Traffic

Transportation Impact Analysis for Submittal to Tarpon Springs

Prepared For City of

Anclote Harbor Apartments

City of Tarpon Springs, Florida

Prepared by:

Kimley-Horn and Associates, Inc.
Tampa, Florida

September 2020

Kimley»Horn

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PE 9/22/20

Christopher Hatton
PE Number: 48905

Date

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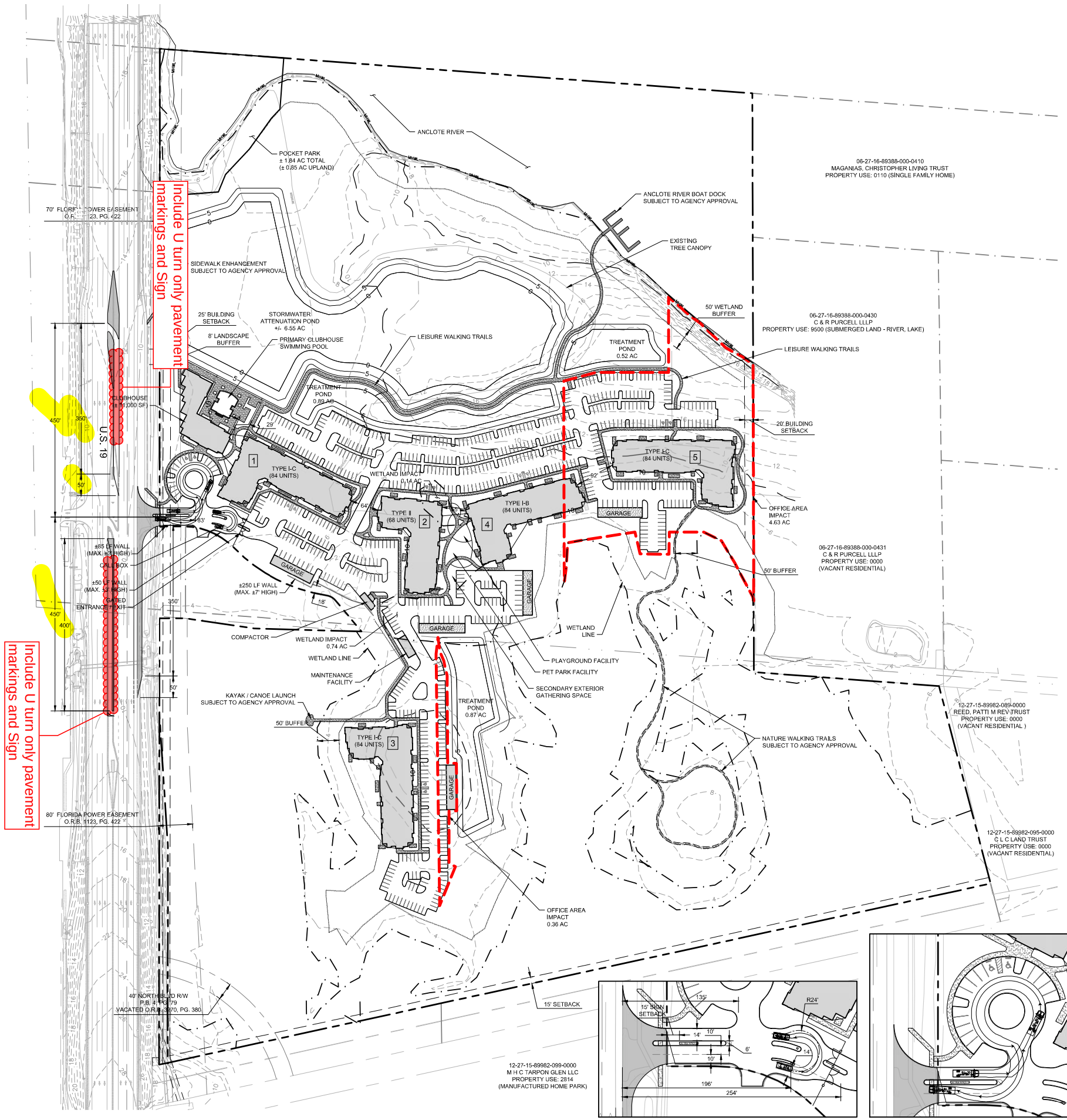
INTRODUCTION

This Traffic Impact Analysis (TIA) for the residential development of Anclote Harbor was conducted following the pre-application meeting with the Florida Department of Transportation (FDOT) on May 9, 2019 and methodology meeting and follow up discussions held on July 16, 2020 and August 7, 2020 with Patricia McNeese, Mo Gopalakrishna, and Linda Hess. Methodology comments were received and discussed on August 7, 2020. The updated methodology and comments are attached to this report. A description of the proposed land use and the results of the TIA are provided below.

The analysis is provided based upon the requirements in the Tarpon Springs Code of Ordinances Section 122.11 for Mobility Management. This project meets the criteria for a deficient road corridor and a Tier 2 project based upon Section 122.11.04 for Deficient Road Corridors, Transportation Management Plan Strategies Applied. The requirements include a traffic study and transportation management plan identifying improvements necessary to mitigate the impacts of the project. The cost of transportation management strategies implemented for tier 2 projects may be applied as credit toward the project's multimodal impact fee assessment or payment of the fee could be included as part of a transportation management plan.

The proposed residential development site is located along US 19 in Pinellas County, Florida, north of the Pinellas Trail. This development is proposed to include up to 404 mid-rise multi-family dwelling units. The project location map is illustrated in **Figure 1**.

ANCLOTE HARBOR PRELIMINARY DEVELOPMENT PLAN



WAIVERS

APPLIED FOR	
WAIVER	DESCRIPTION
LDC SECTION 78.01(E)(7)(d) MAXIMUM ALLOWABLE HEIGHT	TO INCREASE THE ALLOWABLE MAXIMUM BUILDING HEIGHT FROM 45 FT TO 53 FT
REQUIREMENT FOR SECONDARY ACCESS POINT	TO DECREASE REQUIRED ACCESS POINTS TO ONE.
REQUIREMENT FOR COMMUNITY POOL PARKING	REDUCTION OF ADDITIONAL PARKING REQUIRED FOR COMMUNITY POOL

LEGEND

- PROPERTY BOUNDARY
- ADJACENT PROPERTY LINE
- NORTH BLVD R/W
- EASEMENT LINE
- SECTION LINE
- FLOOD PLAIN LINE
- MEAN HIGH WATER LINE (MHW)
- PROPOSED BUILDING
- PROVIDED RESIDENTIAL ON OFFICE LAND AREA - 4.99 AC (PER PINELLAS COUNTY WIDE PLAN, EFFECTIVE 10/24/2019)
- EXISTING CONTOUR (10)
- PROPOSED CONTOUR (10)

NORTH

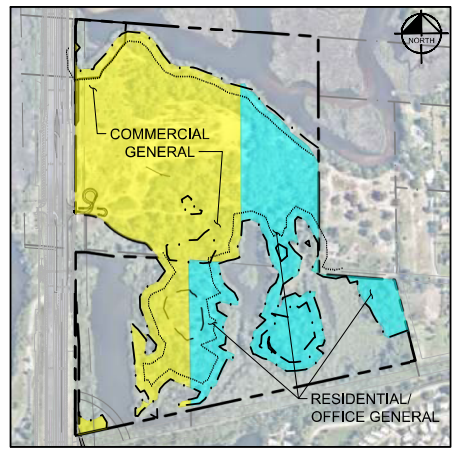
GRAPHIC SCALE IN FEET
0 60 120 240

SITE DATA TABLE

SITE SIZE			
UPLANDS	42.23 AC (27.55 RES. / 14.68 OFFICE)		
WETLANDS	30.39 AC (13.09 RES. / 17.30 OFFICE)		
TOTAL SITE	72.62 AC		
SUBMERGED LAND	8.33 AC		
PROPERTY APPRAISER PARCEL NUMBER	06-27-16-89388-000-0420		
ADDRESS	42501 U.S. HIGHWAY 19 NORTH		
PLAN CATEGORY	EAST SIDE: ROG WEST SIDE: CG		
EXISTING ZONING DISTRICT	GB, GENERAL BUSINESS		
PROPOSED ZONING DISTRICT	RPD, RESIDENTIAL PLANNED DEVELOPMENT		
EXISTING LAND USE	VACANT		
PROPOSED LAND USE	404 MULTIFAMILY RESIDENTIAL DWELLINGS, CLUBHOUSE, ACCESSORY GARAGES AND MAINTENANCE BUILDINGS		
FLOOD ZONE	ZONE AE, 9.00' FLOOD PANEL 12103C0036G, 09/02/2003		
	RPD MULTIFAMILY USE CODE REQUIREMENT	CONDITIONAL USE GENERAL BUSINESS DISTRICT	PROVIDED
DENSITY	15 DU / AC	15 DU / AC COMMERCIAL 15 DU / AC RESIDENTIAL / OFFICE GENERAL	RESIDENTIAL: 308 UNITS / 67.64 AC 4.55 DU / AC OFFICE: 96 UNITS / 4.99 AC 19.24 DU / AC SITE AVERAGE: 5.62 DU / AC
MINIMUM LOT SIZE	10,000 SF	10,000 SF	72.62 AC
MINIMUM LOT WIDTH	100'	80'	±2,000'
SETBACKS			
	REQUIRED	CONDITIONAL USE	PROVIDED
FRONT / WEST	25' MIN.	25' MIN.	25' MIN.
SIDE / NORTH & SOUTH	15' MIN.	20' MIN.	15' MIN.
REAR / EAST	15' MIN.	20' MIN.	15' MIN.
BUILDING SEPARATIONS	15' SIDE FACING SIDE 20' FRONT / REAR FACING SIDE 30' FRONT / REAR FACING FRONT / REAR +5' FOR EACH STORY ABOVE 2 STORIES FOR ALL SEPARATIONS	15' SIDE FACING SIDE 20' FRONT / REAR FACING SIDE 25' FRONT / REAR FACING FRONT / REAR +5' FOR EACH STORY ABOVE 2 STORIES FOR ALL SEPARATIONS	25' SIDE FACING SIDE 30' FRONT / REAR FACING SIDE 40' FRONT / REAR FACING FRONT / REAR
WETLAND BUFFER	50'	15'	50'
MAXIMUM HEIGHT	45'	45'	53' (WAIVER REQUESTED)
OPEN SPACE PER 147.01 (B) (TOTAL SITE)	18.16 AC (25% OF TOTAL SITE)	10% MINIMUM	22.31 AC UPLAND OPEN SPACE 9.08 AC WETLANDS / STORM (50% MAX) TOTAL 31.39 AC (43%)
OPEN SPACE AND IMPERVIOUS PER ORD 2018-27 (SIGNIFICANT UPLAND AREA)	OPEN SPACE 10.04 AC (30% OF SIGNIFICANT UPLAND AREA) MAX. IMPERVIOUS 16.74 AC (50% OF SIGNIFICANT UPLAND AREA)	MAXIMUM IMPERVIOUS RATIO: 0.90	OPEN SPACE 18.46 AC (55% OF SIGNIFICANT UPLAND AREA) PROP. IMPERVIOUS 10.09 AC (30% OF SIGNIFICANT UPLAND AREA)
PARKING	707 SPACES FOR RESIDENCES (1.75 SPACES / DU) +44 SPACES (1 SPACE / 250 SF OF 11,000 SF CLUBHOUSE BUILDING) +56 SPACES (1 SPACE / 50 SF OF COMMUNITY POOL) = 807 TOTAL SPACES	707 SPACES FOR RESIDENCES (1.75 SPACES / DU) +44 SPACES (1 SPACE / 250 SF OF 11,000 SF CLUBHOUSE BUILDING) +56 SPACES (1 SPACE / 50 SF OF COMMUNITY POOL) = 807 TOTAL SPACES	716 AT GRADE SPACES +45 GARAGE SPACES = 761 TOTAL SPACES (WAIVER REQUESTED)

ENTRANCE DETAIL
SCALE: 1" = 60'

DELIVERY CIRCULATION DETAIL
SCALE: 1" = 60'



CITY OF TARPON SPRINGS
FUTURE LAND USE MAP (ORD 2012-07)
SCALE: 1" = 500'

LOCATION MAP
SCALE: 1" = 2,000'

NO.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 813-620-1460
WWW.KIMLEY-HORN.COM CA 00000696

DESIGN ENGINEER:
FLORIDA REGISTRATION NUMBER:
DATE:

SCALE
DESIGNED BY RPC
DRAWN BY BFN
CHECKED BY RPC

ANCLOTE HARBOR
PRELIMINARY DEVELOPMENT PLAN

MORGAN
ANCLOTE HARBOR
TARPON SPRINGS FLORIDA

DATE
04/17/2020
PROJECT NO.
145062001
SHEET NUMBER
PDP-01

Keep City and Reviewer informed on the status of the FDOT Approval of Permit Plans for the NB right turn lane into the site, and the offset median U turn lanes. Provide a copy of any plans that are provided to FDOT, to the City.

Access to the property will be provided at one access connection along US 19 and a pre-application meeting was held with the Florida Department of Transportation (FDOT) on May 9, 2019. The pre-application comments are attached. Based upon comments received at the pre-application meeting, the project access is to consist of a proposed offset left-turn median opening along US 19.

Prior to undertaking this analysis, a transportation study methodology was prepared and discussed on July 16, 2020 and August 7, 2020 with Patricia McNeese, Mo Gopalakrishna, and Linda Hess (American Consulting Professionals). The approved methodology is included in **Appendix A**.

In general, the following procedural steps were undertaken:

- Traffic volumes anticipated to be generated by the proposed development were estimated using the Institute of Transportation Engineers', *Trip Generation Manual*, 10th Edition;
- Project traffic was distributed and assigned to the public roadway network based upon the results of a FSUTMS analysis;
- Existing a.m. and p.m. peak-hour traffic volumes in the study area were collected and adjusted to reflect the peak season conversion factor volumes, and considered in the development of future background volumes;
- Work Programs of Pinellas County and the FDOT were considered in the scheduled roadway improvements in the area;
- Intersection and level of service (LOS) analyses within the study area for existing and future scenarios were completed using analytical methods defined in the *Highway Capacity Software* (*HCS*) programs and the Florida Department of Transportation's "*Quality/Level of Service Handbook*."

Synchro software was used (per Appendices), not Highway Capacity Software. Revise verbiage in the report.

PROJECT SITE INFORMATION

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the development. These trips were distributed and assigned throughout the study roadway network.

Trip Generation

The trip generation potential of the proposed residential development was estimated for the a.m. and p.m. peak-hours using the equations from the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition, for land use code (LUC) 221: Multi-Family Housing Mid-Rise. The estimated net, new trips expected to be generated by the proposed development are 145 a.m. peak-hour trips (37 entering, 108 exiting) and 178 p.m. peak-hour trips (108 entering, 70 exiting), as shown in **Table 1**.

No pass-by or internal capture trips were assumed. Based upon the trip generation, this project meets the criteria for a Tier 2 project (between 51 and 300 new peak hour trips). Therefore, transportation management strategies are included in this report.

Table 1: Project Trip Generation

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS TRIPS			INTERNAL CAPTURE		PASS-BY CAPTURE		NET, NEW EXTERNAL TRIPS		
						Percent											
Land Use	Period	ITE Edition	ITE Code	Scale	ITE Units	In	Out	In	Out	Total	%	Trips	%	Trips	In	Out	Total
Multi-family Housing Mid-Rise	**Daily**	10	221	404	DU	50%	50%	1,100	1,100	2,200	0%	0	0%	0	**1,100**	**1,100**	**2,200**
Multi-family Housing Mid-Rise	**AM**	10	221	404	DU	26%	74%	37	108	145	0%	0	0%	0	**37**	**108**	**145**
Multi-family Housing Mid-Rise	**PM**	10	221	404	DU	61%	39%	108	70	178	0%	0	0%	0	**108**	**70**	**178**

Notes:

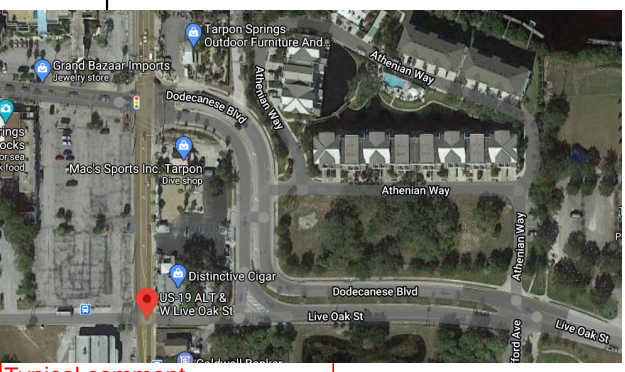
1. Daily Trip Generation Fitted Curve: T = 5.45(X) - 1.75
2. AM Trip Generation Average Rate: T = 0.36(X)
3. AM Trip Generation based upon average rate as $R^2 < 0.75$
4. PM Trip Generation Average Rate: T = 0.44(X)
5. PM Trip Generation based upon average rate as $R^2 < 0.75$

Trip Distribution and Assignment

New traffic expected to be generated by the proposed residential project was distributed to the roadway network based on the existing turning movement volume counts at the study intersections and the Florida Standard Urban Model Structure (FSUTMS) for District 7 (version 9.1). The model distribution is attached. Approximately 35% of the vehicles entering and exiting the site are anticipated to utilize US 19 to the north while 65% of the vehicles entering and exiting the site are anticipated to utilize US 19 to the south. The project traffic distribution calculation is attached for reference.

The resulting percentages were applied to the trip generation estimates shown in Table 1 to estimate project trips within the vicinity of the project site. The distribution of project traffic, in terms of trip percentages, is shown in **Figure 2.**

The a.m. peak-hour project traffic is shown in **Figure 3.** The p.m. peak-hour project traffic is shown in **Figure 4.**



Typical comment - Dodecanese Blvd is a WB extension of Live Oak St., and ties in at Alt US 19 north of the Live Oak St./Alt US 19 intersection. Please show it correctly in all Figures.

2%+4% = 6%?

Live Oak St. southbound through shows 63%, whereas Spruce Street southbound traffic shows 65%. Please clarify

The Traffic Distribution at the Live Oak St/Alt US 19 does not add up at the adjacent intersections of Live Oak St/US 19 and Spruce St/US 19. Also there is 2% distribution in N-S Direction where are they leading to? Please confirm.

Legend

- Roadway
- Unsignalized Study Intersection
- Signalized Study Intersection
- Median Opening
- XX% Entering Traffic
- (XX%) Exiting Traffic

Beckett Way
US 19
Site
Project Driveway
Alt US 19
Dodecanese Blvd
Live Oak Street
Spruce Street
E Tarpon Avenue
E Klosterman Road

Kimley»Horn

Figure 2
Project Traffic Distribution
Anclote Harbor Development
Tarpon Springs, Florida

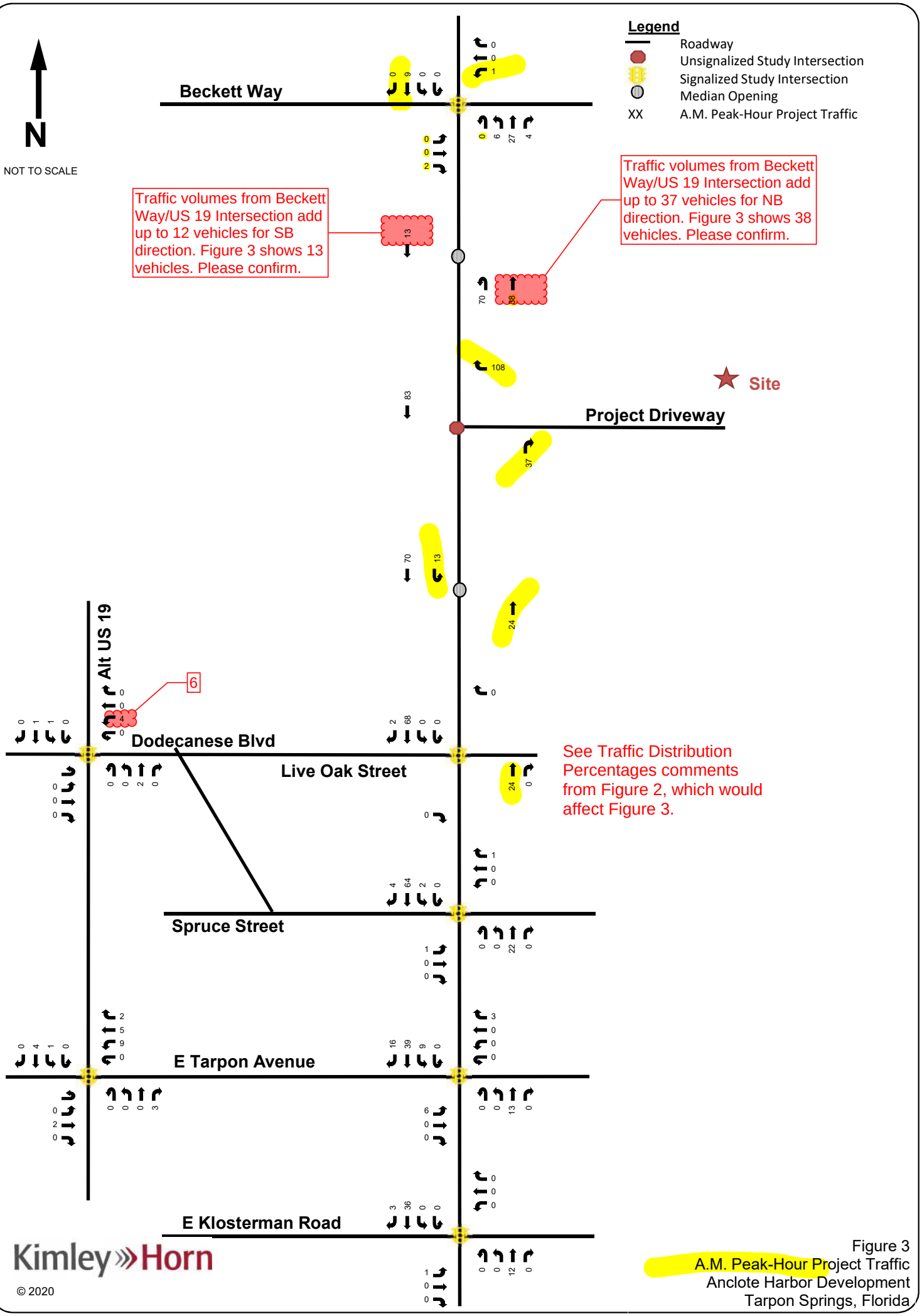


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Figure 3
A.M. Peak-Hour Project Traffic
Anclote Harbor Development
Tarpon Springs, Florida

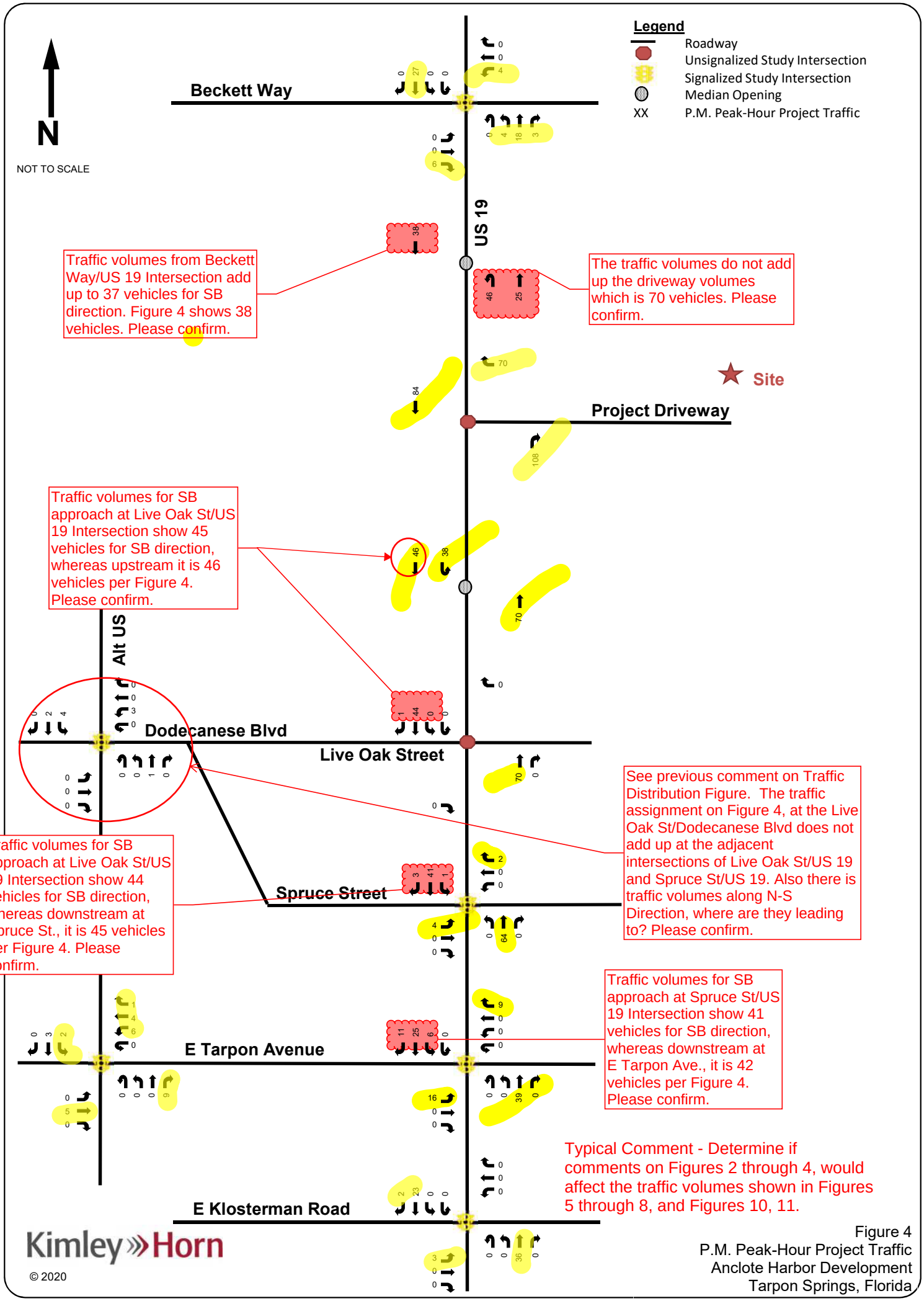

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Figure 4
P.M. Peak-Hour Project Traffic
Anclote Harbor Development
Tarpon Springs, Florida

SCHEDULED IMPROVEMENTS

A review of the Five-Year Work Program for Pinellas County and FDOT District Seven revealed that there are no roadway capacity projects near the project site which are scheduled to be funded within five years.

A drainage improvement project along US 19 from North of Anclote River Bridge to South of Brittany Park Boulevard is identified in the Five-Year Work Program (Item 434807-3).

STUDY AREA DETERMINATION

The study area was based upon the *2019 Annual Level of Service Report* for Forward Pinellas and consists of the adjacent roadway segments of US 19 from Beckett Way to Klosterman Road. The study area intersections included were discussed during the methodology phase. The study area roadway segments were determined to be the roadway segments, defined in the *2019 Annual Level of Service Report*, that were significantly impacted by the project (greater than 1% of the service volume for directional peak hour traffic).

The study area roadway segments were determined to be the adjacent roadway segments of US 19 from Beckett Way to Klosterman Road, Tarpon Avenue from US 19 to Alt US 19, and Live Oak Street from US 19 to Alt US 19.

The study intersections were determined to be the following signalized intersections:

- US 19 & Klosterman Road
- US 19 & Tarpon Avenue
- US 19 & Spruce Street
- US 19 & Live Oak Street
- US 19 & Beckett Way
- Live Oak Street & Alt US 19
- Tarpon Ave & Alt US 19

According to the *Annual Level of Service Report* for Forward Pinellas, the roadway segment of US 19 from Klosterman Road to Tarpon Avenue currently operates at Level of Service F based upon a generalized roadway analysis.

TRAFFIC VOLUMES

Existing traffic conditions were evaluated within the study network. The procedures used in this analysis are discussed below.

Vehicle turning movement volume counts were conducted at the intersections of US 19 & Klosterman Road, US 19 & Tarpon Avenue, US 19 & Spruce Street, US 19 & Live Oak Street, and US 19 & Beckett Way during the a.m. peak period (7:00 a.m. to 9:00 a.m.) and p.m. peak period (4:00 p.m. to 6:00 p.m.) on June 20, 2019 to quantify existing peak-hour conditions within the study area. The raw counts are attached for reference.

As a result of the methodology meeting an updated FSUTMS model (v 9.1), the study area was updated. Therefore, additional data was collected on August 2020 for the study area intersections of Live Oak Street & Alt US 19 and Tarpon Avenue & Alt US 19. The traffic data was reviewed based upon the volumes provided in the Forward Pinellas 2019 Level of Service Report. The p.m. peak-hour traffic counts were collected again at the intersection of US 19 & Klosterman Road and determined to be within 4% of the 2019 traffic volumes at the same intersection for the p.m. peak-hour. Therefore, the August 2020 peak-hour traffic volumes were increased by 4% to provide a conservative analysis.

The a.m. peak-hour traffic counts were collected again at the intersection of US 19 & Klosterman Road and determined to be 8% less than the 2019 traffic volumes at the same intersection for the a.m. peak-hour. The traffic volumes for the a.m. peak-hour were also compared to the peak hour volumes in the Pinellas County Level of Service Report for E Live Oak Street and Tarpon Avenue. Therefore, the a.m. peak-hour volumes were increased by 8% to account for fluctuations in normal traffic patterns due to COVID at the two study area intersections of Live Oak Street & Alt US 19 and Tarpon Avenue & Alt US 19 (the only study area intersections collected in 2020).

To provide a conservative analysis, the existing conditions were analyzed for the year 2020. The data collected at the study area intersections in 2019 was adjusted by the approved background growth rate of 2% for one year.

All of the vehicle counts at the study intersections were adjusted to reflect peak-season conditions. This modification was performed using the Florida Department of Transportation (FDOT) peak-season conversion factor (PSCF), which corresponds to the data collection date for Pinellas County. The peak-season conversion factors are attached.

The peak season conversion factors (PSCF) are provided in **Appendix B** and the existing seasonally adjusted traffic volumes are provided in **Figure 5** and **Figure 6.** The traffic count data sheets are included in **Appendix C**.

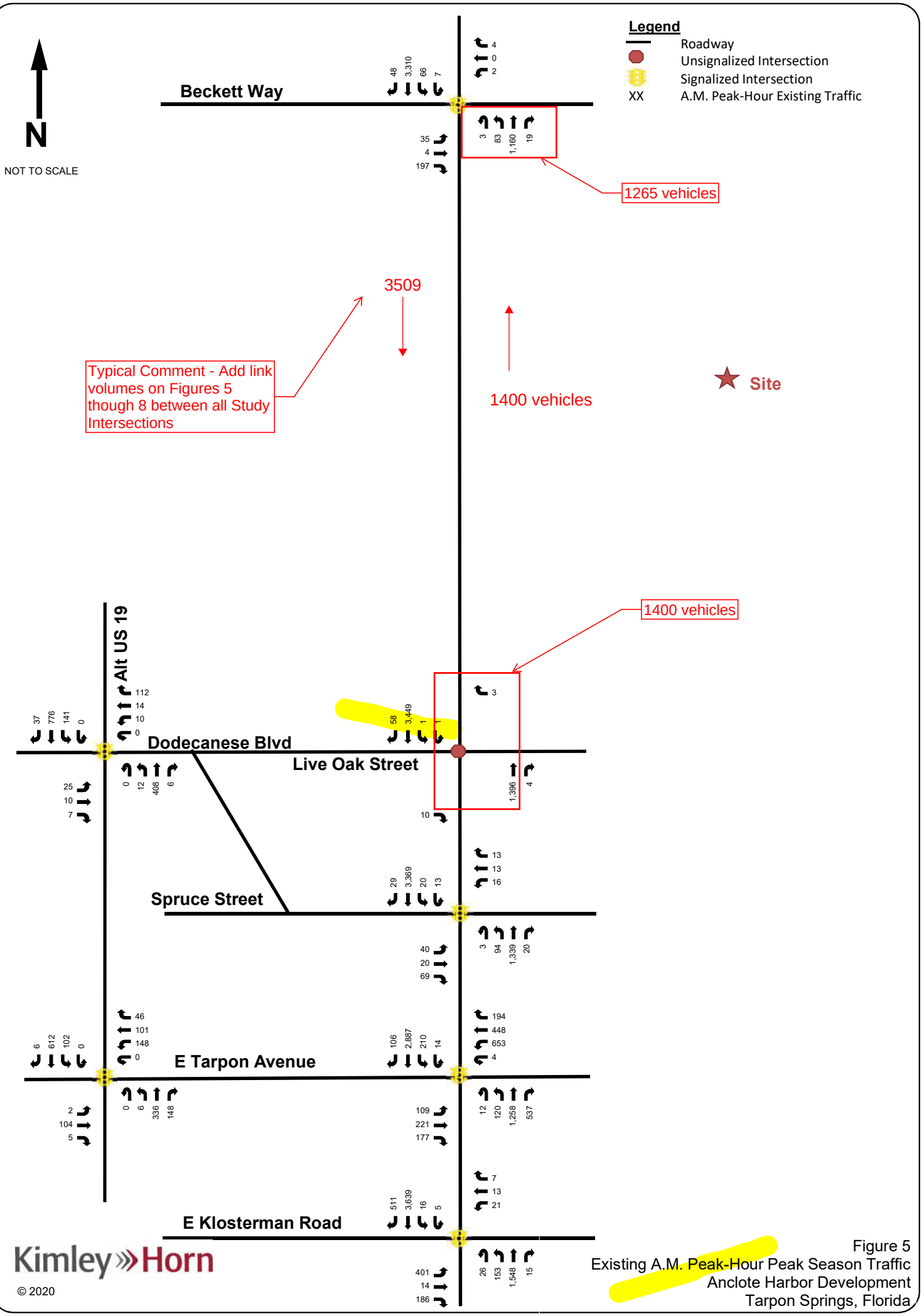

Figure 5
Existing A.M. Peak-Hour Peak Season Traffic
Anclote Harbor Development
Tarpon Springs, Florida

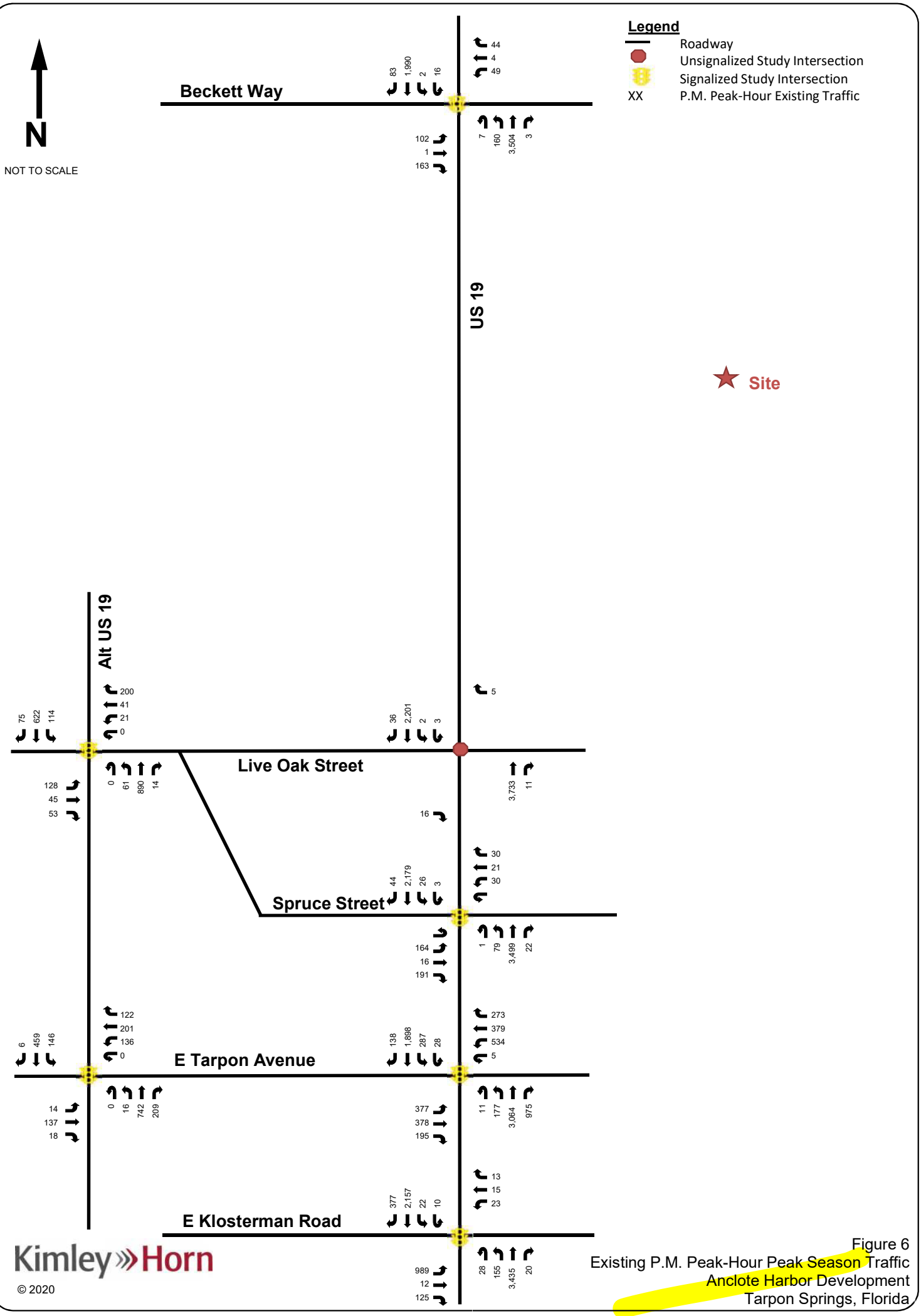

Figure 6
Existing P.M. Peak-Hour Peak Season Traffic
Anclote Harbor Development
Tarpon Springs, Florida

BUILD-OUT YEAR TRAFFIC CONDITIONS

Future traffic volumes consist of two components: project traffic and background (non-project) traffic estimates. Future background traffic is defined as expected non-project traffic on the roadway network in the future year at buildout of the proposed project. For the purposes of this analysis, it was determined that 2022 would be the buildout year of the development and, thus, 2022 conditions were evaluated as the "future" year scenario.

The future background volumes were developed by growing existing traffic 2.0% annually based upon historical Annual Average Daily Traffic (AADT) volumes along US 19. The growth rate calculations are attached. As discussed during the methodology phase, a growth rate of 1.3% was calculated. However, to account for projects in Tarpon Springs, a 2% background growth rate was used to provide a conservative estimate. The future background volumes include the 2% annual growth factor for 3 years for the data collected in 2019 and for 2 years for the data collected in 2020.

Figure 7 and **Figure 8** illustrate the peak-hour background traffic volumes.

