TRAFFIC IMPACT ANALYSIS

629 RESIDENCES FORT LAUDERDALE, FL

PREPARED FOR: 629 SE 5TH VE, LLC

Kimley»Horn

February 1,2019 Revised February 22, 2019 Revised February 27, 2019 Revised March 1, 2019 Kimley-Horn Project #140575000 CA 00000696 Kimley-Horn and Associates, Inc. 1920 Wekiva Way West Palm Beach, Florida 33411 561/845-0665 TEL

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EXECUTIVE SUMMARY

Kimley-Horn and Associates has prepared a study to evaluate the impact of development of 249 units of high-rise multifamily housing and 1,300 square feet of commercial use located between SE 6th Street and SE 7th Street on the west side of SE 5th Avenue in Fort Lauderdale, Florida.

A site-specific analysis was undertaken to evaluate impacts on the surrounding transportation network. Project trips were assigned to the proposed driveway on SE 5th Avenue based upon the anticipated distribution of traffic to and from the site. The driveway analysis was performed with *HCS 2010* software and the analysis indicated the driveway will operate acceptably.

An analysis was also conducted to review the intersection operations at six intersections (three signalized and three unsignalized intersections) in the immediate vicinity of the site using *Synchro 10.0* and *HCS 2010* software.

- 1. Federal Highway & SE 7th Street
- 2. Federal Highway & SE 6th Street
- 3. SE 5th Avenue & SE 7th Street
- 4. SE 5 Avenue & SE 6th Street
- 5. SE 3rd Avenue & SE 7th Street
- 6. SE 3rd Avenue & SE 6th Street

The analysis indicated that the signalized intersection operates at an acceptable Level of Service (LOS) and delay except the intersection of SE 3rd Avenue & SE 7th Street, which will operate at LOS E overall during the future AM peak hour conditions but will have some individual movements at LOS F in the future with or without the project traffic. Additionally, turn lane storage is anticipated to adequately accommodate future volumes at the study intersections during total future conditions except for the eastbound left-turn lane on SE 7th Street & Federal Highway during the PM peak hour. However, the excess projected queue is only 7 feet, which is not a full vehicle length. No modifications are proposed.

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INTRODUCTION

The proposed plan of development will include a high-rise multifamily housing and commercial uses located between SE 6th Street and SE 7th Street on the west side of SE 5th Avenue in Fort Lauderdale, Florida. *Figure 1* illustrates the location of the project site. The folio numbers for the project site are the following:

- 504210580100
- 504210580090
- 504210580080
- 504210580070
- 504210580060
- 504210580050

Kimley-Horn and Associates, Inc. was retained to prepare a traffic impact analysis to evaluate the impacts resulting from buildout of this site by 2022. This document presents the methodology used and the findings of the traffic impact analysis. The analysis was conducted in accordance with the requirements of the City of Fort Lauderdale, Florida.

The site plan, Folio Numbers, and study methodology information can be found in Appendix A.

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INVENTORY AND PLANNING DATA

To evaluate the traffic conditions on the surrounding network, intersection turning movement counts were performed at the following intersections listed below.

Intersection Volume Data

Turning movement, pedestrian and bicycle counts were collected during the AM peak (7:00 a.m. to 9:00 p.m.) and PM peak (4:00 p.m. to 6:00 p.m.) periods at the following intersections:

- 7. Federal Highway & SE 7th Street
- 8. Federal Highway & SE 6th Street
- 9. SE 5th Avenue & SE 7th Street
- 10. SE 5 Avenue & SE 6th Street
- 11. SE 3rd Avenue & SE 7th Street
- 12. SE 3rd Avenue & SE 6th Street

Intersection 1 turning movement counts were conducted during typical weekday conditions on January 16, 2019 while intersections 2 through 6 were conducted during typical weekday conditions on January 22, 2019. All counts were conducted during peak season. The volumes were collected in 15-minute intervals and the peak hour was determined for each intersection.

The turning movement counts are provided in *Appendix B*. Signal timing summaries are provided in *Appendix C*.

Study Area Roadway Characteristics

The following roadways are within the project influence area and are characterized based on the number of lanes, annual average daily traffic, road classification, jurisdiction, posted speed limit, on street parking, and adjacent land uses:

- Federal Highway is a 6-lane divided arterial with an AADT of 50,500 vehicles. Federal Highway is under the jurisdiction of FDOT and is also designated as US 1/State Road 5.
 It has a posted speed limit of 35 miles per hour with no on-street parking and is surrounded by commercial and office uses.
- SE 3rd Avenue is a County 4-lane undivided arterial with an AADT of 16,600 vehicles. SE 3rd Avenue has a posted speed limit of 35 miles per hour with no on-street parking and is surrounded by office uses.

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SE 7th Street is a City 2-lane undivided collector road with an AADT of 11,500 vehicles.
 SE 7th Street has a posted speed limit of 25 miles per hour with no on-street parking and is surrounded by residential and office uses.

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PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

Existing and Proposed Land Uses

The existing site currently contains a mix of uses: of a single-family detached home, 1,134 square feet of small office building and 11 multi-family (low-rise) dwelling units. The proposed site will include 1,300 square feet of commercial and 249 multi-family (high-rise) dwelling units.

Trip Generation

The trip generation potential of the development was calculated based upon the trip generation rates and equations provided by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition.* The trip generation potential for the existing uses will be calculated using rates and equations published for Land Use 210 (Single-Family Detached, Land Use 712 (Small Office Building), and Land Use 220 (Multi-Family Housing (Low-Rise)). The trip generation for the proposed uses will be calculated using rates and equations published for Land Use 220 (Multi-Family Housing (Low-Rise)). The trip generation for the proposed uses will be calculated using rates and equations published for Land Use 222 (Multi-Family Housing (High-Rise)) and Land Use 820 (Commercial). Internal capture between the proposed commercial and residential uses was determined using methodology published by the National Cooperative Highway Research Program (NCHRP) for calculating internal capture between land uses. The NCHRP worksheets are included in *Appendix A*.

As indicated in *Table 1*, the net new trip generation potential of the proposed site is 1,118 net external daily trips, 68 net new external AM peak hour trips (16 in/ 52 out) and 86 net new external PM peak hour trips (51 in/ 35 out).

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Table 1: Trip Generation

LAND USE		INTENSITY			AM PEAK HOUR			PM PEAK HOUR		
LAND USE		INTENSITY		TRIPS	TOTAL	IN	OUT	TOTAL	IN	OUT
		Exi	isting S	cenario						
Single-Family Detached home		1	DU	9	1	0	1	1	1	0
Small Office Building		1,134	SF	18	2	2	0	3	1	2
Multifamily Housing (Low-Rise)	1	11	DU	81	5	1	4	6	4	2
	Subtotal			108	8	3	5	10	6	4
	Surger 1						1.			
Existing Net Nev	y Volumes	ilac	-	108	8	3	5	10	6	4
existing Net Net	w external o			Scenario	4	3	2	10	0	4
Multifamily Housing (High-Rise)	-	249	DU	1,193	83	20	63	93	57	36
Commercial		1,300	SF	49	1	1	0	23	11	12
Commercial	Subtotal	1,500	3/1	1,242	84	21	63	115	68	48
Internal Capture	Subtotor			1,242	04	21	05	110	00	40
Multifamily Housing (High-Rise)				8	0	o	0	4	3	1
Commercial				8	0	ő	0	4	1	3
commercial	Subtotal			16	0	0	0	8	4	4
	Subtator			10	U	0	0	0		
Multi-Modal Reduction Su		10%			8	2	6	12	7	5
	Subtotal			0	8	2	6	12	7	.5
	2012 - 12					1220	1.1.1.1	11.		
Driveway Volumes				1,226	76	19	57	96	57	39
Net New Ex				1,226	76	19	57	96	57	39
Existing Net External Trips -	Proposed No	et External Trips		1,118	68	16	52	86	51	35
Note: Trip generation was calculate	d using the f	ollowing data:								
Daily Traffic Generation										
Single-Family Detached home		TE 210]		=	T=9.44 tri	ins / Dil				
Small Office Building		TE 712]		÷	T=16.19 t	•	DO SE			
Multifamily Housing (Low-Rise)		[ITE 220]		-	T = 7,32 tri		10.01			
Multifamily Housing (High-Rise)		TE 222]		2		A	trins / Di			
Commercial		ITE 820]		-	T = 3.94(X) + 211.81 trips / DU T = 37.75 trips / 1000 SF					
AM Peak Hour Traffic Generation		in orol		-	1-31.131	ubs / roo	JU Jr			
Single-Family Detached home	1	TTE 210]			T = 0.74 tri		25% in /7	5% out)		
Small Office Building		ITE 712]			T=1.92 trip	1.1				
Charles and the second s				-	T=0.46 tri					
Multifamily Housing (Low-Rise)		ITE 220]				· · · · · · · · · · · · · · · · · · ·				
Multifamily Housing (High-Rise)		ITE 222]		•	T=0.28Ln	· · · · · · · · · · · · · · · · · · ·			ă.	
Commercial	- 13	ITE 820]		=	T = 0,94 tri	ps / 1000	J SF (62%)	n, 38% ou	9	
PM Peak Hour Traffic Generation							and the			
Single-Family Detached home		ITE 210]			T = 0.99 tri	1				
Small Office Building		[ITE 712]		=	T = 2,45 tri	100 C 100 C			0	
Multifamily Housing (Low-Rise)		ITE 220]		÷	T = 0.56 tri	· · · · · · · · · · · · · · · · · · ·				
		[TE 222]		=	T = 0.34 (X) + 8.56 (61% in, 39% out)					
Multifamily Housing (High-Rise) Commercial		[TE 820]		÷.	Ln(T) = 0.7	· · · · · · · · · · · · · · · · · · ·				

k:\wpb_tpto\1405\140575000 - 629 se 5th ave\excel\[2019-01-16 625 se 5th tripgen.xlsx]tripgen ite

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Traffic Distribution

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. These trips were assigned to the surrounding roadways based upon a review of the roadway network proposed to be in place at the time of buildout and its travel time characteristics.

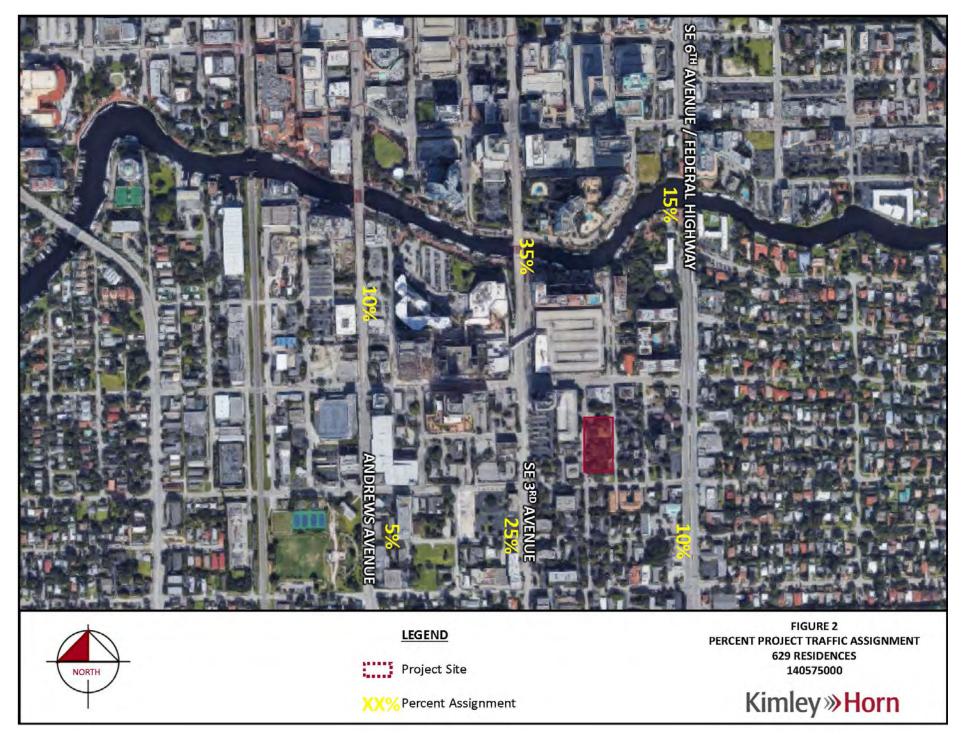
The distribution according to cardinal directions is:

NORTH		60 percent
SOUTH	-	40 percent

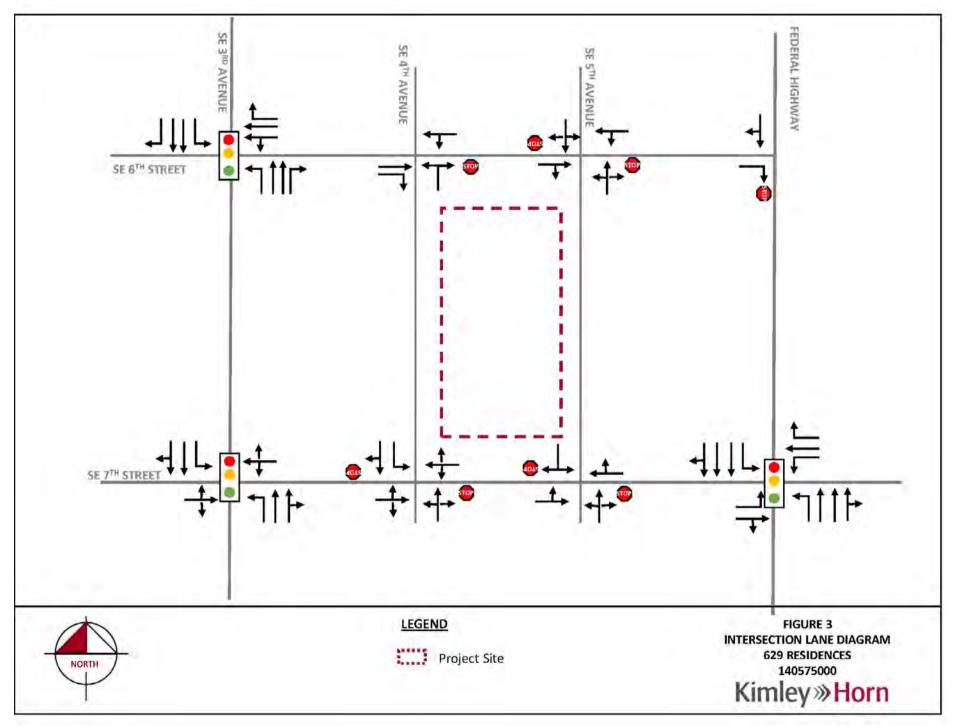
Traffic Assignment

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns. *Figure 2* shows the project distribution of the surrounding roadways. *Figure 3* and *Figure 4* illustrate the lane configurations and the project traffic assignments at the study intersections, respectively.

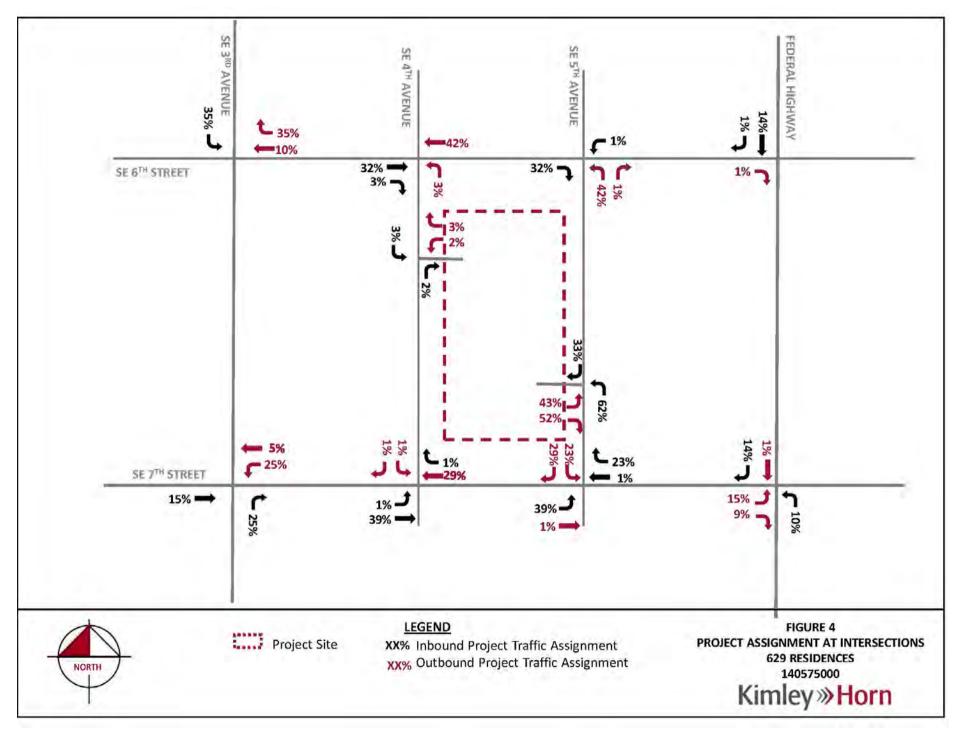
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INTERSECTION ANALYSIS

The operating analyses for three conditions (2019 existing, 2022 background, and 2022 future total) were performed at the signalized and unsignalized study intersections and unsignalized site driveway during the AM and PM peak hours for:

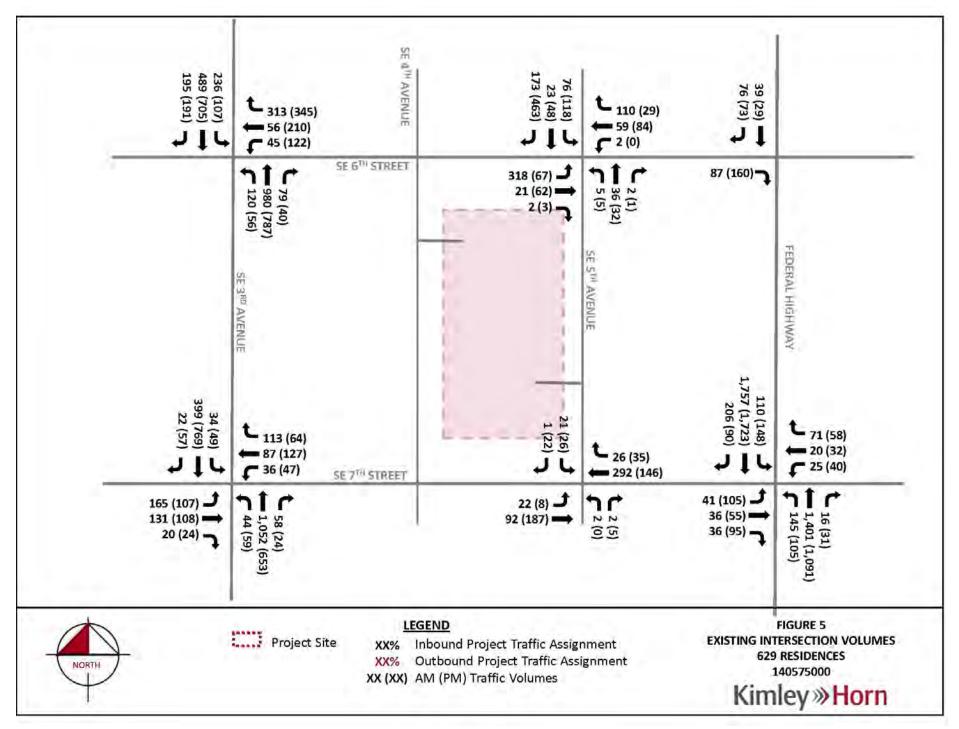
- 1. Federal Highway & SE 7th Street
- 2. Federal Highway & SE 6th Street
- 3. SE 5th Avenue & SE 7th Street
- 4. SE 5 Avenue & SE 6th Street
- 5. SE 3rd Avenue & SE 7th Street
- 6. SE 3rd Avenue & SE 6th Street

The intersection analyses were based upon year 2019 turning movement counts conducted at the study intersections in January 2019. To determine 2022 background volumes, a 0.5% compounded annual growth rate is applied to the existing 2019 volumes. Future total 2022 volumes were calculated by adding project traffic to background traffic volumes.

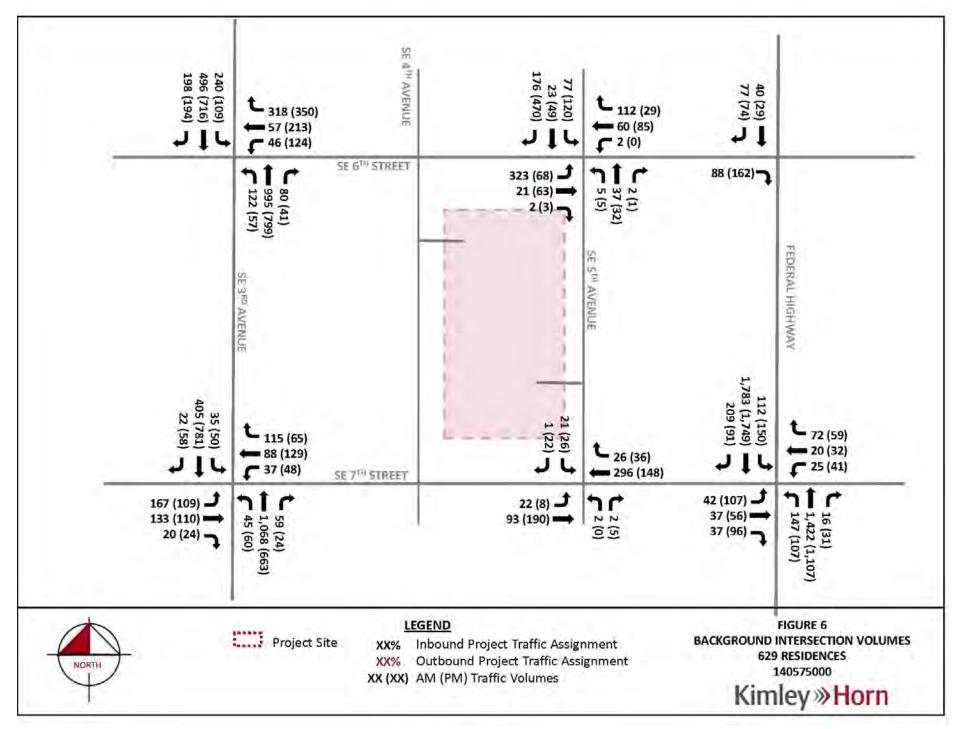
Figure 5,6, and 7 illustrate the existing, background, and future total volumes at the study intersection, respectively.

Volume development worksheets can be found in Appendix D.

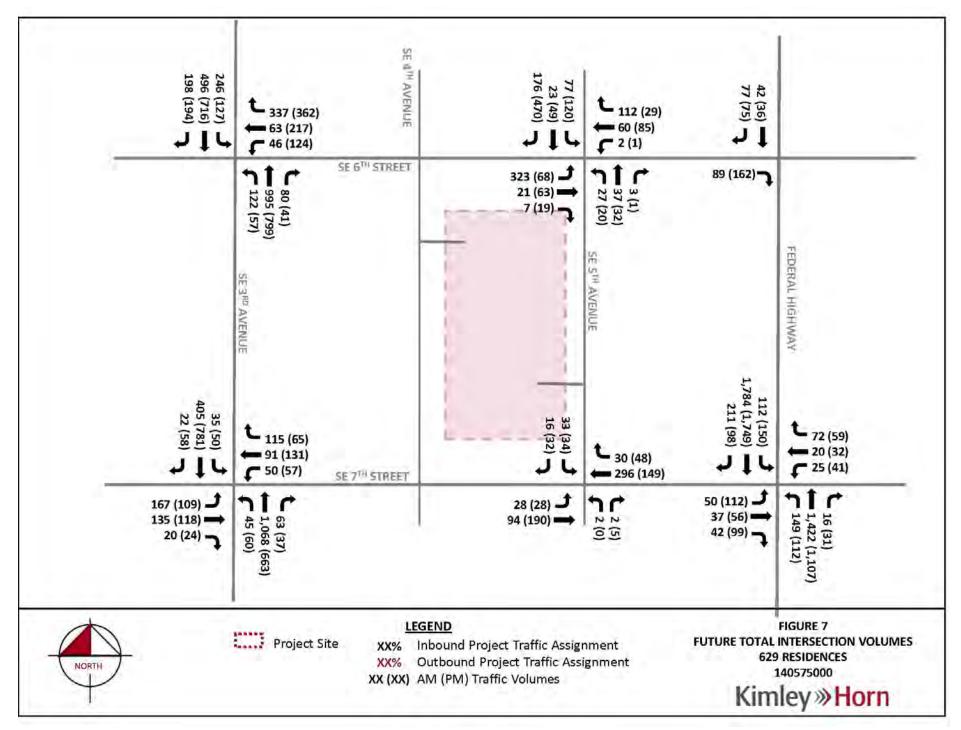
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LEVEL OF SERVICE / DELAY ANALYSIS

The intersection analyses use the methodologies outlined in the *Highway Capacity Manual, 6th Edition* in order to determine the overall intersection level of service and delay during the three analysis conditions during AM and PM peak hours. Trafficware's *Synchro 10.0* software was used to analyze the signalized intersections and *HCS 2010* was used to analyze the unsignalized intersections. The Synchro output worksheets and HCS output worksheets are included in *Appendix E* and *Appendix F*, respectively.

Summary tables have been prepared to document the level of service and delay at the intersections for the existing (2019), future background (2022), and future total (2022) conditions. Table 2A and 2B present the findings of the existing AM and PM peak hour analysis, respectively. Table 3A and 3B present the findings of the background AM and PM peak hour analysis, respectively. Table 4A and 4B present the findings of the future total AM and PM peak hour analysis, respectively. As illustrated in Table 2A and 2B, Table 3A and 3B and Table 4A and 4B, the signalized intersections except SE 3rd Avenue & SE 7th Street have an overall Level of Service C in the existing, background, and future total conditions, respectively. The unsignalized intersection approaches are Level of Service D or better. For future conditions, it is appropriate to implement changes to the allocation of signal timing at various intersection approaches. Therefore, optimization of the signal timing was considered during the AM peak hour at the intersection of SE 3rd Avenue & SE 7th Avenue. Table 5 summarizes the level of service and delay for the AM peak hour at this intersection with optimized signal timing. As shown in this table, optimized eastbound total delay is a decrease in 22.7 seconds from the future total condition and a decrease in 16.9 seconds from the background condition for this movement.

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Intersection	Traffic Control	Overall	Delay /	Approach	Total		Delay / LOS								
intersection	Traffic Control	LOS		Delay	Delay /LOS	Left	Through	Right							
		AM Peak	Hour		1000 202										
	Circultured				NB	20.9/C	10.6/B	22.5/C	16.4/B						
SE 3rd Avenue & SE 6th Street			23.4	22.4	с	SB	14.1/B	18.5/B	12.6/B	12.8/B					
SE SIG Avenue & SE oui Street	Signalized	23.4	Ľ	EB	0		· · · · · · ·	-							
		. I. I.		WB	51.1/D	25.8/C	0.0/A	59.2/E							
	Signalized			NB	58.7/E	17.8/B	60.6/E	60.1/E							
SE 3rd Avenue & SE 7th Street		Cimedized	Classelland	57.9	E	SB	29.5/C	22.7/C	30.1/C	30.1/0					
		57.9	57.5		E	EB	99.0/F	99.0/F							
						1.0.1	1.01	1.0					WB	53.9/D	53.9/D
					117.7	NB	6.6/A	13.7/B	5.8/A	6.1/A					
	et and the state						110	11.0		SB	7.3/A	4.6/A	7.2/A	7.9/A	
Federal Highway & SE 7th Street	Signalized	Signalized	Signalized	Signalized	Signalized	Signalized	Signalized		11.0	11.0	В	EB	72.7/E	72.7/E	0.0/A
				WB	75.7/E	77.9/E	69.5/E	76.6/E							
Intersection	Traffic Control		-		Approach De	lay		_							
intersection	Traine Control	N	В	SB		EB		WB							
SE 6th Street & SE 5th Avenue	Unsignalized	25.	4/D	25	.7/D	7.	8/A	0.1/A							
SE 6th Street & Federal Highway	Unsignalized	1.1	-			9.	1/A	-							
SE 7th Street & SE 5th Avenue	Unsignalized	10.	2/B	11	.8/B	1.	7/A								

Table 2A:AM Peak Hour 2019 Existing Intersection LOS and Delay

Table 2B:PM Peak Hour 2019 Existing Intersection LOS and Delay

Intersection	Traffic Control	and the second se	Delay /	Approach	Total	Delay / LOS				
		LOS		Delay	Delay /LOS	Left	Through	Right		
		PM Peak	Hour					-		
	Signalized			NB	1.3/A	9.3/A	0.8/A	0.2/A		
SE 3rd Avenue & SE 6th Street		10.0	9 B	SB	12.0/B	8.9/A	12.6/B	11.6/B		
SE 3rd Avenue & SE 6th Street		19.9		EB	0		1			
				WB	55.9/E	27.5/C	27.2/C	83.3/F		
				NB	25.1/C	18.8/B	25.8/C	25.6/0		
SE 3rd Avenue & SE 7th Street	Signalized	22.0		SB	29.3/C	17.7/B	30.1/C	29.9/0		
		33.0	с	EB	52.5/D	52.5/D				
									WB	51.3/D
				1	NB	9.2/A	10.9/B	8.9/A	9.2/A	
				SB	10.6/B	6.9/A	10.6/B	11.3/8		
Federal Highway & SE 7th Street	Signalized	17.2	В	EB	77.2/E	77.8/E	0.0/A	76.7/E		
				WB	75.4/E	87.8/F	68.6/E	70.6/E		
Intersection	Traffic Control		-		Approach De	lay				
Intersection	frame control	N	B	9	5B	1	в	WB		
SE 6th Street & SE 5th Avenue	Unsignalized	13.	4/B	24	.7/C	3.	9/A			
SE 6th Street & Federal Highway	Unsignalized					9.	4/A			
SE 7th Street & SE 5th Avenue	Unsignalized	9.3	3/A	10	.5/B	0.	3/A			

Intersection	Traffic Control	Overall	Overall Delay /		Total	Delay / LOS							
	Tramic Control	LOS		Delay	Delay /LOS	Left	Through	Right					
		AM Peak	Hour										
				NB	20.9/C	10.3/B	22.5/C	16.4/B					
SE 3rd Avenue & SE 6th Street	Signalized	22.4	13.4 C	SB	14.1/B	18.5/B	12.6/B	12.8/E					
SE 3rd Avenue & SE bin Street		23.4		EB	0			1					
		(WB	51,1/D	25.8/C	0.0/A	59.2/E					
	Signalized	57.9	57.0	1		NB	58.7/E	17.8/B	60.6/E	60.1/E			
SE 3rd Avenue & SE 7th Street				-	SB	29.5/C	22.7/C	30.1/C	30.1/0				
			E	EB	99.0/F	99.0/F		2					
			1.11	1.11	1	1 1 1	100	WB	53.9/D	53.9/D	1		
		11.0	11.0						NB	6.6/A	13.7/B	5.8/A	6.1/A
r. I	Charles de				SB	7.3/A	4.6/A	7.2/A	7.9/A				
Federal Highway & SE 7th Street	Signalized			В	EB	72.7/E	72.7/E	0.0/A	72.8/8				
		· · · ·		WB	75.7/E	77.9/E	69.5/E	76.6/E					
Intersection	Traffic Control			-	Approach De	elay	_						
mersection	frame control	N	NB		SB		EB						
SE 6th Street & SE 5th Avenue	Unsignalized	26.	26.1/D		.1/D	7.9/A		0.1/A					
SE 6th Street & Federal Highway	Unsignalized					9.1	1/A						
SE 7th Street & SE 5th Avenue	Unsignalized	10.	2/B	11	.9/B	1.	7/A	-					

Table 3A: AM Peak Hour 2022 Background Intersection LOS and Delay

Table 3B: PM Peak Hour 2022 Background Intersection LOS and Delay

Intersection	Traffic Control	Overall	Delay /	Approach	Total		Delay / LOS						
intersection	Trame Control	LOS		Delay	Delay /LOS	Left	Through	Right					
		PM Peak	Hour										
		1		NB	1.3/A	9.0/A	0.8/A	0.2/A					
CE 2-d August B. CE Cal. Church	Signalized	20.6	с	SB	12.5/B	8.9/A	13.2/B	12.1/B					
SE 3rd Avenue & SE 6th Street		20.6	C.	EB	0								
		1.1.1		WB	57.8/E	27.6/C	27.2/C	87.1/F					
	Signalized	33.9	· · · · ·	NB	25.9/C	19.3/B	26.5/C	26.4/C					
SE 3rd Avenue & SE 7th Street			22.0	22.0	22.0	с	SB	30.5/C	18.0/B	31.3/C	31.1/C		
			C.	EB	53.0/D	53.0/D							
								WB	51.9/D	51.9/D	1		
	Signalized	Signalized			17.4	17.4	î - 7	NB	9.4/A	11.6/B	9.1/A	9.4/A	
r. I							Signalized 17.4	17.4			SB	10.8/B	7.1/A
Federal Highway & SE 7th Street			Signalized	Signalized				В	EB	77.0/E	77.6/E	0.0/A	76.5/E
		-		WB	75.2/E	87.7/F	68.3/E	70.3/E					
Intersection	Traffic Control			4	Approach De	lay		-					
intersection	namecontrol	N	IB		SB	EB		WB					
SE 6th Street & SE 5th Avenue	Unsignalized	13.	13.5/B		.0/D	3.9/A							
SE 6th Street & Federal Highway	Unsignalized					9.	1/A	ž —					
SE 7th Street & SE 5th Avenue	Unsignalized	9.3	3/A	10	.5/B	0.	3/A	2					

Intersection	Traffic Control	Overall	Overall Delay /		Total		Delay / LOS						
intersection	frame control	LOS		Delay	Delay /LOS	Left	Through	Right					
		AM Peak	Hour										
				NB	21.2/C	10.8/B	22.8/C	16.6/B					
SE 3rd Avenue & SE 6th Street	Cincolined	Signalized		26.4	с	SB	14.7/B	20.2/C	12.7/B	12.8/B			
SE SIG Avenue & SE bin Street	Signalized	20.4	L	EB	0								
				WB	64.8/E	26.0/C	0.0/A	77.3/E					
	Signalized	64.8		NB	68.5/E	18.1/B	70.7/F	70.7/F					
SE 3rd Avenue & SE 7th Street			64.8	64.8	64.8	E	SB	29.9/C	22.9/C	30.5/C	30.5/0		
						04.0	04.0	04.0	E	EB	104.8/F	104.8/F	
						1.00	WB	59.8/E	59.8/E	-	1		
			11.6		11.5			NB	7.2/A	17.2/B	6.1/A	6.4/A	
	fine line d	11.6									SB	7.7/A	4.8/A
Federal Highway & SE 7th Street	Signalized			В	EB	72.3/E	72.5/E	0.0/A	72.1/E				
				WB	74.7/E	77.9/E	68.8/E	75.3/E					
Intersection	Traffic Control				Approach D	elay	_						
intersection	frame control	Ň	IB	SB		EB		WB					
SE 6th Street & SE 5th Avenue	Unsignalized	31.	8/D	27	.3/D	7.8/A		0.1/A					
SE 6th Street & Federal Highway	Unsignalized			-		9.1	1/A						
SE 7th Street & SE 5th Avenue	Unsignalized	10.	4/B	11	.8/B	2.0	D/A	-					

Table 4A: AM Peak Hour 2022 Future Total Intersection LOS and Delay

Table 4B: PM Peak Hour 2022 Future Total Intersection LOS and Delay

Intersection	Traffic Control	Overall	Delay /	Approach	Total		Delay / LOS							
intersection	Trame Control	L	LOS		Delay /LOS	Left	Through	Right						
		PM Peak	Hour											
				NB	1.7/A	9.6/A	1.1/A	0.5/A						
SE 3rd Avenue & SE 6th Street	Signalized	23.3		с	SB	12.1/B	9.0/A	12.7/B	11.6/B					
SE SFO AVENUE & SE OUN SUPER		23.5	L.	EB	0		·							
				WB	63.8/E	27.7/C	27.3/C	98.0/F						
	Signalized	35.4	<u> </u>	NB	27.3/C	19.8/B	28.0/C	27.8/C						
SE 3rd Avenue & SE 7th Street			25.4		SB	32.0/C	18.7/B	33.0/C	32.7/C					
			D	EB	54.1/D	54.1/D		-						
			1.1		1.2.2	1.1		WB	53.0/D	53.0/D	(ment)			
				1 1 1	1	1	1.1	10.00	1	NB	9.6/A	12.2/B	9.2/A	9.5/A
- total presidents	et and the st				SB	11.1/B	7.2/A	11.2/B	11.8/B					
Federal Highway & SE 7th Street	Signalized	Signalized	17.7	В	EB	76.9/E	77.7/E	0.0/A	76.4/E					
		100	5	WB	75.0/E	87.8/F	68.0/E	70.0/E						
Intersection	Traffic Control			-	Approach De	elay								
intersection	maniecontrol	N	IB	2	SB	EB		WB						
SE 6th Street & SE 5th Avenue	Unsignalized	18.	.0/C	26	.4/D	3.	5/A	0.1/A						
SE 6th Street & Federal Highway	Unsignalized		Č			9.	1/A	1 ***						
SE 7th Street & SE 5th Avenue	Unsignalized	9.3	3/A	11	.0/B	1.	1/A	1-						

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Intersection	Traffic Control	Overall	Overall Delay / LOS		Total	Delay / LOS			
	Tramic Control	L			Delay /LOS	Left	Through	Right	
		AM Peak	Hour						
	Signalized	63.4	.4 E	NB	68.5/E	18.1/B	70.7/F	70.4/F	
CE 2-4 August 0 CE 244 Charact					SB	29.9/C	22.9/C	30.5/C	30.5/0
SE 3rd Avenue & SE 7th Street				EB	82.1/F	82.1/F			
				WB	76.3/E	76.3/E			

Table 5: 2022 Future LOS and Delay Optimized

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TURN LANE ANALYSIS

The 95th percentile queue lengths for three conditions (existing, background, and future total) were analyzed at the signalized study intersections during the AM peak hour and PM peak hour using Trafficware's *Synchro 10.0* Software. These analyses use the methodologies outlined in the *Highway Capacity Manual* in order to determine the 95th percentile queue lengths. *Table 6, 7,* and 8 summarize the existing, background, and future total queue lengths, respectively.

