Final Traffic Impact Analysis

COUNTRY GREEN PD

CITY OF OCALA, FL

Prepared for:

WG One Corp

Prepared by:

Kimley-Horn and Associates, Inc.

142742000
September 2018

101 E Silver Springs Boulevard, Suite 400
Ocala, FL 34470
352 438 3000

Kimley»Horn

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THIS IS TO CERTIFY THAT THE ENCLOSED CALCULATIONS WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

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DATE: 8/12/2020

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EXECUTIVE SUMMARY

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the Country Green Planned Development (PD). The PD is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. The PD area is +/- 40 acres on the west side of the Ocala West PUD.

The TIA has been prepared to support a Concurrency Development Agreement (CDA). The analysis has been performed in accordance with the City of Ocala Traffic Impact Analysis guidelines and the methodology which was approved by the City of Ocala, Marion County, and Ocala/Marion County TPO.

The project's development program includes the following uses and intensities:

- Apartments – 900 dwelling units
- Commercial retail – 75,000 square feet

Access to the property is proposed via an existing full access connection on SW 20th Street across from SW 54th Court and a right-in/right out connection on SW 20th Street.

The traffic analysis was performed considering a buildout timeframe of 20 years (2037) for the proposed development program. The operating conditions within the study area were evaluated for future background (before addition of project traffic) conditions and buildout traffic conditions. Transportation improvements were identified within the study area to be needed under future background traffic conditions. These improvements are needed prior to the addition to project traffic, and therefore no proportionate share contribution is required by the development per Florida State Statutes.

The following geometric improvements were identified to be needed at project buildout, in addition to those identified under future background traffic conditions:

- Signalization and construction of an exclusive westbound left-turn lane at the intersection of SW 20th Street and SW 54th Court (site access improvement)
- Construction of an exclusive northbound right-turn lane at the intersection of SW 20th Street and SW 38th Avenue
- Signal timing adjustments at the intersection of SW 20th Street and SW 27th Avenue

Consistent with Florida Statute, the project's proportionate share percentage was calculated for each offsite transportation improvement (non-site related) identified to be needed due to the addition of project traffic.

The traffic analysis and results provided herein support the transportation concurrency reservation request for the Country Green PD project. The owners of the Country Green PD and Wintergreen PD, which is located on the eastern boundary of the Ocala West PUD, have prepared TIAs for both developments and will be going through the transportation concurrency reservation process concurrently. However, for the purpose of the Wintergreen PD TIA, project trips from the Country Green PD will be considered "vested" background trips.

The contribution of right-of-way for the future SW 44th Avenue is intended to mitigate for the transportation deficiencies identified within this study to require mitigation from the developer.

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INTRODUCTION

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the proposed Country Green Planned Development (PD). The project site is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. The PD area is +/- 40 acres on the west side of the Ocala West Planned Unit Development (PUD). The site is proposed to contain commercial retail and residential uses.

The TIA identifies transportation needs within the study area under future background (before the addition of project traffic) and project buildout conditions. The TIA has been prepared to support the transportation concurrency reservation and a developer agreement for the subject property. The analysis has been performed in accordance with the City of Ocala Traffic Impact Analysis guidelines and the methodology which was approved by the City of Ocala, Marion County, and the Ocala/Marion County Transportation Planning Organization (TPO). The approved methodology is included in the **Appendix**.

The project's development program includes the following uses and intensities:

- Multifamily housing – 900 dwelling units
- Commercial retail – 75,000 square feet

Access to the property is proposed via an existing full access connection on SW 20th Street across from SW 54th Court and a right-in/right out connection on SW 20th Street. The buildout timeframe evaluated for the project is 20 years (by end of 2037). A copy of the current PD Plan illustrating the site location and proposed project access is included in the **Appendix**.

This TIA is based on data collected by Kimley-Horn and supplemented by information obtained from City of Ocala, Marion County, and Florida Department of Transportation (FDOT) sources. The study observed the established procedures found in Institute of Transportation Engineers (ITE) sources, FDOT sources, and the *2010 Highway Capacity Manual* (HCM 2010).

PROJECT TRAFFIC

The trip generation potential of the proposed development program was calculated based upon rates and equations contained in the ITE *Trip Generation Manual,* Tenth Edition. Internal capture and pass-by calculations were prepared in accordance with the methods established in the ITE *Trip Generation Handbook, 3rd Edition*.

The ITE calculated pass-by capture was limited to 10% of the projected SW 20th Street traffic volumes. The pass-by capture calculations were approved during the methodology process. Pass-by trips have been included in the driveway volumes for evaluation of the site access locations.

Based on the development program provided, the project is anticipated to generate 6,792 net new daily trips, 413 net new AM peak hour trips, and 522 net new PM peak hour trips.

Table 1 illustrates the trip generation calculations for the site, which were approved during the methodology process.

Site Access

Access to the Country Green PD is proposed via a connection on the north side of the parcel to SW 20th Street as well as three access points along a proposed north-south roadway along the west side of the parcel, intersecting with SW 20th Street directly across from SW 54th Court.

The access locations are illustrated on the PD in the **Appendix**. This report includes evaluation of the site access locations for the appropriate control and geometry needed at project buildout.

Table 1: Trip Generation Calculations

Land Use	Intensity			Daily Trips	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
					Total	In	Out	Total	In	Out
Proposed Development										
Multifamily Housing (Mid-Rise)	900 DU			4,903	295	77	218	365	223	142
Shopping Center	75,000 SF			4,944	189	117	72	439	211	228
	Subtotal			*9,847*	*484*	*194*	*290*	*804*	*434*	*370*
Internal Capture	Daily	AM	PM							
Residential	17%	1%	22%	828	4	2	2	80	59	21
Commercial	17%	2%	18%	828	4	2	2	80	21	59
Subtotal	*17%*	*2%*	*20%*	1,656	8	4	4	160	80	80
Pass-By Traffic [1]	Daily	AM	PM							
Shopping Center	34%	34%	34%	1,399	63	39	24	122	65	57
10% of Adjacent Street Traffic	10%			1,651	151	76	75	152	76	76
	Limiting:			*1,399*	*63*	*39*	*24*	*122*	*65*	*57*
Driveway Volumes				**8,191**	**476**	**190**	**286**	**644**	**354**	**290**
TOTAL NET NEW TRIPS				**6,792**	**413**	**151**	**262**	**522**	**289**	**233**

Note: *Trip Generation was calculated using the data from ITE's Trip Generation Manual, 10th Edition*

Multifamily Housing (Mid-Rise) [ITE LUC 221]

Daily	T = 5.45*(X) - 1.75 (X is DU)
AM Peak Hour of Adjacent Street	Ln(T) = 0.98*Ln(X) - 0.98 (X is DU; 26% in, 74% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.96*Ln(X) - 0.63 (X is DU; 61% in, 39% out)

Shopping Center [ITE LUC 820]

Daily	Ln(T) = 0.68*Ln(X) + 5.57 (X is SF/1,000)
AM Peak Hour of Adjacent Street	T = 0.50*(X) + 151.78 (X is SF/1,000; 62% in, 38% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.74*Ln(X) + 2.89 (X is DU; 48% in, 52% out)
Pass-By Trip Reduction [2]	P = 0.34*(T)

Note 1: The ITE calculated pass-by capture was limited to 10% of the projected adjacent side-street traffic volumes. Adjacent side-street traffic volume is that projected for SW 20th Street based on existing traffic volumes from the 2016 FDOT Florida Traffic Information CD, turning movement counts, and the growth rates from the approved methodology. Background growth was applied to account for future adjacent traffic volumes at buildout of the development.
Note 2: The ITE recommended pass-by capture rate for the PM peak hour was applied for the daily and AM peak hours as well.

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TRIP DISTRIBUTION, ASSIGNMENT, AND STUDY AREA

A projected traffic distribution was developed using output from the Central Florida Regional Planning Model (CFRPM) Version 6.0, which is based on the Florida Standard Urban Transportation Model Structure (FSUTMS). Hand adjustments were made to the model output based on site layout characteristics and local knowledge to establish a reasonable estimation for the project's travel patterns within the study area. The distribution was approved during the methodology review process.

Functionally classified roadway segments in the project's vicinity were reviewed to determine the project's potential traffic impact. The project impact on the surrounding roadway network has been calculated as the average PM peak hour trip assignment on that roadway segment divided by the segment's peak hour peak direction service volume. A 3% threshold was used to define the project study area. Per the City of Ocala Traffic Impact Analysis Guidelines, the study area includes all significantly impacted roadways plus one segment beyond the last segment that meets the 3% impact threshold, unless the project has a de minimis impact on the roadway segment. The service volumes for evaluated roadways were obtained utilizing functional classification and level of service information published by the TPO and FDOT.

The project significance calculations are provided within the methodology document located in the **Appendix**.

The following roadway segments are included within the study area, as approved during the methodology process:

- SW 60th Avenue – SR 40 to SW 20th Street
- SW 60th Avenue – SW 20th Street to SW 38th Street
- SW 60th Avenue – SW 38th Street to SR 200
- SW 38th Street – SW 60th Avenue to SR 200
- SW 20th Street – SW 60th Avenue to SW 44th Avenue
- SW 20th Street – SW 44th Avenue to I-75
- SW 20th Street – I-75 to SW 27th Avenue
- SW 20th Street – SW 27th Avenue to SR 200

In addition to roadway segment analysis, the following intersections were evaluated for PM peak hour traffic conditions (4-6 PM), as approved during the methodology process:

- SW 20th Street & SW 60th Avenue
- SW 20th Street & SW 44th Avenue (unsignalized)
- SW 20th Street & SW 38th Avenue
- SW 20th Street & SW 31st Avenue
- SW 20th Street & SW 27th Avenue
- SW 38th Street & SW 60th Avenue

- SW 38th Street/40th Street & SW 38th Court (unsignalized)
- SW 38th Court & SR 200

In addition, based on request by the review agencies during development of the methodology, the following intersections were also evaluated during the AM peak period (7AM – 9AM):

- SW 20th Street & SW 44th Avenue (unsignalized)
- SW 20th Street & SW 38th Avenue

The two site access locations on SW 20th Street were also reviewed for buildout traffic conditions. **Figure 1** illustrates the site location, trip distribution, and study area for the traffic analysis.

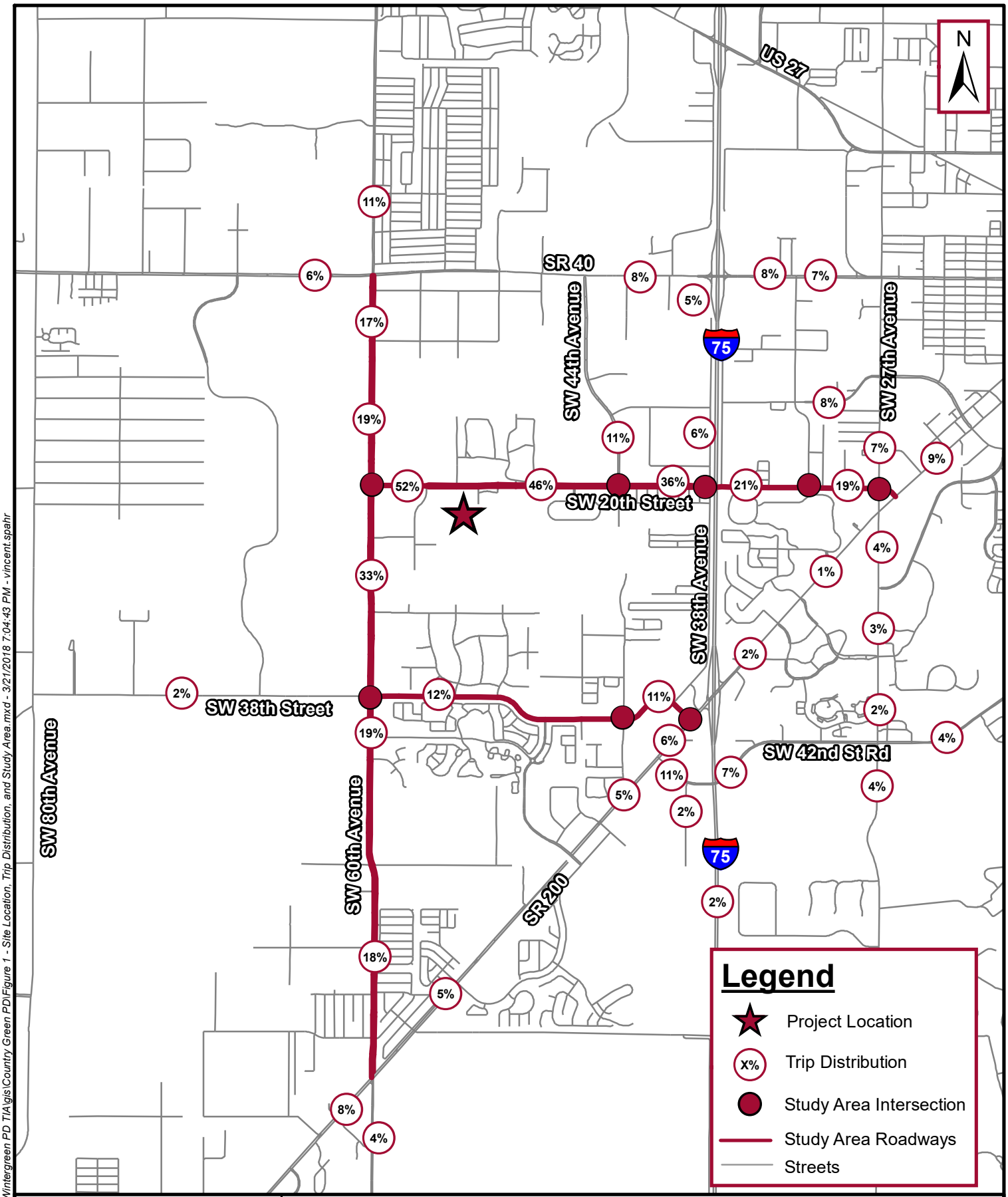

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FIGURE 1: SITE LOCATION, TRIP DISTRIBUTION, AND STUDY AREA

COUNTRY GREEN PD
OCALA, FLORIDA

Project No: 142742000	Not To Scale	June 2018	Figure 1

EXISTING CONDITIONS ANALYSIS

Data Collection

Turning movement counts were collected at the study area intersections during the AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hours of adjacent street traffic in February 2018. The turning movement counts were used for the existing conditions analysis and as a basis for forecasting the future year turning movement volumes. The turning movement counts are provided in the **Appendix**.

The appropriate peak season factors from FDOT were utilized to adjust the observed traffic volumes to peak season. Existing peak hour factors, right turns on red, and heavy vehicles were recorded during the turning movement counts. The existing intersection lane geometries were observed in the field. Existing signal timings obtained from the City of Ocala and Marion County were utilized in the analysis.

Roadway Segment Analysis

Study roadway segments were evaluated to determine the existing PM peak hour levels of service and to provide a basis for the future conditions analysis. The maximum service volumes were obtained from the latest Marion County Roadway Segment Tables and the 2013 FDOT Quality/Level of Service Handbook.

The existing PM peak hour directional traffic volumes on the roadway segments were calculated using the PM peak hour turning movement count (approach/departure) data collected at the study area intersections. The reported existing traffic volume is an average of the recorded approach and departure volumes, adjusted to peak season using the applicable FDOT peak season factor.

Table 2 illustrates the existing peak hour volume and level of service for roadway segments in the study area during the PM peak hour. All the study area roadway segments are shown to operate within the adopted level of service standard under existing PM peak hour traffic conditions.

Table 2: Existing Conditions PM Peak Hour Roadway Segment Analysis

Roadway		ROADWAY ATTRIBUTES [1]				Peak Hour Directional Service Capacity [2]	EXISTING PEAK SEASON PEAK HOUR TRAFFIC CONDITIONS					
							Volumes [3]		V/C Ratios		LOS [2]	
From	To	FDOT Classification	Area Type	Adopted LOS Standard	Number of Lanes		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
NW / SW 60th Ave												
SR 40	SW 20th St	NS-SA-C1	Urban	E	4	1,800	680	840	0.38	0.47	C	C
SW 20th St	SW 38th St	NS-SA-C1	Urban	E	4	1,800	695	1,000	0.39	0.56	C	C
SW 38th St	SR 200	NS-SA-C1	Urban	E	4	1,800	599	869	0.33	0.48	C	C
SW 38th St												
SW 60th Ave	SR 200	NS-SA-C1	Urban	E	2	792	404	433	0.51	0.55	C	C
SW 20th St												
SW 60th Ave	SW 44th Ave	NS-SA-C1	Urban	E	4	1,800	382	629	0.21	0.35	C	C
SW 44th Ave	I-75	NS-SA-C1	Urban	E	4	1,800	471	649	0.26	0.36	C	C
I-75	SW 27th Ave	NS-SA-C1	Urban	E	2	832	643	647	0.77	0.78	C	C
SW 27th Ave	SR 200	NS-SA-C1	Urban	E	2	792	334	285	0.42	0.36	C	C

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Roadway Existing *3/16/2018*

1. The roadway attributes were obtained from the latest Marion County and FDOT sources.
2. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
3. Existing peak season volumes are based on existing turning movement counts and supplemented by seasonal factors from FDOT's Florida Traffic Information 2016.

Intersection Analysis

The existing intersection operating conditions were evaluated based on the data collection efforts summarized above. The operating conditions at the study intersections were analyzed using the Synchro 9 software package, which implements the procedures of the 2010 *Highway Capacity Manual* (HCM). The observed turning movement volumes were adjusted to peak season volumes for the existing conditions analysis. Existing lane geometry, peak hour factors, truck percentages, U-turn percentages, and right-turn-on-red percentages observed in the field were input into the capacity analyses.

Table 3 provides a summary of the average delay and level of service during the PM peak hour under existing traffic conditions. All study area intersections operate with acceptable overall intersection level of service under existing PM peak hour conditions. However, the intersection of SW 38th Street and SW 60th Avenue is shown to operate with an individual traffic movement having a volume to capacity (V/C) ratio exceeding 1.0, as summarized in **Table 3**.

Table 4 provides a summary of the average delay and level of service during the existing AM peak hour. The two area intersections evaluated during the AM peak hours are shown to operate with acceptable overall intersection LOS.

The Synchro 9 analysis output is provided in the **Appendix**.

Table 3: Existing Conditions PM Peak Hour Intersection Analysis

Intersection	Existing Conditions		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized			
SW 20th St & SW 54th Ct (TWSC)[1]	C	17.8	0.12
SW 20th St & SW 44th Ave (TWSC) [1]	C	17.6	0.31
SW 43rd Ct & SW 40th St (AWSC)	B	12.5	0.56
Signalized			
SW 20th St & SW 60th Ave	B	15.7	0.87
SW 20th St & SW 38th Ave	C	29.4	0.87
SW 20th St & SW 31st Ave/CCF	B	13.3	0.72
SW 20th St & SW 27th Ave	D	38.7	0.86
SW 38th St & SW 60th Ave	D	37.9	1.08
SR 200 & SW 38th Ct	D	44.6	0.91

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Note:
1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.

Table 4: Existing Conditions AM Peak Hour Intersection Analysis

Intersection	Existing Conditions		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized			
SW 20th St & SW 44th Ave (TWSC) [1]	B	13.7	0.12
Signalized			
SW 20th St & SW 38th Ave	C	24.7	0.81

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Note:
1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.

FUTURE CONDITIONS ANALYSIS

Committed Transportation Improvements

SW 49th Avenue, from SW 42nd Street to CR 484 has been considered as a four-lane divided collector roadway for the future conditions analysis. The construction of this roadway is funded through transportation impact fees and recent sales tax referendum.

The extension of SW 44th Avenue from SW 20th Street to SR 200 has not been assumed in this analysis, consistent with the approved methodology.

Traffic Volume Development

The future traffic volumes within the study area were calculated based on the approved methodology. Future background traffic volumes were calculated using collected peak season turning movement traffic volumes, an annual background growth rate applied over the 20-year buildout timeframe, and committed traffic volumes.

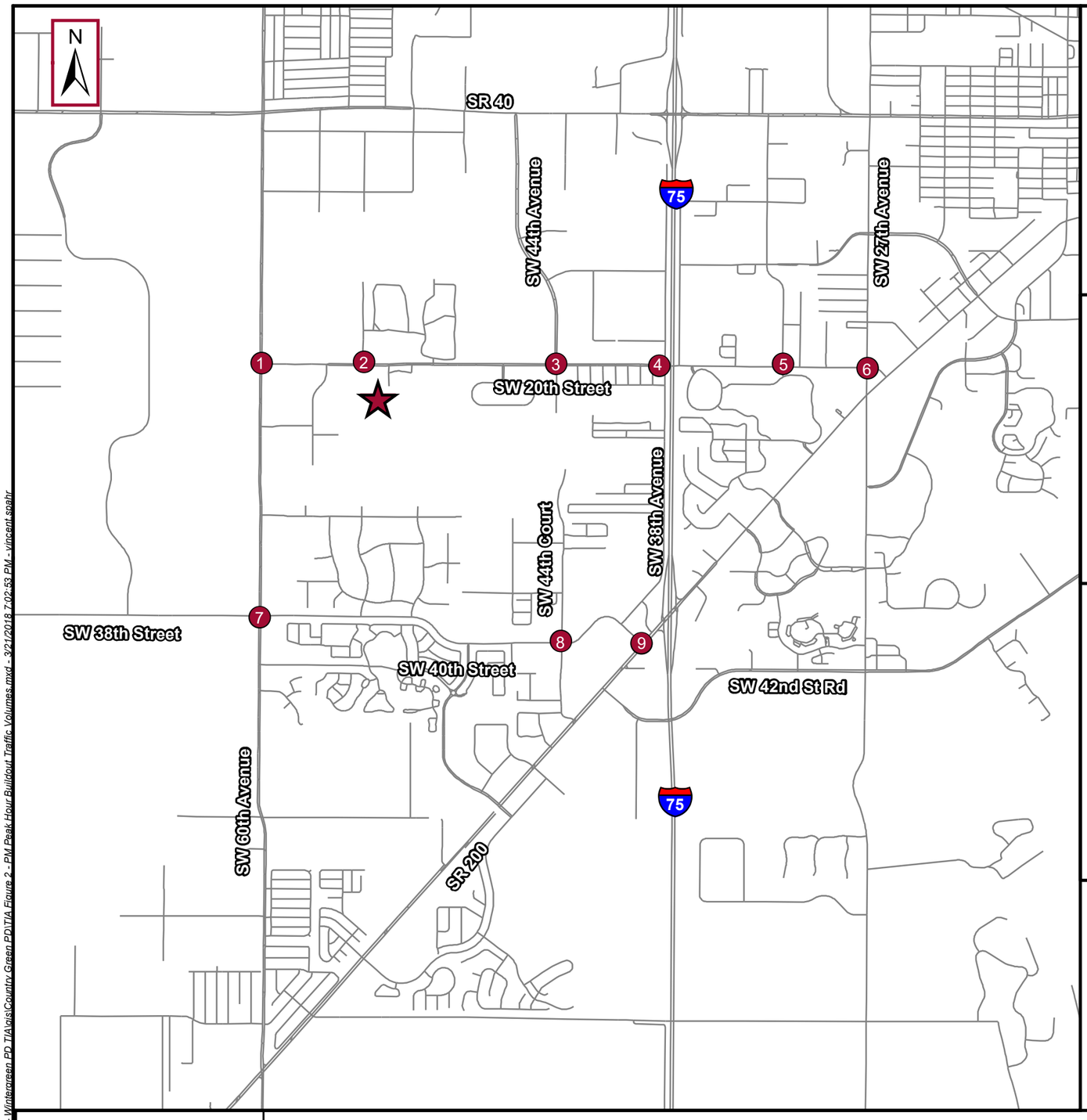
A 1.5% background annual growth rate was applied to the existing peak season volumes over the 20-year buildout timeframe. In addition, the following committed projects were included in the background traffic volume development, consistent with the approved methodology:

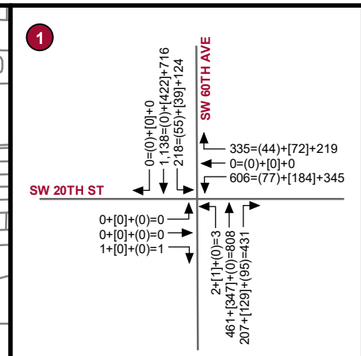
- Heathbrook remaining unbuilt
- Trinity Lane/Red Oak PUD
- Grand Oaks Town Center remaining
- Broadmoor Oaks
- Paddock Ridge East
- Paddock Ridge West
- On Top of the World
- Winding Oaks PD

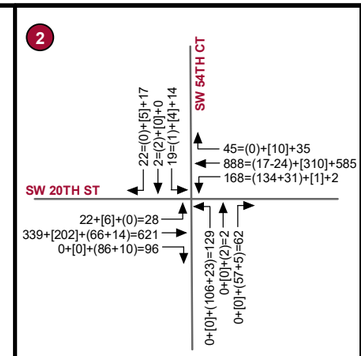
The total buildout traffic volumes were calculated as the sum of the background traffic volumes and project traffic. For the roadway segment analyses, the PM peak hour project traffic volumes were calculated as an average across the segment length.

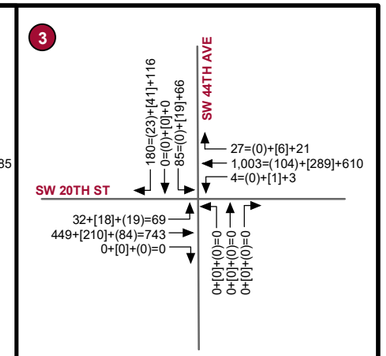
Two intersections were evaluated for AM peak hour traffic conditions. The same project trip distribution utilized for the PM analysis was utilized for the AM analysis.

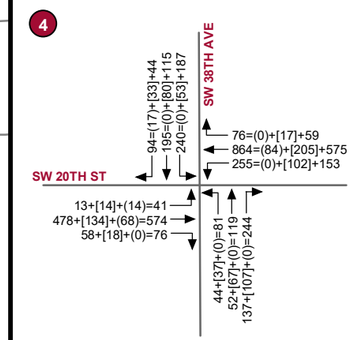
Worksheets detailing the future conditions intersection volume development are contained in the **Appendix**. The buildout total traffic volumes during the weekday PM peak hour are illustrated in **Figure 2**. The buildout total traffic volumes during the weekday AM peak hour are illustrated in **Figure 3**.

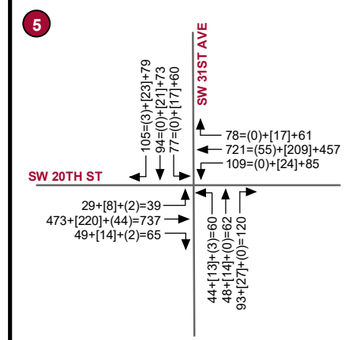


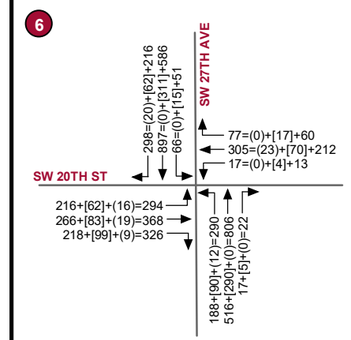


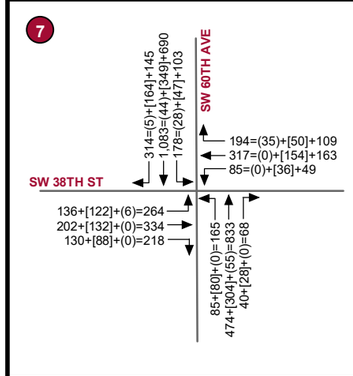


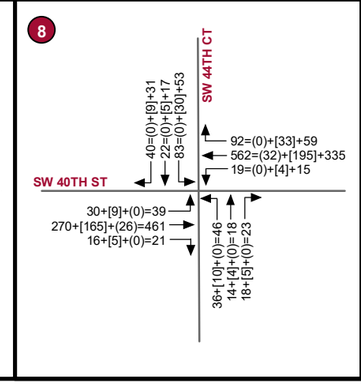


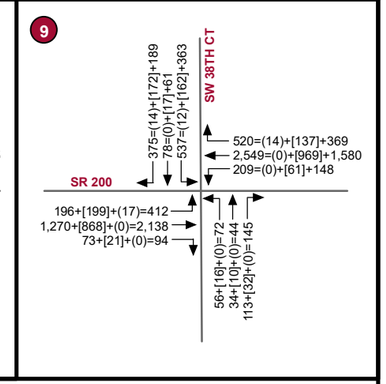












Legend

- Project Location
- Study Area Intersection
- Streets
- Existing + [Background Growth] + (Project Traffic+Pass-by Trips) = Buildout Total Traffic

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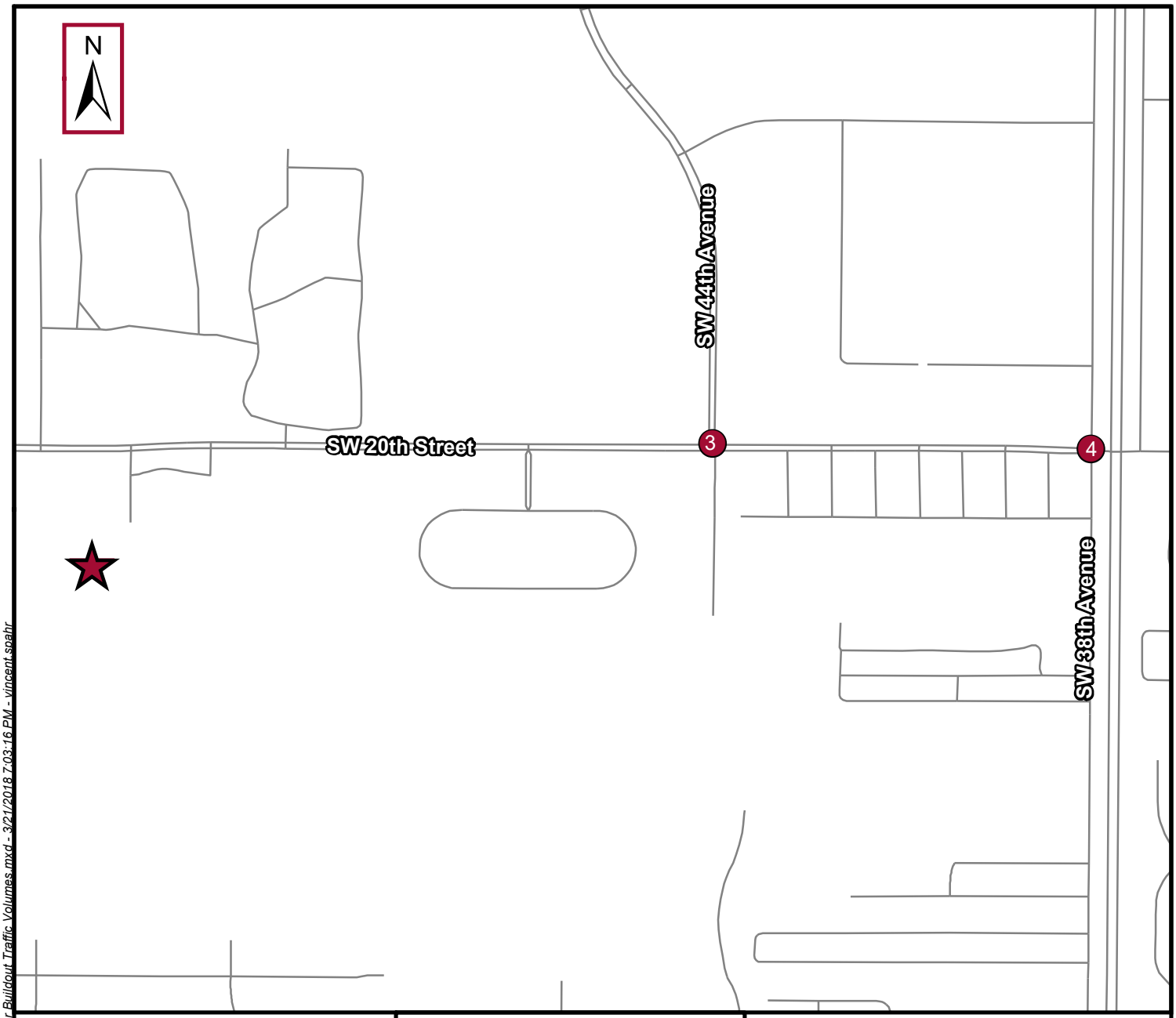
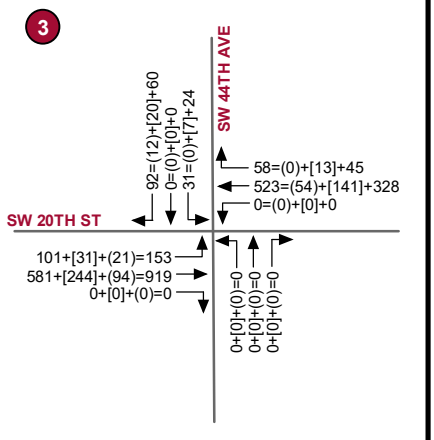
FIGURE 2: PM PEAK HOUR BUILDOUT TRAFFIC VOLUMES

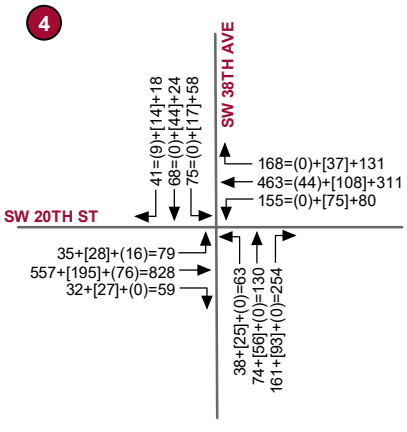
COUNTRY GREEN PD
OCALA, FLORIDA

Project No: 142742000

Not To Scale | June 2018







Legend

- Project Location
- Study Area Intersection
- Streets
- Existing + [Background Growth] + (Project Traffic) = Buildout Total Traffic

FIGURE 3: AM PEAK HOUR BUILDOUT TRAFFIC VOLUMES

COUNTRY GREEN PD
OCALA, FLORIDA

Project No: 142742000 | Not To Scale | June 2018

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Future Background Roadway Segment Analysis

The roadway segments within the study area were evaluated for level of service under future background conditions (before the addition of project traffic) during the PM peak hour.

The service volumes for roadways within the study area were obtained utilizing functional classification and level of service information published by the Ocala/Marion County TPO and FDOT, consistent with the approved methodology.

The segment of SW 20th Street from I-75 to SW 27th Avenue is shown to exceed the generalized service volume under future background (non-project) traffic conditions during the PM peak hour, as shown in **Table 5**. A more detailed Synchro arterial analysis of the segment indicates that SW 20th Street would operate at LOS D in the eastbound direction and LOS C in the westbound direction under future background traffic conditions. In addition, the future background conditions analysis identified the need for improvement at the intersection of SW 20th Street at SW 38th Avenue, which will improve level of service in the westbound direction.

All other roadway segments within the study area are shown to operate within the generalized service volume with 2037 background (non-project) traffic volumes. The future background conditions roadway segment analyses are detailed in **Table 5**. The Synchro Arterial analysis for SW 20th Street from I-75 to SW 27th Avenue is included in the **Appendix**.

Table 5: Future Background Conditions PM Peak Hour Roadway Segment Analysis

Roadway		Adopted LOS Standard	Peak Hour Directional Service Capacity [1]	Existing PM Peak Hour Traffic Conditions		Applied Growth Rate [3]	Future (2037) Background Traffic Conditions									
				Volumes [2]			Future Background Peak Season Traffic [4]		Committed Traffic [5]		Future Non-Project Traffic Volumes [6]		V/C Ratios		LOS [1]	
From	To			NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
NW / SW 60th Ave																
SR 40	SW 20th St	E	1,800	680	840	1.5%	874	1,079	226	222	1,100	1,301	0.61	0.72	C	C
SW 20th St	SW 38th St	E	1,800	695	1,000	1.5%	893	1,285	279	299	1,172	1,584	0.65	0.88	C	C
SW 38th St	SR 200	E	1,800	599	869	1.5%	770	1,117	242	225	1,012	1,342	0.56	0.75	C	C
SW 38th St																
SW 60th Ave	SR 200	E	792	404	433	1.5%	519	556	119	135	638	691	0.81	0.87	C	C
SW 20th St																
SW 60th Ave	SW 44th Ave	E	1,800	382	629	1.5%	491	808	94	126	585	934	0.33	0.52	C	C
SW 44th Ave	I-75	E	1,800	471	649	1.5%	605	834	71	100	676	934	0.38	0.52	C	C
I-75	SW 27th Ave	E	832	643	647	1.5%	826	831	78	76	904	907	1.09	1.09	F (D) [7]	F (C) [7]
SW 27th Ave	SR 200	E	792	334	285	1.5%	429	366	7	10	436	376	0.55	0.48	C	C

1. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
2. Existing peak season volumes are based on existing turning movement counts and supplemented by seasonal factors from FDOT's Florida Traffic Information 2016.
3. A background annual 1.5% growth rate was applied based on the approved methodology.
4. Future Peak Season Traffic is the summation of existing peak season volumes and background growth.
5. Committed traffic is cumulative from previously approved studies for Heathbrook, Trinity Lane/Red Oak PUD, Grand Oaks Towne Center, Broadmoor Oaks, Paddock Ridge East, Paddock Ridge West, On Top of the World, and Winding Oaks.
6. Future non-project traffic volumes are the summation of existing peak season volumes, background growth, and committed traffic.
7. SW 20th Street from I-75 to SW 27th Avenue is anticipated to exceed the generalized service volume under future background conditions. A detailed Synchro Arterial analysis shows LOS D in the eastbound direction and LOS C in the westbound direction for the segment.

Future Buildout Roadway Segment Analysis

The roadway segments within the study area were evaluated for level of service under future buildout traffic conditions during the PM peak hour. The service volumes utilized for the analysis are the same as those utilized for the future background conditions analysis.

The segment of SW 20th Street from I-75 to SW 27th Avenue is shown to exceed the generalized service capacity under future buildout traffic conditions during the PM peak hour, as shown in **Table 6**. The segment is also shown to exceed the generalized service volume with future background traffic volumes (prior to addition of project traffic). A more detailed Synchro arterial analysis of the segment indicated that SW 20th Street would operate at LOS E in the eastbound direction and LOS C in the westbound direction under future buildout traffic conditions. In addition, improvements have been identified at the intersection of SW 20th Street with SW 38th Avenue under future background and future buildout traffic conditions, which provide improved levels of service on SW 20th Street.

All other roadway segments within the study area are shown to operate with acceptable level of service with 2037 buildout traffic volumes. The project does not have a significant and adverse impact on any of the roadway segments within the study area.

The buildout roadway segment analyses are detailed in **Table 6.** The Synchro Arterial analysis of SW 20th Street from I-75 to SW 27th Avenue is included in the **Appendix**.

Table 6: Buildout Conditions PM Peak Hour Roadway Segment Analysis

Roadway		Adopted LOS Standard	Peak Hour Directional Service Capacity [1]	Future Non-Project Traffic Volumes [2]		PM Peak Hour Project Traffic			Future Buildout PM Peak Hour Traffic Conditions					
									Volumes [4]		V/C Ratios		LOS [1]	
From	To			NB/EB	SB/WB	% Assign [3]	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
NW / SW 60th Ave														
SR 40	SW 20th St	E	1,800	1,100	1,301	18.0%	42	52	1,142	1,353	0.63	0.75	C	C
SW 20th St	SW 38th St	E	1,800	1,172	1,584	33.0%	95	77	1,267	1,661	0.70	0.92	C	
SW 38th St	SR 200	E	1,800	1,012	1,342	18.5%	53	43	1,065	1,385	0.59	0.77	C	C
SW 38th St														
SW 60th Ave	SR 200	E	792	638	691	11.5%	27	33	665	724	0.84	0.91	C	C
SW 20th St														
SW 60th Ave	SW 44th Ave	E	1,800	585	934	50.7%	146	118	731	1,052	0.41	0.58	C	C
SW 44th Ave	I-75	E	1,800	676	934	32.5%	76	94	752	1,028	0.42	0.57	C	C
I-75	SW 27th Ave	E	832	904	907	23.0%	54	66	958	973	1.15	1.17	F (E) [5]	F (C) [5]
SW 27th Ave	SR 200	E	792	436	376	8.0%	19	23	455	399	0.57	0.50	C	C

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180320-Tableupdates.xlsx]Roadway Buildout *3/20/2018*

1. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
2. Future non-project traffic volumes are the summation of existing peak season volumes, background growth, and committed traffic.
3. The percent project traffic is averaged across the roadway segment.
4. Future Buildout traffic volumes are the summation of future non-project traffic and project traffic.
5. SW 20th Street from I-75 to SW 27th Avenue is anticipated to exceed the generalized service capacity at project buildout. A detailed Synchro Arterial analysis shows LOS E in the eastbound direction and LOS C in the westbound direction. This segment also exceeds generalized service capacity under future background (before the addition of project traffic) conditions.

Future Background Conditions Intersections Analysis

The intersections within the study area were evaluated to determine improvement needs to provide an acceptable level of service and intersection operations with future background traffic conditions prior to addition of project traffic. The future background traffic volumes included existing peak season traffic, background traffic growth, and committed project traffic. Existing intersection geometry, signal timings (as obtained from the City of Ocala and Marion County), and peak hour factor and percent heavy vehicles (as obtained from the traffic counts) were input into Synchro 9 for the analysis.

Table 7 summarizes the resultant intersection LOS for the future background conditions with existing intersection geometry and signal timings during the PM peak hour. Several transportation deficiencies are anticipated under future background (non-project) traffic conditions. The identified intersection improvements that are shown to be needed under future background traffic conditions to provide acceptable intersection operations and level of service are summarized in **Table 7**. As noted in **Table 7**, many of the identified improvements are consistent with those previously identified in the approved Winding Oaks TIA.

With the identified improvements, the intersections within the study area are shown to operate with acceptable level of service, delay, and V/C ratios under future background traffic conditions (year 2037). The resultant intersection LOS and V/C ratios under PM peak hour future background traffic conditions with the identified transportation improvements are summarized in **Table 7**.

Two intersections were also evaluated for the weekday AM peak hour. The AM peak hour analysis does not result in any additional intersection improvement needs over those identified for the PM peak hour analysis. A summary of the future background conditions intersection analysis during the AM peak hour is provided in **Table 8**. The improvements identified during the PM peak hour analysis were applied for the AM peak hour analysis and the resulting LOS, delay, and V/C ratios were reported in **Table 8**.

The Synchro 9 output reports are provided in the **Appendix**.

Table 7: Future Background Conditions PM Peak Hour Intersection Analysis

Intersection	Future (2037) Background Conditions			Future (2037) Background Conditions with Improvements			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Improvements	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized							
SW 20th St & SW 54th Ct (TWSC)[1]	E	40.1	0.32	--	E	40.1	0.32
SW 20th St & SW 44th Ave (TWSC) [1]	F	55.3	0.87	Signalize when warranted [2]	B	11.1	0.74
SW 43rd Ct & SW 40th St (AWSC)	E	47.2	1.03	Signalize when warranted [2]	A	9.3	0.66
Signalized							
SW 20th St & SW 60th Ave	D	50.9	1.41	Signal timing adjustments [3]	C	24.9	0.91
SW 20th St & SW 38th Ave	F	87.2	1.28	2nd WB through lane	D	49.2	0.95
SW 20th St & SW 31st Ave/College of Central Florida	C	23.2	0.94	--	C	23.2	0.94
SW 20th St & SW 27th Ave	D	54.1	0.97	--	D	54.1	0.97
SW 38th St & SW 60th Ave	F	195.8	2.41	2nd EBL turn lane, exclusive EBR turn lane, and exclusive WBR turn lane on 38th St [3]	D	48.0	0.96
SR 200 & SW 38th Ct	E	68.4	1.76	2nd EBL turn lane and exclusive WBR turn lane on SR 200 [3], and exclusive SBR turn lane on SW 38th Ct	D	41.3	0.93

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Note:

1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.
2. Future (2037) background traffic volumes meet peak hour signal warrant requirements from the Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant spreadsheets are included in the **Appendix**.
3. Consistent with improvements previously identified in the approved Winding Oaks TIA.

Table 8: Future Background Conditions AM Peak Hour Intersection Analysis

Intersection	Future (2037) Background Conditions			Future (2037) Background Conditions with Improvements			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Improvements [2]	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized							
SW 20th St & SW 44th Ave (TWSC) [1]	C	20.7	0.29	Signalize when warranted [3]	A	7.8	0.67
Signalized							
SW 20th St & SW 38th Ave	E	64.4	1.35	2nd WB through lane	D	41.3	0.93

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Note:

1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.
2. Improvements are consistent with those identified to be needed for PM Peak Hour traffic conditions.
3. Future (2037) background traffic volumes meet peak hour signal warrant requirements from the Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant spreadsheets are included in the **Appendix**.

Future Buildout Conditions Intersection Analysis

The intersection operating conditions were evaluated under buildout traffic conditions for year 2037. The future buildout conditions analysis included future background non-project traffic and project traffic. The intersection geometry identified to be needed under future background traffic conditions was utilized in the buildout conditions analysis to identify any additional transportation improvements that are necessary to provide acceptable level of service and intersection operations due to the addition of project traffic.

Table 9 details the resultant intersection LOS and delay for PM peak hour future buildout traffic conditions with background improved geometry. The intersection capacity analysis shows the need for the following transportation improvements in addition to those identified in the future background traffic scenario to provide acceptable traffic operations at project buildout.

- Signalization and construction of an exclusive westbound left-turn lane at the intersection of SW 20th Street and SW 54th Court (site related)
- Construction of an exclusive northbound right-turn lane on SW 38th Avenue at SW 20th Street
- Adjustment of signal timings at the intersection of SW 27th Avenue and SW 20th Street

The intersections within the study area are shown to operate with acceptable LOS and V/C ratios under PM peak hour buildout traffic conditions considering the mitigation identified above, as summarized in **Table 9.**

Two intersections were also evaluated for the weekday AM peak hour per the approved methodology. The AM peak hour analysis does not result in any additional intersection improvement needs over those identified for the PM peak hour analysis. A summary of the buildout conditions intersection analysis during the AM peak hour is provided in **Table 10**.

The Synchro 9 output reports are provided in the **Appendix**.

Figure 4 illustrates the required intersection geometry needed to provide acceptable traffic operations at the study area intersections under future background traffic conditions and buildout traffic conditions.