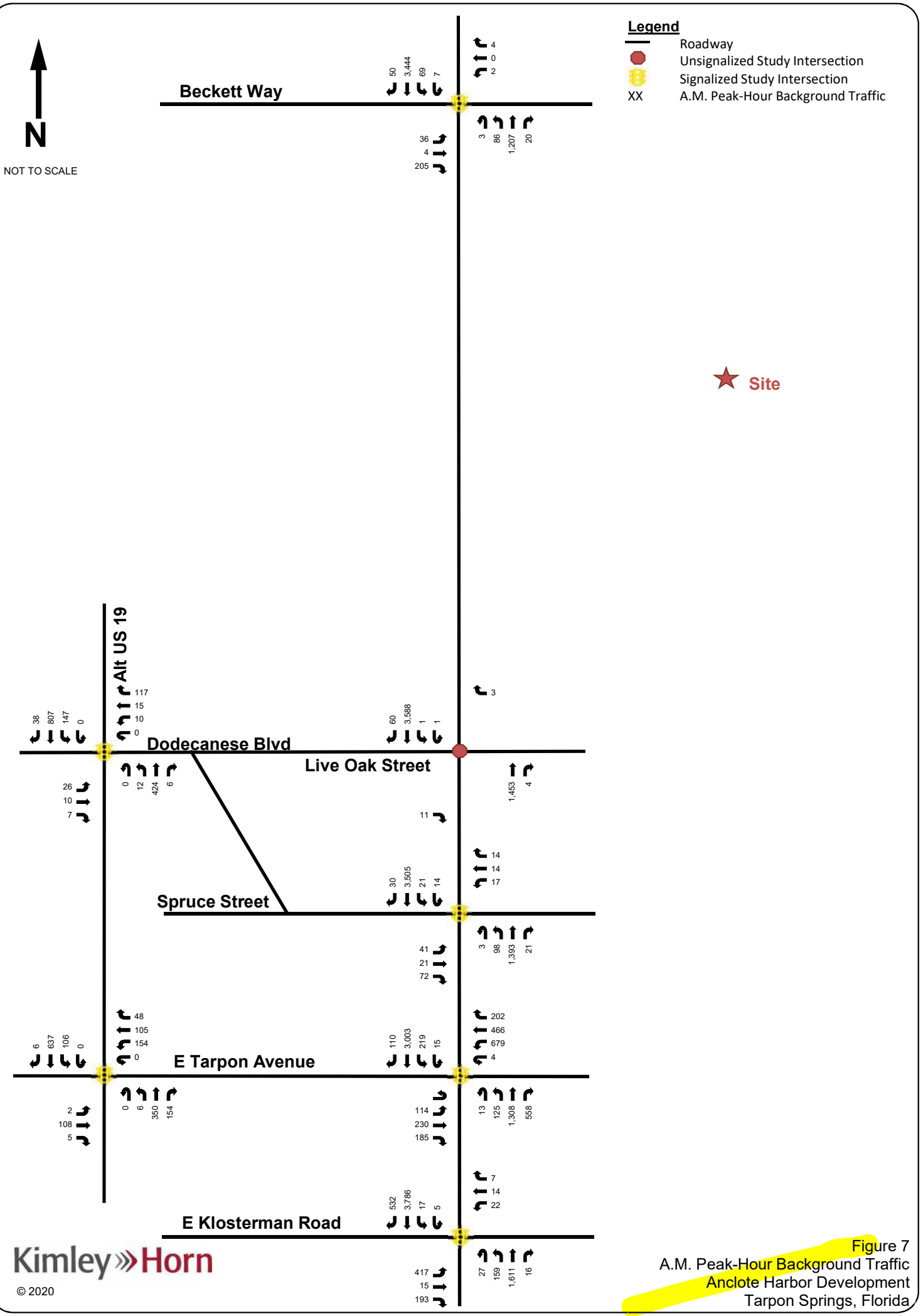

Figure 7
A.M. Peak-Hour Background Traffic
Anclote Harbor Development
Tarpon Springs, Florida

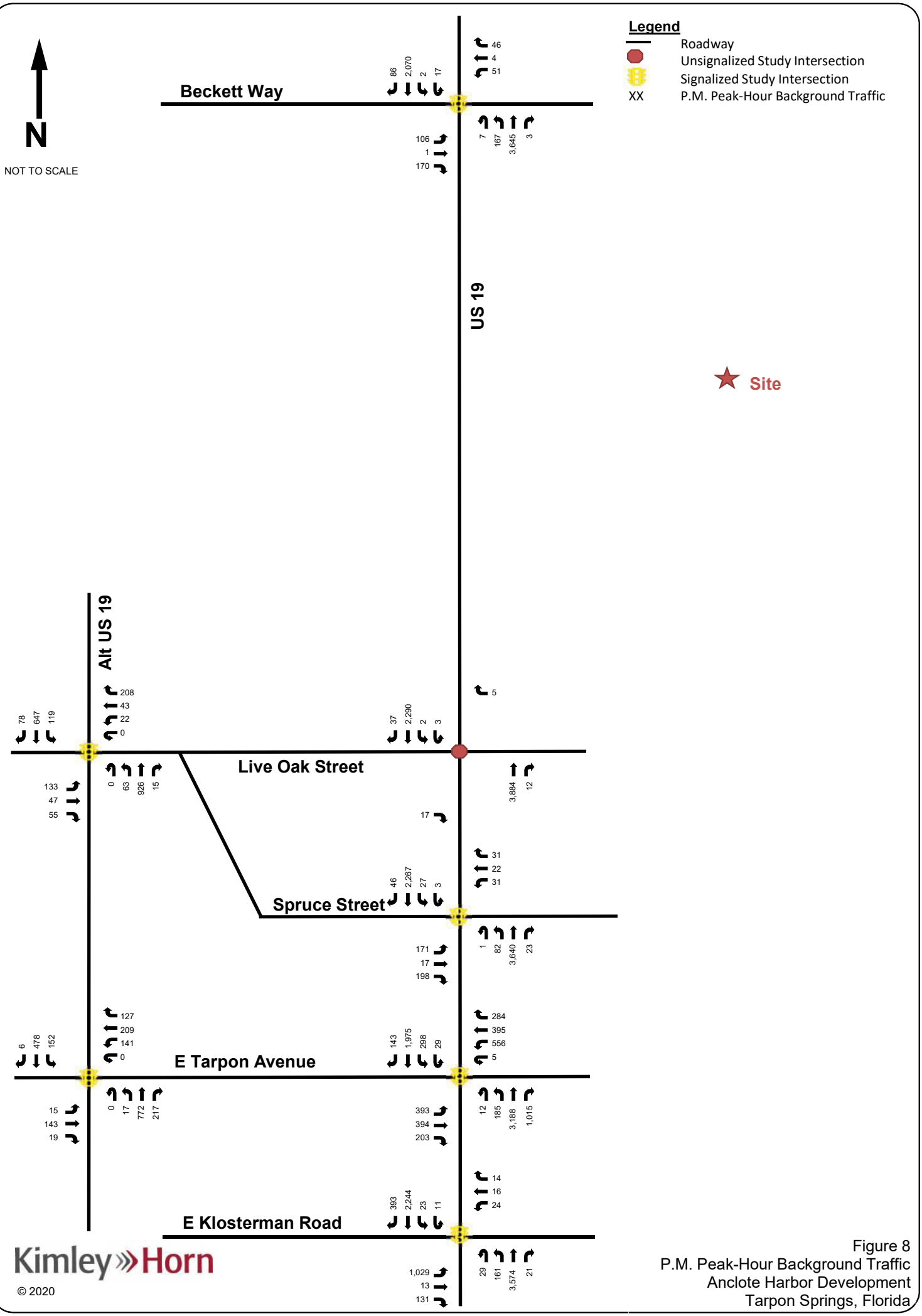

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Figure 8
P.M. Peak-Hour Background Traffic
Anclote Harbor Development
Tarpon Springs, Florida

Project Trip Distribution and Assignment

The study area roadway segments were determined to be the adjacent roadway segments of US 19 from Beckett Way to Klosterman Road, Tarpon Avenue from US 19 to Alt US 19, and Live Oak Street from US 19 to Alt US 19. New traffic expected to be generated by the proposed residential project was distributed to the roadway network based on the existing turning movement volume counts at the study intersections and the Florida Standard Urban Model Structure (FSUTMS) for District 7 (version 9.1). The model distribution is attached. Approximately 35% of the vehicles entering and exiting the site are anticipated to utilize US 19 to the north while 65% of the vehicles entering and exiting the site are anticipated to utilize US 19 to the south.

Project Access

An example of the project access, off-set left-turn median opening, is included in **Figure 9** and was provided by the FDOT to illustrate the offset left-turn lane median opening at the project access connection. The driveway allows for only right-in/right-out access. Vehicles entering from the southbound approach make a u-turn at the median opening and then a right-in at the driveway. Vehicles leaving the site would make a westbound right-turn and then a u-turn to travel south at the median opening. The median locations and turn lane lengths will be coordinated and reviewed by FDOT.

Figure 9: Offset Left-Turn Median Opening Example

The build-out year (2022) traffic conditions were evaluated within the study network. The intersection analyses were performed using *Synchro*. **Figure 10** and **Figure 11** illustrate the total traffic volumes (2022 background traffic volumes + project traffic) for the a.m. peak-hour and p.m. peak-hour, respectively.

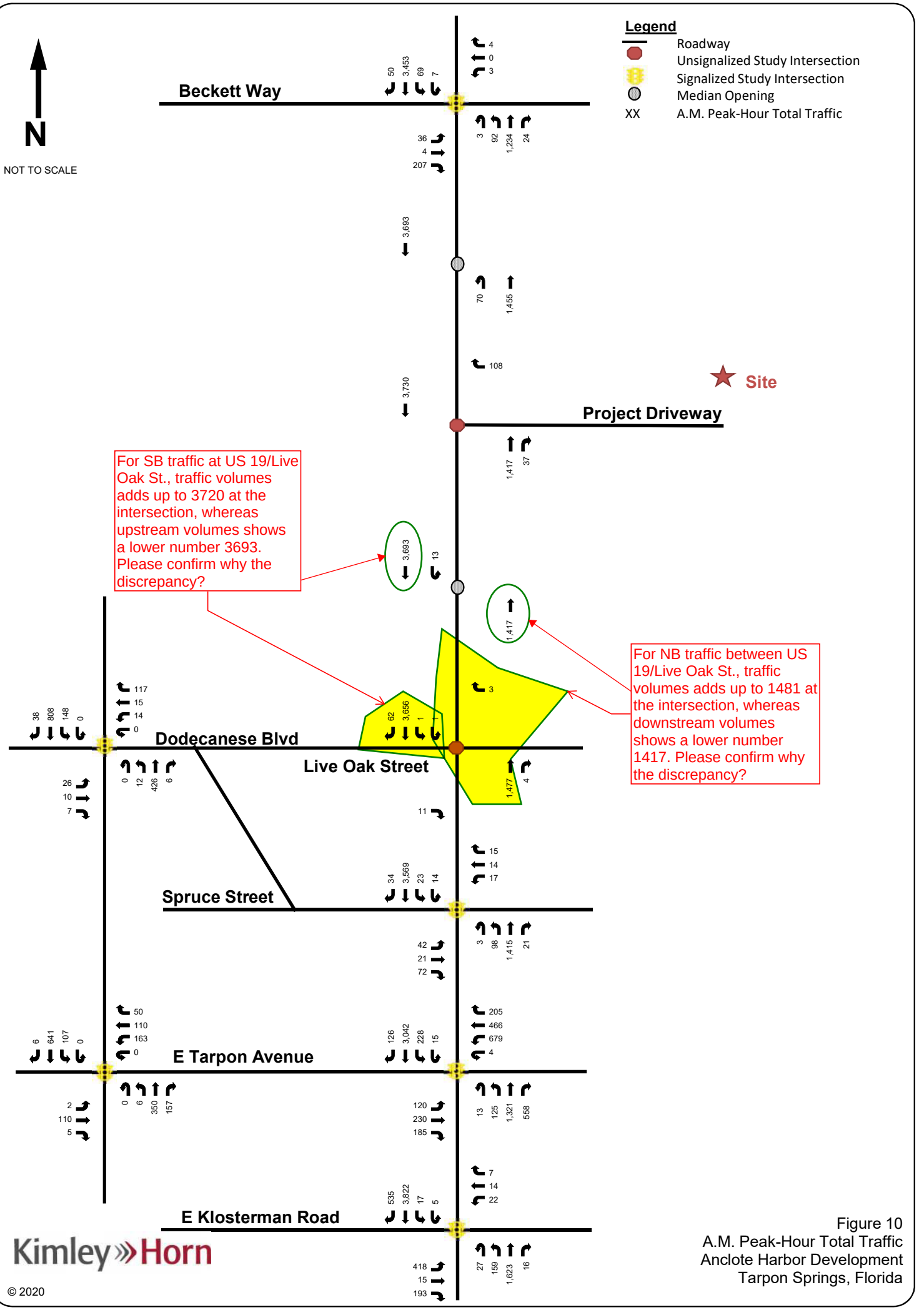

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Figure 10
A.M. Peak-Hour Total Traffic
Anclote Harbor Development
Tarpon Springs, Florida

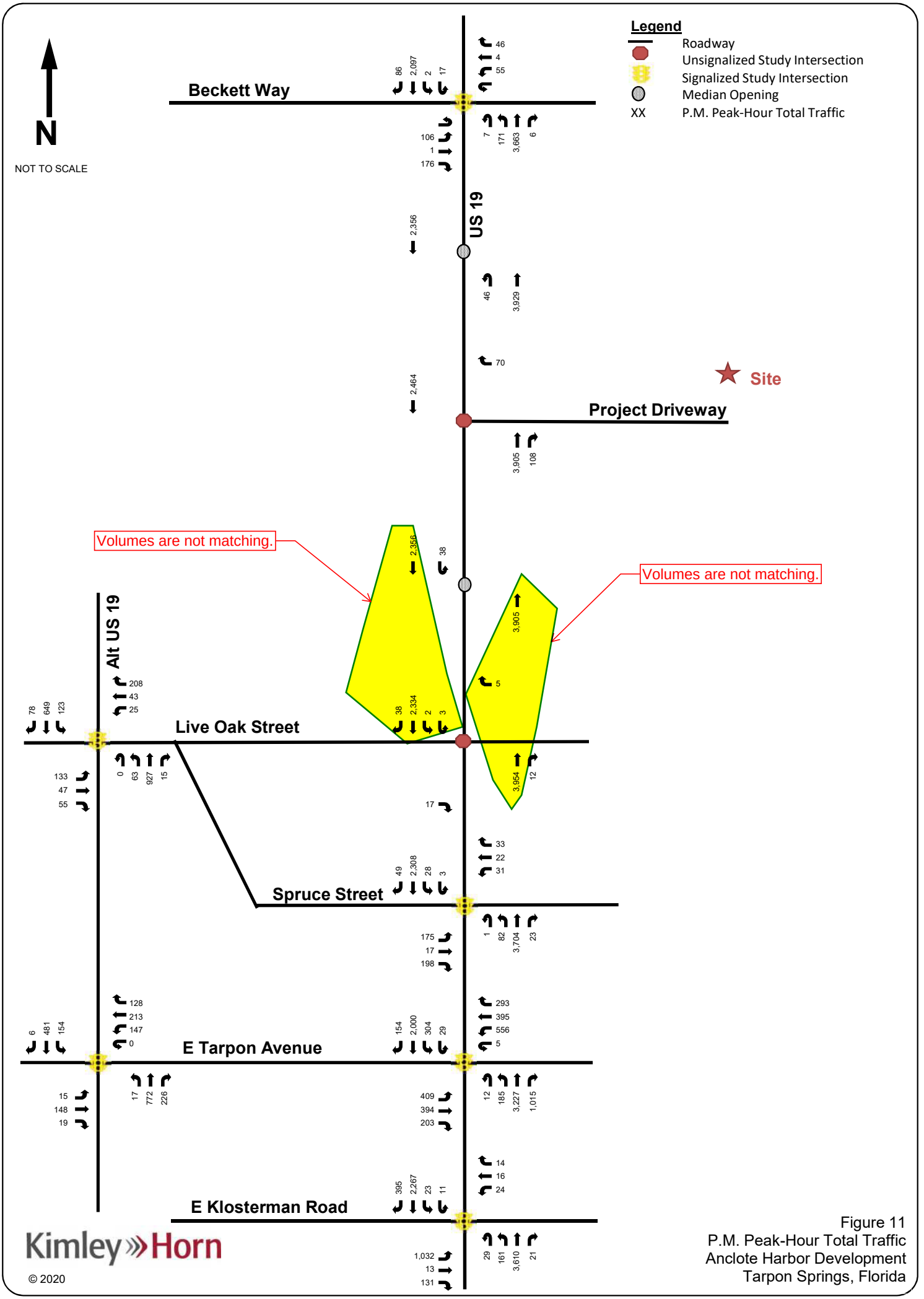

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Figure 11
P.M. Peak-Hour Total Traffic
Anclote Harbor Development
Tarpon Springs, Florida

Roadway Capacity Analysis

US 19 is a six-lane divided roadway from Tarpon Avenue to Beckett Way and an eight-lane divided roadway from Klosterman Road to Tarpon Avenue.

As indicated in **Table 2**, the existing (year 2020) and future total (year 2020 with project) traffic is anticipated to exceed the capacity for the US 19 level of service (LOS) D volume during the future a.m. peak-hour based upon the generalized roadway analysis.

To provide a more detailed analysis, a more specific modeling was performed using the Synchro detailed arterial report. Based upon the signal delay and travel time along the corridor, the analysis indicates the study roadway segments are anticipated to operate at LOS E or better during the a.m. peak-hour period for the study area.

Is FDOT okay with allowing the Applicant not to pay any impact fees for traffic added by the subject project and other future projects contributing to worsen the LOS to E? LOS D is the acceptable criteria. LOS E is not acceptable.

Based on comments made on Figure 2 (Project Traffic Distribution Percentages). Confirm if Project Traffic Assignment Peak Hour values, Project % Service Volumes, etc. in Table 3 will change and update the table.

This should be LOS D Capacity. It was shown correctly before in the last submittal. Please change it back to LOS D.

Table 2: Roadway Analysis (A.M. Pe

Roadway	From	To	Direction	Road Laneage	Adopted LOS D Service Volumes[1]	PSCF	Year 2020 Existing Peak Season Directional Volume[2]	Year 2020 Existing Volume Exceeds LOS D Capacity?	Year 2022 Background Peak-Hour Volumes	Project Traffic Assignment	Peak-Hour Project Volumes	Project % of Service Volume	Year 2022 Total P.M. Peak-Hour Traffic Volume	Exceeds LOS F Capacity?
US 19	Klosterman Road	Tarpon Avenue	NB	8D	4,040	1.09	1,333	No	2,022	36%	13	0.32%	2,035	No
			SB	8D	4,040	1.09	3,511	Yes	4,110	36%	39	0.97%	4,149	No[3]
	Tarpon Avenue	Live Oak Street	NB	6D	3,020	1.09	1,488	No	1,548	59%	22	0.73%	1,570	No
			SB	6D	3,020	1.09	3,338	Yes	3,473	59%	64	2.12%	3,537	No[4]
	Live Oak Street	Project Access	NB	6D	3,020	1.09	1,944	No	1,387	100%	37	1.23%	1,424	No
			SB	6D	3,020	1.09	3,950	Yes	3,652	100%	108	3.58%	3,760	No[3]
	Project Access	Beckett Way	NB	6D	3,020	1.09	1,944	No	1,387	100%	108	3.58%	1,495	No
			SB	6D	3,020	1.09	3,950	Yes	3,652	65%	84	2.78%	3,736	No[3]
E Live Oak St	US 19	Alt US 19	EB	2D	572	1.13	143	No	140	6%	2	0.35%	142	No
			WB				136	No	134	6%	6	1.05%	140	No
E Tarpon Ave	US 19	Alt US 19	EB	2D	792	1.13	431	No	423	15%	6	0.76%	429	No
			WB				485	No	474	15%	16	2.02%	490	No

Notes:

1. Based on Forward Pinellas LOS Report and FDOT QLOS Tables
2. Based on turning movement counts collected
3. Based upon Synchro detailed arterial analysis this roadway segment is anticipated to operate at LOS D
4. Based upon Synchro detailed arterial analysis this roadway segment is anticipated to operate at LOS E

Update this last column to say YES for anything that exceeds LOS D Service Volumes, which is the acceptable LOS. LOS E and F are unacceptable.

As indicated in **Table 3**, the existing and future total traffic is anticipated to exceed the capacity for the US 19 level of service (LOS) D volume during the future p.m. peak-hour based upon the generalized roadway analysis.

To provide a more detailed analysis, a more specific modeling was performed using the Synchro detailed arterial report. Based upon the signal delay and travel time along the corridor, the analysis indicates the study roadway segments are anticipated to operate at LOS E or better during the p.m. peak-hour period for the study area.

See comments made on Table 2.

Table 3: Roadway Analysis (P.M. Peak-Hour)

Roadway	From	To	Direction	Road Laneage	Adopted LOS D Service Volumes[1]	PSCF	Year 2020 Existing Peak Season Directional Volume[2]	Year 2022 Background Volume Exceeds LOS D Capacity?	Year 2022 Background Peak-Hour Volumes	Project Traffic Assignment	Peak-Hour Project Volumes	Project % of Service Volume	Year 2022 Total P.M. Peak-Hour Traffic Volume	Exceeds LOS F Capacity?
US 19	Klosterman Road	Tarpon Avenue	NB	8D	4,040	1.09	4,337	**Yes**	4,514	36%	39	0.97%	4,553	**No[3]**
			SB	8D	4,040	1.09	2,602	No	2,709	36%	25	0.62%	2,734	**No**
	Tarpon Avenue	Live Oak Street	NB	6D	3,020	1.09	3,743	**Yes**	3,895	59%	64	2.12%	3,959	**No[4]**
			SB	6D	3,020	1.09	2,284	No	2,376	59%	41	1.36%	2,417	**No**
	Live Oak Street	Project Access	NB	6D	3,020	1.09	3,708	**Yes**	3,857	100%	108	3.58%	3,965	**No[3]**
			SB	6D	3,020	1.09	2,226	No	2,315	100%	70	2.32%	2,385	**No**
	Project Access	Beckett Way	NB	6D	3,020	1.09	3,708	**Yes**	3,857	100%	70	2.32%	3,927	**No[3]**
			SB	6D	3,020	1.09	2,226	No	2,315	65%	84	2.78%	2,399	**No**
E Live Oak St	US 19	Alt US 19	EB	2D	572	1.13	272	No	284	6%	6	1.05%	290	**No**
			WB				203	No	212	6%	4	0.70%	216	**No**
E Tarpon Ave	US 19	Alt US 19	EB	2D	792	1.13	721	No	751	15%	16	2.02%	767	**No**
			WB				577	No	600	15%	11	1.39%	611	**No**

Notes:

1. Based on Forward Pinellas LOS Report and FDOT QLOS Table
2. Based on turning movement counts collected
3. Based upon Synchro detailed arterial analysis this roadway segment is anticipated to operate at LOS D
4. Based upon Synchro detailed arterial analysis this roadway segment is anticipated to operate at LOS E

Intersection Analysis

Synchro (v10) software was used to determine existing and future total peak-hour operational conditions for the study area intersections.

The intersection movements were evaluated based upon the volume to capacity ratio. A v/c ratio for each movement that is less than 1.0 is considered to operate acceptably.

The following movements are anticipated to operate with v/c ratios greater than 1.0 during the a.m. peak-hour periods in background conditions as indicated in **Table 4**.

- US 19 & Beckett Way
  - Southbound left-turn
- US 19 & Spruce Street
  - Southbound through
- US 19 & Tarpon Avenue
  - Westbound left-turn
  - Southbound through
- US 19 & Klosterman Road
  - Northbound left-turn
  - Southbound right-turn

Previous comment not implemented. In addition to V/C ratios, add LOS for each of movements and overall intersection LOS and corresponding delay in vehicles/second. Mention if LOS D thresholds can be met with any countermeasures to improve the operation of the movements/overall intersection. When would the improvements be needed and who will address operational improvements? Revise narrative under Intersection Analysis, and corresponding Table 4.

As stated in the Tarpon Spring's Land Development Code:

> "In 2013, the Pinellas County Metropolitan Planning Organization approved the Pinellas County Mobility Plan Report. The intent of the Mobility Plan is to replace local transportation concurrency management programs with a system that provides local governments with the means to manage the traffic impacts of development projects without requiring developers to meet adopted level of service standards.
>
> The transportation element of the comprehensive plan identifies a number of highway system facilities operating under deficient level of service conditions. These require the

application of Mobility Plan provisions in order to manage transportation impacts and to increase mobility through the use of multimodal impact fees to fund transportation improvements."

Therefore, based upon House Bill 7207, as these are existing and background deficiencies, no improvements are identified as the responsibility of the developer. No additional movements are anticipated to operate with a v/c ratio greater than 1.0 with the addition of the project traffic.

General Comment for Tables 4 and 5 - Confirm if any of the previous comments made on the Figures would change any of the V/C ratios listed. Also include LOS.

Table 4: Intersection Analysis (A.M. Peak)

Existing Conditions (2020) v/c Ratio[1] {Background Conditions (2022) v/c Ratio}[2] [Total Conditions (2022) v/c Ratio][3]														
		Eastbound			Westbound			Northbound			Southbound		
Intersection	Peak Hour	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
US 19 & Beckett Way	AM	0.29	0.86		0.06			0.85	0.30	0.01	**1.34**	0.88	0.04
		{0.29}	{0.87}		{0.06}			{0.85}	{0.31}	{0.01}	**{1.40}**	{0.92}	{0.04}
		[0.29]	[0.87]		[0.09]			[0.86]	[0.32]	[0.01]	**[1.40]**	[0.93]	[0.04]
US 19 & E Live Oak Street	AM	--	--	0.17	--	--	0.01	--	--	--	0.01	--	--
		--	--	{0.20}	--	--	{0.01}	--	--	--	{0.01}	--	--
		--	--	[0.21]	--	--	[0.01]	--	--	--	[0.01]	--	--
US 19 & Spruce Street	AM	0.56		0.15	0.46		0.04	0.26	0.42	0.02	0.13	**1.19**	0.02
		{0.56}		{0.17}	{0.47}		{0.04}	{0.28}	{0.44}	{0.02}	{0.15}	**{1.24}**	{0.02}
		[0.56]		[0.17]	[0.47]		[0.05]	[0.28]	[0.44]	[0.02]	[0.15]	**[1.26]**	[0.03]
US 19 & E Tarpon Avenue	AM	0.79	0.50	0.91	**1.79**	0.66	0.64	0.82	0.48	0.65	0.91	**1.04**	0.12
		{0.79}	{0.50}	{0.91}	**{1.86}**	{0.68}	{0.66}	{0.82}	{0.51}	{0.69}	{0.95}	**{1.09}**	{0.13}
		[0.80]	[0.50]	[0.91]	**[1.86]**	[0.68]	[0.67]	[0.82]	[0.51]	[0.69]	[0.99]	**[1.10]**	[0.15]
US 19 & E Klosterman Road	AM	0.84	0.00	0.57	--	0.78	--	**1.07**	0.34	--	0.63	0.94	**1.01**
		{0.85}	{0.00}	{0.59}	--	{0.79}	--	**{1.12}**	{0.36}	--	{0.65}	{0.98}	**{1.06}**
		[0.85]	[0.00]	[0.59]	--	[0.79]	--	**[1.12]**	[0.36]	--	[0.65]	[0.99]	**[1.06]**
E Live Oak Street/ Dodecanese Blvd & Alt US 19	AM	0.17	0.12		0.06	0.09	0.82	0.03	0.29		0.21	0.63	
		{0.17}	{0.12}		{0.06}	{0.09}	{0.83}	{0.03}	{0.31}		{0.22}	{0.66}	
		[0.17]	[0.12]		[0.10]	[0.09]	[0.81]	[0.03]	[0.31]		[0.22]	[0.65]	
E Tarpon Ave & Alt US 19	AM	0.65			0.51	0.39		0.01	0.46		0.20	0.48	
		{0.66}			{0.53}	{0.40}		{0.01}	{0.48}		{0.21}	{0.51}	
		[0.66]			[0.54]	[0.40]		[0.01]	[0.49]		[0.22]	[0.52]	

1. Existing Conditions: Year 2020 Traffic volumes
2. Background Conditions: Year 2022 Traffic volumes = Existing Traffic Volumes + 2% annual growth
3. Total Conditions: Background + Project Traffic Volumes: Year 2022 Traffic Volumes + Project Traffic

Previous comment not implemented. It was discussed during comment resolution meeting that the general public and council members do not understand what V/C ratio is. Previous comment "Include a LOS chart with LOS A thru F with corresponding delays so City staff and laymen can understand the operations. Also include the thresholds for V/C (volume/capacity) ratio (such as what is acceptable and what is failure), so it is easily understandable to City council and anyone reviewing this report."

The following movements are anticipated to operate with v/c ratios greater than 1.0 during the p.m. peak-hour periods in background conditions as indicated in **Table 5**.

- US 19 & Spruce Street
    - Northbound through
- US 19 & Tarpon Avenue
    - Eastbound left-turn
    - Westbound left-turn
    - Northbound through
- US 19 & Klosterman Road
    - Southbound left-turn

The following movements are anticipated to operate with v/c ratios greater than 1.0 during the p.m. peak-hour periods in total conditions as indicated in **Table 5.**

- Alternative US 19 & Tarpon Avenue
    - Southbound left-turn

Signal timing adjustments are recommended with the addition of the project. With additional green time for the southbound left-turn, the intersection of Alternative US 19 & Tarpon Avenue can operate acceptably (all v/c ratios for all movements less than 1.0).

See comments on Table 4.

Table 5: Intersection Analysis (P.M. Peak)

Existing Conditions (2020) v/c Ratio[1] {Background Conditions (2022) v/c Ratio}[2] [Total Conditions (2022) v/c Ratio][3] (Total Conditions with Signal Timing Adjustment (2022) v/c Ratio)[4]														
Intersection	**Peak Hour**	**Eastbound**			**Westbound**			**Northbound**			**Southbound**		
		EBL	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
US 19 & Beckett Way	PM	0.71	0.33		0.59			0.90	0.89	0.00	0.50	0.57	0.04
		{0.72}	{0.36}		{0.62}			{0.91}	{0.94}	{0.00}	{0.51}	{0.60}	{0.04}
		[0.69]	[0.39]		[0.67]			[0.91]	[0.94]	[0.00]	[0.51]	[0.61]	[0.04]
US 19 & E Live Oak Street	PM	--	--	0.10	--	--	0.11	--	--	--	0.40	--	--
		--	--	{0.11}	--	--	{0.12}	--	--	--	{0.47}	--	--
		--	--	[0.12]	--	--	[0.13]	--	--	--	[0.52]	--	--
US 19 & Spruce Street	PM	0.74		0.17	0.60		0.02	0.50	**1.05**	0.02	0.67	0.73	0.03
		{0.78}		{0.19}	{0.73}		{0.02}	{0.52}	**{1.09}**	{0.02}	{0.69}	{0.75}	{0.03}
		[0.78]		[0.19]	[0.76]		[0.02]	[0.52]	**[1.11]**	[0.02]	[0.70]	[0.77]	[0.04]
US 19 & E Tarpon Avenue	PM	**1.10**	0.89	0.00	**1.46**	0.84	0.00	0.85	**1.21**	0.00	0.84	0.69	0.00
		{1.15}	{0.89}	{0.00}	**{1.52}**	{0.85}	{0.00}	{0.86}	**{1.26}**	{0.00}	{0.91}	{0.72}	{0.00}
		[1.20]	[0.89]	[0.00]	**[1.52]**	[0.85]	[0.00]	[0.86]	**[1.27]**	[0.00]	[0.92]	[0.73]	[0.00]
US 19 & E Klosterman Road	PM	**1.01**	0.00	0.14	--	0.78	--	0.84	0.83	--	0.77	0.66	
		{1.05}	{0.00}	{0.16}	--	{0.78}	--	{0.84}	{0.87}	--	{0.77}	{0.69}	
		[1.05]	[0.00]	[0.16]	--	[0.78]	--	[0.84]	[0.88]	--	[0.77]	[0.70]	
E Live Oak Street/ Dodecanese Blvd & Alt US 19	PM	0.66	0.37		0.12	0.14	0.82	0.15	0.70		0.39	0.62	
		{0.67}	{0.37}		{0.12}	{0.14}	{0.82}	{0.17}	{0.74}		{0.46}	{0.64}	
		[0.67]	[0.37]		[0.13]	[0.14]	[0.82]	[0.17]	[0.74]		[0.47]	[0.66]	
E Tarpon Ave & Alt US 19	PM	0.76			0.51	0.78		0.03	0.92		0.77	0.37	
		{0.77}			{0.52}	{0.79}		{0.03}	{0.98}		{0.98}	{0.39}	
		[0.78]			[0.53]	[0.79]		[0.03]	[0.99]		**[1.09]**	[0.40]	
		(0.85)			(0.60)	(0.81)		(0.03)	(0.99)		(0.98)	(0.39)	

1. Existing Conditions: Year 2020 Traffic volumes
2. Background Conditions: Year 2022 Traffic volumes = Existing Traffic Volumes + 2% annual growth
3. Total Conditions: Background + Project Traffic Volumes: Year 2022 Traffic Volumes + Project Traffic
4. Total Conditions: Background + Project Traffic Volumes: Year 2022 Traffic Volumes + Project Traffic

Project Access Analysis

Per discussion with the FDOT, the project access location is required to consist of offset left-turn median openings along US 19. The approved pre-application notes from FDOT are provided in the approved methodology in the appendix. A queue analysis was performed for the median openings north and south of the project driveway. The results are summarized in **Table 6**.

The median opening for the project northbound u-turn lane (at the median north of the project driveway) is anticipated to require 605 feet. This includes the 200 feet of queue storage and 405 feet for deceleration/taper based upon FDOT Standard Index 711-001. The southbound u-turn

lane (at the median south of the project driveway) is anticipated to require 605 feet. This includes the 200 feet of queue storage and 405 feet for deceleration/taper based upon FDOT Standard Index 711-001.

NB U Turn

SB U Turn

Table 6: Intersection Queue Analysis

Total Conditions (2022) Queue Analysis (feet)[1,2]													
Intersection	Peak Hour	Eastbound			Westbound			Northbound			Southbound		
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
US 19 & North Median	AM	--			--			194	--		--		
	PM	--			--			29	--		--		
US 19 & Project Driveway	AM	--			--		22	--			--		
	PM	--			--		76	--			--		
US 19 & South Median	AM	--			--			--			3	--	
	PM	--			--			--			139	--	

1. 95th Percentile Queue from Synchro
2. Total Conditions: Background + Project Traffic Volumes: Year 2022 Traffic Volumes + Project Traffic

An analysis based on FDOT's *Access Management Guidebook (2019)* was performed for northbound right-turn volumes at the driveway access connection along US 19 to determine if a right-turn lane may be warranted for the proposed development. A right-turn lane may be warranted for a roadway with a speed limit over 45 miles per hour if the number of right-turns per hour is between 35 to 55 vehicles. The p.m. peak-hour project traffic right-turn volume is 108 vehicles. Therefore, a northbound right-turn lane of 405 feet (based upon a design speed of 55 miles per hour and FDOT Standard Index 711-001) is warranted at this location and the turn radii for the project site shall be designed accordingly with respect to FDOT turn lane specifications.

Parking

Parking will be provided on-site. The total number of proposed parking spaces is 761 spaces which includes 45 spaces in the garage and 716 at grade spaces. The number of required spaces is 807 which includes 56 spaces for the community pool, 44 spaces for the clubhouse, and 707 parking spaces for the residential units. A waiver has been requested for a reduction for the number of required parking spaces for the pool area.

The waiver requested by Applicant for Parking is 46 spaces. Work with City of Tarpon Springs on this waiver. This may encourage parking outside community when events occur in the clubhouse or any guests are having parties. Clarify where would overflow parking be accommodated?

MULTIMODAL ANALYSIS

Sidewalks and bicycle lanes currently exist along both sides of US 19. The Fred Marquis Pinellas trail is south of the site and will be connected to the site. The sidewalk connection will be provided from the site to the existing sidewalk along US 19. A map illustrating the existing multi-modal including transit stops and routes is attached in the appendix.

A circulation exhibit will be provided with the site plan showing the proposed sidewalk connections on site. Pedestrian facilities will be provided on site as well as additional gathering spaces including a pocket park, playground and pet park.

Since, this is a requirement for Applicant to make Multi-modal improvements. Can it be made contingent upon Applicant to provide Design Construction Plans to City/FDOT and applicant pay for Construction of the same concurrently with the proposed development. A more detailed review will be done by City's Consultant of the Design Plans.

TRANSPORTATION MANAGEMENT STRATEGIES

As required by the City of Tarpon Springs, transportation management strategies are included for this project. The project is proposing an intensity reduction as the current zoning is commercial. The project is also proposing a density reduction since the density allows for the development of 499 units but the applicant is seeking approval for 404 dwelling units.

To provide access to the site, offset left-turn lanes will be constructed along US 19. This improvement will allow vehicles traveling on US 19 to make a southbound or northbound u-turn movement and will improve existing conditions as it provides an opportunity for vehicles to make a u-turn in both directions prior to the existing northbound and southbound left-turn lanes at the intersections of US 19 & E Live Oak Street and US 19 & Beckett Way. This will reduce the northbound and southbound u-turns at the adjacent signalized intersections and existing median openings and improve their intersection operations for these movements.

Additionally, coordination with the FDOT for access management and review will be required. The project is requesting only one access connection on US 19 to reduce impacts to the overall network. It is proposed to construct a northbound right-turn lane at the project entrance to reduce impacts to the existing network and improve safety.

Anclote Harbor Apartments will encourage traffic reduction by promoting a livable community through site design features. The apartments will enable a live-work-play lifestyle and promote a pedestrian friendly design with connected walking paths.

Residents will enjoy access to recreational amenities such as resort style pool, fitness center with yoga, cardio and strength training studios, dog park, grill stations, on-site boat dock access, kayak/canoe launch areas, and walking paths with sidewalk connection to the Pinellas trail. The project will also enable working-from-home by featuring a co-working inspired business center with large collaborative spaces, private conference room, and private office spaces. The

community will feature electric car chargers and foster multimodal transportation by providing bike storage and encouraging ride sharing and resident carpooling programs.

CONCLUSION

The proposed residential development, Anclote Harbor Apartments, is proposed to be located in the City of Tarpon Springs, Florida, east of US 19. The residential development is proposed to include up to 404 multi-family dwelling units.

As required by the City of Tarpon Springs in section § 122.11.03 of their Land Development Code:

> *"Transportation management plans are to be submitted by applicants of development projects in conjunction with their site plans. Transportation management plans are required for development applications seeking to utilize transportation management strategies/improvements to address their development impacts."*

Specifically, the applicant is proposing several transportation management strategies/improvements to address their development's impacts as outlined in the Transportation Management Strategies section of this report.

As part of the Conclusion, summarize all Recommendations of what the Applicant will provide?

APPENDIX A:

APPROVED METHODOLOGY

Kimley»Horn

August 17, 2020

Suite 150
655 North Franklin Street
Tampa, Florida
33602

Patricia L. McNeese, AICP
Principal Planner
City of Tarpon Springs
324 East Pine Street
Tarpon Springs, Florida 34688

Re: Anclote Harbor
Traffic Impact Analysis Methodology
42501 US Highway 19
Pinellas County, Florida
Parcel: 06-27-16-89388-000-0420

Dear Ms. McNeese:

The purpose of this letter is to document the methodology that will be conducted for the Traffic Impact Analysis for a proposed residential development, Anclote Harbor. The project site is located in the northeast corner of US 19 & Fred Marquis Pinellas Trail in Pinellas County, Florida. The concept site plan is attached. The following methodology is provided below for your review and comments.

The site will be analyzed for traffic impacts for up to 404 multi-family dwelling units (mid-rise). Access to the property will be provided at one access connection along US 19. A pre-application meeting was held with the Florida Department of Transportation (FDOT) on May 9, 2019 to discuss the proposed access along US 19. Based upon comments received at the pre-application meeting, overall access is to be provided along US 19 as a proposed offset left-turn median opening. The project driveway will only allow right-in/right-out movements as shown below in **Figure 1** which was provided by the FDOT at the pre-application meeting.

Figure 1 – Proposed Offset Left-Turn Median Opening

To appropriately address transportation operational issues related to this proposed residential development, Kimley-Horn will conduct an analysis that follows the study

TEL: 813 620 1460

methodology detailed below. The general site location map is attached.

Project Trip Generation: The anticipated project trip generation will be based upon the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition for land use code 221 (Multi-family Housing Mid-Rise). The trip generation table is summarized and attached. Based upon the trip generation, the proposed development is anticipated to generate 145 net, new a.m. peak-hour trips (37 entering/108 exiting) and 178 net, new p.m. peak-hour trips (108 entering/70 exiting).

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS TRIPS			INTERNAL CAPTURE		PASS-BY CAPTURE		NET, NEW EXTERNAL TRIPS		
						Percent											
Land Use	Period	ITE Edition	ITE Code	Scale	ITE Units	In	Out	In	Out	Total	%	Trips	%	Trips	In	Out	Total
Multi-family Housing Mid-Rise	**Daily**	10	221	404	DU	50%	50%	1100	1100	2200	0%	0	0%	0	1,100	1,100	2,200
Multi-family Housing Mid-Rise	**AM**	10	221	404	DU	26%	74%	37	108	145	0%	0	0%	0	37	108	145
Multi-family Housing Mid-Rise	**PM**	10	221	404	DU	61%	39%	108	70	178	0%	0	0%	0	108	70	178

Notes:
1. Daily Trip Generation Fitted Curve: T = 5.45(X) - 1.75
2. AM Trip Generation Average Rate: T = 0.36(X)
3. AM Trip Generation based upon average rate as $R^2 < 0.75$
4. PM Trip Generation Average Rate: T = 0.44(X)
5. PM Trip Generation based upon average rate as $R^2 < 0.75$

Analysis Year Scenarios: The transportation intersection and roadway analysis for the study area segments will be conducted for the buildout (year is assumed as build out year 2022) during the p.m. peak-hours. Synchro version 10 will be used for the intersection analyses and Synchro for the roadway analyses (detailed arterial).

Project Trip Distribution: The project traffic will be assigned to the road network using the FDOT District Seven Florida Standard Urban Transportation Model Structure (FSUTMS) planning model, specifically the Existing plus Committed (E+C) network. The select zone distribution output is attached and has been updated based upon the latest available version of the model.

Scheduled Improvements: The Work Programs for Pinellas County, Forward Pinellas, and Florida Department of Transportation (FDOT) District 7 and developer committed improvements were reviewed for improvements which are currently planned and funded for construction within the buildout time frame in the immediate vicinity of the project site.

No improvements were identified during this time period. Therefore, existing lane geometry and traffic controls will be used in the analysis of existing conditions for all impacted intersections and roadways.

Background Traffic Volumes: A growth rate of 1.3% was calculated based upon historic FDOT AADT volumes in the area. The growth rate calculations are attached. As discussed with the City, to provide a conservative growth, 2% exponential growth rate will be included.

Study Area: As defined in the *2019 Annual Level of Service Report* for Forward Pinellas, the study area roadway segments will be those that are defined as significantly impacted roadways, with the project traffic representing 1.0% or greater of the maximum service volume of peak-hour Level of Service (LOS) D evaluated for up to two miles from the project site boundaries. The study roadway segments were evaluated within two miles of the site until no longer deemed to be significantly impacted.

The intersections were based upon the end segments defined in the Pinellas County *Annual Level of Service Report* for Forward Pinellas.

Roadway segments include those impacted by project traffic that is greater than 1.0% of the LOS D Minimum Adopted Standards service volume. US 19 from Klosterman Road to Tarpon Avenue and US 19 from Tarpon Avenue to Beckett Way are considered deficient segments; therefore, these segments will be included in the analysis. The study area table is attached.

The following study roadway segments will be included in the analysis:

- US 19 from Klosterman Road to Tarpon Avenue
- US 19 from Tarpon Avenue to Live Oak Street
- US 19 from Live Oak Street to Beckett Way
- Live Oak Street from US 19 to Alt US 19
- Tarpon Avenue from US 19 to Alt US 19

The following study intersections will be included in the analysis:

- US 19 & Klosterman Road
- US 19 & Tarpon Avenue
- US 19 & Beckett Way
- US 19 & Live Oak Street
- Live Oak Street & Alt US 19
- Tarpon Avenue & Alt US 19

As these segments of US 19 are considered deficient in the Comprehensive Plan, transportation management plan strategies will be included in the analysis.

The proposed project access connection along US 19 will also be analyzed and the level of service per movement will be documented.

Due to the potential impacts of COVID for the traffic data, the data collected during 2020 will be compared to historical data sources along the study roadway segments including the *2019 Annual Level of Service Report* for Forward Pinellas. The count data at the intersections that are collected during 2020 will be increased, if appropriate, to reflect traffic volumes in the *2019 Annual Level of Service Report* for Forward Pinellas.

Access Management Analysis: As shown in the concept development plan, access to the site is proposed via one right-in/right-out driveway along US 19. Directional median openings are proposed to be provided north and south of the development

driveway. The location of the medians will be coordinated with the Florida Department of Transportation.

The two median openings (immediately north and south of the site) will be analyzed for the anticipated queue and turn lane length required. The analysis will include the number of anticipated trips heading north or south which utilize the median openings.

A Level of Service (LOS) analysis will be included for the unsignalized project driveway.

Multi-Modal Review: A review will be conducted to document the existing multi-modal conditions. The review will include recommendations for future potential multi-modal options within the area.

We will follow-up with you to determine if you have any questions or comments regarding this transportation methodology. We look forward to working with you.

