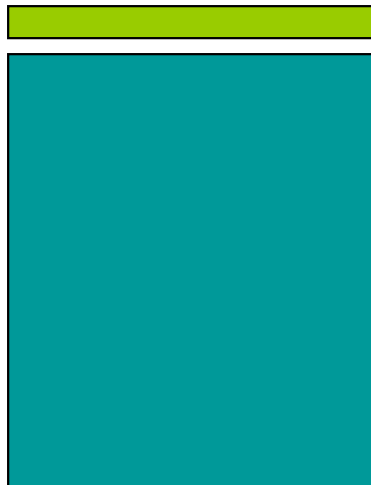


Bluesten Park Hallandale Beach, Florida

traffic study



prepared for:
Acai Associates, Inc

Traf Tech
ENGINEERING, INC.

November 2016

November 9, 2016

Mr. Donald Wilkin, RA
Principal – Acai Associates, Inc.
2937 W. Cypress Creek Road Suite 200
Fort Lauderdale, Florida 33309

Re: Bluesten Park, Hallandale Beach, Florida – Traffic Impact Study

Dear Donald:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the Traffic Impact Study undertaken for the proposed Bluesten planned to be located on the east side of SE 1st Avenue between SE 5th Street on the north and SE 7th Street on the south in the City of Hallandale Beach in Broward County, Florida.

It has been a pleasure working with Acai Associates, Inc., on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer

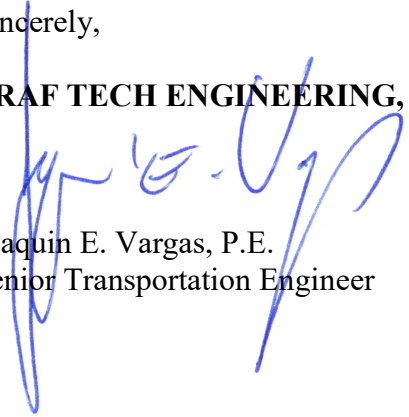


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INTRODUCTION

The redevelopment of Bluesten Park will consist of a city park and a recreational community center. The park is located on the east side of SE 1st Avenue between SE 5th Street on the north and SE 7th Street on the south in the City of Hallandale Beach in in Broward County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained by Acai Associates, Inc., to conduct a traffic study in connection with the proposed redevelopment of the Bluesten Park. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Capacity Evaluation
7. Conclusions



INVENTORY

Existing Land Use

The existing site has a park

Proposed Land Use and Access

The Bluesten Park site will be re-developed with the following land uses and intensities:

- City Park of 17.2 Acres
- Community Center of 46, 716 Square feet

Access to the site will be provided via a driveway off of SE 1st Avenue and a driveway off of SE 7th Street. Appendix A contains a copy of the proposed site plan for the Bluesten Park.

EXISTING CONDITIONS

This section addresses the existing roadway system located in the vicinity of the project site and nearby intersections.

Roadway System

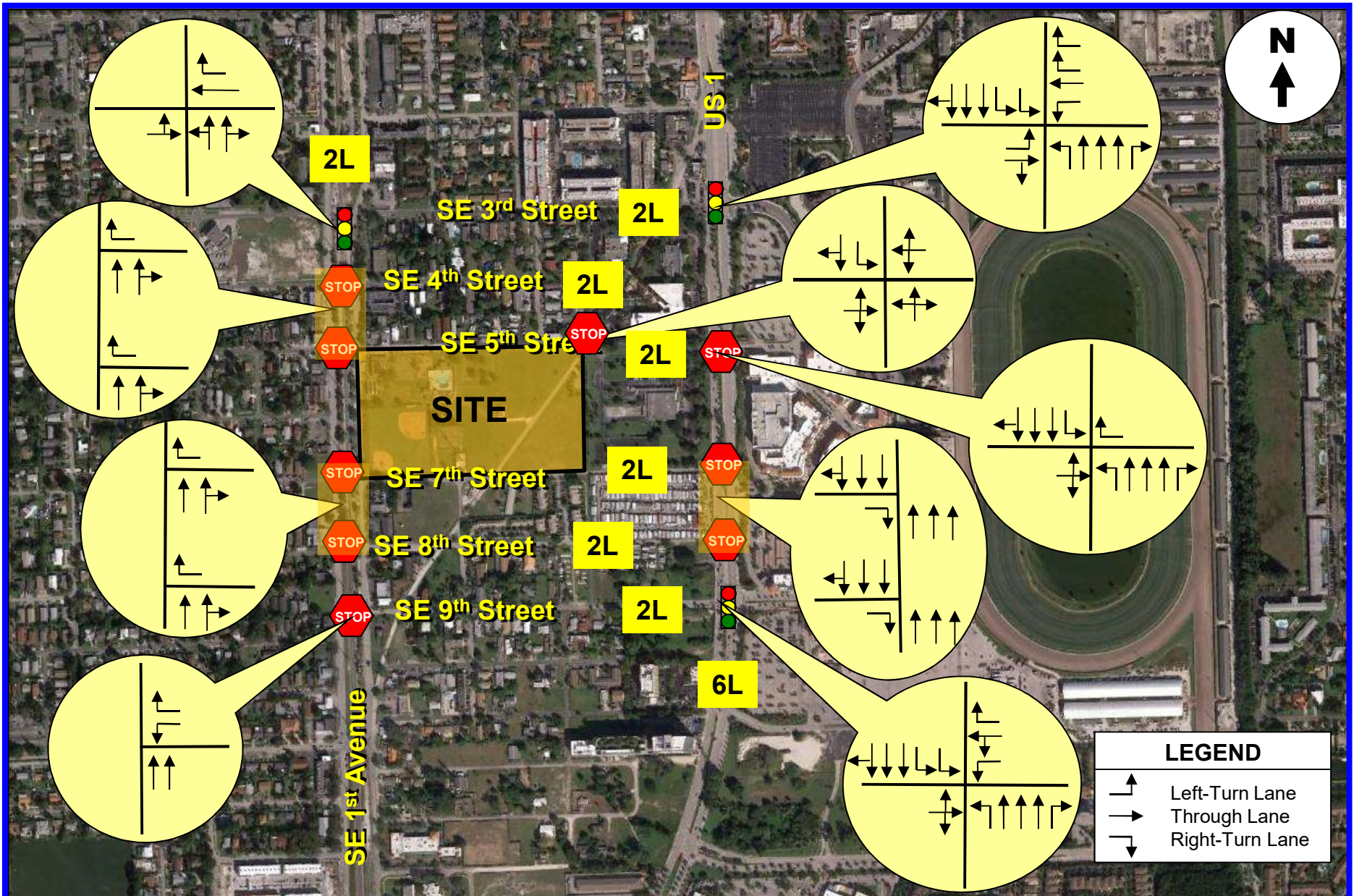
The roadway system located near the project site includes US 1/S. Federal Highway, SE 1st Avenue, SE 3rd Street, SE 4th Street, SE 5th Street, SE 7th Street, SE 8th Street and SE 9th Street. In the Vicinity of the project site, US/s. Federal Highway is a north-south arterial with three through lane in each direction. SE 1st Avenue is a one-way facility in the northbound direction with two through lanes. SE 3rd Street, SE 4th Street, SE 5th Street, SE 7th Street, SE 8th Street, and SE 9th Street are all east-west local streets with one through lane in each direction.

Nearby Intersections

The Bluesten Park is surrounded by the following intersections:

1. US 1 and SE 3rd Street (Signalized)
2. US 1 and SE 5th Street (Stop controlled)
3. US 1 and SE 7th Street (Stop controlled)
4. US 1 and SE 8th Street (Stop controlled)
5. US 1 and SE 9th Street (Signalized)
6. SE 1st Avenue and SE 3rd Street (Signalized)
7. SE 1st Avenue and SE 4th Street (Stop controlled)
8. SE 1st Avenue and SE 5th Street (Stop controlled)
9. SE 1st Avenue and SE 7th Street (Stop controlled)
10. SE 1st Avenue and SE 8th Street (Stop controlled)
11. SE 1st Avenue and SE 9th Street (Stop controlled)
12. SE 4th Avenue and SE 5th Street (Stop controlled)

Figure 2 shows the existing lane geometry of the intersections surrounding the project site.



TRAFFIC COUNTS

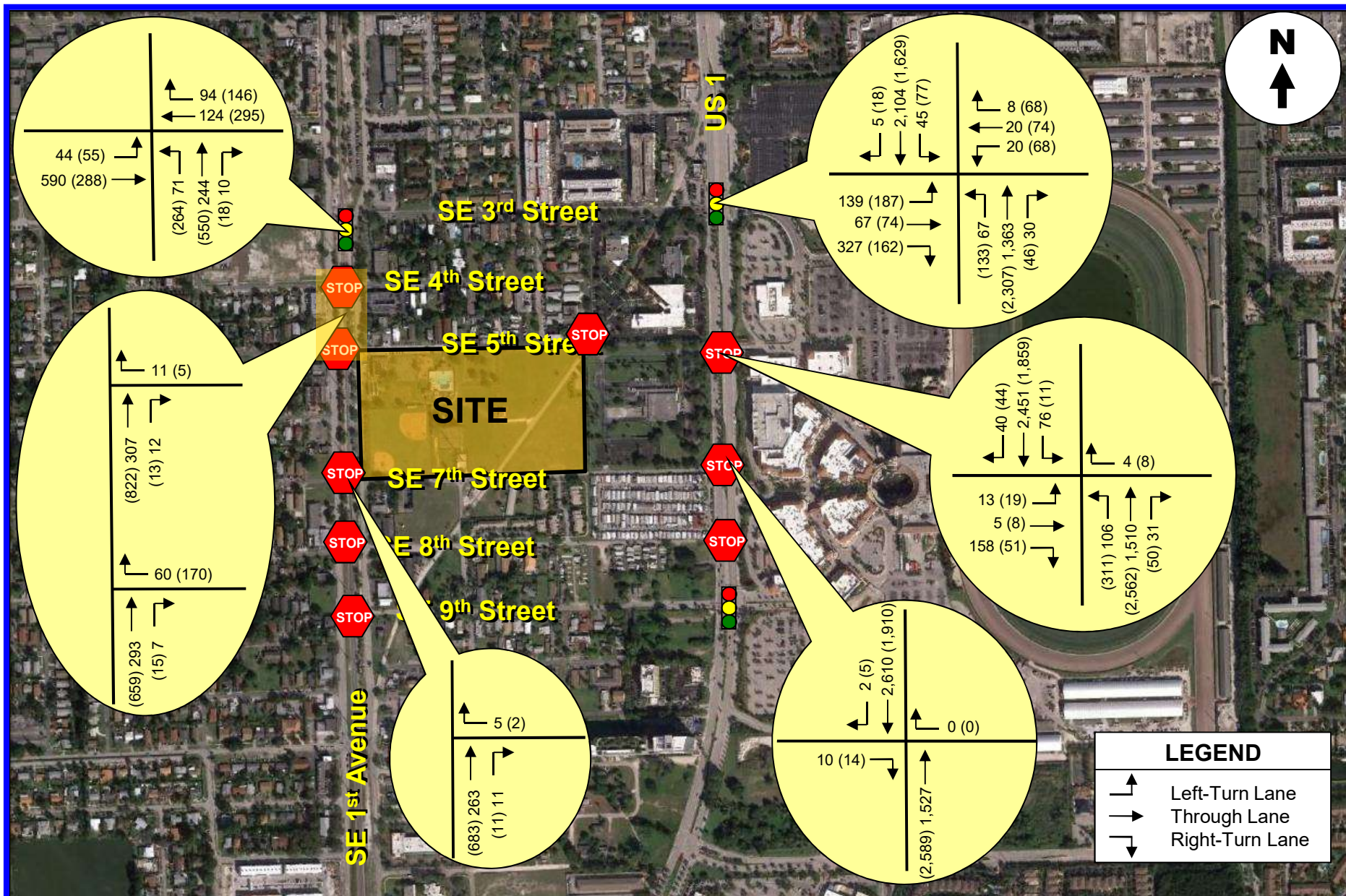
Traf Tech Engineering, Inc., in association with Traffic Survey Specialists, Inc., collected traffic data at the following locations:

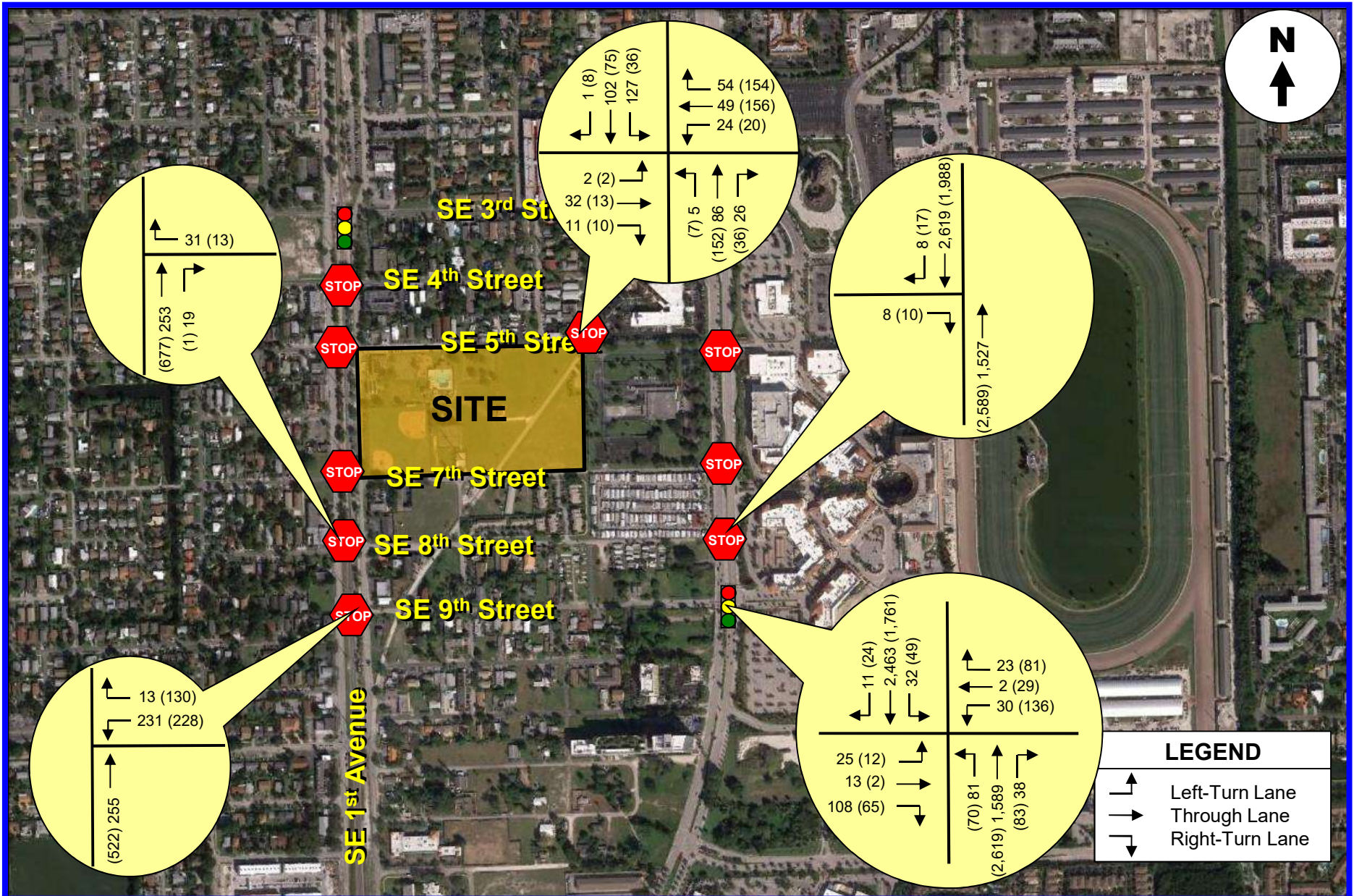
1. US 1 and SE 3rd Street
2. US 1 and SE 5th Street
3. US 1 and SE 7th Street
4. US 1 and SE 8th Street
5. US 1 and SE 9th Street
6. SE 1st Avenue and SE 3rd Street
7. SE 1st Avenue and SE 4th Street
8. SE 1st Avenue and SE 5th Street
9. SE 1st Avenue and SE 7th Street
10. SE 1st Avenue and SE 8th Street
11. SE 1st Avenue and SE 9th Street
12. SE 4th Avenue and SE 5th Street

The intersection turning movement counts performed by Traffic Survey Specialists, Inc., were collected on Thursday, October 20, 2016 during the AM and PM peak periods (7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively).

Figures 3A and 3B summarize the results of the intersection turning movement counts undertaken during the weekday peak hours. Appendix B contains the intersection turning movement counts, as collected in the field. The signal timing plans for the signalized intersections were obtained from Broward County Traffic Engineering Division and are also included in Appendix B.

.





TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (9th Edition). According to the subject ITE manual, the most appropriate "land use" categories for the proposed land uses includes: Land Use 411 – City Park and Land Use 495 – Recreational Community Center. Table 1 summarizes the trips associated with the proposed development.

Table 1 Trip Generation Summary Bluesten Park								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
City Park	17.2 Acres	33	43	34	77	34	26	60
Recreational Community Center	46,716 S.F.	1,580	63	33	96	63	65	128
Total Trips		1,613	106	67	173	97	91	188

Compiled by: Traf Tech Engineering, Inc. (November 2016).

Source: Institute of Transportation Engineers (ITE) Trip Generation (9th Edition).

As indicated in Table 1, the new trips anticipated to be generated by the proposed development consist of approximately 1,613 daily trips, approximately 106 trips during the AM peak hour (106 inbound and 67 outbound) and approximately 188 PM peak hour trips (97 inbound and 91 outbound).

The trip generation rates used to determine the trips associated with the proposed land uses are presented on the following page:

ITE Land Use 411 – City Park

Daily Trips

$$T = 1.89 (X)$$

Where T = number of daily trips and X = Acres

AM Peak Hour of Adjacent Street (Typical Morning Rush Hour)

$$T = 4.50 (X) (56\% \text{ entering}/44\% \text{ exiting})$$

Where T = number of daily trips and X = Acres

PM Peak Hour of Adjacent Street (Typical Afternoon Rush Hour)

$$T = 3.50 (X) (57\% \text{ entering}/43\% \text{ exiting})$$

Where T = number of daily trips and X = Acres

ITE Land Use 495 – Recreational Community Center

Daily Trips

$$T = 33.82 (X)$$

Where T = number of daily trips and X = 1,000 Square feet gross floor area

AM Peak Hour of Adjacent Street (Typical Afternoon Rush Hour)

$$T = 2.05 (X) (66\% \text{ entering}/34\% \text{ exiting})$$

Where T = number of daily trips and X = 1,000 Square feet gross floor area

PM Peak Hour of Adjacent Street (Typical Afternoon Rush Hour)

$$T = 2.74 (X) (49\% \text{ entering}/51\% \text{ exiting})$$

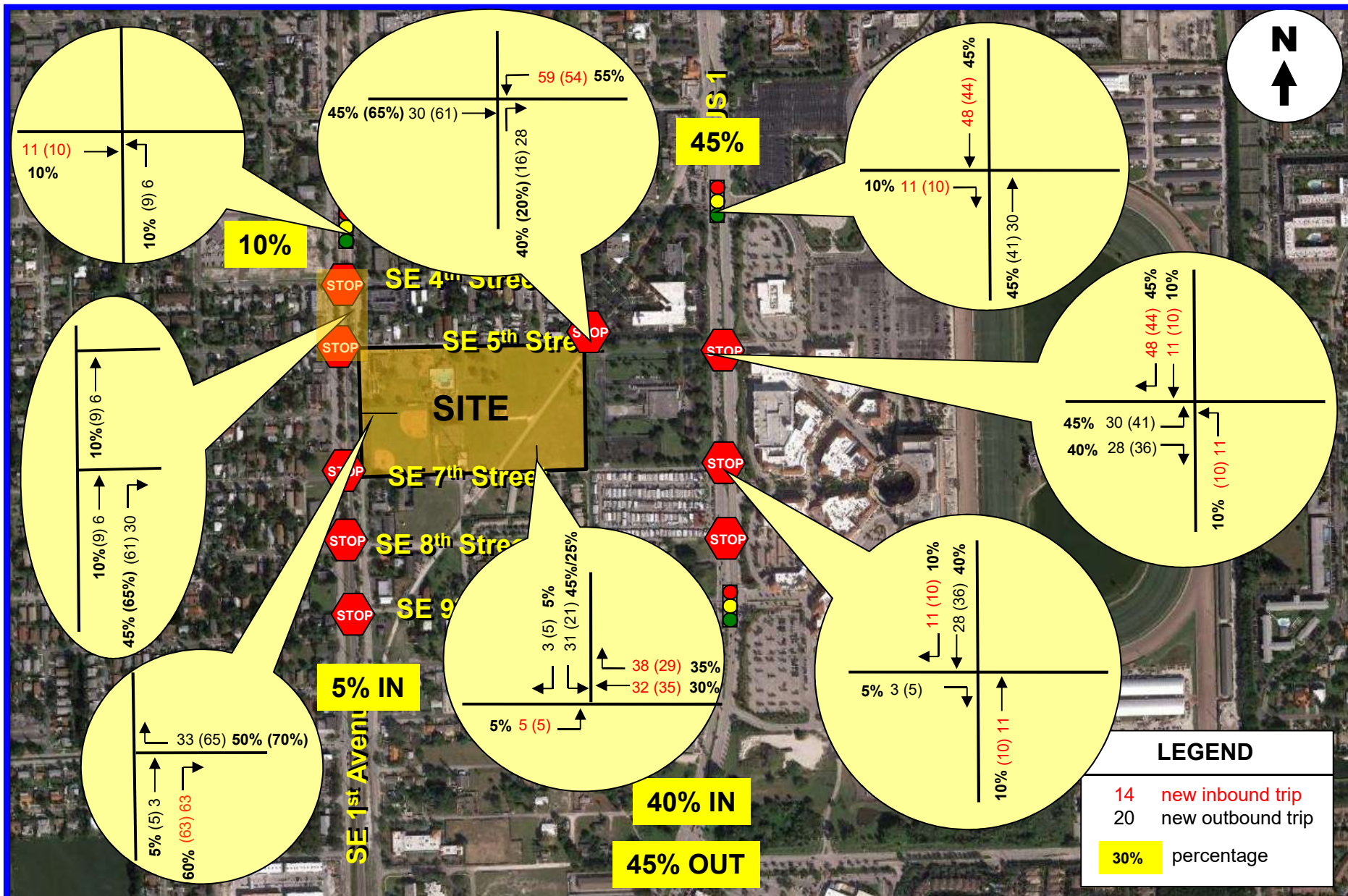
Where T = number of daily trips and X = 1,000 Square feet gross floor area
Square feet gross floor area

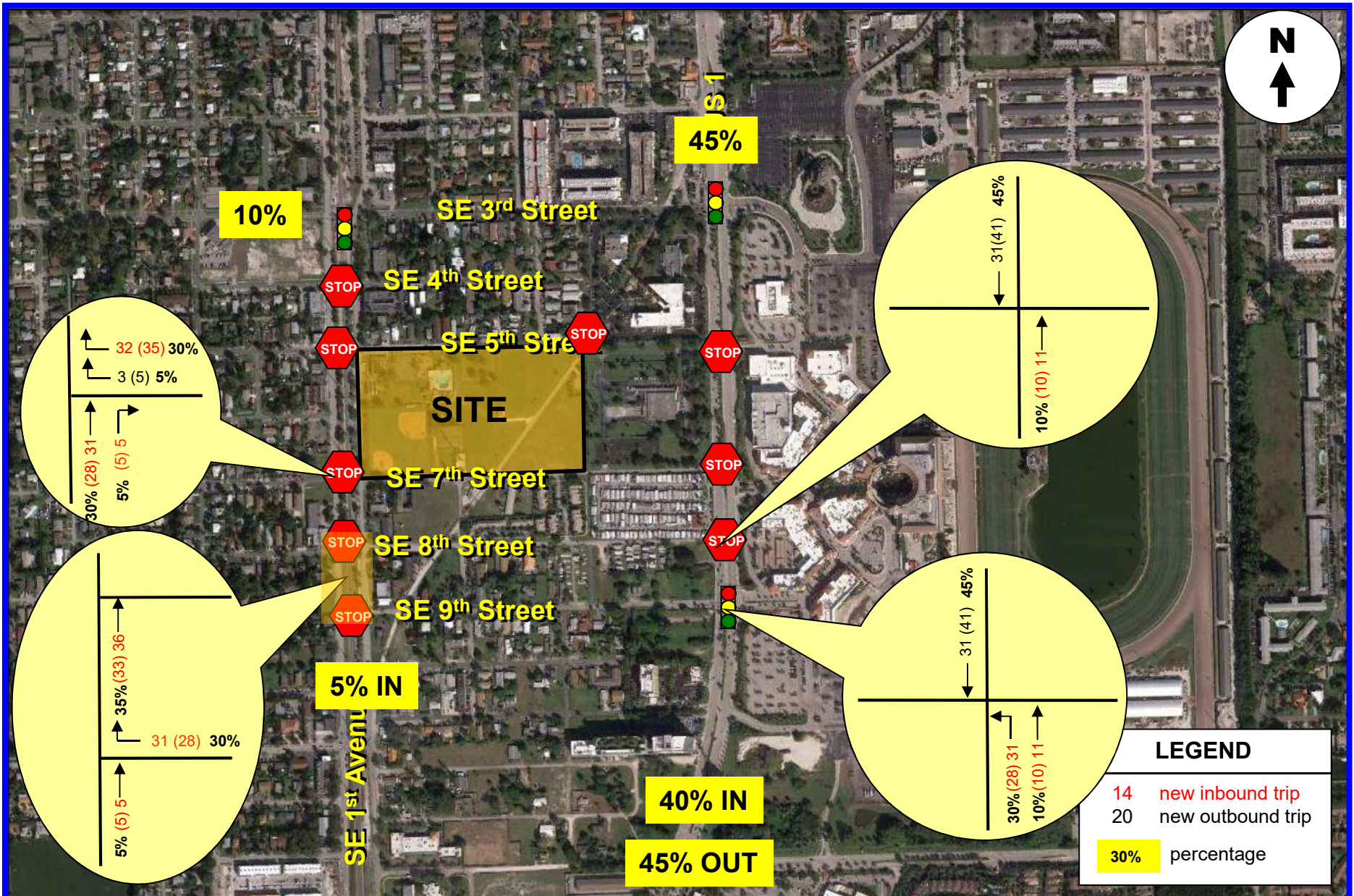
TRIP DISTRUBUTION AND TRAFFIC ASSIGNMENT

Based on the existing street system surrounding the project and the current traffic volumes on US 1/S. Federal Highway and SE 3rd Street, the following traffic assignment was developed for the subject project:

- 45% to and from the north via US 1/S. Federal Highway
- 40% to and from the south via US 1/S. Federal Highway
- 5% to and from the south via SE 1st Avenue
- 10% to and from the west via SE 3rd Street

The new peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The new project traffic assignment is summarized in Figures 4A and 4B.





TRAFFIC ANALYSIS

This section of the study is divided into three parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions.

Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes project buildout conditions without the proposed project and the second set adds the new trips anticipated to be generated by the project.

In order to develop year 2018 traffic volumes (project anticipated to be built and occupied by the year 2018), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of October to average peak season conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.19 is required to convert traffic counts collected during the third week of October to average peak season conditions (refer to Appendix C). The second analysis includes a growth factor to project 2016 peak season traffic volumes to the year 2018. For purposes of this traffic study, a 1.0% growth rate was applied to the 2016 traffic counts in order to develop 2018 background traffic conditions.

Additionally, future trips associated with nine nearby approved developments (Beachwalk, 7th Avenue Village, CVS Pharmacy, Diplomat Golf Course & Tennis, Gulfstream Park, Gulfstream Point, Hallandale Artsquare, Hallandale Oasis, and Chateau Square) were added to the background traffic. The future traffic calculations (peak season adjustments, traffic growth, committed developments, and the traffic associated with the proposed development) for the study intersections are contained in Appendix D in tabular format.

The new trips generated by the project (refer to Figures 4A and 4B) were added to the 2016 background traffic in order to develop total traffic conditions. The future traffic projections for the study intersections (peak season adjustments, traffic growth rates, committed developments and project traffic) are presented in tabular format in Appendix D. Figures 5 and 6 present the year 2018 future traffic volumes for the study area.

Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the proposed project.

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the study intersections. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCM) using the SYNCHRO software. The results of the capacity analyses are summarized in Table 2.

As indicated in Table 2, all intersections are currently operating adequately and will continue to operate at acceptable level of service in the year 2018 with the proposed project in place, except for five intersections. The exceptions are US 1 and SE 3rd Street, US 1 and SE 5th Street, US 1 and SE 7th Street, US 1 and SE 8th Street, and US 1 and 9th Street. Note that the deficient level of service at these intersections is mostly due to additional trips generated by committed developments in the area. Appendix E contains the results of the SYNCHRO analyses.

The access driveways off of SE 1st Avenue and SE 7th Street are projected to operate at level of service “A” and “B” as a stop-control intersection during the AM and PM peak hours. No turn lanes are required at the access driveways.

TABLE 2 Intersection Level of Service Results Bluesten Park			
		Future Traffic Conditions	
Intersection	2016 Existing	2018 w/o Project	2018 With Project
US 1 and SE 3rd Street (signal)	D (D)	F (F)	F (F)
US 1 and SE 5 th Street WB	C (E)	C (F)	C (F)
US 1 and SE 7th Street EB	E (C)	F (E)	F (E)
US 1 and SE 8 th Street EB	E (D)	F (E)	F (E)
US 1 and SE 9 th Street (signal)	F (C)	F (D)	F (D)
SE 1 st Avenue and SE 3 rd Street (signal)	B (B)	B (B)	B (B)
SE 1st Avenue and SE 4th Street WB	A (B)	A (B)	A (B)
SE 1st Avenue and SE 5th Street WB	A (B)	A (B)	B (B)
SE 1st Avenue and SE 7th Street WB	A (B)	A (B)	A (B)
SE 1st Avenue and SE 8th Street WB	A (B)	A (B)	A (B)
SE 1st Avenue and SE 9th Street WB	B (C)	B (C)	B (C)
SE 4 th Avenue and SE 5 th Street WB	A (B)	A (B)	A (B)
SE 1st Avenue and Driveway 1 WB			A (B)
SE 7 th Street and Driveway 2 SB			A (A)

Source: Highway Capacity Manual. LEGEND: AM Peak (PM Peak)

Link Analysis

Link analyses were undertaken within the study using the Generalized Service Volume Tables in the FDOT 2013 Quality and LOS Handbook. The roadway segment evaluation is presented in Tables 3 and 4. As indicated in the tables, all major roadway segments near the project are projected to operate at acceptable levels of services.

TABLE 3 Link Evaluation - Bluesten Park AM Peak Hour Analysis								
Roadway Segment	Lanes	LOS "D"	Existing Traffic		Future Conditons		Future Conditions	
		Capacity	Volume	LOS	(2018) w/o Project	LOS	(2018) with Project	LOS
<u>Hallandale Bch Blvd</u>								
- West of Dixie/NE 1st Ave	6	5390	2653	C	2538	C	2538	C
- Dixie/NE 1st Ave to US 1	6	4500	2770	D	3807	D	3807	D
<u>Federal Highway</u>								
- US 1 to Hibiscus Street	6	5390	3082	C	3933	C	4011	C
- Hibiscus Street to SE 3rd Street	6	5390	3021	C	4052	C	4130	C
- SE 3rd Street to South	6	5390	3322	C	4367	C	4437	C

Traffic volumes taken from Chateau Square (Including all Committed Developments)

Hallandale Beach Boulevard assumed as a "State Signalized Arterial - Class I", west of Dixie Highway and "Class II" east of Dixie Highway

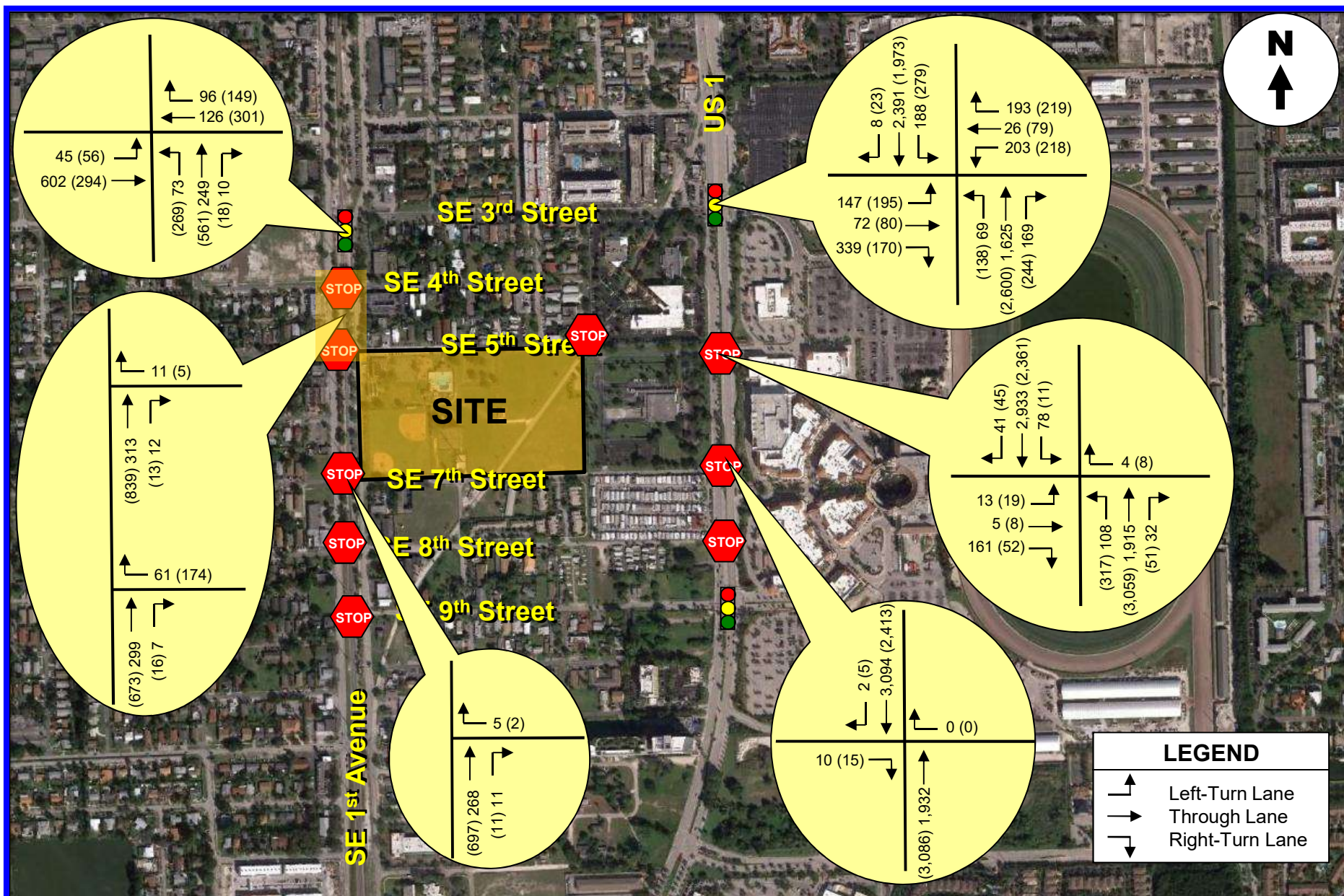
Federal Highway assumed as a "State Signalized Arterial - Class I", south of Hallandale Beach Boulevard and a "Class II", north of Hallandale Beach Boulevard

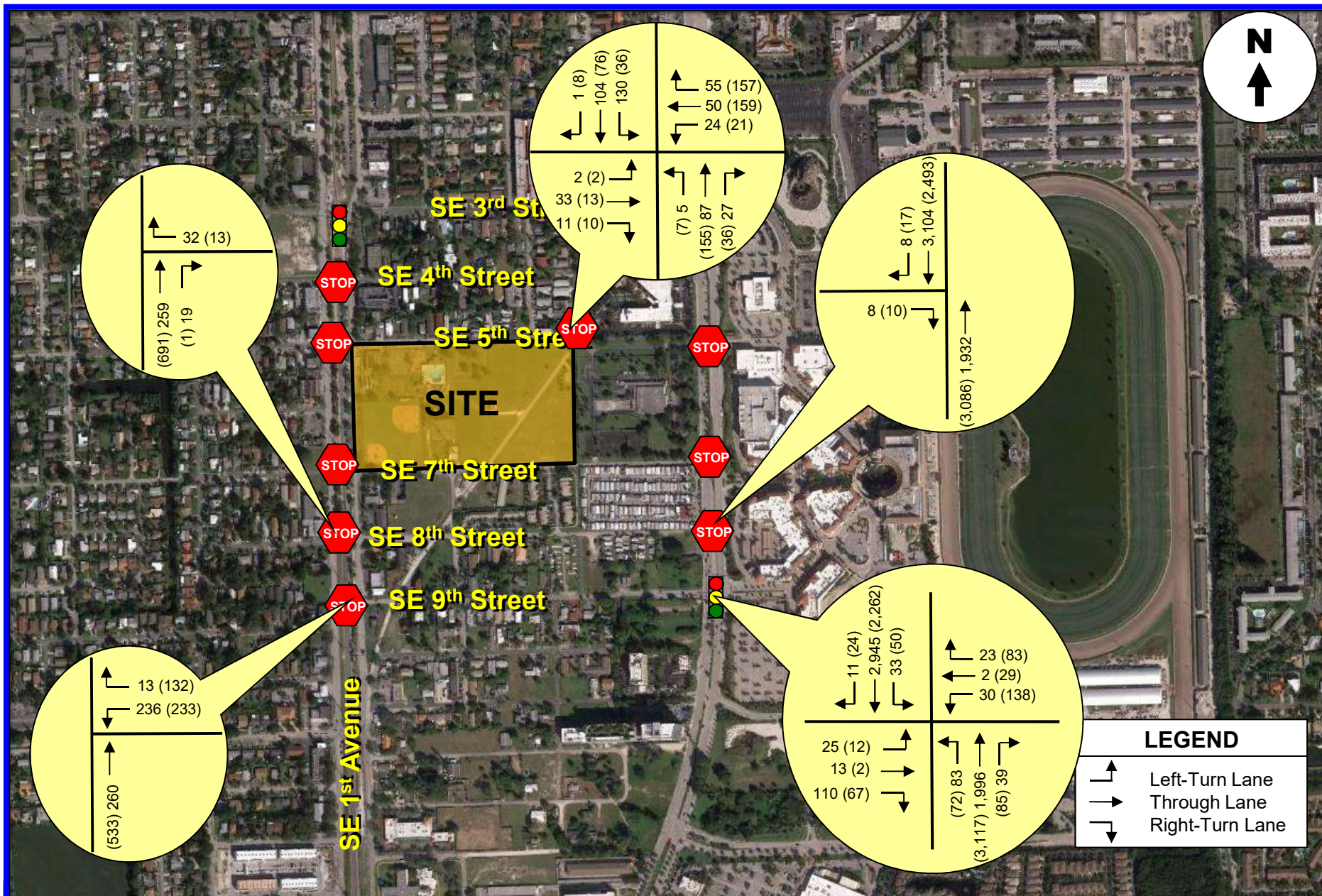
TABLE 4 Link Evaluation - Bluesten Park PM Peak Hour Analysis								
Roadway Segment	Lanes	LOS "D" Capacity	Existing Traffic (2015)		Future Conditons (2018) w/o Project		Future Conditions (2018) with Project	
			Volume	LOS	Volume	LOS	Volume	LOS
Hallandale Bch Blvd								
- West of Dixie/NE 1st Ave	6	5390	2982	C	4101	C	4101	C
- Dixie/NE 1st Ave to US 1	6	4500	2857	D	4153	D	4153	D
Federal Highway								
- US 1 to Hibiscus Street	6	5390	3380	C	4376	C	4461	C
- Hibiscus Street to SE 3rd Street	6	5390	3403	C	4342	C	4427	C
- SE 3rd Street to South	6	5390	3259	C	4402	C	4466	C

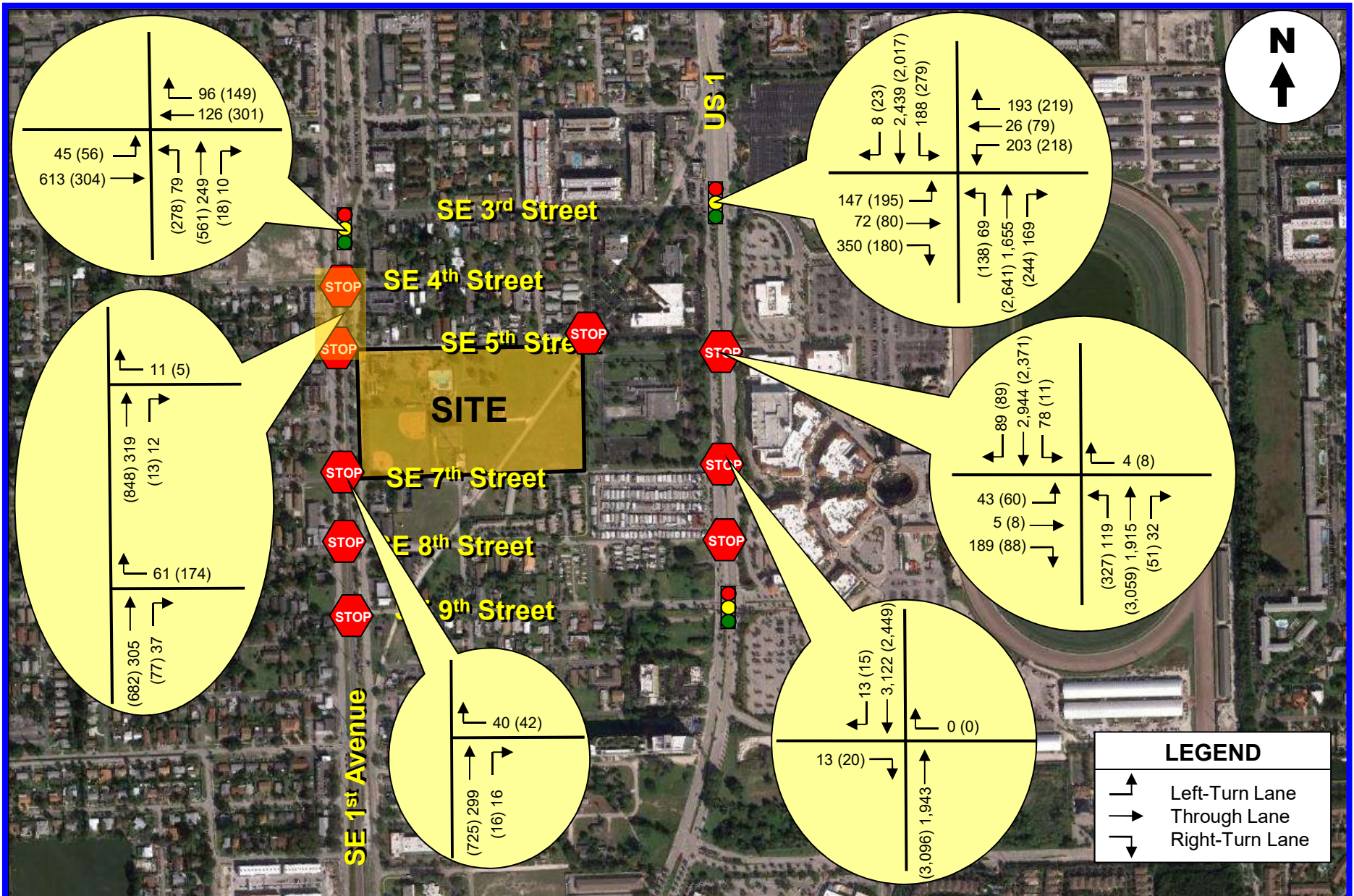
Traffic volumes taken from Chateau Square (Including all Committed Developments)

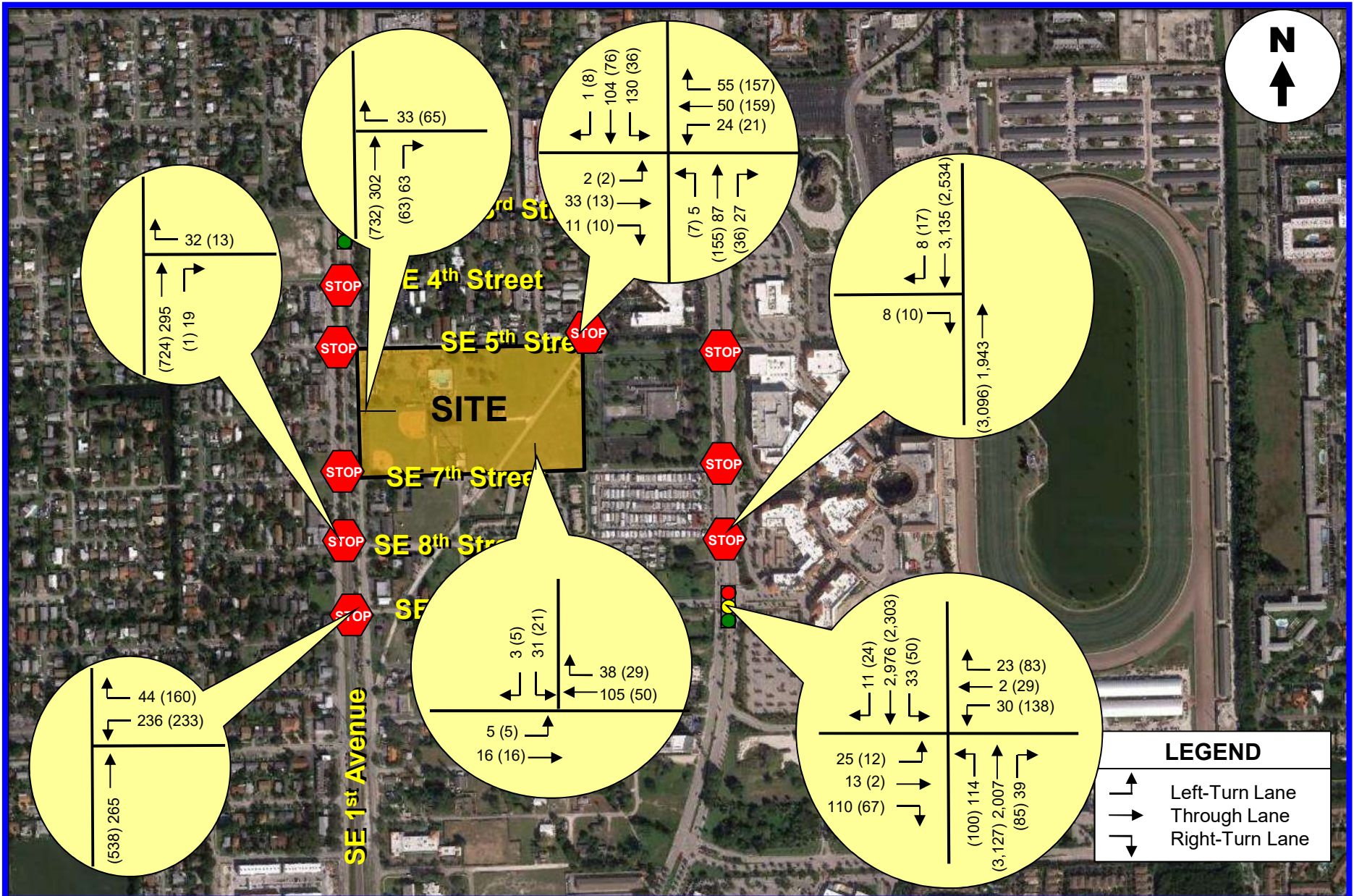
Hallandale Beach Boulevard assumed as a "State Signalized Arterial - Class I", west of Dixie Highway and "Class II" east of Dixie Highway

Federal Highway assumed as a "State Signalized Arterial - Class I", south of Hallandale Beach Boulevard and a "Class II", north of Hallandale Beach Boulevard









CONCLUSIONS

The redevelopment of Bluesten Park will consist of a city park and a recreational community center. The park is located on the east side of SE 1st Avenue between SE 5th Street on the north and SE 7th Street on the south in the City of Hallandale Beach in Broward County, Florida. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network.