Table 9: Buildout Conditions PM Peak Hour Intersection Analysis

Intersection	Future (2037) Buildout Conditions with Background Improvements [2]			Future (2037) Buildout Conditions with Mitigation			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Mitigation [3]	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized							
SW 20th St & SW 54th Ct (TWSC)[1]	F/F	--/--	4.60	Signalize when warranted [4], exclusive WBL turn	B	19.5	0.76
Signalized							
SW 20th St & SW 60th Ave	C	32.8	0.93	--	C	32.8	0.93
SW 20th St & SW 44th Ave	B	12.5	0.78	--	B	12.5	0.78
SW 20th St & SW 38th Ave	E	60.7	1.01	Exclusive NBR turn lane	D	37.7	0.91
SW 20th St & SW 31st Ave/College of Central Florida	C	27.1	0.98	--	C	27.1	0.98
SW 20th St & SW 27th Ave	E	62.1	1.01	Signal timing adjustments	E	60.3	0.98
SW 38th St & SW 60th Ave	D	51.6	0.98	--	D	51.6	0.98
SW 43rd Ct & SW 40th St	A	9.5	0.68	--	A	9.5	0.68
SR 200 & SW 38th Ct	D	49.5	0.95	--	D	49.5	0.95

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Note:

1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.
2. Analysis assumed improvement identified to be needed under the future background traffic conditions are in place for the buildout conditions analysis.
3. Identified mitigation is in addition to improvement identified to be needed in the background traffic conditions.
4. Future (2037) buildout traffic volumes meet peak hour signal warrant requirements from the Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant spreadsheets are included in the **Appendix**.

Table 10: Buildout Conditions AM Peak Hour Intersection Analysis

Intersection	Future (2037) Buildout Conditions with Background Improvements			Future (2037) Buildout Conditions with Mitigation			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Mitigation [1]	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Signalized							
SW 20th St & SW 44th Ave	A	8.1	0.71	--	A	8.1	0.71
SW 20th St & SW 38th Ave	D	52.5	1.02	Exclusive NBR turn lane	C	29.2	0.90

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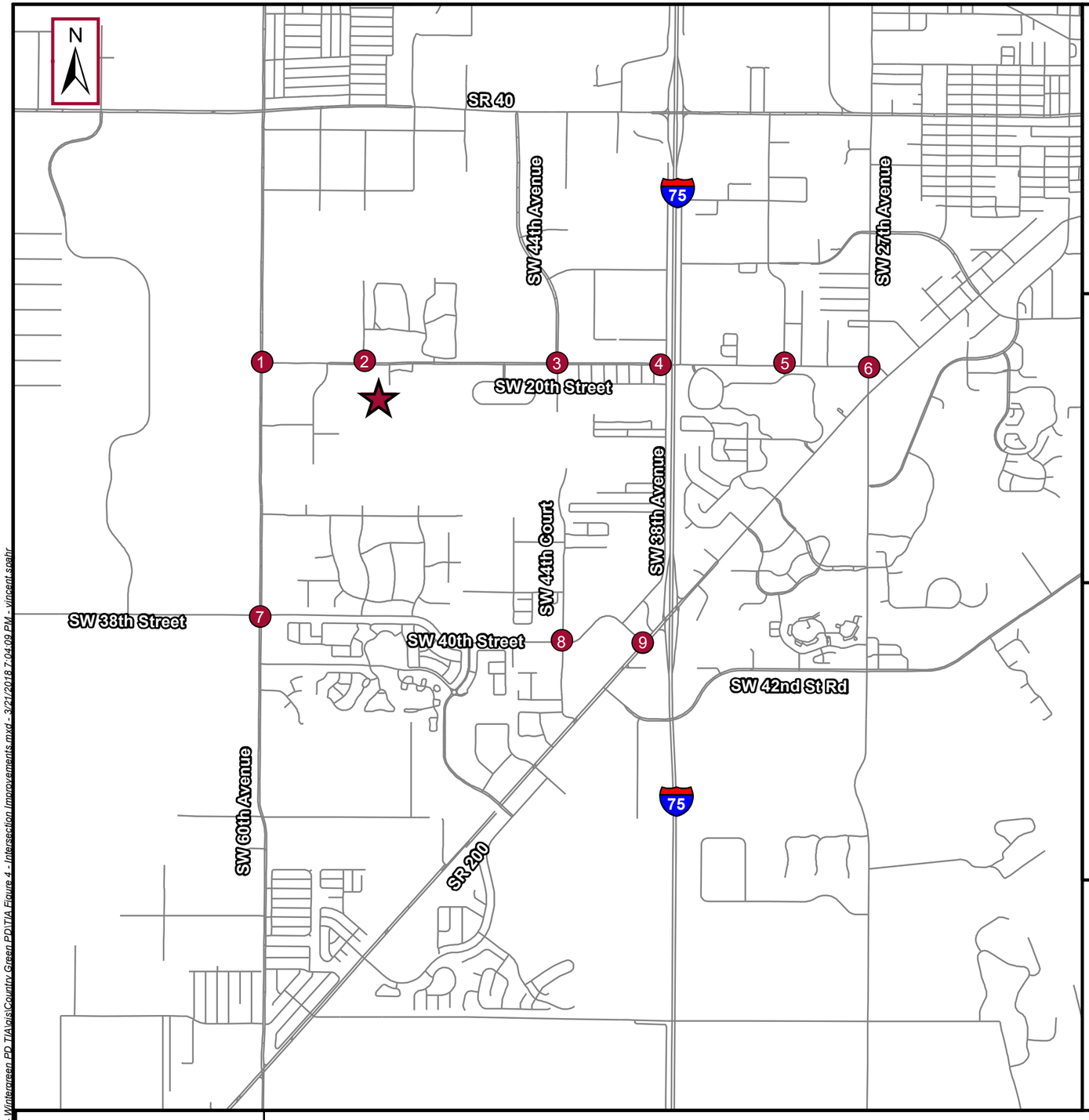
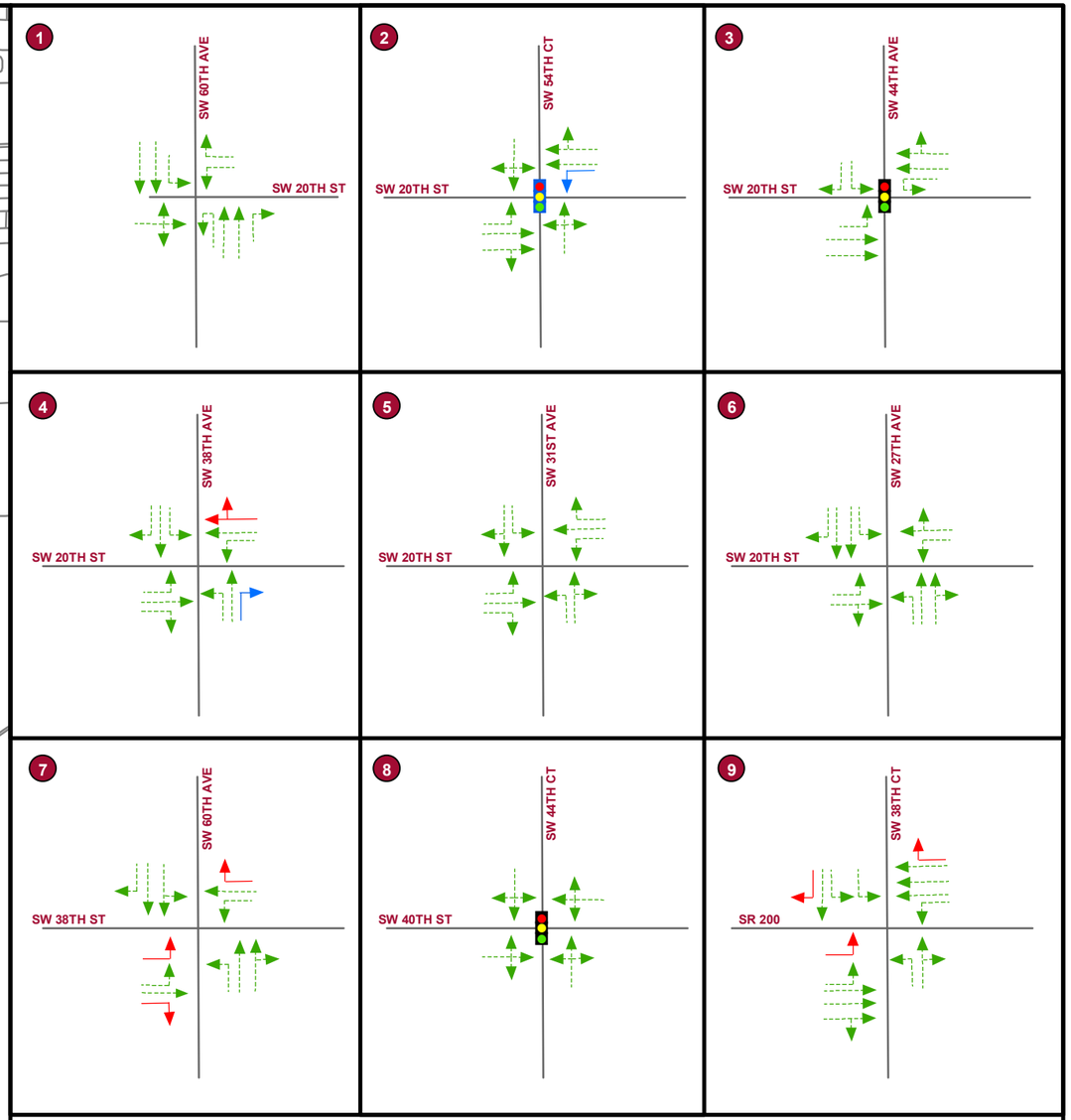
Note:
1. Identified mitigation is in addition to improvement identified to be needed in the background traffic conditions. Improvement is consistent with the improvement identified to be needed under the PM peak hour buildout traffic condition.





Legend

- Project Location
- Study Area Intersection
- Streets
- Existing Lane Geometry
- Lane Geometry Needed to Support Future Background Traffic
- Lane Geometry Needed to Support Future Buildout Traffic
- Traffic Signal Needed to Support Future Background Traffic
- Traffic Signal Needed to Support Future Buildout Traffic

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Kimley»Horn

101 E Silver Springs Blvd, Suite 400, Ocala FL 34470
Phone: 352 438 3000
www.kimley-horn.com CA 00000696

FIGURE 4: INTERSECTION IMPROVEMENT DETAILS

COUNTRY GREEN PD
OCALA, FLORIDA

Project No: 142742000

Not To Scale | June 2018

PRELIMINARY SIGNAL WARRANT ANALYSIS

A PM peak hour signal warrant analysis was conducted considering future background and buildout traffic volumes at the following intersections:

- SW 20th Street and SW 54th Court
- SW 20th Street and SW 44th Avenue
- SW 43rd Court and SW 40th Street

Guidelines established in the *Manual on Uniform Traffic Control Devices* (MUTCD) 2009 Edition for peak hour volume Warrant 3 were used for the analysis.

SW 20th Street and SW 54th Court

The major street (SW 20th Street) was evaluated as a two-or-more lane approach with a speed limit over 40 mph (meaning that the 70% columns were utilized). The minor street (SW 54th Court) was evaluated as a single-lane approach considering the total volume for the northbound approach volumes in the buildout scenario. The projected PM peak hour traffic volumes under future buildout conditions meet the peak hour signal warrant criteria.

Considering unsignalized operation, both the northbound and southbound approaches are shown to exhibit LOS F, with V/C ratios exceeding 1.0 under future buildout traffic conditions. The intersection is shown to operate with acceptable level of service and delay considering signalized intersection control with PM peak hour future buildout traffic conditions. Improvements at this intersection are considered to be site related.

SW 20th Street & SW 44th Avenue

The major street (SW 20th Street) was evaluated as a two-or-more lane approach with a speed limit over 40 mph (meaning that the 70% columns were utilized). The minor street (SW 44th Avenue) was evaluated as a two-lane approach considering the southbound approach volumes. The southbound approach volume was calculated as the sum of the left-turn volume and 25 percent of the southbound right-turn volume (Pagones Theorem calls for reducing the right-turn volume by 75 percent when an exclusive right-turn lane is present). The projected PM peak hour traffic volumes in the background (2037) conditions meet peak hour signal warrant criteria.

Considering unsignalized operation, the southbound approach is shown to exhibit LOS F, with the southbound left-turn movement experiencing delays in excess of two minutes per vehicle. The intersection is shown to operate with acceptable level of service and delay considering signalized intersection control with PM (and AM) peak hour future background and buildout traffic conditions.

SW 43rd Court and SW 40th Street

The major street (SW 40th Street) was evaluated as a one-lane approach with a speed limit over 40 mph (meaning that the 70% columns were utilized). The minor street (SW 43rd Court) was analyzed as a single-lane approach considering the southbound approach volume. The southbound approach volume was calculated as the sum of the left-turn volume, the through volume, and 80 percent of the right-turn volume (Pagones Theorem calls for reducing the right-turn volume by 20 percent when right-turns are less than 35 percent of the approach volume on a shared left/through/right approach). The projected PM peak hour traffic volumes in the background (2037) conditions meet peak hour signal warrant criteria.

Considering unsignalized operation, the intersection is shown to exhibit LOS E, with a V/C ratio exceeding 1.0 under background traffic conditions. The intersection is shown to operate with acceptable level of service and delay considering signalized intersection control with PM peak hour future background and buildout traffic conditions.

The preliminary signal warrant worksheets are provided in the **Appendix**. A summary table of the Pagones Theorem reductions is also included in the **Appendix**.

SITE ACCESS ANALYSIS

The following access connections are proposed to serve the development:

- Existing full access connection on SW 20th Street at SW 54th Court
- New right-in/right-out access connection on SW 20th Street

The proposed site access locations were evaluated for required turn lane needs and intersection control to accommodate the traffic at project buildout.

SW 20th Street and SW 54th Court

As detailed in the Preliminary Signal Warrant Analysis section, under buildout traffic conditions, the intersection of SW 20th Street and SW 54th Court is shown to meet the peak hour signal warrant and will require signalization to operate with an acceptable level of service.

In addition to signalization, a westbound left-turn lane is recommended to accommodate ingress traffic to the project site. According to 2017 FDOT Design Standards, and using a design speed of 45mph the required deceleration length is 185 feet. The anticipated 95th percentile queue length from the Synchro analysis is approximately 75 feet. Therefore, the total required turn lane length to accommodate the deceleration and 95th percentile queue is 260 feet.

An exclusive eastbound right-turn lane is not recommended on SW 20th Street at the intersection of SW 54th Court based on the results of the Synchro analysis.

SW 20th Street Site Access

The proposed right-in/right-out access connection on SW 20th Street is proposed approximately mid-way between SW 54th Court and SW 53rd Ave.

Based on the National Cooperative Highway Research Program (NCHRP) Report 457, the projected right-turn volume into the development at the right-in/right-out access on SW 20th Street warrants a right-turn bay. The recommended length of the eastbound right-turn lane is 185 feet, based on the deceleration length required per 2017 FDOT Standards for a design speed of 45 mph.

CRASH DATA SUMMARY

Five years of historic crash data (2013 – 2017) was obtained from the Signal Four Analytics program for SW 20th Street from ¼ mile west of SW 54th Court to ½ mile east of SW 54th Court.

There were seven crashes reported along this segment of SW 20th Street between the years of 2013 and 2017; one of the seven crashes resulted in an injury. The most common crash type was rear end crashes (three crashes), followed by off-road crashes (two crashes). Four of the seven crashes occurred under dark conditions and two involved alcohol. A summary of the crash type by year is provided in **Table 11**.

Table 11: Crash Summary, 2013 – 2017

	2013	2014	2015	2016	2017	5-Year Total
Crash Severity						
Injury				1		**1**
Property Damage Only	2	1		2	1	**6**
Crash Type						
Rear-End	2			1		**3**
Off-Road				2		**2**
Sideswipe		1				**1**
Bicycle					1	**1**
Lighting Conditions						
Dark - Lighted	2			1	1	**4**
Daylight		1		2		**3**
Alcohol Involvement						
Yes				2		**2**
No	2	1		1	1	**5**
TOTALS	**2**	**1**	**0**	**3**	**1**	**7**

TRANSPORTATION MITIGATION AND PROPORTIONATE SHARE

Per Chapter 163.3180 of the Florida Statutes, an acceptable method for a land owner to mitigate their transportation impacts is to pay a proportionate share cost towards subject improvements. Per the Florida Statutes, proportionate share contributions are not required for improvements identified to correct transportation deficiencies that occur prior to addition of project traffic. Therefore, any transportation improvements identified to be needed in the background conditions analysis are assumed to be in place for the purposes of the proportionate share calculation.

Several transportation improvements were identified as being required within the study area to provide acceptable traffic operations with future background traffic conditions (before addition of project traffic), and are therefore not subject to proportionate share mitigation. The improvements are summarized in **Table 7** and illustrated in **Figure 4**.

The following geometric improvement was identified as being required within the study area to provide acceptable traffic operations at project buildout, in addition to those improvements identified in the future background traffic scenario (and are therefore subject to proportionate share mitigation):

- Construction of exclusive northbound right-turn lane on SW 38th Avenue at SW 20th Street

Per Florida Statutes, the proportionate-share percentage for off-site transportation improvements is calculated based upon the number of trips from the proposed development expected to utilize the proposed improvement, divided by the change in the peak hour maximum service volume resulting from construction of an improvement necessary to maintain or achieve the adopted level of service.

The project impact for the identified intersection geometric improvement was calculated as the total project traffic utilizing the intersection divided by the total increase in capacity of the intersection created by the identified improvements.

The total increase in lane group capacity for an exclusive northbound right-turn lane at the intersection of SW 20th Street and SW 38th Avenue is 167 vehicles per hour compared to 183 project trips per hour utilizing all movements at the intersection. The project trips represent more than 100 percent of the capacity increase resulting from the recommended improvement, but the proportionate share percentage is limited to 100 percent of the improvement cost. Therefore, the project's proportionate share percentage for the improvement is 100 percent.

The proportionate share calculations are included in the **Appendix**.

The developer intends to mitigate for the identified transportation deficiency through dedication of SW 44th Avenue right-of-way fronting the Wintergreen PD. The construction of SW 44th Avenue, from SW 20th Street to SR 200 is anticipated to reduce traffic volumes on SW 38th Avenue and the northbound right-turn movement of the intersection at SW 38th Avenue with SW 20th Street.

CONCLUSION

This TIA has been performed to support a concurrency development agreement and traffic capacity reservation for the Country Green PD. The traffic analysis provided is consistent with the approved methodology document.

The traffic analysis was performed considering a buildout timeframe of 20 years (2037) for the proposed development program. The operating conditions within the study area were evaluated for future background (before addition of project traffic) conditions and buildout traffic conditions. Transportation improvements were identified within the study area to be needed under future background traffic conditions. These improvements are needed prior to the addition to project traffic, and therefore no proportionate share contribution is required by the development per Florida State Statutes.

The following geometric improvement was identified to be needed at project buildout, in addition to those identified under future background traffic conditions:

- Construction of an exclusive northbound right-turn lane at the intersection of SW 20th Street and SW 38th Avenue

Consistent with Florida Statute, the project's proportionate share percentage was calculated for the off-site transportation improvement identified to be needed due to the addition of project traffic. The calculated proportionate share for the intersection improvement at SW 20th Street and SW 38th Avenue is 100%.

The developer intends to mitigate for off-site transportation impacts through dedication of right-of-way along SW 44th Avenue fronting the Wintergreen PD. The proposed SW 44th Avenue from SW 20th street to SR 200 will provide additional transportation capacity for this area of the City of Ocala.

In addition to proportionate share contribution towards off-site improvements, transportation improvements are needed to accommodate project traffic at the site access locations on SW 20th Street. Site access improvements are the responsibility of the developer. The following site access improvements are recommended at the projects driveway connections to SW 20th Street.

- Construction of a 260-foot westbound left-turn lane on SW 20th Street at SW 54th Court
- Signalization of the intersection of SW 20th Street at SW 54th Court, when warranted
- Construction of a 185-foot eastbound right-turn lane on SW 20th Street at the right-in/right-out driveway

The traffic analysis and results provided herein support the transportation concurrency reservation request for the Country Green PD project.

APPENDICES

Appendix A: Conceptual Site Development Plan

GRAPHIC SCALE

100 0 50 100 200 400

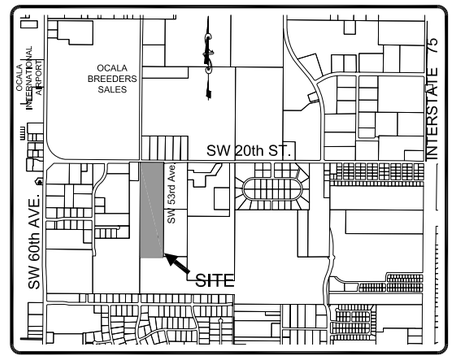
(IN FEET)
1 inch = 100 ft.

PD PLAN for COUNTRY GREEN

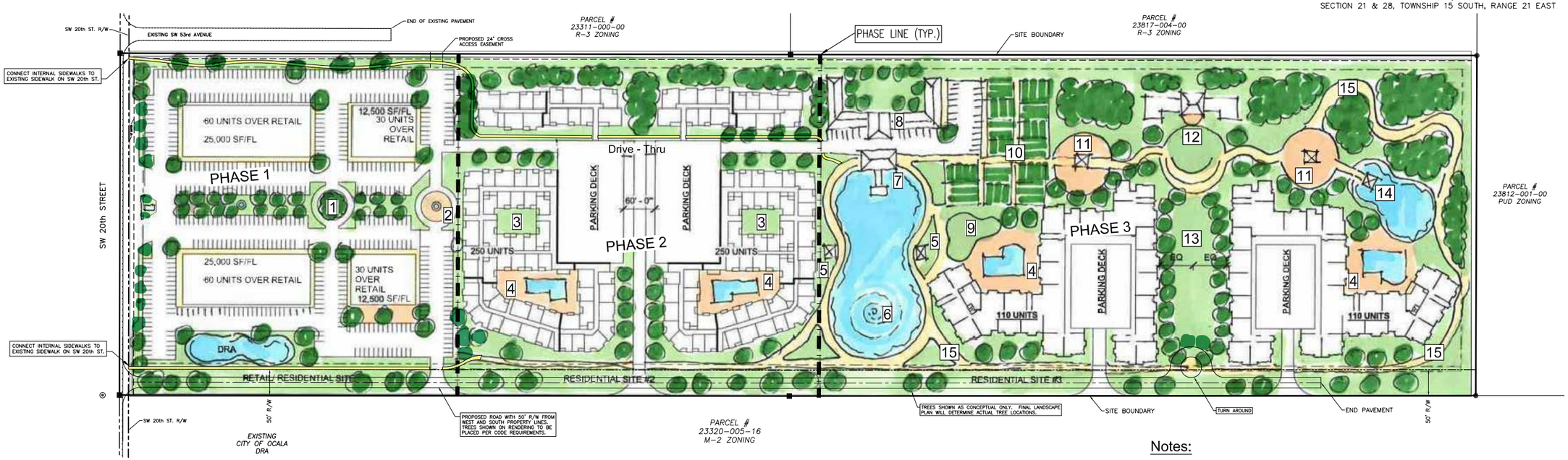
OCALA, FLORIDA

PARCEL 23320-005-03

AMENITIES LEGEND			
1	ROUNDABOUT w/ TREE	8	LEASEABLE WORKSHOPS
2	ROUNDABOUT w/ FOUNTAIN	9	CHIPPING / PUTTING GREEN
3	COURTYARD	10	LEASEABLE GARDEN SPACE
4	POOL w/ DECK	11	OPEN AIR PAVILION
5	GRILLING AREA	12	LEASEABLE AMPHITHEATER
6	POND WATER FEATURE	13	LEASEABLE EVENT LAWN
7	OPEN AIR PAVILION w/ DOCK	14	POND w/ DOCK
		15	PEDESTRIAN / BIKE TRAILS



LOCATION MAP
SCALE: 1" = 2000'
MARION COUNTY, FLORIDA
SECTION 21 & 28, TOWNSHIP 15 SOUTH, RANGE 21 EAST



Parking Calculations:

RESIDENTIAL OVER RETAIL (PHASE 1 ONLY):

RETAIL: 1 PARKING SPACE FOR EACH 250 SQUARE FEET OF FLOOR AREA

COMMERCIAL BUILDINGS 75,000 SF 75,000/250 = 300 SPACES
COMMERCIAL PARKING PROVIDED – 300 SPACES

RESIDENTIAL OVER RETAIL #1 – (2) 4 STORY BLDGS @ 60 UNITS PER BLDG. = 120 UNITS
(2) 4 STORY BLDGS @ 30 UNITS PER BLDG. = 60 UNITS

RESIDENTIAL PARKING REQUIRED/PROVIDED 180 UNITS X 1.5 = 270 SPACES

REQUIRED HANDICAPPED PARKING – 1 SPACE FOR EVERY 25 SPACES – 570/25 = 23 SPACES

RESIDENTIAL
MULTI–FAMILY DWELLING (PHASES 2 & 3):

1.5 PARKING SPACES PER UNIT (TOTAL 720 UNITS)

PHASE 2:
(2) 4 STORY BUILDINGS (250 UNITS EA.) = 500 UNITS = 1.5 X 500 = 750 SPACES

PHASE 3:
(2) 4 STORY BUILDINGS (110 UNITS EA.) = 220 UNITS = 1.5 X 220 = 330 SPACES

SPACES REQUIRED: 1,080

SPACES PROVIDED: (4) 4 STORY PARKING DECKS @ 455 SPACES EA. = 1820 SPACES

1820/1080 = 1.69 SPACES PER UNIT

REQUIRED HANDICAPPED PARKING – 2% OF TOTAL – .02 X 1,820 = 36

NOTE: RESIDENTIAL OVER RETAIL MAY REQUIRE DECK PARKING TO MEET PARKING REQUIREMENTS.

Traffic Impact Statement:

TRAFFIC GENERATION RATES ARE BASED ON THE ITE TRIP GENERATION, 7th EDITION.

RESIDENTIAL:

ITE LAND USE CODE = 223, MID–RISE RESIDENTIAL CONDOMINIUM/TOWNHOUSE.

DWELLING UNITS = 900

A.M. PEAK HOUR OF GENERATOR
TRIP GENERATION A.M. = 0.30 (AVERAGE RATE) X 900 = 270 TRIPS
TRIP DISTRIBUTION = 31% ENTERING = 270 X 0.31 = 84 TRIPS
69% EXITING = 270 X 0.69 = 186 TRIPS

P.M. PEAK HOUR OF GENERATOR
TRIP GENERATION P.M. = 0.39 (AVERAGE RATE) X 900 = 351 TRIPS
TRIP DISTRIBUTION = 58% ENTERING = 351 X 0.58 = 204 TRIPS
42% EXITING = 351 X 0.42 = 147 TRIPS

COMMERCIAL:

SPECIALTY RETAIL (826): 2.71 PER 1000 SF 2.71 X 75 = 203

PEAK HOUR CALCULATION (WEEKDAY PM PEAK):

TRIP DISTRIBUTION = 44% ENTERING = 0.44 X 203 = 89 TRIPS
56% EXITING = 0.56 X 203 = 114 TRIPS

Open Space - PD:

122–942 (a)(4) OPEN SPACE. OPEN SPACE REQUIREMENTS FOR A PD ARE AS FOLLOWS:

a. OPEN SPACE SHALL INCLUDE ACTIVE AND PASSIVE RECREATION AREAS SUCH AS COURTYARDS, STREETSCAPES/SIDEWALKS, PLAYGROUNDS, GOLF COURSES, WATERWAYS, LANDSCAPED YARDS AND PATIOS, LAGOONS, FLOODPLAINS, NATURE TRAILS, ROOF AREAS, AND OTHER SIMILAR OPEN SPACES. WATER RETENTION AREAS THAT ARE DESIGNED AS AESTHETIC LAKES OR PONDS FOR PASSIVE OR ACTIVE RECREATIONAL USE MAY ALSO BE COUNTED AS OPEN SPACE, AS LONG AS THESE AREAS ARE DESIGNED TO RETAIN A MINIMUM OF THREE FEET OF WATER AT ALL TIMES.

b. FENCED WATER RETENTION AREAS, OPEN WATER AREAS BEYOND THE PERIMETER OF THE SITE, PAVED PORTIONS OF STREET RIGHT–OF–WAY, DRIVEWAYS, OFF–STREET PARKING AREAS AND OFF–STREET LOADING AREAS SHALL NOT BE COUNTED IN DETERMINING OPEN SPACE. SIDE YARDS LESS THAN SIX FEET WIDE SHALL NOT BE COUNTED AS OPEN SPACE.

c. OPEN SPACE SHALL BE CLUSTERED INTO LARGER TRACTS/AREAS. BUILDINGS AND STRUCTURES SHOULD BE CLUSTERED SO THAT THE OPEN SPACE IS USABLE TO THE OCCUPANTS/RESIDENTS RATHER THAN MERELY PROVIDING MINIMAL SETBACKS OR SPACING BETWEEN BUILDINGS OR STRUCTURES. ZERO LOT LINE AND CLUSTERED DESIGN IS ENCOURAGED. FRONT, SIDE AND REAR YARDS IN SINGLE–FAMILY RESIDENTIAL AREAS SHALL NOT BE COUNTED AS AGGREGATE OPEN SPACE.

d. THERE SHALL BE A MINIMUM OPEN SPACE REQUIREMENT OF 25 PERCENT OF THE TOTAL GROSS ACREAGE FOR ALL DEVELOPMENT IN ANY PD PROJECT. AT LEAST TEN PERCENT OF THE TOTAL REQUIRED OPEN SPACE SHALL BE IN USABLE AGGREGATE FORM. AGGREGATE OPEN SPACE IS DEFINED AS COMMON OPEN SPACE AREAS THAT IS DESIGNED AND INTENDED FOR USE BY THE OCCUPANTS/RESIDENTS OF A PD.

e. TREES SHOWN AS CONCEPTUAL ONLY. FINAL LANDSCAPE PLAN WILL DETERMINE ACTUAL TREE LOCATIONS.

Notes:

1. LAND USE DESIGNATION = MEDIUM INTENSITY/SPECIAL DISTRICT
   ALLOWABLE DENSITY = 30 UNITS/ACRE
   PROPOSED DENSITY = 900/31.70 = 28.39 UNITS/ACRE
2. SITE AREA = 39.63 ACRES
   RESIDENTIAL OVER RETAIL = 9.60 ACRES
   RESIDENTIAL = 30.03 ACRES

   (2) – 4 STORY BUILDINGS @ 60 UNITS PER BLDG. = 120 UNITS
   (2) – 4 STORY BUILDINGS @ 30 UNITS PER BLDG. = 60 UNITS

   (2) – 4 STORY BUILDINGS @ 250 UNITS PER BLDG. = 500 UNITS
   (2) – 4 STORY BUILDINGS @ 110 UNITS PER BLDG. = 220 UNITS

   900 UNITS
3. A PD DEVELOPER'S AGREEMENT PURSUANT TO SECTION 122.944(d) SHALL BE PROVIDED AT FINAL PLAN SUBMITTAL.
4. A TITLE OPINION SHALL BE REQUIRED BY THE TIME THE FINAL DEVELOPMENT PLAN AND THE FINAL DEVELOPER'S AGREEMENT ARE SUBMITTED.
5. LOADING AREAS AND DUMPSTER PADS TO BE SCREENED PER CITY CODE.
6. ALL UTILITIES SHALL BE UNDERGROUND (122–942).
7. ACCESS SHALL BE PROVIDED TO ALL USERS (122–942).
8. IF SEPARATE TRACTS ARE SOLD, TRACTS MUST MEET PLATTING REQUIREMENTS OF CHAPTER 114 (122–942).
9. A UNIFIED SIGNAGE PLAN MUST BE ADDRESSED WITH SUBMITTAL OF THE FIRST FINAL PD PLAN.
10. AN ARBORIST OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL EVALUATE THE TREES ONSITE, PROVIDE NECESSARY TREE PRESERVATION REQUIREMENTS TO BE PROVIDED AND IS INVOLVED IN THE SITE CLEARING PROCESS TO ASSURE THE HEALTHY SURVIVAL OF ALL TREES SHOWN ON THE SITE TO BE SAVED.
11. A LANDSCAPE ARCHITECT OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL DESIGN THE LANDSCAPE PLAN AND MANAGE THE ONSITE TREE PLANTING.
12. A LEGALLY CONSTITUTED MAINTENANCE AGREEMENT SHALL BE PROVIDED AT FINAL PLAN PURSUANT TO 122–944(C).
13. PROJECT SHALL BE UNDER UNIFIED CONTROL OF COUNTRY GREEN, LLP.
14. AMENITIES TO INCLUDE:

- GRILL AREAS
- PAVILIONS
- GARDENS AND PARKS
- GARDENS FOR LEASE
- WORKSHOPS AND STUDIOS FOR LEASE
- FITNESS ROOMS
- CLUBROOMS
- COFFEE BARS
- WALKING TRAILS
- EVENT LAWNS
- SWIMMING POOLS
- COVERED GARAGES

Revisions:
By:
Date:

Designed: MWR
Drawn: JWS
Checked: MWR
Scale: 1" = 100'
Project: 2015-56
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Certificate No. EB-0009198 Michael W. Radcliffe P.E. #31170 Christopher A. Dale P.E. #66588

Project Name: PD PLAN for COUNTRY GREEN

Sheet No.
1 of 2

Appendix B: Approved Traffic Analysis Methodology Correspondence

METHODOLOGY ACCEPTANCE

Project: Country Green PD

Project #: TIA18-0001

Applicant: Kimley-Horn and Associates Inc 438-3000
E-Mail: Amber.Gartner@kimley-horn.com

Meeting date:

Approved:

City Planning	x	County Traffic	
TPO	x	County Planning	x
City Traffic	x		
Other			

On February 9, 2018, the methodology for assessing the impact of subject project was approved by City staff subject to the following conditions:

1. Multimodal connectivity is encouraged
2. Trip generation statement on PD Plan sheet 1 of 2 needs to be updated to match traffic study.
3. Perform left and right turn lane analyses at the SW 20th Street connection.
4. Include Background Traffic in the existing conditions table

Approved: Noel C Cooper

Noel Cooper, PE, Transportation Engineer
City Engineer's Office Department

Kimley»Horn

January 16, 2018

Ms. Karen Cupp
Development Coordinator
City of Ocala Growth Management
201 SE 3rd Street, 2nd Floor
Ocala, FL 34471

RE: ***Traffic Study Methodology for Country Green PD;***
Kimley-Horn Project No. 142742000

Dear Ms. Cupp:

This methodology document has been prepared for the forthcoming traffic study associated with the previously-approved Country Green Planned Development (PD). The PD is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. Tables and figures are attached which detail the project's trip generation potential, trip distribution, and proposed study area. Following is a discussion related to the preliminary analyses and proposed methodology for the traffic study. This revised methodology document is based on comments previously received from the City of Ocala, Marion County, and the Ocala/Marion County TPO.

Project Background

The project site is adjacent to the Ocala West Planned Unit Development (PUD) in Ocala, Florida. The proposed Country Green PD (parcel 23320-005-03) is generally located on the west side of the Ocala West PUD and is ±39.63 acres. The proposed Country Green PD will encompass 900 multifamily housing dwelling units (apartments) and 75,000 square feet of shopping center land use. A copy of the conceptual site development plan is provided as an attachment.

The owner of the Country Green PD also owns the Wintergreen PD, which is located on the eastern boundary of the Ocala West PUD. Both projects will be going through the traffic study and concurrency reservation process concurrently. However, for the purpose of the traffic impact studies, traffic from Wintergreen PD will not be included within the Country Green PD analysis.

Analysis Years / Phasing

The traffic analysis will identify transportation impacts and improvement needs that will be required within the timeframe expected for project buildout. A 20-year buildout timeframe for the proposed County Green PD will be utilized for the traffic study (year 2037).

Project Trip Generation

The Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* will be used to calculate trip generation potential for the proposed land uses within the project for the daily, AM peak hour, and PM peak hour conditions. Land use codes (LUCs) 221 (Multifamily Housing (Mid-Rise)) and 820 (Shopping Center) will be utilized. Internal capture and pass-by calculations will be calculated in accordance with the methods and rates established in the ITE *Trip Generation Handbook, 3rd Edition*. Pass-by trips will be included in the driveway volumes for evaluation of the site access locations.

The individual external trip generation of each development was calculated and summed to determine the net new traffic impact on the surrounding roadway network. Based on the development program provided, the project is anticipated to generate 6,792 net new daily trips, 413 net new AM peak hour trips, and 522 net new PM peak hour trips. Trip generation calculations are provided in the attached **Table 1**. The internal capture worksheets are also attached.

Project Trip Distribution

The project trip distribution will be developed based on Version 6.0 of the Central Florida Regional Planning Model (CFRPM), which is based on the Florida Standard Urban Transportation Model Structure (FSUTMS). The model output will be further refined based on engineering judgement and knowledge of local travel patterns and land uses. For the purpose of this study, it is assumed that SW 44th Avenue is not constructed between SW 20th Street and SR 200. The model output distribution was adjusted to reflect the transportation network without SW 44th Avenue. Adjustments were made to reflect local traffic assignment to the adjacent roadway network, as depicted in the attached CFRPM model plot with hand adjustments.

Study Area

Functionally classified roadway segments in the project's vicinity were reviewed to determine the project's potential traffic impact. The project impact on the surrounding roadway network has been calculated as the average PM peak hour trip assignment on that roadway segment divided by the segment's peak hour peak direction service volume. A 3% threshold was used to define a preliminary study area. Per the City of Ocala Traffic Impact Analysis Guidelines, the study area includes all significantly impacted roadways plus one segment beyond the last segment that meets the 3% impact threshold, unless the project has a de minimis impact on the roadway segment. **Table 2** details the project significant impact calculations and proposed study roadway segments.

The traffic study is proposed to include PM peak hour (4-6 PM) intersection level of service analyses at the following intersections of functionally classified roadways located within the project study area.

- SW 20th Street & SW 60th Avenue
- SW 20th Street & SW 44th Avenue
- SW 20th Street & SW 38th Avenue
- SW 20th Street & SW 31st Avenue
- SW 20th Street & SW 27th Avenue
- SW 38th Street & SW 60th Avenue
- SW 38th Street/40th Street & SW 38th Court
- SW 38th Street/40th Street & SR 200

An AM peak hour (7AM-9AM) intersection level of service analysis will also be performed at the following intersections, based on input from City of Ocala Transportation staff:

- SW 20th Street & SW 44th Avenue
- SW 20th Street & SW 38th Avenue

Figure 1 illustrates the site location, trip distribution, and study area segments and intersections proposed to be included in the analysis.

Site Access

Access to the Country Green PD is proposed via a connection on the north side of the parcel to SW 20th Street as well as three access points along a proposed north-south roadway along the west side of the parcel, intersecting with SW 20th Street directly across from SW 54th Court.

The access locations are illustrated on the attached conceptual site development plan. The traffic analysis will include evaluation of the site access locations for the appropriate control and geometry needed at project buildout.

Committed Transportation Improvements

SW 49th Avenue, from SW 42nd Street to CR 484 has been considered as a four-lane divided collector roadway for the project impact calculations. The construction of this roadway is funded through transportation impact fees and recent sales tax referendum.

The extension of SW 44th Avenue from SW 20th Street to SR 200 will not be assumed in this analysis.

Crash Data Review

Historic crash data as provided by Marion County will be reviewed and summarized for roadway segments that have direct driveway access.

Future Volume Development

Turning movement counts will be collected at the study area intersections during the PM peak period (4PM-6PM) and AM peak period (7AM-9AM), as specified previously. The observed turning movement volumes will be adjusted to peak season using peak season adjustment factors published by FDOT for the existing conditions analysis. Approach and departure volumes recorded at the intersections will be utilized to determine existing PM peak hour peak season traffic volumes on the study area roadway segments.

Future background traffic volumes will be calculated using existing peak season traffic volumes, an annual background growth rate applied over the 20-year buildout timeframe, and committed traffic volumes from the following developments:

- Heathbrook remaining unbuilt
- Trinity Lane/Red Oak PUD
- Grand Oaks Town Center remaining
- Broadmoor Oaks
- Paddock Ridge East
- Paddock Ridge West
- On Top of the World
- Winding Oaks PD

The number of vested trips and existing built percentages for each vested development are to be provided by the City of Ocala.

Historic AADT data and CFRPM model data within the study area were utilized to determine an appropriate areawide growth rate to utilize for the analysis. Within the next ten years, traffic growth within the study area will be primarily due to development within the committed projects listed above. Based on input from City of Ocala and Marion County Transportation staff, a historical growth rate of 1.50 percent will be used for the 20-year analysis project timeframe in addition to the committed traffic.

Future Conditions Analysis

The traffic analysis will identify transportation impacts and improvement needs for roadways and intersections within the study area upon project buildout, within a 20-year timeframe (2037).

The Synchro 9 software package will be utilized to evaluate the intersection operations during the AM peak hour and PM peak hour under existing, future background (non-project traffic), and buildout traffic conditions. PM peak hour roadway segment volumes under existing, future background, and buildout traffic conditions will be compared to the adopted and/or committed service volume.

The traffic study will provide a summary of the analysis results and necessary improvements to achieve an acceptable level of service within the study area. The traffic study will identify proportionate share calculations to mitigate transportation improvements shown to be needed due to the addition of project traffic.

Please feel free to contact me with any questions you may have during your review of the attached materials. We look forward to completing this project.

Sincerely,
KIMLEY-HORN

Amber L. Gartner, PE

Attachments: Country Green PD Conceptual Site Development Plan
Table 1 – Trip Generation
Internal Capture Worksheets
Figure 1 – Site Location, Trip Distribution, and Study Area
Table 2 – Project Significance Calculations
FSUTMS Select Zone Plot (hand adjusted)

Cc: Don Carll
Mike Radcliffe

K:\OCA_Civil\142742000 - Wintergreen PD TIA\doc\Methodology\Lkc180116alg_Country Green PD Traffic Methodology.docx

GRAPHIC SCALE

100 0 50 100 200 400

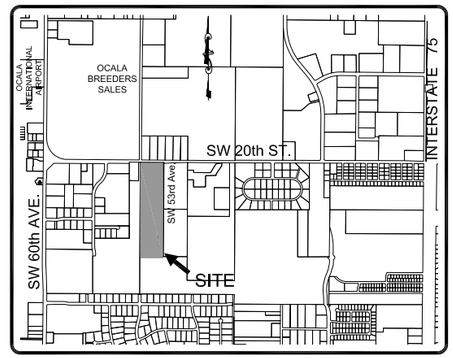
(IN FEET)
1 inch = 100 ft.

