15	0	0	2	0	0	6	0
Lane Group Flow (vph)	57	154	0	47	185	0	58	407	0	40	513	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.1	13.1		13.1	13.1		40.1	40.1		40.1	40.1	
Effective Green, g (s)	13.1	13.1		13.1	13.1		40.1	40.1		40.1	40.1	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.60	0.60		0.60	0.60	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	204	284		207	289		420	894		504	891	
v/s Ratio Prot		0.11			c0.12			0.27			c0.34	
v/s Ratio Perm	0.05			0.04			0.08			0.05		
v/c Ratio	0.28	0.54		0.23	0.64		0.14	0.46		0.08	0.58	
Uniform Delay, d1	22.9	24.2		22.7	24.8		5.9	7.4		5.7	8.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	1.7		0.4	4.0		0.7	1.7		0.3	2.7	
Delay (s)	23.5	25.9		23.1	28.8		6.6	9.1		6.0	11.0	
Level of Service	C	C		C	C		A	A		A	B	
Approach Delay (s)		25.3			27.7			8.8			10.6	
Approach LOS		C			C			A			B	

Intersection Summary					
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.59				
Actuated Cycle Length (s)	67.0	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	82.7%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	99	30	73	309	332	160
Future Volume (vph)	99	30	73	309	332	160
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.969				0.956	
Flt Protected	0.963			0.991		
Satd. Flow (prot)	1514	0	0	1342	1443	0
Flt Permitted	0.963			0.991		
Satd. Flow (perm)	1514	0	0	1342	1443	0
Link Speed (k/h)	50			60	60	
Link Distance (m)	338.1			560.0	907.3	
Travel Time (s)	24.3			33.6	54.4	
Confl. Peds. (#/hr)		1	8			8
Confl. Bikes (#/hr)			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	4%	1%	2%	1%
Adj. Flow (vph)	103	31	76	322	346	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	134	0	0	398	513	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	99	30	73	309	332	160
Future Volume (Veh/h)	99	30	73	309	332	160
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	103	31	76	322	346	167
Pedestrians	8			1		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	912	438	521			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	912	438	521			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	63	95	93			
cM capacity (veh/h)	282	614	1028			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	134	398	513
Volume Left	103	76	0
Volume Right	31	0	167
cSH	322	1028	1700
Volume to Capacity	0.42	0.07	0.30
Queue Length 95th (m)	15.7	1.9	0.0
Control Delay (s)	23.9	2.3	0.0
Lane LOS	C	A	
Approach Delay (s)	23.9	2.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	27	33	53	21	36	26	321	55	59	288	12
Future Volume (vph)	13	27	33	53	21	36	26	321	55	59	288	12
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.938			0.956			0.981			0.995	
Flt Protected		0.991			0.976			0.997			0.992	
Satd. Flow (prot)	0	1336	0	0	1521	0	0	1562	0	0	1559	0
Flt Permitted		0.991			0.976			0.997			0.992	
Satd. Flow (perm)	0	1336	0	0	1521	0	0	1562	0	0	1559	0
Link Speed (k/h)		50			50			60			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			61.8			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Adj. Flow (vph)	14	29	36	58	23	39	28	349	60	64	313	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	120	0	0	437	0	0	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	13	27	33	53	21	36	26	321	55	59	288	12
Future Volume (vph)	13	27	33	53	21	36	26	321	55	59	288	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	29	36	58	23	39	28	349	60	64	313	13

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	120	437	390
Volume Left (vph)	14	58	28	64
Volume Right (vph)	36	39	60	13
Hadj (s)	-0.01	-0.10	-0.03	0.07
Departure Headway (s)	6.3	6.1	5.1	5.2
Degree Utilization, x	0.14	0.20	0.61	0.57
Capacity (veh/h)	477	509	683	664
Control Delay (s)	10.3	10.6	15.8	14.8
Approach Delay (s)	10.3	10.6	15.8	14.8
Approach LOS	B	B	C	B

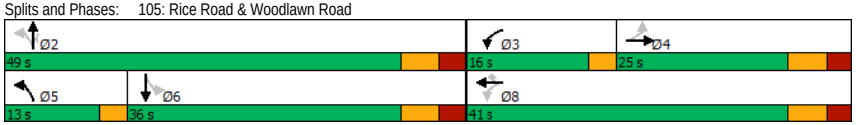
Intersection Summary				
Delay	14.4			
Level of Service	B			
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	310	60	226	369	55	80	260	145	60	276	56
Future Volume (vph)	47	310	60	226	369	55	80	260	145	60	276	56
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97			0.98	1.00		
Frt		0.976				0.850			0.850		0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3239	0	1538	1758	1273	1553	1741	1248	1568	1497	0
Flt Permitted	0.526			0.349			0.393			0.586		
Satd. Flow (perm)	862	3239	0	562	1758	1232	642	1741	1228	965	1497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				85			158		12	
Link Speed (k/h)		50			50			60			60	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			42.4			61.8	
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Adj. Flow (vph)	51	337	65	246	401	60	87	283	158	65	300	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	402	0	246	401	60	87	283	158	65	361	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	25.0	25.0		16.0	41.0	41.0	13.0	49.0	49.0	36.0	36.0	
Total Split (%)	27.8%	27.8%		17.8%	45.6%	45.6%	14.4%	54.4%	54.4%	40.0%	40.0%	
Maximum Green (s)	18.2	18.2		13.0	34.2	34.2	10.0	42.0	42.0	29.0	29.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	14.9	14.9		34.1	30.3	30.3	46.1	42.1	42.1	31.9	31.9	
Actuated g/C Ratio	0.17	0.17		0.40	0.35	0.35	0.53	0.49	0.49	0.37	0.37	
v/c Ratio	0.34	0.69		0.68	0.65	0.12	0.19	0.33	0.23	0.18	0.64	
Control Delay	38.2	38.5		29.1	29.0	2.8	12.0	15.6	3.3	23.4	30.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	38.2	38.5		29.1	29.0	2.8	12.0	15.6	3.3	23.4	30.6	
LOS	D	D		C	C	A	B	B	A	C	C	
Approach Delay		38.5			26.8			11.3			29.5	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 86.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 26.0		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	51	402	246	401	60	87	283	158	65	361
v/c Ratio	0.34	0.69	0.68	0.65	0.12	0.19	0.33	0.23	0.18	0.64
Control Delay	38.2	38.5	29.1	29.0	2.8	12.0	15.6	3.3	23.4	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	38.5	29.1	29.0	2.8	12.0	15.6	3.3	23.4	30.6
Queue Length 50th (m)	7.9	33.2	30.0	57.4	0.0	7.2	29.5	0.0	8.1	53.1
Queue Length 95th (m)	19.0	48.7	49.5	88.1	4.8	15.7	50.4	10.4	19.0	#97.1
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	182	702	369	698	540	449	849	680	356	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.57	0.67	0.57	0.11	0.19	0.33	0.23	0.18	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	310	60	226	369	55	80	260	145	60	276	56
Future Volume (vph)	47	310	60	226	369	55	80	260	145	60	276	56
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1558	3238		1535	1758	1233	1553	1741	1228	1564	1496	
Flt Permitted	0.53	1.00		0.35	1.00	1.00	0.39	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	862	3238		564	1758	1233	642	1741	1228	965	1496	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	337	65	246	401	60	87	283	158	65	300	61
RTOR Reduction (vph)	0	18	0	0	0	39	0	0	80	0	8	0
Lane Group Flow (vph)	51	384	0	246	401	21	87	283	78	65	353	0
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	14.9	14.9		30.3	30.3	30.3	42.7	42.7	42.7	31.9	31.9	
Effective Green, g (s)	14.9	14.9		30.3	30.3	30.3	42.7	42.7	42.7	31.9	31.9	
Actuated g/C Ratio	0.17	0.17		0.35	0.35	0.35	0.49	0.49	0.49	0.37	0.37	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	147	555		335	613	430	397	856	604	354	549	
v/s Ratio Prot		0.12		c0.10	0.23		0.02	c0.16			c0.24	
v/s Ratio Perm	0.06			c0.15		0.02	0.09		0.06	0.07		
v/c Ratio	0.35	0.69		0.73	0.65	0.05	0.22	0.33	0.13	0.18	0.64	
Uniform Delay, d1	31.7	33.8		22.2	23.8	18.7	12.5	13.4	12.0	18.6	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	3.7		8.1	2.5	0.0	0.3	1.0	0.4	1.1	5.7	
Delay (s)	33.1	37.5		30.3	26.3	18.8	12.8	14.4	12.4	19.8	28.5	
Level of Service	C	D		C	C	B	B	B	B	B	C	
Approach Delay (s)		37.0			27.1			13.5			27.1	
Approach LOS		D			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	78.5%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

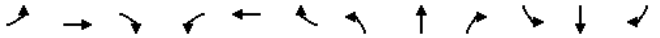
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	370	359	0
Future Volume (vph)	0	0	0	370	359	0
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1598	0	0	1348	1505	0
Flt Permitted						
Satd. Flow (perm)	1598	0	0	1348	1505	0
Link Speed (k/h)	50			50	60	
Link Distance (m)	290.1			240.6	560.0	
Travel Time (s)	20.9			17.3	33.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	402	390	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	402	390	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	370	359	0
Future Volume (Veh/h)	0	0	0	370	359	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	402	390	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	792	390	390			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	792	390	390			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	358	658	1169			

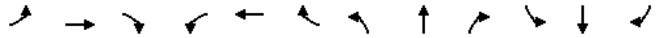
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	402	390
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1169	1700
Volume to Capacity	0.00	0.00	0.23
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	370	0	0	359	0
Future Volume (vph)	0	0	0	0	0	0	0	370	0	0	359	0
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1598	0	0	1598	0	0	1598	0	0	1598	0
Flt Permitted												
Satd. Flow (perm)	0	1598	0	0	1598	0	0	1598	0	0	1598	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		286.1			169.9			235.8			240.6	
Travel Time (s)		20.6			12.2			17.0			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	402	0	0	390	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	402	0	0	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	370	0	0	359	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	370	0	0	359	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	402	0	0	390	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	792	792	390	792	792	402	390			402		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	792	792	390	792	792	402	390			402		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	307	322	658	307	322	648	1169			1157		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	402	390
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1169	1157
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary					
Average Delay		0.0			
Intersection Capacity Utilization	26.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	757	154	402	955	6	109	7	342	4	5	8
Future Volume (vph)	7	757	154	402	955	6	109	7	342	4	5	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt		0.975			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1568	3169	0	1568	3273	0	1553	1776	1236	0	1502	0
Flt Permitted	0.274			0.124			0.746				0.959	
Satd. Flow (perm)	452	3169	0	205	3273	0	1219	1776	1236	0	1457	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			1				372		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1140.0			100.9	
Travel Time (s)		21.8			38.3			82.1			7.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	8	823	167	437	1038	7	118	8	372	4	5	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	990	0	437	1045	0	118	8	372	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	24.4	24.4	
Total Split (s)	37.0	37.0		28.0	65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	41.1%	41.1%		31.1%	72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	30.8	30.8		25.0	58.9		18.6	18.6	18.6	18.6	18.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	29.1	29.1		57.5	54.4		18.7	18.7	18.7		18.7	
Actuated g/C Ratio	0.34	0.34		0.67	0.63		0.22	0.22	0.22		0.22	
v/c Ratio	0.05	0.90		0.89	0.50		0.44	0.02	0.66		0.06	
Control Delay	21.1	39.5		42.1	9.2		37.1	28.9	10.1		20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	21.1	39.5		42.1	9.2		37.1	28.9	10.1		20.8	
LOS	C	D		D	A		D	C	B		C	
Approach Delay		39.3			18.9			16.8			20.8	
Approach LOS		D			B			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 85.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 25.4		Intersection LOS: C	
Intersection Capacity Utilization 80.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	8	990	437	1045	118	8	372	18
v/c Ratio	0.05	0.90	0.89	0.50	0.44	0.02	0.66	0.06
Control Delay	21.1	39.5	42.1	9.2	37.1	28.9	10.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	39.5	42.1	9.2	37.1	28.9	10.1	20.8
Queue Length 50th (m)	1.0	86.7	56.1	45.0	19.0	1.2	0.0	1.3
Queue Length 95th (m)	4.2	#125.8	#109.6	58.8	36.5	4.9	27.5	7.1
Internal Link Dist (m)		278.4		507.3		1116.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	163	1164	537	2264	266	388	560	325
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.85	0.81	0.46	0.44	0.02	0.66	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	757	154	402	955	6	109	7	342	4	5	8
Future Volume (vph)	7	757	154	402	955	6	109	7	342	4	5	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1568	3169		1568	3273		1553	1776	1236		1503	
Flt Permitted	0.27	1.00		0.12	1.00		0.75	1.00	1.00		0.96	
Satd. Flow (perm)	452	3169		205	3273		1219	1776	1236		1457	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	823	167	437	1038	7	118	8	372	4	5	9
RTOR Reduction (vph)	0	19	0	0	0	0	0	0	291	0	7	0
Lane Group Flow (vph)	8	971	0	437	1045	0	118	8	81	0	11	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	29.1	29.1		54.4	54.4		18.7	18.7	18.7		18.7	
Effective Green, g (s)	29.1	29.1		54.4	54.4		18.7	18.7	18.7		18.7	
Actuated g/C Ratio	0.34	0.34		0.64	0.64		0.22	0.22	0.22		0.22	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	153	1077		483	2080		266	387	270		318	
v/s Ratio Prot		0.31		c0.23	0.32			0.00				
v/s Ratio Perm	0.02			c0.34			c0.10		0.07		0.01	
v/c Ratio	0.05	0.90		0.90	0.50		0.44	0.02	0.30		0.03	
Uniform Delay, d1	19.0	26.9		22.1	8.4		28.9	26.3	28.0		26.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	10.4		20.2	0.2		5.3	0.1	2.8		0.2	
Delay (s)	19.1	37.3		42.3	8.5		34.2	26.4	30.8		26.5	
Level of Service	B	D		D	A		C	C	C		C	
Approach Delay (s)		37.1			18.5			31.6			26.5	
Approach LOS		D			B			C			C	

Intersection Summary

HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	15.6
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

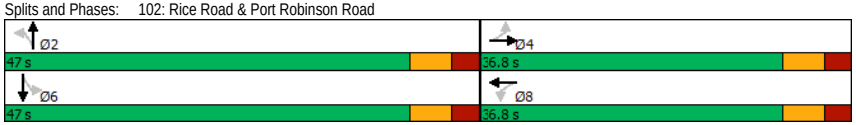
c Critical Lane Group

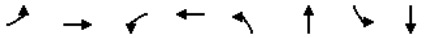
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	121	64	47	153	45	61	417	23	39	457	73
Future Volume (vph)	58	121	64	47	153	45	61	417	23	39	457	73
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948			0.966			0.992			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	1455	0	1568	1483	0	1568	1494	0	1568	1490	0
Flt Permitted	0.604			0.633			0.387			0.458		
Satd. Flow (perm)	997	1455	0	1045	1483	0	639	1494	0	756	1490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			19			5			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		272.2			408.2			137.7			1140.0	
Travel Time (s)		19.6			29.4			9.9			82.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	62	130	69	51	165	48	66	448	25	42	491	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	199	0	51	213	0	66	473	0	42	569	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.59	0.59		0.59	0.59	
v/c Ratio	0.31	0.62		0.24	0.68		0.17	0.53		0.09	0.64	
Control Delay	26.6	28.5		24.9	33.8		9.1	11.9		8.0	14.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.6	28.5		24.9	33.8		9.1	11.9		8.0	14.1	
LOS	C	C		C	C		A	B		A	B	
Approach Delay		28.0			32.1			11.5			13.7	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 67.7			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			