As shown in these tables, the 95th percentile queue length does not exceed the storage for any movement during the existing, background and future total conditions except for the eastbound left movement at the intersection of SE 7th Street & Federal Highway during PM peak hours. Based upon the analyses undertaken, the storage length is exceeded by only seven (7) feet during future total conditions. Because the queue storage is exceeded by a fraction of one vehicle, it is anticipated that the 95th percentile queue will effectively be contained within the storage length provided. Therefore, the queue for this movement is not impacting any conflicting movements.

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Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
					AM Peak	Hour								1.000
SE 3RD AVENUE & SE 6TH STREET	-	NA		NA	105	300	58	125	15	65	128	155	36	155
SE 3RD AVENUE & SE 7TH STREET		NA	1	NA	1.011-4	NA	32	250	1	NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	52	200	60	100	54	100	126	350		NA	29	270		NA
and the second se					PM Peak	Hour			_			_		
SE 3RD AVENUE & SE 6TH STREET	-	NA		NA	119	300	7	125	Ø	65	39	155	34	155
SE 3RD AVENUE & SE 7TH STREET	-	NA		NA	_	NA	40	250		NA	55	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	197	200	94	100	47	100	57	350		NA	60	270		NA

Table 6: Existing Conditions 95th Percentile Queue

Table 7: Background Conditions 95th Percentile Queue

Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
					AM Peak	Hour								
SE 3RD AVENUE & SE 6TH STREET		NA		NA	105	300	58	125	15	65	128	155	36	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA	-	NA	32	250	-	NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	52	200	60	100	54	100	126	350	29	NA	29	270		NA
					PM Peak	Ноцг						-		
SE 3RD AVENUE & SE 6TH STREET		NA		NA	117	300	7	125	0	65	40	155	35	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA	1.1	NA	41	250		NA	56	100	-	NA
SE 7TH STREET & FEDERAL HIGHWAY	199	200	95	100	48	100	66	350		NA	61	270		NA

Table 8: Future Total Conditions 95th Percentile Queue

Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
					AM Peak	Hour								
SE 3RD AVENUE & SE 6TH STREET		NA		NA	127	300	56	125	15	65	150	155	36	155
SE 3RD AVENUE & SE 7TH STREET	1	NA		NA		NA	33	250		NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	62	200	59	100	53	100	142	350		NA	32	270		NA
			-	-	PM Peak	Hour		1	-					1
SE 3RD AVENUE & SE 6TH STREET		NA		NA	127	300	7	125	o	65	46	155	35	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	41	250		NA	56	100	1	NA
SE 7TH STREET & FEDERAL HIGHWAY	207	200	94	100	48	100	78	350		NA	63	270	110	NA

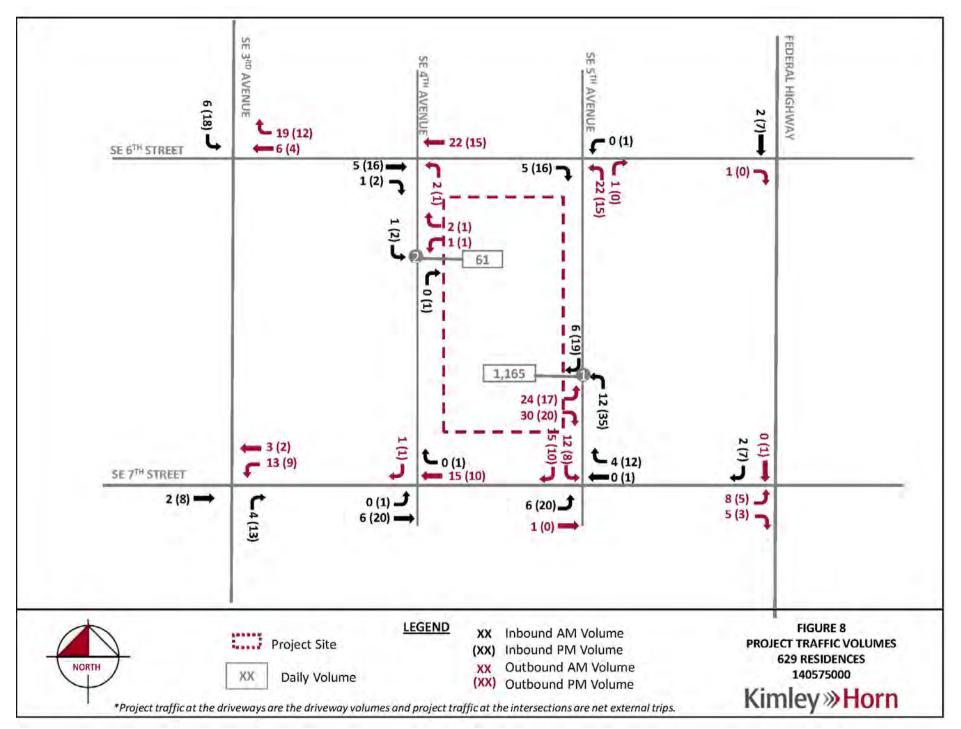
DRIVEWAY ACCESS

Access to the site is proposed via two full-access driveways: one on SE 5th Avenue and one on SE 4th Avenue. The driveway on SE 5th Avenue will be utilized more because it provides access to the parking garage. The driveway on SE 4th Avenue will only provide access to/from a few parking spaces. *Figure 8* illustrates the driveway volumes at the project driveways and the project traffic volumes at the study intersections.

A driveway analysis has been conducted for the main driveway on SE 5th Avenue using *HCS* 2010 software for future total (2022) conditions. The minor driveway on SE 4th Avenue serves fewer than 5 vehicles in the peak hours; therefore, this driveway was not analyzed. The level of service and delay at the main driveway is shown in *Table 9*. As shown in the table, the approach level of service is LOS A and the 95th percentile queue for the northbound left movement into the site is 0 feet during the AM peak hour and only 3 feet during the PM peak hour. Therefore, no lane modifications are proposed at the driveway.

Peak Hour	EB Approach Delay	NB Approach Delay	NBL 95% Queue
AM Peak Hour	8.9/A	1.4/A	0 ft
PM Peak Hour	9.2/A	3.3/A	3 ft

Table 9: Driveway Analysis



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CONCLUSION

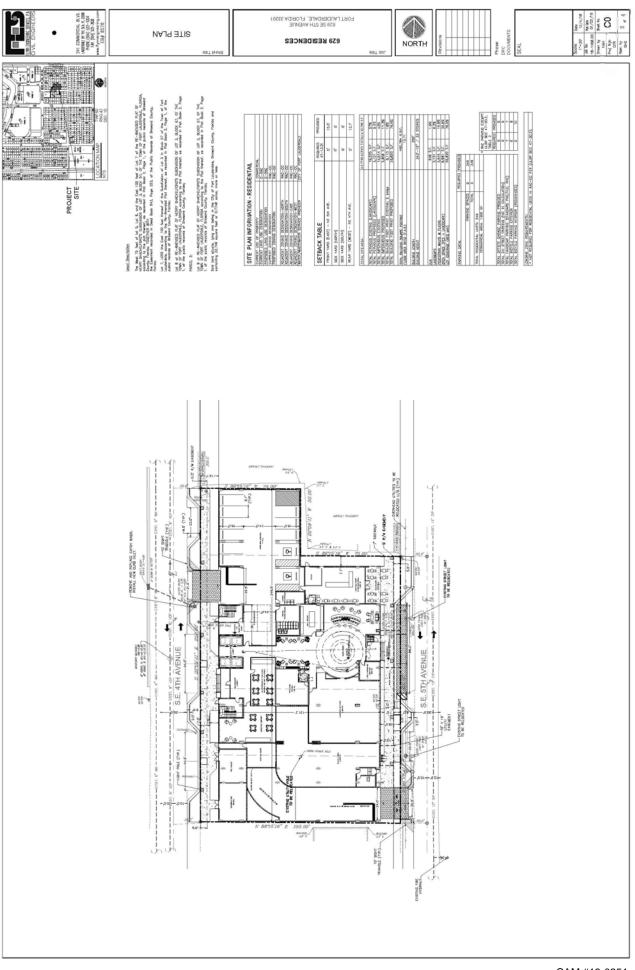
The proposed plan of development will include a high-rise multifamily housing and commercial uses located between SE 6th Street and SE 7th Street on the west side of SE 5th Avenue in Fort Lauderdale, Florida.

Trip generation calculations were prepared to evaluate the volume of trips anticipated to be generated during the weekday AM and PM peak hours. These anticipated trips were then used to analyze the intersections close in proximity to the site. The intersection of SE 3rd Avenue & SE 7th Street, is projected to operate at an overall LOS E during both future background and future total conditions. Further evaluation indicates that optimized signal timing in the future total condition will improve conditions by decreasing delay for the eastbound movement compared to the background condition during the AM peak hour. As noted, it is common for signal timing to be adjusted (optimized), for future conditions to account for changes in intersection volumes. The remaining intersections will all operate at an overall LOS D or better during existing, background, and future total conditions.

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APPENDIX A: PROJECT INFORMATION, METHODOLOGY, AND INTERNAL CAPTURE WORKSHEET

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1/25/2019



Site Address	633 SE 5 AVENUE # 1-4 FORT LAUDERDALE, 33301	ID#	504219580100
Property Owner	LAUDERDALE 629 LLC	Millage	0312
Malling Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	08 - Multi-family - less than 10 units

Abbreviated Legal Description REAMENDED PLAT HENRY \$HACKLEFORD\$ \$UB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 9

The just values displayed below were set in compliance with Sec. 193.011, Fia. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

	Property Assessment Values										
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax					
2019	\$112,500	\$123,360	0	\$235,860	\$235,860						
2018	\$112,500	\$483,560	0	\$596,060	\$596,060	\$11,845.16					
2017	\$112,500	\$271,370	0	\$383,870	\$291,510	\$7,013.73					

	2019 Exemptions	and Taxable Values by Taxing Authority		
	County	School Board	Municipal	Independent
Just Value	\$235,860	\$235,860	\$235,880	\$235,860
Portability	D	0	0	0
Assessed / SOH	\$235,860	\$235,860	\$235,860	\$235,860
Homestead	D	٥	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	D	0	0	0
Exemption Type	0	0	0	٥
Taxable	\$235,860	\$235,860	\$235,660	\$235,860

				- 3 1	Land Calculations /	
	Sale	s History		Price	Factor	Туре
Date	Тура	Price	Book/Page or CIN	\$15,00	7,500 SqFt	Square Foot
05/02/2017	Warranty Deed Disqualified Sale	\$750,000	114362068			
12/01/1993	Quit Claim Deed	\$100	21530 / 589			2
07/01/1972	Warranty Deed	\$5,000		Adj. Bidg. S.F.:	2787	
				Effective Year:	1976	
				Actual Year:	1975	
				Units/Beds/Baths:	4/6/6	

	8	pecial Assessment	1					
Fire	Garb	Light	Drain	Impr	Sale	Storm	Clean	Misc
Ft Lauderdaje Fire-rescue (03)								
Reeldential (R)					1	1		
		u					5	

1/25/2019



Site Address	629 SE 5 AVENUE FORT LAUDERDALE, 33301	IDØ	504210580090	
Property Owner	LAUDERDALE 629 LLC	Millage	9312	
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	17 - Office buildings, non-professional services buildings, one-story	

Abbreviated Legal Description

REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 8

The just values displayed below were set in compliance with Sec. 193.011, Fia. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

-	Property Assessment Values										
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax					
2019	\$187,500	\$208,550	0	\$396,050	\$396,050						
2018	\$187,500	\$208,550	Ó	\$396,050	\$396,050	\$7,972.79					
2017	\$187,500	\$192,380	0	\$379,880	\$379,880	\$7,787.37					

	2019 Exemptions	and Taxable Values by Taxing Authority		
	County	School Board	Municipal	Independent
Just Value	\$396,050	\$396,050	\$396,050	\$396,050
Portability	0	0	0	0
Assessed / SOH	\$396,050	\$396,050	\$396,050	\$396,050
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vst/Dis	0	0	0	0
Senior	D	0	0	0
Exemption Type	0	0	0	0
Taxable	\$396,050	\$396,050	\$396,050	\$396,050

	Sales History				Land Calculations /	
Date	Туре	Price	Book/Page or CIN	Price	Factor	Туре
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239	\$25,00	7,500 SqFt	Square Foot
08/29/2014	Warranty Deed Qualified Sale	\$500,000	112554167			
05/28/2010	Quit Claim Deed	\$500	47135 / 785	Adj. Bidg. S.F.:	1134	
2220122423	Disgustified Sale	1000		Effective Year:	1950	
05/21/2002	Warranty Deed	\$275,000	33311 / 33	Actual Year:	1932	
11/01/1993	Warranty Deed	\$110,000	21397 / 508	Units/Beds/Baths:	0//	

	8	pecial Assessment	1					11 - T
Fire	Garb	Light	Drain	Impr	Sale	Storm	Clean	Misc
Ft Lauderdaje Fire-rescue (03)								
Commercial (C)								
1,134		4		<u></u>			5	

1/1

1/25/2019



Site Address	625 SE 5 AVENUE FORT LAUDERDALE, 33301	WCI	504210580080
Property Owner	LAUDERDALE 629 LLC	Millage	9312
Malling Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	00 - Vacant residential

Abbreviated Legal Description REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 7 E 100

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values							
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Тах	
2019	\$375,000	0	0	\$375,000	\$375,000		
2018	\$375,000	0	0	\$375,000	\$375,000	\$7,158.03	
2017	\$250,000	0	0	\$250,000	\$82,500	\$2,696.87	

	2019 Exemptions	and Taxable Values by Taxing Authority		
	County	School Board	Municipal	Independent
Just Value	\$375,000	\$375,000	\$375,000	\$375,000
Portability	D	0	0	0
Assessed / SOH	\$375,000	\$375,000	\$375,000	\$375,000
Homestead	D	٥	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	D	0	0	0
Exemption Type	0	0	0	0
Taxable	\$375,000	\$375,000	\$375,000	\$376,000

					Land Calculations /	and the second second
	Sales Histor	У		Price	Factor	Type
Date	Туре	Price	Book/Page or GIN	\$75,00	5,000 SgFt	Square Foot
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239			
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$900,000	112553565			
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650	Adj. Bidg. S.F.:	0	
07/01/1993	Warranty Deed		20934 / 178	Effective Year:	0	
12/01/1976	Warranty Deed	\$25,000		Actual Year:		
120111070	warany been	4241444		Units/Beds/Baths:	0//	

	8	pecial Assessment						A
Fire	Garb	Light	Drain	Impr	Sale	Storm	Clean	Misc
Ft Lauderdaje Fire-rescue (03)								
Vacant Lots (L)								
1		P				<u>(1</u>	5	

1/25/2019

Broward County Property Appraiser's Network



Site Address	624 SE 4 AVENUE FORT LAUDERDALE, 33301	ID#	504210580070
Property Owner	LAUDERDALE 629 LLC % MICHAEL R TILLEY	Miliage	0312
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	01 - Single family

Abbreviated Legal Description

REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 7 LESS E 100

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

			Pr	operty Assessment Values		
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Valu	19 Tax
2019	\$62,500	\$53,590	0	\$116,090	\$116,090	
2018	\$62,500	\$53,590	0	\$116,090	\$116,090	\$2,363.56
2017	\$62,500	\$51,520	0	\$114,020	\$114,020	\$2,362.56
			2019 Exemption	and Taxable Values by Taxing Authority		
			County	School Board	Municipal	Independent
lust Value			\$116,090	\$116,090	\$116,090	\$116,090
ortability			0	0	0	0
ssessed / SC	н		\$116,090	\$116,090	\$116,090	\$116,090
Iomestead	÷		0	0	0	0
dd. Homeste	ad		0	٥	0	C
Vid/Vet/Die			0	0	0	0
ienlor			D	0	0	0
xemption Typ	pe		0	0	0	0
axable			\$116,090	\$116,090	\$116,090	\$116,090

					Land Calculations /	
The second se	Sales History				Factor	Тура
Date	Туре	Price	Book/Page or CIN	\$25.00	2,500 SgFt	Square Foot
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239			
09/23/2014	Warranty Deed Disqualified Sale	\$300,000	112553758			
02/17/2000	Warranty Deed	\$70,000	30277 / 739	Adj. Bidg. S.F.:	766	
02/01/1977	Warranty Deed	\$14,000	6918 / 970	Effective Year:	1947	
				Actual Year:	1946	
				Units/Beds/Baths:	1//	

	Special Assessments							
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)				T				
Residential (R)			· · · · · · · · · · · · · · · · · · ·			1		
1		A	11 11					

1/25/2019



Site Address	620 SE 4 AVENUE # 1-7 FORT LAUDERDALE, 33301	ID#	504210580060
Property Owner	LAUDERDALE 629 LLC	Nillage	0312
Malling Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	08 - Multi-family - less than 10 units

Abbreviated Legal Description REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 6

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values								
Year Land	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax		
2019	\$187,500	\$315,120	0	\$502,620	\$502,620			
2018	\$187,500	\$315,120	Û	\$502,620	\$502,620	\$10,916.82		
2017	\$187,500	\$269,730	0	\$457,230	\$417,830	\$9,769.18		

	2018 Exemptions	and taxable values by taxing Authomy		
	County	School Board	Municipal	Independent
Just Value	\$502,820	\$502,620	\$502,620	\$502,620
Portability	D	0	0	0
Assessed / SOH	\$502,620	\$502,620	\$502,620	\$502,620
Homesteed	0	٥	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	D	0	0	0
Exemption Type	D	0	0	0
Taxable	\$502,620	\$502,620	\$502,620	\$502,620

				Land Calculations /			
	Sales Histor	Price	Factor	Type			
Date	Туре	Price	Book/Page or GIN	\$25,00	7,500 SgFt	Square Fool	
05/01/2017	Multi Werranty Deed Exception Due to Condition	\$2,500,000	114362239				
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$800,000	112553565				
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650	Adj. Bidg. S.F.:	2513		
07/01/1993	Warranty Deed		20934 / 178	Effective Year:	1975		
10/01/1976	Warranty Deed	\$82,000		Actual Year:	Actual Year: 1974		
IMAILE1A	Trainally Deed	402,000		Units/Beds/Baths:	7//		

	8	pecial Assessment	1					
Fire	Garb	Light	Drain	Impr	Sale	Storm	Clean	Misc
Ft Lauderdaje Fire-rescue (03)				L				
Residential (R)						1		
7		P				<u>(1</u>	5	

Broward County Property Appraiser's Network

1/25/2019



Site Address	616 SE 4 AVENUE FORT LAUDERDALE, 33301	ID#	504210580050	
Property Owner	LAUDERDALE 629 LLC	Millage	9312	
Malling Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	00 - Vacant residential	

Abbreviated Legal Description REAMENDED PLAT HENRY \$HACKLEFORD\$ \$UB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 5 W 75

The just values displayed below were set in compliance with Sec. 193.011, Fia. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

			Pro	perty Assessment Values		
Year	Land	Building	Agriculture Savings	Just / Market Value	Asseased / SOH Value	Tax
2019	\$281,250	0	0	\$281,250	\$281,250	
2018	\$281,250	0	0	\$281,250	\$281,250	\$5,368.50
2017	\$187,500	0	0	\$187,500	\$103,120	\$2,553.59

	2019 Exemptions	and Taxable Values by Taxing Authority		
	County	School Board	Municipal	Independent
Just Value	\$281,250	\$281,250	\$281,250	\$281,250
Portability	D	0	0	0
Assessed / SOH	\$281,250	\$281,250	\$281,250	\$281,250
Homastead	D	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	D	0	0	0
Senior	D	0	0	0
Exemption Type	D	0	0	0
Taxable	\$281,250	\$261,250	\$281,250	\$261,250

					Land Calculations /	and the second second
	Sales Histor	У		Price	Factor	Type
Date	Туре	Price	Book/Page or GIN	\$75,00	3,750 SqFt	Square Foot
05/01/2017	Multi Werranty Deed Exception Due to Condition	\$2,500,000	114362239			
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$800,000	112553565			
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650	Adj. Bidg. S.F.:	0	
07/01/1993	Warranty Deed		20934 / 178	Effective Year:	D	
03/01/1977	Warranty Deed	\$19,000		Actual Year:		
AMA IL 1971	man carty press	+191000		Units/Beds/Baths:	0//	

	8	pecial Assessment						
Fire	Garb	Light	Drain	Impr	Sale	Storm	Clean	Misc
Ft Lauderdaje Fire-rescue (03)				L				
Vacant Lots (L)		1			0			
1.1		P				<u>1</u>	5	

Kimley »Horn

MEMORANDUM

To:	Benjamin Restrepo, P.E. City of Fort Lauderdale
From:	Christopher W. Heggen, P.E. Kimley-Horn and Associates, Inc.
Date:	January 16, 2019
Subject:	629 Residences - Traffic Impact Analysis Methodology Fort Lauderdale, Florida Kimley-Horn # 140575000

629 Residences is a proposed development that is proposed to include 249 multi-family residential units and 1,300 square feet of retail use. The site is located at approximately 616 SE 4th Avenue in Ft. Lauderdale, Florida. *Figure 1* illustrates the location of the site. Kimley-Horn and Associates, Inc. has been retained to conduct a traffic impact analysis for the proposed site. Following is a summary of the methodology that we have developed for this analysis.

- Trip generation: The trip generation potential for the residential units will be calculated using rates and equations published for by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, *Tenth Edition*.
 - The trip generation potential for the existing uses will be calculated using rates and equations published for Land Use 210 (Single-Family Detached), Land Use 712 (Small Office Building), and Land Use 220 (Multi-family housing (Low Rise)).
 - The trip generation potential for the proposed uses will be calculated using rates and equations published for Land Use 222 (Multi-family housing (High Rise) Land Use 820 (Commercial). Pass-by determination for the commercial use will use rates outlined in the ITE *Trip Generation Handbook*, 3rd Edition.

A preliminary trip generation calculation has been attached as Table 1.

- Multi-modal credits: a multi-modal credit of 10% will be applied to the trip generation calculations for the AM and PM peak hours.
- Trip distribution/assignment: Trip distribution will be based on the characteristics of the adjacent roadway network and types of surrounding uses.
- Data collection: Bike, pedestrian and vehicular AM (7:00 AM 9:00 AM) and PM (4:00 PM 6:00 PM) peak period turning movement counts will be collected at the following locations:
 - Federal Highway & SE 7th Street
 - Federal Highway & SE 6th Street
 - SE 5th Avenue & SE 7th Street
 - SE 5th Avenue & SE 6th Street
 - SE 3rd Avenue & SE 7th Street
 - SE 3rd Avenue & SE 6th Street

561-845-0665

Kimley »Horn

- From this count data, peak hour traffic volumes will be determined. For any counts conducted outside of the peak season (January – March), the Peak Season Conversion Factor (PSCF) published by FDOT will be applied.
- Future Background Volumes: Future background volumes will be determined by adding a 0.5% compounded annual growth rate plus, specific development volumes, if any from nearby approved projects to the intersection counts. A list of approved projects along with trip generation and distribution graphic provided by the city of Fort Lauderdale Staff will be utilized in the analysis to determine volumes added at study intersections.
- Total Future Volumes: Total future volumes will be determined by adding project traffic volumes at each of the study intersections.
- Intersection LOS Analysis: Intersection LOS analyses will be conducted for Existing Peak Season, Future Background Peak Season and Future Total Peak Season Conditions using Synchro software for signalized intersections and HCS software for unsignalized intersections. HCM 2010 output will be used to determine LOS and delay at each study intersection.
- An executive summary will include LOS tables for each intersection for the Existing Peak Season, Future Background Peak Season and Future Total Peak Season Conditions
- Driveway LOS and delay will be conducted for Future Total Peak Season Conditions using HCS software.
- Turn lane requirements and vehicular queue storage requirements will be determined at site turn lanes based upon the volumes of traffic anticipated to utilize the site driveways.
- Following a determination of project impacts, the Applicant will review potential mitigation measures with City staff and the City consultant to evaluate feasibility and appropriateness of these measures.
- A buildout of 2022 will be analyzed.

The data collection, calculations, analyses and results will be summarized in a written report for City review. Relevant tables, charts, figures and worksheets will be included in the summary report. Please review the methodology for this analysis as outlined above and indicate your concurrence by signing in the space below. Should you have questions or comments regarding the proposed methodology, please call me via phone at (561) 840-0248 or via e-mail at chis.heggen@kimley-horn.com.

Concur by:

Date:

Benjamin Restrepo, P.E.

K:\WPB_TPTO\1405\140575000 - 629 SE 5th Ave\2019-01-16 629 Residences Traffic Methodology .docx

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour

based on the Trip Generation Handbook, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily

based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

			SUMMA	KY			
			GROSS TRIP	GENERATION			
	10001000	Da	ily	A.M. Pea	ak Hour	P.M. Pea	ak Hour
	Land Use	Enter	Exit	Enter	Exit	Enter	Exit
INPUT	Office						
	Retail	25	25	1	0	11	12
5	Restaurant	9					3
4	Cinema/Entertainment	1			1		
	Residential	597	597	20	63	57	36
	Hotel						
		621	621	21	63	68	48
			INTERN	IAL TRIPS			
	Land Use	Da	ily	A.M. Pea	ak Hour	P.M. Pea	ak Hour
-	Land Use	Enter	Exit	Enter	Exit	Enter	Exit
OUTPUT	Office	0	0	0	0	0	0
a	Retail	3	5	0	0	1	3
5	Restaurant	0	0	0	0	0	0
ส	Cinema/Entertainment	0	0	0	0	0	0
9	Residential	5	3	0	0	3	1
	Hotel	0	0	0	0	0	0
		8	8	0	0	4	4
	% Reduction	1.3	3%	0.0)%	6.9	1%
		_	EXTERN	IAL TRIPS			
	Land Use	Da	ily	A.M. Pea	ak Hour	P.M. Pea	ak Hour
÷.	Land Use	Enter	Exit	Enter	Exit	Enter	Exit
OUTPUT	Office	0	0	0	0	0	0
2	Retail	22	20	1	0	10	9
5	Restaurant	0	0	0	0	0	0
ลี	Cinema/Entertainment	0	0	0	0	0	0
9	Residential	592	594	20	63	54	35
	Hotel	0	0	0	0	0	0
		613	613	21	63	64	44

APPENDIX B: TURNING MOVEMENT COUNTS

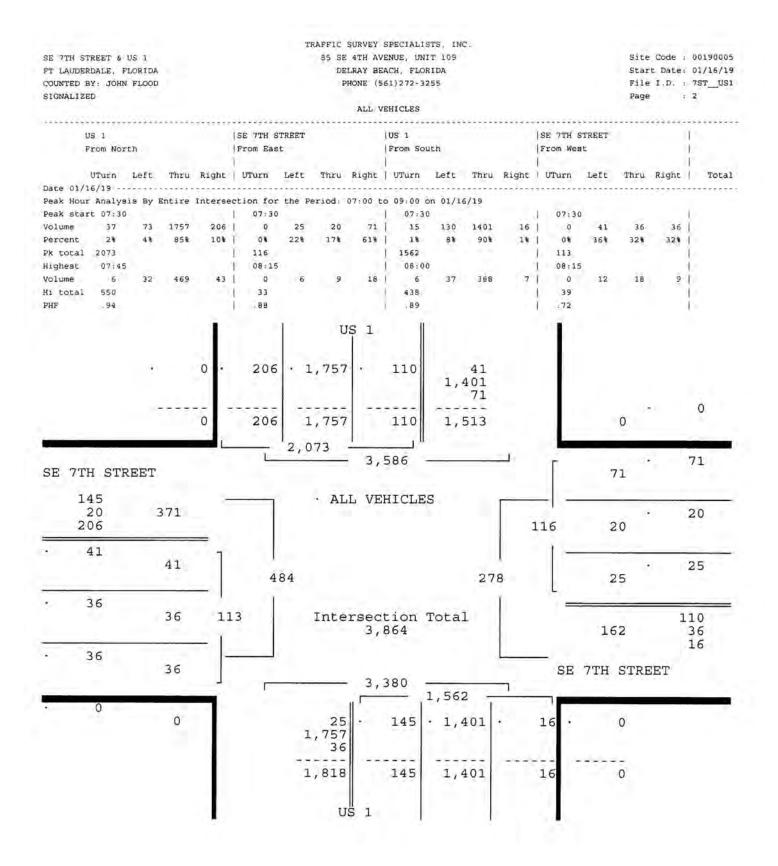
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CAM #19-0351 Exhibit 4 Page 41 of 186 SE 7TH STREET & US 1 FT LAUDERDALE, FLORIDA COUNTED BY: JOHN FLOOD SIGNALIZED

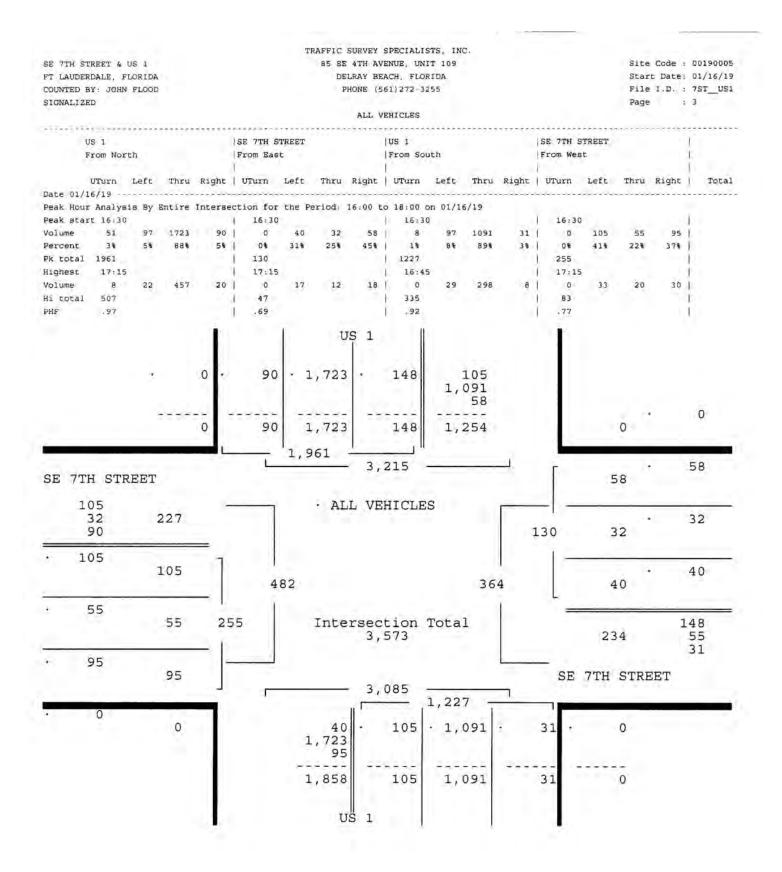
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

Site Code : 00190005 Start Date: 01/16/19 File I.D. : 7ST_US1 Page : 1

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07:30	4	10	479	43	1 0	3	2	25	1 1	32	362	3	0	8	3	9	984
07:45	6	32	469	43	1 0	10	3	16	5	20	348	2	0	11	8	9	982
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08:15	13	16	361	67	1 0	6	9	18	3	41	303	4	0	12	18	9	880
08:30	7	11	395	60	1 0	5	6	7	0	19	308	2	0	14	10	9	853
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17:00	13	25	403	23	1 0	9	8	18	2	26	236	8) 0	31	13	22	837
17:15	8	22	457	20	1 0	17	12	18	0	15	267	7	1 0	33	20	30	926
17:30	8	24	438	21	1 0	15	18	12	0	17	258	11	1 0	24	22	26	894
17:45	12	24	387	41	1 0	10	7	14	2	21	286	10	1 0	26	10	15	865
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CAM #19-0351 Exhibit 4 Page 43 of 186



CAM #19-0351 Exhibit 4 Page 44 of 186 SE 7TH STREET & US 1 PT LAUDERDALE, FLORIDA COUNTED BY: JOHN FLOOD SIGNALIZED

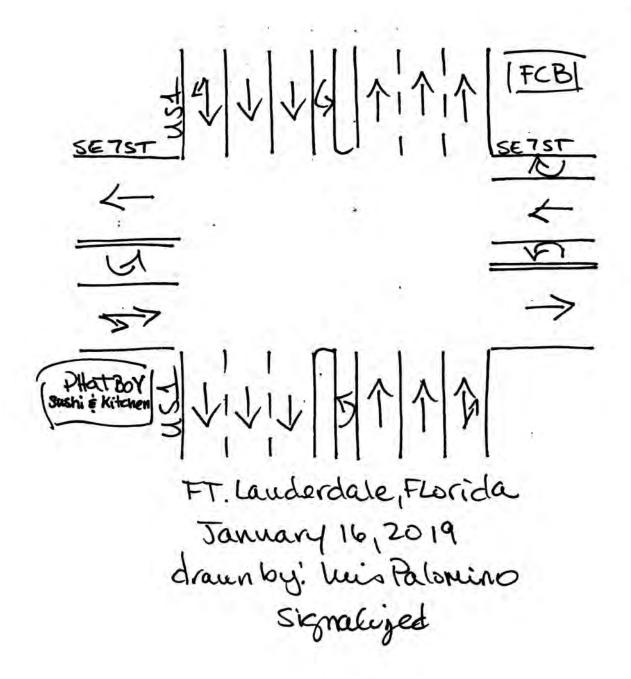
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

PEDESTRIANS & BIKES

Site Code : 00190005 Start Date: 01/16/19 File I.D. : 7ST_US1 Page : 1

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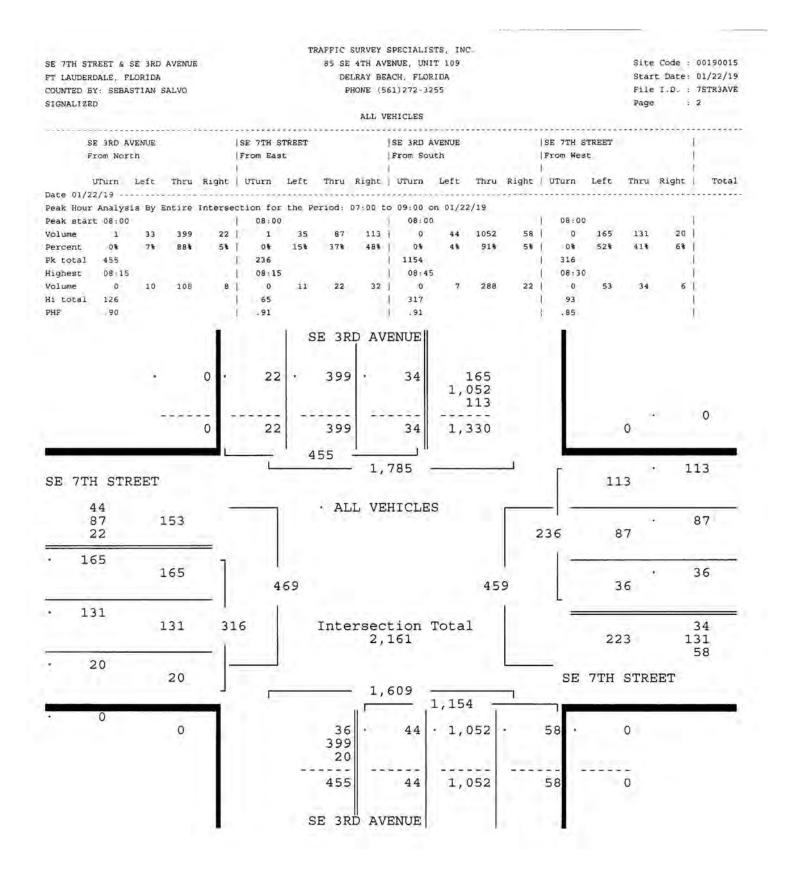


CAM #19-0351 Exhibit 4 Page 46 of 186 SE 7TH STREET & SE 3RD AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: SEBASTIAN SALVO SIGNALIZED