PD PLAN for COUNTRY GREEN

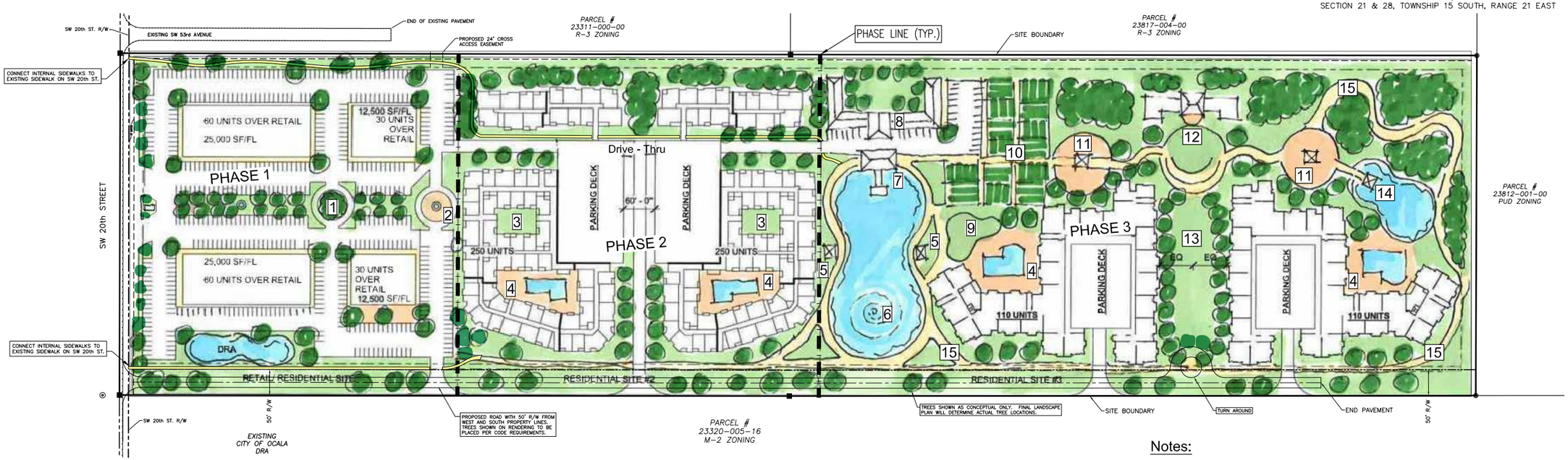
OCALA, FLORIDA

PARCEL 23320-005-03

AMENITIES LEGEND			
1	ROUNDABOUT w/ TREE	8	LEASEABLE WORKSHOPS
2	ROUNDABOUT w/ FOUNTAIN	9	CHIPPING / PUTTING GREEN
3	COURTYARD	10	LEASEABLE GARDEN SPACE
4	POOL w/ DECK	11	OPEN AIR PAVILION
5	GRILLING AREA	12	LEASEABLE AMPHITHEATER
6	POND WATER FEATURE	13	LEASEABLE EVENT LAWN
7	OPEN AIR PAVILION w/ DOCK	14	POND w/ DOCK
		15	PEDESTRIAN / BIKE TRAILS



LOCATION MAP
SCALE: 1" = 2000'
MARION COUNTY, FLORIDA
SECTION 21 & 28, TOWNSHIP 15 SOUTH, RANGE 21 EAST



Parking Calculations:

RESIDENTIAL OVER RETAIL (PHASE 1 ONLY):

RETAIL: 1 PARKING SPACE FOR EACH 250 SQUARE FEET OF FLOOR AREA

COMMERCIAL BUILDINGS 75,000 SF 75,000/250 = 300 SPACES
COMMERCIAL PARKING PROVIDED – 300 SPACES

RESIDENTIAL OVER RETAIL #1 – (2) 4 STORY BLDGS @ 60 UNITS PER BLDG. = 120 UNITS
(2) 4 STORY BLDGS @ 30 UNITS PER BLDG. = 60 UNITS

RESIDENTIAL PARKING REQUIRED/PROVIDED 180 UNITS X 1.5 = 270 SPACES

REQUIRED HANDICAPPED PARKING – 1 SPACE FOR EVERY 25 SPACES – 570/25 = 23 SPACES

RESIDENTIAL
MULTI–FAMILY DWELLING (PHASES 2 & 3):

1.5 PARKING SPACES PER UNIT (TOTAL 720 UNITS)

PHASE 2:
(2) 4 STORY BUILDINGS (250 UNITS EA.) = 500 UNITS = 1.5 X 500 = 750 SPACES

PHASE 3:
(2) 4 STORY BUILDINGS (110 UNITS EA.) = 220 UNITS = 1.5 X 220 = 330 SPACES

SPACES REQUIRED: 1,080

SPACES PROVIDED: (4) 4 STORY PARKING DECKS @ 455 SPACES EA. = 1820 SPACES

1820/1080 = 1.69 SPACES PER UNIT

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Project Name: PD PLAN for COUNTRY GREEN

Sheet No.
1 of 2

Kimley»Horn

Table 1: Trip Generation

Land Use	Intensity			Daily Trips	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
					Total	In	Out	Total	In	Out
Proposed Development										
Multifamily Housing (Mid-Rise)	900 DU			4,903	295	77	218	365	223	142
Shopping Center	75,000 SF			4,944	189	117	72	439	211	228
	Subtotal			*9,847*	*484*	*194*	*290*	*804*	*434*	*370*
Internal Capture	Daily	AM	PM							
Residential	17%	1%	22%	828	4	2	2	80	59	21
Commercial	17%	2%	18%	828	4	2	2	80	21	59
Subtotal	*17%*	*2%*	*20%*	1,656	8	4	4	160	80	80
Pass-By Traffic [2]	Daily	AM	PM							
Shopping Center	34%	34%	34%	1,399	63	39	24	122	65	57
10% of Adjacent Street Traffic	10%			1,508	136	68	68	136	68	68
	Subtotal			1,399	63	39	24	122	65	57
Driveway Volumes				8,191	476	190	286	644	354	290
TOTAL NET NEW TRIPS				6,792	413	151	262	522	289	233

Note: *Trip Generation was calculated using the data from ITE's Trip Generation Manual, 10th Edition*

Multifamily Housing (Mid-Rise) [ITE LUC 221]	
Daily	T = 5.45*(X) - 1.75 (X is DU)
AM Peak Hour of Adjacent Street	Ln(T) = 0.98*Ln(X) - 0.98 (X is DU; 26% in, 74% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.96*Ln(X) - 0.63 (X is DU; 61% in, 39% out)
Shopping Center [ITE LUC 820]	
Daily	Ln(T) = 0.68*Ln(X) + 5.57 (X is SF/1,000)
AM Peak Hour of Adjacent Street [1]	T = 0.50*(X) + 151.78 (X is SF/1,000; 62% in, 38% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.74*Ln(X) + 2.89 (X is DU; 48% in, 52% out)

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

Country Green PD

GROSS TRIP GENERATION

INPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office						
Retail	2,472	2,472	117	72	211	228
Restaurant						
Cinema/Entertainment						
Residential	2,452	2,452	77	218	223	142
Hotel						
	4,924	4,924	194	290	434	370

INTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	0	0	0	0	0	0
Retail	334	494	2	2	21	59
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	494	334	2	2	59	21
Hotel	0	0	0	0	0	0
	828	828	4	4	80	80

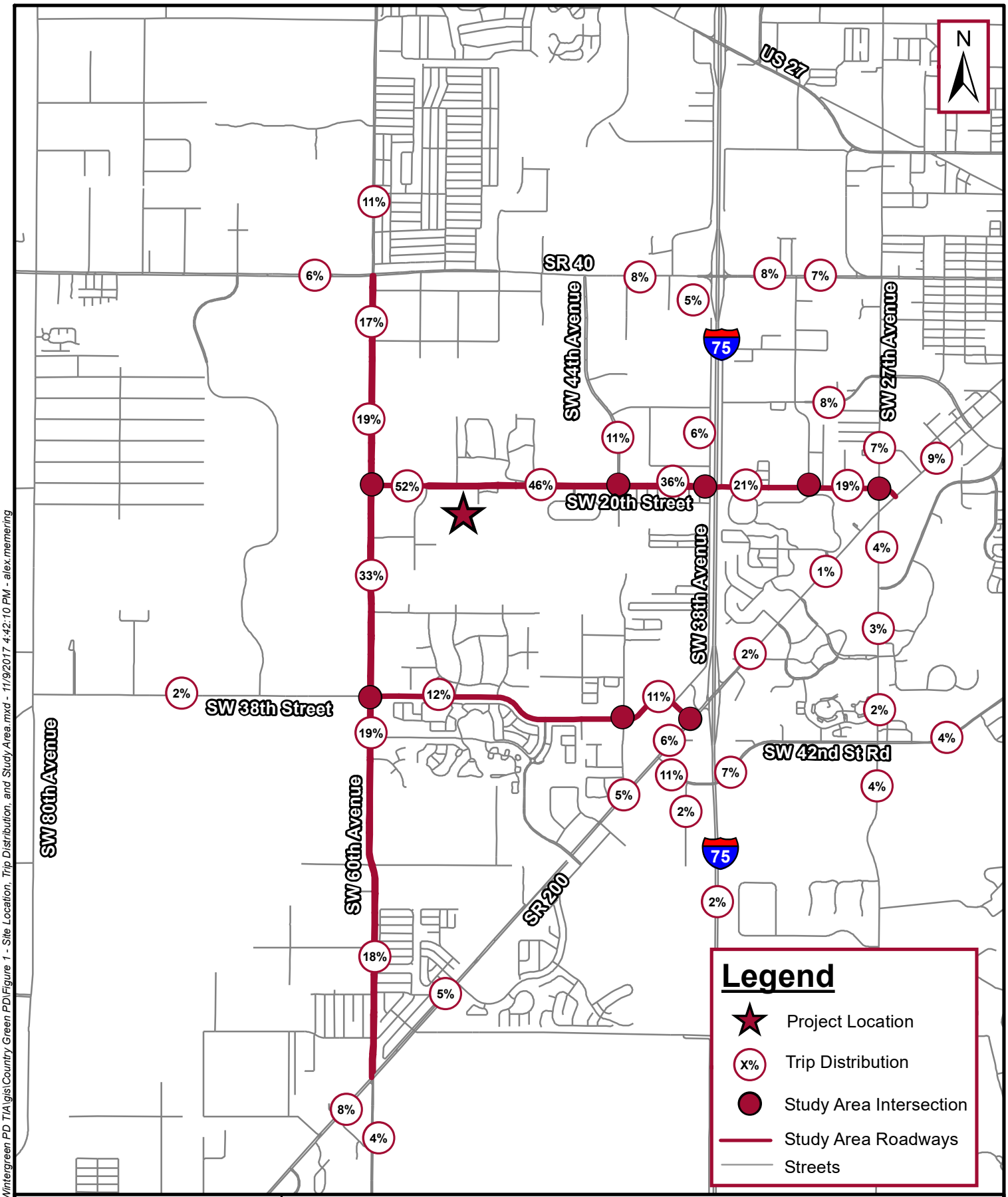
OUTPUT

Total % Reduction	*16.8%*		*1.7%*		*19.9%*	
Office						
Retail	16.7%		2.1%		18.2%	
Restaurant						
Cinema/Entertainment						
Residential	16.9%		1.4%		21.9%	
Hotel						

EXTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	0	0	0	0	0	0
Retail	2,138	1,978	115	70	190	169
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1,958	2,118	75	216	164	121
Hotel	0	0	0	0	0	0
	4,096	4,096	190	286	354	290



Kimley»Horn

101 E Silver Springs Blvd, Suite 400, Ocala FL 34470
Phone: 352 438 3000
www.kimley-horn.com CA 00000696

FIGURE 1: SITE LOCATION, TRIP DISTRIBUTION, AND STUDY AREA

COUNTRY GREEN PD
OCALA, FLORIDA

Project No: 142742000	Not To Scale	November 2017	Figure 1

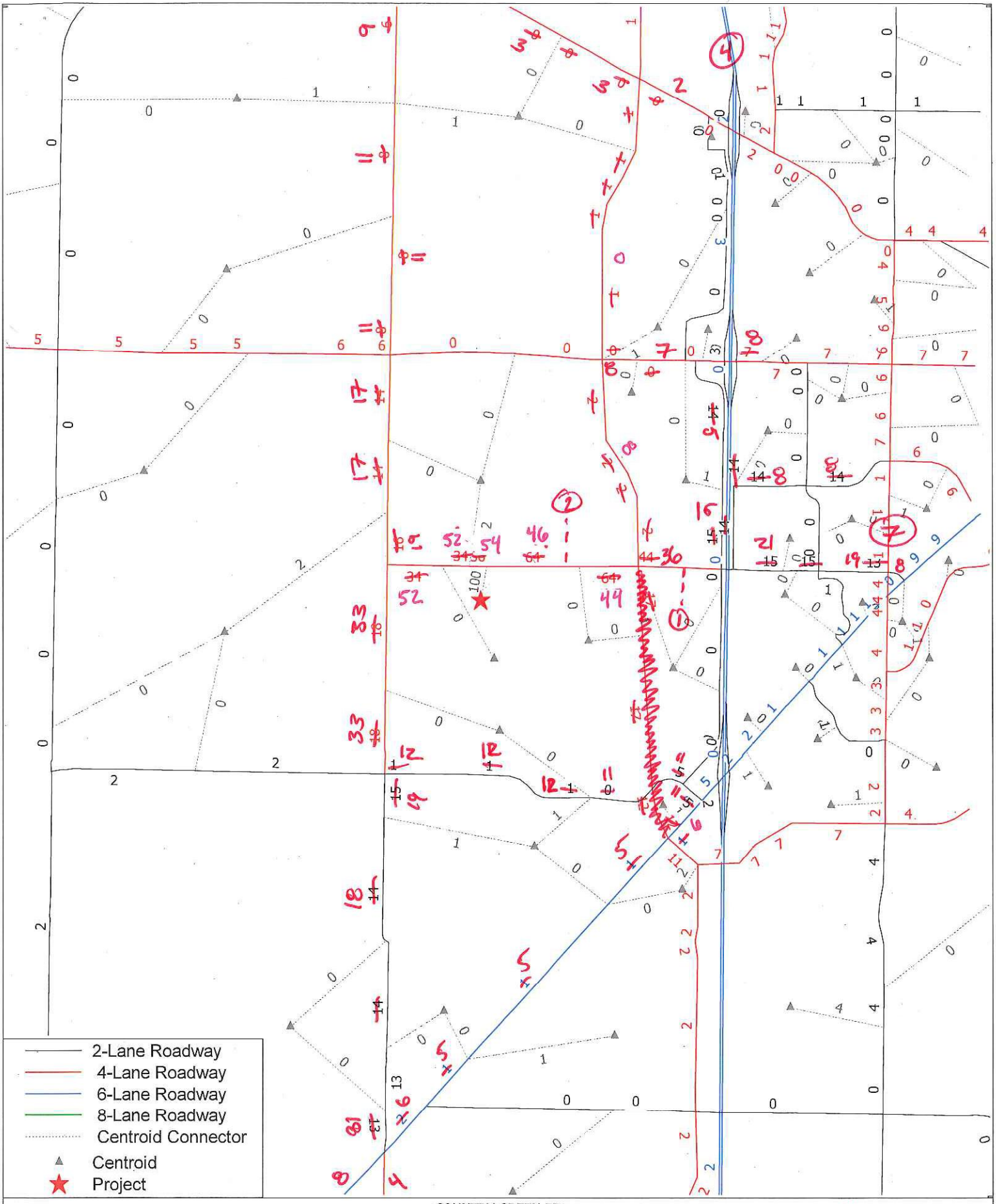
Kimley»Horn

Table 2: Project Significant Impact Calculations

Roadway		ROADWAY ATTRIBUTES [1]				EXISTING DAILY TRAFFIC CONDITIONS				Percent Project Traffic Assignment [2]	PM PEAK HOUR SIGNIFICANCE CALCULATIONS					Include In Study Area? [5]
											Pk. Hr. Dir. Service Capacity [3]	Project Traffic		Percent Impact	Significant Impact? [4]	
From	To	FDOT Classification	Area Type	Adopted LOS	Number of Lanes	Service Capacity [3]	2016 AADT	2016 V/C	2016 LOS			NB / EB	SB / WB			
SR 200																
SW 60th Ave	SW 48th Ave	ST-SA-C1	Urban	D	6	59,900	42,750	0.71	C	5.5%	3,020	16	13	0.53%	--	No
SW 48th Ave	I-75 East Ramps	ST-SA-C1	Urban	D	6	59,900	38,500 [6]	0.64	C	5.5%	3,020	13	16	0.53%	--	No
I-75 East Ramps	SW 27th Ave	ST-SA-C1	Urban	D	6	59,900	43,500	0.73	C	1.5%	3,020	3	4	0.13%	--	No
SW 27th Ave	SW 17th St	ST-SA-C1	Urban	D	6	59,900	38,300	0.64	C	9.0%	3,020	21	26	0.86%	--	No
NW / SW 60th Ave																
US 27	SR 40	NS-SA-C1	Urban	E	4	35,820	9,900	0.28	C	10.0%	1,800	23	29	1.61%	--	No
SR 40	SW 20th St	NS-SA-C1	Urban	E	4	35,820	13,800	0.39	C	18.0%	1,800	42	52	2.89%	--	Yes
SW 20th St	SW 38th St	NS-SA-C1	Urban	E	4	35,820	12,500 [6]	0.35	C	33.0%	1,800	95	77	5.28%	Yes	Yes
SW 38th St	SR 200	NS-SA-C1	Urban	E	4	35,820	14,950	0.42	C	18.5%	1,800	53	43	2.94%	--	Yes
SR 200	SW 80th St	NS-SA-C1	Urban	E	4	35,820	18,500	0.52	C	3.0%	1,800	9	7	0.50%	--	No
SW 49th Ave																
SW 42nd St	SW 66th St	NS-SA-C1	Urban	E	4	35,820	--	--	--	2.0%	1,800	6	5	0.33%	--	No
SW 44th Ave																
SR 40	SW 20th St	NS-SA-C1	Urban	E	4	35,820	--	--	--	8.0%	1,800	19	23	1.28%	--	No
SW 42nd St																
SR 200	SW 27th Ave	NS-SA-C1	Urban	E	4	35,820	17,700	0.49	C	9.0%	1,800	21	26	1.44%	--	No
SW 27th Ave	SW 7th Ave	NS-SA-C1	Urban	E	4	35,820	19,200 [6]	0.54	C	4.0%	1,800	9	12	0.67%	--	No
SW 38th St																
SW 80th Ave	SW 60th Ave	NS-SA-C1	Urban	E	2	15,930	8,500	0.53	C	2.0%	792	6	5	0.76%	--	No
SW 60th Ave	SR 200	NS-SA-C1	Urban	E	2	15,930	6,200	0.39	C	11.5%	792	27	33	4.17%	Yes	Yes
SW 27th Ave																
SR 40	SR 200	NS-SA-C1	Urban	E	4	35,820	20,700	0.58	C	6.7%	1,800	16	19	1.06%	--	No
SR 200	SW 42nd St	NS-SA-C1	Urban	E	4	35,820	20,400	0.57	C	3.0%	1,800	9	7	0.50%	--	No
CR 475A																
SW 42nd St	SW 66th St	NS-SA-C1	Urban	E	2	15,930	12,300	0.77	C	2.0%	792	6	5	0.76%	--	No
SR 40																
SW 80th Ave	SW 60th Ave	ST-SA-C1	Urban	D	4	41,790	21,000	0.50	C	5.5%	2,100	16	13	0.76%	--	No
SW 60th Ave	SW 44th/46th Ave	ST-SA-C1	Urban	D	4	41,790	28,500 [6]	0.68	C	0.0%	2,100	0	0	0.00%	--	No
SW 44th/46th Ave	I-75	ST-SA-C1	Urban	D	4	41,790	30,500	0.73	C	7.5%	2,100	17	22	1.05%	--	No
I-75	SW 27th Ave	ST-SA-C1	Urban	D	4	39,800	33,000	0.83	C	7.5%	2,000	17	22	1.10%	--	No
SW 27th Ave	SW MLK Ave	ST-SA-C1	Urban	D	4	39,800	26,700	0.67	C	6.5%	2,000	15	19	0.95%	--	No
SW 20th St																
SW 60th Ave	SW 44th Ave	NS-SA-C1	Urban	E	4	35,820	11,600	0.32	C	50.7%	1,800	146	118	8.11%	Yes	Yes
SW 44th Ave	I-75	NS-SA-C1	Urban	E	4	35,820	12,800	0.36	C	32.5%	1,800	76	94	5.22%	Yes	Yes
I-75	SW 27th Ave	NS-SA-C1	Urban	E	2	16,727	11,600	0.69	C	23.0%	832	54	66	7.93%	Yes	Yes
SW 27th Ave	SR 200	NS-SA-C1	Urban	E	2	15,930	10,900 [6]	0.68	C	8.0%	792	19	23	2.90%	--	Yes
SW 38th Ave																
SR 40	SW 20th St	NS-SA-C2	Urban	E	2	14,040	3,500 [6]	0.25	C	5.5%	720	13	16	2.22%	--	No
SW 20th St	SW 38th St	NS-SA-C2	Urban	E	2	14,040	5,300 [6]	0.38	C	0.0%	720	0	0	0.00%	--	No

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[MethodologyCalcs_171102.xlsx]T2-STUDYAREA_CGreen_avg_3%

1. The roadway attributes were obtained from the latest Marion County and FDOT sources.
2. Project traffic assignment was calculated as the average across the segment based on the trip distribution and assignment.
3. Roadway Service Capacities were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables. A four-lane service capacity was assumed for SW 44th Ave and SW 49th Ave.
4. A segment is considered significantly impacted if the project impact is 3% or greater based on City of Ocala guidelines.
5. The study area includes all significantly impacted segments, plus one segment beyond, except when the next segment is expected to have *de minimis* impacts (<1%).
6. Roadway segments did not have traffic counts recorded for 2016. The most recent year of available data (2012 being the earliest) is reported.



COUNTRY GREEN PD
SELECT ZONE DISTRIBUTION (PERCENTAGES) (Hand Adjusted)
CFRPMv6.0 CF 2040 MODEL
10/30/2017

cube

Appendix C: Traffic Data

SeasonalFactorReport-Marion

2016 Peak Season Factor Category Report - Report Type: ALL

Category: 3600 MARION COUNTYWIDE

MOCF: 0.97

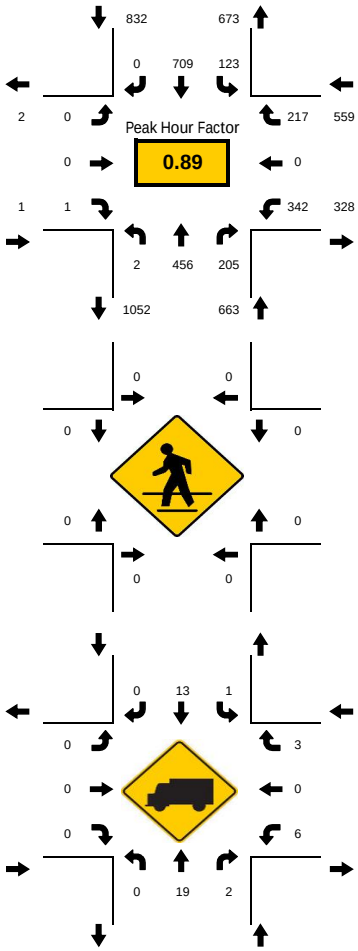
Week	Dates	SF	PSCF
1	01/01/2016 - 01/02/2016	0.99	1.02
2	01/03/2016 - 01/09/2016	1.02	1.05
3	01/10/2016 - 01/16/2016	1.06	1.09
4	01/17/2016 - 01/23/2016	1.05	1.08
5	01/24/2016 - 01/30/2016	1.03	1.06
6	01/31/2016 - 02/06/2016	1.02	1.05
7	02/07/2016 - 02/13/2016	1.00	1.03
* 8	02/14/2016 - 02/20/2016	0.99	1.02
* 9	02/21/2016 - 02/27/2016	0.98	1.01
*10	02/28/2016 - 03/05/2016	0.96	0.99
*11	03/06/2016 - 03/12/2016	0.95	0.98
*12	03/13/2016 - 03/19/2016	0.93	0.96
*13	03/20/2016 - 03/26/2016	0.94	0.97
*14	03/27/2016 - 04/02/2016	0.95	0.98
*15	04/03/2016 - 04/09/2016	0.96	0.99
*16	04/10/2016 - 04/16/2016	0.97	1.00
*17	04/17/2016 - 04/23/2016	0.98	1.01
*18	04/24/2016 - 04/30/2016	0.99	1.02
*19	05/01/2016 - 05/07/2016	0.99	1.02
*20	05/08/2016 - 05/14/2016	1.00	1.03
21	05/15/2016 - 05/21/2016	1.01	1.04
22	05/22/2016 - 05/28/2016	1.01	1.04
23	05/29/2016 - 06/04/2016	1.01	1.04
24	06/05/2016 - 06/11/2016	1.02	1.05
25	06/12/2016 - 06/18/2016	1.02	1.05
26	06/19/2016 - 06/25/2016	1.02	1.05
27	06/26/2016 - 07/02/2016	1.02	1.05
28	07/03/2016 - 07/09/2016	1.01	1.04
29	07/10/2016 - 07/16/2016	1.01	1.04
30	07/17/2016 - 07/23/2016	1.02	1.05
31	07/24/2016 - 07/30/2016	1.02	1.05
32	07/31/2016 - 08/06/2016	1.03	1.06
33	08/07/2016 - 08/13/2016	1.03	1.06
34	08/14/2016 - 08/20/2016	1.04	1.07
35	08/21/2016 - 08/27/2016	1.05	1.08
36	08/28/2016 - 09/03/2016	1.05	1.08
37	09/04/2016 - 09/10/2016	1.06	1.09
38	09/11/2016 - 09/17/2016	1.07	1.10
39	09/18/2016 - 09/24/2016	1.05	1.08
40	09/25/2016 - 10/01/2016	1.03	1.06
41	10/02/2016 - 10/08/2016	1.01	1.04
42	10/09/2016 - 10/15/2016	0.99	1.02
43	10/16/2016 - 10/22/2016	0.99	1.02
44	10/23/2016 - 10/29/2016	0.99	1.02

45	10/30/2016 - 11/05/2016	0.99	1.02
46	11/06/2016 - 11/12/2016	0.99	1.02
47	11/13/2016 - 11/19/2016	0.99	1.02
48	11/20/2016 - 11/26/2016	0.99	1.02
49	11/27/2016 - 12/03/2016	0.99	1.02
50	12/04/2016 - 12/10/2016	0.99	1.02
51	12/11/2016 - 12/17/2016	0.99	1.02
52	12/18/2016 - 12/24/2016	1.02	1.05
53	12/25/2016 - 12/31/2016	1.06	1.09

* Peak Season

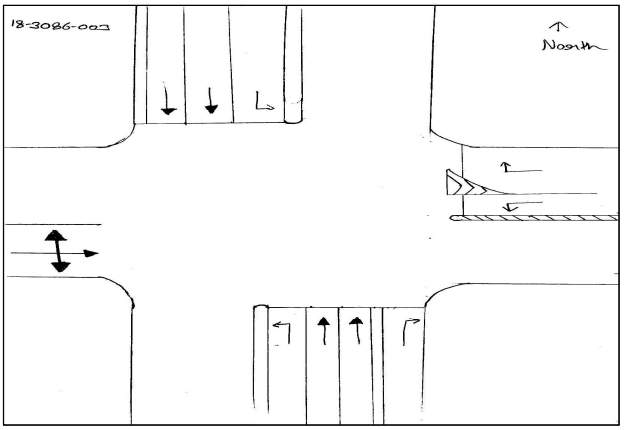
LOCATION: SW 60th Ave & SW 20th St
CITY/STATE: Ocala, FL

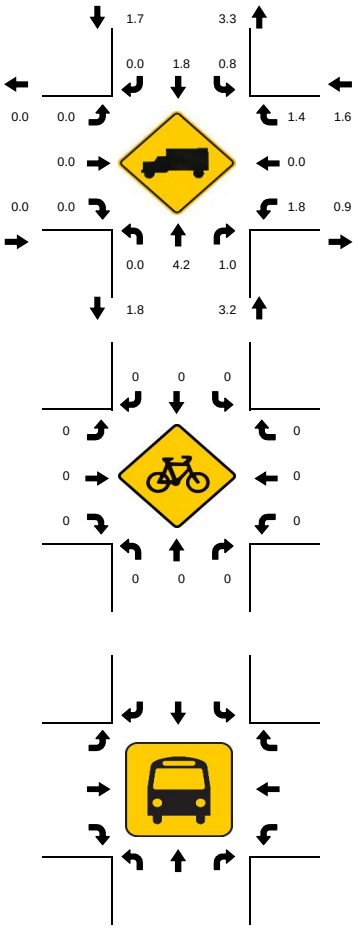
PROJECT ID: 18-03086-003
DATE: 02/20/2018



Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM

National Data & Surveying Services





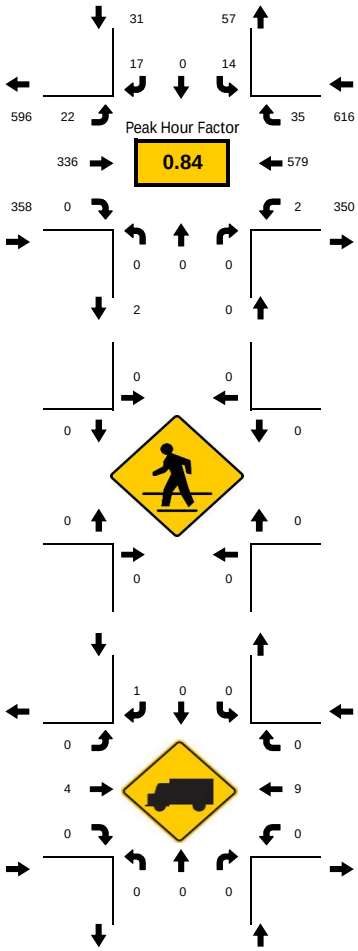
15-Min Count Period	SW 60th Ave Northbound					SW 60th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
04:00 PM	0	139	63	1	13	40	147	0	0	0	0	0	0	0	0	71	0	41	0	19	502	1968
04:15 PM	0	141	55	0	18	36	128	0	0	0	0	0	0	0	0	104	0	66	0	35	530	1994
04:30 PM	0	118	54	0	25	31	142	0	0	0	0	0	0	0	0	81	0	50	0	27	476	2040
04:45 PM	0	124	47	0	12	25	151	0	0	0	0	0	0	0	0	66	0	47	0	28	460	2055
05:00 PM	0	121	53	2	14	33	180	0	0	0	0	0	0	0	0	83	0	56	0	30	528	1980
05:15 PM	0	112	62	0	22	40	202	0	0	0	0	0	0	0	0	96	0	64	0	42	576	1452
05:30 PM	0	99	43	0	13	25	176	0	0	0	0	0	1	0	1	97	0	50	0	28	491	876
05:45 PM	0	99	47	0	9	28	108	0	0	0	0	0	3	0	3	56	0	44	0	27	385	385

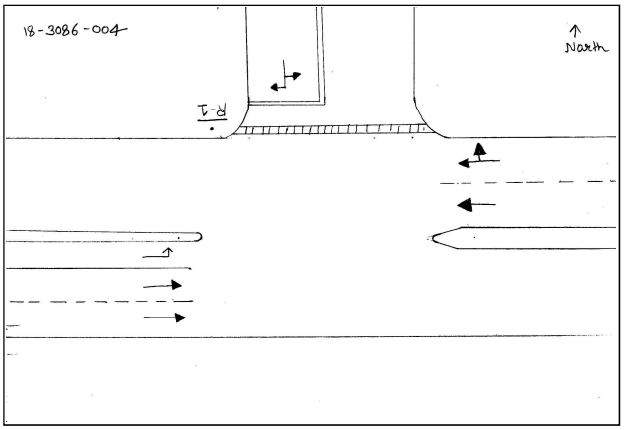
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	0	496	248	8	88	160	808	0	0	0	0	0	4	0	4	388	0	256	0	168	**2368**
Heavy Trucks	0	28	4			4	20	0			0	0	0			12	0	4			**72**
Pedestrians		0					0					0					0				**0**
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			**0**
Railroad																					
Stopped Buses																					

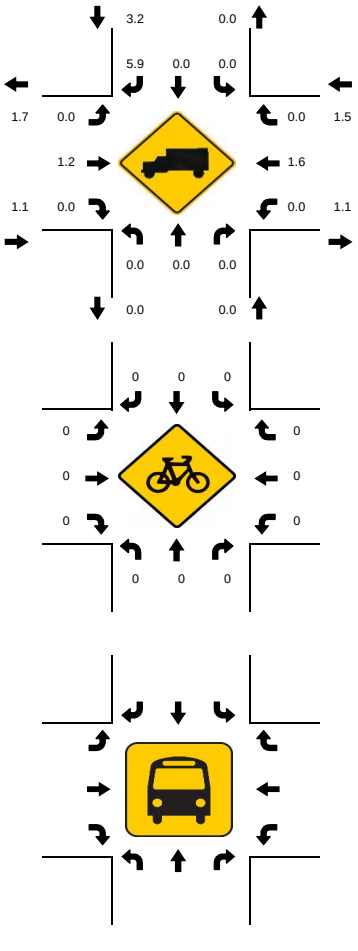
LOCATION: SW 54th Ct & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-004
DATE: 02/20/2018

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM





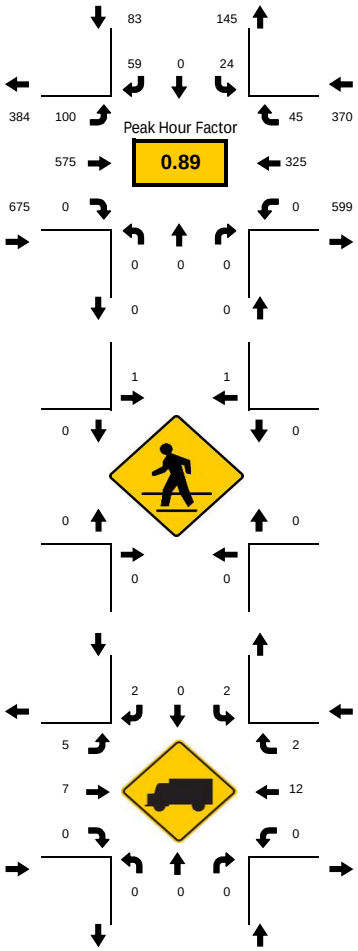


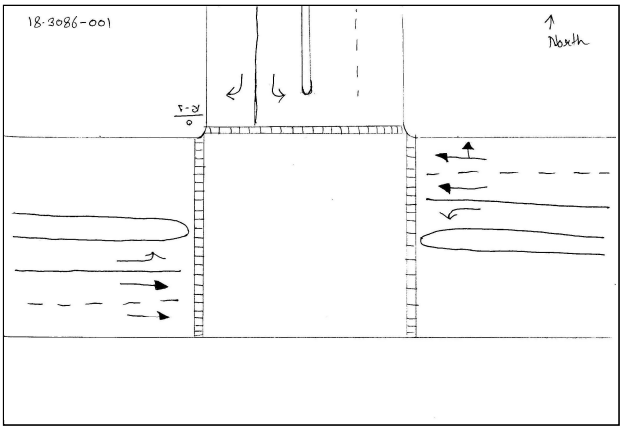
15-Min Count Period Beginning At	SW 54th Ct Northbound					SW 54th Ct Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0		3	0	1	0		12	138	0	0		0	156	7	0		317	976
04:15 PM	0	0	0	0		4	0	4	0		7	93	0	0		0	102	5	0		215	959
04:30 PM	0	0	0	0		4	0	5	0		3	82	0	0		0	134	4	0		232	1005
04:45 PM	0	0	0	0		3	0	4	0		3	66	0	0		0	127	8	1		212	979
05:00 PM	0	0	0	0		1	0	4	0		7	107	0	0		0	170	10	1		300	926
05:15 PM	0	0	0	0		6	0	4	0		9	81	0	0		0	148	13	0		261	626
05:30 PM	0	0	0	0		4	0	5	0		3	78	0	0		0	110	6	0		206	365
05:45 PM	0	0	0	0		1	0	4	0		8	59	0	0		0	82	4	1		159	159
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0		24	0	20	0		36	428	0	0		0	680	52	4		**1244**	
Heavy Trucks	0	0	0			0	0	4			0	8	0			0	20	0			**32**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			**0**	
Railroad																						
Stopped Buses																						

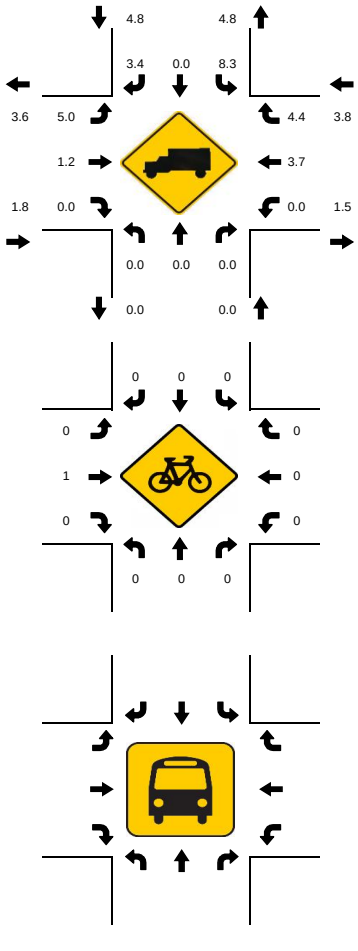
LOCATION: SW 44th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-001
DATE: 02/20/2018

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 07:45 AM - 08:00 AM





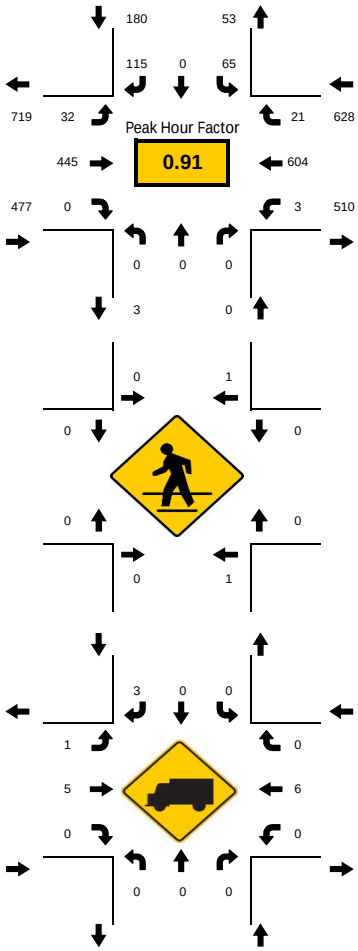


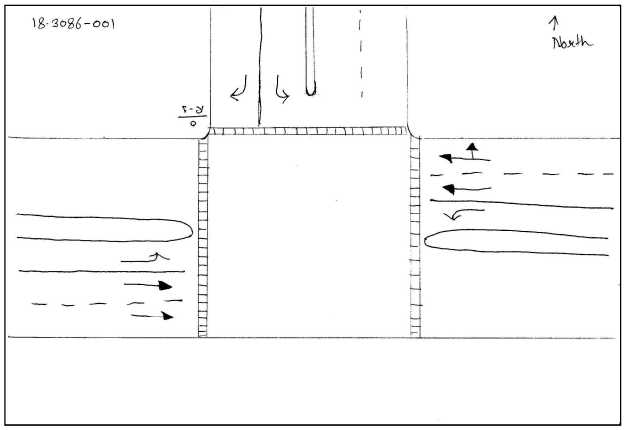
15-Min Count Period	SW 44th Ave Northbound					SW 44th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						Hourly
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Total
07:00 AM	0	0	0	0		10	0	4	0		20	100	0	0		0	39	10	0		183	992
07:15 AM	0	0	0	0		5	0	11	0		12	121	0	0		0	55	14	0		218	1090
07:30 AM	0	0	0	0		6	0	10	0		29	148	0	0		0	75	6	0		274	1128
07:45 AM	0	0	0	0		2	0	17	0		30	176	0	0		0	78	14	0		317	1100
08:00 AM	0	0	0	0		8	0	20	0		23	135	0	0		0	80	15	0		281	995
08:15 AM	0	0	0	0		8	0	12	0		18	116	0	0		0	92	10	0		256	714
08:30 AM	0	0	0	0		3	0	13	0		15	129	0	0		0	78	8	0		246	458
08:45 AM	0	0	0	0		11	0	14	0		13	113	0	0		0	55	6	0		212	212
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	0	0	0		32	0	80	0		120	704	0	0		0	368	60	0		**1364**	
Heavy Trucks	0	0	0			4	0	4			8	16	0			0	20	4			**56**	
Pedestrians		0					4					0					0				**4**	
Bicycles	0	0	0			0	0	0			0	4	0			0	0	0			**4**	
Railroad																						
Stopped Buses																						

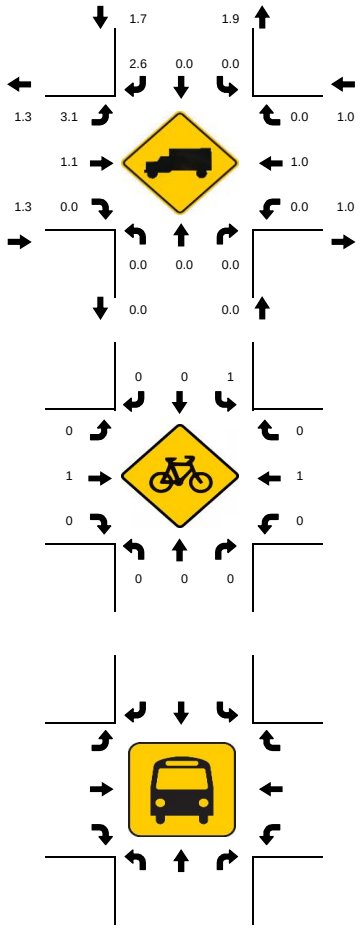
LOCATION: SW 44th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-001
DATE: 02/20/2018

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM







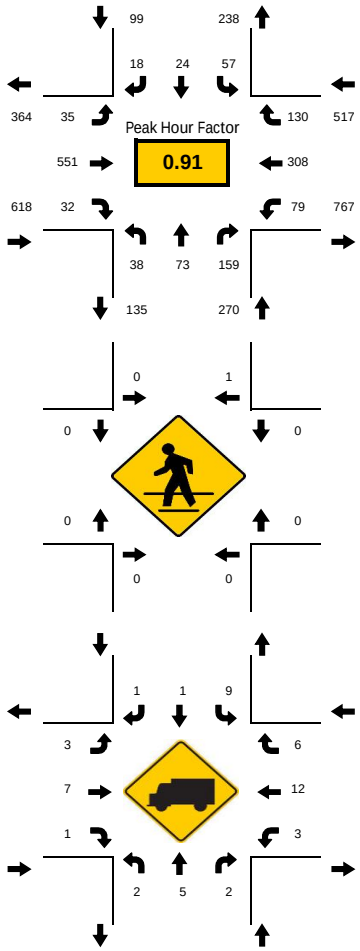
15-Min Count Period Beginning At	SW 44th Ave Northbound					SW 44th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	2	0		13	0	18	0		19	136	0	0		0	151	16	0		355	1273
04:15 PM	0	0	0	0		10	0	17	0		6	132	0	0		0	157	8	1		331	1272
04:30 PM	0	0	0	0		15	0	19	0		9	118	0	0		0	136	3	0		300	1285
04:45 PM	0	0	0	0		11	0	19	0		10	99	0	0		0	141	7	0		287	1283
05:00 PM	0	0	0	0		24	0	48	0		7	101	0	0		2	164	7	1		354	1248
05:15 PM	0	0	0	0		15	0	29	0		6	127	0	0		0	163	4	0		344	894
05:30 PM	0	0	2	0		10	0	18	0		14	88	0	0		1	156	8	1		298	550
05:45 PM	0	0	0	0		10	0	18	0		6	81	0	0		0	132	5	0		252	252

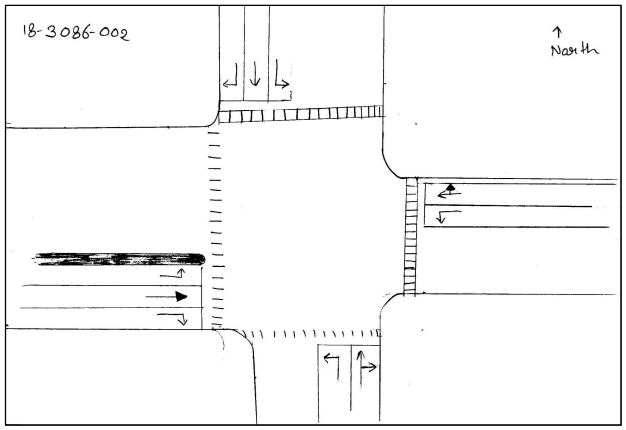
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	0	0	0	0		96	0	192	0		40	508	0	0		8	656	28	4		**1532**
Heavy Trucks	0	0	0			0	0	8			4	12	0			0		8	0		**32**
Pedestrians		4					4					0					0				**8**
Bicycles	0	0	0			4	0	0			0	4	0			0		4	0		**12**
Railroad																					
Stopped Buses																					

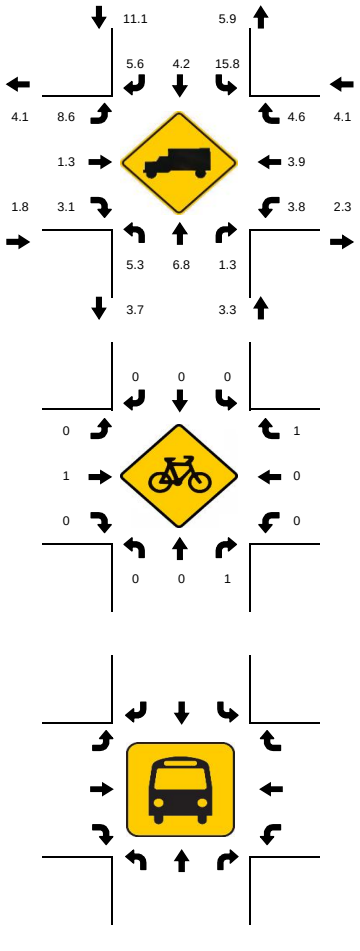
LOCATION: SW 38th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-002
DATE: 02/20/2018

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 07:45 AM - 08:00 AM





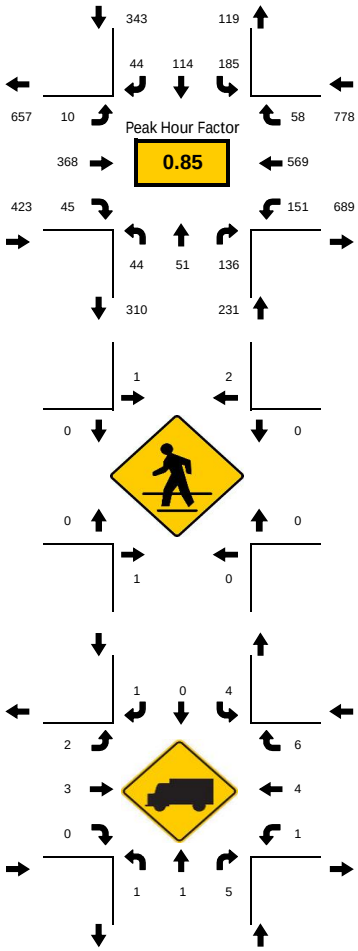


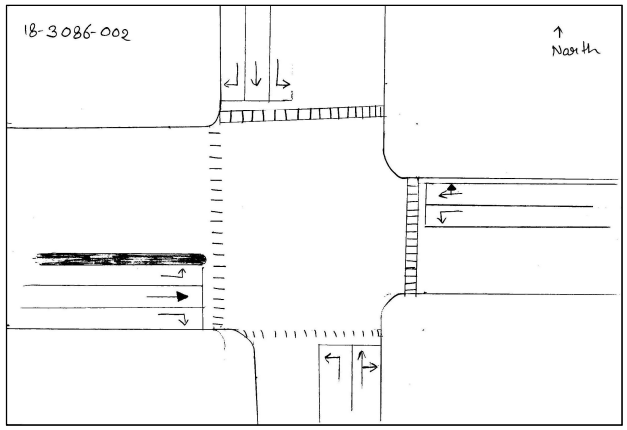
15-Min Count Period	SW 38th Ave Northbound					SW 38th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						Hourly
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Total
07:00 AM	6	11	27	0	13	8	8	2	0	2	7	80	14	0	7	18	48	24	0	3	253	1291
07:15 AM	6	14	28	0	13	9	8	2	0	2	2	104	12	0	6	20	56	17	0	0	278	1425
07:30 AM	3	16	35	0	17	6	7	4	0	3	8	145	8	0	1	20	71	22	0	4	345	1504
07:45 AM	11	21	45	0	13	21	4	2	0	2	10	141	4	0	1	25	85	46	0	0	415	1494
08:00 AM	11	18	35	0	9	18	7	5	0	5	10	149	9	0	4	15	69	41	0	4	387	1374
08:15 AM	13	18	44	0	14	12	6	7	0	4	7	116	11	0	7	19	83	21	0	2	357	987
08:30 AM	4	13	27	0	10	10	8	2	0	2	4	128	15	0	3	17	85	22	0	2	335	630
08:45 AM	10	10	26	0	9	18	11	4	0	0	3	121	7	0	2	19	50	16	0	3	295	295
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	52	84	180	0	68	84	28	28	0	20	40	596	44	0	28	100	340	184	0	16	**1760**	
Heavy Trucks	8	12	4			12	4	4			4	16	4			8	20	12			**108**	
Pedestrians		0					4					0					0				**4**	
Bicycles	0	0	4			0	0	0			0	4	0			0	0	4			**12**	
Railroad																						
Stopped Buses																						

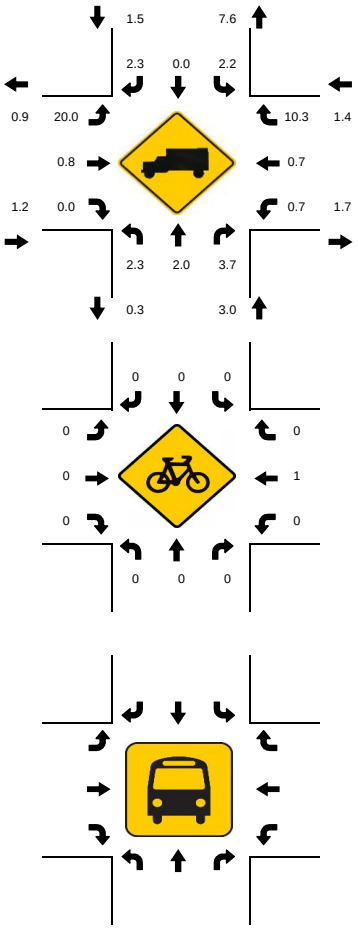
LOCATION: SW 38th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-002
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







