US 11 Corridor Improvements
Stage 0 - Feasibility Study

In
St. Tammany Parish, Louisiana

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Regional Planning Commission

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A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2001.

HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, SPECIAL REPORT 209, WASHINGTON, D.C., 2000.

INTERSECTION CHANNELIZATION DESIGN GUIDE, H.R.P.R. #279, TRANSPORTATION RESEARCH BOARD, 1985.

EXECUTIVE SUMMARY

OVERVIEW

The purpose of this study is to evaluate the US 11 corridor in the Slidell area for capacity issues and for possible short and long term solutions for some of the transportation issues of the corridor.

This report identifies problems and recommends potential transportation system enhancements that will relieve vehicular traffic congestion on the US 11 corridor. The Consultant studied the two sections of the US 11 corridor which seem most limited in terms of serving present and projected traffic. These two sections are that portion of US 11 between I-12 and US 190, and that segment between the Slidell south City limits and Lake Pontchartrain.

Both sections are heavily traveled, but the northern section has the bridge over the Norfolk Southern Railroad, which creates a tremendous bottleneck.

The southern section, between the Slidell city limits and Lake Pontchartrain, has become a major thoroughfare, especially since Hurricane Katrina caused severe damage to the I-10 twin spans east of New Orleans. It also provides access to housing developments along Lake Pontchartrain, such as the marine-oriented subdivision of Eden Isles, and those to the west along Carr Drive. These developments have units under construction, and are expected to grow into the foreseeable future. Although the widening of the US-11 bridge is unlikely as it stands now, access will still be required from the Slidell area.

The intersections analyzed include:

- I-12 EB/WB ramps at US 11
- US 11 at North Blvd.
- US 11 at Lafayette St.
- US 11 at US 190 (Gause Blvd.)
- US 11 at Oak Harbor Blvd.
- US 11 at Eden Isles
- US 11 at Carr Dr.

CONCLUSIONS AND RECOMMENDATIONS

If left unimproved, existing congestion and attendant safety problems will increase due to the additional travel generated by the continuing growth of the region. An Environmental Inventory was favorable as regards highway improvements in this US 11 corridor.

The following measures are recommended to cope with the traffic congestion in the US 11 corridor in Slidell.

Short Term Solutions:

- Provide an additional left turn lane on the I-12WB off ramp at US 11.
- Signalize the intersection of US 11 at Oak Harbor Boulevard.

Long Term Solutions:

- Widen the entire corridor to 4-lanes with additional left turn lanes at key intersections.

  US 11 at I-12 WB on/off ramp/Brown Switch Road
  - Additional left turn lane on the northbound approach.
  - Additional left turn lane on I-12 WB off ramp.

  US 11 at I-12 EB on/off ramp
  - Dual right and left turn lanes, (one additional lane each) on the EB approach; i.e., the I-12EB off ramp.

  US 11 at US 190 (Gause Blvd.)
  - Dual left turn lanes on the west, north and southbound approaches. (One additional lane each)

  US 11 at Carr Dr.
  - Add left turn lane on US northbound.

- Rebuild the Norfolk Southern Railroad Bridge, or remove the bridge structure and construct a 4 lane roadway section with an at-grade highway-rail crossing.
- Install highway- rail traffic controls including gates, signals, and roadway markings in accordance with the Manual on Uniform Traffic Control Devices.

US 11 at I-12 WB on/off ramp/Brown Switch Road
- Provide an additional left turn lane on the northbound approach.
- Provide a dedicated right turn lane on the southbound approach

US 11 at I-12 EB on/off ramp
- Provide dual right and left turn lanes (one additional lane each) on the EB approach of the I-12EB off ramp.
- Provide a dedicated right turn lane on the southbound approach.

US 11 at North Blvd and US 11 at Lafayette Street
- Add one additional through lane each both north and south bound.

US 11 at US 190 (Gause Blvd.)
- Provide a dedicated right turn lane on the east bound approach of US 190
- Provide dual left turn lanes on the west, north and southbound approaches. (One additional lane each)

US 11 at Oak Harbor Blvd

- Signalize the intersection

US 11 at Eden Isles Ave

- Add one additional through lane each both north and south bound.

US 11 at Carr Dr. 9

- Flair the roadway of US 11 and provide a left turn lane for northbound US 11.

Given that the existing Right-of-Way in the southern section is adequate, and that there are minimal environmental issues; it is recommended to proceed with the design phase of the southern section while continuing to resolve the issues surrounding the northern section.

TABLE E-1
COST ESTIMATE

ITEM	Approximate Cost
South Section: Lake Pontchartrain to Spartan Drive	
Four Lane Sections with Median (See Figures 10b-10C)	$19,500,000
Sky-Tram	$26,000,000
Acquisition of Properties on the west side	$4,500,000
Total	**$50,000,000**
North Section: Gause Blvd to I-12	
Option One	
Four Lane Sections with Median (See Figure 10d)	$10,500,000
Overpass at Norfolk Southern RR	$9,000,000
Acquisition of Right-ofWay	$1,500,000
Total	**$21,000,000**
Option Two	
Four Lane Sections with Median (See Figure 10d)	$10,500,000
Norfolk Southern RR at-grade Intersection	$750,000
Demolition of Existing Norfolk Southern Bridge	$1,000,000
Acquisition of Right-ofWay	$1,500,000
Total	**$13,750,000**

I. INTRODUCTION

The purpose of this study is to evaluate the US 11 corridor in the Slidell area for highway capacity, land use and environmental issues.

The objectives of this study are as follows:

- To assess the corridor land uses
- To analyze the capacity of the existing roadway.
- To provide short term solutions to some of the corridor traffic issues.
- To provide long term solutions to the corridor traffic issues.
- To review environmental issues associated with a highway improvement project in this corridor.

In an effort to define traffic impact, this analysis determines the extent of existing traffic conditions and projects changes in traffic flow due to operation of the proposed facility. Field surveys and records search comprised the land use and environmental study.

II. PROJECT LOCATION AND STUDY AREA

Figure 1 – Diagram depicts the northern study corridor and intersections.

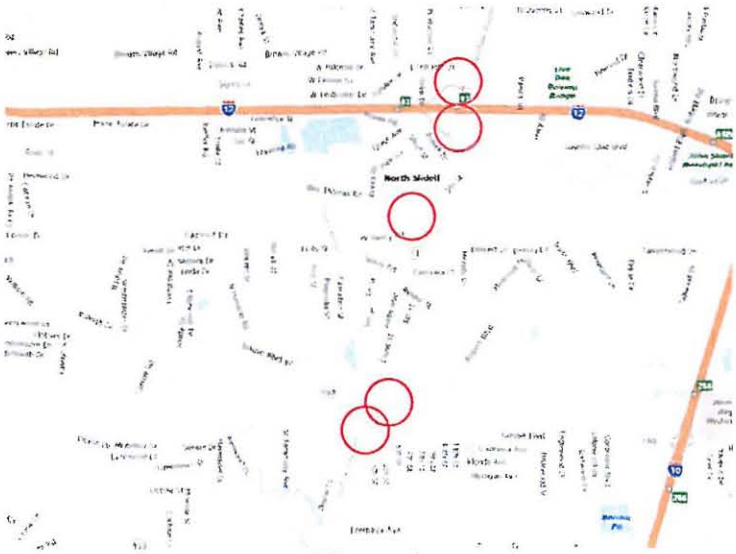


Figure 1

Figure 2 – Diagram depicts the southern study corridor and intersections.

Figure 2

III. EXISTING TRANSPORTATION SYSTEM CONDITIONS

As indicated before, the study area transportation system identified for investigation includes the portions of US 11 from I-12 to US 190 (Gause Blvd.) and from the south Slidell City Limit to Lake Pontchartrain. Eight existing intersections are evaluated in this report, and include:

- US 11 at I-12 WB Off ramp/Brown Switch Rd
- US 11 at I-12 EB Off ramp
- US 11 at North Blvd.
- US 11 at Lafayette St.
- US 11 at US 190 (Gause Blvd.)
- US 11 at Oak Harbor Blvd.
- US 11 at Eden Isles Blvd.
- US 11 at Carr Dr.

US 11 is functionally classified as a rural two lane minor arterial roadway with a posted speed limit of 45 mph south of Slidell and 40 mph north of US 190.

IV. LAND USES

A. NEW DIRECTION 2025 - FUTURE LAND USE

The 2025 land use plan was investigated to determine what the parish plans are for this corridor.

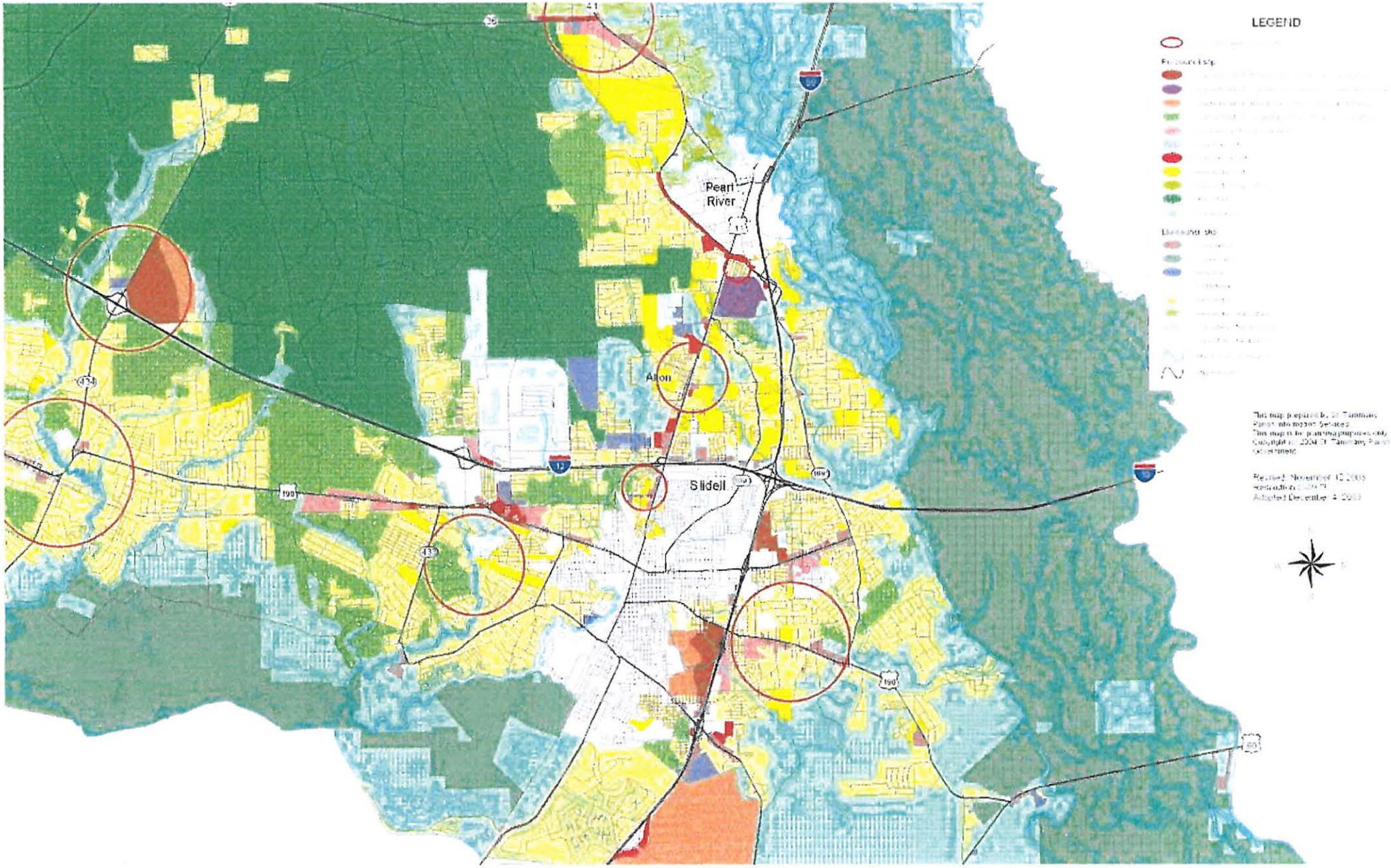
B. NORTHERN SECTION

The predominant land use from I-12 down to US 190 is residential. There is a section immediately south of the interstate on the west side that is zoned C-2 (Highway Commercial) The area around the railroad overpass is a combination of Suburban Agricultural and Residential. No significant changes are anticipated according to the New Direction 2025 Plan.

C. SOUTHERN SECTION

This area is a combination of Commercial and light industrial as well as single and multiple family residential properties. No significant changes are anticipated according to the New Direction 2025 Plan.

The official New Direction 2025 Plan land use map for the area under study is presented in **figure 3**.


LEGEND
Pearl River
Aron
Slidell
41
36
434
190
433
12
10
59

V. EXISTING TRAFFIC CONDITIONS

A. PEAK INTERVALS FOR ANALYSIS

The peak hour selected for analysis was weekday AM and PM peak period.

B. EXISTING TRAFFIC VOLUME DATA

Weekday AM and PM peak traffic counts were obtained by Krebs, LaSalle, LeMieux Consultants at the study area intersections previously identified.

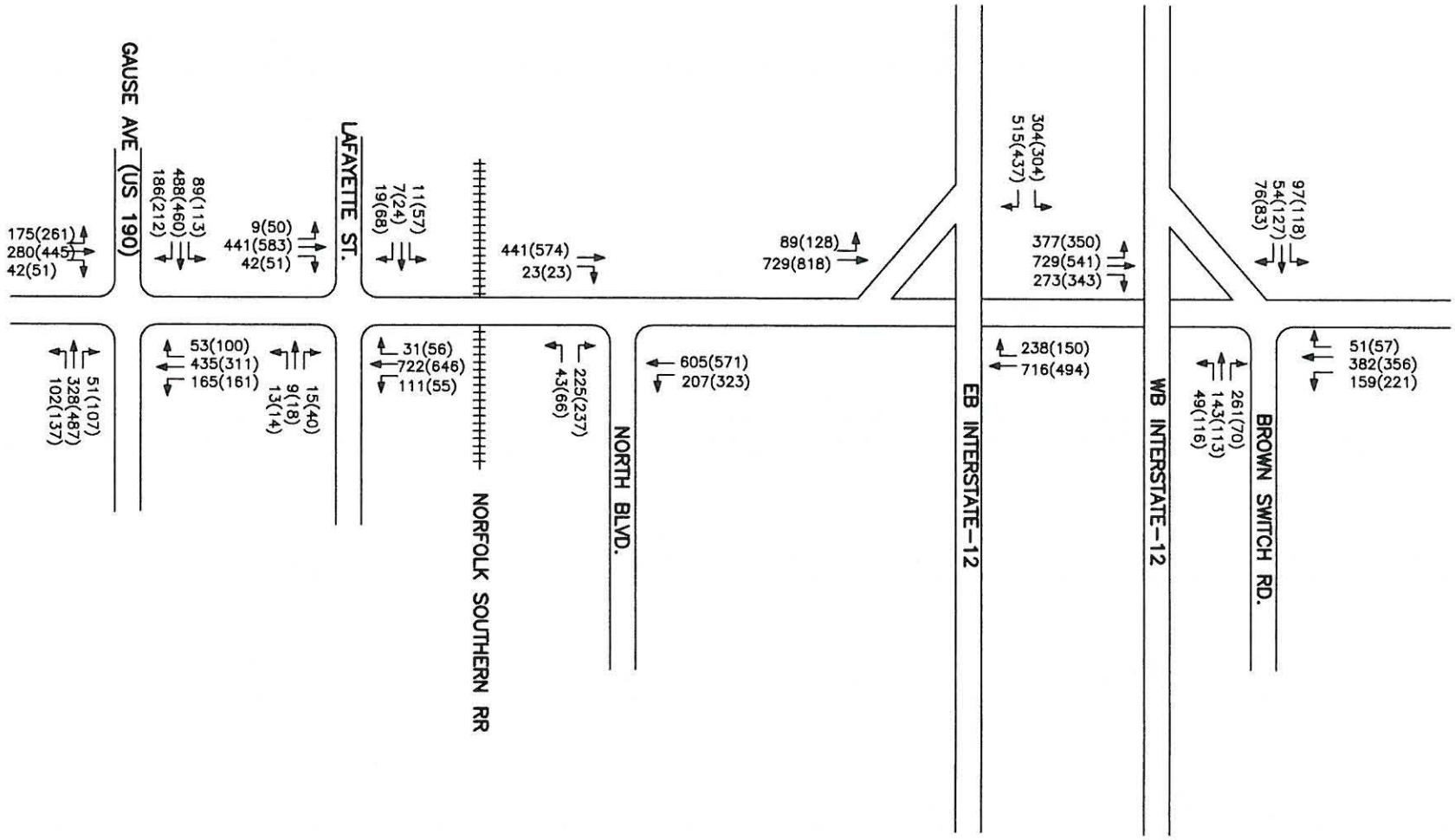
C. AVERAGE DAILY TRAFFIC

Average Daily Traffic (ADT) counts were made by Krebs, LaSalle, LeMieux Consultants along US 11 at 3 locations from Tuesday, October 24, 2006 to Thursday, October 26, 2006. **Table I** illustrates the data collected.

TABLE I – ROADWAY AVERAGE DAILY TRAFFIC

Roadway	Average Daily Traffic (ADT) Vehicles/Day
US 11 Northern Section	
Northbound	7298
Southbound	8670
US 11 Southern Section near lake	
Northbound	4891
Southbound	7631

Figures 4 and 5 depict existing traffic volumes:



STUDIED INTERSECTIONS

UPPER SECTION

NOTE: N.T.S.

FIGURE 4

XX = AM
(XX) = PM

N

EXISTING VOLUMES
PEAK PERIODS

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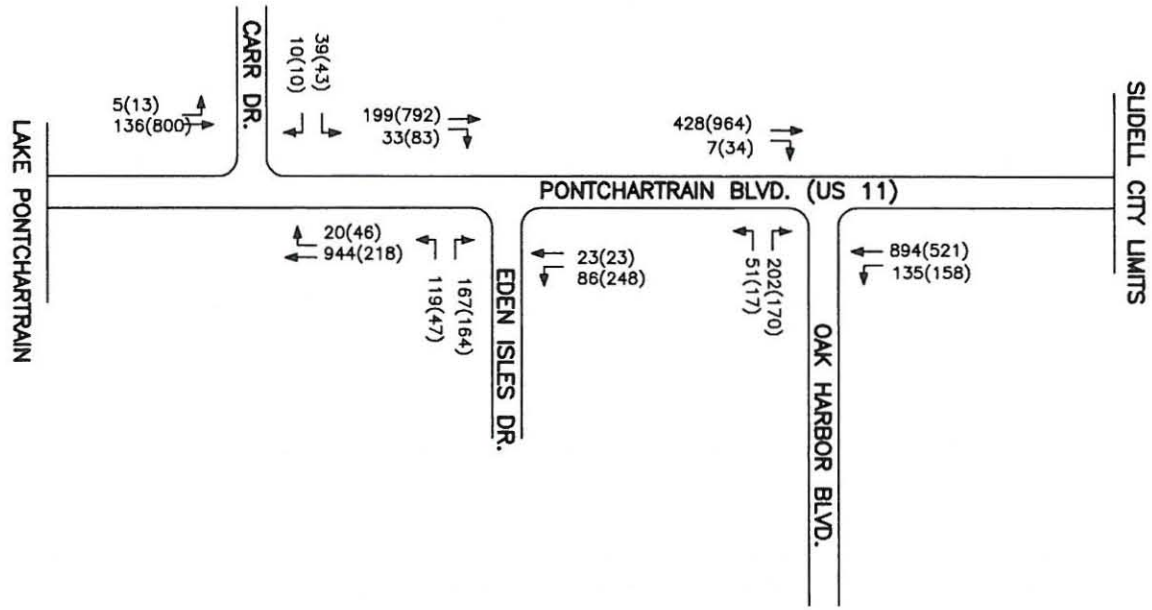

STUDIED INTERSECTIONS

LOWER SECTION

NOTE: N.T.S.

FIGURE 5

XX = AM

(XX) = PM

N

EXISTING VOLUMES
PEAK PERIODS

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D. Field Observations at Study Area Intersections

The study area intersections were observed during the AM and PM peak interval to assess current traffic operations. As previously mentioned turn turning movement counts were made at the listed intersections during the week of October 23, 2006. The following discussion summarizes the conditions observed.

US 11 at I-12 WB on/off ramp /Brown Switch Road

- Vehicular right-of-way controlled by multi-phase, traffic signal.
- On and off ramp on WB approach, Brown Switch frontage road on westbound approach.
- Excessive queuing was observed during the PM peak period.

US 11 at I-12 EB on/off ramp

- Vehicular right-of-way controlled by multi-phase, traffic signal.
- On and off ramp on EB approach.
- Excessive queuing was observed on the northbound left turn lane for entrance to I-12.

US 11 at North Blvd

- Vehicular right-of-way controlled by multi-phase, traffic signal.
- 3-way intersection.

US 11 at Lafayette St

- Intersection has recently been upgraded to four (4) through lanes and left turn lanes on US 11.
- Vehicular right-of-way controlled by multi-phase, traffic signal.
- EB approach is the exit of a shopping center.

US 11 at US 190 (Gause Blvd.)

- Intersection has recently been upgraded.
- Vehicular right-of-way controlled by multi-phase, traffic signal.
- Heavy traffic on all approaches.

US 11 at Oak Harbor Blvd. North and south free flow with Stop controls on Oak Harbor Blvd.

- During PM peak hour traffic, heavy queuing.

US 11 at Eden Isles Ave.

- Vehicular right-of-way controlled by multi-phase, traffic signal.

US 11 at Carr Dr.

- North and south free flow with stop controls on Carr Dr.

VI. FUTURE TRANSPORTATION SYSTEM CONDITIONS

In the future, the entire corridor is expected to be widened to four lanes, likely more of a boulevard type roadway, similar to that shown in **Figure 9** below.

An alternative to the bridge section over the Norfolk Southern Railroad was explored in that the creation of an underpass to the railway would allow for the desired grade separation.

Given a choice, grade separation is far more desirable for safety reasons.

No firm cost estimates were made, but in general, underpasses cost significantly more than bridges. This coupled with the additional foundation requirements of the railroad; the continuous pumping requirements due to the low elevation; and the fact that this is an evacuation route led us the conclusion that an underpass arrangement was not desirable.

The section of US 11 from somewhat north of Gause Blvd. (US 190) to just north of the Norfolk Southern Railroad has a narrow Right-of-Way of 50 to 75 feet. Therefore additional Right-of-Way would have to be acquired.

VII. FUTURE TRAFFIC CONDITIONS

The Future Land Use Plan indicates little difference in planned land uses, therefore future volumes were projected at 3% growth up to the year 2025. These are based on the assumption that US 11 will be 4 lanes throughout the corridor. Analysis results are shown in Table IV below.

The following additional changes are anticipated to be necessary:

US 11 at I-12 WB on/off ramp/Brown Switch Road

- An additional left turn lane on the northbound approach.
- A dedicated right turn lane on the southbound approach.
- Additional left turn lane on I-12 WB off ramp.

US 11 at I-12 EB on/off ramp

- Dual right and left turn lanes, (one additional lane each) on the EB approach; i.e., the I-12EB off ramp.
- A dedicated right turn lane on the southbound US 11 approach.

US 11 at North Blvd

- Two additional through lanes, one north bound and one south bound.

US 11 at Lafayette St

- Recently upgraded – no additional recommendations

US 11 at US 190 (Gause Blvd.)

- Dedicated right turn lane on the east bound approach
- Dual left turn lanes on the west, north and southbound approaches. (One additional lane each)

US 11 at Oak Harbor Blvd.

- Signalize the intersection.

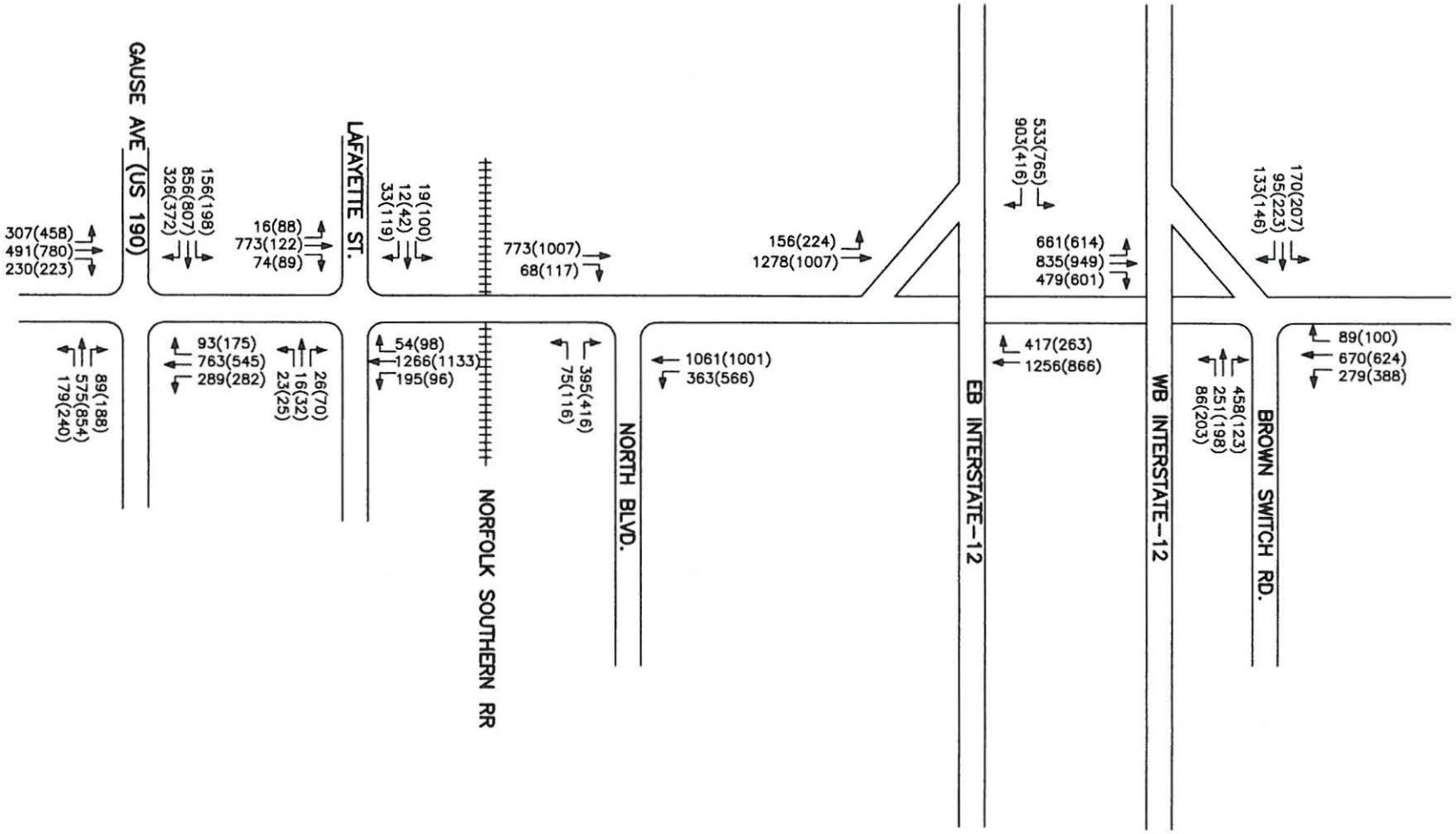
US 11 at Eden Isles Ave.

- Add additional through lanes north and south bound.
- Roadway of US 11 between lake and Oak Harbor Blvd is in need of immediate overlay.

US 11 at Carr Dr.

- Add left turn lane on US northbound.

Figures 7 and 8 depict traffic volumes anticipated in the year 2025:



STUDIED INTERSECTIONS

UPPER SECTION

NOTE: N.T.S.

FIGURE 7

XX = AM
(XX) = PM

N

EXISTING VOLUMES
PEAK PERIODS

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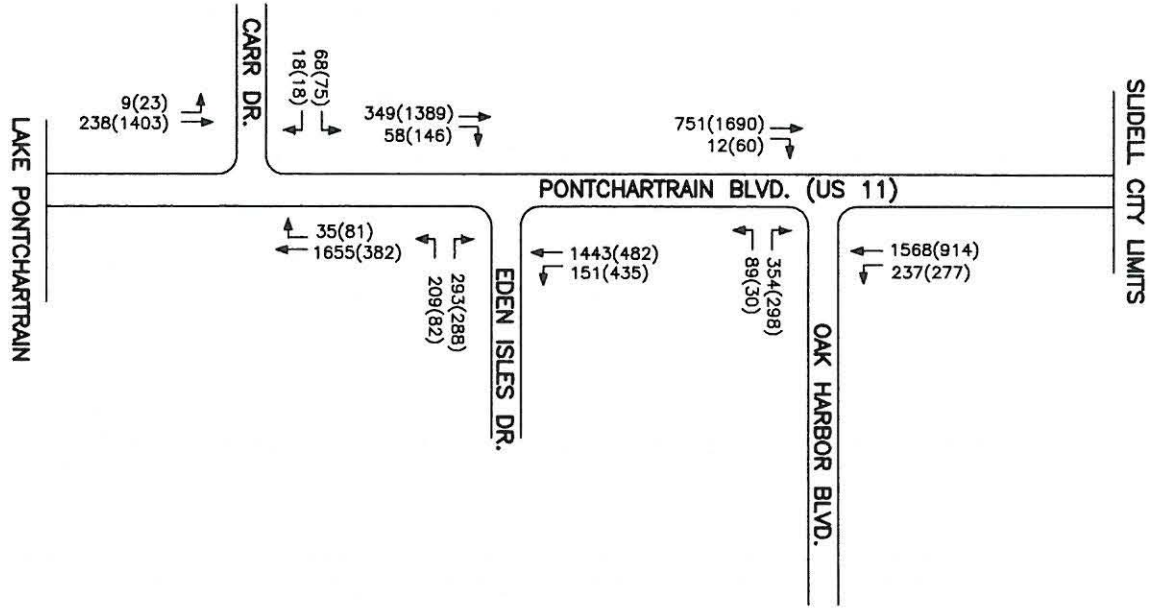

STUDIED INTERSECTIONS

LOWER SECTION

NOTE: N.T.S.

FIGURE 8

XX = AM
(XX) = PM

N

EXISTING VOLUMES
PEAK PERIODS

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VIII. CAPACITY ANALYSIS

INTRODUCTION

The capacity of a highway system is predicated on two components: the capacity of the included roadway sections and the capacity of the affected intersections along the route. Intersecting roadways generally provide the initial constraint on a system's capacity. Efficiency at the intersections becomes the critical constraint for capacity. Vehicle interactions at these points must therefore be analyzed to assess the projected capacity levels. Criteria for stop controlled intersection level of service are denoted in **Table II** and signalized controlled intersection level of service criteria in **Table III**.

TABLE II – LEVEL OF SERVICE CRITERIA FOR TWO WAY STOP CONTROL INTERSECTIONS

LEVEL OF SERVICE CRITERIA FOR TWSC INTERSECTIONS	
Level of Service	Control Delay per Vehicle (sec)
A	≤ 10
B	>10 to ≤ 15
C	> 15 to ≤ 25
D	> 25 to ≤ 35
E	> 35 to ≤ 50
F	> 50

TABLE III – LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level of Service	Control Delay per Vehicle (sec)
A	≤ 10
B	> 10 to ≤ 20
C	> 20 to ≤ 35
D	> 35 to ≤ 55
E	> 55 to ≤ 80
F	> 80

METHOD OF PROCEDURE

The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual published by the Transportation Research Board. Synchro 6 was used in analyzing operating conditions at study area intersections. The procedure yields a Level of Service (LOS) as an indicator of how well intersections operate.

The concept of Level of Service is defined as a qualitative measurement describing operating conditions within a traffic stream and their perception by motorists and/or passengers. Level of Service is defined in terms of delay which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

Six Levels of Service, with corresponding levels of delay are defined for analysis. They are assigned letter designations, from "A" to "F", with LOS "A" representing the best conditions (little or no delay), LOS "C" average conditions and LOS "F" the worst (excessive delay). Suggested ranges of service capacity, related delay, and an explanation of Levels of Service are included in the Appendix.

INTERSECTION ANALYSIS RESULTS

Capacity results of the existing conditions are listed in **Tables IVa, IVb, and IVc**. Full description of alternatives is included in the conclusion section as well as corresponding figures. All capacity analysis calculations are included in the Appendix.

Under current conditions, analysis shows that at different times, all intersections except the I-12EB off ramp at US 11 fail on at least one movement.

Certain short term geometric improvements and timing changes were explored to provide some relief from the current congestion. With the addition of a left turn lane on the I-12WB off ramp at Brown Switch Road, and some timing changes; the Level of Service for all intersections on the northern section of the corridor improved to D or above. The results are listed in the table below.

On the southern corridor, the left turn movements on the Oak Harbor Blvd. and the Carr Dr. approaches to US 11 were high-delay movements. Traffic signals would provide the necessary time for left-turn movements from these intersections. However, the volumes are low and may not meet the nationally accepted warrants for a traffic signal. Crossing guards may be necessary to assist left-turning motorists from these two intersections during peak hours of traffic.

TABLE IVa
INTERSECTION CAPACITY ANALYSIS RESULTS

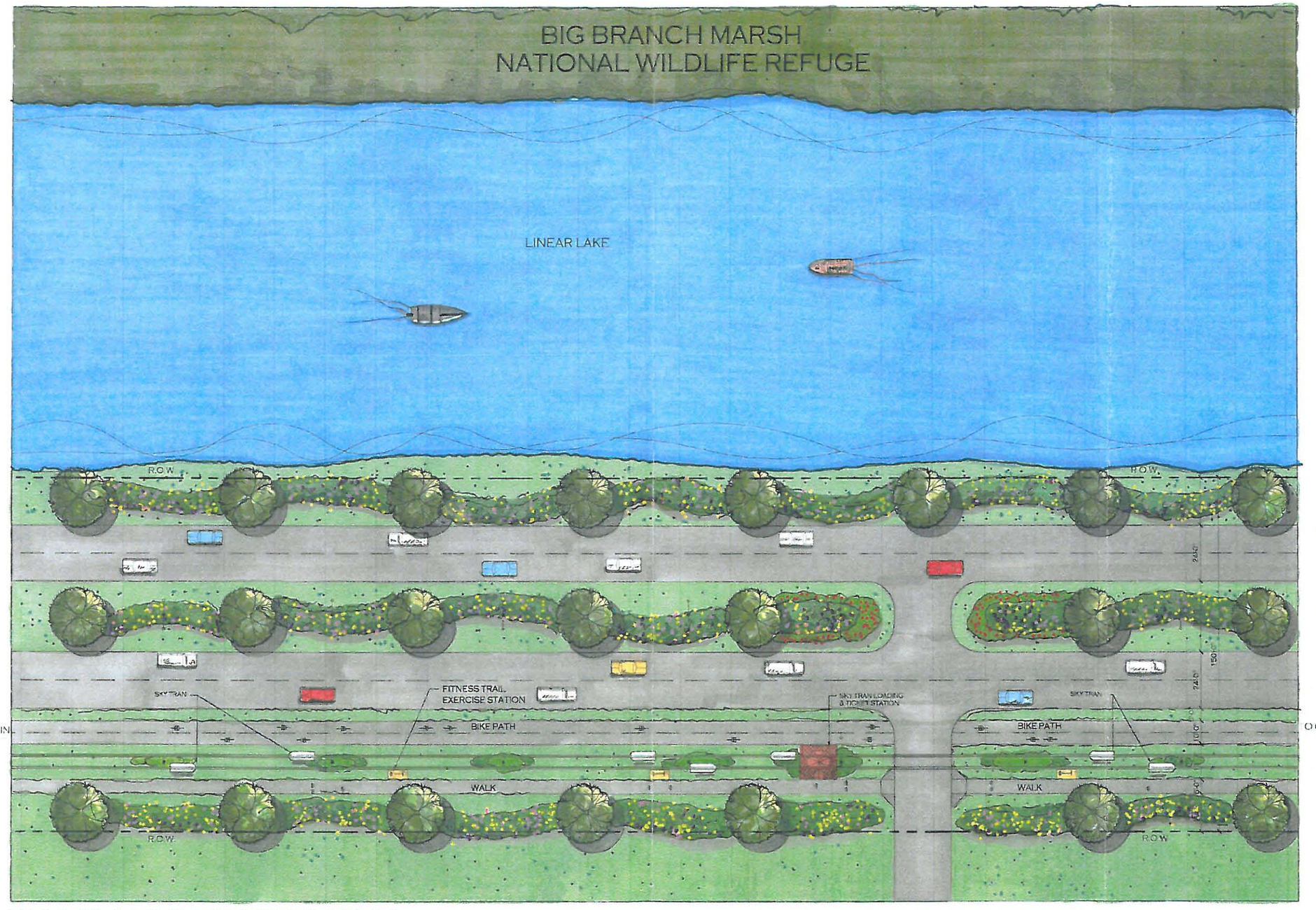
Intersection		Existing		Short Term Solution		2025 Solution	
Front St. (US 11) at I-12WB Offramp/Brown Switch Rd		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound: Front St. (US 11)	Left Turn Movement	C(33.8sec)	D(37.4sec)	C(22.4sec)	C(17.3sec)	B(15.0sec)	C(32.1sec)
	Thru Movement	B(19.8sec)	C(34.8sec)	B(16.5sec)	B(16.4sec)	C(23.9sec)	C(31.9sec)
	Right Turn Movement	A(9.6sec)	D(43.7sec)	B(18.0sec)	B(15.6sec)	C(20.7sec)	C(27.7sec)
Southbound: Front St. (US 11)	Left Turn Movement	C(28.2sec)	D(35.8sec)	B(16.1sec)	B(17.9sec)	B(16.4sec)	C(27.3sec)
	Thru Movement	D(43.1sec)	**F(95.8sec)**	C(25.9sec)	C(26.7sec)	C(28.2sec)	D(36.9sec)
	Right Turn Movement	D(43.1sec)	**F(95.8sec)**	C(25.9sec)	C(26.7sec)	C(22.9sec)	C(27.9sec)
Eastbound: I-12 WB Offramp	Left Turn Movement	D(37.1sec)	**F(94.7sec)**	D(42.4sec)	D(40.1sec)	D(53.9sec)	D(53.7sec)
	Thru Movement	D(37.1sec)	**F(94.7sec)**	C(31.7sec)	D(38.5sec)	C(33.4sec)	D(42.3sec)
	Right Turn Movement	D(37.1sec)	**F(94.7sec)**	C(31.7sec)	D(38.5sec)	C(33.4sec)	D(42.3sec)
Westbound: I-12 WB onramp	Left Turn Movement	C(25.7sec)	C(27.9sec)	C(26.2sec)	C(34.0sec)	C(26.6sec)	D(35.9sec)
	Thru Movement	C(23.9sec)	B(17.0sec)	D(35.8sec)	D(40.2sec)	C(32.4sec)	D(50.6sec)
	Right Turn Movement	C(23.9sec)	B(17.0sec)	D(35.8sec)	D(40.2sec)	C(26.6sec)	D(50.6sec)
Front St. (US 11) at I-12EB Offramp		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound: Front St. (US 11)	Left Turn Movement	D(51.4sec)	B(18.7sec)	D(47.4sec)	B(19.0sec)	D(44.9sec)	B(17.3sec)
	Thru Movement	B(13.5sec)	B(20.0sec)	B(13.5sec)	C(20.3sec)	C(26.4sec)	B(15.8sec)
Southbound: Front St. (US 11)							
	Thru Movement	C(20.5sec)	D(45.7sec)	C(19.8sec)	C(32.5sec)	D(54.1sec)	C(27.2sec)
	Right Turn Movement	C(20.5sec)	D(45.7sec)	C(19.8sec)	C(32.5sec)	C(32.3sec)	A(4.7sec)
Eastbound: I-12 EB Offramp	Left Turn Movement	D(38.0sec)	C(32.9sec)	C(25.6sec)	C(32.3sec)	C(33.4sec)	C(26.1sec)
	Thru Movement						
	Right Turn Movement	D(37.2sec)	C(26.5sec)	C(30.1sec)	C(25.9sec)	C(25.5sec)	B(10.3sec)
Front St. (US 11) at North Blvd.		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound: Front St. (US 11)							
	Thru Movement	**E(76.3sec)**	B(19.5sec)	C(22.9sec)	C(23.2sec)	D(37.4sec)	D(36.5sec)
	Right Turn Movement	**E(76.3sec)**	B(19.5sec)	C(22.9sec)	C(23.2sec)	D(37.4sec)	D(36.5sec)
Southbound: Front St. (US 11)	Left Turn Movement	**F(1387.1sec)**	B(13.2sec)	B(13.1sec)	B(13.3sec)	C(32.0sec)	D(42.5sec)
	Thru Movement	A(4.5sec)	A(4.3sec)	A(4.7sec)	A(4.3sec)	A(4.8sec)	A(4.7sec)
Westbound: North Blvd.	Left Turn Movement	D(36.1sec)	D(36.4sec)	D(36.0sec)	D(36.2sec)	D(35.2sec)	D(35.8sec)
	Right Turn Movement	D(35.4sec)	D(35.0sec)	D(35.3sec)	D(34.9sec)	D(35.2sec)	C(34.7sec)

TABLE IVb
INTERSECTION CAPACITY ANALYSIS RESULTS

Intersection		Existing		Short Term Solution		2025 Solution	
Front St. (US 11) at Lafayette St.		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound: Front St. (US 11)	Left Turn Movement	A(6.8sec)	B(13.7sec)	A(5.2sec)	A(7.8sec)	B(14.2sec)	C(20.1sec)
	Thru Movement	B(10.7sec)	B(15.6sec)	A(4.5sec)	A(8.7sec)	B(11.7sec)	B(16.4sec)
	Right Turn Movement	B(10.7sec)	B(15.6sec)	A(4.5sec)	A(8.7sec)	B(11.7sec)	B(16.4sec)
Southbound: Front St. (US 11)	Left Turn Movement	A(5.0sec)	A(9.6sec)	B(9.5sec)	B(11.9sec)	C(21.8sec)	B(19.0sec)
	Thru Movement	A(5.8sec)	B(11.6sec)	B(11.4sec)	B(15.9sec)	C(21.9sec)	D(41.4sec)
	Right Turn Movement	A(5.8sec)	B(11.6sec)	B(11.4sec)	B(15.9sec)	C(21.9sec)	D(41.4sec)
Eastbound: Lafayette St.	Left Turn Movement	D(47.6sec)	**E(71.0sec)**	D(38.9sec)	D(38.1sec)	D(37.1sec)	D(53.3sec)
	Thru Movement	D(46.5sec)	D(50.4sec)	D(38.1sec)	C(33.5sec)	D(35.4sec)	C(29.2sec)
	Right Turn Movement	D(46.5sec)	D(50.4sec)	D(38.1sec)	C(33.5sec)	D(35.4sec)	C(29.2sec)
Westbound: Lafayette St.	Left Turn Movement	D(48.9sec)	D(50.3sec)	D(40.4sec)	C(34.9sec)	D(38.8sec)	C(32.6sec)
	Thru Movement	D(48.9sec)	D(50.3sec)	D(40.4sec)	C(34.9sec)	D(38.8sec)	C(32.6sec)
	Right Turn Movement	D(48.9sec)	D(50.3sec)	D(40.4sec)	C(34.9sec)	D(38.8sec)	C(32.6sec)
Front St. (US 11) at Gause Blvd. (US 190)		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound: Front St. (US 11)	Left Turn Movement	C(29.3sec)	D(35.5sec)	C(21.4sec)	C(23.9sec)	C(34.2sec)	B(19.5sec)
	Thru Movement	D(40.3sec)	D(52.8sec)	C(31.3sec)	D(37.2sec)	D(52.7sec)	D(36.8sec)
	Right Turn Movement	D(40.3sec)	D(52.8sec)	C(31.3sec)	D(37.2sec)	D(52.7sec)	D(36.8sec)
Southtbound: Front St. (US 11)	Left Turn Movement	D(40.0sec)	D(48.3sec)	D(37.7sec)	C(21.4sec)	D(38.6sec)	C(35.0sec)
	Thru Movement	**E(57.6sec)**	**E(67.2sec)**	D(44.8sec)	C(33.4sec)	D(48.0sec)	D(49.2sec)
	Right Turn Movement	**E(57.6sec)**	**E(67.2sec)**	D(44.8sec)	C(33.4sec)	D(48.0sec)	D(49.2sec)
Eastbound: Gause Blvd. (US 190)	Left Turn Movement	B(15.9sec)	B(19.5sec)	B(17.1sec)	B(16.4sec)	D(46.2sec)	B(17.2sec)
	Thru Movement	C(27.3sec)	C(31.0sec)	C(33.2sec)	C(31.1sec)	D(45.2sec)	C(25.0sec)
	Right Turn Movement	C(27.3sec)	C(31.0sec)	C(33.2sec)	C(31.1sec)	D(35.4sec)	C(22.0sec)
Westbound: Gause Blvd. (US 190)	Left Turn Movement	B(17.2sec)	C(20.3sec)	D(37.5sec)	B(16.9sec)	D(42.1sec)	D(36.5sec)
	Thru Movement	C(23.2sec)	C(28.4sec)	C(24.2sec)	C(26.7sec)	D(37.4sec)	C(28.4sec)
	Right Turn Movement	C(23.2sec)	C(28.4sec)	C(24.2sec)	C(26.7sec)	D(37.4sec)	C(28.4sec)

TABLE IVc
INTERSECTION CAPACITY ANALYSIS RESULTS

Intersection		Existing		Short Term Solution		2025 Solution	
Pontchartrain Blvd (US 11) at Oak Harbor Dr.		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northtbound: Pontchartrain Dr. (US 11)	Thru Movement	A(0sec)	A(0sec)	A(5.3sec)	C(21.8sec)	A(6.0sec)	C(27.9sec)
	Right Turn Movement	A(0sec)	A(0sec)	A(5.3sec)	C(21.8sec)	A(6.0sec)	C(27.9sec)
Southtbound: Pontchartrain Dr. (US 11)	Left Turn Movement	A(9.0sec)	B(12.6sec)	A(5.1sec)	D(43.3sec)	C(23.3sec)	D(52.4sec)
	Thru Movement	A(0sec)	A(0sec)	B(11.2sec)	A(3.2sec)	A(9.7sec)	A(2.9sec)
Westbound:Oak Harbor Dr.	Left Turn Movement	**F(101.9sec)**	**F(114.5sec)**	B(19.0sec)	C(32.1sec)	C(22.3sec)	D(45.3sec)
	Right Turn Movement	B(14.6sec)	**E(42.0sec)**	B(18.9sec)	C(31.9sec)	D(44.0sec)	D(49.9sec)
Pontchartrain Blvd (US 11) at Eden Isles		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northtbound: Pontchartrain Dr. (US 11)	Thru Movement	B(10.8sec)	B(10.3sec)	A(7.8sec)	C(22.1sec)	A(7.4sec)	D(48.6sec)
	Right Turn Movement	A(9.5sec)	A(4.7sec)	A(6.6sec)	A(8.5sec)	A(7.4sec)	B(18.9sec)
Southtbound: Pontchartrain Dr. (US 11)	Left Turn Movement	A(4.5sec)	A(9.8sec)	A(4.6sec)	C(27.7sec)	A(4.6sec)	D(50.1sec)
	Thru Movement	A(9.6sec)	A(2.1sec)	B(11.2sec)	A(3.0sec)	A(8.1sec)	A(3.3sec)
Westbound: Eden Isles	Left Turn Movement	**E(55.9sec)**	**E(55.2sec)**	D(35.4sec)	C(33.4sec)	D(45.1sec)	D(43.1sec)
	Right Turn Movement	D(49.2sec)	D(53.2sec)	C(31.1sec)	C(32.1sec)	C(31.4sec)	D(40.5sec)
Pontchartrain Blvd (US 11) at Carr Dr.		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northtbound: Pontchartrain Dr. (US 11)	Left Turn Movement	A(0.5sec)	A(0.3sec)	A(0.9sec)	A(0.3sec)	A(2.5sec)	A(7.3sec)
	Thru Movement	A(0.5sec)	A(0.3sec)	A(0.9sec)	A(0.3sec)	A(2.5sec)	A(7.3sec)
Southtbound: Pontchartrain Dr. (US 11)	Thru Movement	A(0sec)	A(0sec)	A(0sec)	A(0sec)	A(8.5sec)	A(3.2sec)
	Right Turn Movement	A(0sec)	A(0sec)	A(0sec)	A(0sec)	A(8.5sec)	A(3.2sec)
Westbound: Carr Dr.	Left Turn Movement	D(27.0sec)	C(23.9sec)	**E(43.0sec)**	D(33.1sec)	C(24.8sec)	C(26.0sec)
	Right Turn Movement	D(27.0sec)	C(23.9sec)	**E(43.0sec)**	D(33.1sec)	C(24.8sec)	C(26.0sec)



TAMMANY PARKWAY

US HIGHWAY 11 CORRIDOR IMPROVEMENTS

19A

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CONCEPTUAL SITE PLAN

1" = 20' 0

FIGURE 10

TAMMANY PARKWAY

US HIGHWAY 11 CORRIDOR IMPROVEMENTS

SCHEMATIC ROADWAY SECTION

1/8 = 1'-0"