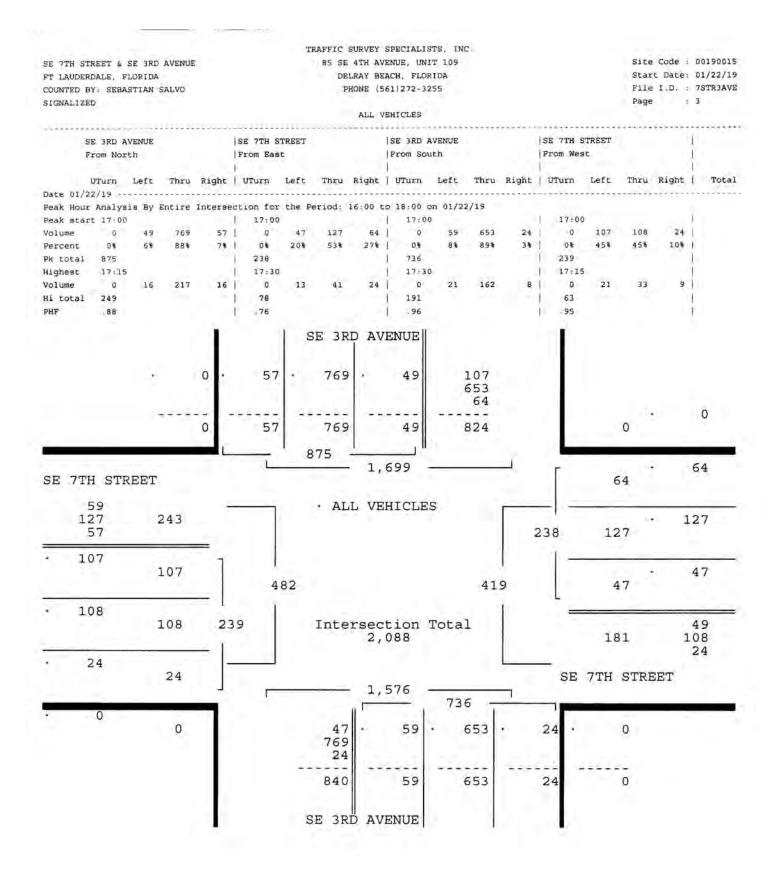
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 7STR3AVE Page : 1

SIGNALIZED								ALL V	EHICLES						Page		
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17:30	0	9	162	14	1 0	13	41	24	1 0	21	162	8	1 0	30	25	2	511
17:45	0	14	171	9	1 0	8	22	16	1 0	12	164	5	1 0	32	24	6	483
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CAM #19-0351 Exhibit 4 Page 48 of 186



CAM #19-0351 Exhibit 4 Page 49 of 186 SE 7TH STREET & SE 3RD AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: SEBASTIAN SALVO SIGNALIZED

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

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 7STR3AVE Page : 1

PEDESTRIANS & BIKES

SI	E 3RD	AVENUE			SE 7TH	STREET			SE 3RD	AVENUE		1	SE 7TH	STREET		1	
F	rom No	rth			From Ea	ast			From Sc	uth		1	From We	st			
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8:30	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	1	
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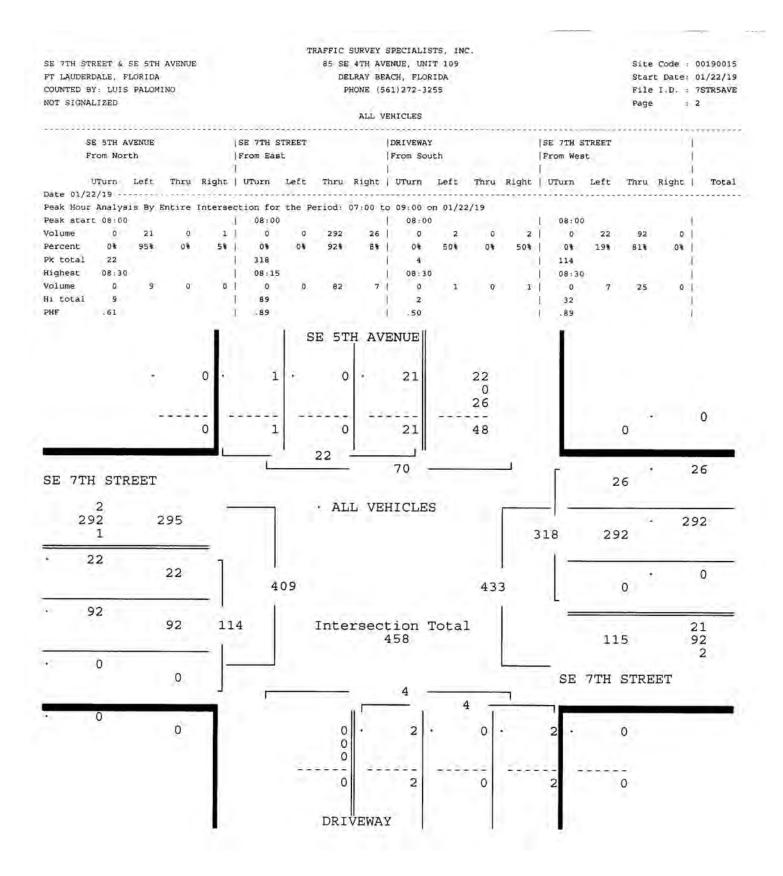
1 1911 SE 75 SE IST J. J. S. A. TAHFI E3me FT. Landerdele, FLorida January 22, 2019 drawn by: huis Palomino Signatured

CAM #19-0351 Exhibit 4 Page 51 of 186 SE 7TH STREET & SE 5TH AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: LUIS PALOMINO NOT SIGNALIZED

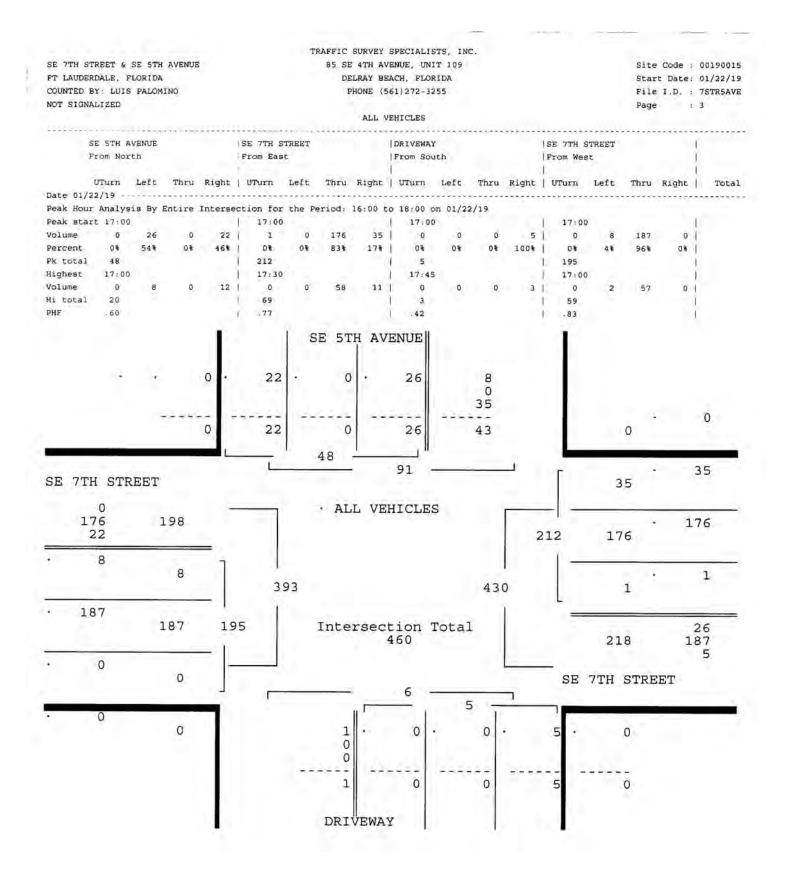
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 7STR5AVE Page : 1

								ALL V	EHICLES								
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07:15	0	6	0	1	1 0	0	40	4	0	D	0	o	1 0	3	7	0]	61
07:30	Ó	6	0	o	1 0	0	39	7	0	1	0	0	1 0	9	26	0 1	88
07:45	0	7	0	2	1 0	0	39	4	0	0	0	1	1 0	4	17	0]	74
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16:45	0	9	0	10	0	0	27	3	0	0	0	0	1 0	2	31	0 1	82
Hr Tota	1 0	25	0	27	0	0	122	14	0	2	0	5	1 0	5	155	0.1	355
17:00	0	8	0	12	0	0	38	4	0	0	0	0	1 0	2	57	0	121
17:15	0	8	0	5	1 1	0	38	9	1 0	0	0	2	1 0	1	55	01	119
17:30	Q	7	0	2	0	0	58	11	0	0	0	0	1 0	3	34	0	115
17:45	0	3	0	3	0	0	42	11	0	0	0	3	1 0	2	41	0	105
Hr Tota	1 0	26	0	22) 1	0	176	35	0	o	0	5	1 0	8	187	01	460



CAM #19-0351 Exhibit 4 Page 53 of 186



CAM #19-0351 Exhibit 4 Page 54 of 186 SE 7TH STREET & SE 5TH AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: LUIS PALOMINO NOT SIGNALIZED

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

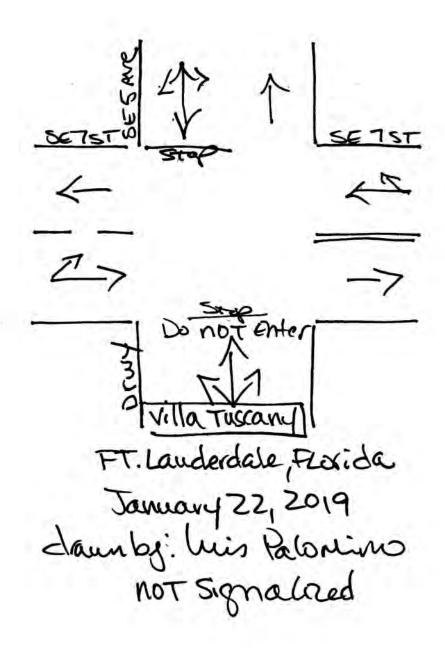
Site Code : 00190015 Start Date: 01/22/19 File I.D. : 7STR5AVE Page : 1

PEDESTRIANS & BIKES

SI	E STH	AVENUE			SE 7TH	STREET			DRIVEWA	Y			SE 7TH	STREET		ŧ	
Fi	rom No	rth			From E	ast			From Sc	outh			From We	st		1	
	Left	BIKES	Right	Peds	 Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 01/22																	
and the second				- 2	-												
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07:45	0	0	0	0	-	Q	0	0	0	0	0	0	0	0	0	0	(
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08:15	0	0	Q	0	1 0	0	0	0	0	0	0	0	1 0	0	0	0	
08:30	0	0	0	0	1 0	0	0	0	0	1	0	0	1 0	0	0	0	1
08:45	0	0	0	0	1 0	0	0	0	0	0	0	0	1 0	0	0	0 1	0
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Hr Total	0	0	0	0	1 0	0	0	1	0	0	0	Ó	0	0	0	0	1
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TOTAL	0	0	0	0	1 0	0	0	2	0	3	0	1	0	0	D	1]	7



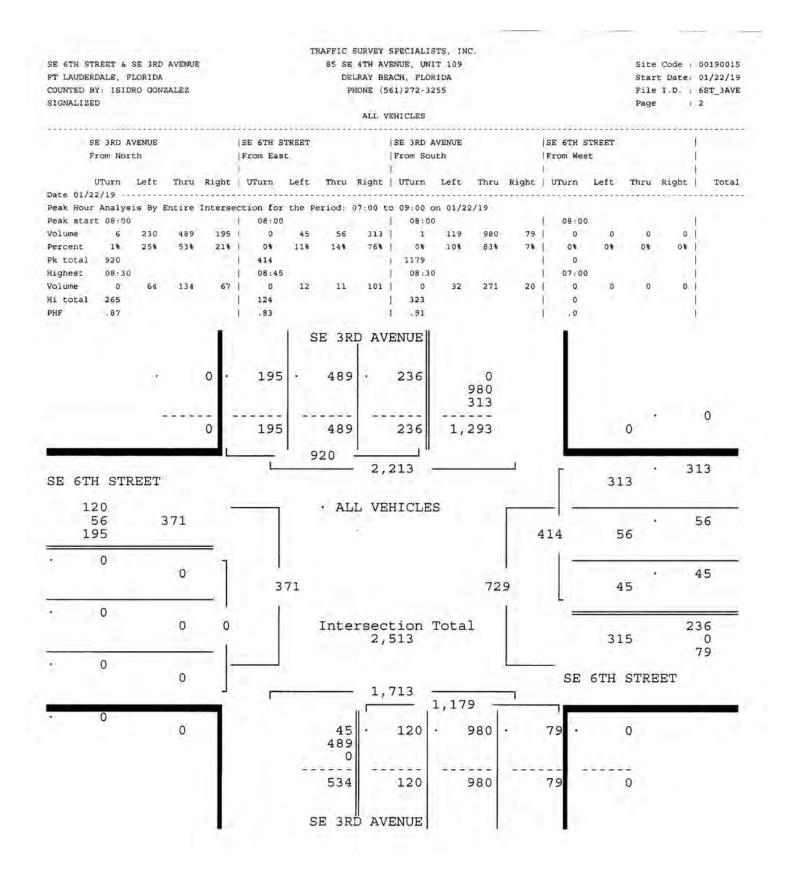


CAM #19-0351 Exhibit 4 Page 56 of 186 SE 6TH STREET & SE 3RD AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: ISIDRO GONZALEZ SIGNALIZED

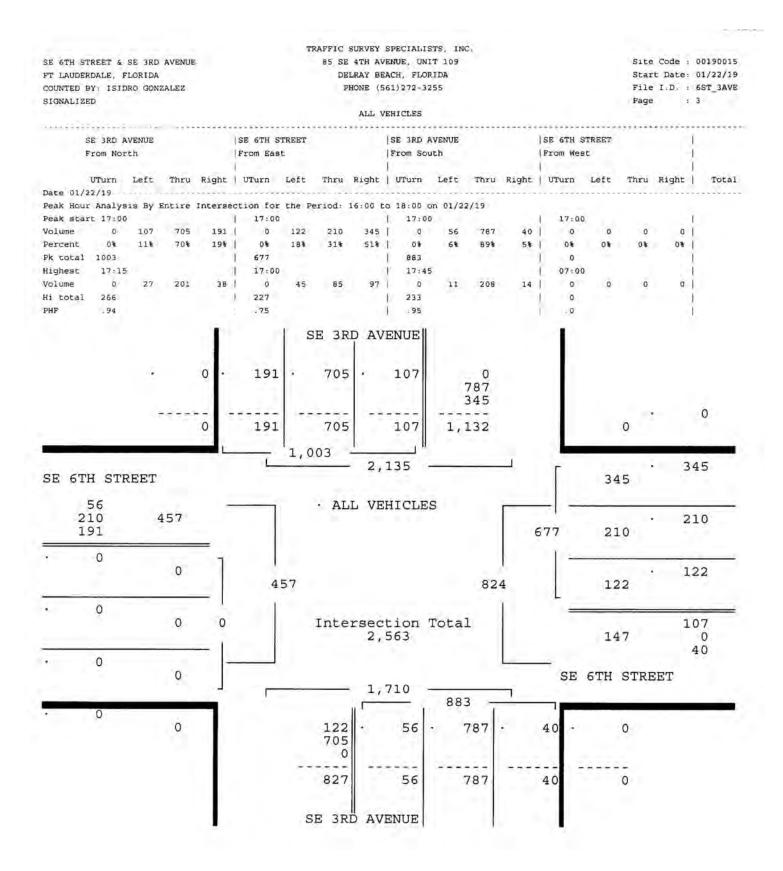
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 6ST_3AVE Page : 1

SIGNALIZE	0							ALL V	EHICLES						Page	e :	1
														فللددد		فالمحمد	
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F	rom No:	rth			From E	ast			From So	uth			From We	st)	
					1				1				1			1	
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07:30	4	69	88	42	1 0	7	8	63	1 0	25	186	21	0	0	0	0]	51
07:45	3	73	108	40	1 0	6	13	59	0	25	241	39	0	0	0	0	60
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08:15	0	48	147	48	1 0	13	19	73	1 0	26	251	17	0	0	0	0 1	643
08:30	0	64	134	67	0	12	16	86	1 0	32	271	20	0	0	0	0 1	703
08:45	2	48	97	50	1 0	12	11	101	1 0	32	254	13	0	0	0	0	620
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16:30	1	50	180	52	1 0	19	48	66	1 0	15	163	11	0	0	0	0	575
16:45	0	23	204	38	1 0	23	46	71	1 0	14	147	10	0	0	0	0	576
Hr Total	2	92	667	132	1 0	89	152	250	1 0	50	552	41	0	0	0	0	202
17:00	0	23	185	51	1 0	45	85	97	1 0	18	181	11	0	0	0	0	696
17:15	O	27	201	38	1 0	36	57	93	1 0	19	182	7	0	0	0	0	660
17:30	D	25	148	44	0	23	44	75	0.	8	216	8	0	0	0	D	591
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CAM #19-0351 Exhibit 4 Page 58 of 186



CAM #19-0351 Exhibit 4 Page 59 of 186 SE 6TH STREET & SE 3RD AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: ISIDRO GONZALEZ SIGNALIZED

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

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 6ST_3AVE Page : 1

SIGNALIZ							P	EDESTRI	ANS & BI	KES					Page		
	SE 3RD From No	AVENUE			SE 6TH				SE 3RD				SE 6TH			I	
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Date 01/	22/19 -									******							
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07:30	0	0	0	22	0	2	0	5	0	0	0	5	0	0	0	3	37
07:45	0	0	0	22	1 0	2	0	7	0	0	0	8	0	a	0	8]	47
Hr Total	0	0	0	62	0	5	0	15	0	1	0	17	0	Ó	0	16	116
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08:15	0	0	0	19	0	0	0	10	0	0	0	9	1 0	0	0	2	40
08:30	0	0	0	23	1 0	1	o	12	0	1	0	26	1 0	0	0	0 I	63
08:45	0	0	0	15	0	Ó	0	4	Ó	Ó	Ó	11	I. 0	3	0	11	34
Hr Total	0	Ø	0	74	0	2	0	31	0	1	0	54	0	4	0	5	171
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16:15	0	2	0	16	0	2	0	3	0	1	0	2	0	0	0	0]	26
16:30	0	0	0	4	0	0	0	1	0	0	0	1	0	1	0	0]	7
16:45	0	1	Ö	2	1 0	3	- Ô	8	0	0	0	1	0	0	0	3]	18
Hr Total	Q	3	0	26	1 0	5	0	17	0	1	0	9	0	1	0	3	65
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North

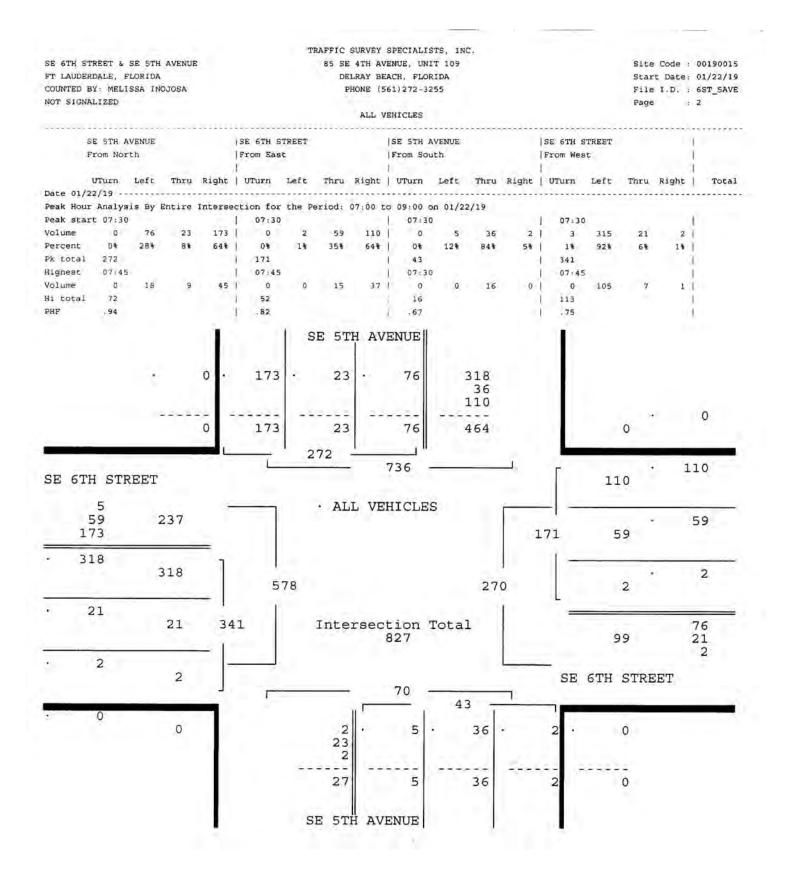
EGST N FT. Landerdale, FLorida January 22, 2019 drawn by. huis Palomino Signalized

CAM #19-0351 Exhibit 4 Page 61 of 186 SE 6TH STREET & SE 5TH AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: MELISSA INOJOSA NOT SIGNALIZED

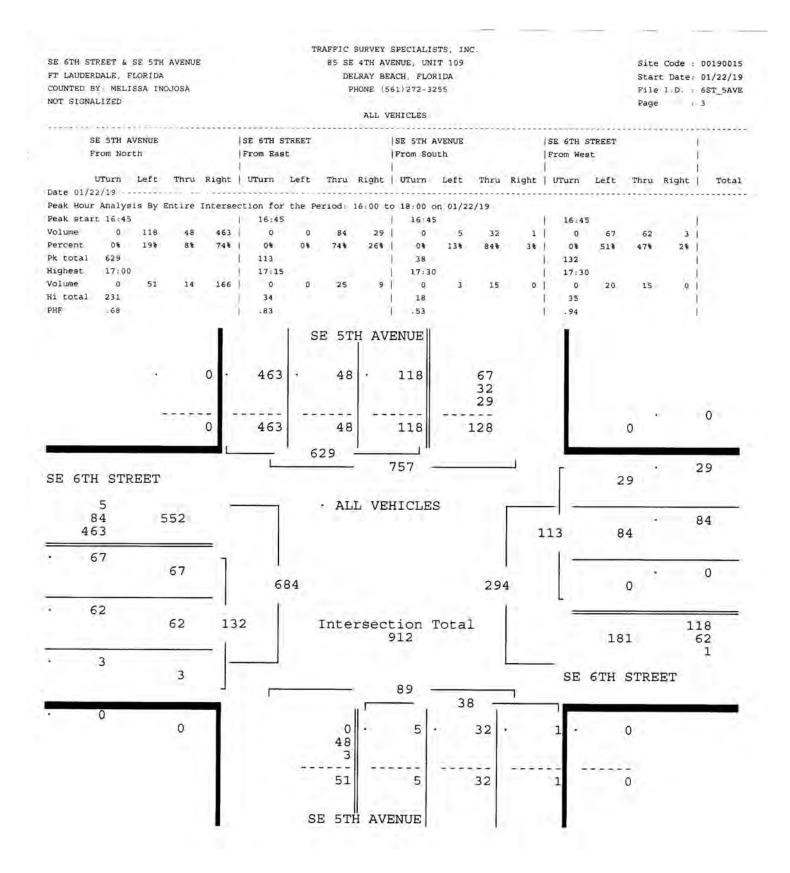
TRAFFIC SURVEY SPECIALISTS, INC. 85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 6ST_5AVE Page : 1

NOT STONA	11220							ALL V	EHICLES						Page	t 1.	
	E 5TH . rom No	AVENUE			SE 6TH From Ea				SE STH				SE 6TH			 	
1	JTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
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07:15	0	10	7	31	1 0	0	10	18	1 0	0	8	0	1 2	67	10	1	164
07:30	0	19	6	43	1 0	1	10	30	0	0	16	0	1 3	78	2	1	209
07:45	0	18	9	45	1 0	0	15	37	1 0	1	8	1	1 0	105	7	1 1	247
Hr Total	0	53	24	151	0	1	45	103	1 0	1	36	1	6	308	25	3]	757
08:00	0	21	4	38	1 0	0	16	18	1 0	2	3	1	1 0	74	5	0 1	182
08:15	0	18	4	47	0	1	18	25	1 0	2	9	0	1 0	58	7	0	189
OB:30	0	21	8	46	1 0	0	22	14	1 0	3	10	1	1 0	58	18	3	204
08:45	0	20	4	39	1 2	0	29	11	1 1	1	8	1	1 1	43	11	0 1	171
Hr Total	0	80	20	170	1 2	1	85	68	1 1	8	30	3	1 1	233	41	3	746
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16:15	0	9	8	58) 0	0	6	4	0	0	5	0	1 0	20	14	0 1	124
16:30	0	17	10	84	1 0	0	12	4	1 0	0	4	0	1 0	18	11	0	160
16:45	0	29	15	96	0	0	21	7	0	0	4	ì	1 0	13	18	2	206
Hr Total	0	70	44	314	1 0	0	50	20	1 0	1	16	1	0 1	64	54	4	638
17:00	0	51	14	166	1 0	0	19	4	1 0	2	4	o	0	17	14	11	292
17:15	Ó	20	12	124	0	0	25	9	0	0	9	0	0	17	15	0 1	231
17:30	0	18	7	77	0	O	19	9	0	3	15	0	1 0	20	15	0	183
17:45	0	10	5	67	0	0	15	6	0	3	12	0	0	18	11	0 [147
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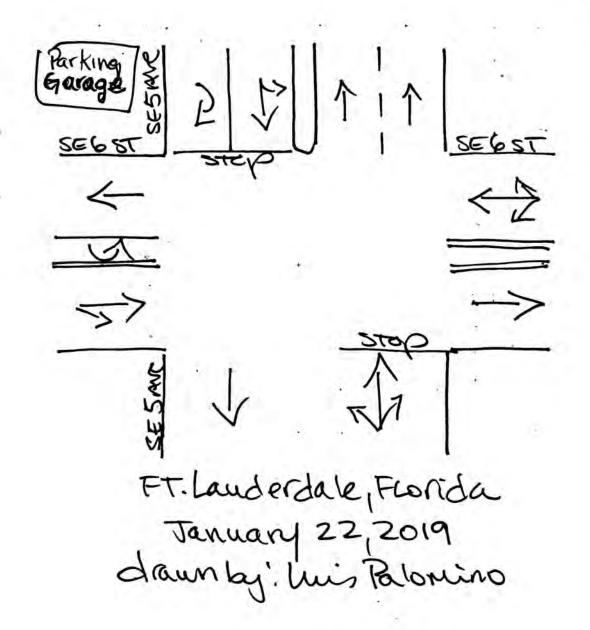
CAM #19-0351 Exhibit 4 Page 64 of 186 SE 6TH STREET & SE 5TH AVENUE FT LAUDERDALE, FLORIDA COUNTED BY: MELISSA INOJOSA NOT SIGNALIZED

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

Site Code : 00190015 Start Date: 01/22/19 File I.D. : 6ST_5AVE Page : 1

	JIZED						P	EDESTRIA	NS & BI	KES					Page		1
SE		AVENUE			SE 6TH	STREET			SE 5TH From Sc				SE 6TH				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	 Left	BIKES	Right	Peds	Tota
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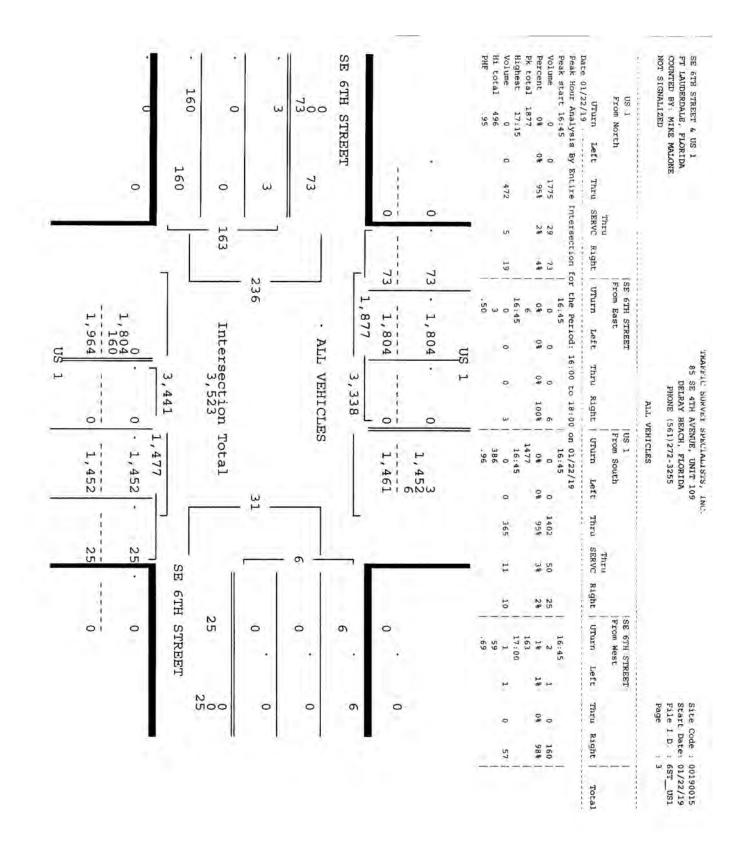
North



CAM #19-0351 Exhibit 4 Page 66 of 186

TOTAL	Hr Total	17:45	17:30	17:15	17:00	HI TOLAT	16:45	16:30	16:15	16:00		Hr Total	08:45	08:30	08:15	08:00	Hr Total	07:45	07:30	07:15	07:00	Date				NOT S	FT LA
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13730	3379	729	865	698	968	3200	873	751	855	721	11111111	3713	940	955	606	606	3438	1060	942	804	632		Total		-	File I.D. 6ST_US1 Page : 1	Start Date: 01/22/19

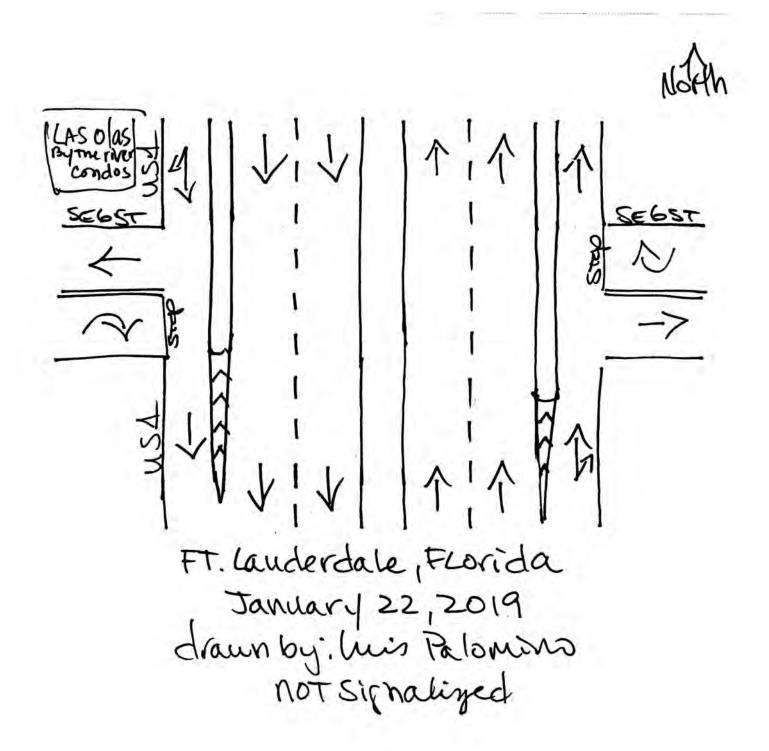
, d	. 87	0	1	76	SE 6TH S				PHF .88		Peak Hour Analysis By Peak start 07:45	UTurn Date 01/22/19 -	US 1 From North	SE 6TH STREET & US 1 FT LAUDERDALE, FLORIDA COUNTED BY: MIKE MALONE NOT SIGNALIZED
					STREET				0 0 588 .88	0 75 0 8 0	sis By 5	n Left	North	& US 1 , FLORIDA IKE MALON D
0	87	0	н	76	F I				548	1960 94 %	Entire	Thru		. H
	<u> </u>	 - 88 -			ſ	0	•	-	15	24	Interse	SERVC		
	4				-		-1		25	48	Intersection for	Right		
1,999 		Int	164		2,015	76 1,999	76 . 1,999	-	.31 .31		or the Period: 07:00 to 09:00 07:45	UTurn Left	SE 6TH STREET From East	
US 1	Ι ω	cerse		ALL V	ц ш	99	. 66	US 1	ø	0 * 0	1: 07:00	ft Thru	ET	ŝ
0 0	,751	Intersection 3,833		ALL VEHICLES	3,733				0	0 5 0* 100*	to 09:0	u Right		SE 4TH DELRAY DELRAY PHONE ALL
1,652		n Total		LES		0 1,658	0 1,652		452 .92		g	UTUIN	US 1 From South	85 SE 4TH AVENUE, UNIT 109 DELRAY BEACH, FLORIDA PHONE (561)272-3255 ALL VEHICLES
· · ·	Ι _Γ		18		Ļ	611			0	0 1576 0% 95%		Left Thru		60
13			,	თ	- , .				432 3			Thru SERVC		
4	SE 6		1					-	19	76 5¥		ru 70 Right		
0 0	6TH STREET	13	0	0	л	0			1 08:15 1 23 1 .96	13 1 18 18 88	1 07		SE 6TH STR	
	EET		•	1					5 W L 15	1 .0	07:45	n Left	6TH STREET om West	
	t	000	0	0	л	0			0	0.0				Site Start File Page
			1	1					22	\$66 84	3	Thru Right		Code : t Date: 1.D.
										شریف بند ا	-	 Total		Site Code : 00190015 Start Date: 01/22/19 File 1.D. : 6ST_US1 Page : 2



FT LAUDI COUNTED NOT SIGN	BY: MIN						PI	LRAY BEA HONE (56 EDESTRIA	1)272-3	255						t Date: 0 I.D. : 6 ; 1	
	US 1	*******		1	SE 6TH	STREET	******		US 1	******		 i	SE 6TH	STREET	******	ĩ	******
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	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 01,										*****							
07:00	0	0	0	0	0	0	0	0]	0	0	0	0)	0	0	0	0 1	0
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07:30	0	0	0	1)	0	0	0	2	0	0	0	1	0	0	0	0	4
07:45	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
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08:30	0	-0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 1	0
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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Hr Total	0	0	0	0	0	0	0	2	0	0	0	0]	Ó	0	0	0	
17:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	
17:30	0	0	O	0	0	0	0	0	Ø	0	0	0	0	0	0	0	
17:15	0	o	O	0	0	Q	0	0	0	0	0	0)	O	0	0	0 1	
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Hr Total	0	0	0	0	0	1	0	4 1	0	1	0	0	0	2	0	0 1	
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16:30	0	0	0	0 1	0	1	0	0 1	0	0	0	0	0	2	0	0]	
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16:00	0	0	0	0	0	0	0	0 1	0	1	0	0 1	0	0	0	0 1	

TRAFFIC SURVEY SPECIALISTS, INC.



CAM #19-0351 Exhibit 4 Page 71 of 186 Traffic Impact Analysis

Kimley »Horn

APPENDIX C: SIGNAL TIMING

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CAM #19-0351 Exhibit 4 Page 72 of 186



BROWARD COUNTY TRAFFIC ENGINEERING ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	2086		Initi	al Operatio	n Date	1960		
Controller Type	2070 LN		Syste	em Number		2086		
Modification Number	17		Mod	ification D	ate	09/11/2018		
Drawing/Project No	DES. GRP	. 4	FPL	Grid Num	ber	8767947390	7	
Intersection	SE 3 AVE	NUE and SE	6 STREE	Т				
Municipality	FORT LA	JDERDALE						
Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2			5	6		8
Direction	SBL	NB			NBL	SB		WB
Initial Green(MIN)	4	10			4	10		6
Vehicle Ext.(GAP)	1.5	3.0			1.5	3.0		2.0
Maximum Green I	20	40			20	40		25
Maximum Green II								
Yellow Clearance	4.0	4.0			4.0	4.0		4.0
All Red Clearance	2.0	2.0			2.0	2.0		2.0
Phase Recall	OFF	MIN			OFF	MIN		OFF
Detector Delay								
Walk		7+A			-	7+A		7+A
Pedestrian Clearance		24				24		23
Permissive	5 SECT				5 SECT			
Flash Operation		YELLOW				YELLOW		RED
Attachment								
NOTES: 1. FLASH OPERATION: 2. BRIDGE PREEMPTIC		D. TH: PHASES	2+6 ON		HASES 1+	5.		