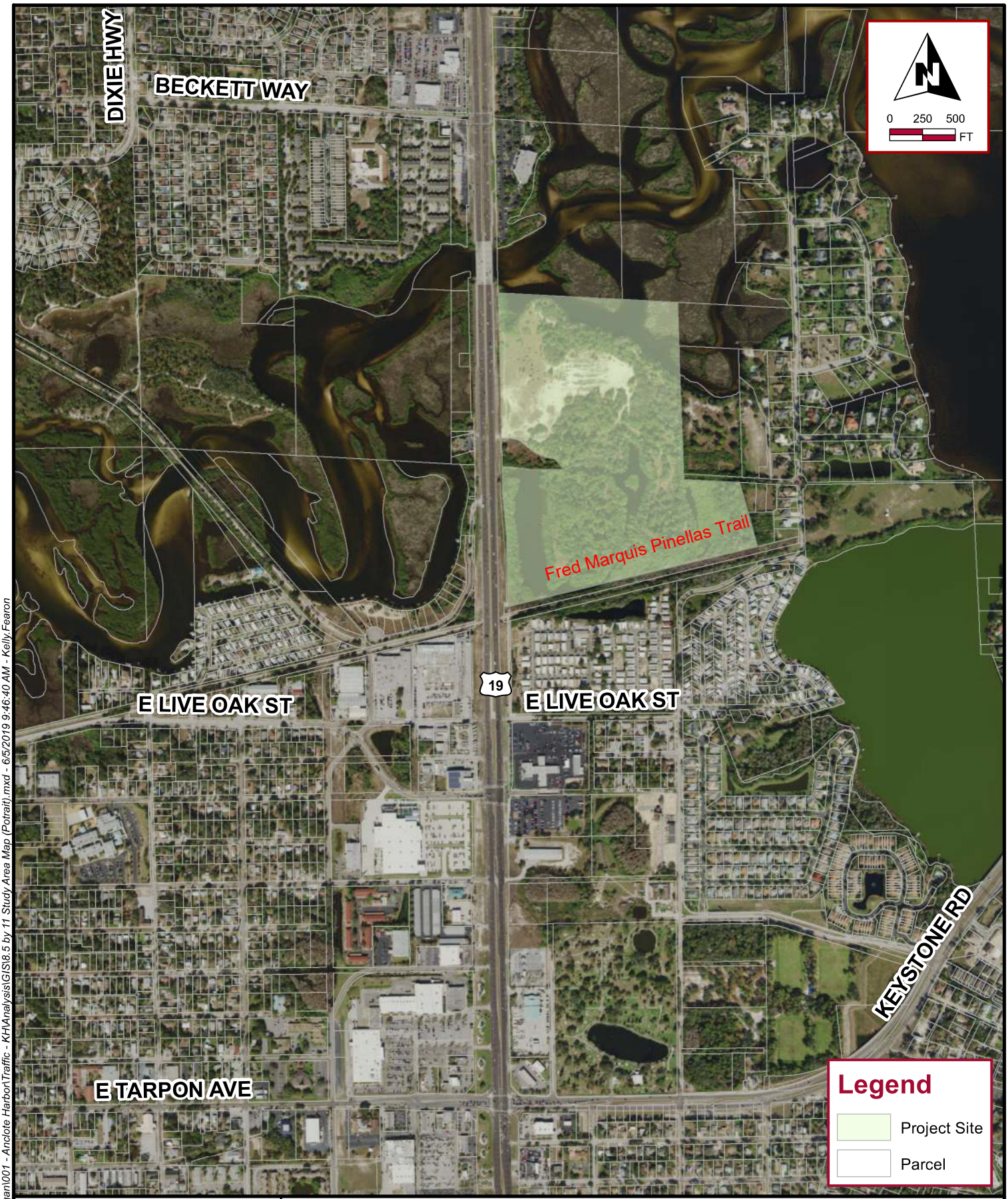
Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

Christopher Hatton, P.E.
Senior-Vice President

Kelly Fearon, P.E.
Transportation Engineer

Attachments: Study Area Table
FSUTMS Select Zone Analysis
Growth Calculations
FDOT Pre-Application Notes



K:\TAM_Civil\145062 - Morgan\001 - Anclote HarborTraffic - KH\Analysis\GIS\8.5 by 11 Study Area Map (Potrait).mxd - 6/5/2019 9:46:40 AM - Kelly.Fearon

Kimley»Horn

655 North Franklin St, Suite 150, Tampa, FL 33602
Phone: (813) 620 1460
www.kimley-horn.com

Project Location Map

MORGAN - TARPON SPRINGS
PINELLAS COUNTY, FLORIDA

Project No: 145062001	Scale: As Noted	June 2019	Figure 1

Kimley»Horn

Study Area Table (AM Peak-Hour)

Roadway	From	To	Service Volumes		AM Peak-Hour Directional Traffic		Study Network	
			Lane	LOS D Peak Hour Directional Volume	Project Traffic (%)	Project Traffic (Inbound)	Project Traffic % of Service Volume	Significant Segment?
US 19	Alderman Rd	Klosterman Rd	6D	2,940	25%	27	0.92%	**No**
	Klosterman Rd	Tarpon Ave	6D	2,940	30%	32	1.09%	**Yes**
	Tarpon Ave	Live Oak St	6D	2,940	67%	72	2.45%	**Yes**
	Live Oak St	Project Access	6D	2,940	100%	108	3.67%	**Yes**
	Project Access	Beckett Way	6D	2,940	33%	36	1.22%	**Yes**
	Beckett Way	Pasco County Line	6D	2,940	25%	27	0.92%	**No**
Live Oak Street	Alt US 19	US 19	2D	572	6%	6	1.05%	**Yes**
Keystone Road	East Lake Road	US 19	2D	1764	8%	9	0.51%	**No**
Tarpon Avenue	Alt US 19	US 19	2D	792	14%	15	1.89%	**Yes**
Beckett Way	US 19	Old Dixie Highway	2U	559	5%	5	0.89%	**No**
Dixie Highway	Alt US 19	Beckett Way	2U	1,440	5%	5	0.35%	**No**
	Beckett Way	Pasco County Line	2U	1,440	0%	0	0.00%	**No**
Alt US 19	Meres Blvd	Tarpon Ave	2D	830	3%	3	0.36%	**No**
Alt US 19	Tarpon Ave	Anclote Ave	2U	880	2%	2	0.23%	**No**

Study Area Table (PM Peak-Hour)

Roadway	From	To	Service Volumes		PM Peak-Hour Directional Traffic		Study Network	
			Lane	LOS D Peak Hour Directional Volume	Project Traffic (%)	Project Traffic (Outbound)	Project Traffic % of Service Volume	Significant Segment?
US 19	Alderman Road	Klosterman Rd	6D	2,940	25%	27	0.92%	**No**
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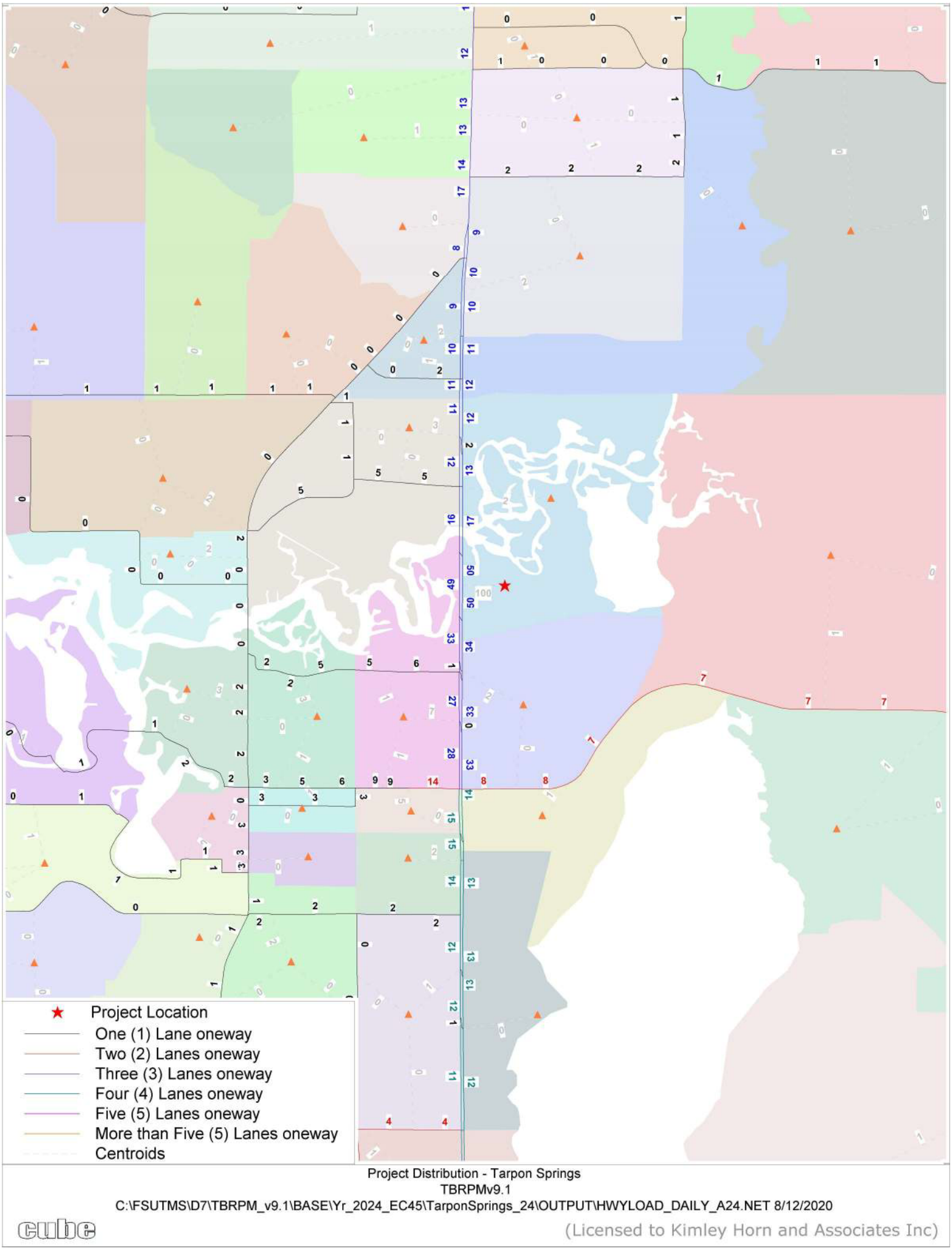
Alt US 19	Meres Blvd	Tarpon Ave	2D	830	3%	3	0.36%	**No**
Alt US 19	Tarpon Ave	Anclote Ave	2U	880	2%	2	0.23%	**No**

Project Distribution (% of trips)



Project Distribution - Tarpon Springs
TBRPMv9.1
C:\FSUTMS\D7\TBRPM_v9.1\BASE\Yr_2024_EC45\TarponSprings_24\OUTPUT\HWYLOAD_DAILY_A24.NET 8/12/2020

cube

Project: Anclote Harbor
Location: Pinellas County
Notes: Annual Level of Service Report

Volume Source #1: US 19 from Tarpon Ave to Beckett Way
Volume Source #2:
Volume Source #3:
Volume Source #4:
Volume Source #5:

Line	Month	Year	Volume Source #1	Volume Source #2	Volume Source #3	Volume Source #4	Volume Source #5	Average Volume
1		2014	59000					59000
2		2015	59000					59000
3		2016	60000					60000
4		2017	61000					61000
5		2018	62000					62000
6								
7								
8								
9								
10								

INPUT DATA

Line	Month	Year	Aggregate Traffic Volume
1		2014	59000
2		2015	59000
3		2016	60000
4		2017	61000
5		2018	62000
6			
7			
8			
9			
10			

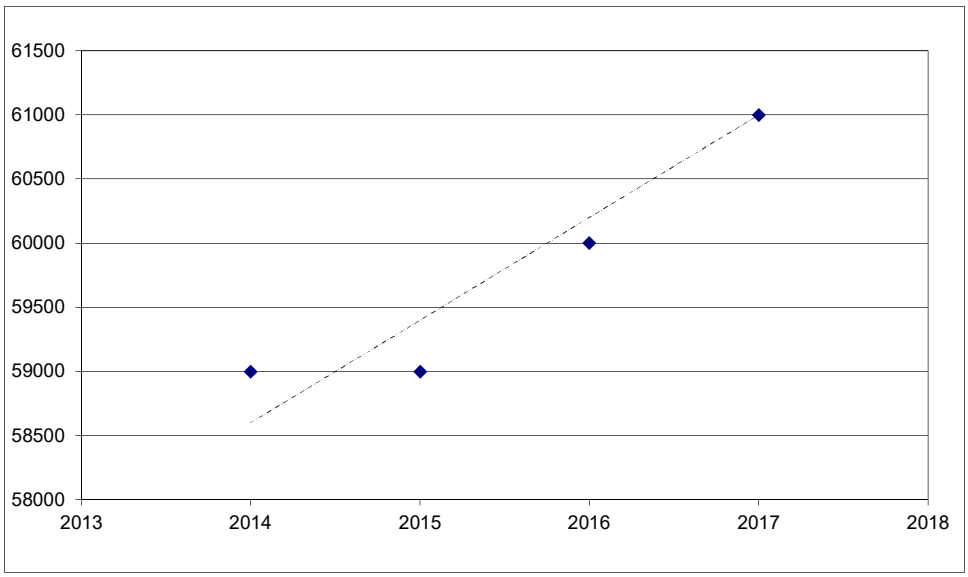
OUTPUT DATA

Line	Month	Year	Best Fit Volume Trend
1		2014	58600
2		2015	59400
3		2016	60200
4		2017	61000
5		2018	61800
6			
7			
8			
9			
10			

Slope: 800
Intercept: -1552600
R^2: 0.941176471
Standard Error: 365.1483717

Exponential Growth Rate: 1.34%
Future = Existing (1+Growth)^N

Linear Growth Rate: 1.37%
Future = Existing (1+Growth*N)



Florida Department of Transportation

RON DESANTIS
GOVERNOR

5211 Ulmerton Road
Clearwater, FL 33760

KEVIN J. THIBAULT, P.E.
SECRETARY

May 9, 2018

This pre-application finding may be used as a basis for permit approval until 11/09/2019 , given field conditions have not substantially changed.
THIS DOCUMENT IS NOT A PERMIT APPROVAL

Shane Hanney
Kimley Horn
655 N. Franklin Street Suite 150
Tampa, FL 33602

Re: **PRE-APPLICATION REVIEW FOR ACCESS PERMIT**

Access Class: 3
Applicant: Kimley Horn
Approx. M.P.: 32.258
Connection Category: C
County: Pinellas

Posted Speed: 55
Permit #: TBD
Project: TBD
Section: 15150 000
State Road: 55

Dear Mr. Hanney:

A Pre-application Review meeting for the above project was conducted on May 9, 2019. The purpose of the Pre-application Review is to establish the permit category, number, type, general location and associated features of access connections to the State Highway. The Department's Access Management Group offers the following based the information provided:

☐ We disapprove the concept as presented with the following considerations.

☒ We approve the concept as presented with the following conditions/considerations.

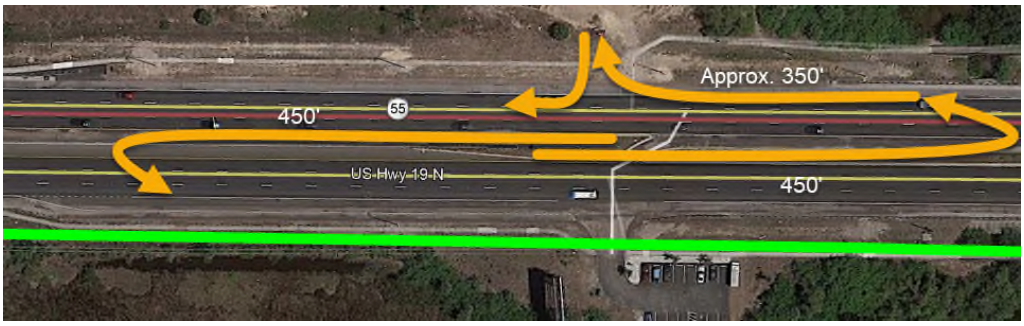
☐ We approve the concept as submitted and we invite you to submit a permit application package to the Pinellas Maintenance Office with engineering drawings that reflect the concept approved here.

☐ We are prepared to continue the review of the concept with the District Variance Committee.

☐ We are prepared to review a concept when presented with the following:

Conditions/Comments:

1. If you wish to pursue the proposed access connection project, the permit would be Category-C. The fee will be $1000. Please submit an Access Connection permit via FDOT's new One Stop Permitting website (https://osp.fdot.gov).
2. A Drainage permit or Exception will be required for your project. Please submit a Drainage Exception or Permit via FDOT's new One Stop Permitting website (https://osp.fdot.gov). If you need to discuss technical issues with your Drainage permit or exception, you may contact Antonius Lebrun at District Office (813-975-6000).
3. Given the speed and the traffic generated for the site a right turn lane is warranted.
4. The Department will not allow for an open median cut, but will agree to an offset left turn median opening. The illustration below depicts what the Department means by an offset left turn median opening.



5. The Daily trips for 400+ apartment according to ITE is 2,700 making the site a Category C. Category C requires a full traffic Study including a pedestrian and bike traffic.
6. A separate construction agreement will be required for the work in the roadway. The construction agreement will require a full plan, Certificate of Liability, Cost estimate, and a Surety bond OR a Letter of Credit.
7. A modification to the existing NB left to convert to a conventional median
8. 50-foot radiuses for the driveway with shoulder extended to the right-of-way line.
9. The turn lanes will be a minimum of 11-foot.
10. The installation of the right turn lane into the site will require a relocation of the existing light poles in the right-of-way. Please show on the plans the existing location and the relocation of the light poles.

All permit application packages shall be submitted to:

Florida Department of Transportation
5211 Ulmerton Road
Clearwater, FL 33760
Attn: Brian A. Bennett, P.E. Pinellas Operations Program Engineer

Favorable review of the proposed generally means that you may develop plans complying with the review comments and submit them, within six months, to the Department for permit processing. When permit requests are submitted subsequent to a Pre-application Review, Department staff reviews the design plans for compliance with standard and constructability. The applicant's Engineer of Record is responsible for the technical accuracy of the plans. In keeping with the intent of the Rule, the Department will attempt to abide with the review comments to the extent that necessary judgment is available to the Permits Engineer. Unfavorable review generally means that a permit application based on the design proposal would likely be denied.

Kimley»Horn

August 17, 2020

Patricia L. McNeese, AICP
Principal Planner
City of Tarpon Springs
324 East Pine Street
Tarpon Springs, Florida 34688

Re: Anclote Harbor
Traffic Impact Analysis Methodology
42501 US Highway 19
Pinellas County, Florida
Parcel: 06-27-16-89388-000-0420

Dear Ms. McNeese:

Kimley-Horn and Associates, Inc (Kimley-Horn) is providing you with the following responses to comments dated July 17, 2020 for the Traffic Impact Analysis Methodology Review. Enclosed within this application, please find:

- Updated traffic impact analysis methodology

Comment 1: In the subject and methodology document verbiage replace references to "Transportation Methodology" with "Traffic Impact Analysis Methodology"

Response 1: Acknowledged. The traffic impact analysis methodology has been updated.

Comment 2: Include address of property with Parcel Number if available.

Response 2: Acknowledged. The traffic impact analysis methodology has been updated.

Comment 3: Confirm the exact location of the proposed site. Per the location map, it is in the NE Corner of US 19 and Fred Marquis Trail.

Response 3: Acknowledged. The traffic impact analysis methodology has been updated.

Comment 4: How were the roadway segments and intersections selected for analysis? Was it linear along US 19 or was a 2 mile radius of influence used? Relevant intersections and roadway segments within 2 miles radius of influence, were not included. Study intersections that were selected in the methodology extend 2 miles to the south but north intersections only extend 0.5 miles. Please clarify.

Response 4: The study area roadway segments were defined as segments impacted by project traffic that is greater than 1.0% of the LOS D Minimum Adopted Standards service volume. A review was

performed of the roadway segments within two miles of the project to determine which roadway segments are impacted by project traffic that is greater than 1.0% of the LOS D Minimum Adopted Standards service volume.

The study area has been updated based upon the latest available FSUTMS (version 9.1) model.

Comment 5: Confirm there is only one sole unsignalized driveway to the site. Per the Concept Development Plan there is only a right in-right out access provided. Include directional arrows on the plans to indicate traffic movements from and to the site. Also confirm if there would be another access point for emergency vehicles to enter the property, should the sole access driveway be blocked by a potential crash.

Response 5: Due to the site location and existing roadway network, only one access connection is proposed (right-in/right-out driveway). The access connection will include two ingress lanes and one egress lanes to provide additional access to the site should the sole access driveway be blocked by a potential crash.

Comment 6: Include methodology for access management along US 19. The Concept Development Plan shows directional medians being provided north and south of the development driveway. Spacing for directional median openings should meet FDOT criteria for access management classification. Per FDOT Access management criteria, directional median opening should be 660'. Per the Concept Development Plan, only 350' has been provided which doesn't provide for much transition distance for maneuvers from the development's right in right out driveway, before they cross three lanes to make a U turn and then proceed to go SB. Can U turn median opening be moved further north to provide for sufficient transitional distance from a safety perspective. Also analyze the U turn opening for stacking in the U turn storage lane. Also analyze the U turn median opening proposed south of the development's entrance north of Live Oak, for motorists coming from the north. Include number of trips heading north or south.

Response 6: As indicated in the updated Traffic Impact Analysis Methodology, the proposed access along US 19 is based upon comments received at an FDOT pre-application meeting on May 9, 2019. The traffic impact analysis methodology has been updated with a figure to illustrate the allowed movements at the access connection. The location of the medians will be coordinated and subject to approval by the Florida Department of Transportation (FDOT).

Comment 7: Include in methodology for driveway analysis and if un-signalized driveway would meet acceptable LOS.

Response 7: Acknowledged. The traffic impact analysis methodology has been updated. A driveway analysis will be provided.

Comment 8: Include in methodology multi-modal considerations and improvements.

Response 8: Acknowledged. The traffic impact analysis methodology has been updated. Multi-modal considerations will be included in the analysis.

Comment 9: Confirm if the Multi-Family Housing will be Low-Rise or Mid-Rise? The TIA Report dated April 10, 2020 shows "Mid-Rise" with Net New External Trips different from what is shown here.

Response 9: The concept plan has been updated and the site is proposed to include mid-rise multi-family housing. The traffic impact analysis methodology has been updated.

Comment 10: Confirm which software will be used for the roadway segment LOS analysis.

Response 10: A roadway analysis will be provided using the detailed arterial analysis with Synchro, version 10.

Comment 11: Confirm which FSUTMS model was used and what the base and future model years are. Specify what the committed developments within the study area.

Response 11: The FSUTMS Model (version 9.1) was used for District 7. The model base year for this version is 2015, the existing + committed network year is 2024, and the future year is 2045.

As discussed with the City, a 2% growth rate will be included in the analysis to provide a conservative estimate of any committed developments within the study area.

Comment 12: How will existing year model traffic volumes be validated? Methodology does not specify data collection.

Response 12: The FSUTMS model existing traffic volumes will not be independently validated as the model is created and maintained by the District.

The existing traffic volumes along US 19 were collected on June 20, 2019 and will be utilized in the existing traffic conditions analysis. The traffic volumes were collected at the study area intersections identified in the methodology.

The additional study area intersections (Live Oak Street & Alt US 19 and Tarpon Ave & Alt US 19) were collected in 2020 and will be reviewed based upon Forward Pinellas 2019 Annual Level of Service data and adjusted, if appropriate.

Comment 13: Annual Growth Factor computation was shown. Would the exponential or linear growth factor be used? However, it is not clear what the opening year will be? Is it Year 2022? Would opening year traffic volumes be forecasted from current year traffic volumes? Also include

information on data collection efforts, on roadway segment and intersection peak hour collection efforts. Where is data being collected? Also include information on the committed developments traffic that would be included?

Response 13: The growth factor will be exponential growth. As stated in the methodology the opening year is 2022. Opening year (background) traffic volumes will be forecasted from the current traffic volume data (collected on June 20, 2019).

Turning movement count data was collected at the identified study intersections from the methodology on June 20, 2019 and will be utilized for the roadway and intersection analysis.
As discussed with the City, a 2% growth rate will be included in the analysis to provide a conservative estimate of any committed developments within the study area.

Comment 14: Update Trip Generation Chart per ITE Trip Generation to include:

a. AM Peak hour trips

1. AM Peak Hour Trips per ITE
2. Fitted Curve Equation:
3. Ln(T) = 0.95 Ln(X) - 0.51
4. Directional Distribution:
5. 23% entering, 77% exiting
6. Calculated Trip Ends:
7. Fitted Curve: 181 (Total), 41 (Entry), 140 (Exit)

b. Daily Weekday trips.

1. Daily Trips per ITE
2. Fitted Curve Equation:
3. T = 7.56(X) - 40.86
4. Directional Distribution:
5. 50% entering, 50% exiting
6. Calculated Trip Ends:
7. Fitted Curve: 3044 (Total), 1522 (Entry), 1522 (Exit)

Response 14: The trip generation was updated for land use code 221 (Mid-Rise Multifamily housing) for the a.m. peak-hour and daily weekday.

Comment 15: For the PM peak hour trip generation shown, include the Fitted Curve Equation:
a. Ln(T) = 0.89 Ln(X) - 0.02

Response 15: The trip generation was updated for land use code 221 (Mid-Rise Multifamily housing) for the p.m. peak-hour.

Comment 16: Under Study Area, the 2017 Annual Level of Service Report for Forward Pinellas, is being used. Use Forward Pinellas's latest LOS report which is dated 2019. Here is the link to the report: https://forwardpinellas.org/wp-content/uploads/2016/06/Level-Of-Service-Final-Report.pdf

Response 16: Acknowledged.

Comment 17: Parking considerations have not been included. Is all parking on-site? Include parking per code.

Response 17: Acknowledged. Parking will be provided on site and noted on the site plan.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Kelly Fearon

Kelly Fearon, P.E.
Transportation Engineer

Project: Anclote Harbor
Location: Pinellas County
Notes: Annual Level of Service Report

Volume Source #1: US 19 from Tarpon Ave to Beckett Way
Volume Source #2:
Volume Source #3:
Volume Source #4:
Volume Source #5:

Line	Month	Year	Volume Source #1	Volume Source #2	Volume Source #3	Volume Source #4	Volume Source #5	Average Volume
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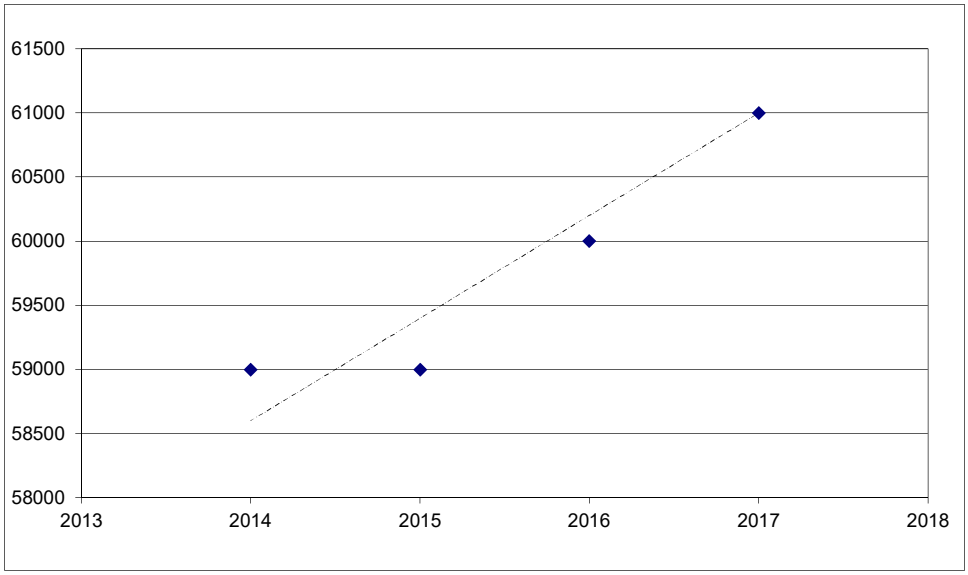


APPENDIX B:

PEAK SEASON FACTOR CATEGORY REPORT

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1500 PINELLAS COUNTYWIDE

MOCF: 0.93

WEEK	DATES	SF	PSCF
1	01/01/2019 - 01/05/2019	1.04	1.12
2	01/06/2019 - 01/12/2019	1.03	1.11
3	01/13/2019 - 01/19/2019	1.02	1.10
4	01/20/2019 - 01/26/2019	1.00	1.08
5	01/27/2019 - 02/02/2019	0.98	1.05
* 6	02/03/2019 - 02/09/2019	0.96	1.03
* 7	02/10/2019 - 02/16/2019	0.93	1.00
* 8	02/17/2019 - 02/23/2019	0.93	1.00
* 9	02/24/2019 - 03/02/2019	0.92	0.99
*10	03/03/2019 - 03/09/2019	0.91	0.98
*11	03/10/2019 - 03/16/2019	0.91	0.98
*12	03/17/2019 - 03/23/2019	0.91	0.98
*13	03/24/2019 - 03/30/2019	0.92	0.99
*14	03/31/2019 - 04/06/2019	0.93	1.00
*15	04/07/2019 - 04/13/2019	0.94	1.01
*16	04/14/2019 - 04/20/2019	0.95	1.02
*17	04/21/2019 - 04/27/2019	0.96	1.03
*18	04/28/2019 - 05/04/2019	0.97	1.04
19	05/05/2019 - 05/11/2019	0.98	1.05
20	05/12/2019 - 05/18/2019	0.99	1.06
21	05/19/2019 - 05/25/2019	0.99	1.06
22	05/26/2019 - 06/01/2019	1.00	1.08
23	06/02/2019 - 06/08/2019	1.00	1.08
24	06/09/2019 - 06/15/2019	1.00	1.08
25	06/16/2019 - 06/22/2019	1.01	1.09
26	06/23/2019 - 06/29/2019	1.01	1.09
27	06/30/2019 - 07/06/2019	1.02	1.10
28	07/07/2019 - 07/13/2019	1.02	1.10
29	07/14/2019 - 07/20/2019	1.03	1.11
30	07/21/2019 - 07/27/2019	1.03	1.11
31	07/28/2019 - 08/03/2019	1.04	1.12
32	08/04/2019 - 08/10/2019	1.05	1.13
33	08/11/2019 - 08/17/2019	1.05	1.13
34	08/18/2019 - 08/24/2019	1.06	1.14
35	08/25/2019 - 08/31/2019	1.06	1.14
36	09/01/2019 - 09/07/2019	1.06	1.14
37	09/08/2019 - 09/14/2019	1.07	1.15
38	09/15/2019 - 09/21/2019	1.07	1.15
39	09/22/2019 - 09/28/2019	1.06	1.14
40	09/29/2019 - 10/05/2019	1.05	1.13
41	10/06/2019 - 10/12/2019	1.04	1.12
42	10/13/2019 - 10/19/2019	1.03	1.11
43	10/20/2019 - 10/26/2019	1.04	1.12
44	10/27/2019 - 11/02/2019	1.04	1.12
45	11/03/2019 - 11/09/2019	1.04	1.12
46	11/10/2019 - 11/16/2019	1.05	1.13
47	11/17/2019 - 11/23/2019	1.05	1.13
48	11/24/2019 - 11/30/2019	1.04	1.12
49	12/01/2019 - 12/07/2019	1.04	1.12
50	12/08/2019 - 12/14/2019	1.04	1.12
51	12/15/2019 - 12/21/2019	1.04	1.12
52	12/22/2019 - 12/28/2019	1.03	1.11
53	12/29/2019 - 12/31/2019	1.02	1.10

* PEAK SEASON

APPENDIX C:

TRAFFIC COUNT REPORTS,

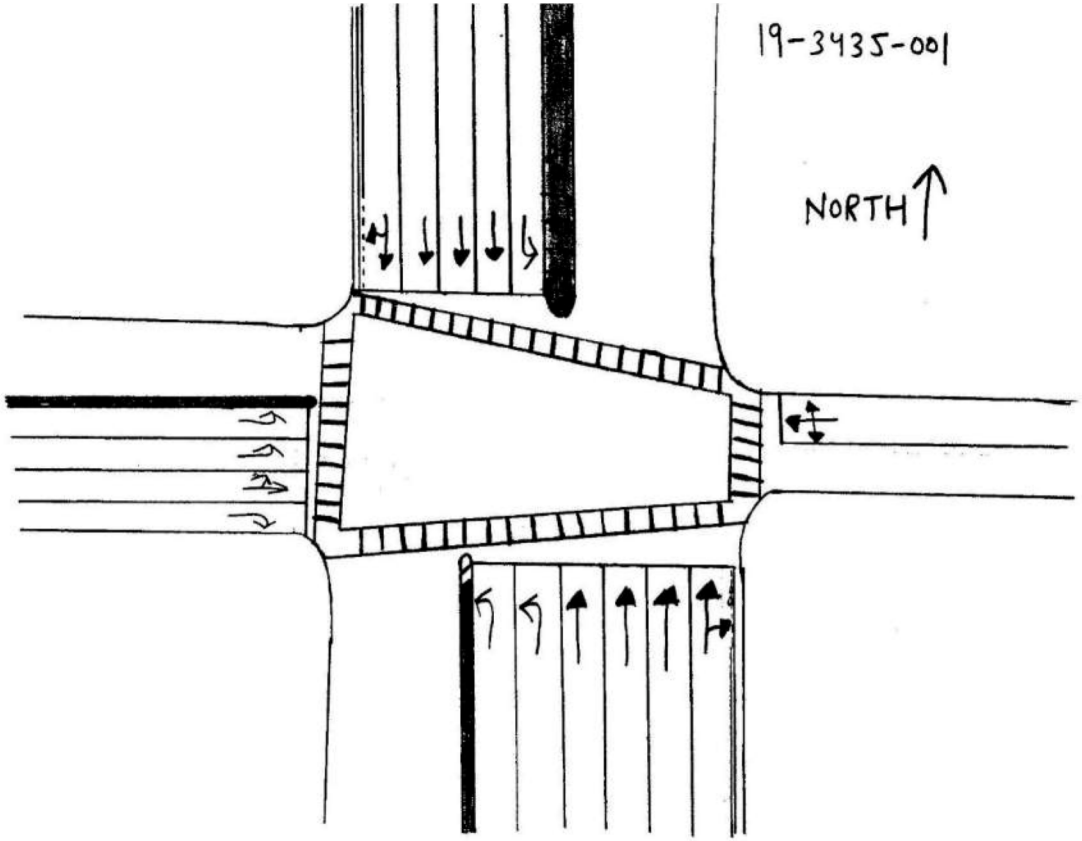
INTERSECTION DIAGRAMS, AND

SIGNAL TIMING PLANS

National Data & Surveying Services

N/S Street: **US 19**

Speed: **55 MPH**



E/W Street: **Klosterman Rd**

Speed: **40 MPH**

Site Code: **19-3435-001**

Date: **06/20/2019**

Weather: **Sunny**

City: **Tarpon Springs**

County: **Pinellas**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

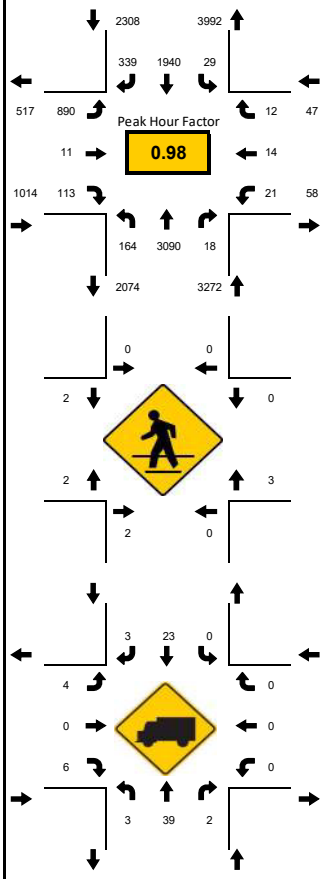
SIGNAL TIMING

PHASES	**1**	**2**	**3**
NL/NT	00:38	00:34	00:13
NT/ST	02:26	02:27	02:50
NL/SL	-	-	00:18
EL/ET	00:39	00:24	00:38
WL/WT	00:19	00:16	00:19

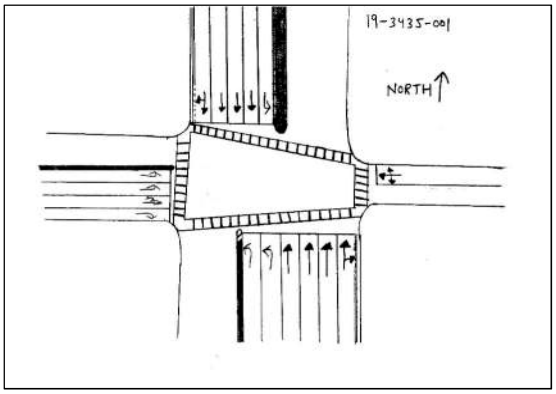
LOCATION: US 19 & Klosterman Rd
CITY/STATE: Tarpon Springs, FL

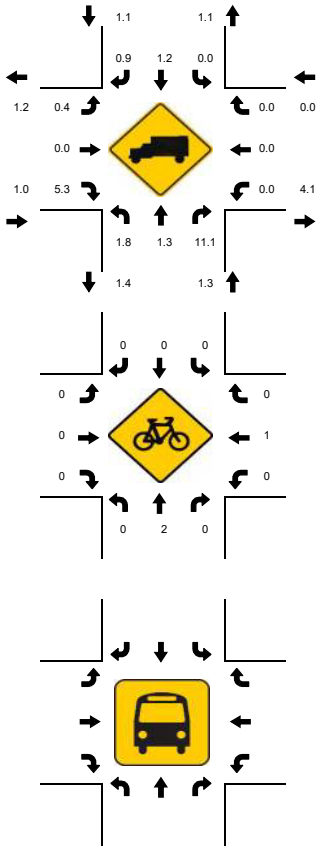
PROJECT ID: 19-03435-001
DATE: 06/20/2019

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:15 PM - 05:30 PM



National Data & Surveying Services





15-Min Count Period Beginning At	US 19 Northbound					US 19 Southbound					Klosterman Rd Eastbound					Klosterman Rd 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	40	700	4	5	1	7	469	87	1	4	194	1	33	0	24	3	2	6	0	3	1552	6137
04:15 PM	40	687	4	3	0	4	494	75	4	9	196	3	31	0	28	6	5	3	0	2	1555	6257
04:30 PM	55	669	7	1	1	4	440	77	1	3	215	4	29	0	18	1	2	2	0	0	1507	6389
04:45 PM	43	682	4	2	0	2	510	70	3	12	176	3	19	0	11	4	1	4	0	2	1523	6558
05:00 PM	22	748	3	2	0	1	524	81	3	11	235	3	27	0	22	11	7	5	0	2	1672	6641
05:15 PM	38	751	6	7	0	3	516	83	3	7	242	2	22	0	19	5	4	5	0	1	1687	4969
05:30 PM	47	819	2	3	0	9	433	87	1	17	230	3	36	0	23	3	3	0	0	0	1676	3282
05:45 PM	32	772	7	13	1	7	467	88	2	10	183	3	28	0	21	2	0	2	0	1	1606	1606

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	188	3276	28	52	4	36	2096	352	12	68	968	12	144	0	92	44	28	20	0	8	**7256**
Heavy Trucks	8	60	4			0	28	4			8	0	12			0	0	0			**124**
Pedestrians		8					0					8					8				**24**
Bicycles	0	8	0			0	0	0			0	0	0			0	4	0			**12**
Railroad Stopped Buses																					

National Data & Surveying Services

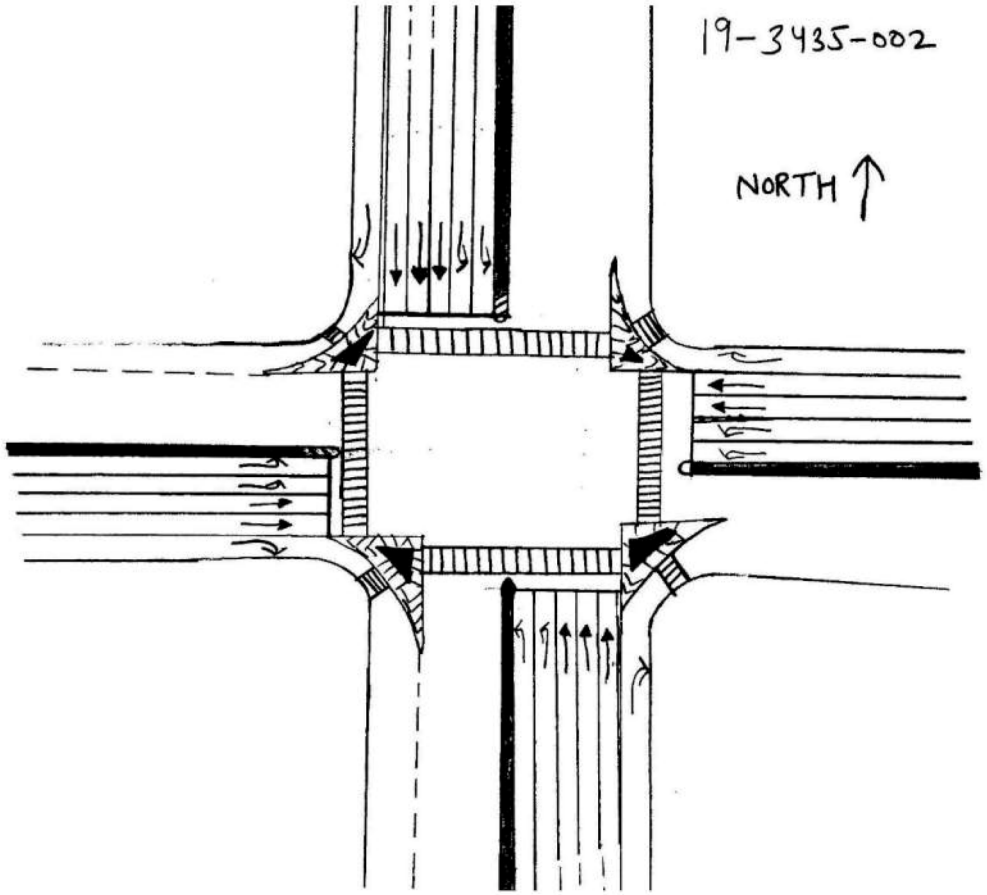
N

N/S Street: **US 19**

Speed: **55 MPH**

E/W Street: **Tarpon Ave**

Speed: **45 MPH**



Site Code: **19-3435-002**

Date: **06/20/2019**

Weather: **Sunny**

City: **Tarpon Springs**

County: **Pinellas**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

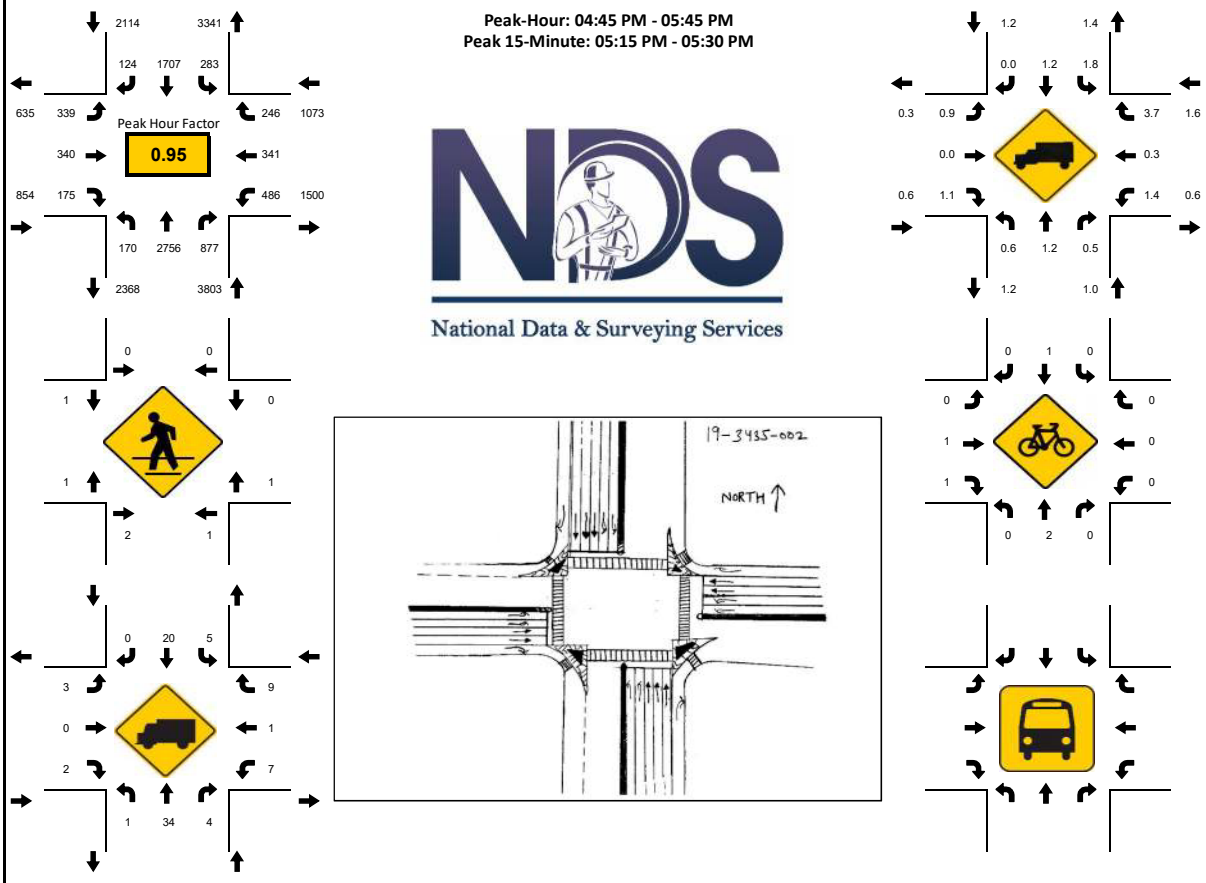
SIGNAL TIMING

PHASES	**1**	**2**	**3**
NL/NT	00:26	00:26	00:30
NT/ST	01:53	01:51	01:45
SL/ST	00:25	00:26	00:28
EL/ET	00:33	00:33	00:32
WL/WT	00:45	00:44	00:44