The Bluesten Park site will be re-developed with the following land uses and intensities:

- City Park of 17.2 Acres
- Community Center of 46, 716 Square feet

Access to the site will be provided via a driveway off of SE 1st Avenue and a driveway off of SE 7th Street. The conclusions of the traffic study are presented below:

- The new trips anticipated to be generated by the proposed development consist of approximately 1,613 daily trips, approximately 106 trips during the AM peak hour (106 inbound and 67 outbound) and approximately 188 PM peak hour trips (97 inbound and 91 outbound).
- All intersections are currently operating adequately and will continue to operate at acceptable level of service in the year 2018 with the proposed project in place, except for five intersections. The exceptions are US 1 and SE 3rd Street, US 1 and SE 5th Street, US 1 and SE 7th Street, US 1 and SE 8th Street, and US 1 and 9th Street. Note that the deficient level of service at these intersections is mostly due to additional trips generated by committed developments in the area.
- The access driveways off of SE 1st Avenue and SE 7th Street are projected to operate at level of service “A” and “B” as a stop-control intersection during the AM and PM peak hours. No turn lanes are required at the access driveways.

-
- Results of a link analyses indicated that all major roadway segments near the project are projected to operate at acceptable levels of services.

APPENDIX A

Site Plan – Bluesten Park



APPENDIX B

Intersection Turning Movement Counts and Signal Timing Plans

TRAFFIC SURVEY SPECIALISTS, INC.

SE 3RD STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: RICHARD MENDEZ
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 3ST_1AVE
Page : 1

ALL VEHICLES

SE 1ST AVENUE From North					SE 3RD STREET From East				SE 1ST AVENUE From South				SE 3RD STREET From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	
Date 10/20/16																			
07:00	0	0	0	0	0	0	15	5	0	10	11	2	0	2	30	0			75
07:15	0	0	0	0	0	0	31	9	0	6	25	2	0	6	51	0			130
07:30	0	0	0	0	0	0	42	6	0	15	31	0	0	13	51	0			158
07:45	0	0	0	0	0	0	38	7	0	9	42	1	0	7	82	0			186
Hr Total	0	0	0	0	0	0	126	27	0	40	109	5	0	28	214	0			549
08:00	0	0	0	0	0	0	24	11	0	13	45	3	0	8	115	0			219
08:15	0	0	0	0	0	0	27	19	0	17	58	1	0	10	111	0			243
08:30	0	0	0	0	0	0	26	19	0	19	45	3	0	5	129	0			246
08:45	0	0	0	0	0	0	27	30	0	11	57	1	0	14	141	0			281
Hr Total	0	0	0	0	0	0	104	79	0	60	205	8	0	37	496	0			989
* BREAK *																			
16:00	0	0	0	0	0	0	77	40	0	35	93	3	0	7	70	0			325
16:15	0	0	0	0	0	0	75	43	0	27	92	6	0	6	67	0			316
16:30	0	0	0	0	0	0	75	54	0	41	111	0	0	6	59	0			346
16:45	0	0	0	0	0	0	62	37	0	36	88	1	0	12	73	0			309
Hr Total	0	0	0	0	0	0	289	174	0	139	384	10	0	31	269	0			1296
17:00	0	0	0	0	0	0	70	35	0	60	114	3	0	16	62	0			360
17:15	0	0	0	0	0	0	63	33	0	56	109	4	0	9	63	0			337
17:30	0	0	0	0	0	0	61	25	0	49	107	2	0	8	54	0			306
17:45	0	0	0	0	0	0	54	30	0	57	132	6	0	13	63	0			355
Hr Total	0	0	0	0	0	0	248	123	0	222	462	15	0	46	242	0			1358
TOTAL	0	0	0	0	0	0	767	403	0	461	1160	38	0	142	1221	0			4192

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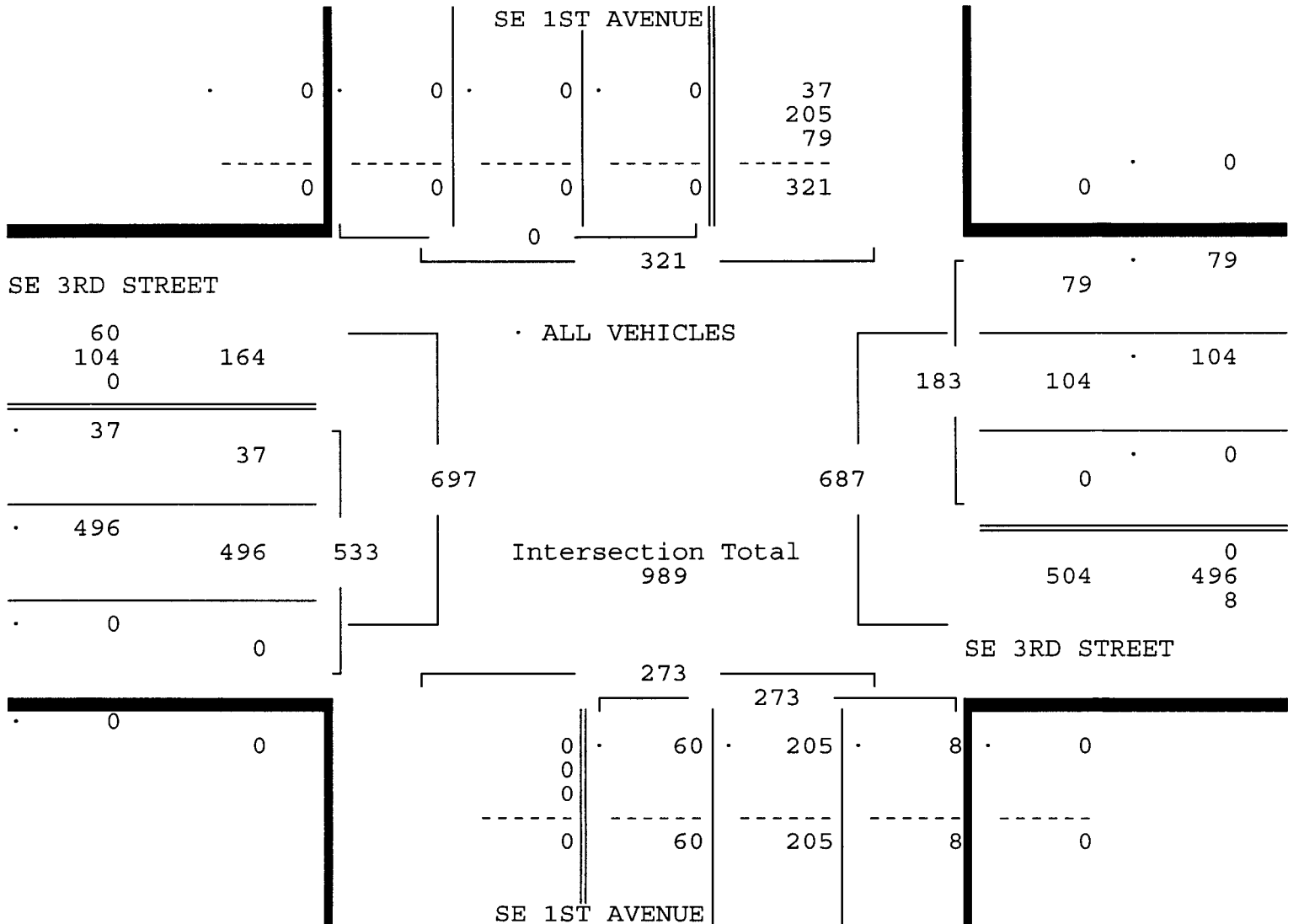
ALL VEHICLES

SE 1ST AVENUE From North				SE 3RD STREET From East				SE 1ST AVENUE From South				SE 3RD STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00				08:00				08:00				08:00				
Volume	0	0	0	0	0	104	79	0	60	205	8	0	37	496	0	
Percent	0%	0%	0%	0%	0%	57%	43%	0%	22%	75%	3%	0%	7%	93%	0%	
Pk total	0			183				273				533				
Highest	07:00			08:45				08:15				08:45				
Volume	0	0	0	0	0	27	30	0	17	58	1	0	14	141	0	
Hi total	0			57				76				155				
PHF	.0			.80				.90				.86				



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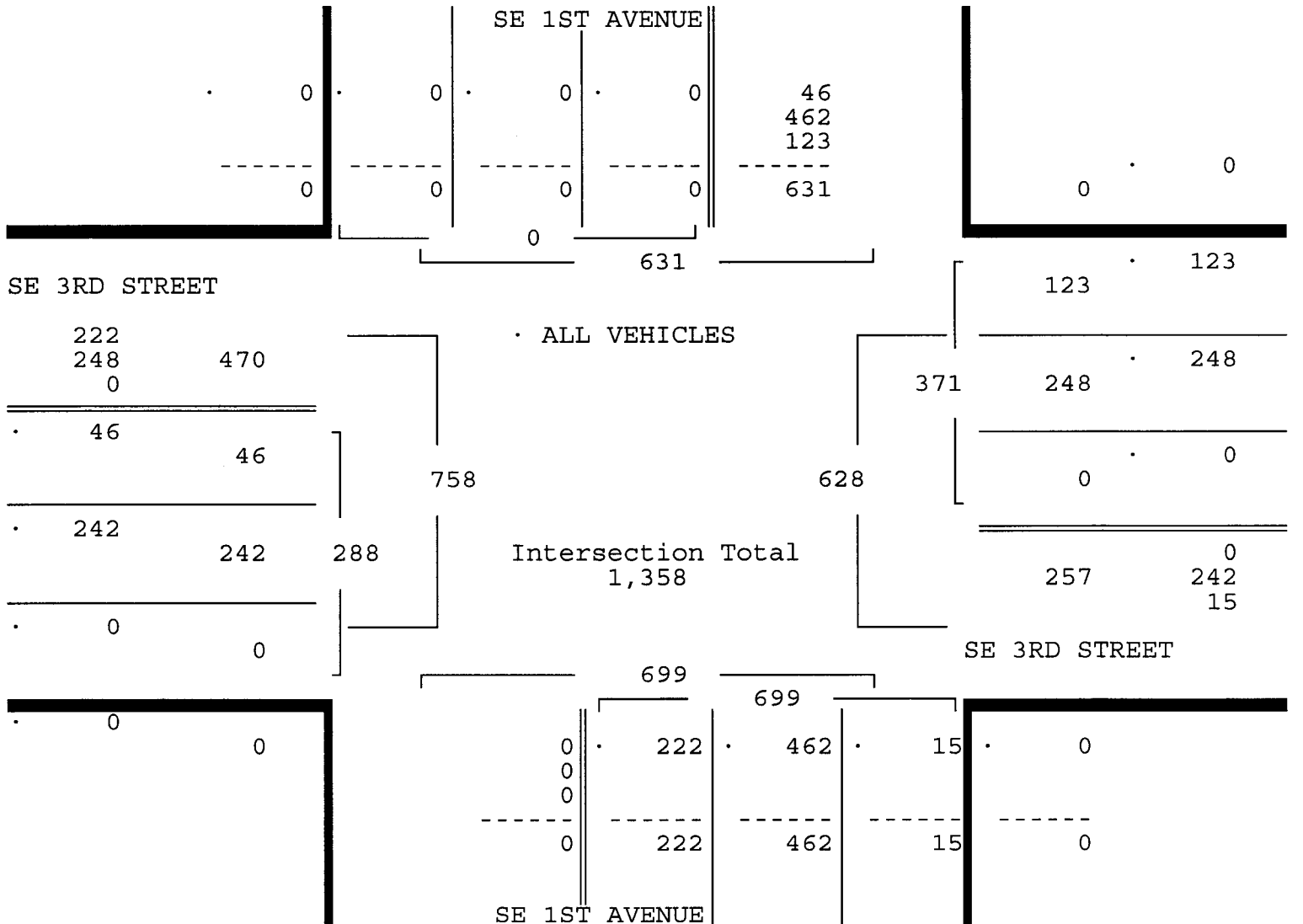
ALL VEHICLES

SE 1ST AVENUE From North				SE 3RD STREET From East				SE 1ST AVENUE From South				SE 3RD STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16

Peak start 17:00					17:00					17:00					17:00	
Volume	0	0	0	0	0	0	248	123	0	222	462	15	0	46	242	0
Percent	0%	0%	0%	0%	0%	0%	67%	33%	0%	32%	66%	2%	0%	16%	84%	0%
Pk total	0				371				699				288			
Highest	07:00				17:00				17:45				17:00			
Volume	0	0	0	0	0	0	70	35	0	57	132	6	0	16	62	0
Hi total	0				105				195				78			
PHF	.0				.88				.90				.92			



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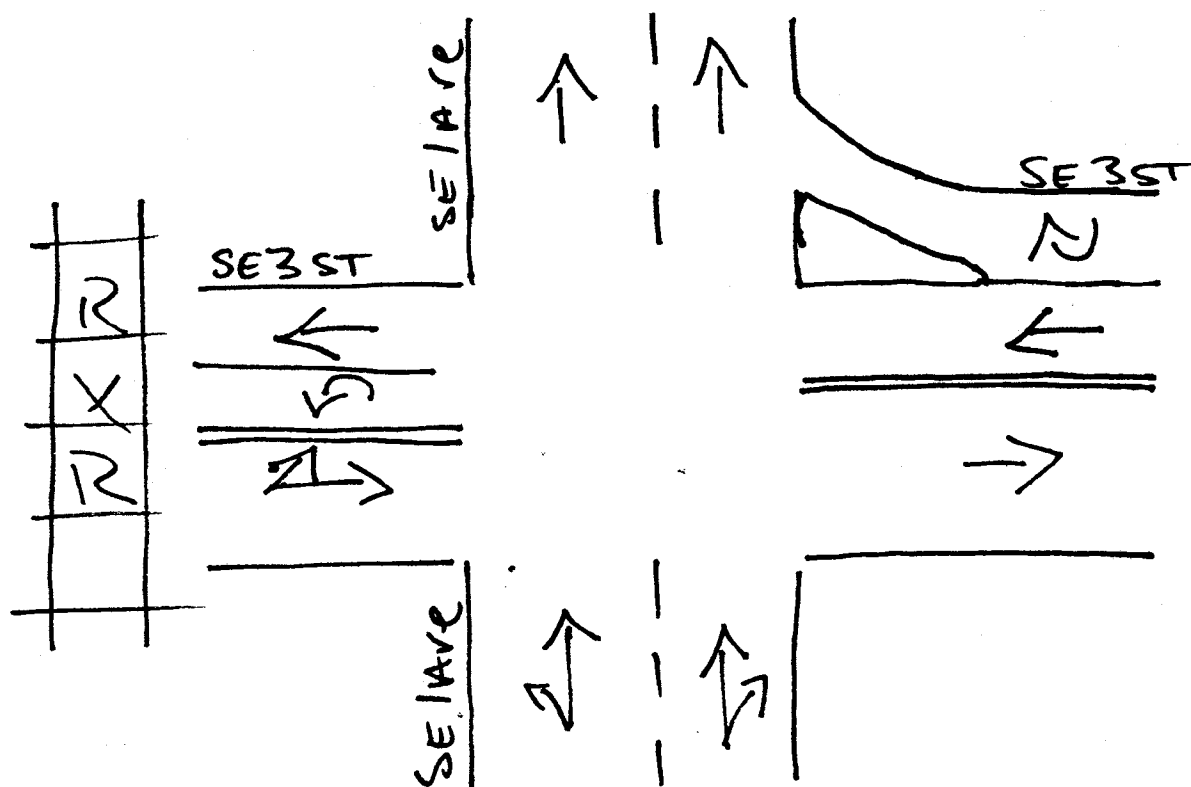
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Page : 1

PEDESTRIANS & BIKES

	SE 1ST AVENUE From North				SE 3RD STREET From East				SE 1ST AVENUE From South				SE 3RD STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 10/20/16	-----																
07:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Hr Total	0	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	4
08:00	0	1	0	3	0	1	0	0	0	0	0	0	0	0	0	0	5
08:15	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	4
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4
Hr Total	0	2	0	3	0	2	0	5	0	0	0	1	0	0	0	0	13
----- * BREAK * -----																	
16:00	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	5
16:15	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
16:30	0	2	0	3	0	0	0	0	0	1	0	0	0	0	0	0	6
16:45	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
Hr Total	0	6	0	5	0	0	0	5	0	2	0	0	0	0	0	0	18
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
17:30	0	0	0	0	0	1	0	4	0	1	0	2	0	0	0	0	8
17:45	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	4
Hr Total	0	0	0	1	0	1	0	8	0	3	0	2	0	0	0	0	15

TOTAL	0	10	0	9	0	4	0	18	0	5	0	4	0	0	0	0	50

North



Hallandale Beach, Florida
February 23, 2016
drawn by: Luis Palomino
signalized

SE 4TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 4ST_1AVE
Page : 1

ALL VEHICLES

SE 1ST AVENUE					SE 4TH STREET					SE 1ST AVENUE					-----					
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 10/20/16																				
07:00	0	0	0	0	0	0	0	3	0	0	22	0	0	0	0	0	0	0	25	
07:15	0	0	0	0	0	0	0	1	0	0	38	1	0	0	0	0	0	0	40	
07:30	0	0	0	0	0	0	0	3	0	0	47	0	0	0	0	0	0	0	50	
07:45	0	0	0	0	0	0	0	3	0	0	55	2	0	0	0	0	0	0	60	
Hr Total	0	0	0	0	0	0	0	10	0	0	162	3	0	0	0	0	0	0	175	
08:00	0	0	0	0	0	0	0	1	0	0	55	1	0	0	0	0	0	0	57	
08:15	0	0	0	0	0	0	0	5	0	0	68	1	0	0	0	0	0	0	74	
08:30	0	0	0	0	0	0	0	2	0	0	68	3	0	0	0	0	0	0	73	
08:45	0	0	0	0	0	0	0	1	0	0	67	5	0	0	0	0	0	0	73	
Hr Total	0	0	0	0	0	0	0	9	0	0	258	10	0	0	0	0	0	0	277	
----- * BREAK *																				
16:00	0	0	0	0	0	0	0	2	0	0	118	1	0	0	0	0	0	0	121	
16:15	0	0	0	0	0	0	0	3	0	0	129	4	0	0	0	0	0	0	136	
16:30	0	0	0	0	0	0	0	0	0	0	156	4	0	0	0	0	0	0	160	
16:45	0	0	0	0	0	0	0	0	0	0	108	0	0	0	0	0	0	0	108	
Hr Total	0	0	0	0	0	0	0	5	0	0	511	9	0	0	0	0	0	0	525	
17:00	0	0	0	0	0	0	0	1	0	0	180	3	0	0	0	0	0	0	184	
17:15	0	0	0	0	0	0	0	1	0	0	175	2	0	0	0	0	0	0	178	
17:30	0	0	0	0	0	0	0	0	0	0	166	5	0	0	0	0	0	0	171	
17:45	0	0	0	0	0	0	0	2	0	0	170	1	0	0	0	0	0	0	173	
Hr Total	0	0	0	0	0	0	0	4	0	0	691	11	0	0	0	0	0	0	706	
TOTAL	0	0	0	0	0	0	0	28	0	0	1622	33	0	0	0	0	0	0	1683	

SE 4TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 4ST_1AVE
Page : 2

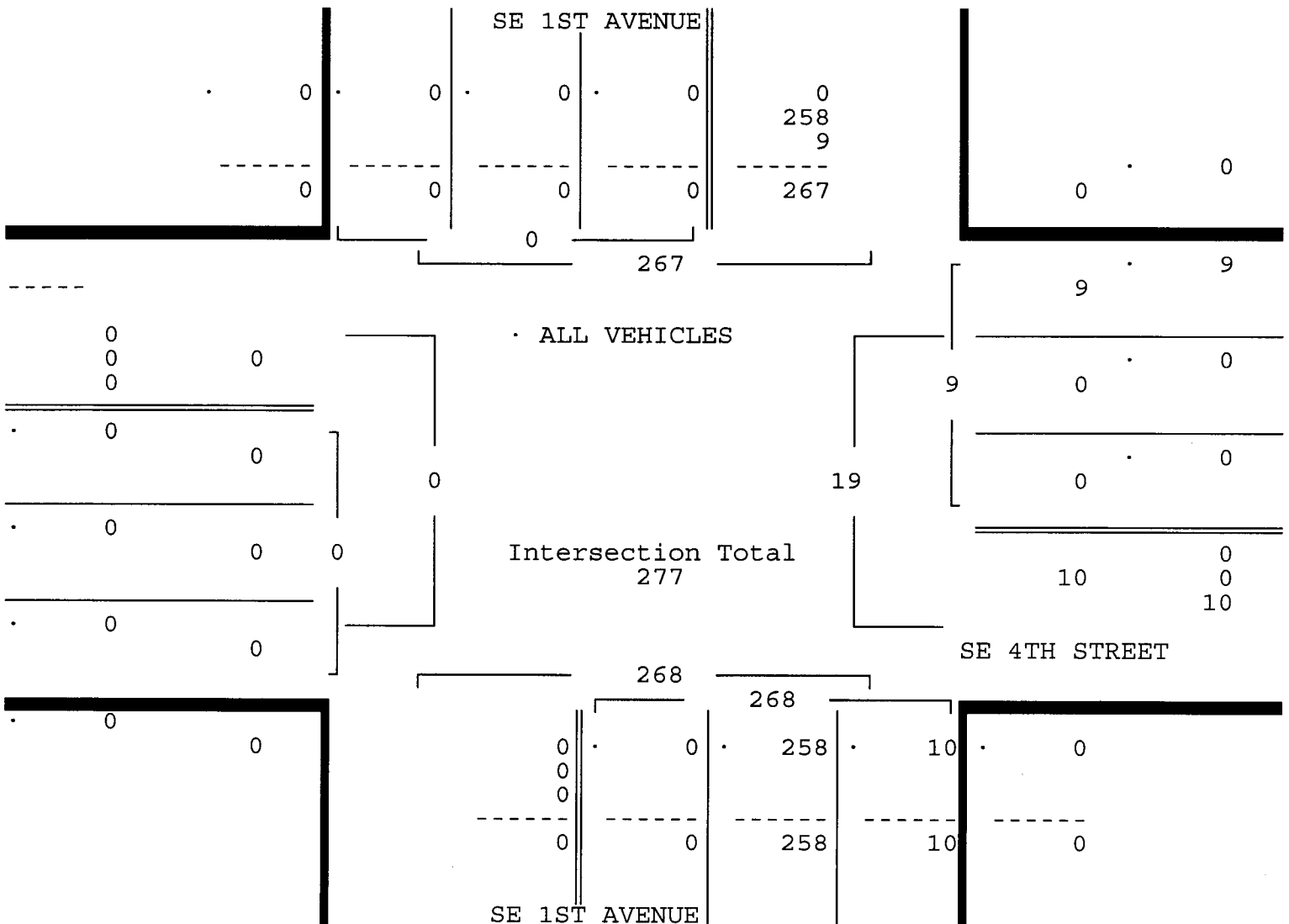
ALL VEHICLES

SE 1ST AVENUE From North				SE 4TH STREET From East				SE 1ST AVENUE From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00				08:00				08:00				08:00				
Volume	0	0	0	0	0	0	9	0	0	258	10	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	96%	4%	0%	0%	0%	0%	
Pk total	0				9			268				0				
Highest	07:00				08:15			08:45				07:00				
Volume	0	0	0	0	0	0	5	0	0	67	5	0	0	0	0	
Hi total	0				5			72				0				
PHF	.0				.45			.93				.0				



SE 4TH STREET & SE 1ST AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: AMBER PALOMINO
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 4ST_1AVE
 Page : 3

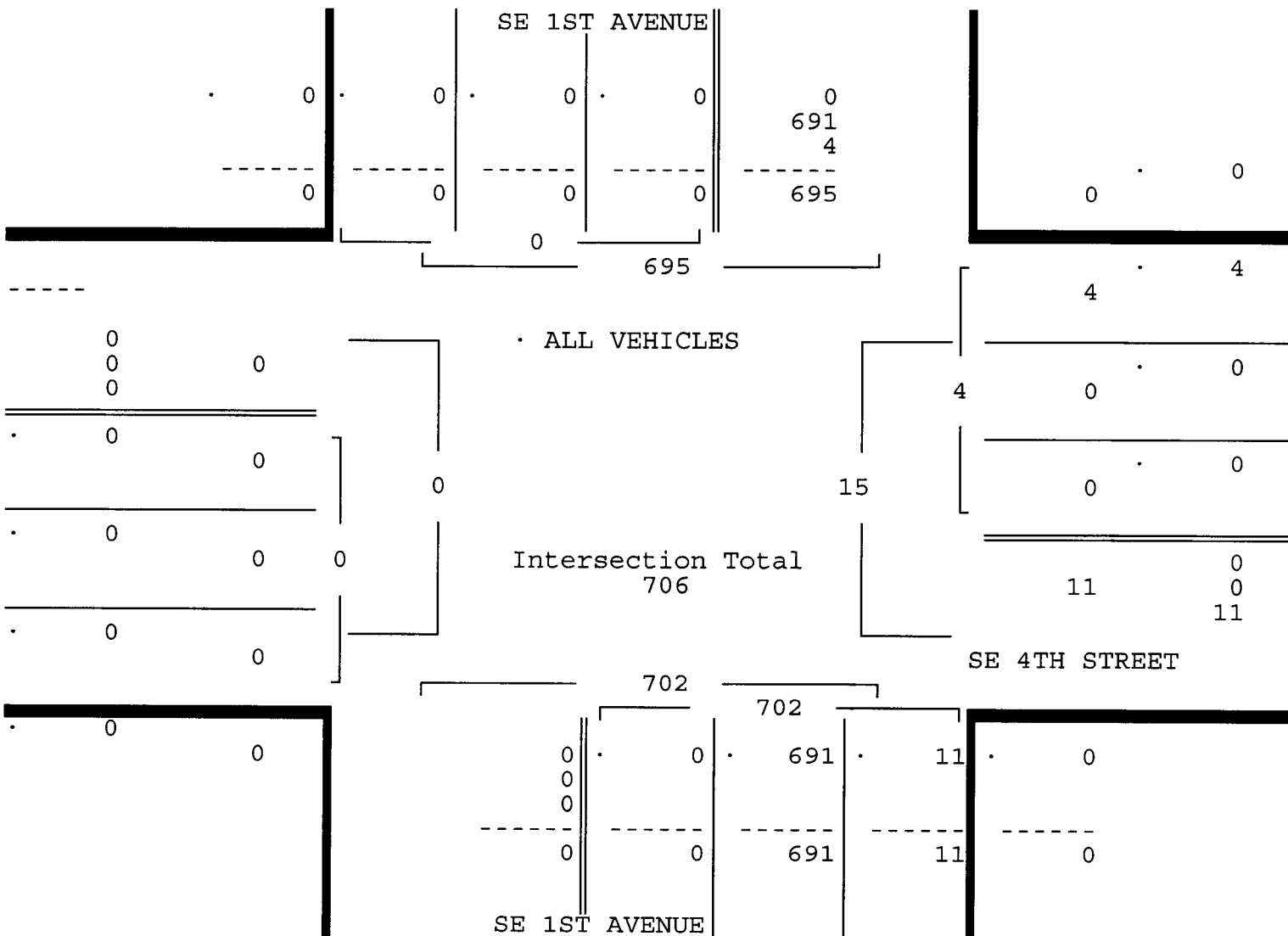
ALL VEHICLES

SE 1ST AVENUE From North				SE 4TH STREET From East				SE 1ST AVENUE From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16

Peak start 17:00				17:00				17:00				17:00				
Volume	0	0	0	0	0	0	4	0	0	691	11	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	98%	2%	0%	0%	0%	0%	
Pk total	0				4			702				0				
Highest	07:00				17:45			17:00				07:00				
Volume	0	0	0	0	0	0	2	0	0	180	3	0	0	0	0	
Hi total	0				2			183				0				
PHF	.0				.50			.96				.0				

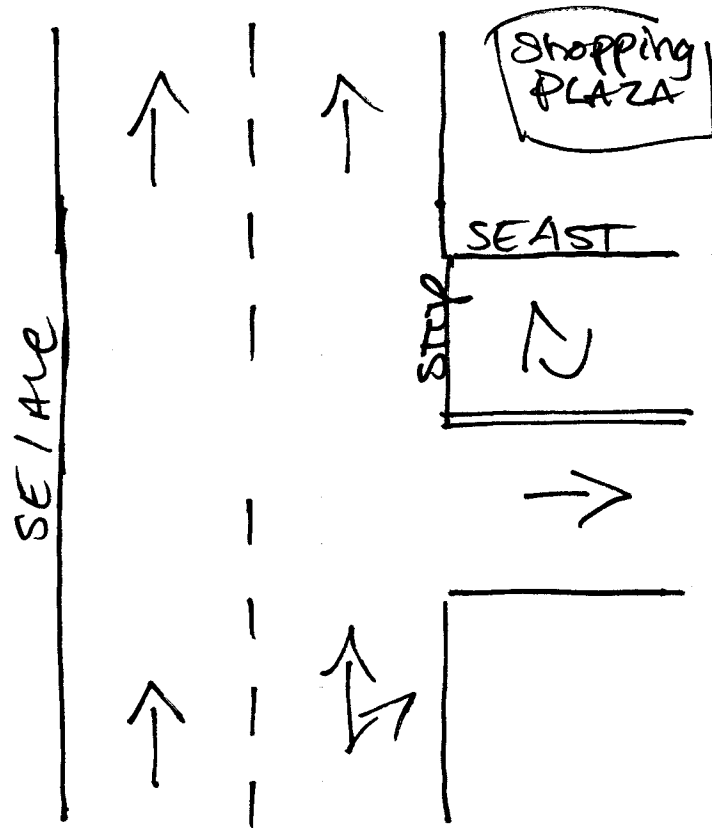


Site Code : 00160226
Start Date: 10/20/16
File I.D. : 4ST_1AVE
Page : 1

SE 1ST AVENUE				SE 4TH STREET				SE 1ST AVENUE				-----				
From North				From East				From South				From West				
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 10/20/16 -----																
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
08:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
08:15	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
----- * BREAK * -----																
16:00	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
16:15	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
16:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	5
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Hr Total	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3

TOTAL	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	14

↑
North



Hallandale Bch, Florida
October 19, 2016
drawn by: Luis Pabruno
not signalized

SE 5TH STREET & SE 1ST AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: SEBASTIAN SALVO
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/19/16
 File I.D. : 5ST_1AVE
 Page : 1

ALL VEHICLES

SE 1ST AVENUE					SE 5TH STREET					SE 1ST AVENUE					-----						
From North					From East					From South					From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total	
Date 10/19/16 -----																					
07:00	0	0	0	0		0	0	0	7		0	0	19	0		0	0	0	0		26
07:15	0	0	0	0		0	0	0	5		0	0	32	1		0	0	0	0		38
07:30	0	0	0	0		0	0	0	6		0	0	39	0		0	0	0	0		45
07:45	0	0	0	0		0	0	0	6		0	0	41	0		0	0	0	0		47
Hr Total	0	0	0	0		0	0	0	24		0	0	131	1		0	0	0	0		156
08:00	0	0	0	0		0	0	0	10		0	0	55	2		0	0	0	0		67
08:15	0	0	0	0		0	0	0	17		0	0	78	1		0	0	0	0		96
08:30	0	0	0	0		0	0	0	8		0	0	53	2		0	0	0	0		63
08:45	0	0	0	0		0	0	0	15		0	0	57	1		0	0	0	0		73
Hr Total	0	0	0	0		0	0	0	50		0	0	243	6		0	0	0	0		299
----- * BREAK * -----																					
16:00	0	0	0	0		0	0	0	25		0	0	100	1		0	0	0	0		126
16:15	0	0	0	0		0	0	0	31		0	0	99	4		0	0	0	0		134
16:30	0	0	0	0		0	0	0	29		0	0	104	1		0	0	0	0		134
16:45	0	0	0	0		0	0	0	41		0	0	115	3		0	0	0	0		159
Hr Total	0	0	0	0		0	0	0	126		0	0	418	9		0	0	0	0		553
17:00	0	0	0	0		0	0	0	30		0	0	159	2		0	0	0	0		191
17:15	0	0	0	0		0	0	0	39		0	0	127	4		0	0	0	0		170
17:30	0	0	0	0		0	0	0	37		0	0	142	4		0	0	0	0		183
17:45	0	0	0	0		0	0	0	37		0	0	126	3		0	0	0	0		166
Hr Total	0	0	0	0		0	0	0	143		0	0	554	13		0	0	0	0		710

TOTAL	0	0	0	0		0	0	0	343		0	0	1346	29		0	0	0	0		1718

SE 5TH STREET & SE 1ST AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: SEBASTIAN SALVO
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/19/16
 File I.D. : 5ST_1AVE
 Page : 2

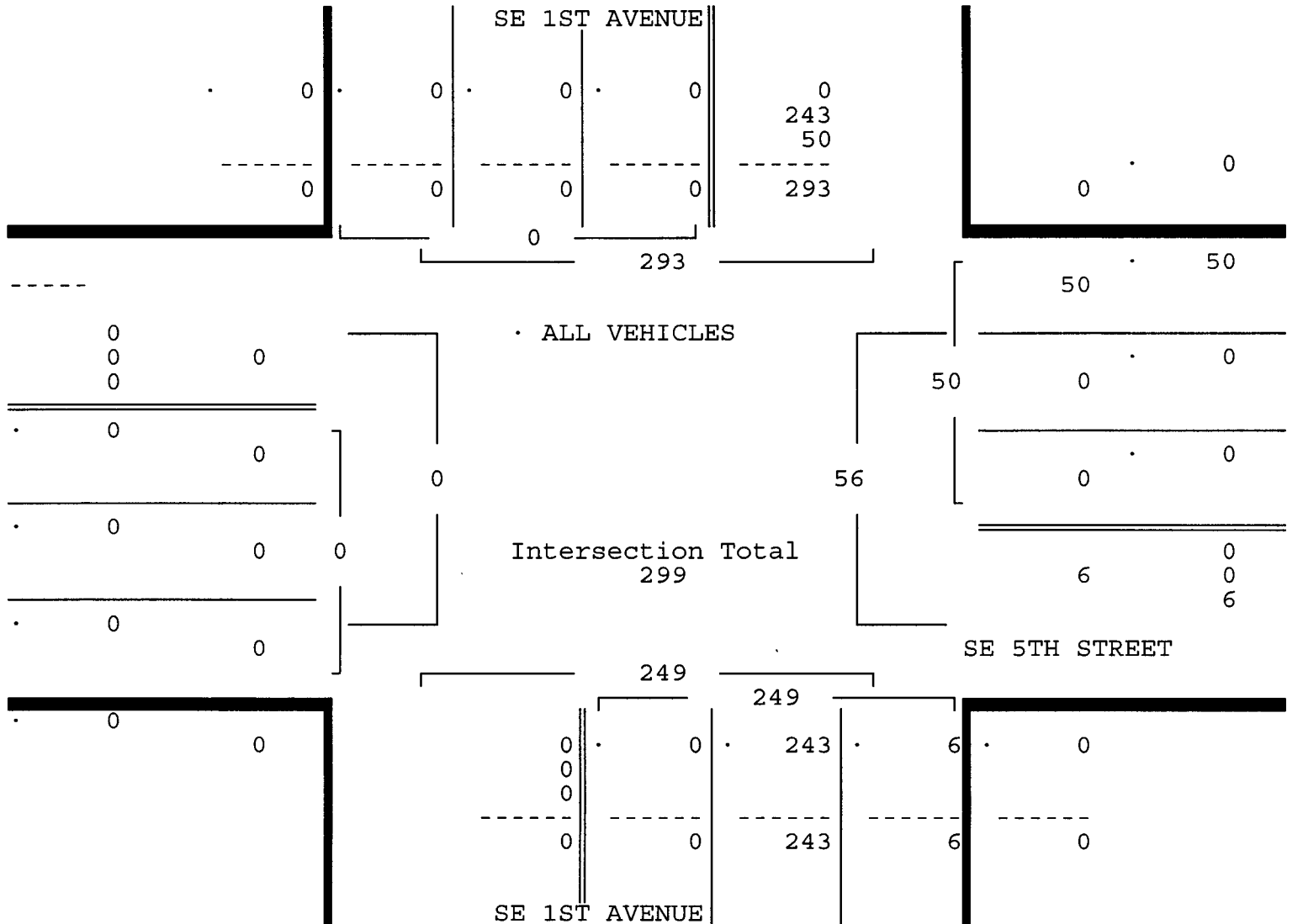
ALL VEHICLES

SE 1ST AVENUE From North				SE 5TH STREET From East				SE 1ST AVENUE From South				From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/19/16

Peak start 08:00				08:00				08:00				08:00				
Volume	0	0	0	0	0	0	50	0	0	243	6	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	98%	2%	0%	0%	0%	0%	
Pk total	0				50			249				0				
Highest	07:00				08:15			08:15				07:00				
Volume	0	0	0	0	0	0	17	0	0	78	1	0	0	0	0	
Hi total	0				17			79				0				
PHF	.0				.74			.79				.0				



SE 5TH STREET & SE 1ST AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: SEBASTIAN SALVO
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/19/16
 File I.D. : 5ST_1AVE
 Page : 3

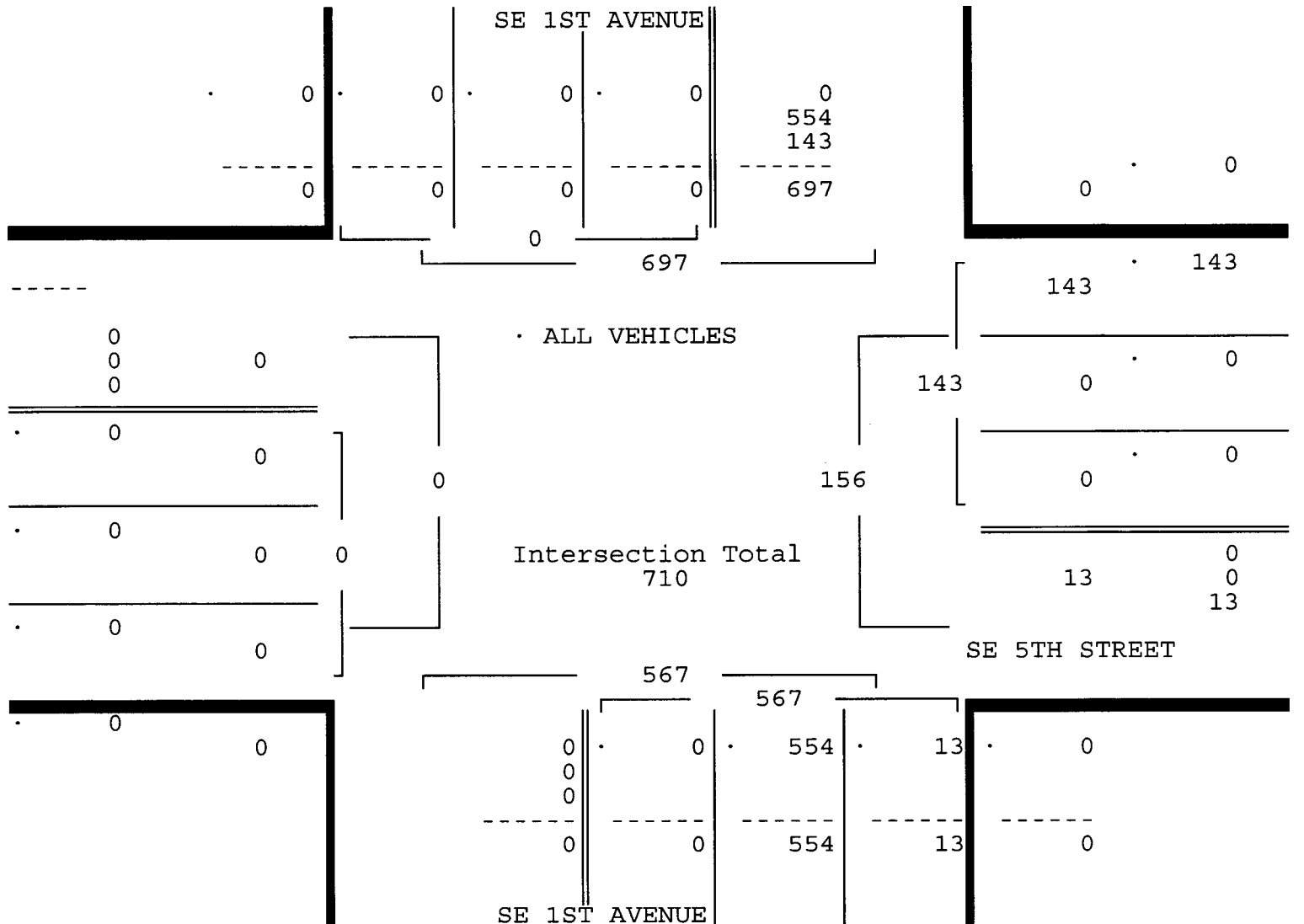
ALL VEHICLES

SE 1ST AVENUE From North				SE 5TH STREET From East				SE 1ST AVENUE From South				From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

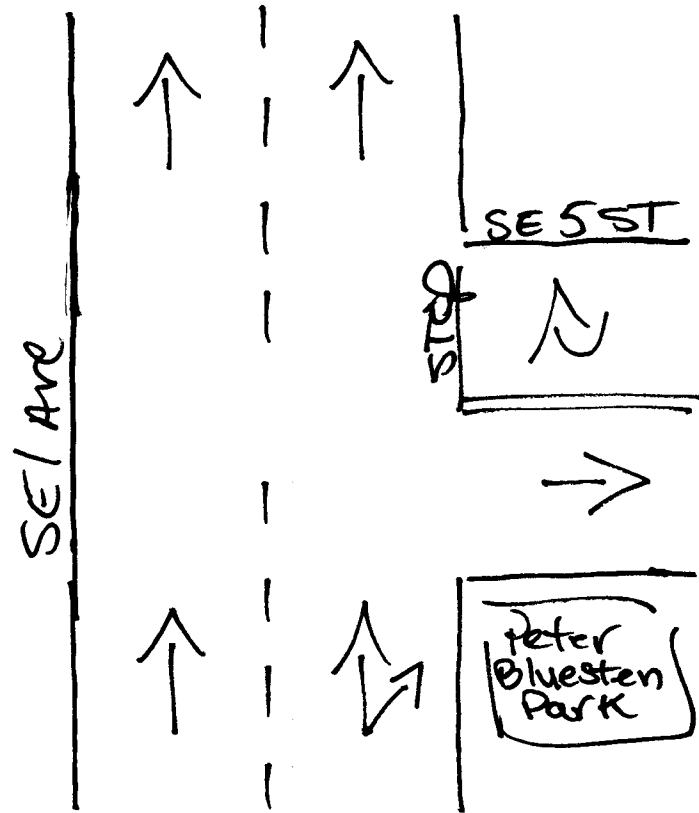
Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/19/16

Peak start 17:00					17:00					17:00					17:00	
Volume	0	0	0	0	0	0	0	143	0	0	554	13	0	0	0	0
Percent	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	98%	2%	0%	0%	0%	0%
Pk total	0				143				567				0			
Highest	07:00				17:15				17:00				07:00			
Volume	0	0	0	0	0	0	0	39	0	0	159	2	0	0	0	0
Hi total	0				39				161				0			
PHF	.0				.92				.88				.0			



[illegible]



Hallandale Bch, Florida
October 19, 2016
drawn by: Luis Palomino
not signalized

SE 7TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 7ST_1AVE
Page : 1

ALL VEHICLES

SE 1ST AVENUE From North					SE 7TH STREET From East				SE 1ST AVENUE From South				----- From West							
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total
Date 10/19/16 -----																				
07:00	0	0	0	0	0	0	0	1		0	0	18	0		0	0	0	0	0	19
07:15	0	0	0	0	0	0	0	1		0	0	32	1		0	0	0	0	0	34
07:30	0	0	0	0	0	0	0	0		0	0	38	0		0	0	0	0	0	38
07:45	0	0	0	0	0	0	0	0		0	0	44	1		0	0	0	0	0	45
Hr Total	0	0	0	0	0	0	0	2		0	0	132	2		0	0	0	0	0	136
08:00	0	0	0	0	0	0	0	2		0	0	50	2		0	0	0	0	0	54
08:15	0	0	0	0	0	0	0	1		0	0	67	4		0	0	0	0	0	72
08:30	0	0	0	0	0	0	0	0		0	0	50	1		0	0	0	0	0	51
08:45	0	0	0	0	0	0	0	1		0	0	54	2		0	0	0	0	0	57
Hr Total	0	0	0	0	0	0	0	4		0	0	221	9		0	0	0	0	0	234
----- * BREAK * -----																				
16:00	0	0	0	0	0	0	0	0		0	0	105	1		0	0	0	0	0	106
16:15	0	0	0	0	0	0	0	0		0	0	104	0		0	0	0	0	0	104
16:30	0	0	0	0	0	0	0	1		0	0	99	1		0	0	0	0	0	101
16:45	0	0	0	0	0	0	0	0		0	0	115	0		0	0	0	0	0	115
Hr Total	0	0	0	0	0	0	0	1		0	0	423	2		0	0	0	0	0	426
17:00	0	0	0	0	0	0	0	0		0	0	167	1		0	0	0	0	0	168
17:15	0	0	0	0	0	0	0	0		0	0	136	0		0	0	0	0	0	136
17:30	0	0	0	0	0	0	0	1		0	0	142	4		0	0	0	0	0	147
17:45	0	0	0	0	0	0	0	1		0	0	129	4		0	0	0	0	0	134
Hr Total	0	0	0	0	0	0	0	2		0	0	574	9		0	0	0	0	0	585