Broward County

Timing Sheet

Station: 2086 - SE 3 Ave & SE 6 St (Standard File)

Phase	1 (SL)	2 (NT)	3	4	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk	1	7	-		1	7		7	100		-) — ·		-
Ped Clearance		24				24		23				1	-	-	1	-
Min Green	4	10	L		4	10	-	6								-
Gap Ext	1.5	3	-		1.5	3		2				-	-	·		1
Max1	20	40		1	20	40		25	1	1		-		1	1	
Max2			-						1.00						1000	
Yellow Clr	4	4	1		4	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	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert	2.000	1.0001	-				-					-	1.12			-
Added Initial	-									-	-	-				
Max Initial						-	-		1		-				-	
Time Before Reduce									1					-		-
Cars Before Reduce																1.0
Time To Reduce				-			-		1			1	-	-		-
Reduce By	-			-								-	-			-
Min Gap	-		-		-		-		-							
Dynamic Max Limit		-		-							-		-			1.00
Dynamic Max Step				-	1		_					(F		-	1	
Enable	ON	ON			ON	ON	_	ON	-							-
Auto Flash Entry	-			1				ON	_	-		-				
Auto Flash Exit		ON		-		ON	-		-						-	
Non-Actuated 1									-	-	-	-				-
Non-Actuated 2	3				1 1											
Lock Call	-						-		ON	ON	ON	ON	ON	ON	ON	ON
Min Recall	-	ON		-		ON	_					Tes		-		-
Max Recall	-					-								-		
Ped Recall				-					_		1		1			
Soft Recall	-				1						÷	1				-
Dual Entry	-	1		-			-		-		1			-		-
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage											511	511			0	011
Rest in Walk		ON	_			ON							-	1.2		
Cond Service	-				-		-									
Add Init Calc				-										-		-
Concurrent Ps	1	1	1	1	2	2	2	2			1			-		-

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash	1.000		1 Complete	1.	10.00	ON
Override Higher Preempt			1.000	1		ON
Flash in Dwell	11.5			1.1		
Link to Preempt	11	1	11-21			
Delay			1	1		11
Min Duration					1	
Min Green	6	6	6	6	6	1.
Min Walk	1.00		1	1		
Ped Clear	-			1.1		
Track Green	1					
Min Dwell	6	6	6	6	6	
Max Presence	180	180	180	180	180	1.1
Track Veh 1		L			1	1
Track Veh 2	-					10.00
Track Veh 3						
Track Veh 4		-				
Dwell Cyc Veh I	2	8	1		2	
Dwell Cyc Veh 2	6		6	1.000	5	
Dwell Cyc Veh 3						1
Dwell Cyc Veh 4						
Dweil Cyc Veh 5			0.01	1		
Dwell Cyc Veh 6					1.000	
Dwell Cyc Veh 7	-	1.5				-
Dwell Cyc Veh 8				·		-
Dwell Cyc Veh 9	1 - 1			11	1	12
Dweil Cyc Veh 10				1 - 1		
Dwell Cyc Veh 11	1			1	1 1	-
Dwell Cyc Veh 12		-		1 1		-
Dwell Cyc Pedl				1		
Dwell Cyc Ped2		· · · · ·				
Dwell Cyc Ped3	-					-
Dwell Cyc Ped4	-					-
Dwell Cyc Ped5			-			-
Dwell Cyc Ped6	1	-		-		
Dwell vPed7	1		1	1	1	-
Dwell Cyc Ped8	1					-
Exit 1	8	1	2		2	
Exit 2		5	6		6	-
Exit 3	-		-		1	
Exit 4	1 1					-

Preempt LP

Channel	1	2	3	4
Min				-
Max				1
Enable		1		
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt	1	1		
No Skip	1			-
Priority P1				
Priority P2				1
Priority P3				
Priority P4		1		
Lock		1	126-11	
Headway				
Group Lock	_			_
Queue Jump				
Free Mode		1	1.1	
Alt Table				

Station: 2086 - SE 3 Ave & SE 6 St (Standard File)

Coordination

TOUL			Pattern	Cycle	Ouser	spin	Seque	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	opin to
Day	Plan 1) — —									Easy						27									_
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23		25	255		-	-	-			-	-		-	_	-	-	-	-	-	-	-	-	-	-	-	_
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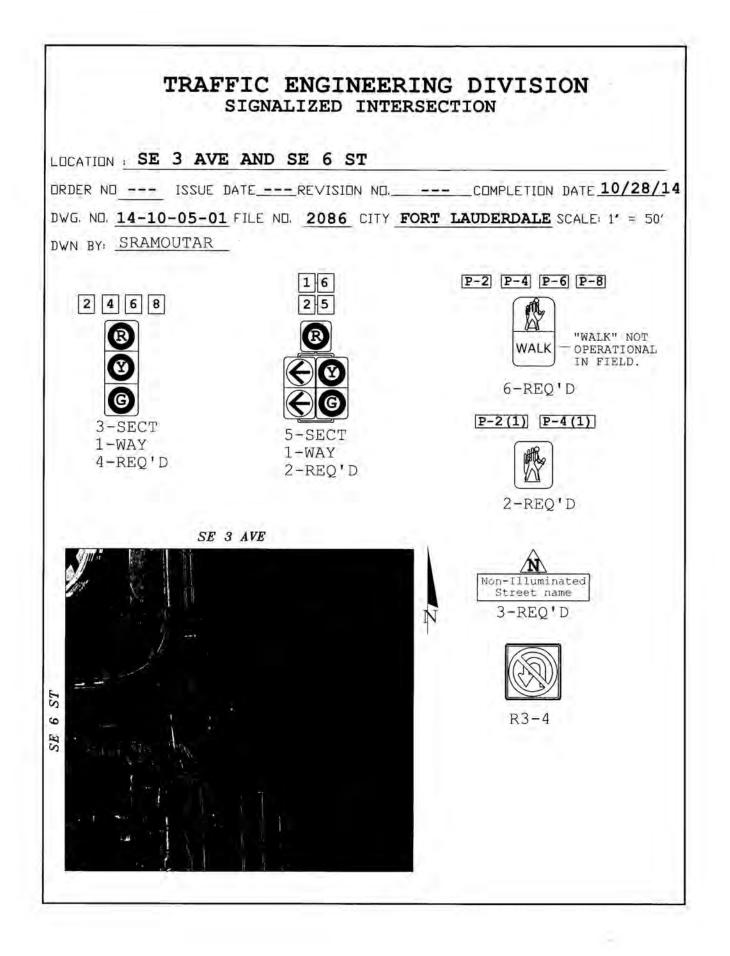
Station: 2086 - SE 3 Ave & SE 6 St (Standard File)

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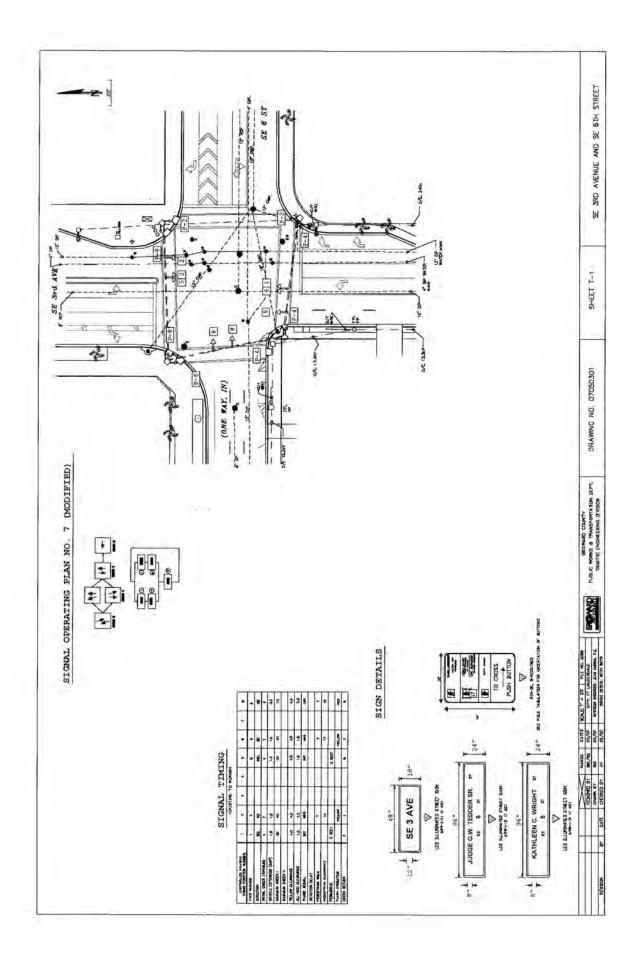
Scheduler

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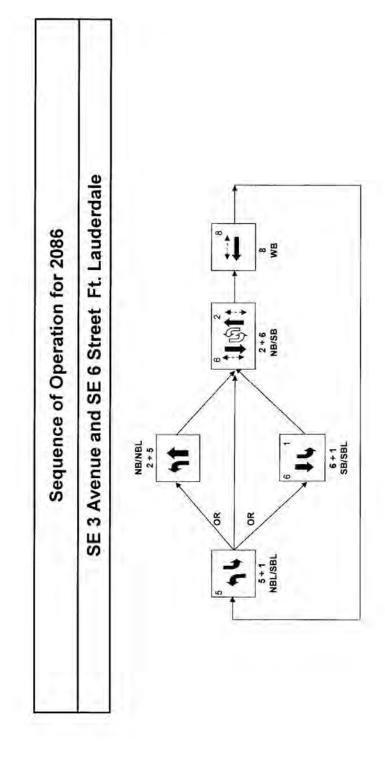
User Comments:



CAM #19-0351 Exhibit 4 Page 77 of 186



CAM #19-0351 Exhibit 4 Page 78 of 186





BROWARD COUNTY TRAFFIC ENGINEERING ACTUATED TRAFFIC SIGNAL TIMING SHEET

MunicipalityFORT IController Phase1Face Number1DirectionSBLInitial Green(MIN)4	VENUE and S LAUDERDALE 2 2	Mod FPL E 7 STREE	em Number lification D: Grid Numl T 4	ate	2104 09/12/2018 87679494600		
Drawing/Project NoGRP 4IntersectionSE 3 AMunicipalityFORT IController Phase1Face Number1DirectionSBLInitial Green(MIN)4	LAUDERDALE 2 2	FPL E 7 STREE 3	Grid Numl T	ber	87679494600		
IntersectionSE 3 AMunicipalityFORT IController Phase1Face Number1DirectionSBLInitial Green(MIN)4	LAUDERDALE 2 2	E 7 STREE	T				
IntersectionSE 3 AMunicipalityFORT IController Phase1Face Number1DirectionSBLInitial Green(MIN)4	LAUDERDALE 2 2	E 7 STREE	T				
MunicipalityFORT IController Phase1Face Number1DirectionSBLInitial Green(MIN)4	LAUDERDALE 2 2	3		5	6	6	
Face Number1DirectionSBLInitial Green(MIN)4	2		4	5	6	1.0	
Face Number1DirectionSBLInitial Green(MIN)4	2				0	7	8
Direction SBL Initial Green(MIN) 4			4,7	5	6		•
Westman Street and Street	NB	WB	EB	NBL	SB		
The second	10	5	5	4	10		
Vehicle Ext.(GAP) 1.5	3.0	2.0	2.0	1.5	3.0		
Maximum Green I 12	40	25	25	12	40		
Maximum Green II							
Yellow Clearance 4.0	4.0	4.0	4.0	4.0	4.0		
All Red Clearance 2.0	2.0	2.0	2.0	2.0	2.0		- 2
Phase Recall OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay							
Walk	7	7	7		7		
Pedestrian Clearance	12	20	20		12		
Permissive 5 SEC	Т			5 SECT			
Flash Operation	YELLOW	RED	RED		YELLOW	-	
Attachment							
NOTES:							
1. ANTI-BACKDOWN NORTH/SO 2. NIGHT FLASH: 2100-0600, 7 D 3. MOD. 18 UPDATES ALL RED, VALUES.	AYS.						

Broward County

Timing Sheet

Station: 2104 - SE 3 Ave & SE 7 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WT)	4 (ET)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7	7		7		2		·	11.2	1.	1	h		1
Ped Clearance	1.1.1.1	12	20	20	1.1	12						1000	-	1.0		
Min Green	4	10	5	5	4	10		-	-		1	· · · · ·	-		1	1
Gap Ext	1.5	3	2	2	1.5	3		112-7-		1.000	P	1000		1		
Maxl	12	40	25	25	12	40				1	11.	1.				0
Max2		1		1		·			1.000		1.5	1		1.1.1.1.1.1		1
Yellow Clr	4	4	4	4	4	4		1.1.1.1.1.1.1	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				1						-	1					0
Added Initial			1													0
Max Initial	1 1 (11	1			12 414		1000			1	12		1		1
Time Before Reduce	1.1.1										1.000	1				
Cars Before Reduce					1			1			1.1					
Time To Reduce										1	1					
Reduce By			10000		1.00	1		1.1	1.2. 1	1	1.5	A second		1,		
Min Gap										-						-
Dynamic Max Limit	- i)	1.00		1				-	· · · · ·		1			1		
Dynamic Max Step	The second	1.00	1.00		12-14			· · · · ·				1				1
Enable	ON	ON	ON	ON	ON	ON		11								
Auto Flash Entry	101			ON					1				-			
Auto Flash Exit		ON				ON	1		1			1				1
Non-Actuated 1		1											1			1
Non-Actuated 2					1.1			1.	1.5.1.5	1	1000	1000	-		1000	1
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON			1	-						
Max Recall														i		
Ped Recall													_	1		
Soft Recall	al de la serie	1.00	1.1.1		1	1000		100	1.00		1.0	Dec. 1	1	· · · · · · · · · · · · · · · · · · ·		
Dual Entry			-	1	-											
Sim Gap Enable			1						ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage			-													
Rest In Walk		ON	-			ON	-				-		-			
Cond Service				1			_					1000				
Add Init Calc	-						1				-					
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			1.1.1		1	
Override Higher Preempt		1	1	1	1	
Flash in Dwell					-	
Link to Preempt			12		1	1
Delay	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		1.000	1		-
Min Duration				1.00	1.00	122
Min Green	6	6	6	6	6	6
Min Walk			1 - 1	1		1
Ped Clear			1			1.1
Track Green						
Min Dwell	15	8	15	15	15	15
Max Presence	180	180	180	180	180	180
Track Veh I			1	1		
Track Veh 2			1	1		
Track Veh 3				1		1
Track Veh 4				1.1		
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6	1.000	5	
Dwell Cyc Veh 3				1		
Dwell Cyc Veh 4		-	I			
Dwell Cyc Veh 5			11.11			
Dwell Cyc Veh 6				1.00		
Dwell Cyc Veh 7				1		
Dwell Cyc Veh 8				1.1.1.1.1		
Dwell Cyc Veh 9					1	
Dwell Cyc Veh 10	1	1		1		
Dwell Cyc Veh 11	han	in the second	5	V		
Dwell Cyc Veh 12				1.		
Dwell Cyc Ped1						
Dwell Cyc Ped2				1.		
Dwell Cyc Ped3	01123	100	1.21			
Dwell Cyc Ped4	4 M.	1		1		-
Dwell Cyc Ped5		1000	1	1.00		
Dwell Cyc Ped6	1	1		11.1.1.1		
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	1.00	1.000	2	4	2	1
Exit 2	3		6		6	5
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min			1	
Max			11	
Enable				1.1
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip	-		1.00	
Priority P1				
Priority P2			1	1
Priority P3				
Priority P4		1		1
Lock		1.5		
Headway			1	1.00
Group Lock		1.1.1.1.1.1	1	11.000
Queue Jump				1.22
Free Mode				1.10
Alt Table			11111	1.

Station: 2104 - SE 3 Ave & SE 7 St (Standard File)

Coordination

Hour			Pattern	ycie	Oliset	pint	cque	nort	Long	Well	plit 1	plit 2	plit 3	plit 4	plit 5	plit 6	Split 7	plit 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Spin 10
Day	Plan 1	1									Easy															_
		25	255	1.1.1	1.00	1.45				1	10	11.2.4										- 1		1		-
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15		4	4	80	20	4	1	10	50	1	12	28	20	20	12	28	20	20		-	-	-	-	-	_	
18 21	15	3	3	80	21	3	1	10	50	-	12	28	20	20	12	28	20	20		-	-	-		-	-	-
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ay l	Plan 2	-	_		-		_	<u> </u>	_		Easy					-				_						-
		25	255																		1			1		
6	-	100	254				1.1							1		1.2.1										-
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21	50	25	255	00	21	3	1	10	50		12	28	20	20	12	28	20	20	-	-	+	+	-	-	-	
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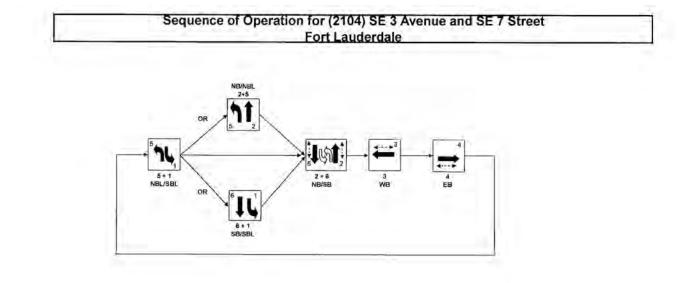
Station: 2104 - SE 3 Ave & SE 7 St (Standard File)

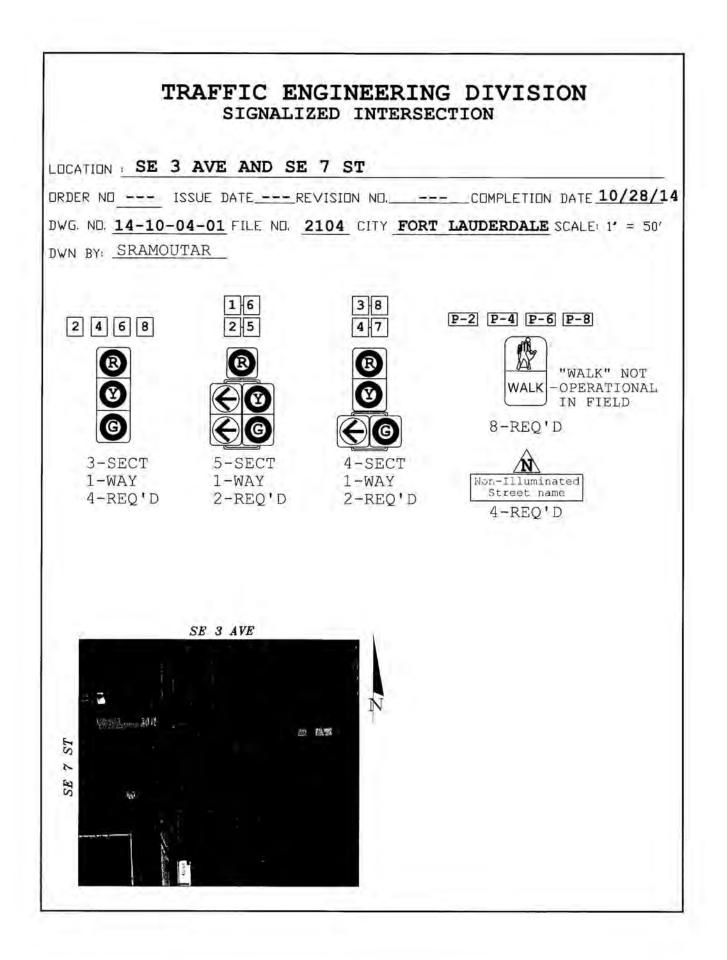
Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short -	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	opin in
Day P	lan 4			_				-	-	E	asy						-			1.1	1					
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Scheduler

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Plan	J	F	М	A	М	J	J	A	S	1	oli	N		S	M	T	W			1								17	18	3	9	0	1	2	3	4	5	6	7	8	19	0	Ð	1 2	1	1	4	5	6	7	8	9	0	1	Day Plan
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21						1				T		T							T	T		1			-		T	t	1	T	1			-				1	1		1	t	t	+		t	t	1							1
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User Comments:





CAM #19-0351 Exhibit 4 Page 85 of 186



BROWARD COUNTY TRAFFIC ENGINEERING ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	2118		Initi	al Operatio	n Date	3/6/64		
Controller Type	2070		Syst	em Number		2118		
Modification Number	20		Mod	lification Da	ite	01/28/2015		
Drawing/Project No	DES. GR	P. 2	FPL	Grid Num	ber	87679654607		
Intersection	FEDERA	L HWY. (US I	/SR 5) ar	d SE 7 STR	EET			
Municipality		UDERDALE		14 44 6 4 0 C				
Controller Phase	I	2	3	4	5	6	7	8
Face Number	1	2		4	5	6		8
Direction	SBL	NB		EB	NBL	SB		WB
Initial Green(MIN)	5	12		6	5	12		6
Vehicle Ext.(GAP)	2.0	3.0		2.0	2.0	3.0		2.0
Maximum Green I	15	50		25	20	50		25
Maximum Green II						0.0		
Yellow Clearance	4,5	4,5		4.0	4.5	4.5		4.0
All Red Clearance	2.0	2.0		2.0	2.0	2.0		2.0
Phase Recall	OFF	MIN		OFF	OFF	MIN		OFF
Detector Delay								
Walk		7		5		7		5
Pedestrian Clearance		16		25		16		25
Permissive	NO				NO			
Flash Operation	RED	YELLOW		RED	RED	YELLOW	_	RED
Attachment			_	0	0.75			
NOTES:								
1. DUAL ENTRY HARD 2. PHOTO ENFORCEMI 3. MOD. 20 UPDATES F	ENT, CITY	OF FT. LAUDI			R FDOT S	TANDARDS.		

Submitted By

Approved By

Broward County

Timing Sheet

Station : 2118 - US 1 & SE 7 St (Ft Lauderdale) (Standard File)

Phase	1 (SL)	2 (NT)	3	4 (ET)	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		5		7		5			1					
Ped Clearance		16		25	1	16		25			1			1		1
Min Green	5	12		6	5	12	-	6			1					1
Gap Ext	2	3		2	2	3		2			17	-		17 5. 1	-	
Max1	15	50		25	20	50		25		-	0.0					
Max2					1			1.		1.1.1	11 11 12		-			
Yellow Clr	4,5	4.5		4	4.5	4.5		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	-											1			-	1
Added Initial								1 1			2			11.0		
Max Initial					1			1			-					
Time Before Reduce					1											
Cars Before Reduce				-												1
Time To Reduce											1				1	
Reduce By	1.1															1
Min Gap					1						1				1.0	1
Dynamic Max Limit													1	1	12	
Dynamic Max Step							_					-	1.1.1.1	1	1	
Enable	ON	ON		ON	ON	ON		ON	-	1						-
Auto Flash Entry			-	ON				ON			-					
Auto Flash Exit	-	ON		-		ON						-		1		-
Non-Actuated 1							-				-			1		1
Non-Actuated 2	1.1.1				1			1				1		1		1
Lock Call	-			-				-	ON	ON	ON	ON	ON	ON	ON	ON
Min Recall	-	ON				ON							-			-
Max Recall	-			-			_	-				-				-
Ped Recall			-	-	1	-		-			-			11 2000		1
Soft Recall					1			1								
Dual Entry	-			ON		-		ON			-			-		-
Sim Gap Enable	-			-					ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage	-								011	0.1	0		0.0	Gir	- and	1
Rest In Walk	-	ON	-		1	ON					1		1	-		1
Cond Service	1	-			-	SA			-							1
Add Init Calc				-	-					-			-			
Concurrent Ps	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		ON
Override Higher Preempt			1	ON	1	ON
Flash in Dwell					1	
Link to Preempt		-				
Delay			1	(i)		
Min Duration			1			-
Min Green	6	6	6	· · · · ·	6	-
Min Walk					11.0.00	-
Ped Clear						
Track Green	1				1.71	
Min Dwell	8	8	8		8	
Max Presence	180	180	180	1.11	180	
Track Veh I	11.000	2.1			1.1.1.	
Track Veh 2					1	
Track Veh 3						
Track Veh 4			1			
Dwell Cyc Veh 1	2	4	1		2	
Dwell Cyc Veh 2	6	8	6	1	5	
Dwell Cyc Veh 3		1.1.1		1 11 1		_
Dwell Cyc Veh 4					1	-
Dwell Cyc Veh 5		-				
Dwell Cyc Veh 6		2 11 1		-		-
Dwell Cyc Veh 7						
Dwell Cyc Veh 8		-		1	1	
Dwell Cyc Veh 9		-		1	1	
Dwell Cyc Veh 10					6	
Dwell Cyc Veh 11				1.1.1	0.000	
Dwell Cyc Veh 12				1	C	1
Dwell Cyc Ped I						
Dwell Cyc Ped2		· · · · · · ·		1		
Dwell Cyc Ped3	1					
Dwell Cyc Ped4		1			1 - 2	
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit I	4	1	2		2	
Exit 2	8	5	6		6	
Exit 3						
Exit 4					1	

Preempt LP

Channel	1	2	3	- 4
Min			1	1
Max				
Enable	-			
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				-
No Skip	1			-
Priority P1				
Priority P2				
Priority P3	1			
Priority P4				
Lock				
Headway		1		
Group Lock		1.1.1.1		
Queue Jump	1.1.1	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		
Free Mode	1	1		
Alt Table				

Station: 2118 - US I & SE 7 St (Ft Lauderdale) (Standard File)

Coordination

nour	Minute	Action	Pattern	Cycle	Offset		Solit	Seamo	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	opin to
Day	Plan 1										Easy															
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9	-	3	3	160	156	3	1	7	50		25	101	-	34	25	101		34	-	-						_
15	-	4	4	180	65	4	1	7	50	-	30	111		39	30	111		39				-1	-			_
20		100	254	1	-	-	-	-							-				-	_	-			_	_	_
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av l	Plan 2	-	_				-	-			Easy						-	-	-	_	-		-	-	- 1	-
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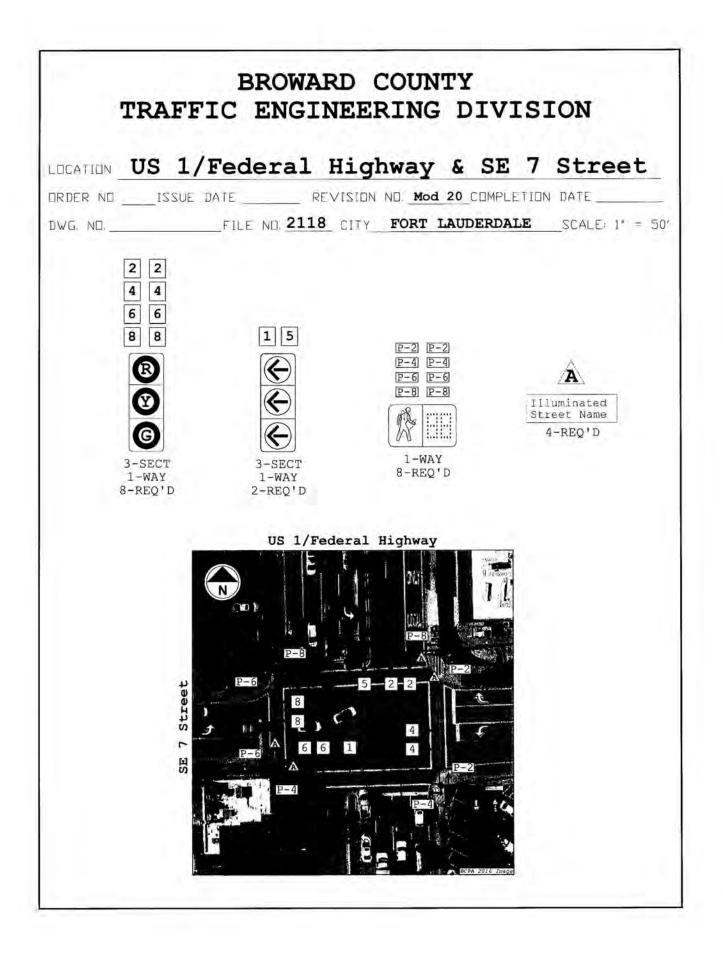
Station : 2118 - US 1 & SE 7 St (Ft Lauderdale) (Standard File)

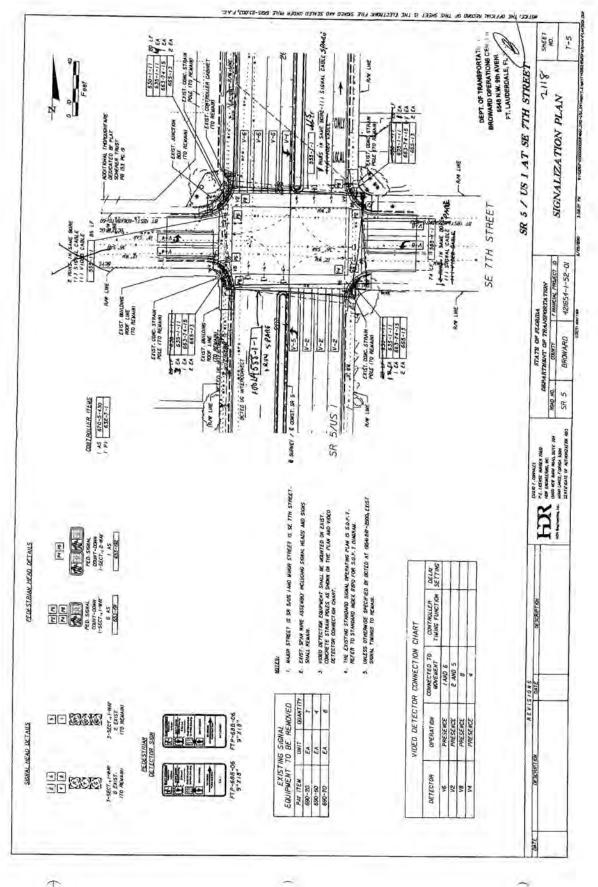
Hour	Minute	Action	Pattern	Cycle	Offset	opin	Solit		Long	Dwell	Split 2 Split 1	cyndo	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
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15		4	4	180	65	4	1	7	50	30	111	-	39	30	111		39								
20		100	254	1	100					_			1.1.1			1000	1.1	-							
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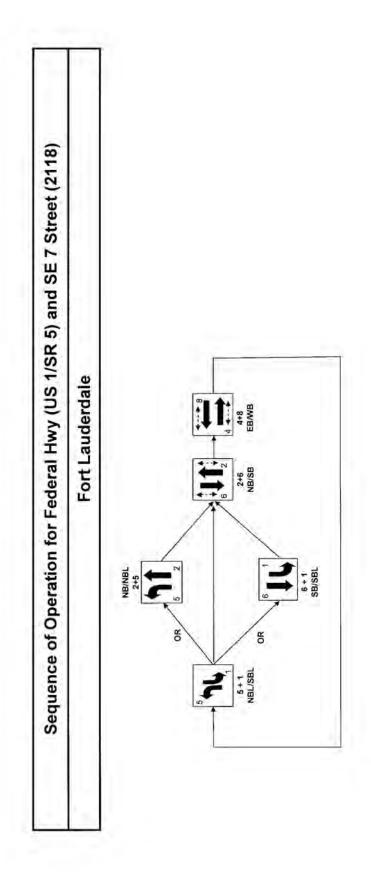
User Comments:





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CAM #19-0351 Exhibit 4 Page 91 of 186



CAM #19-0351 Exhibit 4 Page 92 of 186 APPENDIX D: VOLUME DEVELOPMENT WORKSHEETS

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CAM #19-0351 Exhibit 4 Page 93 of 186

SE 3RD AVENUE & SE 6TH STREET **VOLUME DEVELOPMENT**

SIGNALIZED INTERSECTION

Growth Rate = 0.50%

			<u>AM</u>	Peak H	our							
		orthbou			outhbou			Eastbour	M11		<i>N</i> estbour	
Existing Volume on 01/22/2019	LT 120	Thru 980	RT 79	LT 236	Thru 489	RT 195	LT 0	Thru 0	RT 0	LT 45	Thru 56	RT 313
Peak Season Volume	120	980	79	236	489	195	0	0	0	45	56	313
reak season volume	120	500		250	403	155	5	U	U	45	50	515
Traffic Volume Growth	2	15	1	4	7	3	0	0	0	1	1	5
0.5% Traffic Volume Growth	2	15	1	4	7	3	0	0	0	1	1	5
Max (Traffic Vol +0.5% or Historic Growth)	2	15	1	4	7	3	0	0	0	1	1	5
					195							2.52
Background Traffic Volumes	122	995	80	240	496	198	0	0	0	46	57	318
Project Traffic												
Inbound Traffic Assignment				35.0%								
Inbound Traffic Volumes				6							والساد ا	10,24
Outbound Traffic Assignment											10.0%	35.0%
Outbound Traffic Volumes		4			-	(-	, :		()	6	19
Project Traffic			1	6		1					6	19
TOTAL TRAFFIC	122	995	80	246	496	198	0	0	0	46	63	337
TOTAL TRAFFIC	122	995	80	246	496	198	0	0	0	46	63	337
TOTAL TRAFFIC	122	995		246 Peak He		198	0	0	0	46	63	337
TOTAL TRAFFIC			<u>PM</u>	Peak He	our		0					
TOTAL TRAFFIC	Ν	orthboui	<u>PM</u> 1d	Peak He	<u>our</u> outhbour	nd		Eastbour	nd		Nestboun	d
			<u>PM</u>	Peak He	our		0 LT 0					
TOTAL TRAFFIC Existing Volume on 01/22/2019 Peak Season Volume	N LT	orthbour Thru	PM nd RT	Peak Ho So LT	<mark>DUL</mark> Duthbour Thru	nd RT	LT	Eastbour Thru	ıd RT	LT	Nestboun Thru	d RT
Existing Volume on 01/22/2019 Peak Season Volume	N LT 56 56	orthbour Thru 787 787	PM nd RT 40 40	Peak He Sc LT 107 107	DUT Puthbour Thru 705 705	nd RT 191 191	LT 0 0	Eastbour Thru 0 0	nd RT O O	LT 122 122	Westboun Thru 210 210	d RT 345 345
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth	N LT 56 56 1	orthbour Thru 787 787 12	PM nd RT 40 40	Peak He	DUT Duthbour Thru 705 705 11	nd RT 191 191 3	LT 0 0	Eastbour Thru 0 0	nd RT O O	LT 122 122 2	Westbourn Thru 210 210 3	d RT 345 345 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth	N LT 56 56 1 1	orthb out Thru 787 787 12 12	PM nd RT 40 40 1 1	Peak Ho LT 107 107 2 2	DUIT puthbour Thru 705 705 11 11	nd RT 191 191 3 3	LT 0 0 0	Eastbour Thru 0 0 0	nd RT 0 0 0	LT 122 122 2 2	Westbourn Thru 210 210 3 3 3	d RT 345 345 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth	N LT 56 56 1	orthbour Thru 787 787 12	PM nd RT 40 40	Peak He	DUT Duthbour Thru 705 705 11	nd RT 191 191 3	LT 0 0	Eastbour Thru 0 0	nd RT O O	LT 122 122 2	Westbourn Thru 210 210 3	d RT 345 345 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth	N LT 56 56 1 1	orthb out Thru 787 787 12 12	PM nd RT 40 40 1 1	Peak Ho LT 107 107 2 2	DUIT puthbour Thru 705 705 11 11	nd RT 191 191 3 3	LT 0 0 0	Eastbour Thru 0 0 0	nd RT 0 0 0	LT 122 122 2 2	Westbourn Thru 210 210 3 3 3	d RT 345 345 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth) Background Traffic Volumes	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Vestbourn Thru 210 210 3 3 3 3	d RT 345 345 5 5 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Volume Growth) Background Traffic Volumes Project Traffic	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He Sc LT 107 107 2 2 2 2 2 109	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Vestbourn Thru 210 210 3 3 3 3	d RT 345 345 5 5 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth) Background Traffic Volumes	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Vestbourn Thru 210 210 3 3 3 3	d RT 345 345 5 5 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth) Background Traffic Volumes Project Traffic Inbound Traffic Assignment	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He Sc LT 107 107 2 2 2 2 2 109 35.0%	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Vestbourn Thru 210 210 3 3 3 3	d RT 345 345 5 5 5 350
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth) Background Traffic Volumes Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He Sc LT 107 107 2 2 2 2 2 109 35.0%	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Westbourn Thru 210 210 3 3 3 213	d RT 345 345 5 5 5 5
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth) Background Traffic Volumes Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment	N 56 56 1 1 1	orthbour Thru 787 787 12 12 12 12	PM RT 40 40 1 1 1 1	Peak He Sc LT 107 107 2 2 2 2 2 109 35.0%	Dur buthbour Thru 705 705 11 11 11	nd RT 191 191 3 3 3 3	LT 0 0 0 0 0	Eastbour Thru 0 0 0 0 0	rd RT 0 0 0 0 0 0	LT 122 122 2 2 2 2	Westbourn Thru 210 210 3 3 3 213 10.0%	d RT 345 345 5 5 5 350 350%

k:\wpb_tpto\1405\140575000 - 629 se 5th ave\excel\{2019-02-20 625 se 5th tripgen.xlsx]se 3rd&se6th