LOCATION: US 19 & Tarpon Ave
CITY/STATE: Tarpon Springs, FL

PROJECT ID: 19-03435-002
DATE: 06/20/2019

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 Beginning At	US 19 Northbound					US 19 Southbound					Tarpon Ave Eastbound					Tarpon Ave 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	22	634	159	1	0	76	382	22	6	0	92	95	33	0	0	107	84	75	0	0	1788	7587
04:15 PM	42	712	210	8	0	74	437	23	7	0	71	55	52	1	0	133	70	60	2	0	1957	7728
04:30 PM	43	705	201	1	0	57	422	30	5	0	81	77	47	1	0	134	103	83	3	0	1993	7840
04:45 PM	40	614	203	4	0	68	400	32	7	0	97	83	47	0	0	119	76	57	2	0	1849	7844
05:00 PM	32	671	211	2	0	67	421	36	8	0	91	93	39	0	0	116	86	56	0	0	1929	7834
05:15 PM	52	767	249	3	0	76	462	27	6	0	66	59	44	0	0	121	73	63	1	0	2069	5905
05:30 PM	36	704	214	1	0	47	424	29	4	0	85	105	45	0	0	125	106	70	2	0	1997	3836
05:45 PM	48	682	215	1	0	45	313	24	7	0	69	69	38	0	0	145	100	83	0	0	1839	1839

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	208	3068	996	16	0	304	1848	144	32	0	388	420	188	0	0	500	424	280	8	0	**8824**
Heavy Trucks	4	40	8			12	24	0			8	0	4			12		4	16		**132**
Pedestrians		8						0				4					4				**16**
Bicycles	0	8	0			0	4	0			0	4	4			0		0	0		**20**
Railroad Stopped Buses																					

National Data & Surveying Services

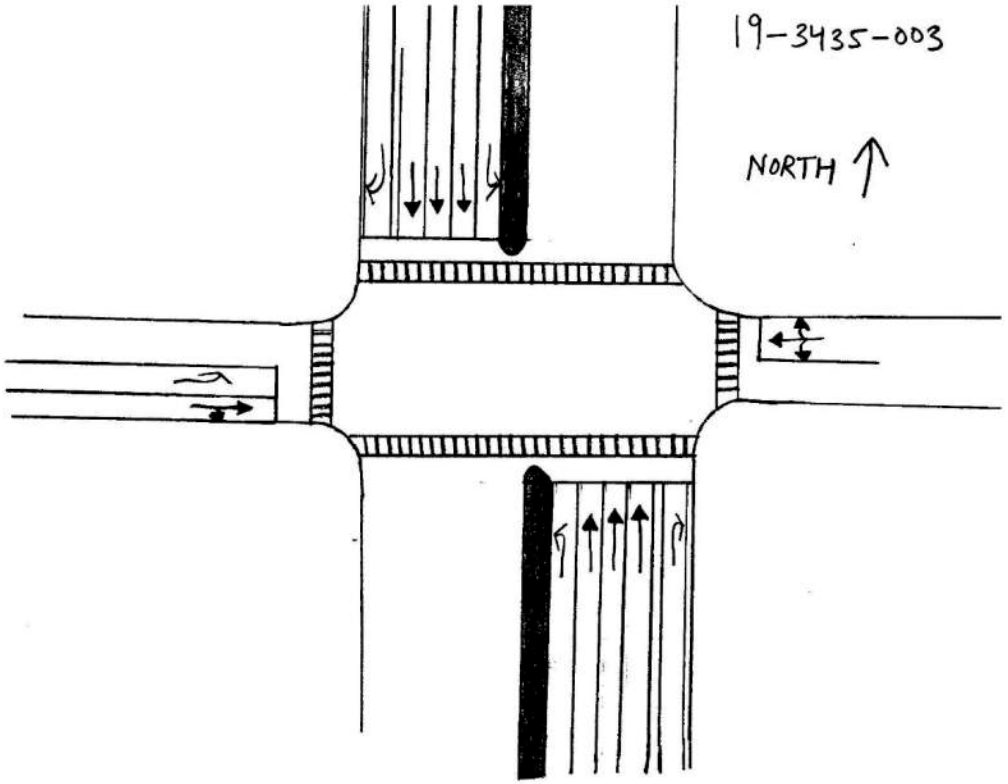
N

N/S Street: **US 19**

Speed: **55 MPH**

E/W Street: **Beckett Way**

Speed: **35 MPH**



Site Code: **19-3435-003**

Date: **06/20/2019**

Weather: **Sunny**

City: **Tarpon Springs**

County: **Pinellas**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

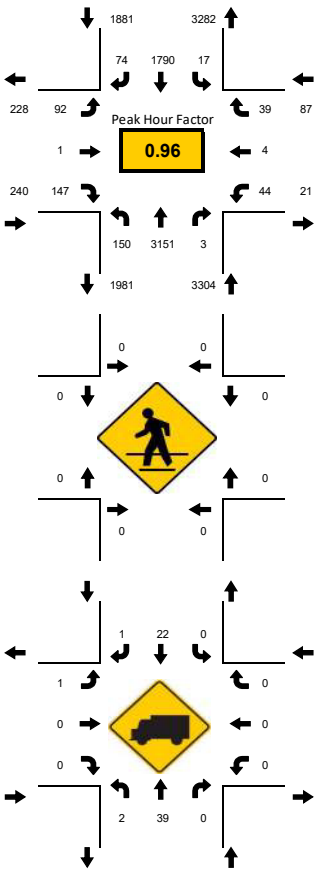
SIGNAL TIMING

PHASES	**1**	**2**	**3**
NL/SL	00:17	00:16	00:15
NL/NT	00:18	00:15	00:28
NT/ST	02:54	02:58	02:40
ET/WT	00:33	00:37	00:31

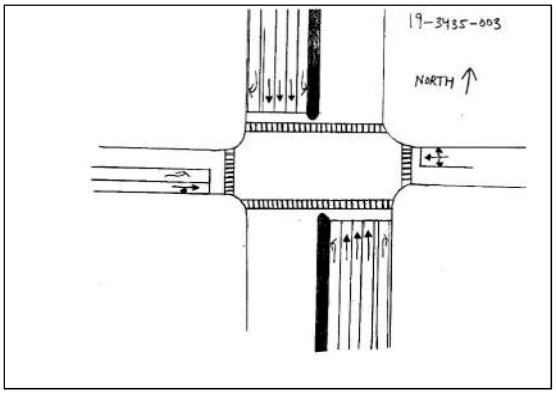
LOCATION: US 19 & Beckett Way
CITY/STATE: Tarpon Springs, FL

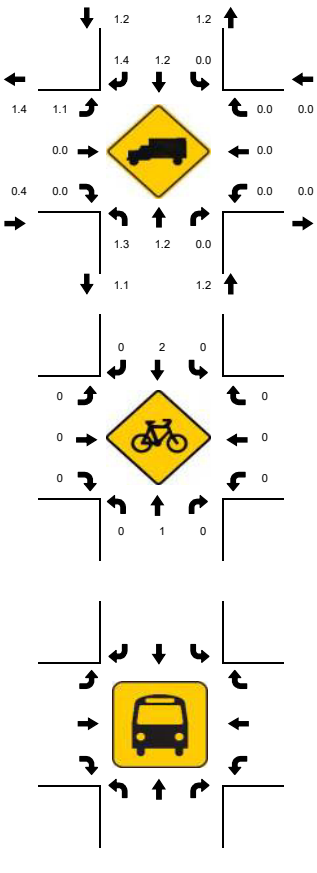
PROJECT ID: 19-03435-003
DATE: 06/20/2019

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



National Data & Surveying Services





15-Min Count Period Beginning At	US 19 Northbound					US 19 Southbound					Beckett Way Eastbound					Beckett Way 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	30	753	2	3	0	2	398	20	1	6	15	0	35	0	26	10	1	8	0	7	1278	5292
04:15 PM	23	788	2	2	0	0	427	14	5	4	21	0	34	0	29	11	0	11	0	10	1338	5421
04:30 PM	41	774	0	1	0	0	449	13	5	3	18	1	30	0	18	12	1	14	0	9	1359	5512
04:45 PM	30	727	0	1	0	2	457	19	2	6	21	0	41	0	37	9	1	7	0	5	1317	5494
05:00 PM	39	800	3	3	1	0	433	23	6	6	28	0	41	0	36	16	2	13	0	11	1407	5446
05:15 PM	34	850	0	1	0	0	451	19	2	4	25	0	35	0	29	7	0	5	0	4	1429	4039
05:30 PM	44	792	0	0	0	0	432	14	1	4	16	0	28	0	24	12	0	2	0	2	1341	2610
05:45 PM	38	784	0	1	0	0	376	14	1	7	12	1	32	0	25	8	0	2	0	1	1269	1269

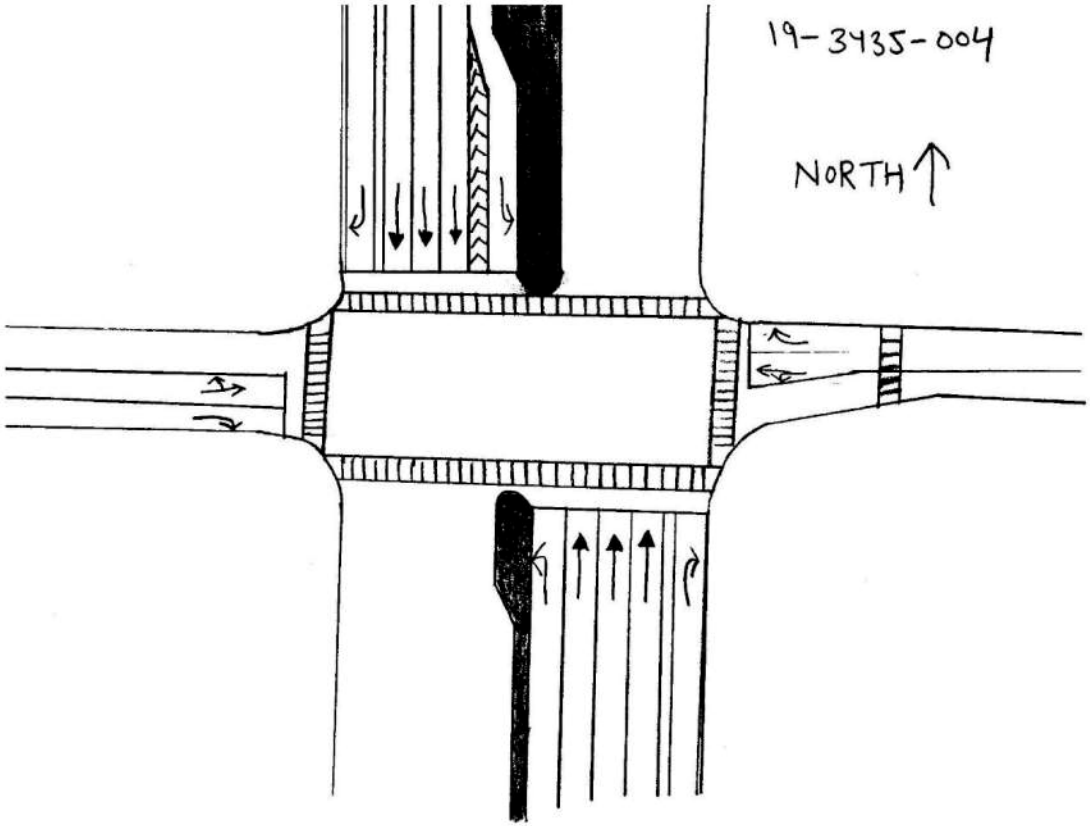
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	164	3400	12	12	4	8	1828	92	24	24	112	4	164	0	148	64	8	56	0	44	**5948**
Heavy Trucks	4	60	0			0	28	4			4	0	0			0		0	0		**100**
Pedestrians		0						0				0					0				**0**
Bicycles	0	4	0			0	4	0			0	0	0			0		0	0		**8**
Railroad Stopped Buses																					

National Data & Surveying Services

N

N/S Street: **US 19**

Speed: **55 MPH**



E/W Street: **Spruce St**

Speed: **30 MPH**

Site Code: **19-3435-004**

Date: **06/20/2019**

Weather: **Sunny**

City: **Tarpon Springs**

County: **Pinellas**

Count Times: **07:00 - 09:00**

16:00 - 18:00

Control: **Signalized**

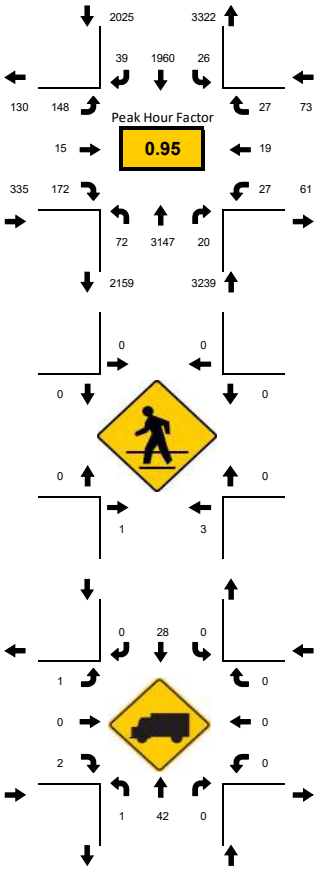
SIGNAL TIMING

PHASES	**1**	**2**	**3**
SL/ST	00:13	00:15	00:14
NT/ST	02:31	02:20	02:37
NL/NT	00:30	00:31	00:29
ET/WT	00:56	00:40	00:48

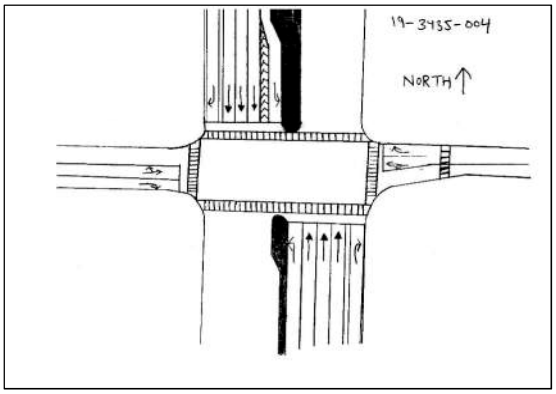
LOCATION: US 19 & Spruce St
CITY/STATE: Tarpon Springs, FL

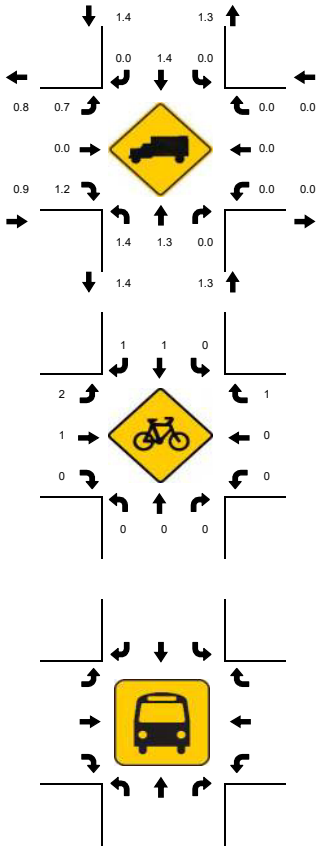
PROJECT ID: 19-03435-004
DATE: 06/20/2019

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



National Data & Surveying Services





15-Min Count Period Beginning At	US 19 Northbound					US 19 Southbound					Spruce St Eastbound					Spruce 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	21	727	5	1	1	7	380	13	4	1	39	4	47	0	42	10	5	8	0	8	1271	5441
04:15 PM	23	792	10	2	1	1	442	9	2	2	28	2	43	0	38	7	6	5	0	3	1372	5555
04:30 PM	18	784	4	0	0	7	500	13	1	5	36	5	38	0	27	6	5	8	0	8	1425	5672
04:45 PM	15	722	5	1	1	7	510	10	1	4	41	5	45	0	37	3	6	2	0	2	1373	5590
05:00 PM	21	770	6	0	2	7	444	9	0	3	49	4	47	0	39	14	6	8	0	8	1385	5545
05:15 PM	17	871	5	0	0	2	506	7	1	3	22	1	42	0	39	4	2	9	0	7	1489	4160
05:30 PM	14	782	2	0	0	4	439	10	1	2	31	2	37	0	29	5	7	9	0	5	1343	2671
05:45 PM	14	777	11	2	1	7	436	8	2	3	27	0	29	0	26	6	4	5	0	4	1328	1328

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	84	3484	24	4	8	28	2040	52	4	20	196	20	188	0	156	56	24	36	0	32	**6240**
Heavy Trucks	4	60	0			0	40	0			4	0	4			0		0	0		**112**
Pedestrians		12						0				0					0				**12**
Bicycles	0	0	0			0	4	4			8	4	0			0		0	4		**24**
Railroad																					
Stopped Buses																					

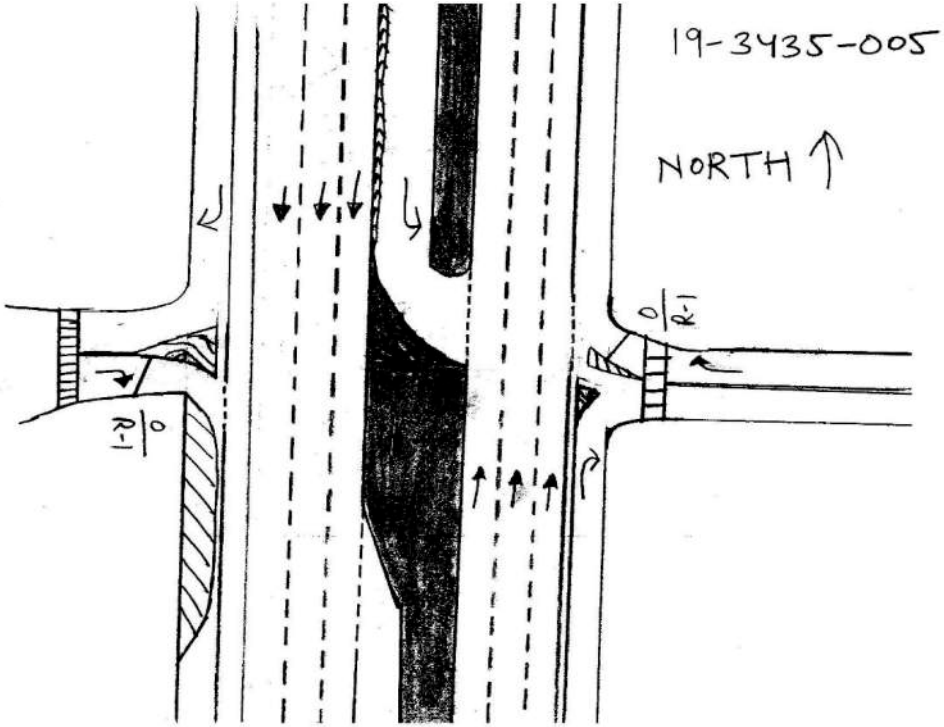
National Data & Surveying Services

Site Code:	**19-3435-005**
Date:	**06/20/2019**
Weather:	**Sunny**
City:	**Tarpon Springs**
County:	**Pinellas**
Count Times:	**07:00 - 09:00**
	16:00 - 18:00
Control:	**2-Way Stop (EB/WB)**

N

N/S Street: **US 19**

Speed: **55 MPH**



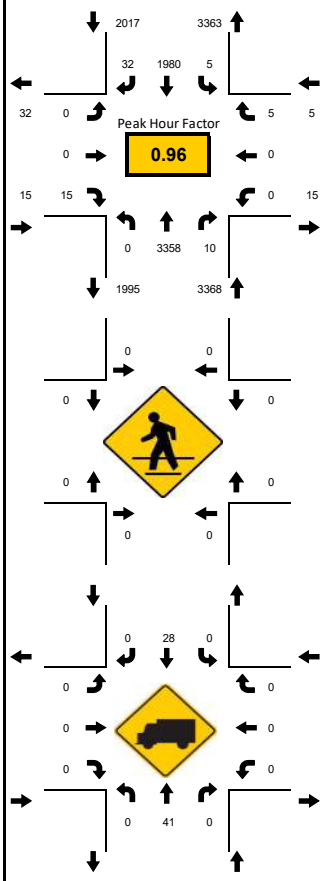
E/W Street: **Live Oak St**

Speed: **30 MPH**

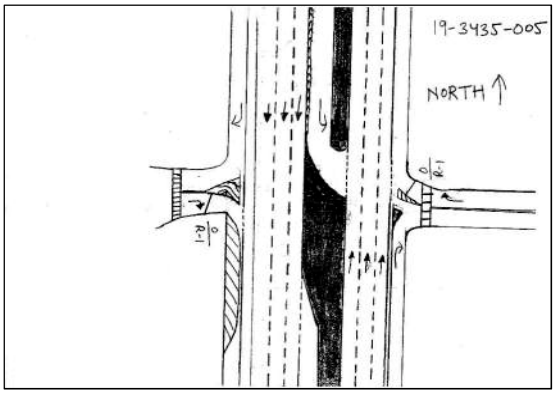
LOCATION: US 19 & Live Oak St
CITY/STATE: Tarpon Springs, FL

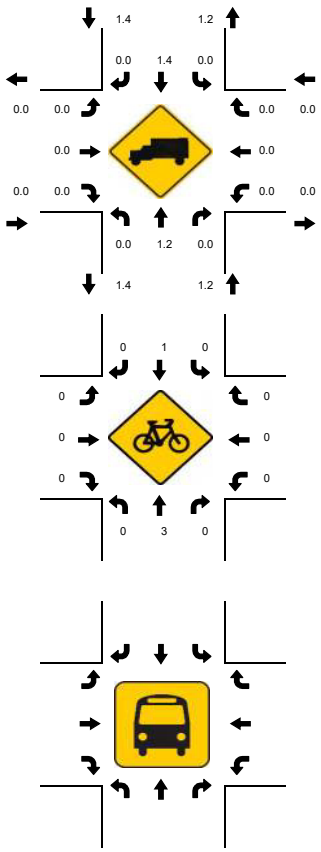
PROJECT ID: 19-03435-005
DATE: 06/20/2019

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



National Data & Surveying Services





15-Min Count Period Beginning At	US 19 Northbound					US 19 Southbound					Live Oak St Eastbound					Live Oak 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	802	0	0	0	0	412	2	2	0	0	0	6	0	0	0	0	3	0	0	1227	5116
04:15 PM	0	849	2	0	0	1	422	10	1	0	0	0	5	0	0	0	0	0	0	0	1290	5286
04:30 PM	0	786	3	0	0	1	499	15	0	0	0	0	8	0	0	0	0	3	0	0	1315	5405
04:45 PM	0	763	1	0	0	0	510	7	1	0	0	0	1	0	0	0	0	1	0	0	1284	5380
05:00 PM	0	883	2	0	0	1	504	2	1	0	0	0	4	0	0	0	0	0	0	0	1397	5387
05:15 PM	0	926	4	0	0	0	467	8	1	0	0	0	2	0	0	0	0	1	0	0	1409	3990
05:30 PM	0	813	4	0	0	1	464	5	0	0	0	0	3	0	0	0	0	0	0	0	1290	2581
05:45 PM	0	838	2	0	0	5	436	6	1	0	0	0	3	0	0	0	0	0	0	0	1291	1291

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	3704	16	0	0	4	2040	60	4	0	0	0	32	0	0	0	0	12	0	0	**5872**
Heavy Trucks	0	52	0			0	44	0			0	0	0			0		0	0		**96**
Pedestrians		0					0					0					0				**0**
Bicycles	0	12	0			0	4	0			0	0	0			0		0	0		**16**
Railroad																					
Stopped Buses																					

Prepared by National Data & Surveying Services

US 19 & E Klosterman Rd

Peak Hour Turning Movement Count

ID: 20-120166-001
City: Tarpon Springs

Day: Thursday
Date: 08/13/2020

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

US 19 — SOUTHBOUND

	U-Turn	Left	Thru	Right	Peds	
AM	337	3206	7	5	1593	AM
NOON	0	0	0	0	0	NOON
PM	332	1828	10	8	3830	PM

E Klosterman Rd — EASTBOUND

	U-Turn	Left	Thru	Right	Peds	
AM	458	0	535			AM
NOON	0	0	0	0	0	NOON
PM	0	0	1	0	0	PM
AM	302	0	721	0	0	AM
NOON	4	0	22	0	0	NOON
PM	150	0	130	0	0	PM

CONTROL

Signalized

	AM	NOON	PM
TEV	5457	0	6404
PHF	0.95		0.94

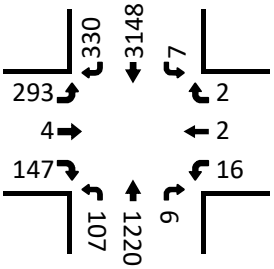
E Klosterman Rd — WESTBOUND

	U-Turn	Left	Thru	Right	Peds	
PM	0	26	0	2		PM
NOON	0	7	0	3	0	NOON
AM	0	17	0	16	0	AM
PM	0	0	0	0	0	PM
NOON		48	0	18	0	NOON
AM					0	AM

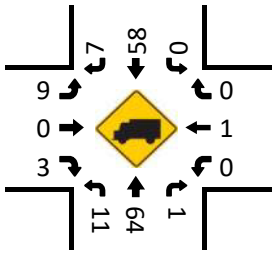
US 19 — NORTHBOUND

	U-Turn	Left	Thru	Right	Peds	
PM	1991	16	195	3075	16	PM
NOON	0	0	0	0	0	NOON
AM	3388	16	118	1284	7	AM

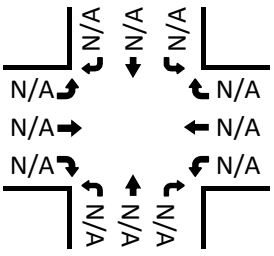
Cars (AM)



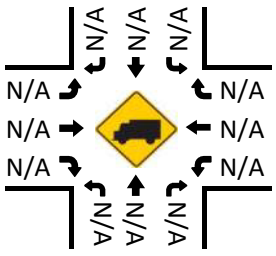
HT (AM)



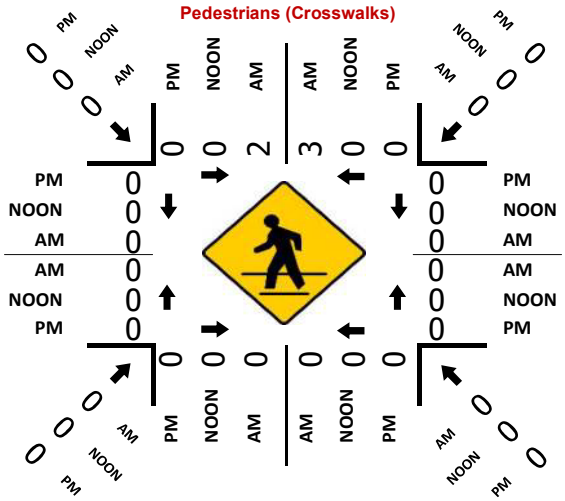
Cars (NOON)



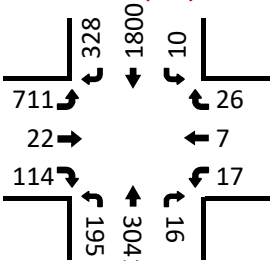
HT (NOON)



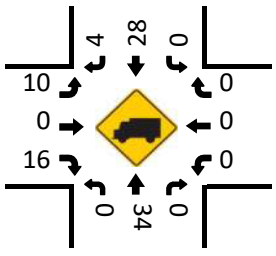
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

ALT US 19 & Live Oak St / Dodecanese Blvd

Peak Hour Turning Movement Count

ID: 20-120166-002
City: Tarpon Springs

Day: Thursday
Date: 08/13/2020

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

ALT US 19 — SOUTHBOUND

	Right	Through	Left	U-Turn	Departure
AM	31	636	116	0	446
NOON	0	0	0	0	0
PM	63	529	97	0	1037
(red)	0	0	0	0	

Live Oak St / Dodecanese Blvd — EASTBOUND

	AM	NOON	PM	(red)
Departure	52	0	150	
U-Turn	0	0	0	0
Left	20	0	109	0
Through	8	0	38	0
Right	6	0	45	0

Live Oak St / Dodecanese Blvd — WESTBOUND

	(red)	PM	NOON	AM
Left	0	170	0	92
Through	0	35	0	11
Right	0	18	0	8
U-Turn	0	0	0	0
Departure		147	0	129

ALT US 19 — NORTHBOUND

	Departure	U-Turn	Left	Through	Right
(red)		0	0	0	0
PM	592	0	52	758	12
NOON	0	0	0	0	0
AM	650	0	10	334	5

CONTROL

Signalized

	AM	NOON	PM
TEV	1277	0	1926
PHF	0.97		0.92

Cars (AM)

Approach	Left	Through	Right
Southbound	109	617	29
Eastbound	19	7	6
Westbound	8	10	84
Northbound	6	330	4

HT (AM)

Approach	Left	Through	Right
Southbound	7	19	2
Eastbound	1	1	0
Westbound	0	1	8
Northbound	1	4	1

Cars (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

HT (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Cars (PM)

Approach	Left	Through	Right
Southbound	93	525	63
Eastbound	106	38	44
Westbound	18	35	170
Northbound	51	749	12

HT (PM)

Approach	Left	Through	Right
Southbound	4	4	0
Eastbound	3	0	1
Westbound	0	0	0
Northbound	1	9	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (westward)	1	0	0
North leg (eastward)	1	0	0
West leg (southward)	3	0	0
West leg (northward)	1	0	0
East leg (southward)	0	0	0
East leg (northward)	0	0	0
South leg (eastward)	3	0	0
South leg (westward)	0	0	0
NW corner (diagonal)	0	0	0
NE corner (diagonal)	0	0	0
SW corner (diagonal)	0	0	0
SE corner (diagonal)	0	0	0

Prepared by National Data & Surveying Services

ALT US 19 & E Tarpon Ave / W Tarpon Ave

Peak Hour Turning Movement Count

ID: 20-120166-003
City: Tarpon Springs

Day: Thursday
Date: 08/13/2020

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

ALT US 19 — SOUTHBOUND

AM	5	502	83	0	315	AM
NOON	0	0	0	0	0	NOON
PM	5	390	124	0	748	PM

EASTBOUND — E Tarpon Ave / W Tarpon Ave

AM	NOON	PM	
92	0	189	⇦
0	0	0	↶ 0
2	0	12	↱ 0
85	0	116	→ 0
4	0	15	↴ 0
AM	NOON	PM	

WESTBOUND — E Tarpon Ave / W Tarpon Ave

PM	NOON	AM	
104	0	38	0 ↰
171	0	82	0 ←
115	0	121	0 ↙
0	0	0	0 ↶
418	0	289	⇨
PM	NOON	AM	

CONTROL

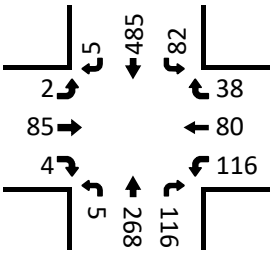
Signalized

TEV	1323 AM	0 NOON	1875 PM
PHF	0.95		0.98

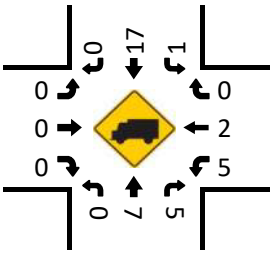
ALT US 19 — NORTHBOUND

PM	520	0	13	632	178	PM
NOON	0	0	0	0	0	NOON
AM	627	0	5	275	121	AM

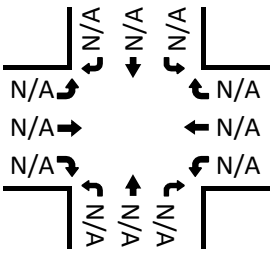
Cars (AM)



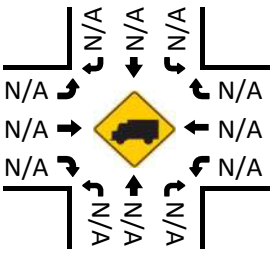
HT (AM)



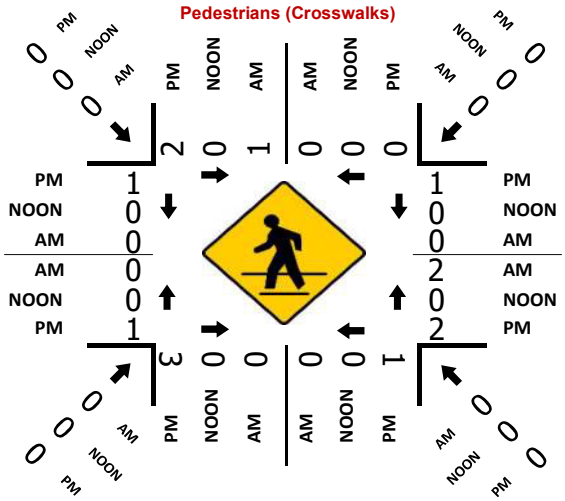
Cars (NOON)



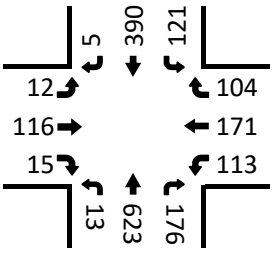
HT (NOON)



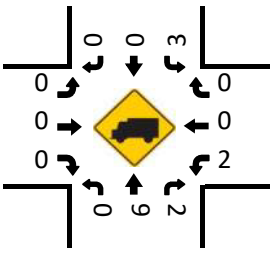
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Intersection **44**

Report Date: **08/17/2020**
Run Time: 02:27 PM

Main Street: ALT 19
Side Street: TARPON AVE
Jurisdiction: STATE/TARPON SPRINGS
Section #: 2 MTCS
Comm. Addrs: IP: 10.198.100.78 Gateway: 10.198.100.254 Subnet: 255.255.255.0
Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
1				
2	ALT 19	SB		
3				
4	TARPON AVE.	WB		
5	ALT 19	SB	LT	Protected/Permitted
6	ALT 19	NB		
7	TARPON AVE.	WB	LT	Protected/Permitted
8	TARPON AVE.	EB		

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green		20		5	5	20	5	5
Walk		7		7		7		7
Ped Clr		7		10		11		13
Veh Ext		3.5		3	2	3.5	2	3
Yellow Clr		3.4		4.0	3.4	3.4	4.0	4.0
Red Clr		2.7		2.9	2.5	2.7	2.0	2.9
Max 1		70		35	15	55	15	20
Max 2								
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall								
Ped Recall								
Max Recall		X				X		
CNA 1		X				X		
Phase In Use		X		X		X		X
Flash		Y		R		Y		R
Delay Det.								

Last Timing Change Date: **03/21/2018**	**Database Modified:** **06/28/2020**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	130
2	110
3	140
4	100
5	150
6	130

Offset	Sec. / %
1	59
2	106
3	66
4	7
5	60
6	45

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1		79		51	21	58	20	31
PATTERN 2		70		40	15	55	15	25
PATTERN 3		95		45	13	82	18	27
PATTERN 4		60		40	15	45	15	25
PATTERN 5		103		47	15	88	18	29
PATTERN 6		82		48	16	66	18	30

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0600**		
	2	3	**1130**		
	3	5	**1600**		
	4	3	**1800**		
	5	2	**1900**		
	6	100	**2300**	FREE	ON
DAY PLAN2					
	1	2	**0730**		
	2	3	**0930**		
	3	2	**1900**		
	4	100	**2100**	FREE	ON
DAY PLAN3					
	1	2	**0830**		
	2	3	**1030**		
	3	2	**1900**		
	4	100	**2100**	FREE	ON

WEEK PLAN

	S	M	T	W	T	F	S
1	3	1	1	1	1	1	2

Notes:

PLAN 1= AM PEAK 130
PLAN 2= OFF PEAK 110
PLAN 3= PM PEAK 140
PLAN 4= PM OFF PEAK 100
PLAN 5= 150 PM RUSH
PLAN 6= WEEKENDS 130 (UNUSED)

Intersection **10**

Report Date: **07/01/2019**
Run Time: 08:23 AM

Main Street: US 19
Side Street: BECKETT WAY
Jurisdiction: STATE/COUNTY
Section #: 7 MIST
Comm. Addrs: IP: 10.197.175.6 Gateway: 10.197.175.254 Subnet: 255.255.255.0
Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
1	US 19 FYA	NB	LT	Protected/Permitted
2	US 19	SB		
3				
4	ST LUKES	WB		
5	US 19 FYA	SB	LT	Protected/Permitted
6	US 19	NB		
7				
8	BECKETT WAY	EB		

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green	7	20		7	7	20		7
Walk		7		7		7		7
Ped Clr		15		36		15		39
Veh Ext	4	4		3	4	4		3
Yellow Clr	5.5	5.5		4.1	5.5	5.5		4.1
Red Clr	2.0	2.0		4.6	2.0	2.0		4.6
Max 1	30	60		20	30	60		20
Max 2								
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall		X				X		
Ped Recall								
Max Recall								
CNA 1								
Phase In Use	X	X		X	X	X		X
Flash	R	Y		R	R	Y		R
Delay Det.								10

Last Timing Change Date: **03/08/2018**	**Database Modified:** **06/24/2019**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	240
2	226
3	240
4	160
7	200
8	200

Offset	Sec. / %
1	40
2	40
3	180
4	66
7	0
8	33

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	24	161	0	55	24	161	0	55
PATTERN 2	30	141	0	55	23	148	0	55
PATTERN 3	58	127	0	55	15	170	0	55
PATTERN 4	35	69	0	56	35	69	0	56
PATTERN 5								
PATTERN 6								
PATTERN 7	34	109	0	57	20	123	0	57
PATTERN 8	34	109	0	57	20	123	0	57

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0530**		
	2	2	**0900**		
	3	3	**1400**		
	4	4	**2030**		
	5	100	**2200**	FREE	100
DAY PLAN2					
	1	4	**0600**		
	2	10	**0800**		
	3	8	**1300**		
	4	9	**1900**		
	5	4	**2000**		
	6	100	**2200**	FREE	100
DAY PLAN3					
	1	4	**0600**		
	2	7	**0800**		
	3	10	**1000**		
	4	8	**1300**		
	5	9	**1900**		
	6	4	**2000**		
	7	100	**2200**	FREE	ON

WEEK PLAN

	S	M	T	W	T	F	S
1	3	1	1	1	1	1	2

Notes:

- THE NBLT & SBLT FYA'S ARE TURNED "OFF" (RUNS PROTECTED ONLY) FROM:
0530 - 2030 MONDAY - FRIDAY
0800 - 2000 SATURDAY
1000 - 2000 SUNDAY

ALSO RUNS PED PROTECT WHEN FYA'S ARE OPERATIONAL.

*** SEE PROGRAM SHEETS! ***

PLAN 1= 240 AM PEAK
PLAN 2= 225 MIDDAY
PLAN 3= 240 PM PEAK
PLAN 4= 160 LATE EVENING

PLAN 7= 200 WEEKEND AM
PLAN 8= 200 WEEKEND PM

ALL PLANS RUN THE STANDARD SEQUENCE

Intersection **28**

Report Date: **07/01/2019**
Run Time: 08:27 AM

Main Street: US 19
Side Street: SPRUCE ST
Jurisdiction: STATE/COUNTY
Section #:
Comm. Addrs: IP: 10.197.175.69 Gateway: 10.197.175.254 Subnet: 255.255.255.0
Pre-empt:

Phase #	Street Name	Direction		Left Turn Type
1	US 19 N.	NB	LT	Restricted
2	US 19 N.	SB		
3				
4	SPRUCE St.	WB		
5	US 19 N.	SB	LT	Restricted
6	US 19 N.	NB		
7				
8	SPRUCE St.	EB		

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green	7	30		10	7	30		10
Walk		7		7		7		7
Ped Clr		28		39		28		39
Veh Ext	3	3		3	3	3		3
Yellow Clr	5.6	5.6		3.7	5.6	5.6		3.7
Red Clr	2.0	2.0		5.0	2.0	2.0		5.0
Max 1	15	80		45	15	80		45
Max 2								
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall		X				X		
Ped Recall								
Max Recall								
CNA 1		X				X		
Phase In Use	X	X		X	X	X		X
Flash	R	Y		R	R	Y		R
Delay Det.								