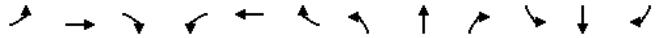
Splits and Phases: 102: Rice Road & Port Robinson Road





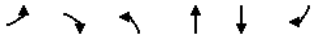
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	199	51	213	66	473	42	569
v/c Ratio	0.31	0.62	0.24	0.68	0.17	0.53	0.09	0.64
Control Delay	26.6	28.5	24.9	33.8	9.1	11.9	8.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	28.5	24.9	33.8	9.1	11.9	8.0	14.1
Queue Length 50th (m)	7.0	19.5	5.7	23.8	3.5	32.5	2.1	42.5
Queue Length 95th (m)	16.9	38.9	14.4	44.3	11.6	71.8	7.6	95.1
Internal Link Dist (m)		248.2		384.2		113.7		1116.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	443	667	465	670	379	888	448	889
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.30	0.11	0.32	0.17	0.53	0.09	0.64

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	121	64	47	153	45	61	417	23	39	457	73
Future Volume (vph)	58	121	64	47	153	45	61	417	23	39	457	73
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1568	1455		1568	1483		1568	1495		1568	1491	
Flt Permitted	0.60	1.00		0.63	1.00		0.39	1.00		0.46	1.00	
Satd. Flow (perm)	998	1455		1045	1483		638	1495		756	1491	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	130	69	51	165	48	66	448	25	42	491	78
RTOR Reduction (vph)	0	29	0	0	15	0	0	2	0	0	5	0
Lane Group Flow (vph)	62	170	0	51	198	0	66	471	0	42	564	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Effective Green, g (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.59	0.59		0.59	0.59	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	201	294		211	300		378	887		448	885	
v/s Ratio Prot		0.12			c0.13			0.32			c0.38	
v/s Ratio Perm	0.06			0.05			0.10			0.06		
v/c Ratio	0.31	0.58		0.24	0.66		0.17	0.53		0.09	0.64	
Uniform Delay, d1	23.0	24.4		22.6	24.9		6.2	8.2		5.9	9.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	2.3		0.4	4.6		1.0	2.3		0.4	3.5	
Delay (s)	23.6	26.7		23.1	29.5		7.2	10.4		6.3	12.5	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		25.9			28.2			10.0			12.1	
Approach LOS		C			C			B			B	

Intersection Summary					
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.64				
Actuated Cycle Length (s)	67.7	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	86.6%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	111	34	82	360	370	170
Future Volume (vph)	111	34	82	360	370	170
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.969				0.957	
Flt Protected	0.963			0.991		
Satd. Flow (prot)	1514	0	0	1342	1445	0
Flt Permitted	0.963			0.991		
Satd. Flow (perm)	1514	0	0	1342	1445	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	338.1			560.0	907.3	
Travel Time (s)	24.3			40.3	65.3	
Confl. Peds. (#/hr)		1	8			8
Confl. Bikes (#/hr)			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	4%	1%	2%	1%
Adj. Flow (vph)	116	35	85	375	385	177
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	460	562	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	34	82	360	370	170
Future Volume (Veh/h)	111	34	82	360	370	170
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	116	35	85	375	385	177
Pedestrians	8			1		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1026	482	570			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1026	482	570			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	51	94	91			
cM capacity (veh/h)	238	580	986			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	151	460	562
Volume Left	116	85	0
Volume Right	35	0	177
cSH	276	986	1700
Volume to Capacity	0.55	0.09	0.33
Queue Length 95th (m)	24.3	2.3	0.0
Control Delay (s)	32.8	2.5	0.0
Lane LOS	D	A	
Approach Delay (s)	32.8	2.5	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	30	37	56	22	45	29	380	62	67	320	15
Future Volume (vph)	18	30	37	56	22	45	29	380	62	67	320	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.942			0.951			0.982			0.995	
Flt Protected		0.989			0.978			0.997			0.992	
Satd. Flow (prot)	0	1346	0	0	1516	0	0	1564	0	0	1559	0
Flt Permitted		0.989			0.978			0.997			0.992	
Satd. Flow (perm)	0	1346	0	0	1516	0	0	1564	0	0	1559	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			74.2			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Adj. Flow (vph)	20	33	40	61	24	49	32	413	67	73	348	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	134	0	0	512	0	0	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	18	30	37	56	22	45	29	380	62	67	320	15
Future Volume (vph)	18	30	37	56	22	45	29	380	62	67	320	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	33	40	61	24	49	32	413	67	73	348	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	93	134	512	437
Volume Left (vph)	20	61	32	73
Volume Right (vph)	40	49	67	16
Hadj (s)	0.00	-0.13	-0.03	0.07
Departure Headway (s)	6.8	6.5	5.4	5.5
Degree Utilization, x	0.18	0.24	0.76	0.67
Capacity (veh/h)	459	483	654	620
Control Delay (s)	11.3	11.6	23.4	19.2
Approach Delay (s)	11.3	11.6	23.4	19.2
Approach LOS	B	B	C	C

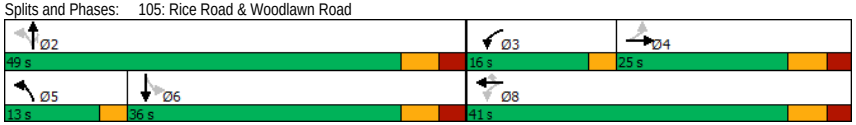
Intersection Summary					
Delay		19.6			
Level of Service		C			
Intersection Capacity Utilization	68.3%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	336	65	245	400	67	90	298	163	69	298	63
Future Volume (vph)	57	336	65	245	400	67	90	298	163	69	298	63
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97			0.98	1.00		
Frt		0.976				0.850			0.850		0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3238	0	1538	1758	1273	1553	1741	1248	1568	1495	0
Flt Permitted	0.510			0.319			0.354			0.564		
Satd. Flow (perm)	836	3238	0	513	1758	1232	579	1741	1228	928	1495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				85			169		12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			50.8			74.2	
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Adj. Flow (vph)	62	365	71	266	435	73	98	324	177	75	324	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	436	0	266	435	73	98	324	177	75	392	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	25.0	25.0		16.0	41.0	41.0	13.0	49.0	49.0	36.0	36.0	
Total Split (%)	27.8%	27.8%		17.8%	45.6%	45.6%	14.4%	54.4%	54.4%	40.0%	40.0%	
Maximum Green (s)	18.2	18.2		13.0	34.2	34.2	10.0	42.0	42.0	29.0	29.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	15.6	15.6		35.0	31.2	31.2	46.1	42.1	42.1	31.8	31.8	
Actuated g/C Ratio	0.18	0.18		0.40	0.36	0.36	0.53	0.48	0.48	0.37	0.37	
v/c Ratio	0.41	0.73		0.75	0.69	0.15	0.23	0.39	0.26	0.22	0.71	
Control Delay	40.7	39.5		34.1	30.3	4.3	12.6	16.6	3.7	24.4	33.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.7	39.5		34.1	30.3	4.3	12.6	16.6	3.7	24.4	33.9	
LOS	D	D		C	C	A	B	B	A	C	C	
Approach Delay		39.7			29.2			12.2			32.4	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.1			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 27.7		Intersection LOS: C	
Intersection Capacity Utilization 82.2%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	436	266	435	73	98	324	177	75	392
v/c Ratio	0.41	0.73	0.75	0.69	0.15	0.23	0.39	0.26	0.22	0.71
Control Delay	40.7	39.5	34.1	30.3	4.3	12.6	16.6	3.7	24.4	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	39.5	34.1	30.3	4.3	12.6	16.6	3.7	24.4	33.9
Queue Length 50th (m)	9.8	36.5	32.9	64.0	0.0	8.4	35.6	0.7	9.7	60.7
Queue Length 95th (m)	22.5	53.0	#60.3	97.5	7.1	17.3	58.4	11.9	21.7	#110.9
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	175	696	359	691	536	418	841	680	339	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.63	0.74	0.63	0.14	0.23	0.39	0.26	0.22	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

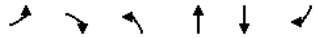
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	336	65	245	400	67	90	298	163	69	298	63
Future Volume (vph)	57	336	65	245	400	67	90	298	163	69	298	63
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1558	3237		1535	1758	1233	1553	1741	1228	1564	1495	
Flt Permitted	0.51	1.00		0.32	1.00	1.00	0.35	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	836	3237		516	1758	1233	579	1741	1228	929	1495	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	365	71	266	435	73	98	324	177	75	324	68
RTOR Reduction (vph)	0	19	0	0	0	47	0	0	87	0	8	0
Lane Group Flow (vph)	62	417	0	266	435	26	98	324	90	75	384	0
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	15.7	15.7		31.2	31.2	31.2	42.7	42.7	42.7	31.8	31.8	
Effective Green, g (s)	15.7	15.7		31.2	31.2	31.2	42.7	42.7	42.7	31.8	31.8	
Actuated g/C Ratio	0.18	0.18		0.36	0.36	0.36	0.49	0.49	0.49	0.36	0.36	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	149	579		328	625	438	369	847	597	336	542	
v/s Ratio Prot		0.13		c0.12	0.25		0.02	c0.19			c0.26	
v/s Ratio Perm	0.07			c0.17		0.02	0.11		0.07	0.08		
v/c Ratio	0.42	0.72		0.81	0.70	0.06	0.27	0.38	0.15	0.22	0.71	
Uniform Delay, d1	31.9	33.9		22.4	24.2	18.6	13.2	14.2	12.5	19.4	24.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.9	4.4		14.1	3.4	0.1	0.4	1.3	0.5	1.5	7.6	
Delay (s)	33.8	38.3		36.5	27.6	18.6	13.6	15.5	13.0	20.9	31.6	
Level of Service	C	D		D	C	B	B	B	B	C	C	
Approach Delay (s)		37.8			29.8			14.4			29.9	
Approach LOS		D			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	82.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	428	399	0
Future Volume (vph)	0	0	0	428	399	0
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1598	0	0	1348	1505	0
Flt Permitted						
Satd. Flow (perm)	1598	0	0	1348	1505	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	290.1			240.6	560.0	
Travel Time (s)	20.9			17.3	40.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	465	434	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	465	434	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	428	399	0
Future Volume (Veh/h)	0	0	0	428	399	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	465	434	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	899	434	434			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	899	434	434			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	309	622	1126			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	465	434
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1126	1700
Volume to Capacity	0.00	0.00	0.26
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.0		
Intersection Capacity Utilization		34.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	0	12	0	416	29	18	381	0
Future Volume (vph)	0	0	0	20	0	12	0	416	29	18	381	0
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.950			0.991				
Flt Protected					0.970						0.998	
Satd. Flow (prot)	0	1598	0	0	1473	0	0	1584	0	0	1595	0
Flt Permitted					0.970						0.998	
Satd. Flow (perm)	0	1598	0	0	1473	0	0	1584	0	0	1595	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		286.1			169.9			235.8			240.6	
Travel Time (s)		20.6			12.2			17.0			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	22	0	13	0	452	32	20	414	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	35	0	0	484	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	20	0	12	0	416	29	18	381	0
Future Volume (Veh/h)	0	0	0	20	0	12	0	416	29	18	381	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	22	0	13	0	452	32	20	414	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	935	938	414	922	922	468	414			484		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	935	938	414	922	922	468	414			484		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	91	100	98	100			98		
cM capacity (veh/h)	237	259	638	247	265	595	1145			1079		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	35	484	434
Volume Left	0	22	0	20
Volume Right	0	13	32	0
cSH	1700	316	1145	1079
Volume to Capacity	0.00	0.11	0.00	0.02
Queue Length 95th (m)	0.0	3.0	0.0	0.5
Control Delay (s)	0.0	17.8	0.0	0.6
Lane LOS	A	C		A
Approach Delay (s)	0.0	17.8	0.0	0.6
Approach LOS	A	C		

Intersection Summary					
Average Delay		0.9			
Intersection Capacity Utilization		50.4%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	757	177	445	955	6	118	7	367	4	5	8
Future Volume (vph)	7	757	177	445	955	6	118	7	367	4	5	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99										
Frt		0.972			0.999				0.850		0.932	
Flt Protected	0.950			0.950			0.950				0.989	
Satd. Flow (prot)	1568	3160	0	1568	3273	0	1553	1776	1236	0	1502	0
Flt Permitted	0.274			0.121			0.746				0.958	
Satd. Flow (perm)	452	3160	0	200	3273	0	1219	1776	1236	0	1455	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			1				399		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1140.0			100.9	
Travel Time (s)		21.8			38.3			82.1			7.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	8	823	192	484	1038	7	128	8	399	4	5	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1015	0	484	1045	0	128	8	399	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	24.4	24.4	
Total Split (s)	37.0	37.0		28.0	65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	41.1%	41.1%		31.1%	72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	30.8	30.8		25.0	58.9		18.6	18.6	18.6	18.6	18.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	29.9	29.9		60.2	57.1		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.34	0.34		0.68	0.65		0.21	0.21	0.21		0.21	
v/c Ratio	0.05	0.93		0.95	0.49		0.50	0.02	0.69		0.06	
Control Delay	21.1	43.3		52.4	9.0		39.2	28.9	10.7		20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	21.1	43.3		52.4	9.0		39.2	28.9	10.7		20.8	
LOS	C	D		D	A		D	C	B		C	
Approach Delay		43.1			22.7			17.8			20.8	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 88.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 28.6		Intersection LOS: C	
Intersection Capacity Utilization 84.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	8	1015	484	1045	128	8	399	18
v/c Ratio	0.05	0.93	0.95	0.49	0.50	0.02	0.69	0.06
Control Delay	21.1	43.3	52.4	9.0	39.2	28.9	10.7	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	43.3	52.4	9.0	39.2	28.9	10.7	20.8
Queue Length 50th (m)	1.0	89.5	68.1	45.0	20.8	1.2	0.0	1.3
Queue Length 95th (m)	4.2	#130.7	#131.2	58.8	39.3	4.9	28.9	7.1
Internal Link Dist (m)		278.4		507.3		1116.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	157	1126	524	2187	256	375	575	313
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.90	0.92	0.48	0.50	0.02	0.69	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	757	177	445	955	6	118	7	367	4	5	8
Future Volume (vph)	7	757	177	445	955	6	118	7	367	4	5	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1568	3159		1568	3273		1553	1776	1236		1503	
Flt Permitted	0.27	1.00		0.12	1.00		0.75	1.00	1.00		0.96	
Satd. Flow (perm)	452	3159		200	3273		1219	1776	1236		1457	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	823	192	484	1038	7	128	8	399	4	5	9
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	315	0	7	0
Lane Group Flow (vph)	8	993	0	484	1045	0	128	8	84	0	11	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	29.9	29.9		57.2	57.2		18.6	18.6	18.6		18.6	
Effective Green, g (s)	29.9	29.9		57.2	57.2		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.34	0.34		0.65	0.65		0.21	0.21	0.21		0.21	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	153	1069		504	2120		256	374	260		306	
v/s Ratio Prot		0.31		c0.26	0.32			0.00				
v/s Ratio Perm	0.02			c0.36			c0.11		0.07		0.01	
v/c Ratio	0.05	0.93		0.96	0.49		0.50	0.02	0.32		0.04	
Uniform Delay, d1	19.7	28.2		24.0	8.0		30.7	27.6	29.5		27.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	13.4		30.1	0.2		6.8	0.1	3.3		0.2	
Delay (s)	19.8	41.6		54.1	8.2		37.6	27.7	32.8		27.9	
Level of Service	B	D		D	A		D	C	C		C	
Approach Delay (s)		41.4			22.8			33.9			27.9	
Approach LOS		D			C			C			C	