TOTAL	0	0	0	0	0	0	0	9		0	0	1350	22		0	0	0	0	0	1381

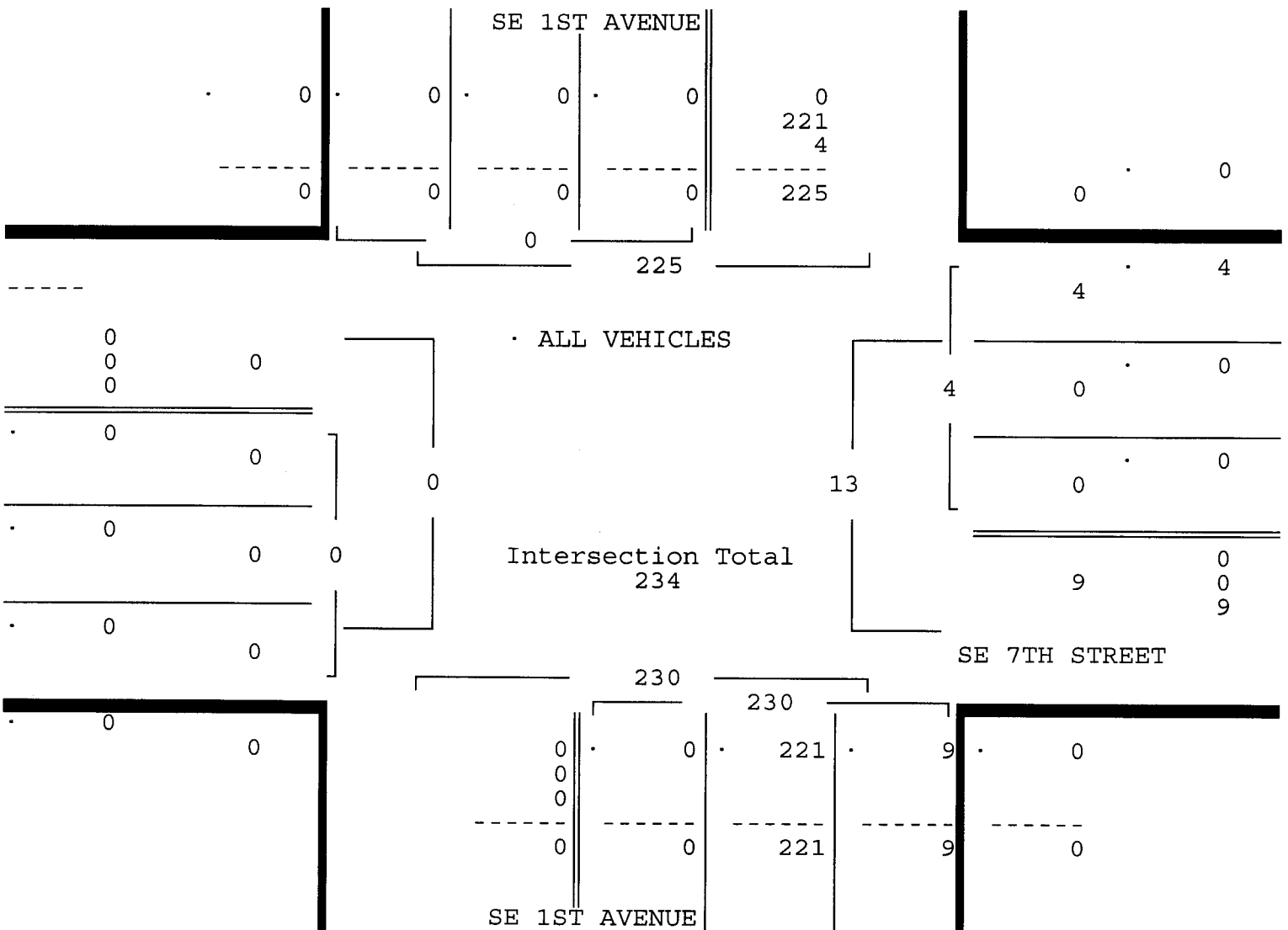
SE 7TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 7ST_1AVE
Page : 2

ALL VEHICLES

SE 1ST AVENUE From North					SE 7TH STREET From East				SE 1ST AVENUE From South				----- From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	
Date 10/19/16 -----																			
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/19/16																			
Peak start 08:00					08:00				08:00				08:00						
Volume	0	0	0	0	0	0	0	4		0	0	221	9		0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	0%	100%		0%	0%	96%	4%		0%	0%	0%	0%	
Pk total	0				4					230					0				
Highest	07:00				08:00					08:15					07:00				
Volume	0	0	0	0	0	0	0	2		0	0	67	4		0	0	0	0	
Hi total	0				2					71					0				
PHF	.0				.50					.81					.0				



SE 7TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 7ST_1AVE
Page : 3

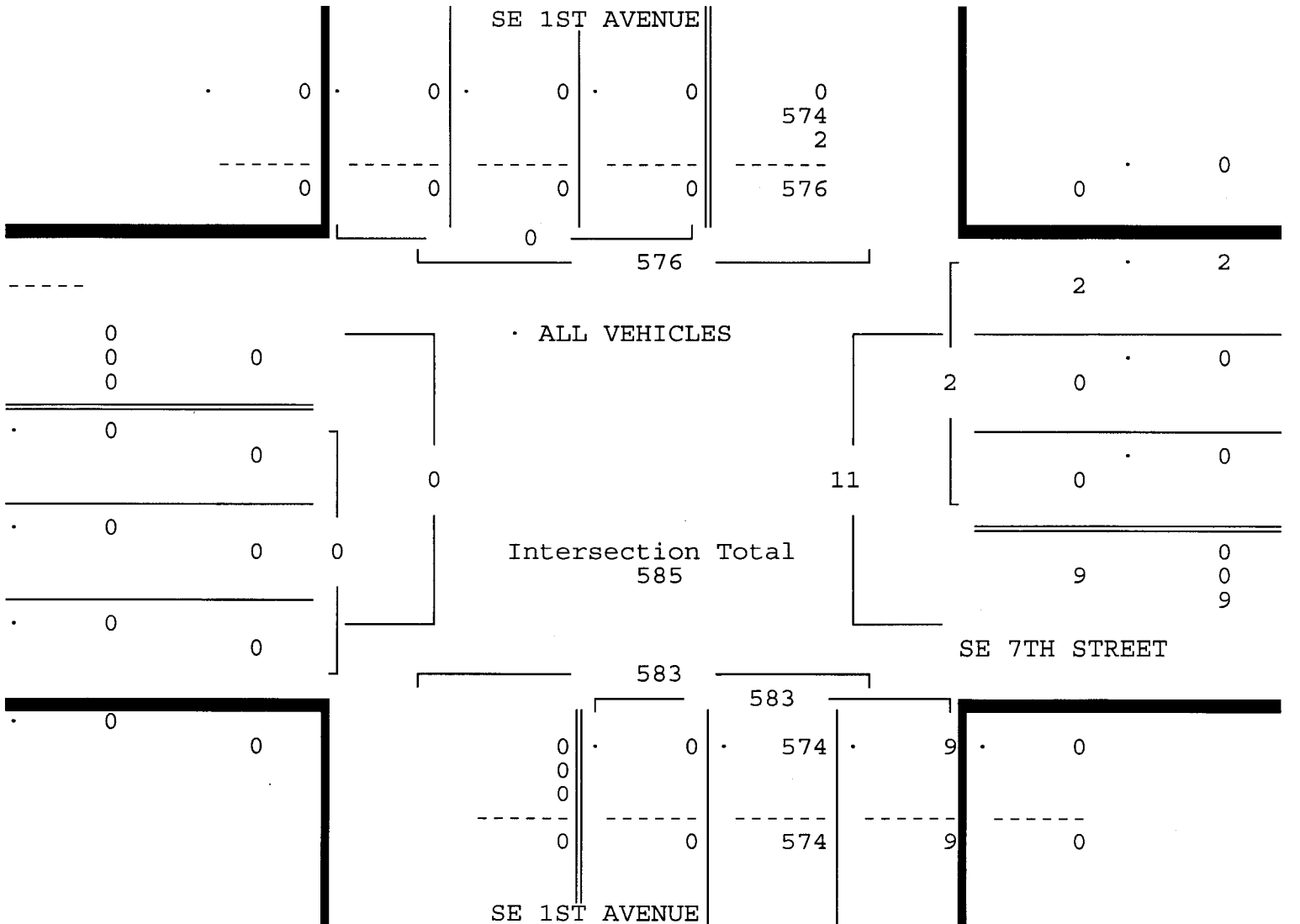
ALL VEHICLES

SE 1ST AVENUE From North				SE 7TH STREET From East				SE 1ST AVENUE From South				From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/19/16

Peak start 17:00				17:00				17:00				17:00				
Volume	0	0	0	0	0	0	2	0	0	574	9	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	98%	2%	0%	0%	0%	0%	
Pk total	0				2			583				0				
Highest	07:00				17:30			17:00				07:00				
Volume	0	0	0	0	0	0	1	0	0	167	1	0	0	0	0	
Hi total	0				1			168				0				
PHF	.0				.50			.87				.0				



SE 7TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: AMBER PALOMINO
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.

85 SE 4TH AVENUE, UNIT 109

DELRAY BEACH, FLORIDA

PHONE (561) 272-3255

Site Code : 00160226

Start Date: 10/19/16

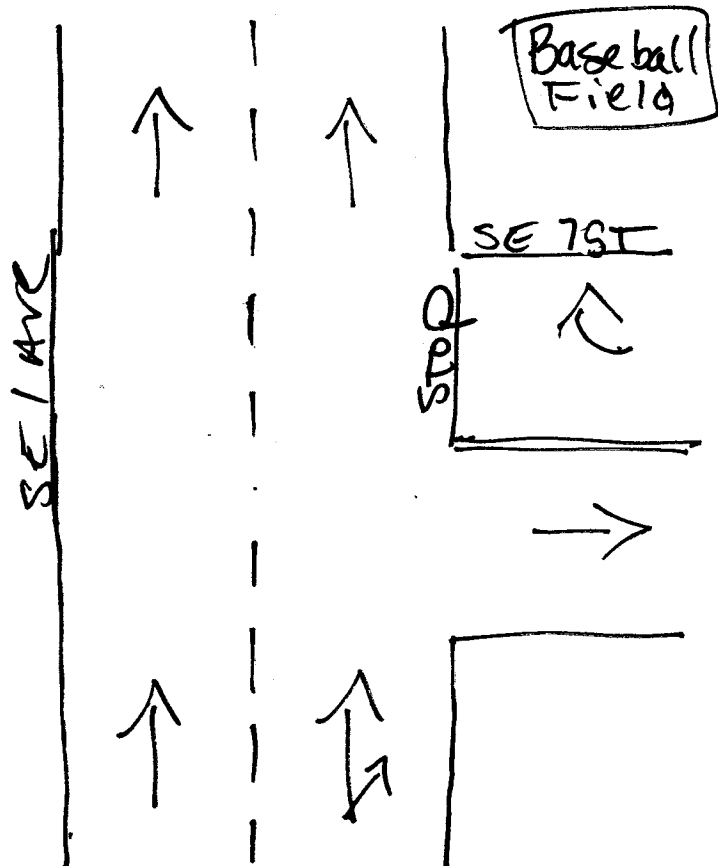
File I.D. : 7ST 1AVE

Page : 1

PEDESTRIANS & BIKES

[illegible]

↑
North



Hallandale Bch, Florida
October 19, 2016
drawn by: Luis Palomino
not signaled

SE 8TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 8ST_1AVE
Page : 1

ALL VEHICLES

SE 1ST AVENUE					SE 8TH STREET				SE 1ST AVENUE				-----				
From North					From East				From South				From West				
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 10/19/16 -----																	
07:00	0	0	0	0	0	0	0	1	0	0	17	1	0	0	0	0	19
07:15	0	0	0	0	0	0	0	3	0	0	31	2	0	0	0	0	36
07:30	0	0	0	0	0	0	0	6	0	0	32	2	0	0	0	0	40
07:45	0	0	0	0	0	0	0	1	0	0	46	1	0	0	0	0	48
Hr Total	0	0	0	0	0	0	0	11	0	0	126	6	0	0	0	0	143
08:00	0	0	0	0	0	0	0	7	0	0	47	3	0	0	0	0	57
08:15	0	0	0	0	0	0	0	10	0	0	65	8	0	0	0	0	83
08:30	0	0	0	0	0	0	0	8	0	0	46	3	0	0	0	0	57
08:45	0	0	0	0	0	0	0	1	0	0	55	2	0	0	0	0	58
Hr Total	0	0	0	0	0	0	0	26	0	0	213	16	0	0	0	0	255
----- * BREAK * -----																	
16:00	0	0	0	0	0	0	0	5	0	0	103	2	0	0	0	0	110
16:15	0	0	0	0	0	0	0	3	0	0	103	3	0	0	0	0	109
16:30	0	0	0	0	0	0	0	2	0	0	98	1	0	0	0	0	101
16:45	0	0	0	0	0	0	0	5	0	0	113	0	0	0	0	0	118
Hr Total	0	0	0	0	0	0	0	15	0	0	417	6	0	0	0	0	438
17:00	0	0	0	0	0	0	0	3	0	0	162	0	0	0	0	0	165
17:15	0	0	0	0	0	0	0	2	0	0	132	0	0	0	0	0	134
17:30	0	0	0	0	0	0	0	2	0	0	145	1	0	0	0	0	148
17:45	0	0	0	0	0	0	0	4	0	0	130	0	0	0	0	0	134
Hr Total	0	0	0	0	0	0	0	11	0	0	569	1	0	0	0	0	581

TOTAL	0	0	0	0	0	0	0	63	0	0	1325	29	0	0	0	0	1417

SE 8TH STREET & SE 1ST AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: MARISA CRUZ
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/19/16
 File I.D. : 8ST_1AVE
 Page : 2

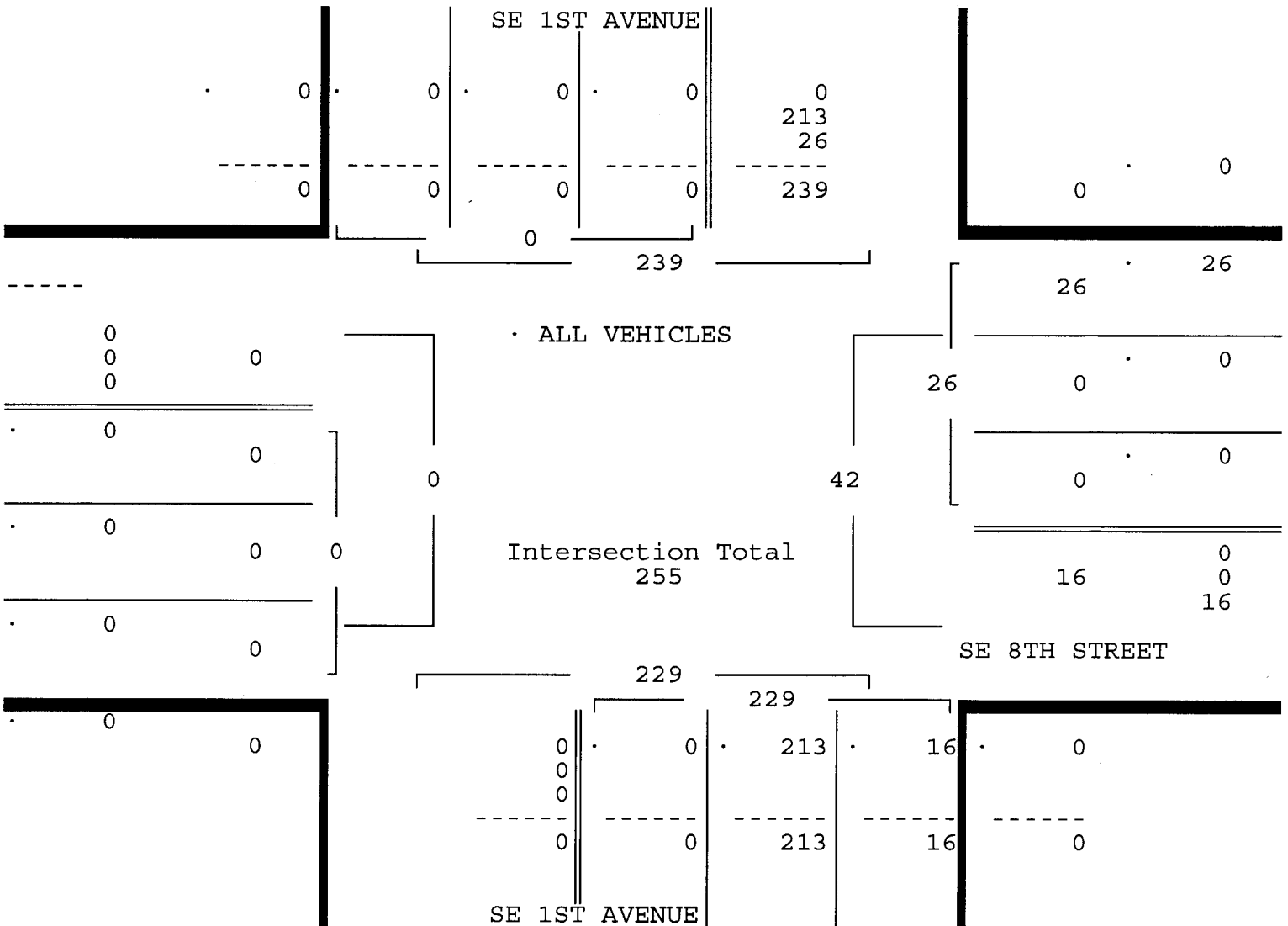
ALL VEHICLES

SE 1ST AVENUE From North				SE 8TH STREET From East				SE 1ST AVENUE From South				From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/19/16

Peak start 08:00					08:00					08:00					08:00				
Volume	0	0	0	0	0	0	0	26	0	0	213	16	0	0	0	0	0	0	0
Percent	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	93%	7%	0%	0%	0%	0%	0%	0%	0%
Pk total	0				26				229				0						
Highest	07:00				08:15				08:15				07:00						
Volume	0	0	0	0	0	0	0	10	0	0	65	8	0	0	0	0	0	0	0
Hi total	0				10				73				0						
PHF	.0				.65				.78				.0						



SE 8TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 8ST_1AVE
Page : 3

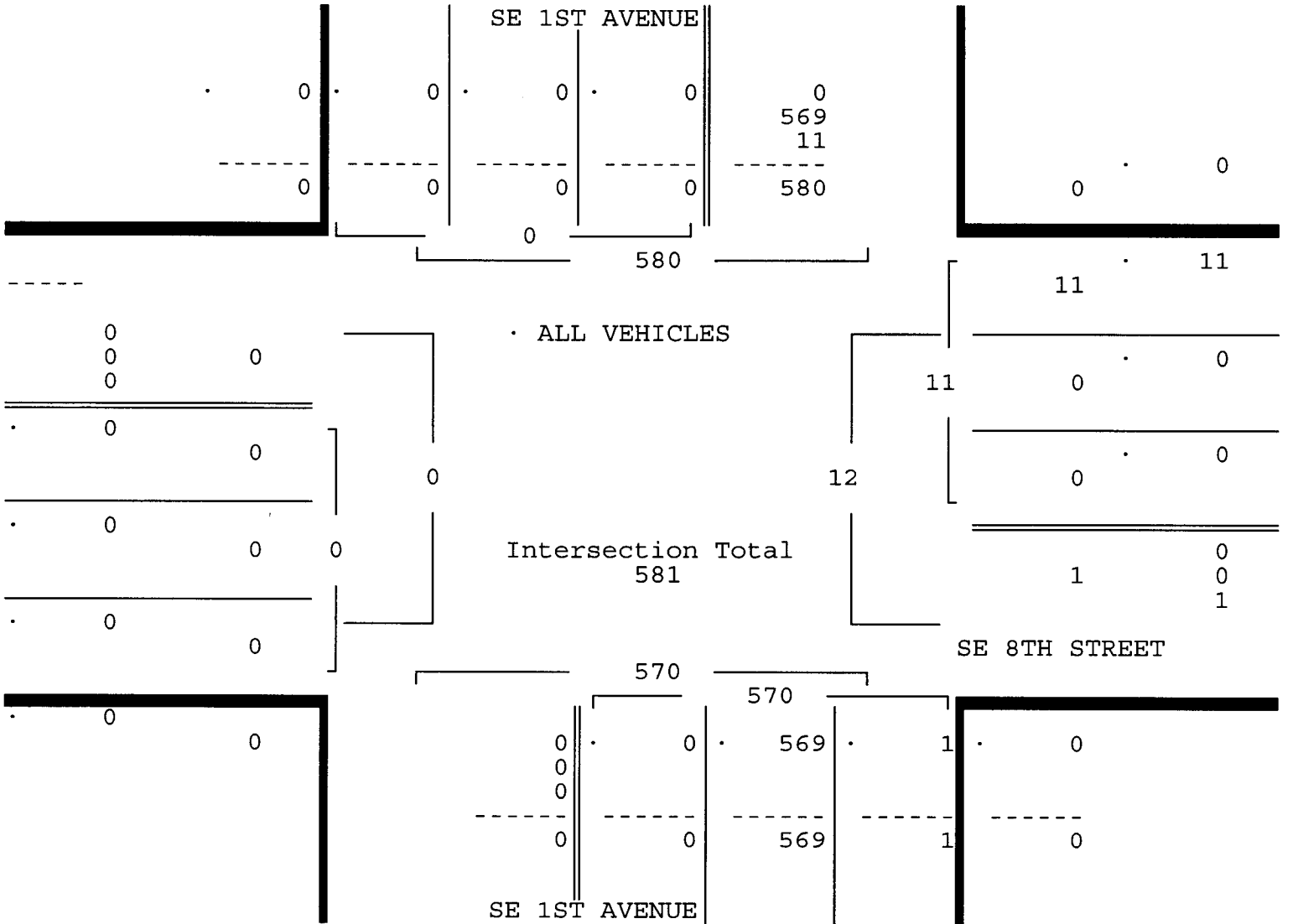
ALL VEHICLES

SE 1ST AVENUE From North				SE 8TH STREET From East				SE 1ST AVENUE From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/19/16

Peak start 17:00				17:00				17:00				17:00				
Volume	0	0	0	0	0	0	11	0	0	569	1	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	
Pk total	0				11			570				0				
Highest	07:00				17:45			17:00				07:00				
Volume	0	0	0	0	0	0	4	0	0	162	0	0	0	0	0	
Hi total	0				4			162				0				
PHF	.0				.69			.88				.0				



SE 8TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.

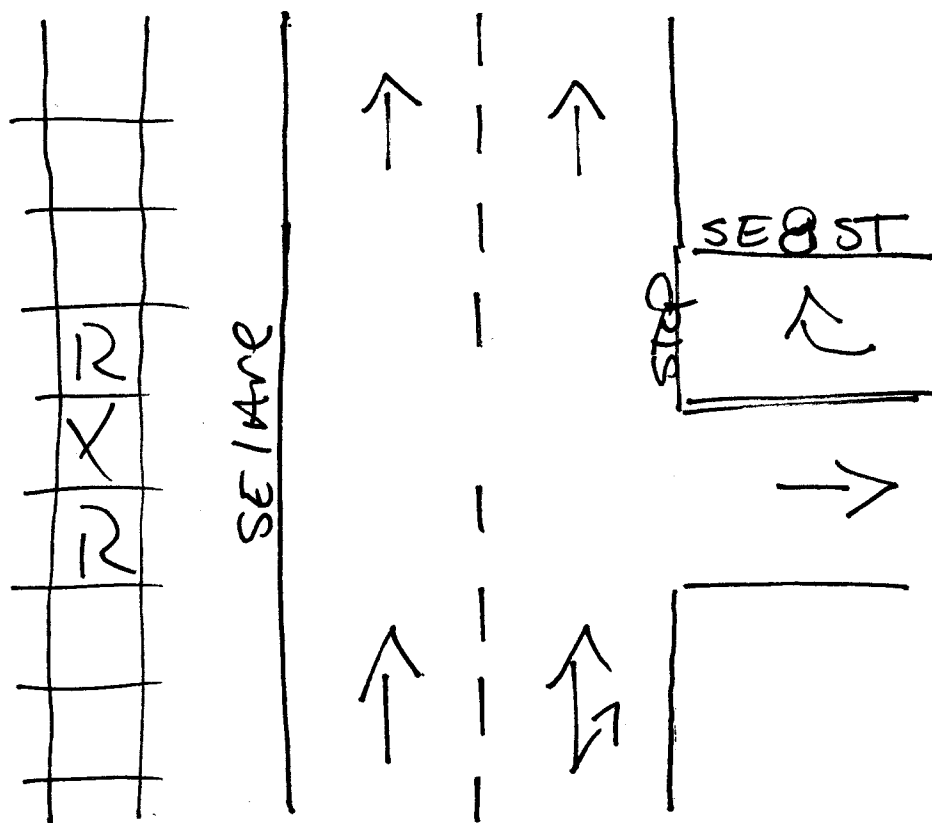
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 8ST_1AVE
Page : 1

PEDESTRIANS & BIKES

Date 10/19/16	SE 1ST AVENUE From North				SE 8TH STREET From East				SE 1ST AVENUE From South				From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
07:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	3
08:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
08:30	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	3
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	4	0	1	0	0	0	2	0	0	0	0	7
* BREAK *																	
16:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	2	0	1	0	2	0	0	0	1	0	0	6
17:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	0	0	4	0	2	0	2	0	0	0	1	0	0	9
TOTAL	0	0	0	1	0	10	0	3	0	2	0	3	0	1	0	0	20

↑
North



Hallandale Bch, Florida
October 19, 2016
drawn by: Luis Palomino
not signalized

TRAFFIC SURVEY SPECIALISTS, INC.

SE 9TH STREET & SE 1ST AVENUE

85 SE 4TH AVENUE, UNIT 109

Site Code : 00160226

HALLANDALE BEACH, FLORIDA

DELRAY BEACH, FLORIDA

Start Date: 10/19/16

COUNTED BY: ADAM JOHNSON

PHONE (561)272-3255

File I.D. : 9ST_1AVE

NOT SIGNALIZED

Page : 1

ALL VEHICLES

SE 1ST AVENUE					SE 9TH STREET				SE 1ST AVENUE				-----				
From North					From East				From South				From West				
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 10/19/16 -----																	
07:00	0	0	0	0	0	5	0	2	0	0	15	0	0	0	0	0	22
07:15	0	0	0	0	0	10	0	3	0	0	30	0	0	0	0	0	43
07:30	0	0	0	0	0	18	0	5	0	0	29	0	0	0	0	0	52
07:45	0	0	0	0	0	45	0	1	0	0	46	0	0	0	0	0	92
Hr Total	0	0	0	0	0	78	0	11	0	0	120	0	0	0	0	0	209
08:00	0	0	0	0	0	63	0	0	0	0	51	0	0	0	0	0	114
08:15	0	0	0	0	0	52	0	7	0	0	71	0	0	0	0	0	130
08:30	0	0	0	0	0	34	0	3	0	0	46	0	0	0	0	0	83
08:45	0	0	0	0	0	22	0	5	0	0	58	0	0	0	0	0	85
Hr Total	0	0	0	0	0	171	0	15	0	0	226	0	0	0	0	0	412
----- * BREAK * -----																	
16:00	0	0	0	0	0	27	0	16	0	0	90	0	0	0	0	0	133
16:15	0	0	0	0	0	40	0	13	0	0	90	0	0	0	0	0	143
16:30	0	0	0	0	0	26	0	12	0	0	88	0	0	0	0	0	126
16:45	0	0	0	0	0	27	0	19	0	0	93	0	0	0	0	0	139
Hr Total	0	0	0	0	0	120	0	60	0	0	361	0	0	0	0	0	541
17:00	0	0	0	0	0	36	0	35	0	0	119	0	0	0	0	0	190
17:15	0	0	0	0	0	54	0	29	0	0	104	0	0	0	0	0	187
17:30	0	0	0	0	0	47	0	29	0	0	112	0	0	0	0	0	188
17:45	0	0	0	0	0	55	0	16	1	0	104	0	0	0	0	0	176
Hr Total	0	0	0	0	0	192	0	109	1	0	439	0	0	0	0	0	741

TOTAL	0	0	0	0	0	561	0	195	1	0	1146	0	0	0	0	0	1903

SE 9TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 9ST_1AVE
Page : 2

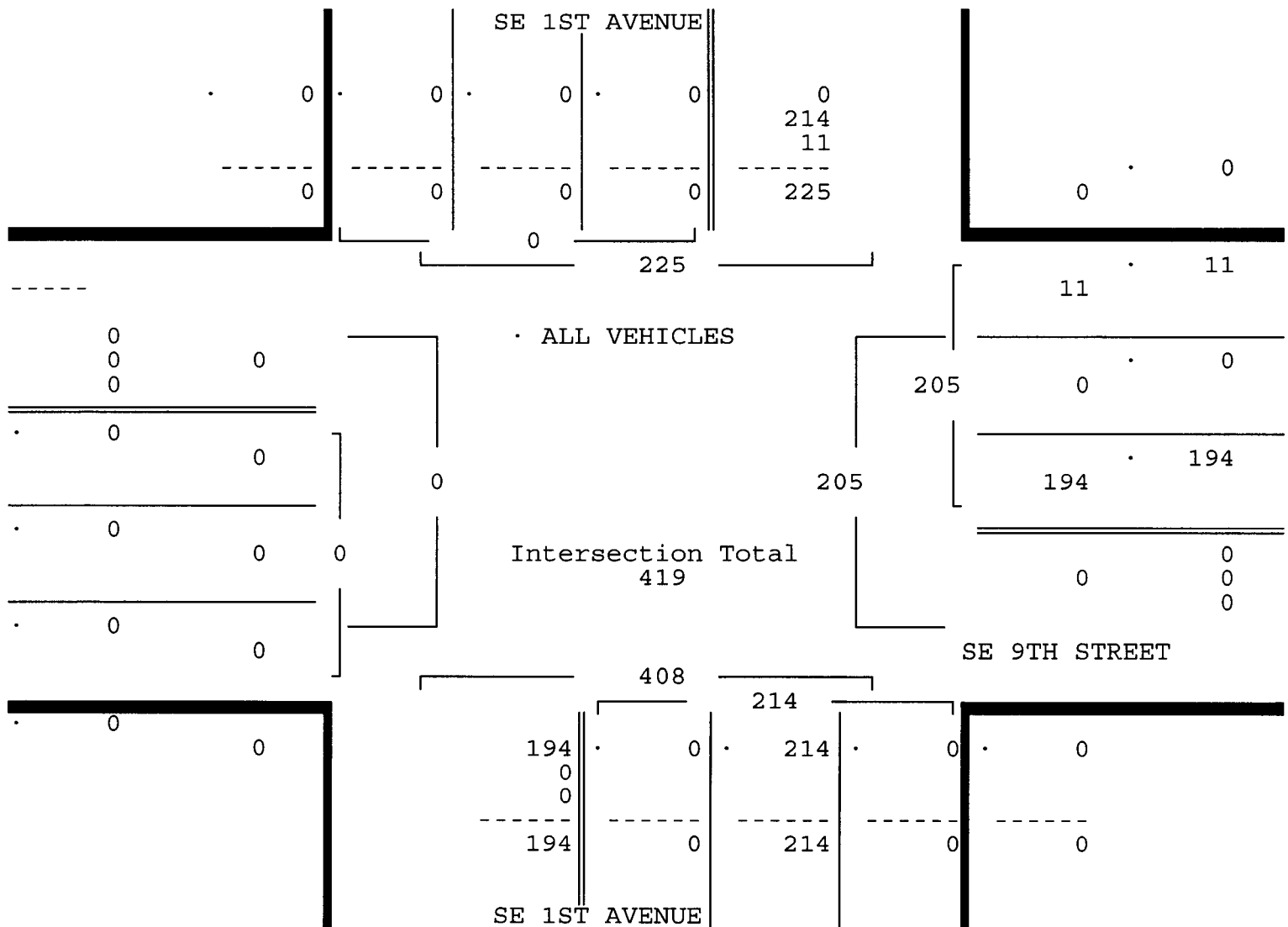
ALL VEHICLES

SE 1ST AVENUE From North				SE 9TH STREET From East				SE 1ST AVENUE From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/19/16

Peak start 07:45					07:45					07:45					
Volume	0	0	0	0	0	194	0	11	0	0	214	0	0	0	0
Percent	0%	0%	0%	0%	0%	95%	0%	5%	0%	0%	100%	0%	0%	0%	0%
Pk total	0				205				214			0			
Highest	07:00				08:00				08:15			07:00			
Volume	0	0	0	0	0	63	0	0	0	0	71	0	0	0	0
Hi total	0				63				71			0			
PHF	.0				.81				.75			.0			



SE 9TH STREET & SE 1ST AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/19/16
File I.D. : 9ST_1AVE
Page : 3

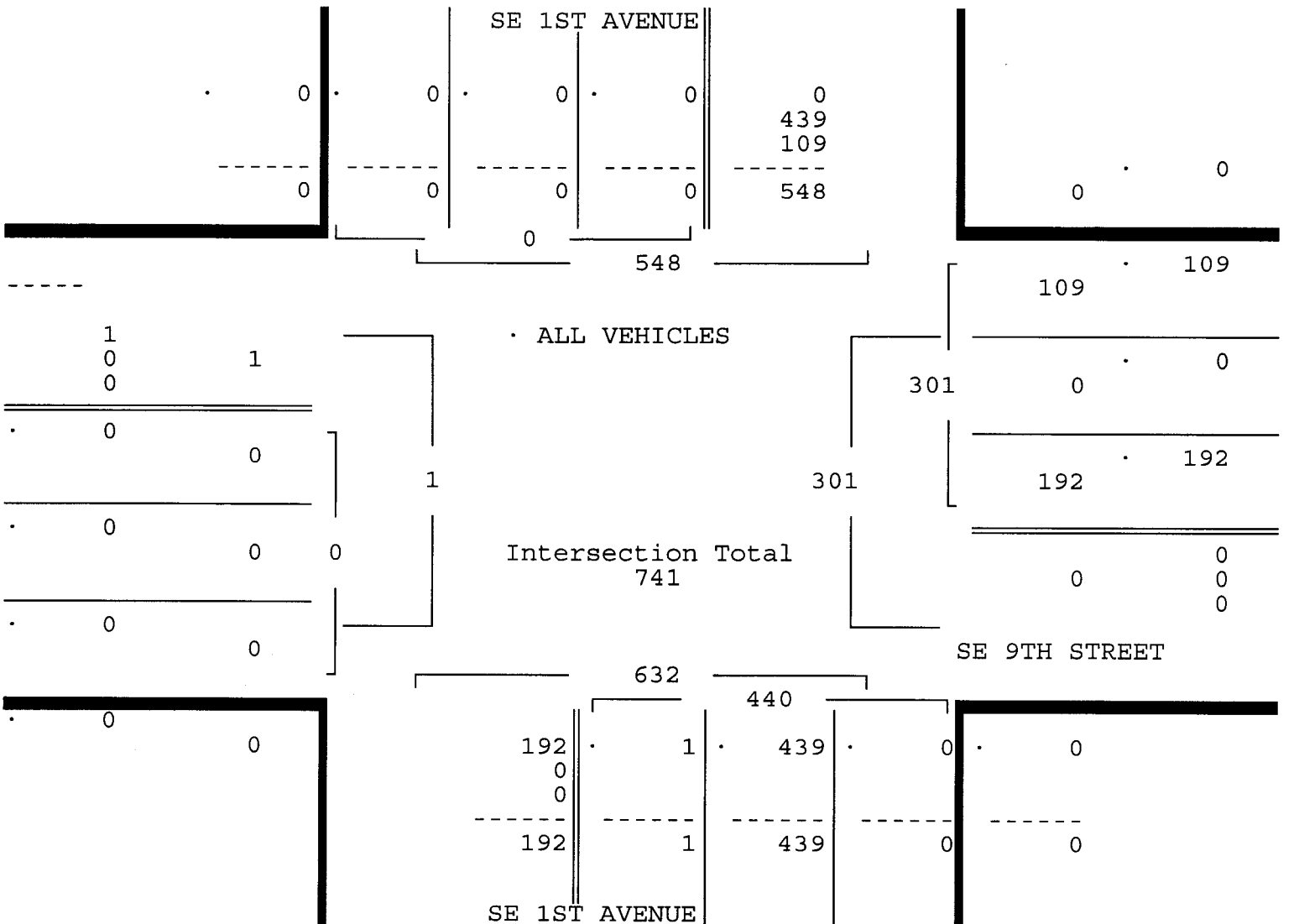
ALL VEHICLES

SE 1ST AVENUE From North				SE 9TH STREET From East				SE 1ST AVENUE From South				From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

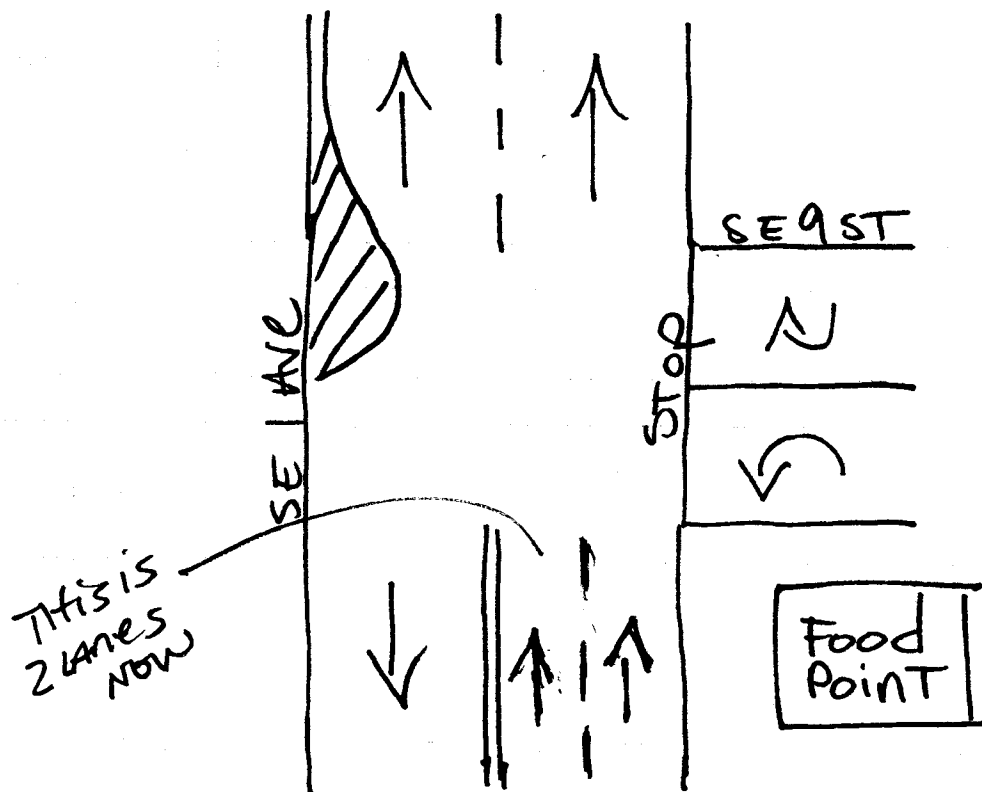
Date 10/19/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/19/16

Peak start 17:00					17:00					17:00					17:00	
Volume	0	0	0	0	0	192	0	109	1	0	439	0	0	0	0	0
Percent	0%	0%	0%	0%	0%	64%	0%	36%	0%	0%	100%	0%	0%	0%	0%	0%
Pk total	0				301				440							
Highest	07:00				17:15				17:00						07:00	
Volume	0	0	0	0	0	54	0	29	0	0	119	0	0	0	0	0
Hi total	0				83				119						0	
PHF	.0				.91				.92						.0	



↑
North



Hallandale beach, Florida
August 15, 2013
drawn by: Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.

SE 5TH STREET & SE 4TH AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 5ST_4AVE
Page : 1

ALL VEHICLES

SE 4TH AVENUE From North				SE 5TH STREET From East				OLD FEDERAL HIGHWAY From South				SE 5TH STREET From West					
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 10/20/16 -----																	
07:00	0	5	5	0	0	1	3	8	0	0	11	1	0	0	1	1	36
07:15	0	6	7	0	0	1	6	10	0	0	3	1	0	0	1	1	36
07:30	0	10	7	0	0	1	1	9	0	2	9	5	0	0	5	0	49
07:45	0	13	14	3	0	3	8	10	0	2	13	5	0	1	4	1	77
Hr Total	0	34	33	3	0	6	18	37	0	4	36	12	0	1	11	3	198
08:00	0	23	19	0	0	2	11	9	0	0	16	4	0	1	7	3	95
08:15	0	25	22	1	0	6	9	10	0	1	14	6	0	0	5	5	104
08:30	0	28	26	0	0	5	9	15	0	2	22	6	0	0	9	1	123
08:45	0	31	19	0	0	7	12	11	0	1	20	6	0	1	6	0	114
Hr Total	0	107	86	1	0	20	41	45	0	4	72	22	0	2	27	9	436
----- * BREAK * -----																	
16:00	0	7	18	2	0	11	13	30	0	0	16	10	0	0	3	3	113
16:15	0	6	9	4	0	4	21	24	0	1	22	7	0	1	4	3	106
16:30	0	8	13	0	0	4	30	27	0	1	22	8	0	0	3	3	119
16:45	0	8	9	0	0	8	24	23	0	0	28	6	0	1	5	1	113
Hr Total	0	29	49	6	0	27	88	104	0	2	88	31	0	2	15	10	451
17:00	0	9	14	1	0	6	32	28	0	0	34	10	0	0	0	1	135
17:15	0	4	14	2	0	3	33	28	0	1	23	4	0	1	2	3	118
17:30	0	11	16	0	0	1	40	28	0	1	26	9	0	0	4	1	137
17:45	0	6	19	4	0	7	26	45	0	4	45	7	0	1	5	3	172
Hr Total	0	30	63	7	0	17	131	129	0	6	128	30	0	2	11	8	562

TOTAL	0	200	231	17	0	70	278	315	0	16	324	95	0	7	64	30	1647

SE 5TH STREET & SE 4TH AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: ADAM JOHNSON
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : SST_4AVE
 Page : 2

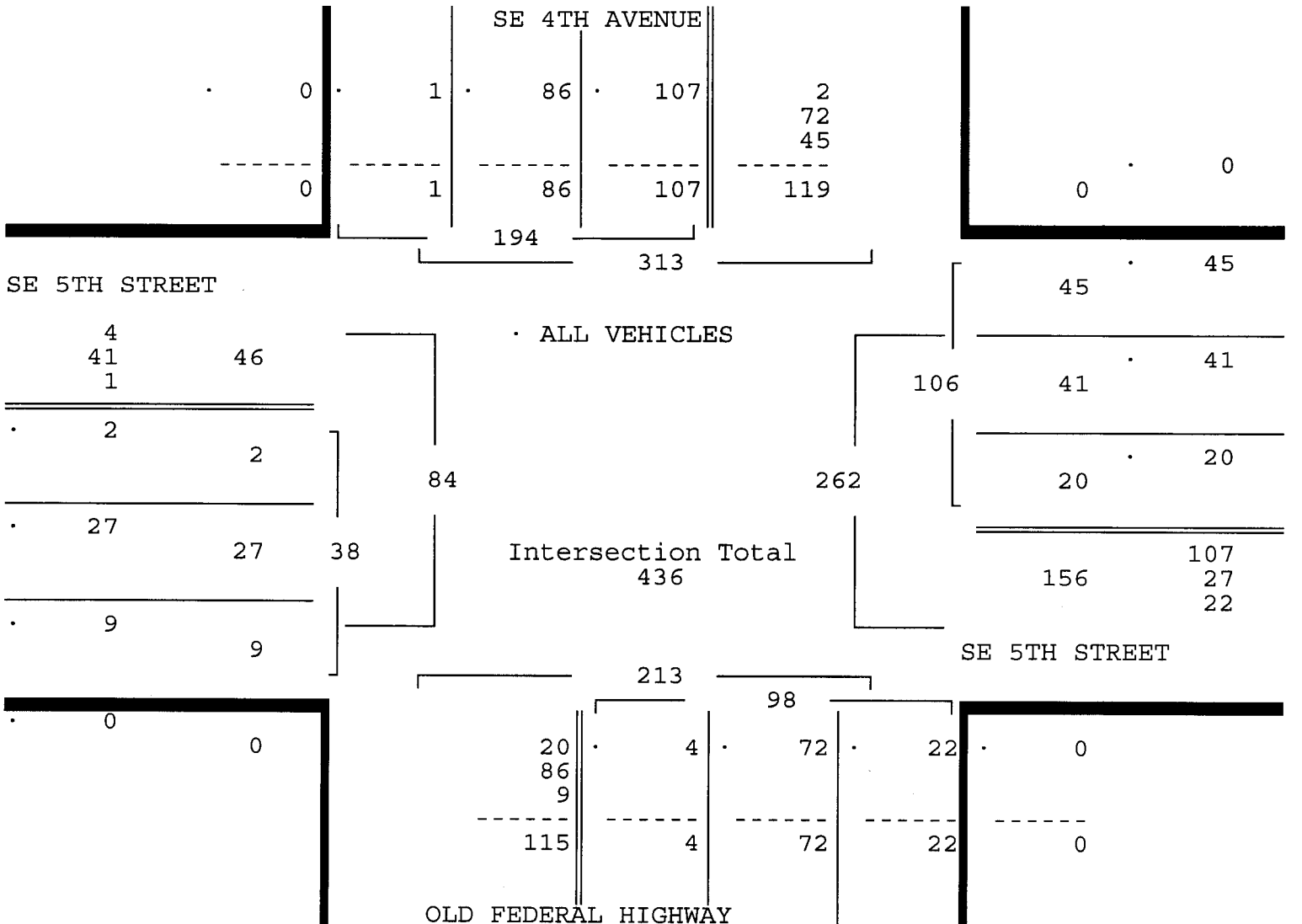
ALL VEHICLES

SE 4TH AVENUE From North				SE 5TH STREET From East				OLD FEDERAL HIGHWAY From South				SE 5TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start	08:00				08:00				08:00				08:00			
Volume	0	107	86	1	0	20	41	45	0	4	72	22	0	2	27	9
Percent	0%	55%	44%	1%	0%	19%	39%	42%	0%	4%	73%	22%	0%	5%	71%	24%
Pk total	194				106				98				38			
Highest	08:30				08:45				08:30				08:00			
Volume	0	28	26	0	0	7	12	11	0	2	22	6	0	1	7	3
Hi total	54				30				30				11			
PHF	.90				.88				.82				.86			



SE 5TH STREET & SE 4TH AVENUE
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: ADAM JOHNSON
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561) 272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 5ST_4AVE
 Page : 3

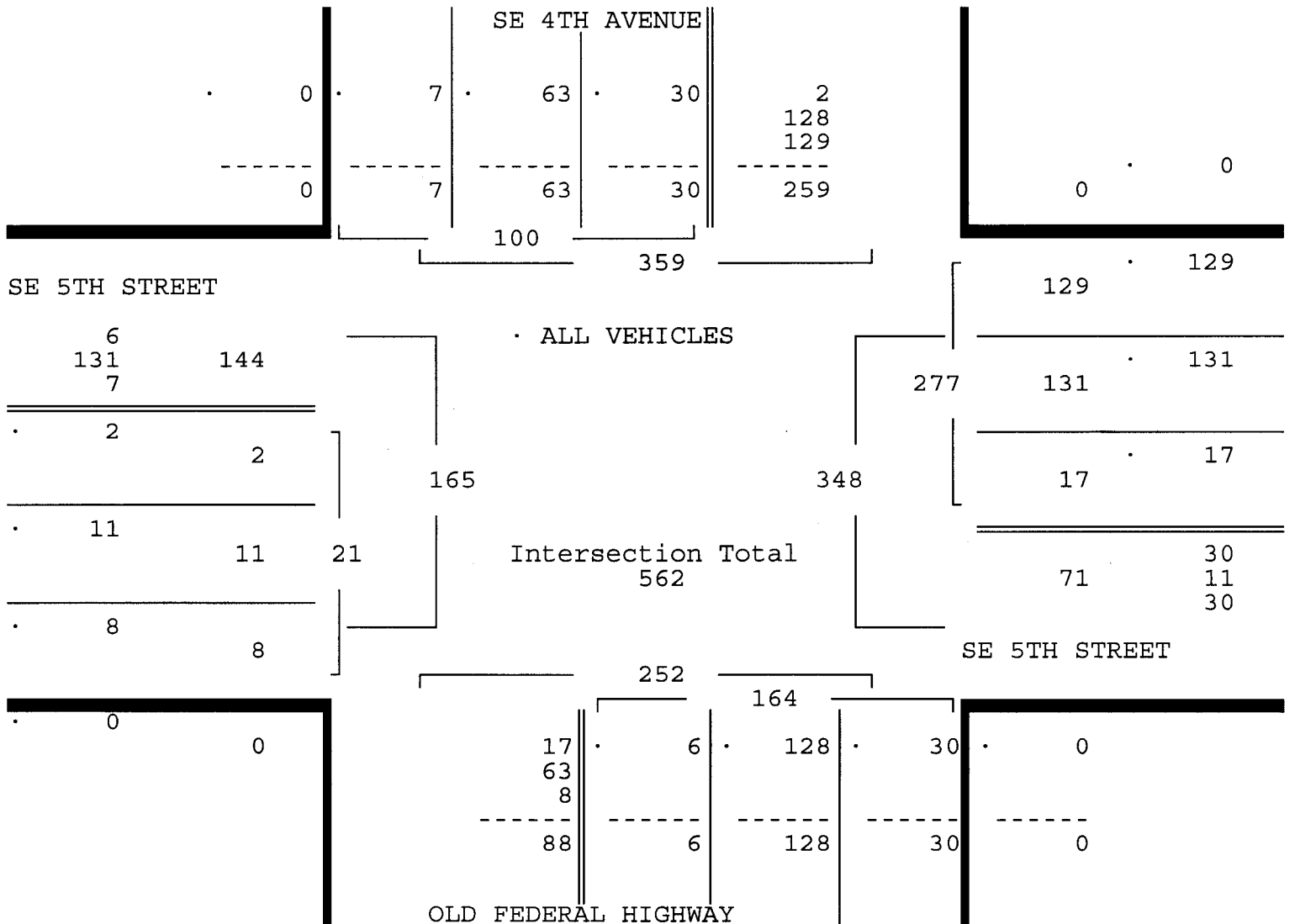
ALL VEHICLES

SE 4TH AVENUE From North				SE 5TH STREET From East				OLD FEDERAL HIGHWAY From South				SE 5TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16

Peak start 17:00					17:00					17:00					17:00	
Volume	0	30	63	7	0	17	131	129	0	6	128	30	0	2	11	8
Percent	0%	30%	63%	7%	0%	6%	47%	47%	0%	4%	78%	18%	0%	10%	52%	38%
Pk total	100					277					164					21
Highest	17:45					17:45					17:45					17:45
Volume	0	6	19	4	0	7	26	45	0	4	45	7	0	1	5	3
Hi total	29					78					56					9
PHF	.86					.89					.73					.58



SE 5TH STREET & SE 4TH AVENUE
HALLANDALE BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.