Last Timing Change Date: **05/14/2015**	**Database Modified:** **02/13/2019**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	240
2	226
3	240
4	160
7	200
8	200

Offset	Sec. / %
1	80
2	30
3	115
4	0
7	150
8	165

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	34	151	0	55	14	171	0	55
PATTERN 2	36	135	0	55	15	156	0	55
PATTERN 3	30	155	0	55	15	170	0	55
PATTERN 4	35	69	0	56	30	74	0	56
PATTERN 5								
PATTERN 6								
PATTERN 7	36	105	0	59	16	125	0	59
PATTERN 8	36	105	0	59	16	125	0	59

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0530**		
	2	2	**0900**		
	3	3	**1400**		
	4	4	**2030**		
	5	100	**2200**	FREE	ON
DAY PLAN2					
	1	4	**0600**		
	2	7	**0800**		
	3	8	**1300**		
	4	4	**1900**		
	5	100	**2200**	FREE	ON

Notes: LEAD/LAGS BY TOD--SPECIAL PROGRAMMING

PLAN 1= 240 AM PEAK--- N AND S LT'S LAG (SEQUENCE 13)
PLAN 2= 225 MIDDAY--- N LAG/ S LEADS (SEQUENCE 9)
PLAN 3= 240 PM PEAK--- N LAG/S LEADS (SEQUENCE 9)
PLAN 4= 160 LATE NITE---LEAD/LEAD (SEQUENCE 1)

PLAN 7= 200 WEEKEND AM --- LEAD/LEAD (SEQUENCE 1)
PLAN 8= 200 WEEKEND PM --- LEAD/LEAD (SEQUENCE 1)

Intersection **48**

Report Date: **07/01/2019**
Run Time: 08:28 AM

Main Street: US 19
Side Street: TARPON AVE
Jurisdiction: STATE/COUNTY
Section #: 7 MIST-OPAC
Comm. Addrs: IP: 10.197.175.11 Gateway: 10.197.175.254 Subnet: 255.255.255.0
Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
1	US 19	NB	LT	Restricted
2	US 19	SB		
3	TARPON AVE	EB	LT	Restricted
4	TARPON AVE	WB		
5	US 19	SB	LT	Restricted
6	US 19	NB		
7	TARPON AVE	WB	LT	Restricted
8	TARPON AVE	EB		

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green	7	20	7	10	7	20	7	10
Walk		7		7		7		7
Ped Clr		28		33		28		33
Veh Ext	3	4	3	3	3	4	3	3
Yellow Clr	5.2	5.2	4.9	4.9	5.2	5.2	4.9	4.9
Red Clr	2.4	2.4	3.3	3.3	2.4	2.4	3.3	3.3
Max 1	25	60	25	30	25	60	25	30
Max 2	30	160	25	30	30	160	35	25
Max 3	20	160	25	44	40	160	40	20
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall		X				X		
Ped Recall								
Max Recall								
CNA 1		X				X		
Phase In Use	X	X	X	X	X	X	X	X
Flash	R	Y	R	R	R	Y	R	R
Delay Det.								

Last Timing Change Date: **01/25/2018**	**Database Modified:** **04/18/2019**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	240
2	226
3	240
4	160
7	200
8	200

Offset	Sec. / %
1	64
2	27
3	100
4	4
7	115
8	131

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	20	134	33	53	32	122	37	49
PATTERN 2	23	110	37	56	35	98	43	50
PATTERN 3	36	122	33	49	26	132	35	47
PATTERN 4	30	46	25	59	30	46	33	51
PATTERN 5								
PATTERN 6								
PATTERN 7	23	85	37	55	31	77	42	50
PATTERN 8	20	91	37	52	26	85	31	58

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0530**		
	2	2	**0900**		
	3	3	**1400**		
	4	4	**2030**		
	5	100	**2200**	FREE	ON
DAY PLAN2					
	1	4	**0600**		
	2	7	**0800**		
	3	8	**1300**		
	4	4	**1900**		
	5	100	**2200**	FREE	ON

Notes:

PLAN 1= 240 AM PEAK---SEQUENCE 2 = 1-5, 2-6, 3-8, 4-7 - MAX 3
PLAN 2= 225 MIDDAY---SEQUENCE 14 = 2-6, 1-5, 3-8, 4-7 - MAX 3
PLAN 3= 240 PM PEAK--- SEQUENCE 6 = 1-6, 2-5, 3-8, 4-7 - MAX 2
PLAN 4= 160 LATE NIGHT---SEQUENCE 1 = 1-5, 2-6, 3-7, 4-8 - MAX 2
PLAN 7= 200 WEEKEND AM---SEQUENCE 5 = 1-6, 2-5, 3-7, 4-8 - MAX 2
PLAN 8= 200 WEEKEND PM---SEQUENCE 14 = 2-6, 1-5, 3-8, 4-7 - MAX 2

Intersection **84**

Report Date: **07/01/2019**
Run Time: 08:26 AM

Main Street: US 19
Side Street: KLOSTERMAN RD
Jurisdiction: STATE/COUNTY
Section #: 7 MIST-OPAC
Comm. Addrs: IP: 10.197.175.21 Gateway: 10.197.175.254 Subnet: 255.255.255.0
Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
1	US 19	NB	LT	Restricted
2	US 19	SB		
3	KLOSTERMAN TIMING PHASE	EB	LT LEAD	
4	KLOSTERMAN RD	WB	LT LAG	Restricted
5	US 19	SB	LT	Restricted
6	US 19	NB		
7	KLOSTERMAN TIMING PHASE	WB	LT LAG	
8	KLOSTERMAN RD	EB	LT LEAD	Restricted

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green	6	20	7	7	6	20	7	7
Walk		7		7		7		7
Ped Clr		32		43		32		45
Veh Ext	4	5	3	3	2.5	5	3	3
Yellow Clr	5.6	5.6	4.5	3.7	5.6	5.6	3.7	4.5
Red Clr	2.0	2.0	2.9	3.9	2.0	2.0	3.9	2.9
Max 1	33	60	35	35	15	60	35	35
Max 2	35	150	65	30	35	150	30	65
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall		X				X		
Ped Recall								
Max Recall								
CNA 1								
Phase In Use	X	X	X	X	X	X	X	X
Flash	R	Y		R	R	Y		R
Delay Det.								

Last Timing Change Date: **04/28/2016**	**Database Modified:** **08/16/2018**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	240
2	226
3	240
4	160
7	200
8	200

Offset	Sec. / %
1	135
2	146
3	35
4	107
7	53
8	62

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	20	102	60	58	20	102	58	60
PATTERN 2	30	77	60	59	20	87	59	60
PATTERN 3	35	100	55	50	25	110	50	55
PATTERN 4	30	77	30	23	30	77	23	30
PATTERN 5								
PATTERN 6	25	56	60	59	15	66	59	60
PATTERN 8	25	56	60	59	15	66	59	60

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0530**		
	2	2	**0900**		
	3	3	**1400**		
	4	4	**2030**		
	5	100	**2200**	FREE	ON
DAY PLAN2					
	1	4	**0600**		
	2	7	**0800**		
	3	8	**1300**		
	4	4	**1900**		
	5	100	**2200**	FREE	ON

Notes: SIDE STREET IS SPLIT LEAD/LAG. PHASE 3 AND 8 LEAD----PHASE 4 AND 7 LAG
PHASES 3 AND 7 ARE FOR TIMING ONLY, NO FIELD WIRING
LEAD/LAG PROGRAMMED THROUGH PHASE SEQUENCE MENU

DETECTOR 36 PHASE 4 CALLS 7
DETECTOR 40 PHASE 8 CALLS 3

*** SEE NEXT PAGE! ***

ALL PLANS RUN MAX 2 DURING COORD/SET TO "FIXED"
SEQUENCE 2= 1, 5----2, 6----3, 8----4, 7
SEQUENCE 10= 2, 5----1, 6-----3, 8-----4, 7

PLAN 1= 240 AM PEAK (SEQ 2)
PLAN 2= 225 WEEKDAY OFF PEAK (SEQ 2)
PLAN 3= 240 PM PEAK (SEQ 10)
PLAN 4= WEEKENDS AND LATE NIGHT OFF PEAK (SEQ 1)

PLAN 7= 200 WEEKEND AM (SEQ 2)
PLAN 8= 200 WEEKEND PM (SEQ 2)

Intersection **20**

Report Date: **08/19/2020**
Run Time: 01:00 PM

Main Street: ALT 19
Side Street: DODECANESE BLVD
Jurisdiction: STATE/TARPON SPRINGS
Section #: 2 MTCS
Comm. Addrs: 54 IP: 10.198.100.34 Gateway: 10.198.100.254 Subnet: 255.255.255.0
Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
1	ALT 19	NB	LT	Protected/Permitted
2	ALT 19	SB		
3				
4	DODECANESE BLVD	WB		
5				
6	ALT 19	NB		
7				
8	DODECANESE BLVD	EB		

Timing Plan 1 (MM,2,1)

PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min. Green	7	20		7		20		7
Walk		7		7		7		7
Ped Clr		24		10		24		12
Veh Ext	2	4		4		4		4
Yellow Clr	3.7	3.7		3.7		3.7		3.7
Red Clr	2.6	2.6		2.2		2.6		2.2
Max 1	16	45		20		45		20
Max 2								
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall								
Ped Recall								
Max Recall		X				X		
CNA 1								
Phase In Use	X	X		X		X		X
Flash		Y		R		Y		R
Delay Det.								

Last Timing Change Date: **06/28/2020**	**Database Modified:** **06/28/2020**
Technician Initials:	**Control Room Pers. Initials:**

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	130
2	110
3	140
4	100
5	150
6	130

Offset	Sec. / %
1	114
2	19
3	1
4	7
5	0
6	105

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	18	84		28		102		28
PATTERN 2	19	63		28		82		28
PATTERN 3	20	80		40		100		40
PATTERN 4	16	58		26		74		26
PATTERN 5	20	90		40		110		40
PATTERN 6	18	74		38		92		38

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	**0600**		
	2	3	**1130**		
	3	5	**1600**		
	4	3	**1800**		
	5	2	**1900**		
	6	100	**2100**	FREE	ON
DAY PLAN2					
	1	2	**0730**		
	2	3	**0930**		
	3	2	**1900**		
	4	100	**2100**	FREE	ON
DAY PLAN3					
	1	2	**0830**		
	2	3	**1030**		
	3	2	**1900**		
	4	100	**2100**	FREE	ON

WEEK PLAN

	S	M	T	W	T	F	S
1	3	1	1	1	1	1	2

Notes:

PLAN 1= AM PEAK 130
PLAN 2= OFF PEAK 110
PLAN 3= PM PEAK 140
PLAN 4= PM OFF PEAK 100
PLAN 5= 150 PM RUSH
PLAN 6= WEEKENDS 130 (UNUSED)

APPENDIX D:

EXISTING AND FUTURE TRAFFIC VOLUMES

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & Beckett Way
COUNT DATE: June 20, 2019
TIME PERIOD: 7:00 a.m. - 8:00 a.m.
PEAK HOUR FACTOR: 0.96

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		31	4	177		2	0	4	3	74	1,043	17	6	60	2,977	43
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**34**	**4**	**193**		**2**	**0**	**4**	**3**	**81**	**1,137**	**19**	**7**	**65**	**3,245**	**47**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		2	0	12		0	0	0	0	5	70	1	0	4	199	3
NON-PROJECT TRAFFIC		**36**	**4**	**205**		**2**	**0**	**4**	**3**	**86**	**1,207**	**20**	**7**	**69**	**3,444**	**50**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New				2		1				6	27	4			9	
TOTAL PROJECT TRAFFIC			**0**	**0**	**2**		**1**	**0**	**0**	**0**	**6**	**27**	**4**	**0**	**0**	**9**	**0**
TOTAL TRAFFIC			**36**	**4**	**207**		**3**	**0**	**4**	**3**	**92**	**1,234**	**24**	**7**	**69**	**3,453**	**50**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Live Oak Street
COUNT DATE: June 20, 2019
TIME PERIOD: 7:15 a.m. - 8:15 a.m.
PEAK HOUR FACTOR: 0.97

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements				9				3			1,256	4	1	1	3,102	52
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS				**10**				**3**			**1,369**	**4**	**1**	**1**	**3,381**	**57**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH				1				0			84	0	0	0	207	3
NON-PROJECT TRAFFIC				**11**				**3**			**1,453**	**4**	**1**	**1**	**3,588**	**60**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New											24				68	2
TOTAL PROJECT TRAFFIC					**0**				**0**			**24**	**0**	**0**	**0**	**68**	**2**
TOTAL TRAFFIC					**11**				**3**			**1,477**	**4**	**1**	**1**	**3,656**	**62**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & Spruce Street
COUNT DATE: June 20, 2019
TIME PERIOD: 7:15 a.m. - 8:15 a.m.
PEAK HOUR FACTOR: 0.93

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		36	18	62		15	12	12	3	84	1,205	18	12	18	3,030	26
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**39**	**20**	**68**		**16**	**13**	**13**	**3**	**92**	**1,313**	**20**	**13**	**20**	**3,303**	**28**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		2	1	4		1	1	1	0	6	80	1	1	1	202	2
NON-PROJECT TRAFFIC		**41**	**21**	**72**		**17**	**14**	**14**	**3**	**98**	**1,393**	**21**	**14**	**21**	**3,505**	**30**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		1						1			22			2	64	4
TOTAL PROJECT TRAFFIC			**1**	**0**	**0**		**0**	**0**	**1**	**0**	**0**	**22**	**0**	**0**	**2**	**64**	**4**
TOTAL TRAFFIC			**42**	**21**	**72**		**17**	**14**	**15**	**3**	**98**	**1,415**	**21**	**14**	**23**	**3,569**	**34**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Tarpon Ave
COUNT DATE: June 20, 2019
TIME PERIOD: 7:45 a.m. - 8:45 a.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		98	199	160	4	587	403	174	11	108	1,131	483	13	189	2,596	95
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**107**	**217**	**174**	**4**	**640**	**439**	**190**	**12**	**118**	**1,233**	**526**	**14**	**206**	**2,830**	**104**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		7	13	11	0	39	27	12	1	7	75	32	1	13	173	6
NON-PROJECT TRAFFIC		**114**	**230**	**185**	**4**	**679**	**466**	**202**	**13**	**125**	**1,308**	**558**	**15**	**219**	**3,003**	**110**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		6						3			13			9	39	16
TOTAL PROJECT TRAFFIC			**6**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**13**	**0**	**0**	**9**	**39**	**16**
TOTAL TRAFFIC			**120**	**230**	**185**	**4**	**679**	**466**	**205**	**13**	**125**	**1,321**	**558**	**15**	**228**	**3,042**	**126**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Klosterman Road
COUNT DATE: June 20, 2019
TIME PERIOD: 7:15 a.m. - 8:15 a.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		361	13	167		19	12	6	23	138	1,393	14	5	15	3,273	460
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**393**	**14**	**182**		**21**	**13**	**7**	**25**	**150**	**1,518**	**15**	**5**	**16**	**3,568**	**501**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		24	1	11		1	1	0	2	9	93	1	0	1	218	31
NON-PROJECT TRAFFIC		**417**	**15**	**193**		**22**	**14**	**7**	**27**	**159**	**1,611**	**16**	**5**	**17**	**3,786**	**532**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		1									12				36	3
TOTAL PROJECT TRAFFIC			**1**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**36**	**3**
TOTAL TRAFFIC			**418**	**15**	**193**		**22**	**14**	**7**	**27**	**159**	**1,623**	**16**	**5**	**17**	**3,822**	**535**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Project Driveway
COUNT DATE: June 20, 2019
TIME PERIOD:
PEAK HOUR FACTOR:

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New								108				37			83	
TOTAL PROJECT TRAFFIC									**108**				**37**			**83**	
TOTAL TRAFFIC									**108**				**37**			**83**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Offset Median Opening (North)
COUNT DATE: June 20, 2019
TIME PERIOD:
PEAK HOUR FACTOR:

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New									70		38				13	
TOTAL PROJECT TRAFFIC										**70**		**38**				**13**	
TOTAL TRAFFIC										**70**		**38**				**13**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Offset Median Opening (South)
COUNT DATE: June 20, 2019
TIME PERIOD:
PEAK HOUR FACTOR:

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New											24		13		70	
TOTAL PROJECT TRAFFIC												**24**		**13**		**70**	
TOTAL TRAFFIC												**24**		**13**		**70**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Live Oak St & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 7:15 a.m. - 8:15 a.m.
PEAK HOUR FACTOR: 0.97

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		20	8	6		8	11	92		10	334	5		116	636	31

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Tarpon Ave & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 7:00 a.m. - 8:00 a.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		2	85	4		121	82	38		5	275	121		83	502	5

2020 Data Increased by 8%

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Live Oak St & Alt US 19 (Adjusted by 8%)
COUNT DATE: August 13, 2020
TIME PERIOD: 7:15 a.m. - 8:15 a.m.
PEAK HOUR FACTOR: 0.97

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		22	9	6	0	9	12	99	0	11	361	5	0	125	687	33
Peak Season Correction Factor	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
EXISTING CONDITIONS		**25**	**10**	**7**	**0**	**10**	**14**	**112**	**0**	**12**	**408**	**6**	**0**	**141**	**776**	**37**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		1	0	0	0	0	1	5	0	0	16	0	0	6	31	1
NON-PROJECT TRAFFIC		**26**	**10**	**7**	**0**	**10**	**15**	**117**	**0**	**12**	**424**	**6**	**0**	**147**	**807**	**38**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New						4					2			1	1	
TOTAL PROJECT TRAFFIC			**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**1**	**0**
TOTAL TRAFFIC			**26**	**10**	**7**	**0**	**14**	**15**	**117**	**0**	**12**	**426**	**6**	**0**	**148**	**808**	**38**

2020 Data Increased by 8%

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Tarpon Ave & Alt US 19 (Adjusted by 8%)
COUNT DATE: August 13, 2020
TIME PERIOD: 7:00 a.m. - 8:00 a.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		2	92	4	0	131	89	41	0	5	297	131	0	90	542	5
Peak Season Correction Factor	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
EXISTING CONDITIONS		**2**	**104**	**5**	**0**	**148**	**101**	**46**	**0**	**6**	**336**	**148**	**0**	**102**	**612**	**6**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		0	4	0	0	6	4	2	0	0	14	6	0	4	25	0
NON-PROJECT TRAFFIC		**2**	**108**	**5**	**0**	**154**	**105**	**48**	**0**	**6**	**350**	**154**	**0**	**106**	**637**	**6**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New			2			9	5	2				3		1	4	
TOTAL PROJECT TRAFFIC			**0**	**2**	**0**	**0**	**9**	**5**	**2**	**0**	**0**	**0**	**3**	**0**	**1**	**4**	**0**
TOTAL TRAFFIC			**2**	**110**	**5**	**0**	**163**	**110**	**50**	**0**	**6**	**350**	**157**	**0**	**107**	**641**	**6**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & Beckett Way
COUNT DATE: June 20, 2019
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.96

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		92	1	147		44	4	39	6	144	3,151	3	15	2	1,790	74
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**100**	**1**	**160**		**48**	**4**	**43**	**7**	**157**	**3,435**	**3**	**16**	**2**	**1,951**	**81**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		6	0	10		3	0	3	0	10	210	0	1	0	119	5
NON-PROJECT TRAFFIC		**106**	**1**	**170**		**51**	**4**	**46**	**7**	**167**	**3,645**	**3**	**17**	**2**	**2,070**	**86**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New				6		4				4	18	3			27	
TOTAL PROJECT TRAFFIC			**0**	**0**	**6**		**4**	**0**	**0**	**0**	**4**	**18**	**3**	**0**	**0**	**27**	**0**
TOTAL TRAFFIC			**106**	**1**	**176**		**55**	**4**	**46**	**7**	**171**	**3,663**	**6**	**17**	**2**	**2,097**	**86**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Live Oak Street
COUNT DATE: June 20, 2019
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.96

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements				15				5			3,358	10	3	2	1,980	32
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS				**16**				**5**			**3,660**	**11**	**3**	**2**	**2,158**	**35**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH				1				0			224	1	0	0	132	2
NON-PROJECT TRAFFIC				**17**				**5**			**3,884**	**12**	**3**	**2**	**2,290**	**37**

"PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New											70				44	1
TOTAL PROJECT TRAFFIC					**0**				**0**			**70**	**0**	**0**	**0**	**44**	**1**
TOTAL TRAFFIC					**17**				**5**			**3,954**	**12**	**3**	**2**	**2,334**	**38**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & Spruce Street
COUNT DATE: June 20, 2019
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		148	15	172		27	19	27	1	71	3,147	20	3	23	1,960	39
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**161**	**16**	**187**		**29**	**21**	**29**	**1**	**77**	**3,430**	**22**	**3**	**25**	**2,136**	**43**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		10	1	11		2	1	2	0	5	210	1	0	2	131	3
NON-PROJECT TRAFFIC		**171**	**17**	**198**		**31**	**22**	**31**	**1**	**82**	**3,640**	**23**	**3**	**27**	**2,267**	**46**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		4						2			64			1	41	3
TOTAL PROJECT TRAFFIC			**4**	**0**	**0**		**0**	**0**	**2**	**0**	**0**	**64**	**0**	**0**	**1**	**41**	**3**
TOTAL TRAFFIC			**175**	**17**	**198**		**31**	**22**	**33**	**1**	**82**	**3,704**	**23**	**3**	**28**	**2,308**	**49**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Tarpon Ave
COUNT DATE: June 20, 2019
TIME PERIOD: 4:45 p.m. - 5:45 p.m.
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		339	340	175	5	481	341	246	10	160	2,756	877	25	258	1,707	124
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**370**	**371**	**191**	**5**	**524**	**372**	**268**	**11**	**174**	**3,004**	**956**	**27**	**281**	**1,861**	**135**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		23	23	12	0	32	23	16	1	11	184	59	2	17	114	8
NON-PROJECT TRAFFIC		**393**	**394**	**203**	**5**	**556**	**395**	**284**	**12**	**185**	**3,188**	**1,015**	**29**	**298**	**1,975**	**143**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		16						9			39			6	25	11
TOTAL PROJECT TRAFFIC			**16**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**39**	**0**	**0**	**6**	**25**	**11**
TOTAL TRAFFIC			**409**	**394**	**203**	**5**	**556**	**395**	**293**	**12**	**185**	**3,227**	**1,015**	**29**	**304**	**2,000**	**154**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & E Klosterman Road
COUNT DATE: June 20, 2019
TIME PERIOD: 5:00 p.m. - 6:00 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		890	11	113		21	14	12	25	139	3,090	18	9	20	1,940	339
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS		**970**	**12**	**123**		**23**	**15**	**13**	**27**	**152**	**3,368**	**20**	**10**	**22**	**2,115**	**370**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		59	1	8		1	1	1	2	9	206	1	1	1	129	23
NON-PROJECT TRAFFIC		**1,029**	**13**	**131**		**24**	**16**	**14**	**29**	**161**	**3,574**	**21**	**11**	**23**	**2,244**	**393**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		3									36				23	2
TOTAL PROJECT TRAFFIC			**3**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**36**	**0**	**0**	**0**	**23**	**2**
TOTAL TRAFFIC			**1,032**	**13**	**131**		**24**	**16**	**14**	**29**	**161**	**3,610**	**21**	**11**	**23**	**2,267**	**395**

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: US 19 & Project Driveway
COUNT DATE: June 20, 2019
TIME PERIOD: 5:00 p.m. - 6:00 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New								70				108			84	
TOTAL PROJECT TRAFFIC									**70**				**108**			**84**	
TOTAL TRAFFIC									**70**				**108**			**84**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Offset Median Opening (North)
COUNT DATE: June 20, 2019
TIME PERIOD: 5:00 p.m. - 6:00 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New									46		25				38	
TOTAL PROJECT TRAFFIC										**46**		**25**				**38**	
TOTAL TRAFFIC										**46**		**25**				**38**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Offset Median Opening (South)
COUNT DATE: June 20, 2019
TIME PERIOD: 5:00 p.m. - 6:00 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements																
Peak Season Correction Factor	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090	1.090
EXISTING CONDITIONS																

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH																
NON-PROJECT TRAFFIC																

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New											70		38		46	
TOTAL PROJECT TRAFFIC												**70**		**38**		**46**	
TOTAL TRAFFIC												**70**		**38**		**46**	

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Live Oak St & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.92

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		109	38	45		18	35	170		52	758	12		97	529	63

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Tarpon Ave & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 4:45 p.m. - 5:45 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		12	116	15		115	171	104		13	632	178		124	390	5

2020 Data Increased by 4%

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Live Oak St & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.92

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		113	40	47	0	19	36	177	0	54	788	12	0	101	550	66
Peak Season Correction Factor	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
EXISTING CONDITIONS		**128**	**45**	**53**	**0**	**21**	**41**	**200**	**0**	**61**	**890**	**14**	**0**	**114**	**622**	**75**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		5	2	2	0	1	2	8	0	2	36	1	0	5	25	3
NON-PROJECT TRAFFIC		**133**	**47**	**55**	**0**	**22**	**43**	**208**	**0**	**63**	**926**	**15**	**0**	**119**	**647**	**78**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New						3					1			4	2	
TOTAL PROJECT TRAFFIC			**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**2**	**0**
TOTAL TRAFFIC			**133**	**47**	**55**	**0**	**25**	**43**	**208**	**0**	**63**	**927**	**15**	**0**	**123**	**649**	**78**

2020 Data Increased by 4%

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Tarpon Ave & Alt US 19
COUNT DATE: August 13, 2020
TIME PERIOD: 4:45 p.m. - 5:45 p.m.
PEAK HOUR FACTOR: 0.98

"EXISTING TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Movements		12	121	16	0	120	178	108	0	14	657	185	0	129	406	5
Peak Season Correction Factor	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130	1.130
EXISTING CONDITIONS		**14**	**137**	**18**	**0**	**136**	**201**	**122**	**0**	**16**	**742**	**209**	**0**	**146**	**459**	**6**

"BACKGROUND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildout	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		1	6	1	0	5	8	5	0	1	30	8	0	6	19	0
NON-PROJECT TRAFFIC		**15**	**143**	**19**	**0**	**141**	**209**	**127**	**0**	**17**	**772**	**217**	**0**	**152**	**478**	**6**

"PROJECT TRAFFIC"

LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New			5			6	4	1				9		2	3	
TOTAL PROJECT TRAFFIC			**0**	**5**	**0**	**0**	**6**	**4**	**1**	**0**	**0**	**0**	**9**	**0**	**2**	**3**	**0**
TOTAL TRAFFIC			**15**	**148**	**19**	**0**	**147**	**213**	**128**	**0**	**17**	**772**	**226**	**0**	**154**	**481**	**6**

APPENDIX E:

INTERSECTION ANALYSIS REPORTS

EXISTING CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	4	197	2	0	4	86	1160	19	73	3310	48
Future Volume (vph)	35	4	197	2	0	4	86	1160	19	73	3310	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			4591			2676	
Travel Time (s)		13.4			6.1			56.9			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	1%	0%	0%	25%	5%	3%	0%	0%	1%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	36	209	0	0	6	0	90	1208	20	76	3448	50
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.52	0.76			0.06		0.67	0.32	0.02	0.45	0.87	0.04
Control Delay	135.0	29.6			1.2		124.4	4.7	0.3	112.6	23.6	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	135.0	29.6			1.2		124.4	4.7	0.3	112.6	23.6	0.1
Queue Length 50th (ft)	57	6			0		133	123	0	117	1287	0
Queue Length 95th (ft)	105	109			0		211	127	1	188	1631	0
Internal Link Dist (ft)		608			232			4511			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	268	475			134		361	3812	1237	169	3965	1186
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	0.13	0.44			0.04		0.25	0.32	0.02	0.45	0.87	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: US 19 & Beckett Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	4	197	2	0	4	86	1160	19	73	3310	48
Future Volume (veh/h)	35	4	197	2	0	4	86	1160	19	73	3310	48
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1900	1530	1826	1856	1900	1900	1885	1796
Adj Flow Rate, veh/h	36	4	101	2	0	1	90	1208	15	76	3448	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	0	1	0	0	25	5	3	0	0	1	7
Cap, veh/h	126	5	117	35	5	8	106	4026	1280	57	3937	1165
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.06	0.79	0.79	0.03	0.76	0.76
Sat Flow, veh/h	1405	62	1558	138	66	102	1739	5066	1610	1810	5147	1522
Grp Volume(v), veh/h	36	0	105	3	0	0	90	1208	15	76	3448	44
Grp Sat Flow(s),veh/h/ln	1405	0	1620	306	0	0	1739	1689	1610	1810	1716	1522
Q Serve(g_s), s	0.0	0.0	15.4	0.0	0.0	0.0	12.3	15.4	0.5	7.5	114.5	1.7
Cycle Q Clear(g_c), s	6.6	0.0	15.4	15.4	0.0	0.0	12.3	15.4	0.5	7.5	114.5	1.7
Prop In Lane	1.00		0.96	0.67		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	0	122	48	0	0	106	4026	1280	57	3937	1165
V/C Ratio(X)	0.29	0.00	0.86	0.06	0.00	0.00	0.85	0.30	0.01	1.34	0.88	0.04
Avail Cap(c_a), veh/h	291	0	312	212	0	0	366	4026	1280	57	3937	1165
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	105.7	0.0	109.7	103.2	0.0	0.0	111.6	6.6	5.1	116.3	20.1	6.8
Incr Delay (d2), s/veh	1.2	0.0	15.8	0.5	0.0	0.0	22.1	0.2	0.0	236.3	3.1	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	2.2	0.0	7.1	0.2	0.0	0.0	6.2	5.2	0.2	7.2	41.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.9	0.0	125.5	103.8	0.0	0.0	133.7	6.8	5.1	352.5	23.1	6.9
LnGrp LOS	F	A	F	F	A	A	F	A	A	F	C	A
Approach Vol, veh/h		141			3			1313			3568	
Approach Delay, s/veh		120.8			103.8			15.5			30.0	
Approach LOS		F			F			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.1	191.1		26.8	15.0	198.2		26.8				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	14.3	116.5		17.4	9.5	17.4		17.4				
Green Ext Time (p_c), s	0.4	3.0		0.0	0.0	16.2		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		28.8
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	20	69	16	13	13	97	1339	20	33	3369	29
Future Volume (vph)	40	20	69	16	13	13	97	1339	20	33	3369	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		635			737			2346			564	
Travel Time (s)		9.6			11.2			29.1			7.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	4%	0%	0%	0%	7%	4%	0%	3%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	74	0	31	14	104	1440	22	35	3623	31
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	6.4	30.0	30.0
Minimum Split (s)	26.7	26.7	26.7	26.7	26.7	26.7	14.6	37.6	37.6	14.0	37.6	37.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	34.0	171.0	171.0	14.0	151.0	151.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	14.2%	71.3%	71.3%	5.8%	62.9%	62.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.67	0.39		0.30	0.07	0.56	0.36	0.02	0.76	0.99	0.03
Control Delay		139.4	13.6		112.0	0.7	91.1	2.5	0.1	184.2	46.1	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		139.4	13.6		112.0	0.7	91.1	2.5	0.1	184.2	46.1	0.0
Queue Length 50th (ft)		103	0		48	0	172	101	0	55	2205	0
Queue Length 95th (ft)		164	39		90	0	253	81	m1	m72	#2244	m0
Internal Link Dist (ft)		555			657			2266			484	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		275	372		291	384	185	4017	1312	46	3672	1192
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		0.24	0.20		0.11	0.04	0.56	0.36	0.02	0.76	0.99	0.03

Intersection Summary

Area Type: Other
Cycle Length: 240
Actuated Cycle Length: 240
Offset: 80 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
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: 6: US 19 & Spruce St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	69	16	13	13	97	1339	20	33	3369	29
Future Volume (veh/h)	40	20	69	16	13	13	97	1339	20	33	3369	29
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1900	1841	1900	1900	1900	1796	1841	1900	1856	1870	1900
Adj Flow Rate, veh/h	43	22	16	17	14	4	104	1440	21	35	3623	19
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	0	4	0	0	0	7	4	0	3	2	0
Cap, veh/h	83	34	107	41	27	111	401	3421	1096	267	3051	962
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.47	1.00	1.00	0.15	0.60	0.60
Sat Flow, veh/h	841	491	1560	252	397	1610	1711	5025	1610	1767	5106	1610
Grp Volume(v), veh/h	65	0	16	31	0	4	104	1440	21	35	3623	19
Grp Sat Flow(s),veh/h/ln	1332	0	1560	648	0	1610	1711	1675	1610	1767	1702	1610
Q Serve(g_s), s	0.0	0.0	2.3	2.7	0.0	0.6	8.8	0.0	0.0	4.1	143.4	1.2
Cycle Q Clear(g_c), s	11.7	0.0	2.3	14.4	0.0	0.6	8.8	0.0	0.0	4.1	143.4	1.2
Prop In Lane	0.66		1.00	0.55		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	0	107	68	0	111	401	3421	1096	267	3051	962
V/C Ratio(X)	0.56	0.00	0.15	0.46	0.00	0.04	0.26	0.42	0.02	0.13	1.19	0.02
Avail Cap(c_a), veh/h	309	0	301	264	0	311	401	3421	1096	267	3051	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	109.4	0.0	105.1	111.4	0.0	104.3	51.2	0.0	0.0	88.3	48.3	19.7
Incr Delay (d2), s/veh	4.1	0.0	0.6	4.7	0.0	0.1	0.3	0.3	0.0	0.2	88.0	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	4.1	0.0	1.0	2.0	0.0	0.2	3.6	0.1	0.0	1.9	82.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.5	0.0	105.8	116.2	0.0	104.5	51.5	0.3	0.0	88.5	136.3	19.7
LnGrp LOS	F	A	F	F	A	F	D	A	A	F	F	B
Approach Vol, veh/h		81			35			1565			3677	
Approach Delay, s/veh		112.0			114.8			3.7			135.2	
Approach LOS		F			F			A			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	63.8	151.0		25.2	43.8	171.0		25.2
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7
Max Green Setting (Gmax), s	26.4	143.4		* 46	6.4	163.4		* 46
Max Q Clear Time (g_c+I1), s	10.8	145.4		16.4	6.1	2.0		13.7
Green Ext Time (p_c), s	0.2	0.0		0.1	0.0	13.3		0.3

Intersection Summary		
HCM 6th Ctrl Delay		96.3
HCM 6th LOS		F

Notes

* HCM 6th 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)	0	0	10	0	0	3	0	1396	4	2	3449	58
Future Volume (vph)	0	0	10	0	0	3	0	1396	4	2	3449	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		410			292			564			4591	
Travel Time (s)		9.3			6.6			12.8			104.3	
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 (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	10	0	0	3	0	1439	4	2	3556	60
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection												
Int Delay, s/veh	0.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	3	0	1396	4	2	3449	58
Future Vol, veh/h	0	0	10	0	0	3	0	1396	4	2	3449	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	2
Mvmt Flow	0	0	10	0	0	3	0	1439	4	2	3556	60

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1778	-	-	720	-	0	0	1443	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	62	0	0	321	0	-	-	242	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	62	-	-	321	-	-	-	242	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	74.3	16.3	0	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	62	321	242	-	-
HCM Lane V/C Ratio	-	-	0.166	0.01	0.009	-	-
HCM Control Delay (s)	-	-	74.3	16.3	20	-	-
HCM Lane LOS	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.6	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	221	177	657	448	194	132	1258	537	224	2887	106
Future Volume (vph)	109	221	177	657	448	194	132	1258	537	224	2887	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			6497			2346	
Travel Time (s)		10.4			16.2			80.5			29.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	1%	4%	2%	2%	2%	5%	5%	3%	5%	2%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	233	186	692	472	204	139	1324	565	236	3039	112
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.61	0.62	0.64	1.81	0.83	0.51	0.65	0.48	0.55	0.77	1.02	0.11
Control Delay	123.6	109.2	35.8	420.8	110.5	20.2	116.0	49.4	33.7	136.4	32.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	123.6	109.2	35.8	420.8	110.5	20.2	116.0	49.4	33.7	136.4	32.1	0.8
Queue Length 50th (ft)	93	190	66	~845	390	40	114	582	410	186	~1837	3
Queue Length 95th (ft)	134	234	163	#984	446	134	159	678	623	m192	#2056	m6
Internal Link Dist (ft)		606			987			6417			2266	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	351	577	370	383	616	420	394	2763	1021	307	2987	974
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.40	0.50	1.81	0.77	0.49	0.35	0.48	0.55	0.77	1.02	0.11

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

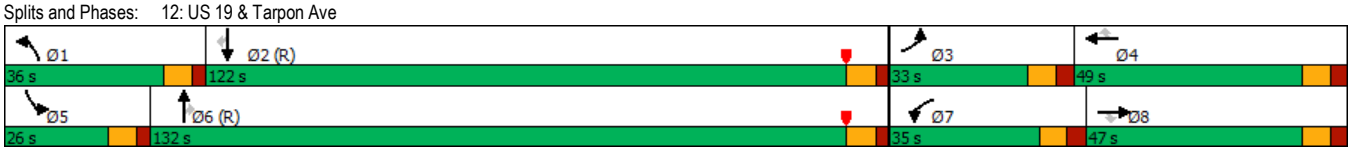
Control Type: Actuated-Coordinated

~ 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: 12: US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	221	177	657	448	194	132	1258	537	224	2887	106
Future Volume (veh/h)	109	221	177	657	448	194	132	1258	537	224	2887	106
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1841	1870	1870	1870	1826	1826	1856	1826	1870	1856
Adj Flow Rate, veh/h	115	233	186	692	472	204	139	1324	565	236	3039	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	1	4	2	2	2	5	5	3	5	2	3
Cap, veh/h	146	470	205	386	712	317	170	2736	863	259	2936	904
Arrive On Green	0.04	0.13	0.13	0.11	0.20	0.20	0.05	0.55	0.55	0.15	1.00	1.00
Sat Flow, veh/h	3428	3582	1560	3456	3554	1585	3374	4985	1572	3374	5106	1572
Grp Volume(v), veh/h	115	233	186	692	472	204	139	1324	565	236	3039	112
Grp Sat Flow(s),veh/h/ln	1714	1791	1560	1728	1777	1585	1687	1662	1572	1687	1702	1572
Q Serve(g_s), s	8.0	14.5	28.2	26.8	29.4	28.4	9.8	39.2	60.7	16.5	138.0	0.0
Cycle Q Clear(g_c), s	8.0	14.5	28.2	26.8	29.4	28.4	9.8	39.2	60.7	16.5	138.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	470	205	386	712	317	170	2736	863	259	2936	904
V/C Ratio(X)	0.79	0.50	0.91	1.79	0.66	0.64	0.82	0.48	0.65	0.91	1.04	0.12
Avail Cap(c_a), veh/h	354	579	252	386	712	317	399	2736	863	259	2936	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.15	0.15	0.15
Uniform Delay (d), s/veh	113.8	96.9	102.8	106.6	88.5	88.1	112.8	33.3	38.1	100.8	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.8	29.9	367.2	2.3	4.4	9.1	0.6	3.9	7.8	18.2	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	3.8	6.8	13.2	31.8	13.8	12.0	4.5	15.8	24.3	6.9	4.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.8	97.7	132.7	473.8	90.8	92.5	121.9	33.9	42.0	108.6	18.2	0.0
LnGrp LOS	F	F	F	F	F	F	F	C	D	F	F	A
Approach Vol, veh/h		534			1368			2028			3387	
Approach Delay, s/veh		115.3			284.8			42.2			23.9	
Approach LOS		F			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	145.6	18.4	56.3	26.0	139.3	35.0	39.7
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	11.8	140.0	10.0	31.4	18.5	62.7	28.8	30.2
Green Ext Time (p_c), s	0.3	0.0	0.3	2.5	0.0	26.6	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	84.4
HCM 6th LOS	F

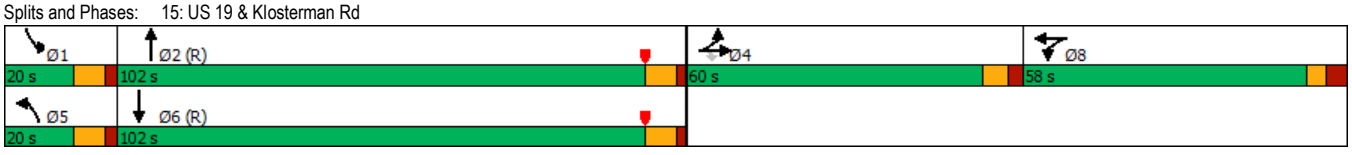
Notes

* HCM 6th 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)	401	14	186	21	13	7	179	1548	15	21	3639	511
Future Volume (vph)	401	14	186	21	13	7	179	1548	15	21	3639	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			1992	
Travel Time (s)		10.7			7.0			18.5			24.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	1%	0%	8%	0%	4%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	291	146	196	0	43	0	188	1645	0	22	4369	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		13.6	27.6	
Total Split (s)	60.0	60.0	60.0	58.0	58.0		20.0	102.0		20.0	102.0	
Total Split (%)	25.0%	25.0%	25.0%	24.2%	24.2%		8.3%	42.5%		8.3%	42.5%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	0.76	0.75	0.54		0.52		0.57	0.37		0.37	1.11	
Control Delay	114.2	124.3	14.6		121.7		111.1	17.0		118.8	110.9	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	114.2	124.3	14.6		121.7		111.1	17.0		118.8	110.9	
Queue Length 50th (ft)	251	252	0		62		150	317		34	~2298	
Queue Length 95th (ft)	303	343	89		116		201	417		m38	m#2184	
Internal Link Dist (ft)		546			331			1416			1912	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	698	353	503		374		327	4424		93	3925	
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	0.42	0.41	0.39		0.11		0.57	0.37		0.24	1.11	

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 135 (56%), Referenced to phase 2:NBT and 6:SBT, 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: 15: US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	401	14	186	21	13	7	179	1548	15	21	3639	511
Future Volume (veh/h)	401	14	186	21	13	7	179	1548	15	21	3639	511
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1781	1900	1841	1856	1900	1900	1870	1870
Adj Flow Rate, veh/h	433	0	88	22	14	7	188	1629	12	22	3831	513
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	1	0	8	0	4	3	0	0	2	2
Cap, veh/h	513	0	154	28	18	9	176	4780	35	35	4041	509
Arrive On Green	0.10	0.00	0.10	0.03	0.03	0.03	0.05	0.73	0.73	0.02	0.69	0.69
Sat Flow, veh/h	5302	0	1598	864	550	275	3401	6586	49	1810	5829	735
Grp Volume(v), veh/h	433	0	88	43	0	0	188	1184	457	22	3131	1213
Grp Sat Flow(s),veh/h/ln	1767	0	1598	1689	0	0	1700	1596	1847	1810	1609	1738
Q Serve(g_s), s	19.3	0.0	12.6	6.1	0.0	0.0	12.4	21.6	21.6	2.9	135.9	166.4
Cycle Q Clear(g_c), s	19.3	0.0	12.6	6.1	0.0	0.0	12.4	21.6	21.6	2.9	135.9	166.4
Prop In Lane	1.00		1.00	0.51		0.16	1.00		0.03	1.00		0.42
Lane Grp Cap(c), veh/h	513	0	154	55	0	0	176	3475	1340	35	3346	1205
V/C Ratio(X)	0.84	0.00	0.57	0.78	0.00	0.00	1.07	0.34	0.34	0.63	0.94	1.01
Avail Cap(c_a), veh/h	1162	0	350	355	0	0	176	3475	1340	93	3346	1205
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	106.6	0.0	103.6	115.3	0.0	0.0	113.8	12.0	12.0	116.8	32.1	36.8
Incr Delay (d2), s/veh	3.9	0.0	3.3	21.2	0.0	0.0	87.7	0.3	0.7	13.2	6.4	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	9.1	0.0	5.4	3.0	0.0	0.0	7.6	7.6	8.9	1.5	50.8	73.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.5	0.0	106.9	136.5	0.0	0.0	201.5	12.3	12.7	130.0	38.5	64.4
LnGrp LOS	F	A	F	F	A	A	F	B	B	F	D	F
Approach Vol, veh/h		521			43			1829			4366	
Approach Delay, s/veh		109.9			136.5			31.8			46.2	
Approach LOS		F			F			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	181.8		30.6	20.0	174.0		15.4				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	12.4	94.4		52.6	12.4	94.4		50.4				
Max Q Clear Time (g_c+I1), s	4.9	23.6		21.3	14.4	168.4		8.1				
Green Ext Time (p_c), s	0.0	35.0		1.9	0.0	0.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		47.8	
HCM 6th LOS		D	