19

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FIGURE 9

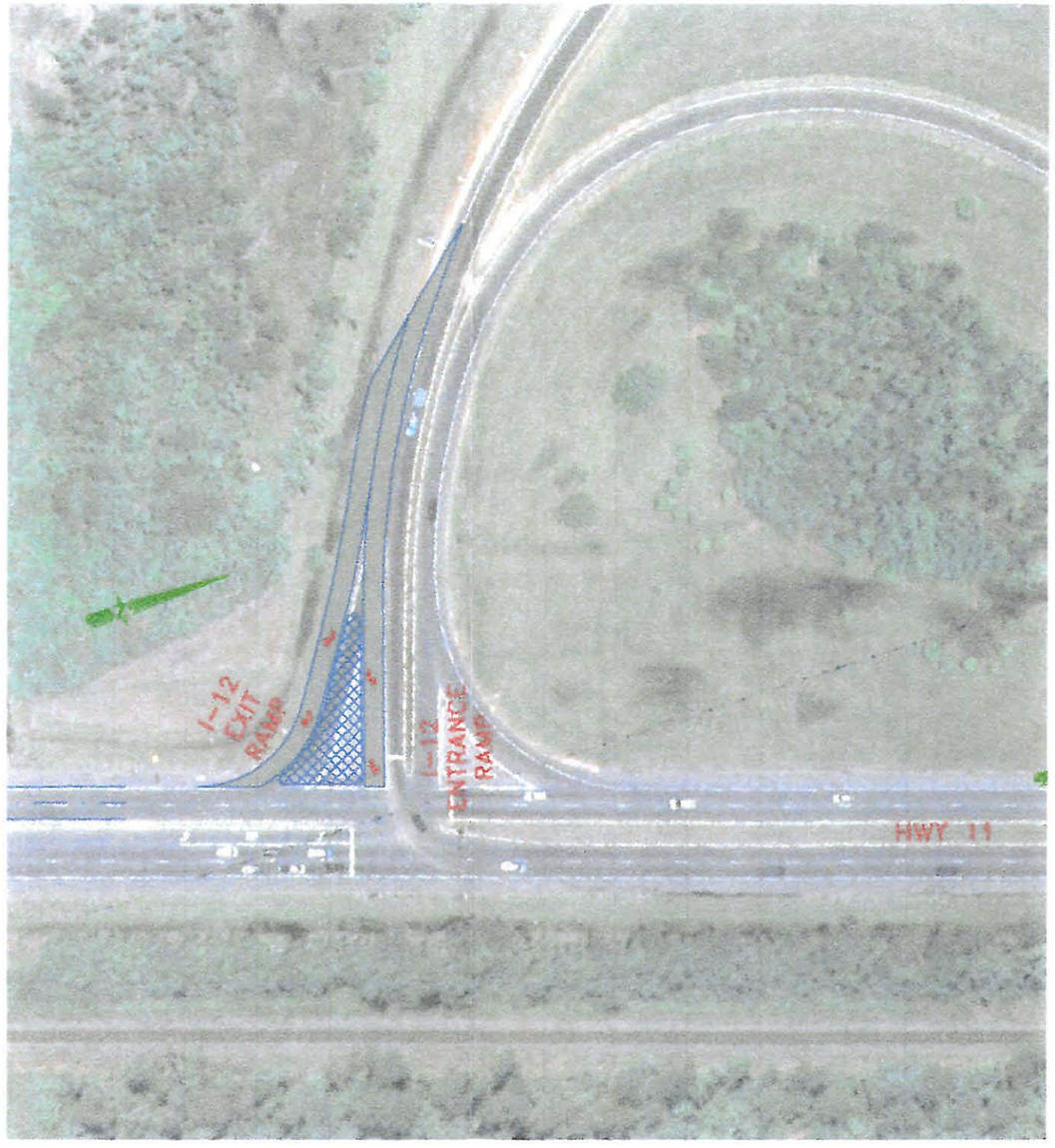

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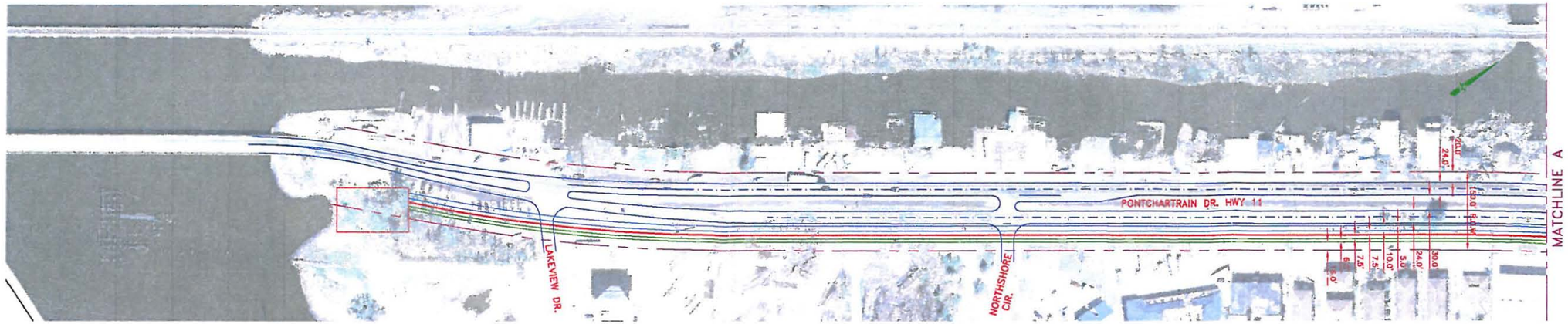
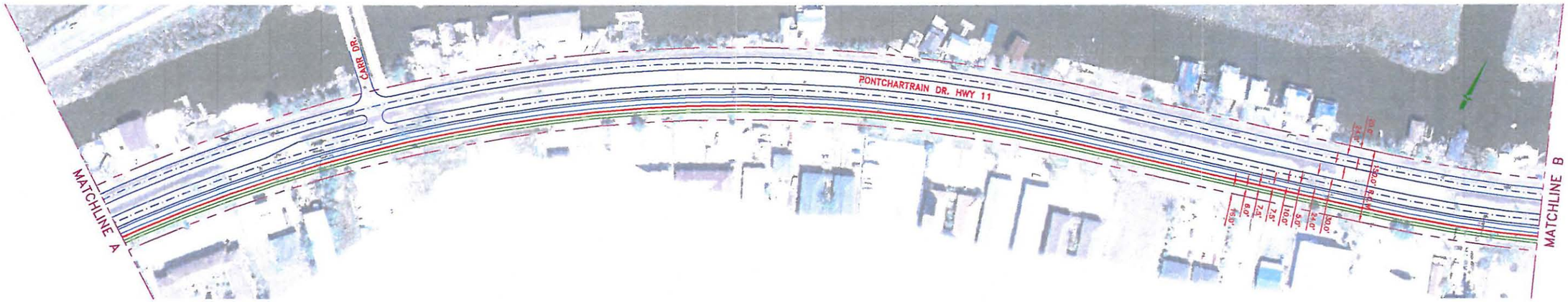
FIGURE 10A





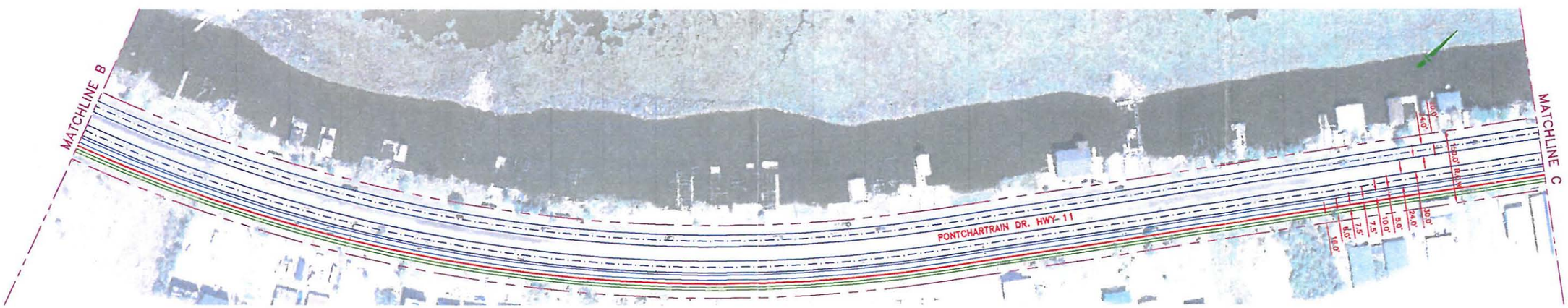


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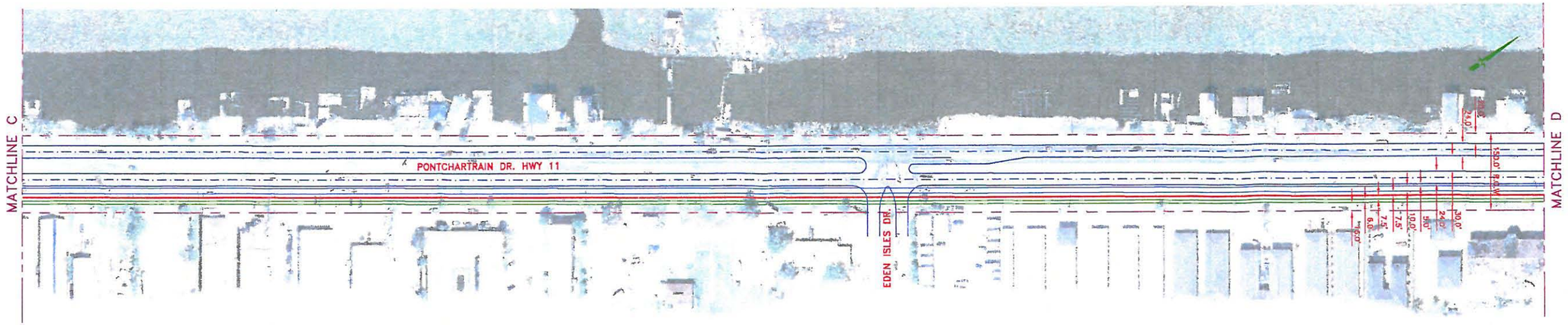
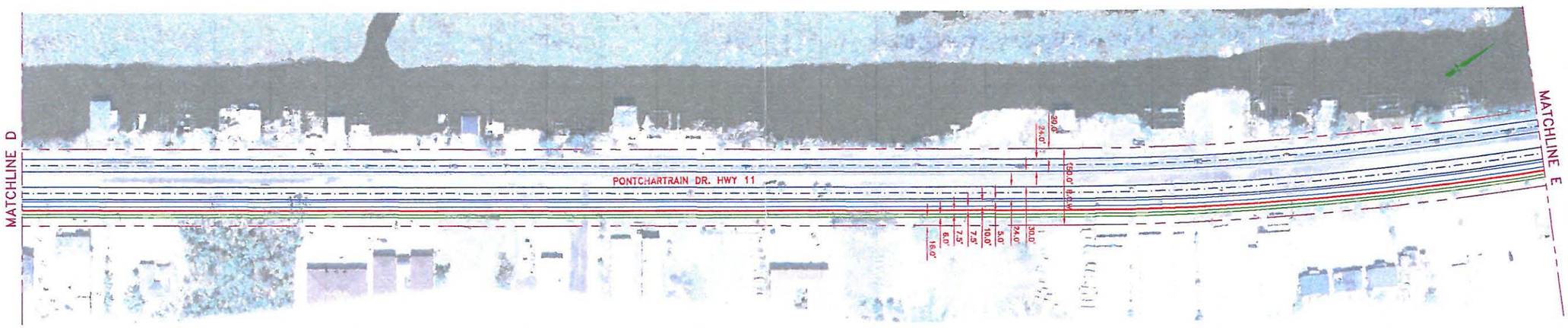
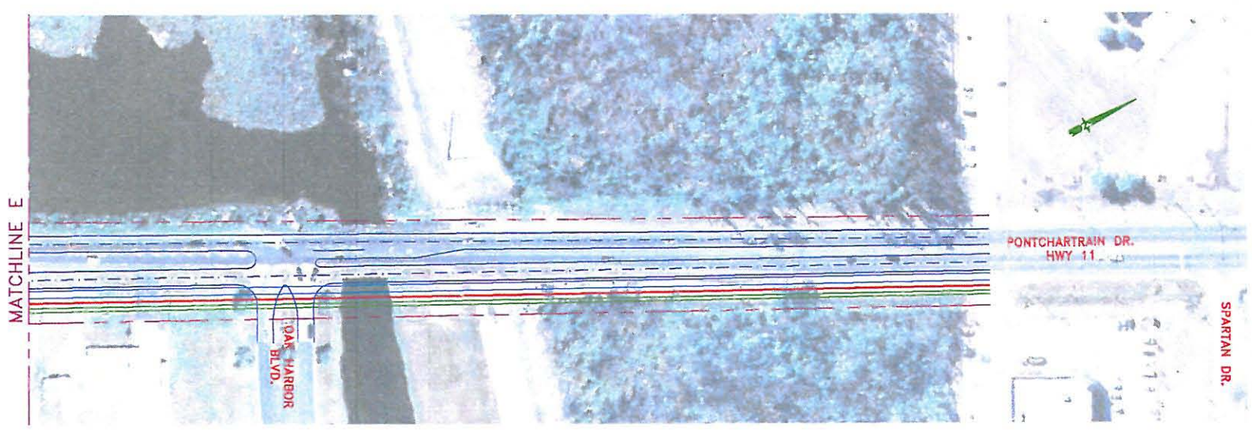
FIGURE 10B







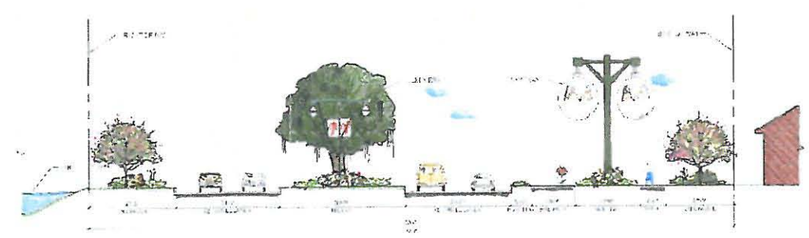


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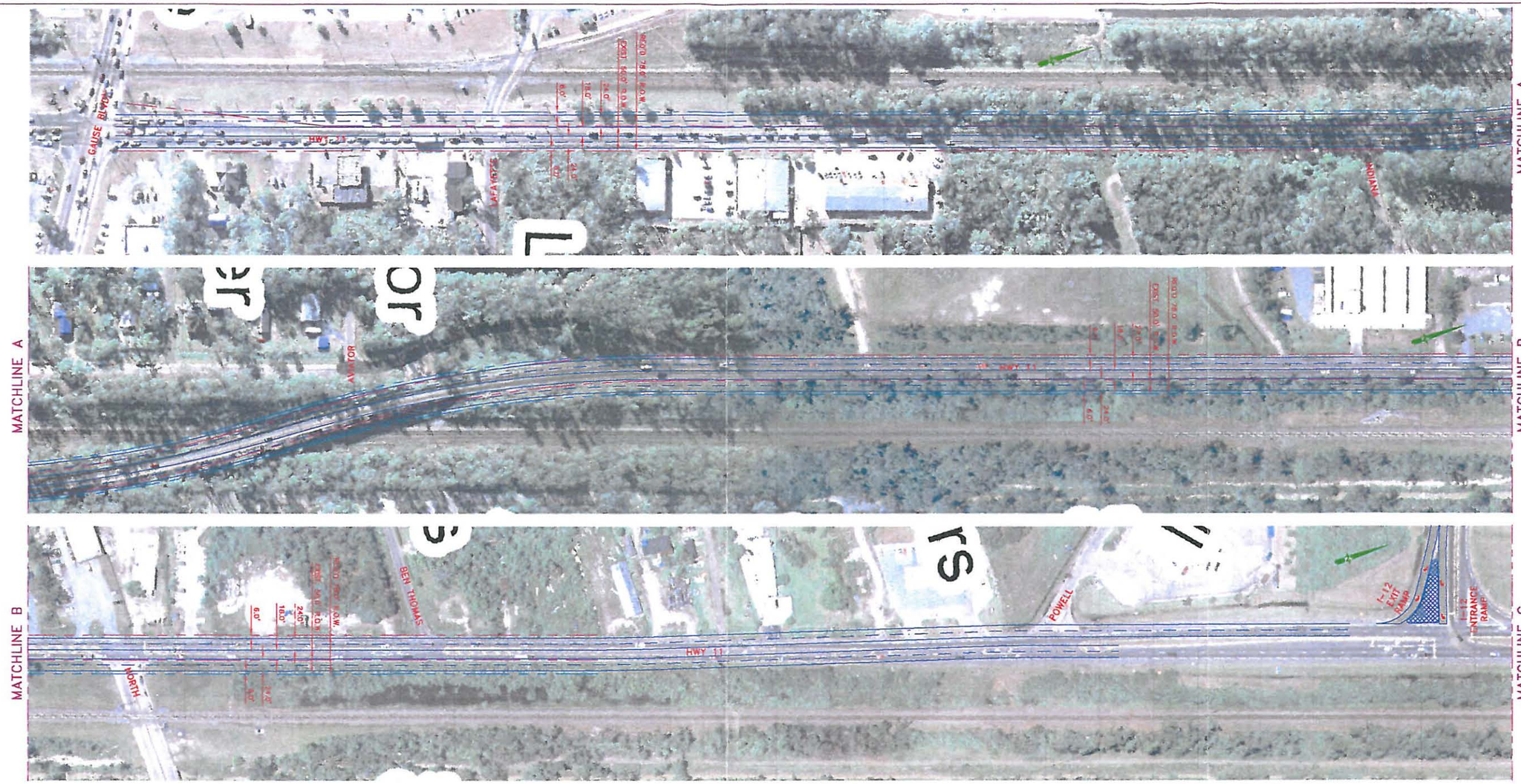
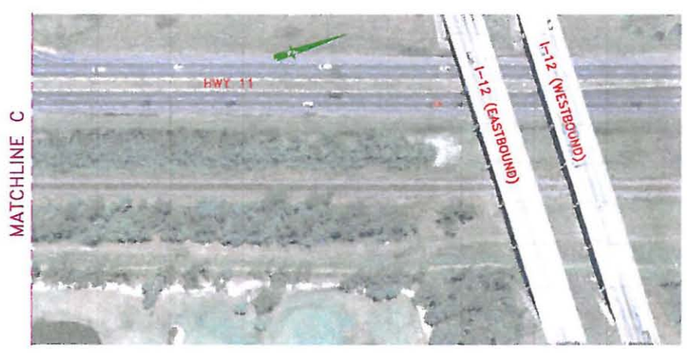
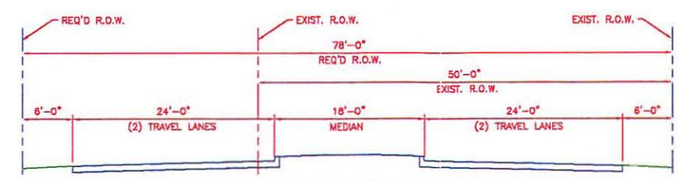
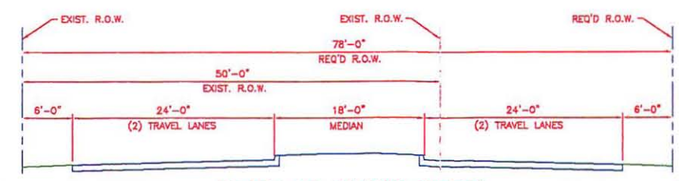
FIGURE 10C







SOUTH OF AVIATOR STREET



NORTH OF AVIATOR STREET

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FIGURE 10D

IX. CORRIDOR ENHANCEMENT

As part of the beautification aspect of the project, KLL has provided some renditions of potential corridor enhancements consisting of Bike paths, walkways, landscaping, lighting, and even possibly an overhead tramway. These renderings are displayed below in **Figures 9 and 10**. A CD is attached on the first page which provides computerized traffic simulation video clips of existing PM conditions and proposed PM conditions. The proposed simulation includes US 11 corridor beautification.

The additional left turn lane on the I-12WB off ramp at US 11 is illustrated in **Figure 10a**.

The four lane section on the south stretch between Lake Pontchartrain and Spartan Dr. is illustrated in **Figures 10b and 10c**.

The four lane section on the north stretch between Gause Blvd. and I-12 is illustrated in **Figure 10d**.

X. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to evaluate the US 11 corridor in the Slidell area for capacity issues and for possible short and long term solutions for some of the transportation issues of the corridor.

Short Term Solutions:

- Provide an additional left turn lane on the I-12WB off ramp at US 11.
- Signalize the intersection of US 11 at Oak Harbor Boulevard.

Long Term Solutions:

- Widen the entire corridor to 4-lanes with additional left turn lanes at key intersections.

  US 11 at I-12 WB on/off ramp/Brown Switch Road
  - Additional left turn lane on the northbound approach.
  - Additional left turn lane on I-12 WB off ramp.

  US 11 at I-12 EB on/off ramp
  - Dual right and left turn lanes, (one additional lane each) on the EB approach; i.e., the I-12EB off ramp.

  US 11 at US 190 (Gause Blvd.)
  - Dual left turn lanes on the west, north and southbound approaches. (One additional lane each)

  US 11 at Carr Dr.
  - Add left turn lane on US northbound.

- Rebuild the Norfolk Southern Railroad Bridge, or remove the bridge structure and construct a 4 lane roadway section with an at-grade highway-rail crossing. Install highway- rail traffic controls including gates, signals, and roadway markings in accordance with the Manual on Uniform Traffic Control Devices.

  US 11 at I-12 WB on/off ramp/Brown Switch Road
  - Provide an additional left turn lane on the northbound approach.
  - Provide a dedicated right turn lane on the southbound approach

  US 11 at I-12 EB on/off ramp
  - Provide dual right and left turn lanes (one additional lane each) on the EB approach of the I-12EB off ramp.
  - Provide a dedicated right turn lane on the southbound approach.

  US 11 at North Blvd and US 11 at Lafayette Street
  - Add one additional through lane each both north and south bound.
  -

US 11 at US 190 (Gause Blvd.)

- Provide a dedicated right turn lane on the east bound approach of US 190
- Provide dual left turn lanes on the west, north and southbound approaches. (One additional lane each)

US 11 at Oak Harbor Blvd

- Signalize the intersection

US 11 at Eden Isles Ave

- Add one additional through lane each both north and south bound.

US 11 at Carr Dr. 9

- Flair the roadway of US 11 and provide a left turn lane for northbound US 11.

Given that the existing Right-of-Way in the southern section is adequate, and that there are minimal environmental issues; *it is recommended to proceed with the design phase of the southern section while continuing to resolve the issues surrounding the upper section.*

TABLE V
COST ESTIMATE

ITEM	Approximate Cost
South Section: Lake Pontchartrain to Spartan Drive	
Four Lane Sections with Median (See Figures 10b-10C)	$19,500,000
Sky-Tram	$26,000,000
Acquisition of Properties on the west side	$4,500,000
Total	**$50,000,000**
North Section: Gause Blvd to I-12	
Option One	
Four Lane Sections with Median (See Figure 10d)	$10,500,000
Overpass at Norfolk Southern RR	$9,000,000
Acquisition of Right-ofWay	$1,500,000
Total	**$21,000,000**
Option Two	
Four Lane Sections with Median (See Figure 10d)	$10,500,000
Norfolk Southern RR at-grade Intersection	$750,000
Demolition of Existing Norfolk Southern Bridge	$1,000,000
Acquisition of Right-ofWay	$1,500,000
Total	**$13,750,000**

XI. ENVIRONMENTAL INVENTORY

Krebs LaSalle Environmental, LLC. conducted a Stage 0 Environmental Study locating significant features along and adjacent to US 11 as designated in Chapter 4: Stage 0 Standard Operating Procedure of the "DOTD Program Development and Project Delivery System Manual" on December 28, 2006. The feasibility study for improvements along the US 11 corridor was divided into two target areas. One was US 11 between Lake Pontchartrain and the Slidell south city limits (**figure 11**), and the other was US 11 between Interstate-12 (I-12) and Gause Blvd. (US 190) (**figure 12**).

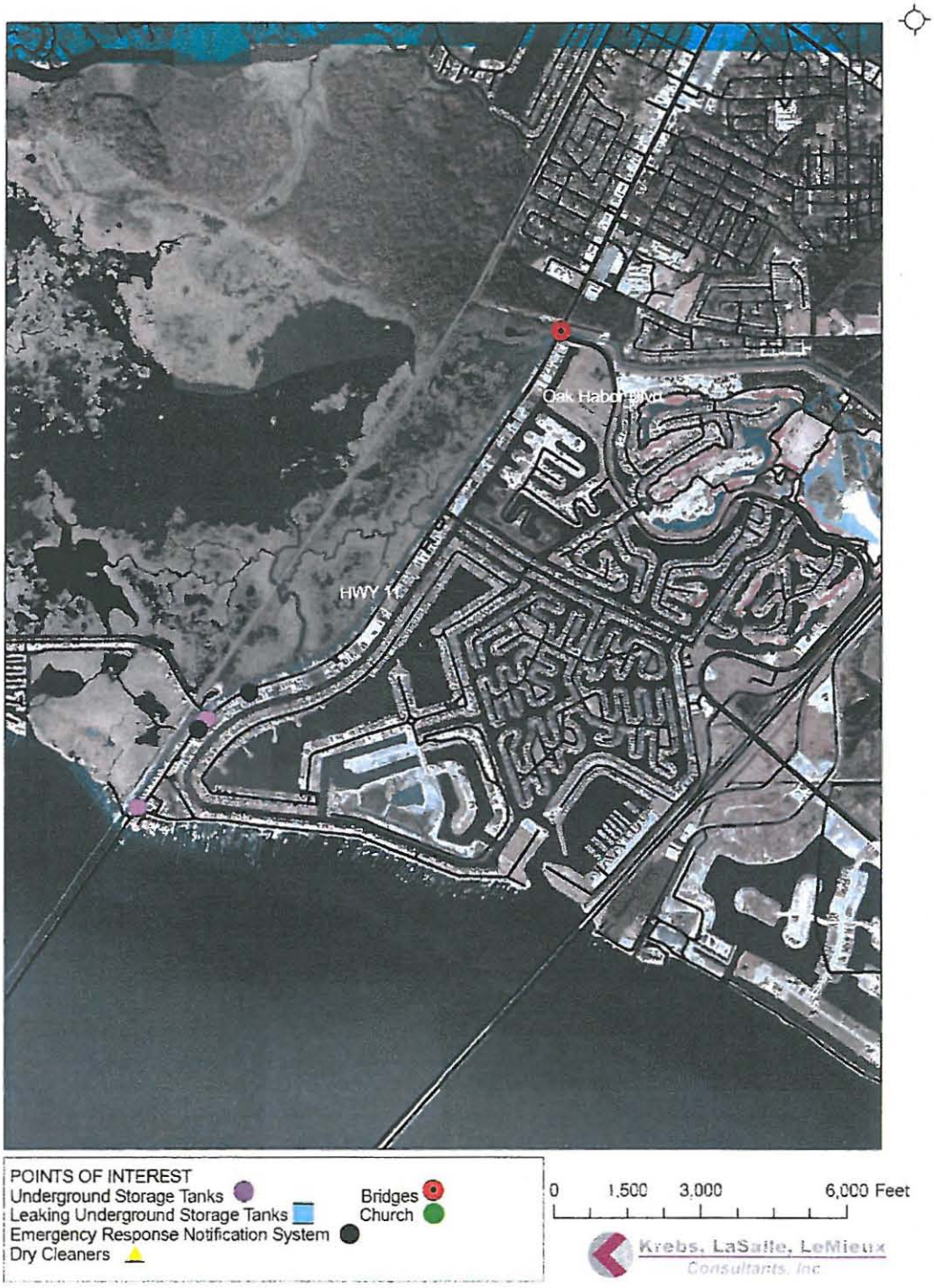


FIGURE 11: US 11 between Lake Pontchartrain and the Slidell city limits

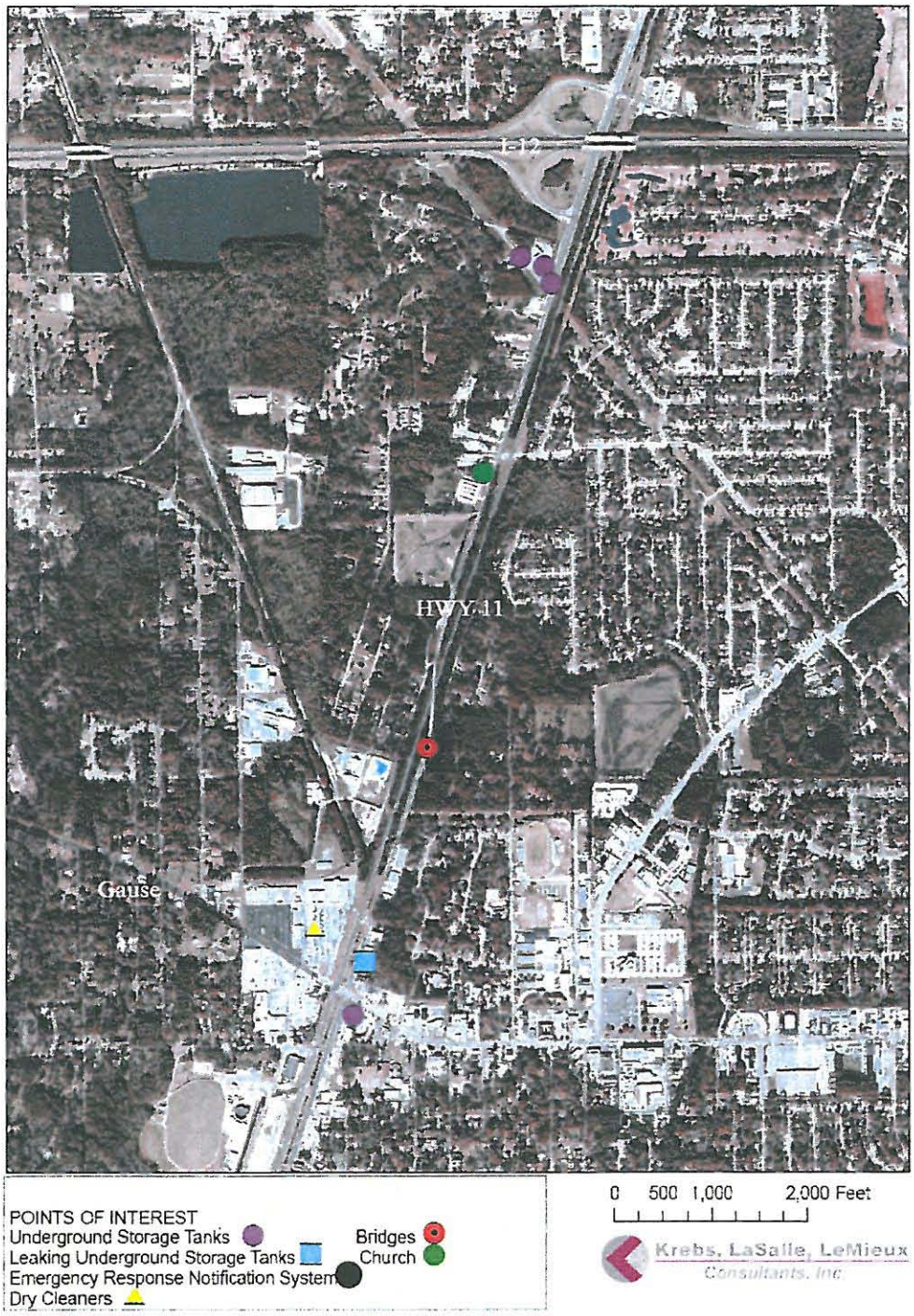


FIGURE 12: US 11 between Interstate-12 (I-12) and Gause Blvd (US 190)

Adjacent Land Use

Land along the US 11 corridor between Lake Pontchartrain and the Slidell city limits is surrounded by Brackish Marsh with residential and commercial property lining the roadway. The land bordering the other section of US 11 is a mix of undeveloped, residential, and commercial land. All of this property adjacent to the project area appears to be privately owned, and none of this property is enrolled in the Wetland Reserve Program. The proposed improvements should not exceed the current highway right-of-way, thus having minimal to zero impact on adjacent land.

Community Elements

Community elements that may possibly be impacted along the project corridor were also recorded. There are no cemeteries, schools, public facilities, or community water well/supply along either section. However, there is one church, The Community Baptist Church, on the west side of US 11 between US 190 and I-12.

Section 4(f) issue

There were no Section 4(f) land use issues, including public recreation areas, pubic parks, wildlife refuges, and historic sites, found along the US 11 corridor in question.

National Register of Historic Places

There are not any locations listed on the National Register of Historic Places along either target area.

Threatened or endangered species in the area

The Louisiana Natural Heritage Program has the *Acipenser oxyrinchus desotoi* (Gulf Sturgeon), *Gopherus polyphemus* (Gopher tortoise), *Graptemys oculifera* (Ringed Map Turtle), *Haliaeetus leucocephalus* (Bald Eagle), *Isoetes louisianensis* (Louisiana Quillwort), *Picoides borealis* (Red-cockaded Woodpecker), *Potamilus inflatus* (Inflated Heelsplitter), *Pseudotriton montanus* (Gulf Coast Mud Salamander), *Rana sevosa* (Dusky Gopher Frog), *Trichechus manatus* (Manantee), and the *Ursus americanus luteolus* (Louisiana Black Bear) as possible threatened or endangered species in St. Tammany Parish. However, a field inspection did not reveal any of these species nor their habitats in the proposed project area.

Louisiana Scenic Rivers Act

There are no waterways under the Louisiana Scenic Rivers Act along the targeted US 11 corridor.

Significant Trees as defined by EDSM I.1.1.21 within ROW

The field inspection did not locate any significant trees as defined by EDSM I.1.1.21 within the right of way. The EDSM definition includes any live oaks, red oaks, white oaks, magnolias, of cypress that are either aesthetically important, greater than 18" DBH (diameter breast height – 4.5 feet above the ground), or historic.

Significant Bridges

Only two bridges are located along the roadway in question, and neither are over navigable waterways. The Norfolk Southern Railroad Bridge, built in 1937, is between US 190 and I-12. The US 11 bridge across the Schneider Canal is located at the Slidell city limits.

Hazardous Materials

State and federal database were researched, along with a field survey, to determine if hazardous materials are present along the project corridor.

Leaking underground storage tanks:

The Circle K #2896 at 1150 Front St. was the only leaking underground storage tanks listed with Louisiana Department of Environmental Quality (LADEQ) along the study corridor.

CERCLIS:

The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), which is maintained by the Environmental Protection Agency (EPA), did not list any active or archived sites along the project area.

ERNS:

The Emergency Response Notification System (ERNS) is maintained by the National Response Center (NPC). NPC's primary function is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. There were two incidents of hazardous material spills along the study areas:

- NRC# 470577, 4782 Pontchartrain Dr., unknown sheen.
- NRC# 106870, 4848 Pontchartrain Dr., unknown sheen.

Enforcement and compliance history:

A review of the EPA database revealed no enforcement or compliance violations in the study site.

Underground storage tanks (UST):

A request to the LADEQ listed eight (8) underground storage tanks adjacent to the corridor:

Bryan T. Ledet, 4838 Pontchartrain Dr.

Alabama Great Southern Railroad, 4981 Pontchartrain Dr.

Help U Go, 4826 Pontchartrain Dr.

I-12 Shell, 60299 HWY 11

Circle K #2896, 1150 Front St.

Precision Tune, 1224 Front St.

Jubilee #4815, 60328 Powell Dr.

Highway 11 Shell, 60239 HWY 11

Chemical plants, refineries, or landfills:
Neither the field survey of database searches revealed any chemical plants, refineries, or landfills along the area.

Large manufacturing facilities:
No large manufacturing facilities were discovered during the field inspection.

Dry cleaners:
Only one dry cleaner is along the study corridor, which is the Corporate Cleaners located between HWY 190 and I-12.

Oil/Gas wells:
A search of the Louisiana Department of Natural Resources SONRIS website, mapped the closest oil/gas well as 0.22 miles north of the US 11 / I-12 intersection.

Residential or commercial relocations/displacements:
No residential or commercial relocations or displacements are necessary for the proposed improvements.

Sensitive community issues:
There were no sensitive community issues discovered during this survey.

Project area population:
The population along the target area is a broad variety of demographics; therefore, should not create disproportionately high and adverse human health and environmental effects on minority or low income populations.

Detour/closure types:
Temporary lane closures should be the only type of detour or road closure activities needed.

Windshield survey results:
The field survey found that the southern portion of project area was severely impacted by the 2005 Hurricane Katrina. Extensive building damage is visible with storm debris still littering the area.

C.S. _____ Parish St. Tammany

Route _____ Begin Log mile _____ End Log mile _____

ADJACENT LAND USE: **The section of Hwy 11 between Lake Pontchartrain and the Slidell city limits is surrounded by Brackish Marsh with residential and commercial property lining the roadway. The other section of Hwy 11 is a mix of undeveloped, residential, and commercial land. All property adjacent to the project area appears to be privately owned. No adjacent property in either section is enrolled in the Wetland Reserve Program.**

Any property owned by a Native American Tribe?
(Y or N or Unknown) If so, which Tribe? Unknown

Any property enrolled into the Wetland Reserve Program?
(Y or N or Unknown) If so, give the location N

Community Elements: Is the project impacting or adjacent to any:
(Y or N) Cemeteries N
(Y or N) Churches Y
(Y or N) Schools N
(Y or N) Public Facilities (i.e., fire station, library, etc.) N
(Y or N) Community water well/supply Y

Section 4(f) issue: Is the project impacting or adjacent to any:
(Y or N) Public recreation areas N
(Y or N) Public parks N
(Y or N) Wildlife Refuges N
(Y or N) Historic Sites N

Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places? (Y or N) **Is the project within a historic district or a national landmark district?** (Y or N) If the answer is yes to either question, list names and locations below:
Y, Slidell Railroad Depot, 1809 Front St.

Do you know of any threatened or endangered species in the area? (Y or N)
If so, which species? N

Does the project impact a stream protected by the Louisiana Scenic Rivers Act? (Y or N)
If yes, name the stream. N

Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW?(Y or N)
If so, where? N

What year was the existing bridge built?
Norfolk Southern Railroad Bridge, date built: 1937
Hwy 11 Bridge across pumping station canal, date built: 1964
Unknown Tributary, date built: 1956
Unknown Tributary, date built: unknown

Are any waterways impacted by the project considered navigable? (Y or N) If unknown, state so, list the waterways: N- no navigable waterways, but jurisdictional wetlands and tributaries are present.

Hazardous Material: Have you checked the following DEQ and EPA databases for potential problems?

(Y or N) Leaking Underground Storage Tanks Y-Circle K #2896, 1150 Front St.
(Y or N) CERCLIS N-(active or archived)
(Y or N) ERNS Y- NRC# 470577, 4782 Pontchartrain Dr., unknown sheen
NRC# 106870, 4848 Pontchartrain Dr., unknown sheen
(Y or N) Enforcement and Compliance History N
If found site, give the name and location: _____

Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (Y or N) Y
If so, give the name and location: Bryan T. Ledet, 4838 Pontchartrain Dr.
Alabama Great Southern Railroad, 4981 Pontchartrain Dr.
Help U Go, 4826 Pontchartrain Dr.
I-12 Shell, 60299 Hwy 11
Circle K # 2896, 1150 Front St.
Jubilee # 4815, 60328 Powell Dr.
Highway 11 Shell, 60239 Hwy 11

Any chemical plants, refineries or landfills adjacent to the project? (Y or N) **Any large manufacturing facilities adjacent to the project?** (Y or N) **Dry Cleaners?** (Y or N) If yes to any, give names and locations: N, N, Y- Corporate Cleaners, 1320 Corporate Square Drive, Slidell, LA 70458

Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (Y or N) List the type and location of wells being impacted by the project. The closest oil well is 0.22 miles north or the Hwy 11/I-12 intersection

Are there any possible residential or commercial relocations/displacements? (Y or N) How many? N

Do you know of any sensitive community issues related to the project? (Y or N) If so, explain N

Is the project area population minority or low income? (Y or N) Population along the target area is a broad variety of demographics; therefore, should not create disproportionately high or adverse human health and environmental effects on minority or low income populations.

What type of detour/closures could be used on the job? Temporary lane closures

Did you notice anything of concern during your site/windshield survey of the area? If so, explain below. Southern portion of project area was severely impacted by Hurricane Katrina in 2005. Extensive building damage is visible with storm debris still littering the area.

Lucas Watkins
Krebs LaSalle Environmental, LLC
Point of Contact

Office: 985-624-5125
Cell: 985-974-0703
Phone Number

12/ 27/ 06
Date

- This assessment was conducted within the existing HWY 11 corridor.

APPENDIX

Krebs, LaSalle, LeMieux Consultants, Inc.

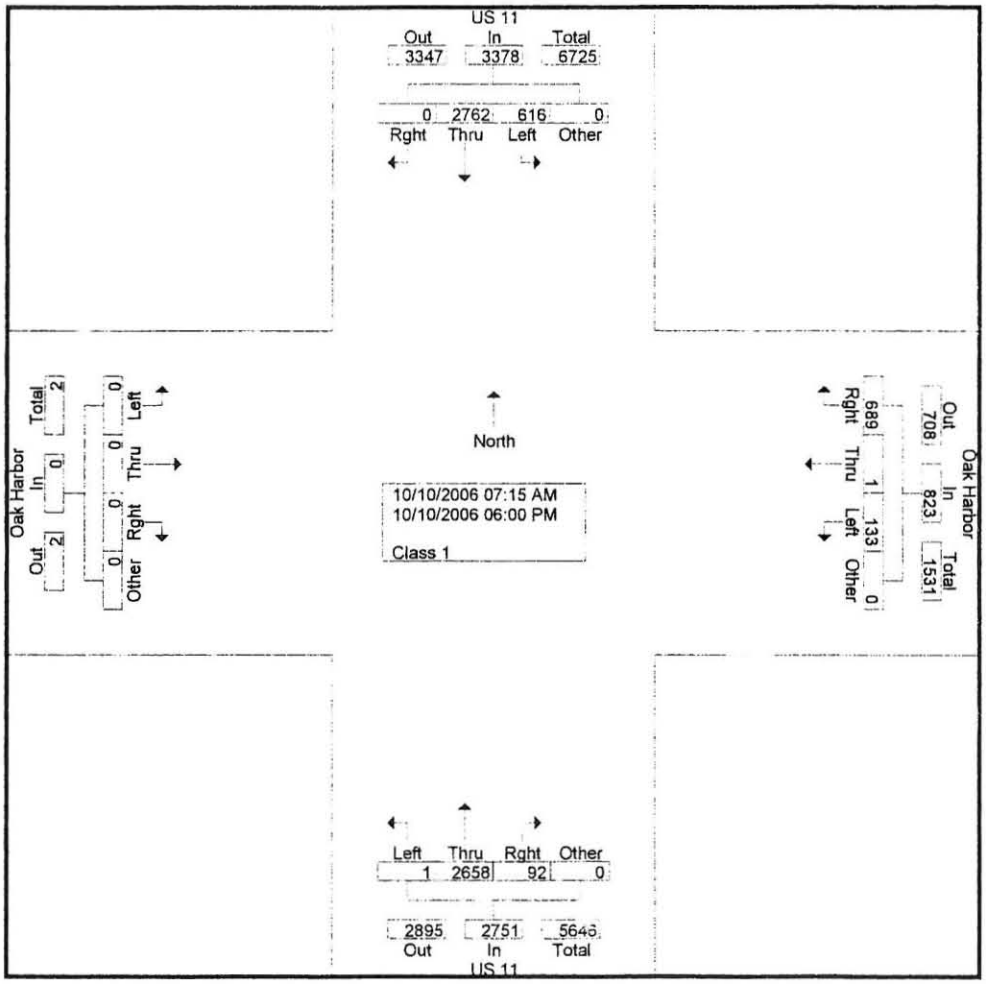
File Name : USA647~1
Site Code : 00000000
Start Date : 10/10/2006
Page No : 1

Groups Printed- Class 1

	US 11 Southbound				Oak Harbor Westbound				US 11 Northbound				Oak Harbor Eastbound				
Start Time	Rght	Thru	Left	Other	Rght	Thru	Left	Other	Rght	Thru	Left	Other	Rght	Thru	Left	Other	Int. Total
07:15 AM	0	235	38	0	30	0	17	0	1	104	0	0	0	0	0	0	425
07:30 AM	0	242	35	0	40	0	14	0	4	79	0	0	0	0	0	0	414
07:45 AM	0	214	31	0	70	0	11	0	2	129	0	0	0	0	0	0	457
Total	0	691	104	0	140	0	42	0	7	312	0	0	0	0	0	0	1296
08:00 AM	0	203	31	0	62	0	9	0	0	116	0	0	0	0	0	0	421
08:15 AM	0	200	51	0	39	0	19	0	3	93	1	0	0	0	0	0	406
08:30 AM	0	219	34	0	46	0	12	0	4	80	0	0	0	0	0	0	395
08:45 AM	0	226	45	0	39	0	6	0	5	78	0	0	0	0	0	0	399
Total	0	848	161	0	186	0	46	0	12	367	1	0	0	0	0	0	1621
09:00 AM	0	195	40	0	34	0	8	0	8	105	0	0	0	0	0	0	390
*** BREAK ***																	
Total	0	195	40	0	34	0	8	0	8	105	0	0	0	0	0	0	390
*** BREAK ***																	
04:15 PM	0	123	44	0	43	0	8	0	5	246	0	0	0	0	0	0	469
04:30 PM	0	120	34	0	37	0	6	0	8	198	0	0	0	0	0	0	403
04:45 PM	0	138	31	0	36	0	7	0	8	218	0	0	0	0	0	0	438
Total	0	381	109	0	116	0	21	0	21	662	0	0	0	0	0	0	1310
05:00 PM	0	110	36	0	49	0	6	0	8	234	0	0	0	0	0	0	443
05:15 PM	0	117	47	0	46	1	2	0	12	255	0	0	0	0	0	0	480
05:30 PM	0	158	51	0	43	0	0	0	8	242	0	0	0	0	0	0	502
05:45 PM	0	136	24	0	32	0	8	0	6	233	0	0	0	0	0	0	439
Total	0	521	158	0	170	1	16	0	34	964	0	0	0	0	0	0	1864
06:00 PM	0	126	44	0	43	0	0	0	10	248	0	0	0	0	0	0	471
Grand Total	0	2762	616	0	689	1	133	0	92	2658	1	0	0	0	0	0	6952
Apprch %	0	81.8	18.2	0	83.7	0.1	16.2	0	3.3	96.6	0	0	0	0	0	0	
Total %	0	39.7	8.9	0	9.9	0	1.9	0	1.3	38.2	0	0	0	0	0	0	

Krebs, LaSalle, LeMieux Consultants, Inc.

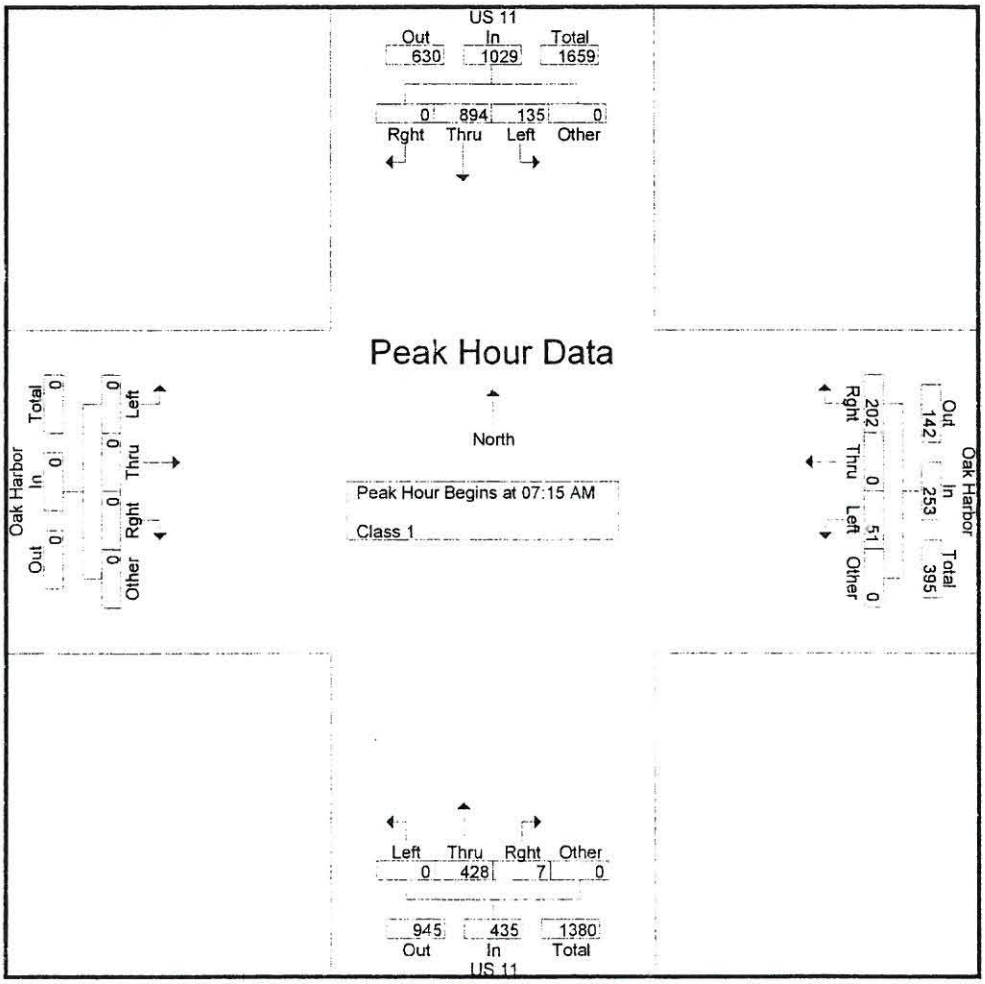
File Name : USA647~1
Site Code : 00000000
Start Date : 10/10/2006
Page No : 2



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : USA647~1
Site Code : 00000000
Start Date : 10/10/2006
Page No : 3

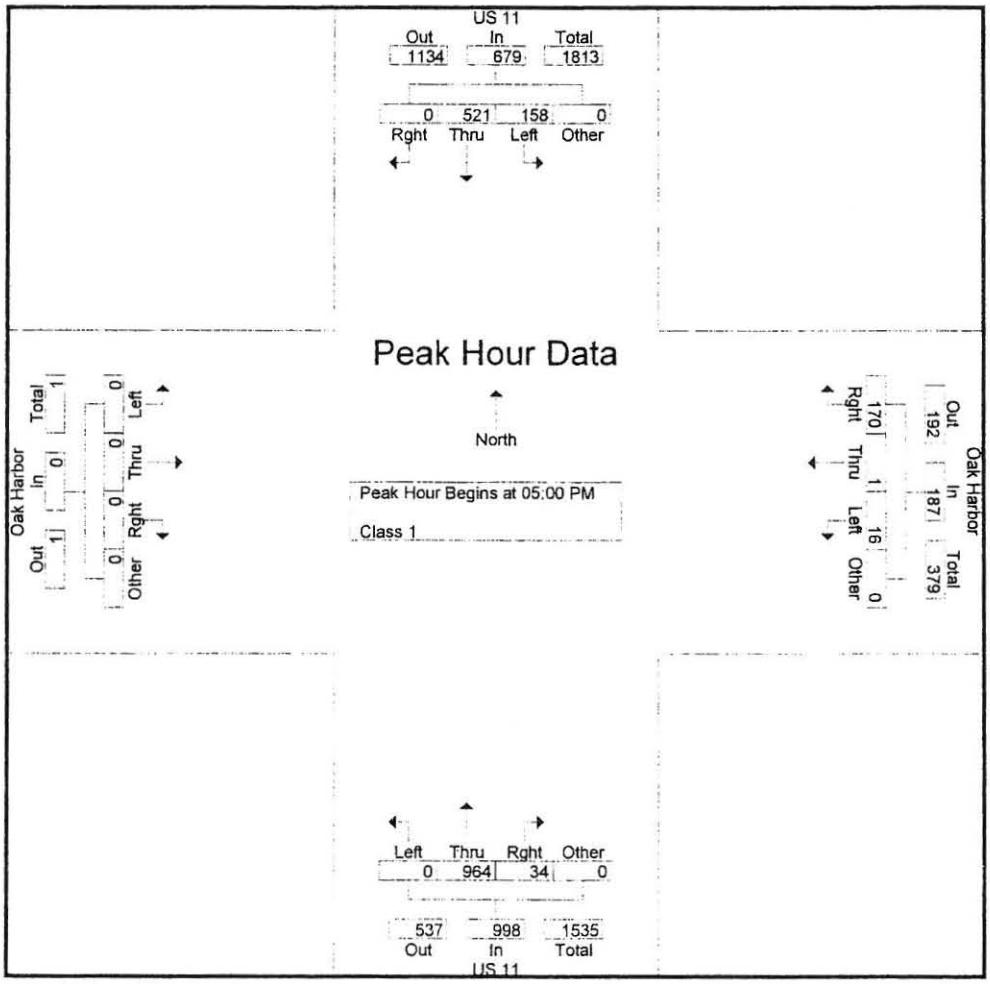
	US 11 Southbound					Oak Harbor Westbound					US 11 Northbound					Oak Harbor Eastbound					
Start Time	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	235	**38**	0	273	30	0	**17**	0	47	1	104	0	0	105	0	0	0	0	0	425
07:30 AM	0	**242**	35	0	**277**	40	0	14	0	54	**4**	79	0	0	83	0	0	0	0	0	414
07:45 AM	0	214	31	0	245	**70**	0	11	0	**81**	2	**129**	0	0	**131**	0	0	0	0	0	**457**
08:00 AM	0	203	31	0	234	62	0	9	0	71	0	116	0	0	116	0	0	0	0	0	421
Total Volume	0	894	135	0	1029	202	0	51	0	253	7	428	0	0	435	0	0	0	0	0	1717
% App. Total	0	86.9	13.1	0		79.8	0	20.2	0		1.6	98.4	0	0		0	0	0	0		
PHF	.000	.924	.888	.000	.929	.721	.000	.750	.000	.781	.438	.829	.000	.000	.830	.000	.000	.000	.000	.000	.939



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : USA647~1
Site Code : 00000000
Start Date : 10/10/2006
Page No : 4

	US 11 Southbound					Oak Harbor Westbound					US 11 Northbound					Oak Harbor Eastbound					
Start Time	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Rght	Thru	Left	Other	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	110	36	0	146	**49**	0	6	0	**55**	8	234	0	0	242	0	0	0	0	0	443
05:15 PM	0	117	47	0	164	46	**1**	2	0	49	**12**	**255**	0	0	**267**	0	0	0	0	0	480
05:30 PM	0	**158**	**51**	0	**209**	43	0	0	0	43	8	242	0	0	250	0	0	0	0	0	**502**
05:45 PM	0	136	24	0	160	32	0	**8**	0	40	6	233	0	0	239	0	0	0	0	0	439
Total Volume	0	521	158	0	679	170	1	16	0	187	34	964	0	0	998	0	0	0	0	0	1864
% App. Total	0	76.7	23.3	0		90.9	0.5	8.6	0		3.4	96.6	0	0		0	0	0	0		
PHF	.000	.824	.775	.000	.812	.867	.250	.500	.000	.850	.708	.945	.000	.000	.934	.000	.000	.000	.000	.000	.928



Krebs, LaSalle, LeMieux Consultants, Inc.