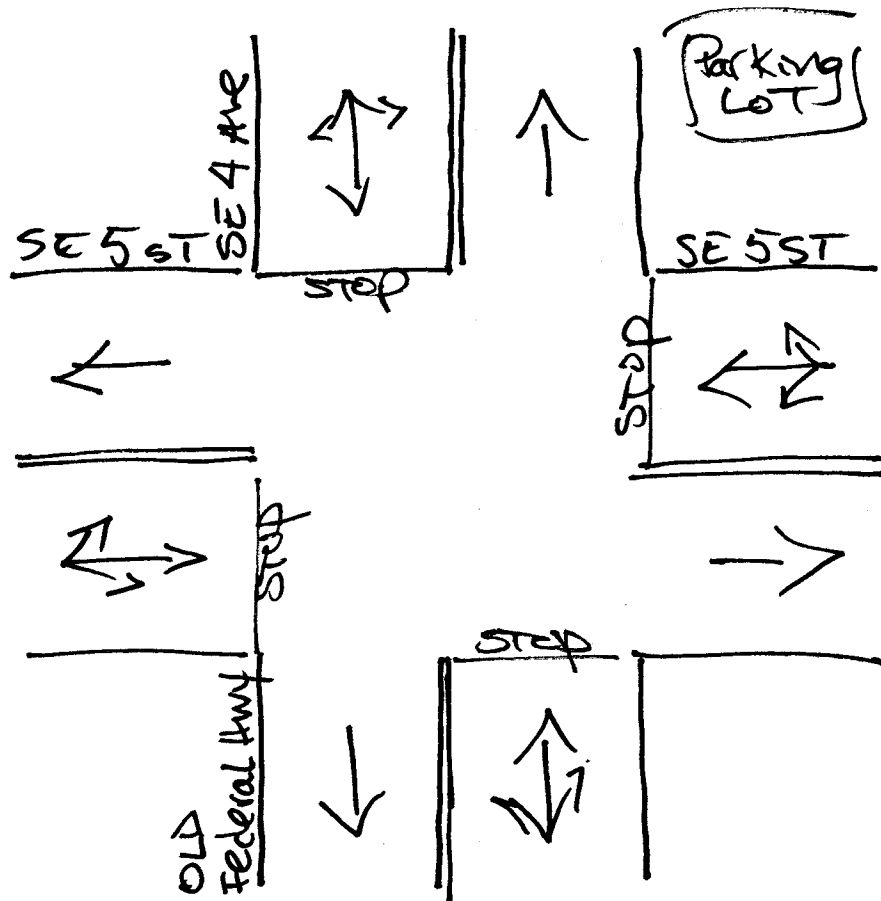
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 5ST_4AVE
Page : 1

PEDESTRIANS & BIKES

SE 4TH AVENUE From North					SE 5TH STREET From East					OLD FEDERAL HIGHWAY From South					SE 5TH STREET From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Total
Date 10/20/16																				
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
07:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Hr Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	3	
----- * BREAK * -----																				
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7
16:30	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	6	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	9
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	0	0	0	8	0	0	0	2	0	2	0	0	0	0	0	1	0	4	17	

North



Hallandale Bch, Florida

October 19, 2016

drawn by: Luis Paloneino

NOT signalized

SE 3RD STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: R. MARTINEZ & S. SALVO
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 3STR_US1
Page : 1

ALL VEHICLES

US 1				SEABISCUIT TRAIL				US 1				SE 3RD STREET					
From North				From East				From South				From West					
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 10/20/16 -----																	
07:00	0	2	244	0	0	5	2	6	1	5	126	3	0	13	4	12	423
07:15	0	4	237	0	0	3	2	3	1	3	171	2	0	11	6	23	466
07:30	2	5	346	0	0	1	1	2	0	5	215	2	0	14	3	28	624
07:45	2	5	388	0	0	1	0	1	0	8	225	10	0	22	6	50	718
Hr Total	4	16	1215	0	0	10	5	12	2	21	737	17	0	60	19	113	2231
08:00	4	3	409	0	0	4	0	1	0	8	209	2	0	33	13	48	734
08:15	1	10	478	1	0	5	6	1	2	7	330	3	0	18	9	63	934
08:30	1	3	413	1	0	3	6	3	2	22	310	14	0	33	12	92	915
08:45	2	14	468	2	0	5	5	2	0	15	296	6	0	33	22	72	942
Hr Total	8	30	1768	4	0	17	17	7	4	52	1145	25	0	117	56	275	3525
----- * BREAK * -----																	
16:00	0	13	337	2	0	17	22	14	7	28	458	10	0	25	8	33	974
16:15	2	13	274	4	0	22	22	14	1	40	426	13	0	36	22	33	922
16:30	5	12	337	6	0	11	12	11	1	33	457	4	0	31	14	44	978
16:45	5	10	381	3	1	11	14	13	2	29	530	7	0	37	17	30	1090
Hr Total	12	48	1329	15	1	61	70	52	11	130	1871	34	0	129	61	140	3964
17:00	4	16	308	5	0	17	24	17	2	26	461	13	0	52	16	31	992
17:15	3	10	343	1	0	17	12	16	1	18	491	15	0	37	15	31	1010
17:30	0	9	258	1	0	18	27	41	1	15	284	1	0	25	13	35	728
17:45	2	16	343	5	0	21	18	92	2	1	136	1	0	63	20	37	757
Hr Total	9	51	1252	12	0	73	81	166	6	60	1372	30	0	177	64	134	3487

TOTAL	33	145	5564	31	1	161	173	237	23	263	5125	106	0	483	200	662	13207

SE 3RD STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: R. MARTINEZ & S. SALVO
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 3STR_US1
Page : 2

ALL VEHICLES

US 1 From North				SEABISCUIT TRAIL From East				US 1 From South				SE 3RD STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00				08:00				08:00				08:00				Total
Volume	8	30	1768	4	0	17	17	7	4	52	1145	25	0	117	56	275
Percent	0%	2%	98%	0%	0%	41%	41%	17%	0%	4%	93%	2%	0%	26%	12%	61%
Pk total	1810				41				1226				448			
Highest	08:15				08:15				08:30				08:30			
Volume	1	10	478	1	0	5	6	1	2	22	310	14	0	33	12	92
Hi total	490				12				348				137			
PHF	.92				.85				.88				.82			

US 1				SE 3RD STREET			
0	4	1,768	38	117	1,145	7	0
0	4	1,768	38	1,269			0
1,810				3,079			

SE 3RD STREET

ALL VEHICLES				SEABISCUIT TRAIL			
56	17	77	41	17	17	17	38
117	117	525	160	17	17	17	56
56	56	448		119			25
275	275						
Intersection Total 3,525				3,286			

US 1				SEABISCUIT TRAIL			
17	56	1,145	25	0			
1,768							
275							
2,060	56	1,145	25	0			

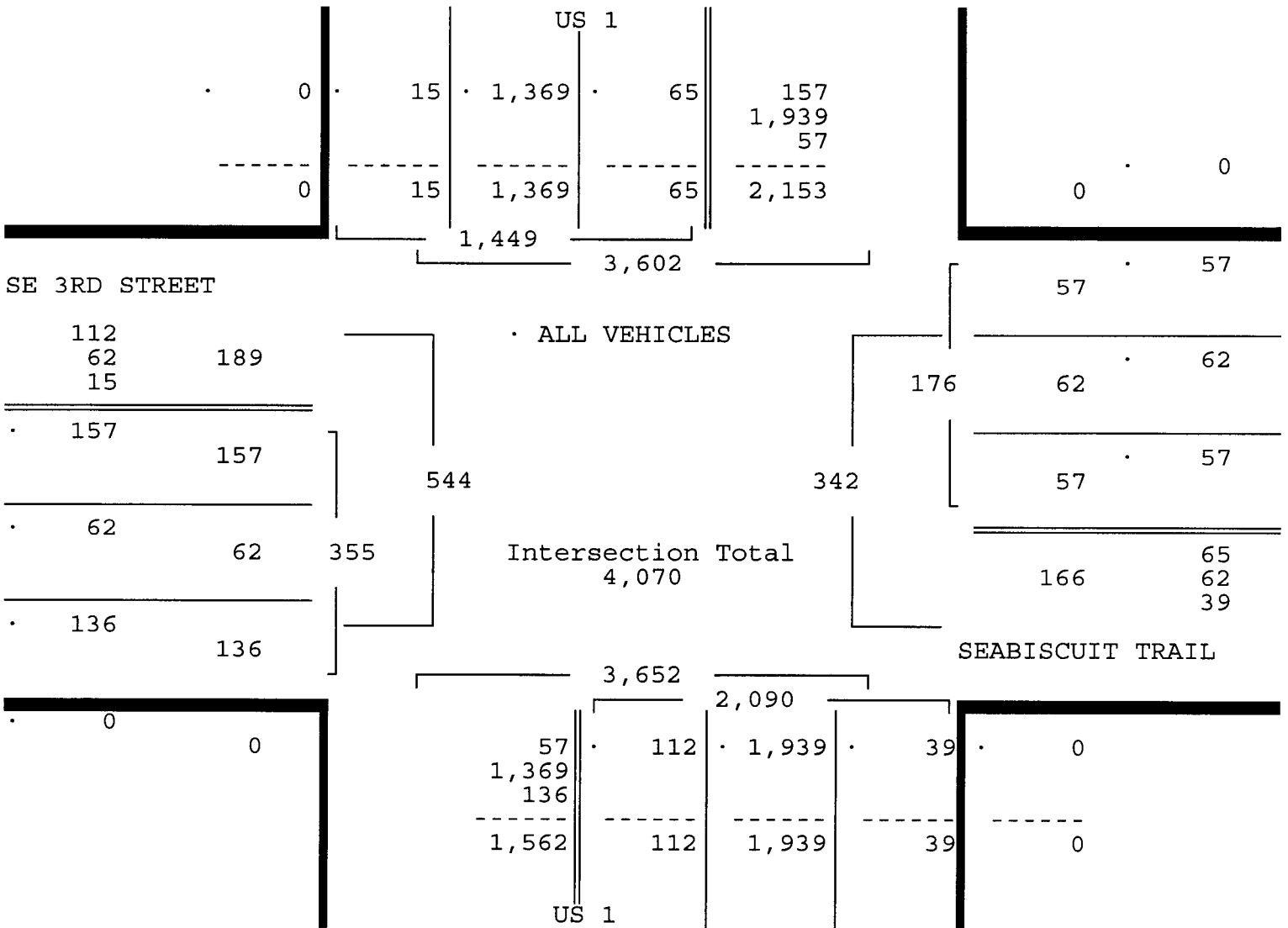
SE 3RD STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: R. MARTINEZ & S. SALVO
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 3STR_US1
Page : 3

ALL VEHICLES

US 1				SEABISCUIT TRAIL				US 1				SE 3RD STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 10/20/16																
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16																
Peak start 16:30				16:30				16:30				16:30				
Volume	17	48	1369	15	1	56	62	57	6	106	1939	39	0	157	62	136
Percent	1%	3%	94%	1%	1%	32%	35%	32%	0%	5%	93%	2%	0%	44%	17%	38%
Pk total	1449				176				2090				355			
Highest	16:45				17:00				16:45				17:00			
Volume	5	10	381	3	0	17	24	17	2	29	530	7	0	52	16	31
Hi total	399				58				568				99			
PHF	.91				.76				.92				.90			



TRAFFIC SURVEY SPECIALISTS, INC.

SE 3RD STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: R. MARTINEZ & S. SALVO
SIGNALIZED

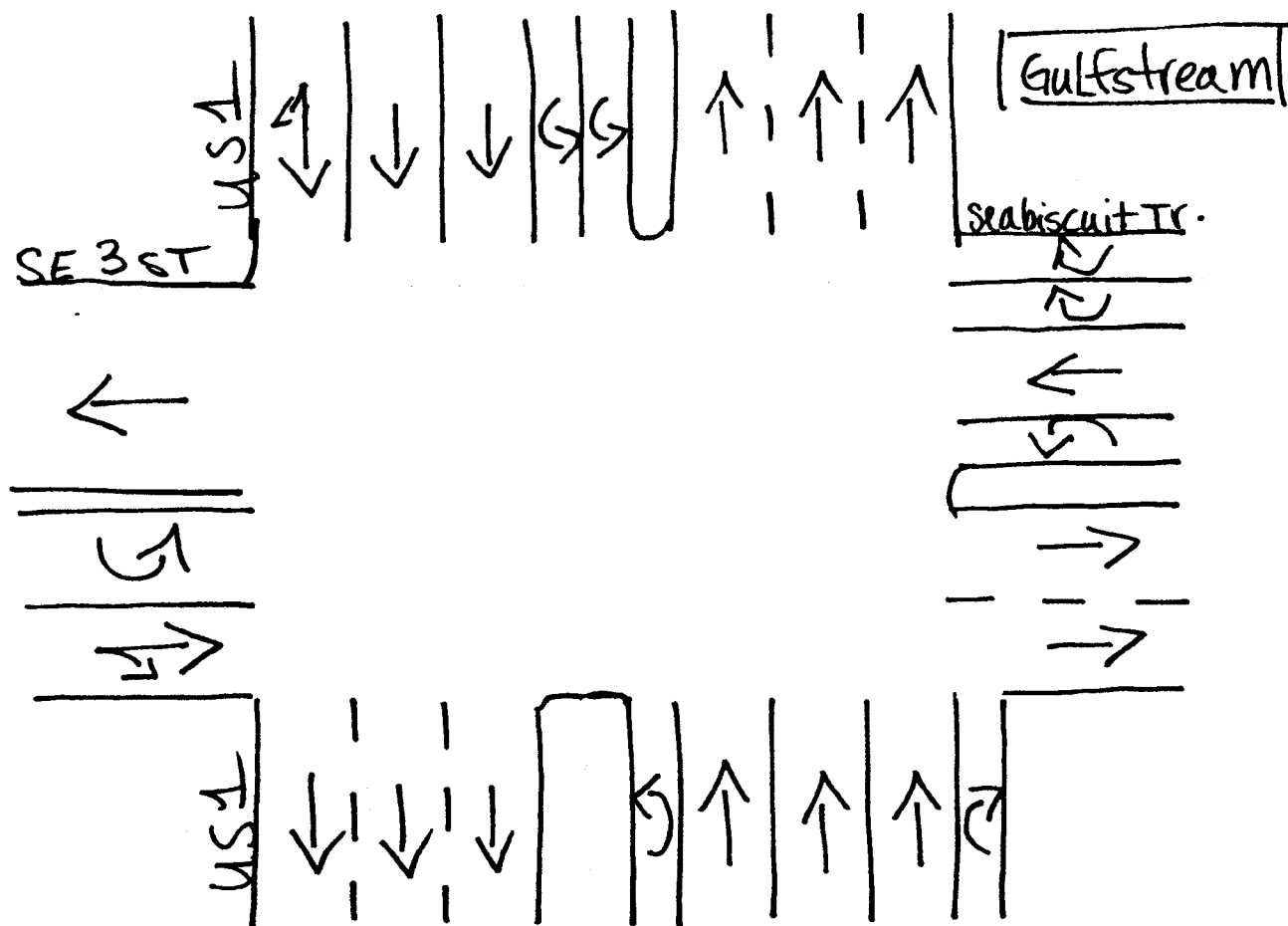
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 3STR_US1
Page : 1

PEDESTRIANS & BIKES

Date 10/20/16	US 1 From North				SEABISCUIT TRAIL From East				US 1 From South				SE 3RD STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
07:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
07:15	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3
07:30	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
07:45	0	0	0	2	0	0	0	1	0	0	0	0	0	1	0	2	6
Hr Total	0	0	0	2	0	1	0	3	0	0	0	3	0	2	0	2	13
08:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
08:15	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
08:30	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
08:45	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Hr Total	0	2	0	1	0	8	0	1	0	0	0	0	0	1	0	2	15
* BREAK *																	
16:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
16:15	0	0	0	2	0	5	0	2	0	0	0	0	0	0	0	0	9
16:30	0	1	0	0	0	2	0	2	0	0	0	1	0	1	0	0	7
16:45	0	0	0	1	0	5	0	1	0	0	0	0	0	0	0	0	7
Hr Total	0	1	0	4	0	13	0	5	0	0	0	1	0	1	0	0	25
17:00	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	6
17:15	0	0	0	1	0	2	0	1	0	1	0	0	0	0	0	1	6
17:30	0	1	0	2	0	1	0	3	0	3	0	1	0	0	0	3	14
17:45	0	0	0	3	0	2	0	0	0	1	0	0	0	0	0	4	10
Hr Total	0	3	0	6	0	5	0	6	0	5	0	1	0	2	0	8	36
TOTAL	0	6	0	13	0	27	0	15	0	5	0	5	0	6	0	12	89

↑
North



Hallandale beach, Florida
March 15, 2014
drawn by: Luis Palomino
signalized

SE 5TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: JOHN FLOOD
NOT SIGNALIZED, NO US 1 THRU TRAFFIC

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 55STR_U1
Page : 1

ALL BUT US 1 THRU

US 1 From North				SEA BISCUIT TRAIL From East				US 1 From South				SE 5TH STREET From West					
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 10/20/16 -----																	
07:00	0	7	0	3	0	0	0	1	0	9	0	6	0	3	0	5	34
07:15	1	5	0	6	0	0	0	1	2	13	0	4	0	3	0	7	42
07:30	1	13	0	2	0	0	0	0	0	11	0	1	0	2	1	11	42
07:45	1	12	0	5	0	0	0	1	2	21	0	6	0	5	0	15	68
Hr Total	3	37	0	16	0	0	0	3	4	54	0	17	0	13	1	38	186
08:00	1	14	0	5	0	0	0	0	0	20	0	8	0	2	1	26	77
08:15	0	11	0	12	0	0	0	1	2	21	0	3	0	3	1	32	86
08:30	1	20	0	10	0	0	0	1	1	21	0	7	0	5	0	34	100
08:45	1	16	0	7	0	0	0	1	5	19	0	8	0	1	2	41	101
Hr Total	3	61	0	34	0	0	0	3	8	81	0	26	0	11	4	133	364
----- * BREAK * -----																	
16:00	3	4	0	18	0	1	0	6	4	37	0	13	0	9	0	13	108
16:15	2	1	0	11	0	1	0	7	6	42	0	12	0	6	0	12	100
16:30	1	6	0	18	0	0	0	1	6	48	0	9	0	7	1	10	107
16:45	3	6	0	15	0	0	0	4	3	35	0	16	0	1	2	17	102
Hr Total	9	17	0	62	0	2	0	18	19	162	0	50	0	23	3	52	417
17:00	0	3	0	11	0	1	0	4	2	54	0	6	0	10	2	14	107
17:15	3	3	0	10	0	0	0	2	1	55	0	5	0	2	2	9	92
17:30	0	0	0	5	0	0	0	1	3	54	0	0	0	3	2	12	80
17:45	0	0	0	11	0	0	0	0	9	83	0	31	0	1	1	8	144
Hr Total	3	6	0	37	0	1	0	7	15	246	0	42	0	16	7	43	423

TOTAL	18	121	0	149	0	3	0	31	46	543	0	135	0	63	15	266	1390

SE 5TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: JOHN FLOOD
NOT SIGNALIZED, NO US 1 THRU TRAFFIC

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 55STR_U1
Page : 2

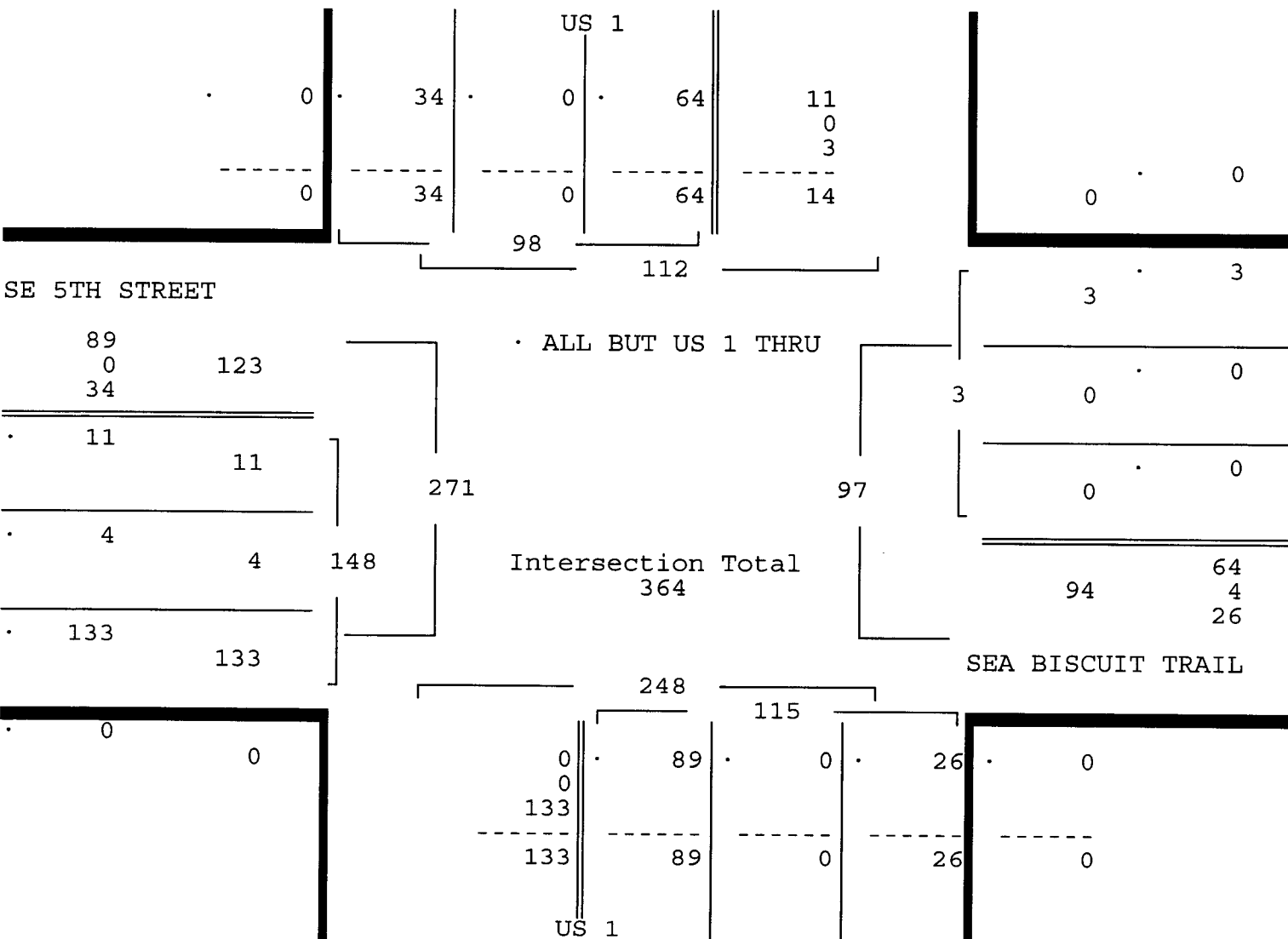
ALL BUT US 1 THRU

US 1 From North				SEA BISCUIT TRAIL From East				US 1 From South				SE 5TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00					08:00				08:00				08:00			
Volume	3	61	0	34	0	0	0	3	8	81	0	26	0	11	4	133
Percent	3%	62%	0%	35%	0%	0%	0%	100%	7%	70%	0%	23%	0%	7%	3%	90%
Pk total	98					3					115					148
Highest	08:30					08:15					08:45					08:45
Volume	1	20	0	10	0	0	0	1	5	19	0	8	0	1	2	41
Hi total	31					1					32					44
PHF	.79					.75					.90					.84



SE 5TH STREET & US 1
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: JOHN FLOOD
 NOT SIGNALIZED, NO US 1 THRU TRAFFIC

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 55STR_U1
 Page : 3

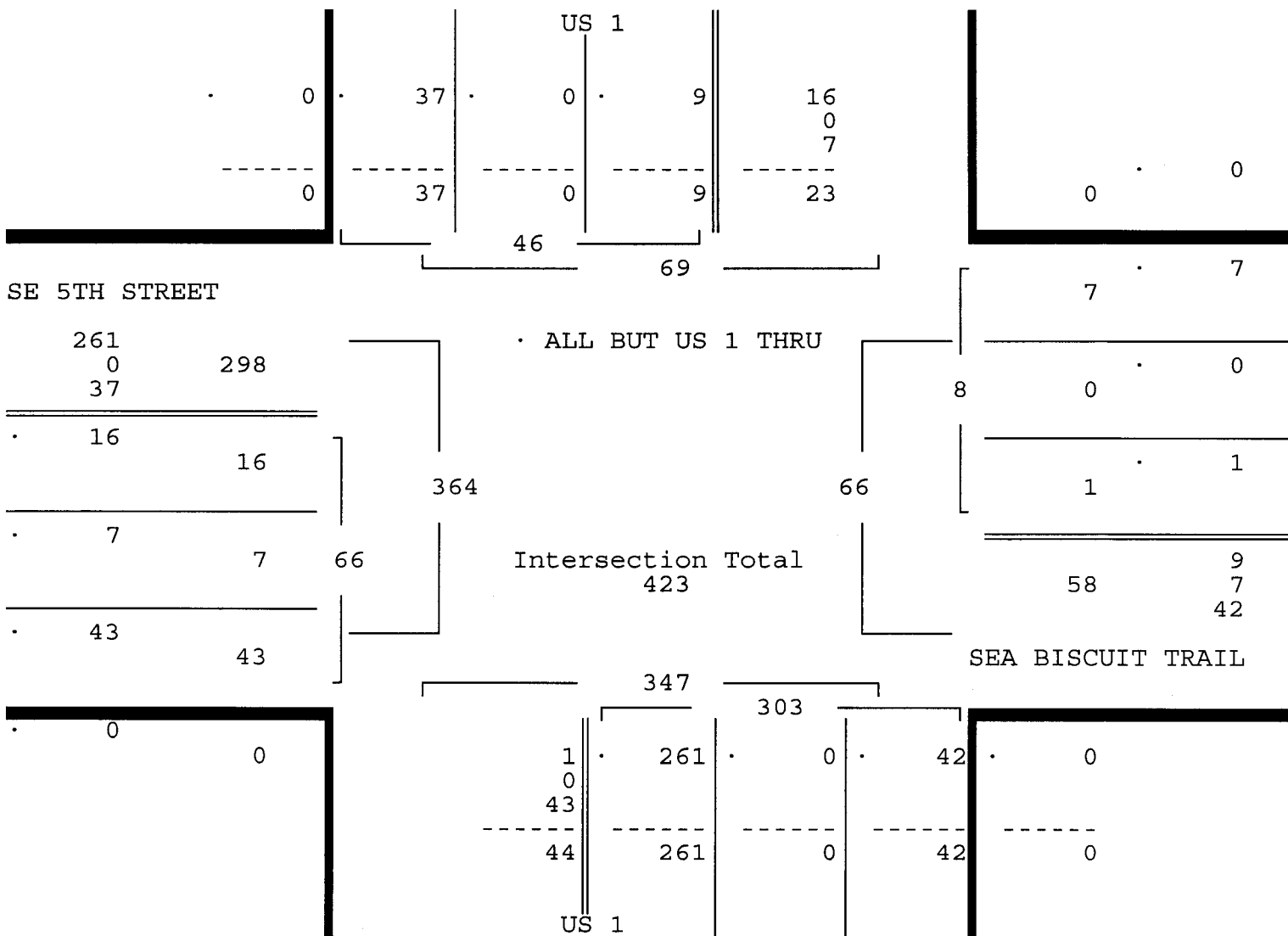
ALL BUT US 1 THRU

US 1 From North				SEA BISCUIT TRAIL From East				US 1 From South				SE 5TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 12:30 to 18:00 on 10/20/16

Peak start 17:00				17:00				17:00				17:00				
Volume	3	6	0	37	0	1	0	7	15	246	0	42	0	16	7	43
Percent	7%	13%	0%	80%	0%	12%	0%	88%	5%	81%	0%	14%	0%	24%	11%	65%
Pk total	46				8				303				66			
Highest	17:15				17:00				17:45				17:00			
Volume	3	3	0	10	0	1	0	4	9	83	0	31	0	10	2	14
Hi total	16				5				123				26			
PHF	.72				.40				.62				.63			



TRAFFIC SURVEY SPECIALISTS, INC.

SE 5TH STREET & US 1
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: JOHN FLOOD
 NOT SIGNALIZED, NO US 1 THRU TRAFFIC

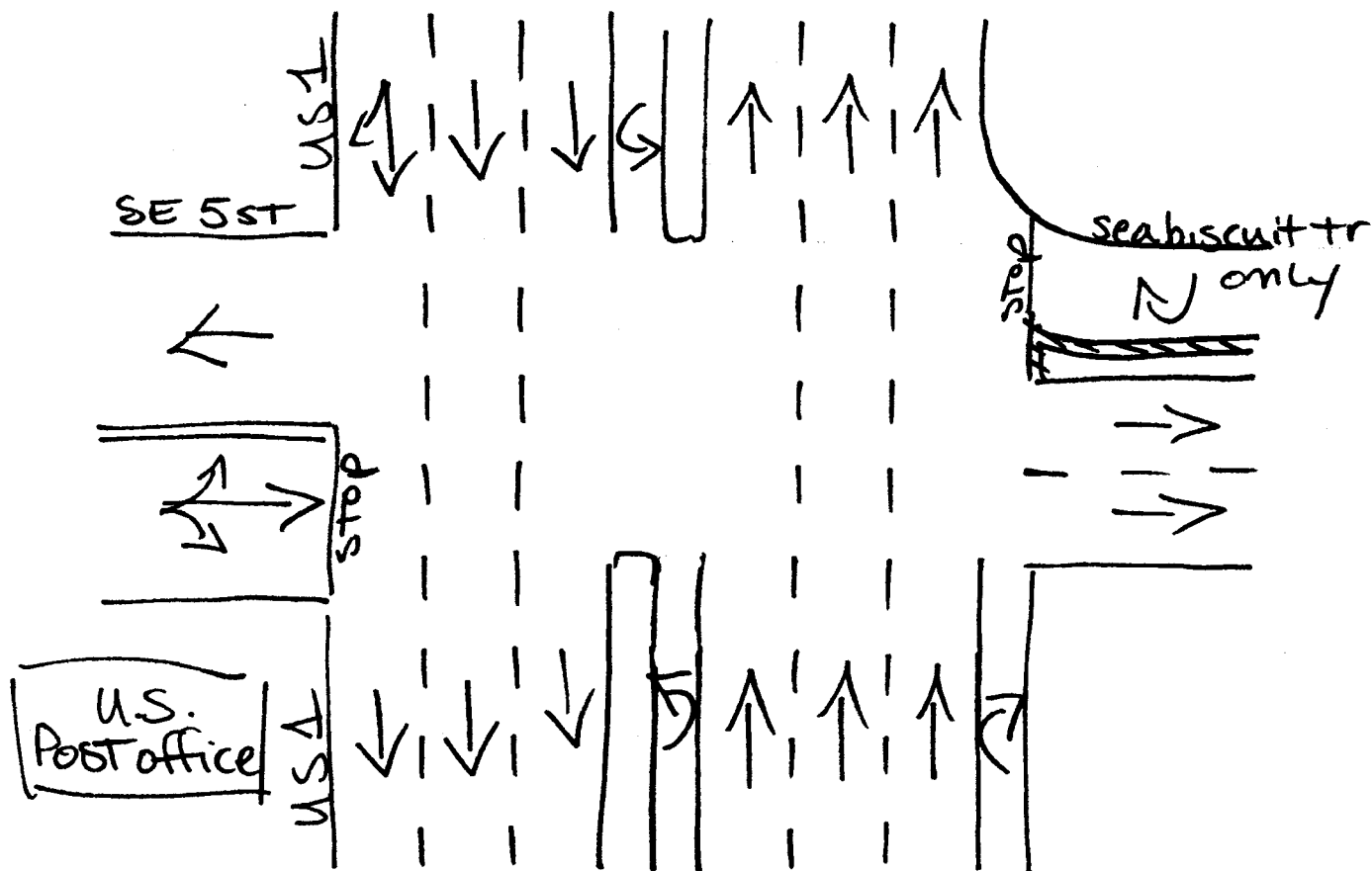
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 55STR_U1
 Page : 1

PEDESTRIANS & BIKES

Date 10/20/16	US 1 From North				SEA BISCUIT TRAIL From East				US 1 From South				SE 5TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
07:00	0	0	0	0	0	2	0	0	0	1	0	0	0	4	0	1	8
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:30	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	10
07:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2
Hr Total	0	0	0	0	0	4	0	3	0	1	0	0	0	9	0	4	21
08:00	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	6
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
08:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	0	0	5	0	0	0	0	0	0	0	4	0	0	9
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	1	0	5	0	0	0	0	0	0	0	2	0	2	0	1	11
16:30	0	0	0	1	0	2	0	0	0	0	0	1	0	1	0	2	7
16:45	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0	0	5
Hr Total	0	1	0	6	0	5	0	1	0	0	0	3	0	4	0	3	23
17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	1	5
17:15	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	3	8
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	5	7
Hr Total	0	0	0	1	0	4	0	1	0	1	0	1	0	3	0	9	20
TOTAL	0	1	0	7	0	18	0	5	0	2	0	4	0	20	0	16	73

North ↑



Hallandale beach, Florida

August 15, 2013

drawn by: Luis Palomino

NOT Signalized

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561) 272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 7STR_US1
Page : 1

[illegible]

SE 7TH STREET & US 1
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: VICTOR CANALES
 NOT SIGNALIZED, TURNS ONLY

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 7STR_US1
 Page : 2

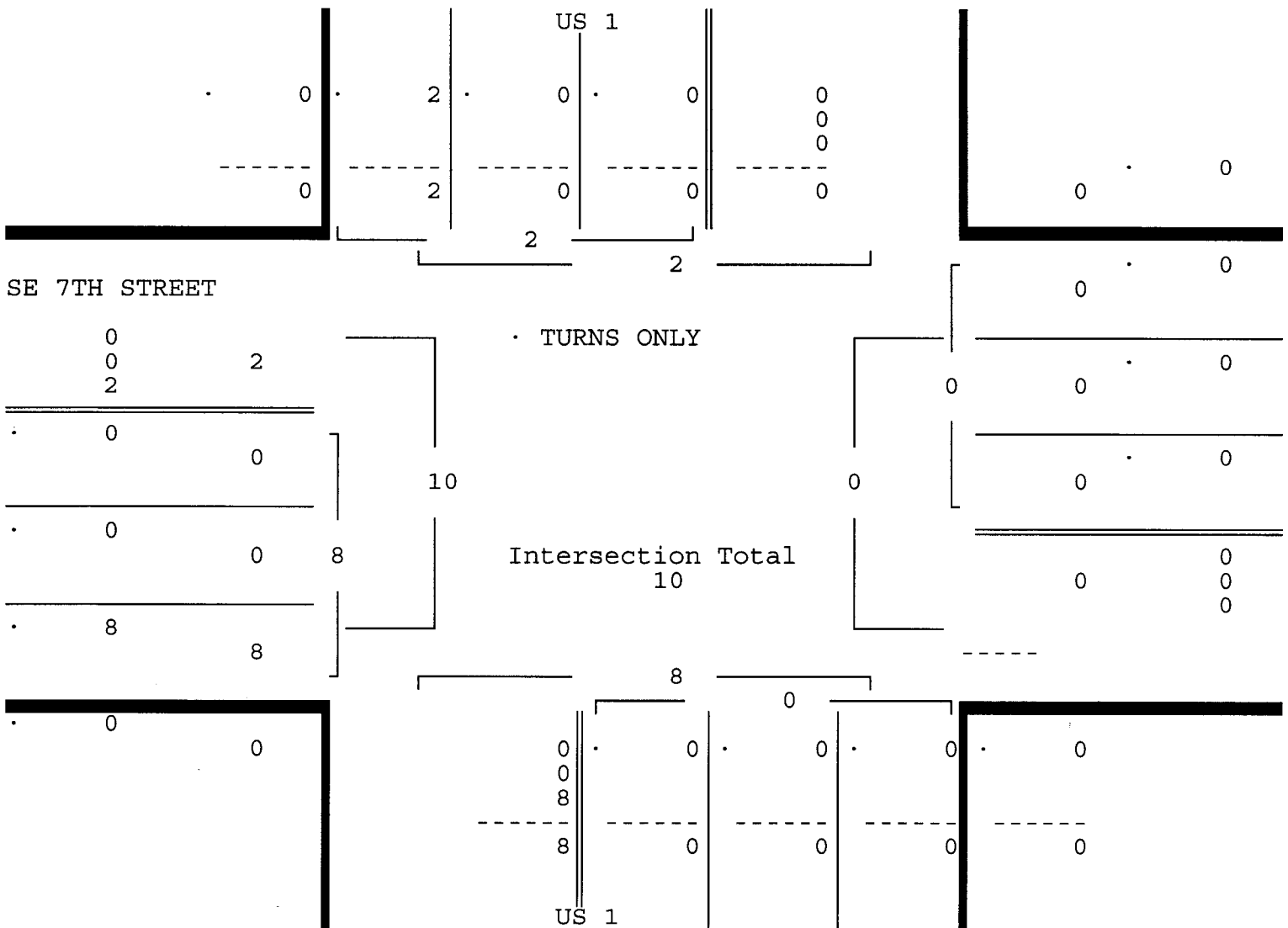
 TURNS ONLY

US 1 From North					From East					US 1 From South					SE 7TH STREET From West					Total
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 07:00					07:00								07:00							
Volume	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Percent	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Pk total	2				0					0					8					
Highest	07:30				07:00					07:00					07:15					
Volume	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Hi total	1				0					0					3					
PHF	.50				.0					.0					.67					



SE 7TH STREET & US 1
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: VICTOR CANALES
 NOT SIGNALIZED, TURNS ONLY

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Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 7STR_US1
 Page : 3

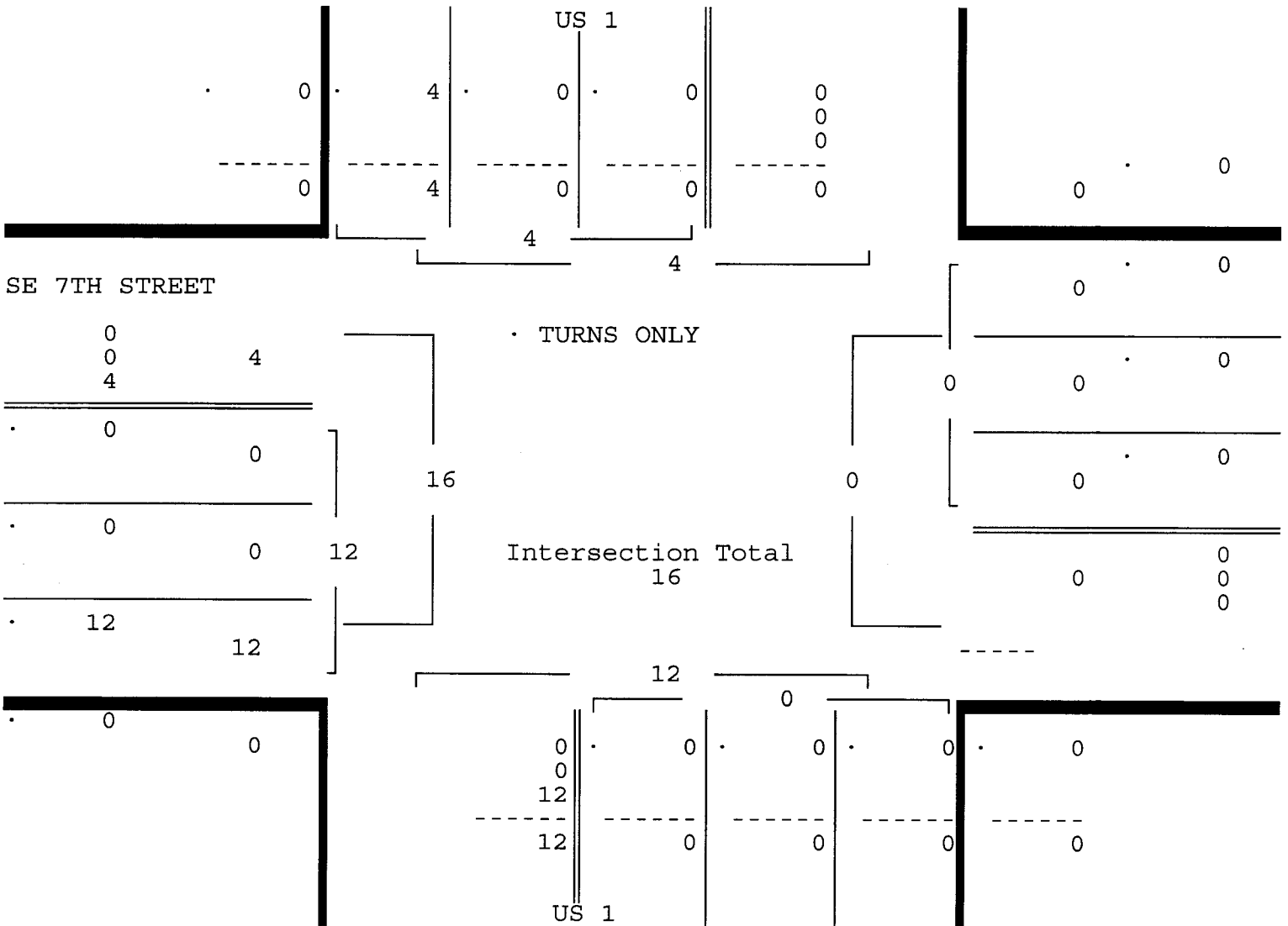
 TURNS ONLY

US 1 From North				From East				US 1 From South				SE 7TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16

Peak start 16:00					16:00				16:00				16:00			
Volume	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	12
Percent	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Pk total	4				0				0				12			
Highest	16:00				07:00				07:00				16:00			
Volume	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4
Hi total	3				0				0				4			
PHF	.33				.0				.0				.75			