Intersection Summary

HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	15.6
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

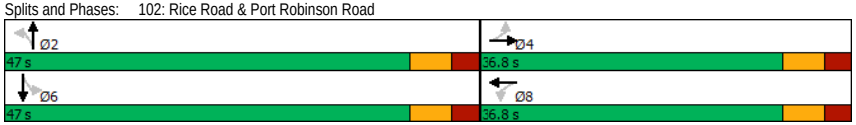
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	121	71	54	153	45	65	451	23	39	523	73
Future Volume (vph)	58	121	71	54	153	45	65	451	23	39	523	73
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.966			0.993			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	1451	0	1568	1483	0	1568	1496	0	1568	1494	0
Flt Permitted	0.604			0.621			0.336			0.430		
Satd. Flow (perm)	997	1451	0	1025	1483	0	555	1496	0	710	1494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			19			4			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		272.2			408.2			137.7			1140.0	
Travel Time (s)		19.6			29.4			9.9			82.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	62	130	76	58	165	48	70	485	25	42	562	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	206	0	58	213	0	70	510	0	42	640	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.59	0.59		0.59	0.59	
v/c Ratio	0.31	0.64		0.28	0.68		0.21	0.57		0.10	0.72	
Control Delay	26.6	29.0		25.9	33.8		9.9	12.7		8.1	17.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.6	29.0		25.9	33.8		9.9	12.7		8.1	17.0	
LOS	C	C		C	C		A	B		A	B	
Approach Delay		28.4			32.1			12.4			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 67.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 90.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 102: Rice Road & Port Robinson Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	206	58	213	70	510	42	640
v/c Ratio	0.31	0.64	0.28	0.68	0.21	0.57	0.10	0.72
Control Delay	26.6	29.0	25.9	33.8	9.9	12.7	8.1	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	29.0	25.9	33.8	9.9	12.7	8.1	17.0
Queue Length 50th (m)	7.0	20.1	6.5	23.8	3.8	36.4	2.1	52.2
Queue Length 95th (m)	16.9	39.8	16.0	44.3	12.8	80.5	7.7	#134.6
Internal Link Dist (m)		248.2		384.2		113.7		1116.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	443	667	456	670	329	889	421	891
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.31	0.13	0.32	0.21	0.57	0.10	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	121	71	54	153	45	65	451	23	39	523	73
Future Volume (vph)	58	121	71	54	153	45	65	451	23	39	523	73
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1568	1450		1568	1483		1568	1495		1568	1494	
Flt Permitted	0.60	1.00		0.62	1.00		0.34	1.00		0.43	1.00	
Satd. Flow (perm)	998	1450		1025	1483		555	1495		710	1494	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	62	130	76	58	165	48	70	485	25	42	562	78
RTOR Reduction (vph)	0	31	0	0	15	0	0	2	0	0	4	0
Lane Group Flow (vph)	62	175	0	58	198	0	70	508	0	42	636	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Effective Green, g (s)	13.7	13.7		13.7	13.7		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.59	0.59		0.59	0.59	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	201	293		207	300		329	887		421	887	
v/s Ratio Prot		0.12			c0.13			0.34			c0.43	
v/s Ratio Perm	0.06			0.06			0.13			0.06		
v/c Ratio	0.31	0.60		0.28	0.66		0.21	0.57		0.10	0.72	
Uniform Delay, d1	23.0	24.5		22.8	24.9		6.4	8.5		5.9	9.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	2.7		0.5	4.6		1.5	2.7		0.5	4.9	
Delay (s)	23.6	27.2		23.4	29.5		7.9	11.2		6.4	14.7	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		26.4			28.2			10.8			14.2	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	13.8	
Intersection Capacity Utilization	90.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	111	41	86	398	450	170
Future Volume (vph)	111	41	86	398	450	170
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.963				0.963	
Flt Protected	0.965			0.991		
Satd. Flow (prot)	1507	0	0	1342	1453	0
Flt Permitted	0.965			0.991		
Satd. Flow (perm)	1507	0	0	1342	1453	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	338.1			560.0	907.3	
Travel Time (s)	24.3			40.3	65.3	
Confl. Peds. (#/hr)		1	8			8
Confl. Bikes (#/hr)			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	4%	1%	2%	1%
Adj. Flow (vph)	116	43	90	415	469	177
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	0	505	646	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	41	86	398	450	170
Future Volume (Veh/h)	111	41	86	398	450	170
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	116	43	90	415	469	177
Pedestrians	8			1		
Lane Width (m)	3.6			3.6		
Walking Speed (m/s)	1.2			1.2		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1160	566	654			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1160	566	654			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	41	92	90			
cM capacity (veh/h)	195	519	917			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	159	505	646
Volume Left	116	90	0
Volume Right	43	0	177
cSH	235	917	1700
Volume to Capacity	0.68	0.10	0.38
Queue Length 95th (m)	34.5	2.6	0.0
Control Delay (s)	47.4	2.7	0.0
Lane LOS	E	A	
Approach Delay (s)	47.4	2.7	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	30	37	56	22	52	29	430	62	71	360	15
Future Volume (vph)	18	30	37	56	22	52	29	430	62	71	360	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	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 Factor												
Frt		0.942			0.946			0.984			0.996	
Flt Protected		0.989			0.979			0.997			0.992	
Satd. Flow (prot)	0	1346	0	0	1510	0	0	1569	0	0	1560	0
Flt Permitted		0.989			0.979			0.997			0.992	
Satd. Flow (perm)	0	1346	0	0	1510	0	0	1569	0	0	1560	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			1030.4			235.8	
Travel Time (s)		40.1			50.0			74.2			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Adj. Flow (vph)	20	33	40	61	24	57	32	467	67	77	391	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	142	0	0	566	0	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	18	30	37	56	22	52	29	430	62	71	360	15
Future Volume (vph)	18	30	37	56	22	52	29	430	62	71	360	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	33	40	61	24	57	32	467	67	77	391	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	93	142	566	484
Volume Left (vph)	20	61	32	77
Volume Right (vph)	40	57	67	16
Hadj (s)	0.00	-0.15	-0.03	0.07
Departure Headway (s)	7.2	6.9	5.6	5.8
Degree Utilization, x	0.19	0.27	0.87	0.77
Capacity (veh/h)	449	475	639	606
Control Delay (s)	11.9	12.4	34.7	25.6
Approach Delay (s)	11.9	12.4	34.7	25.6
Approach LOS	B	B	D	D

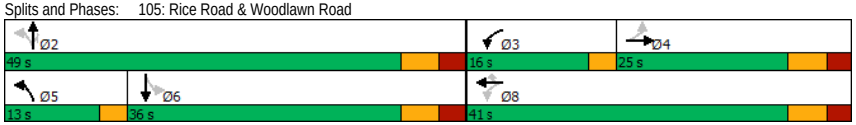
Intersection Summary					
Delay		27.2			
Level of Service		D			
Intersection Capacity Utilization	74.3%	ICU Level of Service		D	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	336	65	245	400	74	90	334	163	78	320	72
Future Volume (vph)	64	336	65	245	400	74	90	334	163	78	320	72
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97			0.98	1.00		
Frt		0.976				0.850			0.850		0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3238	0	1538	1758	1273	1553	1741	1248	1568	1494	0
Flt Permitted	0.510			0.319			0.317			0.545		
Satd. Flow (perm)	836	3238	0	513	1758	1232	518	1741	1228	897	1494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				85			151		13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			1030.4	
Travel Time (s)		42.4			63.1			50.8			74.2	
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Adj. Flow (vph)	70	365	71	266	435	80	98	363	177	85	348	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	436	0	266	435	80	98	363	177	85	426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	25.0	25.0		16.0	41.0	41.0	13.0	49.0	49.0	36.0	36.0	
Total Split (%)	27.8%	27.8%		17.8%	45.6%	45.6%	14.4%	54.4%	54.4%	40.0%	40.0%	
Maximum Green (s)	18.2	18.2		13.0	34.2	34.2	10.0	42.0	42.0	29.0	29.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	15.6	15.6		35.0	31.2	31.2	46.1	42.1	42.1	31.8	31.8	
Actuated g/C Ratio	0.18	0.18		0.40	0.36	0.36	0.53	0.48	0.48	0.37	0.37	
v/c Ratio	0.47	0.73		0.75	0.69	0.16	0.25	0.43	0.26	0.26	0.77	
Control Delay	43.0	39.5		34.1	30.3	5.0	12.8	17.3	4.7	25.2	37.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.0	39.5		34.1	30.3	5.0	12.8	17.3	4.7	25.2	37.2	
LOS	D	D		C	C	A	B	B	A	C	D	
Approach Delay		40.0			29.0			13.1			35.2	
Approach LOS		D			C			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 87.1			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 84.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	70	436	266	435	80	98	363	177	85	426
v/c Ratio	0.47	0.73	0.75	0.69	0.16	0.25	0.43	0.26	0.26	0.77
Control Delay	43.0	39.5	34.1	30.3	5.0	12.8	17.3	4.7	25.2	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	39.5	34.1	30.3	5.0	12.8	17.3	4.7	25.2	37.2
Queue Length 50th (m)	11.2	36.5	32.9	64.0	0.0	8.4	41.0	2.4	11.1	68.0
Queue Length 95th (m)	24.8	53.0	#60.3	97.5	8.3	17.3	66.5	13.9	24.4	#126.0
Internal Link Dist (m)		565.4		852.0			682.2			1006.4
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	175	696	359	691	536	392	841	671	328	554
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.63	0.74	0.63	0.15	0.25	0.43	0.26	0.26	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	336	65	245	400	74	90	334	163	78	320	72
Future Volume (vph)	64	336	65	245	400	74	90	334	163	78	320	72
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1558	3237		1535	1758	1233	1553	1741	1228	1564	1493	
Flt Permitted	0.51	1.00		0.32	1.00	1.00	0.32	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	836	3237		516	1758	1233	518	1741	1228	897	1493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	365	71	266	435	80	98	363	177	85	348	78
RTOR Reduction (vph)	0	19	0	0	0	52	0	0	77	0	8	0
Lane Group Flow (vph)	70	417	0	266	435	28	98	363	100	85	418	0
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	15.7	15.7		31.2	31.2	31.2	42.7	42.7	42.7	31.8	31.8	
Effective Green, g (s)	15.7	15.7		31.2	31.2	31.2	42.7	42.7	42.7	31.8	31.8	
Actuated g/C Ratio	0.18	0.18		0.36	0.36	0.36	0.49	0.49	0.49	0.36	0.36	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	149	579		328	625	438	345	847	597	325	541	
v/s Ratio Prot		0.13		c0.12	0.25		0.03	c0.21			c0.28	
v/s Ratio Perm	0.08			c0.17		0.02	0.11		0.08	0.09		
v/c Ratio	0.47	0.72		0.81	0.70	0.06	0.28	0.43	0.17	0.26	0.77	
Uniform Delay, d1	32.3	33.9		22.4	24.2	18.6	13.5	14.6	12.6	19.7	24.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	4.4		14.1	3.4	0.1	0.5	1.6	0.6	2.0	10.2	
Delay (s)	34.6	38.3		36.5	27.6	18.7	13.9	16.2	13.2	21.6	35.0	
Level of Service	C	D		D	C	B	B	B	B	C	C	
Approach Delay (s)		37.8			29.7			15.0			32.8	
Approach LOS		D			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	84.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	19	23	452	451	35
Future Volume (vph)	18	19	23	452	451	35
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931				0.990	
Flt Protected	0.976			0.998		
Satd. Flow (prot)	1452	0	0	1345	1490	0
Flt Permitted	0.976			0.998		
Satd. Flow (perm)	1452	0	0	1345	1490	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	290.1			240.6	560.0	
Travel Time (s)	20.9			17.3	40.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	21	25	491	490	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	0	516	528	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	19	23	452	451	35
Future Volume (Veh/h)	18	19	23	452	451	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	21	25	491	490	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1050	509	528			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1050	509	528			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	96	98			
cM capacity (veh/h)	246	564	1039			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	41	516	528
Volume Left	20	25	0
Volume Right	21	0	38
cSH	345	1039	1700
Volume to Capacity	0.12	0.02	0.31
Queue Length 95th (m)	3.2	0.6	0.0
Control Delay (s)	16.8	0.7	0.0
Lane LOS	C	A	
Approach Delay (s)	16.8	0.7	0.0
Approach LOS	C		

Intersection Summary				
Average Delay		1.0		
Intersection Capacity Utilization		68.8%	ICU Level of Service	C
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	0	25	20	0	12	34	439	29	18	400	52
Future Volume (vph)	24	0	25	20	0	12	34	439	29	18	400	52
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.931			0.950			0.992			0.985	
Flt Protected		0.976			0.970			0.997			0.998	
Satd. Flow (prot)	0	1452	0	0	1473	0	0	1580	0	0	1571	0
Flt Permitted		0.976			0.970			0.997			0.998	
Satd. Flow (perm)	0	1452	0	0	1473	0	0	1580	0	0	1571	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		286.1			169.9			235.8			240.6	
Travel Time (s)		20.6			12.2			17.0			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	0	27	22	0	13	37	477	32	20	435	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	35	0	0	546	0	0	512	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	25	20	0	12	34	439	29	18	400	52
Future Volume (Veh/h)	24	0	25	20	0	12	34	439	29	18	400	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	0	27	22	0	13	37	477	32	20	435	57
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1084	1086	464	1098	1099	493	492			509		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1084	1086	464	1098	1099	493	492			509		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	100	95	87	100	98	97			98		
cM capacity (veh/h)	183	205	599	174	201	576	1071			1056		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	53	35	546	512
Volume Left	26	22	37	20
Volume Right	27	13	32	57
cSH	283	235	1071	1056
Volume to Capacity	0.19	0.15	0.03	0.02
Queue Length 95th (m)	5.4	4.1	0.9	0.5
Control Delay (s)	20.7	22.9	1.0	0.5
Lane LOS	C	C	A	A
Approach Delay (s)	20.7	22.9	1.0	0.5
Approach LOS	C	C		

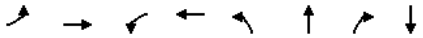
Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	55.2%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	836	169	443	1054	6	122	8	384	5	6	8
Future Volume (vph)	7	836	169	443	1054	6	122	8	384	5	6	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00										
Frt		0.975			0.999				0.850		0.942	
Flt Protected	0.950			0.950			0.950				0.988	
Satd. Flow (prot)	1568	3169	0	1568	3273	0	1553	1776	1236	0	1517	0
Flt Permitted	0.246			0.118			0.744				0.953	
Satd. Flow (perm)	406	3169	0	195	3273	0	1216	1776	1236	0	1463	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			1				417		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1140.0			100.9	
Travel Time (s)		21.8			38.3			82.1			7.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	8	909	184	482	1146	7	133	9	417	5	7	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1093	0	482	1153	0	133	9	417	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	24.4	24.4	
Total Split (s)	37.0	37.0		28.0	65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	41.1%	41.1%		31.1%	72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	30.8	30.8		25.0	58.9		18.6	18.6	18.6	18.6	18.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	30.8	30.8		61.2	58.1		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.35	0.35		0.69	0.65		0.21	0.21	0.21		0.21	
v/c Ratio	0.06	0.98		0.95	0.54		0.53	0.02	0.71		0.07	
Control Delay	21.4	52.6		54.0	9.5		40.3	28.9	10.9		21.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	21.4	52.6		54.0	9.5		40.3	28.9	10.9		21.5	
LOS	C	D		D	A		D	C	B		C	
Approach Delay		52.4			22.6			18.2			21.5	
Approach LOS		D			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 31.8		Intersection LOS: C	
Intersection Capacity Utilization 87.1%		ICU Level of Service E	
Analysis Period (min) 15			