US 11
406-0092

File Name : US16F9~1
Site Code : 00000000
Start Date : 11/1/2006
Page No : 1

Groups Printed- Unshifted

	11 Southbound				LAFAYETTE Westbound				11 Northbound				LAFAYETTE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	5	177	5	0	2	0	1	0	4	105	0	0	3	0	0	0	302
07:15 AM	2	155	12	0	2	0	1	0	5	99	1	0	4	0	0	0	281
07:30 AM	1	193	17	0	6	0	2	0	2	117	2	0	0	1	2	0	343
07:45 AM	5	174	21	0	5	1	4	0	11	128	2	0	2	1	2	0	356
Total	13	699	55	0	15	1	8	0	22	449	5	0	9	2	4	0	1282
08:00 AM	7	198	25	0	4	1	3	0	8	106	2	0	6	3	5	0	368
08:15 AM	10	167	39	0	2	3	1	0	9	103	4	0	7	3	2	0	350
08:30 AM	9	183	26	0	4	4	5	0	14	104	1	0	4	0	2	0	356
08:45 AM	11	149	23	0	5	1	6	0	4	80	2	0	4	1	5	0	291
Total	37	697	113	0	15	9	15	0	35	393	9	0	21	7	14	0	1365
*** BREAK ***																	
04:00 PM	16	112	11	0	14	7	10	0	1	157	11	0	18	5	22	0	384
04:15 PM	13	137	13	0	8	3	2	0	5	129	5	0	9	2	8	0	334
04:30 PM	13	161	10	0	10	4	0	0	5	155	6	0	22	2	20	0	408
04:45 PM	13	152	15	0	17	7	4	0	15	147	9	0	15	10	17	0	421
Total	55	562	49	0	49	21	16	0	26	588	31	0	64	19	67	0	1547
05:00 PM	20	159	17	0	7	3	5	0	17	133	23	0	19	8	12	0	423
05:15 PM	10	174	13	0	6	4	5	0	14	148	12	0	12	4	8	0	410
05:30 PM	16	148	13	0	6	4	2	0	7	132	6	0	15	3	26	0	378
05:45 PM	18	150	5	0	7	2	5	0	9	150	15	0	19	3	16	0	399
Total	64	631	48	0	26	13	17	0	47	563	56	0	65	18	62	0	1610
Grand Total	169	2589	265	0	105	44	56	0	130	1993	101	0	159	46	147	0	5804
Apprch %	5.6	85.6	8.8	0	51.2	21.5	27.3	0	5.8	89.6	4.5	0	45.2	13.1	41.8	0	
Total %	2.9	44.6	4.6	0	1.8	0.8	1	0	2.2	34.3	1.7	0	2.7	0.8	2.5	0	

Krebs, LaSalle, LeMieux Consultants, Inc.

US 11
406-0092

File Name : US16F9~1
Site Code : 00000000
Start Date : 11/1/2006
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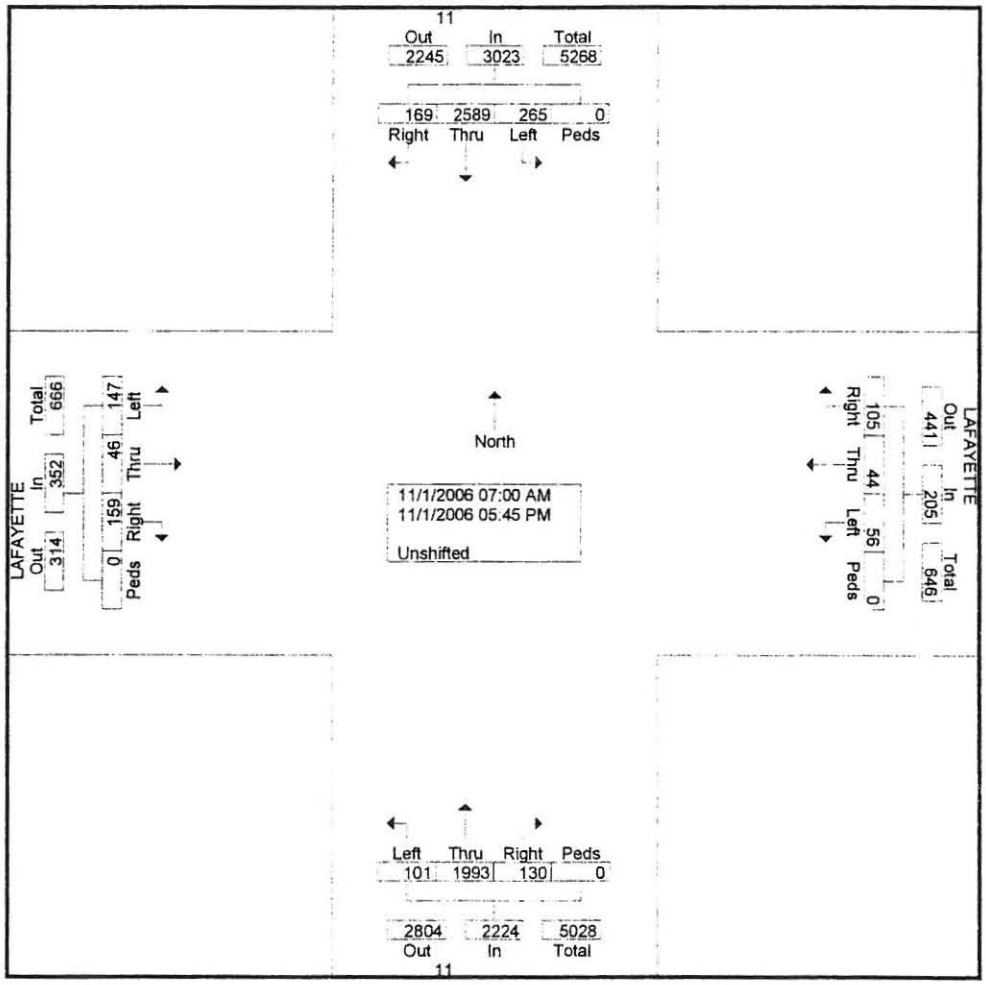
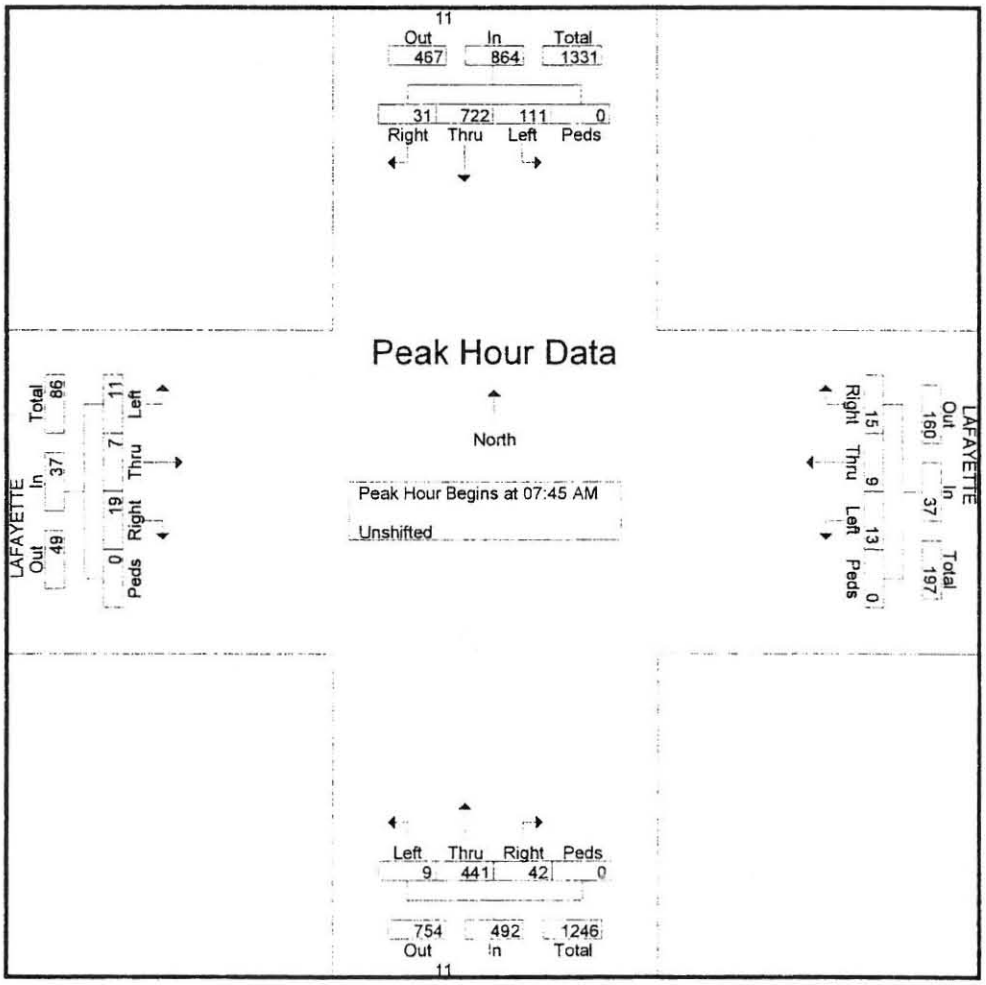


Krebs, LaSalle, LeMieux Consultants, Inc.

US 11
406-0092

File Name : US16F9~1
Site Code : 00000000
Start Date : 11/1/2006
Page No : 3

	11 Southbound					LAFAYETTE Westbound					11 Northbound					LAFAYETTE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	5	174	21	0	200	**5**	1	4	0	10	11	**128**	2	0	**141**	2	1	2	0	5	356
08:00 AM	7	**198**	25	0	**230**	4	1	3	0	8	8	106	2	0	116	6	**3**	**5**	0	**14**	**368**
08:15 AM	**10**	167	**39**	0	216	2	3	1	0	6	9	103	**4**	0	116	**7**	3	2	0	12	350
08:30 AM	9	183	26	0	218	4	**4**	**5**	0	**13**	**14**	104	1	0	119	4	0	2	0	6	356
Total Volume	31	722	111	0	864	15	9	13	0	37	42	441	9	0	492	19	7	11	0	37	1430
% App. Total	3.6	83.6	12.8	0		40.5	24.3	35.1	0		8.5	89.6	1.8	0		51.4	18.9	29.7	0		
PHF	.775	.912	.712	.000	.939	.750	.563	.650	.000	.712	.750	.861	.563	.000	.872	.679	.583	.550	.000	.661	.971

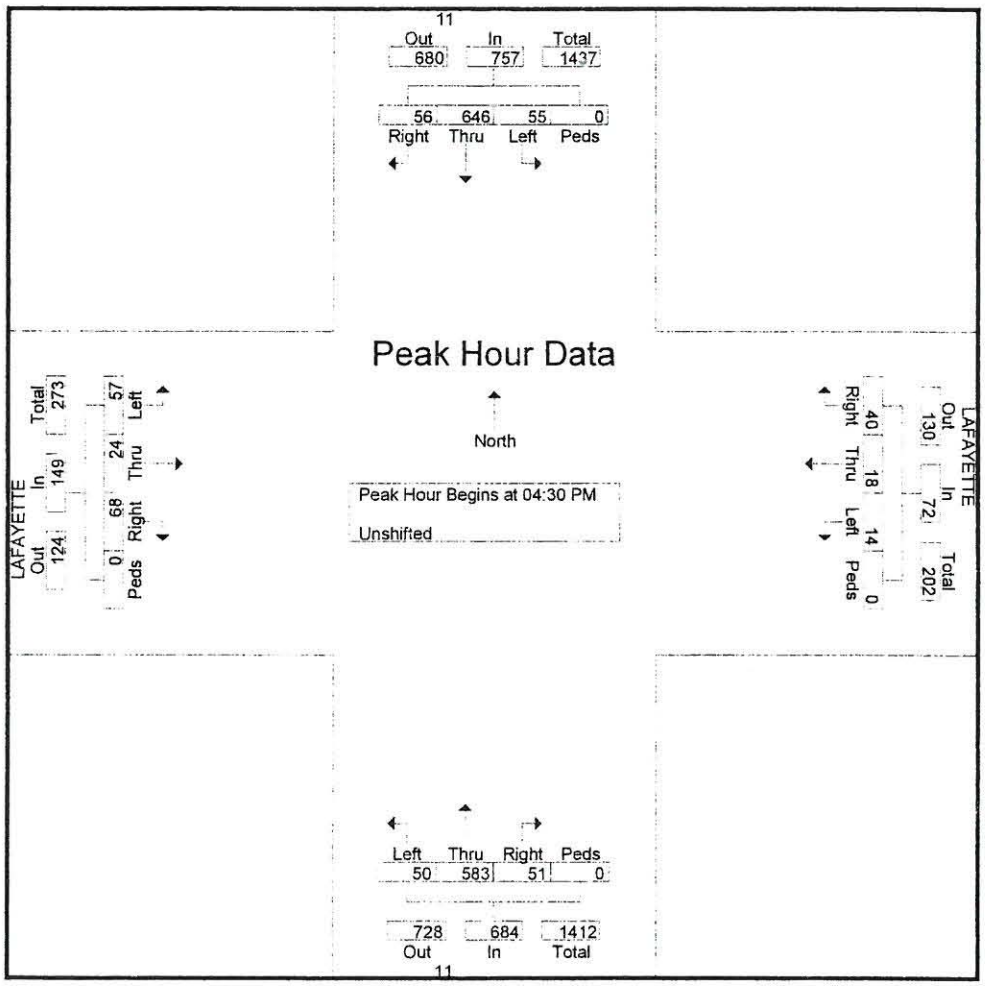


Krebs, LaSalle, LeMieux Consultants, Inc.

US 11
406-0092

File Name : US16F9~1
Site Code : 00000000
Start Date : 11/1/2006
Page No : 4

	11 Southbound					LAFAYETTE Westbound					11 Northbound					LAFAYETTE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	13	161	10	0	184	10	4	0	0	14	5	**155**	6	0	166	**22**	2	**20**	0	**44**	408
04:45 PM	13	152	15	0	180	**17**	**7**	4	0	**28**	15	147	9	0	171	15	**10**	17	0	42	421
05:00 PM	**20**	159	**17**	0	196	7	3	**5**	0	15	**17**	133	**23**	0	173	19	8	12	0	39	**423**
05:15 PM	10	**174**	13	0	**197**	6	4	5	0	15	14	148	12	0	**174**	12	4	8	0	24	410
Total Volume	56	646	55	0	757	40	18	14	0	72	51	583	50	0	684	68	24	57	0	149	1662
% App. Total	7.4	85.3	7.3	0		55.6	25	19.4	0		7.5	85.2	7.3	0		45.6	16.1	38.3	0		
PHF	.700	.928	.809	.000	.961	.588	.643	.700	.000	.643	.750	.940	.543	.000	.983	.773	.600	.713	.000	.847	.982



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~3
Site Code : 00000000
Start Date : 10/10/2006
Page No : 1

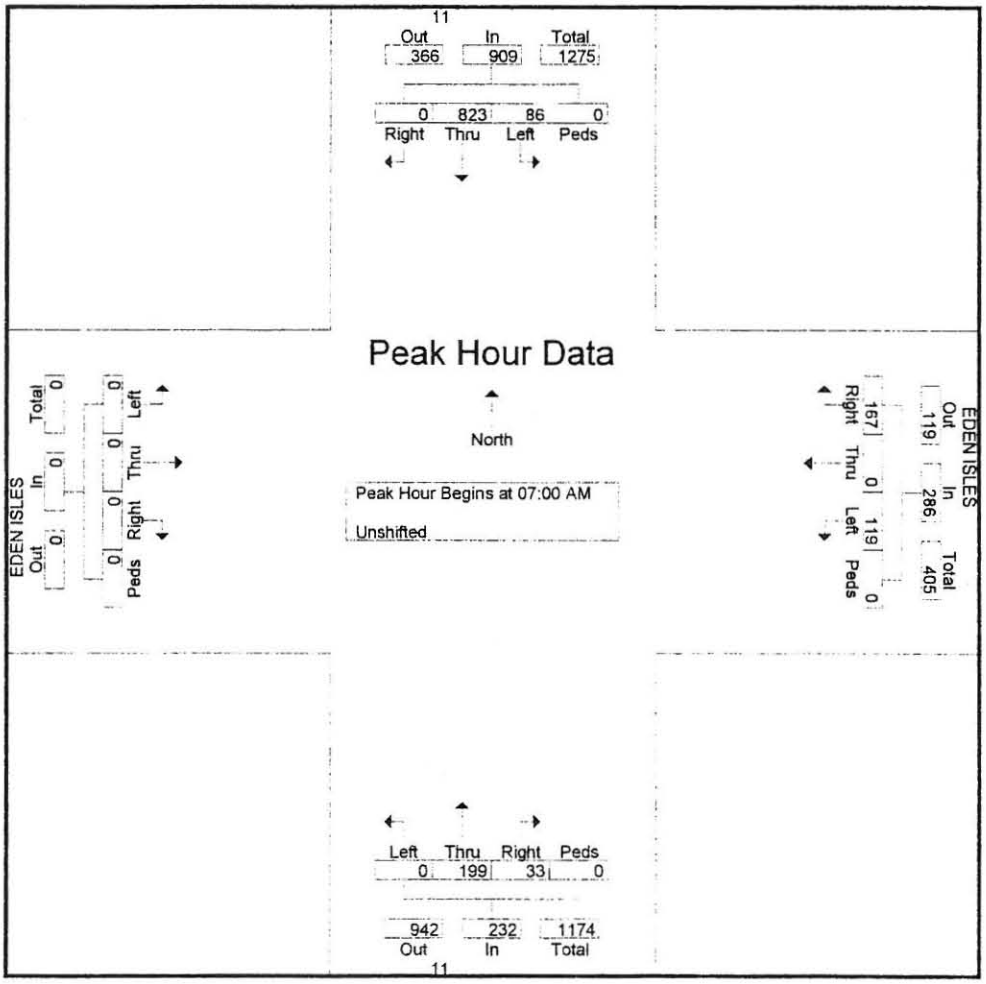
Groups Printed- Unshifted

	11 Southbound				EDEN ISLES Westbound				11 Northbound				EDEN ISLES Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	0	240	14	0	42	0	35	0	4	41	0	0	0	0	0	0	376
07:15 AM	0	226	19	0	26	0	32	0	9	46	0	0	0	0	0	0	358
07:30 AM	0	167	23	0	36	0	18	0	11	52	0	0	0	0	0	0	307
07:45 AM	0	190	30	0	63	0	34	0	9	60	0	0	0	0	0	0	386
Total	0	823	86	0	167	0	119	0	33	199	0	0	0	0	0	0	1427
08:00 AM	0	175	50	0	53	0	25	0	10	35	0	0	0	0	0	0	348
08:15 AM	0	191	27	0	41	0	22	0	7	35	0	0	0	0	0	0	323
08:30 AM	0	175	42	0	37	0	38	0	9	45	0	0	0	0	0	0	346
08:45 AM	0	176	28	0	56	0	59	0	12	46	0	0	0	0	0	0	377
Total	0	717	147	0	187	0	144	0	38	161	0	0	0	0	0	0	1394
03:45 PM	0	42	35	0	25	0	10	0	12	125	0	0	0	0	0	0	249
Total	0	42	35	0	25	0	10	0	12	125	0	0	0	0	0	0	249
04:00 PM	0	67	52	0	44	0	7	0	22	161	0	0	0	0	0	0	353
04:15 PM	0	68	53	0	39	0	12	0	25	163	0	0	0	0	0	0	360
04:30 PM	0	55	62	0	51	0	13	0	16	189	0	0	0	0	0	0	386
04:45 PM	0	59	54	0	34	0	18	0	19	193	0	0	0	0	0	0	377
Total	0	249	221	0	168	0	50	0	82	706	0	0	0	0	0	0	1476
05:00 PM	0	73	56	0	54	0	10	0	28	193	0	0	0	0	0	0	414
05:15 PM	0	67	79	0	30	0	10	0	17	190	0	0	0	0	0	0	393
05:30 PM	0	76	59	0	46	0	9	0	19	216	0	0	0	0	0	0	425
Grand Total	0	2047	683	0	677	0	352	0	229	1790	0	0	0	0	0	0	5778
Apprch %	0	75	25	0	65.8	0	34.2	0	11.3	88.7	0	0	0	0	0	0	
Total %	0	35.4	11.8	0	11.7	0	6.1	0	4	31	0	0	0	0	0	0	

Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~3
Site Code : 00000000
Start Date : 10/10/2006
Page No : 2

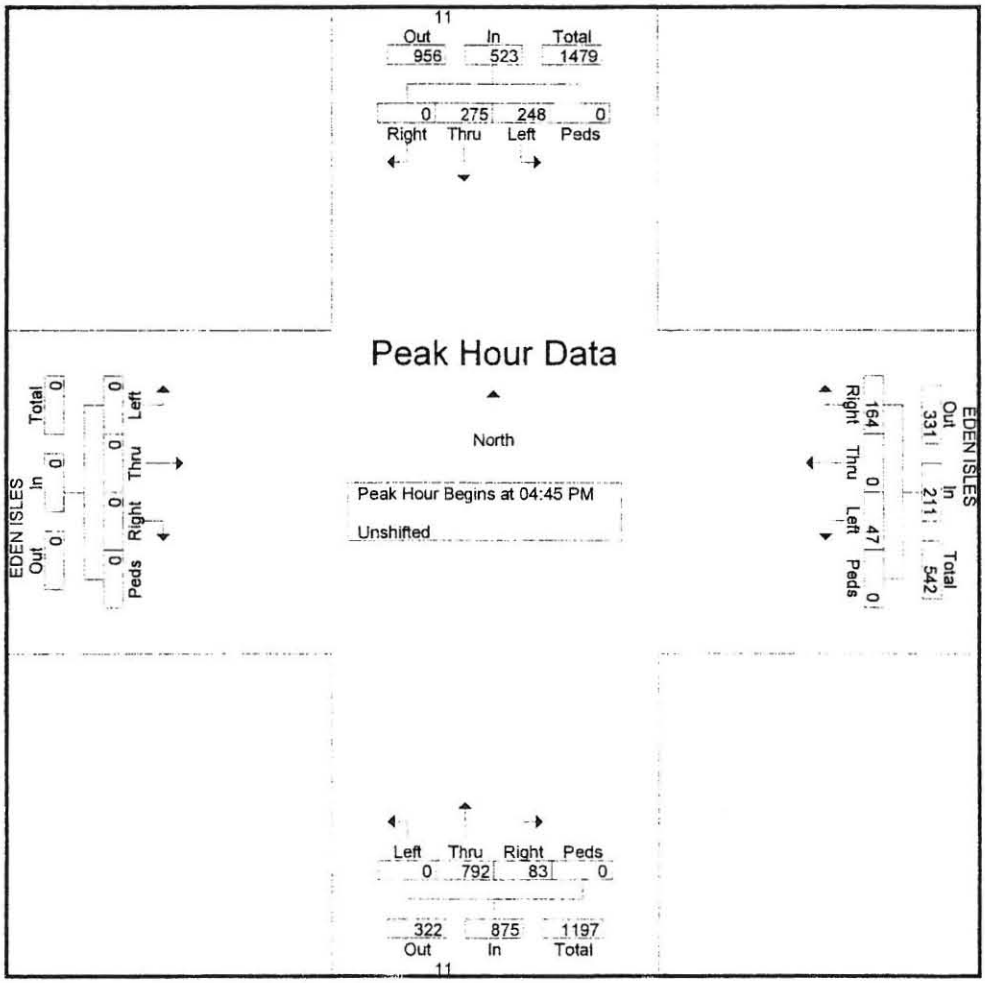
	11 Southbound					EDEN ISLES Westbound					11 Northbound					EDEN ISLES Eastbound					
S t Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
eak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
eak Hour for Entire Intersection Begins at 07:00 AM																					
(00 AM	0	**240**	14	0	**254**	42	0	**35**	0	77	4	41	0	0	45	0	0	0	0	0	376
(15 AM	0	226	19	0	245	26	0	32	0	58	9	46	0	0	55	0	0	0	0	0	358
(, .30 AM	0	167	23	0	190	36	0	18	0	54	**11**	52	0	0	63	0	0	0	0	0	307
07:45 AM	0	190	**30**	0	220	**63**	0	34	0	**97**	9	**60**	0	0	**69**	0	0	0	0	0	**386**
Total Volume	0	823	86	0	909	167	0	119	0	286	33	199	0	0	232	0	0	0	0	0	1427
% p. Total	0	90.5	9.5	0		58.4	0	41.6	0		14.2	85.8	0	0		0	0	0	0		
PHF	.000	.857	.717	.000	.895	.663	.000	.850	.000	.737	.750	.829	.000	.000	.841	.000	.000	.000	.000	.000	.924



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~3
Site Code : 00000000
Start Date : 10/10/2006
Page No : 3

	11 Southbound					EDEN ISLES Westbound					11 Northbound					EDEN ISLES Eastbound					
St Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App Total	Right	Thru	Left	Peds	App. Total	Int. Total
ea Hour Analysis From 03:45 PM to 05:30 PM - Peak 1 of 1																					
eak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	59	54	0	113	34	0	**18**	0	52	19	193	0	0	212	0	0	0	0	0	377
05:00 PM	0	73	56	0	129	**54**	0	10	0	**64**	**28**	193	0	0	221	0	0	0	0	0	414
05:15 PM	0	67	**79**	0	**146**	30	0	10	0	40	17	190	0	0	207	0	0	0	0	0	393
05:30 PM	0	**76**	59	0	135	46	0	9	0	55	19	**216**	0	0	**235**	0	0	0	0	0	**425**
Total Volume	0	275	248	0	523	164	0	47	0	211	83	792	0	0	875	0	0	0	0	0	1609
% App. Total	0	52.6	47.4	0		77.7	0	22.3	0		9.5	90.5	0	0		0	0	0	0		
PHF	.000	.905	.785	.000	.896	.759	.000	.653	.000	.824	.741	.917	.000	.000	.931	.000	.000	.000	.000	.000	.946



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~'
Site Code : 00000000
Start Date : 10/3/2006
Page No : 1

Groups Printed- Unshifted

	11 Southbound				GAUSE Westbound				11 Northbound				GAUSE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	9	112	21	0	11	41	22	0	9	56	37	0	53	87	17	0	475
07:15 AM	7	123	42	0	26	58	21	0	18	88	46	0	71	92	10	0	602
07:30 AM	12	108	51	0	12	49	18	0	20	74	44	0	58	124	17	0	587
07:45 AM	12	117	31	0	14	73	22	0	34	81	43	0	45	112	21	0	605
Total	40	460	145	0	63	221	83	0	81	299	170	0	227	415	65	0	2269
08:00 AM	12	115	44	0	10	106	37	0	32	66	50	0	45	122	17	0	656
08:15 AM	10	112	47	0	14	83	20	0	31	58	47	0	51	118	28	0	619
08:30 AM	19	91	43	0	13	66	23	0	34	75	35	0	45	136	23	0	603
08:45 AM	11	90	42	0	10	58	38	0	36	74	32	0	48	129	25	0	593
Total	52	408	176	0	47	313	118	0	133	273	164	0	189	505	93	0	2471
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	16	77	43	0	29	105	19	0	32	116	75	0	58	134	21	0	725
04:15 PM	30	83	53	0	23	146	44	0	31	96	54	0	30	113	22	0	725
04:30 PM	23	88	39	0	23	87	22	0	33	99	53	0	60	126	13	0	666
04:45 PM	26	82	35	0	37	120	36	0	19	118	53	0	42	131	26	0	725
Total	95	330	170	0	112	458	121	0	115	429	235	0	190	504	82	0	2841

Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~1
Site Code : 00000000
Start Date : 10/3/2006
Page No : 2

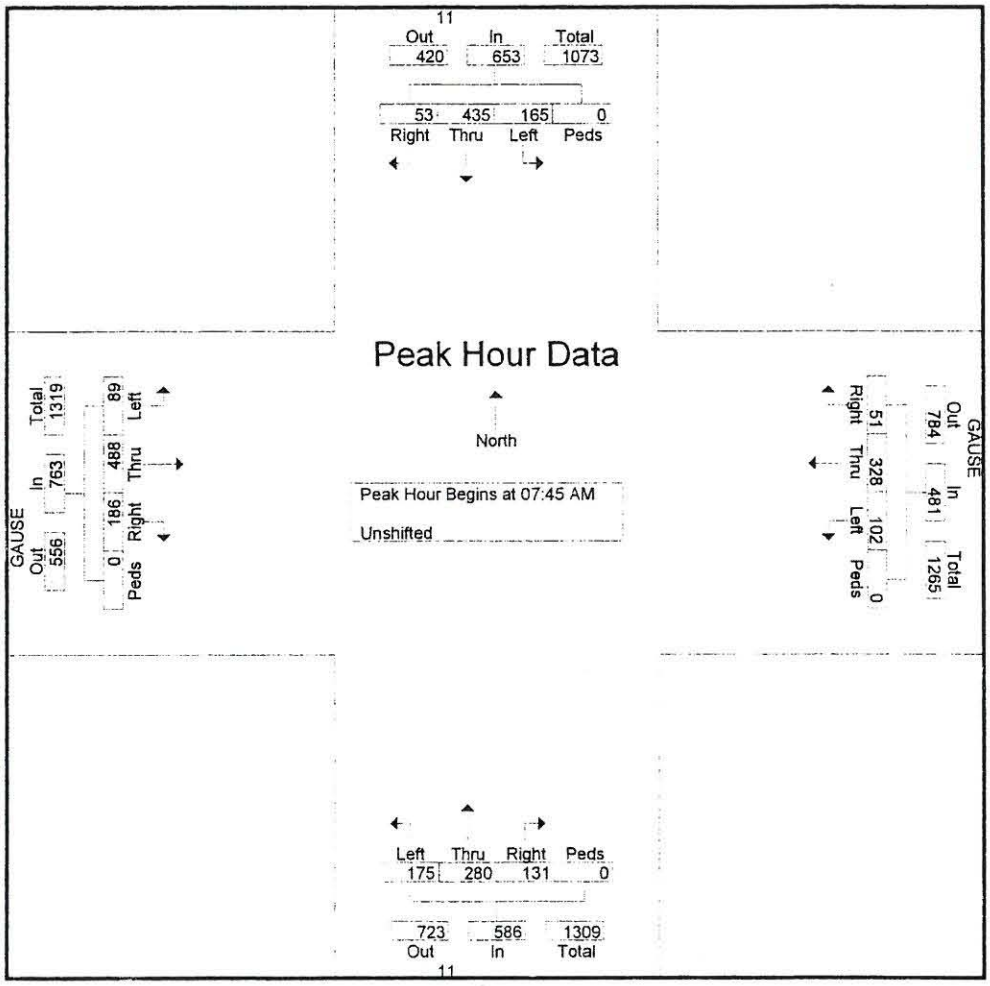
Groups Printed- Unshifted

	11 Southbound				GAUSE Westbound				11 Northbound				GAUSE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
05:00 PM	25	63	41	0	15	120	37	0	40	122	72	0	49	114	30	0	728
05:15 PM	18	75	39	0	20	131	34	0	36	87	68	0	59	108	25	0	700
05:30 PM	31	91	46	0	35	116	30	0	32	118	68	0	62	107	32	0	768
05:45 PM	31	79	47	0	27	102	28	0	28	98	52	0	36	100	26	0	654
Total	105	308	173	0	97	469	129	0	136	425	260	0	206	429	113	0	2850
Grand Total	292	1506	664	0	319	1461	451	0	465	1426	829	0	812	1853	353	0	10431
Apprch %	11.9	61.2	27	0	14.3	65.5	20.2	0	17.1	52.4	30.5	0	26.9	61.4	11.7	0	
Total %	2.8	14.4	6.4	0	3.1	14	4.3	0	4.5	13.7	7.9	0	7.8	17.8	3.4	0	

Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~1
Site Code : 00000000
Start Date : 10/3/2006
Page No : 3

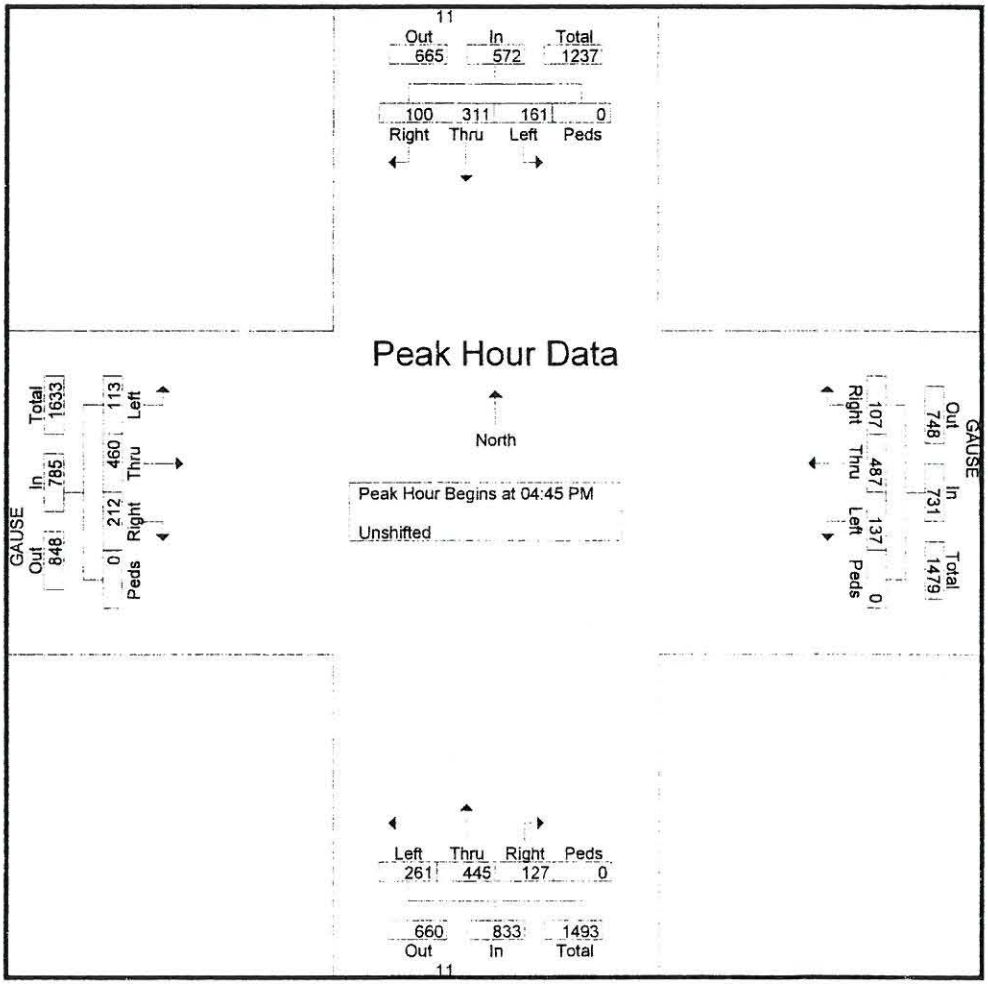
	11 Southbound					GAUSE Westbound					11 Northbound					GAUSE Eastbound					
S t Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
eak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
eak Hour for Entire Intersection Begins at 07:45 AM																					
(45 AM	12	**117**	31	0	160	**14**	73	22	0	109	**34**	**81**	43	0	**158**	45	112	21	0	178	605
(00 AM	12	115	44	0	**171**	10	**106**	**37**	0	**153**	32	66	**50**	0	148	45	122	17	0	184	**656**
08:15 AM	10	112	**47**	0	169	14	83	20	0	117	31	58	47	0	136	**51**	118	**28**	0	197	619
08:30 AM	**19**	91	43	0	153	13	66	23	0	102	34	75	35	0	144	45	**136**	23	0	**204**	603
Tc Volume	53	435	165	0	653	51	328	102	0	481	131	280	175	0	586	186	488	89	0	763	2483
% p. Total	8.1	66.6	25.3	0		10.6	68.2	21.2	0		22.4	47.8	29.9	0		24.4	64	11.7	0		
PHF	.697	.929	.878	.000	.955	.911	.774	.689	.000	.786	.963	.864	.875	.000	.927	.912	.897	.795	.000	.935	.946



Krebs, LaSalle, LeMieux Consultants, Inc.

File Name : US11AT~'
Site Code : 00000000
Start Date : 10/3/2006
Page No : 4

	11 Southbound					GAUSE Westbound					11 Northbound					GAUSE Eastbound					
S t Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
ea Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
ea Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	26	82	35	0	143	**37**	120	36	0	**193**	19	118	53	0	190	42	**131**	26	0	199	725
05:00 PM	25	63	41	0	129	15	120	**37**	0	172	**40**	**122**	**72**	0	**234**	49	114	30	0	193	728
15 PM	18	75	39	0	132	20	**131**	34	0	185	36	87	68	0	191	59	108	25	0	192	700
30 PM	**31**	**91**	**46**	0	**168**	35	116	30	0	181	32	118	68	0	218	**62**	107	**32**	0	**201**	**768**
Total Volume	100	311	161	0	572	107	487	137	0	731	127	445	261	0	833	212	460	113	0	785	2921
% App. Total	17.5	54.4	28.1	0		14.6	66.6	18.7	0		15.2	53.4	31.3	0		27	58.6	14.4	0		
PHF	.806	.854	.875	.000	.851	.723	.929	.926	.000	.947	.794	.912	.906	.000	.890	.855	.878	.883	.000	.976	.951



APPENDIX B

CORRIDOR ADT DATA

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start	23-Oct-06		Tue		Wed		Thu		Fri		Sat		Sun		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	18	129	25	112	20	*	*	*	*	*	*	*	21	120
12:15	*	*	7	136	12	129	19	*	*	*	*	*	*	*	13	132
12:30	*	*	12	145	7	139	9	*	*	*	*	*	*	*	9	142
12:45	*	*	13	129	8	159	10	*	*	*	*	*	*	*	10	144
01:00	*	*	7	135	13	130	9	*	*	*	*	*	*	*	10	132
01:15	*	*	5	150	5	133	8	*	*	*	*	*	*	*	6	142
01:30	*	*	3	145	5	146	9	*	*	*	*	*	*	*	6	146
01:45	*	*	4	137	6	131	12	*	*	*	*	*	*	*	7	134
02:00	*	*	4	133	7	**146**	10	*	*	*	*	*	*	*	7	140
02:15	*	146	9	137	3	**156**	4	*	*	*	*	*	*	*	5	146
02:30	*	148	4	135	2	**143**	6	*	*	*	*	*	*	*	4	142
02:45	*	**136**	5	**162**	4	**159**	4	*	*	*	*	*	*	*	4	**152**
03:00	*	**153**	5	**164**	4	142	6	*	*	*	*	*	*	*	5	**153**
03:15	*	**136**	5	**153**	2	147	4	*	*	*	*	*	*	*	4	**145**
03:30	*	**172**	7	**165**	7	138	9	*	*	*	*	*	*	*	8	**158**
03:45	*	132	5	107	4	148	4	*	*	*	*	*	*	*	4	129
04:00	*	143	9	145	7	145	5	*	*	*	*	*	*	*	7	144
04:15	*	138	11	145	5	99	10	*	*	*	*	*	*	*	9	127
04:30	*	98	4	114	6	98	8	*	*	*	*	*	*	*	6	103
04:45	*	144	13	102	6	118	3	*	*	*	*	*	*	*	7	121
05:00	*	92	11	89	19	117	18	*	*	*	*	*	*	*	16	99
05:15	*	113	19	57	15	55	12	*	*	*	*	*	*	*	15	75
05:30	*	90	24	89	18	87	23	*	*	*	*	*	*	*	22	89
05:45	*	122	26	101	27	126	26	*	*	*	*	*	*	*	26	116
06:00	*	135	55	133	54	132	49	*	*	*	*	*	*	*	53	133
06:15	*	127	46	127	46	151	57	*	*	*	*	*	*	*	50	135
06:30	*	163	81	158	71	144	60	*	*	*	*	*	*	*	71	155
06:45	*	113	91	146	70	145	61	*	*	*	*	*	*	*	74	135
07:00	*	118	114	157	89	113	**90**	*	*	*	*	*	*	*	98	129
07:15	*	99	94	119	100	137	**91**	*	*	*	*	*	*	*	95	118
07:30	*	81	107	103	110	83	**76**	*	*	*	*	*	*	*	98	89
07:45	*	70	93	107	118	94	**83**	*	*	*	*	*	*	*	98	90
08:00	*	99	99	105	96	80	45	*	*	*	*	*	*	*	80	95
08:15	*	65	82	89	99	68	36	*	*	*	*	*	*	*	72	74
08:30	*	65	101	70	108	83	28	*	*	*	*	*	*	*	79	73
08:45	*	78	96	75	76	66	31	*	*	*	*	*	*	*	68	73
09:00	*	55	96	65	92	94	14	*	*	*	*	*	*	*	67	71
09:15	*	47	74	79	93	95	23	*	*	*	*	*	*	*	63	74
09:30	*	49	91	54	87	77	31	*	*	*	*	*	*	*	70	60
09:45	*	44	115	45	102	59	35	*	*	*	*	*	*	*	84	49
10:00	*	54	108	58	101	86	42	*	*	*	*	*	*	*	84	66
10:15	*	40	84	39	110	46	*	*	*	*	*	*	*	*	97	42
10:30	*	29	107	39	93	45	*	*	*	*	*	*	*	*	100	38
10:45	*	36	**97**	25	115	30	*	*	*	*	*	*	*	*	106	30
11:00	*	17	**114**	29	**105**	44	*	*	*	*	*	*	*	*	**110**	30
11:15	*	20	**126**	20	**112**	26	*	*	*	*	*	*	*	*	**119**	22
11:30	*	14	**117**	21	**117**	22	*	*	*	*	*	*	*	*	**117**	19
11:45	*	14	91	26	**123**	17	*	*	*	*	*	*	*	*	**107**	19
Total	0	3595	2509	4993	2504	5040	1100	0	0	0	0	0	0	0	2291	4950
Day Total	3595		7502		7544		1100		0		0		0		7241	
% Splits	0.0%	100.0 %	33.4%	66.6%	33.2%	66.8%	100.0 %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6%	68.4%
Peak		02:45	10:45	02:45	11:00	02:00	07:00								11:00	02:45
Vol.		597	454	644	457	604	340								453	608
P.H.F.		0.868	0.901	0.976	0.929	0.950	0.934								0.952	0.962

ADT ADT 7,298 AADT 7,298

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start	23-Oct-06		Tue		Wed		Thu		Fri		Sat		Sun		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	10	**153**	13	135	13	*	*	*	*	*	*	*	12	**144**
12:15	*	*	9	**140**	13	131	11	*	*	*	*	*	*	*	11	**136**
12:30	*	*	10	**115**	10	130	7	*	*	*	*	*	*	*	9	**122**
12:45	*	*	3	**159**	7	133	14	*	*	*	*	*	*	*	8	**146**
01:00	*	*	6	134	0	123	6	*	*	*	*	*	*	*	4	128
01:15	*	*	6	133	2	113	6	*	*	*	*	*	*	*	5	123
01:30	*	*	4	124	9	137	6	*	*	*	*	*	*	*	6	130
01:45	*	*	5	127	8	150	4	*	*	*	*	*	*	*	6	138
02:00	*	*	4	134	1	99	6	*	*	*	*	*	*	*	4	116
02:15	*	117	5	122	7	92	5	*	*	*	*	*	*	*	6	110
02:30	*	119	4	164	2	122	6	*	*	*	*	*	*	*	4	135
02:45	*	122	6	99	3	139	4	*	*	*	*	*	*	*	4	120
03:00	*	115	10	101	3	118	6	*	*	*	*	*	*	*	6	111
03:15	*	90	4	118	6	122	4	*	*	*	*	*	*	*	5	110
03:30	*	**126**	3	119	8	**162**	7	*	*	*	*	*	*	*	6	136
03:45	*	**135**	5	113	5	**129**	2	*	*	*	*	*	*	*	4	126
04:00	*	**110**	5	114	6	**135**	8	*	*	*	*	*	*	*	6	120
04:15	*	**123**	15	101	13	**130**	16	*	*	*	*	*	*	*	15	118
04:30	*	105	16	97	12	136	19	*	*	*	*	*	*	*	16	113
04:45	*	105	30	140	27	111	14	*	*	*	*	*	*	*	24	119
05:00	*	113	29	141	43	114	39	*	*	*	*	*	*	*	37	123
05:15	*	116	51	108	52	162	58	*	*	*	*	*	*	*	54	129
05:30	*	134	62	86	66	140	63	*	*	*	*	*	*	*	64	120
05:45	*	115	66	110	80	108	86	*	*	*	*	*	*	*	77	111
06:00	*	77	76	121	92	101	78	*	*	*	*	*	*	*	82	100
06:15	*	76	106	140	117	110	102	*	*	*	*	*	*	*	108	109
06:30	*	111	143	116	124	106	154	*	*	*	*	*	*	*	140	111
06:45	*	121	171	103	176	99	145	*	*	*	*	*	*	*	164	108
07:00	*	94	158	83	160	78	134	*	*	*	*	*	*	*	151	85
07:15	*	88	162	87	142	72	144	*	*	*	*	*	*	*	149	82
07:30	*	65	177	78	169	65	130	*	*	*	*	*	*	*	159	69
07:45	*	60	**187**	79	**220**	66	175	*	*	*	*	*	*	*	194	68
08:00	*	51	**196**	63	**183**	68	**197**	*	*	*	*	*	*	*	**192**	61
08:15	*	69	**214**	68	**183**	80	**192**	*	*	*	*	*	*	*	**196**	72
08:30	*	43	**188**	45	**197**	82	**210**	*	*	*	*	*	*	*	**198**	57
08:45	*	58	183	65	202	47	**240**	*	*	*	*	*	*	*	**208**	57
09:00	*	53	173	85	163	58	185	*	*	*	*	*	*	*	174	65
09:15	*	48	160	65	150	81	172	*	*	*	*	*	*	*	161	65
09:30	*	61	150	65	171	55	162	*	*	*	*	*	*	*	161	60
09:45	*	34	145	47	142	50	140	*	*	*	*	*	*	*	142	44
10:00	*	40	142	36	141	24	109	*	*	*	*	*	*	*	131	33
10:15	*	27	124	36	120	31	*	*	*	*	*	*	*	*	122	31
10:30	*	22	154	35	143	30	*	*	*	*	*	*	*	*	148	29
10:45	*	20	139	21	149	30	*	*	*	*	*	*	*	*	144	24
11:00	*	18	154	20	127	24	*	*	*	*	*	*	*	*	140	21
11:15	*	18	119	19	154	32	*	*	*	*	*	*	*	*	136	23
11:30	*	15	142	21	109	22	*	*	*	*	*	*	*	*	126	19
11:45	*	16	136	15	166	14	*	*	*	*	*	*	*	*	151	15
Total	0	3030	4067	4465	4096	4496	3079	0	0	0	0	0	0	0	4070	4392
Day Total	3030		8532		8592		3079		0		0		0		8462	
% Splits	0.0%	100.0 %	47.7%	52.3%	47.7%	52.3%	100.0 %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	48.1%	51.9%
Peak		03:30	07:45	12:00	07:45	03:30	08:00								08:00	12:00
Vol.		494	785	567	783	556	839								794	548
P.H.F.		0.915	0.917	0.892	0.890	0.858	0.874								0.954	0.938