SE 7TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: VICTOR CANALES
NOT SIGNALIZED, TURNS ONLY

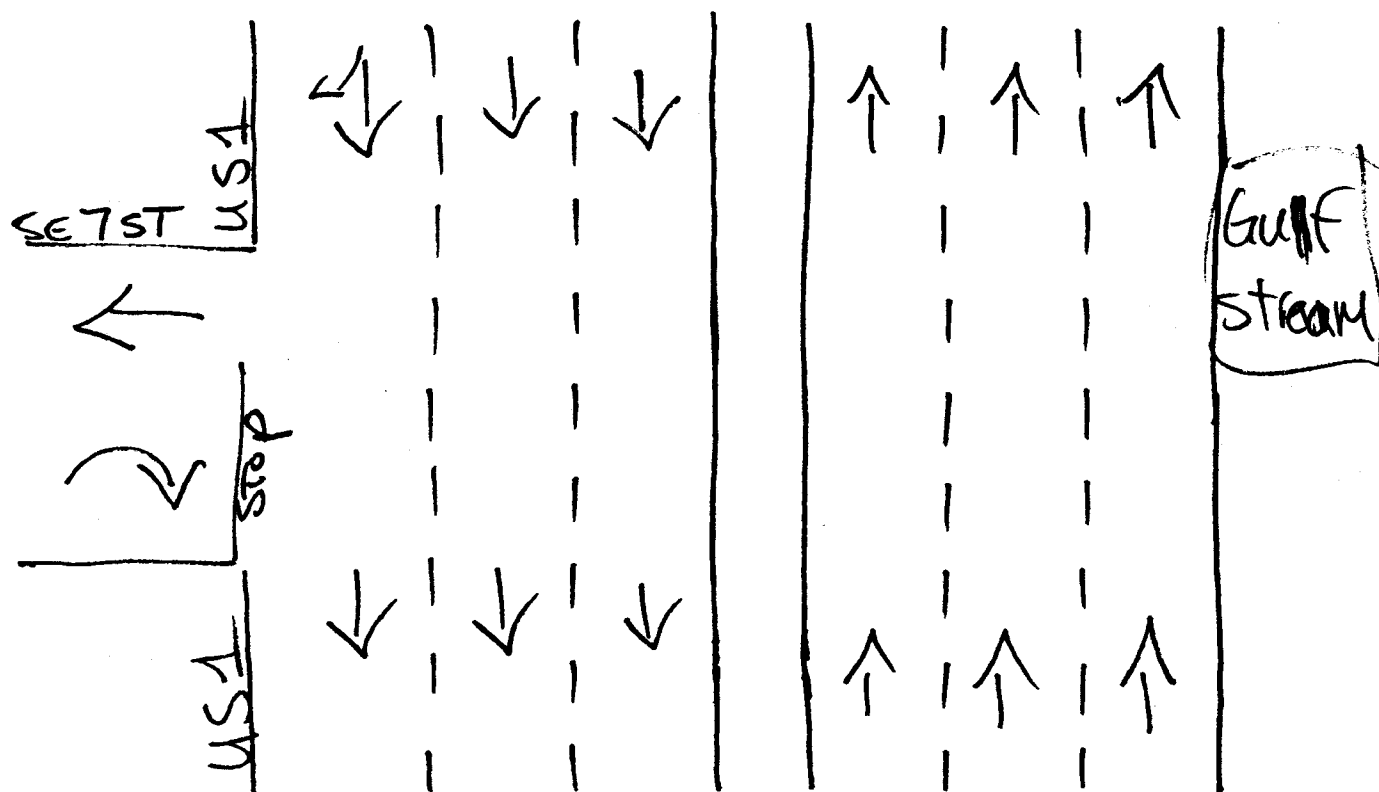
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 7STR_US1
Page : 1

PEDESTRIANS & BIKES

Date 10/20/16	US 1 From North				From East				US 1 From South				SE 7TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	3	9
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	10
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	9	23
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	9	14
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	5
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	6
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	13	19
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
Hr Total	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	10	13
TOTAL	0	0	0	1	0	0	0	0	0	0	0	1	0	26	0	41	69

North



Hallandale Beach, Florida
March 14, 2016
drawn by: Luis Palomino
not signalized ✓

[illegible]

SE 8TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: ALEX RICKETTS
NOT SIGNALIZED, TURNS ONLY

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 8STR_US1
Page : 2

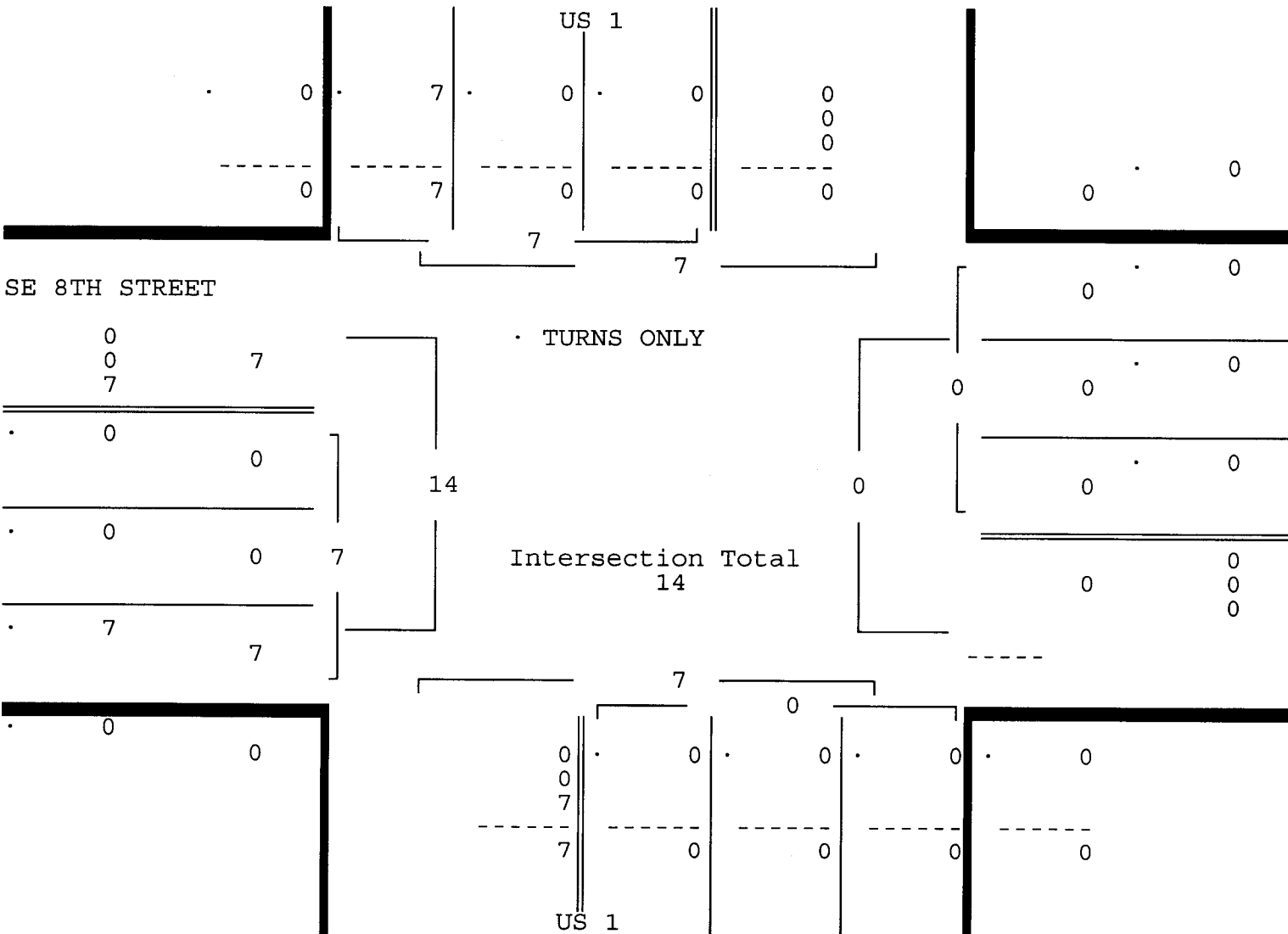
TURNS ONLY

US 1 From North				From East				US 1 From South				SE 8TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00					08:00				08:00				08:00			
Volume	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Percent	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Pk total	7				0				0				7			
Highest	08:45				07:00				07:00				08:45			
Volume	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	5
Hi total	3				0				0				5			
PHF	.58				.0				.0				.35			



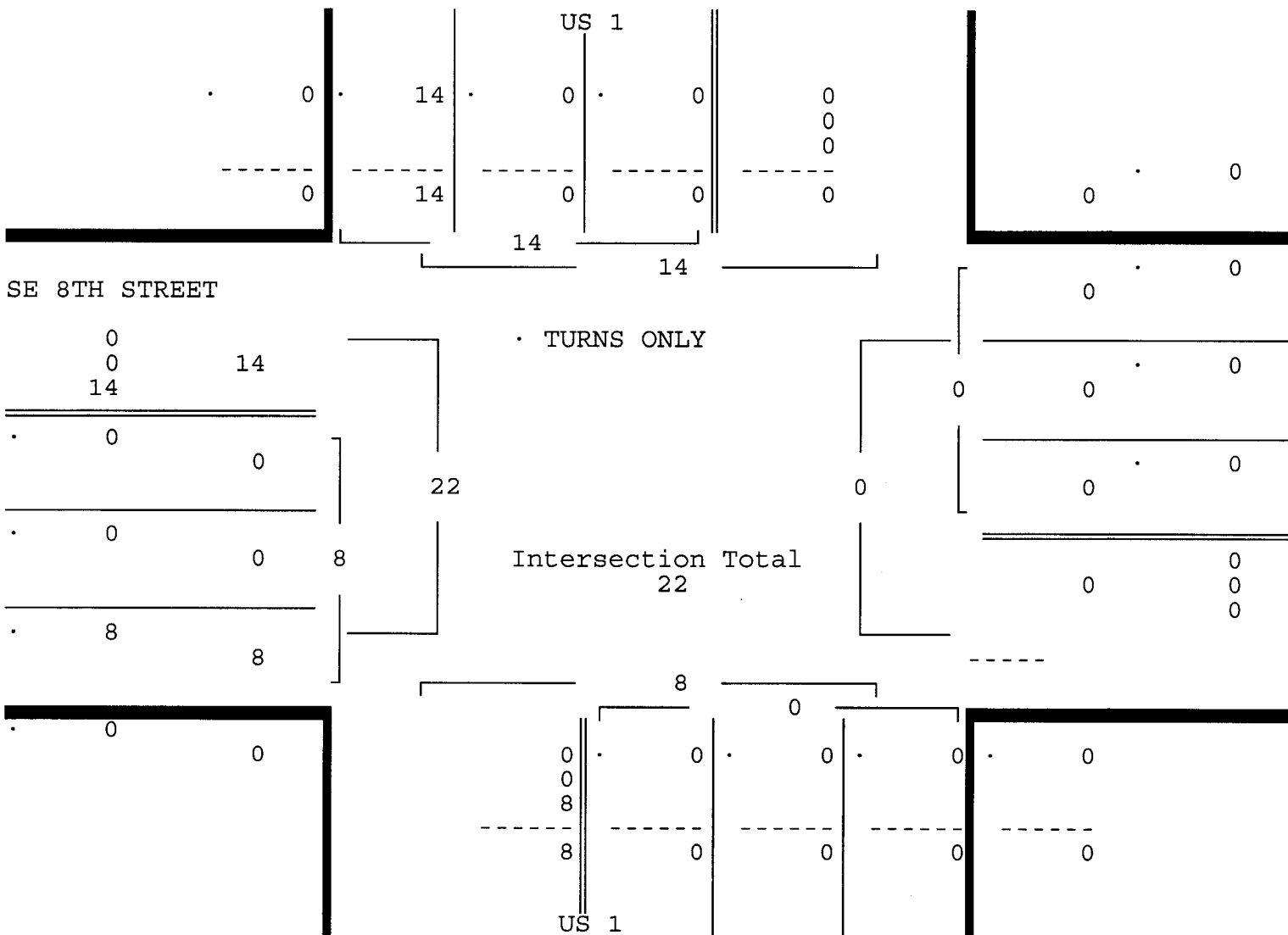
SE 8TH STREET & US 1
 HALLANDALE BEACH, FLORIDA
 COUNTED BY: ALEX RICKETTS
 NOT SIGNALIZED, TURNS ONLY

TRAFFIC SURVEY SPECIALISTS, INC.
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 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00160226
 Start Date: 10/20/16
 File I.D. : 8STR_US1
 Page : 3

URNS ONLY

US 1					-----					US 1					SE 8TH STREET					
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 10/20/16 -----																				Total
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 10/20/16																				
Peak start 16:15					16:15					16:15					16:15					
Volume	0	0	0	14	0	0	0	0		0	0	0	0		0	0	0	8		
Percent	0%	0%	0%	100%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	100%		
Pk total	14				0					0					8					
Highest	16:45				07:00					07:00					16:45					
Volume	0	0	0	6	0	0	0	0		0	0	0	0		0	0	0	3		
Hi total	6				0					0					3					
PHF	.58				.0					.0					.67					



SE 8TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: ALEX RICKETTS
NOT SIGNALIZED, TURNS ONLY

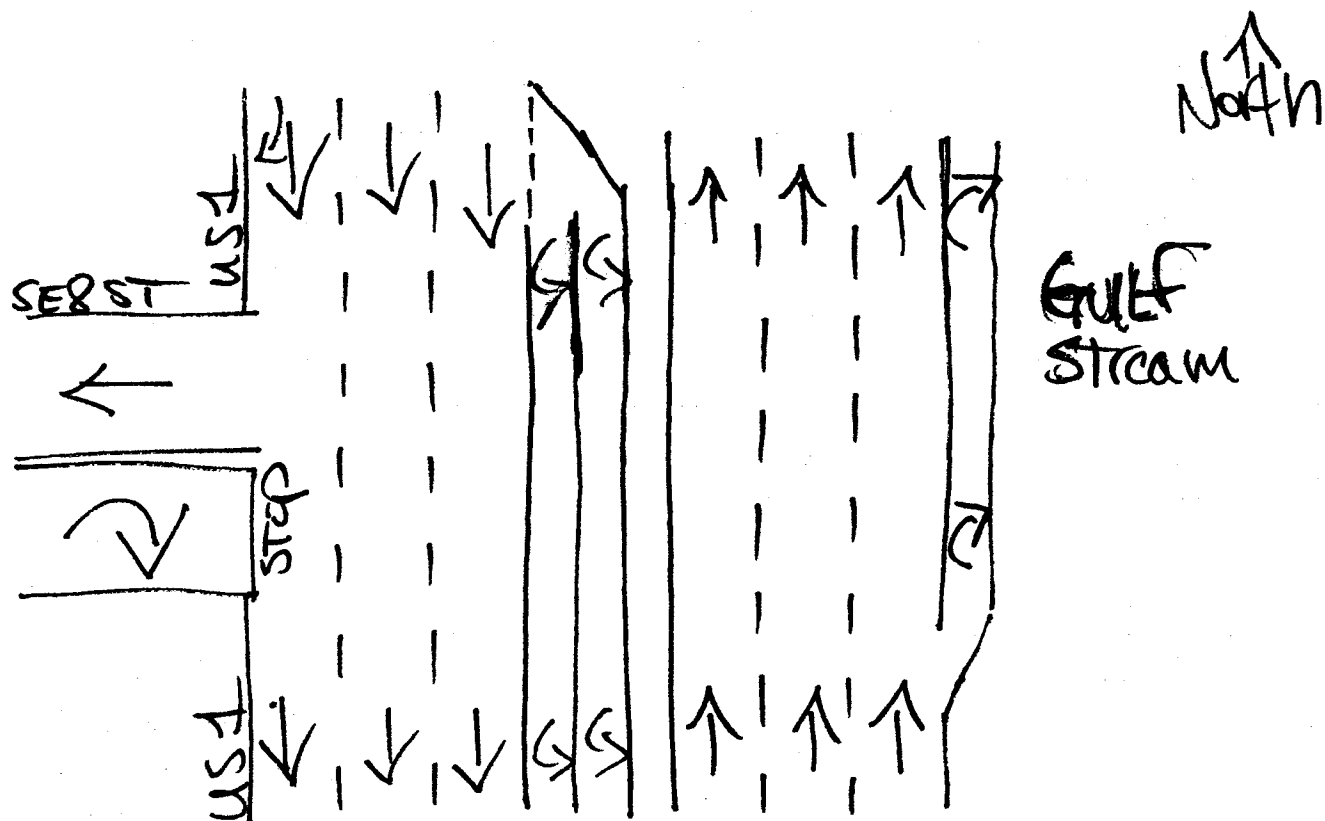
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 8STR_US1
Page : 1

PEDESTRIANS & BIKES

	US 1 From North				----- From East	US 1 From South				SE 8TH STREET From West							
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 10/20/16	-----																
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	5
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	7
07:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	7	14
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
----- * BREAK * -----																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	4
Hr Total	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	8	11
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	6
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	8	9

TOTAL	0	0	0	1	0	0	0	0	0	0	0	1	0	9	0	27	38



Hallandale Beach, Florida

March 14, 2016

drawn by: Luis Palomino
not signaled ✓

SE 9TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: M. CRUZ & A. PEREZ
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 9STR_US1
Page : 1

ALL VEHICLES

US 1 From North					VIA DA FORTUNA From East				US 1 From South				SE 9TH STREET From West							
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total
Date 10/20/16 -----																				
07:00	0	1	228	1	0	4	0	0		0	1	152	1		0	1	1	2		392
07:15	0	1	283	3	0	0	0	2		0	1	201	0		0	0	1	8		500
07:30	0	6	352	3	0	4	1	3		0	8	231	6		0	1	4	10		629
07:45	2	3	431	5	0	2	1	2		1	8	262	5		0	2	0	8		732
Hr Total	2	11	1294	12	0	10	2	7		1	18	846	12		0	4	6	28		2253
08:00	0	8	452	4	1	9	1	8		1	27	285	3		0	3	4	19		825
08:15	1	0	490	2	0	3	0	4		1	17	299	6		0	5	2	19		849
08:30	0	7	566	2	0	4	1	5		2	12	389	11		0	9	3	30		1041
08:45	1	10	562	1	0	8	0	2		0	8	362	12		0	4	2	23		995
Hr Total	2	25	2070	9	1	24	2	19		4	64	1335	32		0	21	11	91		3710
----- * BREAK * -----																				
16:00	2	8	368	7	0	34	5	8		6	13	514	14		0	6	2	24		1011
16:15	0	13	338	2	0	39	8	15		3	16	567	10		0	3	0	11		1025
16:30	2	10	345	5	0	23	2	12		5	10	526	23		0	2	1	9		975
16:45	3	10	389	7	0	27	4	18		6	6	575	17		0	1	0	14		1077
Hr Total	7	41	1440	21	0	123	19	53		20	45	2182	64		0	12	3	58		4088
17:00	0	5	365	5	1	37	7	20		4	13	532	16		0	4	1	18		1028
17:15	0	11	381	3	0	26	11	18		2	13	568	14		0	3	0	14		1064
17:30	0	5	282	1	0	42	10	12		3	24	484	22		0	6	1	7		899
17:45	0	19	379	4	0	36	11	9		5	35	301	53		0	7	5	13		877
Hr Total	0	40	1407	13	1	141	39	59		14	85	1885	105		0	20	7	52		3868

TOTAL	11	117	6211	55	2	298	62	138		39	212	6248	213		0	57	27	229		13919

SE 9TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: M. CRUZ & A. PEREZ
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 9STR_US1
Page : 2

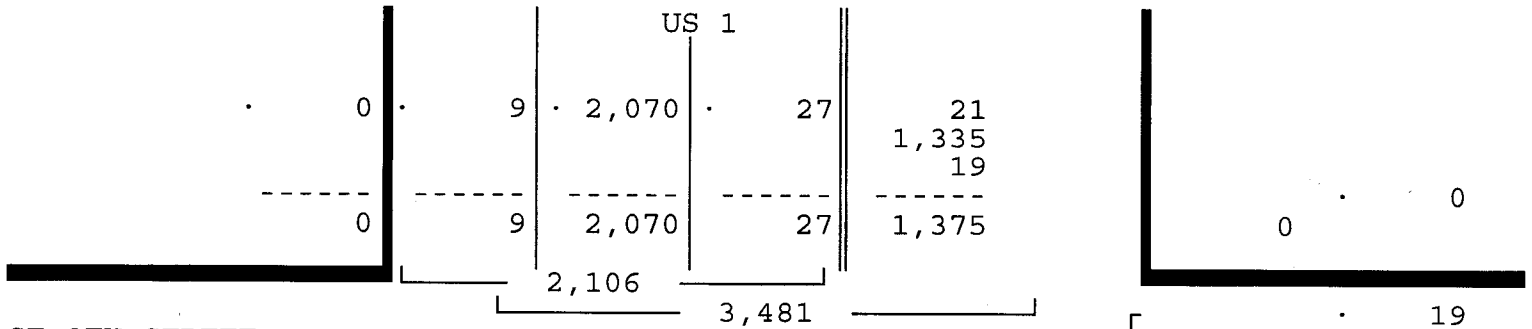
ALL VEHICLES

US 1 From North				VIA DA FORTUNA From East				US 1 From South				SE 9TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

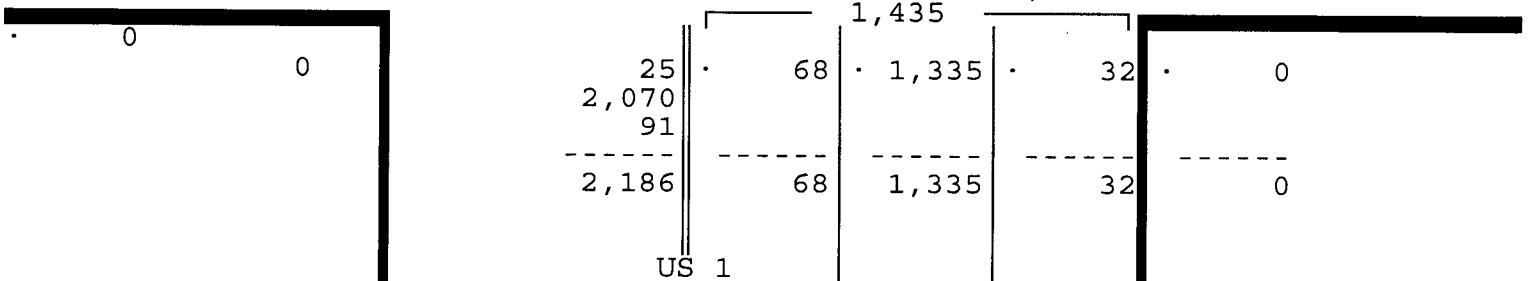
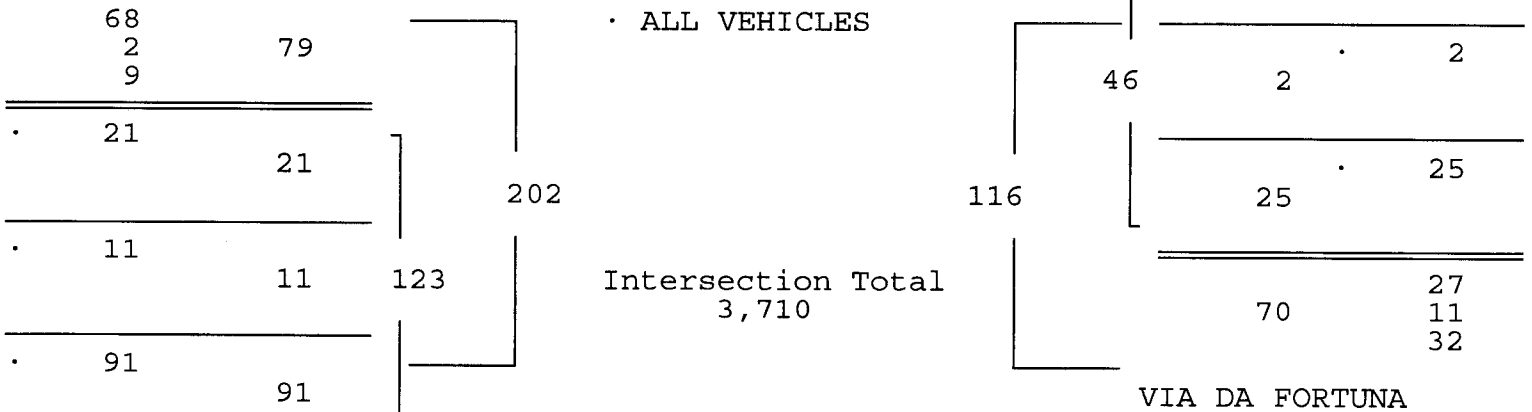
Date 10/20/16

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 10/20/16

Peak start 08:00					08:00				08:00				08:00			
Volume	2	25	2070	9	1	24	2	19	4	64	1335	32	0	21	11	91
Percent	0%	1%	98%	0%	2%	52%	4%	41%	0%	4%	93%	2%	0%	17%	9%	74%
Pk total	2106					46					1435					123
Highest	08:30					08:00					08:30					08:30
Volume	0	7	566	2	1	9	1	8	2	12	389	11	0	9	3	30
Hi total	575					19					414					42
PHF	.92					.61					.87					.73



SE 9TH STREET



Site Code : 00160226
Start Date: 10/20/16
File I.D. : 9STR_US1
Page : 3

[illegible]

SE 9TH STREET & US 1
HALLANDALE BEACH, FLORIDA
COUNTED BY: M. CRUZ & A. PEREZ
SIGNALIZED

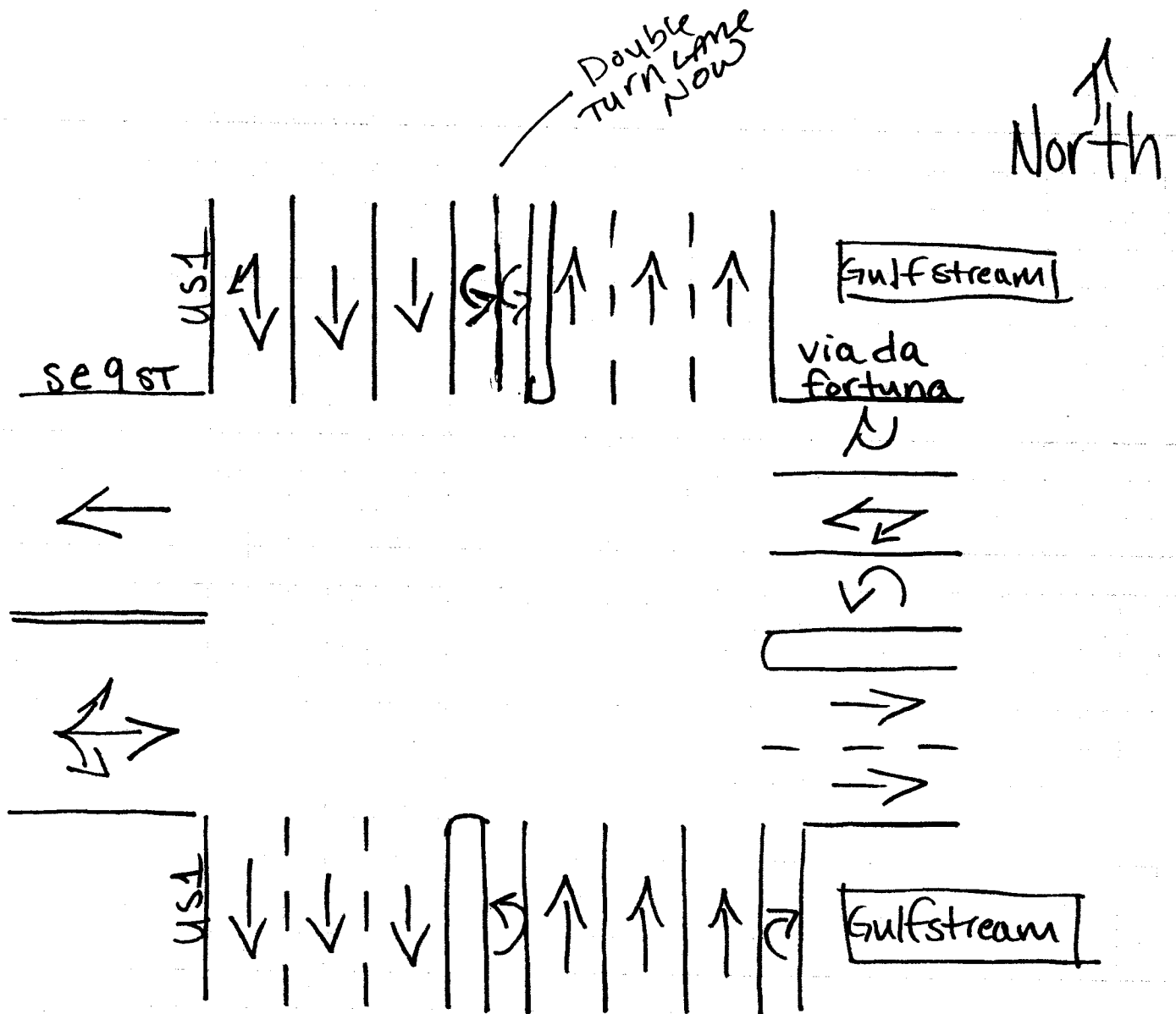
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00160226
Start Date: 10/20/16
File I.D. : 9STR_US1
Page : 1

PEDESTRIANS & BIKES

	US 1 From North				VIA DA FORTUNA From East				US 1 From South				SE 9TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 10/20/16	-----																
07:00	0	0	0	0	0	2	0	0	0	0	0	0	0	7	0	3	12
07:15	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	3	7
07:30	0	1	0	1	0	1	0	1	0	1	0	0	0	3	0	2	10
07:45	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
Hr Total	0	1	0	4	0	5	0	2	0	1	0	0	0	10	0	9	32
08:00	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0	0	5
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	4
08:45	0	1	0	1	0	4	0	1	0	0	0	0	0	1	0	1	9
Hr Total	0	2	0	1	0	9	0	2	0	0	0	0	0	3	0	1	18
----- * BREAK * -----																	
16:00	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	2	5
16:15	0	0	0	0	0	1	0	4	0	0	0	0	0	1	0	0	6
16:30	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
16:45	0	0	0	0	0	2	0	3	0	1	0	0	0	0	0	0	6
Hr Total	0	1	0	0	0	7	0	8	0	1	0	0	0	1	0	2	20
17:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
17:15	0	0	0	3	0	2	0	4	0	0	0	2	0	0	0	2	13
17:30	0	2	0	2	0	0	0	2	0	0	0	0	0	1	0	0	7
17:45	0	1	0	0	0	2	0	1	0	2	0	0	0	1	0	1	8
Hr Total	0	4	0	5	0	4	0	7	0	2	0	2	0	2	0	4	30

TOTAL	0	8	0	10	0	25	0	19	0	4	0	2	0	16	0	16	100



Hallandale beach, Florida

August 15, 2013

drawn by: Luis Palomino

signalized ✓



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3395	Initial Operation Date	1/24/90
Controller Type	2070	System Number	3395
Modification Number	8	Modification Date	07/23/2014
Drawing/Project No	86010	FPL Grid Number	87669298900
Intersection	FEDERAL HWY. (US 1/SR 5) and SE 3 STREET		
Municipality	HALLANDALE BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1,8R	2			5	6	4,7	3,8
Direction	SBL	NB			NBL	SB	EB	WB
Initial Green(MIN)	5	12			5	12	6	6
Vehicle Ext.(GAP)	1.5	3.0			1.5	3.0	2.0	2.0
Maximum Green I	20	60			18	60	35	35
Maximum Green II								
Yellow Clearance	5.0	5.0			5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0			2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN			OFF	MIN	OFF	OFF
Detector Delay								
Walk		7				7	7	7
Pedestrian Clearance		25				25	32	29
Permissive	DUAL				NO			
Flash Operation	RED	YELLOW			RED	YELLOW	RED	RED
Green Return								

Attachment

Channel/Drop / **IP Address**

NOTES:

1. HEADS 8R (WBR) OVERLAPPED WITH SBL (PHASE 1) AND WB (PHASE 8).
2. 8R OMITTED WHEN P8 ACTIVE.
3. FLASH OPERATION: 0000-0600, 7 DAYS.
4. MOD. 8 UPDATES YELLOW CLEARANCE VALUES PER FDOT STANDARDS.

Submitted By _____ **Approved By** _____

Station : 3395 - US 1 & SE 3 St (Standard File)

Phase	1 (SL)	2 (NT)	3	4	5 (NL)	6 (ST)	7 (ET)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7				7	7	7								
Ped Clearance		25				25	32	29								
Min Green	5	12			5	12	6	6								
Gap Ext	1.5	3			1.5	3	2	2								
Max1	20	60			18	60	35	35								
Max2																
Yellow Clr	5	5			5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2			2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON			ON	ON	ON	ON								
Auto Flash Entry							ON									
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable	ON	ON	ON		ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash		ON				
Override Higher Preempt		ON				
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6		6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8		8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	8	2	7
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	7		2	1	2	8

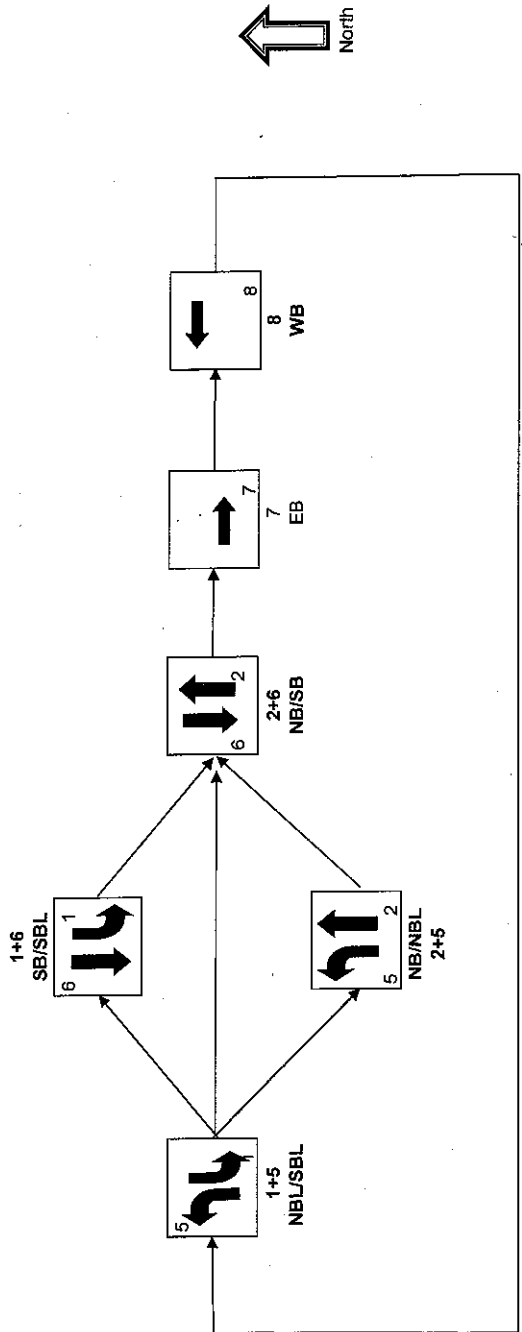
Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

[illegible][illegible]

User Comments:

Sequence of Operation for (3395) Federal Hwy (US 1 / SR 5) and SE 3 Street,
Hallandale Beach





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3540	Initial Operation Date	3/4/2009
Controller Type	2070	System Number	3540
Modification Number	3	Modification Date	09/17/2014
Drawing/Project No		FPL Grid Number	9999999999
Intersection	FEDERAL HIGHWAY (US 1/SR 5) and SE 9 STREET		
Municipality	HALLANDALE BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1,8R	2			5	6	4,7	3,8,2R
Direction	SBL	NB			NBL	SB	EB	WB
Initial Green(MIN)	5	10			5	10	6	6
Vehicle Ext.(GAP)	1.5	3.0			1.5	3.0	2.0	2.0
Maximum Green I	30	60			20	60	15	35
Maximum Green II								
Yellow Clearance	5.0	5.0			5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0			2.0	2.0	2.5	2.5
Phase Recall	OFF	MIN			OFF	MIN	OFF	OFF
Detector Delay								
Walk		7				7	7	7
Pedestrian Clearance		26				26	35	34
Permissive	DUAL				NO			
Flash Operation	RED	YELLOW			RED	YELLOW	RED	RED
Green Return								

Attachment

Channel/Drop / IP Address

NOTES:

1. HEAD 8R IS OMITTED WHEN P8 IS ACTIVE & HEAD 2R IS OMITTED WHEN P2 IS ACTIVE.
2. HEAD 8R [WBR] HARDWIRED WITH PH.1 [SBL] AND HEAD 2R [NBR] OVERLAPPED WITH PH.3 [WBL].
3. MOD. 3 UPDATES YELLOW CLEARANCE VALUES PER FDOT STANDARDS.

Submitted By _____ Approved By _____

Station : 3540 - US 1 & SE 9 St (Standard File)

Phase	1 (SL)	2 (NT)	3	4	5 (NL)	6 (ST)	7 (ET)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7				7	7	7		7				7	7	7
Ped Clearance		26				26	35	34		26				26	35	34
Min Green	5	10			5	10	6	6								
Gap Ext	1.5	3			1.5	3	2	2								
Max1	30	60			20	60	15	35								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2			2	2	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON			ON	ON	ON	ON								
Auto Flash Entry								ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON				ON			ON	ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash		ON				
Override Higher Preempt		ON				
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6		6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8		8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1		2	7
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	7		2		2	8

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Coordination

[illegible]

Split 16	Easy	
Split 15		
Split 14		
Split 13		
Split 12		
Split 11		
Split 10		
Split 9		
Split 8		
Split 7		
Split 6		
Split 5		
Split 4		
Split 3		
Split 2		
Split 1		
Dwell		
Long		
Short		
Segue		
Split		
Offset		
Cycle		
Pattern		
Action		
Minute		
Hour		

[illegible]

User Comments:

BROWARD COUNTY TRAFFIC ENGINEERING DIVISION TRAFFIC SIGNAL LOCATION SKETCH

LOCATION **FEDERAL HIGHWAY & SE 9 STREET**

ORDER NO FDOT ISSUE DATE --- REVISION NO. 0 COMPLETION DATE 3-4-09

DWG. NO. 12-08-06-01 FILE NO. 3540 CITY HALLANDALE BEACH SCALE: 1" = 50'

DWN BY: LARRY

NORTH



Illuminated
Street name

4-REQ'D

FEDERAL HWY

1 3 5

2 4 6



3-SECT
4-REQ'D



3-SECT
5-REQ'D

P-2 P-4 P-6 P-8



8-REQ'D

SE 9 ST

3 8
7 4



4-SECT
2-REQ'D

2 2R
8 8R

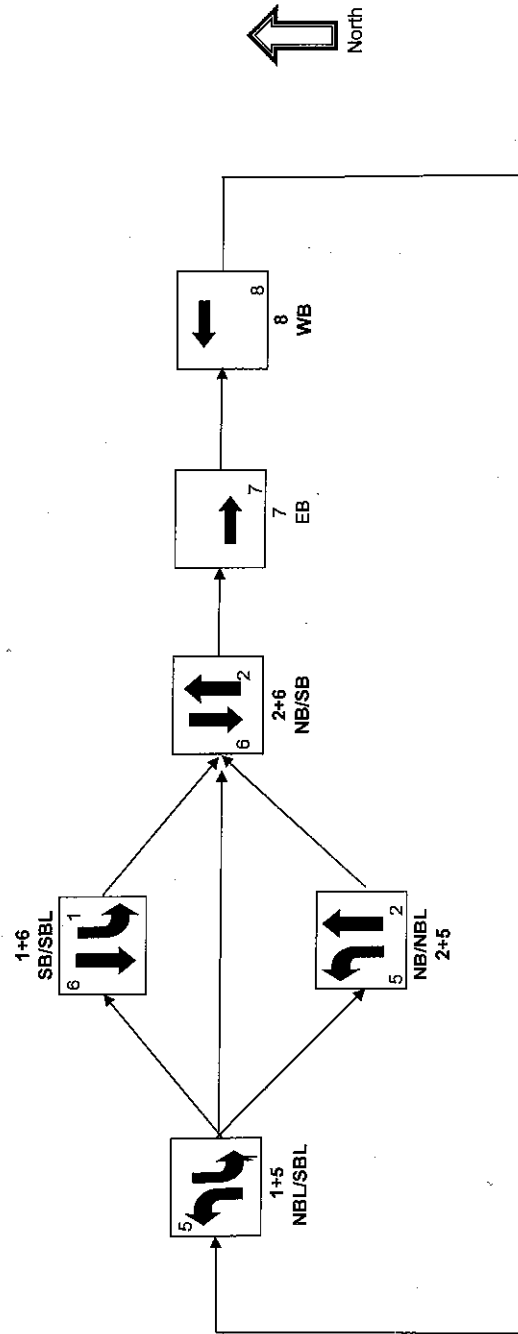


5-SECT
2-REQ'D

1. VIDEO DETECTION

2. THIS REVISION INSTALLS TRAFFIC SIGNAL

Sequence of Operation for (3540) Federal Hwy (US 1 / SR 5) and SE 9 Street,
Hallandale Beach



APPENDIX C

Historical Traffic Counts Peak Season Conversion Factors and Committed Developments Information

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0268 - SR 5 / US 1 AT DADE/BROWARD CO LINE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2015	48000	C	N 24500		S 23500	9.00	54.90	1.90
2014	54000	C	N 27500		S 26500	9.00	54.50	1.90
2013	51000	C	N 26500		S 24500	9.00	54.60	4.80
2012	59000	C	N 30000		S 29000	9.00	55.00	4.80
2011	48500	C	N 21000		S 27500	9.00	54.50	15.60
2010	55000	C	N 28000		S 27000	9.37	54.06	15.60
2009	50500	C	N 26000		S 24500	9.31	53.74	15.60
2008	61000	C	N 29000		S 32000	9.70	54.48	2.40
2007	54000	C	N 26000		S 28000	9.10	53.47	2.40
2006	48500	C	N 25000		S 23500	9.48	53.59	1.60
2005	52500	C	N 27000		S 25500	10.60	58.90	1.50
2004	48000	C	N 24500		S 23500	10.40	56.30	1.50
2003	45000	C	N 23000		S 22000	9.20	55.90	2.20
2002	50000	C	N 24500		S 25500	9.50	55.00	2.20
2001	47000	C	N 24000		S 23000	9.70	55.60	3.50
2000	44500	C	N 23000		S 21500	9.40	56.30	3.80

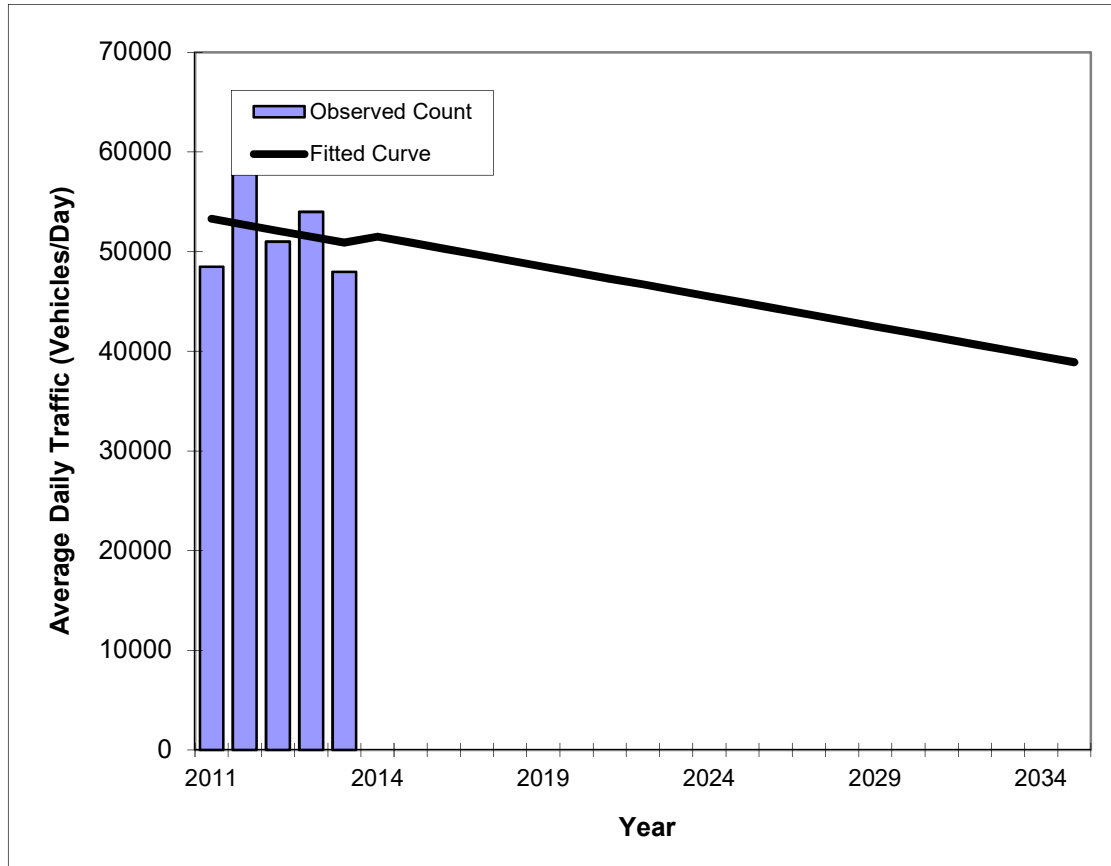
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

SR 5/US 1 -- AT DADE/BROWARD CO LINE

PIN#	0
Location	1

County:	Broward County
Station #:	0268
Highway:	SR 5/US 1



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	48500	53300
2012	59000	52700
2013	51000	52100
2014	54000	51500
2015	48000	50900
2016 Opening Year Trend		
2016	N/A	50300
2017 Mid-Year Trend		
2017	N/A	49700
2018 Design Year Trend		
2018	N/A	49100
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-600
Trend R-squared:	4.38%
Trend Annual Historic Growth Rate:	-1.13%
Trend Growth Rate (2015 to Design Year):	-1.18%
Printed:	4-Nov-16
Straight Line Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2015 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7037 - SE 1 AVE, S OF HALLANDALE BEACH BLVD

YEAR	AADT		DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----	-----	-----	-----	-----
2015	6100 C	N	6100	0	9.00	99.90	3.40
2014	4100 X				9.00	99.90	7.40
2013	4100 X		0	0	9.00	99.90	7.60
2012	4100 T		0	0	9.00	99.90	5.90
2011	4100 S		0	0	9.00	99.90	6.30
2010	4100 F		0	0	8.35	99.99	9.30
2009	4100 C	N	4100	0	8.53	99.99	5.30
2008	4400 C	N	4400	0	8.81	99.99	6.50
2007	4200 C	N	4200	0	8.63	99.99	4.80
2006	4400 C	N	4400	0	8.40	99.99	2.90
2005	3100 C	N	3100		8.20	99.90	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