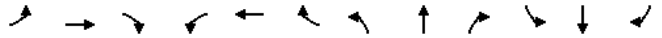
Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	8	1093	482	1153	133	9	417	21
v/c Ratio	0.06	0.98	0.95	0.54	0.53	0.02	0.71	0.07
Control Delay	21.4	52.6	54.0	9.5	40.3	28.9	10.9	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	52.6	54.0	9.5	40.3	28.9	10.9	21.5
Queue Length 50th (m)	1.0	100.6	68.2	52.2	21.7	1.3	0.0	1.8
Queue Length 95th (m)	4.3	#148.0	#130.8	67.8	40.8	5.4	29.8	8.0
Internal Link Dist (m)		278.4		507.3		1116.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	139	1113	518	2162	253	370	588	312
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.98	0.93	0.53	0.53	0.02	0.71	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	836	169	443	1054	6	122	8	384	5	6	8
Future Volume (vph)	7	836	169	443	1054	6	122	8	384	5	6	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1568	3169		1568	3274		1553	1776	1236		1518	
Flt Permitted	0.25	1.00		0.12	1.00		0.74	1.00	1.00		0.95	
Satd. Flow (perm)	406	3169		195	3274		1216	1776	1236		1464	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	909	184	482	1146	7	133	9	417	5	7	9
RTOR Reduction (vph)	0	19	0	0	0	0	0	0	330	0	7	0
Lane Group Flow (vph)	8	1074	0	482	1153	0	133	9	87	0	14	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	30.8	30.8		58.1	58.1		18.6	18.6	18.6		18.6	
Effective Green, g (s)	30.8	30.8		58.1	58.1		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.35	0.35		0.65	0.65		0.21	0.21	0.21		0.21	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	140	1094		499	2132		253	370	257		305	
v/s Ratio Prot		0.34		c0.26	0.35			0.01				
v/s Ratio Perm	0.02			c0.37			c0.11		0.07		0.01	
v/c Ratio	0.06	0.98		0.97	0.54		0.53	0.02	0.34		0.05	
Uniform Delay, d1	19.5	28.9		24.7	8.4		31.4	28.1	30.1		28.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	22.7		31.4	0.3		7.6	0.1	3.5		0.3	
Delay (s)	19.7	51.7		56.1	8.7		39.0	28.2	33.6		28.5	
Level of Service	B	D		E	A		D	C	C		C	
Approach Delay (s)		51.4			22.6			34.8			28.5	
Approach LOS		D			C			C			C	

Intersection Summary

HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	15.6
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

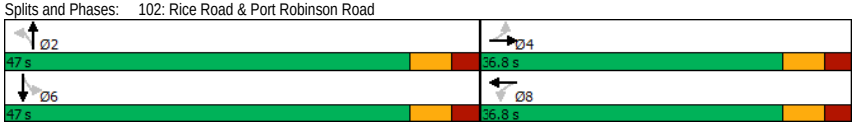
c Critical Lane Group

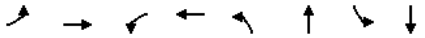
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	132	70	52	169	50	68	468	26	42	491	79
Future Volume (vph)	63	132	70	52	169	50	68	468	26	42	491	79
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948			0.966			0.992			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	1455	0	1568	1483	0	1568	1494	0	1568	1490	0
Flt Permitted	0.556			0.597			0.349			0.409		
Satd. Flow (perm)	918	1455	0	986	1483	0	576	1494	0	675	1490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			20			5			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		272.2			408.2			137.7			1140.0	
Travel Time (s)		19.6			29.4			9.9			82.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	68	142	75	56	182	54	73	503	28	45	528	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	217	0	56	236	0	73	531	0	45	613	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.58	0.58		0.58	0.58	
v/c Ratio	0.35	0.64		0.27	0.71		0.22	0.61		0.11	0.70	
Control Delay	27.4	29.2		25.1	34.7		10.5	14.1		8.9	16.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.4	29.2		25.1	34.7		10.5	14.1		8.9	16.9	
LOS	C	C		C	C		B	B		A	B	
Approach Delay		28.8			32.9			13.7			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83.8			
Actuated Cycle Length: 68.8			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 90.7%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 102: Rice Road & Port Robinson Road

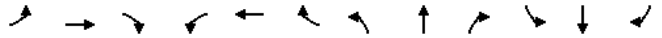




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	217	56	236	73	531	45	613
v/c Ratio	0.35	0.64	0.27	0.71	0.22	0.61	0.11	0.70
Control Delay	27.4	29.2	25.1	34.7	10.5	14.1	8.9	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	29.2	25.1	34.7	10.5	14.1	8.9	16.9
Queue Length 50th (m)	7.8	22.2	6.3	27.0	4.2	40.7	2.4	50.7
Queue Length 95th (m)	18.3	42.8	15.5	49.0	14.0	90.6	8.7	#120.2
Internal Link Dist (m)		248.2		384.2		113.7		1116.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	402	656	431	660	336	874	394	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.33	0.13	0.36	0.22	0.61	0.11	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	132	70	52	169	50	68	468	26	42	491	79
Future Volume (vph)	63	132	70	52	169	50	68	468	26	42	491	79
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1568	1455		1568	1482		1568	1495		1568	1490	
Flt Permitted	0.56	1.00		0.60	1.00		0.35	1.00		0.41	1.00	
Satd. Flow (perm)	918	1455		986	1482		576	1495		675	1490	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	68	142	75	56	182	54	73	503	28	45	528	85
RTOR Reduction (vph)	0	27	0	0	16	0	0	2	0	0	5	0
Lane Group Flow (vph)	68	190	0	56	220	0	73	529	0	45	608	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Effective Green, g (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.58	0.58		0.58	0.58	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	197	312		212	318		336	873		394	870	
v/s Ratio Prot		0.13			c0.15			0.35			c0.41	
v/s Ratio Perm	0.07			0.06			0.13			0.07		
v/c Ratio	0.35	0.61		0.26	0.69		0.22	0.61		0.11	0.70	
Uniform Delay, d1	22.9	24.4		22.5	24.9		6.8	9.2		6.4	10.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.8		0.5	5.9		1.5	3.1		0.6	4.6	
Delay (s)	23.7	27.2		23.0	30.8		8.3	12.3		7.0	14.7	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		26.3			29.3			11.8			14.1	
Approach LOS		C			C			B			B	

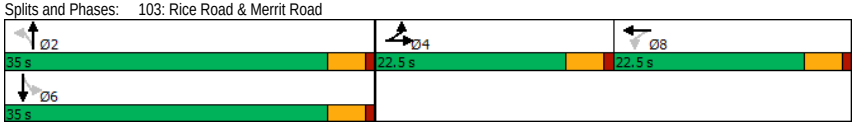
Intersection Summary					
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.70				
Actuated Cycle Length (s)	68.8	Sum of lost time (s)		13.8	
Intersection Capacity Utilization	90.7%	ICU Level of Service		E	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	0	39	0	0	0	93	403	0	0	397	183
Future Volume (vph)	129	0	39	0	0	0	93	403	0	0	397	183
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Storage Length (m)	40.0		0.0	80.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99					0.99				0.99	
Frt		0.850									0.953	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1548	1562	0	1863	1863	0	1256	2587	0	1863	2700	0
Flt Permitted	0.950						0.423					
Satd. Flow (perm)	1548	1562	0	1863	1863	0	556	2587	0	1863	2700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		563									109	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.1			162.5			560.0			120.3	
Travel Time (s)		24.3			11.7			40.3			8.7	
Confl. Peds. (#/hr)			1				8					8
Confl. Bikes (#/hr)							1					1
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	4%	1%	2%	2%	2%	1%
Adj. Flow (vph)	134	0	41	0	0	0	97	420	0	0	414	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	41	0	0	0	0	97	420	0	0	605	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes				
Headway Factor	1.22	1.00	1.22	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		35.0	35.0		35.0	35.0	
Total Split (%)	28.1%	28.1%		28.1%	28.1%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	9.3	9.3					22.8	22.8			22.8	
Actuated g/C Ratio	0.25	0.25					0.61	0.61			0.61	
v/c Ratio	0.35	0.05					0.28	0.26			0.36	
Control Delay	15.3	0.1					8.9	5.8			5.3	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	15.3	0.1					8.9	5.8			5.3	
LOS	B	A					A	A			A	
Approach Delay		11.8						6.4			5.3	
Approach LOS		B						A			A	

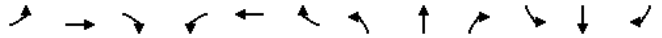
Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 37.1			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.36			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 103: Rice Road & Merrit Road



Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	134	41	97	420	605
v/c Ratio	0.35	0.05	0.28	0.26	0.36
Control Delay	15.3	0.1	8.9	5.8	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.3	0.1	8.9	5.8	5.3
Queue Length 50th (m)	6.6	0.0	3.1	7.0	8.5
Queue Length 95th (m)	21.1	0.0	12.2	15.9	19.3
Internal Link Dist (m)		314.1		536.0	96.3
Turn Bay Length (m)	40.0		50.0		
Base Capacity (vph)	782	1067	471	2190	2303
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.04	0.21	0.19	0.26

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	0	39	0	0	0	93	403	0	0	397	183
Future Volume (vph)	129	0	39	0	0	0	93	403	0	0	397	183
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Total Lost time (s)	4.5	4.5					4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00					1.00	0.95			0.95	
Frpb, ped/bikes	1.00	0.99					1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.95	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1548	1563					1251	2587			2707	
Flt Permitted	0.95	1.00					0.42	1.00			1.00	
Satd. Flow (perm)	1548	1563					557	2587			2707	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Adj. Flow (vph)	134	0	41	0	0	0	97	420	0	0	414	191
RTOR Reduction (vph)	0	33	0	0	0	0	0	0	0	0	47	0
Lane Group Flow (vph)	134	8	0	0	0	0	97	420	0	0	558	0
Confl. Peds. (#/hr)			1				8					8
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	4%	1%	2%	2%	2%	1%
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.5	7.5					21.5	21.5			21.5	
Effective Green, g (s)	7.5	7.5					21.5	21.5			21.5	
Actuated g/C Ratio	0.20	0.20					0.57	0.57			0.57	
Clearance Time (s)	4.5	4.5					4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	305	308					315	1463			1531	
v/s Ratio Prot	c0.09	0.01						0.16			c0.21	
v/s Ratio Perm							0.17					
v/c Ratio	0.44	0.03					0.31	0.29			0.36	
Uniform Delay, d1	13.4	12.3					4.3	4.3			4.5	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	1.0	0.0					0.6	0.1			0.1	
Delay (s)	14.4	12.3					4.9	4.4			4.7	
Level of Service	B	B					A	A			A	
Approach Delay (s)		13.9			0.0			4.5			4.7	
Approach LOS		B			A			A			A	

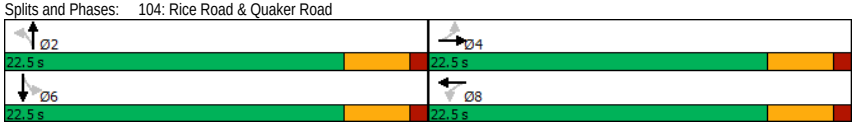
Intersection Summary						
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A			
HCM 2000 Volume to Capacity ratio	0.45					
Actuated Cycle Length (s)	38.0	Sum of lost time (s)	13.5			
Intersection Capacity Utilization	48.0%	ICU Level of Service	A			
Analysis Period (min)	15					
c Critical Lane Group						

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	42	61	24	48	33	426	70	71	344	15
Future Volume (vph)	19	34	42	61	24	48	33	426	70	71	344	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	60.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt		0.917			0.900			0.979			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1548	1285	0	1548	1467	0	1395	2980	0	1475	2992	0
Flt Permitted	0.851			0.851			0.521			0.451		
Satd. Flow (perm)	1387	1285	0	1387	1467	0	765	2980	0	699	2992	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			52			49			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			110.5			235.8	
Travel Time (s)		40.1			50.0			8.0			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Adj. Flow (vph)	21	37	46	66	26	52	36	463	76	77	374	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	83	0	66	78	0	36	539	0	77	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane											Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.1	7.1		7.2	7.2		17.7	17.7		17.7	17.7	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.64	0.64		0.64	0.64	
v/c Ratio	0.06	0.23		0.18	0.19		0.07	0.28		0.17	0.20	
Control Delay	8.3	6.6		9.5	5.5		6.0	5.0		6.9	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.3	6.6		9.5	5.5		6.0	5.0		6.9	5.0	
LOS	A	A		A	A		A	A		A	A	
Approach Delay		6.9			7.3			5.0			5.3	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 45			
Actuated Cycle Length: 27.7			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 42.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 104: Rice Road & Quaker Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	83	66	78	36	539	77	390
v/c Ratio	0.06	0.23	0.18	0.19	0.07	0.28	0.17	0.20
Control Delay	8.3	6.6	9.5	5.5	6.0	5.0	6.9	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	6.6	9.5	5.5	6.0	5.0	6.9	5.0
Queue Length 50th (m)	0.6	1.1	1.9	0.7	0.8	6.7	1.9	5.0
Queue Length 95th (m)	3.4	6.9	7.6	6.0	4.0	15.5	7.7	11.7
Internal Link Dist (m)		532.9		669.9		86.5		211.8
Turn Bay Length (m)	60.0		30.0		40.0		30.0	
Base Capacity (vph)	910	859	910	981	595	2330	544	2331
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.10	0.07	0.08	0.06	0.23	0.14	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	42	61	24	48	33	426	70	71	344	15
Future Volume (vph)	19	34	42	61	24	48	33	426	70	71	344	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1548	1285		1548	1467		1395	2980		1474	2992	
Flt Permitted	0.85	1.00		0.85	1.00		0.52	1.00		0.45	1.00	
Satd. Flow (perm)	1387	1285		1387	1467		766	2980		700	2992	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	37	46	66	26	52	36	463	76	77	374	16
RTOR Reduction (vph)	0	39	0	0	44	0	0	23	0	0	5	0
Lane Group Flow (vph)	21	44	0	66	34	0	36	516	0	77	385	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	4.7	4.7		4.7	4.7		15.8	15.8		15.8	15.8	
Effective Green, g (s)	4.7	4.7		4.7	4.7		15.8	15.8		15.8	15.8	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	220	204		220	233		410	1596		374	1602	
v/s Ratio Prot		0.03			0.02			c0.17			0.13	
v/s Ratio Perm	0.02			c0.05			0.05			0.11		
v/c Ratio	0.10	0.22		0.30	0.15		0.09	0.32		0.21	0.24	
Uniform Delay, d1	10.6	10.8		10.9	10.7		3.3	3.8		3.6	3.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.8	0.3		0.1	0.1		0.3	0.1	
Delay (s)	10.8	11.3		11.7	11.0		3.4	4.0		3.8	3.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.2			11.3			3.9			3.7	
Approach LOS		B			B			A			A	