SE 3RD AVENUE & SE 7TH STREET **VOLUME DEVELOPMENT**

SIGNALIZED INTERSECTION

Growth Rate = 0.50%

Buildout Year = Years =	1 2022 3	1 2022 3										
			<u>AM P</u>	eak H	lour							
	N	lorthbou	nd	S	outhbour	ıd		Eastboun	d	Ŵ	Vestboun	d
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	44	1,052	58	34	399	22	165	131	20	36	87	113
Peak Season Volume	44	1,052	58	34	399	22	165	131	20	36	87	113
Traffic Volume Crowth	4	10	4	4		0			0	4	4	2
Traffic Volume Growth	1	16	1 1	1 1	6	0	2	2	0	1 1	1 1	2
0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth)	1 1	16 16	1	1	6 6	0 0	2	2	0 0	1	1	2
Max (mane vol +0.5% of historic drowin)	1	10	-		0	U	2	2	Q	1		2
Background Traffic Volumes	45	1,068	59	35	405	22	167	133	20	37	88	115
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes			25.0% 4	1				15.0% 2		25.0% 13	5.0% 3	
Project Traffic			4	-				2		13	3	
TOTAL TRAFFIC	45	1,068	63	35	405	22	167	135	20	50	91	115
TOTAL TRAFFIC			<u>PM P</u>	eak H	our		167			50	91	
TOTAL TRAFFIC	N	Vorthbou	<u>PM P</u>	<mark>eak</mark> H	our outhbour	ıd		Eastboun	d	50	91 Vestboun	d
	N LT	Jorthbou Thru	PM P	eak H s LT	our outhbour Thru	ıd RT	LT	Eastboun Thru	d RT	50 VM LT	91 Vestboun Thru	d RT
Existing Volume on 01/22/2019	N	Vorthbou	<u>PM P</u>	<mark>eak</mark> H	our outhbour	ıd		Eastboun	d	50	91 Vestboun	d RT 64
Existing Volume on 01/22/2019	N LT 59	Northbou Thru 653	PM P nd RT 24	eak H s LT 49	our outhbour Thru 769	ıd RT 57	LT 107	Eastboun Thru 108	d RT 24	50 V LT 47	91 Vestboun Thru 127	d RT 64
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth	N LT 59 59 1	Northbou Thru 653	PM P nd RT 24 24 24 0	r <mark>eak H</mark> s LT 49 49 1	our outhbour Thru 769	1d RT 57 57 1	LT 107 107 2	Eastbourn Thru 108 108 2	d RT 24	50 V LT 47	91 Vestboun Thru 127 127	d RT 64 64
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth	N LT 59 59 1 1	Northbou Thru 653 653	PM P nd 24 24 0 0	eak H s LT 49 49 1 1	outhbour Thru 769 769 12 12	nd RT 57 57 1 1	LT 107 107 2 2	Eastboun Thru 108 108 2 2 2	d RT 24 24 0 0	50 M LT 47 47 1 1	91 Vestboun 127 127 2 2	RT 64 64 1 1
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth	N LT 59 59 1	Northbou Thru 653 653 10	PM P nd RT 24 24 24 0	r <mark>eak H</mark> s LT 49 49 1	outhbour Thru 769 769 12	1d RT 57 57 1	LT 107 107 2	Eastbourn Thru 108 108 2	d RT 24 24 24	50 V LT 47 47 1	91 Vestboun Thru 127 127	d RT 64 64
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth	N LT 59 59 1 1	Northbou Thru 653 653 10 10	PM P nd 24 24 0 0	eak H s LT 49 49 1 1	outhbour Thru 769 769 12 12	nd RT 57 57 1 1	LT 107 107 2 2	Eastboun Thru 108 108 2 2 2	d RT 24 24 0 0	50 M LT 47 47 1 1	91 Vestboun 127 127 2 2	d RT 64 64 1 1
Existing Volume on 01/22/2019 Peak Season Volume Traffic Volume Growth 0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth)	N LT 59 59 1 1 1	lorthbou Thru 653 653 10 10 10	PM P nd 24 24 24 0 0 0 0	eak H S LT 49 49 1 1 1 1	outhbour Thru 769 769 12 12 12	nd RT 57 57 1 1 1 1	LT 107 107 2 2 2 2	Eastboun Thru 108 108 2 2 2 2	d RT 24 24 24 0 0 0	50 LT 47 47 1 1 1 1	91 Vestboun Thru 127 127 2 2 2 2	d RT 64 64 1

TOTAL TRAFFIC k:\wpb_tpto\1405\140575000 -629 se 5th ave\excel\{2019-02-20 625 se 5th tripgen.xlsx}se 3rd&se7th

60

663

37

50

781

109

58

118

24

131

57

SE 7TH STREET & FEDERAL HIGHWAY VOLUME DEVELOPMENT

SIGNALIZED INTERSECTION

Growth Rate = 0.50%

Growth Rate = Peak Season = Buildout Year = Years =	0.50% 1 2022 3	1 2022 3										
			AM	Peak H	our							
	Ň	lorthbour	ıd	S	outhbou	nd		Eastbour	nd	1	N estbour	d
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volumes on 01/16/2019	145	1,401	16	110	1,757	206	41	36	36	25	20	71
Peak Season Volume	145	1,401	16	110	1,757	206	41	36	36	25	20	71
Traffic Malazza Cara da		24	0		26						0	
Traffic Volume Growth	2	21	0	2	26	3	1 1	1 1	1 1	0	0	1
0.5% Traffic Volume Growth Max (Traffic Vol +0.5% or Historic Growth)	2	21 21	0	2	26 26	3	1	1 1	1 1	0	0	1
	2	21	U	2	20	3	T	T	1	Ū.	U	
Background Traffic Volumes	147	1,422	16	112	1,783	209	42	37	37	25	20	72
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes Project Traffic	10% 2 2				1.0% 1 1	14.0% 2 2	15.0% 8 8		9.0% 5 5			
			_	_				_		_	_	
TOTAL TRAFFIC	149	1,422	16	112	1,784	211	50	37	42	25	20	72
			PM I	Peak H	our							
	N	lorthbour	nd	s	outhbou	nd	1000	Eastbour	nd	1	Nestboun	d
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volumes on 01/16/2019	105	1,091	31	148	1,723	90	105	55	95	40	32	58
Peak Season Volume	105	1,091	31	148	1,723	90	105	55	95	40	32	58
T- ff. Malana Canada	-	45	0		26							
Traffic Volume Growth	2	16	0	2	26	1	2	1	1	1	0	1
0.5% Traffic Volume Growth Max (Traffic Volum 5% or Historic Growth)	2	16 16	0 0	2	26 26	1	2	1	1 1	1	0	1 1
Max (Traffic Vol +0.5% or Historic Growth)	2	10	U	2	20	1	2	1	Ť.		Ū.	
Background Traffic Volumes	107	1,107	31	150	1,749	91	107	56	96	41	32	59
Project Traffic Inbound Traffic Assignment	10%					14.0% 7						
Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes	5				1.0%		15.0% 5		9.0% 3		4.4.	
Outbound Traffic Assignment	5				1.0%	7	201000.00					
Outbound Traffic Assignment Outbound Traffic Volumes		1,107	31	150	1.0% 1,749	7	5	56	3	41	32	5

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SE 6TH STREET & SE 5TH AVENUE **VOLUME DEVELOPMENT**

UNSIGNALIZED INTERSECTION

Years =	3	3										
			<u>AM F</u>	eak H	lour							
	N	orthbou	nd	s	outhbou	nd	-	Eastbou	nd	V	V estbour	nd
And the state of the sector of the	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	
Existing Volume on 01/22/2019	5	36	2	76	23	173	318	21	2	2	59	1
Peak Season Volume	5	36	2	76	23	173	318	21	2	2	59	3
Traffic Volume Growth	0	1	0	1	0	3	5	0	0	0	1	
0.5% Traffic Volume Growth	0	1	0	1	0	3	5	0	0	0	1	
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	1	0	3	5	0	0	0	1	14
Background Traffic Volumes	5	37	2	77	23	176	323	21	2	2	60	3
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes	42.0% 22		1.0% 1						32.0% 5	1.0%		
Project Traffic	22		1				1	1	5		111	
TOTAL TRAFFIC	27	37	3	77	23	176	323	21	7	2	60	

	N	orthbou	nd	S	outhbour	ıd		Eastbou	nd	V	Vestboun	d
the state of the s	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	5	32	1	118	48	463	67	62	3	0	84	29
Peak Season Volume	5	32	1	118	48	463	67	62	3	0	84	29
Traffic Volume Growth	0	0	0	2	1	7	1	1	0	0	1	0
0.5% Traffic Volume Growth	0	0	0	2	1	7	1	1	0	0	1	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	2	1	7	1	1	0	0	1	0
Background Traffic Volumes	5	32	1	120	49	470	68	63	3	0	85	29
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes	42.0% 15		1.0%						32.0% 16	1.0% 1		
Project Traffic	15	1							16	1		
TOTAL TRAFFIC	20	32	1	120	49	470	68	63	19	1	85	29

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SE 7TH STREET & SE 5TH AVENUE VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

Growth Rate =	0.50%	
Peak Season =	1	1
Buildout Year =	2022	2022
Years =	3	3

AM Peak Hour

	ľ	lorthboun	ıd	South	bound	Eastb	ound	West	bound
and the second	LT	Thru	RT	LT	RT	LT	Thru	Thru	RT
Existing Volume on 01/22/2019	2	0	2	21	1	22	92	292	26
Peak Season Volume	2	0	2	21	1	22	92	292	26
Traffic Volume Growth	0	0	0	0	0	0	1	4	0
0.5% Traffic Volume Growth	0	0	0	0	0	0	1	4	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	0	1	4	0
Background Traffic Volumes	2	0	2	21	1	22	93	296	26
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes				23.0% 12	29.0% 15	39.0% 6	1.0% 1	1.0%	23.0% 4
Project Traffic				12	15	6	1	×	4
TOTAL TRAFFIC	2	0	2	33	16	28	94	296	30

PM Peak Hour

	I	lorthbour	ıd	South	bound	Eastb	ound	West	bound
	LT	Thru	RT	LT	RT	LT	Thru	Thru	RT
Existing Volume on 01/22/2019	0	0	5	26	22	8	187	146	35
Peak Season Volume	0	0	5	26	22	8	187	146	35
Traffic Volume Growth	0	0	0	0	0	0	3	2	1
0.5% Traffic Volume Growth	0	0	0	0	0	0	3	2	1
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	0	3	2	1
Background Traffic Volumes	0	0	5	26	22	8	190	148	36
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes						39.0% 20		1.0% 1	23.0% 12
Outbound Traffic Assignment		1.000		23.0%	29.0%	1.1.1	1.0%		
Outbound Traffic Volumes Project Traffic	_			8	10 10	20		1	12
TOTAL TRAFFIC	0	0	5	34	32	28	190	149	48

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SE 6TH STREET & SFEDERAL HIGHWAY VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

		ONSTONAL
Growth Rate =	0.50%	
Peak Season =	1	1
Buildout Year =	2022	2022
Years =	3	3

AM Peak Hour

Northbound				outhbour	1d		Eastbour	nd	Westbound			
LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	
				39	76	1	0	87				
0	0	0	0	39	76	1	0	87	0	0	0	
0	0	0	0	1	1	0	0	1	0	0	0	
0	0	0	0	1	1	0	0	1	0	0	0	
0	0	0	0	1	1	0	0	1	0	0	0	
0	0	0	0	40	77	1	0	88	0	0	0	
1				14.0% 2	1.0%			1.0%				
								1			0	
	0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 39 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 40 1 1 1 1 1 0 0 0 0 40 1 1 1 1 1 0 0 0 0 2	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					

PM Peak Hour

	N	orthbour	ıd	5	Gouthbour	nd		Eastbour	nd		Westboun	d
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	Y			0	29	73	3	0	160	Sec. 1.4	1 A 4 1	-
Peak Season Volume	0	0	0	0	29	73	3	0	160	0	0	0
Traffic Volume Growth	0	0	0	0	0	1	0	0	2	0	0	0
0.5% Traffic Volume Growth	0	0	0	0	0	1	0	0	2	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	1	0	0	2	0	0	0
Background Traffic Volumes	0	0	0	0	29	74	3	0	162	0	0	0
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes					14.0% 7	1.0% 1			1.0%			
Project Traffic			1		7	1						
TOTAL TRAFFIC	0	0	0	0	36	75	3	0	162	0	0	0

DRIVEWAY 1 VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

Growth Rate =	0.50%		
Peak Season =	1	1	
Buildout Year =	2022	2022	
Years =	3	3	

AM Peak Hour

	N	orthboun	d	S	outhbou	nd		Eastbou	nd		N estbour	d
	LT	*Thru	RT	LT	*Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019		46			28	1.						-
Peak Season Volume	0	46	0	0	28	0	0	0	0	0	0	0
Traffic Volume Growth	0	1	0	0	0	0	0	0	0	0	0	0
0.5% Traffic Volume Growth	0	1	0	0	0	0	0	0	0	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	0	0	0	0	0	0	0	0	0
Background Traffic Volumes	0	47	0	0	28	0	0	0	0	0	0	0
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes	10					33.0% 5	43.0% 23		52.0% 27			
Project Traffic	10					5	23		27			
TOTAL TRAFFIC	10	47	0	0	28	5	23	0	27	0	0	0

PM Peak Hour

	N	orthboun	d	S	outhbou	nd		Eastbour	ıd		Westboun	d
	LT	*Thru	RT	LT	*Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	1.271	41			50			1	1	1		-
Peak Season Volume	0	41	0	0	50	0	0	0	0	0	0	0
Traffic Volume Growth	0	1	0	0	1	0	0	0	0	0	0	0
0.5% Traffic Volume Growth	0	1	0	0	1	0	0	0	0	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	0	1	0	0	0	0	0	0	0
Background Traffic Volumes	0	42	0	0	51	0	0	0	0	0	0	0
Project Traffic Inbound Traffic Assignment Inbound Traffic Volumes Outbound Traffic Assignment Outbound Traffic Volumes	32					33.0% 17	43.0% 15		52.0% 18			
Project Traffic	32					17	15		18			
TOTAL TRAFFIC	32	42	0	0	51	17	15	0	18	0	0	0

*NBT and SBT movements taken from TMCs average of SE 5th Ave & SE 6th Street and SE 5th Ave & SE 7th Street

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Kimley »Horn

APPENDIX E: SYNCHRO WORKSHEETS

CAM #19-0351 Exhibit 4 Page 101 of 186 Traffic Impact Analysis

Kimley »Horn

SE 3RD AVENUE & SE 6TH STREET

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Timings 3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour 02/22/2019

	+	*	1	1	1	1	Į.	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	412	1	7	个个	1	٦	^	*	
Traffic Volume (vph)	56	313	120	980	79	236	489	195	
Future Volume (vph)	56	313	120	980	79	236	489	195	
Tum Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6		
Permitted Phases		\$	2		2	6		6	
Detector Phase	8	8	5	2	.2	1	6	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	10.9	10.9	48.8	41.6	41.6	54.2	46.1	46.1	
Actuated g/C Ratio	0.14	0.14	0.61	0.52	0.52	0.68	0.58	0.58	
wc Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21	
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
LOS	C	В	A	C	A	В	В	A	
Approach Delay	21.6	_		23.5			9.9	() () () () () () () () () ()	
Approach LOS	C			C			A		
Intersection Summary									
Cycle Length: 80									
Actuated Cycle Length: 80									
Offset: 51 (64%), Reference	ced to phase	e 2: NB TL	and 6: SI	BTL, Star	t of Green	1			
Natural Cycle: 60	100								
Control Type: Actuated-Co	ordinated								
Maximum V/c Ratio: 0.75									
Intersection Signal Delay:				1	ntersectio	n LOS: B			
Intersection Capacity Utiliz	zation 60.29	6		1	CU Level	of Servic	еB		
Analysis Period (min) 15									
Colite and Phases: 2:0	E 2rd Auer	0.000	oth Otmat						
Splits and Phases: 3: S	E 3rd Avenu	HE OF DE F	our otreet				_	1	
14 M	1000								

ØI	🖡 🕇 Ø2 (R)	
15s	41 s	
105	Ø6 (R)	08
15 s	415	24s

01/25/2019 Existing AM Peak Hour

Synchro 10 Report Page 1

Queues 3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour 02/22/2019

	+	*	1	1	1	1	1	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	106	329	126	1032	83	248	515	205	
wc Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21	
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Length 50th (ft)	25	32	28	265	14	31	63	0	
Queue Length 95th (ft)	43	105	m58	m287	m15	#128	122	36	
Internal Link Dist (ft)	\$17			575			243		
Tum Bay Length (ft)		325	125		100	100		150	
Base Capacity (wph)	778	557	646	1838	881	418	2041	999	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	Ô	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
ororage cap resident	0.14	0.59	0.20	0.56	0.09	0.59	0.25	0.21	

Queue shown is maximum after two cycles.

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

01/25/2019 Existing AM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour 02/22/2019

	1	-	7	1	+	*	1	1	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations				-	412	1	1	**	1	٦	^	7
Traffic Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	1.95
Future Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/n				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				47	59	329	126	1032	83	248	515	205
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				183	629	357	492	1604	716	367	1743	778
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				811	2795	1585	17\$1	3554	1585	1781	3554	1585
Grp Volume (v), veh/h				106	0	329	126	1032	83	248	515	205
Grp Sat Flow(s), veh/h/ln				1830	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Cycle Q Clear(g_c), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Prop In Lane				0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				412	400	357	492	1604	716	367	1743	778
V/C Ratio(X)				0.26	0.00	0.92	0.26	0.64	0.12	0.68	0.30	0.26
Avail Cap(c_a), veh/h				412	400	357	586	1604	716	391	1743	778
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	30.3	10.6	22.3	16.4	14.3	12.1	11.9
Incr Delay (d2), s/veh				0.3	0.0	28.9	0.0	0.2	0.0	4.2	0.4	0.8
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 Back Of Q (50%), veh/in				1.6	0.0	8.8	1.1	8.7	1.1	2.5	2.6	2.2
Unsig. Movement Delay, s/veh				1	*.*		1.1	*.1				C.C.
LnGrp Delay(d),s/veh				25.8	0.0	59.2	10.6	22.5	16.4	18.5	12.6	12.8
LnGrp LOS				C	A	E	В	C	В	В	В	B
Approach Vol, veh/h					435	-	1	1241			968	
Approach Delay, sAveh					51.1			20.9			14.1	_
Approach LOS					D			C			B	
		2				4						_
Timer - Assigned Phs	1	2	_	_	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	42.1			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35,0		18.0				
Max Q Clear Time (g_c+l1), s	7.8	22.1			5.0	8.9		18.2				_
Green Ext Time (p_c), s	0.1	6.2			0.1	4.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			С									

01/25/2019 Existing AM Peak Hour

Synchro 10 Report Page 3

Timings 3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour 02/22/2019

	+	*	1	1	1	- 1	4	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	412	7	1	**	*	1	^	*	
Traffic Volume (vph)	210	345	56	787	40	107	705	191	
Future Volume (vph)	210	345	56	787	40	107	705	191	
Tum Type	NA	Perm	pm+pt	NA.	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6		
Permitted Phases		8	2		2	6		6	
Detector Phase	8	\$	5	2	.2	1	6	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.5	14.5	47.8	42.5	42.5	50.6	45.7	45.7	
Actuated g/C Ratio	0.18	0.18	0.60	0.53	0.53	0.63	0.57	0.57	
wc Ratio	0.55	0.69	0.12	0.44	0.05	0.26	0.37	0.20	
Control Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6	
LOS	C	В	A	A	A	A	В	A	
Approach Delay	23.3			5.2			9.6		
Approach LOS	C			A			A		
Intersection Summary	_								
Cycle Length: 80									
Actuated Cycle Length: 80									
Offset: 27 (34%), Referenc	ed to phase	2:NBTL	and 6:SE	BTL, Star	t of Green	1			
Natural Cycle: 60									
Control Type: Actuated-Col	ordinated								
Maximum v/c Ratio: 0.69									
	11.7			ł	ntersectio	n LOS: B			
Intersection Signal Delay: 1						- Course	- 0		
Intersection Signal Delay: 1 Intersection Capacity Utiliz: Analysis Period (min) 15	ation 53.1%	ó		1	CU Level	or servic	eА		

Ø1	🕴 🗖 Ø2 (R)	
15s	415	
1 Ø5	🕫 🖶 Ø6 (R)	₹_Ø8
15 s	41s	24s

01/25/2019 Existing PM Peak Hour

Synchro 10 Report Page 1

Queues 3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour 02/22/2019

	+	*	1	1	1	1	1	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	349	363	59	828	42	113	742	201	
w/c Ratio	0.55	0.69	0.12	0.44	0.05	0.26	0.37	0.20	
Control Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6	
Queue Length 50th (ft)	\$3	30	3	54	0	18	114	0	
Queue Length 95th (ft)	119	111	m7	69	m0	39	176	34	
Internal Link Dist (ft)	\$17			575			243		
Tum Bay Length (ft)		325	125		100	100	-	150	
Base Capacity (vph)	782	583	530	1878	897	467	2020	990	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	Ô	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.45	0.62	0.11	0.44	0.05	0.24	0.37	0.20	

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

01/25/2019 Existing PM Peak Hour

Synchro 10 Report Page 2

> CAM #19-0351 Exhibit 4 Page 107 of 186

HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour 02/22/2019

	1	-	7	1	+	*	1	t	1	4	+	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations					412	1	7	**	7	7	^	7
Traffic Volume (veh/h)	0	0	0	122	210	345	56	787	40	107	705	191
Future Volume (veh/h)	0	0	0	122	210	345	56	787	40	107	705	191
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	C
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/in				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				128	221	363	59	828	42	113	742	201
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				282	524	357	384	1770	789	499	1825	\$14
Arrive On Green				0.22	0.22	0.22	0.07	1.00	1.00	0.05	0.51	0.51
Sat Flow, veh/h				1255	2330	1585	1781	3554	1585	1781	3554	1585
Grp Volume (v), veh/h				184	165	363	59	828	42	113	742	201
Grp Sat Flow(s),veh/h/ln				1808	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.0	6.3	18.0	1.3	0.1	0.0	2.4	10.3	5.7
Cycle Q Clear(g_c), s				7.0	6.3	18.0	1.3	0.1	0.0	2.4	10.3	5.7
Prop In Lane				0.69		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	384	1770	789	499	1825	814
V/C Ratio(X)				0.45	0.41	1.02	0.15	0.47	0.05	0.23	0.41	0.25
Avail Cap(c_a), veh/h				407	400	357	519	1770	789	606	1825	814
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.5	31.0	9.2	0.1	0.1	8.6	12.0	10.8
Incr Delay (d2), s/veh				8.0	0.7	52.3	0.1	0.7	0.1	0.2	0.7	0.7
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 Back Of Q (50%), veh/in				3.0	2.7	11.8	0.4	0.2	0.0	0.9	3.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.5	27.2	83.3	9.3	0.8	0.2	8.9	12.6	11.6
LnGrp LOS				С	С	F	A	A	A	A	В	E
Approach Vol, veh/h					712	-		929		-	1056	
Approach Delay, s/veh					55.9			1.3			12.0	_
Approach LOS					E			А			В	
Timer - Assigned Phs	1	2			5	6		8				-
Phs Duration (G+Y+Rc), s	10.2	45.8			8.9	47.1		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+l1), s	4.4	2.1			3.3	12.3		20.0				
Green Ext Time (p_c), s	0.1	7.0			0.0	6.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			19.9	-								
HCM 6th LOS			B									-

01/25/2019 Existing PM Peak Hour

Synchro 10 Report Page 3

Timings 3: SE 3rd Avenue & SE 6th Street

Background AM Peak HOur 02/22/2019

	+	*	1	1	1	- 1	4	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	412	1	7	**	*	7	^	*	
Traffic Volume (vph)	56	313	120	980	79	236	489	195	
Future Volume (vph)	56	313	120	980	79	236	489	195	
Tum Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6		
Permitted Phases		8	2		2	6		6	
Detector Phase	8	8	5	2	.2	1	6	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	10.9	10.9	48.8	41.6	41.6	54.2	46.1	46.1	
Actuated g/C Ratio	0.14	0.14	0.61	0.52	0.52	0.68	0.58	0.58	
wc Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21	
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
LOS	C	В	A	C	A	В	В	A	
Approach Delay	21.6			23.5			9.9		
Approach LOS	C			C			A		
Intersection Summary									
Cycle Length: 80									
Actuated Cycle Length: \$0									
Offset: 51 (64%), Referenc	ed to phase	E 2: NB TL	and 6:SE	BTL, Star	t of Green	1			
Natural Cycle: 60									
Control Type: Actuated-Con	ordinated								
Maximum V/c Ratio: 0.75									
Intersection Signal Delay: 1				h	ntersectio	n LOS: B			
	ation 60.2%	6		þ	CU Level	of Service	e B		
Intersection Capacity Utilization	dilon vv.L.								

Ø1	Ø2 (R)	
15s	415	
105	🖉 🚽 Ø6 (R)	₩ Ø8
15 s	415	24 s

01/25/2019 Background AM Peak Hour

Queues 3: SE 3rd Avenue & SE 6th Street

Background AM Peak HOur 02/22/2019

	+	*	1	1	1	4	ŧ	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	106	329	126	1032	83	248	515	205	
w/c Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21	
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6	
Queue Length 50th (ft)	25	32	28	265	14	31	63	0	
Queue Length 95th (ft)	43	105	m5\$	m287	m15	#128	122	36	
Internal Link Dist (ft)	\$17			575			243		
Turn Bay Length (ft)		325	125		100	100		150	
Base Capacity (vph)	778	557	646	1838	881	418	2041	999	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	Ó	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.14	0.59	0.20	0.56	0.09	0.59	0.25	0.21	
Intersection Summary # 95th percentile volume	exceeds ca	ipacity, qu	ieue may	/ be longe	r.				

Queue shown is maximum after two cycles. m Volume for 95th percentile queue is metered by upstream signal.

01/25/2019 Background AM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Background AM Peak HOur 02/22/2019

	1	+	7	1	+-	*	1	1	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		_			41	1	7	**	1	7	^	1
Traffic Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Future Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/in				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				47	59	329	126	1 0 3 2	83	248	515	205
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				183	629	357	492	1604	716	367	1743	778
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				\$11	2795	1585	17\$1	3554	1585	1781	3554	1585
Grp Volume (v), veh/h				106	0	329	126	1032	83	248	515	205
Grp Sat Flow(s),veh/h/ln				1830	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Cycle Q Clear(g_c), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Prop In Lane				0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				412	400	357	492	1604	716	367	1743	778
V/C Ratio(X)				0.26	0.00	0.92	0.26	0.64	0.12	0.68	0.30	0.26
Avail Cap(c_a), veh/h				412	400	357	586	1604	716	391	1743	778
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	30.3	10.6	22.3	16.4	14.3	12.1	11.9
Incr Delay (d2), sAeh				0.3	0.0	28.9	0.0	0.2	0.0	4.2	0.4	0.8
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 Back Of Q (50%), veh/in				1.6	0.0	8.8	1.1	8.7	1.1	2.5	2.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				25.8	0.0	59.2	10.6	22.5	16.4	18.5	12.6	12.8
LnGrp LOS				C	A	E	В	C	В	В	В	В
Approach Vol, veh/h					435			1241			968	
Approach Delay, s/veh					51.1			20.9			14.1	
Approach LOS					D			C			В	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	13.9	42.1			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35,0		18.0				
Max Q Clear Time (g_c+l1), s	7.8	22.1			5.0	8.9		18.2	-			
Green Ext Time (p_c), s	0,1	6.2			0.1	4.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			23.4									
HCM 6th LOS			С									

01/25/2019 Background AM Peak Hour

Timings 3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour 02/22/2019

	+	1	1	1	1	1	ŧ	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑ Ъ	1	٦	**	1	٦	^	*	
Traffic Volume (vph)	213	350	57	799	41	109	716	194	
Future Volume (vph)	213	350	57	799	41	109	716	194	
Tum Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6		
Permitted Phases		8	2		2	6		6	
Detector Phase	8	8	5	2	.2	1	6	6	
Switch Phase									
Minimum Initial (s)	4.0	4.0	5.0	10.0	10.0	4.0	5.0	5.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	10.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.6	14.6	47.8	42.3	42.3	50.4	45.5	45.5	
Actuated g/C Ratio	0.18	0.18	0.60	0.53	0.53	0.63	0.57	0.57	
wc Ratio	0.56	0.70	0.13	0.45	0.05	0.27	0.37	0.21	
Control Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6	
LOS	C	В	A	A	A	A	В	A	
Approach Delay	23.7	-		5.2	1		9.7		
Approach LOS	C			A	n		A		
Intersection Summary									
Cycle Length: 80									
Actuated Cycle Length: \$0									
Offset: 27 (34%), Referen	ced to phase	e 2: NB TL	and 6:SI	BTL, Star	t of Greek	n			
Natural Cycle: 60									
Control Type: Actuated-Co	pordinated								
Maximum v/c Ratio: 0.70					-				
Intersection Signal Delay:				1	ntersectio	in LOS: B	Ú.		
Intersection Capacity Utilia	zation 53.89	6		1	CU Level	of Servic	eА		
Analysis Period (min) 15									
	E Out Area								
Splits and Phases: 3: S	E 3rd Avenu	ie & SE (xn Street	-					
No.	1000								

V _{Ø1}	🚽 🕇 Ø2 (R)	
15s	415	
105	🚽 🕹 Ø6 (R)	₩ Ø8
15 s	41s	245

01/25/2019 Background PM Peak Hour

Queues 3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour 02/22/2019

	+-	*	1	1	1	1	1	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	355	368	60	841	43	115	754	204	
w/c Ratio	0.56	0.70	0.13	0.45	0.05	0.27	0.37	0.21	
Control Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6	
Queue Length 50th (ft)	\$4	34	3	55	0	18	117	0	
Queue Length 95th (ft)	121	117	m7	70	m0	40	179	35	
Internal Link Dist (ft)	\$17			575			243		
Tum Bay Length (ft)		325	125		100	100		150	
Base Capacity (vph)	782	580	523	1873	895	460	2013	988	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.45	0.63	0.11	0.45	0.05	0.25	0.37	0.21	

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

01/25/2019 Background PM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour	i
02/22/2019	i

	1	+	7	1	+	*	1	1	1	1	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations					41	1	7	**	1	٦	^	7
Traffic Volume (veh/h)	0	0	0	124	213	350	57	799	41	109	716	194
Future Volume (veh/h)	0	0	0	124	213	350	57	799	41	109	716	194
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	(
Ped-Bike Adj(A_pbT)				1.00	_	1.00	1.00		1.00	1.00	11 A.	1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				_	No	-		No		_	No	
Adj Sat Flow, veh/h/n				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				131	224	368	60	\$41	43	115	754	204
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				284	522	357	389	1767	788	495	1791	799
Arrive On Green				0.22	0.22	0.22	0.09	0.99	0.99	0.05	0.50	0.50
Sat Flow, veh/h				1262	2322	1585	1781	3554	1585	1781	3554	1585
Grp Volume (v), veh/h				188	167	368	60	841	43	115	754	204
Grp Sat Flow(s),veh/h/ln				1807	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.2	6.5	18.0	1.3	0.2	0.0	2.5	10.7	5.9
Cycle Q Clear(g_c), s				7.2	6.5	18.0	1.3	0.2	0.0	2.5	10.7	5.9
Prop In Lane				0.70	-	1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	389	1767	788	495	1791	799
V/C Ratio(X)				0.46	0.42	1.03	0.15	0.48	0.05	0.23	0.42	0.26
Avail Cap(c_a), veh/h				407	400	357	507	1767	788	601	1791	799
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.5	31.0	8.9	0.1	0.1	\$.7	12.5	11.3
Incr Delay (d2), s/veh				8.0	0.7	56.1	0.1	0.7	0.1	0.2	0.7	0.8
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 Back Of Q (50%), veh/In				3.1	2.7	12.1	0.4	0.2	0.0	0.9	4.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.6	27.2	\$7.1	9.0	0.8	0.2	8.9	13.2	12.1
LnGrp LOS				C	C	F	A	A	A	A	В	B
Approach Vol, veh/h					723			944			1073	
Approach Delay, s/veh					57.8			1.3			12.5	
Approach LOS					E			A			В	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	10.2	45.8			9.7	46.3		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+l1), s	4.5	2.2			3.3	12.7		20.0				
Green Ext Time (p_c), s	0.1	7.1			0.0	6.2		0,0				
Intersection Summary												
HCM 6th Ctrl Delay			20.6									
HCM 6th LOS			C									

01/25/2019 Background PM Peak Hour

Timings 3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour 02/22/2019

	+	1	1	1	1	- 6	Ŧ	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↑ Ъ	1	٦	个个	1	٦	^	*	
Traffic Volume (vph)	63	337	122	995	80	246	496	198	
Future Volume (vph)	63	337	122	995	80	246	496	198	
Tum Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6	1	
Permitted Phases		8	2		2	6	1	6	
Detector Phase	8	8	5	.2	.2	1	6	6	
Switch Phase									
Minimum Initial (\$)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag		1.02	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	11.8	11.8	48.0	40.6	40.6	53.2	45.1	45.1	
Actuated g/C Ratio	0.15	0.15	0.60	0.51	0.51	0.66	0.56	0.56	
wc Ratio	0.22	0.78	0.21	0.58	0.10	0.65	0.26	0.21	
Control Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7	
LOS	C	C	A	C	A	B	B	A	
Approach Delay	23.7			24.3		-	11.1		
Approach LOS	C			C			В		
Intersection Summary							_		
Cycle Length: 80									
Actuated Cycle Length: 80									
Offset: 51 (64%), Referenc Natural Cycle: 65		e 2: NB TL	and 6: SI	BTL, Star	t of Gree	n			
Control Type: Actuated-Co	ordinated								
Maximum v/c Ratio: 0.78	orumated								
All and a second of the second of the second s	101			1	ntovocatio	n LOS: B			
Intersection Signal Delay:					00.00000000000	CONCRETERVING			
Intersection Capacity Utiliz Analysis Period (min) 15	acion 61.19	0			CO Level	of Servic	ев		
Anarysis renou (min) 15									
Solits and Phases: 2: 9	E 3rd Aven	IE & SE 6	Sth Streat						
	E 3rd Aven		Sth Street					T	

Ø1	Ø2 (R)	
15s	415	
105	Ø6 (R)	Ø8
15 s	41s	24 s

01/25/2019 Future AM Peak Hour

Queues 3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour 02/22/2019

	+	*	1	1	1	4	1	1	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	114	355	128	1047	84	259	522	208	
w/c Ratio	0.22	0.78	0.21	0.58	0.10	0.65	0.26	0.21	
Control Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7	
Queue Length 50th (ft)	26	44	37	274	14	38	70	0	
Queue Length 95th (ft)	45	127	m56	m285	m15	#150	123	36	
Internal Link Dist (ft)	\$17			575			243		
Turn Bay Length (ft)		325	125		100	100		150	
Base Capacity (vph)	779	556	632	1795	863	402	1996	983	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced w/c Ratio	0.15	0.64	0.20	0.58	0.10	0.64	0.26	0.21	
Intersection Summary		-		-			-		

Would be a shown is maximum after two cycles.
 M Volume for 95th percentile queue is metered by upstream signal.