ADT ADT 8,670 AADT 8,670

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start	23-Oct-06		Tue		Wed		Thu		Fri		Sat		Sun		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	12	42	14	53	14	*	*	*	*	*	*	*	13	48
12:15	*	*	10	47	12	48	11	*	*	*	*	*	*	*	11	48
12:30	*	*	6	42	4	51	5	*	*	*	*	*	*	*	5	46
12:45	*	*	5	80	7	55	9	*	*	*	*	*	*	*	7	68
01:00	*	*	6	69	4	55	4	*	*	*	*	*	*	*	5	62
01:15	*	*	2	56	5	63	2	*	*	*	*	*	*	*	3	60
01:30	*	*	4	62	5	72	2	*	*	*	*	*	*	*	4	67
01:45	*	*	3	61	3	61	6	*	*	*	*	*	*	*	4	61
02:00	*	*	4	61	4	73	5	*	*	*	*	*	*	*	4	67
02:15	*	*	3	78	8	91	2	*	*	*	*	*	*	*	4	84
02:30	*	*	4	76	3	77	3	*	*	*	*	*	*	*	3	76
02:45	*	*	3	101	4	84	2	*	*	*	*	*	*	*	3	92
03:00	*	100	3	110	2	93	4	*	*	*	*	*	*	*	3	101
03:15	*	150	6	152	5	158	1	*	*	*	*	*	*	*	4	153
03:30	*	126	3	145	2	119	2	*	*	*	*	*	*	*	2	130
03:45	*	164	2	164	3	179	6	*	*	*	*	*	*	*	4	169
04:00	*	154	2	196	1	140	2	*	*	*	*	*	*	*	2	163
04:15	*	151	2	179	1	146	2	*	*	*	*	*	*	*	2	159
04:30	*	169	8	**211**	1	154	3	*	*	*	*	*	*	*	4	178
04:45	*	**192**	0	**208**	4	190	4	*	*	*	*	*	*	*	3	**197**
05:00	*	**203**	6	**213**	5	**185**	9	*	*	*	*	*	*	*	7	**200**
05:15	*	**181**	5	**213**	4	**203**	6	*	*	*	*	*	*	*	5	**199**
05:30	*	**189**	9	207	12	**193**	7	*	*	*	*	*	*	*	9	**196**
05:45	*	169	5	198	10	**191**	15	*	*	*	*	*	*	*	10	186
06:00	*	155	14	154	14	171	13	*	*	*	*	*	*	*	14	160
06:15	*	117	24	135	12	141	25	*	*	*	*	*	*	*	20	131
06:30	*	104	15	121	17	137	10	*	*	*	*	*	*	*	14	121
06:45	*	105	24	119	19	122	22	*	*	*	*	*	*	*	22	115
07:00	*	74	30	98	29	90	23	*	*	*	*	*	*	*	27	87
07:15	*	79	25	64	37	88	20	*	*	*	*	*	*	*	27	77
07:30	*	75	22	52	14	72	31	*	*	*	*	*	*	*	22	66
07:45	*	53	33	56	28	53	**40**	*	*	*	*	*	*	*	34	54
08:00	*	36	23	47	24	51	**34**	*	*	*	*	*	*	*	27	45
08:15	*	46	26	50	27	36	**36**	*	*	*	*	*	*	*	30	44
08:30	*	30	25	22	28	43	**35**	*	*	*	*	*	*	*	29	32
08:45	*	33	26	23	39	19	36	*	*	*	*	*	*	*	34	25
09:00	*	25	33	37	25	32	27	*	*	*	*	*	*	*	28	31
09:15	*	19	20	35	23	33	38	*	*	*	*	*	*	*	27	29
09:30	*	29	24	33	42	34	36	*	*	*	*	*	*	*	34	32
09:45	*	19	16	20	34	24	26	*	*	*	*	*	*	*	25	21
10:00	*	29	33	20	31	25	27	*	*	*	*	*	*	*	30	25
10:15	*	14	41	21	29	31	43	*	*	*	*	*	*	*	38	22
10:30	*	10	42	10	29	31	43	*	*	*	*	*	*	*	38	17
10:45	*	12	**48**	16	27	22	*	*	*	*	*	*	*	*	38	17
11:00	*	10	**31**	16	**50**	22	*	*	*	*	*	*	*	*	**40**	16
11:15	*	21	**45**	23	**36**	19	*	*	*	*	*	*	*	*	**40**	21
11:30	*	1[illegible]	**54**	10	**39**	7	*	*	*	*	*	*	*	*	**46**	9
11:45	*	16	40	10	**38**	7	*	*	*	*	*	*	*	*	**39**	11
Total	0	3070	827	4163	814	4044	691	0	0	0	0	0	0	0	844	4018
Day Total	3070		4990		4858		691		0		0		0		4862	
% Splits	0.0%	100.0 %	16.6%	83.4%	16.8%	83.2%	100.0 %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.4%	82.6%
Peak		04:45	10:45	04:30	11:00	05:00	07:45								11:00	04:45
Vol.		765	178	845	163	772	145								165	792
P.H.F.		0.942	0.824	0.992	0.815	0.951	0.906								0.897	0.990

ADT ADT 4,891 AADT 4,891

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start Time	23-Oct-06 Mon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		*	*			*	*				
12:15		*	*			*	*				
12:30		*	*			*	*				
12:45		*	*	0	0	*	*	0	0	0	0
01:00		*	*			*	*				
01:15		*	*			*	*				
01:30		*	*			*	*				
01:45		*	*	0	0	*	*	0	0	0	0
02:00		*	*			*	*				
02:15		*	*			*	*				
02:30		*	*			*	*				
02:45		*	*	0	0	*	*	0	0	0	0
03:00		*	77			*	100				
03:15		*	57			*	150				
03:30		*	83			*	126				
03:45		*	66	0	283	*	164	0	540	0	823
04:00		*	48			*	154				
04:15		*	48			*	151				
04:30		*	47			*	169				
04:45		*	36	0	179	*	192	0	666	0	845
05:00		*	55			*	203				
05:15		*	57			*	181				
05:30		*	41			*	189				
05:45		*	51	0	204	*	169	0	742	0	946
06:00		*	32			*	155				
06:15		*	38			*	117				
06:30		*	27			*	104				
06:45		*	30	0	127	*	105	0	481	0	608
07:00		*	35			*	74				
07:15		*	23			*	79				
07:30		*	26			*	75				
07:45		*	14	0	98	*	53	0	281	0	379
08:00		*	33			*	36				
08:15		*	26			*	46				
08:30		*	15			*	30				
08:45		*	16	0	90	*	33	0	145	0	235
09:00		*	21			*	25				
09:15		*	25			*	19				
09:30		*	15			*	29				
09:45		*	11	0	72	*	19	0	92	0	164
10:00		*	18			*	29				
10:15		*	16			*	14				
10:30		*	4			*	10				
10:45		*	8	0	46	*	12	0	65	0	111
11:00		*	4			*	10				
11:15		*	10			*	21				
11:30		*	3			*	11				
11:45		*	4	0	21	*	16	0	58	0	79
Total		0	1120			0	3070			0	4190
Percent		0.0%	100.0%			0.0%	100.0%			0.0%	100.0%

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start Time	24-Oct-06 Tue	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	111			12	42				
12:15		1	98			10	47				
12:30		0	104			6	42				
12:45		5	95	7	408	5	80	33	211	40	619
01:00		2	85			6	69				
01:15		2	101			2	56				
01:30		0	85			4	62				
01:45		3	79	7	350	3	61	15	248	22	598
02:00		3	101			4	61				
02:15		2	85			3	78				
02:30		1	71			4	76				
02:45		3	59	9	316	3	101	14	316	23	632
03:00		1	61			3	110				
03:15		2	76			6	152				
03:30		8	58			3	145				
03:45		10	64	21	259	2	164	14	571	35	830
04:00		11	53			2	196				
04:15		25	43			2	179				
04:30		29	46			8	211				
04:45		48	48	113	190	0	208	12	794	125	984
05:00		81	71			6	213				
05:15		128	56			5	213				
05:30		175	51			9	207				
05:45		210	69	594	247	5	198	25	831	619	1078
06:00		206	47			14	154				
06:15		251	44			24	135				
06:30		254	31			15	121				
06:45		246	26	957	148	24	119	77	529	1034	677
07:00		237	33			30	98				
07:15		229	25			25	64				
07:30		215	19			22	52				
07:45		187	26	868	103	33	56	110	270	978	373
08:00		180	19			23	47				
08:15		167	26			26	50				
08:30		186	18			25	22				
08:45		202	13	735	76	26	23	100	142	835	218
09:00		214	18			33	37				
09:15		240	23			20	35				
09:30		221	15			24	33				
09:45		187	7	862	63	16	20	93	125	955	188
10:00		147	21			33	20				
10:15		182	21			41	21				
10:30		152	4			42	10				
10:45		149	9	630	55	48	16	164	67	794	122
11:00		119	8			31	16				
11:15		127	6			45	23				
11:30		143	3			54	10				
11:45		118	5	507	22	40	10	170	59	677	81
Total		5310	2237			827	4163			6137	6400
Percent		70.4%	29.6%			16.6%	83.4%			49.0%	51.0%

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start Time	25-Oct-06 Wed	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	101			14	53				
12:15		4	87			12	48				
12:30		6	80			4	51				
12:45		3	98	17	366	7	55	37	207	54	573
01:00		1	93			4	55				
01:15		0	82			5	63				
01:30		0	94			5	72				
01:45		4	72	5	341	3	61	17	251	22	592
02:00		2	66			4	73				
02:15		3	71			8	91				
02:30		3	74			3	77				
02:45		1	74	9	285	4	84	19	325	28	610
03:00		5	51			2	93				
03:15		2	56			5	158				
03:30		6	85			2	119				
03:45		10	43	23	235	3	179	12	549	35	784
04:00		8	52			1	140				
04:15		27	61			1	146				
04:30		43	62			1	154				
04:45		48	58	126	233	4	190	7	630	133	863
05:00		85	67			5	185				
05:15		129	55			4	203				
05:30		180	39			12	193				
05:45		184	50	578	211	10	191	31	772	609	983
06:00		225	43			14	171				
06:15		233	50			12	141				
06:30		254	37			17	137				
06:45		219	45	931	175	19	122	62	571	993	746
07:00		265	31			29	90				
07:15		210	30			37	88				
07:30		235	23			14	72				
07:45		175	28	885	112	28	53	108	303	993	415
08:00		206	20			24	51				
08:15		199	28			27	36				
08:30		186	24			28	43				
08:45		127	30	718	102	39	19	118	149	836	251
09:00		192	31			25	32				
09:15		213	38			23	33				
09:30		201	30			42	34				
09:45		181	18	787	117	34	24	124	123	911	240
10:00		201	19			31	25				
10:15		139	14			29	31				
10:30		157	13			29	31				
10:45		133	16	630	62	27	22	116	109	746	171
11:00		121	7			50	22				
11:15		118	9			36	19				
11:30		102	2			39	7				
11:45		98	2	439	20	38	7	163	55	602	75
Total		5148	2259			814	4044			5962	6303
Percent		69.5%	30.5%			16.8%	83.2%			48.6%	51.4%

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start Time	26-Oct-06 Thu	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		7	*			14	*				
12:15		3	*			11	*				
12:30		8	*			5	*				
12:45		3	*	21	0	9	*	39	0	60	0
01:00		2	*			4	*				
01:15		1	*			2	*				
01:30		2	*			2	*				
01:45		2	*	7	0	6	*	14	0	21	0
02:00		3	*			5	*				
02:15		1	*			2	*				
02:30		3	*			3	*				
02:45		5	*	12	0	2	*	12	0	24	0
03:00		1	*			4	*				
03:15		4	*			1	*				
03:30		7	*			2	*				
03:45		9	*	21	0	6	*	13	0	34	0
04:00		13	*			2	*				
04:15		30	*			2	*				
04:30		33	*			3	*				
04:45		63	*	139	0	4	*	11	0	150	0
05:00		88	*			9	*				
05:15		139	*			6	*				
05:30		173	*			7	*				
05:45		186	*	586	0	15	*	37	0	623	0
06:00		239	*			13	*				
06:15		236	*			25	*				
06:30		193	*			10	*				
06:45		308	*	976	0	22	*	70	0	1046	0
07:00		290	*			23	*				
07:15		260	*			20	*				
07:30		241	*			31	*				
07:45		186	*	977	0	40	*	114	0	1091	0
08:00		186	*			34	*				
08:15		185	*			36	*				
08:30		180	*			35	*				
08:45		176	*	727	0	36	*	141	0	868	0
09:00		171	*			27	*				
09:15		201	*			38	*				
09:30		192	*			36	*				
09:45		207	*	771	0	26	*	127	0	898	0
10:00		162	*			27	*				
10:15		166	*			43	*				
10:30		155	*			43	*				
10:45		*	*	483	0	*	*	113	0	596	0
11:00		*	*	*	*	*	*	*	*	*	*
11:15		*	*	*	*	*	*	*	*	*	*
11:30		*	*	*	*	*	*	*	*	*	*
11:45		*	*	*	*	*	*	*	*	*	*
Total		4720	0			691	0			5411	0
Percent		100.0%	0.0%			100.0%	0.0%			100.0%	0.0%
Grand Total		15178	5616			2332	11277			17510	16893
Percent		73.0%	27.0%			17.1%	82.9%			50.9%	49.1%
ADT		ADT 12,187		AADT 12,187							

Krebs, LaSalle, LeMieux Consultants, Inc.

Site Code: 000000000001
Station ID:

Comment 1
Comment 2
Comment 3
Comment 4

Latitude: 0' 0.000 South

Start	23-Oct-06		Tue		Wed		Thu		Fri		Sat		Sun		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	1	**111**	4	101	7	*	*	*	*	*	*	*	4	**106**
12:15	*	*	1	**98**	4	87	3	*	*	*	*	*	*	*	3	**92**
12:30	*	*	0	**104**	6	80	8	*	*	*	*	*	*	*	5	**92**
12:45	*	*	5	**95**	3	**98**	3	*	*	*	*	*	*	*	4	**96**
01:00	*	*	2	85	1	**93**	2	*	*	*	*	*	*	*	2	89
01:15	*	*	2	101	0	**82**	1	*	*	*	*	*	*	*	1	92
01:30	*	*	0	85	0	**94**	2	*	*	*	*	*	*	*	1	90
01:45	*	*	3	79	4	72	2	*	*	*	*	*	*	*	3	76
02:00	*	*	3	101	2	66	3	*	*	*	*	*	*	*	3	84
02:15	*	*	2	85	3	71	1	*	*	*	*	*	*	*	2	78
02:30	*	*	1	71	3	74	3	*	*	*	*	*	*	*	2	72
02:45	*	*	3	59	1	74	5	*	*	*	*	*	*	*	3	66
03:00	*	**77**	1	61	5	51	1	*	*	*	*	*	*	*	2	63
03:15	*	**57**	2	76	2	56	4	*	*	*	*	*	*	*	3	63
03:30	*	**83**	8	58	6	85	7	*	*	*	*	*	*	*	7	75
03:45	*	**66**	10	64	10	43	9	*	*	*	*	*	*	*	10	58
04:00	*	48	11	53	8	52	13	*	*	*	*	*	*	*	11	51
04:15	*	48	25	43	27	61	30	*	*	*	*	*	*	*	27	51
04:30	*	47	29	46	43	62	33	*	*	*	*	*	*	*	35	52
04:45	*	36	48	48	48	58	63	*	*	*	*	*	*	*	53	47
05:00	*	55	81	71	85	67	88	*	*	*	*	*	*	*	85	64
05:15	*	57	128	56	129	55	139	*	*	*	*	*	*	*	132	56
05:30	*	41	175	51	180	39	173	*	*	*	*	*	*	*	176	44
05:45	*	51	210	69	184	50	186	*	*	*	*	*	*	*	193	57
06:00	*	32	206	47	225	43	239	*	*	*	*	*	*	*	223	41
06:15	*	38	**251**	44	**233**	50	236	*	*	*	*	*	*	*	**240**	44
06:30	*	27	**254**	31	**254**	37	193	*	*	*	*	*	*	*	**234**	32
06:45	*	30	**246**	26	**219**	45	**308**	*	*	*	*	*	*	*	**258**	34
07:00	*	35	**237**	33	**265**	31	**290**	*	*	*	*	*	*	*	**264**	33
07:15	*	23	229	25	210	30	**260**	*	*	*	*	*	*	*	233	26
07:30	*	26	215	19	235	23	**241**	*	*	*	*	*	*	*	230	23
07:45	*	14	187	26	175	28	186	*	*	*	*	*	*	*	183	23
08:00	*	33	180	19	206	20	186	*	*	*	*	*	*	*	191	24
08:15	*	26	167	26	199	28	185	*	*	*	*	*	*	*	184	27
08:30	*	15	186	18	186	24	180	*	*	*	*	*	*	*	184	19
08:45	*	16	202	13	127	30	176	*	*	*	*	*	*	*	168	20
09:00	*	21	214	18	192	31	171	*	*	*	*	*	*	*	192	23
09:15	*	25	240	23	213	38	201	*	*	*	*	*	*	*	218	29
09:30	*	15	221	15	201	30	192	*	*	*	*	*	*	*	205	20
09:45	*	11	187	7	181	18	207	*	*	*	*	*	*	*	192	12
10:00	*	18	147	21	201	19	162	*	*	*	*	*	*	*	170	19
10:15	*	16	182	21	139	14	166	*	*	*	*	*	*	*	162	17
10:30	*	4	152	4	157	13	155	*	*	*	*	*	*	*	155	7
10:45	*	8	149	9	133	16	*	*	*	*	*	*	*	*	141	11
11:00	*	4	119	8	121	7	*	*	*	*	*	*	*	*	120	6
11:15	*	10	127	6	118	9	*	*	*	*	*	*	*	*	122	8
11:30	*	3	143	3	102	2	*	*	*	*	*	*	*	*	122	3
11:45	*	4	118	5	98	2	*	*	*	*	*	*	*	*	108	4
Total	0	1120	5310	2237	5148	2259	4720	0	0	0	0	0	0	0	5266	2219
Day Total	1120		7547		7407		4720		0		0		0		7485	
% Splits	0.0%	100.0 %	70.4%	29.6%	69.5%	30.5%	100.0 %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	70.4%	29.6%
Peak		03:00	06:15	12:00	06:15	00:45	06:45								06:15	12:00
Vol.		283	988	408	971	367	1099								996	386
P.H.F.		0.852	0.972	0.919	0.916	0.936	0.892								0.943	0.910

ADT ADT 7,631 AADT 7,631

APPENDIX C

TSI'S

TRAFFIC SIGNAL INVENTORY

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION District 62

TSI NO. 00261
SHEET: 1 OF 10

INTERSECTION: US 11 @ WB I-12 RAMPS & BROWN'S SW RD
STATION ID: 9007 (Secondary) 9006 (Master)
CITY: SLIDELL
PARISH: ST TAMMANY
INSTALLATION DATE: 06/25/79
TYPE SIGNAL: VOLUME DENSITY, INTERCONNECTED
LAST REVISION DATE: 08/06/05

PHASES	Φ2 + Φ6			Φ4 + Φ7			Φ4 + Φ8			Φ3 + Φ8			Φ1 + Φ5						FL
INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	10	11	12	16	17	18	
SIGNAL FACES 1	G	Y	R			R			R			R	R/G	R/Y	R				R
2	G	Y	R			R			R			R	R/G	R/Y	R				R
3	G	Y	R			R			R			R			R				Y
4	G	Y	R			R			R			R			R				Y
5	G	Y	R			R			R			R			R				Y
6	G	Y	R			R			R	R/G	R/Y	R			R				Y
7			R			R	G	G	G	G/G	Y/Y	R			R				R
8			R			R	G	G	G	G	Y	R			R				R
9			R	G/G	Y/G	G	G	Y	R			R			R				R
10			R	G	G	G	G	Y	R			R			R				R
11																			
12																			
13																			
14																			
15																			
16																			
TIME SEC	23.0	5.0	1.0	15.0	5.0	1.0	10.0	5.0	1.0	24.0	5.0	1.0	18.0	5.0	1.0				
FO SEC	0			21			37			67			91						
SPLIT SEC		29		37		21	37		46	30		46		24					

Hours of Flashing Operation: Emergency

FREE OPERATION
2200 - 0500 (S-S)

Offset = 0 sec

PLAN = 1 CYCLE LENGTH = 120 TIMES OF OPERATION = 0500 - 1400 (S-S)

TIME SEC	17.0	5.0	1.0	19.0	5.0	1.0	8.0	5.0	1.0	20.0	5.0	1.0	25.0	5.0	1.0				
FO SEC	0			25			40			66			97						
SPLIT SEC		23		40		25	40		41	26		41		31					

Offset = 0 sec

PLAN = 2 CYCLE LENGTH = 120 TIMES OF OPERATION = 1400 - 2200 (S-S)

TIME SEC																			
FO SEC																			
YP SEC																			

Offset = sec

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

TIME SEC																			
FO SEC																			
YP SEC																			

Offset = sec

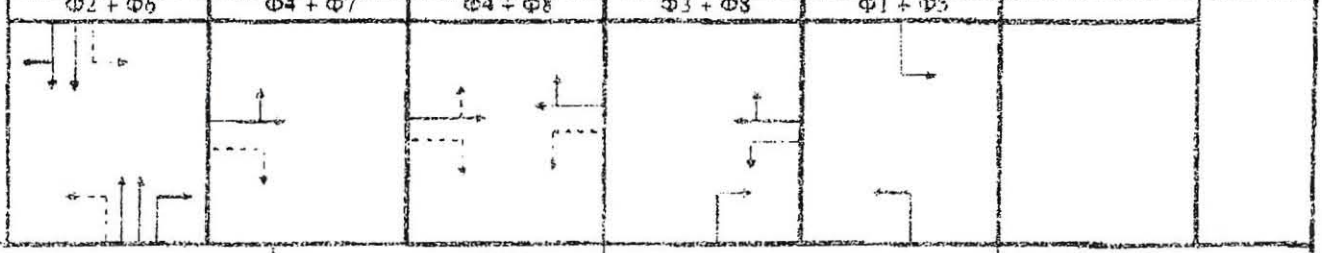
PLAN = CYCLE LENGTH = TIMES OF OPERATION =

TIME SEC																			
FO SEC																			
YP SEC																			

Offset = sec

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

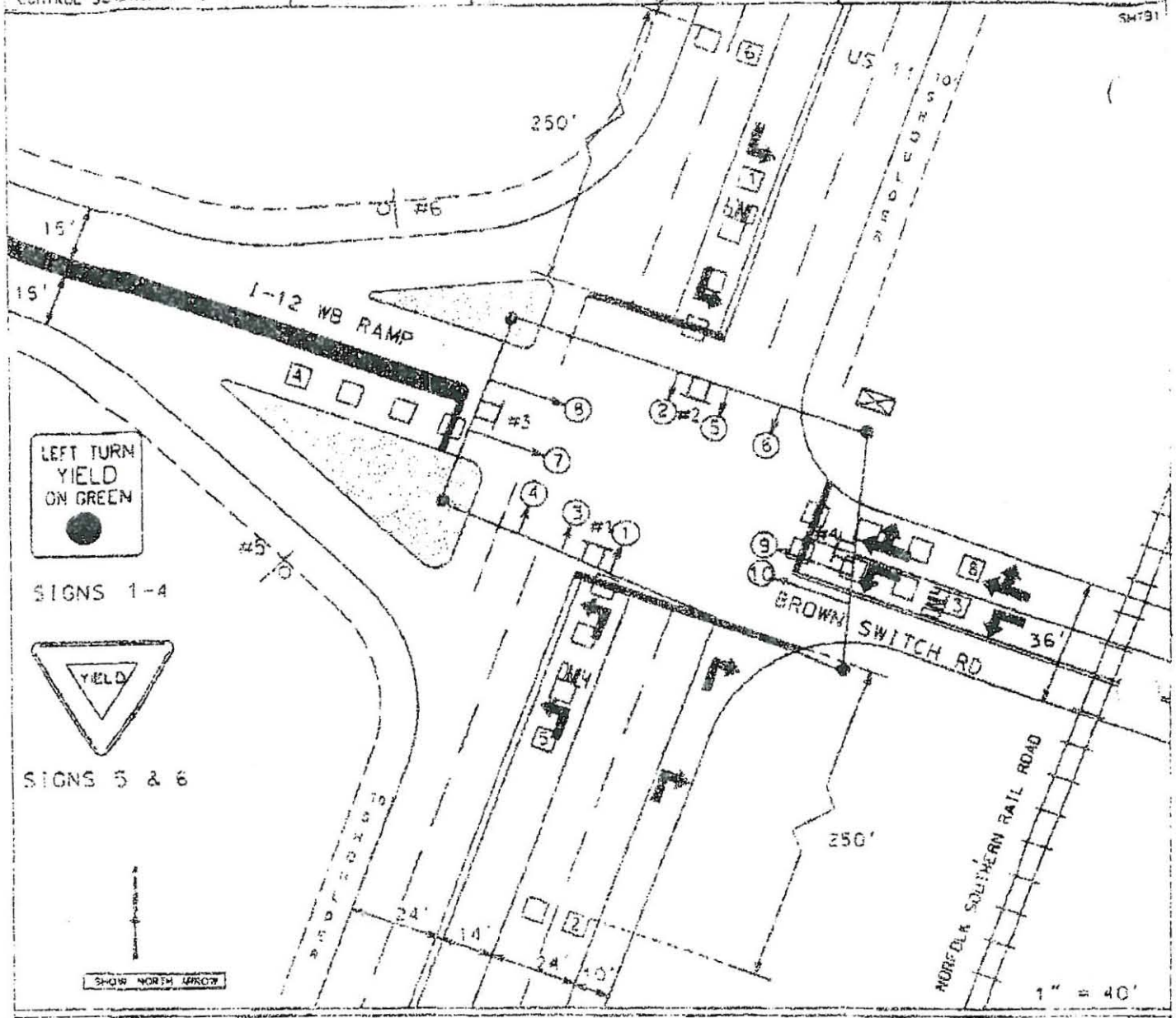
PHASING



SIGNAL WARRANTS: 1,2,3, & 7 MAINTAINED BY: LADOTD CONTROLLER MANUF: NAZTEC - TS2 SYSTEM #:

MASTER/ SLAVE: MASTER MASTER AT TSI #: 261 COORDINATED WITH TSI # S: 261, 714, 728

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 00261	SHEET 2 OF 10



- WOOD POLE
- METAL POLE
- SPAN WIRE
- CONTROLLER
- STOP LINE
- PED CROSS WALK
- #2 SPAN WIRE SIGN & NO.
- #3 GROUND MOUNT SIGN & NO.
- #3 OVERHEAD SIGN & NO.
- LD LOOP DETECTOR & NO.
- PEDESTAL MOUNT SIGNAL & NO.
- SIGNAL FACE & NO.
- PEDESTRIAN SIGNAL & NO.
- PED BUTTON & SIGN
- PARALLEL PARKING

EXISTING SPEED LIMITS

US 11 - 45 MPH

BROWNSWITCH - 45 MPH

SIGNAL FACES	3-5-8-&10					1-2-7-9	6			
TOTALS	5					4	1			
R - RED Y - YELLOW G - GREEN GA - GREEN ARROW YA - YELLOW ARROW BK - BLANK W - WHITE DW - DON'T WALK FDW - FLASHING DON'T WALK	R Y G 12" INC				P YA Y GA G 12" LED	R YA Y GA G 12" INC	R Y YA G GA 12" INC			PED

TRAFFIC SIGNAL INVENTORY

TSI NO. 00381

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION

SHEET: 3 OF 10

CONTROL SECTION: 018-04 HIGHWAY: US 11 PARISH: ST TAMMANY

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description		↳	↑	↓	→	↰	↓	↱	←
PARAMETER	RANGE								
MIN GREEN (MIN I)	0 - 99.0	5.0	15.0	5.0	5.0	5.0	15.0	5.0	5.0
PASSAGE TIME	0 - 9.9	2.0	6.0	5.0	3.0	2.0	6.0	2.0	5.0
MAX GREEN I (MAX I)	0 - 99.0	30.0	40.0	20.0	30.0	30.0	40.0	20.0	50.0
MAX GREEN II (MAX II)	0 - 99.0								
YELLOW CLEARANCE (YEL)	3 - 9.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
RED CLEARANCE (RED)	0 - 9.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WALK (WALK)	0 - 99.0								
PED CLEARANCE (P CLR)	0 - 99.0								
ADDED INITIAL GREEN	0 - 9.9		2.0				2.0		
TIME TO REDUCE	0 - 99.0		15.0				15.0		
TIME BEFORE REDUCTION	0 - 99.0		15.0				15.0		
MAX GAP	0 - 9.9		2.0				2.0		
MAX INITIAL GREEN	0 - 99		20.0				20.0		
WALK 2	0 - 99.0								
PED CLEARANCE 2	0 - 99.0								
MAX 3	0 - 99.0								
MAX EXTENSION	0 - 99.0								
RECALL	CODES	MOF	MIN	MOF	MOF	MOF	MIN	MOF	MOF
LOOP # - DELAY (in sec.)	0 - 99.0								
LOOP # - EXTEND (in sec.)	0 - 9.9								

RECALL FUNCTIONS	
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

Note 1: Phases 3 and 8 have elevated gap times due to the proximity of the railroad tracks to the intersection on that approach.

Note 2: Recall is MAX for phases 3 and 8 during plans.

Note 3:

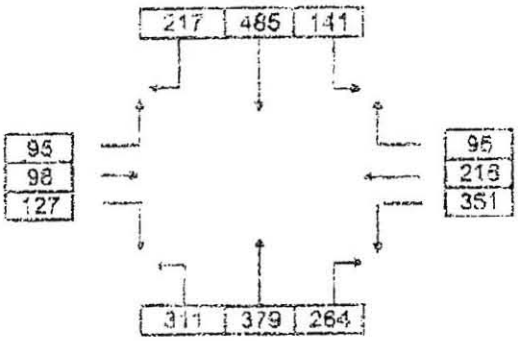
TRAFFIC SIGNAL INVENTORY

TSI NO. 00261

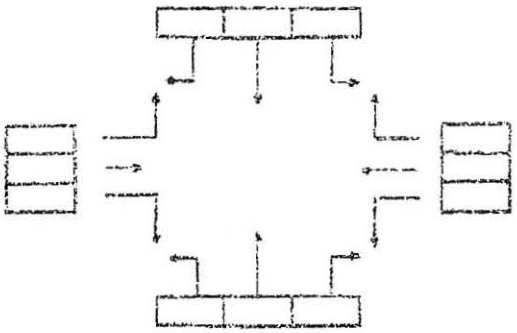
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION

SHEET 4 OF 10

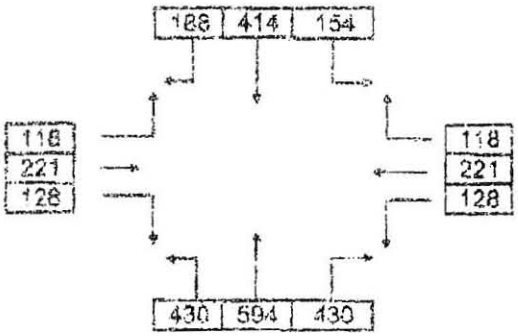
CONTROL SECTION: 018-04 HIGHWAY: US 11 PARISH: ST TAMMANY



AM PEAK HOUR: 3-27-03 7:30 - 8:30 AM



MIDDAY PEAK HOUR:



PM PEAK HOUR: 3-27-03 4:30 - 5:30 PM

SHOW NORTH ARROW

TRAFFIC VOLUMES - VPH

Peak Hour Factor ( )

LOOP #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
1	4 - 6' X 6'	1	SB US 11 - LEFT
2	2 - 6' X 6'	2	NB US 11 - THRU
3	4 - 6' X 6'	3	WB BROWNS' SWITCH RD - LEFT
4	4 - 6' X 6'	4 & 7	EB I-12 RAMP - THRU/LEFT
5	4 - 6' X 6'	5	NB US 11 - LEFT
6	2 - 6' X 6'	6	SB US 11 - THRU
8	4 - 6' X 6'	8	WB BROWNS' SWITCH RD - THRU/RIGHT

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 00261	SHEET 5 OF 10

SH7XI

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P2 & P6

FACES \ INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	G	Y	R			R	G	Y	R			R			R						
2	G	Y	R			R	G	G	G	G*	G*	G			R						
3	G	Y	R			R	G	Y	R			R			R						
4	G	Y	R			R	G	Y	R			R			R						
5	G	Y	R			R	G	G	G	G	G	G			R						
6	G	Y	R			R	G	G	G	G	G	G			R						
7			R	G*	Y*	R			R			R			R	G*					
8			R	G	Y	R			R			R			R	G					
9			R			R			R			R	G*	Y*	R						
10			R			R			R			R	G	Y	R						
11																					
12																					
13																					
14																					
15																					
16																					
TIME SEC	5	5	1	10	5	1	40	5	1	30	5	1	30	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION*		RETURN TO**	
	P2 & P6	P3 & P8	P2 & P6	P2 & P5	P4 & P7	P3 & P8

*REPEAT PREEMPTION SEQUENCE UNTIL TRACK CLEARS.

**SERVICE P4 & P7 FIRST AFTER THE TRACK HAS CLEARED IN ORDER TO HELP QUICKLY CLEAR TRAFFIC ON THE INTERSTATE 12 RAMP.

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO 00261	SHEET 8 OF 10

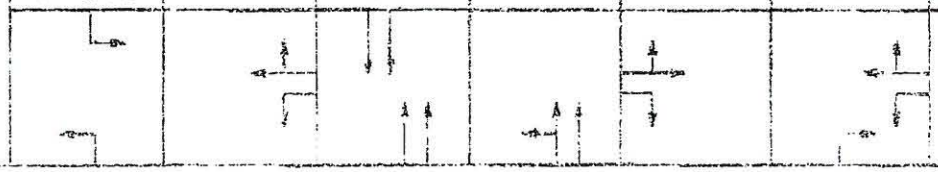
SHTX1

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P1 & P5

INTERVALS → / FACES ↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	R/R	R/R	R			R	G	Y	R			R			R						
2	R/R	R/R	R			R	G	G	G	G/G	G/G	G			R						
3			R			R	G	Y	R			R			R						
4			R			R	G	Y	R			R			R						
5			R			R	G	G	G	G	G	G			R						
6			R			R	G	G	G	G	G	G			R						
7			R	G/G	Y/Y	R			R			R			R	G/G					
8			R	G	Y	R			R			R			R	G					
9			R			R			R			R	G/G	Y/Y	R						
10			R			R			R			R	G	Y	R						
11																					
12																					
13																					
14																					
15																					
16																					
TIME SEC	5	5	1	10	5	1	40	5	1	30	5	1	30	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION*		RETURN TO**	
	P1 & P5	P3 & P8	P2 & P6	P2 & P5	P4 & P7	P3 & P8



*REPEAT PREEMPTION SEQUENCE UNTIL TRACK CLEARS.

**SERVICE P4 & P7 FIRST AFTER THE TRACK HAS CLEARED IN ORDER TO HELP QUICKLY CLEAR TRAFFIC ON THE INTERSTATE 12 RAMP.

TRAFFIC SIGNAL INVENTORY	TSI NO. 00714
.SIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 3 OF 5
CONTROL SECTION: 018-04 HIGHWAY: US 11	PARISH: ST TAMMANY 052

Phase Timing Parameters

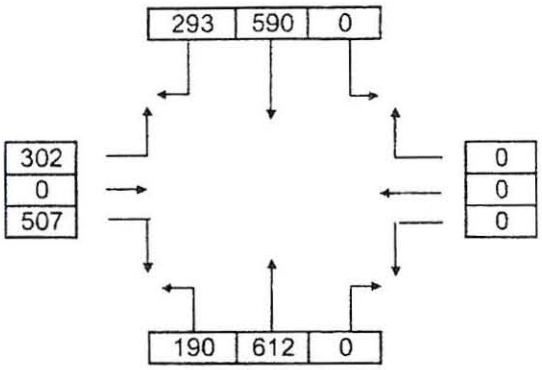
Phase Designation		1	2				6		8
Movement Description		↰	↓				↑		→
PARAMETER	RANGE								
MIN GREEN (MIN I)	0 - 99.0	5.0	15.0				15.0		10.0
PASSAGE TIME	0 - 9.9	3.0	6.0				6.0		4.0
MAX GREEN I (MAX I)	0 - 99.0	25.0	50.0				50.0		50.0
MAX GREEN II (MAX II)	0 - 99.0								
YELLOW CLEARANCE (YEL)	3 - 9.9	5.0	5.0				5.0		5.0
RED CLEARANCE (RED)	0 - 9.9	1.0	1.0				1.0		1.0
WALK (WALK)	0 - 99.0								
PED CLEARANCE (P CLR)	0 - 99.0								
ADDED INITIAL GREEN	0 - 9.9		2.0				2.0		
TIME TO REDUCE	0 - 99.0		15.0				15.0		
TIME BEFORE REDUCTION	0 - 99.0		15.0				15.0		
GAP	0 - 9.9		2.0				2.0		
MAX INITIAL GREEN	0 - 99		33.0				33.0		
WALK 2	0 - 99.0								
PED CLEARANCE 2	0 - 99.0								
MAX 3	0 - 99.0								
MAX EXTENSION	0 - 99.0								
RECALL	CODES	MOF	MIN				MIN		MOF
LOOP # - DELAY (in sec.)	0 - 99.0								
LOOP # - EXTEND (in sec.)	0 - 9.9								

RECALL FUNCTIONS	
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

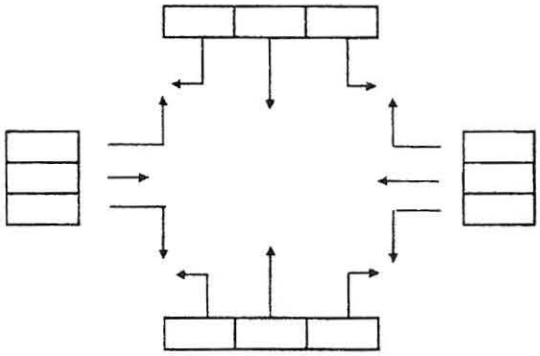
Note 1:
Note 2:
Note 3:

TRAFFIC SIGNAL INVENTORY	TSI NO. 00714
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 4 OF 5

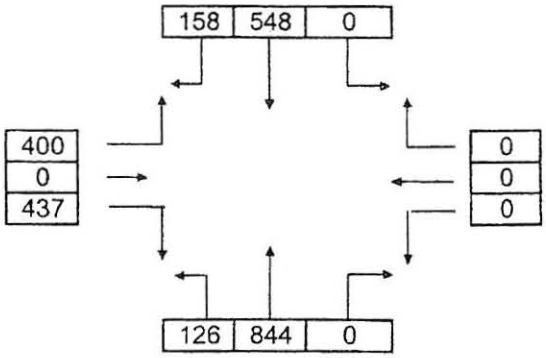
CONTROL SECTION: 018-04	HIGHWAY: US 11	PARISH: ST TAMMANY 052



AM PEAK HOUR: 3-25-03 7:30 - 8:30 AM



MIDDAY PEAK HOUR:



PM PEAK HOUR: 3-25-03 4:30 - 5:30 PM

SHOW NORTH ARROW

TRAFFIC VOLUMES - VPH

Peak Hour Factor ( )

CAMERA #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
3	N/A	1	NB US 11 - LEFT
4	N/A	8	EB I-12 ON/OFF RAMP - THRU/LEFT
LOOP #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
2	2 - 6' x 6'	2	SB US 11 - THRU
6	2 - 6' x 6'	6	NB US 11 - THRU

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TRAFFIC AND PLANNING SECTION

TRAFFIC SIGNAL INVENTORY

FORM TSI -1 (REV. 1/92)

[illegible]

PHASE NO.	INTERVAL																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
1																									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									

FLASH TIME OF PHASES

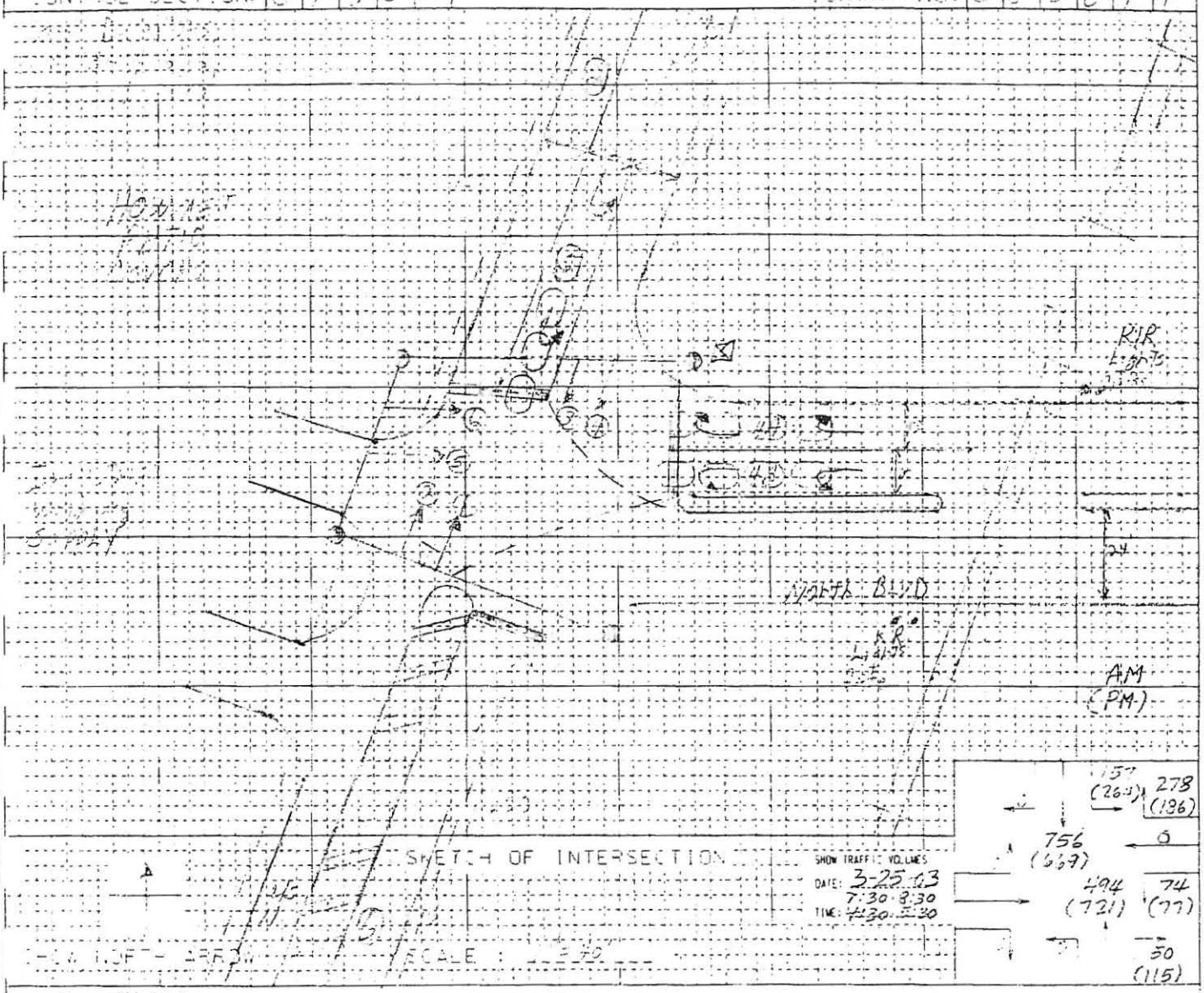
TIME (SEC.)		OS-1_____
%		OS-2_____
FORCE OFF (SEC)	TIME OF OPERATION_____ DIAL NO._____ TOTAL CYCLE LENGTH_____SEC.	OS-3_____
TIME (SEC.)		OS-1_____
%		OS-2_____
FORCE OFF (SEC)	TIME OF OPERATION_____ DIAL NO._____ TOTAL CYCLE LENGTH_____SEC.	OS-3_____
TIME (SEC.)		OS-1_____
%		OS-2_____
FORCE OFF (SEC)	TIME OF OPERATION_____ DIAL NO._____ TOTAL CYCLE LENGTH_____SEC.	OS-3_____

FACE NO.	SIGNAL FACE INDICATIONS				
TOTAL					
R=RED Y=YELLOW G=GREEN ←=ARROW WA=WALK A=WAIT DW=DON'T WALK 8=8" LENS 12=12" LENS					
FACE NO.					
TOTAL					
SHOW OTHERS	PEDESTRIAN SIG.				

ACTUATED CONTROLLER TIMING DATA

FUNCTION	A	B	C	D	E	F	G	H
ACTIVE PHASES (ON/OFF)								
MINIMUM GREEN								
PASSAGE								
MAX. INTERVAL I								
MAX. INTERVAL II								
YELLOW CLEARANCE								
RED CLEARANCE								
TIME BEFORE REDUCTION								
TIME TO REDUCE								
MINIMUM GAP								
ADDED INITIAL								
WALK								
PED CLEAR								
RECALL (L,N,C,R,M,MX)								
DETECTOR # UNDER PHASE								

CONTROL SECTION 0 1 8 0 4 HIGHWAY NO. 0 0 0 0 1 1



MONO POLE	PARALLEL PARKING STALLS	CONTROLLER	EXISTING SPEED LIMITS
METAL POLE	ANGLE PARKING STALLS	GROUND MOUNTED SIGN & NO.	
SPAN WIRE	STOP LINE	OVERHEAD SIGN & NO.	
SIGNAL FACE & NO.	CROSS WALK	PEDESTAL SIGNAL & NO.	
PEDESTRIAN SIGNAL & NO.	BUILDING AREA		
LOOP DETECTOR			

SIGNAL PHASING SEQUENCE

A	B	C	D	E	F	G	H

SIGNAL WARRANTED: MAINTENANCE RESPONSIBILITY: CONTROLLER TYPE:

FOR SIGNALS WITHIN SYSTEM INDICATE: MASTER CONTROLLER LOCATION NO.