Intersection Summary					
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.32				
Actuated Cycle Length (s)	29.5	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	42.8%	ICU Level of Service		A	
Analysis Period (min)	15				

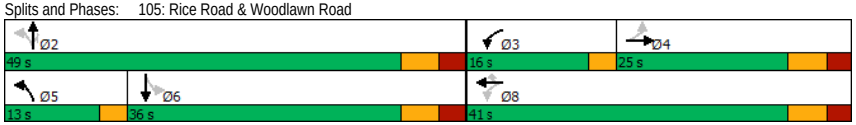
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	370	72	271	441	73	102	335	184	73	320	68
Future Volume (vph)	62	370	72	271	441	73	102	335	184	73	320	68
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97			0.98	1.00		
Frt		0.976				0.850			0.850		0.974	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3239	0	1538	1758	1273	1553	1741	1248	1568	1495	0
Flt Permitted	0.490			0.280			0.315			0.544		
Satd. Flow (perm)	804	3239	0	451	1758	1232	515	1741	1228	896	1495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				85			170		13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			919.9	
Travel Time (s)		42.4			63.1			50.8			66.2	
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Adj. Flow (vph)	67	402	78	295	479	79	111	364	200	79	348	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	480	0	295	479	79	111	364	200	79	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	25.0	25.0		16.0	41.0	41.0	13.0	49.0	49.0	36.0	36.0	
Total Split (%)	27.8%	27.8%		17.8%	45.6%	45.6%	14.4%	54.4%	54.4%	40.0%	40.0%	
Maximum Green (s)	18.2	18.2		13.0	34.2	34.2	10.0	42.0	42.0	29.0	29.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	16.4	16.4		36.2	32.4	32.4	46.0	42.0	42.0	31.7	31.7	
Actuated g/C Ratio	0.19	0.19		0.41	0.37	0.37	0.52	0.48	0.48	0.36	0.36	
v/c Ratio	0.45	0.77		0.86	0.74	0.16	0.29	0.44	0.30	0.25	0.77	
Control Delay	42.3	41.8		44.8	32.4	4.8	13.5	17.8	4.7	25.1	37.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	42.3	41.8		44.8	32.4	4.8	13.5	17.8	4.7	25.1	37.9	
LOS	D	D		D	C	A	B	B	A	C	D	
Approach Delay		41.9			34.1			13.2			35.9	
Approach LOS		D			C			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 88.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 30.6		Intersection LOS: C	
Intersection Capacity Utilization 86.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	67	480	295	479	79	111	364	200	79	422
v/c Ratio	0.45	0.77	0.86	0.74	0.16	0.29	0.44	0.30	0.25	0.77
Control Delay	42.3	41.8	44.8	32.4	4.8	13.5	17.8	4.7	25.1	37.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	41.8	44.8	32.4	4.8	13.5	17.8	4.7	25.1	37.9
Queue Length 50th (m)	10.7	41.2	37.4	72.9	0.0	10.0	42.5	2.9	10.5	68.9
Queue Length 95th (m)	24.2	58.7	#71.6	110.3	8.1	19.3	66.6	15.0	22.7	#123.9
Internal Link Dist (m)		565.4		852.0			682.2			895.9
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	165	685	345	682	529	386	829	673	322	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.70	0.86	0.70	0.15	0.29	0.44	0.30	0.25	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	370	72	271	441	73	102	335	184	73	320	68
Future Volume (vph)	62	370	72	271	441	73	102	335	184	73	320	68
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1559	3237		1536	1758	1232	1553	1741	1228	1564	1495	
Flt Permitted	0.49	1.00		0.28	1.00	1.00	0.32	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	803	3237		453	1758	1232	516	1741	1228	896	1495	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	402	78	295	479	79	111	364	200	79	348	74
RTOR Reduction (vph)	0	18	0	0	0	50	0	0	88	0	8	0
Lane Group Flow (vph)	67	462	0	295	479	29	111	364	112	79	414	0
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	16.4	16.4		32.4	32.4	32.4	42.6	42.6	42.6	31.7	31.7	
Effective Green, g (s)	16.4	16.4		32.4	32.4	32.4	42.6	42.6	42.6	31.7	31.7	
Actuated g/C Ratio	0.18	0.18		0.36	0.36	0.36	0.48	0.48	0.48	0.36	0.36	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	148	597		323	641	449	339	835	589	319	533	
v/s Ratio Prot		0.14		c0.13	0.27		0.03	c0.21			c0.28	
v/s Ratio Perm	0.08			c0.20		0.02	0.13		0.09	0.09		
v/c Ratio	0.45	0.77		0.91	0.75	0.06	0.33	0.44	0.19	0.25	0.78	
Uniform Delay, d1	32.2	34.4		23.0	24.6	18.3	14.1	15.2	13.2	20.1	25.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	6.2		28.9	4.8	0.1	0.6	1.7	0.7	1.8	10.6	
Delay (s)	34.4	40.6		51.9	29.4	18.4	14.7	16.9	13.9	22.0	36.0	
Level of Service	C	D		D	C	B	B	B	B	C	D	
Approach Delay (s)		39.9			36.1			15.6			33.8	
Approach LOS		D			D			B			C	

Intersection Summary				
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	19.8	
Intersection Capacity Utilization	86.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	481	428	0
Future Volume (vph)	0	0	0	481	428	0
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Storage Length (m)	0.0	0.0	30.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1598	0	1348	2561	2859	0
Flt Permitted						
Satd. Flow (perm)	1598	0	1348	2561	2859	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	290.1			240.6	560.0	
Travel Time (s)	20.9			17.3	40.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	523	465	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	523	465	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	481	428	0
Future Volume (Veh/h)	0	0	0	481	428	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	523	465	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	726	232	465			
vC1, stage 1 conf vol	465					
vC2, stage 2 conf vol	262					
vCu, unblocked vol	726	232	465			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	542	770	1093			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	0	0	262	262	310	155
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.15	0.15	0.18	0.09
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0			0.0	
Approach LOS	A					

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	21.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	0	12	0	469	29	18	410	0
Future Volume (vph)	0	0	0	20	0	12	0	469	29	18	410	0
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	0.0		0.0	0.0		0.0	30.0		0.0	30.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt					0.950			0.991				
Flt Protected					0.970					0.950		
Satd. Flow (prot)	0	1598	0	0	1473	0	1598	3009	0	1518	3036	0
Flt Permitted					0.970					0.950		
Satd. Flow (perm)	0	1598	0	0	1473	0	1598	3009	0	1518	3036	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		286.1			169.9			235.8			240.6	
Travel Time (s)		20.6			12.2			17.0			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	22	0	13	0	510	32	20	446	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	35	0	0	542	0	20	446	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.4%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	20	0	12	0	469	29	18	410	0
Future Volume (Veh/h)	0	0	0	20	0	12	0	469	29	18	410	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	22	0	13	0	510	32	20	446	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)								236				
pX, platoon unblocked												
vC, conflicting volume	754	1028	223	789	1012	271	446			542		
vC1, stage 1 conf vol	486	486		526	526							
vC2, stage 2 conf vol	268	542		263	486							
vCu, unblocked vol	754	1028	223	789	1012	271	446			542		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	100	98	100			98		
cM capacity (veh/h)	468	410	780	457	423	727	1111			1023		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	0	35	0	340	202	20	297	149
Volume Left	0	22	0	0	0	20	0	0
Volume Right	0	13	0	0	32	0	0	0
cSH	1700	530	1700	1700	1700	1023	1700	1700
Volume to Capacity	0.00	0.07	0.00	0.20	0.12	0.02	0.17	0.09
Queue Length 95th (m)	0.0	1.7	0.0	0.0	0.0	0.5	0.0	0.0
Control Delay (s)	0.0	12.3	0.0	0.0	0.0	8.6	0.0	0.0
Lane LOS	A	B				A		
Approach Delay (s)	0.0	12.3	0.0			0.4		
Approach LOS	A	B						

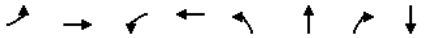
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	27.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	836	192	486	1054	6	131	8	409	5	6	8
Future Volume (vph)	7	836	192	486	1054	6	131	8	409	5	6	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Storage Length (m)	60.0		0.0	100.0		0.0	65.0		65.0	0.0		0.0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99										
Frt		0.972			0.999				0.850		0.942	
Flt Protected	0.950			0.950			0.950				0.988	
Satd. Flow (prot)	1568	3160	0	1568	3273	0	1553	1776	1236	0	1517	0
Flt Permitted	0.246			0.118			0.744				0.953	
Satd. Flow (perm)	406	3160	0	195	3273	0	1216	1776	1236	0	1463	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			1				445		9	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		302.4			531.3			1140.0			100.9	
Travel Time (s)		21.8			38.3			82.1			7.3	
Confl. Peds. (#/hr)			3	3								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Adj. Flow (vph)	8	909	209	528	1146	7	142	9	445	5	7	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1118	0	528	1153	0	142	9	445	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.31	1.20	1.09	1.35	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.2	24.2		13.0	24.1		24.4	24.4	24.4	24.4	24.4	
Total Split (s)	37.0	37.0		28.0	65.0		25.0	25.0	25.0	25.0	25.0	
Total Split (%)	41.1%	41.1%		31.1%	72.2%		27.8%	27.8%	27.8%	27.8%	27.8%	
Maximum Green (s)	30.8	30.8		25.0	58.9		18.6	18.6	18.6	18.6	18.6	
Yellow Time (s)	4.2	4.2		3.0	4.1		4.1	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.3	2.3	2.3	2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	
Act Effct Green (s)	30.8	30.8		62.0	58.9		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.34	0.34		0.69	0.65		0.21	0.21	0.21		0.21	
v/c Ratio	0.06	1.01		1.03	0.54		0.57	0.02	0.73		0.07	
Control Delay	21.4	60.4		71.6	9.4		42.0	28.9	11.4		21.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	21.4	60.4		71.6	9.4		42.0	28.9	11.4		21.5	
LOS	C	E		E	A		D	C	B		C	
Approach Delay		60.1			29.0			19.0			21.5	
Approach LOS		E			C			B			C	

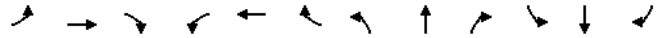
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 37.4		Intersection LOS: D	
Intersection Capacity Utilization 91.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 101: Rice Road & Highway 20



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Group Flow (vph)	8	1118	528	1153	142	9	445	21
v/c Ratio	0.06	1.01	1.03	0.54	0.57	0.02	0.73	0.07
Control Delay	21.4	60.4	71.6	9.4	42.0	28.9	11.4	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	60.4	71.6	9.4	42.0	28.9	11.4	21.5
Queue Length 50th (m)	1.0	~106.4	~87.4	52.2	23.4	1.3	0.0	1.8
Queue Length 95th (m)	4.3	#153.0	#150.8	67.8	43.3	5.4	31.8	8.0
Internal Link Dist (m)		278.4		507.3		1116.0		76.9
Turn Bay Length (m)	60.0		100.0		65.0		65.0	
Base Capacity (vph)	138	1103	515	2142	251	367	608	309
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	1.01	1.03	0.54	0.57	0.02	0.73	0.07

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	836	192	486	1054	6	131	8	409	5	6	8
Future Volume (vph)	7	836	192	486	1054	6	131	8	409	5	6	8
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1535	1651	1776	1498	1630	1630	1630
Total Lost time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1568	3160		1568	3274		1553	1776	1236		1518	
Flt Permitted	0.25	1.00		0.12	1.00		0.74	1.00	1.00		0.95	
Satd. Flow (perm)	406	3160		195	3274		1216	1776	1236		1464	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	909	209	528	1146	7	142	9	445	5	7	9
RTOR Reduction (vph)	0	22	0	0	0	0	0	0	353	0	7	0
Lane Group Flow (vph)	8	1096	0	528	1153	0	142	9	92	0	14	0
Confl. Peds. (#/hr)			3	3								
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	1%	0%	3%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	30.8	30.8		58.9	58.9		18.6	18.6	18.6		18.6	
Effective Green, g (s)	30.8	30.8		58.9	58.9		18.6	18.6	18.6		18.6	
Actuated g/C Ratio	0.34	0.34		0.65	0.65		0.21	0.21	0.21		0.21	
Clearance Time (s)	6.2	6.2		3.0	6.1		6.4	6.4	6.4		6.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	138	1081		509	2142		251	367	255		302	
v/s Ratio Prot		0.35		c0.29	0.35			0.01				
v/s Ratio Perm	0.02			c0.39			c0.12		0.07		0.01	
v/c Ratio	0.06	1.01		1.04	0.54		0.57	0.02	0.36		0.05	
Uniform Delay, d1	19.9	29.6		25.6	8.3		32.1	28.5	30.6		28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	30.8		49.9	0.3		8.9	0.1	3.9		0.3	
Delay (s)	20.0	60.4		75.5	8.6		41.0	28.6	34.5		28.9	
Level of Service	C	E		E	A		D	C	C		C	
Approach Delay (s)		60.1			29.6			36.0			28.9	
Approach LOS		E			C			D			C	

Intersection Summary				
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.6	
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			

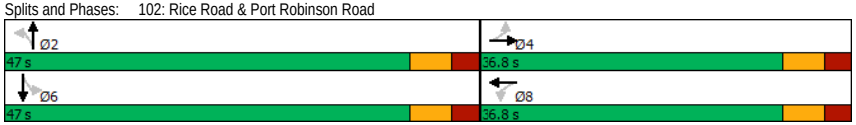
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	132	77	59	169	50	72	502	26	42	557	79
Future Volume (vph)	63	132	77	59	169	50	72	502	26	42	557	79
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Storage Length (m)	20.0		0.0	80.0		0.0	100.0		0.0	80.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.945			0.966			0.993			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	1451	0	1568	1483	0	1568	1496	0	1568	1493	0
Flt Permitted	0.556			0.580			0.299			0.382		
Satd. Flow (perm)	918	1451	0	958	1483	0	494	1496	0	631	1493	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			20			4			12	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		272.2			408.2			137.7			1140.0	
Travel Time (s)		19.6			29.4			9.9			82.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	68	142	83	63	182	54	77	540	28	45	599	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	225	0	63	236	0	77	568	0	45	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	36.8	36.8		36.8	36.8		37.0	37.0		37.0	37.0	
Total Split (s)	36.8	36.8		36.8	36.8		47.0	47.0		47.0	47.0	
Total Split (%)	43.9%	43.9%		43.9%	43.9%		56.1%	56.1%		56.1%	56.1%	
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.1	4.1		4.1	4.1		4.1	4.1		4.1	4.1	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.58	0.58		0.58	0.58	
v/c Ratio	0.35	0.66		0.31	0.71		0.27	0.65		0.12	0.78	
Control Delay	27.4	29.7		26.2	34.7		11.8	15.2		9.0	20.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	27.4	29.7		26.2	34.7		11.8	15.2		9.0	20.7	
LOS	C	C		C	C		B	B		A	C	
Approach Delay		29.1			32.9			14.8			19.9	
Approach LOS		C			C			B			B	

Intersection Summary		
Area Type:	Other	
Cycle Length: 83.8		
Actuated Cycle Length: 68.8		
Natural Cycle: 80		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay: 21.6		Intersection LOS: C
Intersection Capacity Utilization 95.0%		ICU Level of Service F
Analysis Period (min) 15		