01/25/2019 Future AM Peak Hour

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HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour 02/22/2019

	1	+	7	1	+	*	1	1	1	1	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations					41	1	1	† †	1	7	^	7
Traffic Volume (veh/h)	0	0	0	46	63	337	122	995	80	246	496	198
Future Volume (veh/h)	0	0	0	46	63	337	122	995	80	246	496	198
Initial Q (Qb), veh				0	0	0	0	0	0	Ö	0	0
Ped-Bike Adj (A_pbT)				1.00	-	1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				48	66	355	128	1047	84	259	522	208
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				174	638	357	489	1591	710	367	1740	776
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				771	2837	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h			_	114	0	355	128	1047	84	259	522	208
Grp Sat Flow(s), veh/h/ln				1832	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				4.1	0.0	17.9	3.0	20.6	3.1	6.1	7.0	6.2
Cycle Q Clear(g_c), s				4.1	0.0	17.9	3.0	20.6	3.1	6.1	7.0	6.2
Prop In Lane				0.42	¥.¥	1.00	1.00	64.4	1.00	1.00	1.,~	1.00
Lane Grp Cap(c), veh/h				412	400	357	489	1591	710	367	1740	776
V/C Ratio(X)				0.28	0.00	1.00	0.26	0.66	0.12	0.71	0.30	0.27
Avail Cap(c_a), veh/h				412	400	357	582	1591	710	385	1740	776
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.6	0.0	31.0	10.7	22.7	16.5	14.7	12.2	12.0
Incr Delay (d2), sAeh				0.4	0.0	46.4	0.0	0.2	0.0	5.5	0.4	0.8
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 Back Of Q (50%), veh/in				1.8	0.0	11.1	1.1	8.9	1.1	2.7	2.7	2.2
Unsig. Movement Delay, s/veh				1.5	v.v	110	L.I.	V.V	141	4.1	2.1	6.6
LnGrp Delay(d),s/veh				26.0	0.0	77.3	10.8	22.8	16.6	20.2	12.7	12.8
LnGrp LOS				20.0 C	A	E	B	22.0 C	B	C	B	12.0 B
				0	469	-	0	1259	D	0	989	U
Approach Vol, veh/h					64.8			21.2			Contraction of the second	
Approach Delay, s/veh					64.8 E	-	_	21.2 C	-		14.7	
Approach LOS					E			U.			В	
Timer - Assigned Phs	1	2		_	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	41.8			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35,0		18.0				
Max Q Clear Time (g_c+l1), s	8.1	22.6			5.0	9.0		19.9				
Green Ext Time (p_c), s	0.1	6.1			0.1	4.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			С									

01/25/2019 Future AM Peak Hour

Timings 3: SE 3rd Avenue & SE 6th Street

Future PM Peak Hour 02/22/2019

	+	*	1	1	1	- 1	4	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	412	7	1	^	1	7	^	*	
Traffic Volume (vph)	217	362	57	799	41	127	716	194	
Future Volume (vph)	217	362	57	799	41	127	716	194	
Tum Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8		5	2		1	6		
Permitted Phases		8	2		2	6		6	
Detector Phase	8	8	5	2	.2	1	6	6	
Switch Phase									
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0	
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0	
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max	
Act Effct Green (s)	14.7	14.7	46.2	39.7	39.7	50.5	45.5	45.5	
Actuated g/C Ratio	0.18	0.18	0.58	0.50	0.50	0.63	0.57	0.57	
wc Ratio	0.56	0.72	0.13	0.48	0.05	0.32	0.37	0.21	
Control Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6	
LOS	C	В	A	A	A	A	В	A	
Approach Delay	24.4			5.7	1.1		9.8		
Approach LOS	C			A			A		
Intersection Summary	_								
Cycle Length: 80									
Actuated Cycle Length: \$0									
Offset: 27 (34%), Reference	ed to phase	2:NBTL	and 6:SE	BTL, Starl	of Greet	1			
Natural Cycle: 60									
Control Type: Actuated-Co	ordinated								
Maximum v/c Ratio: 0.72									
Intersection Signal Delay: 1	12.3			lt	ntersectio	n LOS: B			
intersection orginal belay.				1	CI Level	of Service	eА		
Intersection Signal Delay. Intersection Capacity Utiliz	ation 54.5%	0		1.	ON DEACH				

Ø1 15s Ø5 Ø6 (R) Ø8 Ø8

01/25/2019 Future PM Peak Hour

Queues 3: SE 3rd Avenue & SE 6th Street

Future PM Peak Hour 02/22/2019

	+	*	1	1	1	4	1	4	
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Group Flow (vph)	359	381	60	841	43	134	754	204	
v/c Ratio	0.56	0.72	0.13	0.48	0.05	0.32	0.37	0.21	
Control Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6	
Queue Length 50th (ft)	\$5	40	3	55	0	21	117	0	
Queue Length 95th (ft)	122	127	m7	m70	m0	46	179	35	
Internal Link Dist (ft)	\$17			575			243		
Tum Bay Length (ft)		325	125		100	100		150	
Base Capacity (wph)	782	580	527	1755	\$46	445	2011	987	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced w/c Ratio	0.46	0.66	0.11	0.48	0.05	0.30	0.37	0.21	

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

01/25/2019 Future PM Peak Hour

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HCM 6th Signalized Intersection Summary 3: SE 3rd Avenue & SE 6th Street

Future PM Peak Hour 02/22/2019

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Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations					41	1	ň	**	7	٦	^	7
Traffic Volume (veh/h)	0	0	0	124	217	362	57	799	41	127	716	194
Future Volume (veh/h)	0	0	0	124	217	362	57	799	41	127	716	194
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00	-	1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				131	228	381	60	841	43	134	754	204
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	.2	2	2	2
Cap, veh/h				281	526	357	380	1742	777	499	1824	\$13
Arrive On Green				0.22	0.22	0.22	0.07	0.98	0.98	0.06	0.51	0.51
Sat Flow, veh/h				1249	2336	1585	1781	3554	1585	1781	3554	1585
Grp Volume (v), veh/h				190	169	381	60	841	43	134	754	204
Grp Sat Flow(s), veh/h/ln				1808	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.3	6.5	18.0	1.3	0.7	0.0	2.9	10.5	5.8
Cycle Q Clear(q_c), s				7.3	6.5	18.0	1.3	0.7	0.0	2.9	10.5	5.8
Prop In Lane				0.69		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	380	1742	777	499	1824	\$13
V/C Ratio(X)				0.47	0.42	1.07	0.16	0.48	0.06	0.27	0.41	0.25
Avail Cap(c_a), veh/h				407	400	357	514	1742	777	593	1824	813
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.6	31.0	9.4	0.4	0.4	8.8	12.0	10.9
Incr Delay (d2), s/veh				0.8	0.7	67.0	0.1	0.7	0.1	0.3	0.7	0.7
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 Back Of Q (50%), veh/in				3.1	2.8	13.2	0.5	0.3	0.0	1.1	4.0	2.0
Unsig. Movement Delay, s/veh				¥.1	6.Y	10.4	v.v	¥.v	v.v	1.01	7.9	- C.V
LnGrp Delay(d),s/veh				27.7	27.3	98.0	9.6	1.1	0.5	9.0	12.7	11.6
LnGrp LOS				C	C	F	A	A	A	A	B	B
Approach Vol, veh/h					740			944			1092	-
Approach Delay, s/veh					63.8			1.7			12.1	
Approach LOS					63.8 E	_		1.7 A	-	-	12.1 B	_
Approach Lois					c	_		А			D	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	10,8	45.2			\$.9	47.1		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				_
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+l1), s	4.9	2.7			3.3	12.5		20.0				
Green Ext Time (p_c), s	0.1	7.1			0.0	6.3		0,0				
Intersection Summary												
HCM 6th Ctrl Delay			22.3									
HCM 6th LOS			С									

01/25/2019 Future PM Peak Hour

Traffic Impact Analysis

Kimley »Horn

SE 7TH STREET & SE 3RD AVENUE

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CAM #19-0351 Exhibit 4 Page 121 of 186

Timings 6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour 02/26/2019

Lane Configurations		-	+-	1	1	1	+	
Lane Configurations 4 4 4 1052 34 399 Traffic Volume (vph) 131 37 44 1052 34 399 Tum Type NA NA pm +pt NA may mp +pt NA Protected Phases 3 4 5 2 1 6 Permitted Phases 2 6 6 6 6 Detector Phase 8 4 5 2 1 6 Switch Phase	Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Traffic Volume (vph) 131 \$7 44 1052 34 399 Future Volume (vph) 131 \$7 44 1052 34 399 Future Volume (vph) 131 \$7 44 1052 34 399 Future Volume (vph) 131 \$7 44 1052 34 399 Protected Phases \$ 4 5 2 1 6 Permitted Phases \$ 2 6 6 6 Better Phase \$ 2 10 0 100 40 100 Minimum Split (\$) 20.0 20.0 12.0 28.0 12.0 28.0 10.0 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40 40	Lane Configurations	\$	4	1	* 1+	٦	† 1>	
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Protected Phases 8 4 5 2 1 6 Permitted Phases 2 6 6 Switch Phase 8 4 5 2 1 6 Switch Phase 8 4 5 2 1 6 Switch Phase 9 10.0 10.0 4.0 10.0 4.0 10.0 Minimum Split (s) 20.0 20.0 12.0 28.0 12.0 28.0 Total Split (s) 20.0 20.0 12.0 28.0 12.0 28.0 Total Split (s) 20.0 20.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	Tum Type	NA	NA.	pm+pt	NA	pm +pt	NA	
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Actuated Cycle Length: \$0 Offset: 7% (98%), Referenced to phase 2: NB TL and 6: SB TL, Start of Green Natural Cycle: 96 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.99 Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization \$2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue	Intersection Summary							
Actuated Cycle Length: \$0 Offset: 7% (98%), Referenced to phase 2: NB TL and 6: SB TL, Start of Green Natural Cycle: 96 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.99 Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization \$2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue	Cycle Length: 80							
Offset: 7% (98%), Referenced to phase 2: NB TL and 6: SB TL, Start of Green Natural Cycle: 96 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.99 Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization %2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue	Actuated Cycle Length: 80)						
Natural Cycle: 95 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.99 Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization %2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue			2:NBTL	and 6: SI	BTL, Star	t of Green	ì	
Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.99 Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization %2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue	Natural Cycle: 95							
Intersection Signal Delay: 46.7 Intersection LOS: D Intersection Capacity Utilization \$2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue		ordinated						
Intersection Capacity Utilization %2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue		1						
Intersection Capacity Utilization %2.3% ICU Level of Service E Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue	Intersection Signal Delay:	46.7			h	ntersectio	n LOS: D	
Analysis Period (min) 15 Splits and Phases: 6: SE 7th Street & SE 3rd Avenue			6		1	CU Level	of Service	ŧ E
	Analysis Period (min) 15		-					
	Survey Sector Sec.		1701					
	Splits and Phases: 6: S	E 7th Street	: & SE 3n	d Avenue	Ş. I.	1.0		

Ø1	Ø2 (R)	704	4,08	
12 s	28 s	20 s	20 s	
105	Ø6 (R)			
25	28.5			

01/25/2019 Existing AM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour 02/26/2019

	+	-	1	1	1	+
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	333	249	46	1168	36	443
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Length 50th (ft)	~182	95	13	~381	10	97
Queue Length 95th (ft)	#343	153	32	#507	5	141
Internal Link Dist (ft)	164	963		314		575
Tum Bay Length (ft)			100		100	
Base Capacity (vph)	347	343	387	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.73	0.12	0.99	0.16	0.38
Intersection Summary	-	-	-			

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

01/25/2019 Existing AM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour 02/26/2019

1	-	+	1	1	~	1	T	1	*	+	*
EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
	4			4.		7	1		5	1	
165	131	20	36	\$7	113	44	1052	5\$	34	399	2
165	131	20	36	\$7	113	44	1052	58	34	399	- 2
0	0	0	0	0	0	0	0	0	0	0	1
1.00		1.00	1.00	-	1.00	1.00		1.00	1.00		1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	No			No			No			No	
1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
174	138	21	38	92	119	46	1107	61	36	420	- 23
0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
2	2	2	2	2	2	2	2	2	2	2	- 2
165	131	20	44	107	139	345	1123	62	142	1108	61
0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.33	0.33	0.01	0.11	0.11
942	747	114	261	632	\$17	1781	3425	189	1781	3426	187
333	0	0	249	0	0	46	574	594	36	217	226
	0	0		0	0		1.1.0.1.1				1837
		0.0			0.0						9.2
	0.0	and the second second			0.0						9.2
	and a second		0.15		0.48			0.10			0.10
	0	0	290	0	0		583	602		575	594
	0.00	0.00	0.86	0.00	0.00						0.38
	0	0	299	0	0			602			594
	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00			0.33
1.00	0.00	0.00	0.78	0.00	0.00		1.00	1.00			0.98
	0.0	0.0	and the second second	0.0	and the second second	17.6					28.3
	0.0	0.0	17.1	0.0	0.0	0.2	33.9	33.4	0.9	1.9	1.8
	0.0		0.0			and the second second		a subject of the			0.0
			6.6						0.5		4.6
								- Protocol			
	0.0	0.0	53.9	0.0	0.0	17.8	60.6	60.1	22.7	30.1	30.1
F			4400	A		В		E	С	С	C
										479	
											-
	F			D			E			C	
1	2		4.	5	6		8				
8.2	32.2		19.6	8.6	31.9		20.0	-		-	
	6.0		6.0								
6,0	22.0		14.0	6.0	22.0		14.0				
3.1	27.7		13.6	3.4	11.2		16.0				
0.0	0.0		0.1	0.0	1.9		0.0				
								_			
		57.9									
		E									
		-									
	165 165 0 1.00 1.00 1.00 1.00 1.00 1.00 174 0.95 2 165 0.17 942 333 1803 14.0 1.40 0.52 315 1.00 14.0 0.52 315 1.00 1.00 33.0 66.0 0.0 11.7 99.0 F 7 99.0 F	465 131 165 131 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1870 1.870 1870 1.870 174 138 0.95 0.95 2 2 165 131 0.17 0.17 942 747 333 0 1803 0 14.0 0.0 14.0 0.0 15 0 1.06 0.00 315 0 1.00 1.00 1.00 0.00 33.0 0.0 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 1.00 0.0 99.0 0.0	0 165 131 20 165 131 20 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 2 2 2 165 131 20 0.17 0.17 0.17 942 747 114 333 0 0 14.0 0.0 0.0 14.0 0.0 0.0 14.0 0.0 0.0 1.00 1.00 1.00 1.00 0.00 0.0 1.00 0.00 0.0 1.00 0.00 0.0	465 131 20 36 165 131 20 36 0 0 0 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.01 1.00 1.00 1.00 1.02 2 2 2 2 1.65 131 20 44 0.17 0.17 0.16 0.06 942 747 114 261 333 0 0 11.6 14.0 0.0 0.0 11.6 14.0 0.0 0.0 0.86 315 0 0 299 1.00 1.00 <td>$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$</td> <td>$\$</td> <td>$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$</td> <td>↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓</td> <td>4 5 1 4 1052 58 165 131 20 36 87 113 44 1052 58 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>Φ Φ γ Φ γ Φ γ γ<td>Φ Φ γ Φ γ Φ γ Φ 165 131 20 36 \$7' 113 44 1062 58 34 399 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td></td>	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\ $	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	4 5 1 4 1052 58 165 131 20 36 87 113 44 1052 58 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Φ Φ γ Φ γ Φ γ <td>Φ Φ γ Φ γ Φ γ Φ 165 131 20 36 \$7' 113 44 1062 58 34 399 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>	Φ Φ γ Φ γ Φ γ Φ 165 131 20 36 \$7' 113 44 1062 58 34 399 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

User approved pedestrian interval to be less than phase max green.

01/25/2019 Existing AM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour 02/26/2019

	-	-	1	1	1	+	
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	\$	\$	٦	* 1+	٦	† 12	
Traffic Volume (vph)	108	127	59	653	49	769	
Future Volume (vph)	108	127	59	653	49	769	
Tum Type	NA	NA.	pm-+pt	NA.	pm +pt	NA	
Protected Phases	8	4	5	2	1	6	
Permitted Phases			2		6		
Detector Phase	8	4	5	.2	1	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0	
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0	
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	13.4	13.2	31.7	28.1	30.5	25.7	
Actuated g/C Ratio	0.17	0.16	0.40	0.35	0.38	0.32	
w/c Ratio	0.82	0.81	0.28	0.57	0.18	0.77	
Control Delay	54.2	50.5	17.4	25.1	25.7	38.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	54.2	50.5	17.4	25.1	25.7	38.5	
LOS	D	D	В	C	C	D	
Approach Delay	54.2	50.5	_	24.5		37.8	
Approach LOS	D	D		C		D	
Intersection Summary	_						
Cycle Length: 80							
Actuated Cycle Length: 80	1						
Offset: 20 (25%), Referenci	ed to phase	e 2: NB TL	and 6: SI	BTL, Star	t of Green	Ϋ́	
Natural Cycle: 85							
Control Type: Actuated-Con	ordinated						
Maximum v/c Ratio: 0.82	0.4			4	ntersectio	n LOS: D	
Maximum v/c Ratio: 0.82 Intersection Signal Delay: 3	\$0.4					and the second se	
and an and a story of the state		6		1	CU Level	of Service C	

Ø1	Ø2 (R)	704	208	
12s	28 ≤	20 s	20 s	
105	Ø6 (R)			
12 5	28 s			_

01/25/2019 Existing PM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour 02/26/2019

	-	-	1	1	4	+
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	252	250	62	712	52	869
w/c Ratio	0.82	0.81	0.28	0.57	0.18	0.77
Control Delay	54.2	50.5	17.4	25.1	25.7	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	50.5	17.4	25.1	25.7	38.5
Queue Length 50th (ft)	119	111	18	168	16	180
Queue Length 95th (ft)	#236	#223	40	230	m55	#326
Internal Link Dist (ft)	164	963		31.4		575
Tum Bay Length (ft)			100		100	
Base Capacity (vph)	320	327	225	1241	288	1133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.76	0.28	0.57	0.18	0.77
Intersection Summary		-				

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

01/25/2019 Existing PM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour 02/26/2019

			*	+		~	1		1	*	+	*
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations		\$			4.		٦	1		٦	1	
Traffic Volume (veh/h)	107	10\$	24	47	127	64	59	653	24	49	769	57
Future Volume (veh/h)	107	108	24	47	127	64	59	653	24	49	769	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	Ċ
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	114	25	49	134	67	62	687	25	52	\$09	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	132	29	57	155	78	236	1186	43	282	1127	84
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.04	0.34	0.34	0.03	0.34	0.34
Sat Flow, veh/h	806	\$13	178	346	948	474	17\$1	3497	127	1781	3354	249
Grp Volume (v), veh/h	252	0	0	250	0	0	62	349	363	52	429	440
Grp Sat Flow(s),veh/h/ln	1798	0	0	1768	0	0	1781	1777	1847	1781	1777	1826
Q Serve(g_s), s	10.9	0.0	0.0	11.0	0.0	0.0	1.8	12.9	12.9	1.5	16.9	16.9
Cycle Q Clear(g_c), s	10.9	0.0	0.0	11.0	0.0	0.0	1.8	12.9	12.9	1.5	16.9	16.9
Prop In Lane	0.45	acat a	0.10	0.20		0.27	1.00		0.07	1.00		0.14
Lane Grp Cap(c), veh/h	293	0	0	290	0	0	236	603	627	282	597	613
V/C Ratio(X)	0.86	0.00	0.00	0.86	0.00	0.00	0.26	0.58	0.58	0.18	0.72	0.72
Avail Cap(c_a), veh/h	315	0	0	309	0	0	303	603	627	355	597	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter (I)	1.00	0.00	0.00	0.89	0.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	32.6	0.0	0.0	32.6	0.0	0.0	18.2	21.7	21.7	17.4	23.2	23.2
Incr Delay (d2), s/veh	19.9	0.0	0.0	18.7	0.0	0.0	0.6	4.0	3.9	0.3	6.8	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	6.2	0.0	0.0	6.1	0.0	0.0	0.7	5.8	6.0	0.6	7.8	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.0	0.0	51.3	0.0	0.0	18.8	25.8	25.6	17.7	30.1	29.9
LnGrp LOS	D	A	A	D	A	A	В	С	С	В	С	С
Approach Vol, veh/h		252			250		1.0	774			921	
Approach Delay, s/veh		52.5			51.3			25.1			29.3	_
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	\$.7	33.1		19.1	9.0	32,9		19.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+l1), s	3.5	14.9		13.0	3.8	18.9		12.9				
Green Ext Time (p_c), s	0.0	2.5		0.1	0.0	1.6		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			33.0									
HCM 6th LOS			С									
Notes												

User approved pedestrian interval to be less than phase max green.

01/25/2019 Existing PM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Background AM Peak HOur 02/26/2019

	-	+	1	1	4	+	
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	\$	4	1	* 1+	٦	† 1>	
Traffic Volume (vph)	131	87	44	1052	34	399	
Future Volume (vph)	131	87	44	1052	34	399	
Tum Type	NA	NA	pm+pt	NA	pm +pt	NA	
Protected Phases	8	4	5	2	1	6	
Permitted Phases			2		6		
Detector Phase	8	4	5	.2	1	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0	
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0	
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	15.3	12.7	30.4	26.8	30.4	26.8	
Actuated g/C Ratio	0.19	0.16	0.38	0.34	0.38	0.34	
wc Ratio	0.96	0.79	0.12	0.99	0.16	0.38	
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2	
LOS	E	D	В	D	A	В	
Approach Delay	74.6	40.2	-	52.9	1	14.7	
Approach LOS	E	D		D		В	
Intersection Summary				_			
Cycle Length: 80							
Actuated Cycle Length: 80)						
Offset: 78 (98%), Referen	ced to phase	e 2: NB TL	and 6: SI	BTL, Star	t of Green	n	
Natural Cycle: 95							
Control Type: Actuated-Co	ordinated						
Maximum v/c Ratio: 0.99	1.0.1						
Intersection Signal Delay:	46.7			1	ntersectio	n LOS: D	
Intersection Capacity Utilia	ation \$2.3%	6		1	CU Level	of Service	E
Analysis Period (min) 15		-					
And the second second second							
Splits and Phases: 6: S	E 7th Street	t & SE 3n	a Avenue	£ 1	L.		1.4

ØI	Ø2 (R)	704	4,08	1.11
12s	25 s	20.5	20 s	
105	Ø6 (R)			
25	28.5			

01/25/2019 Background AM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Background AM Peak HOur 02/26/2019

	+	-	1	1	1	ŧ
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	333	249	46	1168	36	443
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Length 50th (ft)	~182	95	13	~381	10	97
Queue Length 95th (ft)	#343	153	32	#507	5	141
Internal Link Dist (ft)	164	963		314		575
Tum Bay Length (ft)			100	_	100	
Base Capacity (vph)	347	343	387	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.73	0.12	0.99	0.16	0.38
Intersection Summary	-	-		-	-	

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

01/25/2019 Background AM Peak Hour

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Background AM Peak HOur 02/26/2019

Lane Configurations Traffic Volume (veh/h) Future Volume (veh/h) Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1 Parking Bus, Adj 1 Work Zone On Approach Adj Sat Flow, veh/h/n 1 Adj Flow Rate, veh/h	EBL 165 165 0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1	EBT 4 131 131 131 0 1.00 No 1870 138 0.95	20 20 0 1.00 1.00 1.00	WBL 36 36 0 1.00 1.00	WBT 4 87 87 0 1.00	WBR 113 113 0	NBL 44 44 0	NBT 1052 1052	NBR 58 58	SBL	SBT 14 399	SBF 22
Traffic Volume (veh/h) Future Volume (veh/h) Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1 Parking Bus, Adj 1 Work Zone On Approach Adj Sat Flow, veh/h/h 1 Adj Flow Rate, veh/h Peak Hour Factor 0	165 0 1.00 1.00 1.00 1870 1870 174 0.95 2	131 131 0 1.00 No 1870 138	20 0 1.00 1.00 1.870	36 0 1.00 1.00	87 87 0	113 0	44 44	1052 1052	58	34	399	29
Traffic Volume (veh/h) Future Volume (veh/h) Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1 Parking Bus, Adj 1 Work Zone On Approach Adj Sat Flow, veh/h/h 1 Adj Flow Rate, veh/h Peak Hour Factor 0	165 0 1.00 1.00 1.00 1870 1870 174 0.95 2	131 131 0 1.00 No 1870 138	20 0 1.00 1.00 1.870	36 0 1.00 1.00	87 87 0	113 0	44 44	1052 1052	58	34	399	20
Future Volume (veh/h) Initial Q (Qb), veh Ped-Bike Adj(A_pbT) 1 Parking Bus, Adj 1 Work Zone On Approach Adj Sat Flow, veh/h/n 1 Adj Flow Rate, veh/h Peak Hour Factor 0	0 1.00 1.00 1.00 1870 174 0.95 2	0 1.00 No 1870 138	0 1.00 1.00 1870	0 1.00 1.00	0	0						24
Ped-Bike Adj(A_pbT) 1 Parking Bus, Adj 1 Work Zone On Approach Adj Sat Flow, veh/h/n 1 Adj Flow Rate, veh/h Peak Hour Factor 0	1.00 1.00 1870 174 0.95 2	1.00 No 1870 138	1.00 1.00 1870	1.00 1.00	-		0	~		34	399	22
Parking Bus, Adj Work Zone On Approach Adj Sat Flow, veh/h/n 1 Adj Flow Rate, veh/h Peak Hour Factor 0	1.00 1870 174 0.95 2	No 1870 138	1.00	1.00	1.00	4 00		0	0	0	0	(
Work Zone On Approach Adj Sat Flow, veh/h/n 1 Adj Flow Rate, veh/h Peak Hour Factor (1870 174 0.95 2	No 1870 138	1870	C ALL	1.00	1.00	1.00		1.00	1.00		1.00
Adj Sat Flow, veh/h/ln 1 Adj Flow Rate, veh/h Peak Hour Factor (174 0.95 2	1870 138				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Flow Rate, veh/h Peak Hour Factor (174 0.95 2	138			No			No			No	
Peak Hour Factor (0.95 2	a state base		1870	1870	1870	1870	1870	1870	1870	1870	1870
and the second	2	0.95	21	38	92	119	46	1107	61	36	420	23
Percent Heavy Veh, %		1.44	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
		2	2	2	2	2	2	2	2	2	2	2
	165	131	20	44	107	139	345	1123	62	142	1108	61
	0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.33	0.33	0.01	0.11	0.11
Sat Flow, veh/h	942	747	114	261	632	\$17	17\$1	3425	189	1781	3426	187
Grp Volume (v), veh/h	333	0	0	249	0	0	46	574	594	36	217	226
Grp Sat Flow(s),veh/h/ln 1	1803	0	0	1710	0	0	1781	1777	1836	1781	1777	1837
Q Serve(g_s), s 1	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Cycle Q Clear(g_c), s 1	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Prop In Lane (0.52		0.06	0.15		0.48	1.00		0.10	1.00		0.10
Lane Grp Cap(c), veh/h	315	0	0	290	0	0	345	583	602	142	575	594
V/C Ratio(X)	1.06	0.00	0.00	0.86	0.00	0.00	0.13	0.99	0.99	0.25	0.38	0.38
Avail Cap(c_a), veh/h	315	0	0	299	0	0	421	583	602	227	575	594
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
	1.00	0.00	0.00	0.78	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	33.0	0.0	0.0	36.8	0.0	0.0	17.6	26.7	26.7	21.8	28.2	28.3
Incr Delay (d2), sAeh 🛛 🗧	66.0	0.0	0.0	17.1	0.0	0.0	0.2	33.9	33.4	0.9	1.9	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	0.0	0.0	0.0
	11.7	0.0	0.0	6.6	0.0	0.0	0.6	15.7	16.2	0.5	4.5	4.6
Unsig. Movement Delay, s/veh			_		-	_	_			-		-
LnGrp Delay(d),s/veh S	99.0	0.0	0.0	53.9	0.0	0.0	17.8	60.6	60.1	22.7	30.1	30.1
LnGrp LOS	F	A	A	D	A	A	В	E	E	C	С	C
Approach Vol, veh/h		333			249			1214			479	
Approach Delay, sAveh		99.0			53.9			58.7			29.5	1
Approach LOS		F			D			E			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	32.2		19.6	8.6	31.9		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (q_c+l1), s	3.1	27.7		13.6	3.4	11.2		16.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			57.9									
HCM 6th LOS			E									
Notes				_								

User approved pedestrian interval to be less than phase max green.

01/25/2019 Background AM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour 02/26/2019

	-+	+-	1	1	1	+	
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	4	4	7	1	٦	† Ъ	
Traffic Volume (vph)	110	129	60	663	50	781	
Future Volume (vph)	110	129	60	663	50	781	
Tum Type	NA	NA.	pm+pt	NA.	pm +pt	NA	
Protected Phases	8	4	5	2	1	6	
Permitted Phases			2		6		
Detector Phase	8	4	5	.2	1	6	
Switch Phase							
Minimum Initial (\$)	5.0	5.0	4.0	10.0	4.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0	
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0	
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	13.5	13.3	31.6	28.0	30.4	25.6	
Actuated g/C Ratio	0.17	0.17	0.40	0.35	0.38	0.32	
wc Ratio	0.83	0.82	0.28	0.58	0.19	0.78	
Control Delay	55.6	51.7	17.4	25.3	26.1	39.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.6	51.7	17.4	25.3	26.1	39.4	
LOS	E	D	В	C	C	D	
Approach Delay	55.6	51.7	-	24.7	-	38.6	
Approach LOS	E	D		C		D	
Intersection Summary				_			
Cycle Length: 80							
Actuated Cycle Length: 80	· · · · · ·						
Offset: 20 (25%), Reference		2:NBTL	and 6:SE	BTL, Star	t of Greet	ή .	
Natural Cycle: 85	a state let with				and the second s		
Control Type: Actuated-Co	ordinated						
Maximum v/c Ratio: 0.83	and the set of						
Intersection Signal Delay:	37.2			1	ntersectio	n LOS: D	
Intersection Capacity Utiliz		6		1	CU Level	of Service C	
Analysis Period (min) 15	1042-54-01						
and the second second	- The second	a dalar	1.1.1				
Splits and Phases: 6: SI	E 7th Street	& SE 3m	Avenue	3			

ØI	Ø2 (R)	704	208	1
12 s	28 s	20 s	20 s	
105	Ø6 (R)			
25	28 5			

01/25/2019 Background PM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour 02/26/2019

	-	-	1	1	1	Ŧ
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	256	255	63	723	53	883
w/c Ratio	0.83	0.82	0.28	0.58	0.19	0.78
Control Delay	55.6	51.7	17.4	25.3	26.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	51.7	17.4	25.3	26.1	39.4
Queue Length 50th (ft)	121	113	18	172	17	186
Queue Length 95th (ft)	#242	#229	41	234	m56	#336
Internal Link Dist (ft)	164	963		314		575
Tum Bay Length (ft)			100	_	100	
Base Capacity (vph)	319	327	225	1237	282	1129
Starvation Cap Reductn	0	0	0	0	- 0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.78	0.28	0.58	0.19	0.78
Intersection Summary			-	-		-

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

01/25/2019 Background PM Peak Hour

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour 02/26/2019

	1	-	7	1	+	*	1	1	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations		\$			44		7	† ‡		3	† 1 ₂	
Traffic Volume (veh/h)	109	110	24	48	129	65	60	663	24	50	781	58
Future Volume (veh/h)	109	110	24	48	129	65	60	663	24	50	781	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	C
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	116	25	51	136	68	63	698	25	53	\$22	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	134	29	59	157	78	229	1170	42	275	1111	\$2
Arrive On Green	0.16	0.16	0.16	0.17	0.17	0.17	0.04	0.33	0.33	0.03	0.33	0.33
Sat Flow, veh/h	808	\$15	176	354	943	471	17\$1	3499	125	1781	3354	249
Grp Volume(v), veh/h	256	0	0	255	0	0	63	354	369	53	435	448
Grp Sat Flow(s),veh/h/ln	1798	0	0	1768	0	0	1781	1777	1848	1781	1777	1826
Q Serve(g_s), s	11.1	0.0	0.0	11.2	0.0	0.0	1.9	13.3	13.3	1.6	17.4	17.4
Cycle Q Clear(g_c), s	11.1	0.0	0.0	11.2	0.0	0.0	1.9	13.3	13.3	1.6	17.4	17.4
Prop In Lane	0.45		0.10	0.20		0.27	1.00	-	0.07	1.00		0.14
Lane Grp Cap(c), veh/h	296	0	0	294	0	0	229	594	618	275	589	605
V/C Ratio(X)	0.86	0.00	0.00	0.87	0.00	0.00	0.28	0.60	0.60	0.19	0.74	0.74
Avail Cap(c_a), veh/h	315	0	0	309	0	0	295	594	618	347	589	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.89	0.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	32.5	0.0	0.0	32.5	0.0	0.0	18.6	22.1	22.1	17.7	23.7	23.7
Incr Delay (d2), sAieh	20.5	0.0	0.0	19.4	0.0	0.0	0.6	4.4	4.2	0.3	7.6	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	6.4	0.0	0.0	6.2	0.0	0.0	0.8	6.0	6.2	0.6	8.1	\$.3
Unsig. Movement Delay, s/veh	t											
LnGrp Delay(d),s/veh	53.0	0.0	0.0	51.9	0.0	0.0	19.3	26.5	26.4	18.0	31.3	31.1
LnGrp LOS	D	A	A	D	A	A	В	C	C	В	C	C
Approach Vol, veh/h		256			255			786			936	
Approach Delay, s/veh		53.0			51.9			25.9			30.5	
Approach LOS		D			D			C			С	*
Timer - Assigned Phs	1	2		4.	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	32.7		19.3	9.0	32.5		19.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6,0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+l1), s	3.6	15.3		13.2	3.9	19.4		13.1				
Green Ext Time (p_c), s	0.0	2.5		0.1	0.0	1.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			33.9									
HCM 6th LOS			С									
Notes												

User approved pedestrian interval to be less than phase max green.

01/25/2019 Background PM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour 02/26/2019

	-	+-	1	1	1	Ŧ	
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	4	4	٦	41+	٦	1	
Traffic Volume (vph)	135	91	45	1068	35	405	
Future Volume (vph)	135	91	45	1068	35	405	
Tum Type	NA	NA.	pm+pt	NA.	pm +pt	NA	
Protected Phases	8	4	5	2	1	6	
Permitted Phases			2		6		
Detector Phase	8	4	5	.2	1	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0	
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0	
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0	
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	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	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag			Lead	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	None	C-Max	
Act Effct Green (s)	14.7	13.3	30.4	26.8	30.4	26.8	
Actuated g/C Ratio	0.18	0.17	0.38	0.34	0.38	0.34	
wc Ratio	1.01	0.84	0.12	1.01	0.17	0.38	
Control Delay	88.4	45.6	14.7	58.9	7.4	14.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	88.4	45.6	14.7	58.9	7.4	14.8	
LOS	F	D	В	E	A	В	
Approach Delay	88.4	45.6		57.2		14.2	
Approach LOS	F	D		E		В	
Intersection Summary							
Cycle Length: 80							
Actuated Cycle Length: \$0							
Offset: 78 (98%), Reference		2:NBTL	and 6:SE	BTL, Star	of Green	1	
Natural Cycle: 95	Second In 1995				Construction of the		
Control Type: Actuated-Co	ordinated						
Maximum v/c Ratio: 1.01	a. sin story						
Intersection Signal Delay:	51.4			h	ntersectio	n LOS: D	
Intersection Capacity Utiliz		ó			Sectors and the	of Service	E
Analysis Period (min) 15							-
riellos renou (min) ro							

Ø1 Ø2 (R) Ø5 Ø5 Ø6 (R) 12 5 28 5 06 (R)

01/25/2019 Future AM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour 02/26/2019

	+	-	1	1	1	+
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	339	270	47	1190	37	449
w/c Ratio	1.01	0.84	0.12	1.01	0.17	0.38
Control Delay	88.4	45.6	14.7	58.9	7.4	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	45.6	14.7	58.9	7.4	14.8
Queue Length 50th (ft)	~189	113	13	~393	5	99
Queue Length 95th (ft)	#350	#202	33	#521	5	143
Internal Link Dist (ft)	164	963		314		575
Tum Bay Length (ft)			100		100	
Base Capacity (vph)	335	339	385	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	1.01	0.80	0.12	1.01	0.16	0.38
Intersection Summary	-	-				

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

01/25/2019 Future AM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour 02/26/2019

	1	-	7	1	+	*	1	1	1	4	+	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations		\$			47		7	1		٦	1	
Traffic Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Future Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Initial Q (Qb), veh	0	0	0	0	0	0	Û	0	0	0	0	(
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	176	142	21	53	96	121	47	1124	66	37	426	- 23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	132	20	59	107	135	337	1098	64	140	1089	59
Arrive On Green	0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.32	0.32	0.01	0.10	0.10
Sat Flow, veh/h	936	755	112	337	610	769	1781	3411	200	1781	3429	185
Grp Volume(v), veh/h	339	0	0	270	0	0	47	585	605	37	220	229
Grp Sat Flow(s), veh/h/ln	1803	0	Ő	1715	Ő	Ő	1781	1777	1834	1781	1777	1837
Q Serve(g_s), s	14.0	0.0	0.0	12.5	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Cycle Q Clear(q_c), s	14.0	0.0	0.0	12.5	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Prop In Lane	0.52	*.*	0.06	0.20		0.45	1.00	20.0	0.11	1.00	0.0	0.10
Lane Grp Cap(c), veh/h	316	0	0	300	0	0	337	572	591	140	564	583
V/C Ratio(X)	1.07	0.00	0.00	0.90	0.00	0.00	0.14	1.02	1.02	0.26	0.39	0.39
Avail Cap(c_a), veh/h	316	0	0	300	0	0	413	572	591	224	564	583
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	0.76	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	33.0	0.0	0.0	37.0	0.0	0.0	17.9	27.1	27.1	21.9	28.6	28.6
Incr Delay (d2), s/veh	71.8	0.0	0.0	22.8	0.0	0.0	0.2	43.6	43.3	1.0	2.0	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	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	12.2	0.0	0.0	7.6	0.0	0.0	0.6	17.2	17.7	0.5	4.5	4.7
Unsig. Movement Delay, s/veh		×.×	· · · ·	1.1	v.v	¥.¥	×.¥	11.4	11.4	v.v	7.9	7.1
LnGrp Delay(d),s/veh	104.8	0.0	0.0	59.8	0.0	0.0	18.1	70.7	70.4	22.9	30.5	30.5
LnGrp LOS	F	A	A	E	A	A	B	F	F	C	C	C
Approach Vol, veh/h	-	339	0	-	270			1237			486	
Approach Vol, verwi Approach Delay, s/veh		104.8			59.8			68.5			29.9	_
Approach LOS		104.8 F			59.0 E			60.5 E	-		29.9 C	-
Timer - Assigned Phs	4	2		4	5	6		8	_		100	
Phs Duration (G+Y+Rc), s	8.2	31.8		20.0	\$.6	31.4	_	20.0	_			_
Change Period (Y+Rc), s	•.2 6.0	6.0		6.0	¢.¢ 6.0	6.0		6.0				
				14.0								
Max Green Setting (Gmax), s Max Q Clear Time (q_c+I1), s	6.0 3.1	22.0 27.8		14.0	6.0 3.4	22.0 11.3		14.0 16.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.0		0.0				
Intersection Summary	16.35	0.005										
HCM 6th Ctrl Delay			64.8									
HCM 6th LOS			E									
												_
Notes			_									

User approved pedestrian interval to be less than phase max green.