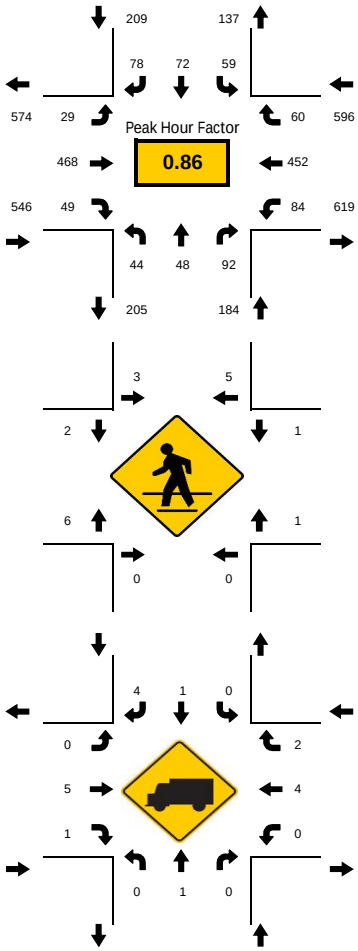
15-Min Count Period Beginning At	SW 38th Ave Northbound					SW 38th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	10	8	37	0	24	26	13	6	0	2	5	108	11	0	5	45	131	12	0	5	412	1724
04:15 PM	12	13	27	0	11	26	15	13	0	9	4	161	16	0	6	36	159	18	0	3	500	1740
04:30 PM	12	10	21	0	10	20	15	7	0	5	4	102	19	1	7	49	113	19	0	2	392	1763
04:45 PM	12	11	32	0	18	35	24	7	0	4	2	92	11	0	7	44	132	18	0	0	420	1775
05:00 PM	13	12	29	0	12	53	27	8	0	5	4	81	15	0	5	34	137	15	0	0	428	1763
05:15 PM	7	9	41	0	15	65	41	14	0	8	3	115	13	0	9	33	167	15	0	0	523	1335
05:30 PM	12	19	34	0	3	32	22	15	0	10	1	80	6	0	6	40	133	10	0	3	404	812
05:45 PM	9	18	32	0	11	16	23	10	0	5	0	91	9	0	6	44	143	13	0	0	408	408

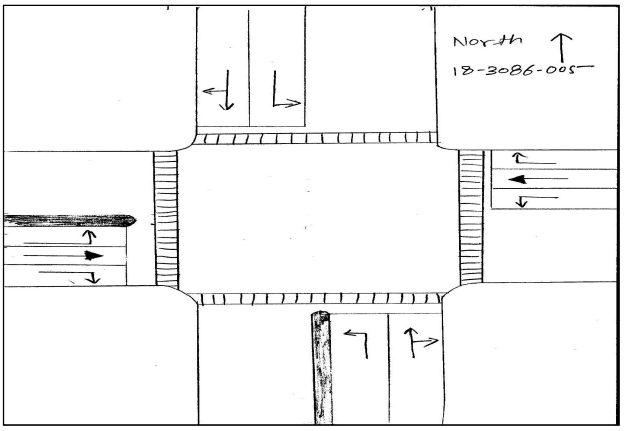
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	52	76	164	0	72	260	164	60	0	40	16	460	60	0	36	176	668	72	0	12	**2228**
Heavy Trucks	4	4	20			8	0	4			4	8	0			4	12	8			**76**
Pedestrians		4					8					0					0				**12**
Bicycles	0	0	0			0	0	0			0	0	0			0	4	0			**4**
Railroad																					
Stopped Buses																					

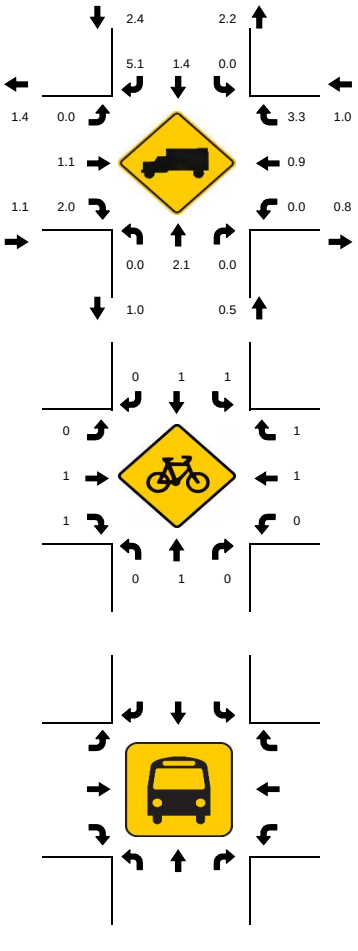
LOCATION: SW 31st Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-005
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







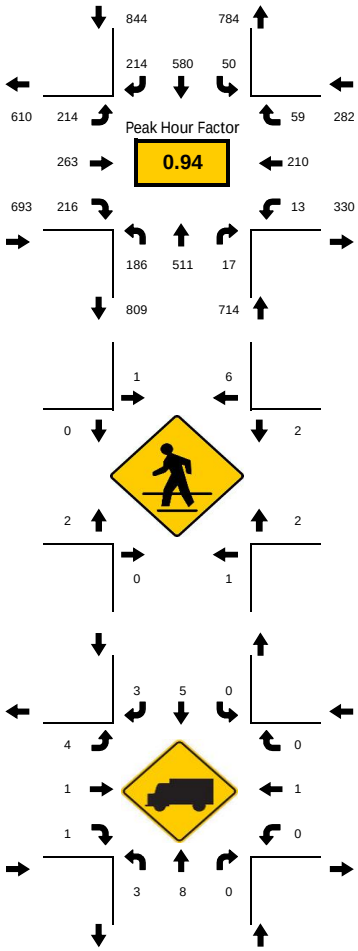
15-Min Count Period	SW 31st Ave Northbound					SW 31st Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
04:00 PM	5	9	36	0	7	17	11	13	0	5	17	131	8	0	1	12	86	9	0	1	354	1445
04:15 PM	6	5	26	0	4	16	15	13	0	7	18	155	6	0	2	18	104	13	0	3	395	1473
04:30 PM	8	17	27	0	7	10	7	10	0	3	6	111	9	0	3	15	100	17	0	4	337	1523
04:45 PM	15	6	28	0	10	13	18	16	0	3	6	109	10	0	5	16	109	13	0	3	359	1535
05:00 PM	13	15	27	0	2	14	14	16	0	7	6	120	13	0	6	24	110	10	0	2	382	1472
05:15 PM	6	17	16	0	6	21	14	33	0	6	12	137	20	0	4	27	121	21	0	3	445	1090
05:30 PM	10	10	21	0	5	11	26	13	0	4	5	102	6	0	1	17	112	16	0	4	349	645
05:45 PM	4	11	22	0	7	13	7	10	0	3	5	96	9	0	3	12	90	17	0	2	296	296

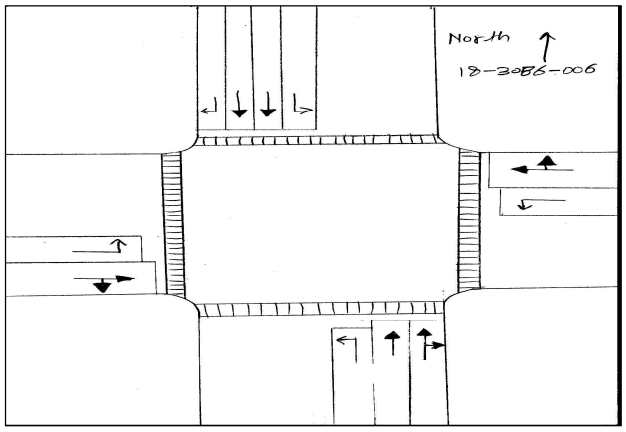
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	60	68	112	0	40	84	104	132	0	28	48	548	80	0	24	108	484	84	0	16	**1912**
Heavy Trucks	0	4	0			0	4	16			0	12	4			0	8	4			**52**
Pedestrians		0					24					28					4				**56**
Bicycles	0	4	0			4	4	0			0	4	4			0	4	4			**28**
Railroad Stopped Buses																					

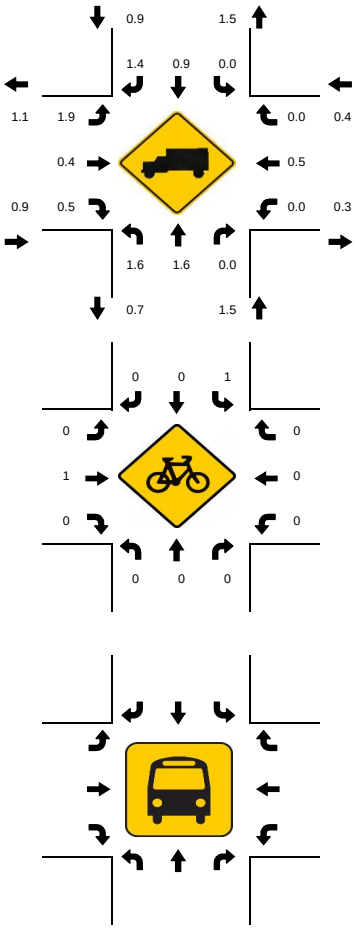
LOCATION: SW 27th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-006
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







15-Min Count Period Beginning At	SW 27th Ave Northbound					SW 27th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	41	122	2	0	0	13	158	48	0	27	48	69	66	0	10	4	41	17	0	1	629	2461
04:15 PM	44	119	1	0	0	15	144	43	0	22	71	67	56	0	7	6	52	15	0	0	633	2485
04:30 PM	51	131	5	0	1	12	132	46	0	19	60	45	54	0	10	4	46	12	0	0	598	2527
04:45 PM	39	122	5	0	0	13	153	51	0	25	54	64	39	0	5	2	48	11	0	6	601	2533
05:00 PM	39	124	2	0	0	9	150	58	0	28	65	81	53	0	8	5	48	19	0	1	653	2431
05:15 PM	57	155	6	0	0	12	151	57	0	21	47	64	60	0	3	3	48	15	0	1	675	1778
05:30 PM	51	110	4	0	1	16	126	48	0	25	48	54	64	0	4	3	66	14	0	1	604	1103
05:45 PM	39	110	5	0	1	16	135	33	0	17	56	37	28	0	3	2	24	14	0	8	499	499

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	228	620	24	0	4	64	612	232	0	112	260	324	256	0	32	20	264	76	0	24	**2980**
Heavy Trucks	8	12	0			0	8	8			8	4	4			0		4	0		**56**
Pedestrians		4					24					8					8				**44**
Bicycles	0	0	0			4	0	0			0	4	0			0		0	0		**8**
Railroad																					
Stopped Buses																					

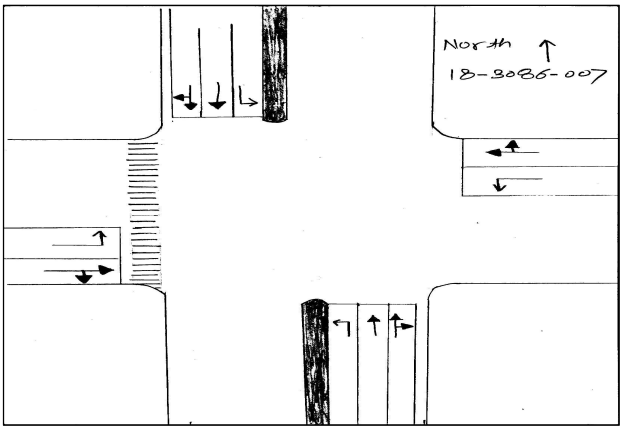
LOCATION: SW 60th Ave & SW 38th St/40th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-007
DATE: 02/20/2018

Peak-Hour: 04:00 PM - 05:00 PM
Peak 15-Minute: 04:00 PM - 04:15 PM

Peak Hour Factor
0.90

National Data & Surveying Services



15-Min Count Period	SW 60th Ave Northbound					SW 60th Ave Southbound					SW 38th St/40th St Eastbound					SW 38th St/40th St Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
04:00 PM	30	130	9	0	1	32	179	38	0	4	33	69	58	0	7	11	33	20	0	5	642	2304
04:15 PM	22	109	12	1	1	25	168	42	0	5	35	41	27	0	3	15	47	27	0	4	571	2278
04:30 PM	13	131	7	0	0	23	170	32	0	4	32	55	25	0	5	9	45	32	0	8	574	2298
04:45 PM	18	99	12	0	0	22	166	32	0	3	35	35	19	0	2	14	36	29	0	8	517	2279
05:00 PM	27	126	15	0	1	20	194	54	0	2	34	34	27	0	10	4	48	33	0	1	616	2256
05:15 PM	22	93	8	0	0	21	208	51	0	7	31	37	27	0	8	15	57	21	0	3	591	1640
05:30 PM	33	92	10	0	0	27	187	55	0	2	19	45	19	0	3	4	45	19	0	3	555	1049
05:45 PM	36	101	3	1	0	14	143	35	0	10	28	35	21	0	7	6	46	25	0	3	494	494

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	120	524	48	4	4	128	716	168	0	20	140	276	232	0	28	60	188	128	0	32	**2732**
Heavy Trucks	4	20	4			4	24	12			8	12	20			4	4	4			**120**
Pedestrians		0					0					0					0				**0**
Bicycles	0	0	0			0	4	0			0	0	0			0	0	0			**4**
Railroad Stopped Buses																					

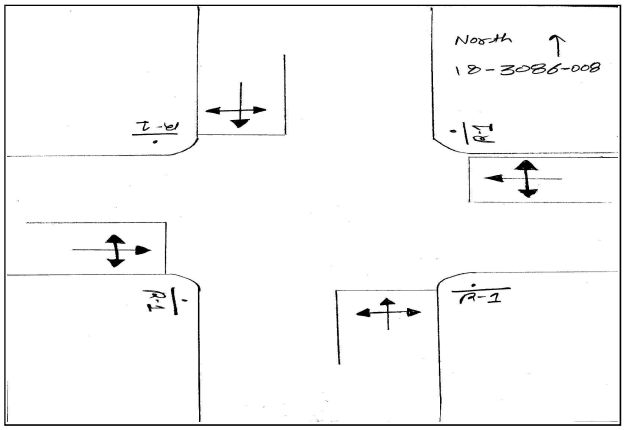
LOCATION: SW 43rd Ct & SW 38th St/40th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-008
DATE: 02/20/2018

Peak-Hour: 04:15 PM - 05:15 PM
Peak 15-Minute: 04:30 PM - 04:45 PM

Peak Hour Factor
0.97

National Data & Surveying Services

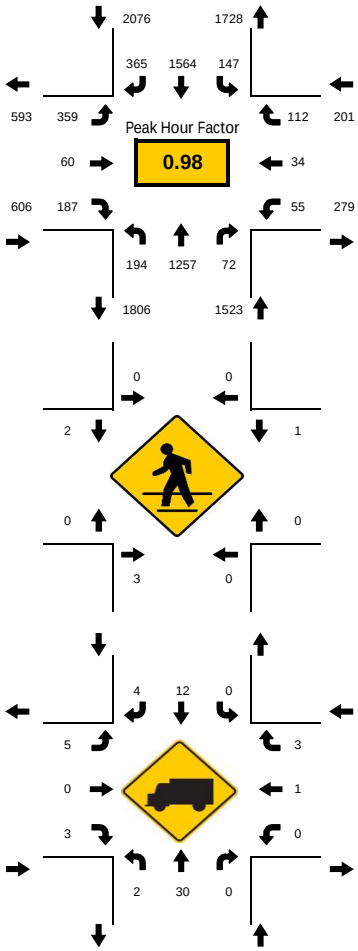


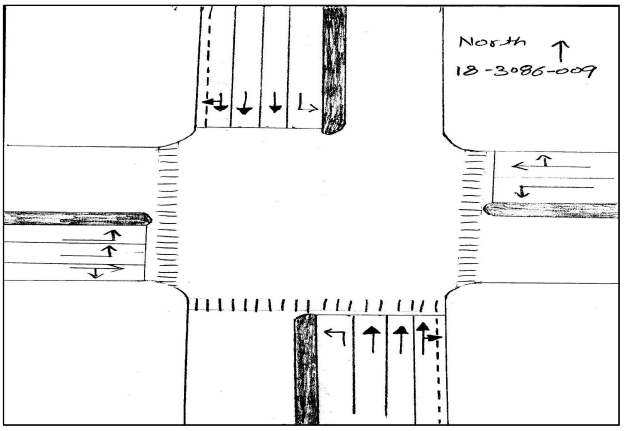
15-Min Count Period Beginning At	SW 43rd Ct Northbound					SW 43rd Ct Southbound					SW 38th St/40th St Eastbound					SW 38th St/40th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	8	4	4	0		9	3	7	0		7	82	10	0		2	65	16	1		218	881
04:15 PM	14	5	4	0		20	4	6	0		7	58	5	0		6	83	7	0		219	886
04:30 PM	5	3	6	0		10	5	3	0		6	76	5	0		3	92	13	1		228	886
04:45 PM	5	4	4	0		10	3	9	0		8	71	5	0		3	76	18	0		216	871
05:00 PM	12	2	4	0		12	5	13	0		9	62	1	0		2	81	20	0		223	857
05:15 PM	9	7	7	0		11	3	7	0		5	63	4	0		6	80	16	1		219	634
05:30 PM	8	10	4	0		19	4	5	0		8	66	5	0		5	64	15	0		213	415
05:45 PM	10	4	6	0		17	4	9	0		3	44	4	0		1	83	17	0		202	202
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	56	20	24	0		80	20	52	0		36	304	20	0		24	368	80	4		**1088**	
Heavy Trucks	0	0	0			4	4	4			8	12	4			0	12	4			**52**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			**0**	
Railroad																						
Stopped Buses																						

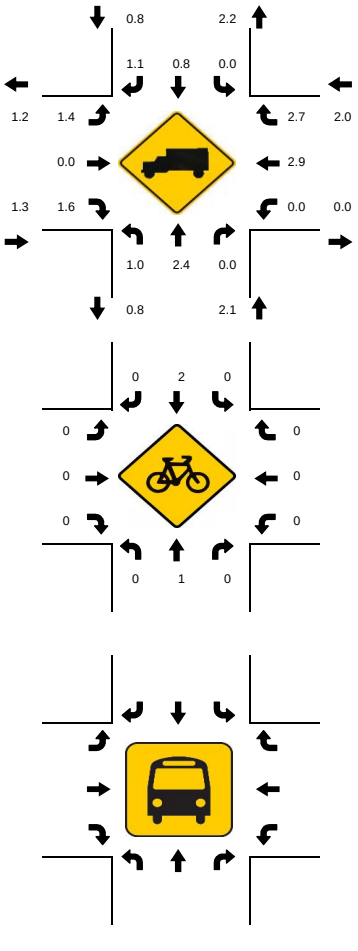
LOCATION: SR 200 & SW 38th Ct
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-009
DATE: 02/20/2018

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM







15-Min Count Period	SR 200 Northbound					SR 200 Southbound					SW 38th Ct Eastbound					SW 38th Ct Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
04:00 PM	43	301	15	4	0	30	348	76	9	19	104	14	63	0	30	16	16	28	0	4	1067	4345
04:15 PM	46	298	24	2	0	26	391	83	9	6	69	20	52	0	19	11	13	26	0	5	1070	4405
04:30 PM	42	284	19	2	5	26	409	96	9	4	118	19	40	0	10	16	7	29	0	16	1116	4406
04:45 PM	50	329	16	8	1	33	348	106	6	12	77	14	47	0	21	13	11	34	0	10	1092	4345
05:00 PM	44	373	24	4	1	24	382	77	4	0	86	15	59	0	30	8	8	19	0	11	1127	4155
05:15 PM	42	271	13	2	0	38	425	86	7	14	78	12	41	0	21	18	8	30	0	15	1071	3028
05:30 PM	53	308	15	5	1	21	366	76	8	6	89	17	51	0	13	14	13	19	0	1	1055	1957
05:45 PM	42	256	14	4	2	24	338	76	8	16	60	11	23	0	14	14	7	25	0	13	902	902
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	200	1492	96	32	20	152	1700	424	36	56	472	76	236	0	120	72	44	136	0	64	**5168**	
Heavy Trucks	4	40	0			0	20	8			12	0	12			0	4	8			**108**	
Pedestrians		8					0					8					4				**20**	
Bicycles	0	4	0			0	4	0			0	0	0			0	0	0			**8**	
Railroad Stopped Buses																						

Appendix D: Signal Timing Worksheets

Station : 106 - SW 60th Ave & SW 20th St (Standard File)

Phase [1.1.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk																
Ped Clearance																
Min Green	7	15	5	10	10	15										
Passage	2.5	2.5	2.5	2.5	2.5	2.5										
Max1	20	50	10	20	20	50										
Max2																
Yellow	4.7	4.7	4.3	4.7	4.7	4.7										
Red		2	2.1	2		2										
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON										
Auto Entry				ON												
Non Act1																
Non Act2																
Lock Call				ON					ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON				ON			ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Prepared By	Date Implemented	Reviewed By	Traffic Engineer

City of Ocala Timing Sheet 1/17/2017 1:47:52 PM

Station : 106 - SW 60th Ave & SW 20th St (Standard File)

Unit Parameters [1.2.1]

Start	Auto	Back	Red	Cons	Tone	Feat	Phas	Dian	SDL	TS2	Cycl	Max	Max	Max	Enal	Loca	Start	Disa	Yell	Omit	Free

ID: 107
Name: SW 20th St & 38th Ave
Configuration: Standard

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	16	0	22	0	16	0	22	0	0	0	0	0	0	0	0
Min Green	10	20	5	10	10	20	5	10	0	0	0	0	0	0	0	0
Passage	3	4	3	3	3	4	3	3	0	0	0	0	0	0	0	0
Max1	20	45	20	25	20	45	20	25	0	0	0	0	0	0	0	0
Max2	20	65	20	25	20	65	20	25	0	0	0	0	0	0	0	0
Yellow	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	0	0	0	0	0	0	0
Red	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 222
Name: SW 20th St & 31st Ave-
Configuration: Upload

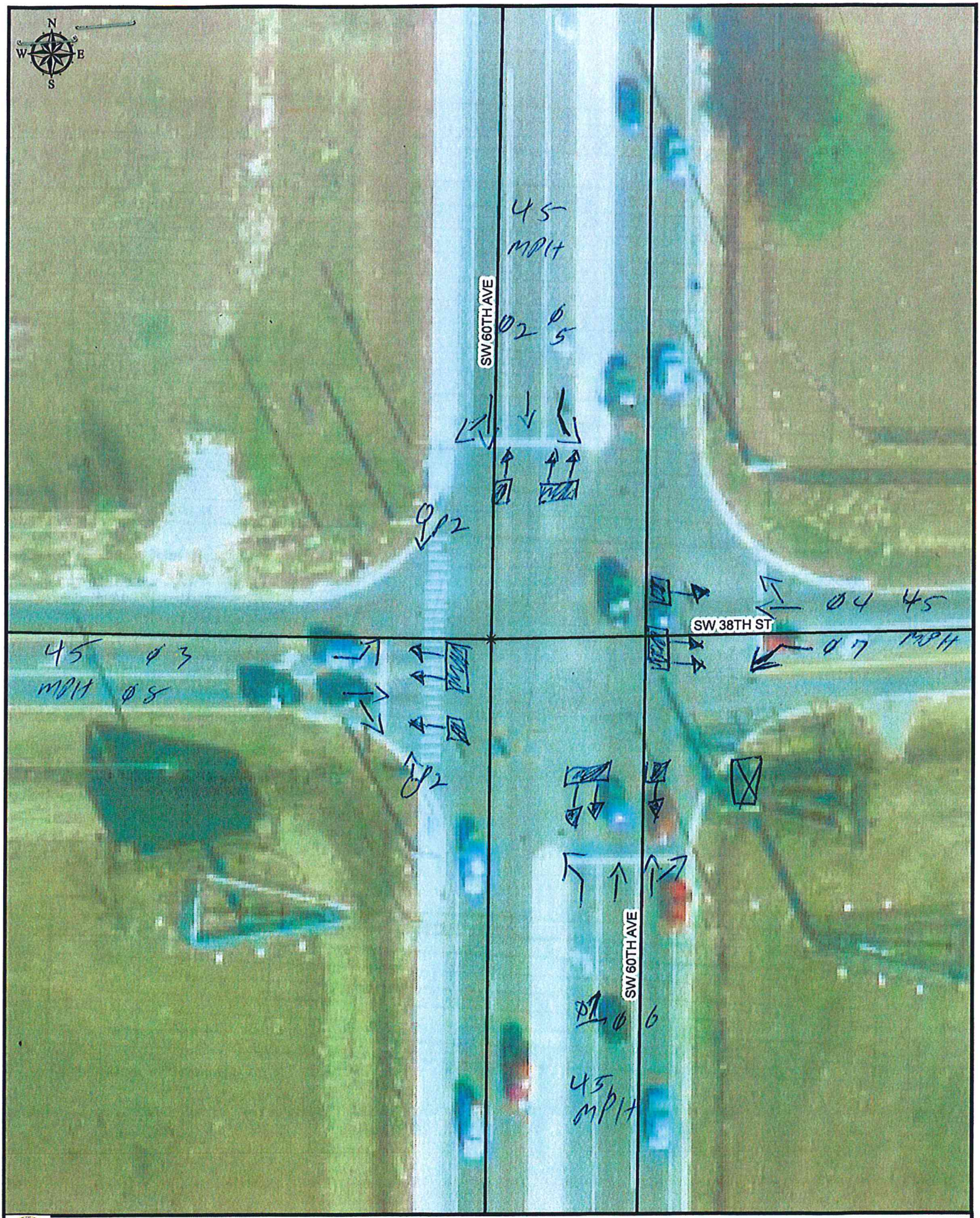
Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	15	0	14	0	15	0	0	0	0	0	0	0	0	0	0
Min Green	0	15	0	8	5	15	2	2	0	0	0	0	0	0	0	0
Passage	0	4	0	3.5	3.5	4	0	0	0	0	0	0	0	0	0	0
Max1	0	30	0	26	20	30	0	0	0	0	0	0	0	0	0	0
Max2	0	40	0	30	25	40	0	0	0	0	0	0	0	0	0	0
Yellow	0	4.7	0	3.6	3.6	4.7	0	4	0	0	0	0	0	0	0	0
Red	0	2	0	2.4	2	2	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	Off	On	Off	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 170
Name: SW 27th Ave & SW 20th St (Temp)
Configuration: Standard

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	28	0	25	0	18	0	26	0	0	0	0	0	0	0	0
Min Green	7	20	7	7	0	20	0	7	0	0	0	0	0	0	0	0
Passage	3	3	3	3	0	3	0	3	0	0	0	0	0	0	0	0
Max1	30	40	30	40	0	40	0	40	0	0	0	0	0	0	0	0
Max2	25	67	24	34	0	93	0	50	0	0	0	0	0	0	0	0
Yellow	4.7	4.7	4.7	3.6	0	4.7	0	4.7	0	0	0	0	0	0	0	0
Red	0	2	0	3.1	0	2	0	2	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	On	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 170
Name: SW 27th Ave & SW 20th St (Temp)
Configuration: Standard

Pattern	Cycle Time	Offset Time	Split Number	Seq Number
Pattern 1	140	118	1	1
Pattern 2	150	16	2	1
Pattern 3	160	30	3	1
Pattern 4	110	93	4	1
Pattern 5	160	146	5	1
Pattern 6	0	0	0	1
Pattern 7	0	0	0	1
Pattern 8	0	0	0	1
Pattern 9	0	0	0	1
Pattern 10	0	0	0	1
Pattern 11	0	0	0	1
Pattern 12	0	0	0	1
Pattern 13	0	0	0	1
Pattern 14	0	0	0	1
Pattern 15	0	0	0	1
Pattern 16	0	0	0	1
Pattern 17	0	0	0	1
Pattern 18	0	0	0	1
Pattern 19	0	0	0	1
Pattern 20	0	0	0	1
Pattern 21	0	0	0	1
Pattern 22	0	0	0	1
Pattern 23	0	0	0	1
Pattern 24	0	0	0	1
Pattern 25	0	0	0	1
Pattern 26	0	0	0	1
Pattern 27	0	0	0	1
Pattern 28	0	0	0	1
Pattern 29	0	0	0	1
Pattern 30	0	0	0	1
Pattern 31	0	0	0	1
Pattern 32	0	0	0	1
Pattern 33	0	0	0	1
Pattern 34	0	0	0	1
Pattern 35	0	0	0	1
Pattern 36	0	0	0	1
Pattern 37	0	0	0	1
Pattern 38	0	0	0	1
Pattern 39	0	0	0	1
Pattern 40	0	0	0	1
Pattern 41	0	0	0	1
Pattern 42	0	0	0	1
Pattern 43	0	0	0	1
Pattern 44	0	0	0	1
Pattern 45	0	0	0	1
Pattern 46	0	0	0	1
Pattern 47	0	0	0	1
Pattern 48	0	0	0	1



SW 60TH AVE @ SW 38TH ST

Marion County Office of the County Engineer
Traffic Division
412 SE 25th Avenue
Ocala, FL 34471

\\mcbcc1\dfs\GIS_TR\Linda.Rea\MAPS\TRAFFIC\Signals\FieldNotesMap

Printed: 07/16/2013, LMR

Notes

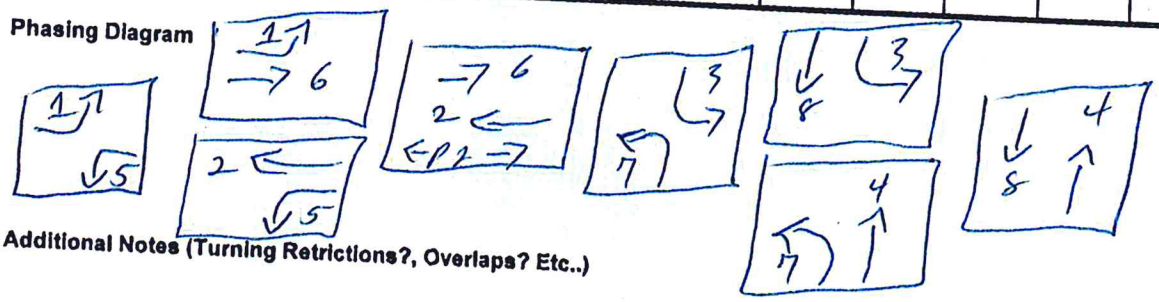
ID	Major St	Minor St	Date	Technician
7	SW 60th Ave	SW 38th ST	8-6-13	Mike Roberson

Basic Timing

PHASE	Φ1	Φ2	Φ3	Φ4	Φ5	Φ6	Φ7	Φ8
MIN GRN	7	25	5	10	7	25	5	10
GAP EXT	3	3	3	3	3	3	3	3
MAX 1	20	50	10	20	20	50	10	20
MAX 2	3.7	4.8	3.7	4.8	3.7	4.8	3.7	4.8
YEL CLR	~~4.3~~	~~4.3~~	~~4.3~~	~~4.3~~	~~4.3~~	~~4.3~~	~~4.3~~	~~4.3~~
RED CLR	2	2	2	2	2	2	2	2
WALK		7						
PED CLR		18						
MIN RECALL		✓						
MAX RECALL						✓		
PED RECALL								
NON-LOCK CALLS	✓		✓	✓	✓		✓	✓
DUAL ENTRY				✓				✓
REST IN WALK								

REVISED 12/30/13 B.R.S.

Phasing Diagram



Additional Notes (Turning Retrictions?, Overlaps? Etc..)

Coordination

Yes (No)

Split	Movement Number 1	2	3	4	5	6	7	8	COMMENTS
1									
2									AM Peak
3									MD PeaK
									PM Peak

Time Patterns for Coordination

Station : 70 - SR 200 & SW 38 CT (Standard File)

Phase [1.1.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7				7		7								
Ped Clearance		24				25		38								
Min Green	7	20	7	7	7	20	7	7								
Passage	3	3	3	3	3	3	3	3								
Max1	20	55	25	33	20	54	33	25								
Max2	27	84	29	20	33	74	26	20								
Yellow	4.8	4.8	3.7	3.7	4.8	4.8	3.7	3.7								
Red	2.6	2	2.4	3.5	2.6	2	2.1	3.6								
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk		ON				ON										

Phase Option [1.1.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Entry				ON				ON								
Non Act1																
Non Act2																
Lock Call	ON	ON	ON		ON	ON	ON									
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable																
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1										
2										
3										
4										
5										
6										
7										
8										

Prepared By	Date Implemented	Reviewed By	Traffic Engineer

City of Ocala Timing Sheet 12/29/2016 9:01:28 AM

Station : 70 - SR 200 & SW 38 CT (Standard File)

Unit Parameters [1.2.1]

Start	Auto	Back	Red	Cons	Tone	Feat	Phas	Dian	SDL	TS2	Cycl	Max	Max	Max	Enal	Loca	Start	Disa	Yell	Omit	Free

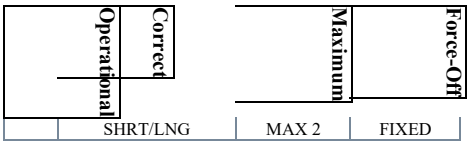
Station : 70 - SR 200 & SW 38 CT (Standard File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

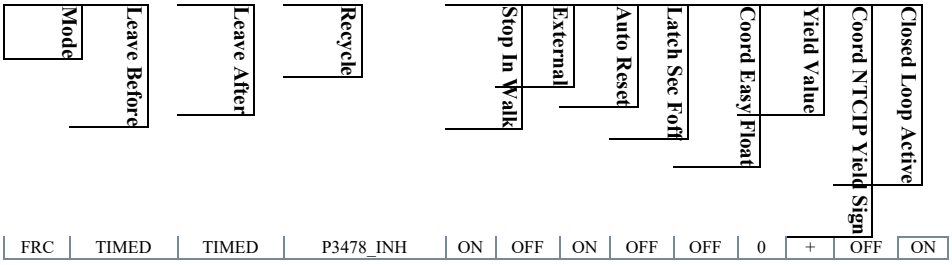
Preempt	1	2	3	4	5	6
Enable						
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1						
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes



Modes+



Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	140	150	160	110	160											
Offset Time	53	79	88	12	39											
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	9	11	9	10	11	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time																
Offset Time																
Split Number	17	18	19	20	21	22	23	24								
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 70 - SR 200 & SW 38 CT (Standard File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	53	39	22	15	64	20	41								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	27	51	20	52	22	56	32	40								
Mode	MAX	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	28	79	33	20	33	74	20	33								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	51	23	18	18	51	18	23								
Mode	NON	MXP	NON	NON	MAX	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	27	61	20	52	22	66	32	40								
Mode	MAX	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Appendix E: Intersection Volume Development Worksheets

INTERSECTION VOLUME DEVELOPMENT
SW 60th Ave @ SW 20th St
PM Peak Hour

Case	SW 60th Ave Northbound			SW 60th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	2	456	205	123	709	0	0	0	1	342	0	217
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	2	461	207	124	716	0	0	0	1	345	0	219
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	3	592	266	159	920	0	0	0	1	443	0	281
Reserved Trips												
Heathbrook (remaining unbuilt)	0	28	9	0	26	0	0	0	0	9	0	0
Trinity Lane/Red Oak PUD	0	70	0	0	66	0	0	0	0	0	0	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	0	0	0	0	0
Broadmoor Oaks	0	10	0	0	8	0	0	0	0	0	0	0
Paddock Ridge East	0	0	0	1	0	0	0	0	0	0	0	3
Paddock Ridge West	0	0	0	3	0	0	0	0	0	0	0	7
On Top of the World	0	42	42	0	61	0	0	0	0	61	0	0
Winding Oaks PD	0	66	19	0	57	0	0	0	0	16	0	0
Reserved Trips	0	216	70	4	218	0	0	0	0	86	0	10
2037 Non-Project Traffic	3	808	336	163	1,138	0	0	0	1	529	0	291
Project Assignment	0.0%	0.0%	33.0%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.0%	0.0%	19.0%
	--	--	IN	IN	--	--	--	--	--	OUT	--	OUT
Project Traffic (Net New Trips)	0	0	95	55	0	0	0	0	0	77	0	44
Total Build-Out Volumes	3	808	431	218	1,138	0	0	0	1	606	0	335

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]RAW TMCs *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 54th Ct @ SW 20th St
PM Peak Hour

Case	SW 54th Ct Northbound			SW 54th Ct Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	0	0	0	14	0	17	22	336	0	2	579	35
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	0	0	0	14	0	17	22	339	0	2	585	35
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	0	0	0	18	0	22	28	436	0	3	752	45
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	9	0	0	9	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	13	0	0	14	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	0	0	0	0	0
Broadmoor Oaks	0	0	0	0	0	0	0	0	0	0	0	0
Paddock Ridge East	0	0	0	0	0	0	0	1	0	0	3	0
Paddock Ridge West	0	0	0	0	0	0	0	3	0	0	7	0
On Top of the World	0	0	0	0	0	0	0	70	0	0	102	0
Winding Oaks PD	0	0	0	0	0	0	0	9	0	0	8	0
Reserved Trips	0	0	0	0	0	0	0	105	0	0	143	0
2037 Non-Project Traffic	0	0	0	18	0	22	28	541	0	3	895	45
Project Assignment	45.5%	0.9%	24.5%	0.3%	0.7%	0.0%	0.0%	22.8%	29.8%	46.4%	7.3%	0.0%
	OUT	OUT	OUT	IN	IN	--	--	IN	IN	IN	OUT	--
Project Traffic (Net New Trips)	106	2	57	1	2	0	0	66	86	134	17	0
Pass-By Traffic	23	0	5	0	0	0	0	14	10	31	-24	0
Total Build-Out Volumes	129	2	62	19	2	22	28	621	96	168	888	45

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]RAW TMCs *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ave @ SW 20th St
AM Peak Hour

Case	SW 38th Ave Northbound			SW 38th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	38	73	159	57	24	18	35	551	32	79	308	130
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	38	74	161	58	24	18	35	557	32	80	311	131
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	49	95	207	75	31	23	45	716	41	103	400	168
Reserved Trips												
Heathbrook (remaining unbuilt)	4	2	6	0	1	0	0	0	3	4	0	0
Trinity Lane/Red Oak PUD	5	21	5	0	21	0	0	0	5	5	0	0
Grand Oaks Town Center remaining	1	1	1	0	1	0	0	0	1	1	0	0
Broadmoor Oaks	2	9	35	0	11	0	0	0	2	42	0	0
Paddock Ridge East	1	0	0	0	0	0	0	0	2	0	0	0
Paddock Ridge West	1	0	0	0	0	0	0	0	5	0	0	0
On Top of the World	0	0	0	0	0	9	18	36	0	0	19	0
Winding Oaks PD	0	2	0	0	3	0	0	0	0	0	0	0
Reserved Trips	14	35	47	0	37	9	18	36	18	52	19	0
2037 Non-Project Traffic	63	130	254	75	68	32	63	752	59	155	419	168
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	29.0%	0.0%	0.0%	29.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	9	16	76	0	0	44	0
Total Build-Out Volumes	63	130	254	75	68	41	79	828	59	155	463	168

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 4 (AM) *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 43rd Ct @ SW 20th St
PM Peak Hour

Case	SW 43rd Ct Northbound			SW 44th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	0	0	0	65	0	115	32	445	0	3	604	21
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	0	0	0	66	0	116	32	449	0	3	610	21
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	0	0	0	85	0	149	41	577	0	4	784	27
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	9	0	0	9	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	13	0	0	14	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	0	0	0	0	0
Broadmoor Oaks	0	0	0	0	0	0	0	0	0	0	0	0
Paddock Ridge East	0	0	0	0	0	0	0	1	0	0	3	0
Paddock Ridge West	0	0	0	0	0	0	0	3	0	0	7	0
On Top of the World	0	0	0	0	0	0	0	56	0	0	82	0
Winding Oaks PD	0	0	0	0	0	8	9	0	0	0	0	0
Reserved Trips	0	0	0	0	0	8	9	82	0	0	115	0
2037 Non-Project Traffic	0	0	0	85	0	157	50	659	0	4	899	27
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.0%	36.0%	0.0%	0.0%	36.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	23	19	84	0	0	104	0
Total Build-Out Volumes	0	0	0	85	0	180	69	743	0	4	1,003	27

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 2 *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ave @ SW 20th St
AM Peak Hour

Case	SW 38th Ave Northbound			SW 38th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	38	73	159	57	24	18	35	551	32	79	308	130
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	38	74	161	58	24	18	35	557	32	80	311	131
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	49	95	207	75	31	23	45	716	41	103	400	168
Reserved Trips												
Heathbrook (remaining unbuilt)	4	2	6	0	1	0	0	0	3	4	0	0
Trinity Lane/Red Oak PUD	5	21	5	0	21	0	0	0	5	5	0	0
Grand Oaks Town Center remaining	1	1	1	0	1	0	0	0	1	1	0	0
Broadmoor Oaks	2	9	35	0	11	0	0	0	2	42	0	0
Paddock Ridge East	1	0	0	0	0	0	0	0	2	0	0	0
Paddock Ridge West	1	0	0	0	0	0	0	0	5	0	0	0
On Top of the World	0	0	0	0	0	9	18	36	0	0	19	0
Winding Oaks PD	0	2	0	0	3	0	0	0	0	0	0	0
Reserved Trips	14	35	47	0	37	9	18	36	18	52	19	0
2037 Non-Project Traffic	63	130	254	75	68	32	63	752	59	155	419	168
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	29.0%	0.0%	0.0%	29.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	9	16	76	0	0	44	0
Total Build-Out Volumes	63	130	254	75	68	41	79	828	59	155	463	168

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ave @ SW 20th St
PM Peak Hour

Case	SW 38th Ave Northbound			SW 38th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	44	51	136	185	114	44	10	368	45	151	569	58
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	44	52	137	187	115	44	10	372	45	153	575	59
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	57	67	176	240	148	57	13	478	58	197	739	76
Reserved Trips												
Heathbrook (remaining unbuilt)	1	1	14	0	2	0	0	0	2	13	0	0
Trinity Lane/Red Oak PUD	7	28	7	0	26	0	0	0	7	7	0	0
Grand Oaks Town Center remaining	1	1	1	0	1	0	0	0	1	1	0	0
Broadmoor Oaks	5	13	46	0	10	0	0	0	4	37	0	0
Paddock Ridge East	3	0	0	0	0	0	0	0	1	0	0	0
Paddock Ridge West	7	0	0	0	0	0	0	0	3	0	0	0
On Top of the World	0	0	0	0	0	20	14	28	0	0	41	0
Winding Oaks PD	0	9	0	0	8	0	0	0	0	0	0	0
Reserved Trips	24	52	68	0	47	20	14	28	18	58	41	0
2037 Non-Project Traffic	81	119	244	240	195	77	27	506	76	255	780	76
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	29.0%	0.0%	0.0%	29.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	17	14	68	0	0	84	0
Total Build-Out Volumes	81	119	244	240	195	94	41	574	76	255	864	76

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 2 *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
College of Central FL @ SW 20th St
PM Peak Hour

Case	College of Central FL Northbound			SW 31st Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	44	48	92	59	72	78	29	468	49	84	452	60
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	44	48	93	60	73	79	29	473	49	85	457	61
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	57	62	120	77	94	102	37	608	63	109	587	78
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	17	0	0	14	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	7	0	0	7	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	1	0	0	1	0
Broadmoor Oaks	0	0	0	0	0	0	0	46	0	0	37	0
Paddock Ridge East	0	0	0	0	0	0	0	0	0	0	0	0
Paddock Ridge West	0	0	0	0	0	0	0	0	0	0	0	0
On Top of the World	0	0	0	0	0	0	0	14	0	0	20	0
Winding Oaks PD	0	0	0	0	0	0	0	0	0	0	0	0
Reserved Trips	0	0	0	0	0	0	0	85	0	0	79	0
2037 Non-Project Traffic	57	62	120	77	94	102	37	693	63	109	666	78
Project Assignment	1.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	19.0%	1.0%	0.0%	19.0%	0.0%
	IN	--	--	--	--	IN	OUT	OUT	OUT	--	IN	--
Project Traffic (Net New Trips)	3	0	0	0	0	3	2	44	2	0	55	0
Total Build-Out Volumes	60	62	120	77	94	105	39	737	65	109	721	78

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0.120044 0.085903

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 27th Ave @ SW 20th St
PM Peak Hour

Case	SW 27th Ave Northbound			SW 27th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	186	511	17	50	580	214	214	263	216	13	210	59
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	188	516	17	51	586	216	216	266	218	13	212	60
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	242	663	22	66	753	278	278	342	280	17	272	77
Reserved Trips												
Heathbrook (remaining unbuilt)	14	43	0	0	61	0	0	0	20	0	0	0
Trinity Lane/Red Oak PUD	14	56	0	0	53	0	0	0	13	0	0	0
Grand Oaks Town Center remaining	2	8	0	0	9	0	0	0	2	0	0	0
Broadmoor Oaks	5	17	0	0	9	0	0	0	2	0	0	0
Paddock Ridge East	0	3	0	0	1	0	0	0	0	0	0	0
Paddock Ridge West	1	7	0	0	3	0	0	0	0	0	0	0
On Top of the World	0	0	0	0	0	0	0	7	0	0	10	0
Winding Oaks PD	0	9	0	0	8	0	0	0	0	0	0	0
Reserved Trips	36	143	0	0	144	0	0	7	37	0	10	0
2037 Non-Project Traffic	278	806	22	66	897	278	278	349	317	17	282	77
Project Assignment	4.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	8.0%	4.0%	0.0%	8.0%	0.0%
	IN	--	--	--	--	IN	OUT	OUT	OUT	--	IN	--
Project Traffic (Net New Trips)	12	0	0	0	0	20	16	19	9	0	23	0
Total Build-Out Volumes	290	806	22	66	897	298	294	368	326	17	305	77

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 2 *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 60th Ave @ SW 38th St
PM Peak Hour