Splits and Phases: 102: Rice Road & Port Robinson Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	225	63	236	77	568	45	684
v/c Ratio	0.35	0.66	0.31	0.71	0.27	0.65	0.12	0.78
Control Delay	27.4	29.7	26.2	34.7	11.8	15.2	9.0	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	29.7	26.2	34.7	11.8	15.2	9.0	20.7
Queue Length 50th (m)	7.8	22.8	7.2	27.0	4.6	45.5	2.4	61.8
Queue Length 95th (m)	18.3	44.0	17.1	49.0	15.5	101.1	8.8	#155.9
Internal Link Dist (m)		248.2		384.2		113.7		1116.0
Turn Bay Length (m)	20.0		80.0		100.0		80.0	
Base Capacity (vph)	402	657	419	660	288	875	368	876
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.34	0.15	0.36	0.27	0.65	0.12	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	132	77	59	169	50	72	502	26	42	557	79
Future Volume (vph)	63	132	77	59	169	50	72	502	26	42	557	79
Ideal Flow (vphpl)	1651	1535	1535	1651	1535	1535	1651	1535	1535	1651	1535	1535
Total Lost time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1568	1450		1568	1482		1568	1495		1568	1493	
Flt Permitted	0.56	1.00		0.58	1.00		0.30	1.00		0.38	1.00	
Satd. Flow (perm)	918	1450		957	1482		493	1495		630	1493	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	68	142	83	63	182	54	77	540	28	45	599	85
RTOR Reduction (vph)	0	31	0	0	16	0	0	2	0	0	5	0
Lane Group Flow (vph)	68	194	0	63	220	0	77	566	0	45	679	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Effective Green, g (s)	14.8	14.8		14.8	14.8		40.2	40.2		40.2	40.2	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.58	0.58		0.58	0.58	
Clearance Time (s)	6.8	6.8		6.8	6.8		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	197	311		205	318		288	873		368	872	
v/s Ratio Prot		0.13			c0.15			0.38			c0.45	
v/s Ratio Perm	0.07			0.07			0.16			0.07		
v/c Ratio	0.35	0.63		0.31	0.69		0.27	0.65		0.12	0.78	
Uniform Delay, d1	22.9	24.5		22.7	24.9		7.0	9.6		6.4	10.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	3.4		0.6	5.9		2.3	3.7		0.7	6.8	
Delay (s)	23.7	27.9		23.3	30.8		9.3	13.3		7.1	17.7	
Level of Service	C	C		C	C		A	B		A	B	
Approach Delay (s)		26.9			29.2			12.8			17.0	
Approach LOS		C			C			B			B	

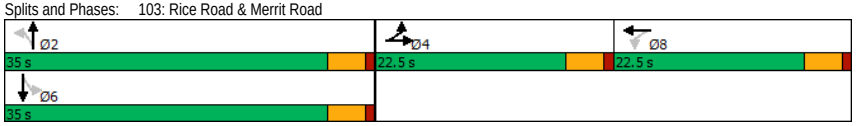
Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	13.8	
Intersection Capacity Utilization	95.0%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	0	46	0	0	0	97	441	0	0	477	183
Future Volume (vph)	129	0	46	0	0	0	97	441	0	0	477	183
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Storage Length (m)	40.0		0.0	80.0		0.0	50.0		0.0	50.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.99					0.99				0.99	
Frt		0.850									0.958	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1548	1562	0	1863	1863	0	1256	2587	0	1863	2717	0
Flt Permitted	0.950						0.390					
Satd. Flow (perm)	1548	1562	0	1863	1863	0	513	2587	0	1863	2717	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		522									81	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		338.1			162.5			560.0			120.3	
Travel Time (s)		24.3			11.7			40.3			8.7	
Confl. Peds. (#/hr)			1				8					8
Confl. Bikes (#/hr)							1					1
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	4%	1%	2%	2%	2%	1%
Adj. Flow (vph)	134	0	48	0	0	0	101	459	0	0	497	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	48	0	0	0	0	101	459	0	0	688	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes				
Headway Factor	1.22	1.00	1.22	1.00	1.00	1.00	1.50	1.50	1.00	1.00	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		35.0	35.0		35.0	35.0	
Total Split (%)	28.1%	28.1%		28.1%	28.1%		43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	18.0	18.0		18.0	18.0		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	9.4	9.4					26.5	26.5			26.5	
Actuated g/C Ratio	0.23	0.23					0.65	0.65			0.65	
v/c Ratio	0.38	0.06					0.30	0.27			0.38	
Control Delay	18.1	0.2					8.8	5.4			5.4	
Queue Delay	0.0	0.0					0.0	0.0			0.0	
Total Delay	18.1	0.2					8.8	5.4			5.4	
LOS	B	A					A	A			A	
Approach Delay		13.4						6.1			5.4	
Approach LOS		B						A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 40.9			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 6.7		Intersection LOS: A	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 103: Rice Road & Merrit Road



Lane Group	EBL	EBT	NBL	NBT	SBT
Lane Group Flow (vph)	134	48	101	459	688
v/c Ratio	0.38	0.06	0.30	0.27	0.38
Control Delay	18.1	0.2	8.8	5.4	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	0.2	8.8	5.4	5.4
Queue Length 50th (m)	7.8	0.0	3.5	8.1	11.4
Queue Length 95th (m)	23.6	0.0	13.0	17.0	23.6
Internal Link Dist (m)		314.1		536.0	96.3
Turn Bay Length (m)	40.0		50.0		
Base Capacity (vph)	711	999	389	1963	2081
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.05	0.26	0.23	0.33

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	0	46	0	0	0	97	441	0	0	477	183
Future Volume (vph)	129	0	46	0	0	0	97	441	0	0	477	183
Ideal Flow (vphpl)	1630	1900	1630	1900	1900	1900	1375	1375	1900	1900	1535	1535
Total Lost time (s)	4.5	4.5					4.5	4.5			4.5	
Lane Util. Factor	1.00	1.00					1.00	0.95			0.95	
Frpb, ped/bikes	1.00	0.99					1.00	1.00			0.99	
Flpb, ped/bikes	1.00	1.00					1.00	1.00			1.00	
Frt	1.00	0.85					1.00	1.00			0.96	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1548	1563					1252	2587			2725	
Flt Permitted	0.95	1.00					0.39	1.00			1.00	
Satd. Flow (perm)	1548	1563					514	2587			2725	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Adj. Flow (vph)	134	0	48	0	0	0	101	459	0	0	497	191
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	134	9	0	0	0	0	101	459	0	0	656	0
Confl. Peds. (#/hr)			1				8					8
Confl. Bikes (#/hr)							1					1
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	4%	1%	2%	2%	2%	1%
Turn Type	Split	NA		Perm			Perm	NA		Perm	NA	
Protected Phases	4	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	7.6	7.6					25.2	25.2			25.2	
Effective Green, g (s)	7.6	7.6					25.2	25.2			25.2	
Actuated g/C Ratio	0.18	0.18					0.60	0.60			0.60	
Clearance Time (s)	4.5	4.5					4.5	4.5			4.5	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	281	284					309	1559			1642	
v/s Ratio Prot	c0.09	0.01						0.18			c0.24	
v/s Ratio Perm							0.20					
v/c Ratio	0.48	0.03					0.33	0.29			0.40	
Uniform Delay, d1	15.3	14.1					4.1	4.0			4.3	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	1.3	0.0					0.6	0.1			0.2	
Delay (s)	16.6	14.1					4.7	4.1			4.5	
Level of Service	B	B					A	A			A	
Approach Delay (s)		15.9			0.0			4.2			4.5	
Approach LOS		B			A			A			A	

Intersection Summary

HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A			
HCM 2000 Volume to Capacity ratio	0.48					
Actuated Cycle Length (s)	41.8	Sum of lost time (s)	13.5			
Intersection Capacity Utilization	51.0%	ICU Level of Service	A			
Analysis Period (min)	15					
c Critical Lane Group						

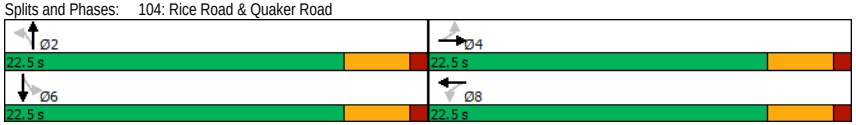
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	42	61	24	55	33	476	70	75	384	15
Future Volume (vph)	19	34	42	61	24	55	33	476	70	75	384	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	60.0		0.0	30.0		0.0	40.0		0.0	30.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor								1.00		1.00		
Frt		0.917			0.895			0.981			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1548	1285	0	1548	1459	0	1395	2988	0	1475	2992	0
Flt Permitted	0.833			0.833			0.500			0.428		
Satd. Flow (perm)	1358	1285	0	1358	1459	0	734	2988	0	664	2992	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			60			43			10	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		556.9			693.9			110.5			235.8	
Travel Time (s)		40.1			50.0			8.0			17.0	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Adj. Flow (vph)	21	37	46	66	26	60	36	517	76	82	417	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	83	0	66	86	0	36	593	0	82	433	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane											Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	7.2	7.2		7.3	7.3		18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.25	0.25		0.26	0.26		0.65	0.65		0.65	0.65	
v/c Ratio	0.06	0.23		0.19	0.21		0.08	0.30		0.19	0.22	
Control Delay	8.9	7.0		10.1	5.8		5.9	5.1		7.0	5.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.9	7.0		10.1	5.8		5.9	5.1		7.0	5.0	
LOS	A	A		B	A		A	A		A	A	
Approach Delay		7.4			7.7			5.1			5.3	
Approach LOS		A			A			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 45
Actuated Cycle Length: 28.5
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.30
Intersection Signal Delay: 5.6 — Intersection LOS: A
Intersection Capacity Utilization 44.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 104: Rice Road & Quaker Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	83	66	86	36	593	82	433
v/c Ratio	0.06	0.23	0.19	0.21	0.08	0.30	0.19	0.22
Control Delay	8.9	7.0	10.1	5.8	5.9	5.1	7.0	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	7.0	10.1	5.8	5.9	5.1	7.0	5.0
Queue Length 50th (m)	0.6	1.1	2.0	0.8	0.8	7.8	2.1	5.7
Queue Length 95th (m)	3.8	7.6	8.4	7.0	4.1	17.8	8.5	13.4
Internal Link Dist (m)		532.9		669.9		86.5		211.8
Turn Bay Length (m)	60.0		30.0		40.0		30.0	
Base Capacity (vph)	871	840	871	957	561	2296	508	2291
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.10	0.08	0.09	0.06	0.26	0.16	0.19

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	34	42	61	24	55	33	476	70	75	384	15
Future Volume (vph)	19	34	42	61	24	55	33	476	70	75	384	15
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.90		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1548	1285		1548	1459		1395	2988		1474	2993	
Flt Permitted	0.83	1.00		0.83	1.00		0.50	1.00		0.43	1.00	
Satd. Flow (perm)	1358	1285		1358	1459		734	2988		664	2993	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	37	46	66	26	60	36	517	76	82	417	16
RTOR Reduction (vph)	0	39	0	0	50	0	0	20	0	0	5	0
Lane Group Flow (vph)	21	44	0	66	36	0	36	573	0	82	428	0
Confl. Peds. (#/hr)									2	2		
Heavy Vehicles (%)	0%	18%	15%	0%	0%	0%	11%	1%	4%	5%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	4.8	4.8		4.8	4.8		16.5	16.5		16.5	16.5	
Effective Green, g (s)	4.8	4.8		4.8	4.8		16.5	16.5		16.5	16.5	
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	215	203		215	231		399	1627		361	1629	
v/s Ratio Prot		0.03			0.02			c0.19			0.14	
v/s Ratio Perm	0.02			c0.05			0.05			0.12		
v/c Ratio	0.10	0.22		0.31	0.15		0.09	0.35		0.23	0.26	
Uniform Delay, d1	10.9	11.1		11.3	11.0		3.3	3.9		3.6	3.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.5		0.8	0.3		0.1	0.1		0.3	0.1	
Delay (s)	11.1	11.7		12.1	11.3		3.4	4.0		3.9	3.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.5			11.6			4.0			3.8	
Approach LOS		B			B			A			A	

Intersection Summary					
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service		A	
HCM 2000 Volume to Capacity ratio	0.34				
Actuated Cycle Length (s)	30.3	Sum of lost time (s)		9.0	
Intersection Capacity Utilization	44.7%	ICU Level of Service		A	
Analysis Period (min)	15				

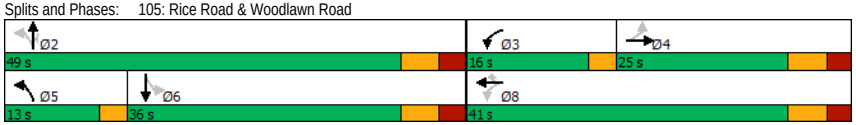
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	370	72	271	441	80	102	371	184	82	342	77
Future Volume (vph)	69	370	72	271	441	80	102	371	184	82	342	77
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Storage Length (m)	25.0		30.0	55.0		0.0	20.0		25.0	30.0		0.0
Storage Lanes	1		1	1		1	1		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99		0.97			0.98	1.00		
Frt		0.976				0.850			0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3239	0	1538	1758	1273	1553	1741	1248	1568	1492	0
Flt Permitted	0.490			0.280			0.279			0.525		
Satd. Flow (perm)	804	3239	0	451	1758	1232	456	1741	1228	865	1492	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				87			154		13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		589.4			876.0			706.2			919.9	
Travel Time (s)		42.4			63.1			50.8			66.2	
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Adj. Flow (vph)	75	402	78	295	479	87	111	403	200	89	372	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	480	0	295	479	87	111	403	200	89	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.20	1.09	1.31	1.20	1.09	1.35	1.20	1.09	1.35	1.20	1.31	1.31
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		3	8	8	5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		10.0	8.0	8.0	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	24.8	24.8		13.0	24.8	24.8	13.0	25.0	25.0	25.0	25.0	
Total Split (s)	25.0	25.0		16.0	41.0	41.0	13.0	49.0	49.0	36.0	36.0	
Total Split (%)	27.8%	27.8%		17.8%	45.6%	45.6%	14.4%	54.4%	54.4%	40.0%	40.0%	
Maximum Green (s)	18.2	18.2		13.0	34.2	34.2	10.0	42.0	42.0	29.0	29.0	
Yellow Time (s)	4.1	4.1		3.0	4.1	4.1	3.0	4.1	4.1	4.1	4.1	
All-Red Time (s)	2.7	2.7		0.0	2.7	2.7	0.0	2.9	2.9	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lag	Lag		Lead			Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0			7.0	7.0		7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0	11.0		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0	0		0	0	0	0	
Act Effct Green (s)	16.4	16.4		36.2	32.4	32.4	46.0	42.0	42.0	31.7	31.7	
Actuated g/C Ratio	0.19	0.19		0.41	0.37	0.37	0.52	0.48	0.48	0.36	0.36	
v/c Ratio	0.50	0.77		0.86	0.74	0.17	0.31	0.49	0.30	0.29	0.84	
Control Delay	44.9	41.8		44.8	32.4	5.2	13.8	18.6	5.5	25.9	43.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	44.9	41.8		44.8	32.4	5.2	13.8	18.6	5.5	25.9	43.2	
LOS	D	D		D	C	A	B	B	A	C	D	
Approach Delay		42.2			33.9			14.2			40.4	
Approach LOS		D			C			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 88.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 31.7		Intersection LOS: C	
Intersection Capacity Utilization 88.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 105: Rice Road & Woodlawn Road