01/25/2019 Future AM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour 02/26/2019

	+	+-	1	1	1	+		
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT		
Lane Configurations	\$	\$	1	1	٦	†]>		
Traffic Volume (vph)	118	131	60	663	50	781		
Future Volume (vph)	118	131	60	663	50	781		
Tum Type	NA	NA	pm+pt	NA.	pm +pt	NA		
Protected Phases	8	4	5	2	1	6		
Permitted Phases			2		6			
Detector Phase	8	4	5	2	1	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0		
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0		
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0		
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%		
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		
All-Red Time (s)	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		
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		
Lead/Lag			Lead	Lag	Lead	Lag		
Lead-Lag Optimize?			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	C-Max	None	C-Max		
Act Effct Green (s)	13.6	13.5	31.4	27.8	30.2	25.4		
Actuated g/C Ratio	0.17	0.17	0.39	0.35	0.38	0.32		
wc Ratio	0.85	0.85	0.28	0.60	0.19	0.79		
Control Delay	58.0	55.1	17.4	25.6	26.3	39.9		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	58.0	55.1	17.4	25.6	26.3	39.9		
LOS	E	E	В	C	C	D		
Approach Delay	58.0	55.1		25.0		39.1		
Approach LOS	E	E		C		D		
Intersection Summary	_							
Cycle Length: 80								
Actuated Cycle Length: \$0	P							
Offset: 20 (25%), Reference		2:NBTL	and 6:SI	BTL, Star	t of Greet	1		
Natural Cycle: 85								
Control Type: Actuated-Co	ordinated							
Maximum v/c Ratio: 0.85								
Intersection Signal Delay:	38.2			h	ntersectio	n LOS: D		
Intersection Capacity Utiliz		6		- 1	CU Level	of Service C		
Analysis Period (min) 15								
Colite and Desserve Co. Of	E 7th Otra-t	P. 05 0	1 0. march 1					
Splits and Phases: 6: SI	E 7th Street	a de sh	a Avenue	5 °	1.4			

ØI	Ø2 (R)	704	4,08	1.14
12s	28 s	20 s	20 s	
105	Ø6 (R)			
25	28 s			

01/25/2019 Future PM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour 02/26/2019

	+	-	1	1	4	Ŧ
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	264	266	63	737	53	883
w/c Ratio	0.85	0.85	0.28	0.60	0.19	0.79
Control Delay	58.0	55.1	17.4	25.6	26.3	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	55.1	17.4	25.6	26.3	39.9
Queue Length 50th (ft)	126	120	18	175	17	186
Queue Length 95th (ft)	#252	#244	41	239	m56	#336
Internal Link Dist (ft)	164	963		31.4		575
Tum Bay Length (ft)			100		100	
Base Capacity (vph)	319	326	225	1223	274	1118
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.83	0.82	0.28	0.60	0.19	0.79
Intersection Summary	_	-				

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

01/25/2019 Future PM Peak Hour

HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour 02/26/2019

Movement EBI Lane Configurations Traffic Volume (veh/h) 105 Future Volume (veh/h) 105 105 Future Volume (veh/h) 105 100 Initial Q (Qb), veh 0 0 Ped-Bike Adj (A_pbT) 1.00 100 Parking Bus, Adj 1.00 100 Work Zone On Approach Adj Sat Flow, veh/h/ln 1870 Adj Sat Flow, veh/h/ln 1870 0.96 Percent Heavy Veh, % 2 2 Cap, veh/h 132 3 Arrive On Green 0.17 3 Sat Flow, veh/h 1800 3 Q Serve(g_s), s 11.4 3 Cycle Q Clear(g_c), s 11.4 3 Prop In Lane 0.44 4 Lane Grp Cap(c), veh/h 303 3 V/C Ratio(X) 0.87 3 Avail Cap(c_a), veh/h 316 100 Upstream Filter(I) 1.00 4	++++++++++++++++++++++++++++++++++++++	EBR 24 24	WBL.	WBT	WBR	NDL	1.100				
Traffic Volume (veh/h) 105 Future Volume (veh/h) 105 Initial Q (Qb), veh 0 Ped-Bike Adj (A_pbT) 1.00 Parking Bus, Adj 1.00 Work Zone On Approach 4 Adj Sat Flow, veh/h/in 1%70 Adj Sat Flow, veh/h/in 1%70 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 7%4 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/in 1%00 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C RatioQ() 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00) 118) 118) 0	24				NBL	NBT	NBR	SBL	SBT	SBF
Future Volume (veh/h) 105 Initial Q (Qb), veh 0 Ped-Bike Adj (A_pbT) 1.00 Parking Bus, Adj 1.00 Work Zone On Approach 100 Adj Sat Flow, veh/h/in 1%70 Adj Sat Flow, veh/h/in 1%70 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 7%4 Grp Volume(v), veh/h 264 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/In 1%00 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00) 118) 118) 0	24		¢\$>		1	朴诤		٦	†]	-
Future Volume (veh/h) 105 Initial Q (Qb), veh 0 Ped-Bike Adj (A_pbT) 1.00 Parking Bus, Adj 1.00 Work Zone On Approach 4 Adj Sat Flow, veh/hIn 1%70 Adj Sat Flow, veh/hIn 1%70 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 7%4 Grp Volume(V), veh/h 264 Grp Sat Flow(s),veh/h/In 1%00 Q Serve(g_s), s 11.4 Gycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	0		57	131	65	60	663	37	50	781	5
Ped-Bike Adj (A_pbT) 1.00 Parking Bus, Adj 1.00 Work Zone On Approach Adj Sat Flow, veh/hIn 1870 Adj Sat Flow, veh/hIn 1870 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(V), veh/h 264 Grp Volume(V), veh/h 264 Grp Sat Flow(s),veh/h/In 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00			57	131	65	60	663	37	50	781	51
Parking Bus, Adj 1.00 Work Zone On Approach Adj Sat Flow, veh/h/m 1870 Adj Sat Flow, veh/h/m 1870 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.36 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/in 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	1	0	0	0	0	Ó	0	0	0	0	(
Work Zone On Approach Adj Sat Flow, veh/h/n 1870 Adj Sat Flow, veh/h/n 1870 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/in 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Adj Sat Flow, veh/h/n 1870 Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Flow Rate, veh/h 116 Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	No			No			No			No	
Peak Hour Factor 0.96 Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Percent Heavy Veh, % 2 Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/in 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	124	25	60	138	68	63	698	- 39	53	\$22	61
Cap, veh/h 132 Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Arrive On Green 0.17 Sat Flow, veh/h 784 Grp Volume(v), veh/h 264 Grp Sat Flow(s),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	2 2	2	2	2	2	2	2	2	2	2	2
Sat Flow, veh/h 784 Grp Volume (v), veh/h 264 Grp Sat Flow(s), veh/h/ln 1800 Q Serve (g_s), s 11.4 Cycle Q Clear (g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio (X) 0.87 Avail Cap (c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter (I) 1.00	142	29	68	158	78	221	1113	62	261	1080	80
Grp Volume (v), veh/h 264 Grp Sat Flow(s), veh/h/in 1800 Q Serve(g_s), s 11.4 Cycle Q Clear (g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	0.17	0.17	0.17	0.17	0.17	0.04	0.33	0.33	0.03	0.32	0.32
Grp Sat Flow(§),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	846	170	399	918	452	1781	3422	191	1781	3354	249
Grp Sat Flow(§),veh/h/ln 1800 Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	. 0	0	266	0	0	63	362	375	53	435	448
Q Serve(g_s), s 11.4 Cycle Q Clear(g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap(c), veh./h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh./h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00		0	1769	0	0	1781	1777	1836	1781	1777	1826
Cycle Q Clear (g_c), s 11.4 Prop In Lane 0.44 Lane Grp Cap (c), veh./h 303 V/C Ratio (X) 0.87 Avail Cap (c_a), veh./h 316 HCM Platoon Ratio 1.00 Upstream Filter (I) 1.00		0.0	11.7	0.0	0.0	1.9	13.8	13.8	1.6	17.6	17.6
Prop In Lane 0.44 Lane Grp Cap(c), veh/h 303 V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00		0.0	11.7	0.0	0.0	1.9	13.8	13.8	1.6	17.6	17.6
Lane Grp Cap(c), veh/h 300 V/C Ratio(X) 0.81 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00	and the second se	0.09	0.23	100	0.26	1.00		0.10	1.00		0.14
V/C Ratio(X) 0.87 Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00		0	304	0	0	221	578	597	261	572	588
Avail Cap(c_a), veh/h 316 HCM Platoon Ratio 1.00 Upstream Filter(I) 1.00		0.00	0.88	0.00	0.00	0.28	0.63	0.63	0.20	0.76	0.76
HCM Platoon Ratio 1.00 Upstream Filter (I) 1.00		0	310	0	0	288	578	597	333	572	588
Upstream Filter(I) 1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		0.00	0.87	0.00	0.00	1.00	1,00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh 32.4		0.0	32.3	0.0	0.0	19.1	22.9	22.9	18.3	24.3	24.3
Incr Delay (d2), sAveh 21.7		0.0	20.7	0.0	0.0	0.7	5.1	4.9	0.4	8.6	8.4
Initial Q Delay(d3),s/veh 0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in 6.7		0.0	6.6	0.0	0.0	0.8	6.3	6.5	0.6	8.4	8.6
Unsig. Movement Delay, s/veh	446			101		and a					4.47
LnGrp Delay(d),s/veh 54.1	0.0	0.0	53.0	0.0	0.0	19.8	28.0	27.8	18.7	33.0	32.7
LnGrp LOS E		A	D	A	A	В	C	С	B	C	C
Approach Vol, veh/h	264	10		266			800			936	
Approach Delay, s/veh	54.1			53.0			27.3			32.0	-
Approach LOS	D			D			C			C	
Timer - Assigned Phs	2		4	5	6		8				-7
Phs Duration (G+Y+Rc), s 8.8	32.0		19.7	9.0	31.8		19.5				
Change Period (Y+Rc), s 6.0			6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s 6.0	and the second		14.0	6.0	22.0		14.0				
Max Q Clear Time (q_c+l1), s 3.6			13.7	3.9	19.6		13.4				
Green Ext Time (p_c), s 0.0	and the second		0.0	0.0	1.3		0.1				
Intersection Summary											
HCM 6th Ctrl Delay		35.4									
HCM 6th LOS		D									
Notes											

User approved pedestrian interval to be less than phase max green.

01/25/2019 Future PM Peak Hour

Timings 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized

	-	-	1	1	1	+		
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT		
Lane Configurations	\$	4	٦	朴存	٦	† 1>		
Traffic Volume (vph)	135	91	45	1068	35	405		
Future Volume (vph)	135	91	45	1068	35	405		
Tum Type	NA	NA	pm+pt	NA	pm +pt	NA		
Protected Phases	8	4	5	2	1	6		
Permitted Phases			2		6			
Detector Phase	8	4	5	2	1	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0		
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0		
Total Split (s)	21.0	19.0	11.0	30.0	10.0	29.0		
Total Split (%)	26.3%	23.8%	13.8%	37.5%	12.5%	36.3%		
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		
All-Red Time (s)	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		
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		
Lead/Lag			Lead	Lag	Lead	Lag		
Lead-Lag Optimize?			Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	C-Max	None	C-Max		
Act Effct Green (s)	15.4	12.6	31.0	28.0	29.8	27.4		
Actuated g/C Ratio	0.19	0.16	0.39	0.35	0.37	0.34		
wc Ratio	0.97	0.87	0.13	0.97	0.20	0.37		
Control Delay	75.7	57.4	14.7	47.5	10.3	19.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	75.7	57.4	14.7	47.5	10.3	19.1		
LOS	E	E	В	D	B	В		
Approach Delay	75.7	57.4		46.3		18.4		
Approach LOS	E	E		D		В		
Intersection Summary				-				
Cycle Length: 80								
Actuated Cycle Length: \$0)							
Offset: 78 (98%), Referen		e 2: NB TL	and 6:SI	BTL, Star	t of Greet	ì		
Natural Cycle: 95								
Control Type: Actuated-Co	oordinated							
Maximum v/c Ratio: 0.97	Contraction of the							
Intersection Signal Delay:	46.0			ł	ntersectio	n LOS: D		
Intersection Capacity Utilia		6		- 1	CU Level	of Service E		
Analysis Period (min) 15		-						
A STREET BOAT 100 A 11 Latte Alle Lander Provider	E 7th Street	t & SE 3n	d Avenue	gi				
Ø1 Ø2	(P)				7	04	4,08	
01 02	(1)					PL	-00	

Ø1	Tøz (R)	704	408	
10 s	30 s	19 s	215	
105	Ø6 (R)			
18	29.5			

01/25/2019 Future AM Peak Hour

Queues 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized 02/26/2019

	-	-	1	1	4	+	
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	339	270	47	1190	37	449	
w/c Ratio	0.97	0.87	0.13	0.97	0.20	0.37	
Control Delay	75.7	57.4	14.7	47.5	10.3	19.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	75.7	57.4	14.7	47.5	10.3	19.1	
Queue Length 50th (ft)	169	126	13	~367	13	107	
Queue Length 95th (ft)	#338	#302	33	#495	10	156	
Internal Link Dist (ft)	164	963		314		575	
Tum Bay Length (ft)			100	_	100		
Base Capacity (vph)	350	318	374	1233	184	1207	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.97	0.85	0.13	0.97	0.20	0.37	
Intersection Summary		-	-	-			

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

01/25/2019 Future AM Peak Hour

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HCM 6th Signalized Intersection Summary 6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized

	1	+	7	1	+-	*	1	1	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SB
Lane Configurations		4		-	4		7	†]>		٦	†]»	
Traffic Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	2
Future Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	2
Initial Q (Qb), veh	0	0	0	0	0	0	Ó	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	-	1.00	1.00		1.00	1.00		1.00	1.00		1.0
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	187
Adj Flow Rate, veh/h	176	142	21	53	96	121	47	1124	66	37	426	.2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.9
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	1
Cap, veh/h	176	142	21	55	99	125	337	1098	64	140	1089	5
Arrive On Green	0.19	0,19	0.19	0.05	0.05	0.05	0.03	0.32	0.32	0.01	0.10	0.1
Sat Flow, veh/h	936	755	112	337	610	769	1781	3411	200	1781	3429	18
Grp Volume(v), veh/h	339	0	0	270	0	0	47	585	605	37	220	22
Grp Sat Flow(s),veh/h/ln	1803	0	0	1715	0	0	1781	1777	1834	1781	1777	183
Q Serve(g_s), s	15.0	0.0	0.0	12.6	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.
Cycle Q Clear(g_c), s	15.0	0.0	0.0	12.6	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.
Prop In Lane	0.52	3.00	0.06	0.20		0.45	1.00		0.11	1.00	0.10	0.1
Lane Grp Cap(c), veh/h	338	0	0	279	0	0	337	572	591	140	564	58
V/C Ratio(X)	1.00	0.00	0.00	0.97	0.00	0.00	0.14	1.02	1.02	0.26	0.39	0.3
Avail Cap(c_a), veh/h	338	0	0	279	0	0	391	572	591	179	564	58
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.3
Upstream Filter(I)	1.00	0.00	0.00	0.76	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.9
Uniform Delay (d), s/veh	32.5	0.0	0.0	37.7	0.0	0.0	17.9	27.1	27.1	21.9	28.6	28.
Incr Delay (d2), s/veh	49.6	0.0	0.0	38.6	0.0	0.0	0.2	43.6	43.3	1.0	2.0	1.
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.
%ile Back Of Q (50%), veh/in	11.0	0.0	0.0	\$.7	0.0	0.0	0.6	17.2	17.7	0.5	4.5	4.
Unsig. Movement Delay, s/veh		4.02		0410	104	201	- 10 M			2101	0.165	
LnGrp Delay(d),s/veh	82.1	0.0	0.0	76.3	0.0	0.0	18.1	70.7	70.4	22.9	30.5	30.
LnGrp LOS	F	A	A	E	A	A	В	F	F	C	C	- 1
Approach Vol, veh/h		339			270			1237			486	
Approach Delay, s/veh		\$2.1			76.3			68.5			29.9	
Approach LOS		F			E			E			C	
					_	~					~	_
Timer - Assigned Phs	1	2		4	5	6	_	*	_		_	
Phs Duration (G+Y+Rc), s	8.2	31.8		19.0	8.6	31.4		21.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	4.0	24.0		13.0	5.0	23.0		15.0				
Max Q Clear Time (g_c+l1), s	3.1	27.8		14.6	3.4	11.3		17.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			63.4									
HCM 6th LOS			E									
Notes			-									
1000		7.7.7			_	_						

User approved pedestrian interval to be less than phase max green.

01/25/2019 Future AM Peak Hour

SE 7TH STREET & FEDERAL HIGHWAY

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Timings 9: SE 7th Street & Federal Highway

Existing AM Peak Hour 02/22/2019

	1	-	1	+-	*	1	t	1	+
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	٦	ţ,	1	1	1	7	444	1	**
Traffic Volume (vph)	41	36	25	20	71	145	1401	110	1757
Future Volume (vph)	41	36	25	20	71	145	1401	110	1757
Tum Type	Perm	NA	Perm	NA.	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		\$		\$	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	135.8	124.4	126.3	119.0
Actuated g/C Ratio	0.06	0.06	0.06	0.06	0.06	0.85	0.78	0.79	0.74
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	\$0.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	\$0.8	72.2	21.5	31.1	6.2	6.9	10,3
LOS	E	E	F	E	С	C	A	A	В
Approach Delay		67.1		42.9	-		8.5		10.1
pproach LOS		E		D			A		В
ntersection Summary									
Cycle Length: 160									
Actuated Cycle Length: 16	0								
Offset: 14 (9%), Reference		2:NBTL a	and 6:SB	TL, Start	of Green				
Natural Cycle: 70	and some second of	- and the state	and and the old		and the second				
Control Type: Actuated-Co	ordinated								
Maximum v/c Ratio: 0.65	a total and the set								
ntersection Signal Delay:	12.1			h	ntersectio	n LOS: B			
ntersection Capacity Utiliz		6			20000000000000	of Service			
Analysis Period (min) 15		-							

Splits and Phases: 9: SE 7th Street & Federal Highway

Ø1	Ø2 (R)	- ² / ₀₄
25s	101s	34.s
1 Ø5	Ø6 (R)	₹Ø8
25 s	101s	34.8

01/25/2019 Existing AM Peak Hour

Queues 9: SE 7th Street & Federal Highway

Existing AM Peak Hour 02/22/2019

76 26 0.55 0.33 50.0 \$0.8	Flow (vph) 43 76 26		NBL	NBT	001		
0.55 0.33 50.0 80.8		1 75		1001	SBL	SBT	
\$0.0 \$0.8		1 10	153	1492	116	2066	
and the second se	0.48 0.55 0.33 0.	0.44	0.65	0.38	0.39	0.55	
0.0 0.0	ay 79.6 60.0 80.8 72	2 21.5	31.1	6.2	6.9	10.3	
V.V V.V	ny 0.0 0.0 0.0 0	0.0	0.0	0.0	0.0	0.0	
\$0.0 \$0.8	79.6 60.0 \$0.\$ 72	2 21.5	31.1	6.2	6.9	10.3	
56 27	th 50th (ft) 44 56 27 :	1 0	44	157	14	306	
n68 60	th 95th (ft) m52 m68 60	1 54	126	216	29	450	
963	(Dist (ft) 963 2	2		320		153	
75	ength (ft) 200 75	75	350		250		
323 217	ity (uph) 242 323 217 3	8 338	305	3945	424	3728	
0 0	Cap Reductn 0 0 0	0 0	0	0	0	0	
0 0	ap Reductn 0 0 0	0 0	0	0	0	0	
0 0	Reductn 0 0 0	0 0	0	0	0	0	
0.24 0.12		5 0.22	0.50	0.38	0.27	0.55	
)	o Reductn 0 c Ratio 0.18 0 Summary	0 0 1 24 0.12 0.00	0 0 0 0 24 0.12 0.06 0.22	0 0 0 0 0 .24 0.12 0.06 0.22 0.50	0 0 0 0 0 0 24 0.12 0.06 0.22 0.50 0.38	0 0 0 0 0 0 0 0 24 0.12 0.06 0.22 0.50 0.38 0.27	0 0 0 0 0 0 0

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

01/25/2019 Existing AM Peak Hour

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Existing AM Peak Hour 02/22/2019

	1	+	7	1	+	*	1	1	1	1	ŧ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	7	1		1	+	1	7	***		7	†††	
Traffic Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Future Volume (veh/h)	41	36	36	25	20	71	145	1 4 0 1	16	110	1757	206
Initial Q (Qb), veh	0	0	0	0	0	0	Ô	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	-	1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	-		No			No	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	38	38	26	21	75	153	1475	17	116	1849	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	66	66	90	143	121	230	4058	47	345	3610	421
Arrive On Green	80.0	80.0	0.08	80.0	80.0	0.08	0.03	0.78	0.78	0.03	0.78	0.78
Sat Flow, veh/h	1300	858	\$58	1323	1870	1585	17\$1	5204	60	1781	4637	541
Grp Volume (v), veh/h	43	0	76	26	21	75	153	965	527	116	1354	712
Grp Sat Flow(s),veh/h/ln	1300	0	1716	1323	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	5.1	0.0	6.8	3.1	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Cycle Q Clear(q_c), s	6.8	0.0	6.8	9.9	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Prop In Lane	1.00	19.00	0.50	1.00		1.00	1.00		0.03	1.00		0.30
Lane Grp Cap(c), veh/h	131	0	131	90	143	121	230	2655	1450	345	2651	1381
V/C Ratio(X)	0.33	0.00	0.58	0.29	0.15	0.62	0.67	0.36	0.36	0.34	0.51	0.52
Avail Cap(c_a), veh/h	259	0	300	220	327	277	384	2655	1450	501	2651	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.35	0.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	0.0	71.4	76.2	69.0	71.6	10.4	5.4	5.4	4.0	6.5	6.5
Incr Delay (d2), s/veh	0.5	0.0	1.4	1.8	0.5	5.0	3.3	0.4	0.7	0.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	1.7	0.0	3.1	1.1	0.8	3.2	2.6	4.8	5.4	0.7	8.1	8.8
Unsig. Movement Delay, s/veh		***	0.1	-	¥.¥	0.4	v	1.0	374	v.1		
LnGrp Delay(d),s/veh	72.7	0.0	72.8	77.9	69.5	76.6	13.7	5.8	6.1	4.6	7.2	7.9
LnGrp LOS	E	A	E	E	E	E	В	A	A	A	A	A
Approach Vol, veh/h		119		-	122	-		1645	-		2182	
Approach Delay, s/veh		72.7			75.7			6.6			7.3	_
Approach LOS		E			E			A	1		A	
Timer - Assigned Phs	1	2		4	5	6	_	8				
Phs Duration (G+Y+Rc), s	11.0	130.8		18.3	11.2	130.6		18.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95.0		28.0				
Max Q Clear Time (q_c+l1), s	4.1	15.9		8.8	4.8	25.8		11.9				
Green Ext Time (p_c), s	0.2	16.6		0.4	0.3	31.3		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			В									-

01/25/2019 Existing AM Peak Hour

Timings 9: SE 7th Street & Federal Highway

Existing PM Peak Hour 02/22/2019

	1	-	1	+	1	1	t	1	+
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	7	ţ,	1	1	1	7	**	7	**
Traffic Volume (vph)	105	55	40	32	58	105	1091	148	1723
Future Volume (vph)	105	55	40	32	58	105	1091	148	1723
Tum Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		\$		8	2	1	6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	19.9	19.9	19.9	19.9	19.9	142.5	133.3	141.7	133.0
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.79	0.74	0.79	0.74
/c Ratio	0.74	0.71	0.59	0.17	0.27	0.53	0.31	0.41	0.51
Control Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
LOS	F	E	F	E	В	В	A	A	В
Approach Delay		\$5.4		57.8			9.2		10.9
Approach LOS		F		E			A		В
tersection Summary									
Cycle Length: 180									
Actuated Cycle Length: 18	0								
Offset: 65 (36%), Reference		2:NBTL	and 6:SE	BTL, Star	t of Green	ï			
Vatural Cycle: 65	Statute In City		and proceeding	and whether	A COMPACTORY				
Control Type: Actuated-Co	ordinated								
Maximum v/c Ratio: 0.74	a contraction of								
ntersection Signal Delay:	17.4			h	ntersectio	n LOS: B			
ntersection Capacity Utiliz		6			0000000000000	of Service			
Analysis Period (min) 15		-							

Splits and Phases: 9: SE 7th Street & Federal Highway

Ø1	Ø2 (R)	
30 s	1115	39 s
105	🚽 🕹 ø6 (R)	₩ Ø8
30 s	ills	29 s 🗾

01/25/2019 Existing PM Peak Hour

Queues 9: SE 7th Street & Federal Highway

Existing PM Peak Hour 02/22/2019

	٠	-	1	+		1	t	4	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	111	158	42	34	61	111	1181	156	1909	
wc Ratio	0.74	0.71	0.59	0.17	0.27	0.53	0.31	0.41	0.51	
Control Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2	
Queue Length 50th (ft)	129	135	48	37	0	21	157	31	307	
Queue Length 95th (ft)	197	213	94	73	47	57	224	60	456	
Internal Link Dist (ft)		963		222			320		153	
Tum Bay Length (ft)	200		75		75	350	- 12	250		
Base Capacity (vph)	250	343	11\$	341	340	346	3753	509	3732	
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	0.44	0.46	0.36	0.10	0.18	0.32	0.31	0.31	0.51	

01/25/2019 Existing PM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Existing PM Peak Hour 02/22/2019

	1	-	7	1	+	*	1	t	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	7	4	-	1	+	1	7	**		٦	**i	
Traffic Volume (veh/h)	105	55	95	40	32	58	105	1091	31	148	1723	.90
Future Volume (veh/h)	105	55	95	40	32	58	105	1091	31	148	1723	- 90
Initial Q (Qb), veh	0	0	0	0	0	0	Ó	0	0	0	0	(
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00	_	1.00	1.00	-	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	58	100	42	34	61	111	1148	33	156	1814	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	84	145	97	255	216	228	3714	107	412	3653	191
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.73	0.73	0.04	0.74	0.74
Sat Flow, veh/h	1301	616	1063	1228	1870	1585	1781	5101	147	1781	4968	260
Grp Volume(v), veh/h	111	0	158	42	- 34	61	111	766	415	156	1242	667
Grp Sat Flow(s),veh/h/ln	1301	0	1679	1228	1870	1585	1781	1702	1844	1781	1702	1824
Q Serve(g_s), s	14.8	0.0	16.2	6.1	2.9	6.2	2.9	14.2	14.2	4.1	27.4	27.5
Cycle Q Clear(g_c), s	17.7	0.0	16.2	22.2	2.9	6.2	2.9	14.2	14.2	4.1	27.4	27.6
Prop In Lane	1.00		0.63	1.00		1.00	1.00	1.1.1	0.08	1.00		0.14
Lane Grp Cap(c), veh/h	196	0	229	97	255	216	228	2478	1343	412	2503	1341
V/C Ratio(X)	0.57	0.00	0.69	0.43	0.13	0.28	0.49	0.31	0.31	0.38	0.50	0.50
Avail Cap(c_a), veh/h	258	0	308	155	343	291	415	2478	1343	586	2503	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.00	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	0.0	74.1	84.7	68.4	69.9	9.3	8.6	8.6	6.3	9.9	9.9
Incr Delay (d2), s/veh	1.6	0.0	2.6	3.0	0.2	0.7	1.6	0.3	0.6	0.6	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	5.1	0.0	7.2	2.0	1.4	2.6	1.2	5.4	6.0	1.6	10.4	11.4
Unsig. Movement Delay, s/veh							1.5		3/76	100		
LnGrp Delay(d),s/veh	77.8	0.0	76.7	87.8	68.6	70.6	10.9	8.9	9.2	6.9	10.6	11.3
LnGrp LOS	E	A	E	F	E	E	В	A	A	A	В	E
Approach Vol, veh/h		269			137	-	1	1292	-		2065	
Approach Delay, s/veh		77.2			75.4			9.2			10.6	
Approach LOS		E			E			A			В	
Timer - Assigned Phs	1	2		4	5	6	_	8	-			-
Phs Duration (G+Y+Rc), s	12.4	137.1		30,5	11.1	138.4		30.5			-	
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (g_c+l1), s	6.1	16.2		19.7	4.9	29.5		24.2				
Green Ext Time (p_c), s	0.4	11.1		1.0	0.2	27.2		0.3				
Intersection Summary	1000	. 1.4		1.4								
HCM 6th Ctrl Delay			17.2									-
HCM 6th LOS			B									-

01/25/2019 Existing PM Peak Hour

Timings 9: SE 7th Street & Federal Highway

Background AM Peak HOur 02/22/2019

	1	-	1	+-	*	1	t	4	+
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	5	t,	1	1	7	٦	**	1	***
Traffic Volume (vph)	41	36	25	20	71	145	1401	110	1757
Future Volume (vph)	41	36	25	20	71	145	1401	110	1757
Tum Type	Perm	NA	Perm	NA.	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		*	2	1	6	
Detector Phase	4	4	8	\$	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	135.8	124.4	126.3	119.0
Actuated g/C Ratio	0.06	0.06	0.06	0.06	0.06	0.85	0.78	0.79	0.74
/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	\$0.8	72.2	21.5	31.1	6.2	6.9	10.3
.08	E	E	F	E	С	С	A	A	В
Approach Delay		67.1		42.9	-		8.5		10.1
pproach LOS		E		D			A		В
tersection Summary									
Cycle Length: 160									
Actuated Cycle Length: 16	0								
Offset: 14 (9%), Reference	ed to phase	2:NBTL a	and 6:SB	TL, Start	of Green				
Vatural Cycle: 70						-			
Control Type: Actuated-Co	ordinated								
Maximum v/c Ratio: 0.65									
ntersection Signal Delay: 1	12.1			h	ntersectio	n LOS: B			
ntersection Capacity Utiliz		6		1	CU Level	of Servic	e C		
Analysis Period (min) 15									

 Splits and Phases:
 9: SE 7th Street & Federal Highway

 Ø1
 Ø2 (R)
 Ø4

 25s
 101s
 34s

 Ø5
 Ø6 (R)
 Ø8

01/25/2019 Background AM Peak Hour

101 s

Queues 9: SE 7th Street & Federal Highway

Background AM Peak HOur 02/22/2019

	1	-	1	40		1	t	4	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	43	76	26	21	75	153	1492	116	2066	
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55	
Control Delay	79.6	60.0	\$0.8	72.2	21.5	31.1	6.2	6.9	10.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	79.6	60.0	\$0.8	72.2	21.5	31.1	6.2	6.9	10.3	
Queue Length 50th (ft)	44	56	27	21	0	44	157	14	306	
Queue Length 95th (ft)	m52	m68	60	51	54	126	216	29	450	
Internal Link Dist (ft)		963		222			320		153	
Tum Bay Length (ft)	200		75		75	350		250	-	
Base Capacity (vph)	242	323	217	326	338	305	3945	424	3728	
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	0.18	0.24	0.12	0.06	0.22	0.50	0.38	0.27	0.55	

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

01/25/2019 Background AM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Background AM Peak HOur
02/22/2019

	1	-	7	1	+-	*	1	1	1	1	ŧ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	7	1+		1	+	1	1	**		7	**i	
Traffic Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Future Volume (veh/h)	41	36	36	25	20	71	145	1 4 0 1	16	110	1757	206
Initial Q (Qb), veh	0	0	0	0	0	0	Ó	0	0	0	0	C
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00	_	1.00	1.00	-	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	38	38	26	21	75	153	1475	17	116	1849	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	66	66	90	143	121	230	4058	47	345	3610	421
Arrive On Green	0.08	80.0	0.08	0.08	80.0	80.0	0.03	0.78	0.78	0.03	0.78	0.78
Sat Flow, veh/h	1300	858	\$58	1323	1870	1585	1781	5204	60	1781	4637	541
Grp Volume(v), veh/h	43	0	76	26	21	75	153	965	527	116	1354	712
Grp Sat Flow(s),veh/h/ln	1300	0	1716	1323	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	5.1	0.0	6.8	3.1	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Cycle Q Clear(g_c), s	6.8	0.0	6.8	9.9	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Prop In Lane	1.00	×.*	0.50	1.00	146	1.00	1.00	10.0	0.03	1.00	20.1	0.30
Lane Grp Cap(c), veh/h	131	0	131	90	143	121	230	2655	1450	345	2651	1381
V/C Ratio(X)	0.33	0.00	0.58	0.29	0.15	0.62	0.67	0.36	0.36	0.34	0.51	0.52
Avail Cap(c_a), veh/h	259	0	300	220	327	277	384	2655	1450	501	2651	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.35	0.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	0.0	71.4	76.2	69.0	71.6	10.4	5.4	5.4	4.0	6.5	6.5
Incr Delay (d2), sAeh	0.5	0.0	1.4	1.8	0.5	5.0	3.3	0.4	0.7	0.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	1.7	0.0	3.1	1.1	0.8	3.2	2.6	4.8	5.4	0.7	8.1	8.8
Unsig. Movement Delay, s/veh		v.v	0.1	1.1	V.Y	0.4	6.V	4.9	Y.T	V.1		¥.¥
LnGrp Delay(d),s/veh	72.7	0.0	72.8	77.9	69.5	76.6	13.7	5.8	6.1	4.6	7.2	7.9
LnGrp LOS	E	A	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h	-	119	-	-	122	-	0	1645		0	2182	
Approach Vol, venki Approach Delay, s/veh		72.7			75.7			6.6			7.3	
Approach LOS		12.1 E			70.7 E			0.0 A	-		A	
Approach Lo S			_		E	_	_	A	_		8	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	130.8		18,3	11.2	130.6		18.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95,0		28.0				
Max Q Clear Time (g_c+l1), s	4.1	15.9		8.8	4.8	25.8		11.9				
Green Ext Time (p_c), s	0.2	16.6		0.4	0.3	31.3		0.3				
Intersection Summary						_						
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			В									

01/25/2019 Background AM Peak Hour

Timings 9: SE 7th Street & Federal Highway

Background PM Peak Hour 02/22/2019

	1	-	1	+	*	1	t	1	+
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	٦	ţ,	٦	1	1	1	***	7	444
Traffic Volume (vph)	107	56	41	32	59	107	1107	150	1749
Future Volume (vph)	107	56	41	32	59	107	1107	150	1749
Tum Type	Perm	NA	Perm	NA	Perm	pm+pt	NA.	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4	-	8		*	2	1	6	-
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	20.2	20.2	20.2	20.2	20.2	142.6	133.0	141.1	132.3
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.79	0.74	0.78	0.74
wc Ratio	0.74	0.71	0.61	0.16	0.27	0.55	0.32	0.42	0.52
Control Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
LOS	F	E	F	E	В	В	A	A	В
Approach Delay		\$5.5		57.9			9.5		11.4
Approach LOS		F		E			A		В
Intersection Summary									
Cycle Length: 180									
Actuated Cycle Length: 18									
Offset: 65 (36%), Referen	ced to phase	e 2: NB TL	and 6: SI	BTL, Star	t of Greet	1			
Natural Cycle: 65									
Control Type: Actuated-Co	oordinated								
Maximum v/c Ratio: 0.74	1.2.2								
Intersection Signal Delay:				1	ntersectio	n LOS: B			
Intersection Capacity Utilia	zation 75.6%	6		- 1	CU Level	of Servic	e D		
Analysis Period (min) 15									
Splits and Phases: 9: S	E 7th Street	P Eodor	ol Liabur	-v					
opino anu ritases. 3. 5	A an aree	areaei	ar nigniuu	sy.					-

 Ø1
 Ø2 (R)

 50 s
 111 s

 Ø5
 Ø6 (R)

01/25/2019 Background PM Peak Hour

1115

Queues 9: SE 7th Street & Federal Highway

Background PM Peak Hour 02/22/2019

	٠	+	1	+		1	t	4	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	_
Lane Group Flow (vph)	113	160	43	34	62	113	1198	158	1937	
wc Ratio	0.74	0.71	0.61	0.16	0.27	0.55	0.32	0.42	0.52	
Control Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7	
Queue Length 50th (ft)	132	137	49	37	0	22	162	32	322	
Queue Length 95th (ft)	199	216	95	73	48	66	230	61	476	
Internal Link Dist (ft)		963		222			320		153	
Tum Bay Length (ft)	200		75		75	350		250	-	
Base Capacity (vph)	250	343	117	341	340	341	3744	503	3713	
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	0.45	0.47	0.37	0.10	0.18	0.33	0.32	0.31	0.52	

01/25/2019 Background PM Peak Hour

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Background PM Peak Hour	E
02/22/2019	