Case	SW 60th Ave Northbound			SW 60th Ave Southbound			SW 38th St Eastbound			SW 38th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	84	469	40	102	683	144	135	200	129	49	161	108
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	85	474	40	103	690	145	136	202	130	49	163	109
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	109	609	51	132	887	186	175	260	167	63	209	140
Reserved Trips												
Heathbrook (remaining unbuilt)	0	37	9	0	34	0	0	0	0	9	0	0
Trinity Lane/Red Oak PUD	28	42	0	13	40	0	0	0	26	0	0	14
Grand Oaks Town Center remaining	0	0	4	0	0	0	0	4	0	3	3	0
Broadmoor Oaks	0	5	0	5	4	0	0	10	0	0	13	5
Paddock Ridge East	0	0	1	0	0	0	0	1	0	3	3	0
Paddock Ridge West	0	0	3	0	0	0	0	3	0	7	7	0
On Top of the World	0	0	0	0	0	123	83	56	0	0	82	0
Winding Oaks PD	28	85	0	0	74	0	0	0	25	0	0	0
Reserved Trips	56	169	17	18	152	123	83	74	51	22	108	19
2037 Non-Project Traffic	165	778	68	150	1,039	309	258	334	218	85	317	159
Project Assignment	0.0%	19.0%	0.0%	12.0%	19.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	12.0%
	--	IN	--	OUT	OUT	OUT	IN	--	--	--	--	IN
Project Traffic (Net New Trips)	0	55	0	28	44	5	6	0	0	0	0	35
Total Build-Out Volumes	165	833	68	178	1,083	314	264	334	218	85	317	194

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 43rd Ct @ SW 40th St
PM Peak Hour

Case	SW 43rd Ct Northbound			SW 44th Ave Southbound			SW 40th St Eastbound			SW 40th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	36	14	18	52	17	31	30	267	16	15	332	58
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	36	14	18	53	17	31	30	270	16	15	335	59
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	46	18	23	68	22	40	39	347	21	19	430	76
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	19	0	0	13	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	13	0	0	14	0
Grand Oaks Town Center remaining	0	0	0	7	0	0	0	8	0	0	6	6
Broadmoor Oaks	0	0	0	0	0	0	0	19	0	0	23	0
Paddock Ridge East	0	0	0	0	0	0	0	0	0	0	1	0
Paddock Ridge West	0	0	0	0	0	0	0	1	0	0	2	1
On Top of the World	0	0	0	0	0	0	0	28	0	0	41	0
Winding Oaks PD	0	0	0	8	0	0	0	0	0	0	0	9
Reserved Trips	0	0	0	15	0	0	0	88	0	0	100	16
2037 Non-Project Traffic	46	18	23	83	22	40	39	435	21	19	530	92
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.0%	0.0%	0.0%	11.0%	0.0%
	--	--	--	--	--	--	--	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	0	0	26	0	0	32	0
Total Build-Out Volumes	46	18	23	83	22	40	39	461	21	19	562	92

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 2 *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ct @ SR 200
PM Peak Hour

Case	SW 38th Ct Northbound			SW 38th Ct Southbound			SR 200 Eastbound			SR 200 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	55	34	112	359	60	187	194	1,257	72	147	1,564	365
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	56	34	113	363	61	189	196	1,270	73	148	1,580	369
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	72	44	145	466	78	243	252	1,632	94	190	2,030	474
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	15	10	200	0	0	185	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	53	56	32	0	0	31	0
Grand Oaks Town Center remaining	0	0	0	0	0	20	22	32	0	0	31	0
Broadmoor Oaks	0	0	0	59	0	19	40	0	0	19	29	32
Paddock Ridge East	0	0	0	0	0	1	2	7	0	0	3	0
Paddock Ridge West	0	0	0	0	0	2	4	18	0	0	7	0
On Top of the World	0	0	0	0	0	0	0	75	0	0	110	0
Winding Oaks PD	0	0	0	0	0	8	9	142	0	0	123	0
Reserved Trips	0	0	0	59	0	118	143	506	0	19	519	32
2037 Non-Project Traffic	72	44	145	525	78	361	395	2,138	94	209	2,549	506
Project Assignment	0.0%	0.0%	0.0%	5.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	--	--	--	OUT	--	OUT	IN	--	--	--	--	IN
Project Traffic (Net New Trips)	0	0	0	12	0	14	17	0	0	0	0	14
Total Build-Out Volumes	72	44	145	537	78	375	412	2,138	94	209	2,549	520

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Int. 2 *3/20/2018*

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

Appendix F: Synchro Output

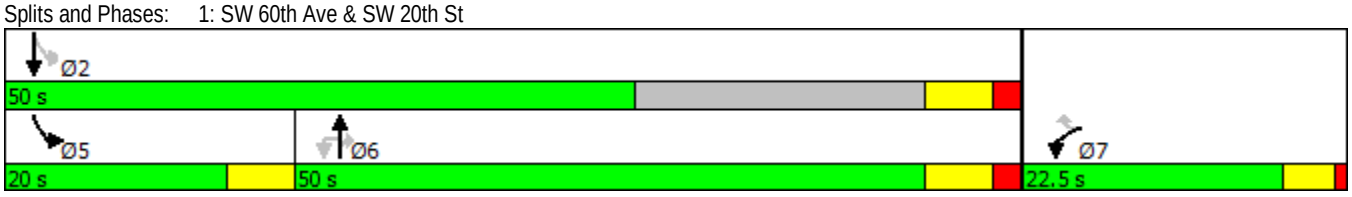
PM Peak Hour Existing Traffic Conditions

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	345	219	2	461	207	124	716
Future Volume (vph)	345	219	2	461	207	124	716
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	3%	3%	3%	2%	2%
Adj. Flow (vph)	388	246	2	518	233	139	804
Shared Lane Traffic (%)							
Lane Group Flow (vph)	388	246	2	518	233	139	804
Turn Type	Prot	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases	7			6		5	2
Permitted Phases		7	6		6	2	
Detector Phase	7	7	6	6	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	15.0	15.0	15.0	10.0	15.0
Minimum Split (s)	22.5	22.5	21.7	21.7	21.7	14.7	21.7
Total Split (s)	22.5	22.5	50.0	50.0	50.0	20.0	50.0
Total Split (%)	24.3%	24.3%	54.1%	54.1%	54.1%	21.6%	54.1%
Yellow Time (s)	3.5	3.5	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.7	6.7	6.7	4.7	6.7
Lead/Lag			Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	Min	None	Min
v/c Ratio	0.69	0.37	0.01	0.51	0.38	0.26	0.47
Control Delay	28.5	4.9	16.0	20.2	4.9	7.8	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	4.9	16.0	20.2	4.9	7.8	10.4
Queue Length 50th (ft)	122	0	1	84	0	22	88
Queue Length 95th (ft)	#278	46	5	128	42	43	121
Internal Link Dist (ft)	2558			6545			3224
Turn Bay Length (ft)			185		295	190	
Base Capacity (vph)	559	668	488	2665	1248	637	3502
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.37	0.00	0.19	0.19	0.22	0.23

Intersection Summary

Cycle Length: 92.5
Actuated Cycle Length: 58
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SW 60th Ave & SW 20th St



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	345	219	2	461	207	124	716
Future Volume (veh/h)	345	219	2	461	207	124	716
Number	7	14		6	16	5	2
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1845	1845	1863	1863
Adj Flow Rate, veh/h	388	101		518	163	139	804
Adj No. of Lanes	1	1		2	1	1	2
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		3	3	2	2
Cap, veh/h	447	399		1170	523	551	1989
Arrive On Green	0.25	0.25		0.33	0.33	0.15	0.56
Sat Flow, veh/h	1774	1583		3597	1568	1774	3632
Grp Volume(v), veh/h	388	101		518	163	139	804
Grp Sat Flow(s),veh/h/ln	1774	1583		1752	1568	1774	1770
Q Serve(g_s), s	12.6	3.1		7.0	4.7	2.5	7.7
Cycle Q Clear(g_c), s	12.6	3.1		7.0	4.7	2.5	7.7
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	447	399		1170	523	551	1989
V/C Ratio(X)	0.87	0.25		0.44	0.31	0.25	0.40
Avail Cap(c_a), veh/h	531	474		2522	1128	736	2547
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	18.0		15.7	14.9	8.4	7.5
Incr Delay (d2), s/veh	12.6	0.3		0.3	0.3	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	1.4		3.4	2.0	1.2	3.7
LnGrp Delay(d),s/veh	34.2	18.3		15.9	15.2	8.7	7.6
LnGrp LOS	C	B		B	B	A	A
Approach Vol, veh/h	489			681			943
Approach Delay, s/veh	30.9			15.8			7.8
Approach LOS	C			B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.5		19.7	13.7	26.8		
Change Period (Y+Rc), s		6.7		4.5	4.7	6.7		
Max Green Setting (Gmax), s		43.3		18.0	15.3	43.3		
Max Q Clear Time (g_c+I1), s		9.7		14.6	4.5	9.0		
Green Ext Time (p_c), s		11.1		0.6	0.2	11.1		

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Notes

User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	339	0	2	585	35	0	0	0	14	0	17
Future Volume (vph)	22	339	0	2	585	35	0	0	0	14	0	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Adj. Flow (vph)	26	404	0	2	696	42	0	0	0	17	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	404	0	0	740	0	0	0	0	0	37	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

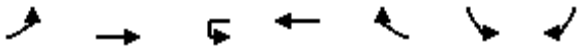
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	339	0	2	585	35	0	0	0	14	0	17
Future Vol, veh/h	22	339	0	2	585	35	0	0	0	14	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	3	3	3
Mvmt Flow	26	404	0	2	696	42	0	0	0	17	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	738	0	0	404	0	0	809	1199	202	976	1178	369
Stage 1	-	-	-	-	-	-	456	456	-	722	722	-
Stage 2	-	-	-	-	-	-	353	743	-	254	456	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.5	6.5	6.9	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Follow-up Hdwy	2.21	-	-	2.22	-	-	3.5	4	3.3	3.53	4.03	3.33
Pot Cap-1 Maneuver	871	-	-	1151	-	-	275	187	811	204	188	625
Stage 1	-	-	-	-	-	-	559	572	-	382	427	-
Stage 2	-	-	-	-	-	-	642	425	-	725	564	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	871	-	-	1151	-	-	259	181	811	199	182	625
Mov Cap-2 Maneuver	-	-	-	-	-	-	259	181	-	199	182	-
Stage 1	-	-	-	-	-	-	542	555	-	371	426	-
Stage 2	-	-	-	-	-	-	619	424	-	703	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	0	17.8
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	871	-	-	1151	-	-	318
HCM Lane V/C Ratio	-	0.03	-	-	0.002	-	-	0.116
HCM Control Delay (s)	0	9.3	-	-	8.1	-	-	17.8
HCM Lane LOS	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	32	449	0	610	21	66	116
Future Volume (vph)	32	449	0	610	21	66	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	2%
Adj. Flow (vph)	35	493	0	670	23	73	127
Shared Lane Traffic (%)							
Lane Group Flow (vph)	35	493	0	693	0	73	127
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	32	449	0	610	21	66	116
Future Vol, veh/h	32	449	0	610	21	66	116
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	2	2
Mvmt Flow	35	493	0	670	23	73	127

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	693	0	360	-	0	999	347
Stage 1	-	-	-	-	-	682	-
Stage 2	-	-	-	-	-	317	-
Critical Hdwy	4.12	-	6.42	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.21	-	2.51	-	-	3.52	3.32
Pot Cap-1 Maneuver	905	-	853	-	-	240	649
Stage 1	-	-	-	-	-	464	-
Stage 2	-	-	-	-	-	711	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	905	-	853	-	-	231	649
Mov Cap-2 Maneuver	-	-	-	-	-	231	-
Stage 1	-	-	-	-	-	464	-
Stage 2	-	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	905	-	853	-	-	231	649
HCM Lane V/C Ratio	0.039	-	-	-	-	0.314	0.196
HCM Control Delay (s)	9.1	-	0	-	-	27.6	11.9
HCM Lane LOS	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	-	0	-	-	1.3	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	372	45	153	575	59	44	52	137	187	115	44
Future Volume (vph)	10	372	45	153	575	59	44	52	137	187	115	44
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	12	438	53	180	676	69	52	61	161	220	135	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	438	53	180	745	0	52	222	0	220	135	52
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.04	0.69	0.08	0.43	0.84		0.16	0.71		0.66	0.32	0.11
Control Delay	11.6	33.7	0.3	15.6	34.9		29.2	41.0		39.7	41.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.6	33.7	0.3	15.6	34.9		29.2	41.0		39.7	41.4	0.5
Queue Length 50th (ft)	3	239	0	58	356		19	75		91	67	0
Queue Length 95th (ft)	12	334	0	93	649		59	181		#221	154	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	338	1151	1030	443	1137		430	389		350	431	469
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.38	0.05	0.41	0.66		0.12	0.57		0.63	0.31	0.11

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 100.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	372	45	153	575	59	44	52	137	187	115	44
Future Volume (veh/h)	10	372	45	153	575	59	44	52	137	187	115	44
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	12	438	21	180	676	65	52	61	105	220	135	20
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	199	727	618	447	779	75	294	75	130	328	391	332
Arrive On Green	0.03	0.39	0.39	0.10	0.46	0.46	0.04	0.12	0.12	0.12	0.21	0.21
Sat Flow, veh/h	1792	1881	1599	1792	1690	163	1757	610	1050	1774	1863	1583
Grp Volume(v), veh/h	12	438	21	180	0	741	52	0	166	220	135	20
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1853	1757	0	1659	1774	1863	1583
Q Serve(g_s), s	0.4	17.9	0.8	5.3	0.0	34.6	2.5	0.0	9.4	10.0	5.9	1.0
Cycle Q Clear(g_c), s	0.4	17.9	0.8	5.3	0.0	34.6	2.5	0.0	9.4	10.0	5.9	1.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	199	727	618	447	0	854	294	0	205	328	391	332
V/C Ratio(X)	0.06	0.60	0.03	0.40	0.00	0.87	0.18	0.00	0.81	0.67	0.35	0.06
Avail Cap(c_a), veh/h	403	1147	975	518	0	1129	475	0	322	359	391	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	23.6	18.4	15.4	0.0	23.3	34.8	0.0	41.1	30.2	32.4	30.5
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.6	0.0	5.8	0.3	0.0	8.1	4.2	0.5	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	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.4	0.3	2.6	0.0	18.9	1.2	0.0	4.8	5.2	3.1	0.4
LnGrp Delay(d),s/veh	20.7	24.4	18.4	16.0	0.0	29.1	35.1	0.0	49.2	34.4	32.9	30.5
LnGrp LOS	C	C	B	B		C	D		D	C	C	C
Approach Vol, veh/h		471			921			218			375	
Approach Delay, s/veh		24.1			26.5			45.8			33.7	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	50.7	18.3	18.2	16.2	43.5	10.1	26.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	2.4	36.6	12.0	11.4	7.3	19.9	4.5	7.9
Green Ext Time (p_c), s	0.0	7.8	0.1	0.5	0.2	9.1	0.1	1.3

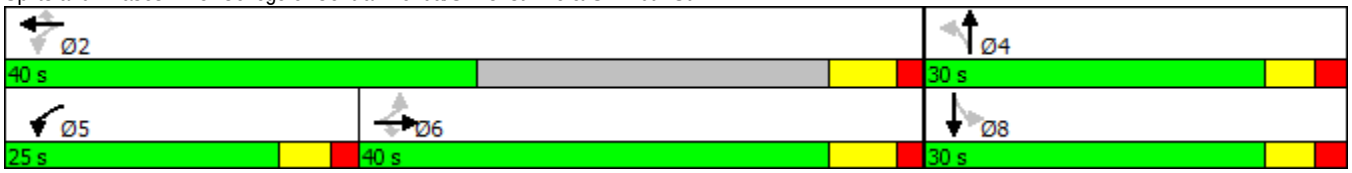
Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	473	49	85	457	61	44	48	93	60	73	79
Future Volume (vph)	29	473	49	85	457	61	44	48	93	60	73	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	34	550	57	99	531	71	51	56	108	70	85	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	550	57	99	531	71	51	164	0	70	177	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.10	0.72	0.08	0.22	0.48	0.07	0.23	0.42		0.31	0.49	
Control Delay	13.5	22.4	1.3	5.7	8.3	1.7	27.7	15.8		29.3	23.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.5	22.4	1.3	5.7	8.3	1.7	27.7	15.8		29.3	23.5	
Queue Length 50th (ft)	8	168	0	12	88	0	17	21		23	41	
Queue Length 95th (ft)	25	299	6	29	164	12	49	72		62	103	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	528	1130	1000	745	1702	1454	526	789		526	774	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.06	0.49	0.06	0.13	0.31	0.05	0.10	0.21		0.13	0.23	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 59.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	473	49	85	457	61	44	48	93	60	73	79
Future Volume (veh/h)	29	473	49	85	457	61	44	48	93	60	73	79
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	34	550	38	99	531	57	51	56	81	70	85	69
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	467	759	645	389	1084	921	272	134	194	284	184	149
Arrive On Green	0.40	0.40	0.40	0.07	0.58	0.58	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	833	1881	1599	1792	1881	1599	1240	696	1007	1247	953	773
Grp Volume(v), veh/h	34	550	38	99	531	57	51	0	137	70	0	154
Grp Sat Flow(s),veh/h/ln	833	1881	1599	1792	1881	1599	1240	0	1703	1247	0	1726
Q Serve(g_s), s	1.4	13.6	0.8	1.6	9.2	0.9	2.1	0.0	3.9	2.9	0.0	4.3
Cycle Q Clear(g_c), s	1.4	13.6	0.8	1.6	9.2	0.9	6.4	0.0	3.9	6.8	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.45
Lane Grp Cap(c), veh/h	467	759	645	389	1084	921	272	0	329	284	0	333
V/C Ratio(X)	0.07	0.72	0.06	0.25	0.49	0.06	0.19	0.00	0.42	0.25	0.00	0.46
Avail Cap(c_a), veh/h	635	1138	968	893	1138	968	574	0	743	587	0	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	13.8	10.0	9.5	6.9	5.1	22.5	0.0	19.5	22.4	0.0	19.7
Incr Delay (d2), s/veh	0.1	1.3	0.0	0.3	0.3	0.0	0.3	0.0	0.8	0.4	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.3	0.4	0.8	4.8	0.4	0.7	0.0	1.9	1.0	0.0	2.1
LnGrp Delay(d),s/veh	10.3	15.2	10.1	9.8	7.2	5.2	22.8	0.0	20.3	22.9	0.0	20.7
LnGrp LOS	B	B	B	A	A	A	C		C	C		C
Approach Vol, veh/h		622			687			188			224	
Approach Delay, s/veh		14.6			7.4			21.0			21.4	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		38.4		16.6	9.5	28.9		16.6
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		11.2		8.4	3.6	15.6		8.8
Green Ext Time (p_c), s		7.3		1.9	0.2	6.6		1.9

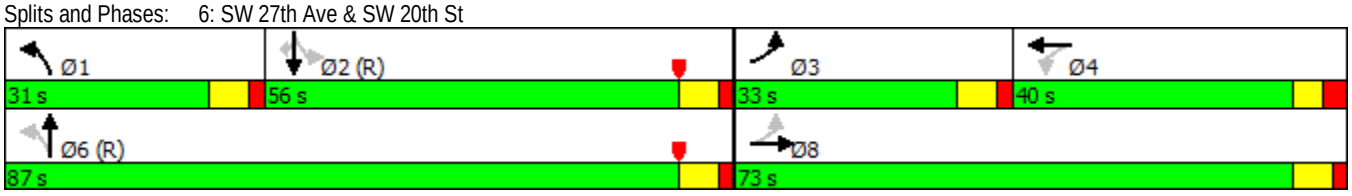
Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	266	218	13	212	60	188	516	17	51	586	216
Future Volume (vph)	216	266	218	13	212	60	188	516	17	51	586	216
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	230	283	232	14	226	64	200	549	18	54	623	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	515	0	14	290	0	200	567	0	54	623	230
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	33.0	73.0		40.0	40.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	20.6%	45.6%		25.0%	25.0%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.76	0.81		0.12	0.86		0.47	0.29		0.15	0.41	0.28
Control Delay	53.7	53.8		54.9	85.1		22.5	19.6		34.3	34.7	5.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.7	53.8		54.9	85.1		22.5	19.6		34.3	34.7	5.0
Queue Length 50th (ft)	177	457		12	288		102	159		35	237	0
Queue Length 95th (ft)	231	557		35	393		170	225		80	343	62
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	353	744		140	389		502	1987		354	1535	818
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	0.65	0.69		0.10	0.75		0.40	0.29		0.15	0.41	0.28

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	266	218	13	212	60	188	516	17	51	586	216
Future Volume (veh/h)	216	266	218	13	212	60	188	516	17	51	586	216
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	230	283	211	14	226	54	200	549	17	54	623	124
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	288	337	251	114	264	63	424	2032	63	441	1664	745
Arrive On Green	0.12	0.34	0.34	0.18	0.18	0.18	0.07	0.58	0.58	0.47	0.47	0.47
Sat Flow, veh/h	1792	1002	747	917	1483	354	1774	3505	108	850	3574	1599
Grp Volume(v), veh/h	230	0	494	14	0	280	200	277	289	54	623	124
Grp Sat Flow(s),veh/h/ln	1792	0	1749	917	0	1837	1774	1770	1844	850	1787	1599
Q Serve(g_s), s	16.3	0.0	41.8	2.3	0.0	23.7	9.1	12.5	12.5	5.8	18.0	7.2
Cycle Q Clear(g_c), s	16.3	0.0	41.8	18.7	0.0	23.7	9.1	12.5	12.5	5.8	18.0	7.2
Prop In Lane	1.00		0.43	1.00		0.19	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	288	0	589	114	0	327	424	1026	1069	441	1664	745
V/C Ratio(X)	0.80	0.00	0.84	0.12	0.00	0.86	0.47	0.27	0.27	0.12	0.37	0.17
Avail Cap(c_a), veh/h	373	0	725	142	0	382	565	1026	1069	441	1664	745
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	49.1	69.4	0.0	63.8	20.0	16.8	16.8	24.4	27.7	24.8
Incr Delay (d2), s/veh	9.1	0.0	7.3	0.5	0.0	15.5	0.8	0.6	0.6	0.6	0.6	0.5
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 BackOfQ(50%),veh/ln	8.8	0.0	21.4	0.6	0.0	13.5	4.5	6.3	6.5	1.4	9.1	3.3
LnGrp Delay(d),s/veh	55.7	0.0	56.3	69.9	0.0	79.3	20.8	17.4	17.4	25.0	28.3	25.2
LnGrp LOS	E		E	E		E	C	B	B	C	C	C
Approach Vol, veh/h		724			294			766			801	
Approach Delay, s/veh		56.1			78.9			18.3			27.6	
Approach LOS		E			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	18.3	81.2	25.4	35.1		99.5		60.5
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	26.3	33.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	11.1	20.0	18.3	25.7		14.5		43.8
Green Ext Time (p_c), s	0.4	9.0	0.4	2.8		10.1		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	202	130	49	163	109	85	474	40	103	690	145
Future Volume (vph)	136	202	130	49	163	109	85	474	40	103	690	145
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	151	224	144	54	181	121	94	527	44	114	767	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	368	0	54	302	0	94	571	0	114	928	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	25.0		7.0	25.0	
Minimum Split (s)	10.7	16.8		10.7	16.8		12.7	31.8		12.7	31.8	
Total Split (s)	10.7	20.0		10.7	20.0		20.0	50.0		20.0	50.0	
Total Split (%)	10.6%	19.9%		10.6%	19.9%		19.9%	49.7%		19.9%	49.7%	
Yellow Time (s)	3.7	4.8		3.7	4.8		3.7	4.8		3.7	4.8	
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)	5.7	6.8		5.7	6.8		5.7	6.8		5.7	6.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.65	0.87		0.24	0.93		0.32	0.45		0.26	0.71	
Control Delay	40.0	56.2		24.4	68.0		11.9	20.0		10.4	23.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.0	56.2		24.4	68.0		11.9	20.0		10.4	23.9	
Queue Length 50th (ft)	54	~210		18	134		21	110		26	199	
Queue Length 95th (ft)	#135	#436		51	#338		41	160		48	273	
Internal Link Dist (ft)		3446			2567			4365			6545	
Turn Bay Length (ft)	200			310			190			185		
Base Capacity (vph)	233	421		221	325		436	1964		563	1963	
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	0.65	0.87		0.24	0.93		0.22	0.29		0.20	0.47	

Intersection Summary

Cycle Length: 100.7
Actuated Cycle Length: 77.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 7: SW 60th Ave & SW 38th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	202	130	49	163	109	85	474	40	103	690	145
Future Volume (veh/h)	136	202	130	49	163	109	85	474	40	103	690	145
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1900	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	151	224	125	54	181	93	94	527	42	114	767	143
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	2	2	2
Cap, veh/h	221	207	116	171	197	101	319	1193	95	440	1092	204
Arrive On Green	0.06	0.19	0.19	0.04	0.17	0.17	0.08	0.36	0.36	0.08	0.37	0.37
Sat Flow, veh/h	1723	1092	610	1774	1161	597	1757	3289	262	1774	2979	555
Grp Volume(v), veh/h	151	0	349	54	0	274	94	280	289	114	456	454
Grp Sat Flow(s),veh/h/ln	1723	0	1702	1774	0	1757	1757	1752	1799	1774	1770	1765
Q Serve(g_s), s	5.0	0.0	14.8	1.9	0.0	11.9	2.5	9.4	9.5	3.0	17.1	17.1
Cycle Q Clear(g_c), s	5.0	0.0	14.8	1.9	0.0	11.9	2.5	9.4	9.5	3.0	17.1	17.1
Prop In Lane	1.00		0.36	1.00		0.34	1.00		0.15	1.00		0.31
Lane Grp Cap(c), veh/h	221	0	323	171	0	298	319	635	652	440	649	647
V/C Ratio(X)	0.68	0.00	1.08	0.32	0.00	0.92	0.29	0.44	0.44	0.26	0.70	0.70
Avail Cap(c_a), veh/h	221	0	323	207	0	298	504	973	998	620	982	980
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	0.0	31.5	25.9	0.0	31.8	15.0	18.8	18.8	13.5	21.0	21.0
Incr Delay (d2), s/veh	8.4	0.0	73.5	1.0	0.0	31.9	0.5	0.5	0.5	0.3	1.4	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 BackOfQ(50%),veh/ln	1.4	0.0	13.4	1.0	0.0	8.4	1.2	4.6	4.8	1.5	8.6	8.6
LnGrp Delay(d),s/veh	35.8	0.0	105.1	27.0	0.0	63.7	15.5	19.3	19.3	13.8	22.4	22.4
LnGrp LOS	D		F	C		E	B	B	B	B	C	C
Approach Vol, veh/h		500			328			663			1024	
Approach Delay, s/veh		84.1			57.6			18.8			21.5	
Approach LOS		F			E			B			C	

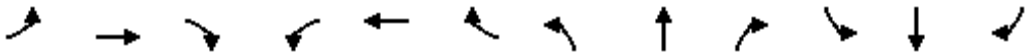
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	35.3	10.7	20.0	12.1	35.0	9.1	21.6
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8
Max Green Setting (Gmax), s	* 14	43.2	* 5	13.2	* 14	43.2	* 5	13.2
Max Q Clear Time (g_c+I1), s	4.5	19.1	7.0	13.9	5.0	11.5	3.9	16.8
Green Ext Time (p_c), s	0.1	9.4	0.0	0.0	0.2	10.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.9
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	270	16	15	335	59	36	14	18	53	17	31
Future Volume (vph)	30	270	16	15	335	59	36	14	18	53	17	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	31	278	16	15	345	61	37	14	19	55	18	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	325	0	0	421	0	0	70	0	0	105	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	270	16	15	335	59	36	14	18	53	17	31
Future Vol, veh/h	30	270	16	15	335	59	36	14	18	53	17	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	4	4	4	2	2	2	0	0	0	4	4	4
Mvmt Flow	31	278	16	15	345	61	37	14	19	55	18	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	13.7	9.7	10.1
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	53%	9%	4%	52%
Vol Thru, %	21%	85%	82%	17%
Vol Right, %	26%	5%	14%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	316	409	101
LT Vol	36	30	15	53
Through Vol	14	270	335	17
RT Vol	18	16	59	31
Lane Flow Rate	70	326	422	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.456	0.554	0.169
Departure Headway (Hd)	5.884	5.041	4.842	5.847
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	611	720	751	615
Service Time	3.907	3.041	2.842	3.868
HCM Lane V/C Ratio	0.115	0.453	0.562	0.169
HCM Control Delay	9.7	12.2	13.7	10.1
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	2.4	3.4	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	1270	73	148	1580	369	56	34	113	363	61	189
Future Volume (vph)	196	1270	73	148	1580	369	56	34	113	363	61	189
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	200	1296	74	151	1612	377	57	35	115	370	62	193
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	1370	0	151	1989	0	57	150	0	370	255	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.4	38.8		14.4	37.8		12.8	14.2		13.1	14.3	
Total Split (s)	28.0	74.0		33.0	79.0		20.0	20.0		33.0	33.0	
Total Split (%)	17.5%	46.3%		20.6%	49.4%		12.5%	12.5%		20.6%	20.6%	
Yellow Time (s)	4.8	4.8		4.8	4.8		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.6	2.0		2.6	2.0		2.1	3.5		2.4	3.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.4	6.8		7.4	6.8		5.8	7.2		6.1	7.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	0.84	0.54		0.72	0.81		0.49	0.80		0.77	0.69	
Control Delay	85.4	35.9		86.7	38.7		85.6	62.6		77.6	53.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	85.4	35.9		86.7	38.7		85.6	62.6		77.6	53.3	
Queue Length 50th (ft)	220	210		155	671		59	72		195	175	
Queue Length 95th (ft)	#367	461		227	739		107	#175		246	278	
Internal Link Dist (ft)		663			2272			411			708	
Turn Bay Length (ft)	290			500			170			260		
Base Capacity (vph)	246	2542		285	2443		157	205		582	383	
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	0.81	0.54		0.53	0.81		0.36	0.73		0.64	0.67	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 88 (55%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: SW 38th Ct & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	1270	73	148	1580	369	56	34	113	363	61	189
Future Volume (veh/h)	196	1270	73	148	1580	369	56	34	113	363	61	189
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1863	1863	1900	1881	1956	1900
Adj Flow Rate, veh/h	200	1296	67	151	1612	346	57	35	62	370	62	108
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	1	1	1
Cap, veh/h	220	2616	135	174	2126	453	73	42	75	435	105	182
Arrive On Green	0.12	0.53	0.53	0.10	0.50	0.50	0.04	0.07	0.07	0.13	0.16	0.16
Sat Flow, veh/h	1774	4952	256	1792	4242	903	1774	604	1070	3476	642	1118
Grp Volume(v), veh/h	200	887	476	151	1298	660	57	0	97	370	0	170
Grp Sat Flow(s),veh/h/ln	1774	1695	1818	1792	1712	1722	1774	0	1674	1738	0	1759
Q Serve(g_s), s	17.8	26.8	26.8	13.3	48.8	49.5	5.1	0.0	9.2	16.7	0.0	14.3
Cycle Q Clear(g_c), s	17.8	26.8	26.8	13.3	48.8	49.5	5.1	0.0	9.2	16.7	0.0	14.3
Prop In Lane	1.00		0.14	1.00		0.52	1.00		0.64	1.00		0.64
Lane Grp Cap(c), veh/h	220	1791	960	174	1716	863	73	0	117	435	0	287
V/C Ratio(X)	0.91	0.50	0.50	0.87	0.76	0.76	0.78	0.00	0.83	0.85	0.00	0.59
Avail Cap(c_a), veh/h	228	1791	960	287	1716	863	157	0	134	584	0	287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.2	24.1	24.1	71.2	32.1	32.3	76.0	0.0	73.4	68.5	0.0	62.0
Incr Delay (d2), s/veh	35.3	1.0	1.8	14.2	3.2	6.4	16.4	0.0	30.1	8.8	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	12.7	13.8	7.3	23.8	25.0	2.8	0.0	5.2	8.5	0.0	7.2
LnGrp Delay(d),s/veh	104.5	25.1	25.9	85.5	35.2	38.6	92.4	0.0	103.5	77.3	0.0	65.3
LnGrp LOS	F	C	C	F	D	D	F		F	E		E
Approach Vol, veh/h		1563			2109			154			540	
Approach Delay, s/veh		35.5			39.9			99.4			73.5	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	87.0	27.3	18.4	22.9	91.3	12.4	33.4
Change Period (Y+Rc), s	7.4	6.8	* 7.3	* 7.2	7.4	6.8	* 5.8	* 7.3
Max Green Setting (Gmax), s	20.6	72.2	* 27	* 13	25.6	67.2	* 14	* 26
Max Q Clear Time (g_c+I1), s	19.8	51.5	18.7	11.2	15.3	28.8	7.1	16.3
Green Ext Time (p_c), s	0.0	18.6	1.4	0.1	0.2	32.0	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

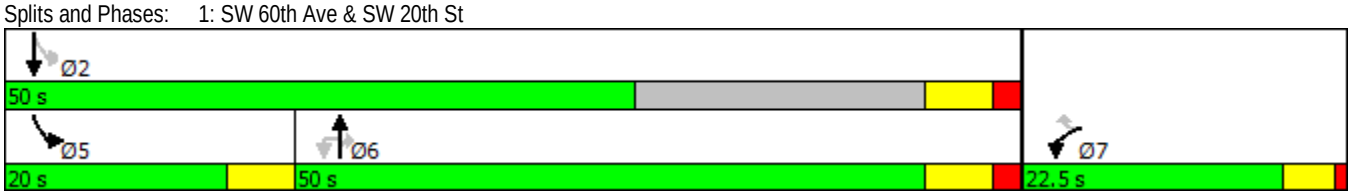
PM Peak Hour Future Year Background Traffic Conditions

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	529	291	3	808	336	163	1138
Future Volume (vph)	529	291	3	808	336	163	1138
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	3%	3%	3%	2%	2%
Adj. Flow (vph)	594	327	3	908	378	183	1279
Shared Lane Traffic (%)							
Lane Group Flow (vph)	594	327	3	908	378	183	1279
Turn Type	Prot	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases	7			6		5	2
Permitted Phases		7	6		6	2	
Detector Phase	7	7	6	6	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	15.0	15.0	15.0	10.0	15.0
Minimum Split (s)	22.5	22.5	21.7	21.7	21.7	14.7	21.7
Total Split (s)	22.5	22.5	50.0	50.0	50.0	20.0	50.0
Total Split (%)	24.3%	24.3%	54.1%	54.1%	54.1%	21.6%	54.1%
Yellow Time (s)	3.5	3.5	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.7	6.7	6.7	4.7	6.7
Lead/Lag			Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	Min	None	Min
v/c Ratio	1.34	0.53	0.02	0.69	0.46	0.43	0.61
Control Delay	196.7	8.9	14.0	22.0	3.7	8.7	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	196.7	8.9	14.0	22.0	3.7	8.7	10.5
Queue Length 50th (ft)	~343	11	1	171	0	30	170
Queue Length 95th (ft)	#669	88	6	244	45	51	214
Internal Link Dist (ft)	2558			6545			3224
Turn Bay Length (ft)			185		295	190	
Base Capacity (vph)	442	615	240	2107	1093	508	3099
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.34	0.53	0.01	0.43	0.35	0.36	0.41

Intersection Summary

Cycle Length: 92.5
Actuated Cycle Length: 73
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SW 60th Ave & SW 20th St



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	529	291	3	808	336	163	1138
Future Volume (veh/h)	529	291	3	808	336	163	1138
Number	7	14		6	16	5	2
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1845	1845	1863	1863
Adj Flow Rate, veh/h	594	134		908	266	183	1279
Adj No. of Lanes	1	1		2	1	1	2
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		3	3	2	2
Cap, veh/h	422	377		1480	662	430	2173
Arrive On Green	0.24	0.24		0.42	0.42	0.13	0.61
Sat Flow, veh/h	1774	1583		3597	1568	1774	3632
Grp Volume(v), veh/h	594	134		908	266	183	1279
Grp Sat Flow(s),veh/h/ln	1774	1583		1752	1568	1774	1770
Q Serve(g_s), s	18.0	5.3		15.3	8.9	3.7	16.5
Cycle Q Clear(g_c), s	18.0	5.3		15.3	8.9	3.7	16.5
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	422	377		1480	662	430	2173
V/C Ratio(X)	1.41	0.36		0.61	0.40	0.43	0.59
Avail Cap(c_a), veh/h	422	377		2006	898	559	2173
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	24.0		17.0	15.2	10.7	8.8
Incr Delay (d2), s/veh	196.8	0.6		0.4	0.4	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.8	2.4		7.4	3.9	1.8	8.1
LnGrp Delay(d),s/veh	225.6	24.6		17.4	15.6	11.4	9.2
LnGrp LOS	F	C		B	B	B	A
Approach Vol, veh/h	728			1174			1462
Approach Delay, s/veh	188.6			17.0			9.5
Approach LOS	F			B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		53.1		22.5	14.5	38.6		
Change Period (Y+Rc), s		6.7		4.5	4.7	6.7		
Max Green Setting (Gmax), s		43.3		18.0	15.3	43.3		
Max Q Clear Time (g_c+I1), s		18.5		20.0	5.7	17.3		
Green Ext Time (p_c), s		17.6		0.0	0.3	14.7		

Intersection Summary	
HCM 2010 Ctrl Delay	50.9
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	541	0	3	895	45	0	0	0	18	0	22
Future Volume (vph)	28	541	0	3	895	45	0	0	0	18	0	22
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Adj. Flow (vph)	33	644	0	4	1065	54	0	0	0	21	0	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	644	0	0	1123	0	0	0	0	0	47	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

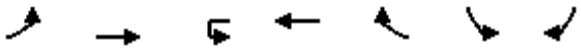
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	541	0	3	895	45	0	0	0	18	0	22
Future Vol, veh/h	28	541	0	3	895	45	0	0	0	18	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	3	3	3
Mvmt Flow	33	644	0	4	1065	54	0	0	0	21	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1119	0	0	644	0	0	1251	1837	322	1488	1810	560
Stage 1	-	-	-	-	-	-	711	711	-	1099	1099	-
Stage 2	-	-	-	-	-	-	540	1126	-	389	711	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.5	6.5	6.9	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Follow-up Hdwy	2.21	-	-	2.22	-	-	3.5	4	3.3	3.53	4.03	3.33
Pot Cap-1 Maneuver	626	-	-	937	-	-	131	77	680	85	77	469
Stage 1	-	-	-	-	-	-	395	439	-	225	284	-
Stage 2	-	-	-	-	-	-	499	282	-	604	432	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	626	-	-	937	-	-	118	72	680	81	72	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	72	-	81	72	-
Stage 1	-	-	-	-	-	-	374	416	-	213	281	-
Stage 2	-	-	-	-	-	-	466	279	-	572	409	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	0	40.1
HCM LOS			A	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	626	-	-	937	-	-	149
HCM Lane V/C Ratio	-	0.053	-	-	0.004	-	-	0.32
HCM Control Delay (s)	0	11.1	-	-	8.9	-	-	40.1
HCM Lane LOS	A	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	1.3



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	50	659	4	899	27	85	157
Future Volume (vph)	50	659	4	899	27	85	157
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	2%
Adj. Flow (vph)	55	724	4	988	30	93	173
Shared Lane Traffic (%)							
Lane Group Flow (vph)	55	724	4	1018	0	93	173
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	50	659	4	899	27	85	157
Future Vol, veh/h	50	659	4	899	27	85	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	2	2
Mvmt Flow	55	724	4	988	30	93	173

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	1018	0	529	-	0	1484	509
Stage 1	-	-	-	-	-	1012	-
Stage 2	-	-	-	-	-	472	-
Critical Hdwy	4.12	-	6.42	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.21	-	2.51	-	-	3.52	3.32
Pot Cap-1 Maneuver	683	-	668	-	-	116	509
Stage 1	-	-	-	-	-	312	-
Stage 2	-	-	-	-	-	594	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	683	-	668	-	-	107	509
Mov Cap-2 Maneuver	-	-	-	-	-	107	-
Stage 1	-	-	-	-	-	312	-
Stage 2	-	-	-	-	-	546	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	55.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	683	-	668	-	-	107	509
HCM Lane V/C Ratio	0.08	-	0.007	-	-	0.873	0.339
HCM Control Delay (s)	10.7	-	10.4	-	-	128.5	15.7
HCM Lane LOS	B	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	0	-	-	5.1	1.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	506	76	255	780	76	81	119	244	240	195	77
Future Volume (vph)	27	506	76	255	780	76	81	119	244	240	195	77
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	32	595	89	300	918	89	95	140	287	282	229	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	595	89	300	1007	0	95	427	0	282	229	91
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.15	0.78	0.12	0.87	1.09		0.34	1.36		1.07	0.66	0.23
Control Delay	13.0	38.7	1.2	42.2	89.4		35.2	214.2		110.8	57.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.0	38.7	1.2	42.2	89.4		35.2	214.2		110.8	57.8	3.8
Queue Length 50th (ft)	10	394	0	113	~977		57	~423		~217	179	0
Queue Length 95th (ft)	23	490	6	#227	#1128		98	#593		#387	#298	11
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	263	922	852	349	920		334	314		264	347	403
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.12	0.65	0.10	0.86	1.09		0.28	1.36		1.07	0.66	0.23

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 120.3
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	506	76	255	780	76	81	119	244	240	195	77
Future Volume (veh/h)	27	506	76	255	780	76	81	119	244	240	195	77
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	32	595	35	300	918	84	95	140	186	282	229	36
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	155	797	678	377	811	74	265	109	145	256	380	323
Arrive On Green	0.05	0.42	0.42	0.11	0.48	0.48	0.06	0.15	0.15	0.11	0.20	0.20
Sat Flow, veh/h	1792	1881	1599	1792	1698	155	1757	720	956	1774	1863	1583
Grp Volume(v), veh/h	32	595	35	300	0	1002	95	0	326	282	229	36
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1854	1757	0	1676	1774	1863	1583
Q Serve(g_s), s	1.2	32.8	1.6	11.2	0.0	58.7	5.5	0.0	18.7	13.7	13.7	2.3
Cycle Q Clear(g_c), s	1.2	32.8	1.6	11.2	0.0	58.7	5.5	0.0	18.7	13.7	13.7	2.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	155	797	678	377	0	885	265	0	255	256	380	323
V/C Ratio(X)	0.21	0.75	0.05	0.79	0.00	1.13	0.36	0.00	1.28	1.10	0.60	0.11
Avail Cap(c_a), veh/h	258	898	763	384	0	885	356	0	255	256	380	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	29.8	20.9	22.9	0.0	32.1	40.6	0.0	52.1	40.2	44.4	39.9
Incr Delay (d2), s/veh	0.6	3.0	0.0	10.9	0.0	73.5	0.8	0.0	152.2	85.8	2.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	17.7	0.7	6.6	0.0	48.1	2.8	0.0	19.4	8.1	7.3	1.0
LnGrp Delay(d),s/veh	28.8	32.9	20.9	33.8	0.0	105.7	41.4	0.0	204.3	126.0	47.1	40.0
LnGrp LOS	C	C	C	C		F	D		F	F	D	D
Approach Vol, veh/h		662			1302			421			547	
Approach Delay, s/veh		32.1			89.1			167.6			87.3	
Approach LOS		C			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	65.0	20.0	25.0	19.5	58.4	13.6	31.4
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	3.2	60.7	15.7	20.7	13.2	34.8	7.5	15.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	12.6	0.1	1.0

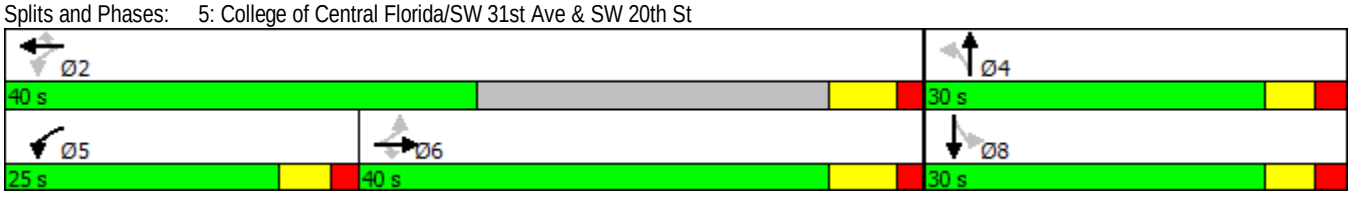
Intersection Summary	
HCM 2010 Ctrl Delay	87.2
HCM 2010 LOS	F

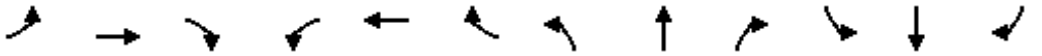
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	693	63	109	666	78	57	62	120	77	94	102
Future Volume (vph)	37	693	63	109	666	78	57	62	120	77	94	102
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	43	806	73	127	774	91	66	72	140	90	109	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	806	73	127	774	91	66	212	0	90	228	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.13	0.90	0.09	0.39	0.65	0.09	0.40	0.55		0.50	0.64	
Control Delay	15.6	36.6	2.4	10.2	11.8	1.8	34.6	20.8		38.1	29.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.6	36.6	2.4	10.2	11.8	1.8	34.6	20.8		38.1	29.9	
Queue Length 50th (ft)	11	332	0	17	178	0	27	46		38	73	
Queue Length 95th (ft)	35	#655	14	51	340	15	62	103		80	138	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	332	893	811	565	1534	1321	315	645		338	623	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.13	0.90	0.09	0.22	0.50	0.07	0.21	0.33		0.27	0.37	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 71.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	693	63	109	666	78	57	62	120	77	94	102
Future Volume (veh/h)	37	693	63	109	666	78	57	62	120	77	94	102
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	806	49	127	774	72	66	72	105	90	109	89
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	311	853	725	248	1126	957	245	153	222	259	209	171
Arrive On Green	0.45	0.45	0.45	0.07	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	655	1881	1599	1792	1881	1599	1191	693	1010	1203	950	776
Grp Volume(v), veh/h	43	806	49	127	774	72	66	0	177	90	0	198
Grp Sat Flow(s),veh/h/ln	655	1881	1599	1792	1881	1599	1191	0	1703	1203	0	1726
Q Serve(g_s), s	3.4	28.7	1.2	2.4	19.7	1.3	3.6	0.0	6.3	4.9	0.0	7.1
Cycle Q Clear(g_c), s	12.9	28.7	1.2	2.4	19.7	1.3	10.7	0.0	6.3	11.3	0.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.45
Lane Grp Cap(c), veh/h	311	853	725	248	1126	957	245	0	375	259	0	380
V/C Ratio(X)	0.14	0.94	0.07	0.51	0.69	0.08	0.27	0.00	0.47	0.35	0.00	0.52
Avail Cap(c_a), veh/h	325	893	759	627	1126	957	390	0	583	405	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	18.3	10.8	15.5	9.6	5.9	28.8	0.0	23.8	28.7	0.0	24.1
Incr Delay (d2), s/veh	0.2	17.8	0.0	1.6	1.8	0.0	0.6	0.0	0.9	0.8	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	19.0	0.5	1.3	10.7	0.6	1.2	0.0	3.0	1.7	0.0	3.5
LnGrp Delay(d),s/veh	17.6	36.1	10.8	17.2	11.4	5.9	29.4	0.0	24.7	29.5	0.0	25.2
LnGrp LOS	B	D	B	B	B	A	C		C	C		C
Approach Vol, veh/h		898			973			243			288	
Approach Delay, s/veh		33.8			11.7			26.0			26.5	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		48.7		21.4	10.2	38.5		21.4
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		21.7		12.7	4.4	30.7		13.3
Green Ext Time (p_c), s		7.8		2.2	0.2	1.1		2.2