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	75	480	295	479	87	111	403	200	89	456
v/c Ratio	0.50	0.77	0.86	0.74	0.17	0.31	0.49	0.30	0.29	0.84
Control Delay	44.9	41.8	44.8	32.4	5.2	13.8	18.6	5.5	25.9	43.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	41.8	44.8	32.4	5.2	13.8	18.6	5.5	25.9	43.2
Queue Length 50th (m)	12.1	41.2	37.4	72.9	0.0	10.0	48.5	4.4	12.0	77.3
Queue Length 95th (m)	26.7	58.7	#71.6	110.3	9.4	19.3	75.2	17.0	25.5	#139.0
Internal Link Dist (m)		565.4		852.0			682.2			895.9
Turn Bay Length (m)	25.0		55.0			20.0		25.0	30.0	
Base Capacity (vph)	165	685	345	682	531	362	829	665	311	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.70	0.86	0.70	0.16	0.31	0.49	0.30	0.29	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	370	72	271	441	80	102	371	184	82	342	77
Future Volume (vph)	69	370	72	271	441	80	102	371	184	82	342	77
Ideal Flow (vphpl)	1651	1776	1535	1651	1776	1498	1651	1776	1498	1651	1535	1535
Total Lost time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1559	3237		1536	1758	1232	1553	1741	1228	1564	1493	
Flt Permitted	0.49	1.00		0.28	1.00	1.00	0.28	1.00	1.00	0.53	1.00	
Satd. Flow (perm)	803	3237		453	1758	1232	455	1741	1228	865	1493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	402	78	295	479	87	111	403	200	89	372	84
RTOR Reduction (vph)	0	18	0	0	0	55	0	0	80	0	8	0
Lane Group Flow (vph)	75	462	0	295	479	32	111	403	120	89	448	0
Confl. Peds. (#/hr)	5		5	5		5			3	3		
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	1%	2%	2%	0%	0%	0%
Turn Type	Perm	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	
Protected Phases		4		3	8		5	2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	16.4	16.4		32.4	32.4	32.4	42.6	42.6	42.6	31.7	31.7	
Effective Green, g (s)	16.4	16.4		32.4	32.4	32.4	42.6	42.6	42.6	31.7	31.7	
Actuated g/C Ratio	0.18	0.18		0.36	0.36	0.36	0.48	0.48	0.48	0.36	0.36	
Clearance Time (s)	6.8	6.8		3.0	6.8	6.8	3.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	148	597		323	641	449	315	835	589	308	532	
v/s Ratio Prot		0.14		c0.13	0.27		0.03	c0.23			c0.30	
v/s Ratio Perm	0.09			c0.20		0.03	0.14		0.10	0.10		
v/c Ratio	0.51	0.77		0.91	0.75	0.07	0.35	0.48	0.20	0.29	0.84	
Uniform Delay, d1	32.6	34.4		23.0	24.6	18.4	14.5	15.6	13.3	20.5	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.7	6.2		28.9	4.8	0.1	0.7	2.0	0.8	2.4	14.9	
Delay (s)	35.3	40.6		51.9	29.4	18.5	15.2	17.6	14.1	22.8	41.1	
Level of Service	D	D		D	C	B	B	B	B	C	D	
Approach Delay (s)		39.9			36.0			16.3			38.1	
Approach LOS		D			D			B			D	

Intersection Summary

HCM 2000 Control Delay	32.0	HCM 2000 Level of Service		C		
HCM 2000 Volume to Capacity ratio	0.87					
Actuated Cycle Length (s)	88.8	Sum of lost time (s)		19.8		
Intersection Capacity Utilization	88.4%	ICU Level of Service		E		
Analysis Period (min)	15					

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	19	23	505	480	35
Future Volume (vph)	18	19	23	505	480	35
Ideal Flow (vphpl)	1630	1630	1375	1375	1535	1535
Storage Length (m)	0.0	0.0	30.0			0.0
Storage Lanes	1	0	1			0
Taper Length (m)	7.5		7.5			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.931				0.990	
Flt Protected	0.976		0.950			
Satd. Flow (prot)	1452	0	1281	2561	2831	0
Flt Permitted	0.976		0.950			
Satd. Flow (perm)	1452	0	1281	2561	2831	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	290.1			240.6	560.0	
Travel Time (s)	20.9			17.3	40.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	21	25	549	522	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	25	549	560	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	3.6	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.22	1.22	1.50	1.50	1.31	1.31
Turning Speed (k/h)	25	15	25			15
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	19	23	505	480	35
Future Volume (Veh/h)	18	19	23	505	480	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	21	25	549	522	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	866	280	560			
vC1, stage 1 conf vol	541					
vC2, stage 2 conf vol	324					
vCu, unblocked vol	866	280	560			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	98			
cM capacity (veh/h)	482	717	1007			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	41	25	274	274	348	212
Volume Left	20	25	0	0	0	0
Volume Right	21	0	0	0	0	38
cSH	579	1007	1700	1700	1700	1700
Volume to Capacity	0.07	0.02	0.16	0.16	0.20	0.12
Queue Length 95th (m)	1.8	0.6	0.0	0.0	0.0	0.0
Control Delay (s)	11.7	8.7	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.7	0.4			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	0	25	20	0	12	34	492	29	18	429	52
Future Volume (vph)	24	0	25	20	0	12	34	492	29	18	429	52
Ideal Flow (vphpl)	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630	1630
Storage Length (m)	0.0		0.0	0.0		0.0	30.0		0.0	30.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.931			0.950			0.992			0.984	
Flt Protected		0.976			0.970		0.950			0.950		
Satd. Flow (prot)	0	1452	0	0	1473	0	1518	3012	0	1518	2988	0
Flt Permitted		0.976			0.970		0.950			0.950		
Satd. Flow (perm)	0	1452	0	0	1473	0	1518	3012	0	1518	2988	0
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		286.1			169.9			235.8			240.6	
Travel Time (s)		20.6			12.2			17.0			17.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	0	27	22	0	13	37	535	32	20	466	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	35	0	37	567	0	20	523	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.0%	ICU Level of Service A	
Analysis Period (min)	15		

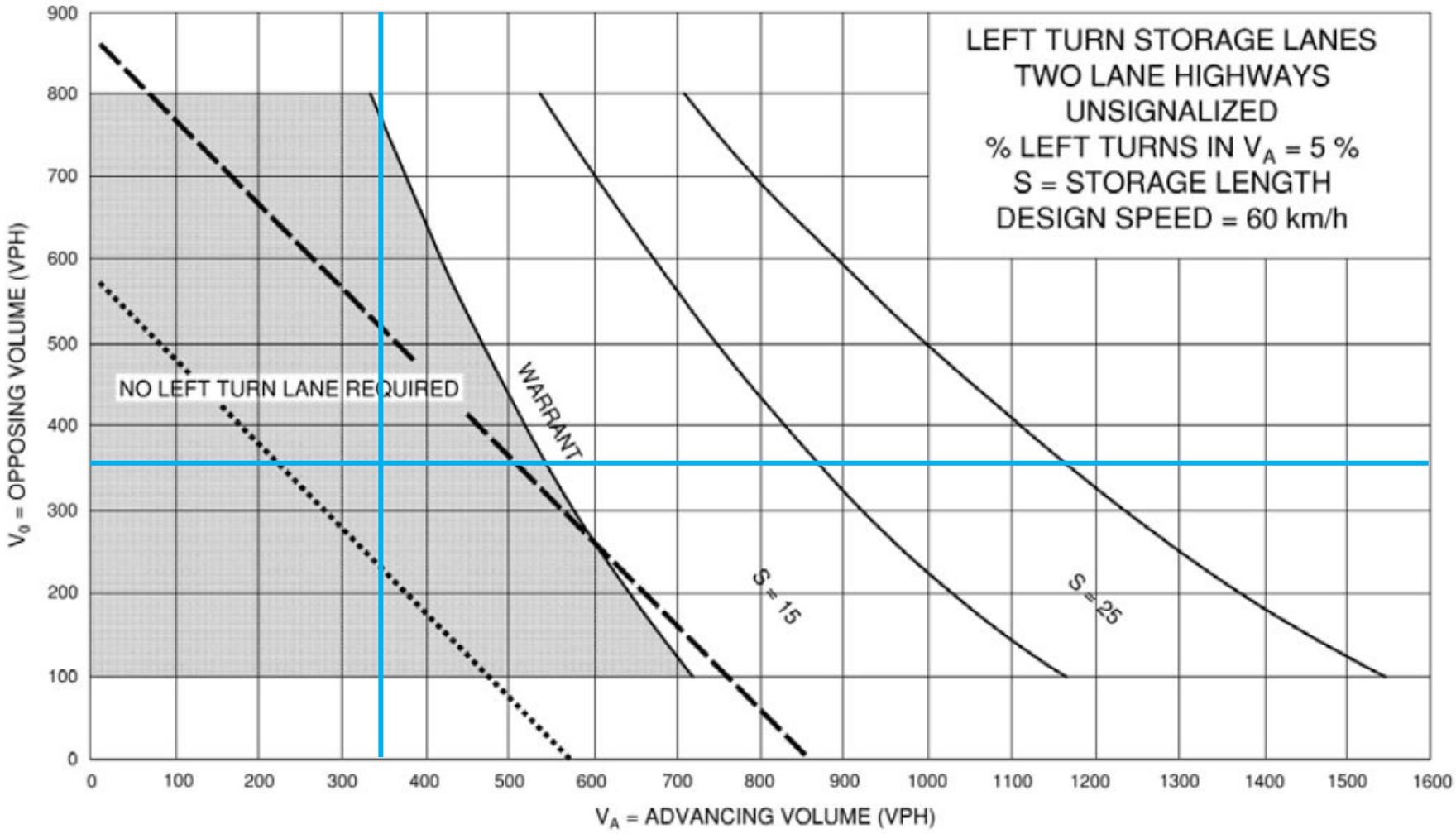
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	0	25	20	0	12	34	492	29	18	429	52
Future Volume (Veh/h)	24	0	25	20	0	12	34	492	29	18	429	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	0	27	22	0	13	37	535	32	20	466	57
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (m)								236				
pX, platoon unblocked												
vC, conflicting volume	889	1176	262	925	1188	284	523			567		
vC1, stage 1 conf vol	534	534		625	625							
vC2, stage 2 conf vol	354	641		300	563							
vCu, unblocked vol	889	1176	262	925	1188	284	523			567		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	96	94	100	98	96			98		
cM capacity (veh/h)	415	360	737	380	356	713	1040			1001		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	35	37	357	210	20	311	212
Volume Left	26	22	37	0	0	20	0	0
Volume Right	27	13	0	0	32	0	0	57
cSH	533	460	1040	1700	1700	1001	1700	1700
Volume to Capacity	0.10	0.08	0.04	0.21	0.12	0.02	0.18	0.12
Queue Length 95th (m)	2.6	2.0	0.9	0.0	0.0	0.5	0.0	0.0
Control Delay (s)	12.5	13.5	8.6	0.0	0.0	8.7	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.5	13.5	0.5			0.3		
Approach LOS	B	B						

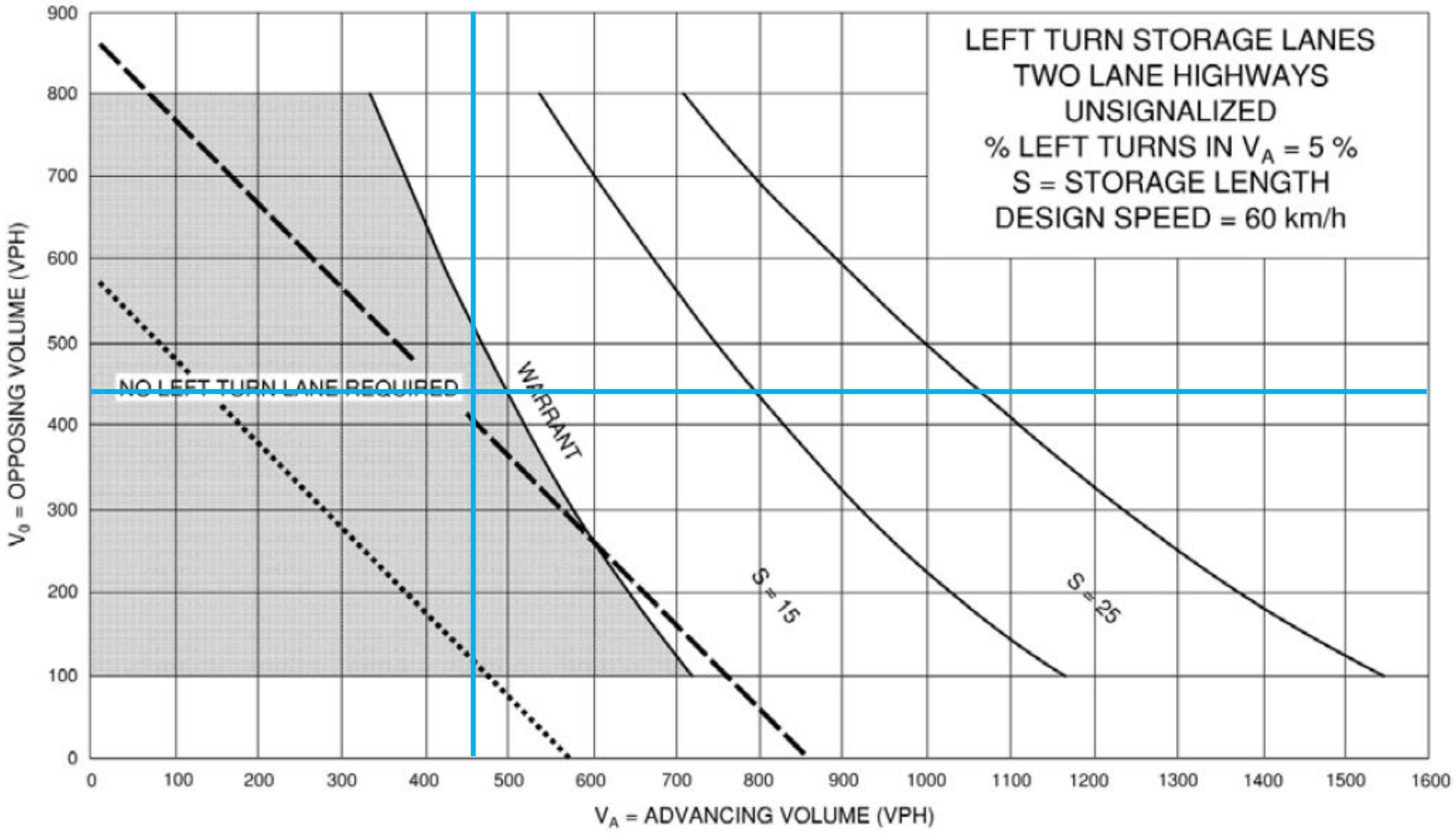
Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	34.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix E