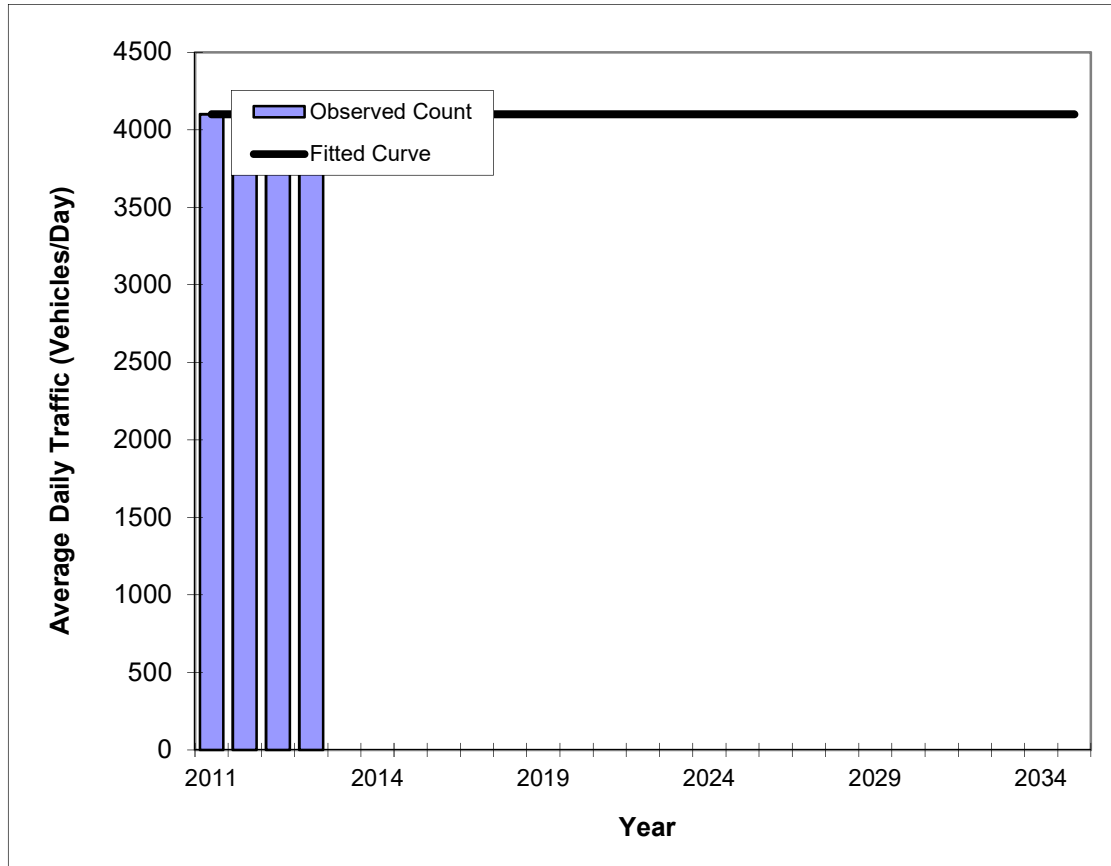
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

SE 1 AVE -- S OF HALLANDALE BEACH BLVD

PIN#	0
Location	2

County:	Broward County
Station #:	7037
Highway:	SE 1 AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	4100	4100
2012	4100	4100
2013	4100	4100
2014	4100	4100
2016 Opening Year Trend		
2016	N/A	4100
2017 Mid-Year Trend		
2017	N/A	4100
2018 Design Year Trend		
2018	N/A	4100
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	0
Trend R-squared:	#DIV/0!
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2014 to Design Year):	0.00%
Printed:	4-Nov-16
Straight Line Growth Option	

*Axle-Adjusted

Growth Rate Trend Analysis Calculations

Description	Station #		
	0268	7037	
Trend Growth Rate(1)	-1.18	0.00	
Adjusted Growth Rate	0.50	0.50	
Average Growth Rate			#REF!
Growth Rate Used			1.00

Notes:

1: Refer to Trend Analysis Chart

2014 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8600 EAST-A1A TO US1

WEEK	DATES	SF	MOCF: 0.90 PSCF
1	01/01/2014 - 01/04/2014	0.98	1.09
2	01/05/2014 - 01/11/2014	0.98	1.09
3	01/12/2014 - 01/18/2014	0.97	1.08
4	01/19/2014 - 01/25/2014	0.95	1.06
* 5	01/26/2014 - 02/01/2014	0.94	1.04
* 6	02/02/2014 - 02/08/2014	0.92	1.02
* 7	02/09/2014 - 02/15/2014	0.90	1.00
* 8	02/16/2014 - 02/22/2014	0.89	0.99
* 9	02/23/2014 - 03/01/2014	0.88	0.98
*10	03/02/2014 - 03/08/2014	0.88	0.98
*11	03/09/2014 - 03/15/2014	0.87	0.97
*12	03/16/2014 - 03/22/2014	0.87	0.97
*13	03/23/2014 - 03/29/2014	0.89	0.99
*14	03/30/2014 - 04/05/2014	0.90	1.00
*15	04/06/2014 - 04/12/2014	0.92	1.02
*16	04/13/2014 - 04/19/2014	0.93	1.03
*17	04/20/2014 - 04/26/2014	0.95	1.06
18	04/27/2014 - 05/03/2014	0.96	1.07
19	05/04/2014 - 05/10/2014	0.97	1.08
20	05/11/2014 - 05/17/2014	0.99	1.10
21	05/18/2014 - 05/24/2014	1.00	1.11
22	05/25/2014 - 05/31/2014	1.02	1.13
23	06/01/2014 - 06/07/2014	1.04	1.16
24	06/08/2014 - 06/14/2014	1.06	1.18
25	06/15/2014 - 06/21/2014	1.08	1.20
26	06/22/2014 - 06/28/2014	1.08	1.20
27	06/29/2014 - 07/05/2014	1.07	1.19
28	07/06/2014 - 07/12/2014	1.07	1.19
29	07/13/2014 - 07/19/2014	1.06	1.18
30	07/20/2014 - 07/26/2014	1.06	1.18
31	07/27/2014 - 08/02/2014	1.06	1.18
32	08/03/2014 - 08/09/2014	1.06	1.18
33	08/10/2014 - 08/16/2014	1.05	1.17
34	08/17/2014 - 08/23/2014	1.05	1.17
35	08/24/2014 - 08/30/2014	1.08	1.20
36	08/31/2014 - 09/06/2014	1.10	1.22
37	09/07/2014 - 09/13/2014	1.13	1.26
38	09/14/2014 - 09/20/2014	1.15	1.28
39	09/21/2014 - 09/27/2014	1.13	1.26
40	09/28/2014 - 10/04/2014	1.11	1.23
41	10/05/2014 - 10/11/2014	1.09	1.21
42	10/12/2014 - 10/18/2014	1.07	1.19
43	10/19/2014 - 10/25/2014	1.07	1.19
44	10/26/2014 - 11/01/2014	1.07	1.19
45	11/02/2014 - 11/08/2014	1.07	1.19
46	11/09/2014 - 11/15/2014	1.06	1.18
47	11/16/2014 - 11/22/2014	1.06	1.18
48	11/23/2014 - 11/29/2014	1.04	1.16
49	11/30/2014 - 12/06/2014	1.02	1.13
50	12/07/2014 - 12/13/2014	1.00	1.11
51	12/14/2014 - 12/20/2014	0.98	1.09
52	12/21/2014 - 12/27/2014	0.98	1.09
53	12/28/2014 - 12/31/2014	0.97	1.08

* PEAK SEASON

09-MAR-2015 16:07:53

830UPD

4_8600_PKSEASON.TXT

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Federal Highway and SE 3rd Street AM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	64	1,124	16	41	1,699	6	142	102	396	23	8	9
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2015 Peak Season Traffic	67	1169	17	43	1767	6	148	106	412	24	8	9
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed developments												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park			138	142				4		181	5	185
Gulfstream Point	1	35	1		36				5	1		
Hallandale ArtSquare		17			50							
Hallandale Oasis												
2022 Background Traffic	72	1,378	157	188	2,058	7	158	118	447	208	14	195
Existing Development												
Chateau Square:												
Primary Trip		110			81	3	5					
Pass-By trips												
2022 Total Traffic	72	1,488	157	188	2,139	10	163	118	447	208	14	195

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Federal Highway and SE 3rd Street PM Peak Hour

Description	Federal Highway Northbound			Federal Highway Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (4/15/2015)	121	1,302	17	69	1,568	13	154	54	145	106	66	120
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2015 Peak Season Traffic	126	1354	18	72	1631	14	160	56	151	110	69	125
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park			195	200				5		147	4	150
Gulfstream Point	2	34	2		45				5	2		
Hallandale ArtSquare		41			54							
Hallandale Oasis												
2022 Background Traffic	137	1,602	216	277	1,932	14	172	65	167	267	78	284
Existing Development												
Chateau Square:												
Primary Trip		96			127	5	4					
Pass-By trips												
2022 Total Traffic	137	1,698	216	277	2,059	19	176	65	167	267	78	284

APPENDIX D

Projected Turning Movement Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 3rd Street AM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	56	1,145	25	38	1,768	4	117	56	275	17	17	7
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	67	1,363	30	45	2,104	5	139	67	327	20	20	8
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park			138	142				4		181	5	185
Gulfstream Point	1	35	1		36				5	1		
Hallandale ArtSquare		17			50							
Hallandale Oasis												
Chateau Square		110			81	3	5					
2018 Background Traffic	69	1,625	169	188	2,391	8	147	72	339	203	26	193
Bluesten Park		30			48				11			
2018 Total Traffic	69	1,655	169	188	2,439	8	147	72	350	203	26	193

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 3rd Street PM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	112	1,939	39	65	1,369	15	157	62	136	57	62	57
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	133	2,307	46	77	1,629	18	187	74	162	68	74	68
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park			195	200				5		147	4	150
Gulfstream Point	2	34	2		45				5	2		
Hallandale ArtSquare		41			54							
Hallandale Oasis												
Chateau Square		96			127	5	4					
2018 Background Traffic	138	2,600	244	279	1,973	23	195	80	170	218	79	219
Bluesten Park		41			44				10			
2018 Total Traffic	138	2,641	244	279	2,017	23	195	80	180	218	79	219

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 5th Street AM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 5th Street Eastbound			SE 5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	89	1,269	26	64	2,060	34	11	4	133			3
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	106	1,510	31	76	2,451	40	13	5	158	0	0	4
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park		138			181							
Gulfstream Point		37			42							
Hallandale ArtSquare		17			50							
Hallandale Oasis												
Chateau Square		110			81							
2018 Background Traffic	108	1,915	32	78	2,933	41	13	5	161	0	0	4
Bluesten Park	11				11	48	30		28			
2018 Total Traffic	119	1,915	32	78	2,944	89	43	5	189	0	0	4

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 5th Street PM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 5th Street Eastbound			SE 5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	261	2,153	42	9	1,562	37	16	7	43	0	0	7
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	311	2,562	50	11	1,859	44	19	8	51	0	0	8
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park		195			147							
Gulfstream Point		38			52							
Hallandale ArtSquare		41			54							
Hallandale Oasis												
Chateau Square		96			127							
2018 Background Traffic	317	3,059	51	11	2,361	45	19	8	52	0	0	8
Bluesten Park	10				10	44	41		36			
2018 Total Traffic	327	3,059	51	11	2,371	89	60	8	88	0	0	8

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 7th Street AM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 7th Street Eastbound			SE 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)		1,283			2,193	2			8			
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	0	1,527	0	0	2,610	2	0	0	10	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park		138			181							
Gulfstream Point		37			42							
Hallandale ArtSquare		17			50							
Hallandale Oasis												
Chateau Square		110			81							
2018 Background Traffic	0	1,932	0	0	3,094	2	0	0	10	0	0	0
Bluesten Park		11			28	11			3			
2018 Total Traffic	0	1,943	0	0	3,122	13	0	0	13	0	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 7th Street PM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 7th Street Eastbound			SE 7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)		2,176			1,605	4			12			
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	0	2,589	0	0	1,910	5	0	0	14	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park		195			147							
Gulfstream Point		38			52							
Hallandale ArtSquare		41			54							
Hallandale Oasis												
Chateau Square		96			127							
2018 Background Traffic	0	3,086	0	0	2,413	5	0	0	15	0	0	0
Bluesten Park		10			36	10			5			
2018 Total Traffic	0	3,096	0	0	2,449	15	0	0	20	0	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 8th Street AM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 8th Street Eastbound			SE 8th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)		1,283			2,201	7			7			
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	0	1,527	0	0	2,619	8	0	0	8	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park		138			181							
Gulfstream Point		37			42							
Hallandale ArtSquare		17			50							
Hallandale Oasis												
Chateau Square		110			81							
2018 Background Traffic	0	1,932	0	0	3,104	8	0	0	8	0	0	0
Bluesten Park		11			31							
2018 Total Traffic	0	1,943	0	0	3,135	8	0	0	8	0	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 8th Street PM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 8th Street Eastbound			SE 8th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)		2,176			1,671	14			8			
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	0	2,589	0	0	1,988	17	0	0	10	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park		195			147							
Gulfstream Point		38			52							
Hallandale ArtSquare		41			54							
Hallandale Oasis												
Chateau Square		96			127							
2018 Background Traffic	0	3,086	0	0	2,493	17	0	0	10	0	0	0
Bluesten Park		10			41							
2018 Total Traffic	0	3,096	0	0	2,534	17	0	0	10	0	0	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 9th Street AM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 9th Street Eastbound			SE 9th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	68	1,335	32	27	2,070	9	21	11	91	25	2	19
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	81	1,589	38	32	2,463	11	25	13	108	30	2	23
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		18			42							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		55			36							
Gulfstream Park		138			181							
Gulfstream Point		37			42							
Hallandale ArtSquare		17			50							
Hallandale Oasis												
Chateau Square		110			81							
2018 Background Traffic	83	1,996	39	33	2,945	11	25	13	110	30	2	23
Bluesten Park	31	11			31							
2018 Total Traffic	114	2,007	39	33	2,976	11	25	13	110	30	2	23

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

US 1 and SE 9th Street PM Peak Hour

Description	US 1 Northbound			US 1 Southbound			SE 9th Street Eastbound			SE 9th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	59	2,201	70	41	1,480	20	10	2	55	114	24	68
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	70	2,619	83	49	1,761	24	12	2	65	136	29	81
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk		27			33							
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis		48			52							
Gulfstream Park		195			147							
Gulfstream Point		38			52							
Hallandale ArtSquare		41			54							
Hallandale Oasis												
Chateau Square		96			127							
2018 Background Traffic	72	3,117	85	50	2,262	24	12	2	67	138	29	83
Bluesten Park	28	10			41							
2018 Total Traffic	100	3,127	85	50	2,303	24	12	2	67	138	29	83

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 1st Avenue and SE 3rd Street AM Peak Hour

Description	SE 1st Avenue Northbound			SE 1st Avenue Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	60	205	8				37	496	0	0	104	79
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	71	244	10	0	0	0	44	590	0	0	124	94
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk												
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis												
Gulfstream Park												
Gulfstream Point												
Hallandale ArtSquare												
Hallandale Oasis												
Chateau Square												
2018 Background Traffic	73	249	10	0	0	0	45	602	0	0	126	96
Bluesten Park	6							11				
2018 Total Traffic	79	249	10	0	0	0	45	613	0	0	126	96

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 1st Avenue and SE 3rd Street PM Peak Hour

Description	SE 1st Avenue Northbound			SE 1st Avenue Southbound			SE 3rd Street Eastbound			SE 3rd Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	222	462	15				46	242	0	0	248	123
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	264	550	18	0	0	0	55	288	0	0	295	146
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk												
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis												
Gulfstream Park												
Gulfstream Point												
Hallandale ArtSquare												
Hallandale Oasis												
Chateau Square												
2018 Background Traffic	269	561	18	0	0	0	56	294	0	0	301	149
Bluesten Park	9							10				
2018 Total Traffic	278	561	18	0	0	0	56	304	0	0	301	149

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 1st Avenue and SE 5th Street
PM Peak Hour

[illegible]

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 1st Avenue and SE 9th Street
AM Peak Hour

[illegible]

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 1st Avenue and SE 9th Street PM Peak Hour

Description	SE 1st Avenue Northbound			SE 1st Avenue Southbound			SE 9th Street Eastbound			SE 9th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)		439	0							192		109
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	0	522	0	0	0	0	0	0	0	228	0	130
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk												
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis												
Gulfstream Park												
Gulfstream Point												
Hallandale ArtSquare												
Hallandale Oasis												
Chateau Square												
2018 Background Traffic	0	533	0	0	0	0	0	0	0	233	0	132
Bluesten Park		5										28
2018 Total Traffic	0	538	0	0	0	0	0	0	0	233	0	160

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 4th Avenue and SE 5th Street AM Peak Hour

Description	SE 4th Avenue Northbound			SE 4th Avenue Southbound			SE 5th Street Eastbound			SE 5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	4	72	22	107	86	1	2	27	9	20	41	45
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	5	86	26	127	102	1	2	32	11	24	49	54
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk												
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis												
Gulfstream Park												
Gulfstream Point												
Hallandale ArtSquare												
Hallandale Oasis												
Chateau Square												
2018 Background Traffic	5	87	27	130	104	1	2	33	11	24	50	55
Bluesten Park												
2018 Total Traffic	5	87	27	130	104	1	2	33	11	24	50	55

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

SE 4th Avenue and SE 5th Street PM Peak Hour

Description	SE 4th Avenue Northbound			SE 4th Avenue Southbound			SE 5th Street Eastbound			SE 5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (10/20/2016)	6	128	30	30	63	7	2	11	8	17	131	129
Season Adjustment Factor	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
2016 Peak Season Traffic	7	152	36	36	75	8	2	13	10	20	156	154
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Development												
Beachwalk												
7th Avenue Village												
CVS Pharmacy												
Diplomat Golf Course & Tennis												
Gulfstream Park												
Gulfstream Point												
Hallandale ArtSquare												
Hallandale Oasis												
Chateau Square												
2018 Background Traffic	7	155	36	36	76	8	2	13	10	21	159	157
Bluesten Park												
2018 Total Traffic	7	155	36	36	76	8	2	13	10	21	159	157

APPENDIX E

Intersection Capacity Analyses

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.875			0.850			0.850					
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1630	0	1770	1863	2787	1770	5085	1583	3433	5085	0
Flt Permitted	0.950			0.541			0.950			0.950		
Satd. Flow (perm)	1770	1630	0	1008	1863	2787	1770	5085	1583	3433	5085	0
Right Turn on Red	Yes			Yes			Yes			Yes		
Satd. Flow (RTOR)	148			68			109					
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	338			417			700			371		
Travel Time (s)	9.2			11.4			10.6			5.6		

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	139	67	20	20	8	67	1363	30	45	2104
Future Volume (vph)	139	67	20	20	8	67	1363	30	45	2104
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	47.0	47.0	44.0	44.0	16.0	16.0	53.0	53.0	16.0	53.0
Total Split (%)	29.4%	29.4%	27.5%	27.5%	10.0%	10.0%	33.1%	33.1%	10.0%	33.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	33.6	33.6	8.6	8.6	18.6	10.8	90.2	90.2	6.3	83.3
Actuated g/C Ratio	0.21	0.21	0.05	0.05	0.12	0.07	0.56	0.56	0.04	0.52
v/c Ratio	0.40	0.92	0.41	0.22	0.02	0.61	0.51	0.03	0.35	0.86
Control Delay	56.2	66.0	93.6	76.2	0.1	76.9	42.0	3.0	81.6	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	66.0	93.6	76.2	0.1	76.9	42.0	3.0	81.6	39.2
LOS	E	E	F	E	A	E	D	A	F	D
Approach Delay		63.5		70.5			42.8			40.1
Approach LOS		E		E			D			D

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 44.3

Intersection LOS: D

Intersection Capacity Utilization 85.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
16 s	53 s	47 s	44 s
 Ø5	 Ø6 (R)		
16 s	53 s		

Queues

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	149	424	22	22	9	72	1466	32	48	2267
v/c Ratio	0.40	0.92	0.41	0.22	0.02	0.61	0.51	0.03	0.35	0.86
Control Delay	56.2	66.0	93.6	76.2	0.1	76.9	42.0	3.0	81.6	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	66.0	93.6	76.2	0.1	76.9	42.0	3.0	81.6	39.2
Queue Length 50th (ft)	134	298	23	23	0	75	567	0	25	777
Queue Length 95th (ft)	197	430	55	53	0	m128	m628	m9	49	#1064
Internal Link Dist (ft)		258		337			620			291
Turn Bay Length (ft)	170		100		100	320		400	615	
Base Capacity (vph)	453	527	239	442	428	125	2866	939	193	2647
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.80	0.09	0.05	0.02	0.58	0.51	0.03	0.25	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	67	327	20	20	8	67	1363	30	45	2104	5
Future Volume (vph)	139	67	327	20	20	8	67	1363	30	45	2104	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1631		1770	1863	2787	1770	5085	1583	3433	5084	
Flt Permitted	0.95	1.00		0.54	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1631		1007	1863	2787	1770	5085	1583	3433	5084	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	149	72	352	22	22	9	72	1466	32	48	2262	5
RTOR Reduction (vph)	0	117	0	0	0	8	0	0	14	0	0	0
Lane Group Flow (vph)	149	307	0	22	22	1	72	1466	18	48	2267	0
Turn Type	Split	NA		Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	33.6	33.6		7.4	7.4	12.7	10.8	87.7	87.7	5.3	82.2	
Effective Green, g (s)	33.6	33.6		7.4	7.4	12.7	10.8	87.7	87.7	5.3	82.2	
Actuated g/C Ratio	0.21	0.21		0.05	0.05	0.08	0.07	0.55	0.55	0.03	0.51	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	371	342		46	86	221	119	2787	867	113	2611	
v/s Ratio Prot	0.08	c0.19			0.01	0.00	c0.04	c0.29		0.01	c0.45	
v/s Ratio Perm				c0.02		0.00			0.01			
v/c Ratio	0.40	0.90		0.48	0.26	0.00	0.61	0.53	0.02	0.42	0.87	
Uniform Delay, d1	54.5	61.5		74.4	73.6	67.8	72.5	23.0	16.5	75.9	34.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.81	1.68	1.00	1.00	1.00	
Incremental Delay, d2	0.3	24.3		2.8	0.6	0.0	5.2	0.6	0.0	0.9	4.2	
Delay (s)	54.8	85.8		77.3	74.2	67.8	64.2	39.2	16.6	76.8	38.4	
Level of Service	D	F		E	E	E	E	D	B	E	D	
Approach Delay (s)		77.7			74.4			39.9			39.2	
Approach LOS		E			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			44.8		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					26.0		
Intersection Capacity Utilization			85.3%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.879				0.865			0.850		0.998	
Flt Protected		0.996					0.950				0.999	
Satd. Flow (prot)	0	1631	0	0	0	1611	1770	5085	1583	0	5070	0
Flt Permitted		0.996					0.950				0.999	
Satd. Flow (perm)	0	1631	0	0	0	1611	1770	5085	1583	0	5070	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 16.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↘	↑↑↑	↗		↑↑↑	
Traffic Vol, veh/h	13	5	158	0	0	4	106	1510	31	76	2451	40
Future Vol, veh/h	13	5	158	0	0	4	106	1510	31	76	2451	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	5	170	0	0	4	114	1624	33	82	2635	43

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3697	4672	1339	-	-	812	2678	0	0	1624	0	0
Stage 1	2820	2820	-	-	-	-	-	-	-	-	-	-
Stage 2	877	1852	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 5	~ 1	~ 123	0	0	276	~ 56	-	-	193	-	-
Stage 1	~ 9	38	-	0	0	-	-	-	-	-	-	-
Stage 2	280	123	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 123	-	-	276	~ 56	-	-	193	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 9	38	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		18.3	41.1	1.1
HCM LOS	-	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 56	-	-	-	276	193	-	-
HCM Lane V/C Ratio	2.035	-	-	-0.016	0.423	-	-	-
HCM Control Delay (s)	\$ 638.6	-	-	- 18.3	36.7	-	-	-
HCM Lane LOS	F	-	-	- C	E	-	-	-
HCM 95th %tile Q(veh)	11.1	-	-	- 0	1.9	-	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection							
Int Delay, s/veh		0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗↗	↗↗↗		
Traffic Vol, veh/h	0	10	0	1527	2610	2	
Future Vol, veh/h	0	10	0	1527	2610	2	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	93	93	93	93	93	93	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	0	11	0	1642	2806	2	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	1404	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	7.14	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.92	-	-	-	-	
Pot Cap-1 Maneuver	0	111	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	111	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	40.9	0		0			
HCM LOS	E						
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR			
Capacity (veh/h)	-	111	-	-			
HCM Lane V/C Ratio	-	0.097	-	-			
HCM Control Delay (s)	-	40.9	-	-			
HCM Lane LOS	-	E	-	-			
HCM 95th %tile Q(veh)	-	0.3	-	-			

Lanes and Geometrics
104: US 1 & SE 8th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗↗	↗↗↗	
Traffic Vol, veh/h	0	8	0	1527	2619	8
Future Vol, veh/h	0	8	0	1527	2619	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	0	1642	2816	9

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1412	- 0	- 0
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- 7.14	- -	- -
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- 3.92	- -	- -
Pot Cap-1 Maneuver	0 109	0 -	- -
Stage 1	0 -	0 -	- -
Stage 2	0 -	0 -	- -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	- 109	- -	- -
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	NB	SB
HCM Control Delay, s	40.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	- 109	- -	-	-
HCM Lane V/C Ratio	- 0.079	- -	-	-
HCM Control Delay (s)	- 40.8	- -	-	-
HCM Lane LOS	- E	- -	-	-
HCM 95th %tile Q(veh)	- 0.3	- -	-	-

Lanes and Geometrics
105: US 1 & SE 9th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.900						0.850			0.850		
Flt Protected	0.992			0.950			0.950			0.950		
Satd. Flow (prot)	0	1663	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Flt Permitted	0.134			0.950			0.950			0.950		
Satd. Flow (perm)	0	225	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)	71						72			116		
Link Speed (mph)	25						25			45		
Link Distance (ft)	272						346			347		
Travel Time (s)	7.4						9.4			5.3		

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	13	30	2	23	81	1589	38	32	2463
Future Volume (vph)	25	13	30	2	23	81	1589	38	32	2463
Turn Type	Perm	NA	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases		7	8	8	1	5	2		1	6
Permitted Phases	7				8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	24.0	24.0	36.0	36.0	20.0	20.0	80.0	80.0	20.0	80.0
Total Split (%)	15.0%	15.0%	22.5%	22.5%	12.5%	12.5%	50.0%	50.0%	12.5%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		17.5	6.8	6.8	14.1	12.2	110.3	110.3	5.8	101.5
Actuated g/C Ratio		0.11	0.04	0.04	0.09	0.08	0.69	0.69	0.04	0.63
v/c Ratio		1.89	0.25	0.25	0.13	0.68	0.51	0.04	0.29	0.86
Control Delay		456.9	82.4	82.3	1.3	95.3	13.8	0.1	94.7	36.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		456.9	82.4	82.3	1.3	95.3	13.8	0.1	94.7	36.9
LOS		F	F	F	A	F	B	A	F	D
Approach Delay		456.9		48.4			17.4			37.6
Approach LOS		F		D			B			D

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 40 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.89

Intersection Signal Delay: 43.8

Intersection LOS: D

Intersection Capacity Utilization 84.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
20 s	80 s	24 s	36 s
 Ø5	 Ø6 (R)		
20 s	80 s		

Queues

105: US 1 & SE 9th Street

11/7/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	164	18	18	26	91	1785	43	36	2779
v/c Ratio	1.89	0.25	0.25	0.13	0.68	0.51	0.04	0.29	0.86
Control Delay	456.9	82.4	82.3	1.3	95.3	13.8	0.1	94.7	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	456.9	82.4	82.3	1.3	95.3	13.8	0.1	94.7	36.9
Queue Length 50th (ft)	~192	20	20	0	95	351	0	18	1110
Queue Length 95th (ft)	#327	49	49	0	152	413	0	m23	1148
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	87	309	312	272	156	3504	1127	278	3223
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.89	0.06	0.06	0.10	0.58	0.51	0.04	0.13	0.86

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	13	108	30	2	23	81	1589	38	32	2463	11
Future Volume (vph)	25	13	108	30	2	23	81	1589	38	32	2463	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1663		1681	1694	1583	1770	5085	1583	3433	5082	
Flt Permitted		0.13		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		224		1681	1694	1583	1770	5085	1583	3433	5082	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	15	121	34	2	26	91	1785	43	36	2767	12
RTOR Reduction (vph)	0	63	0	0	0	25	0	0	14	0	0	0
Lane Group Flow (vph)	0	101	0	18	18	1	91	1785	29	36	2779	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		17.5		4.4	4.4	9.2	12.2	106.3	106.3	4.8	98.9	
Effective Green, g (s)		17.5		4.4	4.4	9.2	12.2	106.3	106.3	4.8	98.9	
Actuated g/C Ratio		0.11		0.03	0.03	0.06	0.08	0.66	0.66	0.03	0.62	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		24		46	46	91	134	3378	1051	102	3141	
v/s Ratio Prot				c0.01	0.01	0.00	c0.05	c0.35		0.01	c0.55	
v/s Ratio Perm		c0.45				0.00			0.02			
v/c Ratio		4.20		0.39	0.39	0.02	0.68	0.53	0.03	0.35	0.88	
Uniform Delay, d1		71.2		76.5	76.5	71.1	72.0	13.9	9.2	76.1	25.7	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.22	1.38	
Incremental Delay, d2		1531.9		2.0	2.0	0.0	10.2	0.6	0.0	0.5	2.7	
Delay (s)		1603.1		78.5	78.5	71.2	82.2	14.5	9.2	92.9	38.2	
Level of Service		F		E	E	E	F	B	A	F	D	
Approach Delay (s)		1603.1			75.4			17.6			38.9	
Approach LOS		F			E			B			D	
Intersection Summary												
HCM 2000 Control Delay			82.8		HCM 2000 Level of Service					F		
HCM 2000 Volume to Capacity ratio			1.28									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					27.0		
Intersection Capacity Utilization			84.8%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/7/2016

													
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%			0%			0%			0%			
Storage Length (ft)	0		0	0		0	0		0	0		0	
Storage Lanes	0		0	0		1	0		0	0		0	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	
Ped Bike Factor													
Frt						0.850							
Flt Protected	0.997					0.989							
Satd. Flow (prot)	0	1857	0	0	1863	1583	0	3486	0	0	0	0	
Flt Permitted	0.970					0.989							
Satd. Flow (perm)	0	1807	0	0	1863	1583	0	3486	0	0	0	0	
Right Turn on Red	Yes					Yes		Yes					Yes
Satd. Flow (RTOR)						108		5					
Link Speed (mph)	25				25			30			30		
Link Distance (ft)	446				483			320			217		
Travel Time (s)	12.2				13.2			7.3			4.9		
Intersection Summary													
Area Type:	Other												

Timings

106: SE 1st Ave & SE 3rd Street

11/7/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↕	↑	↗	↕
Traffic Volume (vph)	44	590	124	94	244
Future Volume (vph)	44	590	124	94	244
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	36.0	36.0	36.0	36.0	24.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		29.5	29.5	29.5	18.5
Actuated g/C Ratio		0.49	0.49	0.49	0.31
v/c Ratio		0.82	0.16	0.13	0.35
Control Delay		21.6	7.9	2.1	18.1
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		21.6	7.9	2.1	18.1
LOS		C	A	A	B
Approach Delay		21.6	5.4		18.1
Approach LOS		C	A		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 17.6

Intersection LOS: B

Intersection Capacity Utilization 64.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
24 s	36 s
	↖ Ø8
	36 s

Queues

106: SE 1st Ave & SE 3rd Street

11/7/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	729	143	108	373
v/c Ratio	0.82	0.16	0.13	0.35
Control Delay	21.6	7.9	2.1	18.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.6	7.9	2.1	18.1
Queue Length 50th (ft)	199	25	0	55
Queue Length 95th (ft)	291	45	16	88
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	944	974	879	1160
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.77	0.15	0.12	0.32
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	590	0	0	124	94	71	244	10	0	0	0
Future Volume (veh/h)	44	590	0	0	124	94	71	244	10	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	51	678	0	0	143	0	82	280	11			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	99	785	0	0	837	711	269	977	40			
Arrive On Green	0.45	0.45	0.00	0.00	0.45	0.00	0.35	0.35	0.35			
Sat Flow, veh/h	77	1747	0	0	1863	1583	768	2785	114			
Grp Volume(v), veh/h	729	0	0	0	143	0	195	0	178			
Grp Sat Flow(s),veh/h/ln	1824	0	0	0	1863	1583	1824	0	1843			
Q Serve(g_s), s	11.5	0.0	0.0	0.0	2.7	0.0	4.7	0.0	4.2			
Cycle Q Clear(g_c), s	21.9	0.0	0.0	0.0	2.7	0.0	4.7	0.0	4.2			
Prop In Lane	0.07		0.00	0.00		1.00	0.42		0.06			
Lane Grp Cap(c), veh/h	884	0	0	0	837	711	640	0	646			
V/C Ratio(X)	0.83	0.00	0.00	0.00	0.17	0.00	0.30	0.00	0.28			
Avail Cap(c_a), veh/h	975	0	0	0	931	792	640	0	646			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.0	0.0	0.0	0.0	9.9	0.0	14.2	0.0	14.0			
Incr Delay (d2), s/veh	5.4	0.0	0.0	0.0	0.1	0.0	1.2	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.3	0.0	0.0	0.0	1.4	0.0	2.5	0.0	2.3			
LnGrp Delay(d),s/veh	20.5	0.0	0.0	0.0	10.0	0.0	15.4	0.0	15.1			
LnGrp LOS	C				A		B		B			
Approach Vol, veh/h		729			143			373				
Approach Delay, s/veh		20.5			10.0			15.2				
Approach LOS		C			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		33.0				33.0				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		18.0		30.0				30.0				
Max Q Clear Time (g_c+I1), s		6.7		23.9				4.7				
Green Ext Time (p_c), s		1.6		3.1				7.1				
Intersection Summary												
HCM 2010 Ctrl Delay			17.7									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.994			
Flt Protected						
Satd. Flow (prot)	0	1611	3518	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3518	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		10.4			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	307	12	0	0
Future Vol, veh/h	0	11	307	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	330	13	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	172	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	842	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	842	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.3	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	842			
HCM Lane V/C Ratio	-	-	0.014			
HCM Control Delay (s)	-	-	9.3			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1611	3529	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3529	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		16.4			8.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	60	293	7	0	0
Future Vol, veh/h	0	60	293	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	78	381	9	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	195	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	814	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	814	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.9	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	814			
HCM Lane V/C Ratio	-	-	0.096			
HCM Control Delay (s)	-	-	9.9			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.3			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.994			
Flt Protected						
Satd. Flow (prot)	0	1611	3518	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3518	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	263	11	0	0
Future Vol, veh/h	0	5	263	11	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	325	14	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	169	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	845	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	845	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.3	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	845			
HCM Lane V/C Ratio	-	-	0.007			
HCM Control Delay (s)	-	-	9.3			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.990			
Flt Protected						
Satd. Flow (prot)	0	1611	3504	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3504	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	31	253	19	0	0
Future Vol, veh/h	0	31	253	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	333	25	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	179	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	833	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	833	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.5	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	833			
HCM Lane V/C Ratio	-	-	0.049			
HCM Control Delay (s)	-	-	9.5			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.2			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	231	13	255	0	0	0
Future Vol, veh/h	231	13	255	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	289	16	319	0	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	319	159
Stage 1	319	-
Stage 2	0	-
Critical Hdwy	6.84	6.94
Critical Hdwy Stg 1	5.84	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	3.52	3.32
Pot Cap-1 Maneuver	649	858
Stage 1	710	-
Stage 2	-	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	649	858
Mov Cap-2 Maneuver	649	-
Stage 1	710	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	14.6	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBWBLn1	WBLn2
Capacity (veh/h)	- 649	858
HCM Lane V/C Ratio	- 0.445	0.019
HCM Control Delay (s)	- 14.9	9.3
HCM Lane LOS	- B	A
HCM 95th %tile Q(veh)	- 2.3	0.1

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.943			0.970			0.999	
Flt Protected		0.998			0.991			0.998			0.973	
Satd. Flow (prot)	0	1796	0	0	1741	0	0	1803	0	0	1811	0
Flt Permitted		0.998			0.991			0.998			0.973	
Satd. Flow (perm)	0	1796	0	0	1741	0	0	1803	0	0	1811	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			8.0			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 9.3

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	32	11	0	24	49	54	0	5	86	26
Future Vol, veh/h	0	2	32	11	0	24	49	54	0	5	86	26
Peak Hour Factor	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	36	13	0	27	56	61	0	6	98	30
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	8.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	19%	55%
Vol Thru, %	74%	71%	39%	44%
Vol Right, %	22%	24%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	45	127	230
LT Vol	5	2	24	127
Through Vol	86	32	49	102
RT Vol	26	11	54	1
Lane Flow Rate	133	51	144	261
Geometry Grp	1	1	1	1
Degree of Util (X)	0.169	0.07	0.189	0.339
Departure Headway (Hd)	4.586	4.908	4.704	4.664
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	779	727	761	768
Service Time	2.632	2.961	2.749	2.703
HCM Lane V/C Ratio	0.171	0.07	0.189	0.34
HCM Control Delay	8.6	8.3	8.9	10.1
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.2	0.7	1.5

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	127	102	1
Future Vol, veh/h	0	127	102	1
Peak Hour Factor	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	144	116	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.1
HCM LOS	B

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.876					0.850			0.850			0.999
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1632	0	1770	1863	2787	1770	5085	1583	3433	5080	0
Flt Permitted	0.950			0.507			0.950			0.950		
Satd. Flow (perm)	1770	1632	0	944	1863	2787	1770	5085	1583	3433	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		143				208			153			
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		338			417			700			371	
Travel Time (s)		9.2			11.4			10.6			5.6	

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	147	72	203	26	193	69	1625	169	188	2391
Future Volume (vph)	147	72	203	26	193	69	1625	169	188	2391
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	47.0	47.0	44.0	44.0	16.0	16.0	53.0	53.0	16.0	53.0
Total Split (%)	29.4%	29.4%	27.5%	27.5%	10.0%	10.0%	33.1%	33.1%	10.0%	33.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	35.4	35.4	39.5	39.5	56.3	8.6	48.4	48.4	10.8	50.6
Actuated g/C Ratio	0.22	0.22	0.25	0.25	0.35	0.05	0.30	0.30	0.07	0.32
v/c Ratio	0.40	0.94	0.94	0.06	0.19	0.78	1.14	0.31	0.87	1.61
Control Delay	55.3	68.8	103.0	47.0	4.8	98.2	132.4	31.7	105.4	311.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	68.8	103.0	47.0	4.8	98.2	132.4	31.7	105.4	311.4
LOS	E	E	F	D	A	F	F	C	F	F
Approach Delay		65.2		54.5			122.0			296.5
Approach LOS		E		D			F			F

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.61

Intersection Signal Delay: 194.0

Intersection LOS: F

Intersection Capacity Utilization 108.1%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
16 s	53 s	47 s	44 s
 Ø5	 Ø6 (R)		
16 s	53 s		

Queues

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	442	218	28	208	74	1747	182	202	2580
v/c Ratio	0.40	0.94	0.94	0.06	0.19	0.78	1.14	0.31	0.87	1.61
Control Delay	55.3	68.8	103.0	47.0	4.8	98.2	132.4	31.7	105.4	311.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	68.8	103.0	47.0	4.8	98.2	132.4	31.7	105.4	311.4
Queue Length 50th (ft)	139	321	223	22	0	78	~826	88	~118	~1468
Queue Length 95th (ft)	207	#495	#407	52	33	m#141	m#915	m172	#207	#1546
Internal Link Dist (ft)		258		337			620			291
Turn Bay Length (ft)	170		100		100	320		400	615	
Base Capacity (vph)	453	524	234	461	1115	100	1536	585	231	1605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.84	0.93	0.06	0.19	0.74	1.14	0.31	0.87	1.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	72	339	203	26	193	69	1625	169	188	2391	8
Future Volume (vph)	147	72	339	203	26	193	69	1625	169	188	2391	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1632		1770	1863	2787	1770	5085	1583	3433	5083	
Flt Permitted	0.95	1.00		0.51	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1632		944	1863	2787	1770	5085	1583	3433	5083	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	158	77	365	218	28	208	74	1747	182	202	2571	9
RTOR Reduction (vph)	0	111	0	0	0	143	0	0	107	0	0	0
Lane Group Flow (vph)	158	331	0	218	28	65	74	1747	75	202	2580	0
Turn Type	Split	NA		Perm	NA pm+ov	Prot	NA	Perm	Prot	NA		
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	35.4	35.4		39.5	39.5	50.3	8.6	48.3	48.3	10.8	50.5	
Effective Green, g (s)	35.4	35.4		39.5	39.5	50.3	8.6	48.3	48.3	10.8	50.5	
Actuated g/C Ratio	0.22	0.22		0.25	0.25	0.31	0.05	0.30	0.30	0.07	0.32	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	391	361		233	459	876	95	1535	477	231	1604	
v/s Ratio Prot	0.09	c0.20			0.02	0.01	0.04	0.34		c0.06	c0.51	
v/s Ratio Perm				c0.23		0.02			0.05			
v/c Ratio	0.40	0.92		0.94	0.06	0.07	0.78	1.14	0.16	0.87	1.61	
Uniform Delay, d1	53.3	60.8		59.0	46.1	38.5	74.8	55.9	40.9	73.9	54.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	1.36	3.17	1.00	1.00	
Incremental Delay, d2	0.2	26.7		40.8	0.0	0.0	24.7	69.1	0.6	27.8	276.8	
Delay (s)	53.5	87.5		99.8	46.1	38.5	83.9	145.2	130.5	101.8	331.5	
Level of Service	D	F		F	D	D	F	F	F	F	F	
Approach Delay (s)		78.6			68.4			141.6			314.8	
Approach LOS		E			E			F			F	
Intersection Summary												
HCM 2000 Control Delay		212.0										
HCM 2000 Volume to Capacity ratio		1.19										
Actuated Cycle Length (s)		160.0							26.0			
Intersection Capacity Utilization		108.1%										
Analysis Period (min)		15										
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.878				0.865			0.850		0.998	
Flt Protected		0.996					0.950				0.999	
Satd. Flow (prot)	0	1629	0	0	0	1611	1770	5085	1583	0	5070	0
Flt Permitted		0.996					0.950				0.999	
Satd. Flow (perm)	0	1629	0	0	0	1611	1770	5085	1583	0	5070	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 33.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↘	↑↑↑	↗		↑↑↑	
Traffic Vol, veh/h	13	5	161	0	0	4	108	1915	32	78	2933	41
Future Vol, veh/h	13	5	161	0	0	4	108	1915	32	78	2933	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	5	173	0	0	4	116	2059	34	84	3154	44

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4400	5635	1599	-	-	1030	3198	0	0	2059	0	0
Stage 1	3344	3344	-	-	-	-	-	-	-	-	-	-
Stage 2	1056	2291	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 2	0	~ 81	0	0	198	~ 30	-	-	117	-	-
Stage 1	~ 4	20	-	0	0	-	-	-	-	-	-	-
Stage 2	217	73	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 81	-	-	198	~ 30	-	-	117	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 4	20	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		23.6	82.1	2.3
HCM LOS	-	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 30	-	-	-	198	117	-	-
HCM Lane V/C Ratio	3.871	-	-	-0.022	0.717	-	-	-
HCM Control Delay (s)	1562.4	-	-	-	23.6	90.3	-	-
HCM Lane LOS	F	-	-	-	C	F	-	-
HCM 95th %tile Q(veh)	13.9	-	-	-	0.1	3.9	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗↗	↗↗↗	
Traffic Vol, veh/h	0	10	0	1932	3094	2
Future Vol, veh/h	0	10	0	1932	3094	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	0	2077	3327	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1665	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	73	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	73	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	62.7	0		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	73	-	-		
HCM Lane V/C Ratio	-	0.147	-	-		
HCM Control Delay (s)	-	62.7	-	-		
HCM Lane LOS	-	F	-	-		
HCM 95th %tile Q(veh)	-	0.5	-	-		

Lanes and Geometrics
104: US 1 & SE 8th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		7		↑↑↑	↑↑↑	
Traffic Vol, veh/h	0	8	0	1932	3104	8
Future Vol, veh/h	0	8	0	1932	3104	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	0	2077	3338	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1673	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	72	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	72	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	61.7	0		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	72	-	-		
HCM Lane V/C Ratio	-	0.119	-	-		
HCM Control Delay (s)	-	61.7	-	-		
HCM Lane LOS	-	F	-	-		
HCM 95th %tile Q(veh)	-	0.4	-	-		

Lanes and Geometrics
105: US 1 & SE 9th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.900						0.850			0.850		
Flt Protected	0.992			0.950			0.950			0.950		
Satd. Flow (prot)	0	1663	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Flt Permitted	0.133			0.950			0.950			0.950		
Satd. Flow (perm)	0	223	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)	73						72			116		
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	272			346			347			300		
Travel Time (s)	7.4			9.4			5.3			4.5		

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/7/2016

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations											
Traffic Volume (vph)	25	13	30	2	23	83	1996	39	33	2945	
Future Volume (vph)	25	13	30	2	23	83	1996	39	33	2945	
Turn Type	Perm	NA	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7	8	8	1	5	2		1	6	
Permitted Phases	7				8			2			
Detector Phase	7	7	8	8	1	5	2	2	1	6	
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0	
Total Split (s)	24.0	24.0	36.0	36.0	20.0	20.0	80.0	80.0	20.0	80.0	
Total Split (%)	15.0%	15.0%	22.5%	22.5%	12.5%	12.5%	50.0%	50.0%	12.5%	50.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)		17.5	6.8	6.8	14.2	12.4	110.2	110.2	5.9	101.3	
Actuated g/C Ratio		0.11	0.04	0.04	0.09	0.08	0.69	0.69	0.04	0.63	
v/c Ratio		1.88	0.25	0.25	0.13	0.68	0.64	0.04	0.29	1.03	
Control Delay		452.3	82.4	82.3	1.3	95.0	16.5	0.1	111.3	44.7	
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		452.3	82.4	82.3	1.3	95.0	16.5	0.1	111.3	44.7	
LOS		F	F	F	A	F	B	A	F	D	
Approach Delay		452.3		48.4			19.2			45.4	
Approach LOS		F		D			B			D	

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 40 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.88

Intersection Signal Delay: 46.4

Intersection LOS: D

Intersection Capacity Utilization 94.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
20 s	80 s	24 s	36 s
 Ø5	 Ø6 (R)		
20 s	80 s		

Queues

105: US 1 & SE 9th Street

11/7/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	167	18	18	26	93	2243	44	37	3321
v/c Ratio	1.88	0.25	0.25	0.13	0.68	0.64	0.04	0.29	1.03
Control Delay	452.3	82.4	82.3	1.3	95.0	16.5	0.1	111.3	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	452.3	82.4	82.3	1.3	95.0	16.5	0.1	111.3	44.7
Queue Length 50th (ft)	~195	20	20	0	96	513	0	21	~1438
Queue Length 95th (ft)	#332	49	49	0	155	594	0	m18	m932
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	89	309	312	272	157	3502	1126	278	3216
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.88	0.06	0.06	0.10	0.59	0.64	0.04	0.13	1.03