SUPERVISOR: Sgt. R. [illegible]

DATE: [illegible]

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 263	SHEET OF

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P2 & P6

INTERVALS →		TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
← FACES →	1	Y	R				G	Y	R													
	2	Y	R				G	Y	R													
	3	Y	R				G	Y	R													
	4	Y	R				G	Y	R													
	5			G	Y	R							G									
	6			G/⊖	Y/⊖	R							G/⊖									
	7																					
	8																					
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					
	16																					
TIME	SEC	5	1	10	5	1	UTC	5	1				NORMAL INTERVAL TIMINGS									
	%																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION (SEE NOTE)		RETURN TO
	P2&P6	P4	P2 & P6		P4
	P2 ↓ P6 ↑	P4	P2 ↓ P6 ↑		P4

NOTE: UTC = UNTIL TRAIN CLEARS

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 263	SHEET OF

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P4

INTERVALS →	TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
↓ FACES →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1						G	Y	R													
2						G	Y	R													
3						G	Y	R													
4						G	Y	R													
5	G	G	G	Y	R							G									
6	G/⊖	G/⊖	G/⊖	Y/⊖	R							G/⊖									
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
TIME SEC	5	1	10	5	1	UTC	5	1				NORMAL INTERVAL TIMINGS									
TIME %																					
PHASING SEQUENCE	TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
	P4		P4			P2 & P6						P4									
	P4		P4			P2 ↓ ↑ P6						P4									

NOTE: UTC = UNTIL TRAIN CLEARS

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 263	SHEET OF

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P2 & P5

INTERVALS →	TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FACES ↓ 1	~~R~~ Y	R				G	Y	R													
2	Y	R				G	Y	R													
3						G	Y	R													
4						G	Y	R													
5			G	Y	R							G									
6			G ~~G~~	Y ~~Y~~	R							G ~~G~~									
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
TIME SEC	5	1	10	5	1	UTC	5	1				NORMAL	INTERVAL	TIMINGS							
TIME %																					
PHASING SEQUENCE	TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
	P2&P5		P4			P2 & P6						P4									
	P2 P5		P4			P2 P6						P4									

NOTE: UTC = UNTIL TRAIN CLEARS

TRAFFIC SIGNAL INVENTORY

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION — District 62

TSI NO. 00706

SHEET: 1 OF 9

:RSECTION: US 11 @ LAFAYETTE STREET

CITY: SLIDELL | PARISH: ST TAMMANY 52 | INSTALLATION DATE: 05/21/91

TYPE SIGNAL: VOLUME DENSITY, INTERCONNECTED | LAST REVISION DATE: 10/01/02

PHASES	Φ2 + Φ6			Φ1 + Φ6			Φ4 + Φ8			Φ2 + Φ5									FL
INTERVALS →	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
SIGNAL FACES 1	G	G	G	←G/G	←Y/Y	R			R			R							Y
2	G	G	G	G	Y	R			R			R							Y
3	G	Y	R			R			R	←G/G	←Y/G	G							Y
4	G	Y	R			R			R	G	G	G							Y
5			R			R	G	Y	R			R							R
6			R			R	G	Y	R			R							R
7			R			R	G	Y	R			R							R
8			R	R/G→	R/Y→	R	G	Y	R			R							R
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

FREE OPERATION
10:00 PM - 6:00 AM
(S-S)

Hours of Flashing Operation: Emergency

TIME	SEC	29.0	5.0	1.0	6.0	5.0	1.0	18.0	5.0	1.0	13.0	5.0	1.0							Offset = 50 sec
FO	SEC	0			12			36			55									
YP	SEC				11			5			10									

PLAN = 1 CYCLE LENGTH = 90 TIMES OF OPERATION = 6:00 AM - 7:00 AM, 7:30 PM - 10:00 PM

TIME	SEC	42.0	5.0	1.0	8.0	5.0	1.0	24.0	5.0	1.0	12.0	5.0	1.0							Offset = 0 sec
FO	SEC	0			14			44			62									
YP	SEC				11			5			10									

PLAN = 2 CYCLE LENGTH = 110 TIMES OF OPERATION = 7:00 AM - 11:00 AM

TIME	SEC	40.0	5.0	1.0	12.0	5.0	1.0	22.0	5.0	1.0	12.0	5.0	1.0							Offset = 0 sec
FO	SEC	0			18			46			64									
YP	SEC				11			5			10									

PLAN = 3 CYCLE LENGTH = 110 TIMES OF OPERATION = 11:00 AM - 3:00 PM

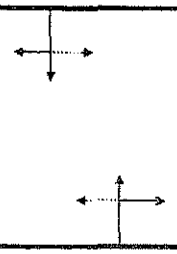
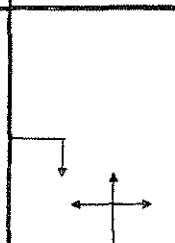
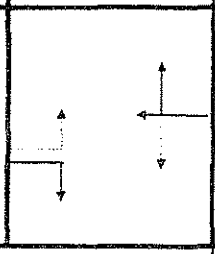
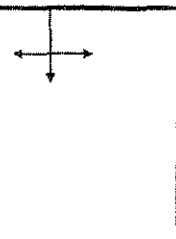
TIME	SEC	47.0	5.0	1.0	17	5.0	1.0	25.0	5.0	1.0	17.0	5.0	1.0							Offset = 0 sec
FO	SEC	0			23			54			77									
YP	SEC				11			5			10									

PLAN = 4 CYCLE LENGTH = 130 TIMES OF OPERATION = 3:00 PM - 7:30 PM

TIME	SEC																			Offset = sec
FO	SEC																			
YP	SEC																			

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

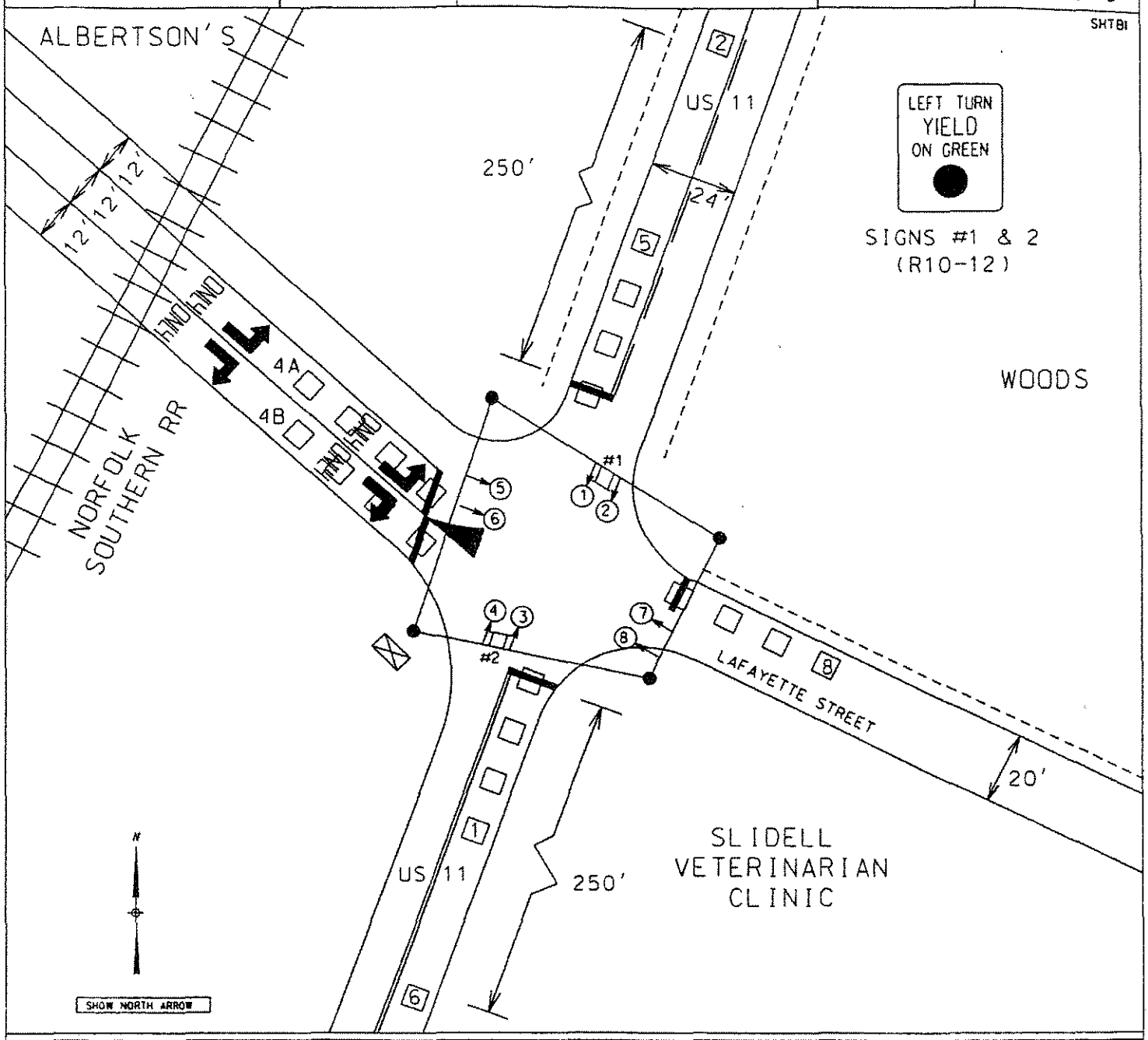
PHASING

Φ2 + Φ6	Φ1 + Φ6	Φ4 + Φ8	Φ2 + Φ5		
					

SIGNAL WARRANTS: 1,2,3	MAINTAINED BY: DOTD	CONTROLLER MANUF: NAZTEC	SYSTEM #:
MASTER/ SLAVE: SLAVE	MASTER AT TSI #: 241	COORDINATED WITH TSI #'S: 235,237,238,241,244,253,706	

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 00706	SHEET 2 OF 9

SHT8I



- WOOD POLE
- METAL POLE
- SPAN WIRE
- CONTROLLER
- STOP LINE
- PED CROSS WALK
- #2 SPAN WIRE SIGN & NO.
- #3 GROUND MOUNT SIGN & NO.
- #3 OVERHEAD SIGN & NO.
- L4 LOOP DETECTOR & NO.
- PEDESTAL MOUNT SIGNAL & NO.
- SIGNAL FACE & NO.
- PEDESTRIAN SIGNAL & NO.
- PED BUTTON & SIGN
- PARALLEL PARKING

EXISTING SPEED LIMITS

US 11 (SOUTH) - 40 MPH

US 11 (NORTH) - 45 MPH

SIGNAL FACES	2,4-7					1,3	8			
TOTALS	5					2	1			
R : RED Y : YELLOW G : GREEN G : GREEN ARROW Y : YELLOW ARROW DK : DARK 12" : 12" DIA. LENS W : WALK DW : DON'T WALK FDW : FLASHING DON'T WALK	R Y G					R Y Y G G	R Y Y G G			PFC

TRAFFIC SIGNAL INVENTORY	TSI NO. 00706
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 3 OF 9
CONTROL SECTION: 018-04 HIGHWAY: US 11	PARISH: ST TAMMANY 52

Phase Timing Parameters

Phase Designation		1	2		4	5	6		8
Movement Description		↰	↓		←	↳	↑		→
PARAMETER	RANGE								
MIN GREEN (MIN I)	0 - 99.0	5.0	15.0		5.0	5.0	15.0		5.0
PASSAGE TIME	0 - 9.9	2.0	6.0		3.0	2.0	6.0		3.0
MAX GREEN I (MAX I)	0 - 99.0	20.0	65.0		30.0	20.0	65.0		30.0
MAX GREEN II (MAX II)	0 - 99.0								
YELLOW CLEARANCE (YEL)	3 - 9.9	5.0	5.0		5.0	5.0	5.0		5.0
RED CLEARANCE (RED)	0 - 9.9	1.0	1.0		1.0	1.0	1.0		1.0
WALK (WALK)	0 - 99.0								
PED CLEARANCE (P CLR)	0 - 99.0								
ADDED INITIAL GREEN	0 - 9.9		2.0				2.0		
TIME TO REDUCE	0 - 99.0		15.0				15.0		
TIME BEFORE REDUCTION	0 - 99.0		15.0				15.0		
GAP	0 - 9.9		2.0				2.0		
MAX INITIAL GREEN	0 - 99		29.0				29.0		
WALK 2	0 - 99.0								
PED CLEARANCE 2	0 - 99.0								
MAX 3	0 - 99.0								
MAX EXTENSION	0 - 99.0								
RECALL	CODES	MOF	MAX		MOF	MOF	MAX		MOF
LOOP # - DELAY (in sec.)	0 - 99.0	3				3			
LOOP # - EXTEND (in sec.)	0 - 9.9								

RECALL FUNCTIONS	
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

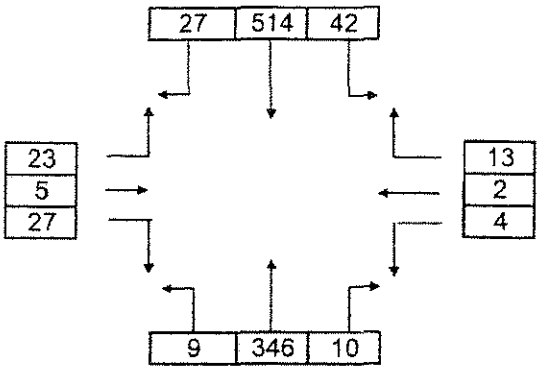
Note 1:

Note 2:

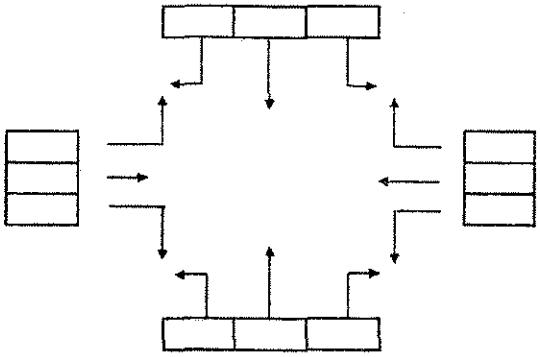
Note 3:

TRAFFIC SIGNAL INVENTORY	TSI NO. 00706
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 4 OF 9

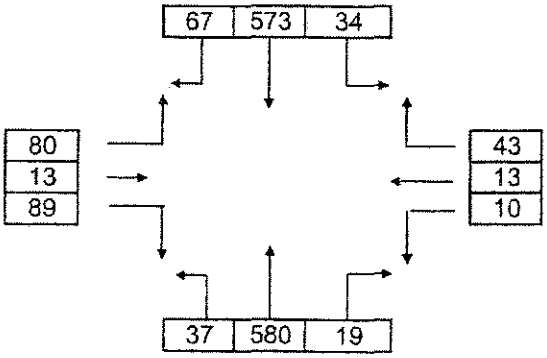
CONTROL SECTION: 018-04 **HIGHWAY:** US 11 **PARISH:** ST TAMMANY 52



AM PEAK HOUR: 6-6-02 8:00 - 9:00 AM



MIDDAY PEAK HOUR:



PM PEAK HOUR: 6-6-02 8:00 - 9:00 AM

SHOW NORTH ARROW

TRAFFIC VOLUMES - VPH

Peak Hour Factor ( )

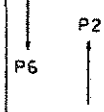
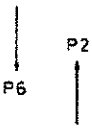
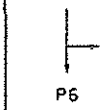
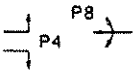
LOOP #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
1	4 - 6' X 6'	1	NB US 11 - LEFT
2	1 - 6' X 6'	2	SB US 11 - THRU
4A	4 - 6' X 6'	4	EB SHOPPING CENTER DRIVE - LEFT
4B	4 - 6' X 6'	4	EB SHOPPING CENTER DRIVE - RIGHT
5	4 - 6' X 6'	5	SB US 11 - LEFT
6	1 - 6' X 6'	6	NB US 11 - THRU
8	4 - 6' X 6'	8	WB LAFAYETTE ST - THRU/LEFT/RIGHT

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 706	SHEET 5 OF 9

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P2 & P6

INTERVALS →		TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FACES ↑	1	Y	R				G	Y	R													
	2	Y	R				G	Y	R													
	3	Y	R				G	Y	R	~~G~~	~~Y~~	R										
	4	Y	R				G	Y	R	G	Y	R										
	5												G									
	6												G									
	7			G	Y	R							G									
	8			G/~~G~~	Y/~~Y~~	R							G									
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					
	16																					
TIME	SEC	5	1	10	5	1	30	5	1	10	5	1	NORMAL INTERVAL TIMINGS									
	%																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION (SEE NOTE)		RETURN TO
	P2&P6	P4	P2 & P6	P1 & P6	P4 & P8
					

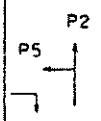
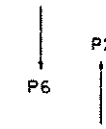
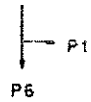
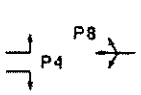
NOTE: REPEAT PREEMPTION SEQUENCES UNTIL TRAIN CLEARS

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 706	SHEET 6 OF 9

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P2 & P5

INTERVALS →		TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FACES ↑	1	~~R~~ Y	R	_	_	_	G	Y	R				_	_	_	_	_	_	_	_	_	_
	2	Y	R	_	_	_	G	Y	R				_	_	_	_	_	_	_	_	_	_
	3	_		_	_		G	Y	R	~~G~~ G	~~R~~ Y	R	_	_	_	_	_	_	_	_	_	_
	4	_		_	_		G	Y	R	G	Y	R	_	_	_	_	_	_	_	_	_	_
	5	_		_	_								G	_	_	_	_	_	_	_	_	_
	6	_		_	_								G	_	_	_	_	_	_	_	_	_
	7			G	Y	R	_	_					G	_	_	_	_	_	_	_	_	_
	8	R/~~G~~	R/~~G~~	G/~~G~~	Y/~~Y~~	R	_	_			_	_	G	_	_	_	_	_	_	_	_	_
	9						_	_			_	_		_	_	_	_	_	_	_	_	_
	10						_	_			_	_		_	_	_	_	_	_	_	_	_
	11	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	12	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	13	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	14	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	15	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	16	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
TIME	SEC	5	1	10	5	1	30	5	1	10	5	1	NORMAL	INTERVAL	TIMINGS							
	%	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION (SEE NOTE)		RETURN TO
	P2&P5	P4	P2 & P6	P1 & P6	P4 & P8
					

NOTE: REPEAT PREEMPTION SEQUENCES UNTIL TRAIN CLEARS

CONTROL SECTION 018-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 706	SHEET 7 OF 9

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P4 & P8

INTERVALS →		TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FACES ↓	1						G	Y	R													
	2						G	Y	R													
	3						G	Y	R	⊕G	⊕Y	R										
	4						G	Y	R	G	Y	R										
	5	Y	R										G									
	6	Y	R										G									
	7	G	G	G	Y	R							G									
	8	R/⊕	R/⊕	C/⊕	Y/⊕	R							G									
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					
	16																					
TIME	SEC	5	1	10	5	1	30	5	1	10	5	1	NORMAL	INTERVAL	TIMINGS							
	%																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION (SEE NOTE)		RETURN TO	
	P4&P8	P4	P2 & P6	P1 & P6	P4 & P8	
	P8, P4	P4	P2, P6	P1, P6	P8, P4	

NOTE: REPEAT PREEMPTION SEQUENCES UNTIL TRAIN CLEARS

CONTROL SECTION C18-04	HIGHWAY US 11	PARISH ST TAMMANY	TSI NO. 706	SHEET 8 OF 9

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION: P1 & P6

INTERVALS →		TRACK CLEARING					PREEMPTION (SEE NOTE)						RETURN TO									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
FACES ↓	1						G	Y	R													
	2						G	Y	R													
	3	~~Y~~	R				G	Y	R	~~G~~	~~Y~~	R										
	4	Y	R				G	Y	R	G	Y	R										
	5												G									
	6												G									
	7			G	Y	R							G									
	8			~~G~~	~~Y~~	R							G									
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					
	16																					
TIME	SEC	5	1	10	5	1	30	5	1	10	5	1	NORMAL INTERVAL TIMINGS									
	%																					

PHASING SEQUENCE	TRACK CLEARING		PREEMPTION (SEE NOTE)		RETURN TO	
	P1&P6	P4	P2 & P6	P1 & P6	P4 & P8	
	P1 P6	P4	P2 P6	P1 P6	P4 P8	

NOTE: REPEAT PREEMPTION SEQUENCES UNTIL TRAIN CLEARS

RAFFIC SIGNAL INVENTORY

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION — District 62

TSI NO. 000241

SHEET: 1 OF 9

INTERSECTION: US 190 (GAUSE BLVD) @ US 11 (FRONT ST)

CITY: SLIDELL | PARISH: ST TAMMANY 52 | INSTALLATION DATE: 08/04/82

. SIGNAL: VOLUME DENSITY, INTERCONNECTED | LAST REVISION DATE: 04/01/97

PHASES	Φ2 + Φ6			Φ3 + Φ7			Φ4 + Φ8			Φ1 + Φ5									FL
INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
SIGNAL FACES 1	G	Y	R	R/G→	R/Y→	R			R			R							R
2	G	Y	R			R			R			R							R
3	G	Y	R			R			R			R							R
4	G	Y	R	R/G→	R/Y→	R			R			R							R
5	G	Y	R			R			R	R/G←	R/Y←	R							R
6	G	Y	R			R			R	R/G←	R/Y←	R							R
7			R			R	G	Y	R	R/G→	R/Y→	R							R
8			R			R	G	Y	R			R							R
9			R			R	G	Y	R			R							R
10			R			R	G	Y	R	R/G→	R/Y→	R							R
11			R	R/G←	R/Y←	R	G	Y	R			R							R
12			R	R/G←	R/Y←	R	G	Y	R			R							R
13																			
14																			
15																			
16																			

FREE OPERATION
10:00 PM - 6:00 AM
(S-S)

Hours of Flashing Operation: Emergency

TIME	SEC	28.0	5.0	1.0	12.0	5.0	1.0	18.0	5.0	1.0	8.0	5.0	1.0							Offset = 0 sec
FO	SEC	0			18			42			56									
YP	SEC																			

PLAN = 1 CYCLE LENGTH = 90 TIMES OF OPERATION = 6:00 AM - 7:00 AM, 7:30 PM - 10:00 PM

[illegible]	SEC	38.0	5.0	1.0	12.0	5.0	1.0	28.0	5.0	1.0	8.0	5.0	1.0							Offset = 64 sec
[illegible]	SEC	0			18			52			66									
YP	SEC																			

PLAN = 2 CYCLE LENGTH = 110 TIMES OF OPERATION = 7:00 AM - 11:00 AM

TIME	SEC	36.0	5.0	1.0	17.0	5.0	1.0	24.0	5.0	1.0	9.0	5.0	1.0							Offset = 40 sec
FO	SEC	0			23			53			68									
YP	SEC																			

PLAN = 3 CYCLE LENGTH = 110 TIMES OF OPERATION = 11:00 AM - 3:00 PM

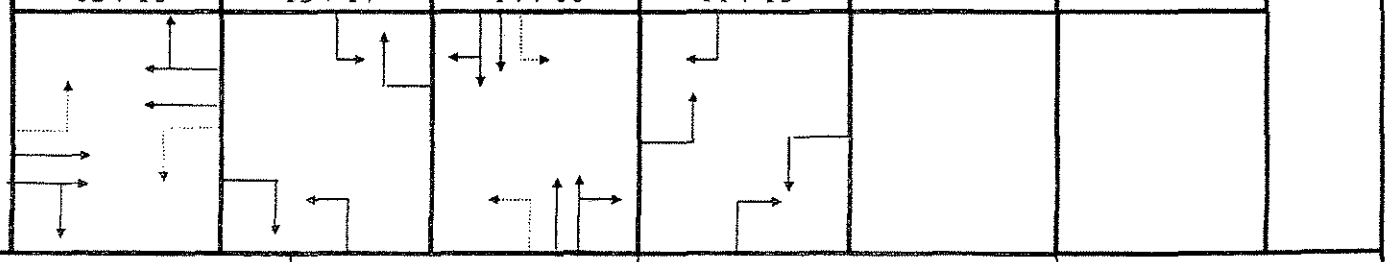
TIME	SEC	45.0	5.0	1.0	21	5.0	1.0	30.0	5.0	1.0	10.0	5.0	1.0							Offset = 50 sec
FO	SEC	0			27			63			79									
YP	SEC																			

PLAN = 4 CYCLE LENGTH = 130 TIMES OF OPERATION = 3:00 PM - 7:30 PM

TIME	SEC																			Offset = sec
FO	SEC																			
YP	SEC																			

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

PHASING

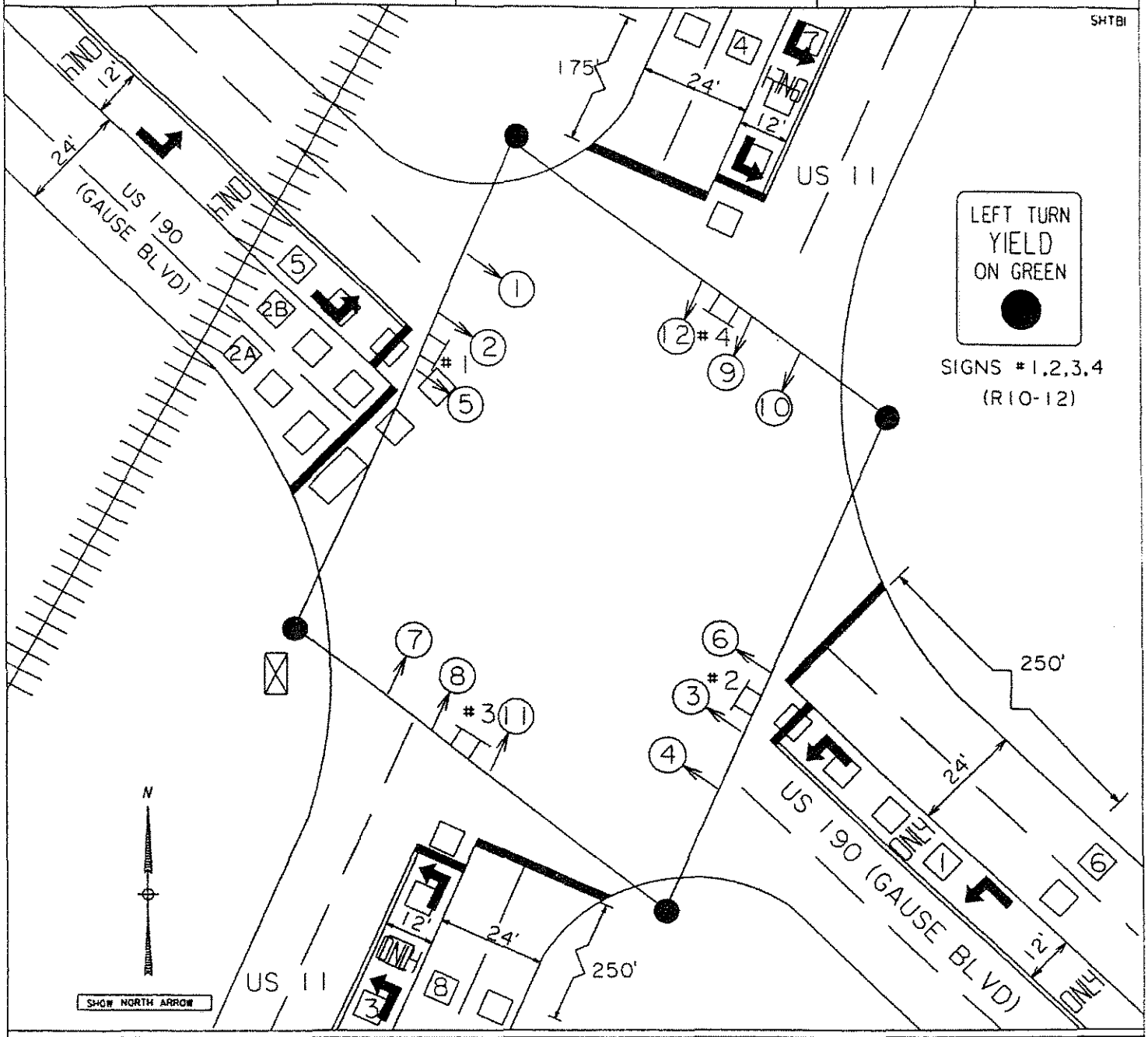


SIGNAL WARRANTS: 1,2,3 | MAINTAINED BY: LADOTD | CONTROLLER MANUF: NAZTEC | SYSTEM #:

MASTER/ SLAVE: MASTER | TWISTED PAIR: SLAVE | HARDWIRE: | MASTER AT TSI #: | TWISTED PAIR: 258 | HARDWIRE: 241 | COORDINATED WITH TSI #'S: | TWISTED PAIR: 254,258,259,266,290,702,716,242, 251,257,267,270,241 | HARDWIRE: 235,237,238,241,244,253,706

CONTROL SECTION 018-03	HIGHW. US 190	PARISH ST TAMMANY	TSI NO. 00241	SHEET 2 OF 9

SHTBI



- WOOD POLE
- METAL POLE
- SPAN WIRE
- CONTROLLER
- STOP LINE
- PED CROSS WALK
- #2 SPAN WIRE SIGN & NO.
- #3 GROUND MOUNT SIGN & NO.
- #3 OVERHEAD SIGN & NO.
- L4 LOOP DETECTOR & NO.
- 2 PEDESTAL MOUNT SIGNAL & NO.
- 2 SIGNAL FACE & NO.
- 2 PEDESTRIAN SIGNAL & NO.
- PED BUTTON & SIGN
- PARALLEL PARKING

EXISTING SPEED LIMITS

US 190 (EAST) - 40 MPH

US 190 (WEST) - 35 MPH

US 11 - 40 MPH

SIGNAL FACES	2,3,8,9					5,6,11,12	1,4,7,10			
TOTALS	4					4	4			
R = RED Y = YELLOW G = GREEN G = GREEN ARROW Y = YELLOW ARROW DK = DARK 12" = 12" DIA. LENS W = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK	LED R 12" Y 12" G 12"					LED R 12" 12" Y 12" 12" G 12"	LED R 12" 12" Y 12" 12" G 12"			PF

TRAFFIC SIGNAL INVENTORY	TSI NO. 000241
...SIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 3 OF 9
CONTROL SECTION: 018-03 HIGHWAY: US 190	PARISH: ST TAMMANY 52

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description		↓	→	↰	↓	↗	←	↳	↑
PARAMETER	RANGE								
MIN GREEN (MIN I)	0 - 99.0	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
PASSAGE TIME	0 - 9.9	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
MAX GREEN I (MAX I)	0 - 99.0	25.0	50.0	25.0	50.0	25.0	50.0	25.0	50.0
MAX GREEN II (MAX II)	0 - 99.0								
YELLOW CLEARANCE (YEL)	3 - 9.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
RED CLEARANCE (RED)	0 - 9.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WALK (WALK)	0 - 99.0								
PED CLEARANCE (P CLR)	0 - 99.0								
ADDED INITIAL GREEN	0 - 9.9				3.0		3.0		3.0
IME TO REDUCE	0 - 99.0				20.0		20.0		20.0
TIME BEFORE REDUCTION	0 - 99.0				10.0		10.0		10.0
GAP	0 - 9.9				2.0		2.0		2.0
MAX INITIAL GREEN	0 - 99								
WALK 2	0 - 99.0								
PED CLEARANCE 2	0 - 99.0								
MAX 3	0 - 99.0								
MAX EXTENSION	0 - 99.0								
RECALL	CODES	MOF	MIN	MOF	MON	MOF	MIN	MOF	MON
LOOP # - DELAY (in sec.)	0 - 99.0								
LOOP # - EXTEND (in sec.)	0 - 9.9								

RECALL FUNCTIONS	
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

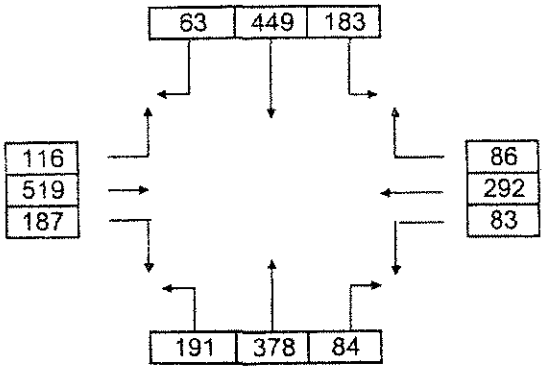
1:

Note 2:

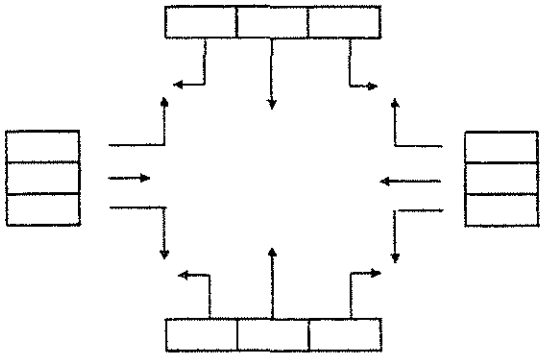
Note 3:

TRAFFIC SIGNAL INVENTORY	TSI NO. 000241
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 4 OF 9

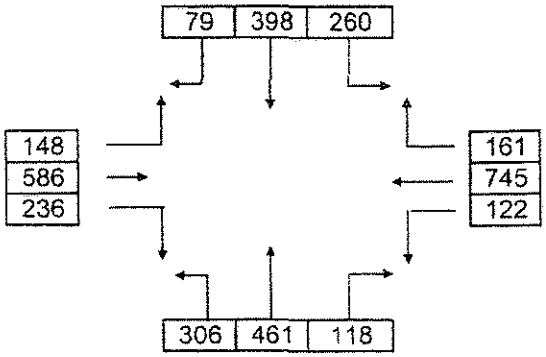
CONTROL SECTION: 018-03	HIGHWAY: US 190	PARISH: ST TAMMANY 52



AM PEAK HOUR: 02-13-2003 7:30AM - 8:30AM



MIDDAY PEAK HOUR:



PM PEAK HOUR: 02-13-2003 4:30PM - 5:30PM

SHOW NORTH ARROW

TRAFFIC VOLUMES - VPH

Peak Hour Factor ( )

LOOP #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
1	4 - 6' X 6'	1	WB - US 190 (GAUSE) - LEFT
2A, 2B	5 - 6' X 6', 1 - 8' X 6', 1 - 12' X 6'	2	EB - US 190 (GAUSE) - THRU
3	4 - 6' X 6'	3	NB - US 11 - LEFT
4	1 - 6' X 6'	4	SB - US 11 - LEFT
5	4 - 6' X 6'	5	EB - US 190 (GAUSE) - LEFT
6	1 - 6' X 6'	6	WB - US 190 (GAUSE) - THRU
7	4 - 6' X 6'	7	SB - US 11 - THRU
8	1 - 6' X 6'	8	NB - US 11 - THRU

CONTROL SECTION 018-03	HIGHWAY S 190	PARISH ST TAMMANY	TSI NO. 000241	SHEET 5 OF 9

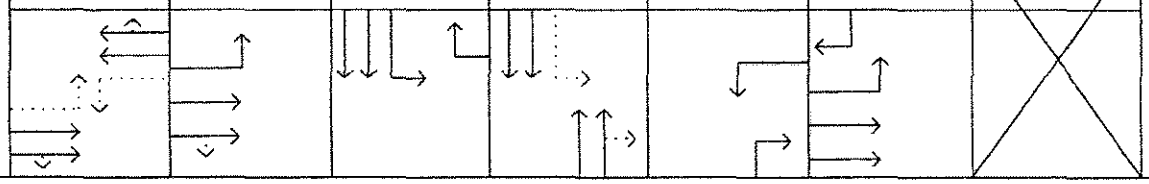
SHTX1

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P2 & P6

INTERVALS → / FACES ↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	G	Y	R			R	R/⊕	R/⊕	R			R			R			R			
2	G	Y	R			R			R			R			R			R			
3	G	G	G	G	Y	R			R			R			R	G	G	G			
4	G	G	G	G	Y	R			R			R			R	G	G	G			
5	G	Y	R			R			R			R	R/⊕	R/⊕	R			R			
6	G	G	G	G/⊕	Y/⊕	R			R			R			R	G/⊕	G/⊕	G			
7			R			R	G	G	G	G	Y	R			R	R/⊕	R/⊕	R			
8			R			R	G	G	G	G	Y	R			R			R			
9			R			R			R	G	Y	R			R			R			
10			R			R			R	G	Y	R	R/⊕	R/⊕	R			R			
11			R			R	G/⊕	G/⊕	G	G	Y	R			R			R			
12			R			R			R			R			R			R			
13																					
14																					
15																					
16																					
TIME SEC	7	5	1	10	5	1	20	5	1	30	5	1	20	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PRE-EMPTION (SEE NOTE)			RETURN TO
	P2 & P6	P2 & P5	P4 & P7	P4 & P8	P1	P2 & P5



NOTE: ALTERNATE AMONG PHASES 4 & 7, 4 & 8, AND 1 UNTIL TRAIN CLEARS.

CONTROL SECTION 018-03	HIGHWAY JS 190	PARISH ST TAMMANY	TSI NO. 000241	SHEET 6 OF 9

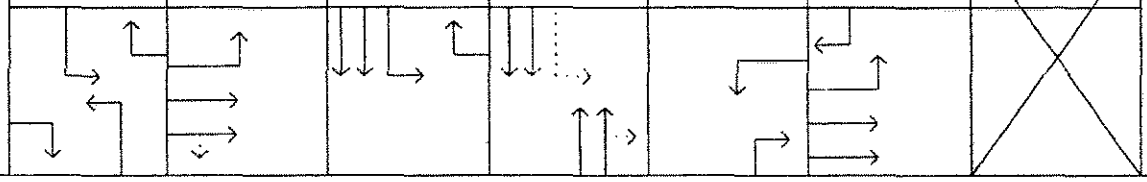
SHT XI

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P3 & P7

INTERVALS → / FACES ↓	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	R/G→	R/Y→	R			R	R/G→	R/Y→	R			R			R			R			
2			R			R			R			R			R			R			
3			R	G	Y	R			R			R			R	G	G	G			
4	R/G→	R/Y→	R	G	Y	R			R			R			R	G	G	G			
5			R			R			R			R	←G/R	←Y/R	R			R			
6			R	←G/G	←Y/Y	R			R			R			R	←G/G	←Y/G	G			
7			R			R	G	G	G	G	Y	R			R	R/G→	R/Y→	R			
8			R			R	G	G	G	G	Y	R			R			R			
9			R			R			R	G	Y	R			R			R			
10			R			R			R	G	Y	R	R/G→	R/Y→	R			R			
11	←G/R	←Y/R	R			R	←G/G	←Y/G	G	G	Y	R			R			R			
12	←G/R	←Y/R	R			R			R			R			R			R			
13																					
14																					
15																					
16																					
TIME SEC	7	5	1	10	5	1	20	5	1	30	5	1	20	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PRE-EMPTION (SEE NOTE)			RETURN TO
	P3 & P7	P2 & P5	P4 & P7	P4 & P8	P1	P2 & P5



NOTE: ALTERNATE AMONG PHASES 4 & 7, 4 & 8, AND 1 UNTIL TRAIN CLEARS.

CONTROL SECTION 018-03	HIGHWAY JS 190	PARISH ST TAMMANY	TSI NO. 000241	SHEET 7 OF 9

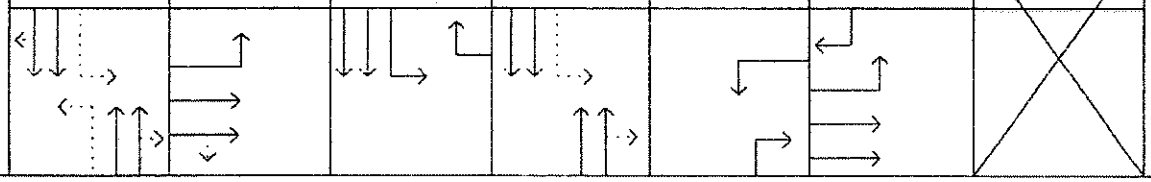
SHTXI

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P4 & P8

FACES \ INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1			R			R	R/⊖	R/⊕	R			R			R			R			
2			R			R			R			R			R			R			
3			R	G	Y	R			R			R			R	G	G	G			
4			R	G	Y	R			R			R			R	G	G	G			
5			R			R			R			R	⊖ R	⊕ R	R			R			
6			R	⊖ G	⊕ Y	R			R			R			R	⊖ G	⊕ G	G			
7	G	Y	R			R	G	G	G	G	Y	R			R	R/⊖	R/⊕	R			
8	G	Y	R			R	G	G	G	G	Y	R			R			R			
9	G	Y	R			R			R	G	Y	R			R			R			
10	G	Y	R			R			R	G	Y	R	R/⊖	R/⊕	R			R			
11	G	Y	R			R	⊖ G	⊕ G	G	G	Y	R			R			R			
12	G	Y	R			R			R			R			R			R			
13																					
14																					
15																					
16																					
TIME SEC	7	5	1	10	5	1	20	5	1	30	5	1	20	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PRE-EMPTION (SEE NOTE)			RETURN TO
	P4 & P8	P2 & P5	P4 & P7	P4 & P8	P1	P2 & P5



NOTE: ALTERNATE AMONG PHASES 4 & 7, 4 & 8, AND 1 UNTIL TRAIN CLEARS.

CONTROL SECTION 018-03	HIGHWAY 190	PARISH ST TAMMANY	TSI NO. 000241	SHEET 8 OF 9

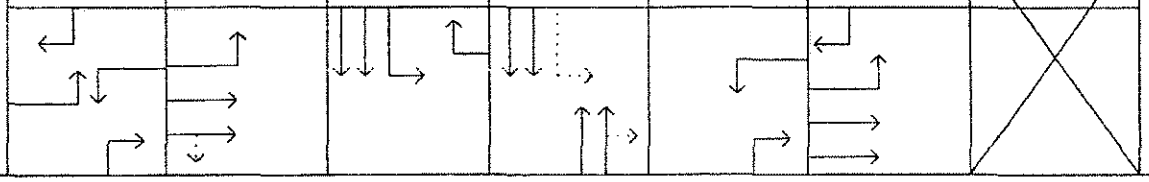
SHTXI

RAILROAD PREEMPTION TIMING

PHASE AT START OF PREEMPTION P1 & P5

FACES \ INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1			R			R	R/G	R/Y	R			R			R			R			
2			R			R			R			R			R			R			
3			R	G	Y	R			R			R			R	G	G	G			
4			R	G	Y	R			R			R			R	G	G	G			
5	G/R	Y/R	R			R			R			R	G/R	Y/R	R			R			
6	G/R	Y/R	R	G/G	Y/Y	R			R			R			R	G/G	Y/G	G			
7	R/G	R/Y	R			R	G	G	G	G	Y	R			R	R/G	R/Y	R			
8			R			R	G	G	G	G	Y	R			R			R			
9			R			R			R	G	Y	R			R			R			
10	R/G	R/Y	R			R			R	G	Y	R	R/G	R/Y	R			R			
11			R			R	G/G	Y/G	G	G	Y	R			R			R			
12			R			R			R			R			R			R			
13																					
14																					
15																					
16																					
TIME SEC	7	5	1	10	5	1	20	5	1	30	5	1	20	5	1						
TIME %																					

PHASING SEQUENCE	TRACK CLEARING		PRE-EMPTION (SEE NOTE)			RETURN TO
	P1 & P5	P2 & P5	P4 & P7	P4 & P8	P1	P2 & P5



NOTE: ALTERNATE AMONG PHASES 4 & 7, 4 & 8, AND 1 UNTIL TRAIN CLEARS.

TRAFFIC SIGNAL INVENTORY

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION — District 62

TSI NO. 000269

SHEET: 1 OF 5

INTERSECTION: US 11 @ EDEN ISLES

CITY: SLIDELL | PARISH: ST TAMMANY 52 | INSTALLATION DATE: 10/09/80

TYPE SIGNAL: VOLUME DENSITY, ISOLATED | LAST REVISION DATE:

PHASES	Φ2 + Φ6			Φ4			Φ2 + Φ5												FL
INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1	G	Y	R			R	←G/G	←Y/G	G										Y
2	G	Y	R			R	G	G	G										Y
3	G	Y	R			R			R										Y
4	G	Y	R	R/G→	R/Y→	R			R										Y
5			R	G	Y	R			R										R
6			R	G	Y	R	R/G→	R/Y→	R										R
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			

SIGNAL FACES

Hours of Flashing Operation: Emergency

FREE OPERATION
7:00 PM - 6:00 AM,
9:00 AM - 2:00PM
(S-S)

	SEC																			
TIME	SEC	87.0	5.0	1.0	23.0	5.0	1.0	12.0	5.0	1.0										
FO	SEC	0			29			47												
YP	SEC	11			129			5												

CMD 1
MAX 2

Offset = sec

PLAN = 1 CYCLE LENGTH = 140 TIMES OF OPERATION = 6:00 AM - 9:00 AM, 2:00 - 7:00 PM M-F

	SEC																			
TIME	SEC																			
FO	SEC																			
YP	SEC																			

Offset = sec

PLAN = 2 CYCLE LENGTH = TIMES OF OPERATION =

	SEC																			
TIME	SEC																			
FO	SEC																			
YP	SEC																			

Offset = sec

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

	SEC																			
TIME	SEC																			
FO	SEC																			
YP	SEC																			

Offset = sec

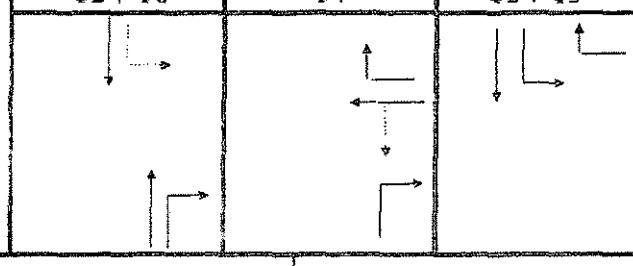
PLAN = CYCLE LENGTH = TIMES OF OPERATION =

	SEC																			
TIME	SEC																			
FO	SEC																			
YP	SEC																			

Offset = sec

PLAN = CYCLE LENGTH = TIMES OF OPERATION =

PHASING

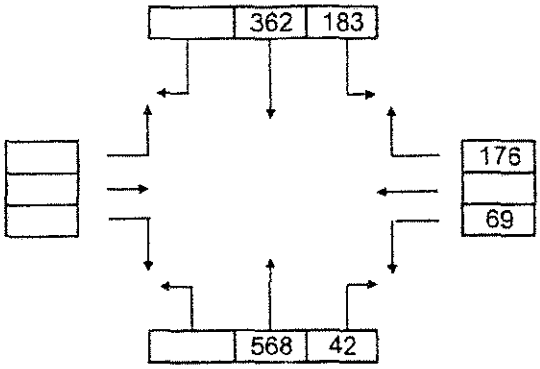


SIGNAL WARRANTS: 1,2,3 | MAINTAINED BY: DOTD | CONTROLLER MANUF: NAZTEC | SYSTEM #:

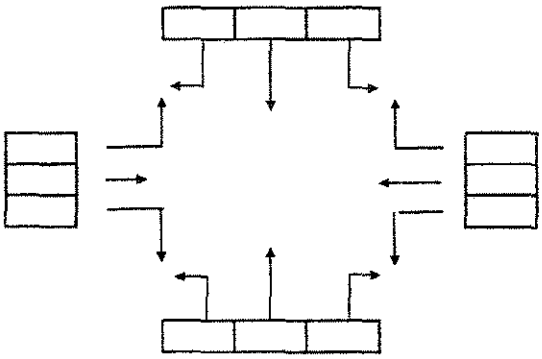
MASTER/ SLAVE: | MASTER AT TSI #: | COORDINATED WITH TSI #S:

TRAFFIC SIGNAL INVENTORY	TSI NO. 000269
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT/ TRAFFIC SECTION	SHEET: 4 OF 5

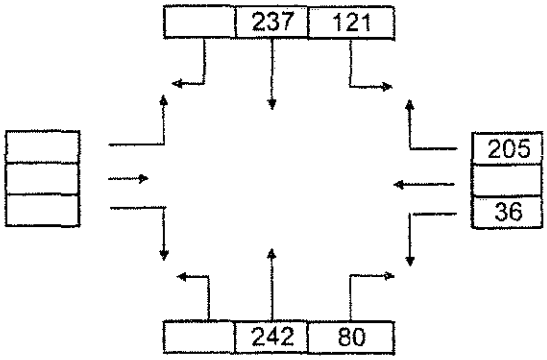
CONTROL SECTION: 018-03	HIGHWAY: US 11	PARISH: ST TAMMANY 52



AM PEAK HOUR: 10-25-1995 7:30 AM - 8:30 AM



MIDDAY PEAK HOUR:



PM PEAK HOUR: 10-25-1995 4:00 PM - 5:00 PM

SHOW NORTH ARROW

TRAFFIC VOLUMES - VPH

Peak Hour Factor ( )

LOOP #	COUNT & SIZE	PHASE #	MOVEMENT DESCRIPTION
2	1 - 6' X 6'	2	SB US 11 - THRU
4A, 4B	8 - 6' X 6'	4	WB EDEN ISLES - THRU/RIGHT/LEFT
5	4 - 6' X 6'	5	SB US 11 - LEFT
6	1 - 6' X 6'	6	NB US 11 - THRU

APPENDIX D

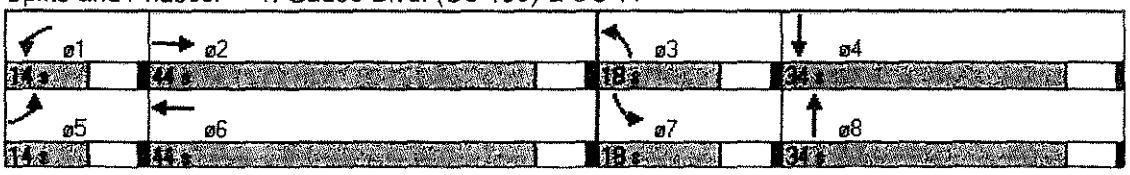
EXISTING CONDITIONS CALCULATIONS

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	89	488	102	328	175	280	165	435
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	14.0	44.0	14.0	44.0	18.0	34.0	18.0	34.0
Total Split (%)	12.7%	40.0%	12.7%	40.0%	16.4%	30.9%	16.4%	30.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	53.6	43.1	55.1	43.9	38.7	23.2	40.6	24.1
Actuated g/C Ratio	0.49	0.39	0.50	0.40	0.35	0.21	0.37	0.22
v/c Ratio	0.25	0.55	0.43	0.35	0.55	0.61	0.46	0.70
Control Delay	16.1	26.8	18.7	24.5	27.4	35.5	36.7	54.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	26.8	18.7	24.5	27.4	35.5	36.7	54.9
LOS	B	C	B	C	C	D	D	D
Approach Delay		25.4		23.2		33.1		50.2
Approach LOS		C		C		C		D

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 33.0 — Intersection LOS: C
Intersection Capacity Utilization 61.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	14.0	44.0	14.0	44.0	18.0	34.0	18.0	34.0
Total Split (%)	12.7%	40.0%	12.7%	40.0%	16.4%	30.9%	16.4%	30.9%
Maximum Green (s)	8.0	38.0	8.0	38.0	12.0	28.0	12.0	28.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	8.3	34.6	8.3	34.6	15.4	27.7	15.4	27.7
90th %ile Term Code	Max	Coord	Max	Coord	Max	Hold	Max	Gap
70th %ile Green (s)	10.6	34.0	12.0	35.4	15.5	21.6	18.4	24.5
70th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Gap
50th %ile Green (s)	9.1	39.7	10.2	40.8	14.2	20.4	15.7	21.9
50th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Gap
30th %ile Green (s)	7.9	44.8	8.7	45.6	12.6	19.3	13.2	19.9
30th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Gap
10th %ile Green (s)	6.5	52.5	6.9	52.9	10.1	16.8	9.8	16.5
10th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Gap

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		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)	1770	3394		1770	3478		1770	3383		1770	3465	
Flt Permitted	0.41	1.00		0.24	1.00		0.23	1.00		0.28	1.00	
Satd. Flow (perm)	761	3394		446	3478		427	3383		513	3465	
Volume (vph)	89	488	186	102	328	51	175	280	131	165	435	53
Peak-hour factor, PHF	0.80	0.90	0.91	0.69	0.77	0.91	0.88	0.86	0.96	0.88	0.93	0.70
Adj. Flow (vph)	111	542	204	148	426	56	199	326	136	188	468	76
RTOR Reduction (vph)	0	34	0	0	9	0	0	45	0	0	12	0
Lane Group Flow (vph)	111	712	0	148	473	0	199	417	0	188	532	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	49.6	41.1		51.0	41.8		34.8	21.2		36.6	22.1	
Effective Green, g (s)	53.6	43.1		55.0	43.8		38.8	23.2		40.6	24.1	
Actuated g/C Ratio	0.49	0.39		0.50	0.40		0.35	0.21		0.37	0.22	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	467	1330		358	1385		341	714		378	759	
v/s Ratio Prot	0.02	c0.21		c0.04	0.14		c0.08	0.12		0.07	c0.15	
v/s Ratio Perm	0.09			0.16			0.12			0.11		
v/c Ratio	0.24	0.54		0.41	0.34		0.58	0.58		0.50	0.70	
Uniform Delay, d1	15.6	25.7		16.4	23.1		26.7	39.1		25.1	39.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.55	1.38	
Incremental Delay, d2	0.3	1.5		0.8	0.1		2.5	1.2		1.0	2.8	
Delay (s)	15.9	27.3		17.2	23.2		29.3	40.3		40.0	57.6	
Level of Service	B	C		B	C		C	D		D	E	
Approach Delay (s)		25.8			21.8			37.0			53.1	
Approach LOS		C			C			D			D	

Intersection Summary

HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

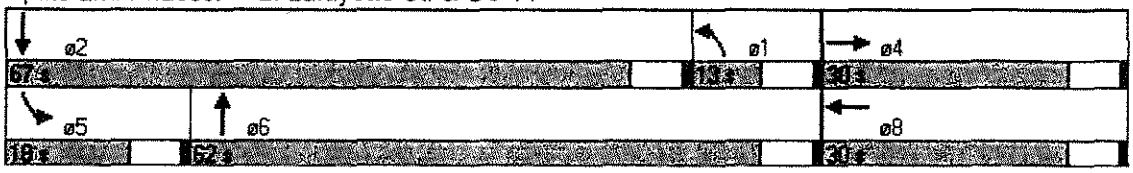
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	11	7	13	9	9	441	111	722
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	13.0	62.0	18.0	67.0
Total Split (%)	27.3%	27.3%	27.3%	27.3%	11.8%	56.4%	16.4%	60.9%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	10.3	10.3		10.3	79.4	79.4	81.0	81.0
Actuated g/C Ratio	0.09	0.09		0.09	0.72	0.72	0.74	0.74
v/c Ratio	0.15	0.12		0.35	0.03	0.23	0.27	0.32
Control Delay	45.1	21.5		33.3	9.3	11.4	6.1	6.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	21.5		33.3	9.3	11.4	6.1	6.0
LOS	D	C		C	A	B	A	A
Approach Delay		29.4		33.3		11.3		6.0
Approach LOS		C		C		B		A

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.35
Intersection Signal Delay: 9.6 — Intersection LOS: A
Intersection Capacity Utilization 43.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	13.0	62.0	18.0	67.0
Total Split (%)	27.3%	27.3%	27.3%	27.3%	11.8%	56.4%	16.4%	60.9%
Maximum Green (s)	24.0	24.0	24.0	24.0	7.0	56.0	12.0	61.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	11.8	11.8	11.8	11.8	7.0	69.0	11.2	73.2
90th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
70th %ile Green (s)	9.5	9.5	9.5	9.5	7.0	72.9	9.6	75.5
70th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
50th %ile Green (s)	8.0	8.0	8.0	8.0	7.0	75.5	8.5	77.0
50th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
30th %ile Green (s)	6.6	6.6	6.6	6.6	7.0	77.7	7.7	78.4
30th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	7.0	91.8	6.2	91.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3168			1626		1770	3487		1770	3514	
Flt Permitted	0.74	1.00			0.86		0.34	1.00		0.40	1.00	
Satd. Flow (perm)	1374	3168			1431		630	3487		741	3514	
Volume (vph)	11	7	19	13	9	15	9	441	42	111	722	31
Peak-hour factor, PHF	0.55	0.58	0.68	0.65	0.56	0.75	0.56	0.86	0.75	0.71	0.91	0.78
Adj. Flow (vph)	20	12	28	20	16	20	16	513	56	156	793	40
RTOR Reduction (vph)	0	26	0	0	18	0	0	5	0	0	2	0
Lane Group Flow (vph)	20	14	0	0	38	0	16	564	0	156	831	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	7.2	7.2			7.2		76.2	76.2		77.8	77.8	
Effective Green, g (s)	9.2	9.2			9.2		78.2	78.2		79.8	79.8	
Actuated g/C Ratio	0.08	0.08			0.08		0.71	0.71		0.73	0.73	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	265			120		541	2479		637	2549	
v/s Ratio Prot		0.00					0.00	c0.16		0.02	c0.24	
v/s Ratio Perm	0.01				c0.03		0.02			0.15		
v/c Ratio	0.17	0.05			0.31		0.03	0.23		0.24	0.33	
Uniform Delay, d1	46.9	46.4			47.4		4.7	5.5		4.8	5.4	
Progression Factor	1.00	1.00			1.00		1.44	1.92		1.00	1.00	
Incremental Delay, d2	0.7	0.1			1.5		0.0	0.2		0.2	0.3	
Delay (s)	47.6	46.5			48.9		6.8	10.7		5.0	5.8	
Level of Service	D	D			D		A	B		A	A	
Approach Delay (s)		46.9			48.9			10.6			5.6	
Approach LOS		D			D			B			A	