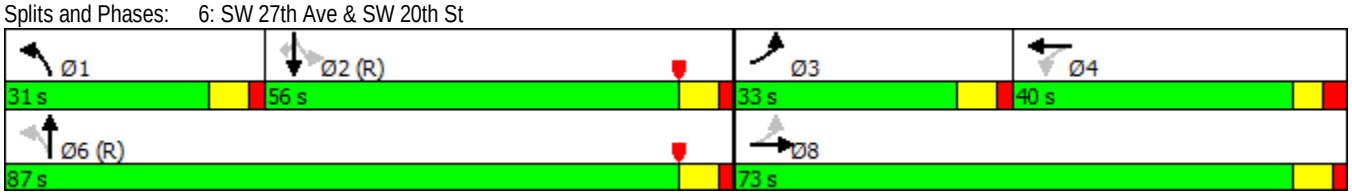
Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	278	349	317	17	282	77	278	806	22	66	897	278
Future Volume (vph)	278	349	317	17	282	77	278	806	22	66	897	278
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	296	371	337	18	300	82	296	857	23	70	954	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	296	708	0	18	382	0	296	880	0	70	954	296
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	33.0	73.0		40.0	40.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	20.6%	45.6%		25.0%	25.0%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.92	0.97		0.37	0.96		0.94	0.49		0.36	0.84	0.42
Control Delay	79.6	69.3		78.2	97.1		81.9	27.1		49.8	59.0	5.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	79.6	69.3		78.2	97.1		81.9	27.1		49.8	59.0	5.9
Queue Length 50th (ft)	253	687		16	396		251	315		58	497	0
Queue Length 95th (ft)	#421	#958		48	#619		#435	375		111	589	71
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	338	744		49	396		321	1792		193	1135	710
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	0.88	0.95		0.37	0.96		0.92	0.49		0.36	0.84	0.42

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	349	317	17	282	77	278	806	22	66	897	278
Future Volume (veh/h)	278	349	317	17	282	77	278	806	22	66	897	278
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	296	371	306	18	300	69	296	857	22	70	954	159
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	319	383	316	61	330	76	318	1816	47	269	1259	563
Arrive On Green	0.14	0.40	0.40	0.22	0.22	0.22	0.12	0.51	0.51	0.35	0.35	0.35
Sat Flow, veh/h	1792	955	787	774	1495	344	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	296	0	677	18	0	369	296	430	449	70	954	159
Grp Sat Flow(s),veh/h/ln	1792	0	1742	774	0	1839	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	19.9	0.0	60.9	3.3	0.0	31.3	16.9	24.9	24.9	12.8	37.7	11.4
Cycle Q Clear(g_c), s	19.9	0.0	60.9	35.3	0.0	31.3	16.9	24.9	24.9	12.8	37.7	11.4
Prop In Lane	1.00		0.45	1.00		0.19	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	319	0	699	61	0	405	318	911	951	269	1259	563
V/C Ratio(X)	0.93	0.00	0.97	0.29	0.00	0.91	0.93	0.47	0.47	0.26	0.76	0.28
Avail Cap(c_a), veh/h	365	0	722	61	0	405	373	911	951	269	1259	563
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	0.0	46.9	78.5	0.0	60.8	35.6	24.9	24.9	37.7	45.8	37.3
Incr Delay (d2), s/veh	27.5	0.0	25.5	2.6	0.0	24.2	27.3	1.8	1.7	2.3	4.3	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 BackOfQ(50%),veh/ln	12.2	0.0	34.3	0.8	0.0	18.6	15.3	12.6	13.2	2.4	19.4	5.3
LnGrp Delay(d),s/veh	69.5	0.0	72.4	81.2	0.0	85.1	62.9	26.6	26.5	40.1	50.1	38.5
LnGrp LOS	E		E	F		F	E	C	C	D	D	D
Approach Vol, veh/h		973			387			1175			1183	
Approach Delay, s/veh		71.5			84.9			35.7			48.0	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	26.1	63.0	28.9	42.0		89.1		70.9
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	26.3	33.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	18.9	39.7	21.9	37.3		26.9		62.9
Green Ext Time (p_c), s	0.4	7.2	0.4	0.0		20.4		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	334	218	85	317	159	165	778	68	150	1039	309
Future Volume (vph)	258	334	218	85	317	159	165	778	68	150	1039	309
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	287	371	242	94	352	177	183	864	76	167	1154	343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	613	0	94	529	0	183	940	0	167	1497	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	25.0		7.0	25.0	
Minimum Split (s)	10.7	16.8		10.7	16.8		12.7	31.8		12.7	31.8	
Total Split (s)	10.7	20.0		10.7	20.0		20.0	50.0		20.0	50.0	
Total Split (%)	10.6%	19.9%		10.6%	19.9%		19.9%	49.7%		19.9%	49.7%	
Yellow Time (s)	3.7	4.8		3.7	4.8		3.7	4.8		3.7	4.8	
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)	5.7	6.8		5.7	6.8		5.7	6.8		5.7	6.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	1.76	2.10		0.56	2.05		0.68	0.59		0.47	0.97	
Control Delay	391.7	528.2		44.5	509.4		30.2	21.3		12.6	43.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	391.7	528.2		44.5	509.4		30.2	21.3		12.6	43.1	
Queue Length 50th (ft)	~222	~623		46	~513		56	216		39	451	
Queue Length 95th (ft)	#399	#868		#97	#745		126	293		66	#659	
Internal Link Dist (ft)		3446			2567			4365			6545	
Turn Bay Length (ft)	200			310			190			185		
Base Capacity (vph)	163	292		167	258		334	1597		445	1547	
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	1.76	2.10		0.56	2.05		0.55	0.59		0.38	0.97	

Intersection Summary

Cycle Length: 100.7
Actuated Cycle Length: 97.2
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SW 60th Ave & SW 38th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	334	218	85	317	159	165	778	68	150	1039	309
Future Volume (veh/h)	258	334	218	85	317	159	165	778	68	150	1039	309
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1900	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	287	371	210	94	352	136	183	864	73	167	1154	305
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	2	2	2
Cap, veh/h	170	154	87	173	182	70	237	1511	128	369	1274	333
Arrive On Green	0.05	0.14	0.14	0.05	0.14	0.14	0.08	0.46	0.46	0.07	0.46	0.46
Sat Flow, veh/h	1723	1086	615	1774	1281	495	1757	3272	276	1774	2778	726
Grp Volume(v), veh/h	287	0	581	94	0	488	183	463	474	167	730	729
Grp Sat Flow(s),veh/h/ln	1723	0	1701	1774	0	1775	1757	1752	1796	1774	1770	1735
Q Serve(g_s), s	5.0	0.0	13.2	4.2	0.0	13.2	5.0	18.0	18.0	4.5	35.4	36.5
Cycle Q Clear(g_c), s	5.0	0.0	13.2	4.2	0.0	13.2	5.0	18.0	18.0	4.5	35.4	36.5
Prop In Lane	1.00		0.36	1.00		0.28	1.00		0.15	1.00		0.42
Lane Grp Cap(c), veh/h	170	0	241	173	0	252	237	809	829	369	811	795
V/C Ratio(X)	1.69	0.00	2.41	0.54	0.00	1.94	0.77	0.57	0.57	0.45	0.90	0.92
Avail Cap(c_a), veh/h	170	0	241	173	0	252	371	813	833	510	821	805
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	39.9	32.7	0.0	39.9	20.6	18.3	18.3	13.6	23.3	23.5
Incr Delay (d2), s/veh	334.3	0.0	646.5	3.5	0.0	436.6	5.2	1.0	0.9	0.9	12.9	15.1
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	0.0
%ile BackOfQ(50%),veh/ln	17.8	0.0	49.5	2.2	0.0	37.0	2.7	8.8	9.0	2.3	20.2	20.7
LnGrp Delay(d),s/veh	372.3	0.0	686.5	36.3	0.0	476.6	25.8	19.3	19.3	14.4	36.1	38.6
LnGrp LOS	F		F	D		F	C	B	B	B	D	D
Approach Vol, veh/h		868			582			1120			1626	
Approach Delay, s/veh		582.6			405.5			20.3			35.0	
Approach LOS		F			F			C			D	

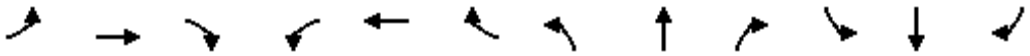
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	49.5	10.7	20.0	12.6	49.8	10.7	20.0
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8
Max Green Setting (Gmax), s	* 14	43.2	* 5	13.2	* 14	43.2	* 5	13.2
Max Q Clear Time (g_c+I1), s	7.0	38.5	7.0	15.2	6.5	20.0	6.2	15.2
Green Ext Time (p_c), s	0.3	4.2	0.0	0.0	0.2	16.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	195.8
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	435	21	19	530	92	46	18	23	83	22	40
Future Volume (vph)	39	435	21	19	530	92	46	18	23	83	22	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	40	448	22	20	546	95	47	19	24	86	23	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	510	0	0	661	0	0	90	0	0	150	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	47.2
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	435	21	19	530	92	46	18	23	83	22	40
Future Vol, veh/h	39	435	21	19	530	92	46	18	23	83	22	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	4	4	4	2	2	2	0	0	0	4	4	4
Mvmt Flow	40	448	22	20	546	95	47	19	24	86	23	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	32.1	71.2	12.4	13.6
HCM LOS	D	F	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	53%	8%	3%	57%
Vol Thru, %	21%	88%	83%	15%
Vol Right, %	26%	4%	14%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	495	641	145
LT Vol	46	39	19	83
Through Vol	18	435	530	22
RT Vol	23	21	92	40
Lane Flow Rate	90	510	661	149
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.834	1.044	0.301
Departure Headway (Hd)	7.673	6.023	5.685	7.46
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	471	607	641	484
Service Time	5.673	4.023	3.685	5.46
HCM Lane V/C Ratio	0.191	0.84	1.031	0.308
HCM Control Delay	12.4	32.1	71.2	13.6
HCM Lane LOS	B	D	F	B
HCM 95th-tile Q	0.7	8.8	17.6	1.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	2138	94	209	2549	506	72	44	145	525	78	361
Future Volume (vph)	395	2138	94	209	2549	506	72	44	145	525	78	361
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	403	2182	96	213	2601	516	73	45	148	536	80	368
Shared Lane Traffic (%)												
Lane Group Flow (vph)	403	2278	0	213	3117	0	73	193	0	536	448	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.4	38.8		14.4	37.8		12.8	14.2		13.1	14.3	
Total Split (s)	28.0	74.0		33.0	79.0		20.0	20.0		33.0	33.0	
Total Split (%)	17.5%	46.3%		20.6%	49.4%		12.5%	12.5%		20.6%	20.6%	
Yellow Time (s)	4.8	4.8		4.8	4.8		3.7	3.7		3.7	3.7	
All-Red Time (s)	2.6	2.0		2.6	2.0		2.1	3.5		2.4	3.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.4	6.8		7.4	6.8		5.8	7.2		6.1	7.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
v/c Ratio	1.78	1.03		0.84	1.37		0.58	0.94		0.92	1.03	
Control Delay	388.3	84.6		93.2	203.5		89.3	91.0		86.9	97.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	388.3	84.6		93.2	203.5		89.3	91.0		86.9	97.2	
Queue Length 50th (ft)	~641	~924		217	~1571		75	122		288	~394	
Queue Length 95th (ft)	m#629	m#717		#327	#1636		132	#285		#394	#648	
Internal Link Dist (ft)		663			2272			411			708	
Turn Bay Length (ft)	290			500			170			260		
Base Capacity (vph)	227	2214		285	2278		157	205		583	433	
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	1.78	1.03		0.75	1.37		0.46	0.94		0.92	1.03	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 88 (55%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: SW 38th Ct & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	395	2138	94	209	2549	506	72	44	145	525	78	361
Future Volume (veh/h)	395	2138	94	209	2549	506	72	44	145	525	78	361
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1900	1863	1863	1900	1881	1956	1900
Adj Flow Rate, veh/h	403	2182	87	213	2601	473	73	45	80	536	80	207
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	1	1	1
Cap, veh/h	228	3092	123	235	2730	469	91	48	86	576	98	254
Arrive On Green	0.13	0.62	0.62	0.13	0.62	0.62	0.05	0.08	0.08	0.17	0.20	0.20
Sat Flow, veh/h	1774	5018	199	1792	4413	758	1774	603	1071	3476	484	1252
Grp Volume(v), veh/h	403	1471	798	213	1984	1090	73	0	125	536	0	287
Grp Sat Flow(s),veh/h/ln	1774	1695	1828	1792	1712	1747	1774	0	1674	1738	0	1736
Q Serve(g_s), s	20.6	47.1	47.6	18.8	84.1	99.0	6.5	0.0	11.9	24.3	0.0	25.3
Cycle Q Clear(g_c), s	20.6	47.1	47.6	18.8	84.1	99.0	6.5	0.0	11.9	24.3	0.0	25.3
Prop In Lane	1.00		0.11	1.00		0.43	1.00		0.64	1.00		0.72
Lane Grp Cap(c), veh/h	228	2089	1126	235	2118	1081	91	0	134	576	0	352
V/C Ratio(X)	1.76	0.70	0.71	0.91	0.94	1.01	0.80	0.00	0.93	0.93	0.00	0.81
Avail Cap(c_a), veh/h	228	2089	1126	287	2118	1081	157	0	134	584	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.7	20.8	20.9	68.5	27.7	30.5	75.1	0.0	73.2	65.8	0.0	60.9
Incr Delay (d2), s/veh	361.3	2.0	3.8	26.9	9.5	29.5	14.6	0.0	57.7	21.6	0.0	13.7
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 BackOfQ(50%),veh/ln	33.0	22.5	25.1	11.0	42.2	56.3	3.6	0.0	7.7	13.4	0.0	13.5
LnGrp Delay(d),s/veh	431.0	22.9	24.7	95.5	37.1	60.0	89.7	0.0	130.9	87.5	0.0	74.6
LnGrp LOS	F	C	C	F	D	F	F		F	F		E
Approach Vol, veh/h		2672			3287			198			823	
Approach Delay, s/veh		85.0			48.5			115.7			83.0	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	106.6	33.8	20.0	28.4	106.2	14.0	39.8
Change Period (Y+Rc), s	7.4	6.8	* 7.3	* 7.2	7.4	6.8	* 5.8	* 7.3
Max Green Setting (Gmax), s	20.6	72.2	* 27	* 13	25.6	67.2	* 14	* 26
Max Q Clear Time (g_c+I1), s	22.6	101.0	26.3	13.9	20.8	49.6	8.5	27.3
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.2	17.5	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.4
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

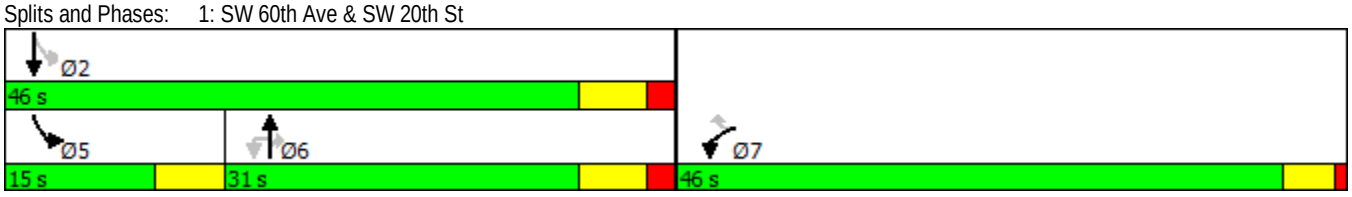
PM Peak Hour Future Year Background Traffic Conditions with Improvement

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	529	291	3	808	336	163	1138
Future Volume (vph)	529	291	3	808	336	163	1138
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	3%	3%	3%	2%	2%
Adj. Flow (vph)	594	327	3	908	378	183	1279
Shared Lane Traffic (%)							
Lane Group Flow (vph)	594	327	3	908	378	183	1279
Turn Type	Prot	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases	7			6		5	2
Permitted Phases		7	6		6	2	
Detector Phase	7	7	6	6	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	15.0	15.0	15.0	10.0	15.0
Minimum Split (s)	22.5	22.5	21.7	21.7	21.7	14.7	21.7
Total Split (s)	46.0	46.0	31.0	31.0	31.0	15.0	46.0
Total Split (%)	50.0%	50.0%	33.7%	33.7%	33.7%	16.3%	50.0%
Yellow Time (s)	3.5	3.5	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.7	6.7	6.7	4.7	6.7
Lead/Lag			Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	Min	None	Min
v/c Ratio	0.86	0.40	0.03	0.88	0.52	0.58	0.76
Control Delay	37.0	3.4	26.0	40.9	5.9	22.4	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	3.4	26.0	40.9	5.9	22.4	23.2
Queue Length 50th (ft)	277	0	1	238	0	52	281
Queue Length 95th (ft)	404	44	9	#400	64	#117	427
Internal Link Dist (ft)	2558			6545			3224
Turn Bay Length (ft)			185		295	190	
Base Capacity (vph)	892	960	97	1034	729	317	1689
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.34	0.03	0.88	0.52	0.58	0.76

Intersection Summary

Cycle Length: 92
Actuated Cycle Length: 83.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SW 60th Ave & SW 20th St



Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	529	291	3	808	336	163	1138
Future Volume (veh/h)	529	291	3	808	336	163	1138
Number	7	14		6	16	5	2
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1845	1845	1863	1863
Adj Flow Rate, veh/h	594	134		908	266	183	1279
Adj No. of Lanes	1	1		2	1	1	2
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		3	3	2	2
Cap, veh/h	656	585		1067	477	341	1729
Arrive On Green	0.37	0.37		0.30	0.30	0.12	0.49
Sat Flow, veh/h	1774	1583		3597	1568	1774	3632
Grp Volume(v), veh/h	594	134		908	266	183	1279
Grp Sat Flow(s),veh/h/ln	1774	1583		1752	1568	1774	1770
Q Serve(g_s), s	25.0	4.6		19.2	11.2	5.0	22.8
Cycle Q Clear(g_c), s	25.0	4.6		19.2	11.2	5.0	22.8
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	656	585		1067	477	341	1729
V/C Ratio(X)	0.91	0.23		0.85	0.56	0.54	0.74
Avail Cap(c_a), veh/h	933	833		1079	483	352	1762
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	17.1		25.8	23.0	17.0	16.2
Incr Delay (d2), s/veh	9.3	0.2		6.6	1.4	1.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	2.0		10.2	5.0	2.5	11.4
LnGrp Delay(d),s/veh	32.9	17.3		32.4	24.4	18.5	17.8
LnGrp LOS	C	B		C	C	B	B
Approach Vol, veh/h	728			1174			1462
Approach Delay, s/veh	30.0			30.6			17.9
Approach LOS	C			C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		45.2		33.7	14.5	30.7		
Change Period (Y+Rc), s		6.7		4.5	4.7	6.7		
Max Green Setting (Gmax), s		39.3		41.5	10.3	24.3		
Max Q Clear Time (g_c+I1), s		24.8		27.0	7.0	21.2		
Green Ext Time (p_c), s		11.5		2.1	0.1	2.8		

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	50	659	4	899	27	85	157
Future Volume (vph)	50	659	4	899	27	85	157
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	2%
Adj. Flow (vph)	55	724	4	988	30	93	173
Shared Lane Traffic (%)							
Lane Group Flow (vph)	55	724	4	1018	0	93	173
Turn Type	pm+pt	NA	Perm	NA		Prot	Prot
Protected Phases	1	6		2		3	3
Permitted Phases	6		2				
Detector Phase	1	6	2	2		3	3
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.3	24.3	24.3	24.3		11.3	11.3
Total Split (s)	12.0	50.0	38.0	38.0		20.0	20.0
Total Split (%)	17.1%	71.4%	54.3%	54.3%		28.6%	28.6%
Yellow Time (s)	4.3	4.3	4.3	4.3		4.3	4.3
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)	6.3	6.3	6.3	6.3		6.3	6.3
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	Min	None	None		None	None
v/c Ratio	0.16	0.34	0.01	0.61		0.33	0.43
Control Delay	5.5	5.9	10.0	13.5		25.8	8.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	5.5	5.9	10.0	13.5		25.8	8.6
Queue Length 50th (ft)	6	49	1	139		28	0
Queue Length 95th (ft)	18	87	6	217		73	47
Internal Link Dist (ft)		4996		2796		1805	
Turn Bay Length (ft)	250		250				
Base Capacity (vph)	350	2939	446	2248		482	557
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	0.16	0.25	0.01	0.45		0.19	0.31

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 53.1
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 20th St & SW 44th Ave

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	50	659	4	899	27	85	157
Future Volume (veh/h)	50	659	4	899	27	85	157
Number	1	6		2	12	3	18
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881		1881	1900	1863	1863
Adj Flow Rate, veh/h	55	724		988	30	93	173
Adj No. of Lanes	1	2		2	0	1	1
Peak Hour Factor	0.91	0.91		0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1		1	1	2	2
Cap, veh/h	357	2201		1576	48	261	233
Arrive On Green	0.05	0.62		0.44	0.44	0.15	0.15
Sat Flow, veh/h	1792	3668		3636	108	1774	1583
Grp Volume(v), veh/h	55	724		499	519	93	173
Grp Sat Flow(s),veh/h/ln	1792	1787		1787	1862	1774	1583
Q Serve(g_s), s	0.8	5.2		11.4	11.4	2.5	5.6
Cycle Q Clear(g_c), s	0.8	5.2		11.4	11.4	2.5	5.6
Prop In Lane	1.00				0.06	1.00	1.00
Lane Grp Cap(c), veh/h	357	2201		795	828	261	233
V/C Ratio(X)	0.15	0.33		0.63	0.63	0.36	0.74
Avail Cap(c_a), veh/h	456	2938		1065	1110	457	408
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	4.9		11.4	11.4	20.4	21.7
Incr Delay (d2), s/veh	0.2	0.1		0.8	0.8	0.8	4.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.5		5.7	6.0	1.3	2.7
LnGrp Delay(d),s/veh	8.0	5.0		12.2	12.1	21.2	26.3
LnGrp LOS	A	A		B	B	C	C
Approach Vol, veh/h		779		1018		266	
Approach Delay, s/veh		5.2		12.2		24.5	
Approach LOS		A		B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.1	30.0				39.0		14.1
Change Period (Y+Rc), s	6.3	6.3				6.3		6.3
Max Green Setting (Gmax), s	5.7	31.7				43.7		13.7
Max Q Clear Time (g_c+I1), s	2.8	13.4				7.2		7.6
Green Ext Time (p_c), s	0.0	10.2				14.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Notes

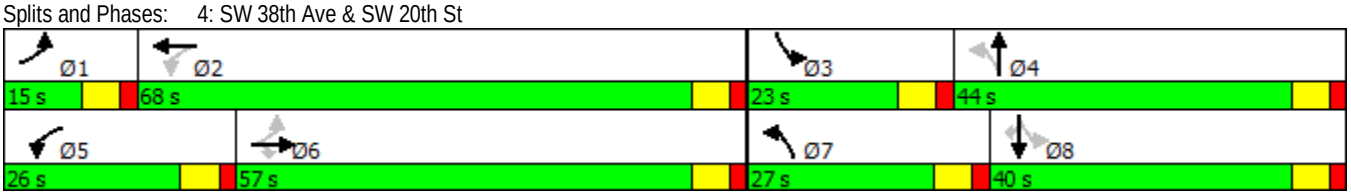
User approved ignoring U-Turning movement.

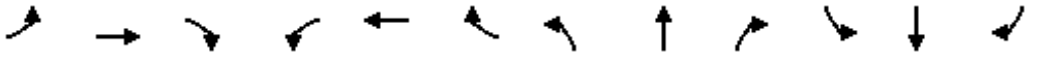
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	506	76	255	780	76	81	119	244	240	195	77
Future Volume (vph)	27	506	76	255	780	76	81	119	244	240	195	77
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	32	595	89	300	918	89	95	140	287	282	229	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	595	89	300	1007	0	95	427	0	282	229	91
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	15.0	57.0	57.0	26.0	68.0		27.0	44.0		23.0	40.0	40.0
Total Split (%)	10.0%	38.0%	38.0%	17.3%	45.3%		18.0%	29.3%		15.3%	26.7%	26.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.15	0.96	0.14	1.02	0.62		0.25	0.94		1.11	0.43	0.16
Control Delay	21.1	74.1	0.5	102.4	33.4		30.3	75.9		128.8	46.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.1	74.1	0.5	102.4	33.4		30.3	75.9		128.8	46.3	0.6
Queue Length 50th (ft)	15	564	0	~266	410		58	356		~266	182	0
Queue Length 95th (ft)	32	#720	0	#418	458		94	#501		#423	256	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	241	658	664	293	1612		503	480		254	532	567
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.13	0.90	0.13	1.02	0.62		0.19	0.89		1.11	0.43	0.16

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 145.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	506	76	255	780	76	81	119	244	240	195	77
Future Volume (veh/h)	27	506	76	255	780	76	81	119	244	240	195	77
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	32	595	35	300	918	84	95	140	186	282	229	36
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	237	657	558	324	1501	137	349	154	205	295	523	445
Arrive On Green	0.03	0.35	0.35	0.13	0.45	0.45	0.06	0.21	0.21	0.12	0.28	0.28
Sat Flow, veh/h	1792	1881	1599	1792	3312	303	1757	720	956	1774	1863	1583
Grp Volume(v), veh/h	32	595	35	300	495	507	95	0	326	282	229	36
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1787	1828	1757	0	1676	1774	1863	1583
Q Serve(g_s), s	1.6	41.2	2.0	15.6	28.7	28.7	5.7	0.0	25.9	16.7	13.8	2.3
Cycle Q Clear(g_c), s	1.6	41.2	2.0	15.6	28.7	28.7	5.7	0.0	25.9	16.7	13.8	2.3
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	237	657	558	324	810	829	349	0	360	295	523	445
V/C Ratio(X)	0.14	0.91	0.06	0.93	0.61	0.61	0.27	0.00	0.91	0.95	0.44	0.08
Avail Cap(c_a), veh/h	304	697	593	349	810	829	516	0	462	295	523	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	42.4	29.6	34.8	28.3	28.3	38.6	0.0	52.4	37.7	40.3	36.2
Incr Delay (d2), s/veh	0.3	15.0	0.0	29.0	1.4	1.3	0.4	0.0	18.2	40.1	0.6	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	0.0
%ile BackOfQ(50%),veh/ln	0.8	24.1	0.9	13.8	14.5	14.8	2.8	0.0	13.9	11.4	7.2	1.0
LnGrp Delay(d),s/veh	28.3	57.4	29.7	63.7	29.6	29.6	39.0	0.0	70.6	77.9	40.9	36.3
LnGrp LOS	C	E	C	E	C	C	D		E	E	D	D
Approach Vol, veh/h		662			1302			421			547	
Approach Delay, s/veh		54.5			37.5			63.5			59.7	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	68.3	23.0	35.7	24.1	54.1	14.0	44.7
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	8.7	61.7	16.7	37.7	19.7	50.7	20.7	33.7
Max Q Clear Time (g_c+I1), s	3.6	30.7	18.7	27.9	17.6	43.2	7.7	15.8
Green Ext Time (p_c), s	0.0	12.1	0.0	1.4	0.2	4.6	0.2	3.4

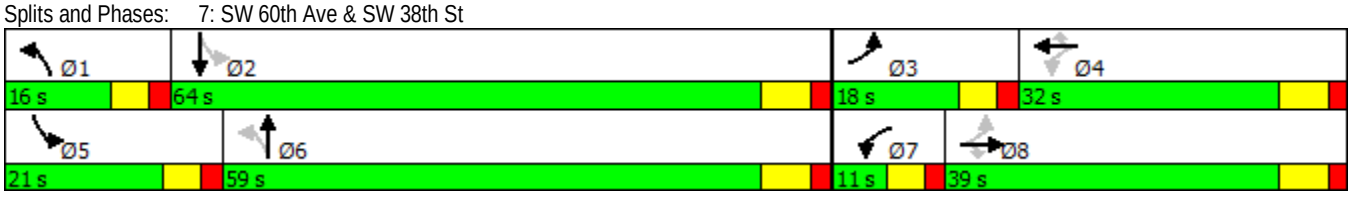
Intersection Summary	
HCM 2010 Ctrl Delay	49.2
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	258	334	218	85	317	159	165	778	68	150	1039	309
Future Volume (vph)	258	334	218	85	317	159	165	778	68	150	1039	309
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	287	371	242	94	352	177	183	864	76	167	1154	343
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	371	242	94	352	177	183	940	0	167	1497	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		
Detector Phase	3	8	8	7	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	7.0	25.0		7.0	25.0	
Minimum Split (s)	10.7	16.8	16.8	10.7	16.8	16.8	12.7	31.8		12.7	31.8	
Total Split (s)	18.0	39.0	39.0	11.0	32.0	32.0	16.0	59.0		21.0	64.0	
Total Split (%)	13.8%	30.0%	30.0%	8.5%	24.6%	24.6%	12.3%	45.4%		16.2%	49.2%	
Yellow Time (s)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	4.8		3.7	4.8	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	5.7	6.8	6.8	5.7	6.8		5.7	6.8	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
v/c Ratio	0.69	0.84	0.51	0.53	0.97	0.40	0.93	0.62		0.54	0.98	
Control Delay	40.3	64.0	23.5	44.3	92.6	9.3	80.5	31.0		19.9	53.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.3	64.0	23.5	44.3	92.6	9.3	80.5	31.0		19.9	53.2	
Queue Length 50th (ft)	89	298	80	55	298	1	103	316		64	632	
Queue Length 95th (ft)	126	#455	166	97	#494	64	#257	408		101	#808	
Internal Link Dist (ft)		3446			2567			4365			6545	
Turn Bay Length (ft)	200		25	310		25	190			185		
Base Capacity (vph)	427	450	478	178	362	448	197	1506		365	1531	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.67	0.82	0.51	0.53	0.97	0.40	0.93	0.62		0.46	0.98	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 129.5
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SW 60th Ave & SW 38th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	334	218	85	317	159	165	778	68	150	1039	309
Future Volume (veh/h)	258	334	218	85	317	159	165	778	68	150	1039	309
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1810	1810	1810	1863	1863	1863	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	287	371	210	94	352	136	183	864	73	167	1154	305
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	2	2	2
Cap, veh/h	416	437	371	169	372	316	208	1472	124	329	1221	319
Arrive On Green	0.08	0.24	0.24	0.04	0.20	0.20	0.08	0.45	0.45	0.07	0.44	0.44
Sat Flow, veh/h	3343	1810	1538	1774	1863	1583	1757	3272	276	1774	2778	726
Grp Volume(v), veh/h	287	371	210	94	352	136	183	463	474	167	730	729
Grp Sat Flow(s),veh/h/ln	1672	1810	1538	1774	1863	1583	1757	1752	1796	1774	1770	1735
Q Serve(g_s), s	8.3	24.7	15.1	5.3	23.5	9.5	8.0	24.9	24.9	6.4	49.7	51.2
Cycle Q Clear(g_c), s	8.3	24.7	15.1	5.3	23.5	9.5	8.0	24.9	24.9	6.4	49.7	51.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.42
Lane Grp Cap(c), veh/h	416	437	371	169	372	316	208	789	808	329	778	762
V/C Ratio(X)	0.69	0.85	0.57	0.55	0.95	0.43	0.88	0.59	0.59	0.51	0.94	0.96
Avail Cap(c_a), veh/h	463	462	393	169	372	316	213	789	808	423	802	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	45.7	42.1	40.1	49.8	44.2	32.6	25.9	25.9	19.9	33.7	34.2
Incr Delay (d2), s/veh	3.8	13.4	1.7	3.9	32.9	0.9	31.4	1.1	1.1	1.2	18.4	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	14.0	6.6	2.8	15.5	4.2	8.1	12.2	12.5	3.2	28.1	29.1
LnGrp Delay(d),s/veh	40.8	59.1	43.7	44.1	82.8	45.1	64.0	27.1	27.0	21.1	52.1	55.8
LnGrp LOS	D	E	D	D	F	D	E	C	C	C	D	E
Approach Vol, veh/h		868			582			1120			1626	
Approach Delay, s/veh		49.3			67.7			33.1			50.6	
Approach LOS		D			E			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	62.3	16.2	32.0	14.3	63.6	11.0	37.2
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8
Max Green Setting (Gmax), s	* 10	57.2	* 12	25.2	* 15	52.2	* 5.3	32.2
Max Q Clear Time (g_c+I1), s	10.0	53.2	10.3	25.5	8.4	26.9	7.3	26.7
Green Ext Time (p_c), s	0.0	2.3	0.2	0.0	0.2	17.5	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	48.0
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	435	21	19	530	92	46	18	23	83	22	40
Future Volume (vph)	39	435	21	19	530	92	46	18	23	83	22	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	40	448	22	20	546	95	47	19	24	86	23	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	510	0	0	661	0	0	90	0	0	150	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		35.0	35.0		20.0	20.0		20.0	20.0	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
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	
Total Lost Time (s)		6.8			6.8			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
v/c Ratio		0.66			0.79			0.29			0.48	
Control Delay		13.7			17.3			15.7			19.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.7			17.3			15.7			19.8	
Queue Length 50th (ft)		85			118			14			26	
Queue Length 95th (ft)		186			256			48			77	
Internal Link Dist (ft)		1473			795			863			1230	
Turn Bay Length (ft)												
Base Capacity (vph)		1117			1205			453			448	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.46			0.55			0.20			0.33	

Intersection Summary
Cycle Length: 55
Actuated Cycle Length: 44.1
Natural Cycle: 55
Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SW 43rd Ct & SW 40th Ct

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	435	21	19	530	92	46	18	23	83	22	40
Future Volume (veh/h)	39	435	21	19	530	92	46	18	23	83	22	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1863	1900	1900	1900	1900	1900	1827	1900
Adj Flow Rate, veh/h	40	448	22	20	546	95	47	19	24	86	23	41
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	0	0	0	4	4	4
Cap, veh/h	130	804	38	103	764	130	239	92	71	262	55	66
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	66	1597	75	20	1518	258	652	589	451	767	349	420
Grp Volume(v), veh/h	510	0	0	661	0	0	90	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	1737	0	0	1796	0	0	1693	0	0	1537	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	11.4	0.0	0.0	1.8	0.0	0.0	3.5	0.0	0.0
Prop In Lane	0.08		0.04	0.03		0.14	0.52		0.27	0.57		0.27
Lane Grp Cap(c), veh/h	971	0	0	997	0	0	402	0	0	382	0	0
V/C Ratio(X)	0.53	0.00	0.00	0.66	0.00	0.00	0.22	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	1304	0	0	1354	0	0	665	0	0	634	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	7.7	0.0	0.0	15.0	0.0	0.0	15.6	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	5.7	0.0	0.0	0.9	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	7.3	0.0	0.0	8.5	0.0	0.0	15.2	0.0	0.0	16.3	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		510			661			90			150	
Approach Delay, s/veh		7.3			8.5			15.2			16.3	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		13.0		26.9		13.0		26.9
Change Period (Y+Rc), s		6.8		6.8		6.8		6.8
Max Green Setting (Gmax), s		13.2		28.2		13.2		28.2
Max Q Clear Time (g_c+I1), s		5.5		13.4		3.8		9.8
Green Ext Time (p_c), s		0.8		6.7		0.9		7.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	395	2138	94	209	2549	506	72	44	145	525	78	361
Future Volume (vph)	395	2138	94	209	2549	506	72	44	145	525	78	361
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	403	2182	96	213	2601	516	73	45	148	536	80	368
Shared Lane Traffic (%)												
Lane Group Flow (vph)	403	2278	0	213	2601	516	73	193	0	536	80	368
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						8
Detector Phase	1	6		5	2	2	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.4	38.8		14.4	37.8	37.8	12.8	14.2		13.1	14.3	14.3
Total Split (s)	28.0	74.0		33.0	79.0	79.0	20.0	20.0		33.0	33.0	33.0
Total Split (%)	17.5%	46.3%		20.6%	49.4%	49.4%	12.5%	12.5%		20.6%	20.6%	20.6%
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.6	2.0		2.6	2.0	2.0	2.1	3.5		2.4	3.6	3.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.4	6.8		7.4	6.8	6.8	5.8	7.2		6.1	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	None
v/c Ratio	0.92	1.02		0.84	1.11	0.65	0.58	0.94		0.93	0.21	0.76
Control Delay	88.6	51.6		93.2	98.3	29.1	89.3	91.0		89.7	59.1	31.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	88.6	51.6		93.2	98.3	29.1	89.3	91.0		89.7	59.1	31.6
Queue Length 50th (ft)	228	~924		217	~1145	317	75	122		288	73	124
Queue Length 95th (ft)	m225	m#378		#327	#1222	452	132	#285		#394	128	#264
Internal Link Dist (ft)		663			2272			411			708	
Turn Bay Length (ft)	290			500		25	170			260		25
Base Capacity (vph)	441	2227		285	2336	797	157	205		582	373	483
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.91	1.02		0.75	1.11	0.65	0.46	0.94		0.92	0.21	0.76

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 116 (73%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: SW 38th Ct & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	395	2138	94	209	2549	506	72	44	145	525	78	361
Future Volume (veh/h)	395	2138	94	209	2549	506	72	44	145	525	78	361
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1881	1863	1863	1900	1881	1956	1881
Adj Flow Rate, veh/h	403	2182	87	213	2601	383	73	45	80	536	80	126
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	1	1	1
Cap, veh/h	441	2989	119	235	3074	957	91	48	86	576	397	324
Arrive On Green	0.13	0.60	0.60	0.13	0.60	0.60	0.05	0.08	0.08	0.17	0.20	0.20
Sat Flow, veh/h	3442	5018	199	1792	5136	1599	1774	603	1071	3476	1956	1599
Grp Volume(v), veh/h	403	1471	798	213	2601	383	73	0	125	536	80	126
Grp Sat Flow(s),veh/h/ln	1721	1695	1828	1792	1712	1599	1774	0	1674	1738	1956	1599
Q Serve(g_s), s	18.5	49.6	50.1	18.8	65.9	20.2	6.5	0.0	11.9	24.3	5.4	10.9
Cycle Q Clear(g_c), s	18.5	49.6	50.1	18.8	65.9	20.2	6.5	0.0	11.9	24.3	5.4	10.9
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	441	2019	1089	235	3074	957	91	0	134	576	397	324
V/C Ratio(X)	0.91	0.73	0.73	0.91	0.85	0.40	0.80	0.00	0.93	0.93	0.20	0.39
Avail Cap(c_a), veh/h	443	2019	1089	287	3074	957	157	0	134	584	397	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	23.1	23.2	68.5	26.1	16.9	75.1	0.0	73.2	65.9	53.0	55.2
Incr Delay (d2), s/veh	23.1	2.3	4.4	26.9	3.1	1.2	14.6	0.0	57.7	21.7	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	23.7	26.6	11.0	31.9	9.3	3.6	0.0	7.7	13.4	3.0	4.9
LnGrp Delay(d),s/veh	92.0	25.5	27.6	95.5	29.2	18.2	89.7	0.0	130.9	87.5	53.3	55.9
LnGrp LOS	F	C	C	F	C	B	F		F	F	D	E
Approach Vol, veh/h		2672			3197			198			742	
Approach Delay, s/veh		36.1			32.3			115.7			78.5	
Approach LOS		D			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.9	103.3	33.8	20.0	28.4	102.8	14.0	39.8
Change Period (Y+Rc), s	7.4	6.8	* 7.3	* 7.2	7.4	6.8	* 5.8	* 7.3
Max Green Setting (Gmax), s	20.6	72.2	* 27	* 13	25.6	67.2	* 14	* 26
Max Q Clear Time (g_c+I1), s	20.5	67.9	26.3	13.9	20.8	52.1	8.5	12.9
Green Ext Time (p_c), s	0.0	4.3	0.2	0.0	0.2	15.0	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

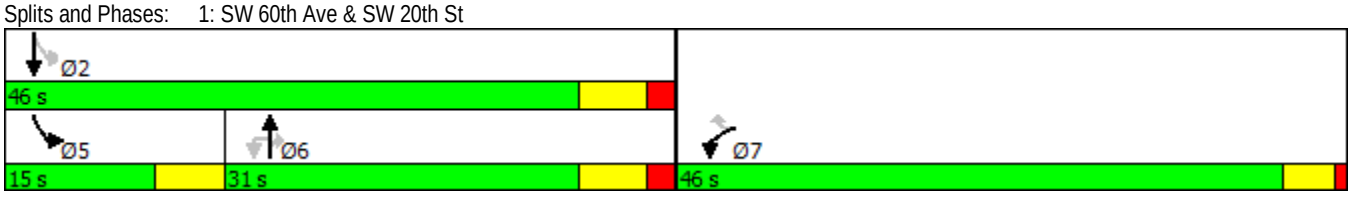
PM Peak Hour Buildout Traffic Conditions (with Background Improvement)

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	606	335	3	808	431	218	1138
Future Volume (vph)	606	335	3	808	431	218	1138
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	3%	3%	3%	2%	2%
Adj. Flow (vph)	681	376	3	908	484	245	1279
Shared Lane Traffic (%)							
Lane Group Flow (vph)	681	376	3	908	484	245	1279
Turn Type	Prot	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases	7			6		5	2
Permitted Phases		7	6		6	2	
Detector Phase	7	7	6	6	6	5	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	15.0	15.0	15.0	10.0	15.0
Minimum Split (s)	22.5	22.5	21.7	21.7	21.7	14.7	21.7
Total Split (s)	46.0	46.0	31.0	31.0	31.0	15.0	46.0
Total Split (%)	50.0%	50.0%	33.7%	33.7%	33.7%	16.3%	50.0%
Yellow Time (s)	3.5	3.5	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	2.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	6.7	6.7	6.7	4.7	6.7
Lead/Lag			Lag	Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	
Recall Mode	None	None	Min	Min	Min	None	Min
v/c Ratio	0.91	0.44	0.04	0.93	0.62	0.82	0.80
Control Delay	42.2	4.6	26.7	49.2	6.6	41.5	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	4.6	26.7	49.2	6.6	41.5	26.7
Queue Length 50th (ft)	342	14	1	276	0	88	342
Queue Length 95th (ft)	#546	64	9	#400	73	#215	427
Internal Link Dist (ft)	2558			6545			3224
Turn Bay Length (ft)			185		295	190	
Base Capacity (vph)	841	926	84	975	785	299	1593
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.41	0.04	0.93	0.62	0.82	0.80

Intersection Summary

Cycle Length: 92
Actuated Cycle Length: 87.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SW 60th Ave & SW 20th St



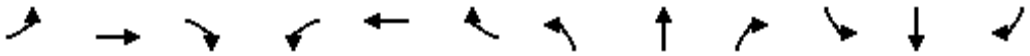
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	606	335	3	808	431	218	1138
Future Volume (veh/h)	606	335	3	808	431	218	1138
Number	7	14		6	16	5	2
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1845	1845	1863	1863
Adj Flow Rate, veh/h	681	183		908	372	245	1279
Adj No. of Lanes	1	1		2	1	1	2
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		3	3	2	2
Cap, veh/h	733	654		995	445	306	1612
Arrive On Green	0.41	0.41		0.28	0.28	0.12	0.46
Sat Flow, veh/h	1774	1583		3597	1568	1774	3632
Grp Volume(v), veh/h	681	183		908	372	245	1279
Grp Sat Flow(s),veh/h/ln	1774	1583		1752	1568	1774	1770
Q Serve(g_s), s	31.2	6.5		21.4	19.0	7.9	26.3
Cycle Q Clear(g_c), s	31.2	6.5		21.4	19.0	7.9	26.3
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	733	654		995	445	306	1612
V/C Ratio(X)	0.93	0.28		0.91	0.84	0.80	0.79
Avail Cap(c_a), veh/h	862	769		997	446	313	1628
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	16.6		29.6	28.7	20.4	19.8
Incr Delay (d2), s/veh	14.7	0.2		12.4	13.0	13.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	6.9		12.1	16.7	5.0	13.4
LnGrp Delay(d),s/veh	38.6	16.9		41.9	41.7	34.0	22.6
LnGrp LOS	D	B		D	D	C	C
Approach Vol, veh/h	864			1280			1524
Approach Delay, s/veh	34.0			41.9			24.4
Approach LOS	C			D			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		45.6		39.8	14.7	30.9		
Change Period (Y+Rc), s		6.7		4.5	4.7	6.7		
Max Green Setting (Gmax), s		39.3		41.5	10.3	24.3		
Max Q Clear Time (g_c+I1), s		28.3		33.2	9.9	23.4		
Green Ext Time (p_c), s		9.3		2.1	0.0	0.9		

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	621	96	168	888	45	129	2	62	19	2	22
Future Volume (vph)	28	621	96	168	888	45	129	2	62	19	2	22
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Adj. Flow (vph)	33	739	114	200	1057	54	154	2	74	23	2	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	853	0	200	1111	0	0	230	0	0	51	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	172.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	621	96	168	888	45	129	2	62	19	2	22
Future Vol, veh/h	28	621	96	168	888	45	129	2	62	19	2	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	-	225	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	3	3	3
Mvmt Flow	33	739	114	200	1057	54	154	2	74	23	2	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1111	0	0	854	0	0	1793	2374	427	1922	2404	555
Stage 1	-	-	-	-	-	-	863	863	-	1484	1484	-
Stage 2	-	-	-	-	-	-	930	1511	-	438	920	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.5	6.5	6.9	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.56	5.56	-
Follow-up Hdwy	2.21	-	-	2.22	-	-	3.5	4	3.3	3.53	4.03	3.33
Pot Cap-1 Maneuver	630	-	-	781	-	-	~ 52	35	582	40	32	473
Stage 1	-	-	-	-	-	-	320	374	-	130	185	-
Stage 2	-	-	-	-	-	-	291	185	-	565	346	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	630	-	-	781	-	-	~ 35	25	582	25	23	473
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 35	25	-	25	23	-
Stage 1	-	-	-	-	-	-	303	354	-	123	138	-
Stage 2	-	-	-	-	-	-	201	138	-	464	328	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.7	$ 1782.2	285.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	50	630	-	-	781	-	-	48
HCM Lane V/C Ratio	4.595	0.053	-	-	0.256	-	-	1.066
HCM Control Delay (s)	$ 1782.2	11	-	-	11.2	-	-	285.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	25.8	0.2	-	-	1	-	-	4.6