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	104	5	148	101	46	6	336	148	102	612	6
Future Volume (vph)	2	104	5	148	101	46	6	336	148	102	612	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	0	151	150	0	6	494	0	104	630	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	31.0	31.0		20.0	51.0		58.0	58.0		21.0	79.0	
Total Split (%)	23.8%	23.8%		15.4%	39.2%		44.6%	44.6%		16.2%	60.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.60		0.55	0.33		0.01	0.49		0.21	0.51	
Control Delay		67.5		46.3	35.9		16.3	20.5		10.2	14.1	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		67.5		46.3	35.9		16.3	20.5		10.2	14.1	
Queue Length 50th (ft)		91		103	89		2	240		31	262	
Queue Length 95th (ft)		150		157	144		10	383		60	396	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		349		287	626		417	1001		555	1243	
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		0.32		0.53	0.24		0.01	0.49		0.19	0.51	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 59 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 19: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	104	5	148	101	46	6	336	148	102	612	6
Future Volume (veh/h)	2	104	5	148	101	46	6	336	148	102	612	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	2	106	5	151	103	47	6	343	151	104	624	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	29	138	6	294	265	121	483	747	329	529	1288	12
Arrive On Green	0.08	0.08	0.08	0.09	0.21	0.21	0.60	0.60	0.60	0.04	0.69	0.69
Sat Flow, veh/h	12	1784	83	1781	1235	564	809	1241	546	1781	1879	18
Grp Volume(v), veh/h	113	0	0	151	0	150	6	0	494	104	0	630
Grp Sat Flow(s),veh/h/ln	1879	0	0	1781	0	1799	809	0	1787	1781	0	1897
Q Serve(g_s), s	1.1	0.0	0.0	9.8	0.0	9.3	0.5	0.0	19.7	2.8	0.0	20.3
Cycle Q Clear(g_c), s	7.7	0.0	0.0	9.8	0.0	9.3	10.0	0.0	19.7	2.8	0.0	20.3
Prop In Lane	0.02		0.04	1.00		0.31	1.00		0.31	1.00		0.01
Lane Grp Cap(c), veh/h	174	0	0	294	0	386	483	0	1077	529	0	1300
V/C Ratio(X)	0.65	0.00	0.00	0.51	0.00	0.39	0.01	0.00	0.46	0.20	0.00	0.48
Avail Cap(c_a), veh/h	375	0	0	324	0	610	483	0	1077	669	0	1300
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.8	0.0	0.0	47.3	0.0	43.7	14.5	0.0	14.2	10.3	0.0	9.6
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.5	0.0	0.6	0.0	0.0	1.4	0.1	0.0	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	3.9	0.0	0.0	4.4	0.0	4.2	0.1	0.0	8.2	1.1	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	0.0	0.0	47.8	0.0	44.4	14.6	0.0	15.6	10.3	0.0	10.9
LnGrp LOS	E	A	A	D	A	D	B	A	B	B	A	B
Approach Vol, veh/h		113			301			500			734	
Approach Delay, s/veh		62.9			46.1			15.6			10.8	
Approach LOS		E			D			B			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		95.2		34.8	10.8	84.4	17.8	17.0				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 73		44.1	15.1	* 52	14.0	24.1				
Max Q Clear Time (g_c+I1), s		22.3		11.3	4.8	21.7	11.8	9.7				
Green Ext Time (p_c), s		6.3		0.9	0.1	4.4	0.0	0.4				

Intersection Summary		
HCM 6th Ctrl Delay		22.3
HCM 6th LOS		C

Notes

* HCM 6th 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)	25	10	7	10	14	112	12	408	6	141	776	37
Future Volume (vph)	25	10	7	10	14	112	12	408	6	141	776	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			1327			1658	
Travel Time (s)		9.5			11.3			30.2			37.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	19	0	11	15	122	13	450	0	153	883	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	2.0		20.0	20.0	
Minimum Split (s)	23.9	23.9		23.9	23.9	23.9	13.3	24.3		26.3	26.3	
Total Split (s)	28.0	28.0		28.0	28.0	28.0	18.0	102.0		84.0	84.0	
Total Split (%)	21.5%	21.5%		21.5%	21.5%	21.5%	13.8%	78.5%		64.6%	64.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.2	2.2		2.2	2.2	2.2	2.6	2.6		2.6	2.6	
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)	5.9	5.9		5.9	5.9	5.9	6.3	6.3		6.3	6.3	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.30	0.15		0.12	0.12	0.55	0.03	0.29		0.21	0.59	
Control Delay	65.5	42.0		58.6	58.1	19.5	2.1	2.8		5.1	8.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	65.5	42.0		58.6	58.1	19.5	2.1	2.8		5.1	8.3	
Queue Length 50th (ft)	22	9		9	12	0	1	58		18	164	
Queue Length 95th (ft)	53	34		29	35	60	5	103		68	495	
Internal Link Dist (ft)		338			417			1247			1578	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	234	306		240	323	375	501	1577		734	1494	
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	0.12	0.06		0.05	0.05	0.33	0.03	0.29		0.21	0.59	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 114 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	10	7	10	14	112	12	408	6	141	776	37
Future Volume (veh/h)	25	10	7	10	14	112	12	408	6	141	776	37
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	27	11	8	11	15	122	13	443	7	153	843	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	161	94	68	172	175	148	417	1507	24	745	1331	63
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.02	0.81	0.81	0.75	0.75	0.75
Sat Flow, veh/h	1242	1023	744	1416	1900	1610	1781	1851	29	926	1785	85
Grp Volume(v), veh/h	27	0	19	11	15	122	13	0	450	153	0	883
Grp Sat Flow(s),veh/h/ln	1242	0	1766	1416	1900	1610	1781	0	1880	926	0	1870
Q Serve(g_s), s	2.6	0.0	1.3	0.9	0.9	9.7	0.2	0.0	7.6	6.6	0.0	29.6
Cycle Q Clear(g_c), s	3.6	0.0	1.3	2.2	0.9	9.7	0.2	0.0	7.6	6.6	0.0	29.6
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.02	1.00		0.05
Lane Grp Cap(c), veh/h	161	0	163	172	175	148	417	0	1530	745	0	1394
V/C Ratio(X)	0.17	0.00	0.12	0.06	0.09	0.82	0.03	0.00	0.29	0.21	0.00	0.63
Avail Cap(c_a), veh/h	258	0	300	282	323	274	541	0	1530	745	0	1394
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.6	0.0	54.2	55.2	54.0	58.0	7.1	0.0	3.0	5.0	0.0	8.0
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.2	0.2	10.7	0.0	0.0	0.5	0.6	0.0	2.2
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	0.9	0.0	0.6	0.3	0.5	4.4	0.1	0.0	2.5	1.3	0.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	54.5	55.3	54.2	68.7	7.1	0.0	3.4	5.7	0.0	10.2
LnGrp LOS	E	A	D	E	D	E	A	A	A	A	A	B
Approach Vol, veh/h		46			148			463			1036	
Approach Delay, s/veh		55.5			66.3			3.5			9.5	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.9	103.2		17.9		112.1		17.9				
Change Period (Y+Rc), s	* 6.3	* 6.3		5.9		* 6.3		5.9				
Max Green Setting (Gmax), s	* 12	* 78		22.1		* 96		22.1				
Max Q Clear Time (g_c+I1), s	2.2	31.6		11.7		9.6		5.6				
Green Ext Time (p_c), s	0.0	10.2		0.3		3.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		14.1
HCM 6th LOS		B

Notes

* HCM 6th 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)	102	1	163	49	4	44	167	3504	3	18	1990	83
Future Volume (vph)	102	1	163	49	4	44	167	3504	3	18	1990	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			4591			2676	
Travel Time (s)		13.4			6.1			56.9			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	2%	0%	0%	0%	1%	1%	0%	0%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	171	0	0	101	0	174	3650	3	19	2073	86
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.82	0.52			1.17		0.79	0.91	0.00	0.28	0.61	0.08
Control Delay	144.5	16.0			222.4		114.9	13.6	0.0	121.7	24.8	2.4
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	144.5	16.0			222.4		114.9	13.6	0.0	121.7	24.8	2.4
Queue Length 50th (ft)	168	1			~169		285	473	0	30	649	0
Queue Length 95th (ft)	243	86			#276		m291	#2209	m0	66	868	25
Internal Link Dist (ft)		608			232			4511			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	227	442			138		376	3993	1269	69	3426	1098
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	0.47	0.39			0.73		0.46	0.91	0.00	0.28	0.61	0.08

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

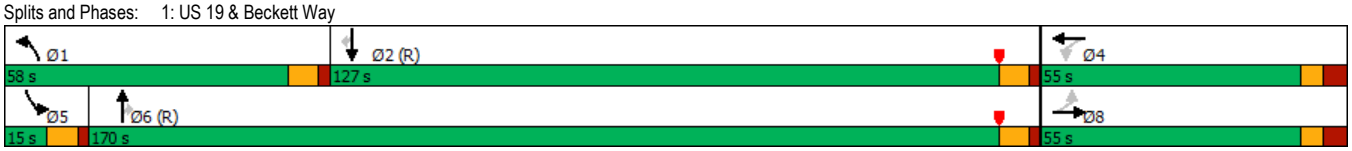
Control Type: Actuated-Coordinated

~ 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: 1: US 19 & Beckett Way



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1	163	49	4	44	167	3504	3	18	1990	83
Future Volume (veh/h)	102	1	163	49	4	44	167	3504	3	18	1990	83
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1870	1900	1900	1900	1885	1885	1900	1900	1885	1885
Adj Flow Rate, veh/h	106	1	45	51	4	16	174	3650	2	19	2073	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	2	0	0	0	1	1	0	0	1	1
Cap, veh/h	150	3	138	89	10	21	192	4080	1277	38	3636	1129
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.79	0.79	0.02	0.71	0.71
Sat Flow, veh/h	1403	35	1580	723	110	242	1795	5147	1610	1810	5147	1598
Grp Volume(v), veh/h	106	0	46	71	0	0	174	3650	2	19	2073	44
Grp Sat Flow(s),veh/h/ln	1403	0	1616	1075	0	0	1795	1716	1610	1810	1716	1598
Q Serve(g_s), s	1.5	0.0	6.4	10.6	0.0	0.0	23.0	121.3	0.1	2.5	47.5	2.0
Cycle Q Clear(g_c), s	18.5	0.0	6.4	17.0	0.0	0.0	23.0	121.3	0.1	2.5	47.5	2.0
Prop In Lane	1.00		0.98	0.72		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	0	141	120	0	0	192	4080	1277	38	3636	1129
V/C Ratio(X)	0.71	0.00	0.33	0.59	0.00	0.00	0.90	0.89	0.00	0.50	0.57	0.04
Avail Cap(c_a), veh/h	297	0	312	273	0	0	378	4080	1277	57	3636	1129
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	108.4	0.0	102.8	109.9	0.0	0.0	105.9	17.7	5.2	116.2	17.3	10.6
Incr Delay (d2), s/veh	6.1	0.0	1.3	4.6	0.0	0.0	18.9	3.5	0.0	13.8	0.7	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	6.9	0.0	2.8	4.6	0.0	0.0	11.7	42.4	0.0	1.3	18.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.4	0.0	104.2	114.5	0.0	0.0	124.8	21.2	5.2	130.1	18.0	10.7
LnGrp LOS	F	A	F	F	A	A	F	C	A	F	B	B
Approach Vol, veh/h		152			71			3826			2136	
Approach Delay, s/veh		111.3			114.5			25.9			18.8	
Approach LOS		F			F			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.2	177.1		29.7	12.5	197.8		29.7				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	25.0	49.5		19.0	4.5	123.3		20.5				
Green Ext Time (p_c), s	0.7	40.9		0.3	0.0	38.8		0.5				

Intersection Summary			
HCM 6th Ctrl Delay			26.6
HCM 6th LOS			C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	16	0	0	5	0	3733	11	5	2201	36
Future Volume (vph)	0	0	16	0	0	5	0	3733	11	5	2201	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		410			292			564			4591	
Travel Time (s)		9.3			6.6			7.0			56.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	17	0	0	5	0	3889	11	5	2293	38
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection												
Int Delay, s/veh	0.5											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	16	0	0	5	0	3733	11	5	2201	36
Future Vol, veh/h	0	0	16	0	0	5	0	3733	11	5	2201	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	17	0	0	5	0	3889	11	5	2293	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1147	-	-	1945	-	0	0	3900	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	168	0	0	48	0	-	-	13	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	168	-	-	48	-	-	-	13	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.8	88.9	0	0.9
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	168	48	13	-	-
HCM Lane V/C Ratio	-	-	0.099	0.109	0.401	-	-
HCM Control Delay (s)	-	-	28.8	88.9	$ 408.1	-	-
HCM Lane LOS	-	-	D	F	F	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	164	16	191	30	21	30	80	3499	22	29	2179	44
Future Volume (vph)	164	16	191	30	21	30	80	3499	22	29	2179	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		635			737			2346			564	
Travel Time (s)		14.4			16.8			29.1			7.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	201	0	54	32	84	3683	23	31	2294	46
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	7.0	30.0	30.0
Minimum Split (s)	54.7	54.7	54.7	54.7	54.7	54.7	14.6	42.6	42.6	14.6	42.6	42.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	30.0	170.0	170.0	15.0	155.0	155.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	12.5%	70.8%	70.8%	6.3%	64.6%	64.6%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.89	0.53		0.39	0.10	0.51	1.00	0.02	0.50	0.69	0.04
Control Delay		136.7	30.4		96.7	0.6	82.3	20.0	0.0	115.1	46.9	12.3
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		136.7	30.4		96.7	0.6	82.3	20.0	0.0	115.1	46.9	12.3
Queue Length 50th (ft)		299	80		78	0	139	~2319	0	50	935	5
Queue Length 95th (ft)		401	175		133	0	m119	m304	m0	m86	1267	m48
Internal Link Dist (ft)		555			657			2266			484	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		256	425		167	384	166	3685	1175	62	3320	1065
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		0.74	0.47		0.32	0.08	0.51	1.00	0.02	0.50	0.69	0.04

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 115 (48%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

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

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

Splits and Phases: 3: US 19 & Spruce St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	16	191	30	21	30	80	3499	22	29	2179	44
Future Volume (veh/h)	164	16	191	30	21	30	80	3499	22	29	2179	44
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1900	1900	1900	1885	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	173	17	52	32	22	6	84	3683	20	31	2294	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	0	0	0	1	1	0	0	1	0
Cap, veh/h	236	20	308	57	33	311	168	3510	1098	46	3161	989
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.68	0.68	0.03	0.61	0.61
Sat Flow, veh/h	1075	106	1598	170	174	1610	1795	5147	1610	1810	5147	1610
Grp Volume(v), veh/h	190	0	52	54	0	6	84	3683	20	31	2294	30
Grp Sat Flow(s),veh/h/ln	1180	0	1598	344	0	1610	1795	1716	1610	1810	1716	1610
Q Serve(g_s), s	0.0	0.0	6.5	6.7	0.0	0.7	10.7	163.7	1.0	4.1	74.5	1.8
Cycle Q Clear(g_c), s	37.6	0.0	6.5	44.3	0.0	0.7	10.7	163.7	1.0	4.1	74.5	1.8
Prop In Lane	0.91		1.00	0.59		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	256	0	308	90	0	311	168	3510	1098	46	3161	989
V/C Ratio(X)	0.74	0.00	0.17	0.60	0.00	0.02	0.50	1.05	0.02	0.67	0.73	0.03
Avail Cap(c_a), veh/h	256	0	308	90	0	311	168	3510	1098	56	3161	989
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	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	93.4	0.0	80.8	106.6	0.0	78.5	103.5	38.2	12.3	116.0	32.2	18.2
Incr Delay (d2), s/veh	10.9	0.0	0.3	10.4	0.0	0.0	0.2	23.1	0.0	21.3	1.5	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	12.3	0.0	2.8	3.7	0.0	0.3	5.0	70.9	0.3	2.2	30.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.3	0.0	81.1	117.0	0.0	78.5	103.7	61.2	12.3	137.2	33.7	18.3
LnGrp LOS	F	A	F	F	A	E	F	F	B	F	C	B
Approach Vol, veh/h		242			60			3787			2355	
Approach Delay, s/veh		99.3			113.1			61.9			34.9	
Approach LOS		F			F			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	155.0		55.0	13.7	171.3		55.0				
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7				
Max Green Setting (Gmax), s	22.4	147.4		* 46	7.4	162.4		* 46				
Max Q Clear Time (g_c+I1), s	12.7	76.5		46.3	6.1	165.7		39.6				
Green Ext Time (p_c), s	0.1	33.0		0.0	0.0	0.0		0.6				

Intersection Summary			
HCM 6th Ctrl Delay			53.9
HCM 6th LOS			D

Notes

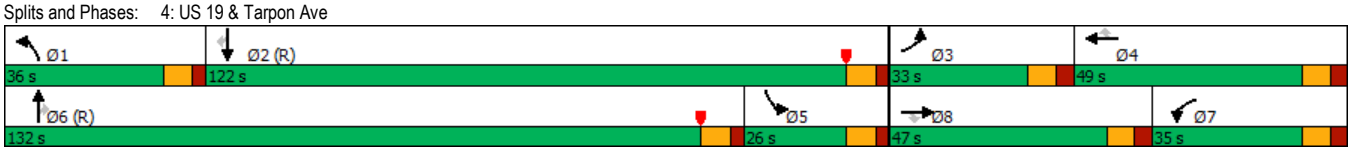
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	377	378	195	539	379	273	188	3064	975	315	1898	138
Future Volume (vph)	377	378	195	539	379	273	188	3064	975	315	1898	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			6497			2346	
Travel Time (s)		10.4			16.2			80.5			29.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	1%	1%	4%	1%	1%	1%	2%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	397	398	205	567	399	287	198	3225	1026	332	1998	145
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	1.11	0.82	0.54	1.17	0.66	0.78	0.72	1.21	1.09	1.26	0.75	0.16
Control Delay	171.4	115.4	17.3	178.5	98.9	67.6	138.7	137.4	76.9	208.4	34.9	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	171.4	115.4	17.3	178.5	98.9	67.6	138.7	137.4	76.9	208.4	34.9	2.1
Queue Length 50th (ft)	~368	329	17	~555	317	257	170	~2267	~724	~334	1044	16
Queue Length 95th (ft)	#494	388	109	#766	384	392	m183	m#2183	m#939	#465	975	10
Internal Link Dist (ft)		606			987			6417			2266	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	358	583	420	483	607	369	410	2662	945	263	2649	897
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.68	0.49	1.17	0.66	0.78	0.48	1.21	1.09	1.26	0.75	0.16

Intersection Summary

Area Type: Other
Cycle Length: 240
Actuated Cycle Length: 240
Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, 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: 4: US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	377	378	195	539	379	273	188	3064	975	315	1898	138
Future Volume (veh/h)	377	378	195	539	379	273	188	3064	975	315	1898	138
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1885	1885	1841	1885	1885	1885	1870	1885	1900
Adj Flow Rate, veh/h	397	398	0	567	399	0	198	3225	0	332	1998	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	4	1	1	1	2	1	0
Cap, veh/h	360	447		389	474		232	2668		395	2914	
Arrive On Green	0.10	0.12	0.00	0.11	0.13	0.00	0.07	0.52	0.00	0.15	0.75	0.00
Sat Flow, veh/h	3483	3610	1598	3483	3582	1560	3483	5147	1598	3456	5147	1610
Grp Volume(v), veh/h	397	398	0	567	399	0	198	3225	0	332	1998	0
Grp Sat Flow(s),veh/h/ln	1742	1805	1598	1742	1791	1560	1742	1716	1598	1728	1716	1610
Q Serve(g_s), s	24.8	26.1	0.0	26.8	26.1	0.0	13.5	124.4	0.0	22.4	47.6	0.0
Cycle Q Clear(g_c), s	24.8	26.1	0.0	26.8	26.1	0.0	13.5	124.4	0.0	22.4	47.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	447		389	474		232	2668		395	2914	
V/C Ratio(X)	1.10	0.89		1.46	0.84		0.85	1.21		0.84	0.69	
Avail Cap(c_a), veh/h	360	584		389	609		412	2668		395	2914	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	107.6	103.5	0.0	106.6	101.7	0.0	110.9	57.8	0.0	99.6	18.7	0.0
Incr Delay (d2), s/veh	78.1	12.9	0.0	219.8	8.3	0.0	8.7	97.8	0.0	10.6	0.9	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	15.2	13.1	0.0	24.1	12.7	0.0	6.4	76.0	0.0	10.3	15.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	185.7	116.4	0.0	326.4	110.0	0.0	119.6	155.6	0.0	110.2	19.6	0.0
LnGrp LOS	F	F		F	F		F	F		F	B	
Approach Vol, veh/h		795	A		966	A		3423	A		2330	A
Approach Delay, s/veh		151.0			237.0			153.5			32.5	
Approach LOS		F			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.6	143.5	33.0	39.9	35.1	132.0	35.0	37.9
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	15.5	49.6	26.8	28.1	24.4	126.4	28.8	28.1
Green Ext Time (p_c), s	0.5	36.3	0.0	1.8	0.0	0.0	0.0	1.7

Intersection Summary		
HCM 6th Ctrl Delay		126.5
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

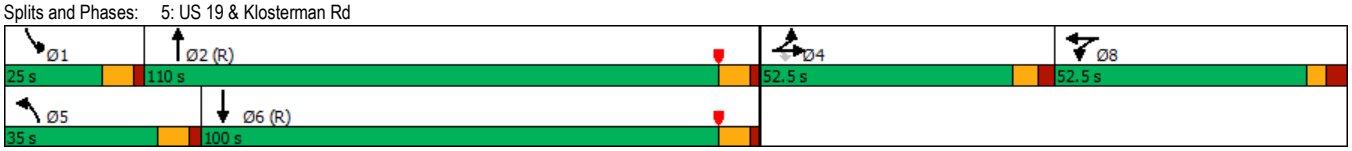
Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	989	12	125	23	15	13	183	3435	20	32	2157	377
Future Volume (vph)	989	12	125	23	15	13	183	3435	20	32	2157	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			1992	
Travel Time (s)		10.7			7.0			18.5			24.7	
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 (%)	1%	0%	5%	0%	0%	0%	2%	1%	11%	0%	1%	1%
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	676	345	128	0	51	0	187	3525	0	33	2586	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		14.6	27.6	
Total Split (s)	52.5	52.5	52.5	52.5	52.5		35.0	110.0		25.0	100.0	
Total Split (%)	21.9%	21.9%	21.9%	21.9%	21.9%		14.6%	45.8%		10.4%	41.7%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	1.11	1.12	0.33		0.56		0.68	0.89		0.47	0.73	
Control Delay	152.9	170.5	13.5		120.4		119.5	44.7		147.4	52.4	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	152.9	170.5	13.5		120.4		119.5	44.7		147.4	52.4	
Queue Length 50th (ft)	~667	~690	4		71		152	1409		49	1225	
Queue Length 95th (ft)	#814	#949	76		127		200	1530		m64	m1186	
Internal Link Dist (ft)		546			331			1416			1912	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	611	307	390		340		391	3946		130	3540	
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	1.11	1.12	0.33		0.15		0.48	0.89		0.25	0.73	

Intersection Summary

Area Type: Other
Cycle Length: 240
Actuated Cycle Length: 240
Offset: 35 (15%), Referenced to phase 2:NBT and 6:SBT, 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: 5: US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	989	12	125	23	15	13	183	3435	20	32	2157	377
Future Volume (veh/h)	989	12	125	23	15	13	183	3435	20	32	2157	377
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1826	1900	1900	1900	1870	1885	1737	1900	1885	1885
Adj Flow Rate, veh/h	1018	0	41	23	15	9	187	3505	19	33	2201	339
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, %	1	0	5	0	0	0	2	1	11	0	1	1
Cap, veh/h	1012	0	291	30	19	12	223	4218	23	43	3362	514
Arrive On Green	0.19	0.00	0.19	0.03	0.03	0.03	0.06	0.63	0.63	0.02	0.59	0.59
Sat Flow, veh/h	5386	0	1547	878	573	344	3456	6706	36	1810	5717	875
Grp Volume(v), veh/h	1018	0	41	47	0	0	187	2540	984	33	1870	670
Grp Sat Flow(s),veh/h/ln	1795	0	1547	1794	0	0	1728	1621	1879	1810	1621	1728
Q Serve(g_s), s	45.1	0.0	5.3	6.2	0.0	0.0	12.8	97.4	97.8	4.4	61.8	62.6
Cycle Q Clear(g_c), s	45.1	0.0	5.3	6.2	0.0	0.0	12.8	97.4	97.8	4.4	61.8	62.6
Prop In Lane	1.00		1.00	0.49		0.19	1.00		0.02	1.00		0.51
Lane Grp Cap(c), veh/h	1012	0	291	60	0	0	223	3059	1182	43	2860	1016
V/C Ratio(X)	1.01	0.00	0.14	0.78	0.00	0.00	0.84	0.83	0.83	0.77	0.65	0.66
Avail Cap(c_a), veh/h	1012	0	291	336	0	0	395	3059	1182	131	2860	1016
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	97.4	0.0	81.3	115.1	0.0	0.0	111.0	34.6	34.7	116.5	33.1	33.3
Incr Delay (d2), s/veh	29.7	0.0	0.2	19.1	0.0	0.0	11.1	2.8	6.9	19.3	1.2	3.4
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	23.9	0.0	2.2	3.3	0.0	0.0	6.1	37.5	45.1	2.3	24.1	26.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.1	0.0	81.5	134.1	0.0	0.0	122.1	37.4	41.6	135.8	34.3	36.6
LnGrp LOS	F	A	F	F	A	A	F	D	D	F	C	D
Approach Vol, veh/h		1059			47			3711			2573	
Approach Delay, s/veh		125.4			134.1			42.7			36.2	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	158.6		52.5	23.1	148.7		15.7				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	17.4	102.4		45.1	27.4	92.4		44.9				
Max Q Clear Time (g_c+I1), s	6.4	99.8		47.1	14.8	64.6		8.2				
Green Ext Time (p_c), s	0.0	2.6		0.0	0.7	26.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		52.9
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	137	18	136	201	122	16	742	209	146	459	6
Future Volume (vph)	14	137	18	136	201	122	16	742	209	146	459	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	139	329	0	16	970	0	149	474	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	27.0	27.0		18.0	45.0		82.0	82.0		13.0	95.0	
Total Split (%)	19.3%	19.3%		12.9%	32.1%		58.6%	58.6%		9.3%	67.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.78		0.60	0.72		0.03	0.97		0.85	0.38	
Control Delay		81.2		52.5	54.1		15.3	52.0		69.1	12.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		81.2		52.5	54.1		15.3	52.0		69.1	12.4	
Queue Length 50th (ft)		149		101	254		7	824		86	190	
Queue Length 95th (ft)		230		160	359		19	#1149		#245	268	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		256		239	502		511	1003		176	1251	
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		0.58	0.66		0.03	0.97		0.85	0.38	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 66 (47%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

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

Splits and Phases: 10: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	137	18	136	201	122	16	742	209	146	459	6
Future Volume (veh/h)	14	137	18	136	201	122	16	742	209	146	459	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	14	140	18	139	205	124	16	757	213	149	468	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	37	169	21	271	261	158	577	825	232	194	1257	16
Arrive On Green	0.11	0.11	0.11	0.08	0.24	0.24	0.58	0.58	0.58	0.05	0.67	0.67
Sat Flow, veh/h	80	1512	186	1781	1109	671	934	1415	398	1781	1872	24
Grp Volume(v), veh/h	172	0	0	139	0	329	16	0	970	149	0	474
Grp Sat Flow(s),veh/h/ln	1777	0	0	1781	0	1779	934	0	1814	1781	0	1896
Q Serve(g_s), s	6.4	0.0	0.0	9.4	0.0	24.3	1.1	0.0	67.2	4.6	0.0	15.3
Cycle Q Clear(g_c), s	13.3	0.0	0.0	9.4	0.0	24.3	4.0	0.0	67.2	4.6	0.0	15.3
Prop In Lane	0.08		0.10	1.00		0.38	1.00		0.22	1.00		0.01
Lane Grp Cap(c), veh/h	226	0	0	271	0	419	577	0	1057	194	0	1273
V/C Ratio(X)	0.76	0.00	0.00	0.51	0.00	0.78	0.03	0.00	0.92	0.77	0.00	0.37
Avail Cap(c_a), veh/h	282	0	0	280	0	484	577	0	1057	201	0	1273
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	0.0	47.7	0.0	50.2	13.7	0.0	26.2	31.8	0.0	10.1
Incr Delay (d2), s/veh	9.0	0.0	0.0	0.6	0.0	7.2	0.1	0.0	13.9	14.1	0.0	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	6.6	0.0	0.0	4.3	0.0	11.7	0.2	0.0	31.9	3.8	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.0	0.0	0.0	48.3	0.0	57.4	13.8	0.0	40.1	45.9	0.0	10.9
LnGrp LOS	E	A	A	D	A	E	B	A	D	D	A	B
Approach Vol, veh/h		172			468			986			623	
Approach Delay, s/veh		70.0			54.7			39.7			19.3	
Approach LOS		E			D			D			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		100.1		39.9	12.4	87.7	17.4	22.5				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 89		38.1	7.1	* 76	12.0	20.1				
Max Q Clear Time (g_c+I1), s		17.3		26.3	6.6	69.2	11.4	15.3				
Green Ext Time (p_c), s		4.3		1.5	0.0	4.3	0.0	0.3				

Intersection Summary		
HCM 6th Ctrl Delay		39.5
HCM 6th LOS		D

Notes

* HCM 6th 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)	128	45	53	21	41	200	61	890	14	114	622	75
Future Volume (vph)	128	45	53	21	41	200	61	890	14	114	622	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			312			175	
Travel Time (s)		9.5			11.3			7.1			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	107	0	23	45	217	66	982	0	124	758	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	20.0		20.0	20.0	
Minimum Split (s)	13.6	13.6		24.6	24.6	24.6	13.3	26.4		26.4	26.4	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	20.0	100.0		80.0	80.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%	28.6%	14.3%	71.4%		57.1%	57.1%	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.2	2.2		2.2	2.2	2.2	2.6	2.6		2.6	2.6	
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)	5.9	5.9		5.9	5.9	5.9	6.3	6.3		6.3	6.3	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.74	0.38		0.14	0.17	0.59	0.15	0.68		0.40	0.59	
Control Delay	78.8	36.2		51.4	51.6	21.6	5.4	11.6		16.6	15.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	78.8	36.2		51.4	51.6	21.6	5.4	11.6		16.6	15.3	
Queue Length 50th (ft)	123	55		19	37	44	12	372		47	347	
Queue Length 95th (ft)	187	108		44	71	122	31	652		117	571	
Internal Link Dist (ft)		338			417			232			95	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	327	450		291	462	516	497	1449		307	1286	
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	0.43	0.24		0.08	0.10	0.42	0.13	0.68		0.40	0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 1 (1%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd

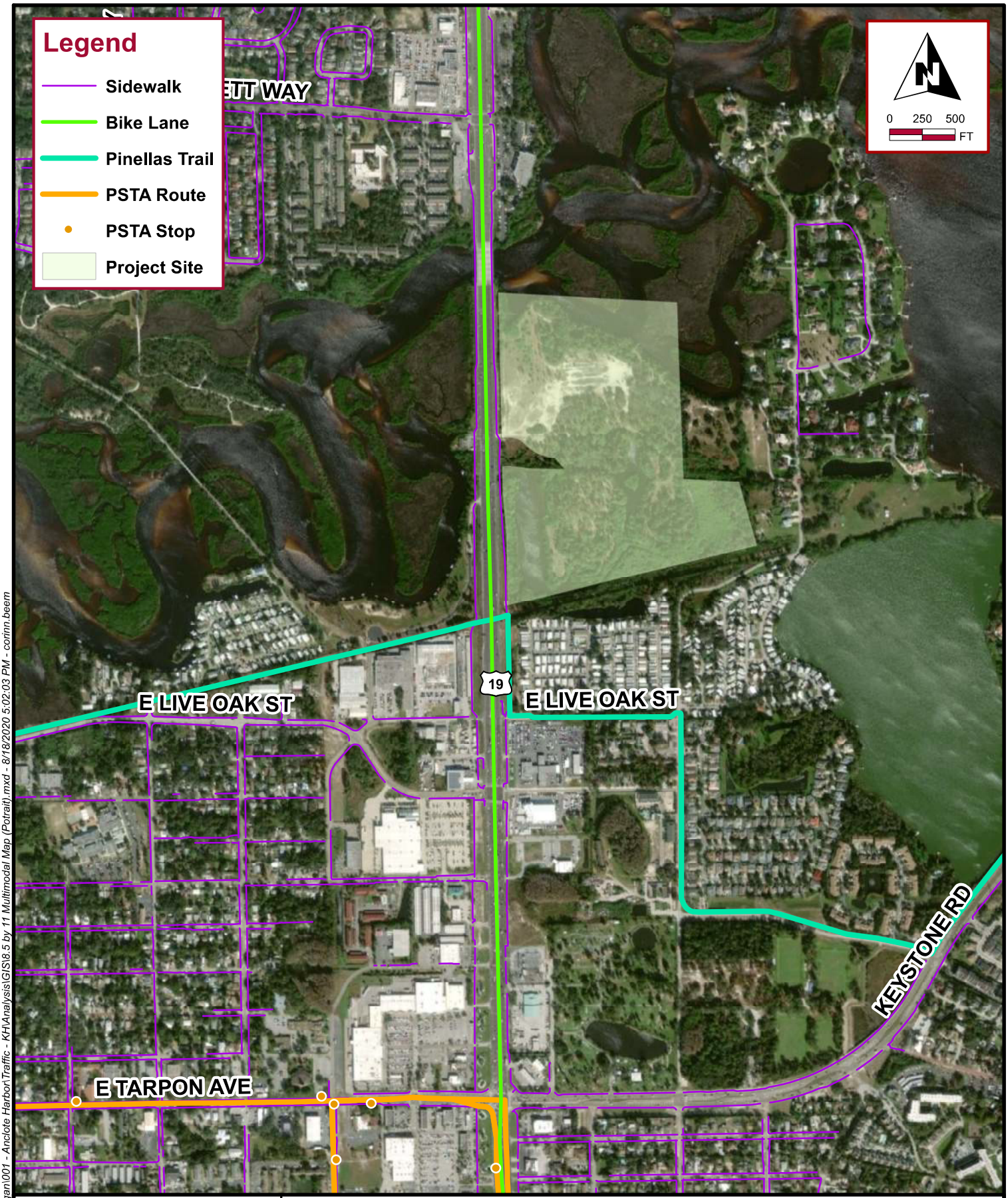
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	45	53	21	41	200	61	890	14	114	622	75
Future Volume (veh/h)	128	45	53	21	41	200	61	890	14	114	622	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	139	49	58	23	45	217	66	967	15	124	676	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	210	130	154	193	311	264	431	1387	22	319	1085	132
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.05	0.75	0.75	0.66	0.66	0.66
Sat Flow, veh/h	1109	793	938	1307	1900	1610	1781	1851	29	564	1649	200
Grp Volume(v), veh/h	139	0	107	23	45	217	66	0	982	124	0	758
Grp Sat Flow(s),veh/h/ln	1109	0	1731	1307	1900	1610	1781	0	1880	564	0	1849
Q Serve(g_s), s	17.2	0.0	7.7	2.2	2.8	18.2	1.5	0.0	38.4	20.7	0.0	33.3
Cycle Q Clear(g_c), s	20.0	0.0	7.7	9.9	2.8	18.2	1.5	0.0	38.4	46.4	0.0	33.3
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	210	0	283	193	311	264	431	0	1408	319	0	1217
V/C Ratio(X)	0.66	0.00	0.38	0.12	0.14	0.82	0.15	0.00	0.70	0.39	0.00	0.62
Avail Cap(c_a), veh/h	299	0	422	298	463	392	523	0	1408	319	0	1217
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.7	0.0	52.2	56.6	50.2	56.6	10.7	0.0	9.2	24.7	0.0	13.9
Incr Delay (d2), s/veh	3.5	0.0	0.8	0.3	0.2	8.6	0.2	0.0	2.9	3.5	0.0	2.4
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	5.0	0.0	3.4	0.8	1.4	8.1	0.6	0.0	15.3	3.1	0.0	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	0.0	53.0	56.9	50.4	65.2	10.8	0.0	12.1	28.3	0.0	16.3
LnGrp LOS	E	A	D	E	D	E	B	A	B	C	A	B
Approach Vol, veh/h		246			285			1048			882	
Approach Delay, s/veh		58.2			62.2			12.0			18.0	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.8	98.4		28.8		111.2		28.8				
Change Period (Y+Rc), s	* 6.3	* 6.3		5.9		* 6.3		5.9				
Max Green Setting (Gmax), s	* 14	* 74		34.1		* 94		34.1				
Max Q Clear Time (g_c+I1), s	3.5	48.4		20.2		40.4		22.0				
Green Ext Time (p_c), s	0.1	9.1		0.9		11.1		0.9				

Intersection Summary		
HCM 6th Ctrl Delay		24.6
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



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Multimodal Map

MORGAN - TARPON SPRINGS
PINELLAS COUNTY, FLORIDA

Project No: 145062001	Scale: As Noted	August 2020	Figure 1

BACKGROUND CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	4	205	2	0	4	89	1207	20	76	3444	50
Future Volume (vph)	36	4	205	2	0	4	89	1207	20	76	3444	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			4591			2676	
Travel Time (s)		13.4			6.1			56.9			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	1%	0%	0%	25%	5%	3%	0%	0%	1%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	218	0	0	6	0	93	1257	21	79	3588	52
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.54	0.76			0.06		0.67	0.33	0.02	0.45	0.91	0.04
Control Delay	135.8	29.0			1.2		122.2	8.7	0.9	111.7	26.7	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	135.8	29.0			1.2		122.2	8.7	0.9	111.7	26.7	0.1
Queue Length 50th (ft)	60	6			0		124	273	1	122	1485	0
Queue Length 95th (ft)	109	111			0		221	164	2	192	1865	0
Internal Link Dist (ft)		608			232			4511			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	268	482			133		361	3787	1229	176	3952	1182
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	0.14	0.45			0.05		0.26	0.33	0.02	0.45	0.91	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: #US 19/US 19 & Beckett Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	4	205	2	0	4	89	1207	20	76	3444	50
Future Volume (veh/h)	36	4	205	2	0	4	89	1207	20	76	3444	50
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1900	1530	1826	1856	1900	1900	1885	1796
Adj Flow Rate, veh/h	38	4	110	2	0	1	93	1257	16	79	3588	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	0	1	0	0	25	5	3	0	0	1	7
Cap, veh/h	133	5	127	36	5	8	109	3997	1270	57	3898	1153
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.06	0.79	0.79	0.03	0.76	0.76
Sat Flow, veh/h	1405	57	1562	130	61	96	1739	5066	1610	1810	5147	1522
Grp Volume(v), veh/h	38	0	114	3	0	0	93	1257	16	79	3588	46
Grp Sat Flow(s),veh/h/ln	1405	0	1619	288	0	0	1739	1689	1610	1810	1716	1522
Q Serve(g_s), s	0.0	0.0	16.7	0.0	0.0	0.0	12.7	16.7	0.5	7.5	134.0	1.8
Cycle Q Clear(g_c), s	6.9	0.0	16.7	16.7	0.0	0.0	12.7	16.7	0.5	7.5	134.0	1.8
Prop In Lane	1.00		0.96	0.67		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	0	131	48	0	0	109	3997	1270	57	3898	1153
V/C Ratio(X)	0.29	0.00	0.87	0.06	0.00	0.00	0.85	0.31	0.01	1.40	0.92	0.04
Avail Cap(c_a), veh/h	290	0	312	204	0	0	366	3997	1270	57	3898	1153
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	104.5	0.0	109.0	102.0	0.0	0.0	111.4	7.1	5.4	116.3	23.3	7.3
Incr Delay (d2), s/veh	1.2	0.0	15.6	0.5	0.0	0.0	22.0	0.2	0.0	256.6	4.7	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	2.3	0.0	7.7	0.2	0.0	0.0	6.4	5.7	0.2	7.6	49.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.7	0.0	124.6	102.6	0.0	0.0	133.4	7.3	5.4	372.9	28.0	7.3
LnGrp LOS	F	A	F	F	A	A	F	A	A	F	C	A
Approach Vol, veh/h		152			3			1366			3713	
Approach Delay, s/veh		119.9			102.6			15.9			35.1	
Approach LOS		F			F			B			D	

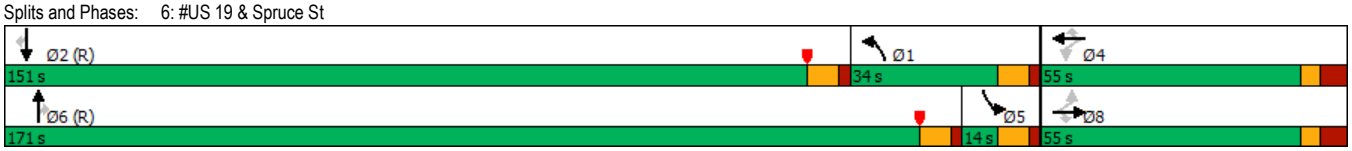
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.6	189.3		28.1	15.0	196.9		28.1				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	14.7	136.0		18.7	9.5	18.7		18.7				
Green Ext Time (p_c), s	0.4	0.0		0.0	0.0	17.4		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	21	72	17	14	14	101	1393	21	35	3505	30
Future Volume (vph)	41	21	72	17	14	14	101	1393	21	35	3505	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		635			737			2346			564	
Travel Time (s)		9.6			11.2			29.1			7.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	4%	0%	0%	0%	7%	4%	0%	3%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	77	0	33	15	109	1498	23	38	3769	32
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	6.4	30.0	30.0
Minimum Split (s)	26.7	26.7	26.7	26.7	26.7	26.7	14.6	37.6	37.6	14.0	37.6	37.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	34.0	171.0	171.0	14.0	151.0	151.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	14.2%	71.3%	71.3%	5.8%	62.9%	62.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.68	0.40		0.32	0.08	0.59	0.37	0.02	0.83	1.03	0.03
Control Delay		139.6	15.6		112.2	0.8	103.5	7.4	0.1	174.1	71.7	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		139.6	15.6		112.2	0.8	103.5	7.4	0.1	174.1	71.7	0.0
Queue Length 50th (ft)		106	0		51	0	169	300	0	60	~2310	0
Queue Length 95th (ft)		169	45		96	0	263	119	m1	m73	#2374	m0
Internal Link Dist (ft)		555			657			2266			484	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		275	372		290	384	185	4011	1310	46	3665	1190
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		0.24	0.21		0.11	0.04	0.59	0.37	0.02	0.83	1.03	0.03