	1	-	7	1	+	*	1	1	1	4	ŧ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	5	4		1	+	1	1	**		7	*††	
Traffic Volume (veh/h)	107	56	96	41	32	59	107	1107	31	150	1749	.91
Future Volume (veh/h)	107	56	96	41	32	59	107	1107	31	150	1749	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	C
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00	_	1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	59	101	43	34	62	113	1165	33	158	1841	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	85	146	98	258	219	223	3704	105	406	3642	190
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.73	0.73	0.04	0.73	0.73
Sat Flow, veh/h	1300	619	1060	1226	1870	1585	1781	5104	145	1781	4969	259
Grp Volume(v), veh/h	113	Ő	160	43	- 34	62	113	777	421	158	1260	677
Grp Sat Flow(s),veh/h/ln	1300	0	1680	1226	1870	1585	1781	1702	1844	1781	1702	1824
Q Serve(g_s), s	15.0	0.0	16.3	6.2	2.9	6.3	3.0	14.6	14.6	4.2	28.2	28.4
Cycle Q Clear(g_c), s	17.9	0.0	16.3	22.6	2.9	6.3	3.0	14.6	14.6	4.2	28.2	28.4
Prop In Lane	1.00		0.63	1.00		1.00	1.00	-	0.08	1.00		0.14
Lane Grp Cap(c), veh/h	199	0	232	98	258	219	223	2470	1338	406	2495	1337
V/C Ratio(X)	0.57	0.00	0.69	0.44	0.13	0.28	0.51	0.31	0.31	0.39	0.51	0.51
Avail Cap(c_a), veh/h	258	0	308	154	343	291	409	2470	1338	579	2495	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter (I)	0.62	0.00	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	73.9	84.7	68.1	69.6	9.8	8.8	8.8	6.5	10.2	10.2
Incr Delay (d2), s/veh	1.6	0.0	2.6	3.1	0.2	0.7	1.8	0.3	0.6	0.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	5.2	0.0	7.3	2.1	1.4	2.6	1.2	5.6	6.1	1.6	10.7	11.8
Unsig. Movement Delay, s/veh		- Caralla								Later -		
LnGrp Delay(d),s/veh	77.6	0.0	76.5	87.7	68.3	70.3	11.6	9.1	9.4	7.1	10.9	11.6
LnGrp LOS	E	A	Е	F	E	E	В	А	A	A	В	В
Approach Vol, veh/h		273	-		139			1311	-		2095	
Approach Delay, s/veh		77.0			75.2			9.4		-	10.8	_
Approach LOS		E			E			А			В	
Timer - Assigned Phs	1	2		4	5	6		8				-
Phs Duration (G+Y+Rc), s	12.5	136.6		30.8	11.2	137.9		30.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (q_c+l1), s	6.2	16.6		19.9	5.0	30.4		24.6				_
Green Ext Time (p_c), s	0.4	11.4		1.0	0.3	27.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			17.4									
HCM 6th LOS			В									

01/25/2019 Background PM Peak Hour

Timings 9: SE 7th Street & Federal Highway

Future AM Peak Hour 02/22/2019

	1	-	1	+-	1	1	t	1	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Configurations	1	1	1	1	7	7	**	1	444	
Traffic Volume (vph)	50	37	25	20	72	149	1422	112	1784	
Future Volume (vph)	50	37	25	20	72	149	1422	112	1784	
Tum Type	Perm	NA	Perm	NA.	Perm	pm+pt	NA	pm+pt	NA	
Protected Phases	_	4		\$		5	2	1	6	
Permitted Phases	4		8		*	2		6		
Detector Phase	4	4	8	8	8	5	2	1	6	
Switch Phase										
Ainimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0	
fotal Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0	
fotal Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%	
/ellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
.ost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fotal Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
ead/Lag			- Cat			Lead	Lag	Lead	Lag	
ead-Lag Optimize?						Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max	
ct Effct Green (s)	11.5	11.5	11.5	11.5	11.5	134.9	123.1	124.7	117.3	
ctuated g/C Ratio	0.07	0.07	0.07	0.07	0.07	0.84	0.77	0.78	0.73	
/c Ratio	0.54	0.55	0.31	0.16	0.41	0.67	0.39	0.40	0.57	
Control Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4	
ueue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
otal Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4	
08	E	E	E	E	В	D	A	A	В	
pproach Delay		65.7		40.9			9.5		11.2	
pproach LOS		E		D			А		В	
tersection Summary	_	-		-						
Cycle Length: 160										
Actuated Cycle Length: 16	0									
Offset: 14 (9%), Reference		2:NBTL a	and 6:SB	TL. Start	of Green					
Vatural Cycle: 70	and prices of	-love in			C. A. S. S. S.	-				
Control Type: Actuated-Co	ordinated									
faximum v/c Ratio: 0.67	a. sin aleys									
tersection Signal Delay:	13.2			h	ntersectio	n 1.0S: B				
		6			20000000000000	of Service				
ntersection Capacity Utiliz										

Splits and Phases: 9: SE 7th Street & Federal Highway

Ø1	Ø2 (R)	- 4 04
25s	101s	34 s
105	Ø6 (R)	₹Ø8
25 s	101 s	34 s

01/25/2019 Future AM Peak Hour

Queues 9: SE 7th Street & Federal Highway

Future AM Peak Hour 02/22/2019

	٠	-	1	+		1	t	4	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	_
Lane Group Flow (vph)	53	83	26	21	76	157	1514	118	2100	
w/c Ratio	0.54	0.55	0.31	0.16	0.41	0.67	0.39	0.40	0.57	
Control Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4	
Queue Length 50th (ft)	55	60	26	.21	0	59	167	15	334	
Queue Length 95th (ft)	m62	m68	59	50	53	142	235	32	487	
Internal Link Dist (ft)		963		222			320		153	
Tum Bay Length (ft)	200		75		75	350		250	-	
Base Capacity (vph)	242	325	205	326	339	298	3904	416	3673	
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	0.22	0.26	0.13	0.06	0.22	0.53	0.39	0.28	0.57	

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

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Future AM Peak Hour 02/22/2019

	1	-	7	1	+	*	1	1	1	1	ŧ	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	٦	4		7	*	1	7	**		٦	***	
Traffic Volume (veh/h)	50	37	42	25	20	72	149	1422	16	112	1784	211
Future Volume (veh/h)	50	37	42	25	20	72	149	1422	16	112	1784	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/n	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	39	44	26	21	76	157	1497	17	118	1878	222
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	65	73	90	151	128	225	4036	46	337	3583	420
Arrive On Green	0.08	0.08	0.08	0.08	80.0	80.0	0.03	0.78	0.78	0.03	0.77	0.77
Sat Flow, veh/h	1298	\$02	905	1315	1870	1585	1781	5205	59	1781	4633	544
Grp Volume (v), veh/h	53	0	83	26	21	76	157	979	535	118	1376	724
Grp Sat Flow(s),veh/h/ln	1298	0	1707	1315	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	6.3	0.0	7.5	3.1	1.7	7.4	3.0	14.5	14.5	2.2	24.6	25.0
Cycle Q Clear(g_c), s	8.0	0.0	7.5	10.6	1.7	7.4	3.0	14.5	14.5	2.2	24.6	25.0
Prop In Lane	1.00	2.12	0.53	1.00	1.11	1.00	1.00	10.0	0.03	1.00		0.31
Lane Grp Cap(c), veh/h	136	0	138	90	151	128	225	2640	1442	337	2633	1371
V/C Ratio(X)	0.39	0.00	0.60	0.29	0.14	0.59	0.70	0.37	0.37	0.35	0.52	0.53
Avail Cap(c_a), veh/h	259	0	299	213	327	277	377	2640	1442	493	2633	1371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.00	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.1	0.0	71.0	76.2	68.3	71.0	13.3	5.7	5.7	4.2	6.9	6.9
Incr Delay (d2), s/veh	0.5	0.0	1.1	1.8	0.4	4.3	3.9	0.4	0.7	0.6	0.7	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	2.1	0.0	3.4	1.1	0.8	3.2	3.5	5.0	5.6	0.8	8.6	9.3
Unsig. Movement Delay, s/veh		*.*		-	¥.¥	0.4		0.0	· · · ·	¥ ¥		0.0
LnGrp Delay(d),s/veh	72.5	0.0	72.1	77.9	68.8	75.3	17.2	6.1	6.4	4.8	7.6	8.4
LnGrp LOS	E	A	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h	-	136		-	123		, in the second s	1671			2218	
Approach Delay, s/veh		72.3			74.7			7.2			7.7	-
Approach LOS		E			E			A			A	
								-			0	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	130.1		18.9	11.3	129.7		18.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95.0		28.0				
Max Q Clear Time (g_c+l1), s	4.2	16.5		10.0	5.0	27.0		12.6				_
Green Ext Time (p_c), s	0.2	17.1		0.5	0.3	32.0		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			В									

01/25/2019 Future AM Peak Hour

Timings 9: SE 7th Street & Federal Highway

Future PM Peak Hour 02/22/2019

					1		*	+
EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
4	1.	7	1	7	7	**	1	ተተኩ
113	56	41	32	59	112	1107	150	1749
113	56	41	32	59	112	1107	150	1749
Perm	NA	Perm	NA	Perm	pm+pt	NA.	pm+pt	NA
	4	_	8		5	2	1	6
4		8		*	2	1	6	
4	4	8	\$	8	5	2	1	6
6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
					Lead	Lag	Lead	Lag
					Yes	Yes	Yes	Yes
None	None	None	None	None	None	C-Max	None	C-Max
20.9	20.9	20.9	20.9	20.9	142.2	132.2	140.0	131.0
0.12	0.12	0.12	0.12	0.12	0.79	0.73	0.78	0.73
0.75	0.70	0.57	0.16	0.26	0.57	0.32	0.43	0.53
103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
F	E	F	E	В	В	A	A	В
	\$4.7	_	56.1			10.0		12.0
	F		E			В		В
0 ed to phase	e 2: NB TL	and 6:SE	3TL, Stari	of Greer	ĩ			
ordinated								
and the state of the								
18.3			ł	ntersectio	n LOS: B			
	6			200000000000000	CONTRACTOR OF A			
	-							
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Splits and Phases: 9: SE 7th Street & Federal Highway

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30 s	1115	39 s
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01/25/2019 Future PM Peak Hour

Queues 9: SE 7th Street & Federal Highway

Future PM Peak Hour 02/22/2019

	٠	+	1	-	*	1	t	4	+	
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	
Lane Group Flow (vph)	119	163	43	34	62	118	1198	158	1944	
w/c Ratio	0.75	0.70	0.57	0.16	0.26	0.57	0.32	0.43	0.53	
Control Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4	
Queue Length 50th (ft)	139	139	49	37	0	24	165	32	335	
Queue Length 95th (ft)	207	217	94	72	48	78	235	63	495	
Internal Link Dist (ft)		963		222			320		153	
Tum Bay Length (ft)	200		75		75	350		250		
Base Capacity (vph)	250	343	118	341	340	337	3719	502	3675	
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	0.48	0.48	0.36	0.10	0.18	0.35	0.32	0.31	0.53	

01/25/2019 Future PM Peak Hour

Synchro 10 Report Page 2

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HCM 6th Signalized Intersection Summary 9: SE 7th Street & Federal Highway

Future PM Peak Hour 02/22/2019

	1	-	7	1	+	*	1	1	1	1	+	1
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Lane Configurations	1	4		1	1	1	7	***	-	7	**	
Traffic Volume (veh/h)	113	56	99	41	32	59	112	1107	31	150	1749	98
Future Volume (veh/h)	113	56	99	41	32	59	112	1107	31	150	1749	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	C
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00	_	1.00	1.00	-	1.00	1.00	11 A.A.	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	59	104	43	34	62	118	1165	33	158	1841	103
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	85	150	98	262	222	223	3693	105	405	3613	202
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.72	0.72	0.04	0.73	0.73
Sat Flow, veh/h	1300	607	1070	1223	1870	1585	1781	5104	145	1781	4948	276
Grp Volume(v), veh/h	119	0	163	43	34	62	118	777	421	158	1265	679
Grp Sat Flow(s),veh/h/ln	1300	0	1678	1223	1870	1585	1781	1702	1844	1781	1702	1821
Q Serve(g_s), s	15.9	0.0	16.7	6.2	2.9	6.3	3.1	14.7	14.7	4.2	28.7	28.9
Cycle Q Clear(g_c), s	18.8	0.0	16.7	22.9	2.9	6.3	3.1	14.7	14.7	4.2	28.7	28.9
Prop In Lane	1.00	100	0.64	1.00		1.00	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	201	0	235	98	262	222	223	2463	1335	405	2486	1329
V/C Ratio(X)	0.59	0.00	0.69	0.44	0.13	0.28	0.53	0.32	0.32	0.39	0.51	0.51
Avail Cap(c_a), veh/h	258	0	308	151	343	291	407	2463	1335	577	2486	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.00	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	73.8	84.7	67.8	69.3	10.3	8.9	8.9	6.6	10.4	10.4
Incr Delay (d2), s/veh	1.6	0.0	2.7	3.1	0.2	0.7	1.9	0.3	0.6	0.6	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/in	5.4	0.0	7.4	2.1	1.4	2.6	1.3	5.6	6.2	1.6	10.9	12.0
Unsig. Movement Delay, s/veh		- Secold										
LnGrp Delay(d),s/veh	77.7	0.0	76.4	87.8	68.0	70.0	12.2	9.2	9.5	7.2	11.2	11.8
LnGrp LOS	E	А	Е	F	E	E	В	A	А	A	В	В
Approach Vol, veh/h		282			139			1316			2102	
Approach Delay, s/veh		76.9			75.0			9.6	_		11.1	
Approach LOS		E			E			A			В	
Timer - Assigned Phs	1	2		4	5	6		8				-
Phs Duration (G+Y+Rc), s	12.6	136,3		31.2	11.4	137.4		31.2			-	
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (g_c+l1), s	6.2	16.7		20.8	5.1	30.9		24.9				
Green Ext Time (p_c), s	0.4	11.4		1.0	0.3	28.1		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			17.7									
HCM 6th LOS			В									

01/25/2019 Future PM Peak Hour

Kimley »Horn

APPENDIX F: HCS WORKSHEETS

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CAM #19-0351 Exhibit 4 Page 162 of 186 Traffic Impact Analysis

Kimley »Horn

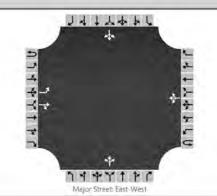
SE 6TH STREET & SE 5TH AVENUE

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General Information		Site Information						
Analyst	MAG	Intersection	SE 6th St & SE 5th Ave					
Agency/Co.	КНА	Jurisdiction	Broward County					
Date Performed	1/25/2019	East/West Street	SE 6th Street					
Analysis Year	2019	North/South Street	SE 5th Avenue					
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95					
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25					
Project Description	Existing							

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U T R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 Number of Lanes 1 1 0 0 1 0 0 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 318 21 2 2 59 110 5 36 2 76 23 173 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 335 2 45 286 1397 1590 221 452 Capacity v/c Ratio 0.24 0.00 0.20 0.63 4.3 0.9 0.0 0.7 95% Queue Length Control Delay (s/veh) 8.4 7.3 25.4 25.7 Level of Service (LOS) Α A D D Approach Delay (s/veh) 7.8 25.4 25.7 0.1 D Approach LOS A A D

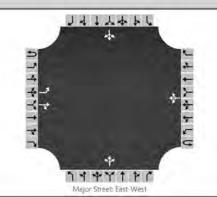
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HCS 2010 TWSC Version 6.70 SE 6th & SE 5th Existing AM.xtw Generated: 1/28/2019 10:59:30 AM

CAM #19-0351 Exhibit 4 Page 164 of 186

General Information		Site Information						
Analyst	MAG	Intersection	SE 6th St & SE 5th Ave					
Agency/Co.	КНА	Jurisdiction	Broward County					
Date Performed	1/25/2019	East/West Street	SE 6th Street					
Analysis Year	2019	North/South Street	SE 5th Avenue					
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95					
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25					
Project Description	Existing							

Lanes



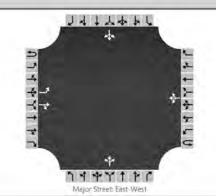
Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U Т R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 Number of Lanes 1 0 0 1 0 1 0 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 67 62 3 0 84 29 5 32 1 118 48 463 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 71 40 662 Capacity 1468 1532 468 822 v/c Ratio 0.05 0.09 0.80 8.6 0.2 0.3 95% Queue Length Control Delay (s/veh) 7.6 7.3 13.4 24.7 Level of Service (LOS) A Α В C Approach Delay (s/veh) 3.9 13.4 24.7 В Approach LOS A C

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HCS 2010 TWSC Version 6.70 SE 6th & SE 5th Existing PM.xtw Generated: 1/28/2019 11:02:42 AM

General Information		Site Information					
	Intersection	SE 6th St & SE 5th Ave					
Agency/Co.	КНА	Jurisdiction	Broward County				
Date Performed	2/22/2019	East/West Street	SE 6th Street				
Analysis Year	2019	North/South Street	SE 5th Avenue				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Background						

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U T R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 Number of Lanes 0 1 1 0 0 1 0 0 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 323 21 2 2 60 112 5 37 2 77 23 176 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 340 2 46 290 1393 1590 216 444 Capacity v/c Ratio 0.24 0.00 0.21 0.65 1.0 0.0 0.8 4.6 95% Queue Length Control Delay (s/veh) 8.4 7.3 26.1 27.1 Level of Service (LOS) Α A D D Approach Delay (s/veh) 7.9 26.1 0.1 27.1 D Approach LOS A A D

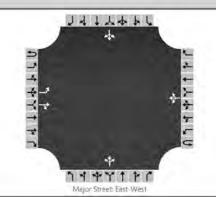
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HCS 2010 1 TWSC Version 6.70 SE 6th & SE 5th Background AM.xtw Generated: 2/26/2019 2:57:14 PM

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General Information		Site Information	
Analyst MAG		Intersection	SE 6th St & SE 5th Ave
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Background		

Lanes



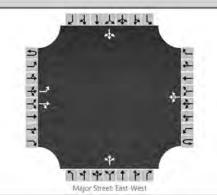
Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U T R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 Number of Lanes 0 1 0 0 1 0 0 1 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 68 63 3 0 85 29 5 32 1 120 49 470 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 72 40 673 1467 1531 462 821 Capacity v/c Ratio 0.05 0.09 0.82 0.2 0.3 9.1 95% Queue Length Control Delay (s/veh) 7.6 7.4 13.5 26.0 Level of Service (LOS) Α A В D 3.9 13.5 Approach Delay (s/veh) 26.0 В Approach LOS A D

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HCS 2010 1 TWSC Version 6.70 SE 6th & SE 5th Background PM.xtw Generated: 2/22/2019 11:24:10 AM

ieneral Information		Site Information					
Analyst MAG Agency/Co. KHA Date Performed 2/22/2019 Analysis Year 2019 Time Analyzed AM Peak Hour	Intersection	SE 6th St & SE 5th Ave					
Agency/Co.	КНА	Jurisdiction	Broward County				
Date Performed	2/22/2019	East/West Street	SE 6th Street				
Analysis Year	2019	North/South Street	SE 5th Avenue				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Future						

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U T R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 Number of Lanes 1 1 0 0 1 0 0 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 323 21 7 2 60 112 27 37 3 77 23 176 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 340 2 70 290 1393 1583 203 443 Capacity v/c Ratio 0.24 0.00 0.34 0.65 1.0 0.0 1.5 4.6 95% Queue Length Control Delay (s/veh) 8.4 7.3 31.8 27.3 Level of Service (LOS) A Α D D Approach Delay (s/veh) 7.8 31.8 0.1 27.3 D Approach LOS A A D

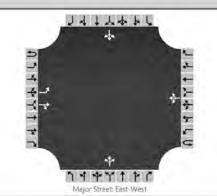
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HCS 2010 TWSC Version 6.70 SE 6th & SE 5th Future AM.xtw Generated: 2/26/2019 2:58:15 PM

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ieneral Information		Site Information		
Analyst MAG Agency/Co. KHA Date Performed 2/22/2019 Analysis Year 2019 Time Analyzed PM Peak Hour	Intersection	SE 6th St & SE 5th Ave		
Agency/Co.	KHA	Jurisdiction	Broward County	
Date Performed	2/22/2019	East/West Street	SE 6th Street	
Analysis Year	2019	North/South Street	SE 5th Avenue	
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95	
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25	
Project Description	Future			

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U Т R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 Number of Lanes 0 1 0 0 1 0 0 1 1 1 0 TR LTR LTR LTR Configuration L Volume (veh/h) 68 63 19 1 85 29 20 32 1 120 48 470 2 2 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 72 1 56 672 1467 1509 333 816 Capacity v/c Ratio 0.05 0.00 0.17 0.82 9.3 0.2 0.0 0.6 95% Queue Length 7.6 Control Delay (s/veh) 7.4 18.0 26.4 Level of Service (LOS) Α Α С D Approach Delay (s/veh) 3.5 18.0 0.1 26.4 C Approach LOS A A D

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HCS 2010 TWSC Version 6.70 SE 6th & SE 5th Future PM.xtw Generated: 2/22/2019 11:25:30 AM

CAM #19-0351 Exhibit 4 Page 169 of 186 Traffic Impact Analysis

Kimley »Horn

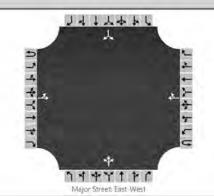
SE 7TH STREET & SE 5TH AVENUE

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CAM #19-0351 Exhibit 4 Page 170 of 186

ieneral Information		Site Information	
Analyst MAG Agency/Co. KHA Date Performed 1/25/2019 Analysis Year 2019 Time Analyzed AM Peak Hour	Intersection	SE 7th St & SE 5th Ave	
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U Т R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 0 Number of Lanes 0 1 0 1 0 1 0 0 0 LT TR LTR LR Configuration Volume (veh/h) 22 92 292 26 2 0 2 21 1 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 120 4 23 Capacity 1224 697 552 0.04 v/c Ratio 0.10 0.01 0.1 0.1 0.0 95% Queue Length Control Delay (s/veh) 8.0 10.2 11.8 Level of Service (LOS) Α В В Approach Delay (s/veh) 1.7 10.2 11.8 В Approach LOS A В

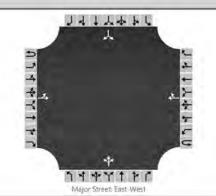
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HCS 2010 TWSC Version 6.70 SE 7th & SE 5th Existing AM.xtw Generated: 1/28/2019 11:07:48 AM

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Seneral Information		Site Information	
Analyst MAG Agency/Co. KHA Date Performed 1/25/2019 Analysis Year 2019	Intersection	SE 7th St & SE 5th Ave	
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

Lanes



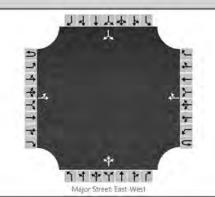
Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U Т R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 Number of Lanes 0 1 0 0 1 0 1 0 0 0 LT TR LTR LR Configuration Volume (veh/h) 8 187 146 35 0 0 5 26 22 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 205 5 50 Capacity 1382 844 707 v/c Ratio 0.15 0.01 0.07 0.2 0.0 0.0 95% Queue Length 7.6 Control Delay (s/veh) 9.3 10.5 Level of Service (LOS) Α Α В Approach Delay (s/veh) 0.3 9.3 10.5 A Approach LOS A В

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Seneral Information		Site Information					
Analyst MAG Agency/Co. KHA		Intersection	SE 7th St & SE 5th Ave				
Agency/Co.	KHA	Jurisdiction	Broward County				
Date Performed	2/22/2019	East/West Street	SE 7th Street				
Analysis Year	2019	North/South Street	SE 5th Avenue				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Background						

Lanes



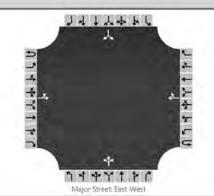
Vehicle Volumes and A	djustmen	ts														
Approach		Eastbound			1000	Westbound				North	bound	_	Southbound			
Movement	U	L	T	R	U	Ļ	T	R	U	L	T	R	U	L	T	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT	· · · · ·		-	1.5		TR			LTR	1			LR	
Volume (veh/h)		22	93				296	26		2	0	2		21		1
Percent Heavy Vehicles		2	· · · · ·			1	1	1	1	2	2	2		2	2×1	2
Proportion Time Blocked																
Right Turn Channelized		N	lo			1	No		No No							
Median Type					<u> </u>			Undi	vided							
Median Storage																
Delay, Queue Length, a	nd Level	of Ser	vice													
Flow Rate (veh/h)		121	-					1	-		4	-		1	23	
Capacity		1219				1					693				548	
v/c Ratio		0.10	. i — ./			1					0.01				0.04	
95% Queue Length		0.1									0.0				0.1	
Control Delay (s/veh)		8.0						-			10.2				11.9	
Level of Service (LOS)		A									В				В	
Approach Delay (s/veh)		1	.7		-					1	0.2			1	1.9	-
Approach LOS	A							В В				в				

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HCS 2010 TWSC Version 6.70 SE 7th & SE 5th Background AM.xtw Generated: 2/22/2019 11:26:11 AM

ieneral Information		Site Information					
Analyst MAG Agency/Co. KHA Date Performed 2/22/2019 Analysis Year 2019	Intersection	SE 7th St & SE 5th Ave					
Agency/Co.	КНА	Jurisdiction	Broward County				
Date Performed	2/22/2019	East/West Street	SE 7th Street				
Analysis Year	2019	North/South Street	SE 5th Avenue				
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Background						

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U т R U Т R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 Number of Lanes 0 0 1 0 0 1 0 0 0 0 1 LT TR LTR LR Configuration Volume (veh/h) 8 190 148 36 0 0 5 26 22 2 2 2 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 208 5 50 Capacity 1378 841 702 v/c Ratio 0.15 0.01 0.07 0.2 0.0 0.0 95% Queue Length Control Delay (s/veh) 7.6 9.3 10.5 Level of Service (LOS) Α Α В Approach Delay (s/veh) 0.3 9.3 10.5 A Approach LOS A В

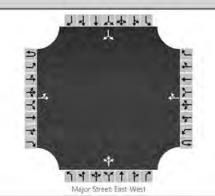
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HCS 2010 1 TWSC Version 6.70 SE 7th & SE 5th Background PM.xtw Generated: 2/22/2019 11:26:54 AM

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Seneral Information		Site Information					
		Intersection	SE 7th St & SE 5th Ave				
Agency/Co.	KHA	Jurisdiction	Broward County				
Date Performed	2/22/2019	East/West Street	SE 7th Street				
Analysis Year	2019	North/South Street	SE 5th Avenue				
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Future						

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U T R U Т R U R Movement L L L L Ť Priority 1U 1 2 3 4U 4 5 6 7 8 9 10 11 12 0 0 0 0 Number of Lanes 0 1 0 0 1 0 0 0 0 1 LT TR LTR LR Configuration Volume (veh/h) 28 94 296 30 2 0 2 33 16 2 2 2 2 Percent Heavy Vehicles 2 2 Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 128 4 52 Capacity 1214 667 577 v/c Ratio 0.11 0.01 0.09 0.3 0.1 0.0 95% Queue Length Control Delay (s/veh) 8.0 10.4 11.8 Level of Service (LOS) A В В Approach Delay (s/veh) 2.0 10.4 11.8 В Approach LOS A В

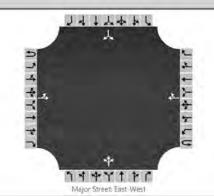
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Seneral Information		Site Information	
Analyst	MAG	Intersection	SE 7th St & SE 5th Ave
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Future	4	

Lanes



Vehicle Volumes and A	djustment	ts														
Approach		Eastbound				Westbound				Northbound			Southbound			
Movement	U	L	Ţ	R	U	UL	T	R	U	UL	T	R	U	L	T	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT			-	1.5	1	TR	i		LTR			-	LR	
Volume (veh/h)		28	190				149	48		0	0	5		34		32
Percent Heavy Vehicles		2				1	1	1	1	2	2	2		2	1.1	2
Proportion Time Blocked																
Right Turn Channelized		N	lo			1	No		No No							
Median Type								Undi	vided							
Median Storage																
Delay, Queue Length, a	and Level o	of Ser	vice													
Flow Rate (veh/h)		229	-					1	-		5			1	70	
Capacity		1362				1					841				673	
v/c Ratio		0.17	1		1	1					0.01				0.10	
95% Queue Length		0.1									0.0				0.3	
Control Delay (s/veh)		7.7									9.3			-	11.0	
Level of Service (LOS)		А									A				В	
Approach Delay (s/veh)	1.1 9.3								11.0							
Approach LOS			Ą								A		В			

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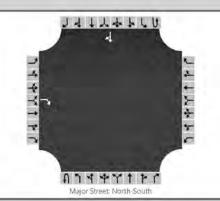
SE 6TH STREET & FEDERAL HIGHWAY

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CAM #19-0351 Exhibit 4 Page 177 of 186

General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U Т R U Т R U L T R Movement L L L 12 Priority 10 11 7 8 9 1U 1 2 3 4U 4 5 6 0 0 0 0 Ò 0 0 0 Number of Lanes 0 0 0 0 1 1 R TR Configuration Volume (veh/h) 87 39 76 3 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 92 Capacity 975 v/c Ratio 0.09 0.3 95% Queue Length Control Delay (s/veh) 9.1 Level of Service (LOS) Α Approach Delay (s/veh) 9,1 Approach LOS A

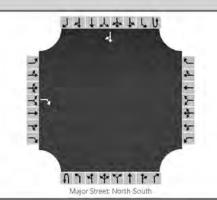
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HCS 2010 TWSC Version 6.70 Federal & SE 6th Existing AM.xtw Generated: 1/28/2019 11:20:38 AM

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General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments

Approach		Eastb	ound	- 11	10.00	West	bound			North	bound			South	bound	
Movement	U	L	T	R	U	Ļ	T	R	U	L	T	R	U	L	T	R
Priority	-	10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R	-	15-1	-	1.	5. T. I.		C	5		-	10	TF
Volume (veh/h)				160											29	73
Percent Heavy Vehicles				3	- 1	1	1	1	1		1	2.00		1	1.001	
Proportion Time Blocked														Ĩ.		
Right Turn Channelized		N	lo			N	lo		-	N	lo	-		1	lo	
Median Type								Und	vided							
Median Storage																
Delay, Queue Length, a	nd Level	of Ser	vice												_	
Delay, Queue Length, a Flow Rate (veh/h)	nd Level	of Ser	vice	168										(
	nd Level	of Ser	vice	168 989												
Flow Rate (veh/h)	nd Level	of Ser	vice													
Flow Rate (veh/h) Capacity	Ind Level	of Ser	vice	989												
Flow Rate (veh/h) Capacity v/c Ratio	Ind Level	of Ser	vice	989 0.17												
Flow Rate (veh/h) Capacity v/c Ratio 95% Queue Length	and Level	of Ser	vice	989 0.17 0.6												
Flow Rate (veh/h) Capacity v/c Ratio 95% Queue Length Control Delay (s/veh)	Ind Level		4	989 0.17 0.6 9.4												

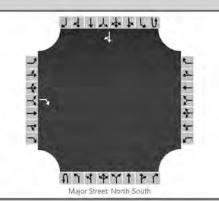
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HCS 2010 TWSC Version 6.70 Federal & SE 6th Existing PM.xtw Generated: 1/28/2019 11:22:33 AM

General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Background		

Lanes

.....



Approach		Eastb	ound	11	10.00	West	bound			North	bound			South	bound	
Movement	U	L	Ť	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	-	10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R		12-1		1.	1		C	1		-		TR
Volume (veh/h)				88											40	77
Percent Heavy Vehicles				3	-	1		1	1		1.1	-		1	1.00	
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	lo		-	N	lo			P	lo	
Median Type								Undi	ivided							
Median Storage																
Delay, Queue Length, a	nd Level	of Ser	vice												_	
Flow Rate (veh/h)				93		-			-							
Capacity				974	-	1										
v/c Ratio			-	0.10	-	1			1.	1		1				
95% Queue Length				0.3												
		1	-	9.1	1			1	1		1					
Control Delay (s/veh)										-						-
Control Delay (s/veh) Level of Service (LOS)				A												
		9	.1	A												

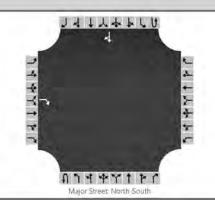
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General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

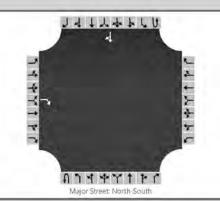
Approach		Eastb	ound	22, 11,		West	bound			North	bound		1000	South	bound	
Movement	U	L	T	R	U	Ļ	T	R	U	L	T	R	U	L.	T	R
Priority		10	11	12	-	7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration		2	1.000	R		i Seri		1	1 î.		(C -=)	5			1.0	TR
Volume (veh/h)				162											29	74
Percent Heavy Vehicles		1.00	1	3	1.1	1	1	ľ	1		1	2.5		1	1.001	
Proportion Time Blocked																
Right Turn Channelized		N	0			N	lo		-	N	lo	-	-	P	No	_
Median Type								Undi	vided							
Median Storage																
Delay, Queue Length, a	nd Level	of Ser	vice												_	
Flow Rate (veh/h)			_		_											
now nate (veryn)		1.		171					5 C .							
Capacity				171 989												
1																
Capacity				989												
Capacity v/c Ratio				989 0.17												
Capacity v/c Ratio 95% Queue Length				989 0.17 0.6												
Capacity v/c Ratio 95% Queue Length Control Delay (s/veh)		9	4	989 0.17 0.6 9.4												

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General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future	4	

Lanes



Vehicle Volumes and A	djustmen	ts														
Approach		East	bound	1		West	bound			North	bound			South	bound	
Movement	U	L	Ţ	R	U	Ļ	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R	-	12-11	· · · ·		1		C	S		-		TR
Volume (veh/h)				89		1									42	77
Percent Heavy Vehicles				3		1		17	1.000		1.00	2.00		1.00	1.1.1	
Proportion Time Blocked							1	1			1			1		
Right Turn Channelized		4	No			N	lo			N	lo			1	No	
Median Type								Undi	vided							
Median Storage										_						
Delay, Queue Length, a	nd Level	of Sei	rvice													
Flow Rate (veh/h)				94					-					[
Capacity				972		1								1		
v/c Ratio				0.10		1						1				
95% Queue Length				0.3												
Control Delay (s/veh)		-		9.1		-	-							1		
Level of Service (LOS)				A						-						
Approach Delay (s/veh)		9),1									-			-	
Approach LOS			A	_	-											

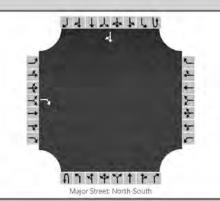
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General Information		Site Information	
Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	КНА	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future		

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U Т R U Т R U T R Movement L L L L 12 Priority 10 11 7 8 9 1U 1 2 3 4U 4 5 6 0 0 0 0 0 0 0 Number of Lanes 0 0 0 Ò 0 1 1 R TR Configuration Volume (veh/h) 162 36 75 3 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 171 Capacity 979 v/c Ratio 0.17 0.6 95% Queue Length Control Delay (s/veh) 9.5 Level of Service (LOS) A Approach Delay (s/veh) 9.5 Approach LOS A

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Kimley »Horn

DRIVEWAY 1

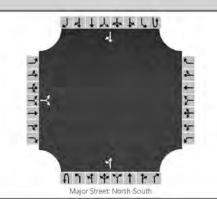
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General Information		Site Information	
Analyst	КНА	Intersection	Driveway & SE 5th Avenue
Agency/Co.		Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	Driveway
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future		

Lanes



Vehicle Volumes and Adjustments Eastbound Westbound Southbound Approach Northbound U T R U T R U Т R U R Movement L L L L Ť 12 Priority 10 11 7 8 9 1U 1 2 3 4U 4 5 б 0 0 0 0 0 0 0 Number of Lanes 0 0 0 0 1 0 1 LR LT TR Configuration Volume (veh/h) 23 27 10 47 28 5 2 2 2 Percent Heavy Vehicles Proportion Time Blocked **Right Turn Channelized** No No No No Undivided Median Type Median Storage Delay, Queue Length, and Level of Service Flow Rate (veh/h) 52 60 Capacity 965 1576 v/c Ratio 0.05 0.04 0.0 0.2 95% Queue Length Control Delay (s/veh) 8.9 7.3 Level of Service (LOS) A Α Approach Delay (s/veh) 8.9 1.4 A Approach LOS A

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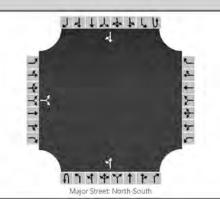
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General Information		Site Information	
Analyst	КНА	Intersection	Driveway & SE 5th Avenue
Agency/Co.		Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	Driveway
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future		

Lanes

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Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR						1	LT	· C :	5		0	1.	TR
Volume (veh/h)		15		18						32	42				51	17
Percent Heavy Vehicles		2		2					í	2	1.1.1			1	1.001	
Proportion Time Blocked																
Right Turn Channelized	No			No				No				No				
Median Type	Undivided															
Median Storage																
Delay, Queue Length, a	nd Level	of Ser	vice									_		_		
Flow Rate (veh/h)			35	-				1		78						
Capacity			896			1				1527						
v/c Ratio			0.04			1			1.	0.05		1				
										0.1						
95% Queue Length			0.1													
			0.1 9.2						1	7.4						
95% Queue Length										7.4 A						
95% Queue Length Control Delay (s/veh)		9	9.2							А	.3					

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