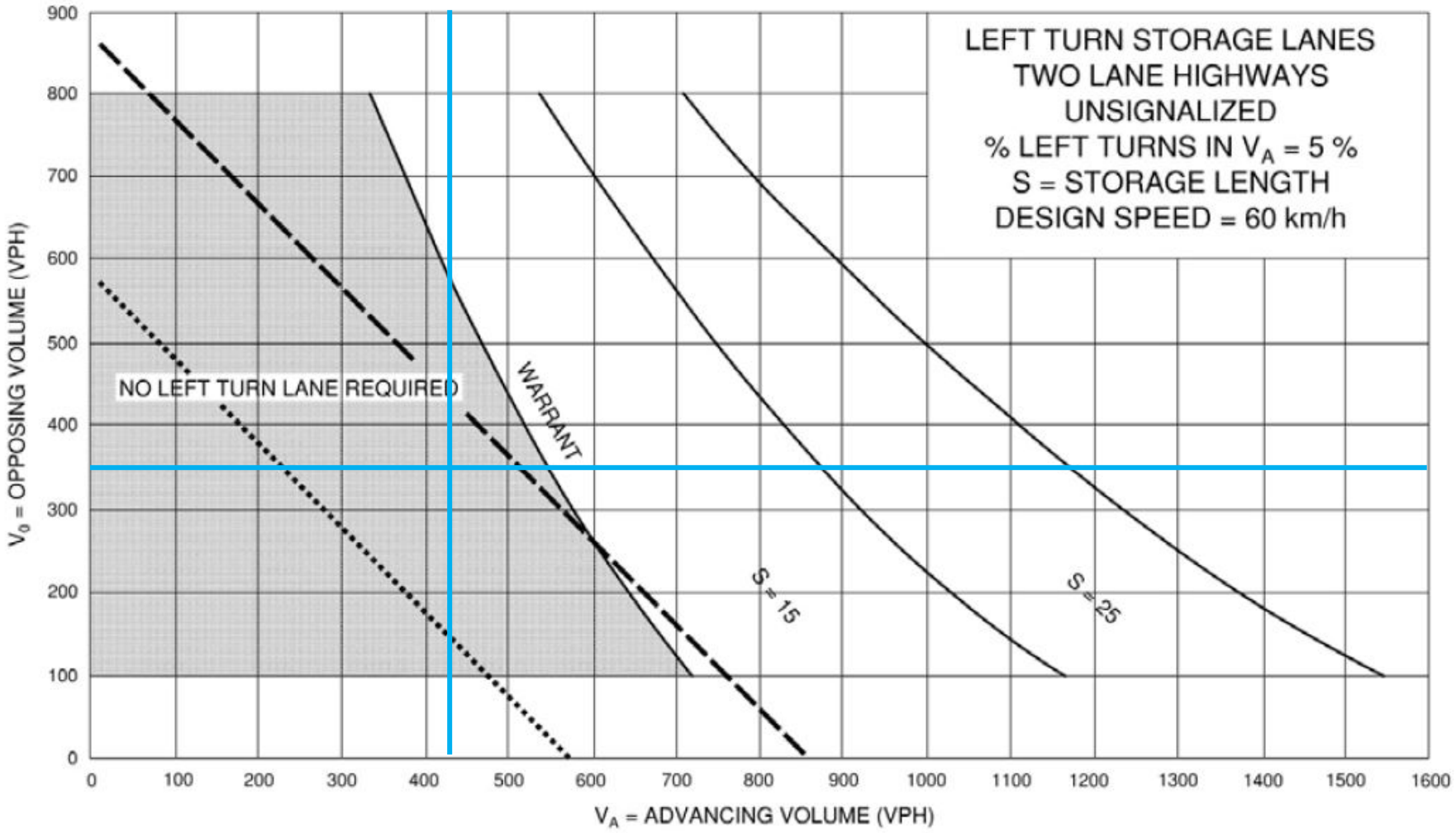
Left-Turn Lane Warrant



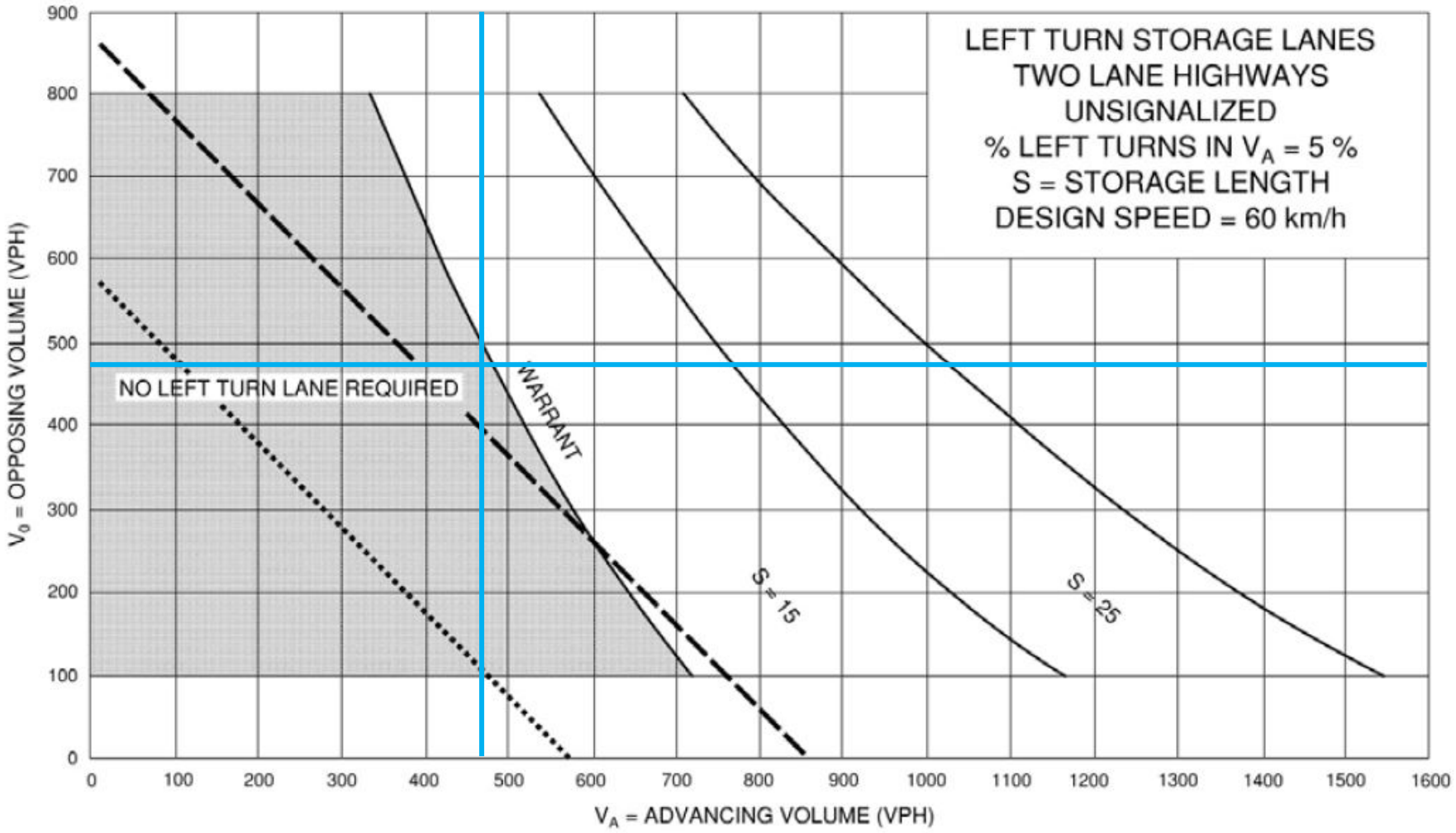
Intersection: Rice Road & Site Street A – Unit Reduction
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: AM Peak Hour



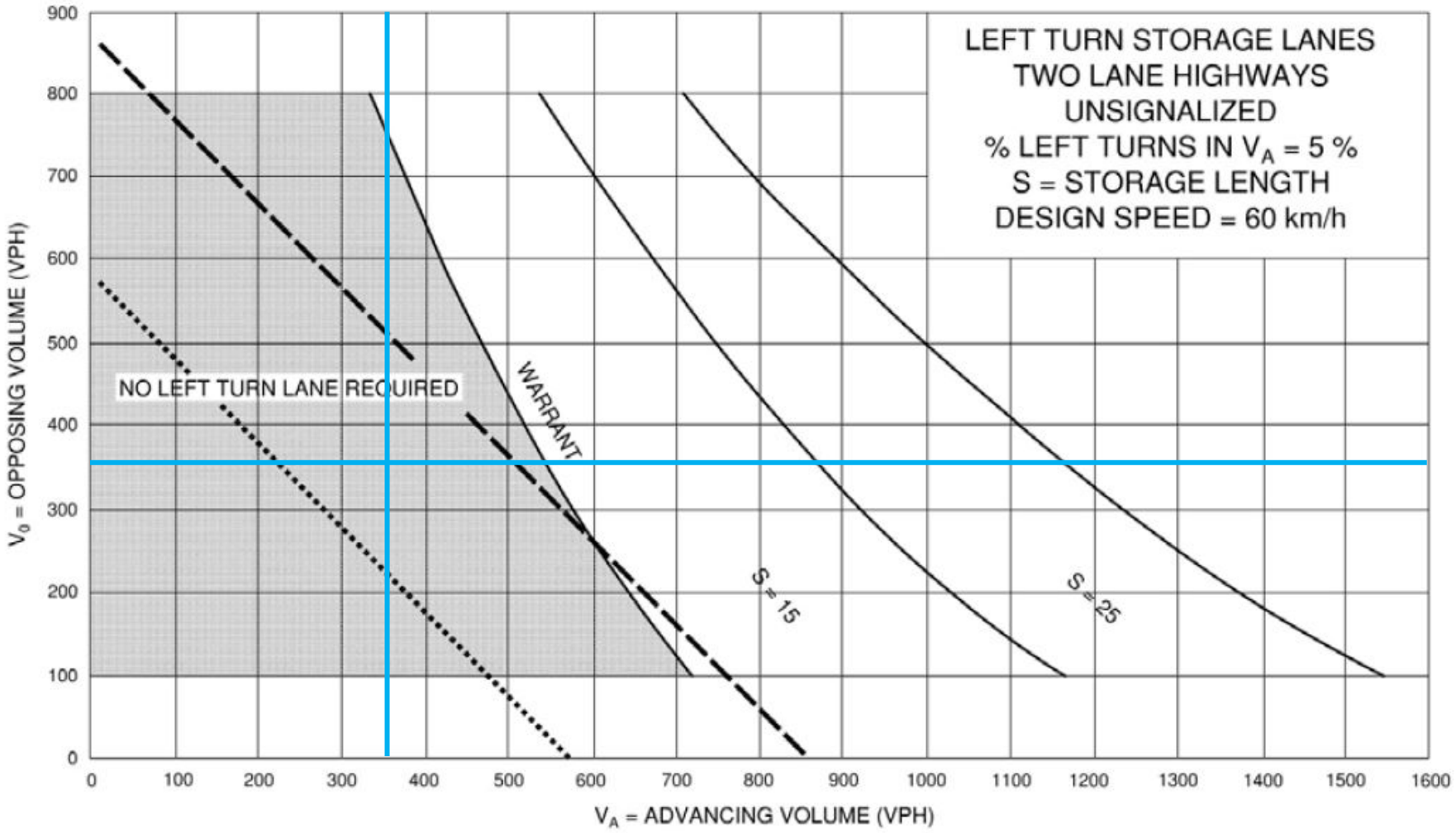
Intersection: Rice Road & Site Street A – Unit Reduction
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: PM Peak Hour



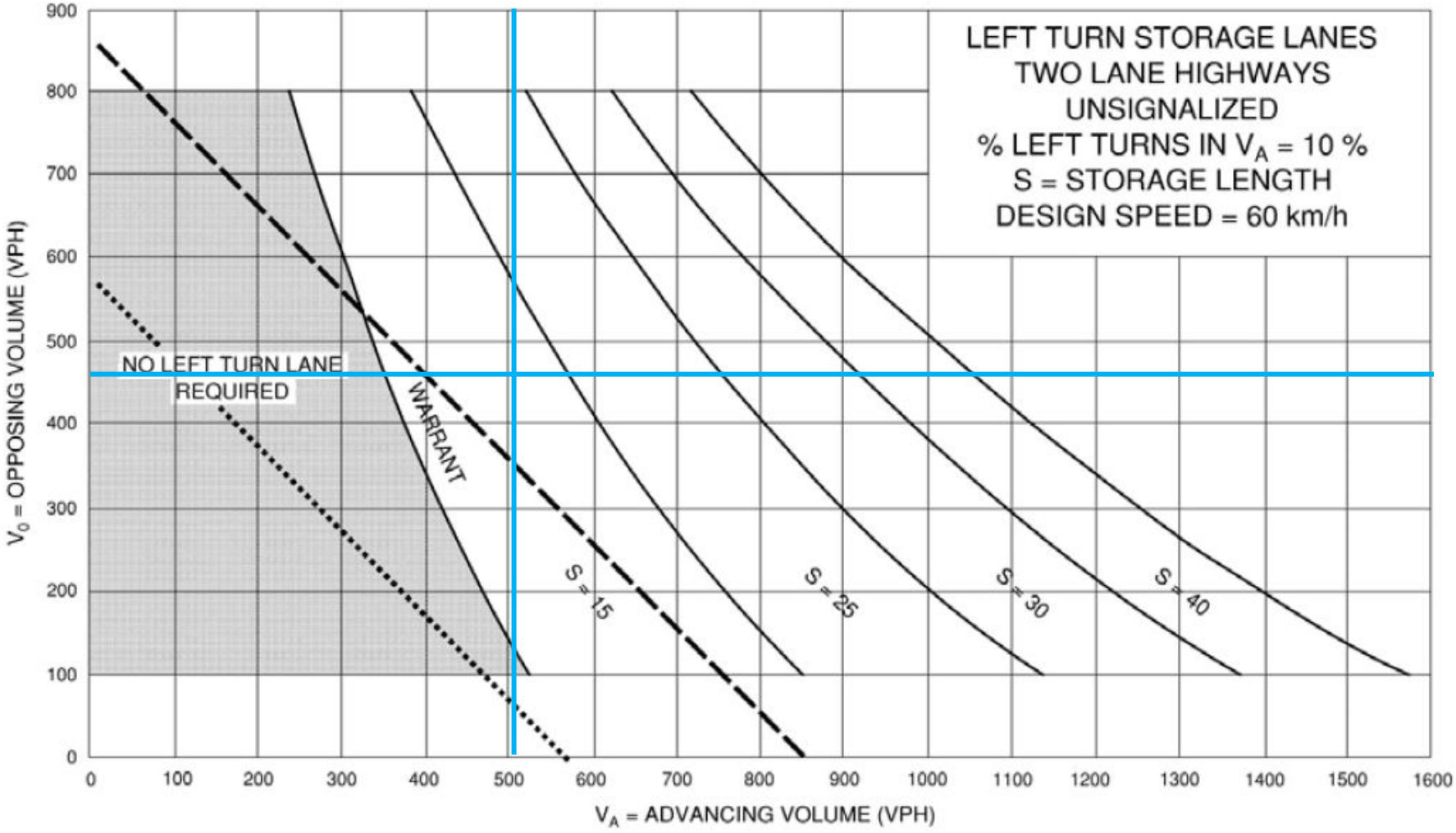
Intersection: Rice Road & Site Street E
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: AM Peak Hour



Intersection: Rice Road & Site Street E
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: PM Peak Hour



Intersection: Rice Road & Site Street A
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: AM Peak Hour



Intersection: Rice Road & Site Street A
Direction: Northbound Left-Turn
Horizon: Five-Year Total Traffic
Peak Hour: PM Peak Hour