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 80 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 150	
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: 6: #US 19 & Spruce St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	21	72	17	14	14	101	1393	21	35	3505	30
Future Volume (veh/h)	41	21	72	17	14	14	101	1393	21	35	3505	30
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1900	1841	1900	1900	1900	1796	1841	1900	1856	1870	1900
Adj Flow Rate, veh/h	44	23	19	18	15	5	109	1498	22	38	3769	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	0	4	0	0	0	7	4	0	3	2	0
Cap, veh/h	84	35	112	41	28	115	396	3421	1096	261	3051	962
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.46	1.00	1.00	0.15	0.60	0.60
Sat Flow, veh/h	830	495	1560	254	396	1610	1711	5025	1610	1767	5106	1610
Grp Volume(v), veh/h	67	0	19	33	0	5	109	1498	22	38	3769	20
Grp Sat Flow(s),veh/h/ln	1324	0	1560	650	0	1610	1711	1675	1610	1767	1702	1610
Q Serve(g_s), s	0.0	0.0	2.7	3.0	0.0	0.7	9.4	0.0	0.0	4.5	143.4	1.2
Cycle Q Clear(g_c), s	12.1	0.0	2.7	15.1	0.0	0.7	9.4	0.0	0.0	4.5	143.4	1.2
Prop In Lane	0.66		1.00	0.55		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	0	112	70	0	115	396	3421	1096	261	3051	962
V/C Ratio(X)	0.56	0.00	0.17	0.47	0.00	0.04	0.28	0.44	0.02	0.15	1.24	0.02
Avail Cap(c_a), veh/h	308	0	301	261	0	311	396	3421	1096	261	3051	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	108.9	0.0	104.7	111.3	0.0	103.7	52.1	0.0	0.0	89.0	48.3	19.7
Incr Delay (d2), s/veh	4.0	0.0	0.7	4.9	0.0	0.2	0.3	0.3	0.0	0.3	108.9	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	4.3	0.0	1.1	2.2	0.0	0.3	3.8	0.1	0.0	2.1	88.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.0	0.0	105.4	116.2	0.0	103.9	52.4	0.3	0.0	89.3	157.2	19.7
LnGrp LOS	F	A	F	F	A	F	D	A	A	F	F	B
Approach Vol, veh/h		86			38			1629			3827	
Approach Delay, s/veh		111.3			114.6			3.8			155.8	
Approach LOS		F			F			A			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	63.1	151.0		25.9	43.1	171.0		25.9				
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7				
Max Green Setting (Gmax), s	26.4	143.4		* 46	6.4	163.4		* 46				
Max Q Clear Time (g_c+I1), s	11.4	145.4		17.1	6.5	2.0		14.1				
Green Ext Time (p_c), s	0.2	0.0		0.1	0.0	14.3		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		110.5
HCM 6th LOS		F

Notes

* HCM 6th 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)	0	0	11	0	0	3	0	1453	4	2	3588	60
Future Volume (vph)	0	0	11	0	0	3	0	1453	4	2	3588	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		410			292			564			4591	
Travel Time (s)		9.3			6.6			7.0			56.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	11	0	0	3	0	1498	4	2	3699	62
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	11	0	0	3	0	1453	4	2	3588	60
Future Vol, veh/h	0	0	11	0	0	3	0	1453	4	2	3588	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	2
Mvmt Flow	0	0	11	0	0	3	0	1498	4	2	3699	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1850	-	-	749	-	0	0	1502	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	56	0	0	308	0	-	-	227	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	56	-	-	308	-	-	-	227	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	84.9	16.8	0	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	56	308	227	-	-
HCM Lane V/C Ratio	-	-	0.203	0.01	0.009	-	-
HCM Control Delay (s)	-	-	84.9	16.8	21	-	-
HCM Lane LOS	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.7	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	230	185	683	466	202	138	1308	558	234	3003	110
Future Volume (vph)	114	230	185	683	466	202	138	1308	558	234	3003	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			6497			2346	
Travel Time (s)		10.4			16.2			80.5			29.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	1%	4%	2%	2%	2%	5%	5%	3%	5%	2%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	242	195	719	491	213	145	1377	587	246	3161	116
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.61	0.61	0.65	1.88	0.84	0.52	0.66	0.51	0.58	0.78	1.07	0.12
Control Delay	123.5	107.1	38.1	449.8	110.0	22.2	119.2	43.4	28.7	128.2	57.1	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	123.5	107.1	38.1	449.8	110.0	22.2	119.2	43.4	28.7	128.2	57.1	0.9
Queue Length 50th (ft)	97	197	81	~891	405	51	119	445	253	193	~2011	4
Queue Length 95th (ft)	139	240	179	#1029	463	147	164	835	801	m195	m#2115	m7
Internal Link Dist (ft)		606			987			6417			2266	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	351	577	370	383	627	425	394	2717	1009	316	2945	962
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.42	0.53	1.88	0.78	0.50	0.37	0.51	0.58	0.78	1.07	0.12

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

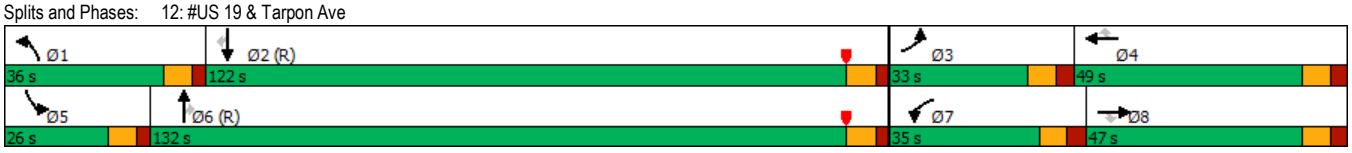
Control Type: Actuated-Coordinated

~ 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: 12: #US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	230	185	683	466	202	138	1308	558	234	3003	110
Future Volume (veh/h)	114	230	185	683	466	202	138	1308	558	234	3003	110
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1841	1870	1870	1870	1826	1826	1856	1826	1870	1856
Adj Flow Rate, veh/h	120	242	195	719	491	213	145	1377	587	246	3161	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	1	4	2	2	2	5	5	3	5	2	3
Cap, veh/h	151	489	213	386	726	324	177	2709	854	259	2899	893
Arrive On Green	0.04	0.14	0.14	0.11	0.20	0.20	0.05	0.54	0.54	0.15	1.00	1.00
Sat Flow, veh/h	3428	3582	1560	3456	3554	1585	3374	4985	1572	3374	5106	1572
Grp Volume(v), veh/h	120	242	195	719	491	213	145	1377	587	246	3161	116
Grp Sat Flow(s),veh/h/ln	1714	1791	1560	1728	1777	1585	1687	1662	1572	1687	1702	1572
Q Serve(g_s), s	8.3	15.0	29.6	26.8	30.6	29.7	10.2	41.8	65.3	17.3	136.2	0.0
Cycle Q Clear(g_c), s	8.3	15.0	29.6	26.8	30.6	29.7	10.2	41.8	65.3	17.3	136.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	489	213	386	726	324	177	2709	854	259	2899	893
V/C Ratio(X)	0.79	0.49	0.91	1.86	0.68	0.66	0.82	0.51	0.69	0.95	1.09	0.13
Avail Cap(c_a), veh/h	354	579	252	386	726	324	399	2709	854	259	2899	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	113.6	95.9	102.2	106.6	88.2	87.8	112.6	34.6	39.9	101.2	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.8	31.9	398.3	2.5	4.8	9.1	0.7	4.5	8.2	41.4	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	7.1	13.9	33.4	14.3	12.6	4.7	16.9	26.2	7.3	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.7	96.7	134.2	504.9	90.7	92.6	121.7	35.3	44.4	109.4	41.4	0.0
LnGrp LOS	F	F	F	F	F	F	F	D	D	F	F	A
Approach Vol, veh/h		557			1423			2109			3523	
Approach Delay, s/veh		115.4			300.3			43.7			44.8	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	143.8	18.8	57.2	26.0	138.0	35.0	41.0
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	12.2	138.2	10.3	32.6	19.3	67.3	28.8	31.6
Green Ext Time (p_c), s	0.4	0.0	0.3	2.4	0.0	27.5	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	97.4
HCM 6th LOS	F

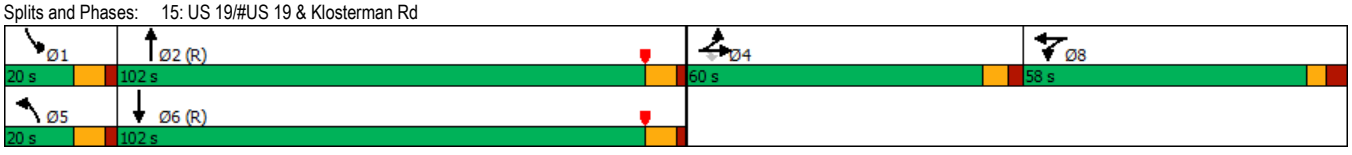
Notes

* HCM 6th 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)	417	15	193	22	14	7	186	1611	16	22	3786	532
Future Volume (vph)	417	15	193	22	14	7	186	1611	16	22	3786	532
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			1992	
Travel Time (s)		10.7			7.0			18.5			24.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	1%	0%	8%	0%	4%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	303	152	203	0	45	0	196	1713	0	23	4545	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		13.6	27.6	
Total Split (s)	60.0	60.0	60.0	58.0	58.0		20.0	102.0		20.0	102.0	
Total Split (%)	25.0%	25.0%	25.0%	24.2%	24.2%		8.3%	42.5%		8.3%	42.5%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	0.76	0.76	0.54		0.53		0.57	0.40		0.38	1.20	
Control Delay	113.8	123.8	14.2		125.4		109.7	18.5		97.5	134.8	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	113.8	123.8	14.2		125.4		109.7	18.5		97.5	134.8	
Queue Length 50th (ft)	262	262	0		67		156	343		35	~2496	
Queue Length 95th (ft)	314	356	91		121		208	448		m38	m#2154	
Internal Link Dist (ft)		546			331			1416			1912	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	698	353	508		373		345	4311		93	3782	
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	0.43	0.43	0.40		0.12		0.57	0.40		0.25	1.20	

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 135 (56%), Referenced to phase 2:NBT and 6:SBT, 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: 15: US 19/#US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	15	193	22	14	7	186	1611	16	22	3786	532
Future Volume (veh/h)	417	15	193	22	14	7	186	1611	16	22	3786	532
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1781	1900	1841	1856	1900	1900	1870	1870
Adj Flow Rate, veh/h	450	0	95	23	15	7	196	1696	13	23	3985	535
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	1	0	8	0	4	3	0	0	2	2
Cap, veh/h	531	0	160	29	19	9	176	4744	36	35	4012	507
Arrive On Green	0.10	0.00	0.10	0.03	0.03	0.03	0.05	0.72	0.72	0.02	0.69	0.69
Sat Flow, veh/h	5302	0	1598	864	564	263	3401	6583	50	1810	5827	736
Grp Volume(v), veh/h	450	0	95	45	0	0	196	1233	476	23	3257	1263
Grp Sat Flow(s),veh/h/ln	1767	0	1598	1691	0	0	1700	1596	1846	1810	1609	1738
Q Serve(g_s), s	20.0	0.0	13.7	6.3	0.0	0.0	12.4	23.3	23.3	3.0	155.3	165.2
Cycle Q Clear(g_c), s	20.0	0.0	13.7	6.3	0.0	0.0	12.4	23.3	23.3	3.0	155.3	165.2
Prop In Lane	1.00		1.00	0.51		0.16	1.00		0.03	1.00		0.42
Lane Grp Cap(c), veh/h	531	0	160	57	0	0	176	3449	1330	35	3322	1196
V/C Ratio(X)	0.85	0.00	0.59	0.79	0.00	0.00	1.12	0.36	0.36	0.65	0.98	1.06
Avail Cap(c_a), veh/h	1162	0	350	355	0	0	176	3449	1330	93	3322	1196
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	106.2	0.0	103.3	115.1	0.0	0.0	113.8	12.6	12.6	116.8	35.8	37.4
Incr Delay (d2), s/veh	3.8	0.0	3.5	20.7	0.0	0.0	102.2	0.3	0.8	13.8	11.7	41.9
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	9.5	0.0	5.9	3.2	0.0	0.0	8.0	8.2	9.6	1.6	59.6	78.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.0	0.0	106.8	135.7	0.0	0.0	216.0	12.9	13.4	130.6	47.5	79.3
LnGrp LOS	F	A	F	F	A	A	F	B	B	F	D	F
Approach Vol, veh/h		545			45			1905			4543	
Approach Delay, s/veh		109.5			135.7			33.9			56.8	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	180.5		31.4	20.0	172.8		15.7				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	12.4	94.4		52.6	12.4	94.4		50.4				
Max Q Clear Time (g_c+I1), s	5.0	25.3		22.0	14.4	167.2		8.3				
Green Ext Time (p_c), s	0.0	36.9		2.0	0.0	0.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		55.2
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	108	5	154	105	48	6	350	154	106	637	6
Future Volume (vph)	2	108	5	154	105	48	6	350	154	106	637	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	117	0	157	156	0	6	514	0	108	656	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	31.0	31.0		20.0	51.0		58.0	58.0		21.0	79.0	
Total Split (%)	23.8%	23.8%		15.4%	39.2%		44.6%	44.6%		16.2%	60.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.61		0.56	0.34		0.02	0.52		0.23	0.53	
Control Delay		67.5		46.7	36.0		16.7	21.4		10.5	14.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		67.5		46.7	36.0		16.7	21.4		10.5	14.8	
Queue Length 50th (ft)		94		108	94		2	256		32	280	
Queue Length 95th (ft)		153		163	149		11	408		62	426	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		349		287	626		394	993		537	1238	
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		0.34		0.55	0.25		0.02	0.52		0.20	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 59 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 19: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	108	5	154	105	48	6	350	154	106	637	6
Future Volume (veh/h)	2	108	5	154	105	48	6	350	154	106	637	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	2	110	5	157	107	49	6	357	157	108	650	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	29	142	6	299	271	124	459	741	326	508	1279	12
Arrive On Green	0.08	0.08	0.08	0.09	0.22	0.22	0.60	0.60	0.60	0.04	0.68	0.68
Sat Flow, veh/h	11	1788	80	1781	1233	565	790	1241	546	1781	1880	17
Grp Volume(v), veh/h	117	0	0	157	0	156	6	0	514	108	0	656
Grp Sat Flow(s),veh/h/ln	1880	0	0	1781	0	1798	790	0	1787	1781	0	1897
Q Serve(g_s), s	1.1	0.0	0.0	10.2	0.0	9.6	0.5	0.0	21.1	2.9	0.0	22.0
Cycle Q Clear(g_c), s	7.9	0.0	0.0	10.2	0.0	9.6	11.6	0.0	21.1	2.9	0.0	22.0
Prop In Lane	0.02		0.04	1.00		0.31	1.00		0.31	1.00		0.01
Lane Grp Cap(c), veh/h	178	0	0	299	0	395	459	0	1067	508	0	1291
V/C Ratio(X)	0.66	0.00	0.00	0.53	0.00	0.40	0.01	0.00	0.48	0.21	0.00	0.51
Avail Cap(c_a), veh/h	376	0	0	324	0	610	459	0	1067	648	0	1291
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.7	0.0	0.0	46.9	0.0	43.3	15.6	0.0	14.8	10.8	0.0	10.1
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.5	0.0	0.6	0.1	0.0	1.6	0.1	0.0	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	4.0	0.0	0.0	4.6	0.0	4.4	0.1	0.0	8.9	1.1	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	0.0	0.0	47.4	0.0	44.0	15.7	0.0	16.4	10.9	0.0	11.6
LnGrp LOS	E	A	A	D	A	D	B	A	B	B	A	B
Approach Vol, veh/h		117			313			520			764	
Approach Delay, s/veh		62.8			45.7			16.4			11.5	
Approach LOS		E			D			B			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		94.6		35.4	10.8	83.7	18.2	17.3				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 73		44.1	15.1	* 52	14.0	24.1				
Max Q Clear Time (g_c+I1), s		24.0		11.6	4.9	23.1	12.2	9.9				
Green Ext Time (p_c), s		6.7		0.9	0.1	4.6	0.0	0.4				

Intersection Summary			
HCM 6th Ctrl Delay		22.7	
HCM 6th LOS		C	

Notes

* HCM 6th 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)	26	10	7	10	15	117	12	424	6	147	807	38
Future Volume (vph)	26	10	7	10	15	117	12	424	6	147	807	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			1327			1658	
Travel Time (s)		9.5			11.3			30.2			37.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	19	0	11	16	127	13	468	0	160	918	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	20.0		20.0	20.0	
Minimum Split (s)	23.9	23.9		23.9	23.9	23.9	13.3	26.3		26.3	26.3	
Total Split (s)	28.0	28.0		28.0	28.0	28.0	18.0	102.0		84.0	84.0	
Total Split (%)	21.5%	21.5%		21.5%	21.5%	21.5%	13.8%	78.5%		64.6%	64.6%	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.2	2.2		2.2	2.2	2.2	2.6	2.6		2.6	2.6	
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)	5.9	5.9		5.9	5.9	5.9	6.3	6.3		6.3	6.3	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.30	0.15		0.12	0.13	0.56	0.03	0.30		0.22	0.61	
Control Delay	65.7	41.9		58.5	58.1	19.3	2.2	2.9		5.2	8.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	65.7	41.9		58.5	58.1	19.3	2.2	2.9		5.2	8.8	
Queue Length 50th (ft)	23	9		9	13	0	1	61		19	178	
Queue Length 95th (ft)	55	34		29	37	62	5	108		72	537	
Internal Link Dist (ft)		338			417			1247			1578	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	234	306		240	323	379	480	1576		721	1493	
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	0.12	0.06		0.05	0.05	0.34	0.03	0.30		0.22	0.61	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 114 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	10	7	10	15	117	12	424	6	147	807	38
Future Volume (veh/h)	26	10	7	10	15	117	12	424	6	147	807	38
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	28	11	8	11	16	127	13	461	7	160	877	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	164	97	71	176	181	153	392	1502	23	731	1326	62
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.02	0.81	0.81	0.74	0.74	0.74
Sat Flow, veh/h	1235	1023	744	1416	1900	1610	1781	1852	28	910	1787	84
Grp Volume(v), veh/h	28	0	19	11	16	127	13	0	468	160	0	918
Grp Sat Flow(s),veh/h/ln	1235	0	1766	1416	1900	1610	1781	0	1880	910	0	1870
Q Serve(g_s), s	2.8	0.0	1.3	0.9	1.0	10.1	0.2	0.0	8.1	7.1	0.0	32.3
Cycle Q Clear(g_c), s	3.7	0.0	1.3	2.2	1.0	10.1	0.2	0.0	8.1	7.1	0.0	32.3
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.01	1.00		0.04
Lane Grp Cap(c), veh/h	164	0	168	176	181	153	392	0	1525	731	0	1388
V/C Ratio(X)	0.17	0.00	0.11	0.06	0.09	0.83	0.03	0.00	0.31	0.22	0.00	0.66
Avail Cap(c_a), veh/h	256	0	300	282	323	274	516	0	1525	731	0	1388
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.4	0.0	53.8	54.8	53.7	57.8	7.9	0.0	3.1	5.2	0.0	8.5
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.1	0.2	10.8	0.0	0.0	0.5	0.7	0.0	2.5
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	0.9	0.0	0.6	0.3	0.5	4.6	0.1	0.0	2.7	1.4	0.0	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	0.0	54.1	54.9	53.9	68.5	7.9	0.0	3.6	5.9	0.0	11.0
LnGrp LOS	E	A	D	D	D	E	A	A	A	A	A	B
Approach Vol, veh/h		47			154			481			1078	
Approach Delay, s/veh		55.1			66.0			3.7			10.2	
Approach LOS		E			E			A			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.9	102.8		18.3		111.7		18.3				
Change Period (Y+Rc), s	* 6.3	* 6.3		5.9		* 6.3		5.9				
Max Green Setting (Gmax), s	* 12	* 78		22.1		* 96		22.1				
Max Q Clear Time (g_c+I1), s	2.2	34.3		12.1		10.1		5.7				
Green Ext Time (p_c), s	0.0	10.9		0.3		3.4		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		14.5	
HCM 6th LOS		B	

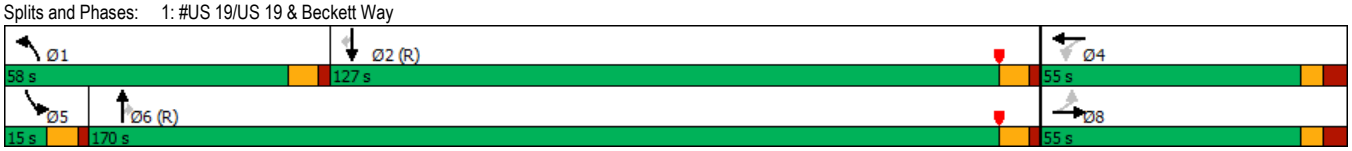
Notes

* HCM 6th 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)	106	1	170	51	4	46	174	3645	3	19	2070	86
Future Volume (vph)	106	1	170	51	4	46	174	3645	3	19	2070	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			4619			2676	
Travel Time (s)		13.4			6.1			57.3			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	2%	0%	0%	0%	1%	1%	0%	0%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	178	0	0	105	0	181	3797	3	20	2156	90
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.80	0.52			1.19		0.80	0.98	0.00	0.29	0.64	0.08
Control Delay	139.6	15.2			223.9		111.1	16.4	0.0	122.1	27.2	2.9
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	139.6	15.2			223.9		111.1	16.4	0.0	122.1	27.2	2.9
Queue Length 50th (ft)	174	1			~177		298	548	0	32	717	0
Queue Length 95th (ft)	247	86			#282		m290	m#2244	m0	68	959	29
Internal Link Dist (ft)		608			232			4539			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	227	448			136		376	3894	1239	70	3375	1083
Starvation Cap Reductn	0	0			0		0	0	0	0	0	0
Spillback Cap Reductn	0	0			0		0	0	0	0	0	0
Storage Cap Reductn	0	0			0		0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.40			0.77		0.48	0.98	0.00	0.29	0.64	0.08

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 150	
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: 1: #US 19/US 19 & Beckett Way



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	1	170	51	4	46	174	3645	3	19	2070	86
Future Volume (veh/h)	106	1	170	51	4	46	174	3645	3	19	2070	86
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1870	1900	1900	1900	1885	1885	1900	1900	1885	1885
Adj Flow Rate, veh/h	110	1	52	53	4	18	181	3797	2	20	2156	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	2	0	0	0	1	1	0	0	1	1
Cap, veh/h	154	3	146	88	10	23	200	4054	1268	39	3593	1115
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.79	0.79	0.02	0.70	0.70
Sat Flow, veh/h	1401	30	1584	679	103	247	1795	5147	1610	1810	5147	1598
Grp Volume(v), veh/h	110	0	53	75	0	0	181	3797	2	20	2156	48
Grp Sat Flow(s),veh/h/ln	1401	0	1615	1030	0	0	1795	1716	1610	1810	1716	1598
Q Serve(g_s), s	0.9	0.0	7.4	11.2	0.0	0.0	23.9	143.3	0.1	2.6	52.2	2.2
Cycle Q Clear(g_c), s	19.5	0.0	7.4	18.6	0.0	0.0	23.9	143.3	0.1	2.6	52.2	2.2
Prop In Lane	1.00		0.98	0.71		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	0	149	120	0	0	200	4054	1268	39	3593	1115
V/C Ratio(X)	0.72	0.00	0.36	0.62	0.00	0.00	0.91	0.94	0.00	0.51	0.60	0.04
Avail Cap(c_a), veh/h	295	0	312	266	0	0	378	4054	1268	57	3593	1115
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	107.8	0.0	102.3	110.0	0.0	0.0	105.4	20.6	5.4	116.2	18.8	11.3
Incr Delay (d2), s/veh	6.1	0.0	1.4	5.2	0.0	0.0	18.7	5.5	0.0	14.2	0.7	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	7.1	0.0	3.2	4.9	0.0	0.0	12.2	51.1	0.0	1.4	20.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.9	0.0	103.7	115.2	0.0	0.0	124.2	26.1	5.4	130.4	19.6	11.3
LnGrp LOS	F	A	F	F	A	A	F	C	A	F	B	B
Approach Vol, veh/h		163			75			3980			2224	
Approach Delay, s/veh		110.6			115.2			30.6			20.4	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.2	175.0		30.8	12.7	196.6		30.8				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	25.9	54.2		20.6	4.6	145.3		21.5				
Green Ext Time (p_c), s	0.8	41.7		0.3	0.0	17.1		0.6				

Intersection Summary		
HCM 6th Ctrl Delay		30.1
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	17	0	0	5	0	3884	12	5	2290	37
Future Volume (vph)	0	0	17	0	0	5	0	3884	12	5	2290	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		410			292			576			4619	
Travel Time (s)		9.3			6.6			7.1			57.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	18	0	0	5	0	4046	13	5	2385	39
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	17	0	0	5	0	3884	12	5	2290	37
Future Vol, veh/h	0	0	17	0	0	5	0	3884	12	5	2290	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	18	0	0	5	0	4046	13	5	2385	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1193	-	-	2023	-	0	0	4059	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	156	0	0	42	0	-	-	11	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	156	-	-	42	-	-	-	11	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31	102.5	0	1.1
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	156	42	11	-	-
HCM Lane V/C Ratio	-	-	0.114	0.124	0.473	-	-
HCM Control Delay (s)	-	-	31	102.5	$ 503.2	-	-
HCM Lane LOS	-	-	D	F	F	-	-
HCM 95th %tile Q(veh)	-	-	0.4	0.4	1.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	17	198	31	22	31	83	3640	23	30	2267	46
Future Volume (vph)	171	17	198	31	22	31	83	3640	23	30	2267	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		635			737			2345			576	
Travel Time (s)		14.4			16.8			29.1			7.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	208	0	56	33	87	3832	24	32	2386	48
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	7.0	30.0	30.0
Minimum Split (s)	54.7	54.7	54.7	54.7	54.7	54.7	14.6	42.6	42.6	14.6	42.6	42.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	30.0	170.0	170.0	15.0	155.0	155.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	12.5%	70.8%	70.8%	6.3%	64.6%	64.6%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.90	0.54		0.40	0.10	0.52	1.05	0.02	0.54	0.73	0.05
Control Delay		135.8	32.3		96.1	0.5	82.6	39.3	0.0	116.7	52.6	13.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		135.8	32.3		96.1	0.5	82.6	39.3	0.0	116.7	52.6	13.6
Queue Length 50th (ft)		311	92		80	0	144	~2527	0	50	1042	8
Queue Length 95th (ft)		#430	190		138	0	m119	m305	m0	m84	1368	m51
Internal Link Dist (ft)		555			657			2265			496	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		256	424		164	384	166	3662	1168	60	3291	1056
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		0.77	0.49		0.34	0.09	0.52	1.05	0.02	0.53	0.73	0.05

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 115 (48%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

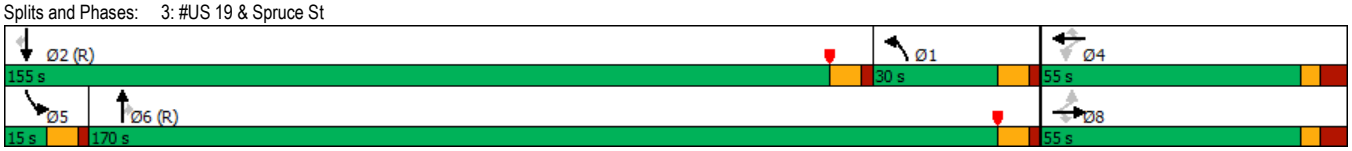
Control Type: Actuated-Coordinated

~ 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: 3: #US 19 & Spruce St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	17	198	31	22	31	83	3640	23	30	2267	46
Future Volume (veh/h)	171	17	198	31	22	31	83	3640	23	30	2267	46
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1900	1900	1900	1885	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	180	18	59	33	23	7	87	3832	21	32	2386	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	0	0	0	1	1	0	0	1	0
Cap, veh/h	233	20	308	48	28	311	168	3509	1098	47	3161	989
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.68	0.68	0.03	0.61	0.61
Sat Flow, veh/h	1057	106	1598	127	146	1610	1795	5147	1610	1810	5147	1610
Grp Volume(v), veh/h	198	0	59	56	0	7	87	3832	21	32	2386	32
Grp Sat Flow(s),veh/h/ln	1163	0	1598	274	0	1610	1795	1716	1610	1810	1716	1610
Q Serve(g_s), s	0.0	0.0	7.4	6.6	0.0	0.8	11.1	163.6	1.0	4.2	80.0	1.9
Cycle Q Clear(g_c), s	39.7	0.0	7.4	46.3	0.0	0.8	11.1	163.6	1.0	4.2	80.0	1.9
Prop In Lane	0.91		1.00	0.59		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	0	308	77	0	311	168	3509	1098	47	3161	989
V/C Ratio(X)	0.78	0.00	0.19	0.73	0.00	0.02	0.52	1.09	0.02	0.69	0.75	0.03
Avail Cap(c_a), veh/h	253	0	308	77	0	311	168	3509	1098	56	3161	989
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	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	94.2	0.0	81.2	108.6	0.0	78.5	103.7	38.2	12.3	116.0	33.3	18.2
Incr Delay (d2), s/veh	14.7	0.0	0.3	29.7	0.0	0.0	0.3	42.0	0.0	24.1	1.7	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	13.2	0.0	3.1	4.2	0.0	0.4	5.2	76.9	0.4	2.3	32.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.9	0.0	81.5	138.2	0.0	78.5	103.9	80.2	12.3	140.1	35.0	18.3
LnGrp LOS	F	A	F	F	A	E	F	F	B	F	D	B
Approach Vol, veh/h		257			63			3940			2450	
Approach Delay, s/veh		102.6			131.6			80.3			36.2	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	155.0		55.0	13.8	171.2		55.0				
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7				
Max Green Setting (Gmax), s	22.4	147.4		* 46	7.4	162.4		* 46				
Max Q Clear Time (g_c+I1), s	13.1	82.0		48.3	6.2	165.6		41.7				
Green Ext Time (p_c), s	0.1	34.5		0.0	0.0	0.0		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		65.5
HCM 6th LOS		E

Notes

* HCM 6th 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)	393	394	203	561	395	284	197	3188	1015	327	1975	143
Future Volume (vph)	393	394	203	561	395	284	197	3188	1015	327	1975	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			2786			2345	
Travel Time (s)		10.4			16.2			34.5			29.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	1%	1%	4%	1%	1%	1%	2%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	414	415	214	591	416	299	207	3356	1068	344	2079	151
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	1.16	0.83	0.55	1.26	0.69	0.81	0.73	1.26	1.13	1.31	0.79	0.17
Control Delay	183.6	115.2	19.6	208.2	100.1	71.7	136.4	158.9	94.7	222.3	34.4	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	183.6	115.2	19.6	208.2	100.1	71.7	136.4	158.9	94.7	222.3	34.4	1.9
Queue Length 50th (ft)	~396	343	30	~609	332	279	177	~2427	~868	~355	1129	16
Queue Length 95th (ft)	#525	405	126	#806	402	417	m182	m#2301	m#1007	#488	878	10
Internal Link Dist (ft)		606			987			2706			2265	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	358	583	420	468	607	369	410	2662	946	263	2635	893
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.71	0.51	1.26	0.69	0.81	0.50	1.26	1.13	1.31	0.79	0.17

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

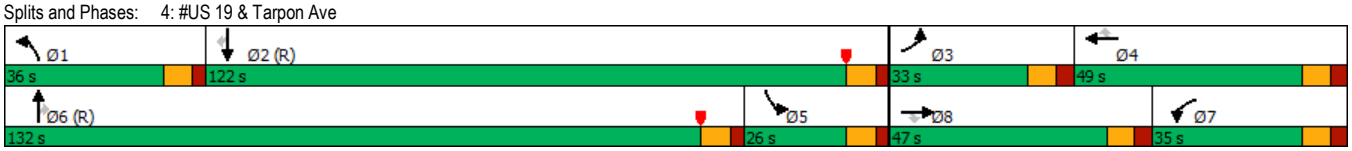
Control Type: Actuated-Coordinated

~ 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: 4: #US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	393	394	203	561	395	284	197	3188	1015	327	1975	143
Future Volume (veh/h)	393	394	203	561	395	284	197	3188	1015	327	1975	143
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1885	1885	1841	1885	1885	1885	1870	1885	1900
Adj Flow Rate, veh/h	414	415	0	591	416	0	207	3356	0	344	2079	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	4	1	1	1	2	1	0
Cap, veh/h	360	464		389	490		241	2668		380	2877	
Arrive On Green	0.10	0.13	0.00	0.11	0.14	0.00	0.07	0.52	0.00	0.15	0.74	0.00
Sat Flow, veh/h	3483	3610	1598	3483	3582	1560	3483	5147	1598	3456	5147	1610
Grp Volume(v), veh/h	414	415	0	591	416	0	207	3356	0	344	2079	0
Grp Sat Flow(s),veh/h/ln	1742	1805	1598	1742	1791	1560	1742	1716	1598	1728	1716	1610
Q Serve(g_s), s	24.8	27.2	0.0	26.8	27.2	0.0	14.1	124.4	0.0	23.5	53.7	0.0
Cycle Q Clear(g_c), s	24.8	27.2	0.0	26.8	27.2	0.0	14.1	124.4	0.0	23.5	53.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	464		389	490		241	2668		380	2877	
V/C Ratio(X)	1.15	0.89		1.52	0.85		0.86	1.26		0.91	0.72	
Avail Cap(c_a), veh/h	360	584		389	609		412	2668		380	2877	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	107.6	103.0	0.0	106.6	101.2	0.0	110.5	57.8	0.0	101.2	20.5	0.0
Incr Delay (d2), s/veh	94.9	14.0	0.0	246.6	9.2	0.0	8.8	119.3	0.0	17.6	1.0	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	16.0	13.7	0.0	25.5	13.3	0.0	6.7	81.3	0.0	11.2	17.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	202.5	116.9	0.0	353.2	110.3	0.0	119.4	177.1	0.0	118.9	21.5	0.0
LnGrp LOS	F	F		F	F		F	F		F	C	
Approach Vol, veh/h		829	A		1007	A		3563	A		2423	A
Approach Delay, s/veh		159.7			252.9			173.8			35.3	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	141.8	33.0	41.0	34.0	132.0	35.0	39.0
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	16.1	55.7	26.8	29.2	25.5	126.4	28.8	29.2
Green Ext Time (p_c), s	0.5	36.5	0.0	1.9	0.0	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	139.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1029	13	131	24	16	14	190	3574	21	34	2244	393
Future Volume (vph)	1029	13	131	24	16	14	190	3574	21	34	2244	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			5689	
Travel Time (s)		10.7			7.0			18.5			70.5	
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 (%)	1%	0%	5%	0%	0%	0%	2%	1%	11%	0%	1%	1%
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	703	360	134	0	54	0	194	3668	0	35	2691	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		14.6	27.6	
Total Split (s)	52.5	52.5	52.5	52.5	52.5		35.0	110.0		25.0	100.0	
Total Split (%)	21.9%	21.9%	21.9%	21.9%	21.9%		14.6%	45.8%		10.4%	41.7%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	1.15	1.17	0.34		0.58		0.69	0.93		0.49	0.76	
Control Delay	165.4	184.0	15.6		121.8		119.3	48.5		146.2	54.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	165.4	184.0	15.6		121.8		119.3	48.5		146.2	54.2	
Queue Length 50th (ft)	~715	~743	12		76		157	1553		53	1276	
Queue Length 95th (ft)	#863	#1006	87		135		206	#1711		m64	m1221	
Internal Link Dist (ft)		546			331			1416			5609	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	611	307	390		340		391	3930		130	3518	
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	1.15	1.17	0.34		0.16		0.50	0.93		0.27	0.76	

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 35 (15%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 145

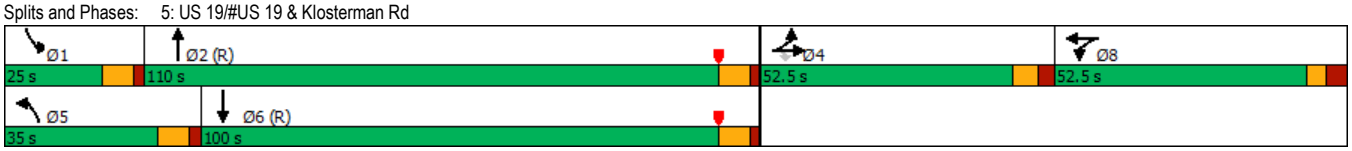
Control Type: Actuated-Coordinated

~ 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: 5: US 19/#US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1029	13	131	24	16	14	190	3574	21	34	2244	393
Future Volume (veh/h)	1029	13	131	24	16	14	190	3574	21	34	2244	393
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1826	1900	1900	1900	1870	1885	1737	1900	1885	1885
Adj Flow Rate, veh/h	1059	0	47	24	16	10	194	3647	20	35	2290	355
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, %	1	0	5	0	0	0	2	1	11	0	1	1
Cap, veh/h	1012	0	291	31	20	13	230	4196	23	45	3337	512
Arrive On Green	0.19	0.00	0.19	0.04	0.04	0.04	0.07	0.63	0.63	0.02	0.58	0.58
Sat Flow, veh/h	5386	0	1547	860	574	358	3456	6706	37	1810	5713	878
Grp Volume(v), veh/h	1059	0	47	50	0	0	194	2643	1024	35	1946	699
Grp Sat Flow(s),veh/h/ln	1795	0	1547	1792	0	0	1728	1621	1879	1810	1621	1727
Q Serve(g_s), s	45.1	0.0	6.1	6.6	0.0	0.0	13.3	106.9	107.6	4.6	66.6	67.8
Cycle Q Clear(g_c), s	45.1	0.0	6.1	6.6	0.0	0.0	13.3	106.9	107.6	4.6	66.6	67.8
Prop In Lane	1.00		1.00	0.48		0.20	1.00		0.02	1.00		0.51
Lane Grp Cap(c), veh/h	1012	0	291	64	0	0	230	3043	1175	45	2840	1009
V/C Ratio(X)	1.05	0.00	0.16	0.78	0.00	0.00	0.84	0.87	0.87	0.77	0.69	0.69
Avail Cap(c_a), veh/h	1012	0	291	335	0	0	395	3043	1175	131	2840	1009
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	97.4	0.0	81.6	114.8	0.0	0.0	110.7	36.8	36.9	116.3	34.6	34.9
Incr Delay (d2), s/veh	41.2	0.0	0.3	18.6	0.0	0.0	11.1	3.7	9.0	18.6	1.4	3.9
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	25.0	0.0	2.5	3.5	0.0	0.0	6.3	41.5	50.1	2.4	26.0	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.6	0.0	81.9	133.4	0.0	0.0	121.8	40.5	45.9	134.9	36.0	38.8
LnGrp LOS	F	A	F	F	A	A	F	D	D	F	D	D
Approach Vol, veh/h		1106			50			3861			2680	
Approach Delay, s/veh		136.2			133.4			46.0			38.0	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	157.8		52.5	23.6	147.8		16.1				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	17.4	102.4		45.1	27.4	92.4		44.9				
Max Q Clear Time (g_c+I1), s	6.6	109.6		47.1	15.3	69.8		8.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.7	21.5		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		56.8
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	143	19	141	209	127	17	772	217	152	478	6
Future Volume (vph)	15	143	19	141	209	127	17	772	217	152	478	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	180	0	144	343	0	17	1009	0	155	494	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	27.0	27.0		18.0	45.0		82.0	82.0		13.0	95.0	
Total Split (%)	19.3%	19.3%		12.9%	32.1%		58.6%	58.6%		9.3%	67.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.80		0.62	0.74		0.03	1.01		0.87	0.40	
Control Delay		82.5		53.2	54.7		15.4	63.7		72.9	12.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		82.5		53.2	54.7		15.4	63.7		72.9	12.8	
Queue Length 50th (ft)		156		104	265		7	~961		~98	206	
Queue Length 95th (ft)		#253		166	376		20	#1226		#256	282	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		255		239	503		498	995		178	1243	
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		0.71		0.60	0.68		0.03	1.01		0.87	0.40	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 66 (47%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 120	
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: 10: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	143	19	141	209	127	17	772	217	152	478	6
Future Volume (veh/h)	15	143	19	141	209	127	17	772	217	152	478	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	15	146	19	144	213	130	17	788	221	155	488	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	37	175	22	275	270	165	550	807	226	158	1241	15
Arrive On Green	0.12	0.12	0.12	0.08	0.24	0.24	0.57	0.57	0.57	0.05	0.66	0.66
Sat Flow, veh/h	79	1470	183	1781	1105	674	917	1416	397	1781	1873	23
Grp Volume(v), veh/h	180	0	0	144	0	343	17	0	1009	155	0	494
Grp Sat Flow(s),veh/h/ln	1732	0	0	1781	0	1779	917	0	1814	1781	0	1896
Q Serve(g_s), s	6.7	0.0	0.0	9.7	0.0	25.3	1.2	0.0	75.6	6.8	0.0	16.7
Cycle Q Clear(g_c), s	14.3	0.0	0.0	9.7	0.0	25.3	4.9	0.0	75.6	6.8	0.0	16.7
Prop In Lane	0.08		0.11	1.00		0.38	1.00		0.22	1.00		0.01
Lane Grp Cap(c), veh/h	234	0	0	275	0	435	550	0	1033	158	0	1256
V/C Ratio(X)	0.77	0.00	0.00	0.52	0.00	0.79	0.03	0.00	0.98	0.98	0.00	0.39
Avail Cap(c_a), veh/h	277	0	0	280	0	484	550	0	1033	158	0	1256
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.5	0.0	0.0	46.8	0.0	49.5	14.9	0.0	29.2	42.1	0.0	10.8
Incr Delay (d2), s/veh	10.6	0.0	0.0	0.8	0.0	7.7	0.1	0.0	22.9	64.5	0.0	0.9
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	7.0	0.0	0.0	4.4	0.0	12.2	0.3	0.0	38.1	8.4	0.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.1	0.0	0.0	47.6	0.0	57.2	15.0	0.0	52.1	106.5	0.0	11.7
LnGrp LOS	E	A	A	D	A	E	B	A	D	F	A	B
Approach Vol, veh/h		180			487			1026			649	
Approach Delay, s/veh		71.1			54.4			51.5			34.4	
Approach LOS		E			D			D			C	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		98.8		41.2	13.0	85.8	17.6	23.5				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 89		38.1	7.1	* 76	12.0	20.1				
Max Q Clear Time (g_c+I1), s		18.7		27.3	8.8	77.6	11.7	16.3				
Green Ext Time (p_c), s		4.5		1.6	0.0	0.0	0.0	0.3				