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	13	110	30	2	23	83	1996	39	33	2945	11
Future Volume (vph)	25	13	110	30	2	23	83	1996	39	33	2945	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1662		1681	1694	1583	1770	5085	1583	3433	5083	
Flt Permitted		0.13		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		224		1681	1694	1583	1770	5085	1583	3433	5083	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	15	124	34	2	26	93	2243	44	37	3309	12
RTOR Reduction (vph)	0	65	0	0	0	24	0	0	15	0	0	0
Lane Group Flow (vph)	0	102	0	18	18	2	93	2243	29	37	3321	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		17.5		4.4	4.4	9.3	12.4	106.2	106.2	4.9	98.7	
Effective Green, g (s)		17.5		4.4	4.4	9.3	12.4	106.2	106.2	4.9	98.7	
Actuated g/C Ratio		0.11		0.03	0.03	0.06	0.08	0.66	0.66	0.03	0.62	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		24		46	46	92	137	3375	1050	105	3135	
v/s Ratio Prot				c0.01	0.01	0.00	c0.05	c0.44		0.01	c0.65	
v/s Ratio Perm		c0.46				0.00			0.02			
v/c Ratio		4.25		0.39	0.39	0.02	0.68	0.66	0.03	0.35	1.06	
Uniform Delay, d1		71.2		76.5	76.5	71.0	71.9	16.2	9.2	76.0	30.6	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.98	
Incremental Delay, d2		1554.5		2.0	2.0	0.0	10.0	1.0	0.0	0.1	27.6	
Delay (s)		1625.7		78.5	78.5	71.1	81.9	17.2	9.3	112.6	57.6	
Level of Service		F		E	E	E	F	B	A	F	E	
Approach Delay (s)		1625.7			75.4			19.6			58.2	
Approach LOS		F			E			B			E	
Intersection Summary												
HCM 2000 Control Delay			86.8		HCM 2000 Level of Service					F		
HCM 2000 Volume to Capacity ratio			1.42									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					27.0		
Intersection Capacity Utilization			94.3%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/7/2016

																						
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12										
Grade (%)	0%			0%			0%			0%												
Storage Length (ft)	0		0	0		0	0		0	0		0										
Storage Lanes	0		0	0		1	0		0	0		0										
Taper Length (ft)	25			25			25			25												
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00										
Ped Bike Factor																						
Frt						0.850																
Flt Protected																						
Satd. Flow (prot)	0	1857	0	0	1863	1583	0	3486	0	0	0	0										
Flt Permitted																						
Satd. Flow (perm)	0	1807	0	0	1863	1583	0	3486	0	0	0	0										
Right Turn on Red						Yes						Yes										
Satd. Flow (RTOR)						110																
Link Speed (mph)					25					30												
Link Distance (ft)					446					483												
Travel Time (s)					12.2					13.2												
Intersection Summary																						
Area Type:	Other																					

Timings

106: SE 1st Ave & SE 3rd Street

11/7/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↕	↕	↕	↕
Traffic Volume (vph)	45	602	126	96	249
Future Volume (vph)	45	602	126	96	249
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	36.0	36.0	36.0	36.0	24.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		29.9	29.9	29.9	18.1
Actuated g/C Ratio		0.50	0.50	0.50	0.30
v/c Ratio		0.83	0.16	0.13	0.36
Control Delay		21.7	7.7	2.0	18.6
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		21.7	7.7	2.0	18.6
LOS		C	A	A	B
Approach Delay		21.7	5.3		18.6
Approach LOS		C	A		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 17.8

Intersection LOS: B

Intersection Capacity Utilization 65.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
24 s	36 s
	↖ Ø8
	36 s

Queues

106: SE 1st Ave & SE 3rd Street

11/7/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	744	145	110	381
v/c Ratio	0.83	0.16	0.13	0.36
Control Delay	21.7	7.7	2.0	18.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.7	7.7	2.0	18.6
Queue Length 50th (ft)	204	25	0	56
Queue Length 95th (ft)	302	45	17	90
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	952	981	886	1149
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.78	0.15	0.12	0.33
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	602	0	0	126	96	73	249	10	0	0	0
Future Volume (veh/h)	45	602	0	0	126	96	73	249	10	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	52	692	0	0	145	0	84	286	11			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	100	795	0	0	848	721	266	960	38			
Arrive On Green	0.46	0.46	0.00	0.00	0.46	0.00	0.34	0.34	0.34			
Sat Flow, veh/h	78	1746	0	0	1863	1583	771	2785	111			
Grp Volume(v), veh/h	744	0	0	0	145	0	199	0	182			
Grp Sat Flow(s),veh/h/ln	1824	0	0	0	1863	1583	1824	0	1843			
Q Serve(g_s), s	12.0	0.0	0.0	0.0	2.8	0.0	4.8	0.0	4.3			
Cycle Q Clear(g_c), s	22.4	0.0	0.0	0.0	2.8	0.0	4.8	0.0	4.3			
Prop In Lane	0.07		0.00	0.00		1.00	0.42		0.06			
Lane Grp Cap(c), veh/h	895	0	0	0	848	721	629	0	635			
V/C Ratio(X)	0.83	0.00	0.00	0.00	0.17	0.00	0.32	0.00	0.29			
Avail Cap(c_a), veh/h	975	0	0	0	931	792	629	0	635			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	14.9	0.0	0.0	0.0	9.6	0.0	14.5	0.0	14.3			
Incr Delay (d2), s/veh	5.8	0.0	0.0	0.0	0.1	0.0	1.3	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.6	0.0	0.0	0.0	1.4	0.0	2.7	0.0	2.4			
LnGrp Delay(d),s/veh	20.7	0.0	0.0	0.0	9.7	0.0	15.8	0.0	15.4			
LnGrp LOS	C				A		B		B			
Approach Vol, veh/h		744			145			381				
Approach Delay, s/veh		20.7			9.7			15.6				
Approach LOS		C			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		26.7		33.3				33.3				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		18.0		30.0				30.0				
Max Q Clear Time (g_c+I1), s		6.8		24.4				4.8				
Green Ext Time (p_c), s		1.7		2.9				7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			17.9									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.994			
Flt Protected						
Satd. Flow (prot)	0	1611	3518	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3518	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		10.4			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	313	12	0	0
Future Vol, veh/h	0	11	313	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	337	13	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	175	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	838	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	838	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.4	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	838			
HCM Lane V/C Ratio	-	-	0.014			
HCM Control Delay (s)	-	-	9.4			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1611	3529	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3529	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		16.4			8.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	61	299	7	0	0
Future Vol, veh/h	0	61	299	7	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	79	388	9	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	199	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	809	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	809	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.9	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	809			
HCM Lane V/C Ratio	-	-	0.098			
HCM Control Delay (s)	-	-	9.9			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.3			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.994			
Flt Protected						
Satd. Flow (prot)	0	1611	3518	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3518	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	268	11	0	0
Future Vol, veh/h	0	5	268	11	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	331	14	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	172	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	842	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	842	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.3	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	842			
HCM Lane V/C Ratio	-	-	0.007			
HCM Control Delay (s)	-	-	9.3			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.990			
Flt Protected						
Satd. Flow (prot)	0	1611	3504	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3504	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	32	259	19	0	0
Future Vol, veh/h	0	32	259	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	341	25	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	183	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	828	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	828	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.6	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBT	SBT
Capacity (veh/h)	-	-	828			
HCM Lane V/C Ratio	-	-	0.051			
HCM Control Delay (s)	-	-	9.6			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.2			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	7.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	236	13	260	0	0	0
Future Vol, veh/h	236	13	260	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	- None		- None	
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	295	16	325	0	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	325	163	0	-		
Stage 1	325	-	-	-		
Stage 2	0	-	-	-		
Critical Hdwy	6.84	6.94	-	-		
Critical Hdwy Stg 1	5.84	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	3.52	3.32	-	-		
Pot Cap-1 Maneuver	644	853	-	0		
Stage 1	705	-	-	0		
Stage 2	-	-	-	0		
Platoon blocked, %			-			
Mov Cap-1 Maneuver	644	853	-	-		
Mov Cap-2 Maneuver	644	-	-	-		
Stage 1	705	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	14.9		0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBWB	NBWB	NBWB	NBWB	NBWB	NBWB
Capacity (veh/h)	-	644	853			
HCM Lane V/C Ratio	-	0.458	0.019			
HCM Control Delay (s)	-	15.2	9.3			
HCM Lane LOS	-	C	A			
HCM 95th %tile Q(veh)	-	2.4	0.1			

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.942			0.969			0.999	
Flt Protected		0.998			0.991			0.998			0.973	
Satd. Flow (prot)	0	1798	0	0	1739	0	0	1801	0	0	1811	0
Flt Permitted		0.998			0.991			0.998			0.973	
Satd. Flow (perm)	0	1798	0	0	1739	0	0	1801	0	0	1811	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			8.0			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	33	11	0	24	50	55	0	5	87	27
Future Vol, veh/h	0	2	33	11	0	24	50	55	0	5	87	27
Peak Hour Factor	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	38	13	0	27	57	63	0	6	99	31
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.4	8.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	19%	55%
Vol Thru, %	73%	72%	39%	44%
Vol Right, %	23%	24%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	46	129	235
LT Vol	5	2	24	130
Through Vol	87	33	50	104
RT Vol	27	11	55	1
Lane Flow Rate	135	52	147	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.173	0.072	0.192	0.347
Departure Headway (Hd)	4.6	4.934	4.724	4.677
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	776	722	756	766
Service Time	2.647	2.99	2.772	2.717
HCM Lane V/C Ratio	0.174	0.072	0.194	0.349
HCM Control Delay	8.6	8.4	8.9	10.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.2	0.7	1.6

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	130	104	1
Future Vol, veh/h	0	130	104	1
Peak Hour Factor	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	148	118	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.2
HCM LOS	B

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.875			0.850			0.850			0.999		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1630	0	1770	1863	2787	1770	5085	1583	3433	5080	0
Flt Permitted	0.950			0.501			0.950			0.950		
Satd. Flow (perm)	1770	1630	0	933	1863	2787	1770	5085	1583	3433	5080	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		148				208			150			
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		338			417			700			371	
Travel Time (s)		9.2			11.4			10.6			5.6	

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	147	72	203	26	193	69	1655	169	188	2439
Future Volume (vph)	147	72	203	26	193	69	1655	169	188	2439
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	47.0	47.0	44.0	44.0	16.0	16.0	53.0	53.0	16.0	53.0
Total Split (%)	29.4%	29.4%	27.5%	27.5%	10.0%	10.0%	33.1%	33.1%	10.0%	33.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	35.9	35.9	40.0	40.0	56.4	8.6	47.7	47.7	10.4	49.5
Actuated g/C Ratio	0.22	0.22	0.25	0.25	0.35	0.05	0.30	0.30	0.06	0.31
v/c Ratio	0.40	0.94	0.94	0.06	0.19	0.78	1.17	0.32	0.91	1.68
Control Delay	54.8	69.3	102.6	47.1	4.8	98.5	146.2	31.8	112.2	340.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	69.3	102.6	47.1	4.8	98.5	146.2	31.8	112.2	340.6
LOS	D	E	F	D	A	F	F	C	F	F
Approach Delay		65.5		54.4			134.2			324.3
Approach LOS		E		D			F			F

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 113 (71%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.68

Intersection Signal Delay: 211.8

Intersection LOS: F

Intersection Capacity Utilization 109.7%

ICU Level of Service H

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
16 s	53 s	47 s	44 s
 Ø5	 Ø6 (R)		
16 s	53 s		

Queues

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	453	218	28	208	74	1780	182	202	2632
v/c Ratio	0.40	0.94	0.94	0.06	0.19	0.78	1.17	0.32	0.91	1.68
Control Delay	54.8	69.3	102.6	47.1	4.8	98.5	146.2	31.8	112.2	340.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.8	69.3	102.6	47.1	4.8	98.5	146.2	31.8	112.2	340.6
Queue Length 50th (ft)	138	328	226	23	0	78	~852	89	~118	~1509
Queue Length 95th (ft)	207	#514	#410	52	33	m#139	m#939	m174	#207	#1586
Internal Link Dist (ft)		258		337			620			291
Turn Bay Length (ft)	170		100		100	320		400	615	
Base Capacity (vph)	453	527	233	465	1117	100	1515	576	223	1571
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.86	0.94	0.06	0.19	0.74	1.17	0.32	0.91	1.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	147	72	350	203	26	193	69	1655	169	188	2439	8
Future Volume (vph)	147	72	350	203	26	193	69	1655	169	188	2439	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Flt	1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1631		1770	1863	2787	1770	5085	1583	3433	5083	
Flt Permitted	0.95	1.00		0.50	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1631		934	1863	2787	1770	5085	1583	3433	5083	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	158	77	376	218	28	208	74	1780	182	202	2623	9
RTOR Reduction (vph)	0	115	0	0	0	142	0	0	105	0	0	0
Lane Group Flow (vph)	158	338	0	218	28	66	74	1780	77	202	2632	0
Turn Type	Split	NA		Perm	NA pm+ov	Prot	NA	Perm	Prot	NA		
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	35.9	35.9		40.0	40.0	50.4	8.6	47.7	47.7	10.4	49.5	
Effective Green, g (s)	35.9	35.9		40.0	40.0	50.4	8.6	47.7	47.7	10.4	49.5	
Actuated g/C Ratio	0.22	0.22		0.25	0.25	0.31	0.05	0.30	0.30	0.07	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	397	365		233	465	877	95	1515	471	223	1572	
v/s Ratio Prot	0.09	c0.21			0.02	0.00	0.04	0.35		c0.06	c0.52	
v/s Ratio Perm				c0.23		0.02			0.05			
v/c Ratio	0.40	0.93		0.94	0.06	0.07	0.78	1.17	0.16	0.91	1.67	
Uniform Delay, d1	52.8	60.8		58.7	45.7	38.4	74.8	56.1	41.4	74.3	55.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	1.35	3.04	1.00	1.00	
Incremental Delay, d2	0.2	28.6		40.8	0.0	0.0	24.9	84.7	0.6	34.9	306.3	
Delay (s)	53.1	89.3		99.5	45.7	38.5	84.2	160.5	126.6	109.2	361.5	
Level of Service	D	F		F	D	D	F	F	F	F	F	
Approach Delay (s)		80.0			68.2			154.7			343.5	
Approach LOS		E			E			F			F	
Intersection Summary												
HCM 2000 Control Delay		230.6										
HCM 2000 Volume to Capacity ratio		1.21										
Actuated Cycle Length (s)		160.0							26.0			
Intersection Capacity Utilization		109.7%										
Analysis Period (min)		15										
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.892				0.865			0.850		0.996	
Flt Protected		0.991					0.950				0.999	
Satd. Flow (prot)	0	1647	0	0	0	1611	1770	5085	1583	0	5060	0
Flt Permitted		0.991					0.950				0.999	
Satd. Flow (perm)	0	1647	0	0	0	1611	1770	5085	1583	0	5060	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 44.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↘	↑↑↑	↗		↑↑↑	
Traffic Vol, veh/h	43	5	189	0	0	4	119	1915	32	78	2944	89
Future Vol, veh/h	43	5	189	0	0	4	119	1915	32	78	2944	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	5	203	0	0	4	128	2059	34	84	3166	96

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4461	5696	1631	-	-	1030	3261	0	0	2059	0	0
Stage 1	3381	3381	-	-	-	-	-	-	-	-	-	-
Stage 2	1080	2315	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 2	0	~ 77	0	0	198	~ 27	-	-	117	-	-
Stage 1	~ 4	19	-	0	0	-	-	-	-	-	-	-
Stage 2	210	71	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	~ 77	-	-	198	~ 27	-	-	117	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 4	19	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		23.6	113.8	2.3
HCM LOS	-	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 27	-	-	-	198	117	-	-
HCM Lane V/C Ratio	4.739	-	-	-0.022	0.717	-	-	-
HCM Control Delay (s)	1975.7	-	-	-	23.6	90.3	-	-
HCM Lane LOS	F	-	-	-	C	F	-	-
HCM 95th %tile Q(veh)	15.7	-	-	-	0.1	3.9	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5080	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5080	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗↗	↗↗↗	
Traffic Vol, veh/h	0	13	0	1943	3122	13
Future Vol, veh/h	0	13	0	1943	3122	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	0	2089	3357	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1685	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	71	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	71	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	67.7	0		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	71	-	-		
HCM Lane V/C Ratio	-	0.197	-	-		
HCM Control Delay (s)	-	67.7	-	-		
HCM Lane LOS	-	F	-	-		
HCM 95th %tile Q(veh)	-	0.7	-	-		

Lanes and Geometrics
104: US 1 & SE 8th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗↗	↗↗↗	
Traffic Vol, veh/h	0	8	0	1943	3135	8
Future Vol, veh/h	0	8	0	1943	3135	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	0	2089	3371	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1690	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	70	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	70	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	63.5	0		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	70	-	-		
HCM Lane V/C Ratio	-	0.123	-	-		
HCM Control Delay (s)	-	63.5	-	-		
HCM Lane LOS	-	F	-	-		
HCM 95th %tile Q(veh)	-	0.4	-	-		

Lanes and Geometrics
105: US 1 & SE 9th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.900						0.850			0.850		
Flt Protected	0.992			0.950			0.950			0.950		
Satd. Flow (prot)	0	1663	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Flt Permitted	0.133			0.950			0.950			0.950		
Satd. Flow (perm)	0	223	0	1681	1694	1583	1770	5085	1583	3433	5080	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)	73						72			116		
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	272			346			347			300		
Travel Time (s)	7.4			9.4			5.3			4.5		

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	25	13	30	2	23	114	2007	39	33	2976
Future Volume (vph)	25	13	30	2	23	114	2007	39	33	2976
Turn Type	Perm	NA	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases		7	8	8	1	5	2		1	6
Permitted Phases	7				8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	24.0	24.0	36.0	36.0	20.0	20.0	80.0	80.0	20.0	80.0
Total Split (%)	15.0%	15.0%	22.5%	22.5%	12.5%	12.5%	50.0%	50.0%	12.5%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		17.5	6.8	6.8	14.2	17.0	110.2	110.2	5.9	96.8
Actuated g/C Ratio		0.11	0.04	0.04	0.09	0.11	0.69	0.69	0.04	0.60
v/c Ratio		1.88	0.25	0.25	0.13	0.68	0.64	0.04	0.29	1.09
Control Delay		452.3	82.4	82.3	1.3	86.9	16.5	0.1	110.5	72.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		452.3	82.4	82.3	1.3	86.9	16.5	0.1	110.5	72.4
LOS		F	F	F	A	F	B	A	F	E
Approach Delay		452.3		48.4			20.0			72.8
Approach LOS		F		D			B			E

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 40 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.88

Intersection Signal Delay: 61.8

Intersection LOS: E

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
20 s	80 s	24 s	36 s
 Ø5	 Ø6 (R)		
20 s	80 s		

Queues

105: US 1 & SE 9th Street

11/7/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	167	18	18	26	128	2255	44	37	3356
v/c Ratio	1.88	0.25	0.25	0.13	0.68	0.64	0.04	0.29	1.09
Control Delay	452.3	82.4	82.3	1.3	86.9	16.5	0.1	110.5	72.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	452.3	82.4	82.3	1.3	86.9	16.5	0.1	110.5	72.4
Queue Length 50th (ft)	~195	20	20	0	131	518	0	21	~1531
Queue Length 95th (ft)	#332	49	49	0	198	600	0	m17	m931
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	89	309	312	272	190	3502	1126	278	3072
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.88	0.06	0.06	0.10	0.67	0.64	0.04	0.13	1.09

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	13	110	30	2	23	114	2007	39	33	2976	11
Future Volume (vph)	25	13	110	30	2	23	114	2007	39	33	2976	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1662		1681	1694	1583	1770	5085	1583	3433	5083	
Flt Permitted		0.13		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		224		1681	1694	1583	1770	5085	1583	3433	5083	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	28	15	124	34	2	26	128	2255	44	37	3344	12
RTOR Reduction (vph)	0	65	0	0	0	24	0	0	15	0	0	0
Lane Group Flow (vph)	0	102	0	18	18	2	128	2255	29	37	3356	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		17.5		4.4	4.4	9.3	17.0	106.2	106.2	4.9	94.1	
Effective Green, g (s)		17.5		4.4	4.4	9.3	17.0	106.2	106.2	4.9	94.1	
Actuated g/C Ratio		0.11		0.03	0.03	0.06	0.11	0.66	0.66	0.03	0.59	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		24		46	46	92	188	3375	1050	105	2989	
v/s Ratio Prot				c0.01	0.01	0.00	c0.07	c0.44		0.01	c0.66	
v/s Ratio Perm		c0.46				0.00			0.02			
v/c Ratio		4.25		0.39	0.39	0.02	0.68	0.67	0.03	0.35	1.12	
Uniform Delay, d1		71.2		76.5	76.5	71.0	68.9	16.3	9.2	76.0	33.0	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.47	0.98	
Incremental Delay, d2		1554.5		2.0	2.0	0.0	7.8	1.1	0.0	0.1	55.7	
Delay (s)		1625.7		78.5	78.5	71.1	76.7	17.3	9.3	111.8	88.1	
Level of Service		F		E	E	E	E	B	A	F	F	
Approach Delay (s)		1625.7			75.4			20.3			88.3	
Approach LOS		F			E			C			F	
Intersection Summary												
HCM 2000 Control Delay			103.3				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.45									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			27.0		
Intersection Capacity Utilization			96.7%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected												
Satd. Flow (prot)	0	1857	0	0	1863	1583	0	3483	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1807	0	0	1863	1583	0	3483	0	0	0	0
Right Turn on Red						Yes						Yes
Satd. Flow (RTOR)						110						
Link Speed (mph)					25					30		
Link Distance (ft)					446					483		
Travel Time (s)					12.2					13.2		

Intersection Summary

Area Type: Other

Timings

106: SE 1st Ave & SE 3rd Street

11/7/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↕	↑	↗	↕
Traffic Volume (vph)	45	613	126	96	249
Future Volume (vph)	45	613	126	96	249
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	36.0	36.0	36.0	36.0	24.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		30.0	30.0	30.0	18.0
Actuated g/C Ratio		0.50	0.50	0.50	0.30
v/c Ratio		0.84	0.16	0.13	0.37
Control Delay		22.6	7.7	2.1	18.7
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		22.6	7.7	2.1	18.7
LOS		C	A	A	B
Approach Delay		22.6	5.3		18.7
Approach LOS		C	A		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 65.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
24 s	36 s
	↖ Ø8
	36 s

Queues

106: SE 1st Ave & SE 3rd Street

11/7/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	757	145	110	388
v/c Ratio	0.84	0.16	0.13	0.37
Control Delay	22.6	7.7	2.1	18.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.6	7.7	2.1	18.7
Queue Length 50th (ft)	208	25	0	58
Queue Length 95th (ft)	315	46	17	91
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	951	980	885	1138
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.80	0.15	0.12	0.34
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	613	0	0	126	96	79	249	10	0	0	0
Future Volume (veh/h)	45	613	0	0	126	96	79	249	10	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	52	705	0	0	145	0	91	286	11			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	99	805	0	0	858	729	278	929	37			
Arrive On Green	0.46	0.46	0.00	0.00	0.46	0.00	0.34	0.34	0.34			
Sat Flow, veh/h	76	1748	0	0	1863	1583	819	2737	109			
Grp Volume(v), veh/h	757	0	0	0	145	0	202	0	186			
Grp Sat Flow(s),veh/h/ln	1824	0	0	0	1863	1583	1822	0	1843			
Q Serve(g_s), s	12.3	0.0	0.0	0.0	2.7	0.0	5.0	0.0	4.4			
Cycle Q Clear(g_c), s	22.9	0.0	0.0	0.0	2.7	0.0	5.0	0.0	4.4			
Prop In Lane	0.07		0.00	0.00		1.00	0.45		0.06			
Lane Grp Cap(c), veh/h	904	0	0	0	858	729	619	0	626			
V/C Ratio(X)	0.84	0.00	0.00	0.00	0.17	0.00	0.33	0.00	0.30			
Avail Cap(c_a), veh/h	975	0	0	0	931	792	619	0	626			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	14.8	0.0	0.0	0.0	9.5	0.0	14.7	0.0	14.5			
Incr Delay (d2), s/veh	6.1	0.0	0.0	0.0	0.1	0.0	1.4	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.9	0.0	0.0	0.0	1.4	0.0	2.7	0.0	2.5			
LnGrp Delay(d),s/veh	21.0	0.0	0.0	0.0	9.6	0.0	16.1	0.0	15.8			
LnGrp LOS	C				A		B		B			
Approach Vol, veh/h		757			145			388				
Approach Delay, s/veh		21.0			9.6			15.9				
Approach LOS		C			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		26.4		33.6				33.6				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		18.0		30.0				30.0				
Max Q Clear Time (g_c+I1), s		7.0		24.9				4.7				
Green Ext Time (p_c), s		1.7		2.8				7.5				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.995			
Flt Protected						
Satd. Flow (prot)	0	1611	3522	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3522	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		10.4			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	319	12	0	0
Future Vol, veh/h	0	11	319	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	343	13	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	178	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	834	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	834	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.4	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	834			
HCM Lane V/C Ratio	-	-	0.014			
HCM Control Delay (s)	-	-	9.4			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.984			
Flt Protected						
Satd. Flow (prot)	0	1611	3483	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3483	0	0	0
Link Speed (mph)	25		25			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		16.4			8.6
Intersection Summary						
Area Type:	Other					

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	61	305	37	0	0
Future Vol, veh/h	0	61	305	37	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	79	396	48	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	222	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	782	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	782	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	10.1	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	782			
HCM Lane V/C Ratio	-	-	0.101			
HCM Control Delay (s)	-	-	10.1			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.3			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.992			
Flt Protected						
Satd. Flow (prot)	0	1611	3511	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3511	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	40	299	16	0	0
Future Vol, veh/h	0	40	299	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	49	369	20	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	194	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	815	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %	-	-	-	-		
Mov Cap-1 Maneuver	-	815	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	9.7		0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR		
Capacity (veh/h)	-	-	815	-		
HCM Lane V/C Ratio	-	-	0.061	-		
HCM Control Delay (s)	-	-	9.7	-		
HCM Lane LOS	-	-	A	-		
HCM 95th %tile Q(veh)	-	-	0.2	-		

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.991			
Flt Protected						
Satd. Flow (prot)	0	1611	3507	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3507	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	32	295	19	0	0
Future Vol, veh/h	0	32	295	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	388	25	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	207	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	799	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	799	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.8	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	799			
HCM Lane V/C Ratio	-	-	0.053			
HCM Control Delay (s)	-	-	9.8			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.2			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 7.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	236	44	265	0	0	0
Future Vol, veh/h	236	44	265	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	295	55	331	0	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	331	166
Stage 1	331	-
Stage 2	0	-
Critical Hdwy	6.84	6.94
Critical Hdwy Stg 1	5.84	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	3.52	3.32
Pot Cap-1 Maneuver	638	849
Stage 1	700	-
Stage 2	-	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	638	849
Mov Cap-2 Maneuver	638	-
Stage 1	700	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	14.5	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBWBLn1	NBWBLn2
Capacity (veh/h)	- 638	849
HCM Lane V/C Ratio	- 0.462	0.065
HCM Control Delay (s)	- 15.4	9.5
HCM Lane LOS	- C	A
HCM 95th %tile Q(veh)	- 2.4	0.2

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.967			0.942			0.969			0.999	
Flt Protected		0.998			0.991			0.998			0.973	
Satd. Flow (prot)	0	1798	0	0	1739	0	0	1801	0	0	1811	0
Flt Permitted		0.998			0.991			0.998			0.973	
Satd. Flow (perm)	0	1798	0	0	1739	0	0	1801	0	0	1811	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			8.0			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	33	11	0	24	50	55	0	5	87	27
Future Vol, veh/h	0	2	33	11	0	24	50	55	0	5	87	27
Peak Hour Factor	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	38	13	0	27	57	63	0	6	99	31
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.4	8.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	19%	55%
Vol Thru, %	73%	72%	39%	44%
Vol Right, %	23%	24%	43%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	46	129	235
LT Vol	5	2	24	130
Through Vol	87	33	50	104
RT Vol	27	11	55	1
Lane Flow Rate	135	52	147	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.173	0.072	0.192	0.347
Departure Headway (Hd)	4.6	4.934	4.724	4.677
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	776	722	756	766
Service Time	2.647	2.99	2.772	2.717
HCM Lane V/C Ratio	0.174	0.072	0.194	0.349
HCM Control Delay	8.6	8.4	8.9	10.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.2	0.7	1.6

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	130	104	1
Future Vol, veh/h	0	130	104	1
Peak Hour Factor	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	148	118	1
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.2
HCM LOS	B

Lanes and Geometrics
115: SE 1st Avenue & Driveway 1

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.974			
Flt Protected						
Satd. Flow (prot)	0	1611	3447	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3447	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	400		235			170
Travel Time (s)	10.9		5.3			3.9

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	33	302	63	0	0
Future Vol, veh/h	0	33	302	63	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	35	325	68	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	196	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	812	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	812	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	9.6	0				
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	812			
HCM Lane V/C Ratio	-	-	0.044			
HCM Control Delay (s)	-	-	9.6			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

Lanes and Geometrics
116: SE 7th Street & Driveway 2

11/7/2016

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.964		0.989	
Flt Protected		0.989			0.956	
Satd. Flow (prot)	0	1842	1796	0	1761	0
Flt Permitted		0.989			0.956	
Satd. Flow (perm)	0	1842	1796	0	1761	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		190	195		200	
Travel Time (s)		4.3	4.4		4.5	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↗	↗		↘	
Traffic Vol, veh/h	5	16	105	38	31	3
Future Vol, veh/h	5	16	105	38	31	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	17	113	41	33	3
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	154	0	-	0	161	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1426	-	-	-	830	916
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1426	-	-	-	827	916
Mov Cap-2 Maneuver	-	-	-	-	827	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	991	-
Approach	EB		WB		SB	
HCM Control Delay, s	1.8		0		9.5	
HCM LOS					A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1426	-	-	-	834	
HCM Lane V/C Ratio	0.004	-	-	-	0.044	
HCM Control Delay (s)	7.5	0	-	-	9.5	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.897			0.850			0.850			0.998		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1671	0	1770	1863	2787	1770	5085	1583	3433	5075	0
Flt Permitted	0.950			0.602			0.950			0.950		
Satd. Flow (perm)	1770	1671	0	1121	1863	2787	1770	5085	1583	3433	5075	0
Right Turn on Red	Yes			Yes			Yes			Yes		
Satd. Flow (RTOR)	65			73			109			1		
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	338			417			700			371		
Travel Time (s)	9.2			11.4			10.6			5.6		

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	187	74	68	74	68	133	2307	46	77	1629
Future Volume (vph)	187	74	68	74	68	133	2307	46	77	1629
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	46.0	46.0	44.0	44.0	24.0	24.0	46.0	46.0	24.0	46.0
Total Split (%)	28.8%	28.8%	27.5%	27.5%	15.0%	15.0%	28.8%	28.8%	15.0%	28.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	23.9	23.9	14.9	14.9	28.6	17.2	87.4	87.4	7.8	78.0
Actuated g/C Ratio	0.15	0.15	0.09	0.09	0.18	0.11	0.55	0.55	0.05	0.49
v/c Ratio	0.76	0.83	0.70	0.46	0.13	0.75	0.89	0.05	0.50	0.72
Control Delay	82.7	70.7	102.3	75.9	10.1	103.5	25.8	0.8	84.1	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	70.7	102.3	75.9	10.1	103.5	25.8	0.8	84.1	36.6
LOS	F	E	F	E	B	F	C	A	F	D
Approach Delay		76.0		63.2			29.5			38.7
Approach LOS		E		E			C			D

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 156 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 38.3

Intersection LOS: D

Intersection Capacity Utilization 89.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	46 s	46 s	44 s
 Ø5	 Ø6 (R)		
24 s	46 s		

Queues

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	201	254	73	80	73	143	2481	49	83	1771
v/c Ratio	0.76	0.83	0.70	0.46	0.13	0.75	0.89	0.05	0.50	0.72
Control Delay	82.7	70.7	102.3	75.9	10.1	103.5	25.8	0.8	84.1	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	70.7	102.3	75.9	10.1	103.5	25.8	0.8	84.1	36.6
Queue Length 50th (ft)	206	199	75	81	0	157	261	0	44	523
Queue Length 95th (ft)	279	285	130	133	24	m190	#1186	m0	74	#810
Internal Link Dist (ft)		258		337			620			291
Turn Bay Length (ft)	170		100		100	320		400	615	
Base Capacity (vph)	442	466	266	442	715	209	2778	914	364	2473
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.55	0.27	0.18	0.10	0.68	0.89	0.05	0.23	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	74	162	68	74	68	133	2307	46	77	1629	18
Future Volume (vph)	187	74	162	68	74	68	133	2307	46	77	1629	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1671		1770	1863	2787	1770	5085	1583	3433	5077	
Flt Permitted	0.95	1.00		0.60	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1671		1121	1863	2787	1770	5085	1583	3433	5077	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	201	80	174	73	80	73	143	2481	49	83	1752	19
RTOR Reduction (vph)	0	55	0	0	0	63	0	0	22	0	1	0
Lane Group Flow (vph)	201	199	0	73	80	10	143	2481	27	83	1770	0
Turn Type	Split	NA		Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	23.9	23.9		14.9	14.9	22.7	17.2	87.4	87.4	7.8	78.0	
Effective Green, g (s)	23.9	23.9		14.9	14.9	22.7	17.2	87.4	87.4	7.8	78.0	
Actuated g/C Ratio	0.15	0.15		0.09	0.09	0.14	0.11	0.55	0.55	0.05	0.49	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	264	249		104	173	395	190	2777	864	167	2475	
v/s Ratio Prot	0.11	c0.12			0.04	0.00	c0.08	c0.49		0.02	0.35	
v/s Ratio Perm				c0.07		0.00			0.02			
v/c Ratio	0.76	0.80		0.70	0.46	0.03	0.75	0.89	0.03	0.50	0.72	
Uniform Delay, d1	65.3	65.7		70.4	68.8	59.1	69.3	32.2	16.8	74.2	32.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.27	0.63	1.00	1.00	1.00	
Incremental Delay, d2	11.0	15.2		16.0	0.7	0.0	9.5	3.3	0.0	0.8	1.8	
Delay (s)	76.4	80.9		86.4	69.5	59.1	97.5	23.8	16.8	75.0	34.1	
Level of Service	E	F		F	E	E	F	C	B	E	C	
Approach Delay (s)		78.9			71.6			27.6			35.9	
Approach LOS		E			E			C			D	
Intersection Summary												
HCM 2000 Control Delay			36.9		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					26.0		
Intersection Capacity Utilization			89.3%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.912				0.865			0.850		0.997	
Flt Protected		0.988					0.950					
Satd. Flow (prot)	0	1678	0	0	0	1611	1770	5085	1583	0	5070	0
Flt Permitted		0.988					0.950					
Satd. Flow (perm)	0	1678	0	0	0	1611	1770	5085	1583	0	5070	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 57.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↘	↑↑↑	↗		↑↑↑	
Traffic Vol, veh/h	19	8	51	0	0	8	311	2562	50	11	1859	44
Future Vol, veh/h	19	8	51	0	0	8	311	2562	50	11	1859	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	9	55	0	0	9	334	2755	54	12	1999	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3817	5470	1023	-	-	1377	2046	0	0	2755	0	0
Stage 1	2046	2046	-	-	-	-	-	-	-	-	-	-
Stage 2	1771	3424	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 4	0	200	0	0	115	~ 118	-	-	51	-	-
Stage 1	36	98	-	0	0	-	-	-	-	-	-	-
Stage 2	76	18	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	200	-	-	115	~ 118	-	-	51	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	36	98	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		38.8	96.3	0.6
HCM LOS	-	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 118	-	-	-	115	51	-	-
HCM Lane V/C Ratio	2.834	-	-	-0.075	0.232	-	-	-
HCM Control Delay (s)	\$ 905.5	-	-	-	38.8	95.7	-	-
HCM Lane LOS	F	-	-	-	E	F	-	-
HCM 95th %tile Q(veh)	31.1	-	-	-	0.2	0.8	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh		0.1				
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	
Traffic Vol, veh/h	0	14	0	2589	1910	5
Future Vol, veh/h	0	14	0	2589	1910	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	0	2784	2054	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1030	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	198	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	198	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	24.7	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	198	-	-		
HCM Lane V/C Ratio	-	0.076	-	-		
HCM Control Delay (s)	-	24.7	-	-		
HCM Lane LOS	-	C	-	-		
HCM 95th %tile Q(veh)	-	0.2	-	-		

Lanes and Geometrics
104: US 1 & SE 8th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5080	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5080	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection							
Int Delay, s/veh		0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗↗	↗↗↗		
Traffic Vol, veh/h	0	10	0	2589	1988	17	
Future Vol, veh/h	0	10	0	2589	1988	17	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	93	93	93	93	93	93	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	0	11	0	2784	2138	18	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	1078	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	7.14	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.92	-	-	-	-	
Pot Cap-1 Maneuver	0	184	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	184	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	25.8	0		0			
HCM LOS	D						
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR			
Capacity (veh/h)	-	184	-	-			
HCM Lane V/C Ratio	-	0.058	-	-			
HCM Control Delay (s)	-	25.8	-	-			
HCM Lane LOS	-	D	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Lanes and Geometrics
105: US 1 & SE 9th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.889						0.850			0.850		
Flt Protected	0.992			0.950			0.950			0.950		
Satd. Flow (prot)	0	1643	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Flt Permitted	0.160			0.950			0.950			0.950		
Satd. Flow (perm)	0	265	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)	68						84			116		
Link Speed (mph)	25						25			45		
Link Distance (ft)	272						346			347		
Travel Time (s)	7.4						9.4			5.3		

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	12	2	136	29	81	70	2619	83	49	1761
Future Volume (vph)	12	2	136	29	81	70	2619	83	49	1761
Turn Type	Perm	NA	Split	NA pm+ov	Prot	NA	Perm	Prot	NA	NA
Protected Phases		7	8	8	1	5	2		1	6
Permitted Phases	7				8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	21.0	21.0	30.0	30.0	24.0	24.0	85.0	85.0	24.0	85.0
Total Split (%)	13.1%	13.1%	18.8%	18.8%	15.0%	15.0%	53.1%	53.1%	15.0%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		14.5	12.5	12.5	25.4	10.5	99.6	99.6	6.4	95.5
Actuated g/C Ratio		0.09	0.08	0.08	0.16	0.07	0.62	0.62	0.04	0.60
v/c Ratio		0.98	0.65	0.65	0.26	0.63	0.86	0.08	0.37	0.61
Control Delay		110.5	93.0	93.0	12.0	95.2	29.0	1.0	70.1	20.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		110.5	93.0	93.0	12.0	95.2	29.0	1.0	70.1	20.2
LOS		F	F	F	B	F	C	A	E	C
Approach Delay		110.5		66.4			29.9			21.6
Approach LOS		F		E			C			C

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 158 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 29.9

Intersection LOS: C

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	85 s	21 s	30 s
 Ø5	 Ø6 (R)		
24 s	85 s		

Queues

105: US 1 & SE 9th Street

11/7/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	83	85	87	84	73	2728	86	51	1859
v/c Ratio	0.98	0.65	0.65	0.26	0.63	0.86	0.08	0.37	0.61
Control Delay	110.5	93.0	93.0	12.0	95.2	29.0	1.0	70.1	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.5	93.0	93.0	12.0	95.2	29.0	1.0	70.1	20.2
Queue Length 50th (ft)	17	92	94	0	76	813	0	27	215
Queue Length 95th (ft)	#141	153	156	49	131	993	11	m42	458
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	85	246	251	421	188	3164	1028	364	3029
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.35	0.35	0.20	0.39	0.86	0.08	0.14	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	65	136	29	81	70	2619	83	49	1761	24
Future Volume (vph)	12	2	65	136	29	81	70	2619	83	49	1761	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.89		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644		1681	1713	1583	1770	5085	1583	3433	5075	
Flt Permitted		0.16		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		264		1681	1713	1583	1770	5085	1583	3433	5075	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	12	2	68	142	30	84	73	2728	86	51	1834	25
RTOR Reduction (vph)	0	62	0	0	0	74	0	0	32	0	1	0
Lane Group Flow (vph)	0	21	0	85	87	10	73	2728	54	51	1858	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		14.5		12.5	12.5	18.9	10.5	99.6	99.6	6.4	95.5	
Effective Green, g (s)		14.5		12.5	12.5	18.9	10.5	99.6	99.6	6.4	95.5	
Actuated g/C Ratio		0.09		0.08	0.08	0.12	0.07	0.62	0.62	0.04	0.60	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		23		131	133	186	116	3165	985	137	3029	
v/s Ratio Prot				0.05	c0.05	0.00	c0.04	c0.54		0.01	0.37	
v/s Ratio Perm		c0.08				0.00			0.03			
v/c Ratio		0.92		0.65	0.65	0.05	0.63	0.86	0.05	0.37	0.61	
Uniform Delay, d1		72.2		71.6	71.6	62.6	72.9	24.6	11.8	74.8	20.5	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.90	
Incremental Delay, d2		149.5		8.0	8.5	0.0	7.5	3.4	0.1	0.5	0.7	
Delay (s)		221.7		79.6	80.1	62.7	80.3	28.0	11.9	64.9	19.3	
Level of Service		F		E	F	E	F	C	B	E	B	
Approach Delay (s)		221.7			74.2			28.8			20.5	
Approach LOS		F			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			31.1		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					27.0		
Intersection Capacity Utilization			80.9%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected												
Satd. Flow (prot)	0	1848	0	0	1863	1583	0	3472	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1559	0	0	1863	1583	0	3472	0	0	0	0
Right Turn on Red						Yes						Yes
Satd. Flow (RTOR)						155						
Link Speed (mph)					25					30		
Link Distance (ft)					446					483		
Travel Time (s)					12.2					13.2		

Intersection Summary

Area Type: Other

Timings

106: SE 1st Ave & SE 3rd Street

11/7/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↕	↕	↕	↕
Traffic Volume (vph)	55	288	295	146	550
Future Volume (vph)	55	288	295	146	550
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		18.3	18.3	18.3	29.7
Actuated g/C Ratio		0.30	0.30	0.30	0.50
v/c Ratio		0.77	0.55	0.26	0.51
Control Delay		29.7	20.5	3.8	12.6
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		29.7	20.5	3.8	12.6
LOS		C	C	A	B
Approach Delay		29.7	15.0		12.6
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 72.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
30 s	30 s
	↖ Ø8
	30 s

Queues

106: SE 1st Ave & SE 3rd Street

11/7/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	365	314	155	885
v/c Ratio	0.77	0.55	0.26	0.51
Control Delay	29.7	20.5	3.8	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.7	20.5	3.8	12.6
Queue Length 50th (ft)	118	93	0	105
Queue Length 95th (ft)	176	137	29	184
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	623	745	726	1722
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.42	0.21	0.51
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	288	0	0	295	146	264	550	18	0	0	0
Future Volume (veh/h)	55	288	0	0	295	146	264	550	18	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	59	306	0	0	314	0	281	585	19			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	116	423	0	0	579	492	542	1207	40			
Arrive On Green	0.31	0.31	0.00	0.00	0.31	0.00	0.49	0.49	0.49			
Sat Flow, veh/h	148	1361	0	0	1863	1583	1108	2465	82			
Grp Volume(v), veh/h	365	0	0	0	314	0	458	0	427			
Grp Sat Flow(s),veh/h/ln	1508	0	0	0	1863	1583	1807	0	1848			
Q Serve(g_s), s	5.5	0.0	0.0	0.0	8.4	0.0	10.4	0.0	9.2			
Cycle Q Clear(g_c), s	13.8	0.0	0.0	0.0	8.4	0.0	10.4	0.0	9.2			
Prop In Lane	0.16		0.00	0.00		1.00	0.61		0.04			
Lane Grp Cap(c), veh/h	538	0	0	0	579	492	885	0	905			
V/C Ratio(X)	0.68	0.00	0.00	0.00	0.54	0.00	0.52	0.00	0.47			
Avail Cap(c_a), veh/h	687	0	0	0	745	633	885	0	905			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.8	0.0	0.0	0.0	17.1	0.0	10.5	0.0	10.2			
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.0	0.8	0.0	2.2	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	0.0	4.4	0.0	5.6	0.0	5.1			
LnGrp Delay(d),s/veh	20.6	0.0	0.0	0.0	17.9	0.0	12.6	0.0	11.9			
LnGrp LOS	C				B		B		B			
Approach Vol, veh/h		365			314			885				
Approach Delay, s/veh		20.6			17.9			12.3				
Approach LOS		C			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		35.4		24.6				24.6				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		24.0		24.0				24.0				
Max Q Clear Time (g_c+I1), s		12.4		15.8				10.4				
Green Ext Time (p_c), s		4.4		2.8				3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			15.4									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1611	3532	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3532	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		8.6			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	822	13	0	0
Future Vol, veh/h	0	5	822	13	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	865	14	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	439	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	566	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	566	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.4	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBT	SBT
Capacity (veh/h)	-	-	566			
HCM Lane V/C Ratio	-	-	0.009			
HCM Control Delay (s)	-	-	11.4			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1611	3529	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3529	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		13.6			8.6
Intersection Summary						
Area Type:	Other					

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	170	659	15	0	0
Future Vol, veh/h	0	170	659	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	185	716	16	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	366	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	631	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	631	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	13.1	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	631			
HCM Lane V/C Ratio	-	-	0.293			
HCM Control Delay (s)	-	-	13.1			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	1.2			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1611	3532	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3532	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	683	11	0	0
Future Vol, veh/h	0	2	683	11	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	785	13	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	399	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	601	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	601	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	601			
HCM Lane V/C Ratio	-	-	0.004			
HCM Control Delay (s)	-	-	11			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	677	1	0	0
Future Vol, veh/h	0	13	677	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	769	1	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	385	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	613	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	613	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	613			
HCM Lane V/C Ratio	-	-	0.024			
HCM Control Delay (s)	-	-	11			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.1			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/7/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	6.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	228	130	522	0	0	0
Future Vol, veh/h	228	130	522	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	134	538	0	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	538	269	0	-		
Stage 1	538	-	-	-		
Stage 2	0	-	-	-		
Critical Hdwy	6.84	6.94	-	-		
Critical Hdwy Stg 1	5.84	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	3.52	3.32	-	-		
Pot Cap-1 Maneuver	473	729	-	0		
Stage 1	549	-	-	0		
Stage 2	-	-	-	0		
Platoon blocked, %			-			
Mov Cap-1 Maneuver	473	729	-	-		
Mov Cap-2 Maneuver	473	-	-	-		
Stage 1	549	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	16.7	0				
HCM LOS	C					
Minor Lane/Major Mvmt	NBWBLn1	WBLn2				
Capacity (veh/h)	-	473	729			
HCM Lane V/C Ratio	-	0.497	0.184			
HCM Control Delay (s)	-	19.9	11			
HCM Lane LOS	-	C	B			
HCM 95th %tile Q(veh)	-	2.7	0.7			