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

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	69	743	4	1003	27	85	180
Future Volume (vph)	69	743	4	1003	27	85	180
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	2%
Adj. Flow (vph)	76	816	4	1102	30	93	198
Shared Lane Traffic (%)							
Lane Group Flow (vph)	76	816	4	1132	0	93	198
Turn Type	pm+pt	NA	Perm	NA		Prot	Prot
Protected Phases	1	6		2		3	3
Permitted Phases	6		2				
Detector Phase	1	6	2	2		3	3
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.3	24.3	24.3	24.3		11.3	11.3
Total Split (s)	12.0	50.0	38.0	38.0		20.0	20.0
Total Split (%)	17.1%	71.4%	54.3%	54.3%		28.6%	28.6%
Yellow Time (s)	4.3	4.3	4.3	4.3		4.3	4.3
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)	6.3	6.3	6.3	6.3		6.3	6.3
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	Min	None	None		None	None
v/c Ratio	0.24	0.37	0.01	0.63		0.34	0.48
Control Delay	6.2	5.9	10.0	13.7		27.3	9.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	6.2	5.9	10.0	13.7		27.3	9.0
Queue Length 50th (ft)	8	58	1	163		31	0
Queue Length 95th (ft)	23	101	6	252		73	50
Internal Link Dist (ft)		4996		2796		1805	
Turn Bay Length (ft)	250		250				
Base Capacity (vph)	322	2843	377	2080		446	547
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	0.24	0.29	0.01	0.54		0.21	0.36

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 56.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 20th St & SW 44th Ave

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	69	743	4	1003	27	85	180
Future Volume (veh/h)	69	743	4	1003	27	85	180
Number	1	6		2	12	3	18
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881		1881	1900	1863	1863
Adj Flow Rate, veh/h	76	816		1102	30	93	198
Adj No. of Lanes	1	2		2	0	1	1
Peak Hour Factor	0.91	0.91		0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1		1	1	2	2
Cap, veh/h	337	2229		1617	44	284	253
Arrive On Green	0.06	0.62		0.45	0.45	0.16	0.16
Sat Flow, veh/h	1792	3668		3649	97	1774	1583
Grp Volume(v), veh/h	76	816		554	578	93	198
Grp Sat Flow(s),veh/h/ln	1792	1787		1787	1864	1774	1583
Q Serve(g_s), s	1.2	6.5		14.3	14.3	2.7	7.0
Cycle Q Clear(g_c), s	1.2	6.5		14.3	14.3	2.7	7.0
Prop In Lane	1.00				0.05	1.00	1.00
Lane Grp Cap(c), veh/h	337	2229		813	848	284	253
V/C Ratio(X)	0.23	0.37		0.68	0.68	0.33	0.78
Avail Cap(c_a), veh/h	404	2682		973	1015	417	373
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.8	5.3		12.5	12.5	21.7	23.5
Incr Delay (d2), s/veh	0.3	0.1		1.5	1.5	0.7	6.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.2		7.3	7.6	1.4	3.5
LnGrp Delay(d),s/veh	9.2	5.4		14.1	14.0	22.4	29.9
LnGrp LOS	A	A		B	B	C	C
Approach Vol, veh/h		892		1132		291	
Approach Delay, s/veh		5.8		14.0		27.5	
Approach LOS		A		B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	32.8				42.6		15.6
Change Period (Y+Rc), s	6.3	6.3				6.3		6.3
Max Green Setting (Gmax), s	5.7	31.7				43.7		13.7
Max Q Clear Time (g_c+I1), s	3.2	16.3				8.5		9.0
Green Ext Time (p_c), s	0.0	10.2				16.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.5
HCM 2010 LOS	B

Notes

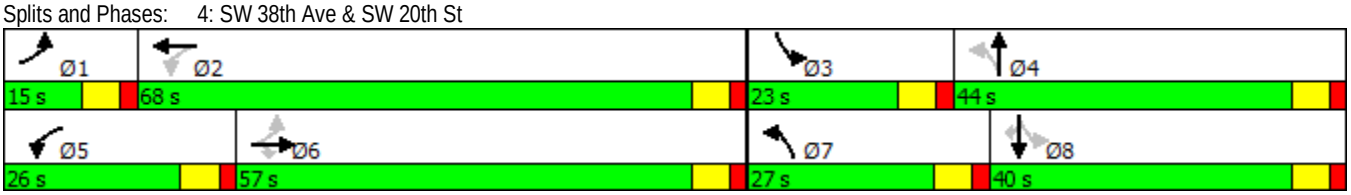
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	574	76	255	864	76	81	119	244	240	195	94
Future Volume (vph)	41	574	76	255	864	76	81	119	244	240	195	94
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	48	675	89	300	1016	89	95	140	287	282	229	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	675	89	300	1105	0	95	427	0	282	229	111
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	15.0	57.0	57.0	26.0	68.0		27.0	44.0		23.0	40.0	40.0
Total Split (%)	10.0%	38.0%	38.0%	17.3%	45.3%		18.0%	29.3%		15.3%	26.7%	26.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.25	1.05	0.14	1.05	0.71		0.25	0.95		1.13	0.44	0.20
Control Delay	23.1	95.6	0.4	108.9	37.6		30.7	77.8		136.4	47.0	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.1	95.6	0.4	108.9	37.6		30.7	77.8		136.4	47.0	2.0
Queue Length 50th (ft)	23	~724	0	~271	473		58	356		~266	182	0
Queue Length 95th (ft)	43	#879	0	#423	521		94	#501		#423	256	4
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	206	644	653	287	1567		493	471		249	526	562
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.23	1.05	0.14	1.05	0.71		0.19	0.91		1.13	0.44	0.20

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 148.1
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	574	76	255	864	76	81	119	244	240	195	94
Future Volume (veh/h)	41	574	76	255	864	76	81	119	244	240	195	94
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	48	675	35	300	1016	84	95	140	186	282	229	56
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	222	668	568	298	1550	128	335	153	204	282	511	435
Arrive On Green	0.03	0.36	0.36	0.14	0.46	0.46	0.06	0.21	0.21	0.12	0.27	0.27
Sat Flow, veh/h	1792	1881	1599	1792	3343	276	1757	720	956	1774	1863	1583
Grp Volume(v), veh/h	48	675	35	300	543	557	95	0	326	282	229	56
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1787	1832	1757	0	1676	1774	1863	1583
Q Serve(g_s), s	2.4	50.7	2.1	19.7	33.4	33.4	6.0	0.0	27.1	16.7	14.5	3.8
Cycle Q Clear(g_c), s	2.4	50.7	2.1	19.7	33.4	33.4	6.0	0.0	27.1	16.7	14.5	3.8
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	222	668	568	298	828	849	335	0	357	282	511	435
V/C Ratio(X)	0.22	1.01	0.06	1.01	0.66	0.66	0.28	0.00	0.91	1.00	0.45	0.13
Avail Cap(c_a), veh/h	278	668	568	298	828	849	492	0	443	282	511	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	46.0	30.3	47.9	29.5	29.5	40.5	0.0	54.9	41.2	42.8	38.9
Incr Delay (d2), s/veh	0.5	37.3	0.0	54.1	1.9	1.8	0.5	0.0	20.4	53.3	0.6	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	0.0
%ile BackOfQ(50%),veh/ln	1.2	33.1	0.9	16.1	16.9	17.3	2.9	0.0	14.6	7.1	7.5	1.7
LnGrp Delay(d),s/veh	29.5	83.3	30.4	102.0	31.4	31.3	40.9	0.0	75.2	94.5	43.4	39.1
LnGrp LOS	C	F	C	F	C	C	D		E	F	D	D
Approach Vol, veh/h		758			1400			421			567	
Approach Delay, s/veh		77.5			46.5			67.5			68.4	
Approach LOS		E			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	72.4	23.0	36.7	26.0	57.0	14.2	45.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	8.7	61.7	16.7	37.7	19.7	50.7	20.7	33.7
Max Q Clear Time (g_c+I1), s	4.4	35.4	18.7	29.1	21.7	52.7	8.0	16.5
Green Ext Time (p_c), s	0.0	13.0	0.0	1.3	0.0	0.0	0.2	3.4

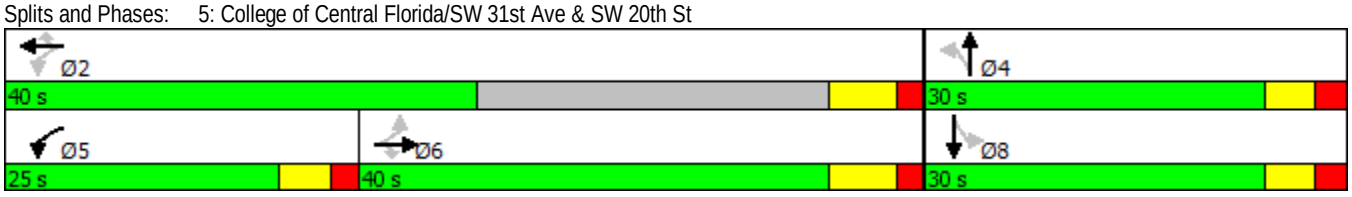
Intersection Summary	
HCM 2010 Ctrl Delay	60.7
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	737	65	109	721	78	62	62	120	77	94	105
Future Volume (vph)	39	737	65	109	721	78	62	62	120	77	94	105
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	45	857	76	127	838	91	72	72	140	90	109	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	857	76	127	838	91	72	212	0	90	231	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.16	0.96	0.09	0.39	0.70	0.09	0.44	0.54		0.50	0.64	
Control Delay	16.3	45.1	2.6	10.3	13.2	1.8	36.0	20.7		37.8	29.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	45.1	2.6	10.3	13.2	1.8	36.0	20.7		37.8	29.8	
Queue Length 50th (ft)	11	368	0	17	204	0	29	46		37	73	
Queue Length 95th (ft)	38	#716	15	51	393	15	67	103		80	139	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	287	894	812	566	1535	1322	311	645		338	625	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.96	0.09	0.22	0.55	0.07	0.23	0.33		0.27	0.37	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 71.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	737	65	109	721	78	62	62	120	77	94	105
Future Volume (veh/h)	39	737	65	109	721	78	62	62	120	77	94	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	45	857	52	127	838	72	72	72	105	90	109	92
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	277	871	740	223	1137	967	238	152	221	254	205	173
Arrive On Green	0.46	0.46	0.46	0.06	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	617	1881	1599	1792	1881	1599	1188	693	1010	1203	935	789
Grp Volume(v), veh/h	45	857	52	127	838	72	72	0	177	90	0	201
Grp Sat Flow(s),veh/h/ln	617	1881	1599	1792	1881	1599	1188	0	1703	1203	0	1724
Q Serve(g_s), s	4.0	32.4	1.3	2.4	22.9	1.3	4.1	0.0	6.5	5.1	0.0	7.4
Cycle Q Clear(g_c), s	16.7	32.4	1.3	2.4	22.9	1.3	11.5	0.0	6.5	11.6	0.0	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.46
Lane Grp Cap(c), veh/h	277	871	740	223	1137	967	238	0	373	254	0	377
V/C Ratio(X)	0.16	0.98	0.07	0.57	0.74	0.07	0.30	0.00	0.47	0.35	0.00	0.53
Avail Cap(c_a), veh/h	277	871	740	591	1137	967	374	0	568	392	0	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	19.1	10.7	16.3	10.1	5.9	29.9	0.0	24.5	29.5	0.0	24.8
Incr Delay (d2), s/veh	0.3	26.6	0.0	2.3	2.5	0.0	0.7	0.0	0.9	0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	23.1	0.6	2.6	12.4	0.6	1.4	0.0	3.1	1.7	0.0	3.6
LnGrp Delay(d),s/veh	20.0	45.7	10.8	18.6	12.7	5.9	30.7	0.0	25.4	30.4	0.0	26.0
LnGrp LOS	C	D	B	B	B	A	C		C	C		C
Approach Vol, veh/h		954			1037			249			291	
Approach Delay, s/veh		42.6			12.9			26.9			27.4	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		50.2		21.8	10.2	40.0		21.8
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		24.9		13.5	4.4	34.4		13.6
Green Ext Time (p_c), s		6.4		2.2	0.2	0.0		2.2

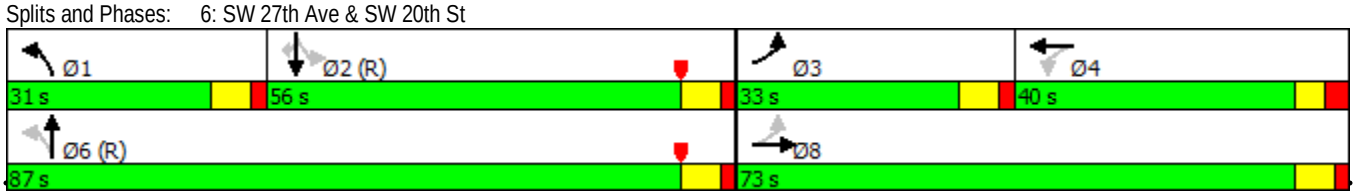
Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	313	391	347	18	324	82	309	857	23	70	954	317
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	738	0	18	406	0	309	880	0	70	954	317
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	33.0	73.0		40.0	40.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	20.6%	45.6%		25.0%	25.0%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.95	0.99		0.38	1.02		0.98	0.50		0.37	0.87	0.45
Control Delay	84.8	74.9		80.7	108.8		94.5	27.6		50.5	61.7	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	84.8	74.9		80.7	108.8		94.5	27.6		50.5	61.7	6.0
Queue Length 50th (ft)	274	740		16	~453		275	315		58	497	0
Queue Length 95th (ft)	#462	#1028		49	#674		#479	375		111	589	73
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	339	744		47	399		315	1770		187	1101	712
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	0.92	0.99		0.38	1.02		0.98	0.50		0.37	0.87	0.45

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	313	391	316	18	324	69	309	857	22	70	954	180
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	332	399	322	55	321	68	329	1773	46	249	1149	514
Arrive On Green	0.16	0.41	0.41	0.21	0.21	0.21	0.14	0.50	0.50	0.32	0.32	0.32
Sat Flow, veh/h	1792	964	779	753	1519	324	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	313	0	707	18	0	393	309	430	449	70	954	180
Grp Sat Flow(s),veh/h/ln	1792	0	1744	753	0	1843	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	23.6	0.0	64.0	2.1	0.0	33.8	20.1	25.5	25.5	13.5	39.5	13.8
Cycle Q Clear(g_c), s	23.6	0.0	64.0	33.8	0.0	33.8	20.1	25.5	25.5	13.5	39.5	13.8
Prop In Lane	1.00		0.45	1.00		0.18	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	332	0	721	55	0	389	329	890	929	249	1149	514
V/C Ratio(X)	0.94	0.00	0.98	0.33	0.00	1.01	0.94	0.48	0.48	0.28	0.83	0.35
Avail Cap(c_a), veh/h	339	0	723	55	0	389	351	890	929	249	1149	514
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	0.0	46.3	79.4	0.0	63.1	42.2	26.1	26.1	41.4	50.2	41.5
Incr Delay (d2), s/veh	33.7	0.0	28.6	3.4	0.0	48.1	31.6	1.9	1.8	2.8	7.0	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 BackOfQ(50%),veh/ln	16.8	0.0	36.6	0.8	0.0	22.4	16.4	12.9	13.4	2.5	20.6	6.4
LnGrp Delay(d),s/veh	84.2	0.0	74.9	82.8	0.0	111.2	73.8	28.0	27.9	44.2	57.2	43.4
LnGrp LOS	F		E	F		F	E	C	C	D	E	D
Approach Vol, veh/h		1020			411			1188			1204	
Approach Delay, s/veh		77.8			110.0			39.9			54.4	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	29.0	58.1	32.3	40.5		87.2		72.8
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	26.3	33.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	22.1	41.5	25.6	35.8		27.5		66.0
Green Ext Time (p_c), s	0.2	6.1	0.1	0.0		20.5		0.1

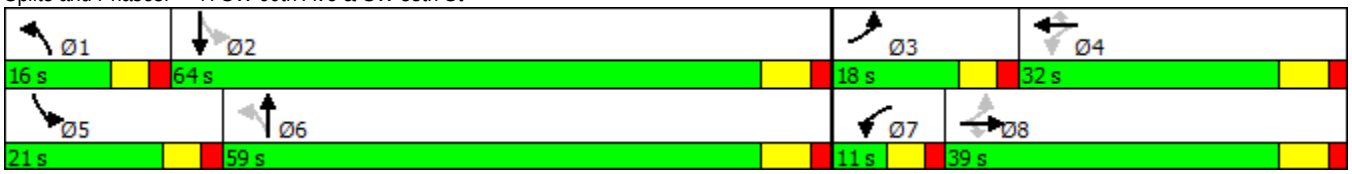
Intersection Summary	
HCM 2010 Ctrl Delay	62.1
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	334	218	85	317	194	165	833	68	178	1083	314
Future Volume (vph)	264	334	218	85	317	194	165	833	68	178	1083	314
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	293	371	242	94	352	216	183	926	76	198	1203	349
Shared Lane Traffic (%)												
Lane Group Flow (vph)	293	371	242	94	352	216	183	1002	0	198	1552	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8		8	4		4	6			2		
Detector Phase	3	8	8	7	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	7.0	25.0		7.0	25.0	
Minimum Split (s)	10.7	16.8	16.8	10.7	16.8	16.8	12.7	31.8		12.7	31.8	
Total Split (s)	18.0	39.0	39.0	11.0	32.0	32.0	16.0	59.0		21.0	64.0	
Total Split (%)	13.8%	30.0%	30.0%	8.5%	24.6%	24.6%	12.3%	45.4%		16.2%	49.2%	
Yellow Time (s)	3.7	4.8	4.8	3.7	4.8	4.8	3.7	4.8		3.7	4.8	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	6.8	6.8	5.7	6.8	6.8	5.7	6.8		5.7	6.8	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
v/c Ratio	0.70	0.84	0.51	0.53	0.97	0.48	0.93	0.68		0.66	1.01	
Control Delay	40.7	63.8	23.5	44.2	92.8	14.8	81.2	33.1		25.0	62.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.7	63.8	23.5	44.2	92.8	14.8	81.2	33.1		25.0	62.0	
Queue Length 50th (ft)	91	298	80	55	298	29	104	352		77	~717	
Queue Length 95th (ft)	128	#455	166	97	#494	105	#256	447		119	#860	
Internal Link Dist (ft)		3446			2567			4365			6545	
Turn Bay Length (ft)	200		25	310		25	190			185		
Base Capacity (vph)	427	449	478	179	362	448	197	1480		339	1530	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.69	0.83	0.51	0.53	0.97	0.48	0.93	0.68		0.58	1.01	

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 129.6
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SW 60th Ave & SW 38th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	334	218	85	317	194	165	833	68	178	1083	314
Future Volume (veh/h)	264	334	218	85	317	194	165	833	68	178	1083	314
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1810	1810	1810	1863	1863	1863	1845	1845	1900	1863	1863	1900
Adj Flow Rate, veh/h	293	371	194	94	352	142	183	926	73	198	1203	311
Adj No. of Lanes	2	1	1	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	2	2	2	3	3	3	2	2	2
Cap, veh/h	409	433	368	165	365	310	202	1473	116	323	1243	317
Arrive On Green	0.08	0.24	0.24	0.04	0.20	0.20	0.08	0.45	0.45	0.08	0.44	0.44
Sat Flow, veh/h	3343	1810	1538	1774	1863	1583	1757	3292	260	1774	2794	713
Grp Volume(v), veh/h	293	371	194	94	352	142	183	493	506	198	756	758
Grp Sat Flow(s),veh/h/ln	1672	1810	1538	1774	1863	1583	1757	1752	1799	1774	1770	1737
Q Serve(g_s), s	8.7	25.2	14.1	5.3	24.1	10.2	8.8	27.8	27.8	7.7	53.2	55.3
Cycle Q Clear(g_c), s	8.7	25.2	14.1	5.3	24.1	10.2	8.8	27.8	27.8	7.7	53.2	55.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.41
Lane Grp Cap(c), veh/h	409	433	368	165	365	310	202	784	805	323	787	773
V/C Ratio(X)	0.72	0.86	0.53	0.57	0.96	0.46	0.91	0.63	0.63	0.61	0.96	0.98
Avail Cap(c_a), veh/h	447	453	385	165	365	310	202	784	805	397	787	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	46.8	42.6	41.8	51.2	45.7	36.5	27.3	27.3	21.0	34.6	35.1
Incr Delay (d2), s/veh	4.9	14.5	1.2	4.5	37.6	1.1	38.5	1.6	1.6	1.9	22.8	27.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	14.3	6.1	0.9	16.2	4.5	8.6	13.8	14.1	3.9	30.8	32.2
LnGrp Delay(d),s/veh	42.7	61.3	43.8	46.3	88.8	46.7	75.0	28.9	28.9	22.9	57.4	62.7
LnGrp LOS	D	E	D	D	F	D	E	C	C	C	E	E
Approach Vol, veh/h		858			588			1182			1712	
Approach Delay, s/veh		51.0			71.8			36.0			55.8	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	64.0	16.6	32.0	15.6	64.4	11.0	37.6
Change Period (Y+Rc), s	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8	* 5.7	6.8
Max Green Setting (Gmax), s	* 10	57.2	* 12	25.2	* 15	52.2	* 5.3	32.2
Max Q Clear Time (g_c+I1), s	10.8	57.3	10.7	26.1	9.7	29.8	7.3	27.2
Green Ext Time (p_c), s	0.0	0.0	0.2	0.0	0.2	16.8	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	51.6
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	461	21	19	562	92	46	18	23	83	22	40
Future Volume (vph)	39	461	21	19	562	92	46	18	23	83	22	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	40	475	22	20	579	95	47	19	24	86	23	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	537	0	0	694	0	0	90	0	0	150	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0		35.0	35.0		20.0	20.0		20.0	20.0	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
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	
Total Lost Time (s)		6.8			6.8			6.8			6.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Min	Min		Min	Min	
v/c Ratio		0.67			0.80			0.30			0.49	
Control Delay		14.0			18.4			16.0			20.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.0			18.4			16.0			20.3	
Queue Length 50th (ft)		94			130			15			28	
Queue Length 95th (ft)		201			#293			48			77	
Internal Link Dist (ft)		1473			795			863			1230	
Turn Bay Length (ft)												
Base Capacity (vph)		1084			1171			440			436	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.50			0.59			0.20			0.34	

Intersection Summary

Cycle Length: 55
Actuated Cycle Length: 45.2
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: SW 43rd Ct & SW 40th Ct

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	461	21	19	562	92	46	18	23	83	22	40
Future Volume (veh/h)	39	461	21	19	562	92	46	18	23	83	22	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
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		1.00
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
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1863	1900	1900	1900	1900	1900	1827	1900
Adj Flow Rate, veh/h	40	475	22	20	579	95	47	19	24	86	23	41
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	0	0	0	4	4	4
Cap, veh/h	126	828	37	100	789	127	234	91	70	257	54	65
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	63	1607	71	19	1533	246	654	589	452	770	348	420
Grp Volume(v), veh/h	537	0	0	694	0	0	90	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	1741	0	0	1798	0	0	1695	0	0	1538	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	12.3	0.0	0.0	1.8	0.0	0.0	3.6	0.0	0.0
Prop In Lane	0.07		0.04	0.03		0.14	0.52		0.27	0.57		0.27
Lane Grp Cap(c), veh/h	991	0	0	1016	0	0	395	0	0	375	0	0
V/C Ratio(X)	0.54	0.00	0.00	0.68	0.00	0.00	0.23	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	1270	0	0	1318	0	0	647	0	0	616	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	7.8	0.0	0.0	15.5	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	6.3	0.0	0.0	0.9	0.0	0.0	1.7	0.0	0.0
LnGrp Delay(d),s/veh	7.3	0.0	0.0	8.8	0.0	0.0	15.8	0.0	0.0	16.8	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		537			694			90			150	
Approach Delay, s/veh		7.3			8.8			15.8			16.8	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		13.1		28.0		13.1		28.0
Change Period (Y+Rc), s		6.8		6.8		6.8		6.8
Max Green Setting (Gmax), s		13.2		28.2		13.2		28.2
Max Q Clear Time (g_c+I1), s		5.6		14.3		3.8		10.4
Green Ext Time (p_c), s		0.8		6.9		0.9		7.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	412	2138	94	209	2549	520	72	44	145	537	78	375
Future Volume (vph)	412	2138	94	209	2549	520	72	44	145	537	78	375
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	420	2182	96	213	2601	531	73	45	148	548	80	383
Shared Lane Traffic (%)												
Lane Group Flow (vph)	420	2278	0	213	2601	531	73	193	0	548	80	383
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2						8
Detector Phase	1	6		5	2	2	7	4		3	8	8
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.4	38.8		14.4	37.8	37.8	12.8	14.2		13.1	14.3	14.3
Total Split (s)	28.0	74.0		33.0	79.0	79.0	20.0	20.0		33.0	33.0	33.0
Total Split (%)	17.5%	46.3%		20.6%	49.4%	49.4%	12.5%	12.5%		20.6%	20.6%	20.6%
Yellow Time (s)	4.8	4.8		4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.6	2.0		2.6	2.0	2.0	2.1	3.5		2.4	3.6	3.6
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.4	6.8		7.4	6.8	6.8	5.8	7.2		6.1	7.3	7.3
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	None
v/c Ratio	0.94	1.03		0.84	1.12	0.62	0.58	0.94		0.95	0.21	0.78
Control Delay	90.8	52.8		93.2	102.2	20.0	89.3	91.0		91.6	59.0	32.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	90.8	52.8		93.2	102.2	20.0	89.3	91.0		91.6	59.0	32.2
Queue Length 50th (ft)	238	~925		217	~1145	223	75	122		295	73	131
Queue Length 95th (ft)	m235	m#382		#327	#1222	351	132	#285		#409	128	#293
Internal Link Dist (ft)		663			2272			411			708	
Turn Bay Length (ft)	290			500			170			260		25
Base Capacity (vph)	445	2220		285	2317	859	157	205		582	376	493
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.94	1.03		0.75	1.12	0.62	0.46	0.94		0.94	0.21	0.78

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 116 (73%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: SW 38th Ct & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	412	2138	94	209	2549	520	72	44	145	537	78	375
Future Volume (veh/h)	412	2138	94	209	2549	520	72	44	145	537	78	375
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	1881	1863	1863	1900	1881	1956	1881
Adj Flow Rate, veh/h	420	2182	87	213	2601	398	73	45	80	548	80	131
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	2	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	1	1	1
Cap, veh/h	443	3494	139	235	3589	1117	91	48	86	584	402	328
Arrive On Green	0.13	0.47	0.70	0.13	0.23	0.70	0.05	0.08	0.08	0.17	0.21	0.21
Sat Flow, veh/h	3442	5018	199	1792	5136	1599	1774	603	1071	3476	1956	1599
Grp Volume(v), veh/h	420	1471	798	213	2601	398	73	0	125	548	80	131
Grp Sat Flow(s),veh/h/ln	1721	1695	1828	1792	1712	1599	1774	0	1674	1738	1956	1599
Q Serve(g_s), s	19.4	52.2	51.3	18.8	74.9	15.9	6.5	0.0	11.9	24.9	5.4	11.3
Cycle Q Clear(g_c), s	19.4	52.2	51.3	18.8	74.9	15.9	6.5	0.0	11.9	24.9	5.4	11.3
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	443	2361	1273	235	3589	1117	91	0	134	584	402	328
V/C Ratio(X)	0.95	0.62	0.63	0.91	0.72	0.36	0.80	0.00	0.93	0.94	0.20	0.40
Avail Cap(c_a), veh/h	443	2361	1273	287	3589	1117	157	0	134	584	402	328
HCM Platoon Ratio	1.00	0.67	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.2	26.9	25.4	68.5	47.3	9.6	75.1	0.0	73.2	65.7	52.7	55.0
Incr Delay (d2), s/veh	29.8	1.3	2.3	26.9	1.3	0.9	14.6	0.0	57.7	23.0	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	24.9	26.7	11.0	35.9	7.2	3.6	0.0	7.7	13.8	3.0	5.1
LnGrp Delay(d),s/veh	99.0	28.1	27.7	95.5	48.6	10.5	89.7	0.0	130.9	88.7	52.9	55.8
LnGrp LOS	F	C	C	F	D	B	F		F	F	D	E
Approach Vol, veh/h		2689			3212			198			759	
Approach Delay, s/veh		39.1			47.0			115.7			79.3	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	119.8	34.2	20.0	28.4	119.4	14.0	40.2
Change Period (Y+Rc), s	7.4	6.8	* 7.3	* 7.2	7.4	6.8	* 5.8	* 7.3
Max Green Setting (Gmax), s	20.6	72.2	* 27	* 13	25.6	67.2	* 14	* 26
Max Q Clear Time (g_c+I1), s	21.4	76.9	26.9	13.9	20.8	54.2	8.5	13.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	12.9	0.1	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

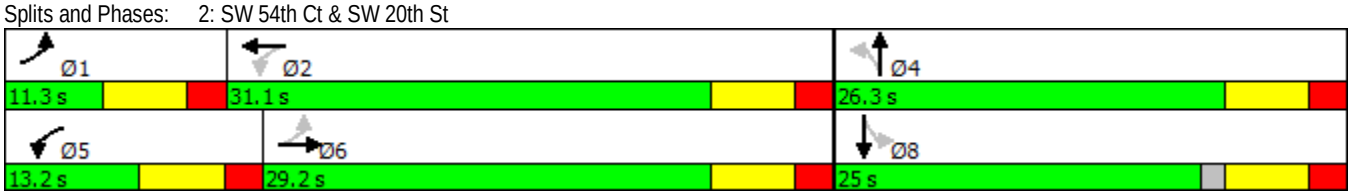
PM Peak Hour Buildout Traffic Conditions with Mitigation

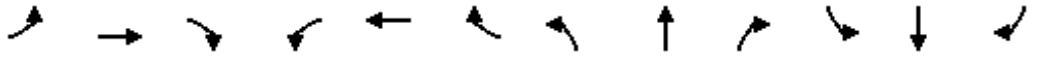
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	621	96	168	888	45	129	2	62	19	2	22
Future Volume (vph)	28	621	96	168	888	45	129	2	62	19	2	22
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	3%	3%	3%
Adj. Flow (vph)	33	739	114	200	1057	54	154	2	74	23	2	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	853	0	200	1111	0	0	230	0	0	51	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	20.0		5.0	20.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	11.3	26.3		11.3	26.3		26.3	26.3		24.3	24.3	
Total Split (s)	11.3	29.2		13.2	31.1		26.3	26.3		25.0	25.0	
Total Split (%)	16.4%	42.5%		19.2%	45.3%		38.3%	38.3%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
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	
Total Lost Time (s)	6.3	6.3		6.3	6.3			6.3			6.3	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		Min	Min		None	None	
v/c Ratio	0.13	0.72		0.59	0.66			0.60			0.13	
Control Delay	8.9	22.0		17.0	17.5			24.9			12.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	8.9	22.0		17.0	17.5			24.9			12.3	
Queue Length 50th (ft)	5	138		34	127			64			7	
Queue Length 95th (ft)	17	200		#71	272			120			28	
Internal Link Dist (ft)		2558			4996			1323			1240	
Turn Bay Length (ft)	225			225								
Base Capacity (vph)	260	1282		338	1678			464			468	
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	0.13	0.67		0.59	0.66			0.50			0.11	

Intersection Summary

Cycle Length: 68.7
Actuated Cycle Length: 63.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: SW 54th Ct & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	621	96	168	888	45	129	2	62	19	2	22
Future Volume (veh/h)	28	621	96	168	888	45	129	2	62	19	2	22
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1900	1900	1900	1845	1900
Adj Flow Rate, veh/h	33	739	114	200	1057	54	154	2	74	23	2	26
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	3	3	3
Cap, veh/h	254	1061	164	385	1395	71	327	23	119	230	45	197
Arrive On Green	0.04	0.34	0.34	0.10	0.41	0.41	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1792	3105	479	1774	3426	175	926	92	483	585	184	800
Grp Volume(v), veh/h	33	425	428	200	546	565	230	0	0	51	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1797	1774	1770	1832	1501	0	0	1570	0	0
Q Serve(g_s), s	0.7	12.5	12.5	4.3	16.1	16.1	6.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	12.5	12.5	4.3	16.1	16.1	8.1	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.10	0.67		0.32	0.45		0.51
Lane Grp Cap(c), veh/h	254	610	614	385	721	746	469	0	0	473	0	0
V/C Ratio(X)	0.13	0.70	0.70	0.52	0.76	0.76	0.49	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	339	673	677	407	722	747	590	0	0	561	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.3	17.3	17.3	12.5	15.4	15.4	20.2	0.0	0.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.8	2.8	1.1	4.6	4.5	0.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.6	6.7	2.2	8.7	8.9	3.5	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	13.5	20.1	20.1	13.6	20.1	19.9	21.0	0.0	0.0	17.9	0.0	0.0
LnGrp LOS	B	C	C	B	C	B	C			B		
Approach Vol, veh/h		886			1311			230			51	
Approach Delay, s/veh		19.8			19.0			21.0			17.9	
Approach LOS		B			B			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	31.0		21.3	12.4	27.1		21.3
Change Period (Y+Rc), s	6.3	6.3		6.3	6.3	6.3		6.3
Max Green Setting (Gmax), s	5.0	24.8		20.0	6.9	22.9		18.7
Max Q Clear Time (g_c+I1), s	2.7	18.1		10.1	6.3	14.5		3.4
Green Ext Time (p_c), s	0.0	5.2		1.2	0.0	6.3		1.5

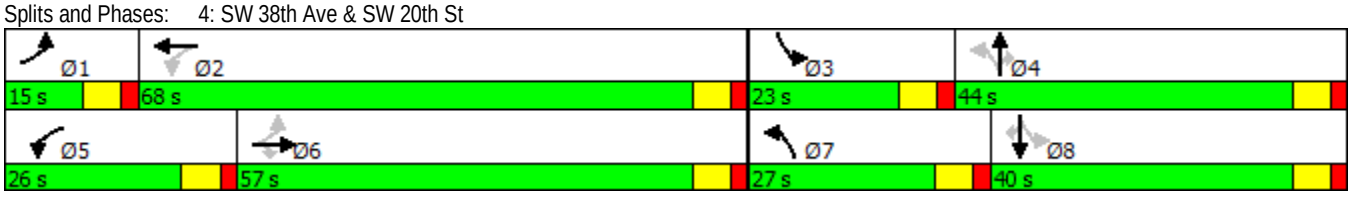
Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	574	76	255	864	76	81	119	244	240	195	94
Future Volume (vph)	41	574	76	255	864	76	81	119	244	240	195	94
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	48	675	89	300	1016	89	95	140	287	282	229	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	675	89	300	1105	0	95	140	287	282	229	111
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0	20.0	11.3	20.0	20.0
Total Split (s)	15.0	57.0	57.0	26.0	68.0		27.0	44.0	44.0	23.0	40.0	40.0
Total Split (%)	10.0%	38.0%	38.0%	17.3%	45.3%		18.0%	29.3%	29.3%	15.3%	26.7%	26.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None	None	None	None	None
v/c Ratio	0.19	0.91	0.12	0.88	0.61		0.36	0.59	0.66	0.80	0.70	0.27
Control Delay	15.9	55.7	0.3	61.1	25.9		36.8	62.5	15.4	55.6	62.8	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	55.7	0.3	61.1	25.9		36.8	62.5	15.4	55.6	62.8	3.1
Queue Length 50th (ft)	15	516	0	183	336		58	112	16	194	182	0
Queue Length 95th (ft)	38	#793	0	#363	466		95	168	80	261	261	6
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	273	740	727	339	1812		397	540	647	354	487	533
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.91	0.12	0.88	0.61		0.24	0.26	0.44	0.80	0.47	0.21

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 129.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	574	76	255	864	76	81	119	244	240	195	94
Future Volume (veh/h)	41	574	76	255	864	76	81	119	244	240	195	94
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	48	675	35	300	1016	84	95	140	135	282	229	56
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	259	759	645	330	1644	136	266	228	194	365	375	319
Arrive On Green	0.03	0.40	0.40	0.12	0.49	0.49	0.06	0.12	0.12	0.14	0.20	0.20
Sat Flow, veh/h	1792	1881	1599	1792	3343	276	1757	1845	1568	1774	1863	1583
Grp Volume(v), veh/h	48	675	35	300	543	557	95	140	135	282	229	56
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1787	1832	1757	1845	1568	1774	1863	1583
Q Serve(g_s), s	1.8	39.8	1.6	12.1	26.5	26.5	5.6	8.6	9.8	16.2	13.3	3.5
Cycle Q Clear(g_c), s	1.8	39.8	1.6	12.1	26.5	26.5	5.6	8.6	9.8	16.2	13.3	3.5
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	759	645	330	879	901	266	228	194	365	375	319
V/C Ratio(X)	0.19	0.89	0.05	0.91	0.62	0.62	0.36	0.61	0.70	0.77	0.61	0.18
Avail Cap(c_a), veh/h	330	800	680	408	925	948	462	583	496	365	526	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	33.1	21.7	27.9	22.1	22.1	41.9	49.6	50.1	37.4	43.3	39.4
Incr Delay (d2), s/veh	0.3	11.7	0.0	20.9	1.2	1.1	0.8	2.7	4.5	9.8	1.6	0.3
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 BackOfQ(50%),veh/ln	0.9	23.1	0.7	11.6	13.3	13.6	2.8	4.6	4.5	8.9	7.0	1.5
LnGrp Delay(d),s/veh	20.9	44.8	21.7	48.8	23.3	23.3	42.7	52.3	54.6	47.1	45.0	39.7
LnGrp LOS	C	D	C	D	C	C	D	D	D	D	D	D
Approach Vol, veh/h		758			1400			370			567	
Approach Delay, s/veh		42.2			28.7			50.7			45.5	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	65.0	23.0	21.0	20.8	54.4	13.7	30.3
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	8.7	61.7	16.7	37.7	19.7	50.7	20.7	33.7
Max Q Clear Time (g_c+I1), s	3.8	28.5	18.2	11.8	14.1	41.8	7.6	15.3
Green Ext Time (p_c), s	0.0	14.5	0.0	2.9	0.4	6.3	0.2	2.6

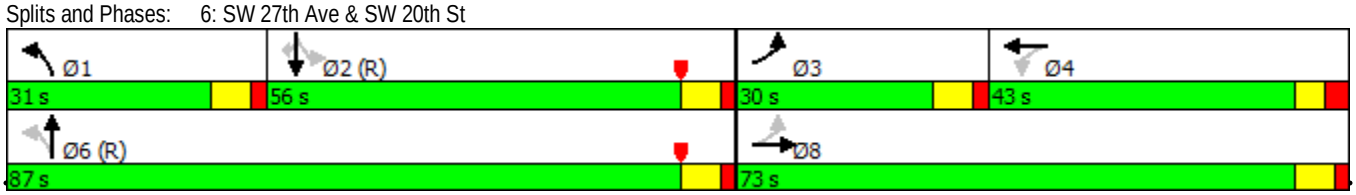
Intersection Summary	
HCM 2010 Ctrl Delay	37.7
HCM 2010 LOS	D

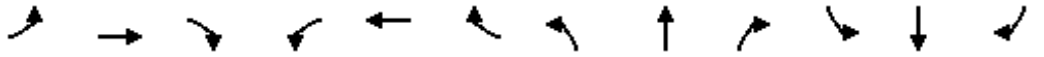
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	313	391	347	18	324	82	309	857	23	70	954	317
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	738	0	18	406	0	309	880	0	70	954	317
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	30.0	73.0		43.0	43.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	18.8%	45.6%		26.9%	26.9%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	1.02	0.99		0.38	0.96		0.98	0.50		0.37	0.87	0.45
Control Delay	103.2	74.9		78.8	94.0		94.5	27.6		50.5	61.7	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	103.2	74.9		78.8	94.0		94.5	27.6		50.5	61.7	6.0
Queue Length 50th (ft)	~293	740		16	418		275	315		58	497	0
Queue Length 95th (ft)	#497	#1028		48	#636		#479	375		111	589	73
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	307	744		47	423		315	1770		187	1101	712
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	1.02	0.99		0.38	0.96		0.98	0.50		0.37	0.87	0.45

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SW 27th Ave & SW 20th St



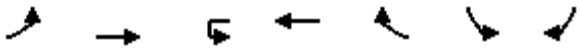


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	313	391	316	18	324	69	309	857	22	70	954	180
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	323	400	323	56	345	73	329	1770	45	248	1144	512
Arrive On Green	0.15	0.41	0.41	0.23	0.23	0.23	0.14	0.50	0.50	0.32	0.32	0.32
Sat Flow, veh/h	1792	964	779	753	1519	324	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	313	0	707	18	0	393	309	430	449	70	954	180
Grp Sat Flow(s),veh/h/ln	1792	0	1744	753	0	1843	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	22.2	0.0	63.9	2.4	0.0	33.5	20.2	25.6	25.6	13.5	39.6	13.8
Cycle Q Clear(g_c), s	22.2	0.0	63.9	36.3	0.0	33.5	20.2	25.6	25.6	13.5	39.6	13.8
Prop In Lane	1.00		0.45	1.00		0.18	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	323	0	723	56	0	418	329	888	927	248	1144	512
V/C Ratio(X)	0.97	0.00	0.98	0.32	0.00	0.94	0.94	0.48	0.48	0.28	0.83	0.35
Avail Cap(c_a), veh/h	323	0	723	56	0	418	350	888	927	248	1144	512
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	46.1	79.2	0.0	60.8	42.5	26.2	26.2	41.6	50.5	41.7
Incr Delay (d2), s/veh	41.5	0.0	28.1	3.2	0.0	29.3	31.7	1.9	1.8	2.8	7.2	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 BackOfQ(50%),veh/ln	17.5	0.0	36.3	0.8	0.0	20.4	16.4	12.9	13.4	2.6	20.8	6.4
LnGrp Delay(d),s/veh	87.5	0.0	74.2	82.5	0.0	90.1	74.2	28.1	28.0	44.4	57.7	43.6
LnGrp LOS	F		E	F		F	E	C	C	D	E	D
Approach Vol, veh/h		1020			411			1188			1204	
Approach Delay, s/veh		78.3			89.7			40.1			54.8	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	29.1	57.9	30.0	43.0		87.0		73.0
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	23.3	36.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	22.2	41.6	24.2	38.3		27.6		65.9
Green Ext Time (p_c), s	0.2	6.0	0.0	0.0		20.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	60.3
HCM 2010 LOS	E

AM Peak Hour Existing Traffic Conditions



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	101	581	0	328	45	24	60
Future Volume (vph)	101	581	0	328	45	24	60
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	4%	4%	5%	5%
Adj. Flow (vph)	113	653	0	369	51	27	67
Shared Lane Traffic (%)							
Lane Group Flow (vph)	113	653	0	420	0	27	67
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	101	581	0	328	45	24	60
Future Vol, veh/h	101	581	0	328	45	24	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	4	5	5
Mvmt Flow	113	653	0	369	51	27	67

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	419	0	476	-	0	947	210
Stage 1	-	-	-	-	-	394	-
Stage 2	-	-	-	-	-	553	-
Critical Hdwy	4.14	-	6.48	-	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	-	5.9	-
Follow-up Hdwy	2.22	-	2.54	-	-	3.55	3.35
Pot Cap-1 Maneuver	1137	-	708	-	-	254	786
Stage 1	-	-	-	-	-	642	-
Stage 2	-	-	-	-	-	532	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	1137	-	708	-	-	229	786
Mov Cap-2 Maneuver	-	-	-	-	-	229	-
Stage 1	-	-	-	-	-	642	-
Stage 2	-	-	-	-	-	479	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	13.7
HCM LOS			B

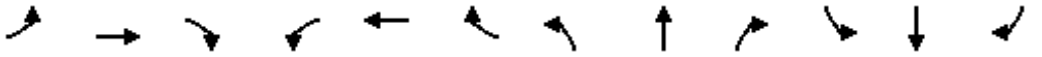
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1137	-	708	-	-	229	786
HCM Lane V/C Ratio	0.1	-	-	-	-	0.118	0.086
HCM Control Delay (s)	8.5	-	0	-	-	22.8	10
HCM Lane LOS	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	0	-	-	0.4	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	557	32	80	311	131	38	74	161	58	24	18
Future Volume (vph)	35	557	32	80	311	131	38	74	161	58	24	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	38	612	35	88	342	144	42	81	177	64	26	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	612	35	88	486	0	42	258	0	64	26	20
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.08	0.79	0.05	0.26	0.61		0.11	0.71		0.24	0.07	0.05
Control Delay	11.1	35.2	0.1	13.0	24.9		28.3	42.5		30.0	38.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.1	35.2	0.1	13.0	24.9		28.3	42.5		30.0	38.8	0.2
Queue Length 50th (ft)	11	355	0	26	250		18	113		28	14	0
Queue Length 95th (ft)	27	536	0	52	380		53	#295		75	45	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	519	1207	1073	402	1139		480	434		355	448	478
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.07	0.51	0.03	0.22	0.43		0.09	0.59		0.18	0.06	0.04

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 93.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

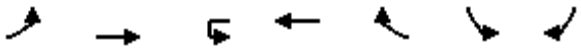


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	557	32	80	311	131	38	74	161	58	24	18
Future Volume (veh/h)	35	557	32	80	311	131	38	74	161	58	24	18
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	38	612	21	88	342	133	42	81	118	64	26	5
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	419	756	643	354	551	214	344	100	146	194	267	227
Arrive On Green	0.07	0.41	0.41	0.10	0.44	0.44	0.04	0.15	0.15	0.05	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1740	1253	487	1757	680	990	1630	1712	1455
Grp Volume(v), veh/h	38	612	21	88	0	475	42	0	199	64	26	5
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	0	1741	1757	0	1670	1630	1712	1455
Q Serve(g_s), s	1.0	24.6	0.7	2.2	0.0	17.8	1.7	0.0	9.8	2.8	1.1	0.2
Cycle Q Clear(g_c), s	1.0	24.6	0.7	2.2	0.0	17.8	1.7	0.0	9.8	2.8	1.1	0.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	419	756	643	354	0	765	344	0	245	194	267	227
V/C Ratio(X)	0.09	0.81	0.03	0.25	0.00	0.62	0.12	0.00	0.81	0.33	0.10	0.02
Avail Cap(c_a), veh/h	582	1293	1099	456	0	1208	564	0	369	383	378	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	22.2	15.1	14.8	0.0	18.3	28.8	0.0	34.9	29.3	30.6	30.2
Incr Delay (d2), s/veh	0.1	2.1	0.0	0.4	0.0	0.8	0.2	0.0	8.0	1.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	13.0	0.3	1.1	0.0	8.6	0.8	0.0	5.0	1.3	0.5	0.1
LnGrp Delay(d),s/veh	13.4	24.4	15.1	15.1	0.0	19.1	29.0	0.0	42.9	30.3	30.8	30.3
LnGrp LOS	B	C	B	B		B	C		D	C	C	C
Approach Vol, veh/h		671			563			241			95	
Approach Delay, s/veh		23.5			18.5			40.5			30.4	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	43.5	10.2	18.7	15.0	40.6	9.4	19.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	3.0	19.8	4.8	11.8	4.2	26.6	3.7	3.1
Green Ext Time (p_c), s	0.0	8.0	0.1	0.7	0.1	7.7	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