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

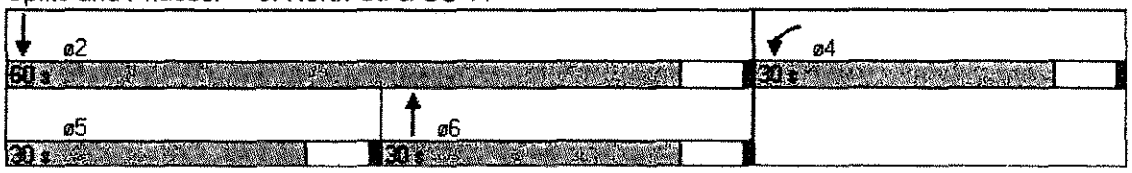
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	43	225	441	207	605
Turn Type		Perm		custom	
Protected Phases	4		6		2
Permitted Phases		4		5	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	11.9	11.9	26.0	40.1	70.1
Actuated g/C Ratio	0.13	0.13	0.29	0.45	0.78
v/c Ratio	0.32	0.68	1.02	2.57	0.46
Control Delay	34.6	6.5	77.5	745.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	6.5	77.5	745.2	5.2
LOS	C	A	E	F	A
Approach Delay	11.5		77.5		248.4
Approach LOS	B		E		F

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.57
Intersection Signal Delay: 150.7 — Intersection LOS: F
Intersection Capacity Utilization 50.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: North St. & US 11



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	4		6		2
Permitted Phases		4		5	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%
Maximum Green (s)	24.0	24.0	24.0	24.0	54.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	C-Min	Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	16.6	16.6	24.0	31.4	61.4
90th %ile Term Code	Gap	Gap	Coord	Max	Coord
70th %ile Green (s)	10.3	10.3	24.0	37.7	67.7
70th %ile Term Code	Gap	Gap	Coord	Max	Coord
50th %ile Green (s)	9.0	9.0	24.0	39.0	69.0
50th %ile Term Code	Gap	Gap	Coord	Max	Coord
30th %ile Green (s)	7.7	7.7	24.0	40.3	70.3
30th %ile Term Code	Gap	Gap	Coord	Max	Coord
10th %ile Green (s)	5.8	5.8	24.0	42.2	72.2
10th %ile Term Code	Gap	Gap	Coord	Max	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1837		1770	1863
Flt Permitted	0.95	1.00	1.00		0.10	1.00
Satd. Flow (perm)	1770	1583	1837		186	1863
Volume (vph)	43	225	441	39	207	605
Peak-hour factor, PHF	0.58	0.66	0.90	0.70	0.63	0.90
Adj. Flow (vph)	74	341	490	56	329	672
RTOR Reduction (vph)	0	296	4	0	0	0
Lane Group Flow (vph)	74	45	542	0	329	672
Turn Type		Perm			custom	
Protected Phases	4		6			2
Permitted Phases		4			5	
Actuated Green, G (s)	9.9	9.9	24.0		38.1	68.1
Effective Green, g (s)	11.9	11.9	26.0		40.1	70.1
Actuated g/C Ratio	0.13	0.13	0.29		0.45	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	234	209	531		83	1451
v/s Ratio Prot	c0.04		c0.29			0.36
v/s Ratio Perm		0.03			c1.77	
v/c Ratio	0.32	0.22	1.02		3.96	0.46
Uniform Delay, d1	35.4	34.9	32.0		25.0	3.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.5	44.3		1362.1	1.1
Delay (s)	36.1	35.4	76.3		1387.1	4.5
Level of Service	D	D	E		F	A
Approach Delay (s)	35.5		76.3			458.9
Approach LOS	D		E			F

Intersection Summary

HCM Average Control Delay	262.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

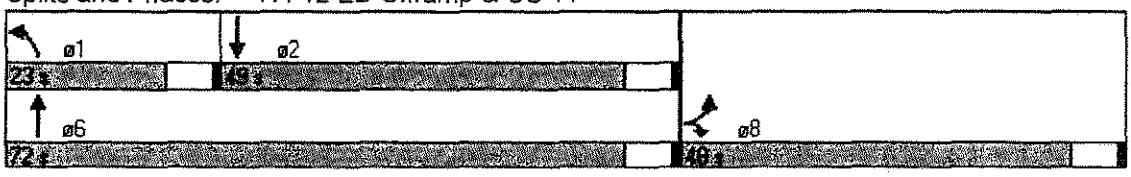
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	304	515	89	729	716
Turn Type		custom	custom		
Protected Phases	8	8	1	6	2
Permitted Phases		8	1		2
Detector Phases	8	8	1	6	2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	48.0	48.0	23.0	72.0	49.0
Total Split (%)	40.0%	40.0%	19.2%	60.0%	40.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Min	C-Min
Act Effct Green (s)	40.8	40.8	14.0	71.2	53.1
Actuated g/C Ratio	0.34	0.34	0.12	0.59	0.44
v/c Ratio	0.70	0.77	0.48	0.39	0.68
Control Delay	39.1	19.4	52.3	14.2	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	19.4	52.3	14.2	21.0
LOS	D	B	D	B	C
Approach Delay	27.5			18.3	21.0
Approach LOS	C			B	C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 22.4 — Intersection LOS: C
Intersection Capacity Utilization 66.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: I-12 EB Offramp & US 11



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	8	8	1	6	2
Permitted Phases		8	1		2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	48.0	48.0	23.0	72.0	49.0
Total Split (%)	40.0%	40.0%	19.2%	60.0%	40.8%
Maximum Green (s)	42.0	42.0	17.0	66.0	43.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	42.0	42.0	16.8	66.0	43.2
90th %ile Term Code	Max	Max	Gap	Coord	Coord
70th %ile Green (s)	42.0	42.0	13.8	66.0	46.2
70th %ile Term Code	Max	Max	Gap	Coord	Coord
50th %ile Green (s)	42.0	42.0	12.0	66.0	48.0
50th %ile Term Code	Max	Max	Gap	Coord	Coord
30th %ile Green (s)	39.3	39.3	10.1	68.7	52.6
30th %ile Term Code	Gap	Gap	Gap	Coord	Coord
10th %ile Green (s)	28.9	28.9	7.5	79.1	65.6
10th %ile Term Code	Gap	Gap	Gap	Coord	Coord

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
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)	1770	1583	1770	3539	3402	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	3539	3402	
Volume (vph)	304	515	89	729	716	238
Peak-hour factor, PHF	0.72	0.86	0.89	0.89	0.92	0.88
Adj. Flow (vph)	422	599	100	819	778	270
RTOR Reduction (vph)	0	236	0	0	26	0
Lane Group Flow (vph)	422	363	100	819	1022	0
Turn Type		custom	custom			
Protected Phases	8	8	1	6	2	
Permitted Phases		8	1		2	
Actuated Green, G (s)	38.8	38.8	12.0	69.2	51.2	
Effective Green, g (s)	40.8	40.8	14.0	71.2	53.2	
Actuated g/C Ratio	0.34	0.34	0.12	0.59	0.44	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	602	538	207	2100	1508	
v/s Ratio Prot	c0.24	0.23	c0.06	0.23	c0.30	
v/s Ratio Perm						
v/c Ratio	0.70	0.67	0.48	0.39	0.68	
Uniform Delay, d1	34.3	33.9	49.6	12.9	26.6	
Progression Factor	1.00	1.00	1.00	1.00	0.68	
Incremental Delay, d2	3.7	3.3	1.8	0.5	2.3	
Delay (s)	38.0	37.2	51.4	13.5	20.5	
Level of Service	D	D	D	B	C	
Approach Delay (s)	37.6			17.6	20.5	
Approach LOS	D			B	C	

Intersection Summary

HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

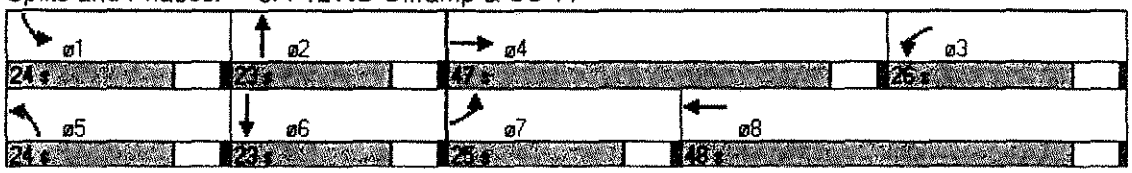
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	97	54	49	143	377	476	273	51	382
Turn Type	pm+pt		pm+pt		pm+pt		Perm	pm+pt	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phases	7	4	3	8	5	2	2	1	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	21.0	21.0	20.0	21.0
Total Split (s)	25.0	47.0	26.0	48.0	24.0	23.0	23.0	24.0	23.0
Total Split (%)	20.8%	39.2%	21.7%	40.0%	20.0%	19.2%	19.2%	20.0%	19.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Min	C-Min	Min	C-Min
Act Effct Green (s)		43.0	53.8	52.3	59.7	46.3	46.3	40.4	31.0
Actuated g/C Ratio		0.36	0.45	0.44	0.50	0.39	0.39	0.34	0.26
v/c Ratio		2.32	0.09	0.52	0.66	0.35	0.37	0.21	0.60
Control Delay		643.2	19.2	21.1	34.3	20.0	2.4	20.3	40.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		643.2	19.2	21.1	34.3	20.0	2.4	20.3	40.9
LOS		F	B	C	C	B	A	C	D
Approach Delay		643.2		20.9		20.0			39.1
Approach LOS		F		C		C			D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.32
Intersection Signal Delay: 84.9 — Intersection LOS: F
Intersection Capacity Utilization 73.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 8: I-12WB Offramp & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	21.0	21.0	20.0	21.0
Total Split (s)	25.0	47.0	26.0	48.0	24.0	23.0	23.0	24.0	23.0
Total Split (%)	20.8%	39.2%	21.7%	40.0%	20.0%	19.2%	19.2%	20.0%	19.2%
Maximum Green (s)	19.0	41.0	20.0	42.0	18.0	17.0	17.0	18.0	17.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	None	Min	C-Min	C-Min	Min	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	0.0	41.0	5.6	52.6	29.9	40.1	40.1	9.3	19.5
90th %ile Term Code	Skip	Max	Gap	Hold	Gap	Coord	Coord	Gap	Coord
70th %ile Green (s)	0.0	41.0	5.6	52.6	26.3	41.2	41.2	8.2	23.1
70th %ile Term Code	Skip	Max	Gap	Hold	Gap	Coord	Coord	Gap	Coord
50th %ile Green (s)	0.0	41.0	5.6	52.6	23.6	42.0	42.0	7.4	25.8
50th %ile Term Code	Skip	Max	Gap	Hold	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	0.0	41.0	5.6	52.6	19.3	42.8	42.8	6.6	30.1
30th %ile Term Code	Skip	Max	Gap	Hold	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	0.0	41.0	0.0	41.0	14.5	55.4	55.4	5.6	46.5
10th %ile Term Code	Skip	Max	Skip	Hold	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	10	12	12	12
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.90		1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1741		1770	1682		1888	3539	1478	1770	3383	
Flt Permitted		0.51		0.58	1.00		0.22	1.00	1.00	0.48	1.00	
Satd. Flow (perm)		898		1081	1682		446	3539	1478	894	3383	
Volume (vph)	97	54	76	49	143	261	377	476	273	51	382	159
Peak-hour factor, PHF	0.87	0.75	0.58	0.85	0.89	0.82	0.90	0.84	0.81	0.75	0.89	0.80
Growth Factor (vph)	87%	75%	58%	86%	89%	82%	81%	84%	81%	75%	89%	80%
Adj. Flow (vph)	97	54	76	50	143	261	339	476	273	51	382	159
RTOR Reduction (vph)	0	15	0	0	48	0	0	0	170	0	34	0
Lane Group Flow (vph)	0	212	0	50	356	0	339	476	103	51	507	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		41.0		51.5	51.5		56.5	43.1	43.1	35.2	27.8	
Effective Green, g (s)		43.0		53.5	53.5		58.5	45.1	45.1	39.2	29.8	
Actuated g/C Ratio		0.36		0.45	0.45		0.49	0.38	0.38	0.33	0.25	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		322		519	750		514	1330	555	361	840	
v/s Ratio Prot				0.01	c0.21		c0.14	0.13		0.01	0.15	
v/s Ratio Perm		c0.24		0.04			c0.19		0.07	0.04		
v/c Ratio		0.66		0.10	0.48		0.66	0.36	0.18	0.14	0.60	
Uniform Delay, d1		32.3		25.6	23.4		21.1	27.0	25.1	28.0	39.9	
Progression Factor		1.00		1.00	1.00		1.43	0.71	0.35	1.00	1.00	
Incremental Delay, d2		4.8		0.1	0.5		2.7	0.7	0.7	0.2	3.2	
Delay (s)		37.1		25.7	23.9		33.0	19.8	9.6	28.2	43.1	
Level of Service		D		C	C		C	B	A	C	D	
Approach Delay (s)		37.1			24.1			21.3			41.8	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

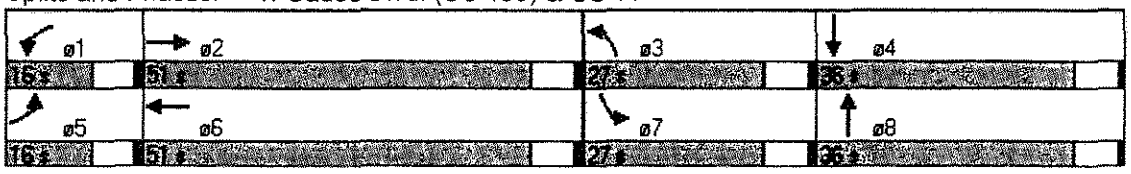
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	113	460	137	487	261	445	161	311
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6	6	8		4	
Detector Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	16.0	51.0	16.0	51.0	27.0	36.0	27.0	36.0
Total Split (%)	12.3%	39.2%	12.3%	39.2%	20.8%	27.7%	20.8%	27.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	64.1	52.4	65.2	53.0	52.2	29.9	46.3	26.9
Actuated g/C Ratio	0.49	0.40	0.50	0.41	0.40	0.23	0.36	0.21
v/c Ratio	0.36	0.55	0.46	0.48	0.67	0.80	0.56	0.67
Control Delay	20.6	30.4	22.3	30.0	32.8	49.9	40.7	62.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	30.4	22.3	30.0	32.8	49.9	40.7	62.3
LOS	C	C	C	C	C	D	D	E
Approach Delay		29.0		28.6		44.7		56.4
Approach LOS		C		C		D		E

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 38.8 — Intersection LOS: D
Intersection Capacity Utilization 67.4% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6	6	8		4	
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	16.0	51.0	16.0	51.0	27.0	36.0	27.0	36.0
Total Split (%)	12.3%	39.2%	12.3%	39.2%	20.8%	27.7%	20.8%	27.7%
Maximum Green (s)	10.0	45.0	10.0	45.0	21.0	30.0	21.0	30.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	10.0	40.1	10.0	40.1	25.9	32.2	23.7	30.0
90th %ile Term Code	Max	Coord	Max	Coord	Max	Max	Gap	Hold
70th %ile Green (s)	12.2	41.3	13.2	42.3	22.0	31.6	19.9	29.5
70th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Gap	Hold
50th %ile Green (s)	10.4	48.8	11.2	49.6	20.3	28.4	17.6	25.7
50th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Gap	Hold
30th %ile Green (s)	8.8	56.1	9.4	56.7	18.4	25.7	14.8	22.1
30th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Gap	Hold
10th %ile Green (s)	7.0	65.9	7.4	66.3	15.3	21.7	11.0	17.4
10th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Gap	Hold

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3369		1770	3422		1770	3408		1770	3406	
Flt Permitted	0.29	1.00		0.23	1.00		0.22	1.00		0.16	1.00	
Satd. Flow (perm)	536	3369		430	3422		404	3408		292	3406	
Volume (vph)	113	460	212	137	487	107	261	445	127	161	311	100
Peak-hour factor, PHF	0.88	0.88	0.86	0.93	0.93	0.72	0.91	0.91	0.79	0.88	0.85	0.81
Adj. Flow (vph)	128	523	247	147	524	149	287	489	161	183	366	123
RTOR Reduction (vph)	0	41	0	0	19	0	0	25	0	0	27	0
Lane Group Flow (vph)	128	729	0	147	654	0	287	625	0	183	462	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6	6		8			4		
Actuated Green, G (s)	60.2	50.5		61.2	51.0		48.3	27.9		42.3	24.9	
Effective Green, g (s)	64.2	52.5		65.2	53.0		52.3	29.9		46.3	26.9	
Actuated g/C Ratio	0.49	0.40		0.50	0.41		0.40	0.23		0.36	0.21	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	376	1361		341	1395		398	784		325	705	
v/s Ratio Prot	0.03	c0.22		c0.04	0.19		c0.12	c0.18		0.08	0.14	
v/s Ratio Perm	0.14			0.18			0.17			0.12		
v/c Ratio	0.34	0.54		0.43	0.47		0.72	0.80		0.56	0.66	
Uniform Delay, d1	18.9	29.5		19.4	28.2		29.2	47.2		31.4	47.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.47	1.38	
Incremental Delay, d2	0.5	1.5		0.9	0.3		6.3	5.6		2.1	2.1	
Delay (s)	19.5	31.0		20.3	28.4		35.5	52.8		48.3	67.2	
Level of Service	B	C		C	C		D	D		D	E	
Approach Delay (s)		29.4			27.0			47.5			62.0	
Approach LOS		C			C			D			E	

Intersection Summary

HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

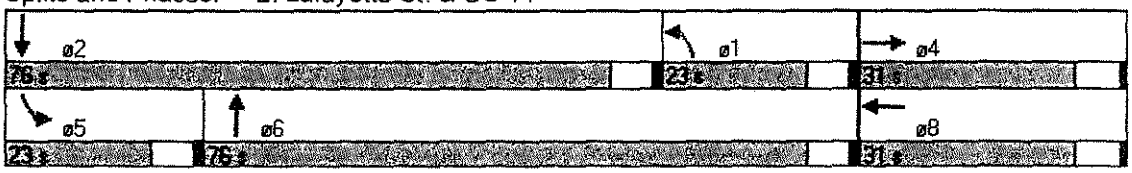
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	57	24	14	18	50	583	55	646
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	31.0	31.0	31.0	31.0	23.0	76.0	23.0	76.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	17.7%	58.5%	17.7%	58.5%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	16.6	16.6		16.6	91.8	91.8	82.4	82.4
Actuated g/C Ratio	0.13	0.13		0.13	0.71	0.71	0.63	0.63
v/c Ratio	0.57	0.27		0.49	0.15	0.28	0.16	0.35
Control Delay	56.4	17.9		31.6	17.3	16.8	10.8	12.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	17.9		31.6	17.3	16.8	10.8	12.1
LOS	E	B		C	B	B	B	B
Approach Delay		32.8		31.6		16.9		12.0
Approach LOS		C		C		B		B

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 17.3 — Intersection LOS: B
Intersection Capacity Utilization 44.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	31.0	31.0	31.0	31.0	23.0	76.0	23.0	76.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	17.7%	58.5%	17.7%	58.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	17.0	70.0	17.0	70.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	21.4	21.4	21.4	21.4	17.0	81.0	9.6	73.6
90th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
70th %ile Green (s)	17.5	17.5	17.5	17.5	17.0	86.2	8.3	77.5
70th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
50th %ile Green (s)	14.6	14.6	14.6	14.6	17.0	89.9	7.5	80.4
50th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
30th %ile Green (s)	11.7	11.7	11.7	11.7	17.0	93.6	6.7	83.3
30th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
10th %ile Green (s)	7.8	7.8	7.8	7.8	17.0	98.4	5.8	87.2
10th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.92		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3174			1587		1770	3487		1770	3484	
Flt Permitted	0.48	1.00			0.93		0.36	1.00		0.34	1.00	
Satd. Flow (perm)	903	3174			1483		667	3487		631	3484	
Volume (vph)	57	24	68	14	18	40	50	583	51	55	646	56
Peak-hour factor, PHF	0.71	0.60	0.77	0.70	0.64	0.59	0.54	0.94	0.75	0.81	0.93	0.70
Adj. Flow (vph)	80	40	88	20	28	68	93	620	68	68	695	80
RTOR Reduction (vph)	0	77	0	0	44	0	0	4	0	0	5	0
Lane Group Flow (vph)	80	51	0	0	72	0	93	684	0	68	770	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	14.6	14.6			14.6		89.8	89.8		80.4	80.4	
Effective Green, g (s)	16.6	16.6			16.6		91.8	91.8		82.4	82.4	
Actuated g/C Ratio	0.13	0.13			0.13		0.71	0.71		0.63	0.63	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	115	405			189		632	2462		484	2208	
v/s Ratio Prot		0.02					0.02	c0.20		0.01	c0.22	
v/s Ratio Perm	c0.09				0.05		0.08			0.08		
v/c Ratio	0.70	0.13			0.38		0.15	0.28		0.14	0.35	
Uniform Delay, d1	54.3	50.3			52.0		6.5	7.0		9.5	11.2	
Progression Factor	1.00	1.00			1.00		2.09	2.20		1.00	1.00	
Incremental Delay, d2	16.7	0.1			1.3		0.1	0.2		0.1	0.4	
Delay (s)	71.0	50.4			53.3		13.7	15.6		9.6	11.6	
Level of Service	E	D			D		B	B		A	B	
Approach Delay (s)		58.3			53.3			15.4			11.5	
Approach LOS		E			D			B			B	

Intersection Summary

HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

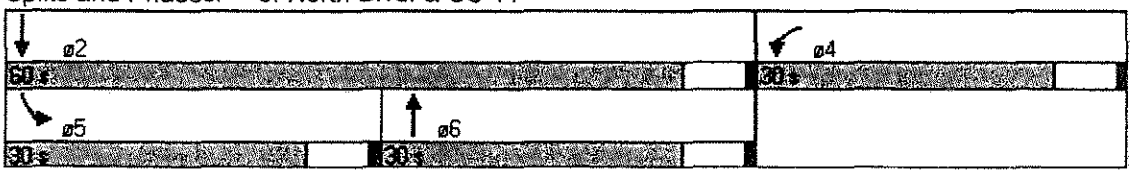
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	66	237	574	323	571
Turn Type		Perm		pm+pt	
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	12.1	12.1	49.2	69.9	69.9
Actuated g/C Ratio	0.13	0.13	0.55	0.78	0.78
v/c Ratio	0.37	0.63	0.72	0.73	0.42
Control Delay	35.1	6.5	23.5	15.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	6.5	23.5	15.5	4.9
LOS	D	A	C	B	A
Approach Delay	13.0		23.5		8.7
Approach LOS	B		C		A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 14.7 — Intersection LOS: B
Intersection Capacity Utilization 65.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: North Blvd. & US 11



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	30.0	30.0	60.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%
Maximum Green (s)	24.0	24.0	24.0	24.0	54.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	C-Min	Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	15.6	15.6	32.7	23.7	62.4
90th %ile Term Code	Gap	Gap	Coord	Gap	Coord
70th %ile Green (s)	11.1	11.1	43.2	17.7	66.9
70th %ile Term Code	Gap	Gap	Coord	Gap	Coord
50th %ile Green (s)	9.6	9.6	48.5	13.9	68.4
50th %ile Term Code	Gap	Gap	Coord	Gap	Coord
30th %ile Green (s)	8.2	8.2	53.5	10.3	69.8
30th %ile Term Code	Gap	Gap	Coord	Gap	Coord
10th %ile Green (s)	6.2	6.2	58.3	7.5	71.8
10th %ile Term Code	Gap	Gap	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1833		1770	1863
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1770	1583	1833		356	1863
Volume (vph)	66	237	574	67	323	571
Peak-hour factor, PHF	0.75	0.79	0.90	0.80	0.94	0.93
Adj. Flow (vph)	88	300	638	84	344	614
RTOR Reduction (vph)	0	260	3	0	0	0
Lane Group Flow (vph)	88	40	719	0	344	614
Turn Type		Perm			pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Actuated Green, G (s)	10.1	10.1	47.3		67.9	67.9
Effective Green, g (s)	12.1	12.1	49.3		69.9	69.9
Actuated g/C Ratio	0.13	0.13	0.55		0.78	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	238	213	1004		537	1447
v/s Ratio Prot	c0.05		c0.39		c0.12	0.33
v/s Ratio Perm		0.03			0.38	
v/c Ratio	0.37	0.19	0.72		0.64	0.42
Uniform Delay, d1	35.5	34.6	15.1		10.6	3.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.4	4.4		2.6	0.9
Delay (s)	36.4	35.0	19.5		13.2	4.3
Level of Service	D	D	B		B	A
Approach Delay (s)	35.4		19.5			7.5
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

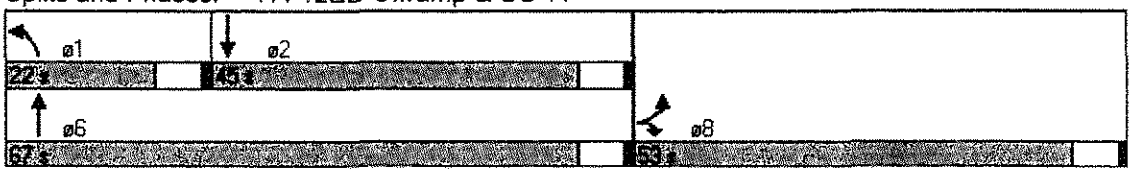
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	438	548	128	818	494
Turn Type		custom	pm+pt		
Protected Phases	8	8	1	6	2
Permitted Phases		8	6		2
Detector Phases	8	8	1	6	2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	53.0	53.0	22.0	67.0	45.0
Total Split (%)	44.2%	44.2%	18.3%	55.8%	37.5%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Min	C-Min
Act Effct Green (s)	49.9	49.9	62.1	62.1	43.8
Actuated g/C Ratio	0.42	0.42	0.52	0.52	0.36
v/c Ratio	0.73	0.63	0.49	0.51	0.56
Control Delay	34.6	10.0	20.0	20.7	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	10.0	20.0	20.7	45.8
LOS	C	A	C	C	D
Approach Delay	21.9			20.6	45.8
Approach LOS	C			C	D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 27.2 — Intersection LOS: C
Intersection Capacity Utilization 59.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: I-12EB Offramp & US 11



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	8	8	1	6	2
Permitted Phases		8	6		2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	53.0	53.0	22.0	67.0	45.0
Total Split (%)	44.2%	44.2%	18.3%	55.8%	37.5%
Maximum Green (s)	47.0	47.0	16.0	61.0	39.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	47.1	47.1	15.9	60.9	39.0
90th %ile Term Code	Max	Max	Gap	Coord	Coord
70th %ile Green (s)	51.9	51.9	14.2	56.1	35.9
70th %ile Term Code	Max	Max	Gap	Coord	Coord
50th %ile Green (s)	55.6	55.6	12.9	52.4	33.5
50th %ile Term Code	Max	Max	Gap	Coord	Coord
30th %ile Green (s)	48.7	48.7	10.6	59.3	42.7
30th %ile Term Code	Gap	Gap	Gap	Coord	Coord
10th %ile Green (s)	36.3	36.3	7.9	71.7	57.8
10th %ile Term Code	Gap	Gap	Gap	Coord	Coord

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	11.0	21.0	21.0	11.0	21.0
Total Split (s)	25.0	40.0	26.0	41.0	31.0	23.0	23.0	31.0	23.0
Total Split (%)	20.8%	33.3%	21.7%	34.2%	25.8%	19.2%	19.2%	25.8%	19.2%
Maximum Green (s)	19.0	34.0	20.0	35.0	25.0	17.0	17.0	25.0	17.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	Max	Max	None	C-Min	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	0.0	34.0	20.0	60.0	25.0	30.8	30.8	11.2	17.0
90th %ile Term Code	Skip	Max	MaxR	MaxR	Max	Coord	Coord	Gap	Coord
70th %ile Green (s)	0.0	34.0	20.0	60.0	25.0	32.3	32.3	9.7	17.0
70th %ile Term Code	Skip	Max	MaxR	MaxR	Max	Coord	Coord	Gap	Coord
50th %ile Green (s)	0.0	34.0	20.0	60.0	25.0	33.4	33.4	8.6	17.0
50th %ile Term Code	Skip	Max	MaxR	MaxR	Max	Coord	Coord	Gap	Coord
30th %ile Green (s)	0.0	34.0	20.0	60.0	23.6	34.5	34.5	7.5	18.4
30th %ile Term Code	Skip	Max	MaxR	MaxR	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	0.0	34.0	20.0	60.0	19.0	48.0	48.0	0.0	23.0
10th %ile Term Code	Skip	Max	MaxR	MaxR	Gap	Coord	Coord	Skip	Coord

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	12	12	12	12
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.97		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1765		1770	1758		1888	3539	1583	1770	3340	
Flt Permitted		0.65		0.46	1.00		0.16	1.00	1.00	0.43	1.00	
Satd. Flow (perm)		1174		863	1758		324	3539	1583	801	3340	
Volume (vph)	118	127	83	116	113	70	350	541	343	57	356	221
Peak-hour factor, PHF	0.87	0.93	0.87	0.81	0.71	0.73	0.90	0.92	0.88	0.78	0.86	0.89
Adj. Flow (vph)	136	137	95	143	159	96	389	588	390	73	414	248
RTOR Reduction (vph)	0	11	0	0	13	0	0	0	271	0	73	0
Lane Group Flow (vph)	0	358	0	143	242	0	389	588	119	73	589	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		34.0		60.0	60.0		48.0	34.6	34.6	25.9	18.5	
Effective Green, g (s)		36.0		62.0	62.0		50.0	36.6	36.6	29.9	20.5	
Actuated g/C Ratio		0.30		0.52	0.52		0.42	0.30	0.30	0.25	0.17	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		352		612	908		467	1079	483	275	571	
v/s Ratio Prot				0.04	c0.14		c0.18	0.17		0.02	c0.18	
v/s Ratio Perm		c0.30		0.08			0.17		0.08	0.05		
v/c Ratio		1.02		0.23	0.27		0.83	0.54	0.25	0.27	1.03	
Uniform Delay, d1		42.0		27.0	16.3		31.2	34.8	31.3	35.3	49.8	
Progression Factor		1.00		1.00	1.00		0.87	0.95	1.36	1.00	1.00	
Incremental Delay, d2		52.0		0.9	0.7		10.3	1.7	1.0	0.5	46.0	
Delay (s)		94.0		27.9	17.0		37.4	34.8	43.7	35.8	95.8	
Level of Service		F		C	B		D	C	D	D	F	
Approach Delay (s)		94.0			20.9			38.1			89.8	
Approach LOS		F			C			D			F	

Intersection Summary

HCM Average Control Delay	56.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	51	202	428	7	135	894
Peak Hour Factor	0.75	0.72	0.83	0.44	0.89	0.92
Hourly flow rate (vph)	68	281	516	16	152	972
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1799	524			532	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1799	524			532	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	9	49			85	
cM capacity (veh/h)	75	553			1036	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	68	281	532	152	972
Volume Left	68	0	0	152	0
Volume Right	0	281	16	0	0
cSH	75	553	1700	1036	1700
Volume to Capacity	0.91	0.51	0.31	0.15	0.57
Queue Length 95th (ft)	116	71	0	13	0
Control Delay (s)	173.3	18.0	0.0	9.1	0.0
Lane LOS	F	C		A	
Approach Delay (s)	48.3		0.0	1.2	
Approach LOS	E				

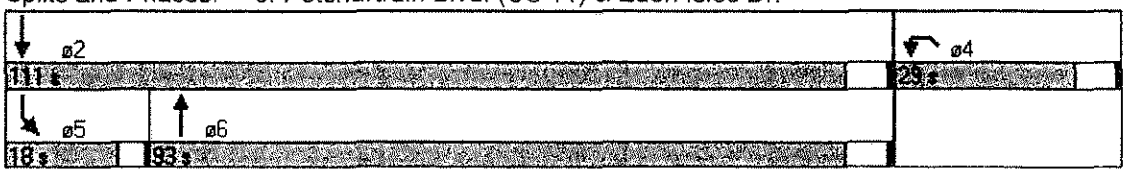
Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	199	33	86	823	119	167
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phases	6	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	93.0	93.0	18.0	111.0	29.0	29.0
Total Split (%)	66.4%	66.4%	12.9%	79.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	89.0	89.0	107.0	107.0	25.0	25.0
Actuated g/C Ratio	0.64	0.64	0.76	0.76	0.18	0.18
v/c Ratio	0.20	0.04	0.14	0.67	0.47	0.54
Control Delay	11.2	2.7	4.5	10.9	57.7	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	2.7	4.5	10.9	57.7	10.1
LOS	B	A	A	B	E	B
Approach Delay	9.9			10.2	27.1	
Approach LOS	A			B	C	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 13.9 — Intersection LOS: B
Intersection Capacity Utilization 56.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.



Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	93.0	93.0	18.0	111.0	29.0	29.0
Total Split (%)	66.4%	66.4%	12.9%	79.3%	20.7%	20.7%
Maximum Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
90th %ile Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
90th %ile Term Code	Coord	Coord	MaxR	Coord	MaxR	MaxR
70th %ile Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
70th %ile Term Code	Coord	Coord	MaxR	Coord	MaxR	MaxR
50th %ile Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
50th %ile Term Code	Coord	Coord	MaxR	Coord	MaxR	MaxR
30th %ile Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
30th %ile Term Code	Coord	Coord	MaxR	Coord	MaxR	MaxR
10th %ile Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
10th %ile Term Code	Coord	Coord	MaxR	Coord	MaxR	MaxR

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Control Type: Pretimed

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	10
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1652	1478
Flt Permitted	1.00	1.00	0.56	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	1040	1863	1652	1478
Volume (vph)	199	33	86	823	119	167
Peak-hour factor, PHF	0.83	0.75	0.72	0.86	0.85	0.66
Adj. Flow (vph)	240	44	119	957	140	253
RTOR Reduction (vph)	0	16	0	0	0	208
Lane Group Flow (vph)	240	28	119	957	140	45
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	87.0	87.0	105.0	105.0	23.0	23.0
Effective Green, g (s)	89.0	89.0	107.0	107.0	25.0	25.0
Actuated g/C Ratio	0.64	0.64	0.76	0.76	0.18	0.18
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lane Grp Cap (vph)	1184	1006	868	1424	295	264
v/s Ratio Prot	0.13		0.01	c0.51	c0.08	
v/s Ratio Perm		0.02	0.09			0.03
v/c Ratio	0.20	0.03	0.14	0.67	0.47	0.17
Uniform Delay, d1	10.7	9.5	4.4	8.0	51.6	48.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.3	2.5	5.4	1.4
Delay (s)	11.0	9.5	4.7	10.5	57.0	50.1
Level of Service	B	A	A	B	E	D
Approach Delay (s)	10.8			9.9	52.6	
Approach LOS	B			A	D	

Intersection Summary

HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	39	10	5	136	944	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	11	5	148	1026	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1196	1037	1048			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1196	1037	1048			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	96	99			
cM capacity (veh/h)	204	281	664			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	53	153	1048
Volume Left	42	5	0
Volume Right	11	0	22
cSH	216	664	1700
Volume to Capacity	0.25	0.01	0.62
Queue Length 95th (ft)	23	1	0
Control Delay (s)	27.0	0.5	0.0
Lane LOS	D	A	
Approach Delay (s)	27.0	0.5	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	17	170	964	34	158	521
Peak Hour Factor	0.50	0.87	0.94	0.71	0.78	0.82
Hourly flow rate (vph)	34	195	1026	48	203	635
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2090	1049			1073	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2090	1049			1073	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	14	29			69	
cM capacity (veh/h)	40	276			649	

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	34	195	1073	203	635
Volume Left	34	0	0	203	0
Volume Right	0	195	48	0	0
cSH	40	276	1700	649	1700
Volume to Capacity	0.86	0.71	0.63	0.31	0.37
Queue Length 95th (ft)	81	122	0	33	0
Control Delay (s)	252.4	44.3	0.0	13.0	0.0
Lane LOS	F	E		B	
Approach Delay (s)	75.2		0.0	3.2	
Approach LOS	F				

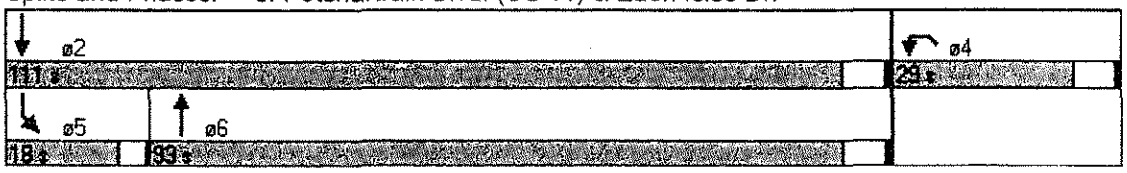
Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	792	83	248	275	47	164
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phases	6	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	93.0	93.0	18.0	111.0	29.0	29.0
Total Split (%)	66.4%	66.4%	12.9%	79.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	91.6	91.6	107.0	107.0	13.0	13.0
Actuated g/C Ratio	0.72	0.72	0.84	0.84	0.10	0.10
v/c Ratio	0.65	0.10	0.80	0.20	0.43	0.63
Control Delay	13.5	1.9	20.8	2.6	55.9	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	1.9	20.8	2.6	55.9	10.8
LOS	B	A	C	A	E	B
Approach Delay	12.1			11.9	22.1	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 128.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 68.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.

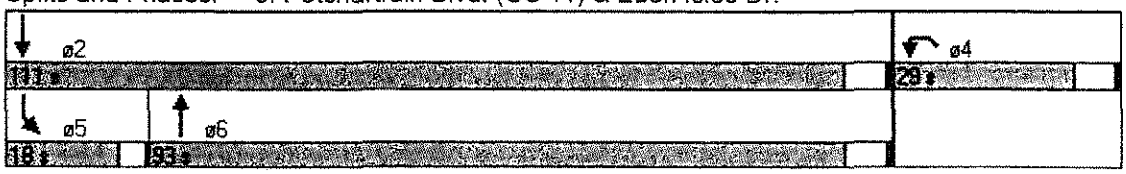


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	792	83	248	275	47	164
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Detector Phases	6	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	93.0	93.0	18.0	111.0	29.0	29.0
Total Split (%)	66.4%	66.4%	12.9%	79.3%	20.7%	20.7%
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	91.6	91.6	107.0	107.0	13.0	13.0
Actuated g/C Ratio	0.72	0.72	0.84	0.84	0.10	0.10
v/c Ratio	0.65	0.10	0.80	0.20	0.43	0.63
Control Delay	13.5	1.9	20.8	2.6	55.9	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.5	1.9	20.8	2.6	55.9	10.8
LOS	B	A	C	A	E	B
Approach Delay	12.1			11.9	22.1	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 128.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 68.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.



Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	93.0	93.0	18.0	111.0	29.0	29.0
Total Split (%)	66.4%	66.4%	12.9%	79.3%	20.7%	20.7%
Maximum Green (s)	87.0	87.0	14.0	105.0	23.0	23.0
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
90th %ile Green (s)	87.0	87.0	14.0	105.0	15.8	15.8
90th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
70th %ile Green (s)	87.0	87.0	14.0	105.0	12.9	12.9
70th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
50th %ile Green (s)	89.8	89.8	11.2	105.0	11.1	11.1
50th %ile Term Code	Hold	Hold	Gap	MaxR	Gap	Gap
30th %ile Green (s)	91.1	91.1	9.9	105.0	9.2	9.2
30th %ile Term Code	Hold	Hold	Gap	MaxR	Gap	Gap
10th %ile Green (s)	92.5	92.5	8.5	105.0	6.6	6.6
10th %ile Term Code	Hold	Hold	Gap	MaxR	Gap	Gap

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 128.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 132.8
70th %ile Actuated Cycle: 129.9
50th %ile Actuated Cycle: 128.1
30th %ile Actuated Cycle: 126.2
10th %ile Actuated Cycle: 123.6

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	10
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1652	1478
Flt Permitted	1.00	1.00	0.22	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	416	1863	1652	1478
Volume (vph)	792	83	248	275	47	164
Peak-hour factor, PHF	0.92	0.74	0.78	0.90	0.65	0.76
Adj. Flow (vph)	861	112	318	306	72	216
RTOR Reduction (vph)	0	29	0	0	0	194
Lane Group Flow (vph)	861	83	318	306	72	22
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	89.6	89.6	105.1	105.1	11.0	11.0
Effective Green, g (s)	91.6	91.6	107.1	107.1	13.0	13.0
Actuated g/C Ratio	0.72	0.72	0.84	0.84	0.10	0.10
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1332	1132	469	1558	168	150
v/s Ratio Prot	0.46		c0.06	0.16	c0.04	
v/s Ratio Perm		0.05	c0.51			0.01
v/c Ratio	0.65	0.07	0.68	0.20	0.43	0.15
Uniform Delay, d1	9.7	5.5	10.8	2.1	54.1	52.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.1	3.9	0.3	1.8	0.5
Delay (s)	12.1	5.6	14.7	2.3	55.8	52.9
Level of Service	B	A	B	A	E	D
Approach Delay (s)	11.4			8.6	53.7	
Approach LOS	B			A	D	

Intersection Summary

HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	128.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	43	10	13	800	218	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	11	14	870	237	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1160	262	237			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1160	262	237			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	99	99			
cM capacity (veh/h)	214	777	1330			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	58	884	287
Volume Left	47	14	0
Volume Right	11	0	50
cSH	248	1330	1700
Volume to Capacity	0.23	0.01	0.17
Queue Length 95th (ft)	22	1	0
Control Delay (s)	23.9	0.3	0.0
Lane LOS	C	A	
Approach Delay (s)	23.9	0.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX E

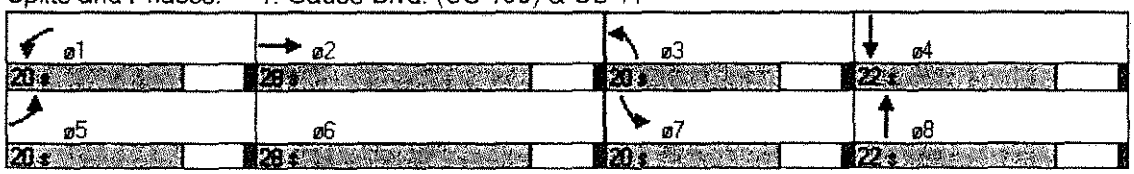
SHORT TERM SOLUTIONS CALCULATIONS

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	89	488	102	328	175	280	165	435
Turn Type	pm+pt		Prot		pm+pt		pm+pt	
Protected Phases	5	2	1		3	8	7	4
Permitted Phases	2			6	8		4	
Detector Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	28.0	20.0	28.0	20.0	22.0	20.0	22.0
Total Split (%)	22.2%	31.1%	22.2%	31.1%	22.2%	24.4%	22.2%	24.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	36.8	26.0	13.8	29.0	34.3	20.5	34.1	20.4
Actuated g/C Ratio	0.41	0.29	0.15	0.32	0.38	0.23	0.38	0.23
v/c Ratio	0.28	0.73	0.54	0.43	0.54	0.56	0.48	0.68
Control Delay	14.3	32.0	39.9	25.0	21.6	30.1	35.1	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	32.0	39.9	25.0	21.6	30.1	35.1	46.9
LOS	B	C	D	C	C	C	D	D
Approach Delay		29.7		28.5		27.5		43.8
Approach LOS		C		C		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 32.5 — Intersection LOS: C
Intersection Capacity Utilization 61.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1		3	8	7	4
Permitted Phases	2			6	8		4	
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	28.0	20.0	28.0	20.0	22.0	20.0	22.0
Total Split (%)	22.2%	31.1%	22.2%	31.1%	22.2%	24.4%	22.2%	24.4%
Maximum Green (s)	14.0	22.0	14.0	22.0	14.0	16.0	14.0	16.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	11.4	22.0	14.0	24.6	14.0	16.0	14.0	16.0
90th %ile Term Code	Gap	Coord	Max	Coord	Max	Max	Max	Max
70th %ile Green (s)	9.8	22.0	14.0	26.2	14.0	16.0	14.0	16.0
70th %ile Term Code	Gap	Coord	Max	Coord	Max	Max	Max	Max
50th %ile Green (s)	8.7	23.4	12.6	27.3	12.2	16.6	13.4	17.8
50th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Max	Gap	Max
30th %ile Green (s)	7.7	24.6	10.6	27.5	10.5	21.2	9.6	20.3
30th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Max
10th %ile Green (s)	6.3	27.9	7.8	29.4	8.3	22.7	7.6	22.0
10th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.98		1.00	0.96		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)	1770	3394		1770	3478		1770	3383		1770	3465	
Flt Permitted	0.42	1.00		0.95	1.00		0.25	1.00		0.33	1.00	
Satd. Flow (perm)	786	3394		1770	3478		458	3383		606	3465	
Volume (vph)	89	488	186	102	328	51	175	280	131	165	435	53
Peak-hour factor, PHF	0.80	0.90	0.91	0.69	0.77	0.91	0.88	0.86	0.96	0.88	0.93	0.70
Adj. Flow (vph)	111	542	204	148	426	56	199	326	136	188	468	76
RTOR Reduction (vph)	0	42	0	0	10	0	0	49	0	0	14	0
Lane Group Flow (vph)	111	704	0	148	472	0	199	413	0	188	530	0
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	5	2		1			3	8		7	4	
Permitted Phases	2				6		8			4		
Actuated Green, G (s)	32.8	24.0		11.8	27.0		30.3	18.5		30.1	18.4	
Effective Green, g (s)	36.8	26.0		13.8	29.0		34.3	20.5		34.1	20.4	
Actuated g/C Ratio	0.41	0.29		0.15	0.32		0.38	0.23		0.38	0.23	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	439	980		271	1121		376	771		407	785	
v/s Ratio Prot	0.03	c0.21		c0.08			c0.08	0.12		0.07	c0.15	
v/s Ratio Perm	0.07				c0.14		0.12			0.10		
v/c Ratio	0.25	0.72		0.55	0.42		0.53	0.54		0.46	0.68	
Uniform Delay, d1	16.8	28.7		35.2	23.9		20.0	30.6		19.7	31.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.87	1.34	
Incremental Delay, d2	0.3	4.5		2.2	0.3		1.3	0.7		0.8	2.1	
Delay (s)	17.1	33.2		37.5	24.2		21.4	31.3		37.7	44.8	
Level of Service	B	C		D	C		C	C		D	D	
Approach Delay (s)		31.2			27.3			28.3			43.0	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

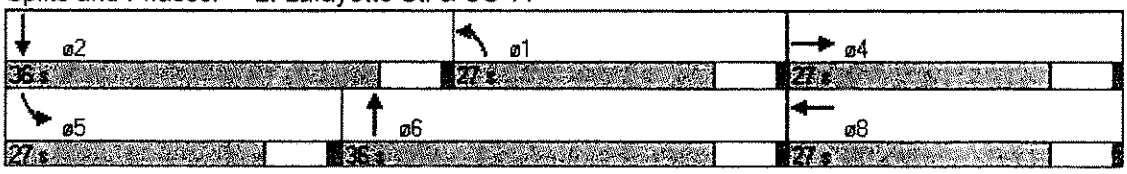
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	11	7	13	9	9	441	111	722
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	9.8	9.8		9.9	61.3	61.3	49.9	49.9
Actuated g/C Ratio	0.11	0.11		0.11	0.68	0.68	0.55	0.55
v/c Ratio	0.13	0.11		0.31	0.02	0.24	0.27	0.43
Control Delay	35.5	17.7		26.5	4.7	4.9	10.4	11.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	17.7		26.5	4.7	4.9	10.4	11.4
LOS	D	B		C	A	A	B	B
Approach Delay		23.6		26.5		4.9		11.2
Approach LOS		C		C		A		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 10.0 — Intersection LOS: A
Intersection Capacity Utilization 43.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	30.0	21.0	30.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	11.0	11.0	11.0	11.0	21.0	47.6	13.4	40.0
90th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
70th %ile Green (s)	9.0	9.0	9.0	9.0	21.0	52.1	10.9	42.0
70th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
50th %ile Green (s)	7.6	7.6	7.6	7.6	21.0	55.0	9.4	43.4
50th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
30th %ile Green (s)	0.0	0.0	0.0	0.0	21.0	70.5	7.5	57.0
30th %ile Term Code	Skip	Skip	Skip	Skip	Hold	Coord	Gap	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	21.0	71.4	6.6	57.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3168			1626		1770	3487		1770	3514	
Flt Permitted	0.81	1.00			0.86		0.34	1.00		0.36	1.00	
Satd. Flow (perm)	1503	3168			1431		630	3487		675	3514	
Volume (vph)	11	7	19	13	9	15	9	441	42	111	722	31
Peak-hour factor, PHF	0.55	0.58	0.68	0.65	0.56	0.75	0.56	0.86	0.75	0.71	0.91	0.78
Adj. Flow (vph)	20	12	28	20	16	20	16	513	56	156	793	40
RTOR Reduction (vph)	0	26	0	0	18	0	0	5	0	0	3	0
Lane Group Flow (vph)	20	14	0	0	38	0	16	564	0	156	830	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	5.5	5.5			5.5		56.9	56.9		45.5	45.5	
Effective Green, g (s)	7.5	7.5			7.5		58.9	58.9		47.5	47.5	
Actuated g/C Ratio	0.08	0.08			0.08		0.65	0.65		0.53	0.53	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	264			119		704	2282		497	1855	
v/s Ratio Prot		0.00					0.01	c0.16		0.04	c0.24	
v/s Ratio Perm	0.01				c0.03		0.01			0.13		
v/c Ratio	0.16	0.05			0.32		0.02	0.25		0.31	0.45	
Uniform Delay, d1	38.3	38.0			38.8		5.5	6.4		11.3	13.1	
Progression Factor	1.00	1.00			1.00		0.57	0.67		0.82	0.81	
Incremental Delay, d2	0.6	0.1			1.5		0.0	0.2		0.3	0.8	
Delay (s)	38.9	38.1			40.4		3.2	4.5		9.5	11.4	
Level of Service	D	D			D		A	A		A	B	
Approach Delay (s)		38.4			40.4			4.5			11.1	
Approach LOS		D			D			A			B	

Intersection Summary

HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

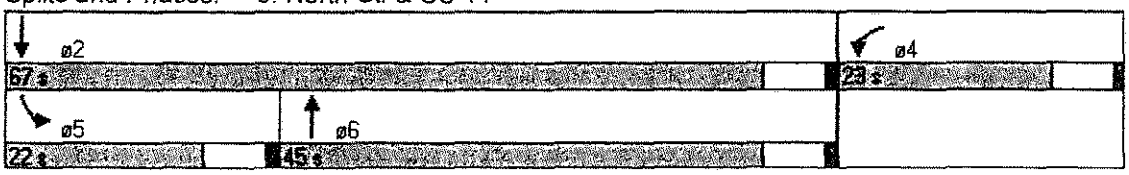
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	43	225	441	207	605
Turn Type		Perm		pm+pt	
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	23.0	23.0	45.0	22.0	67.0
Total Split (%)	25.6%	25.6%	50.0%	24.4%	74.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	12.0	12.0	51.8	70.0	70.0
Actuated g/C Ratio	0.13	0.13	0.58	0.78	0.78
v/c Ratio	0.31	0.67	0.51	0.59	0.46
Control Delay	35.0	7.9	26.8	11.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	7.9	26.8	11.4	5.5
LOS	C	A	C	B	A
Approach Delay	12.7		26.8		7.4
Approach LOS	B		C		A

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 13.9 — Intersection LOS: B
Intersection Capacity Utilization 50.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: North St. & US 11