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.937			0.975			0.991	
Flt Protected		0.997			0.997			0.998			0.985	
Satd. Flow (prot)	0	1757	0	0	1740	0	0	1813	0	0	1818	0
Flt Permitted		0.997			0.997			0.998			0.985	
Satd. Flow (perm)	0	1757	0	0	1740	0	0	1813	0	0	1818	0
Link Speed (mph)		25			75			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			2.7			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 11.7

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	13	10	0	20	156	154	0	7	152	36
Future Vol, veh/h	0	2	13	10	0	20	156	154	0	7	152	36
Peak Hour Factor	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	16	12	0	25	193	190	0	9	188	44
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.6	13	10.9
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	8%	6%	30%
Vol Thru, %	78%	52%	47%	63%
Vol Right, %	18%	40%	47%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	25	330	119
LT Vol	7	2	20	36
Through Vol	152	13	156	75
RT Vol	36	10	154	8
Lane Flow Rate	241	31	407	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.346	0.046	0.53	0.222
Departure Headway (Hd)	5.18	5.355	4.679	5.442
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	670	758	663
Service Time	3.188	3.379	2.777	3.45
HCM Lane V/C Ratio	0.345	0.046	0.537	0.222
HCM Control Delay	10.9	8.6	13	10
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.5	0.1	3.2	0.8

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	36	75	8
Future Vol, veh/h	0	36	75	8
Peak Hour Factor	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	93	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10
HCM LOS	A

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.898			0.850			0.850			0.998		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1673	0	1770	1863	2787	1770	5085	1583	3433	5075	0
Flt Permitted	0.950			0.594			0.950			0.950		
Satd. Flow (perm)	1770	1673	0	1106	1863	2787	1770	5085	1583	3433	5075	0
Right Turn on Red	Yes			Yes			Yes			Yes		
Satd. Flow (RTOR)	64			235			129			1		
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	338			417			700			371		
Travel Time (s)	9.2			11.4			10.6			5.6		

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	195	80	218	79	219	138	2600	244	279	1973
Future Volume (vph)	195	80	218	79	219	138	2600	244	279	1973
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	46.0	46.0	44.0	44.0	24.0	24.0	46.0	46.0	24.0	46.0
Total Split (%)	28.8%	28.8%	27.5%	27.5%	15.0%	15.0%	28.8%	28.8%	15.0%	28.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	25.3	25.3	38.6	38.6	61.7	16.4	53.0	53.0	17.1	53.6
Actuated g/C Ratio	0.16	0.16	0.24	0.24	0.39	0.10	0.33	0.33	0.11	0.34
v/c Ratio	0.75	0.85	0.88	0.19	0.19	0.82	1.66	0.43	0.82	1.26
Control Delay	80.1	71.9	88.6	47.8	3.5	104.4	327.1	17.4	87.7	164.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.1	71.9	88.6	47.8	3.5	104.4	327.1	17.4	87.7	164.4
LOS	F	E	F	D	A	F	F	B	F	F
Approach Delay		75.5		46.2			291.5			155.0
Approach LOS		E		D			F			F

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 156 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.66

Intersection Signal Delay: 205.7

Intersection LOS: F

Intersection Capacity Utilization 106.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	46 s	46 s	44 s
 Ø5	 Ø6 (R)		
24 s	46 s		

Queues

101: US 1 & SE 3rd Street

11/7/2016

											
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Group Flow (vph)	210	269	234	85	235	148	2796	262	300	2147	
v/c Ratio	0.75	0.85	0.88	0.19	0.19	0.82	1.66	0.43	0.82	1.26	
Control Delay	80.1	71.9	88.6	47.8	3.5	104.4	327.1	17.4	87.7	164.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	80.1	71.9	88.6	47.8	3.5	104.4	327.1	17.4	87.7	164.4	
Queue Length 50th (ft)	214	216	232	70	0	146	~1593	58	159	~1082	
Queue Length 95th (ft)	286	303	#371	118	30	m153m	#1684	m74	#234	#1311	
Internal Link Dist (ft)		258		337			620			291	
Turn Bay Length (ft)	170		100		100	320		400	615		
Base Capacity (vph)	442	466	282	476	1233	198	1683	610	384	1701	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.48	0.58	0.83	0.18	0.19	0.75	1.66	0.43	0.78	1.26	

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	80	170	218	79	219	138	2600	244	279	1973	23
Future Volume (vph)	195	80	170	218	79	219	138	2600	244	279	1973	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Flt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1673		1770	1863	2787	1770	5085	1583	3433	5076	
Flt Permitted	0.95	1.00		0.59	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1673		1106	1863	2787	1770	5085	1583	3433	5076	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	86	183	234	85	235	148	2796	262	300	2122	25
RTOR Reduction (vph)	0	54	0	0	0	153	0	0	86	0	1	0
Lane Group Flow (vph)	210	215	0	234	85	82	148	2796	176	300	2146	0
Turn Type	Split	NA		Perm	NA pm+ov	Prot	NA	Perm	Prot	NA		
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	25.3	25.3		38.6	38.6	55.7	16.4	53.0	53.0	17.1	53.7	
Effective Green, g (s)	25.3	25.3		38.6	38.6	55.7	16.4	53.0	53.0	17.1	53.7	
Actuated g/C Ratio	0.16	0.16		0.24	0.24	0.35	0.10	0.33	0.33	0.11	0.34	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	279	264		266	449	970	181	1684	524	366	1703	
v/s Ratio Prot	0.12	c0.13			0.05	0.01	0.08	c0.55		c0.09	0.42	
v/s Ratio Perm				c0.21		0.02			0.11			
v/c Ratio	0.75	0.81		0.88	0.19	0.08	0.82	1.66	0.34	0.82	1.26	
Uniform Delay, d1	64.4	65.1		58.5	48.3	35.0	70.3	53.5	40.2	69.9	53.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.29	0.76	0.70	1.00	1.00	
Incremental Delay, d2	9.7	16.5		25.7	0.1	0.0	10.9	298.3	0.7	12.7	122.1	
Delay (s)	74.1	81.6		84.2	48.3	35.0	101.8	338.7	28.8	82.7	175.2	
Level of Service	E	F		F	D	D	F	F	C	F	F	
Approach Delay (s)		78.3			57.8			302.5			163.9	
Approach LOS		E			E			F			F	
Intersection Summary												
HCM 2000 Control Delay		215.4						HCM 2000 Level of Service		F		
HCM 2000 Volume to Capacity ratio		1.17										
Actuated Cycle Length (s)		160.0						Sum of lost time (s)		26.0		
Intersection Capacity Utilization		106.6%						ICU Level of Service		G		
Analysis Period (min)		15										
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.911				0.865			0.850		0.997	
Flt Protected		0.988					0.950					
Satd. Flow (prot)	0	1677	0	0	0	1611	1770	5085	1583	0	5070	0
Flt Permitted		0.988					0.950					
Satd. Flow (perm)	0	1677	0	0	0	1611	1770	5085	1583	0	5070	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 115.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↘	↑↑↑	↗		↑↑↑	
Traffic Vol, veh/h	19	8	52	0	0	8	317	3059	51	11	2361	45
Future Vol, veh/h	19	8	52	0	0	8	317	3059	51	11	2361	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	9	56	0	0	9	341	3289	55	12	2539	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4584	6558	1294	-	-	1645	2587	0	0	3289	0	0
Stage 1	2587	2587	-	-	-	-	-	-	-	-	-	-
Stage 2	1997	3971	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 1	0	132	0	0	76	~ 62	-	-	27	-	-
Stage 1	~ 14	51	-	0	0	-	-	-	-	-	-	-
Stage 2	54	9	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	132	-	-	76	~ 62	-	-	27	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 14	51	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		58.3	199.4	1
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 62	-	-	-	76	27	-	-
HCM Lane V/C Ratio	5.498	-	-	-0.113	0.438	-	-	-
HCM Control Delay (s)	2155.7	-	-	-	58.3	217.5	-	-
HCM Lane LOS	F	-	-	-	F	F	-	-
HCM 95th %tile Q(veh)	38.2	-	-	-	0.4	1.4	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5085	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5085	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗↗	↗↗↗	
Traffic Vol, veh/h	0	15	0	3086	2413	5
Future Vol, veh/h	0	15	0	3086	2413	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	0	3318	2595	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1300	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	130	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	130	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	36.6	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	130	-	-		
HCM Lane V/C Ratio	-	0.124	-	-		
HCM Control Delay (s)	-	36.6	-	-		
HCM Lane LOS	-	E	-	-		
HCM 95th %tile Q(veh)	-	0.4	-	-		

Lanes and Geometrics
104: US 1 & SE 8th Street

11/7/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5080	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5080	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection							
Int Delay, s/veh		0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗	↗↗		
Traffic Vol, veh/h	0	10	0	3086	2493	17	
Future Vol, veh/h	0	10	0	3086	2493	17	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	93	93	93	93	93	93	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	0	11	0	3318	2681	18	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	1349	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	7.14	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.92	-	-	-	-	
Pot Cap-1 Maneuver	0	121	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	121	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	37.6	0		0			
HCM LOS	E						
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR			
Capacity (veh/h)	-	121	-	-			
HCM Lane V/C Ratio	-	0.089	-	-			
HCM Control Delay (s)	-	37.6	-	-			
HCM Lane LOS	-	E	-	-			
HCM 95th %tile Q(veh)	-	0.3	-	-			

Lanes and Geometrics
105: US 1 & SE 9th Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt		0.889				0.850			0.850		0.998	
Flt Protected		0.992		0.950	0.968		0.950			0.950		
Satd. Flow (prot)	0	1643	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Flt Permitted		0.159		0.950	0.968		0.950			0.950		
Satd. Flow (perm)	0	263	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70				86			116			1
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		272			346			347			300	
Travel Time (s)		7.4			9.4			5.3			4.5	

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/7/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	12	2	138	29	83	72	3117	85	50	2262
Future Volume (vph)	12	2	138	29	83	72	3117	85	50	2262
Turn Type	Perm	NA	Split	NA pm+ov	Prot	NA	Perm	Prot	NA	NA
Protected Phases		7	8	8	1	5	2		1	6
Permitted Phases	7				8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	21.0	21.0	30.0	30.0	24.0	24.0	85.0	85.0	24.0	85.0
Total Split (%)	13.1%	13.1%	18.8%	18.8%	15.0%	15.0%	53.1%	53.1%	15.0%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		14.5	12.6	12.6	25.6	10.7	99.4	99.4	6.5	95.2
Actuated g/C Ratio		0.09	0.08	0.08	0.16	0.07	0.62	0.62	0.04	0.60
v/c Ratio		0.98	0.65	0.66	0.26	0.64	1.03	0.09	0.37	0.79
Control Delay		109.3	93.1	93.0	11.8	95.4	53.6	1.2	55.3	45.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		109.3	93.1	93.0	11.8	95.4	53.6	1.2	55.3	45.3
LOS		F	F	F	B	F	D	A	E	D
Approach Delay		109.3		66.1			53.2			45.5
Approach LOS		F		E			D			D

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 158 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 51.5

Intersection LOS: D

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	85 s	21 s	30 s
 Ø5	 Ø6 (R)		
24 s	85 s		

Queues

105: US 1 & SE 9th Street

11/7/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	85	86	88	86	75	3247	89	52	2381
v/c Ratio	0.98	0.65	0.66	0.26	0.64	1.03	0.09	0.37	0.79
Control Delay	109.3	93.1	93.0	11.8	95.4	53.6	1.2	55.3	45.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.3	93.1	93.0	11.8	95.4	53.6	1.2	55.3	45.3
Queue Length 50th (ft)	17	93	95	0	78	~1322	0	28	667
Queue Length 95th (ft)	#142	154	157	49	134	#1475	14	m27	m666
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	87	246	251	423	188	3159	1027	364	3020
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.35	0.35	0.20	0.40	1.03	0.09	0.14	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	67	138	29	83	72	3117	85	50	2262	24
Future Volume (vph)	12	2	67	138	29	83	72	3117	85	50	2262	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.89		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1643		1681	1713	1583	1770	5085	1583	3433	5077	
Flt Permitted		0.16		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		263		1681	1713	1583	1770	5085	1583	3433	5077	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	12	2	70	144	30	86	75	3247	89	52	2356	25
RTOR Reduction (vph)	0	64	0	0	0	76	0	0	34	0	0	0
Lane Group Flow (vph)	0	21	0	86	88	10	75	3247	55	52	2381	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		14.5		12.6	12.6	19.1	10.7	99.4	99.4	6.5	95.2	
Effective Green, g (s)		14.5		12.6	12.6	19.1	10.7	99.4	99.4	6.5	95.2	
Actuated g/C Ratio		0.09		0.08	0.08	0.12	0.07	0.62	0.62	0.04	0.60	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		23		132	134	188	118	3159	983	139	3020	
v/s Ratio Prot				0.05	c0.05	0.00	c0.04	c0.64		0.02	0.47	
v/s Ratio Perm		c0.08				0.00			0.03			
v/c Ratio		0.93		0.65	0.66	0.05	0.64	1.03	0.06	0.37	0.79	
Uniform Delay, d1		72.2		71.6	71.6	62.4	72.8	30.3	11.9	74.8	24.7	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.73	1.73	
Incremental Delay, d2		151.8		8.5	8.5	0.0	8.0	23.7	0.1	0.1	0.2	
Delay (s)		224.1		80.0	80.1	62.5	80.7	54.0	12.0	54.9	42.8	
Level of Service		F		F	F	E	F	D	B	D	D	
Approach Delay (s)		224.1			74.3			53.5			43.1	
Approach LOS		F			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			52.6		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					27.0		
Intersection Capacity Utilization			87.4%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected												
Satd. Flow (prot)	0	1848	0	0	1863	1583	0	3472	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1546	0	0	1863	1583	0	3472	0	0	0	0
Right Turn on Red						Yes						Yes
Satd. Flow (RTOR)							153	4				
Link Speed (mph)					25					30		
Link Distance (ft)					446					483		
Travel Time (s)					12.2					13.2		

Intersection Summary

Area Type: Other

Timings

106: SE 1st Ave & SE 3rd Street

11/7/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↔	↔	↔	↔
Traffic Volume (vph)	56	294	301	149	561
Future Volume (vph)	56	294	301	149	561
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		18.5	18.5	18.5	29.5
Actuated g/C Ratio		0.31	0.31	0.31	0.49
v/c Ratio		0.78	0.56	0.27	0.53
Control Delay		30.5	20.4	4.1	12.9
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		30.5	20.4	4.1	12.9
LOS		C	C	A	B
Approach Delay		30.5	15.0		12.9
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 17.2

Intersection LOS: B

Intersection Capacity Utilization 73.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
30 s	30 s
	↖ Ø8
	30 s

Queues

106: SE 1st Ave & SE 3rd Street

11/7/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	373	320	159	902
v/c Ratio	0.78	0.56	0.27	0.53
Control Delay	30.5	20.4	4.1	12.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.5	20.4	4.1	12.9
Queue Length 50th (ft)	121	95	2	109
Queue Length 95th (ft)	181	140	31	190
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	618	745	725	1710
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.43	0.22	0.53
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/7/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	294	0	0	301	149	269	561	18	0	0	0
Future Volume (veh/h)	56	294	0	0	301	149	269	561	18	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	60	313	0	0	320	0	286	597	19			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	116	429	0	0	588	500	536	1195	39			
Arrive On Green	0.32	0.32	0.00	0.00	0.32	0.00	0.48	0.48	0.48			
Sat Flow, veh/h	147	1358	0	0	1863	1583	1106	2469	81			
Grp Volume(v), veh/h	373	0	0	0	320	0	467	0	435			
Grp Sat Flow(s),veh/h/ln	1505	0	0	0	1863	1583	1807	0	1848			
Q Serve(g_s), s	5.7	0.0	0.0	0.0	8.5	0.0	10.8	0.0	9.5			
Cycle Q Clear(g_c), s	14.2	0.0	0.0	0.0	8.5	0.0	10.8	0.0	9.5			
Prop In Lane	0.16		0.00	0.00		1.00	0.61		0.04			
Lane Grp Cap(c), veh/h	545	0	0	0	588	500	875	0	895			
V/C Ratio(X)	0.68	0.00	0.00	0.00	0.54	0.00	0.53	0.00	0.49			
Avail Cap(c_a), veh/h	685	0	0	0	745	633	875	0	895			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.6	0.0	0.0	0.0	17.0	0.0	10.8	0.0	10.4			
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.8	0.0	2.3	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	0.0	4.5	0.0	5.9	0.0	5.3			
LnGrp Delay(d),s/veh	20.7	0.0	0.0	0.0	17.7	0.0	13.1	0.0	12.3			
LnGrp LOS	C				B		B		B			
Approach Vol, veh/h		373			320			902				
Approach Delay, s/veh		20.7			17.7			12.7				
Approach LOS		C			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		35.0		25.0				25.0				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		24.0		24.0				24.0				
Max Q Clear Time (g_c+I1), s		12.8		16.2				10.5				
Green Ext Time (p_c), s		4.4		2.8				3.9				
Intersection Summary												
HCM 2010 Ctrl Delay			15.6									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1611	3532	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3532	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		8.6			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	839	13	0	0
Future Vol, veh/h	0	5	839	13	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	883	14	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	448	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	558	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	558	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.5	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	558			
HCM Lane V/C Ratio	-	-	0.009			
HCM Control Delay (s)	-	-	11.5			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1611	3529	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3529	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		13.6			8.6
Intersection Summary						
Area Type:	Other					

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	174	673	16	0	0
Future Vol, veh/h	0	174	673	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	189	732	17	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	374	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	623	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	623	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	13.3	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	623			
HCM Lane V/C Ratio	-	-	0.304			
HCM Control Delay (s)	-	-	13.3			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	1.3			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1611	3532	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3532	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	697	11	0	0
Future Vol, veh/h	0	2	697	11	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	801	13	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	407	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	593	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	593	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.1	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	593			
HCM Lane V/C Ratio	-	-	0.004			
HCM Control Delay (s)	-	-	11.1			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2
Intersection Summary						
Area Type:	Other					

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	691	1	0	0
Future Vol, veh/h	0	13	691	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	785	1	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	393	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	606	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	606	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.1	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	606			
HCM Lane V/C Ratio	-	-	0.024			
HCM Control Delay (s)	-	-	11.1			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.1			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/7/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	233	132	533	0	0	0
Future Vol, veh/h	233	132	533	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	240	136	549	0	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	549	275	0	-		
Stage 1	549	-	-	-		
Stage 2	0	-	-	-		
Critical Hdwy	6.84	6.94	-	-		
Critical Hdwy Stg 1	5.84	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	3.52	3.32	-	-		
Pot Cap-1 Maneuver	466	722	-	0		
Stage 1	542	-	-	0		
Stage 2	-	-	-	0		
Platoon blocked, %			-			
Mov Cap-1 Maneuver	466	722	-	-		
Mov Cap-2 Maneuver	466	-	-	-		
Stage 1	542	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	17.2		0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBWBLn1	WBLn2				
Capacity (veh/h)	-	466 722				
HCM Lane V/C Ratio	-	0.515 0.188				
HCM Control Delay (s)	-	20.7 11.1				
HCM Lane LOS	-	C B				
HCM 95th %tile Q(veh)	-	2.9 0.7				

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/7/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.937			0.976			0.991	
Flt Protected		0.997			0.997			0.998			0.985	
Satd. Flow (prot)	0	1757	0	0	1740	0	0	1814	0	0	1818	0
Flt Permitted		0.997			0.997			0.998			0.985	
Satd. Flow (perm)	0	1757	0	0	1740	0	0	1814	0	0	1818	0
Link Speed (mph)		25			75			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			2.7			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 12.1

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	13	10	0	21	159	157	0	7	155	36
Future Vol, veh/h	0	2	13	10	0	21	159	157	0	7	155	36
Peak Hour Factor	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	16	12	0	26	196	194	0	9	191	44
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.7	13.6	11.1
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	8%	6%	30%
Vol Thru, %	78%	52%	47%	63%
Vol Right, %	18%	40%	47%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	25	337	120
LT Vol	7	2	21	36
Through Vol	155	13	159	76
RT Vol	36	10	157	8
Lane Flow Rate	244	31	416	148
Geometry Grp	1	1	1	1
Degree of Util (X)	0.354	0.046	0.555	0.225
Departure Headway (Hd)	5.213	5.394	4.798	5.477
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	663	757	655
Service Time	3.243	3.431	2.798	3.511
HCM Lane V/C Ratio	0.354	0.047	0.55	0.226
HCM Control Delay	11.1	8.7	13.6	10.1
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.6	0.1	3.5	0.9

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	36	76	8
Future Vol, veh/h	0	36	76	8
Peak Hour Factor	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	94	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.1
HCM LOS	B

Lanes and Geometrics
101: US 1 & SE 3rd Street

11/8/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	170		0	100		100	320		400	615		0
Storage Lanes	1		0	1		2	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.896			0.850			0.850			0.998		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1669	0	1770	1863	2787	1770	5085	1583	3433	5075	0
Flt Permitted	0.950			0.588			0.950			0.950		
Satd. Flow (perm)	1770	1669	0	1095	1863	2787	1770	5085	1583	3433	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68				235			127			1
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		338			417			700			371	
Travel Time (s)		9.2			11.4			10.6			5.6	

Intersection Summary

Area Type: Other

Timings

101: US 1 & SE 3rd Street

11/8/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	195	80	218	79	219	138	2641	244	279	2017
Future Volume (vph)	195	80	218	79	219	138	2641	244	279	2017
Turn Type	Split	NA	Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA
Protected Phases	7	7		8	1	5	2		1	6
Permitted Phases			8		8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	12.0	12.0	5.0	12.0
Minimum Split (s)	45.0	45.0	42.0	42.0	12.0	12.0	39.0	39.0	12.0	39.0
Total Split (s)	46.0	46.0	44.0	44.0	24.0	24.0	46.0	46.0	24.0	46.0
Total Split (%)	28.8%	28.8%	27.5%	27.5%	15.0%	15.0%	28.8%	28.8%	15.0%	28.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)	26.0	26.0	38.8	38.8	61.6	16.1	52.4	52.4	16.8	53.0
Actuated g/C Ratio	0.16	0.16	0.24	0.24	0.38	0.10	0.33	0.33	0.10	0.33
v/c Ratio	0.73	0.85	0.88	0.19	0.19	0.83	1.71	0.43	0.83	1.30
Control Delay	77.6	71.7	89.1	47.8	3.5	106.1	347.3	17.9	89.5	182.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.6	71.7	89.1	47.8	3.5	106.1	347.3	17.9	89.5	182.0
LOS	E	E	F	D	A	F	F	B	F	F
Approach Delay		74.2		46.4			309.8			170.9
Approach LOS		E		D			F			F

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 156 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.71

Intersection Signal Delay: 220.2

Intersection LOS: F

Intersection Capacity Utilization 108.0%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 101: US 1 & SE 3rd Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	46 s	46 s	44 s
 Ø5	 Ø6 (R)		
24 s	46 s		

Queues

101: US 1 & SE 3rd Street

11/8/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	210	280	234	85	235	148	2840	262	300	2194
v/c Ratio	0.73	0.85	0.88	0.19	0.19	0.83	1.71	0.43	0.83	1.30
Control Delay	77.6	71.7	89.1	47.8	3.5	106.1	347.3	17.9	89.5	182.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.6	71.7	89.1	47.8	3.5	106.1	347.3	17.9	89.5	182.0
Queue Length 50th (ft)	212	223	232	69	0	145	~1645	58	159	~1137
Queue Length 95th (ft)	284	313	#381	119	30	m154n	#1715	m77	#234	#1347
Internal Link Dist (ft)		258		337			620			291
Turn Bay Length (ft)	170		100		100	320		400	615	
Base Capacity (vph)	442	468	280	476	1231	195	1664	603	378	1682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.60	0.84	0.18	0.19	0.76	1.71	0.43	0.79	1.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

101: US 1 & SE 3rd Street

11/8/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	80	180	218	79	219	138	2641	244	279	2017	23
Future Volume (vph)	195	80	180	218	79	219	138	2641	244	279	2017	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	0.88	1.00	0.91	1.00	0.97	0.91	
Flt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1863	2787	1770	5085	1583	3433	5077	
Flt Permitted	0.95	1.00		0.59	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1669		1095	1863	2787	1770	5085	1583	3433	5077	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	210	86	194	234	85	235	148	2840	262	300	2169	25
RTOR Reduction (vph)	0	57	0	0	0	153	0	0	85	0	1	0
Lane Group Flow (vph)	210	223	0	234	85	82	148	2840	177	300	2193	0
Turn Type	Split	NA		Perm	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	7			8	1	5	2		1	6	
Permitted Phases				8		8			2			
Actuated Green, G (s)	26.0	26.0		38.8	38.8	55.6	16.1	52.4	52.4	16.8	53.1	
Effective Green, g (s)	26.0	26.0		38.8	38.8	55.6	16.1	52.4	52.4	16.8	53.1	
Actuated g/C Ratio	0.16	0.16		0.24	0.24	0.35	0.10	0.33	0.33	0.11	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)	287	271		265	451	968	178	1665	518	360	1684	
v/s Ratio Prot	0.12	c0.13			0.05	0.01	0.08	c0.56		c0.09	0.43	
v/s Ratio Perm				c0.21		0.02			0.11			
v/c Ratio	0.73	0.82		0.88	0.19	0.08	0.83	1.71	0.34	0.83	1.30	
Uniform Delay, d1	63.7	64.8		58.4	48.1	35.1	70.6	53.8	40.7	70.2	53.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.76	0.70	1.00	1.00	
Incremental Delay, d2	8.0	17.2		26.7	0.1	0.0	13.0	318.7	0.8	14.5	140.6	
Delay (s)	71.7	82.0		85.1	48.2	35.1	103.6	359.7	29.3	84.8	194.0	
Level of Service	E	F		F	D	D	F	F	C	F	F	
Approach Delay (s)		77.6			58.2			321.4			180.9	
Approach LOS		E			E			F			F	
Intersection Summary												
HCM 2000 Control Delay			230.7				HCM 2000 Level of Service			F		
HCM 2000 Volume to Capacity ratio			1.19									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			26.0		
Intersection Capacity Utilization			108.0%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
102: US 1 & SE 5th Street

11/8/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	330		250	315		0
Storage Lanes	0		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	0.91	0.91
Ped Bike Factor												
Frt		0.924				0.865			0.850		0.995	
Flt Protected		0.981					0.950					
Satd. Flow (prot)	0	1688	0	0	0	1611	1770	5085	1583	0	5060	0
Flt Permitted		0.981					0.950					
Satd. Flow (perm)	0	1688	0	0	0	1611	1770	5085	1583	0	5060	0
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		326			311			600			700	
Travel Time (s)		8.9			8.5			9.1			10.6	

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 130.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↔	↔	↑↑↑	↔		↑↑↑	
Traffic Vol, veh/h	60	8	88	0	0	8	327	3059	51	11	2371	89
Future Vol, veh/h	60	8	88	0	0	8	327	3059	51	11	2371	89
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	Stop	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	330	-	250	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	9	95	0	0	9	352	3289	55	12	2549	96

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	4640	6613	1323	-	-	1645	2645	0	0	3289	0	0
Stage 1	2621	2621	-	-	-	-	-	-	-	-	-	-
Stage 2	2019	3992	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	-	-	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	-	-	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	~ 1	0	126	0	0	76	~ 58	-	-	27	-	-
Stage 1	~ 13	49	-	0	0	-	-	-	-	-	-	-
Stage 2	~ 52	9	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	126	-	-	76	~ 58	-	-	27	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 13	49	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		58.3	230	1
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 58	-	-	-	76	27	-	-
HCM Lane V/C Ratio	6.062	-	-	-0.113	0.438	-	-	-
HCM Control Delay (s)	2417.2	-	-	-	58.3	217.5	-	-
HCM Lane LOS	F	-	-	-	F	F	-	-
HCM 95th %tile Q(veh)	40	-	-	-	0.4	1.4	-	-

Notes

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

Lanes and Geometrics
103: US 1 & SE 7th Street

11/8/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5080	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5080	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	249			360	600	
Travel Time (s)	6.8			5.5	9.1	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh		0.1				
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	
Traffic Vol, veh/h	0	20	0	3096	2449	15
Future Vol, veh/h	0	20	0	3096	2449	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	0	3329	2633	16
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	1325	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	125	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	125	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	39.7	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR		
Capacity (veh/h)	-	125	-	-		
HCM Lane V/C Ratio	-	0.172	-	-		
HCM Control Delay (s)	-	39.7	-	-		
HCM Lane LOS	-	E	-	-		
HCM 95th %tile Q(veh)	-	0.6	-	-		

Lanes and Geometrics
104: US 1 & SE 8th Street

11/8/2016

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	0.91
Ped Bike Factor						
Frt		0.865			0.999	
Flt Protected						
Satd. Flow (prot)	0	1611	0	5085	5080	0
Flt Permitted						
Satd. Flow (perm)	0	1611	0	5085	5080	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	169			300	360	
Travel Time (s)	4.6			4.5	5.5	

Intersection Summary

Area Type: Other

Intersection							
Int Delay, s/veh		0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗	↗↗		
Traffic Vol, veh/h	0	10	0	3096	2534	17	
Future Vol, veh/h	0	10	0	3096	2534	17	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	93	93	93	93	93	93	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	0	11	0	3329	2725	18	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	1372	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	7.14	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.92	-	-	-	-	
Pot Cap-1 Maneuver	0	116	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	116	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	39.2	0		0			
HCM LOS	E						
Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR			
Capacity (veh/h)	-	116	-	-			
HCM Lane V/C Ratio	-	0.093	-	-			
HCM Control Delay (s)	-	39.2	-	-			
HCM Lane LOS	-	E	-	-			
HCM 95th %tile Q(veh)	-	0.3	-	-			

Lanes and Geometrics
105: US 1 & SE 9th Street

11/8/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	300		400	530		0
Storage Lanes	0		0	1		1	1		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt	0.889						0.850			0.850		
Flt Protected	0.992			0.950			0.950			0.950		
Satd. Flow (prot)	0	1643	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Flt Permitted	0.159			0.950			0.950			0.950		
Satd. Flow (perm)	0	263	0	1681	1713	1583	1770	5085	1583	3433	5075	0
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)	70						86			116		
Link Speed (mph)	25			25			45			45		
Link Distance (ft)	272			346			347			300		
Travel Time (s)	7.4			9.4			5.3			4.5		

Intersection Summary

Area Type: Other

Timings

105: US 1 & SE 9th Street

11/8/2016

										
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	12	2	138	29	83	100	3127	85	50	2303
Future Volume (vph)	12	2	138	29	83	100	3127	85	50	2303
Turn Type	Perm	NA	Split	NA pm+ov	Prot	NA	Perm	Prot	NA	NA
Protected Phases		7	8	8	1	5	2		1	6
Permitted Phases	7				8			2		
Detector Phase	7	7	8	8	1	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	5.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	48.5	48.5	47.5	47.5	12.0	12.0	40.0	40.0	12.0	40.0
Total Split (s)	21.0	21.0	30.0	30.0	24.0	24.0	85.0	85.0	24.0	85.0
Total Split (%)	13.1%	13.1%	18.8%	18.8%	15.0%	15.0%	53.1%	53.1%	15.0%	53.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		14.5	12.6	12.6	25.6	13.3	99.4	99.4	6.5	92.6
Actuated g/C Ratio		0.09	0.08	0.08	0.16	0.08	0.62	0.62	0.04	0.58
v/c Ratio		0.98	0.65	0.66	0.26	0.71	1.03	0.09	0.37	0.82
Control Delay		109.3	93.1	93.0	11.8	96.1	54.6	1.2	55.3	47.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		109.3	93.1	93.0	11.8	96.1	54.6	1.2	55.3	47.1
LOS		F	F	F	B	F	D	A	E	D
Approach Delay		109.3		66.1			54.5			47.3
Approach LOS		F		E			D			D

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 158 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 52.9

Intersection LOS: D

Intersection Capacity Utilization 93.2%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 105: US 1 & SE 9th Street

 Ø1	 Ø2 (R)	 Ø7	 Ø8
24 s	85 s	21 s	30 s
 Ø5	 Ø6 (R)		
24 s	85 s		

Queues

105: US 1 & SE 9th Street

11/8/2016

	→	↖	←	↗	↘	↑	↙	↘	↓
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	85	86	88	86	104	3257	89	52	2424
v/c Ratio	0.98	0.65	0.66	0.26	0.71	1.03	0.09	0.37	0.82
Control Delay	109.3	93.1	93.0	11.8	96.1	54.6	1.2	55.3	47.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.3	93.1	93.0	11.8	96.1	54.6	1.2	55.3	47.1
Queue Length 50th (ft)	17	93	95	0	108	~1330	0	28	701
Queue Length 95th (ft)	#142	154	157	49	172	#1482	14	m28	m664
Internal Link Dist (ft)	192		266			267			220
Turn Bay Length (ft)					300		400	530	
Base Capacity (vph)	87	246	251	423	192	3159	1027	364	2939
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.35	0.35	0.20	0.54	1.03	0.09	0.14	0.82

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

105: US 1 & SE 9th Street

11/8/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	2	67	138	29	83	100	3127	85	50	2303	24
Future Volume (vph)	12	2	67	138	29	83	100	3127	85	50	2303	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt		0.89		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1643		1681	1713	1583	1770	5085	1583	3433	5077	
Flt Permitted		0.16		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		263		1681	1713	1583	1770	5085	1583	3433	5077	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	12	2	70	144	30	86	104	3257	89	52	2399	25
RTOR Reduction (vph)	0	64	0	0	0	76	0	0	34	0	0	0
Lane Group Flow (vph)	0	21	0	86	88	10	104	3257	55	52	2424	0
Turn Type	Perm	NA		Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		7		8	8	1	5	2		1	6	
Permitted Phases	7					8			2			
Actuated Green, G (s)		14.5		12.6	12.6	19.1	13.3	99.4	99.4	6.5	92.6	
Effective Green, g (s)		14.5		12.6	12.6	19.1	13.3	99.4	99.4	6.5	92.6	
Actuated g/C Ratio		0.09		0.08	0.08	0.12	0.08	0.62	0.62	0.04	0.58	
Clearance Time (s)		6.5		6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		2.0		2.0	2.0	1.5	1.5	3.0	3.0	1.5	3.0	
Lane Grp Cap (vph)		23		132	134	188	147	3159	983	139	2938	
v/s Ratio Prot				0.05	c0.05	0.00	c0.06	c0.64		0.02	0.48	
v/s Ratio Perm		c0.08				0.00			0.03			
v/c Ratio		0.93		0.65	0.66	0.05	0.71	1.03	0.06	0.37	0.82	
Uniform Delay, d1		72.2		71.6	71.6	62.4	71.5	30.3	11.9	74.8	27.2	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.73	1.66	
Incremental Delay, d2		151.8		8.5	8.5	0.0	11.9	24.7	0.1	0.1	0.3	
Delay (s)		224.1		80.0	80.1	62.5	83.4	55.0	12.0	54.9	45.3	
Level of Service		F		F	F	E	F	D	B	D	D	
Approach Delay (s)		224.1			74.3			54.7			45.5	
Approach LOS		F			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			54.2		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)					27.0		
Intersection Capacity Utilization			93.2%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes and Geometrics
106: SE 1st Ave & SE 3rd Street

11/8/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850						
Flt Protected												
Satd. Flow (prot)	0	1848	0	0	1863	1583	0	3472	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1563	0	0	1863	1583	0	3472	0	0	0	0
Right Turn on Red						Yes						Yes
Satd. Flow (RTOR)						153						
Link Speed (mph)					25					30		
Link Distance (ft)					446					483		
Travel Time (s)					12.2					13.2		

Intersection Summary

Area Type: Other

Timings

106: SE 1st Ave & SE 3rd Street

11/8/2016

	↖	→	←	↗	↑
Lane Group	EBL	EBT	WBT	WBR	NBT
Lane Configurations		↕	↕	↕	↕
Traffic Volume (vph)	56	304	301	149	561
Future Volume (vph)	56	304	301	149	561
Turn Type	Perm	NA	NA	Perm	NA
Protected Phases		4	8		2
Permitted Phases	4			8	
Detector Phase	4	4	8	8	2
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	C-Min
Act Effct Green (s)		18.7	18.7	18.7	29.3
Actuated g/C Ratio		0.31	0.31	0.31	0.49
v/c Ratio		0.79	0.55	0.27	0.54
Control Delay		30.3	20.1	4.0	13.2
Queue Delay		0.0	0.0	0.0	0.0
Total Delay		30.3	20.1	4.0	13.2
LOS		C	C	A	B
Approach Delay		30.3	14.7		13.2
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 17.3

Intersection LOS: B

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 106: SE 1st Ave & SE 3rd Street

↖ Ø2 (R)	↗ Ø4
30 s	30 s
	↖ Ø8
	30 s

Queues

106: SE 1st Ave & SE 3rd Street

11/8/2016

	→	←	↖	↑
Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	383	320	159	912
v/c Ratio	0.79	0.55	0.27	0.54
Control Delay	30.3	20.1	4.0	13.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.3	20.1	4.0	13.2
Queue Length 50th (ft)	124	94	1	112
Queue Length 95th (ft)	187	140	31	192
Internal Link Dist (ft)	366	403		240
Turn Bay Length (ft)				
Base Capacity (vph)	625	745	725	1696
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.43	0.22	0.54
Intersection Summary				

HCM 2010 Signalized Intersection Summary
106: SE 1st Ave & SE 3rd Street

11/8/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	304	0	0	301	149	278	561	18	0	0	0
Future Volume (veh/h)	56	304	0	0	301	149	278	561	18	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	60	323	0	0	320	0	296	597	19			
Adj No. of Lanes	0	1	0	0	1	1	0	2	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	0	2	0			
Cap, veh/h	116	439	0	0	594	505	545	1175	38			
Arrive On Green	0.32	0.32	0.00	0.00	0.32	0.00	0.48	0.48	0.48			
Sat Flow, veh/h	145	1375	0	0	1863	1583	1132	2443	80			
Grp Volume(v), veh/h	383	0	0	0	320	0	472	0	440			
Grp Sat Flow(s),veh/h/ln	1520	0	0	0	1863	1583	1806	0	1849			
Q Serve(g_s), s	5.9	0.0	0.0	0.0	8.5	0.0	11.0	0.0	9.7			
Cycle Q Clear(g_c), s	14.4	0.0	0.0	0.0	8.5	0.0	11.0	0.0	9.7			
Prop In Lane	0.16		0.00	0.00		1.00	0.63		0.04			
Lane Grp Cap(c), veh/h	554	0	0	0	594	505	869	0	889			
V/C Ratio(X)	0.69	0.00	0.00	0.00	0.54	0.00	0.54	0.00	0.49			
Avail Cap(c_a), veh/h	689	0	0	0	745	633	869	0	889			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.6	0.0	0.0	0.0	16.8	0.0	10.9	0.0	10.6			
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.8	0.0	2.4	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.2	0.0	0.0	0.0	4.5	0.0	6.0	0.0	5.4			
LnGrp Delay(d),s/veh	20.7	0.0	0.0	0.0	17.6	0.0	13.4	0.0	12.6			
LnGrp LOS	C				B		B		B			
Approach Vol, veh/h		383			320			912				
Approach Delay, s/veh		20.7			17.6			13.0				
Approach LOS		C			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		34.9		25.1				25.1				
Change Period (Y+Rc), s		6.0		6.0				6.0				
Max Green Setting (Gmax), s		24.0		24.0				24.0				
Max Q Clear Time (g_c+I1), s		13.0		16.4				10.5				
Green Ext Time (p_c), s		4.4		2.8				3.9				
Intersection Summary												
HCM 2010 Ctrl Delay			15.7									
HCM 2010 LOS			B									

Lanes and Geometrics
107: SE 1st Ave & SE 4th Street

11/8/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.998			
Flt Protected						
Satd. Flow (prot)	0	1611	3532	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3532	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	313		380			320
Travel Time (s)	8.5		8.6			7.3

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	848	13	0	0
Future Vol, veh/h	0	5	848	13	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	893	14	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	453	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	554	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	554	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.6	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	554			
HCM Lane V/C Ratio	-	-	0.01			
HCM Control Delay (s)	-	-	11.6			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0			

Lanes and Geometrics
108: SE 1st Ave & SE 5th Street

11/8/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.985			
Flt Protected						
Satd. Flow (prot)	0	1611	3486	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3486	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	435		600			380
Travel Time (s)	11.9		13.6			8.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	174	682	77	0	0
Future Vol, veh/h	0	174	682	77	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	189	741	84	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	412	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	589	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	589	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	14	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	589			
HCM Lane V/C Ratio	-	-	0.321			
HCM Control Delay (s)	-	-	14			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	1.4			

Lanes and Geometrics
109: SE 1st Ave & SE 7th Street

11/8/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.997			
Flt Protected						
Satd. Flow (prot)	0	1611	3529	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3529	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	431		360			600
Travel Time (s)	11.8		8.2			13.6

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	725	16	0	0
Future Vol, veh/h	0	42	725	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	833	18	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	426	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	577	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	577	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.8	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	577			
HCM Lane V/C Ratio	-	-	0.084			
HCM Control Delay (s)	-	-	11.8			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.3			

Lanes and Geometrics
110: SE 1st Ave & SE 8th Street

11/8/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	414		300			360
Travel Time (s)	11.3		6.8			8.2
Intersection Summary						
Area Type:	Other					

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	724	1	0	0
Future Vol, veh/h	0	13	724	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	823	1	0	0
Major/Minor	Minor1	Major1				
Conflicting Flow All	-	412	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	589	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	589	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB	NB				
HCM Control Delay, s	11.3	0				
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1			
Capacity (veh/h)	-	-	589			
HCM Lane V/C Ratio	-	-	0.025			
HCM Control Delay (s)	-	-	11.3			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.1			

Lanes and Geometrics
111: SE 1st Ave & SE 9th Street

11/8/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	1770	1583	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	1583	3539	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	360		450			300
Travel Time (s)	9.8		10.2			6.8

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	233	160	538	0	0	0
Future Vol, veh/h	233	160	538	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	240	165	555	0	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	555	277
Stage 1	555	-
Stage 2	0	-
Critical Hdwy	6.84	6.94
Critical Hdwy Stg 1	5.84	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	3.52	3.32
Pot Cap-1 Maneuver	462	720
Stage 1	539	-
Stage 2	-	-
Platoon blocked, %		
Mov Cap-1 Maneuver	462	720
Mov Cap-2 Maneuver	462	-
Stage 1	539	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	17.1	0
HCM LOS	C	

Minor Lane/Major Mvmt	NBWBLn1	NBWBLn2
Capacity (veh/h)	- 462	720
HCM Lane V/C Ratio	- 0.52	0.229
HCM Control Delay (s)	- 20.9	11.5
HCM Lane LOS	- C	B
HCM 95th %tile Q(veh)	- 2.9	0.9

Lanes and Geometrics

114: Old Federal Hwy/SE 4 Avenue & SE 5st Street

11/8/2016

												
Lane Group	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 (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.937			0.976			0.991	
Flt Protected		0.997			0.997			0.998			0.985	
Satd. Flow (prot)	0	1757	0	0	1740	0	0	1814	0	0	1818	0
Flt Permitted		0.997			0.997			0.998			0.985	
Satd. Flow (perm)	0	1757	0	0	1740	0	0	1814	0	0	1818	0
Link Speed (mph)		25			75			25			25	
Link Distance (ft)		252			292			259			243	
Travel Time (s)		6.9			2.7			7.1			6.6	

Intersection Summary

Area Type: Other

Intersection

Intersection Delay, s/veh 12.1

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	2	13	10	0	21	159	157	0	7	155	36
Future Vol, veh/h	0	2	13	10	0	21	159	157	0	7	155	36
Peak Hour Factor	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	16	12	0	26	196	194	0	9	191	44
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.7	13.6	11.1
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	8%	6%	30%
Vol Thru, %	78%	52%	47%	63%
Vol Right, %	18%	40%	47%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	25	337	120
LT Vol	7	2	21	36
Through Vol	155	13	159	76
RT Vol	36	10	157	8
Lane Flow Rate	244	31	416	148
Geometry Grp	1	1	1	1
Degree of Util (X)	0.354	0.046	0.555	0.225
Departure Headway (Hd)	5.213	5.394	4.798	5.477
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	663	757	655
Service Time	3.243	3.431	2.798	3.511
HCM Lane V/C Ratio	0.354	0.047	0.55	0.226
HCM Control Delay	11.1	8.7	13.6	10.1
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.6	0.1	3.5	0.9

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	36	76	8
Future Vol, veh/h	0	36	76	8
Peak Hour Factor	0.93	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	44	94	10
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	10.1
HCM LOS	B

Lanes and Geometrics
115: SE 1st Avenue & Driveway 1

11/8/2016

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	0	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.988			
Flt Protected						
Satd. Flow (prot)	0	1611	3497	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3497	0	0	0
Link Speed (mph)	25		30			30
Link Distance (ft)	400		235			170
Travel Time (s)	10.9		5.3			3.9

Intersection Summary

Area Type: Other

Intersection

Int Delay, s/veh 0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	65	732	63	0	0
Future Vol, veh/h	0	65	732	63	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	70	787	68	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	-	427
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	6.94
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	3.32
Pot Cap-1 Maneuver	0	576
Stage 1	0	-
Stage 2	0	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	576
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	12.1	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	576
HCM Lane V/C Ratio	-	-	0.121
HCM Control Delay (s)	-	-	12.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Lanes and Geometrics
116: SE 7th Street & Driveway 2

11/8/2016

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.951		0.976	
Flt Protected		0.989			0.961	
Satd. Flow (prot)	0	1842	1771	0	1747	0
Flt Permitted		0.989			0.961	
Satd. Flow (perm)	0	1842	1771	0	1747	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		190	195		200	
Travel Time (s)		4.3	4.4		4.5	

Intersection Summary

Area Type: Other

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↗	↗		↘	
Traffic Vol, veh/h	5	16	50	29	21	5
Future Vol, veh/h	5	16	50	29	21	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	17	54	31	23	5
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	97	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1512	-	-	-	902	994
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	899	994
Mov Cap-2 Maneuver	-	-	-	-	899	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	992	-
Approach	EB		WB		SB	
HCM Control Delay, s	1.8		0		9.1	
HCM LOS					A	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1512	-	-	-	916	
HCM Lane V/C Ratio	0.004	-	-	-	0.031	
HCM Control Delay (s)	7.4	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	