AM Peak Hour Future Year Background Traffic Conditions



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	132	825	0	469	58	31	80
Future Volume (vph)	132	825	0	469	58	31	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	4%	4%	5%	5%
Adj. Flow (vph)	148	927	0	527	65	35	90
Shared Lane Traffic (%)							
Lane Group Flow (vph)	148	927	0	592	0	35	90
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	132	825	0	469	58	31	80
Future Vol, veh/h	132	825	0	469	58	31	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	4	5	5
Mvmt Flow	148	927	0	527	65	35	90

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	592	0	676	-	0	1320	296
Stage 1	-	-	-	-	-	560	-
Stage 2	-	-	-	-	-	760	-
Critical Hdwy	4.14	-	6.48	-	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	-	5.9	-
Follow-up Hdwy	2.22	-	2.54	-	-	3.55	3.35
Pot Cap-1 Maneuver	980	-	528	-	-	144	691
Stage 1	-	-	-	-	-	527	-
Stage 2	-	-	-	-	-	415	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	980	-	528	-	-	122	691
Mov Cap-2 Maneuver	-	-	-	-	-	122	-
Stage 1	-	-	-	-	-	527	-
Stage 2	-	-	-	-	-	352	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	20.7
HCM LOS			C

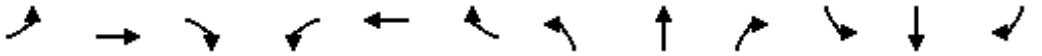
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	980	-	528	-	-	122	691
HCM Lane V/C Ratio	0.151	-	-	-	-	0.286	0.13
HCM Control Delay (s)	9.3	-	0	-	-	45.9	11
HCM Lane LOS	A	-	A	-	-	E	B
HCM 95th %tile Q(veh)	0.5	-	0	-	-	1.1	0.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	752	59	155	419	168	63	130	254	75	68	32
Future Volume (vph)	63	752	59	155	419	168	63	130	254	75	68	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	69	826	65	170	460	185	69	143	279	82	75	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	826	65	170	645	0	69	422	0	82	75	35
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.18	0.95	0.08	0.71	0.70		0.21	1.34		0.44	0.27	0.10
Control Delay	11.6	52.5	0.2	44.8	28.5		36.0	207.7		42.1	50.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.6	52.5	0.2	44.8	28.5		36.0	207.7		42.1	50.4	0.6
Queue Length 50th (ft)	21	638	0	85	399		43	~420		51	55	0
Queue Length 95th (ft)	43	#958	0	#189	585		81	#647		94	106	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	429	921	849	257	925		369	315		234	282	350
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.16	0.90	0.08	0.66	0.70		0.19	1.34		0.35	0.27	0.10

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 120.5
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	752	59	155	419	168	63	130	254	75	68	32
Future Volume (veh/h)	63	752	59	155	419	168	63	130	254	75	68	32
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	69	826	51	170	460	174	69	143	220	82	75	20
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	354	895	760	252	619	234	312	106	163	152	294	250
Arrive On Green	0.08	0.48	0.48	0.09	0.49	0.49	0.04	0.16	0.16	0.06	0.17	0.17
Sat Flow, veh/h	1774	1863	1583	1740	1264	478	1757	656	1010	1630	1712	1455
Grp Volume(v), veh/h	69	826	51	170	0	634	69	0	363	82	75	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	0	1743	1757	0	1666	1630	1712	1455
Q Serve(g_s), s	2.1	48.0	2.0	5.4	0.0	33.9	3.8	0.0	18.7	4.8	4.4	1.3
Cycle Q Clear(g_c), s	2.1	48.0	2.0	5.4	0.0	33.9	3.8	0.0	18.7	4.8	4.4	1.3
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	354	895	760	252	0	852	312	0	269	152	294	250
V/C Ratio(X)	0.19	0.92	0.07	0.67	0.00	0.74	0.22	0.00	1.35	0.54	0.26	0.08
Avail Cap(c_a), veh/h	427	943	802	309	0	882	441	0	269	255	294	250
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	28.1	16.2	24.5	0.0	23.8	38.1	0.0	48.6	39.0	41.6	40.3
Incr Delay (d2), s/veh	0.3	13.9	0.0	4.2	0.0	3.3	0.4	0.0	180.3	2.9	0.5	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	0.0
%ile BackOfQ(50%),veh/ln	1.0	28.0	0.9	2.9	0.0	17.0	1.9	0.0	22.0	2.3	2.1	0.5
LnGrp Delay(d),s/veh	17.2	42.0	16.2	28.8	0.0	27.1	38.4	0.0	228.9	41.9	42.1	40.5
LnGrp LOS	B	D	B	C		C	D		F	D	D	D
Approach Vol, veh/h		946			804			432			177	
Approach Delay, s/veh		38.8			27.5			198.5			41.8	
Approach LOS		D			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	63.0	12.7	25.0	16.3	62.0	11.5	26.2
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	4.1	35.9	6.8	20.7	7.4	50.0	5.8	6.4
Green Ext Time (p_c), s	0.1	10.7	0.1	0.0	0.2	5.7	0.1	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	64.4
HCM 2010 LOS	E

AM Peak Hour Future Year Background Traffic Conditions with Improvement

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	132	825	0	469	58	31	80
Future Volume (vph)	132	825	0	469	58	31	80
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	4%	4%	5%	5%
Adj. Flow (vph)	148	927	0	527	65	35	90
Shared Lane Traffic (%)							
Lane Group Flow (vph)	148	927	0	592	0	35	90
Turn Type	pm+pt	NA	Perm	NA		Prot	Prot
Protected Phases	1	6		2		3	3
Permitted Phases	6		2				
Detector Phase	1	6	2	2		3	3
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.3	24.3	24.3	24.3		11.3	11.3
Total Split (s)	12.0	50.0	38.0	38.0		20.0	20.0
Total Split (%)	17.1%	71.4%	54.3%	54.3%		28.6%	28.6%
Yellow Time (s)	4.3	4.3	4.3	4.3		4.3	4.3
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)	6.3	6.3	6.3	6.3		6.3	6.3
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	Min	None	None		None	None
v/c Ratio	0.28	0.40		0.38		0.13	0.29
Control Delay	6.1	5.7		12.3		19.0	8.2
Queue Delay	0.0	0.0		0.0		0.0	0.0
Total Delay	6.1	5.7		12.3		19.0	8.2
Queue Length 50th (ft)	15	59		62		8	0
Queue Length 95th (ft)	35	100		103		28	29
Internal Link Dist (ft)		2458		2796		1805	
Turn Bay Length (ft)	250						
Base Capacity (vph)	524	3384		2594		572	571
Starvation Cap Reductn	0	0		0		0	0
Spillback Cap Reductn	0	0		0		0	0
Storage Cap Reductn	0	0		0		0	0
Reduced v/c Ratio	0.28	0.27		0.23		0.06	0.16

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 42.6
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 20th St & SW 44th Ave

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	132	825	0	469	58	31	80
Future Volume (veh/h)	132	825	0	469	58	31	80
Number	1	6		2	12	3	18
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1827	1900	1810	1810
Adj Flow Rate, veh/h	148	927		527	65	35	90
Adj No. of Lanes	1	2		2	0	1	1
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		4	4	5	5
Cap, veh/h	552	2237		1240	153	151	135
Arrive On Green	0.09	0.63		0.40	0.40	0.09	0.09
Sat Flow, veh/h	1774	3632		3204	383	1723	1538
Grp Volume(v), veh/h	148	927		293	299	35	90
Grp Sat Flow(s),veh/h/ln	1774	1770		1736	1759	1723	1538
Q Serve(g_s), s	1.9	5.9		5.5	5.5	0.9	2.6
Cycle Q Clear(g_c), s	1.9	5.9		5.5	5.5	0.9	2.6
Prop In Lane	1.00				0.22	1.00	1.00
Lane Grp Cap(c), veh/h	552	2237		692	701	151	135
V/C Ratio(X)	0.27	0.41		0.42	0.43	0.23	0.67
Avail Cap(c_a), veh/h	611	3437		1223	1239	525	468
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.0	4.1		9.8	9.8	19.1	19.9
Incr Delay (d2), s/veh	0.3	0.1		0.4	0.4	0.8	5.5
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.9		2.7	2.7	0.4	1.3
LnGrp Delay(d),s/veh	6.3	4.2		10.2	10.2	19.9	25.4
LnGrp LOS	A	A		B	B	B	C
Approach Vol, veh/h		1075		592		125	
Approach Delay, s/veh		4.5		10.2		23.9	
Approach LOS		A		B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.5	24.2				34.8		10.3
Change Period (Y+Rc), s	6.3	6.3				6.3		6.3
Max Green Setting (Gmax), s	5.7	31.7				43.7		13.7
Max Q Clear Time (g_c+I1), s	3.9	7.5				7.9		4.6
Green Ext Time (p_c), s	0.1	10.4				12.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Notes

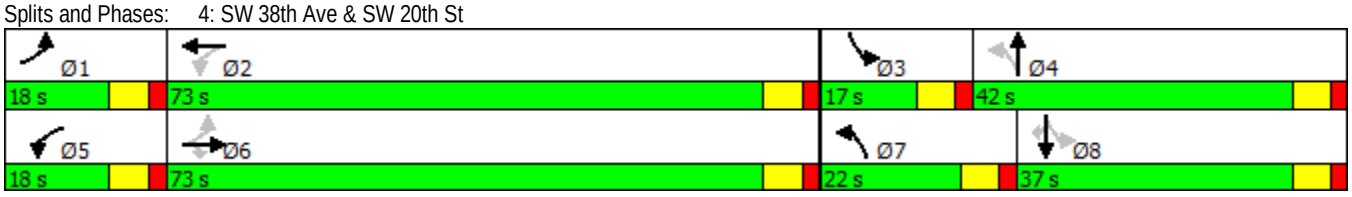
User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	752	59	155	419	168	63	130	254	75	68	32
Future Volume (vph)	63	752	59	155	419	168	63	130	254	75	68	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	69	826	65	170	460	185	69	143	279	82	75	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	69	826	65	170	645	0	69	422	0	82	75	35
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	18.0	73.0	73.0	18.0	73.0		22.0	42.0		17.0	37.0	37.0
Total Split (%)	12.0%	48.7%	48.7%	12.0%	48.7%		14.7%	28.0%		11.3%	24.7%	24.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.17	0.98	0.08	0.92	0.39		0.17	0.97		0.55	0.17	0.08
Control Delay	16.0	67.7	0.2	87.3	23.4		34.3	82.7		48.1	46.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.0	67.7	0.2	87.3	23.4		34.3	82.7		48.1	46.6	0.3
Queue Length 50th (ft)	30	796	0	119	196		46	360		55	58	0
Queue Length 95th (ft)	54	#1091	1	#274	255		83	#579		97	109	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	447	839	777	184	1663		487	447		160	434	455
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.15	0.98	0.08	0.92	0.39		0.14	0.94		0.51	0.17	0.08

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 148
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	752	59	155	419	168	63	130	254	75	68	32
Future Volume (veh/h)	63	752	59	155	419	168	63	130	254	75	68	32
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	69	826	39	170	460	171	69	143	186	82	75	8
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	427	885	752	204	1256	463	377	159	207	164	389	331
Arrive On Green	0.03	0.47	0.47	0.07	0.51	0.51	0.04	0.22	0.22	0.05	0.23	0.23
Sat Flow, veh/h	1774	1863	1583	1740	2484	916	1757	729	948	1630	1712	1455
Grp Volume(v), veh/h	69	826	39	170	320	311	69	0	329	82	75	8
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	1736	1665	1757	0	1677	1630	1712	1455
Q Serve(g_s), s	2.6	55.5	1.8	6.6	14.8	15.0	4.0	0.0	25.3	5.1	4.7	0.6
Cycle Q Clear(g_c), s	2.6	55.5	1.8	6.6	14.8	15.0	4.0	0.0	25.3	5.1	4.7	0.6
Prop In Lane	1.00		1.00	1.00		0.55	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	427	885	752	204	878	842	377	0	366	164	389	331
V/C Ratio(X)	0.16	0.93	0.05	0.83	0.36	0.37	0.18	0.00	0.90	0.50	0.19	0.02
Avail Cap(c_a), veh/h	522	937	796	243	878	842	511	0	451	212	396	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	32.9	18.8	29.7	19.9	19.9	37.8	0.0	50.4	39.9	41.4	39.8
Incr Delay (d2), s/veh	0.2	15.4	0.0	18.8	0.3	0.3	0.2	0.0	18.1	2.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	32.2	0.8	4.2	7.2	7.0	2.0	0.0	13.5	2.4	2.3	0.2
LnGrp Delay(d),s/veh	17.3	48.3	18.8	48.5	20.1	20.2	38.0	0.0	68.5	42.2	41.7	39.9
LnGrp LOS	B	D	B	D	C	C	D		E	D	D	D
Approach Vol, veh/h		934			801			398			165	
Approach Delay, s/veh		44.8			26.2			63.2			41.9	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	73.4	13.1	35.2	15.0	69.3	11.9	36.4
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	11.7	66.7	10.7	35.7	11.7	66.7	15.7	30.7
Max Q Clear Time (g_c+I1), s	4.6	17.0	7.1	27.3	8.6	57.5	6.0	6.7
Green Ext Time (p_c), s	0.1	12.9	0.0	1.6	0.1	5.5	0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

AM Peak Hour Buildout Traffic Conditions (with Background Improvement)

Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	153	919	0	523	58	31	92
Future Volume (vph)	153	919	0	523	58	31	92
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	4%	4%	5%	5%
Adj. Flow (vph)	172	1033	0	588	65	35	103
Shared Lane Traffic (%)							
Lane Group Flow (vph)	172	1033	0	653	0	35	103
Turn Type	pm+pt	NA	Perm	NA		Prot	Prot
Protected Phases	1	6		2		3	3
Permitted Phases	6		2				
Detector Phase	1	6	2	2		3	3
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.3	24.3	24.3	24.3		11.3	11.3
Total Split (s)	12.0	50.0	38.0	38.0		20.0	20.0
Total Split (%)	17.1%	71.4%	54.3%	54.3%		28.6%	28.6%
Yellow Time (s)	4.3	4.3	4.3	4.3		4.3	4.3
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)	6.3	6.3	6.3	6.3		6.3	6.3
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	Min	None	None		None	None
v/c Ratio	0.34	0.44		0.41		0.13	0.32
Control Delay	6.5	5.9		12.4		19.6	8.3
Queue Delay	0.0	0.0		0.0		0.0	0.0
Total Delay	6.5	5.9		12.4		19.6	8.3
Queue Length 50th (ft)	17	68		70		8	0
Queue Length 95th (ft)	40	116		116		29	32
Internal Link Dist (ft)		4996		2796		1805	
Turn Bay Length (ft)	250						
Base Capacity (vph)	508	3332		2536		556	567
Starvation Cap Reductn	0	0		0		0	0
Spillback Cap Reductn	0	0		0		0	0
Storage Cap Reductn	0	0		0		0	0
Reduced v/c Ratio	0.34	0.31		0.26		0.06	0.18

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 43.9
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 20th St & SW 44th Ave

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (veh/h)	153	919	0	523	58	31	92
Future Volume (veh/h)	153	919	0	523	58	31	92
Number	1	6		2	12	3	18
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00				1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863		1827	1900	1810	1810
Adj Flow Rate, veh/h	172	1033		588	65	35	103
Adj No. of Lanes	1	2		2	0	1	1
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		4	4	5	5
Cap, veh/h	537	2276		1317	145	162	144
Arrive On Green	0.09	0.64		0.42	0.42	0.09	0.09
Sat Flow, veh/h	1774	3632		3245	348	1723	1538
Grp Volume(v), veh/h	172	1033		323	330	35	103
Grp Sat Flow(s),veh/h/ln	1774	1770		1736	1766	1723	1538
Q Serve(g_s), s	2.3	7.0		6.4	6.4	0.9	3.1
Cycle Q Clear(g_c), s	2.3	7.0		6.4	6.4	0.9	3.1
Prop In Lane	1.00				0.20	1.00	1.00
Lane Grp Cap(c), veh/h	537	2276		725	737	162	144
V/C Ratio(X)	0.32	0.45		0.45	0.45	0.22	0.71
Avail Cap(c_a), veh/h	582	3230		1149	1169	493	440
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.2	4.3		10.0	10.0	20.1	21.1
Incr Delay (d2), s/veh	0.3	0.1		0.4	0.4	0.7	6.4
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.3		3.1	3.2	0.5	1.6
LnGrp Delay(d),s/veh	6.6	4.4		10.4	10.4	20.7	27.5
LnGrp LOS	A	A		B	B	C	C
Approach Vol, veh/h		1205		653		138	
Approach Delay, s/veh		4.8		10.4		25.8	
Approach LOS		A		B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.8	26.3				37.1		10.8
Change Period (Y+Rc), s	6.3	6.3				6.3		6.3
Max Green Setting (Gmax), s	5.7	31.7				43.7		13.7
Max Q Clear Time (g_c+I1), s	4.3	8.4				9.0		5.1
Green Ext Time (p_c), s	0.1	11.6				13.8		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	8.1
HCM 2010 LOS	A

Notes

User approved ignoring U-Turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	820	59	155	503	168	63	130	254	75	68	49
Future Volume (vph)	77	820	59	155	503	168	63	130	254	75	68	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	85	901	65	170	553	185	69	143	279	82	75	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	901	65	170	738	0	69	422	0	82	75	54
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	18.0	73.0	73.0	18.0	73.0		22.0	42.0		17.0	37.0	37.0
Total Split (%)	12.0%	48.7%	48.7%	12.0%	48.7%		14.7%	28.0%		11.3%	24.7%	24.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.24	1.07	0.08	0.91	0.46		0.17	0.97		0.55	0.17	0.12
Control Delay	16.7	91.7	0.2	84.9	26.6		34.3	82.7		48.1	46.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.7	91.7	0.2	84.9	26.6		34.3	82.7		48.1	46.6	0.5
Queue Length 50th (ft)	37	~986	0	117	242		46	360		55	58	0
Queue Length 95th (ft)	64	#1247	1	#272	310		83	#579		97	109	0
Internal Link Dist (ft)		2796			4210			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	392	839	777	186	1593		487	447		160	434	455
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.22	1.07	0.08	0.91	0.46		0.14	0.94		0.51	0.17	0.12

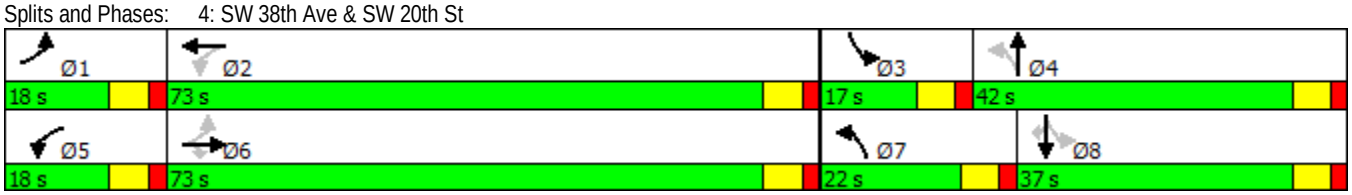
Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 148
Natural Cycle: 140
Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	820	59	155	503	168	63	130	254	75	68	49
Future Volume (veh/h)	77	820	59	155	503	168	63	130	254	75	68	49
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	85	901	39	170	553	171	69	143	183	82	75	12
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	401	885	752	192	1355	418	367	157	201	158	381	323
Arrive On Green	0.04	0.47	0.47	0.08	0.52	0.52	0.04	0.21	0.21	0.05	0.22	0.22
Sat Flow, veh/h	1774	1863	1583	1740	2615	806	1757	736	942	1630	1712	1455
Grp Volume(v), veh/h	85	901	39	170	366	358	69	0	326	82	75	12
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	1736	1685	1757	0	1678	1630	1712	1455
Q Serve(g_s), s	3.4	66.7	1.9	9.4	18.1	18.2	4.3	0.0	26.6	5.5	5.0	0.9
Cycle Q Clear(g_c), s	3.4	66.7	1.9	9.4	18.1	18.2	4.3	0.0	26.6	5.5	5.0	0.9
Prop In Lane	1.00		1.00	1.00		0.48	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	401	885	752	192	899	873	367	0	358	158	381	323
V/C Ratio(X)	0.21	1.02	0.05	0.88	0.41	0.41	0.19	0.00	0.91	0.52	0.20	0.04
Avail Cap(c_a), veh/h	481	885	752	196	899	873	489	0	427	198	381	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	36.9	19.8	43.9	20.7	20.7	40.6	0.0	53.9	42.8	44.4	42.8
Incr Delay (d2), s/veh	0.3	34.9	0.0	34.1	0.3	0.3	0.2	0.0	21.2	2.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	42.7	0.8	8.3	8.7	8.5	2.1	0.0	14.4	2.6	2.4	0.4
LnGrp Delay(d),s/veh	18.4	71.8	19.9	78.0	21.0	21.0	40.8	0.0	75.2	45.4	44.7	42.9
LnGrp LOS	B	F	B	E	C	C	D		E	D	D	D
Approach Vol, veh/h		1025			894			395			169	
Approach Delay, s/veh		65.4			31.8			69.2			44.9	
Approach LOS		E			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	79.1	13.5	36.2	17.7	73.0	12.2	37.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	11.7	66.7	10.7	35.7	11.7	66.7	15.7	30.7
Max Q Clear Time (g_c+I1), s	5.4	20.2	7.5	28.6	11.4	68.7	6.3	7.0
Green Ext Time (p_c), s	0.1	15.4	0.0	1.3	0.0	0.0	0.1	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	52.5
HCM 2010 LOS	D

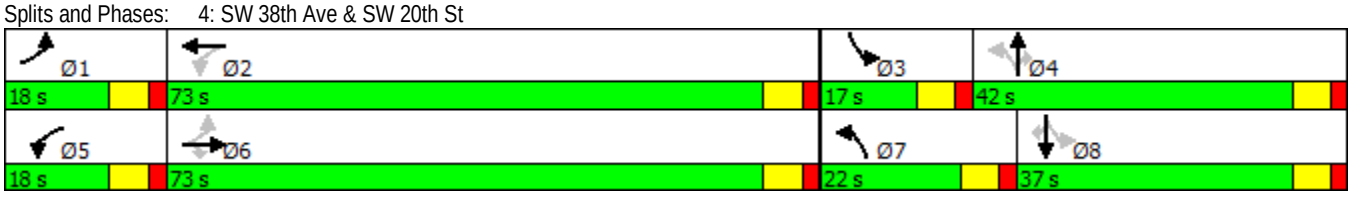
AM Peak Hour Buildout Traffic Conditions with Mitigation

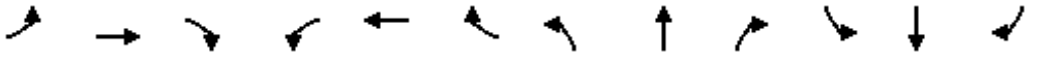
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	820	59	155	503	168	63	130	254	75	68	49
Future Volume (vph)	77	820	59	155	503	168	63	130	254	75	68	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	85	901	65	170	553	185	69	143	279	82	75	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	901	65	170	738	0	69	143	279	82	75	54
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4		4	8		8
Detector Phase	1	6	6	5	2		7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	5.0	20.0		5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	11.3	26.3	26.3	16.3	26.3		11.3	20.0	20.0	11.3	20.0	20.0
Total Split (s)	18.0	73.0	73.0	18.0	73.0		22.0	42.0	42.0	17.0	37.0	37.0
Total Split (%)	12.0%	48.7%	48.7%	12.0%	48.7%		14.7%	28.0%	28.0%	11.3%	24.7%	24.7%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3	6.3	6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None	None	None	None	None
v/c Ratio	0.20	0.93	0.07	0.79	0.40		0.24	0.64	0.65	0.36	0.31	0.18
Control Delay	10.4	47.3	0.3	56.8	17.5		39.9	67.5	14.5	42.8	55.2	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	47.3	0.3	56.8	17.5		39.9	67.5	14.5	42.8	55.2	1.2
Queue Length 50th (ft)	24	689	0	90	172		46	116	7	55	58	0
Queue Length 95th (ft)	51	#1075	2	#231	254		85	188	92	99	110	0
Internal Link Dist (ft)		2796			4210			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	486	965	876	214	1848		366	511	629	239	408	435
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.93	0.07	0.79	0.40		0.19	0.28	0.44	0.34	0.18	0.12

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 129
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	820	59	155	503	168	63	130	254	75	68	49
Future Volume (veh/h)	77	820	59	155	503	168	63	130	254	75	68	49
Number	1	6	16	5	2	12	7	4	14	3	8	18
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		1.00
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1845	1712	1712	1712
Adj Flow Rate, veh/h	85	901	39	170	553	171	69	143	139	82	75	12
Adj No. of Lanes	1	1	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	456	999	849	232	1457	449	262	219	187	203	222	188
Arrive On Green	0.04	0.54	0.54	0.06	0.56	0.56	0.05	0.12	0.12	0.06	0.13	0.13
Sat Flow, veh/h	1774	1863	1583	1740	2615	806	1757	1845	1568	1630	1712	1455
Grp Volume(v), veh/h	85	901	39	170	366	358	69	143	139	82	75	12
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	1736	1685	1757	1845	1568	1630	1712	1455
Q Serve(g_s), s	2.4	48.6	1.3	4.9	13.3	13.4	3.8	8.3	9.6	4.9	4.5	0.8
Cycle Q Clear(g_c), s	2.4	48.6	1.3	4.9	13.3	13.4	3.8	8.3	9.6	4.9	4.5	0.8
Prop In Lane	1.00		1.00	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	456	999	849	232	967	939	262	219	187	203	222	188
V/C Ratio(X)	0.19	0.90	0.05	0.73	0.38	0.38	0.26	0.65	0.75	0.40	0.34	0.06
Avail Cap(c_a), veh/h	568	1109	943	305	1034	1003	426	588	500	265	469	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	23.3	12.3	24.1	13.9	13.9	40.6	47.1	47.7	40.4	44.4	42.8
Incr Delay (d2), s/veh	0.2	9.6	0.0	6.1	0.2	0.3	0.5	3.2	5.8	1.3	0.9	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	0.0
%ile BackOfQ(50%),veh/ln	1.2	27.4	0.6	3.2	6.4	6.2	1.9	4.4	4.5	2.3	2.2	0.3
LnGrp Delay(d),s/veh	11.3	32.9	12.4	30.2	14.1	14.2	41.2	50.4	53.5	41.7	45.3	42.9
LnGrp LOS	B	C	B	C	B	B	D	D	D	D	D	D
Approach Vol, veh/h		1025			894			351			169	
Approach Delay, s/veh		30.3			17.2			49.8			43.3	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	68.7	12.7	19.6	13.3	66.4	11.5	20.8
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	11.7	66.7	10.7	35.7	11.7	66.7	15.7	30.7
Max Q Clear Time (g_c+I1), s	4.4	15.4	6.9	11.6	6.9	50.6	5.8	6.5
Green Ext Time (p_c), s	0.1	15.8	0.0	1.7	0.2	9.4	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	29.2
HCM 2010 LOS	C

PM Peak Hour Arterial Analysis (Background and Buildout with Background Improvement)

Arterial Level of Service: EB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 44th Ave	II	45	116.9	5.9	122.8	1.46	42.8	A
SW 38th Ave	II	45	43.6	74.1	117.7	0.54	16.7	E
College of Central F	II	45	46.7	36.6	83.3	0.58	25.2	C
SW 27th Ave	II	45	39.7	69.3	109.0	0.42	13.9	E
Total	II		246.9	185.9	432.8	3.01	25.0	C

Arterial Level of Service: WB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 31st Ave	II	45	39.7	11.8	51.5	0.42	29.5	B
SW 38th Ave	II	45	46.7	33.4	80.1	0.58	26.2	C
SW 44th Ave	II	45	43.6	13.5	57.1	0.54	34.3	B
SW 60th Ave	II	45	116.9	37.0	153.9	1.46	34.2	B
Total	II		246.9	95.7	342.6	3.01	31.6	B

Arterial Level of Service: EB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 44th Ave	II	45	116.9	5.9	122.8	1.46	42.8	A
SW 38th Ave	II	45	43.6	95.6	139.2	0.54	14.1	E
College of Central F	II	45	46.7	45.1	91.8	0.58	22.9	C
SW 27th Ave	II	45	39.7	74.9	114.6	0.42	13.3	E
Total	II		246.9	221.5	468.4	3.01	23.1	C

Arterial Level of Service: WB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 31st Ave	II	45	39.7	13.2	52.9	0.42	28.7	B
SW 38th Ave	II	45	46.7	37.6	84.3	0.58	24.9	C
SW 44th Ave	II	45	43.6	13.7	57.3	0.54	34.2	B
SW 60th Ave	II	45	116.9	42.2	159.1	1.46	33.1	B
Total	II		246.9	106.7	353.6	3.01	30.7	B

Appendix G: Signal Warrant Analysis Worksheets

Pagones Theorem			
Situation	**Approach configuration**	**Condition**	**Reduction of right turns**
1	Shared Left/ Through/Right	$R > 0.7A$ $0.7A \geq R > 0.35A$ $R \leq 0.35A$	Reduce R by 60 percent Reduce R by 40 percent Reduce R by 20 percent
2	Exclusive Left, Shared Through/ Right	$R > 3T$ $3T \geq R > T/3$ $R \leq T/3$	Reduce R by 60 percent Reduce R by 40 percent Reduce R by 20 percent
3	Any configuration with an exclusive right turn lane (usually ≥ 600 feet long)		Reduce R by 75 percent in all cases
4	Shared Left/Through and Shared Through/Right	$R > (T + L)$ $L > (T + R)$ $L = T = R$ (±10 vehicles) $L = T > 3R$ $R = T > 3L$ All other cases	Reduce R by 65 percent Use Situation 2 Reduce R by 40 percent Reduce R by 20 percent Reduce R by 50 percent Reduce R by 30 percent
5	Exclusive Left, Exclusive Through and Shared Through/Right	$R > T$ $T \geq R > T/2$ $T/2 \geq R > T/4$ $R \leq T/4$	Reduce R by 75 percent Reduce R by 50 percent Reduce R by 30 percent Reduce R by 15 percent

Where: L = number of left turning vehicles in approach;
T = number of through vehicles in approach;
R = number of right turning vehicles in approach; and
$A = (L + T + R)$.

TABLE 3
TRAFFIC SIGNAL WARRANT SUMMARY

City: Ocala | Engineer: Kimley-Horn
County: Marion | Date: March 20, 2018

Major Street: SW 20th Street | Lanes: 2 | Critical Approach Speed: 45
Minor Street: SW 44th Avenue | Lanes: 2
includes RT volume reduction for Pagones Theorem

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 3 - PEAK HOUR

Applicable: ■ Yes ☐ No
Satisfied: ■ Yes ☐ No

If all three criteria are fullfilled or the plotted point lies above the appropriate line, then the warrant is satisfed.

Unusual condition justifying use of warrant:

N/A

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour Volumes	
4:15 PM - 5:15 PM	
Major Street	1,639
Minor Street	124

Criteria

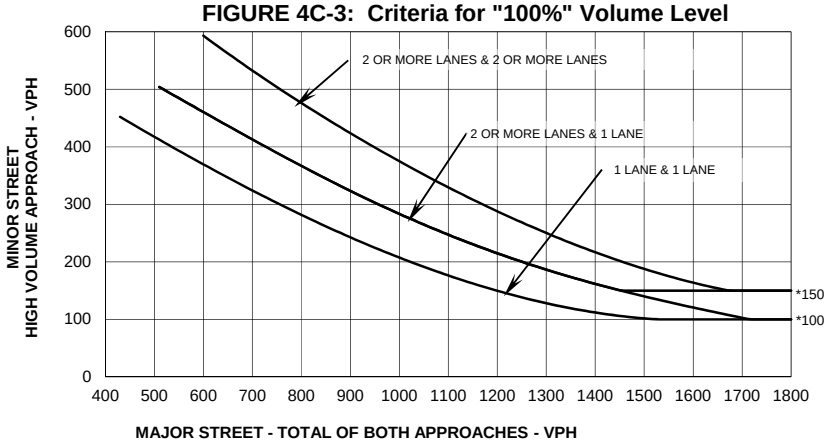
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	**2**
Delay Criteria*	4.0	**5.0**
Delay*		**2.9**
Fulfilled?: ☐ Yes	■ No	

2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	1	**2**
Volume Criteria*	100	**150**
Volume*		**124**
Fulfilled?: ☐ Yes	■ No	

3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	**4**
Volume Criteria*	650	**800**
Volume*		**1,763**
Fulfilled?: ■ Yes	☐ No	

Plot volume combination on the applicable figure below.

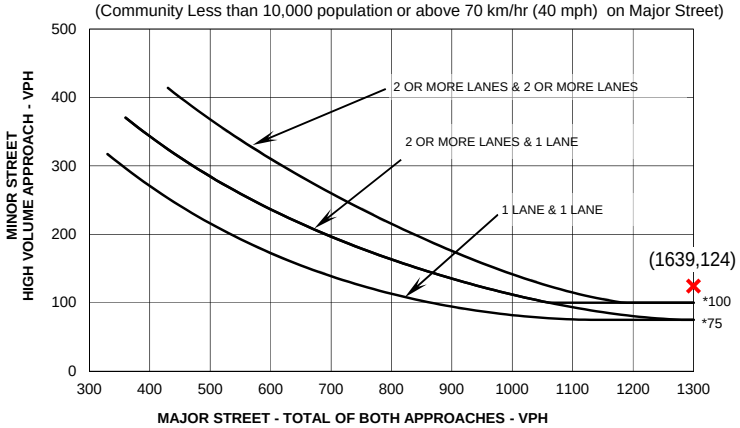
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\Signal Warrant\[WarrantSpreadsheet -- 44th & 20th (Background).xlsm]Warrant 3

TABLE 3
TRAFFIC SIGNAL WARRANT SUMMARY

City: Ocala | Engineer: Kimley-Horn
County: Marion | Date: March 20, 2018

Major Street: SW 40th Street | Lanes: 1 | Critical Approach Speed: 45
Minor Street: SW 43rd Court | Lanes: 1
includes RT volume reduction for Pagones Theorem

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 3 - PEAK HOUR

Applicable: ■ Yes ☐ No
Satisfied: ☐ Yes ■ No

If all three criteria are fullfilled or the plotted point lies above the appropriate line, then the warrant is satisfed.

Plot volume combination on the applicable figure below.

Unusual condition justifying use of warrant:

N/A

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour Volumes	
4:15 PM - 5:15 PM	
Major Street	1,136
Minor Street	137

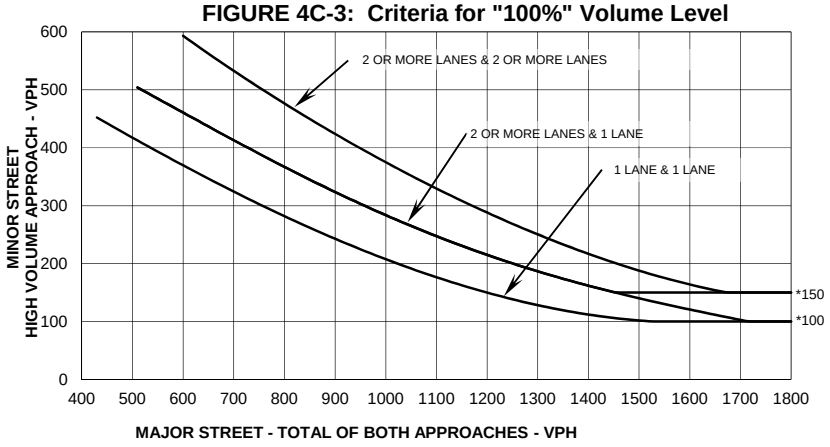
Criteria

1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	**1**	2
Delay Criteria*	**4.0**	5.0
Delay*	**2.9**	
Fulfilled?: ☐ Yes	■ No	

2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	**1**	2
Volume Criteria*	**100**	150
Volume*	**137**	
Fulfilled?: ■ Yes	☐ No	

3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	**4**
Volume Criteria*	650	**800**
Volume*		**1,273**
Fulfilled?: ■ Yes	☐ No	

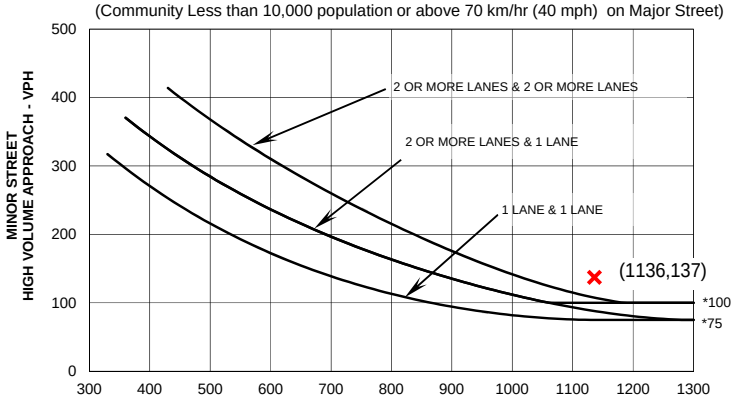
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\Signal Warrant\[WarrantSpreadsheet -- 44th & 20th (Background).xlsm]Warrant 3

TABLE 3
TRAFFIC SIGNAL WARRANT SUMMARY

City: Ocala | Engineer: Kimley-Horn
County: Marion | Date: March 20, 2018

Major Street: SW 20th Street | Lanes: 2 | Critical Approach Speed: 45
Minor Street: SW 54th Court | Lanes: 1
includes RT volume reduction for Pagones Theorem

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 3 - PEAK HOUR

Applicable: ■ Yes ☐ No
Satisfied: ■ Yes ☐ No

If all three criteria are fullfilled or the plotted point lies above the appropriate line, then the warrant is satisfed.

Plot volume combination on the applicable figure below.

Unusual condition justifying use of warrant:

N/A

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour Volumes	
4:30 PM - 5:30 PM	
Major Street	1,846
Minor Street	181

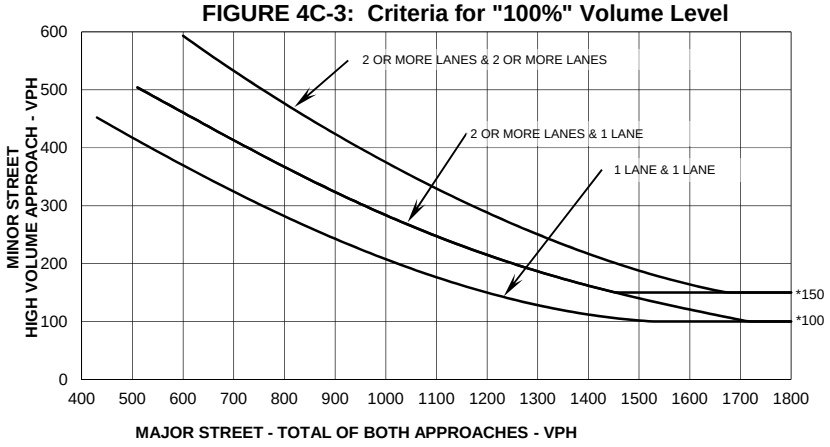
Criteria

1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	**1**	2
Delay Criteria*	**4.0**	5.0
Delay*	**89.4**	
Fulfilled?: ■ Yes	☐ No	

2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	**1**	2
Volume Criteria*	**100**	150
Volume*	**181**	
Fulfilled?: ■ Yes	☐ No	

3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	**4**
Volume Criteria*	650	**800**
Volume*		**2,027**
Fulfilled?: ■ Yes	☐ No	

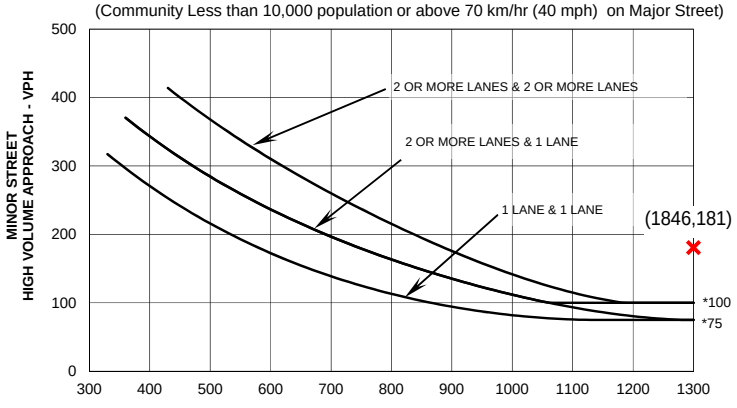
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

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Appendix H: Proportionate Share Calculations

COUNTRY GREEN PD
SW 20TH STREET AND SW 38TH AVE
PROPORTIONATE SHARE CALCULATION
2037 TOTAL BUILDOUT

Lane	Lane Group Capacity		
	without IMP[1]	with IMP[2]	Difference
EB Left	222	259	37
EB Through	668	759	91
EB Right	568	645	77
WB Left	298	330	32
WB Through	828	879	51
WB Right	849	901	52
NB Left	335	266	-69
NB Through	357	228	-129
NB Right	0	194	194
SB Left	282	365	83
SB Through	511	375	-136
SB Right	435	319	-116
Total	5,353	5,520	167
		Country Green Traffic at Intersection [3]	183
		Increase in Capacity	167
		Proportionate Share Percentage[4]:	100.00%

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[TIA-CG_Calcs_180307.xlsx]Prop Share Int 4

Notes:

1. The 'without improvement' scenario includes all improvements needed to meet acceptable LOS under 'Future Background' traffic conditions before the addition of project traffic from the Country Green PD.

2. The 'with improvement' scenario includes all improvements in the 'without improvement' scenario as well as improvements identified to meet acceptable LOS with project traffic from the Country Green PD.

3. Total PM Peak Hour Country Green PD traffic at the intersection.

4. Calculated as the total project traffic for the Country Green PD at the intersection divided by the total increase in capacity due to the improvements (cannot exceed 100%)

Appendix I: Turn Lane Warrant

Right-Turn Lane Analysis - SW 20th Street Right-in/Right-out Access

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

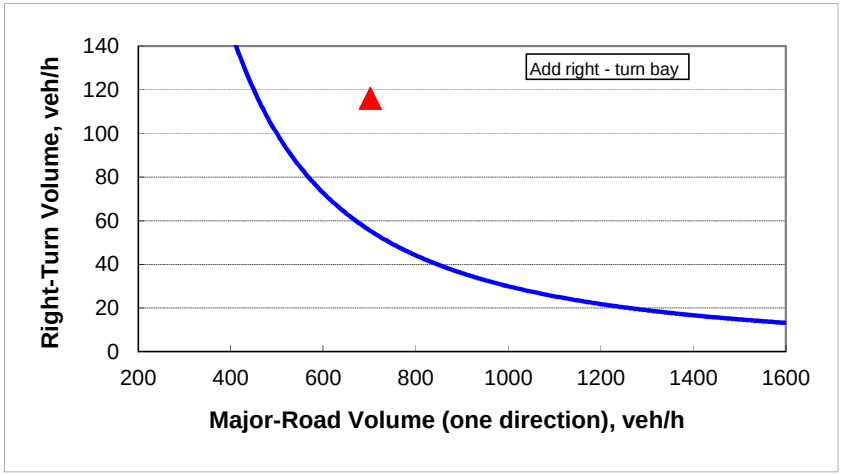
INPUT

Roadway geometry:	4-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	702
Right-turn volume, veh/h:	116

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	55
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Add right-turn bay.	



Appendix J: Post-submittal Documentation and Study Approval

TRANSPORTATION IMPACT ANALYSIS
TRAFFIC STUDY
SUBMITTAL ACCEPTANCE

Date: September 4, 2018

Project: Country Green PD (TIA18-0001)

Applicant: Kimley-Horn and Associates

The submittal concerning the subject project has been approved by the review committee subject to submittal and finalization of the proportionate share agreement.

Oscar E. Tovar, PE, Deputy City Engineer
City Engineer's Office Department

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August 13, 2018

Ms. Karen Cupp
City of Ocala Growth Management Department
201 SE 3rd Street, 2nd Floor
Ocala, FL 34471

RE: ***Country Green PD (TIA18-0001); Response to Comments***
Kimley-Horn Number 142742000

Dear Ms. Cupp:

Kimley-Horn and Associates, Inc. received comments dated August 2, 2018, for the above referenced project. Below are the comments and associated responses:

Transportation

1. Concur with planning comment on proportionate share determination.

   Response: Acknowledged.

Planning

2. Any proportionate share is to be determined through a settlement agreement per Tye Chighizola, Growth Management Director.

   Response: Acknowledged.

Marion County Growth Services

3. The study references a SW 20th Street/SW 54th Court intersection; however, SW 54th Court is not an established right-of-way/roadway south of SW 20th Street. Is it the proposed access driveway shown extending north-to-south along the site's west boundary – that appears to provide western access to the site's mid-third and southern-third residential development areas? Is this "driveway" intended to be made into a formal legal right-of-way?

   Response: The PD plan shows a proposed 50-foot right-of-way along the west and south property lines. The Country Green developer has attempted to reach the adjacent property owner to the west, Emergency One (E-One), to discuss donation of right-of-way to have a joint use driveway/roadway to serve both properties. It is the desire of Country Green to have the roadway split both property lines and have right-of-way donated equally from both properties. A response has not been received from E-One. The intent is to pave the roadway and then dedicate it to the City. There is also an obligation of the southern property owner to provide a paved east-west roadway connection from the SW 54th Court extension to SW 44th Avenue at the intersection with SW 31st Street.

Marion County Transportation

4. No comments received.

Response: Acknowledged.

Transportation Planning Organization (TPO)

5. TPO staff have reviewed the methodology and have no comments at this time.

Response: Acknowledged.

We trust these responses will provide the additional information as requested. Please feel free to contact our office if you have any questions.

Sincerely,
KIMLEY-HORN

Amber L. Gartner, PE

ALG/sab

Cc: Don Carll
File

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