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	23.0	23.0	45.0	22.0	67.0
Total Split (%)	25.6%	25.6%	50.0%	24.4%	74.4%
Maximum Green (s)	17.0	17.0	39.0	16.0	61.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	C-Min	Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	17.0	17.0	39.0	16.0	61.0
90th %ile Term Code	Max	Max	Coord	Max	Coord
70th %ile Green (s)	10.5	10.5	46.1	15.4	67.5
70th %ile Term Code	Gap	Gap	Coord	Gap	Coord
50th %ile Green (s)	9.1	9.1	50.1	12.8	68.9
50th %ile Term Code	Gap	Gap	Coord	Gap	Coord
30th %ile Green (s)	7.7	7.7	54.6	9.7	70.3
30th %ile Term Code	Gap	Gap	Coord	Gap	Coord
10th %ile Green (s)	5.8	5.8	59.4	6.8	72.2
10th %ile Term Code	Gap	Gap	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1837		1770	1863
Flt Permitted	0.95	1.00	1.00		0.32	1.00
Satd. Flow (perm)	1770	1583	1837		603	1863
Volume (vph)	43	225	441	39	207	605
Peak-hour factor, PHF	0.58	0.66	0.90	0.70	0.63	0.90
Adj. Flow (vph)	74	341	490	56	329	672
RTOR Reduction (vph)	0	296	3	0	0	0
Lane Group Flow (vph)	74	45	543	0	329	672
Turn Type		Perm			pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Actuated Green, G (s)	10.0	10.0	49.9		68.0	68.0
Effective Green, g (s)	12.0	12.0	51.9		70.0	70.0
Actuated g/C Ratio	0.13	0.13	0.58		0.78	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	236	211	1059		652	1449
v/s Ratio Prot	c0.04		0.30		c0.08	0.36
v/s Ratio Perm		0.03			c0.31	
v/c Ratio	0.31	0.22	0.51		0.50	0.46
Uniform Delay, d1	35.3	34.8	11.4		5.2	3.5
Progression Factor	1.00	1.00	1.85		2.44	1.14
Incremental Delay, d2	0.8	0.5	1.7		0.4	0.7
Delay (s)	36.0	35.3	22.9		13.1	4.7
Level of Service	D	D	C		B	A
Approach Delay (s)	35.4		22.9			7.4
Approach LOS	D		C			A

Intersection Summary

HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

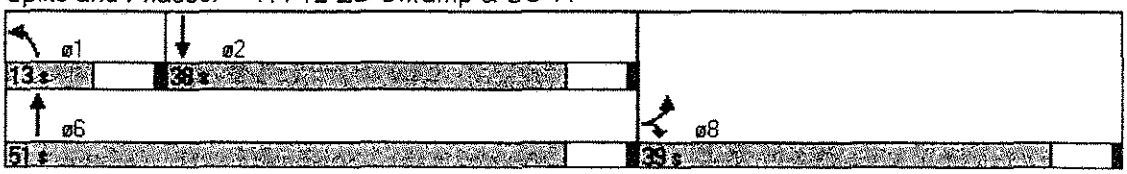
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	304	515	89	729	716
Turn Type		custom	custom		
Protected Phases	8	8	1	6	2
Permitted Phases		8	1		2
Detector Phases	8	8	1	6	2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	39.0	39.0	13.0	51.0	38.0
Total Split (%)	43.3%	43.3%	14.4%	56.7%	42.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Min	C-Min
Act Effct Green (s)	33.3	33.3	8.9	48.7	38.3
Actuated g/C Ratio	0.37	0.37	0.10	0.54	0.43
v/c Ratio	0.65	0.81	0.57	0.43	0.71
Control Delay	27.6	22.2	47.9	14.1	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	22.2	47.9	14.1	19.2
LOS	C	C	D	B	B
Approach Delay	24.4			17.8	19.2
Approach LOS	C			B	B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 20.5 — Intersection LOS: C
Intersection Capacity Utilization 66.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: I-12 EB Offramp & US 11



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	8	8	1	6	2
Permitted Phases		8	1		2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	39.0	39.0	13.0	51.0	38.0
Total Split (%)	43.3%	43.3%	14.4%	56.7%	42.2%
Maximum Green (s)	33.0	33.0	7.0	45.0	32.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	33.0	33.0	7.0	45.0	32.0
90th %ile Term Code	Max	Max	Max	Coord	Coord
70th %ile Green (s)	33.0	33.0	7.0	45.0	32.0
70th %ile Term Code	Max	Max	Max	Coord	Coord
50th %ile Green (s)	33.0	33.0	7.0	45.0	32.0
50th %ile Term Code	Max	Max	Max	Coord	Coord
30th %ile Green (s)	32.9	32.9	7.1	45.1	32.0
30th %ile Term Code	Gap	Gap	Max	Coord	Coord
10th %ile Green (s)	24.4	24.4	0.0	53.6	53.6
10th %ile Term Code	Gap	Gap	Skip	Coord	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
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)	1770	1583	1770	3539	3402	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	1583	1770	3539	3402	
Volume (vph)	304	515	89	729	716	238
Peak-hour factor, PHF	0.72	0.86	0.89	0.89	0.92	0.88
Adj. Flow (vph)	422	599	100	819	778	270
RTOR Reduction (vph)	0	159	0	0	36	0
Lane Group Flow (vph)	422	440	100	819	1012	0
Turn Type		custom	custom			
Protected Phases	8	8	1	6	2	
Permitted Phases		8	1		2	
Actuated Green, G (s)	31.3	31.3	5.6	46.7	35.1	
Effective Green, g (s)	33.3	33.3	7.6	48.7	37.1	
Actuated g/C Ratio	0.37	0.37	0.08	0.54	0.41	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	655	586	149	1915	1402	
v/s Ratio Prot	0.24	c0.28	c0.06	0.23	c0.30	
v/s Ratio Perm						
v/c Ratio	0.64	0.75	0.67	0.43	0.72	
Uniform Delay, d1	23.5	24.7	40.0	12.3	22.1	
Progression Factor	1.00	1.00	0.93	1.04	0.75	
Incremental Delay, d2	2.2	5.4	10.1	0.6	3.2	
Delay (s)	25.6	30.1	47.4	13.5	19.8	
Level of Service	C	C	D	B	B	
Approach Delay (s)	28.2			17.2	19.8	
Approach LOS	C			B	B	

Intersection Summary

HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

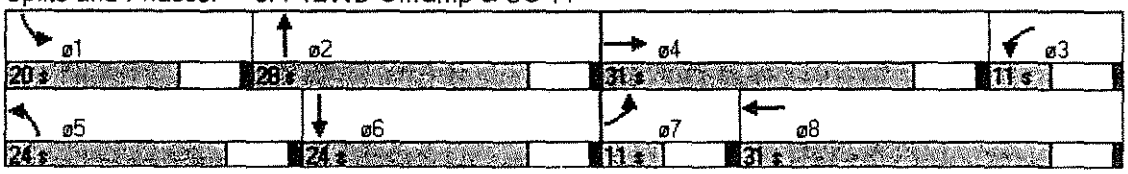
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	97	54	49	143	377	476	273	51	382
Turn Type	pm+pt		pm+pt		pm+pt		Perm	pm+pt	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phases	7	4	3	8	5	2	2	1	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	21.0	21.0	20.0	21.0
Total Split (s)	11.0	31.0	11.0	31.0	24.0	28.0	28.0	20.0	24.0
Total Split (%)	12.2%	34.4%	12.2%	34.4%	26.7%	31.1%	31.1%	22.2%	26.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Min	C-Min	Min	C-Min
Act Effct Green (s)	15.9	15.9	21.6	21.4	50.7	38.6	38.6	39.5	30.8
Actuated g/C Ratio	0.18	0.18	0.24	0.24	0.56	0.43	0.43	0.44	0.34
v/c Ratio	0.50	0.27	0.12	0.78	0.64	0.29	0.31	0.09	0.42
Control Delay	44.3	19.9	25.5	28.4	24.8	17.0	4.2	12.8	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	19.9	25.5	28.4	24.8	17.0	4.2	12.8	24.8
LOS	D	B	C	C	C	B	A	B	C
Approach Delay		32.1		28.1		16.5			23.9
Approach LOS		C		C		B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 22.0 — Intersection LOS: C
Intersection Capacity Utilization 68.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: I-12WB Offramp & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	21.0	21.0	20.0	21.0
Total Split (s)	11.0	31.0	11.0	31.0	24.0	28.0	28.0	20.0	24.0
Total Split (%)	12.2%	34.4%	12.2%	34.4%	26.7%	31.1%	31.1%	22.2%	26.7%
Maximum Green (s)	5.0	25.0	5.0	25.0	18.0	22.0	22.0	14.0	18.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	None	Min	C-Min	C-Min	Min	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	5.0	11.4	18.6	25.0	18.0	27.8	27.8	8.2	18.0
90th %ile Term Code	Max	Gap	Hold	Max	Max	Coord	Coord	Gap	Coord
70th %ile Green (s)	5.0	9.2	19.6	23.8	19.2	30.0	30.0	7.2	18.0
70th %ile Term Code	Max	Gap	Hold	Gap	Max	Coord	Coord	Gap	Coord
50th %ile Green (s)	5.0	7.6	17.6	20.2	16.4	34.2	34.2	6.6	24.4
50th %ile Term Code	Max	Gap	Hold	Gap	Gap	Coord	Coord	Gap	Coord
30th %ile Green (s)	7.0	29.6	0.0	16.6	13.2	36.4	36.4	6.0	29.2
30th %ile Term Code	Max	Hold	Skip	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	0.0	11.6	0.0	11.6	6.2	54.8	54.8	5.6	54.2
10th %ile Term Code	Skip	Hold	Skip	Gap	Gap	Coord	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	10	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.92		1.00	0.91		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1717		1770	1687		1888	3539	1478	1770	3395	
Flt Permitted	0.42	1.00		0.70	1.00		0.31	1.00	1.00	0.50	1.00	
Satd. Flow (perm)	784	1717		1299	1687		616	3539	1478	930	3395	
Volume (vph)	97	54	76	49	143	261	377	476	273	51	382	159
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
Growth Factor (vph)	87%	75%	58%	86%	89%	82%	81%	84%	81%	75%	89%	80%
Adj. Flow (vph)	92	44	48	46	138	233	332	435	240	42	370	138
RTOR Reduction (vph)	0	40	0	0	72	0	0	0	143	0	38	0
Lane Group Flow (vph)	92	52	0	46	299	0	332	435	97	42	470	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	13.9	13.9		20.7	20.7		46.9	34.2	34.2	33.0	26.3	
Effective Green, g (s)	15.9	15.9		22.7	22.7		48.9	36.2	36.2	37.0	28.3	
Actuated g/C Ratio	0.18	0.18		0.25	0.25		0.54	0.40	0.40	0.41	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	209	303		397	425		569	1423	594	464	1068	
v/s Ratio Prot	c0.03	0.03		0.02	c0.18		c0.11	0.12		0.01	0.14	
v/s Ratio Perm	0.05			0.01			c0.21		0.07	0.03		
v/c Ratio	0.44	0.17		0.12	0.70		0.58	0.31	0.16	0.09	0.44	
Uniform Delay, d1	41.0	31.5		26.1	30.6		12.4	18.3	17.2	16.0	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.70	0.87	1.02	1.00	1.00	
Incremental Delay, d2	1.5	0.3		0.1	5.2		1.4	0.5	0.5	0.1	1.3	
Delay (s)	42.4	31.7		26.2	35.8		22.4	16.5	18.0	16.1	25.9	
Level of Service	D	C		C	D		C	B	B	B	C	
Approach Delay (s)		37.1			34.8			18.8			25.1	
Approach LOS		D			C			B			C	

Intersection Summary

HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

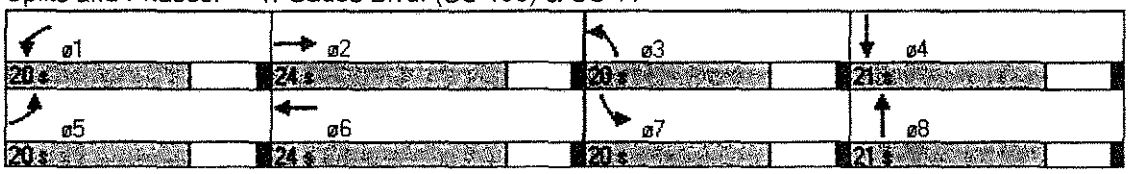
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	113	460	137	487	261	445	161	311
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phases	5	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	24.0	20.0	24.0	20.0	21.0	20.0	21.0
Total Split (%)	23.5%	28.2%	23.5%	28.2%	23.5%	24.7%	23.5%	24.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	36.2	25.0	37.3	25.6	34.2	19.1	30.4	17.2
Actuated g/C Ratio	0.43	0.29	0.44	0.30	0.40	0.22	0.36	0.20
v/c Ratio	0.38	0.73	0.41	0.64	0.68	0.81	0.51	0.67
Control Delay	14.9	29.8	15.3	28.0	24.4	38.9	19.2	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	29.8	15.3	28.0	24.4	38.9	19.2	33.3
LOS	B	C	B	C	C	D	B	C
Approach Delay		27.7		25.7		34.4		29.4
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 29.5 — Intersection LOS: C
Intersection Capacity Utilization 67.4% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	5.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	24.0	20.0	24.0	20.0	21.0	20.0	21.0
Total Split (%)	23.5%	28.2%	23.5%	28.2%	23.5%	24.7%	23.5%	24.7%
Maximum Green (s)	14.0	18.0	14.0	18.0	14.0	15.0	14.0	15.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	12.0	19.1	12.9	20.0	14.0	15.0	14.0	15.0
90th %ile Term Code	Gap	Coord	Gap	Coord	Max	Max	Max	Max
70th %ile Green (s)	10.2	21.1	10.9	21.8	14.0	16.2	12.8	15.0
70th %ile Term Code	Gap	Coord	Gap	Coord	Max	Max	Gap	Max
50th %ile Green (s)	9.1	22.4	9.6	22.9	14.0	17.8	11.2	15.0
50th %ile Term Code	Gap	Coord	Gap	Coord	Max	Max	Gap	Max
30th %ile Green (s)	7.9	23.6	8.4	24.1	12.8	19.2	9.8	16.2
30th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Max	Gap	Hold
10th %ile Green (s)	6.4	29.0	6.7	29.3	10.3	17.5	7.8	15.0
10th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Hold	Gap	Min

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3369		1770	3422		1770	3408		1770	3406	
Flt Permitted	0.24	1.00		0.16	1.00		0.25	1.00		0.23	1.00	
Satd. Flow (perm)	446	3369		305	3422		457	3408		433	3406	
Volume (vph)	113	460	212	137	487	107	261	445	127	161	311	100
Peak-hour factor, PHF	0.88	0.88	0.86	0.93	0.93	0.72	0.91	0.91	0.79	0.88	0.85	0.81
Adj. Flow (vph)	128	523	247	147	524	149	287	489	161	183	366	123
RTOR Reduction (vph)	0	61	0	0	28	0	0	36	0	0	39	0
Lane Group Flow (vph)	128	709	0	147	645	0	287	614	0	183	450	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	32.2	23.1		33.4	23.7		30.1	17.1		26.3	15.2	
Effective Green, g (s)	36.2	25.1		37.4	25.7		34.1	19.1		30.3	17.2	
Actuated g/C Ratio	0.43	0.30		0.44	0.30		0.40	0.22		0.36	0.20	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	363	995		336	1035		415	766		360	689	
v/s Ratio Prot	0.05	c0.21		c0.06	0.19		c0.12	c0.18		0.08	0.13	
v/s Ratio Perm	0.10			0.13			0.16			0.10		
v/c Ratio	0.35	0.71		0.44	0.62		0.69	0.80		0.51	0.65	
Uniform Delay, d1	15.8	26.7		16.0	25.5		18.9	31.2		20.3	31.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	4.3		0.9	1.2		4.9	6.0		1.1	2.2	
Delay (s)	16.4	31.1		16.9	26.7		23.9	37.2		21.4	33.4	
Level of Service	B	C		B	C		C	D		C	C	
Approach Delay (s)		29.0			24.9			33.1			30.1	
Approach LOS		C			C			C			C	

Intersection Summary

HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

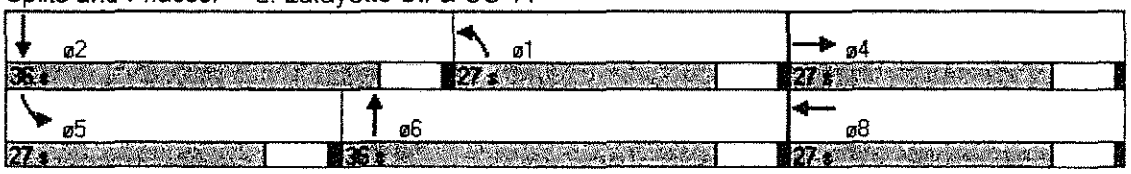
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	57	24	14	18	50	583	55	646
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	13.1	13.1		13.1	55.4	55.4	41.9	41.9
Actuated g/C Ratio	0.15	0.15		0.15	0.62	0.62	0.47	0.47
v/c Ratio	0.45	0.24		0.42	0.12	0.32	0.14	0.48
Control Delay	36.1	12.6		17.2	9.7	9.3	13.0	16.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	12.6		17.2	9.7	9.3	13.0	16.5
LOS	D	B		B	A	A	B	B
Approach Delay		21.6		17.2		9.4		16.2
Approach LOS		C		B		A		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 14.1 — Intersection LOS: B
Intersection Capacity Utilization 44.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	30.0	21.0	30.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	16.3	16.3	16.3	16.3	21.0	46.4	9.3	34.7
90th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
70th %ile Green (s)	13.2	13.2	13.2	13.2	21.0	50.5	8.3	37.8
70th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
50th %ile Green (s)	11.0	11.0	11.0	11.0	21.0	53.6	7.4	40.0
50th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
30th %ile Green (s)	9.0	9.0	9.0	9.0	21.0	56.2	6.8	42.0
30th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
10th %ile Green (s)	6.1	6.1	6.1	6.1	21.0	60.3	5.6	44.9
10th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.92		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3174			1587		1770	3487		1770	3484	
Flt Permitted	0.58	1.00			0.92		0.36	1.00		0.29	1.00	
Satd. Flow (perm)	1077	3174			1480		667	3487		531	3484	
Volume (vph)	57	24	68	14	18	40	50	583	51	55	646	56
Peak-hour factor, PHF	0.71	0.60	0.77	0.70	0.64	0.59	0.54	0.94	0.75	0.81	0.93	0.70
Adj. Flow (vph)	80	40	88	20	28	68	93	620	68	68	695	80
RTOR Reduction (vph)	0	75	0	0	58	0	0	5	0	0	8	0
Lane Group Flow (vph)	80	53	0	0	58	0	93	683	0	68	767	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	11.1	11.1			11.1		53.4	53.4		39.9	39.9	
Effective Green, g (s)	13.1	13.1			13.1		55.4	55.4		41.9	41.9	
Actuated g/C Ratio	0.15	0.15			0.15		0.62	0.62		0.47	0.47	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	462			215		692	2146		378	1622	
v/s Ratio Prot		0.02					0.03	c0.20		0.02	c0.22	
v/s Ratio Perm	c0.07				0.04		0.05			0.06		
v/c Ratio	0.51	0.11			0.27		0.13	0.32		0.18	0.47	
Uniform Delay, d1	35.5	33.4			34.2		7.7	8.3		13.8	16.5	
Progression Factor	1.00	1.00			1.00		1.00	1.00		0.84	0.91	
Incremental Delay, d2	2.6	0.1			0.7		0.1	0.4		0.2	1.0	
Delay (s)	38.1	33.5			34.9		7.8	8.7		11.9	15.9	
Level of Service	D	C			C		A	A		B	B	
Approach Delay (s)		35.3			34.9			8.6			15.6	
Approach LOS		D			C			A			B	

Intersection Summary

HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

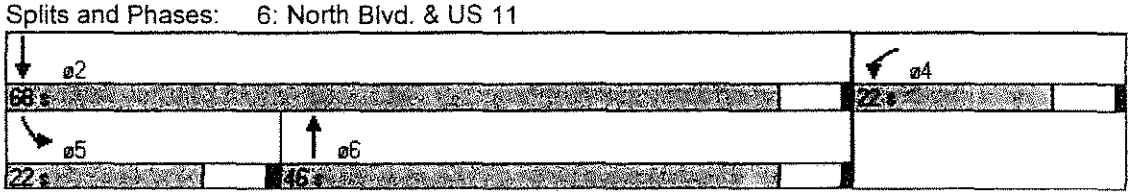
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	66	237	574	323	571
Turn Type		Perm		pm+pt	
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	46.0	22.0	68.0
Total Split (%)	24.4%	24.4%	51.1%	24.4%	75.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	12.3	12.3	49.4	69.7	69.7
Actuated g/C Ratio	0.14	0.14	0.55	0.77	0.77
v/c Ratio	0.36	0.63	0.71	0.76	0.43
Control Delay	35.8	8.0	26.4	23.2	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	8.0	26.4	23.2	5.0
LOS	D	A	C	C	A
Approach Delay	14.4		26.4		11.5
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 17.2 — Intersection LOS: B
Intersection Capacity Utilization 65.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: North Blvd. & US 11



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1833		1770	1863
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1770	1583	1833		357	1863
Volume (vph)	66	237	574	67	323	571
Peak-hour factor, PHF	0.75	0.79	0.90	0.80	0.94	0.93
Adj. Flow (vph)	88	300	638	84	344	614
RTOR Reduction (vph)	0	259	5	0	0	0
Lane Group Flow (vph)	88	41	717	0	344	614
Turn Type		Perm			pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Actuated Green, G (s)	10.3	10.3	47.4		67.7	67.7
Effective Green, g (s)	12.3	12.3	49.4		69.7	69.7
Actuated g/C Ratio	0.14	0.14	0.55		0.77	0.77
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	242	216	1006		532	1443
v/s Ratio Prot	c0.05		c0.39		c0.12	0.33
v/s Ratio Perm		0.03			0.38	
v/c Ratio	0.36	0.19	0.71		0.65	0.43
Uniform Delay, d1	35.3	34.4	15.0		10.6	3.4
Progression Factor	1.00	1.00	1.27		1.00	1.00
Incremental Delay, d2	0.9	0.4	4.2		2.7	0.9
Delay (s)	36.2	34.9	23.2		13.3	4.3
Level of Service	D	C	C		B	A
Approach Delay (s)	35.2		23.2			7.6
Approach LOS	D		C			A

Intersection Summary

HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

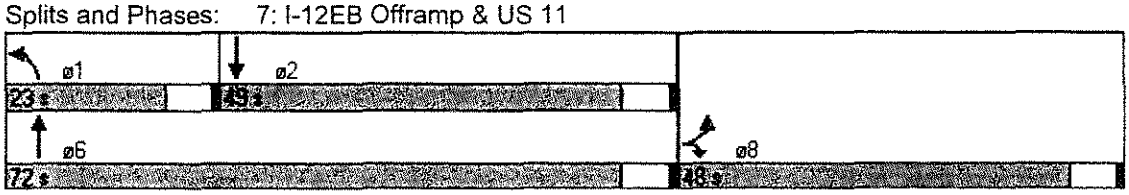
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	438	548	128	818	494
Turn Type		custom	pm+pt		
Protected Phases	8	8	1	6	2
Permitted Phases		8	6		2
Detector Phases	8	8	1	6	2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	48.0	48.0	23.0	72.0	49.0
Total Split (%)	40.0%	40.0%	19.2%	60.0%	40.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Min	C-Min
Act Effct Green (s)	50.4	50.4	61.6	61.6	43.3
Actuated g/C Ratio	0.42	0.42	0.51	0.51	0.36
v/c Ratio	0.72	0.63	0.47	0.51	0.56
Control Delay	34.7	9.5	19.6	20.8	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	9.5	19.6	20.8	31.8
LOS	C	A	B	C	C
Approach Delay	21.7			20.6	31.8
Approach LOS	C			C	C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 23.7 — Intersection LOS: C
Intersection Capacity Utilization 59.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: I-12EB Offramp & US 11



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	8	8	1	6	2
Permitted Phases		8	6		2
Minimum Initial (s)	10.0	10.0	5.0	15.0	12.0
Minimum Split (s)	22.0	22.0	11.0	22.0	22.0
Total Split (s)	48.0	48.0	23.0	72.0	49.0
Total Split (%)	40.0%	40.0%	19.2%	60.0%	40.8%
Maximum Green (s)	42.0	42.0	17.0	66.0	43.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	C-Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	46.6	46.6	15.8	61.4	39.6
90th %ile Term Code	Max	Max	Gap	Coord	Coord
70th %ile Green (s)	51.4	51.4	14.1	56.6	36.5
70th %ile Term Code	Max	Max	Gap	Coord	Coord
50th %ile Green (s)	55.0	55.0	12.8	53.0	34.2
50th %ile Term Code	Max	Max	Gap	Coord	Coord
30th %ile Green (s)	51.6	51.6	10.8	56.4	39.6
30th %ile Term Code	Gap	Gap	Gap	Coord	Coord
10th %ile Green (s)	37.6	37.6	7.9	70.4	56.5
10th %ile Term Code	Gap	Gap	Gap	Coord	Coord

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	20.0	10.0	20.0	20.0	10.0	20.0
Total Split (s)	13.0	23.0	13.0	23.0	26.0	44.0	44.0	10.0	28.0
Total Split (%)	14.4%	25.6%	14.4%	25.6%	28.9%	48.9%	48.9%	11.1%	31.1%
Maximum Green (s)	7.0	17.0	7.0	17.0	20.0	38.0	38.0	4.0	22.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	7.0	17.0	7.0	17.0	20.0	38.0	38.0	4.0	22.0
90th %ile Term Code	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord
70th %ile Green (s)	7.0	17.0	7.0	17.0	20.0	38.0	38.0	4.0	22.0
70th %ile Term Code	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord
50th %ile Green (s)	7.7	15.4	9.1	16.8	16.9	37.3	37.3	4.2	24.6
50th %ile Term Code	Max	Gap	Hold	Gap	Gap	Coord	Coord	Max	Coord
30th %ile Green (s)	9.9	12.8	10.9	13.8	13.7	35.7	35.7	6.6	28.6
30th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Coord	Coord	Gap	Coord
10th %ile Green (s)	7.4	9.1	8.5	10.2	10.1	54.4	54.4	0.0	38.3
10th %ile Term Code	Gap	Gap	Hold	Gap	Gap	Coord	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.94		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1748		1770	1758		1888	3539	1583	1770	3340	
Flt Permitted	0.62	1.00		0.62	1.00		0.22	1.00	1.00	0.43	1.00	
Satd. Flow (perm)	1146	1748		1146	1758		444	3539	1583	801	3340	
Volume (vph)	118	127	83	116	113	70	350	541	343	57	356	221
Peak-hour factor, PHF	0.87	0.93	0.87	0.81	0.71	0.73	0.90	0.92	0.88	0.78	0.86	0.89
Adj. Flow (vph)	136	137	95	143	159	96	389	588	390	73	414	248
RTOR Reduction (vph)	0	29	0	0	25	0	0	0	211	0	91	0
Lane Group Flow (vph)	136	203	0	143	230	0	389	588	179	73	571	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	14.3	14.3		15.0	15.0		49.2	39.4	39.4	30.9	27.1	
Effective Green, g (s)	16.3	16.3		17.0	17.0		51.2	41.4	41.4	34.9	29.1	
Actuated g/C Ratio	0.18	0.18		0.19	0.19		0.57	0.46	0.46	0.39	0.32	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	276	317		289	332		543	1628	728	373	1080	
v/s Ratio Prot	0.05	c0.12		0.06	c0.13		c0.14	0.17		0.01	0.17	
v/s Ratio Perm	0.04			0.04			c0.26		0.11	0.06		
v/c Ratio	0.49	0.64		0.49	0.69		0.72	0.36	0.25	0.20	0.53	
Uniform Delay, d1	38.7	34.1		32.6	34.1		12.9	15.7	14.8	17.6	24.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	4.4		1.3	6.1		4.5	0.6	0.8	0.3	1.9	
Delay (s)	40.1	38.5		34.0	40.2		17.3	16.4	15.6	17.9	26.7	
Level of Service	D	D		C	D		B	B	B	B	C	
Approach Delay (s)		39.1			38.0			16.4			25.8	
Approach LOS		D			D			B			C	

Intersection Summary

HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

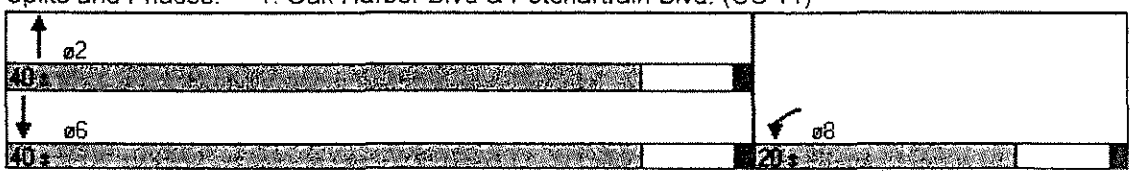
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	51	202	428	135	894
Turn Type		Perm		Perm	
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phases	8	8	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Max	Max	Max
Act Effct Green (s)	10.0	10.0	36.1	36.1	36.1
Actuated g/C Ratio	0.18	0.18	0.67	0.67	0.67
v/c Ratio	0.21	0.54	0.43	0.32	0.78
Control Delay	19.1	5.6	5.9	6.7	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	5.6	5.9	6.7	13.6
LOS	B	A	A	A	B
Approach Delay	8.2		5.9		12.6
Approach LOS	A		A		B

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 54.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 10.1 — Intersection LOS: B
Intersection Capacity Utilization 57.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Oak Harbor Blvd & Potchartrain Blvd. (US 11)



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	8		2		6
Permitted Phases		8		6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%
Maximum Green (s)	14.0	14.0	34.0	34.0	34.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	15.0	15.0	15.0
Time To Reduce (s)	0.0	0.0	15.0	15.0	15.0
Recall Mode	None	None	Max	Max	Max
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	12.7	12.7	34.0	34.0	34.0
90th %ile Term Code	Gap	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	8.4	8.4	34.0	34.0	34.0
70th %ile Term Code	Gap	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	7.4	7.4	34.0	34.0	34.0
50th %ile Term Code	Gap	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	6.3	6.3	34.0	34.0	34.0
30th %ile Term Code	Gap	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	5.5	5.5	34.0	34.0	34.0
10th %ile Term Code	Gap	Gap	MaxR	MaxR	MaxR

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 54.1
Control Type: Semi Act-Uncoord
90th %ile Actuated Cycle: 58.7
70th %ile Actuated Cycle: 54.4
50th %ile Actuated Cycle: 53.4
30th %ile Actuated Cycle: 52.3
10th %ile Actuated Cycle: 51.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1855		1770	1863
Flt Permitted	0.95	1.00	1.00		0.42	1.00
Satd. Flow (perm)	1770	1583	1855		783	1863
Volume (vph)	51	202	428	7	135	894
Peak-hour factor, PHF	0.75	0.72	0.83	0.44	0.89	0.92
Adj. Flow (vph)	68	281	516	16	152	972
RTOR Reduction (vph)	0	229	2	0	0	0
Lane Group Flow (vph)	68	52	530	0	152	972
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.0	8.0	34.1		34.1	34.1
Effective Green, g (s)	10.0	10.0	36.1		36.1	36.1
Actuated g/C Ratio	0.18	0.18	0.67		0.67	0.67
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	327	293	1238		522	1243
v/s Ratio Prot	c0.04		0.29			c0.52
v/s Ratio Perm		0.03			0.19	
v/c Ratio	0.21	0.18	0.43		0.29	0.78
Uniform Delay, d1	18.7	18.6	4.2		3.7	6.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	1.1		1.4	4.9
Delay (s)	19.0	18.9	5.3		5.1	11.2
Level of Service	B	B	A		A	B
Approach Delay (s)	18.9		5.3			10.4
Approach LOS	B		A			B

Intersection Summary

HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	10
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1652	1478
Flt Permitted	1.00	1.00	0.56	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	1036	1863	1652	1478
Volume (vph)	199	33	86	823	119	167
Peak-hour factor, PHF	0.83	0.75	0.72	0.86	0.85	0.66
Adj. Flow (vph)	240	44	119	957	140	253
RTOR Reduction (vph)	0	17	0	0	0	202
Lane Group Flow (vph)	240	27	119	957	140	51
Turn Type		Perm	pm+pt			Perm
Protected Phases	6		5	2	4	
Permitted Phases		6	2			4
Actuated Green, G (s)	54.0	54.0	62.0	62.0	16.0	16.0
Effective Green, g (s)	56.0	56.0	64.0	64.0	18.0	18.0
Actuated g/C Ratio	0.62	0.62	0.71	0.71	0.20	0.20
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Lane Grp Cap (vph)	1159	985	769	1325	330	296
v/s Ratio Prot	0.13		0.01	c0.51	c0.08	
v/s Ratio Perm		0.02	0.10			0.03
v/c Ratio	0.21	0.03	0.15	0.72	0.42	0.17
Uniform Delay, d1	7.4	6.5	4.2	7.7	31.5	29.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.4	3.4	4.0	1.2
Delay (s)	7.8	6.6	4.6	11.2	35.4	31.1
Level of Service	A	A	A	B	D	C
Approach Delay (s)	7.6			10.4	32.6	
Approach LOS	A			B	C	

Intersection Summary

HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	39	10	5	136	944	20
Peak Hour Factor	0.82	0.62	0.42	0.71	0.78	0.62
Hourly flow rate (vph)	48	16	12	192	1210	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1442	1226	1243			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1442	1226	1243			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	67	93	98			
cM capacity (veh/h)	143	218	560			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	64	203	1243
Volume Left	48	12	0
Volume Right	16	0	32
cSH	156	560	1700
Volume to Capacity	0.41	0.02	0.73
Queue Length 95th (ft)	45	2	0
Control Delay (s)	43.0	0.9	0.0
Lane LOS	E	A	
Approach Delay (s)	43.0	0.9	0.0
Approach LOS	E		

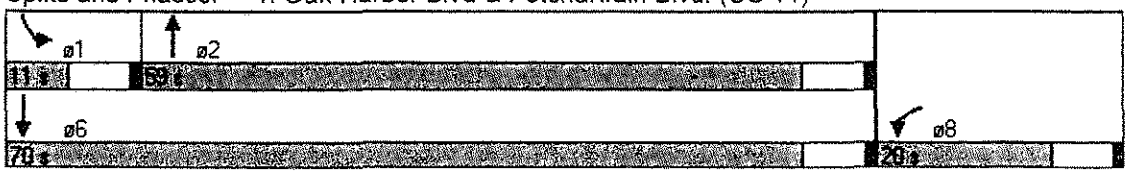
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	17	170	964	158	521
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	10.0	20.0
Total Split (s)	20.0	20.0	59.0	11.0	70.0
Total Split (%)	22.2%	22.2%	65.6%	12.2%	77.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
Act Effct Green (s)	9.8	9.8	51.7	62.8	62.8
Actuated g/C Ratio	0.12	0.12	0.64	0.78	0.78
v/c Ratio	0.16	0.54	0.90	0.84	0.44
Control Delay	33.6	8.7	23.5	47.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	8.7	23.5	47.5	4.3
LOS	C	A	C	D	A
Approach Delay	12.4		23.5		14.8
Approach LOS	B		C		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 74.9% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Oak Harbor Blvd & Potchartrain Blvd. (US 11)



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	10.0	20.0
Total Split (s)	20.0	20.0	59.0	11.0	70.0
Total Split (%)	22.2%	22.2%	65.6%	12.2%	77.8%
Maximum Green (s)	14.0	14.0	53.0	5.0	64.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	Min	None	Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	12.5	12.5	53.0	5.0	64.0
90th %ile Term Code	Gap	Gap	Max	Max	Hold
70th %ile Green (s)	8.3	8.3	53.0	5.0	64.0
70th %ile Term Code	Gap	Gap	Max	Max	Hold
50th %ile Green (s)	7.0	7.0	53.0	5.0	64.0
50th %ile Term Code	Gap	Gap	Max	Max	Hold
30th %ile Green (s)	6.0	6.0	51.0	5.0	62.0
30th %ile Term Code	Gap	Gap	Gap	Max	Hold
10th %ile Green (s)	5.5	5.5	38.8	5.0	49.8
10th %ile Term Code	Gap	Gap	Dwell	Max	Dwell

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 88.5
70th %ile Actuated Cycle: 84.3
50th %ile Actuated Cycle: 83
30th %ile Actuated Cycle: 80
10th %ile Actuated Cycle: 67.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1852		1770	1863
Flt Permitted	0.95	1.00	1.00		0.07	1.00
Satd. Flow (perm)	1770	1583	1852		134	1863
Volume (vph)	17	170	964	34	158	521
Peak-hour factor, PHF	0.50	0.87	0.94	0.71	0.78	0.82
Adj. Flow (vph)	34	195	1026	48	203	635
RTOR Reduction (vph)	0	171	2	0	0	0
Lane Group Flow (vph)	34	24	1072	0	203	635
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	7.8	7.8	49.8		60.8	60.8
Effective Green, g (s)	9.8	9.8	51.8		62.8	62.8
Actuated g/C Ratio	0.12	0.12	0.64		0.78	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	215	192	1190		246	1452
v/s Ratio Prot	c0.02		c0.58		c0.07	0.34
v/s Ratio Perm		0.01			0.57	
v/c Ratio	0.16	0.12	0.90		0.83	0.44
Uniform Delay, d1	31.7	31.6	12.2		23.6	3.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	9.5		19.7	0.2
Delay (s)	32.1	31.9	21.8		43.3	3.2
Level of Service	C	C	C		D	A
Approach Delay (s)	31.9		21.8			12.9
Approach LOS	C		C			B

Intersection Summary

HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

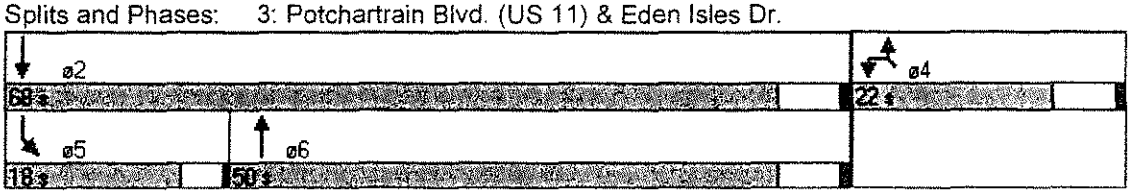
c Critical Lane Group

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	792	83	248	275	47	164
Turn Type		Perm	pm+pt			Prot
Protected Phases	6		5	2	4	4
Permitted Phases		6	2			
Detector Phases	6	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	50.0	50.0	18.0	68.0	22.0	22.0
Total Split (%)	55.6%	55.6%	20.0%	75.6%	24.4%	24.4%
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	46.9	46.9	64.1	64.1	11.3	11.3
Actuated g/C Ratio	0.56	0.56	0.77	0.77	0.14	0.14
v/c Ratio	0.82	0.12	0.86	0.21	0.32	0.56
Control Delay	24.4	2.5	39.8	3.4	34.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.4	2.5	39.8	3.4	34.0	8.4
LOS	C	A	D	A	C	A
Approach Delay	21.9			22.0	14.8	
Approach LOS	C			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 83.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 20.8 Intersection LOS: C
Intersection Capacity Utilization 68.8% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.



Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Protected Phases	6		5	2	4	4
Permitted Phases		6	2			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	8.0	22.0	22.0	22.0
Total Split (s)	50.0	50.0	18.0	68.0	22.0	22.0
Total Split (%)	55.6%	55.6%	20.0%	75.6%	24.4%	24.4%
Maximum Green (s)	44.0	44.0	14.0	62.0	16.0	16.0
Yellow Time (s)	5.0	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	0.5	1.0	1.0	1.0
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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	None	None
Walk Time (s)	5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0
90th %ile Green (s)	44.0	44.0	14.0	62.0	13.8	13.8
90th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
70th %ile Green (s)	44.0	44.0	14.0	62.0	10.6	10.6
70th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
50th %ile Green (s)	44.0	44.0	14.0	62.0	9.1	9.1
50th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
30th %ile Green (s)	44.0	44.0	14.0	62.0	7.6	7.6
30th %ile Term Code	MaxR	MaxR	Max	MaxR	Gap	Gap
10th %ile Green (s)	48.1	48.1	9.9	62.0	5.7	5.7
10th %ile Term Code	Hold	Hold	Gap	MaxR	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 83.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87.8
70th %ile Actuated Cycle: 84.6
50th %ile Actuated Cycle: 83.1
30th %ile Actuated Cycle: 81.6
10th %ile Actuated Cycle: 79.7

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	10	10
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1652	1478
Flt Permitted	1.00	1.00	0.12	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	219	1863	1652	1478
Volume (vph)	792	83	248	275	47	164
Peak-hour factor, PHF	0.92	0.74	0.78	0.90	0.65	0.76
Adj. Flow (vph)	861	112	318	306	72	216
RTOR Reduction (vph)	0	49	0	0	0	187
Lane Group Flow (vph)	861	63	318	306	72	29
Turn Type		Perm	pm+pt			Prot
Protected Phases	6		5	2	4	4
Permitted Phases		6	2			
Actuated Green, G (s)	44.9	44.9	62.1	62.1	9.3	9.3
Effective Green, g (s)	46.9	46.9	64.1	64.1	11.3	11.3
Actuated g/C Ratio	0.56	0.56	0.77	0.77	0.14	0.14
Clearance Time (s)	6.0	6.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1048	890	414	1432	224	200
v/s Ratio Prot	c0.46		c0.12	0.16	c0.04	0.02
v/s Ratio Perm		0.04	0.47			
v/c Ratio	0.82	0.07	0.77	0.21	0.32	0.15
Uniform Delay, d1	14.8	8.3	19.4	2.7	32.6	31.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.3	0.2	8.3	0.3	0.8	0.3
Delay (s)	22.1	8.5	27.7	3.0	33.4	32.1
Level of Service	C	A	C	A	C	C
Approach Delay (s)	20.5			15.6	32.5	
Approach LOS	C			B	C	

Intersection Summary

HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	83.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	43	10	13	800	218	46
Peak Hour Factor	0.58	0.42	0.81	0.82	0.92	0.77
Hourly flow rate (vph)	74	24	16	976	237	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1275	267	237			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1275	267	237			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	59	97	99			
cM capacity (veh/h)	182	772	1330			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	98	992	297
Volume Left	74	16	0
Volume Right	24	0	60
cSH	224	1330	1700
Volume to Capacity	0.44	0.01	0.17
Queue Length 95th (ft)	52	1	0
Control Delay (s)	33.1	0.3	0.0
Lane LOS	D	A	
Approach Delay (s)	33.1	0.3	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX F

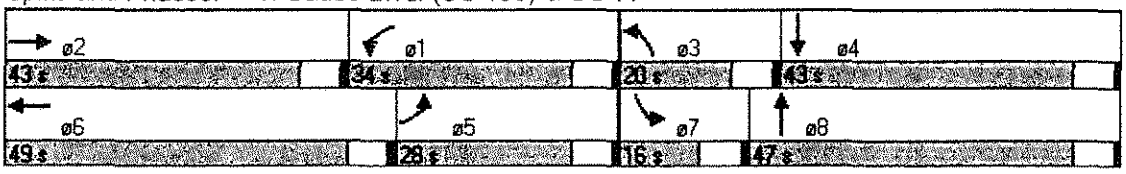
FUTURE 2025 CALCULATIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	156	856	326	179	575	307	491	289	763
Turn Type	pm+pt		Perm	pm+pt		pm+pt		pm+pt	
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases	2		2	6		8		4	
Detector Phases	5	2	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	28.0	43.0	43.0	34.0	49.0	20.0	47.0	16.0	43.0
Total Split (%)	20.0%	30.7%	30.7%	24.3%	35.0%	14.3%	33.6%	11.4%	30.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	66.9	48.9	48.9	72.3	52.2	55.7	39.2	51.9	37.4
Actuated g/C Ratio	0.48	0.35	0.35	0.52	0.37	0.40	0.28	0.37	0.27
v/c Ratio	0.66	0.77	0.50	0.40	0.65	0.66	0.83	0.65	0.71
Control Delay	49.5	47.5	14.4	37.5	40.1	32.8	49.0	33.6	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	47.5	14.4	37.5	40.1	32.8	49.0	33.6	47.8
LOS	D	D	B	D	D	C	D	C	D
Approach Delay		39.8			39.5		44.1		44.2
Approach LOS		D			D		D		D

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 41.9 — Intersection LOS: D
Intersection Capacity Utilization 71.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1	6	3	8	7	4
Permitted Phases	2		2	6		8		4	
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	28.0	43.0	43.0	34.0	49.0	20.0	47.0	16.0	43.0
Total Split (%)	20.0%	30.7%	30.7%	24.3%	35.0%	14.3%	33.6%	11.4%	30.7%
Maximum Green (s)	22.0	37.0	37.0	28.0	43.0	14.0	41.0	10.0	37.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	22.0	37.0	37.0	28.0	43.0	14.0	41.0	10.0	37.0
90th %ile Term Code	Max	Coord	Coord	Hold	Coord	Max	Max	Max	Max
70th %ile Green (s)	19.0	37.0	37.0	25.0	43.0	17.0	41.0	13.0	37.0
70th %ile Term Code	Gap	Coord	Coord	Hold	Coord	Max	Max	Max	Hold
50th %ile Green (s)	16.2	40.7	40.7	22.2	46.7	15.6	38.6	14.5	37.5
50th %ile Term Code	Gap	Coord	Coord	Hold	Coord	Gap	Gap	Gap	Hold
30th %ile Green (s)	13.3	51.4	51.4	15.5	53.6	13.5	35.6	13.5	35.6
30th %ile Term Code	Gap	Coord	Coord	Hold	Coord	Gap	Gap	Gap	Hold
10th %ile Green (s)	9.4	68.4	68.4	5.8	64.8	12.0	30.0	11.8	29.8
10th %ile Term Code	Hold	Coord	Coord	Gap	Coord	Gap	Gap	Gap	Hold

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.97	0.95		0.97	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	3478		3433	3382		3433	4979	
Flt Permitted	0.16	1.00	1.00	0.12	1.00		0.12	1.00		0.11	1.00	
Satd. Flow (perm)	307	3539	1583	440	3478		444	3382		396	4979	
Volume (vph)	156	856	326	179	575	89	307	491	230	289	763	93
Peak-hour factor, PHF	0.80	0.90	0 91	0.69	0.77	0.91	0.88	0.86	0.96	0.88	0.93	0.70
Adj. Flow (vph)	195	951	358	259	747	98	349	571	240	328	820	133
RTOR Reduction (vph)	0	0	167	0	7	0	0	35	0	0	16	0
Lane Group Flow (vph)	195	951	191	259	838	0	349	776	0	328	937	0
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	62.9	46.9	46.9	69.5	50.2		51.6	37.2		48.0	35.4	
Effective Green, g (s)	66.9	48.9	48.9	73.5	52.2		55.6	39.2		52.0	37.4	
Actuated g/C Ratio	0.48	0.35	0.35	0.52	0.37		0.40	0.28		0.37	0.27	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	335	1236	553	686	1297		526	947		464	1330	
v/s Ratio Prot	c0.07	c0.27		c0.06	0.24		c0.08	c0.23		0.07	0.19	
v/s Ratio Perm	0.20		0.12	0.14			0.19			0.19		
v/c Ratio	0.58	0.77	0.35	0.38	0.65		0.66	0.82		0.71	0.70	
Uniform Delay, d1	43.6	40.5	33.7	41.7	36.3		31.0	47.1		33.7	46.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.6	4.7	1.7	0.3	1.1		3.1	5.6		4.9	1.7	
Delay (s)	46.2	45.2	35.4	42.1	37.4		34.2	52.7		38.6	48.0	
Level of Service	D	D	D	D	D		C	D		D	D	
Approach Delay (s)		43.0			38.5			47.2			45.6	
Approach LOS		D			D			D			D	

Intersection Summary

HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

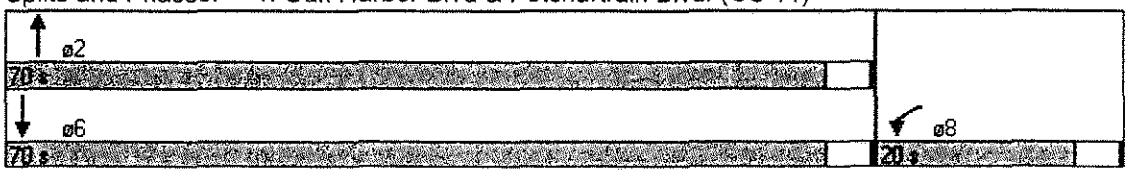
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	89	354	751	237	1568
Turn Type		Perm		Perm	
Protected Phases	8		2		6
Permitted Phases		8		6	
Detector Phases	8	8	2	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	70.0	70.0	70.0
Total Split (%)	22.2%	22.2%	77.8%	77.8%	77.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Min	Min	Min
Act Effct Green (s)	16.8	16.8	45.7	45.7	45.7
Actuated g/C Ratio	0.24	0.24	0.64	0.64	0.64
v/c Ratio	0.28	0.91	0.41	0.78	0.75
Control Delay	30.3	41.4	5.8	19.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	41.4	5.8	19.5	9.2
LOS	C	D	A	B	A
Approach Delay	39.2		5.8		10.6
Approach LOS	D		A		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 14.3 — Intersection LOS: B
Intersection Capacity Utilization 54.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Oak Harbor Blvd & Potchartrain Blvd. (US 11)



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	8		2		6
Permitted Phases		8		6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	20.0	70.0	70.0	70.0
Total Split (%)	22.2%	22.2%	77.8%	77.8%	77.8%
Maximum Green (s)	16.0	16.0	66.0	66.0	66.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag					
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	Min	Min
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	16.0	16.0	66.0	66.0	66.0
90th %ile Term Code	Max	Max	Hold	Max	Max
70th %ile Green (s)	16.0	16.0	63.1	63.1	63.1
70th %ile Term Code	Max	Max	Hold	Gap	Gap
50th %ile Green (s)	16.0	16.0	45.5	45.5	45.5
50th %ile Term Code	Max	Max	Hold	Gap	Gap
30th %ile Green (s)	16.0	16.0	34.7	34.7	34.7
30th %ile Term Code	Max	Max	Hold	Gap	Gap
10th %ile Green (s)	16.0	16.0	25.8	25.8	25.8
10th %ile Term Code	Max	Max	Dwell	Dwell	Dwell

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 71
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 87.1
50th %ile Actuated Cycle: 69.5
30th %ile Actuated Cycle: 58.7
10th %ile Actuated Cycle: 49.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3524		1770	3539
Flt Permitted	0.95	1.00	1.00		0.27	1.00
Satd. Flow (perm)	1770	1583	3524		505	3539
Volume (vph)	89	354	751	12	237	1568
Peak-hour factor, PHF	0.75	0.72	0.83	0.44	0.89	0.92
Adj. Flow (vph)	119	492	905	27	266	1704
RTOR Reduction (vph)	0	166	3	0	0	0
Lane Group Flow (vph)	119	326	929	0	266	1704
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	16.8	16.8	45.8		45.8	45.8
Effective Green, g (s)	16.8	16.8	45.8		45.8	45.8
Actuated g/C Ratio	0.24	0.24	0.65		0.65	0.65
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	421	377	2286		328	2296
v/s Ratio Prot	0.07		0.26			0.48
v/s Ratio Perm		c0.21			c0.53	
v/c Ratio	0.28	0.86	0.41		0.81	0.74
Uniform Delay, d1	22.0	25.8	5.9		9.2	8.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	18.2	0.1		14.1	1.3
Delay (s)	22.3	44.0	6.0		23.3	9.7
Level of Service	C	D	A		C	A
Approach Delay (s)	39.8		6.0			11.6
Approach LOS	D		A			B

Intersection Summary

HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

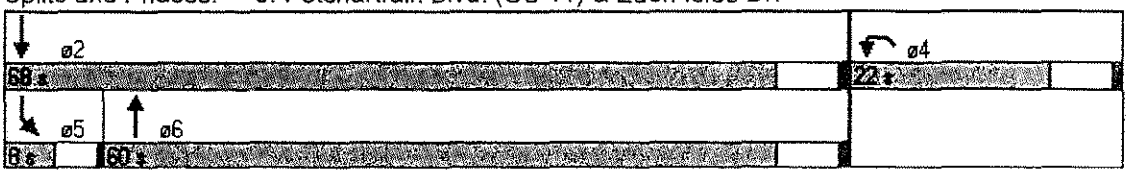
c Critical Lane Group

Lane Group	NBT	SBL	SBT	NWL	NWR
Lane Configurations					
Volume (vph)	349	151	1443	209	293
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phases	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	8.0	22.0	22.0	22.0
Total Split (s)	60.0	8.0	68.0	22.0	22.0
Total Split (%)	66.7%	8.9%	75.6%	24.4%	24.4%
Yellow Time (s)	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	Max	None	Max	None	None
Act Effct Green (s)	56.0	64.0	64.0	17.2	17.2
Actuated g/C Ratio	0.63	0.72	0.72	0.19	0.19
v/c Ratio	0.23	0.34	0.66	0.77	0.69
Control Delay	6.9	5.9	8.5	49.5	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	5.9	8.5	49.5	9.3
LOS	A	A	A	D	A
Approach Delay	6.9		8.2	23.7	
Approach LOS	A		A	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 89.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 11.5 — Intersection LOS: B
Intersection Capacity Utilization 58.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.



Lane Group	NBT	SBL	SBT	NWL	NWR
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	8.0	22.0	22.0	22.0
Total Split (s)	60.0	8.0	68.0	22.0	22.0
Total Split (%)	66.7%	8.9%	75.6%	24.4%	24.4%
Maximum Green (s)	54.0	4.0	62.0	16.0	16.0
Yellow Time (s)	5.0	3.5	5.0	5.0	5.0
All-Red Time (s)	1.0	0.5	1.0	1.0	1.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	None	Max	None	None
Walk Time (s)	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0
90th %ile Green (s)	54.0	4.0	62.0	16.0	16.0
90th %ile Term Code	MaxR	Max	MaxR	Max	Max
70th %ile Green (s)	54.0	4.0	62.0	16.0	16.0
70th %ile Term Code	MaxR	Max	MaxR	Max	Max
50th %ile Green (s)	54.0	4.0	62.0	16.0	16.0
50th %ile Term Code	MaxR	Max	MaxR	Max	Max
30th %ile Green (s)	54.0	4.0	62.0	16.0	16.0
30th %ile Term Code	MaxR	Max	MaxR	Max	Max
10th %ile Green (s)	54.0	4.0	62.0	12.1	12.1
10th %ile Term Code	MaxR	Max	MaxR	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 89.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 90
50th %ile Actuated Cycle: 90
30th %ile Actuated Cycle: 90
10th %ile Actuated Cycle: 86.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.97			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1733			3529	3526	
Flt Permitted	0.96			0.82	1.00	
Satd. Flow (perm)	1733			2904	3526	
Volume (vph)	68	18	9	238	1655	35
Peak-hour factor, PHF	0.82	0.62	0.42	0.71	0.78	0.62
Adj. Flow (vph)	83	29	21	335	2122	56
RTOR Reduction (vph)	1	0	0	0	2	0
Lane Group Flow (vph)	111	0	0	356	2176	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	8.0			42.6	42.6	
Effective Green, g (s)	8.0			42.6	42.6	
Actuated g/C Ratio	0.14			0.73	0.73	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	237			2111	2563	
v/s Ratio Prot	c0.06				c0.62	
v/s Ratio Perm				0.12		
v/c Ratio	0.47			0.17	0.85	
Uniform Delay, d1	23.3			2.5	5.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			0.0	2.8	
Delay (s)	24.8			2.5	8.5	
Level of Service	C			A	A	
Approach Delay (s)	24.8			2.5	8.5	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

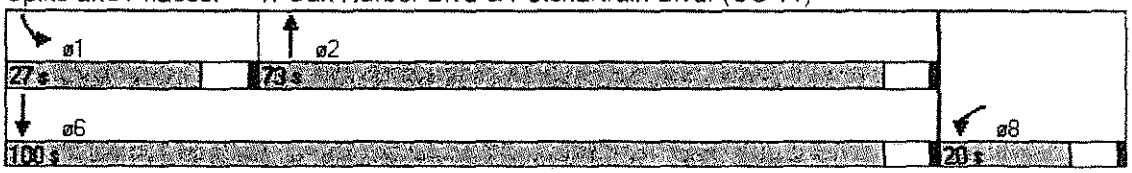
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	30	298	1690	277	914
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	13.0	20.0
Total Split (s)	20.0	20.0	73.0	27.0	100.0
Total Split (%)	16.7%	16.7%	60.8%	22.5%	83.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
Act Effct Green (s)	12.6	12.6	63.7	89.2	89.2
Actuated g/C Ratio	0.11	0.11	0.58	0.81	0.81
v/c Ratio	0.30	0.81	0.92	0.87	0.39
Control Delay	49.8	23.0	28.1	50.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	23.0	28.1	50.0	3.4
LOS	D	C	C	D	A
Approach Delay	27.0		28.1		14.7
Approach LOS	C		C		B

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 110
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 22.7 — Intersection LOS: C
Intersection Capacity Utilization 77.3% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Oak Harbor Blvd & Potchartrain Blvd. (US 11)



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	13.0	20.0
Total Split (s)	20.0	20.0	73.0	27.0	100.0
Total Split (%)	16.7%	16.7%	60.8%	22.5%	83.3%
Maximum Green (s)	14.0	14.0	67.0	21.0	94.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	Min	None	Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	14.0	14.0	67.0	21.0	94.0
90th %ile Term Code	Max	Max	Max	Max	Hold
70th %ile Green (s)	14.0	14.0	67.0	21.0	94.0
70th %ile Term Code	Max	Max	Max	Max	Hold
50th %ile Green (s)	12.3	12.3	67.0	21.0	94.0
50th %ile Term Code	Gap	Gap	Max	Max	Hold
30th %ile Green (s)	7.7	7.7	64.7	21.0	91.7
30th %ile Term Code	Gap	Gap	Gap	Max	Hold
10th %ile Green (s)	6.0	6.0	43.1	13.0	62.1
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 110
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 120
70th %ile Actuated Cycle: 120
50th %ile Actuated Cycle: 118.3
30th %ile Actuated Cycle: 111.4
10th %ile Actuated Cycle: 80.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3515		1770	3539
Flt Permitted	0.95	1.00	1.00		0.06	1.00
Satd. Flow (perm)	1770	1583	3515		110	3539
Volume (vph)	30	298	1690	60	277	914
Peak-hour factor, PHF	0.50	0.87	0.94	0.71	0.78	0.82
Adj. Flow (vph)	60	343	1798	85	355	1115
RTOR Reduction (vph)	0	241	3	0	0	0
Lane Group Flow (vph)	60	102	1880	0	355	1115
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	10.6	10.6	61.8		87.1	87.1
Effective Green, g (s)	12.6	12.6	63.8		89.1	89.1
Actuated g/C Ratio	0.11	0.11	0.58		0.81	0.81
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	203	182	2044		412	2874
v/s Ratio Prot	0.03		c0.53		c0.17	0.32
v/s Ratio Perm		c0.06			0.53	
v/c Ratio	0.30	0.56	0.92		0.86	0.39
Uniform Delay, d1	44.5	45.9	20.6		35.8	2.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	3.9	7.2		16.7	0.1
Delay (s)	45.3	49.9	27.9		52.4	2.9
Level of Service	D	D	C		D	A
Approach Delay (s)	49.2		27.9			14.9
Approach LOS	D		C			B

Intersection Summary

HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

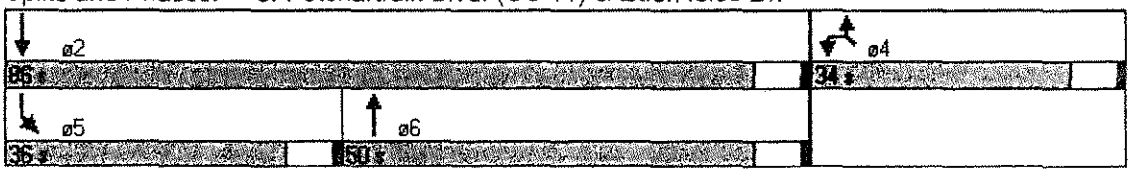
c Critical Lane Group

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	1389	146	435	482	82	288
Turn Type		Perm	pm+pt			Prot
Protected Phases	6		5	2	4	4
Permitted Phases		6	2			
Detector Phases	6	6	5	2	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0
Total Split (s)	50.0	50.0	36.0	86.0	34.0	34.0
Total Split (%)	41.7%	41.7%	30.0%	71.7%	28.3%	28.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	None
Act Effct Green (s)	46.1	46.1	82.1	82.1	15.9	15.9
Actuated g/C Ratio	0.43	0.43	0.77	0.77	0.15	0.15
v/c Ratio	0.98	0.26	0.92	0.20	0.51	0.70
Control Delay	49.7	8.2	51.0	3.7	43.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	8.2	51.0	3.7	43.2	8.0
LOS	D	A	D	A	D	A
Approach Delay	44.9			27.8	16.8	
Approach LOS	D			C	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 106
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 35.0 — Intersection LOS: C
Intersection Capacity Utilization 77.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Potchartrain Blvd. (US 11) & Eden Isles Dr.

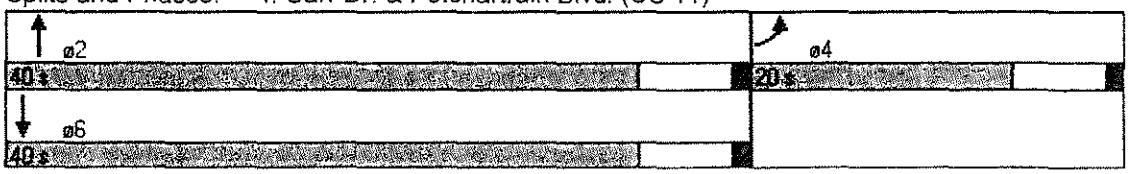


Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	75	23	1403	218
Turn Type		Perm		
Protected Phases	4		2	6
Permitted Phases		2		
Detector Phases	4	2	2	6
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Min	Min	Min
Act Effct Green (s)	12.9		47.5	47.5
Actuated g/C Ratio	0.19		0.72	0.72
v/c Ratio	0.49		0.72	0.12
Control Delay	18.9		9.9	3.3
Queue Delay	0.0		0.0	0.0
Total Delay	18.9		9.9	3.3
LOS	B		A	A
Approach Delay	18.9		9.9	3.3
Approach LOS	B		A	A

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 66
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 62.2% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 4: Carr Dr. & Potchartrain Blvd. (US 11)



Lane Group	EBL	NBL	NBT	SBT
Protected Phases	4		2	6
Permitted Phases		2		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	66.7%	66.7%	66.7%
Maximum Green (s)	14.0	34.0	34.0	34.0
Yellow Time (s)	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0
Recall Mode	None	Min	Min	Min
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
90th %ile Green (s)	14.0	34.0	34.0	34.0
90th %ile Term Code	Max	Max	Max	Hold
70th %ile Green (s)	11.8	34.0	34.0	34.0
70th %ile Term Code	Gap	Max	Max	Hold
50th %ile Green (s)	9.9	37.3	37.3	37.3
50th %ile Term Code	Gap	Dwell	Dwell	Dwell
30th %ile Green (s)	8.2	43.7	43.7	43.7
30th %ile Term Code	Gap	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	83.1	83.1	83.1
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 66
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 60
70th %ile Actuated Cycle: 57.8
50th %ile Actuated Cycle: 59.2
30th %ile Actuated Cycle: 63.9
10th %ile Actuated Cycle: 89.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.97			1.00	0.97	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1735			3536	3432	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1735			3351	3432	
Volume (vph)	75	18	23	1403	218	46
Peak-hour factor, PHF	0.58	0.42	0.81	0.82	0.92	0.77
Adj. Flow (vph)	129	43	28	1711	237	60
RTOR Reduction (vph)	22	0	0	0	18	0
Lane Group Flow (vph)	150	0	0	1739	279	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	9.7			44.9	44.9	
Effective Green, g (s)	11.7			46.9	46.9	
Actuated g/C Ratio	0.18			0.70	0.70	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	305			2360	2417	
v/s Ratio Prot	c0.09				0.08	
v/s Ratio Perm				c0.52		
v/c Ratio	0.49			0.74	0.12	
Uniform Delay, d1	24.8			6.1	3.2	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.2			1.2	0.0	
Delay (s)	26.0			7.3	3.2	
Level of Service	C			A	A	
Approach Delay (s)	26.0			7.3	3.2	
Approach LOS	C			A	A	

Intersection Summary

HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	66.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

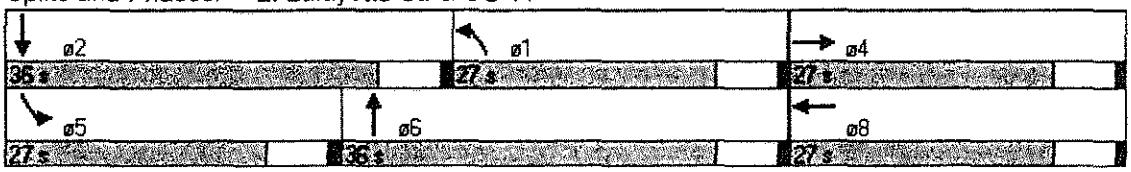
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	19	12	23	16	16	773	195	1266
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	11.8	11.8		11.8	53.8	53.8	45.6	45.6
Actuated g/C Ratio	0.13	0.13		0.13	0.60	0.60	0.51	0.51
v/c Ratio	0.21	0.15		0.45	0.04	0.48	0.48	0.82
Control Delay	34.2	14.7		26.8	11.9	13.2	14.5	22.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	14.7		26.8	11.9	13.2	14.5	22.7
LOS	C	B		C	B	B	B	C
Approach Delay		21.2		26.8		13.2		21.4
Approach LOS		C		C		B		C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 18.7 — Intersection LOS: B
Intersection Capacity Utilization 61.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	30.0	21.0	30.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	14.4	14.4	14.4	14.4	21.0	37.8	19.8	36.6
90th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
70th %ile Green (s)	11.5	11.5	11.5	11.5	21.0	47.0	13.5	39.5
70th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
50th %ile Green (s)	9.6	9.6	9.6	9.6	21.0	50.4	12.0	41.4
50th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
30th %ile Green (s)	7.7	7.7	7.7	7.7	21.0	53.7	10.6	43.3
30th %ile Term Code	Hold	Hold	Gap	Gap	Hold	Coord	Gap	Coord
10th %ile Green (s)	0.0	0.0	0.0	0.0	21.0	70.1	7.9	57.0
10th %ile Term Code	Skip	Skip	Skip	Skip	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3168			1627		1770	3487		1770	3514	
Flt Permitted	0.63	1.00			0.85		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	1179	3168			1412		252	3487		256	3514	
Volume (vph)	19	12	33	23	16	26	16	773	74	195	1266	54
Peak-hour factor, PHF	0.55	0.58	0.68	0.65	0.56	0.75	0.56	0.86	0.75	0.71	0.91	0.78
Adj. Flow (vph)	35	21	49	35	29	35	29	899	99	275	1391	69
RTOR Reduction (vph)	0	43	0	0	26	0	0	6	0	0	3	0
Lane Group Flow (vph)	35	27	0	0	73	0	29	992	0	275	1457	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	8.6	8.6			8.6		50.6	50.6		42.4	42.4	
Effective Green, g (s)	10.6	10.6			10.6		52.6	52.6		44.4	44.4	
Actuated g/C Ratio	0.12	0.12			0.12		0.58	0.58		0.49	0.49	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	139	373			166		535	2038		375	1734	
v/s Ratio Prot		0.01					0.01	c0.28		0.12	c0.41	
v/s Ratio Perm	0.03				c0.05		0.02			0.24		
v/c Ratio	0.25	0.07			0.44		0.05	0.49		0.73	0.84	
Uniform Delay, d1	36.1	35.3			36.9		14.1	10.9		17.6	19.7	
Progression Factor	1.00	1.00			1.00		1.00	1.00		0.84	0.86	
Incremental Delay, d2	1.0	0.1			1.9		0.0	0.8		7.0	4.9	
Delay (s)	37.1	35.4			38.8		14.2	11.7		21.8	21.9	
Level of Service	D	D			D		B	B		C	C	
Approach Delay (s)		36.0			38.8			11.8			21.8	
Approach LOS		D			D			B			C	

Intersection Summary

HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

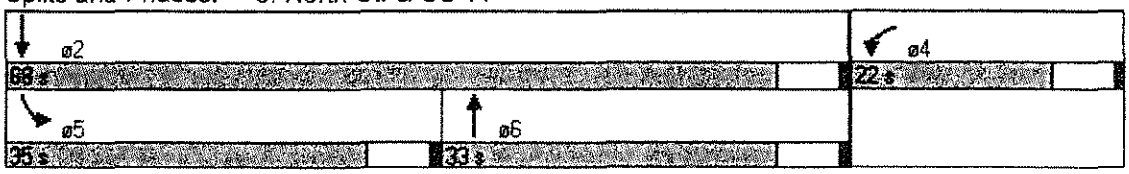
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	75	395	773	363	1061
Turn Type		Perm		pm+pt	
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	33.0	35.0	68.0
Total Split (%)	24.4%	24.4%	36.7%	38.9%	75.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	14.6	14.6	35.4	67.4	67.4
Actuated g/C Ratio	0.16	0.16	0.39	0.75	0.75
v/c Ratio	0.45	0.81	0.69	0.89	0.44
Control Delay	36.2	11.1	40.1	30.6	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	11.1	40.1	30.6	5.2
LOS	D	B	D	C	A
Approach Delay	15.6		40.1		13.6
Approach LOS	B		D		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: North St. & US 11



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	33.0	35.0	68.0
Total Split (%)	24.4%	24.4%	36.7%	38.9%	75.6%
Maximum Green (s)	16.0	16.0	27.0	29.0	62.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	C-Min	Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	16.0	16.0	27.0	29.0	62.0
90th %ile Term Code	Max	Max	Coord	Max	Coord
70th %ile Green (s)	16.0	16.0	27.0	29.0	62.0
70th %ile Term Code	Max	Max	Coord	Max	Coord
50th %ile Green (s)	12.7	12.7	29.3	30.0	65.3
50th %ile Term Code	Gap	Gap	Coord	Gap	Coord
30th %ile Green (s)	10.9	10.9	36.4	24.7	67.1
30th %ile Term Code	Gap	Gap	Coord	Gap	Coord
10th %ile Green (s)	7.4	7.4	47.1	17.5	70.6
10th %ile Term Code	Gap	Gap	Coord	Gap	Coord

Intersection Summary

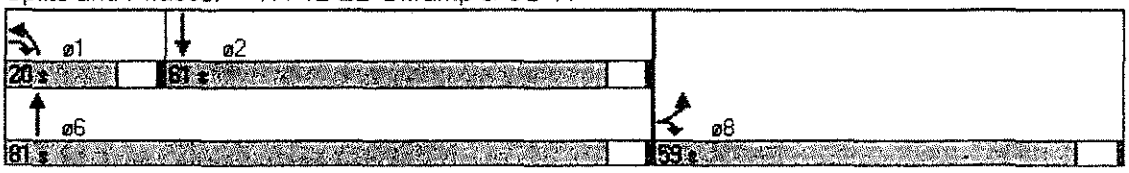
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 22 (24%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	533	903	156	1278	1256	417
Turn Type		pt+ov	pm+pt			Perm
Protected Phases	8	8 1	1	6	2	
Permitted Phases			6		2	2
Detector Phases	8	8 1	1	6	2	2
Minimum Initial (s)	10.0		5.0	15.0	12.0	12.0
Minimum Split (s)	22.0		11.0	22.0	22.0	22.0
Total Split (s)	59.0	79.0	20.0	81.0	61.0	61.0
Total Split (%)	42.1%	56.4%	14.3%	57.9%	43.6%	43.6%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None		None	C-Min	C-Min	C-Min
Act Effct Green (s)	55.0	75.0	77.0	77.0	57.0	57.0
Actuated g/C Ratio	0.39	0.54	0.55	0.55	0.41	0.41
v/c Ratio	0.55	0.70	0.68	0.74	0.95	0.57
Control Delay	34.8	26.8	45.0	26.8	54.3	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	26.8	45.0	26.8	54.3	12.8
LOS	C	C	D	C	D	B
Approach Delay	30.1			28.8	43.6	
Approach LOS	C			C	D	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 34.4 — Intersection LOS: C
Intersection Capacity Utilization 73.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: I-12 EB Offramp & US 11



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	8	8 1	1	6	2	
Permitted Phases			6		2	2
Minimum Initial (s)	10.0		5.0	15.0	12.0	12.0
Minimum Split (s)	22.0		11.0	22.0	22.0	22.0
Total Split (s)	59.0	79.0	20.0	81.0	61.0	61.0
Total Split (%)	42.1%	56.4%	14.3%	57.9%	43.6%	43.6%
Maximum Green (s)	53.0		14.0	75.0	55.0	55.0
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0		2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0		15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0		15.0	15.0	15.0	15.0
Recall Mode	None		None	C-Min	C-Min	C-Min
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
90th %ile Green (s)	53.0		14.0	75.0	55.0	55.0
90th %ile Term Code	Max		Max	Coord	Coord	Coord
70th %ile Green (s)	53.0		14.0	75.0	55.0	55.0
70th %ile Term Code	Max		Max	Coord	Coord	Coord
50th %ile Green (s)	53.0		14.0	75.0	55.0	55.0
50th %ile Term Code	Max		Max	Coord	Coord	Coord
30th %ile Green (s)	53.0		14.0	75.0	55.0	55.0
30th %ile Term Code	Max		Max	Coord	Coord	Coord
10th %ile Green (s)	53.0		14.0	75.0	55.0	55.0
10th %ile Term Code	Max		Max	Coord	Coord	Coord

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	2787	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.07	1.00	1.00	1.00
Satd. Flow (perm)	3433	2787	122	3539	3539	1583
Volume (vph)	533	903	156	1278	1256	417
Peak-hour factor, PHF	0.72	0.86	0.89	0.89	0.92	0.88
Adj. Flow (vph)	740	1050	175	1436	1365	474
RTOR Reduction (vph)	0	9	0	0	0	187
Lane Group Flow (vph)	740	1041	175	1436	1365	287
Turn Type		pt+ov	pm+pt			Perm
Protected Phases	8	8 1	1	6	2	
Permitted Phases			6		2	2
Actuated Green, G (s)	53.0	73.0	75.0	75.0	55.0	55.0
Effective Green, g (s)	55.0	75.0	77.0	77.0	57.0	57.0
Actuated g/C Ratio	0.39	0.54	0.55	0.55	0.41	0.41
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1349	1493	255	1946	1441	645
v/s Ratio Prot	0.22	c0.37	0.08	c0.41	c0.39	
v/s Ratio Perm			0.30			0.18
v/c Ratio	0.55	0.70	0.69	0.74	0.95	0.45
Uniform Delay, d1	32.9	24.1	37.5	23.9	40.0	30.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.4	7.5	2.5	14.1	2.2
Delay (s)	33.4	25.5	44.9	26.4	54.1	32.3
Level of Service	C	C	D	C	D	C
Approach Delay (s)	28.8			28.4	48.5	
Approach LOS	C			C	D	

Intersection Summary

HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

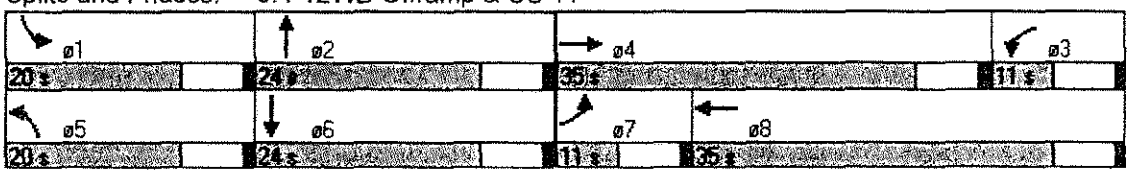
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	170	95	86	251	458	661	835	479	89	670	279
Turn Type	pm+pt		pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phases	7	4	3	8	8	5	2	2	1	6	6
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	11.0	20.0	11.0	20.0	20.0	20.0	21.0	21.0	20.0	21.0	21.0
Total Split (s)	11.0	35.0	11.0	35.0	35.0	20.0	24.0	24.0	20.0	24.0	24.0
Total Split (%)	12.2%	38.9%	12.2%	38.9%	38.9%	22.2%	26.7%	26.7%	22.2%	26.7%	26.7%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	C-Min	C-Min	Min	C-Min	C-Min
Act Effct Green (s)	15.7	15.7	22.2	22.2	22.2	48.8	35.3	35.3	38.9	29.4	29.4
Actuated g/C Ratio	0.17	0.17	0.25	0.25	0.25	0.54	0.39	0.39	0.43	0.33	0.33
v/c Ratio	0.86	0.45	0.20	0.67	0.56	0.64	0.55	0.50	0.24	0.56	0.36
Control Delay	74.2	21.6	26.5	31.0	5.0	15.3	24.8	5.0	13.6	29.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	21.6	26.5	31.0	5.0	15.3	24.8	5.0	13.6	29.6	5.7
LOS	E	C	C	C	A	B	C	A	B	C	A
Approach Delay		47.9		17.8			16.9			22.4	
Approach LOS		D		B			B			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 21.1 — Intersection LOS: C
Intersection Capacity Utilization 72.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: I-12WB Offramp & US 11



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	10	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	0.95	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	0.97	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1717		1770	1724	1504	3662	3539	1478	1770	3539	1583
Flt Permitted	0.46	1.00		0.66	1.00	1.00	0.22	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	856	1717		1220	1724	1504	862	3539	1478	529	3539	1583
Volume (vph)	170	95	133	86	251	458	661	835	479	89	670	279
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
Growth Factor (vph)	87%	75%	58%	86%	89%	82%	81%	84%	81%	75%	89%	80%
Adj. Flow (vph)	161	77	84	80	243	408	582	762	422	73	648	243
RTOR Reduction (vph)	0	55	0	0	10	265	0	0	262	0	0	167
Lane Group Flow (vph)	161	106	0	80	283	93	582	762	160	73	648	76
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	13.7	13.7		21.4	21.4	21.4	45.5	32.1	32.1	33.7	26.2	26.2
Effective Green, g (s)	15.7	15.7		23.4	23.4	23.4	47.6	34.1	34.1	37.7	28.2	28.2
Actuated g/C Ratio	0.17	0.17		0.26	0.26	0.26	0.53	0.38	0.38	0.42	0.31	0.31
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	300		407	448	391	935	1341	560	353	1109	496
v/s Ratio Prot	c0.06	0.06		0.03	c0.16		c0.11	0.22		0.02	0.18	
v/s Ratio Perm	c0.07			0.02		0.06	c0.22		0.11	0.06		0.05
v/c Ratio	0.73	0.35		0.20	0.63	0.24	0.62	0.57	0.29	0.21	0.58	0.15
Uniform Delay, d1	42.1	32.7		26.4	29.5	26.3	13.7	22.1	19.5	16.1	26.0	22.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.8	0.7		0.2	2.9	0.3	1.3	1.8	1.3	0.3	2.3	0.7
Delay (s)	53.9	33.4		26.6	32.4	26.6	15.0	23.9	20.7	16.4	28.2	22.9
Level of Service	D	C		C	C	C	B	C	C	B	C	C
Approach Delay (s)		43.7			28.9			20.2			26.0	
Approach LOS		D			C			C			C	

Intersection Summary

HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

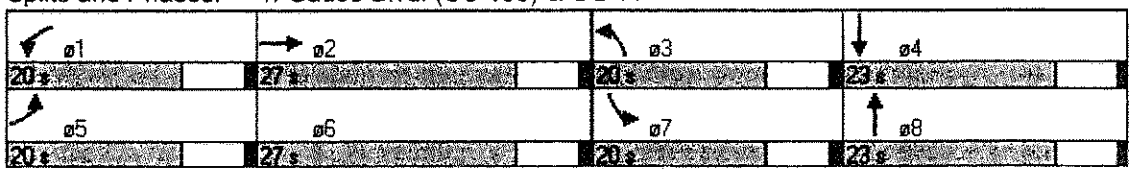
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	198	460	212	137	487	261	445	161	311
Turn Type	pm+pt		Perm	Prot		pm+pt		pm+pt	
Protected Phases	5	2		1		3	8	7	4
Permitted Phases	2		2		6	8		4	
Detector Phases	5	2	2	1	6	3	8	7	4
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	27.0	27.0	20.0	27.0	20.0	23.0	20.0	23.0
Total Split (%)	22.2%	30.0%	30.0%	22.2%	30.0%	22.2%	25.6%	22.2%	25.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	43.4	29.6	29.6	11.2	27.0	34.0	21.1	32.5	20.4
Actuated g/C Ratio	0.48	0.33	0.33	0.12	0.30	0.38	0.23	0.36	0.23
v/c Ratio	0.59	0.45	0.36	0.35	0.64	0.36	0.78	0.29	0.42
Control Delay	19.3	26.3	5.1	36.6	30.0	17.5	37.3	28.1	41.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	26.3	5.1	36.6	30.0	17.5	37.3	28.1	41.2
LOS	B	C	A	D	C	B	D	C	D
Approach Delay		19.4			31.2		31.3		37.6
Approach LOS		B			C		C		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 29.1 — Intersection LOS: C
Intersection Capacity Utilization 62.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Gause Blvd. (US 190) & US 11



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2		1		3	8	7	4
Permitted Phases	2		2		6	8		4	
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	5.0	15.0	5.0	15.0
Minimum Split (s)	20.0	21.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
Total Split (s)	20.0	27.0	27.0	20.0	27.0	20.0	23.0	20.0	23.0
Total Split (%)	22.2%	30.0%	30.0%	22.2%	30.0%	22.2%	25.6%	22.2%	25.6%
Maximum Green (s)	14.0	21.0	21.0	14.0	21.0	14.0	17.0	14.0	17.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)									
Flash Dont Walk (s)									
Pedestrian Calls (#/hr)									
90th %ile Green (s)	14.0	23.4	23.4	11.6	21.0	13.8	18.4	12.6	17.2
90th %ile Term Code	Max	Coord	Coord	Gap	Coord	Gap	Max	Gap	Hold
70th %ile Green (s)	14.0	24.9	24.9	10.1	21.0	12.3	19.9	11.1	18.7
70th %ile Term Code	Max	Coord	Coord	Gap	Coord	Gap	Max	Gap	Hold
50th %ile Green (s)	12.4	25.8	25.8	9.2	22.6	10.3	20.9	10.1	20.7
50th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Gap	Max	Gap	Hold
30th %ile Green (s)	10.5	28.6	28.6	8.2	26.3	9.5	20.1	9.1	19.7
30th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Gap	Gap	Gap	Hold
10th %ile Green (s)	8.0	35.4	35.4	6.7	34.1	8.3	16.4	7.5	15.6
10th %ile Term Code	Gap	Coord	Coord	Gap	Coord	Gap	Gap	Gap	Hold

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		0.97	0.95		0.97	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	3422		3433	3408		3433	4893	
Flt Permitted	0.21	1.00	1.00	0.95	1.00		0.37	1.00		0.20	1.00	
Satd. Flow (perm)	388	3539	1583	3433	3422		1327	3408		709	4893	
Volume (vph)	198	460	212	137	487	107	261	445	127	161	311	100
Peak-hour factor, PHF	0.88	0.88	0.86	0.93	0.93	0.72	0.91	0.91	0.79	0.88	0.85	0.81
Adj. Flow (vph)	225	523	247	147	524	149	287	489	161	183	366	123
RTOR Reduction (vph)	0	0	166	0	27	0	0	34	0	0	66	0
Lane Group Flow (vph)	225	523	81	147	646	0	287	616	0	183	423	0
Turn Type	pm+pt		Perm	Prot			pm+pt			pm+pt		
Protected Phases	5	2		1			3	8		7	4	
Permitted Phases	2		2		6		8			4		
Actuated Green, G (s)	39.4	27.6	27.6	9.2	25.0		29.9	19.1		28.5	18.4	
Effective Green, g (s)	43.4	29.6	29.6	11.2	27.0		33.9	21.1		32.5	20.4	
Actuated g/C Ratio	0.48	0.33	0.33	0.12	0.30		0.38	0.23		0.36	0.23	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	399	1164	521	427	1027		799	799		622	1109	
v/s Ratio Prot	c0.09	0.15		0.04			c0.05	c0.18		0.04	0.09	
v/s Ratio Perm	0.19		0.05		c0.19		0.08			0.07		
v/c Ratio	0.56	0.45	0.16	0.34	0.63		0.36	0.77		0.29	0.38	
Uniform Delay, d1	15.4	23.8	21.4	36.0	27.2		19.2	32.2		20.2	29.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.72	1.67	
Incremental Delay, d2	1.8	1.3	0.6	0.5	1.2		0.3	4.6		0.1	0.1	
Delay (s)	17.2	25.0	22.0	36.5	28.4		19.5	36.8		35.0	49.2	
Level of Service	B	C	C	D	C		B	D		C	D	
Approach Delay (s)		22.5			29.8			31.5			45.3	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		

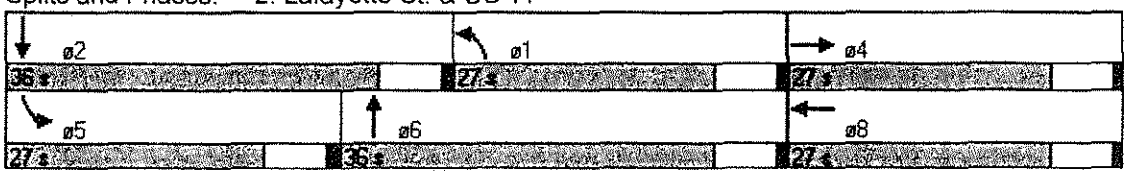
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	100	42	25	32	88	1022	96	1133
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phases	4	4	8	8	1	6	5	2
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Act Effct Green (s)	18.8	18.8		18.8	47.3	47.3	36.2	36.2
Actuated g/C Ratio	0.21	0.21		0.21	0.53	0.53	0.40	0.40
v/c Ratio	0.71	0.29		0.56	0.24	0.66	0.26	0.96
Control Delay	42.3	10.2		23.1	14.9	18.0	18.0	43.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	10.2		23.1	14.9	18.0	18.0	43.6
LOS	D	B		C	B	B	B	D
Approach Delay		22.5		23.1		17.6		41.6
Approach LOS		C		C		B		D

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.8 — Intersection LOS: C
Intersection Capacity Utilization 65.5% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Lafayette St. & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		4		8	1	6	5	2
Permitted Phases	4		8		6		2	
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	36.0	27.0	36.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	40.0%
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	30.0	21.0	30.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	2.0	3.0	2.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	15.0	0.0	15.0
Recall Mode	None	None	None	None	Min	C-Max	Min	C-Max
Walk Time (s)								
Flash Dont Walk (s)								
Pedestrian Calls (#/hr)								
90th %ile Green (s)	21.0	21.0	21.0	21.0	21.0	37.5	13.5	30.0
90th %ile Term Code	Max	Max	Max	Max	Hold	Coord	Gap	Coord
70th %ile Green (s)	21.0	21.0	21.0	21.0	21.0	39.6	11.4	30.0
70th %ile Term Code	Max	Max	Hold	Hold	Hold	Coord	Gap	Coord
50th %ile Green (s)	18.1	18.1	18.1	18.1	21.0	44.1	9.8	32.9
50th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
30th %ile Green (s)	14.6	14.6	14.6	14.6	21.0	49.1	8.3	36.4
30th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord
10th %ile Green (s)	9.5	9.5	9.5	9.5	21.0	56.0	6.5	41.5
10th %ile Term Code	Gap	Gap	Hold	Hold	Hold	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	10	10	10	12	12	12	12	12	12
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90			0.92		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3173			1588		1770	3487		1770	3484	
Flt Permitted	0.46	1.00			0.90		0.16	1.00		0.16	1.00	
Satd. Flow (perm)	861	3173			1448		307	3487		307	3484	
Volume (vph)	100	42	119	25	32	70	88	1022	89	96	1133	98
Peak-hour factor, PHF	0.71	0.60	0.77	0.70	0.64	0.59	0.54	0.94	0.75	0.81	0.93	0.70
Adj. Flow (vph)	141	70	155	36	50	119	163	1087	119	119	1218	140
RTOR Reduction (vph)	0	123	0	0	59	0	0	7	0	0	9	0
Lane Group Flow (vph)	141	102	0	0	146	0	163	1199	0	119	1349	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		1	6		5	2	
Permitted Phases	4			8			6			2		
Actuated Green, G (s)	16.8	16.8			16.8		45.3	45.3		34.2	34.2	
Effective Green, g (s)	18.8	18.8			18.8		47.3	47.3		36.2	36.2	
Actuated g/C Ratio	0.21	0.21			0.21		0.53	0.53		0.40	0.40	
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	180	663			302		535	1833		317	1401	
v/s Ratio Prot		0.03					0.08	c0.34		0.05	c0.39	
v/s Ratio Perm	c0.16				0.10		0.08			0.10		
v/c Ratio	0.78	0.15			0.48		0.30	0.65		0.38	0.96	
Uniform Delay, d1	33.7	29.1			31.3		22.0	15.4		20.3	26.2	
Progression Factor	1.00	1.00			1.00		0.90	0.95		0.90	0.96	
Incremental Delay, d2	19.6	0.1			1.2		0.3	1.7		0.7	16.2	
Delay (s)	53.3	29.2			32.6		20.1	16.4		19.0	41.4	
Level of Service	D	C			C		C	B		B	D	
Approach Delay (s)		38.5			32.6			16.8			39.6	
Approach LOS		D			C			B			D	

Intersection Summary

HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

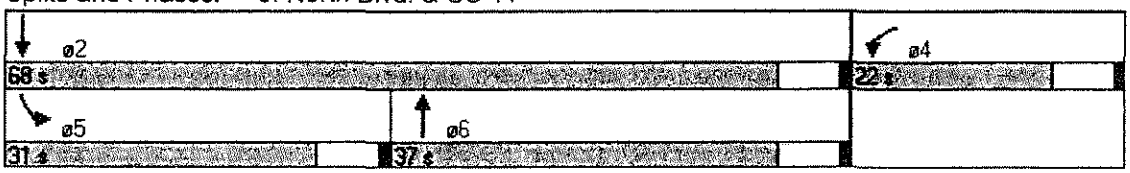
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	116	416	1007	566	1001
Turn Type		Perm		pm+pt	
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Detector Phases	4	4	6	5	2
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	37.0	31.0	68.0
Total Split (%)	24.4%	24.4%	41.1%	34.4%	75.6%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	Min	C-Min
Act Effct Green (s)	15.1	15.1	33.9	66.9	66.9
Actuated g/C Ratio	0.17	0.17	0.38	0.74	0.74
v/c Ratio	0.52	0.78	0.96	0.92	0.41
Control Delay	37.6	11.4	37.7	43.9	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	11.4	37.7	43.9	5.1
LOS	D	B	D	D	A
Approach Delay	17.3		37.7		19.0
Approach LOS	B		D		B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 25.2 — Intersection LOS: C
Intersection Capacity Utilization 79.3% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: North Blvd. & US 11



Lane Group	WBL	WBR	NBT	SBL	SBT
Protected Phases	4		6	5	2
Permitted Phases		4		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	37.0	31.0	68.0
Total Split (%)	24.4%	24.4%	41.1%	34.4%	75.6%
Maximum Green (s)	16.0	16.0	31.0	25.0	62.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	C-Min	Min	C-Min
Walk Time (s)					
Flash Dont Walk (s)					
Pedestrian Calls (#/hr)					
90th %ile Green (s)	16.0	16.0	31.0	25.0	62.0
90th %ile Term Code	Max	Max	Coord	Max	Coord
70th %ile Green (s)	16.0	16.0	31.0	25.0	62.0
70th %ile Term Code	Max	Max	Coord	Max	Coord
50th %ile Green (s)	14.0	14.0	31.0	27.0	64.0
50th %ile Term Code	Gap	Gap	Coord	Max	Coord
30th %ile Green (s)	11.1	11.1	31.0	29.9	66.9
30th %ile Term Code	Gap	Gap	Coord	Max	Coord
10th %ile Green (s)	8.2	8.2	35.7	28.1	69.8
10th %ile Term Code	Gap	Gap	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green
Control Type: Actuated-Coordinated

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3478		1770	3539
Flt Permitted	0.95	1.00	1.00		0.11	1.00
Satd. Flow (perm)	1770	1583	3478		197	3539
Volume (vph)	116	416	1007	117	566	1001
Peak-hour factor, PHF	0.75	0.79	0.90	0.80	0.94	0.93
Adj. Flow (vph)	155	527	1119	146	602	1076
RTOR Reduction (vph)	0	413	11	0	0	0
Lane Group Flow (vph)	155	114	1254	0	602	1076
Turn Type		Perm			pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4			2	
Actuated Green, G (s)	13.1	13.1	31.9		64.9	64.9
Effective Green, g (s)	15.1	15.1	33.9		66.9	66.9
Actuated g/C Ratio	0.17	0.17	0.38		0.74	0.74
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	297	266	1310		653	2631
v/s Ratio Prot	c0.09		0.36		c0.30	0.30
v/s Ratio Perm		0.07			c0.39	
v/c Ratio	0.52	0.43	0.96		0.92	0.41
Uniform Delay, d1	34.2	33.6	27.3		23.9	4.3
Progression Factor	1.00	1.00	0.83		1.00	1.00
Incremental Delay, d2	1.7	1.1	13.8		18.6	0.5
Delay (s)	35.8	34.7	36.5		42.5	4.7
Level of Service	D	C	D		D	A
Approach Delay (s)	35.0		36.5			18.3
Approach LOS	C		D			B

Intersection Summary

HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

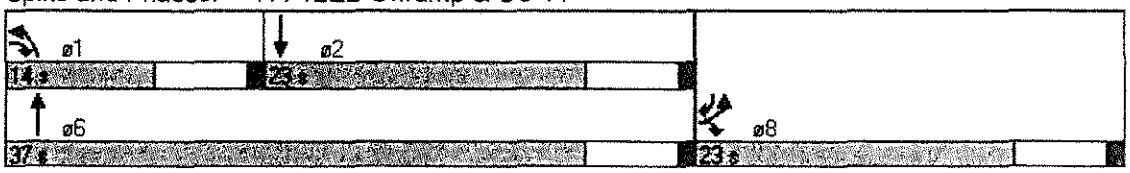
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	765	961	224	1434	866	263
Turn Type		pt+ov	pm+pt			pm+ov
Protected Phases	8	8 1	1	6	2	8
Permitted Phases			6		2	2
Detector Phases	8	8 1	1	6	2	8
Minimum Initial (s)	10.0		5.0	15.0	12.0	10.0
Minimum Split (s)	22.0		11.0	22.0	22.0	22.0
Total Split (s)	23.0	37.0	14.0	37.0	23.0	23.0
Total Split (%)	38.3%	61.7%	23.3%	61.7%	38.3%	38.3%
Yellow Time (s)	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	None
Act Effct Green (s)	19.0	33.0	33.0	33.0	19.0	42.0
Actuated g/C Ratio	0.32	0.55	0.55	0.55	0.32	0.70
v/c Ratio	0.86	0.65	0.74	0.84	0.85	0.25
Control Delay	29.4	11.5	22.8	16.6	28.5	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	11.5	22.8	16.6	28.5	1.7
LOS	C	B	C	B	C	A
Approach Delay	20.2			17.6	22.3	
Approach LOS	C			B	C	

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 19.7 — Intersection LOS: B
Intersection Capacity Utilization 68.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: I-12EB Offramp & US 11



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	2787	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.17	1.00	1.00	1.00
Satd. Flow (perm)	3433	2787	324	3539	3539	1583
Volume (vph)	765	961	224	1434	866	263
Peak-hour factor, PHF	0.82	0.96	0.72	0.88	0.91	0.91
Adj. Flow (vph)	933	1001	311	1630	952	289
RTOR Reduction (vph)	0	14	0	0	0	72
Lane Group Flow (vph)	933	987	311	1630	952	218
Turn Type		pt+ov	pm+pt			pm+ov
Protected Phases	8	8 1	1	6	2	8
Permitted Phases			6		2	2
Actuated Green, G (s)	17.0	31.0	31.0	31.0	17.0	34.0
Effective Green, g (s)	19.0	33.0	33.0	33.0	19.0	38.0
Actuated g/C Ratio	0.32	0.55	0.55	0.55	0.32	0.63
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1087	1533	419	1946	1121	1108
v/s Ratio Prot	c0.27	0.35	0.12	c0.46	0.27	0.06
v/s Ratio Perm			0.28			0.08
v/c Ratio	0.86	0.64	0.74	0.84	0.85	0.20
Uniform Delay, d1	19.2	9.4	10.3	11.3	19.2	4.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.9	0.9	7.0	4.5	8.1	0.1
Delay (s)	26.1	10.3	17.3	15.8	27.2	4.7
Level of Service	C	B	B	B	C	A
Approach Delay (s)	18.0			16.0	22.0	
Approach LOS	B			B	C	

Intersection Summary

HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

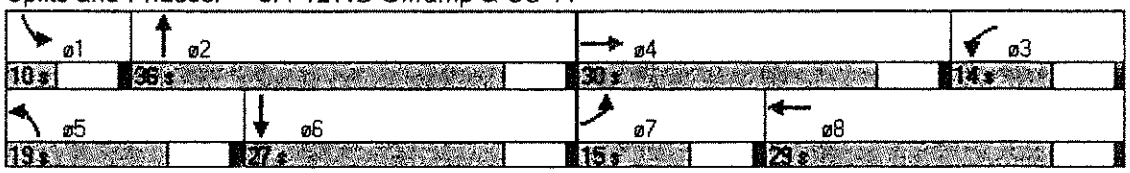
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	207	223	203	198	614	949	601	100	624	388
Turn Type	pm+pt		pm+pt		pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phases	7	4	3	8	5	2	2	1	6	6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	20.0	10.0	20.0	20.0	10.0	20.0	20.0
Total Split (s)	15.0	30.0	14.0	29.0	19.0	36.0	36.0	10.0	27.0	27.0
Total Split (%)	16.7%	33.3%	15.6%	32.2%	21.1%	40.0%	40.0%	11.1%	30.0%	30.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Act Effct Green (s)	23.8	23.8	24.2	24.2	42.8	32.2	32.2	30.3	23.8	23.8
Actuated g/C Ratio	0.26	0.26	0.27	0.27	0.48	0.36	0.36	0.34	0.26	0.26
v/c Ratio	0.83	0.83	0.69	0.90	0.87	0.81	0.74	0.60	0.78	0.59
Control Delay	52.9	38.6	42.8	48.8	32.9	32.6	11.0	28.9	37.8	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.9	38.6	42.8	48.8	32.9	32.6	11.0	28.9	37.8	6.5
LOS	D	D	D	D	C	C	B	C	D	A
Approach Delay		43.9		46.6		26.5			26.3	
Approach LOS		D		D		C			C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 31.5 — Intersection LOS: C
Intersection Capacity Utilization 80.0% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 8: I-12WB Offramp & US 11



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	20.0	10.0	20.0	10.0	20.0	20.0	10.0	20.0	20.0
Total Split (s)	15.0	30.0	14.0	29.0	19.0	36.0	36.0	10.0	27.0	27.0
Total Split (%)	16.7%	33.3%	15.6%	32.2%	21.1%	40.0%	40.0%	11.1%	30.0%	30.0%
Maximum Green (s)	9.0	24.0	8.0	23.0	13.0	30.0	30.0	4.0	21.0	21.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	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
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time Before Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Time To Reduce (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)										
Flash Dont Walk (s)										
Pedestrian Calls (#/hr)										
90th %ile Green (s)	9.0	24.0	8.0	23.0	13.0	30.0	30.0	4.0	21.0	21.0
90th %ile Term Code	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	9.0	24.0	8.0	23.0	13.0	30.0	30.0	4.0	21.0	21.0
70th %ile Term Code	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	9.0	24.0	8.0	23.0	13.0	30.0	30.0	4.0	21.0	21.0
50th %ile Term Code	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Coord
30th %ile Green (s)	9.0	20.9	11.1	23.0	13.0	30.0	30.0	4.0	21.0	21.0
30th %ile Term Code	Max	Gap	Hold	Max	Max	Coord	Coord	Max	Coord	Coord
10th %ile Green (s)	9.0	16.1	12.1	19.2	12.9	31.1	31.1	6.7	24.9	24.9
10th %ile Term Code	Max	Gap	Hold	Gap	Gap	Coord	Coord	Gap	Coord	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	14	12	12	12	12	12
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1748		1770	1758		3662	3539	1583	1770	3539	1583
Flt Permitted	0.31	1.00		0.51	1.00		0.14	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	582	1748		943	1758		555	3539	1583	313	3539	1583
Volume (vph)	207	223	146	203	198	123	614	949	601	100	624	388
Peak-hour factor, PHF	0.87	0.93	0.87	0.81	0.71	0.73	0.90	0.92	0.88	0.78	0.86	0.89
Adj. Flow (vph)	238	240	168	251	279	168	682	1032	683	128	726	436
RTOR Reduction (vph)	0	29	0	0	24	0	0	0	351	0	0	321
Lane Group Flow (vph)	238	379	0	251	423	0	682	1032	332	128	726	115
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	21.8	21.8		22.2	22.2		40.8	30.3	30.3	26.3	21.8	21.8
Effective Green, g (s)	23.8	23.8		24.2	24.2		42.8	32.3	32.3	30.3	23.8	23.8
Actuated g/C Ratio	0.26	0.26		0.27	0.27		0.48	0.36	0.36	0.34	0.26	0.26
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	299	462		358	473		782	1270	568	211	936	419
v/s Ratio Prot	0.10	c0.22		0.09	c0.24		c0.15	0.29		0.04	0.21	
v/s Ratio Perm	0.11			0.10			c0.27		0.21	0.16		0.07
v/c Ratio	0.80	0.82		0.70	0.89		0.87	0.81	0.58	0.61	0.78	0.28
Uniform Delay, d1	40.1	31.1		29.8	31.7		21.6	26.1	23.4	22.4	30.6	26.3
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	13.6	11.2		6.1	18.9		10.5	5.8	4.3	4.9	6.3	1.6
Delay (s)	53.7	42.3		35.9	50.6		32.1	31.9	27.7	27.3	36.9	27.9
Level of Service	D	D		D	D		C	C	C	C	D	C
Approach Delay (s)		46.5			45.3			30.8			32.9	
Approach LOS		D			D			C			C	

Intersection Summary

HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group