Intersection Summary		
HCM 6th Ctrl Delay		48.9
HCM 6th LOS		D

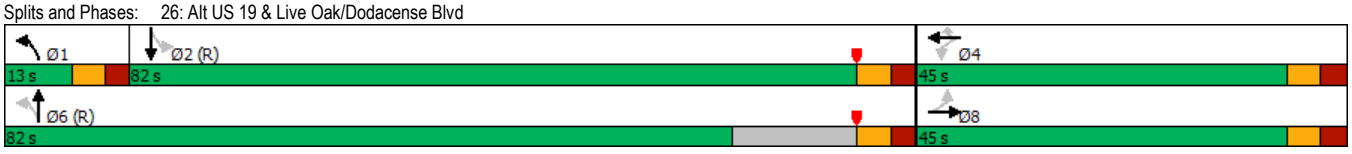
Notes

* HCM 6th 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)	133	47	55	22	43	208	63	926	16	119	647	78
Future Volume (vph)	133	47	55	22	43	208	63	926	16	119	647	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			312			175	
Travel Time (s)		9.5			11.3			7.1			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	111	0	24	47	226	68	1024	0	129	788	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	20.0		20.0	20.0	
Minimum Split (s)	11.4	11.4		24.4	24.4	24.4	10.9	26.2		26.2	26.2	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	13.0	82.0		82.0	82.0	
Total Split (%)	32.1%	32.1%		32.1%	32.1%	32.1%	9.3%	58.6%		58.6%	58.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.4	3.5		3.5	3.5	
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.5	2.7		2.7	2.7	
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)	6.4	6.4		6.4	6.4	6.4	5.9	6.2		6.2	6.2	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.74	0.38		0.14	0.17	0.64	0.17	0.71		0.48	0.62	
Control Delay	78.0	35.4		50.6	51.0	30.5	5.8	13.4		20.7	16.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	78.0	35.4		50.6	51.0	30.5	5.8	13.4		20.7	16.4	
Queue Length 50th (ft)	128	57		19	38	78	13	425		53	376	
Queue Length 95th (ft)	194	110		45	72	159	32	747		144	626	
Internal Link Dist (ft)		338			417			232			95	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	369	506		333	523	542	413	1433		268	1277	
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	0.39	0.22		0.07	0.09	0.42	0.16	0.71		0.48	0.62	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 22 (16%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	47	55	22	43	208	63	926	16	119	647	78
Future Volume (veh/h)	133	47	55	22	43	208	63	926	16	119	647	78
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	145	51	60	24	47	226	68	1007	17	129	703	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	217	137	161	202	327	277	394	1364	23	281	1093	132
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.74	0.74	0.66	0.66	0.66
Sat Flow, veh/h	1097	796	936	1302	1900	1610	1781	1848	31	542	1650	199
Grp Volume(v), veh/h	145	0	111	24	47	226	68	0	1024	129	0	788
Grp Sat Flow(s),veh/h/ln	1097	0	1732	1302	1900	1610	1781	0	1880	542	0	1849
Q Serve(g_s), s	18.1	0.0	7.9	2.3	2.9	18.9	1.6	0.0	43.9	25.2	0.0	35.1
Cycle Q Clear(g_c), s	21.0	0.0	7.9	10.3	2.9	18.9	1.6	0.0	43.9	58.5	0.0	35.1
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	217	0	298	202	327	277	394	0	1387	281	0	1225
V/C Ratio(X)	0.67	0.00	0.37	0.12	0.14	0.82	0.17	0.00	0.74	0.46	0.00	0.64
Avail Cap(c_a), veh/h	331	0	477	337	524	444	425	0	1387	281	0	1225
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	0.0	51.3	55.8	49.2	55.8	11.6	0.0	10.6	30.4	0.0	13.9
Incr Delay (d2), s/veh	3.5	0.0	0.8	0.3	0.2	6.2	0.2	0.0	3.6	5.3	0.0	2.6
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	5.2	0.0	3.5	0.8	1.4	8.2	0.6	0.0	17.8	3.7	0.0	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	0.0	52.0	56.1	49.4	62.0	11.8	0.0	14.1	35.7	0.0	16.5
LnGrp LOS	E	A	D	E	D	E	B	A	B	D	A	B
Approach Vol, veh/h		256			297			1092			917	
Approach Delay, s/veh		57.5			59.5			14.0			19.2	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.5	99.0		30.5		109.5		30.5				
Change Period (Y+Rc), s	5.9	* 6.2		6.4		* 6.2		6.4				
Max Green Setting (Gmax), s	7.1	* 76		38.6		* 76		38.6				
Max Q Clear Time (g_c+I1), s	3.6	60.5		20.9		45.9		23.0				
Green Ext Time (p_c), s	0.0	6.5		1.0		10.5		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		25.5	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

TOTAL CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	4	207	3	0	4	95	1234	24	76	3453	50
Future Volume (vph)	36	4	207	3	0	4	95	1234	24	76	3453	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			2368			2676	
Travel Time (s)		13.4			6.1			29.4			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	1%	0%	0%	25%	5%	3%	0%	0%	1%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	220	0	0	7	0	99	1285	25	79	3597	52
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.54	0.77			0.07		0.69	0.34	0.02	0.45	0.91	0.04
Control Delay	135.5	29.0			1.3		122.7	8.9	1.0	111.7	27.7	0.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	135.5	29.0			1.3		122.7	8.9	1.0	111.7	27.7	0.1
Queue Length 50th (ft)	60	6			0		135	275	2	122	1524	0
Queue Length 95th (ft)	108	111			0		236	178	3	192	1914	0
Internal Link Dist (ft)		608			232			2288			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	267	483			139		361	3786	1229	176	3932	1177
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	0.14	0.46			0.05		0.27	0.34	0.02	0.45	0.91	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: #US 19/US 19 & Beckett Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	4	207	3	0	4	95	1234	24	76	3453	50
Future Volume (veh/h)	36	4	207	3	0	4	95	1234	24	76	3453	50
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1900	1530	1826	1856	1900	1900	1885	1796
Adj Flow Rate, veh/h	38	4	112	3	0	1	99	1285	20	79	3597	46
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	0	1	0	0	25	5	3	0	0	1	7
Cap, veh/h	145	5	129	38	4	5	115	3990	1268	57	3873	1146
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.07	0.79	0.79	0.03	0.75	0.75
Sat Flow, veh/h	1405	56	1563	142	46	63	1739	5066	1610	1810	5147	1522
Grp Volume(v), veh/h	38	0	116	4	0	0	99	1285	20	79	3597	46
Grp Sat Flow(s),veh/h/ln	1405	0	1619	251	0	0	1739	1689	1610	1810	1716	1522
Q Serve(g_s), s	0.0	0.0	17.0	0.0	0.0	0.0	13.5	17.3	0.6	7.5	137.8	1.8
Cycle Q Clear(g_c), s	6.2	0.0	17.0	17.1	0.0	0.0	13.5	17.3	0.6	7.5	137.8	1.8
Prop In Lane	1.00		0.97	0.75		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	0	133	47	0	0	115	3990	1268	57	3873	1146
V/C Ratio(X)	0.26	0.00	0.87	0.09	0.00	0.00	0.86	0.32	0.02	1.40	0.93	0.04
Avail Cap(c_a), veh/h	300	0	312	198	0	0	366	3990	1268	57	3873	1146
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	103.9	0.0	108.9	101.8	0.0	0.0	110.9	7.2	5.5	116.3	24.4	7.6
Incr Delay (d2), s/veh	1.0	0.0	15.5	0.8	0.0	0.0	21.7	0.2	0.0	256.6	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	7.8	0.2	0.0	0.0	6.8	5.9	0.2	7.6	51.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	0.0	124.4	102.6	0.0	0.0	132.7	7.5	5.5	372.9	29.6	7.6
LnGrp LOS	F	A	F	F	A	A	F	A	A	F	C	A
Approach Vol, veh/h		154			4			1404			3722	
Approach Delay, s/veh		119.6			102.6			16.3			36.6	
Approach LOS		F			F			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.4	188.1		28.5	15.0	196.5		28.5				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	15.5	139.8		19.1	9.5	19.3		19.0				
Green Ext Time (p_c), s	0.4	0.0		0.0	0.0	18.2		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		33.7
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	21	72	17	14	15	101	1415	21	37	3569	34
Future Volume (vph)	42	21	72	17	14	15	101	1415	21	37	3569	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		635			737			2346			564	
Travel Time (s)		9.6			11.2			29.1			7.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	4%	0%	0%	0%	7%	4%	0%	3%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	77	0	33	16	109	1522	23	40	3838	37
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	6.4	30.0	30.0
Minimum Split (s)	26.7	26.7	26.7	26.7	26.7	26.7	14.6	37.6	37.6	14.0	37.6	37.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	34.0	171.0	171.0	14.0	151.0	151.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	14.2%	71.3%	71.3%	5.8%	62.9%	62.9%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.68	0.40		0.31	0.08	0.59	0.38	0.02	0.87	1.05	0.03
Control Delay		139.8	15.5		111.9	0.8	103.1	7.5	0.1	186.7	78.2	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		139.8	15.5		111.9	0.8	103.1	7.5	0.1	186.7	78.2	0.0
Queue Length 50th (ft)		108	0		51	0	169	304	0	64	~2398	0
Queue Length 95th (ft)		172	45		96	0	262	123	m1	m#83	#2455	m0
Internal Link Dist (ft)		555			657			2266			484	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		275	372		289	384	185	4008	1309	46	3662	1189
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		0.25	0.21		0.11	0.04	0.59	0.38	0.02	0.87	1.05	0.03

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 80 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 150

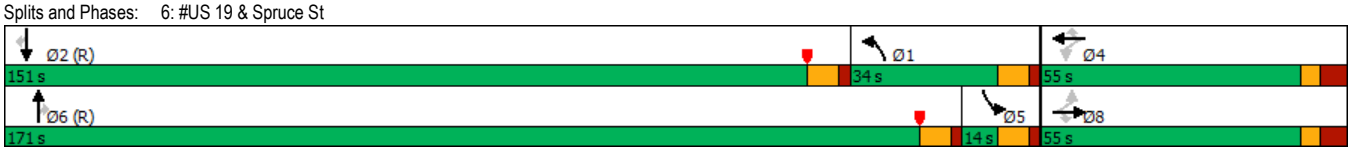
Control Type: Actuated-Coordinated

~ 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: 6: #US 19 & Spruce St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	21	72	17	14	15	101	1415	21	37	3569	34
Future Volume (veh/h)	42	21	72	17	14	15	101	1415	21	37	3569	34
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1900	1841	1900	1900	1900	1796	1841	1900	1856	1870	1900
Adj Flow Rate, veh/h	45	23	19	18	15	6	109	1522	22	40	3838	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	0	4	0	0	0	7	4	0	3	2	0
Cap, veh/h	86	35	114	41	28	117	394	3421	1096	259	3051	962
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.46	1.00	1.00	0.15	0.60	0.60
Sat Flow, veh/h	834	482	1560	251	390	1610	1711	5025	1610	1767	5106	1610
Grp Volume(v), veh/h	68	0	19	33	0	6	109	1522	22	40	3838	25
Grp Sat Flow(s),veh/h/ln	1317	0	1560	641	0	1610	1711	1675	1610	1767	1702	1610
Q Serve(g_s), s	0.0	0.0	2.7	3.0	0.0	0.8	9.5	0.0	0.0	4.7	143.4	1.5
Cycle Q Clear(g_c), s	12.4	0.0	2.7	15.4	0.0	0.8	9.5	0.0	0.0	4.7	143.4	1.5
Prop In Lane	0.66		1.00	0.55		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	0	114	70	0	117	394	3421	1096	259	3051	962
V/C Ratio(X)	0.56	0.00	0.17	0.47	0.00	0.05	0.28	0.44	0.02	0.15	1.26	0.03
Avail Cap(c_a), veh/h	307	0	301	260	0	311	394	3421	1096	259	3051	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00
Uniform Delay (d), s/veh	108.8	0.0	104.4	111.2	0.0	103.6	52.4	0.0	0.0	89.4	48.3	19.7
Incr Delay (d2), s/veh	4.1	0.0	0.7	4.9	0.0	0.2	0.3	0.4	0.0	0.3	118.9	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	4.3	0.0	1.1	2.2	0.0	0.4	3.8	0.1	0.0	2.2	91.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.9	0.0	105.1	116.1	0.0	103.7	52.7	0.4	0.0	89.7	167.2	19.8
LnGrp LOS	F	A	F	F	A	F	D	A	A	F	F	B
Approach Vol, veh/h		87			39			1653			3903	
Approach Delay, s/veh		111.2			114.2			3.8			165.5	
Approach LOS		F			F			A			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	62.8	151.0		26.2	42.8	171.0		26.2				
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7				
Max Green Setting (Gmax), s	26.4	143.4		* 46	6.4	163.4		* 46				
Max Q Clear Time (g_c+I1), s	11.5	145.4		17.4	6.7	2.0		14.4				
Green Ext Time (p_c), s	0.2	0.0		0.1	0.0	14.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		117.3	
HCM 6th LOS		F	

Notes

* HCM 6th 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)	0	0	11	0	0	3	0	1477	4	2	3656	62
Future Volume (vph)	0	0	11	0	0	3	0	1477	4	2	3656	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		410			292			564			818	
Travel Time (s)		9.3			6.6			7.0			10.1	
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 (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	11	0	0	3	0	1523	4	2	3769	64
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	11	0	0	3	0	1477	4	2	3656	62
Future Vol, veh/h	0	0	11	0	0	3	0	1477	4	2	3656	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	2
Mvmt Flow	0	0	11	0	0	3	0	1523	4	2	3769	64

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1885	-	-	762	-	0	0	1527	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	53	0	0	302	0	-	-	220	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	53	-	-	302	-	-	-	220	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	90.5	17	0	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	53	302	220	-	-
HCM Lane V/C Ratio	-	-	0.214	0.01	0.009	-	-
HCM Control Delay (s)	-	-	90.5	17	21.5	-	-
HCM Lane LOS	-	-	F	C	C	-	-
HCM 95th %tile Q(veh)	-	-	0.7	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	230	185	683	466	205	138	1321	558	243	3042	126
Future Volume (vph)	120	230	185	683	466	205	138	1321	558	243	3042	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			6497			2346	
Travel Time (s)		10.4			16.2			80.5			29.1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	1%	4%	2%	2%	2%	5%	5%	3%	5%	2%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	242	195	719	491	216	145	1391	587	256	3202	133
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.63	0.60	0.65	1.88	0.84	0.53	0.66	0.52	0.59	0.77	1.09	0.14
Control Delay	123.6	106.4	37.7	449.8	110.0	22.1	119.3	44.3	29.2	126.1	64.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	123.6	106.4	37.7	449.8	110.0	22.1	119.3	44.3	29.2	126.1	64.5	1.1
Queue Length 50th (ft)	103	196	81	~891	405	51	119	454	261	200	~2066	7
Queue Length 95th (ft)	145	239	178	#1029	462	148	165	846	806	m201	m#2104	m11
Internal Link Dist (ft)		606			987			6417			2266	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	351	577	370	383	627	427	394	2687	1000	331	2936	960
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.53	1.88	0.78	0.51	0.37	0.52	0.59	0.77	1.09	0.14

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

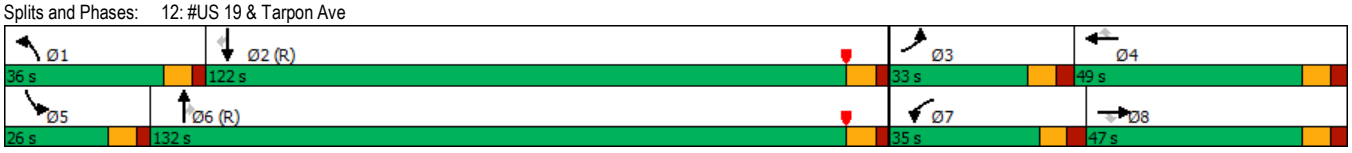
Control Type: Actuated-Coordinated

~ 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: 12: #US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	230	185	683	466	205	138	1321	558	243	3042	126
Future Volume (veh/h)	120	230	185	683	466	205	138	1321	558	243	3042	126
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1841	1870	1870	1870	1826	1826	1856	1826	1870	1856
Adj Flow Rate, veh/h	126	242	195	719	491	216	145	1391	587	256	3202	133
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	1	4	2	2	2	5	5	3	5	2	3
Cap, veh/h	157	489	213	386	719	321	177	2709	854	259	2899	893
Arrive On Green	0.05	0.14	0.14	0.11	0.20	0.20	0.05	0.54	0.54	0.15	1.00	1.00
Sat Flow, veh/h	3428	3582	1560	3456	3554	1585	3374	4985	1572	3374	5106	1572
Grp Volume(v), veh/h	126	242	195	719	491	216	145	1391	587	256	3202	133
Grp Sat Flow(s),veh/h/ln	1714	1791	1560	1728	1777	1585	1687	1662	1572	1687	1702	1572
Q Serve(g_s), s	8.7	15.0	29.6	26.8	30.7	30.2	10.2	42.4	65.3	18.2	136.2	0.0
Cycle Q Clear(g_c), s	8.7	15.0	29.6	26.8	30.7	30.2	10.2	42.4	65.3	18.2	136.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	157	489	213	386	719	321	177	2709	854	259	2899	893
V/C Ratio(X)	0.80	0.49	0.91	1.86	0.68	0.67	0.82	0.51	0.69	0.99	1.10	0.15
Avail Cap(c_a), veh/h	354	579	252	386	719	321	399	2709	854	259	2899	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	113.4	95.9	102.2	106.6	88.6	88.4	112.6	34.7	39.9	101.5	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.8	31.9	398.3	2.7	5.4	9.1	0.7	4.5	14.4	47.7	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	4.1	7.1	13.9	33.4	14.4	12.9	4.7	17.2	26.2	7.8	12.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.4	96.7	134.2	504.9	91.2	93.8	121.7	35.4	44.4	115.9	47.7	0.0
LnGrp LOS	F	F	F	F	F	F	F	D	D	F	F	A
Approach Vol, veh/h		563			1426			2123			3591	
Approach Delay, s/veh		115.4			300.2			43.8			50.8	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	143.8	19.2	56.8	26.0	138.0	35.0	41.0
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	12.2	138.2	10.7	32.7	20.2	67.3	28.8	31.6
Green Ext Time (p_c), s	0.4	0.0	0.3	2.4	0.0	27.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	99.7
HCM 6th LOS	F

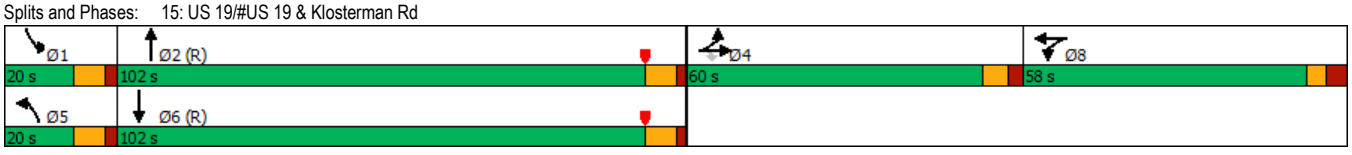
Notes

* HCM 6th 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)	418	15	193	22	14	7	186	1623	16	22	3822	535
Future Volume (vph)	418	15	193	22	14	7	186	1623	16	22	3822	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			1992	
Travel Time (s)		10.7			7.0			18.5			24.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	0%	1%	0%	8%	0%	4%	3%	0%	0%	2%	2%
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	304	152	203	0	45	0	196	1725	0	23	4586	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		13.6	27.6	
Total Split (s)	60.0	60.0	60.0	58.0	58.0		20.0	102.0		20.0	102.0	
Total Split (%)	25.0%	25.0%	25.0%	24.2%	24.2%		8.3%	42.5%		8.3%	42.5%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	0.76	0.76	0.54		0.53		0.57	0.40		0.38	1.21	
Control Delay	113.9	123.6	14.2		125.4		109.7	18.6		96.2	139.7	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	113.9	123.6	14.2		125.4		109.7	18.6		96.2	139.7	
Queue Length 50th (ft)	262	262	0		67		156	346		36	~2536	
Queue Length 95th (ft)	315	356	91		121		208	452		m39	m#2146	
Internal Link Dist (ft)		546			331			1416			1912	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	698	353	508		373		345	4310		93	3781	
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	0.44	0.43	0.40		0.12		0.57	0.40		0.25	1.21	

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 135 (56%), Referenced to phase 2:NBT and 6:SBT, 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: 15: US 19/#US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	15	193	22	14	7	186	1623	16	22	3822	535
Future Volume (veh/h)	418	15	193	22	14	7	186	1623	16	22	3822	535
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1885	1900	1781	1900	1841	1856	1900	1900	1870	1870
Adj Flow Rate, veh/h	451	0	95	23	15	7	196	1708	13	23	4023	538
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	0	1	0	8	0	4	3	0	0	2	2
Cap, veh/h	532	0	160	29	19	9	176	4743	36	35	4013	505
Arrive On Green	0.10	0.00	0.10	0.03	0.03	0.03	0.05	0.72	0.72	0.02	0.69	0.69
Sat Flow, veh/h	5302	0	1598	864	564	263	3401	6584	50	1810	5830	734
Grp Volume(v), veh/h	451	0	95	45	0	0	196	1242	479	23	3287	1274
Grp Sat Flow(s),veh/h/ln	1767	0	1598	1691	0	0	1700	1596	1847	1810	1609	1738
Q Serve(g_s), s	20.1	0.0	13.7	6.3	0.0	0.0	12.4	23.5	23.5	3.0	159.8	165.2
Cycle Q Clear(g_c), s	20.1	0.0	13.7	6.3	0.0	0.0	12.4	23.5	23.5	3.0	159.8	165.2
Prop In Lane	1.00		1.00	0.51		0.16	1.00		0.03	1.00		0.42
Lane Grp Cap(c), veh/h	532	0	160	57	0	0	176	3449	1330	35	3321	1196
V/C Ratio(X)	0.85	0.00	0.59	0.79	0.00	0.00	1.12	0.36	0.36	0.65	0.99	1.06
Avail Cap(c_a), veh/h	1162	0	350	355	0	0	176	3449	1330	93	3321	1196
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	106.1	0.0	103.3	115.1	0.0	0.0	113.8	12.7	12.7	116.8	36.6	37.4
Incr Delay (d2), s/veh	3.8	0.0	3.5	20.7	0.0	0.0	102.2	0.3	0.8	13.8	13.4	45.2
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	9.5	0.0	5.9	3.2	0.0	0.0	8.0	8.3	9.8	1.6	61.8	79.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.0	0.0	106.7	135.7	0.0	0.0	216.0	13.0	13.4	130.6	50.0	82.6
LnGrp LOS	F	A	F	F	A	A	F	B	B	F	D	F
Approach Vol, veh/h		546			45			1917			4584	
Approach Delay, s/veh		109.4			135.7			33.8			59.4	
Approach LOS		F			F			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	180.5		31.5	20.0	172.8		15.7				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	12.4	94.4		52.6	12.4	94.4		50.4				
Max Q Clear Time (g_c+I1), s	5.0	25.5		22.1	14.4	167.2		8.3				
Green Ext Time (p_c), s	0.0	37.2		2.0	0.0	0.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		56.8
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	110	5	163	110	50	6	350	157	107	641	6
Future Volume (vph)	2	110	5	163	110	50	6	350	157	107	641	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	0	166	163	0	6	517	0	109	660	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	31.0	31.0		20.0	51.0		58.0	58.0		21.0	79.0	
Total Split (%)	23.8%	23.8%		15.4%	39.2%		44.6%	44.6%		16.2%	60.8%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.61		0.59	0.35		0.02	0.52		0.23	0.54	
Control Delay		68.1		47.4	36.2		16.8	21.6		10.6	15.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		68.1		47.4	36.2		16.8	21.6		10.6	15.0	
Queue Length 50th (ft)		97		114	99		2	260		33	284	
Queue Length 95th (ft)		156		171	156		11	413		63	431	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		348		289	626		387	988		531	1232	
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		0.34		0.57	0.26		0.02	0.52		0.21	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 59 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 19: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	110	5	163	110	50	6	350	157	107	641	6
Future Volume (veh/h)	2	110	5	163	110	50	6	350	157	107	641	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	2	112	5	166	112	51	6	357	160	109	654	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	29	145	6	307	278	127	450	729	327	499	1269	12
Arrive On Green	0.08	0.08	0.08	0.10	0.23	0.23	0.59	0.59	0.59	0.04	0.67	0.67
Sat Flow, veh/h	11	1790	79	1781	1236	563	787	1233	553	1781	1880	17
Grp Volume(v), veh/h	119	0	0	166	0	163	6	0	517	109	0	660
Grp Sat Flow(s),veh/h/ln	1880	0	0	1781	0	1799	787	0	1786	1781	0	1897
Q Serve(g_s), s	1.2	0.0	0.0	10.8	0.0	10.0	0.5	0.0	21.7	3.0	0.0	22.5
Cycle Q Clear(g_c), s	8.1	0.0	0.0	10.8	0.0	10.0	12.2	0.0	21.7	3.0	0.0	22.5
Prop In Lane	0.02		0.04	1.00		0.31	1.00		0.31	1.00		0.01
Lane Grp Cap(c), veh/h	180	0	0	307	0	405	450	0	1056	499	0	1280
V/C Ratio(X)	0.66	0.00	0.00	0.54	0.00	0.40	0.01	0.00	0.49	0.22	0.00	0.52
Avail Cap(c_a), veh/h	376	0	0	324	0	610	450	0	1056	638	0	1280
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	0.0	46.5	0.0	42.9	16.3	0.0	15.3	11.2	0.0	10.5
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.7	0.0	0.6	0.1	0.0	1.6	0.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	4.9	0.0	4.6	0.1	0.0	9.1	1.2	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	0.0	0.0	47.2	0.0	43.6	16.3	0.0	16.9	11.3	0.0	12.0
LnGrp LOS	E	A	A	D	A	D	B	A	B	B	A	B
Approach Vol, veh/h		119			329			523			769	
Approach Delay, s/veh		62.7			45.4			16.9			11.9	
Approach LOS		E			D			B			B	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		93.8		36.2	10.9	82.9	18.8	17.4				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 73		44.1	15.1	* 52	14.0	24.1				
Max Q Clear Time (g_c+I1), s		24.5		12.0	5.0	23.7	12.8	10.1				
Green Ext Time (p_c), s		6.7		1.0	0.1	4.6	0.0	0.4				

Intersection Summary		
HCM 6th Ctrl Delay		23.2
HCM 6th LOS		C

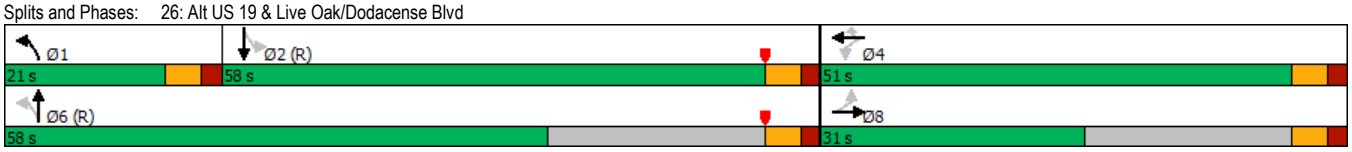
Notes

* HCM 6th 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)	26	10	7	16	15	117	12	426	6	148	809	38
Future Volume (vph)	26	10	7	16	15	117	12	426	6	148	809	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			1327			1658	
Travel Time (s)		9.5			11.3			30.2			37.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	19	0	17	16	127	13	470	0	161	920	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	20.0		20.0	20.0	
Minimum Split (s)	23.5	23.5		23.5	23.5	23.5	10.5	25.5		25.5	25.5	
Total Split (s)	31.0	31.0		51.0	51.0	51.0	21.0	58.0		58.0	58.0	
Total Split (%)	23.8%	23.8%		39.2%	39.2%	39.2%	16.2%	44.6%		44.6%	44.6%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.32	0.16		0.19	0.13	0.57	0.03	0.29		0.22	0.60	
Control Delay	66.6	42.1		61.1	58.3	19.9	1.9	2.6		4.5	7.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	66.6	42.1		61.1	58.3	19.9	1.9	2.6		4.5	7.6	
Queue Length 50th (ft)	23	9		14	13	0	1	57		18	163	
Queue Length 95th (ft)	55	34		39	37	62	5	102		66	488	
Internal Link Dist (ft)		338			417			1247			1578	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	482	622		495	665	647	538	1598		736	1526	
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	0.06	0.03		0.03	0.02	0.20	0.02	0.29		0.22	0.60	

Intersection Summary	
Area Type:	Other
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	10	7	16	15	117	12	426	6	148	809	38
Future Volume (veh/h)	26	10	7	16	15	117	12	426	6	148	809	38
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	28	11	8	17	16	127	13	463	7	161	879	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	166	99	72	179	184	156	404	1516	23	744	1361	63
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.01	0.82	0.82	0.76	0.76	0.76
Sat Flow, veh/h	1235	1023	744	1416	1900	1610	1781	1852	28	909	1787	83
Grp Volume(v), veh/h	28	0	19	17	16	127	13	0	470	161	0	920
Grp Sat Flow(s),veh/h/ln	1235	0	1766	1416	1900	1610	1781	0	1880	909	0	1870
Q Serve(g_s), s	2.7	0.0	1.3	1.4	1.0	10.1	0.2	0.0	7.9	6.8	0.0	30.0
Cycle Q Clear(g_c), s	3.7	0.0	1.3	2.7	1.0	10.1	0.2	0.0	7.9	7.3	0.0	30.0
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.01	1.00		0.04
Lane Grp Cap(c), veh/h	166	0	171	179	184	156	404	0	1539	744	0	1425
V/C Ratio(X)	0.17	0.00	0.11	0.10	0.09	0.81	0.03	0.00	0.31	0.22	0.00	0.65
Avail Cap(c_a), veh/h	288	0	346	537	665	564	590	0	1539	744	0	1425
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.2	0.0	53.6	54.8	53.5	57.6	6.9	0.0	2.9	4.6	0.0	7.3
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.2	0.2	9.8	0.0	0.0	0.5	0.7	0.0	2.3
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	0.0	0.6	0.5	0.5	4.5	0.1	0.0	2.5	1.3	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	0.0	53.9	55.1	53.7	67.4	6.9	0.0	3.4	5.3	0.0	9.5
LnGrp LOS	E	A	D	E	D	E	A	A	A	A	A	A
Approach Vol, veh/h		47			160			483			1081	
Approach Delay, s/veh		54.9			64.7			3.5			8.9	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.4	104.5		18.1		111.9		18.1				
Change Period (Y+Rc), s	5.5	5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s	15.5	52.5		45.5		52.5		25.5				
Max Q Clear Time (g_c+I1), s	2.2	32.0		12.1		9.9		5.7				
Green Ext Time (p_c), s	0.0	8.5		0.5		3.4		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			13.7
HCM 6th LOS			B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	108	1417	37	0	3730
Future Volume (vph)	0	108	1417	37	0	3730
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		300	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		55			55
Link Distance (ft)	1221		593			812
Travel Time (s)	27.8		7.4			10.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	117	1540	40	0	4054
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	108	1417	37	0	3730
Future Volume (Veh/h)	0	108	1417	37	0	3730
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	117	1540	40	0	4054
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2891	513			1580	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2891	513			1580	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	77			100	
cM capacity (veh/h)	13	506			412	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	117	513	513	513	40	1351	1351	1351
Volume Left	0	0	0	0	0	0	0	0
Volume Right	117	0	0	0	40	0	0	0
cSH	506	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.30	0.30	0.30	0.02	0.79	0.79	0.79
Queue Length 95th (ft)	22	0	0	0	0	0	0	0
Control Delay (s)	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B							
Approach Delay (s)	14.2	0.0				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	75.4%	ICU Level of Service		D
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	108	1417	37	0	3730
Future Vol, veh/h	0	108	1417	37	0	3730
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	300	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	117	1540	40	0	4054

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	770	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	*594	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*594	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	594	-
HCM Lane V/C Ratio	-	-	0.198	-
HCM Control Delay (s)	-	-	12.5	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.7	-

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	70	1455	3693	0
Future Volume (vph)	0	0	70	1455	3693	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	400			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		50			
Link Speed (mph)	30			55	55	
Link Distance (ft)	208			812	2368	
Travel Time (s)	4.7			10.1	29.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	76	1582	4014	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	70	1455	3693	0
Future Volume (Veh/h)	0	0	70	1455	3693	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	76	1582	4014	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	4693	1338	4014			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4693	1338	4014			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	100	0			
cM capacity (veh/h)	0	143	43			

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	76	527	527	527	1338	1338	1338
Volume Left	76	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	43	1700	1700	1700	1700	1700	1700
Volume to Capacity	1.75	0.31	0.31	0.31	0.79	0.79	0.79
Queue Length 95th (ft)	194	0	0	0	0	0	0
Control Delay (s)	564.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F						
Approach Delay (s)	25.9				0.0		
Approach LOS							

Intersection Summary				
Average Delay	7.6			
Intersection Capacity Utilization	74.7%	ICU Level of Service	D	
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	1417	0	13	3693
Future Volume (vph)	0	0	1417	0	13	3693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	500	
Storage Lanes	0	0		0	1	
Taper Length (ft)	25				50	
Link Speed (mph)	30		55			55
Link Distance (ft)	365		818			593
Travel Time (s)	8.3		10.1			7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1540	0	14	4014
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	1417	0	13	3693
Future Volume (Veh/h)	0	0	1417	0	13	3693
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1540	0	14	4014
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2906	513			1540	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2906	513			1540	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			97	
cM capacity (veh/h)	12	506			427	

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	513	513	513	14	1338	1338	1338
Volume Left	0	0	0	14	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	1700	1700	1700	427	1700	1700	1700
Volume to Capacity	0.30	0.30	0.30	0.03	0.79	0.79	0.79
Queue Length 95th (ft)	0	0	0	3	0	0	0
Control Delay (s)	0.0	0.0	0.0	13.7	0.0	0.0	0.0
Lane LOS				B			
Approach Delay (s)	0.0			0.0			
Approach LOS							

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	74.7%	ICU Level of Service	D	
Analysis Period (min)	15			

Arterial Level of Service: NB #US 19

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Tarpon Ave	I	55	105.2	44.3	149.5	1.61	38.7	B
Spruce St	I	55	34.7	7.5	42.2	0.44	37.9	B
Beckett Way	I	55	64.0	8.9	72.9	0.98	48.2	A
Total	I		203.9	60.7	264.6	3.03	41.2	B

Arterial Level of Service: SB #US 19

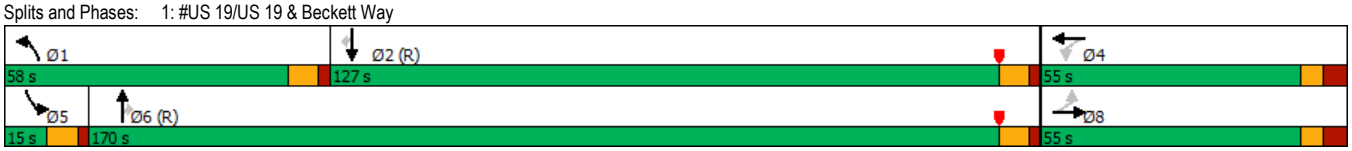
Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Spruce St	I	55	64.0	78.2	142.2	0.98	24.7	D
Tarpon Ave	I	55	34.7	64.5	99.2	0.44	16.1	E
Klosterman Rd	I	55	105.2	139.7	244.9	1.61	23.6	D
Total	I		203.9	282.4	486.3	3.03	22.4	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	1	176	55	4	46	178	3663	6	19	2097	86
Future Volume (vph)	106	1	176	55	4	46	178	3663	6	19	2097	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		0	0		0	650		635	300		755
Storage Lanes	1		0	0		0	1		1	1		1
Taper Length (ft)	50			25			125			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			55			55	
Link Distance (ft)		688			312			1543			2676	
Travel Time (s)		13.4			6.1			19.1			33.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	2%	0%	0%	0%	1%	1%	0%	0%	1%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	184	0	0	109	0	185	3816	6	20	2184	90
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4					6			2
Detector Phase	8	8		4	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	54.7	54.7		51.7	51.7		14.5	29.5	29.5	14.5	29.5	29.5
Total Split (s)	55.0	55.0		55.0	55.0		58.0	170.0	170.0	15.0	127.0	127.0
Total Split (%)	22.9%	22.9%		22.9%	22.9%		24.2%	70.8%	70.8%	6.3%	52.9%	52.9%
Yellow Time (s)	4.1	4.1		4.1	4.1		5.5	5.5	5.5	5.5	5.5	5.5
All-Red Time (s)	4.6	4.6		4.6	4.6		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	8.7			8.7		7.5	7.5	7.5	7.5	7.5	7.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	0.75	0.52			1.18		0.80	0.99	0.00	0.30	0.66	0.08
Control Delay	129.1	14.5			220.6		118.7	20.9	0.0	123.1	29.1	3.1
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	129.1	14.5			220.6		118.7	20.9	0.0	123.1	29.1	3.1
Queue Length 50th (ft)	172	1			~184		304	~576	0	32	759	0
Queue Length 95th (ft)	244	85			#289		m299	m#2221	m0	68	1014	30
Internal Link Dist (ft)		608			232			1463			2596	
Turn Bay Length (ft)	85						650		635	300		755
Base Capacity (vph)	228	453			136		376	3861	1229	68	3326	1068
Starvation Cap Reductn	0	0			0		0	0	0	0	0	0
Spillback Cap Reductn	0	0			0		0	0	0	0	0	0
Storage Cap Reductn	0	0			0		0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41			0.80		0.49	0.99	0.00	0.29	0.66	0.08

Intersection Summary

Area Type: Other
Cycle Length: 240
Actuated Cycle Length: 240
Offset: 180 (75%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
Natural Cycle: 150
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: 1: #US 19/US 19 & Beckett Way



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	1	176	55	4	46	178	3663	6	19	2097	86
Future Volume (veh/h)	106	1	176	55	4	46	178	3663	6	19	2097	86
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1870	1900	1900	1900	1885	1885	1900	1900	1885	1885
Adj Flow Rate, veh/h	110	1	58	57	4	18	185	3816	5	20	2184	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	0	2	0	0	0	1	1	0	0	1	1
Cap, veh/h	159	3	150	88	9	21	204	4041	1264	39	3568	1108
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.79	0.79	0.02	0.69	0.69
Sat Flow, veh/h	1401	27	1587	659	94	222	1795	5147	1610	1810	5147	1598
Grp Volume(v), veh/h	110	0	59	79	0	0	185	3816	5	20	2184	48
Grp Sat Flow(s),veh/h/ln	1401	0	1614	976	0	0	1795	1716	1610	1810	1716	1598
Q Serve(g_s), s	0.0	0.0	8.2	12.1	0.0	0.0	24.4	147.8	0.2	2.6	54.3	2.3
Cycle Q Clear(g_c), s	19.1	0.0	8.2	20.3	0.0	0.0	24.4	147.8	0.2	2.6	54.3	2.3
Prop In Lane	1.00		0.98	0.72		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	0	153	118	0	0	204	4041	1264	39	3568	1108
V/C Ratio(X)	0.69	0.00	0.39	0.67	0.00	0.00	0.91	0.94	0.00	0.51	0.61	0.04
Avail Cap(c_a), veh/h	297	0	311	259	0	0	378	4041	1264	57	3568	1108
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	107.0	0.0	102.1	110.6	0.0	0.0	105.2	21.4	5.6	116.2	19.6	11.6
Incr Delay (d2), s/veh	5.3	0.0	1.6	6.4	0.0	0.0	18.6	6.1	0.0	14.2	0.8	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	7.1	0.0	3.6	5.2	0.0	0.0	12.4	53.0	0.1	1.4	21.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.3	0.0	103.7	117.0	0.0	0.0	123.8	27.5	5.6	130.4	20.4	11.7
LnGrp LOS	F	A	F	F	A	A	F	C	A	F	C	B
Approach Vol, veh/h		169			79			4006			2252	
Approach Delay, s/veh		109.3			117.0			31.9			21.2	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.7	173.9		31.4	12.7	196.0		31.4				
Change Period (Y+Rc), s	7.5	7.5		8.7	7.5	7.5		8.7				
Max Green Setting (Gmax), s	50.5	119.5		46.3	7.5	162.5		46.3				
Max Q Clear Time (g_c+I1), s	26.4	56.3		22.3	4.6	149.8		21.1				
Green Ext Time (p_c), s	0.8	41.7		0.3	0.0	12.6		0.6				

Intersection Summary			
HCM 6th Ctrl Delay			31.2
HCM 6th LOS			C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	17	0	0	5	0	3954	12	5	2334	38
Future Volume (vph)	0	0	17	0	0	5	0	3954	12	5	2334	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		500	420		420
Storage Lanes	0		1	0		1	0		1	1		1
Taper Length (ft)	25			25			25			115		
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		410			292			558			1851	
Travel Time (s)		9.3			6.6			6.9			22.9	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	18	0	0	5	0	4119	13	5	2431	40
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	17	0	0	5	0	3954	12	5	2334	38
Future Vol, veh/h	0	0	17	0	0	5	0	3954	12	5	2334	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	500	420	-	420
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	0
Mvmt Flow	0	0	18	0	0	5	0	4119	13	5	2431	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1216	-	-	2060	-	0	0	4132	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.1	-	-	7.1	-	-	-	5.3	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.9	-	-	3.9	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	0	0	151	0	0	40	0	-	-	10	-	-
Stage 1	0	0	-	0	0	-	0	-	-	-	-	-
Stage 2	0	0	-	0	0	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	151	-	-	40	-	-	-	10	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32	108	0	1.2
HCM LOS	D	F		

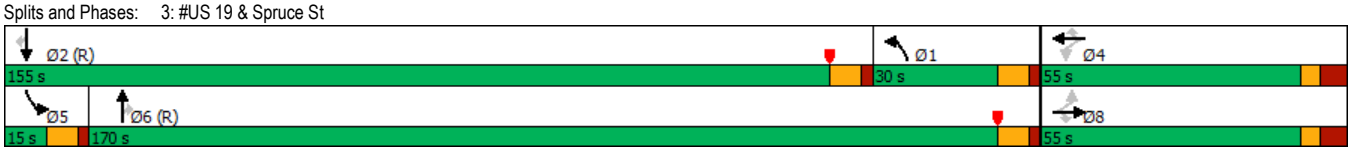
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	151	40	10	-	-
HCM Lane V/C Ratio	-	-	0.117	0.13	0.521	-	-
HCM Control Delay (s)	-	-	32	108	$ 567	-	-
HCM Lane LOS	-	-	D	F	F	-	-
HCM 95th %tile Q(veh)	-	-	0.4	0.4	1.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	17	198	33	22	31	83	3704	23	31	2308	49
Future Volume (vph)	175	17	198	33	22	31	83	3704	23	31	2308	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	160		160	0		50	300		500	275		175
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	70			25			125			115		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		635			737			2337			558	
Travel Time (s)		14.4			16.8			29.0			6.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	0%	0%	0%	1%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	208	0	58	33	87	3899	24	33	2429	52
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6			2
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	30.0	30.0	7.0	30.0	30.0
Minimum Split (s)	54.7	54.7	54.7	54.7	54.7	54.7	14.6	42.6	42.6	14.6	42.6	42.6
Total Split (s)	55.0	55.0	55.0	55.0	55.0	55.0	30.0	170.0	170.0	15.0	155.0	155.0
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	12.5%	70.8%	70.8%	6.3%	64.6%	64.6%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	5.6	5.6	5.6	5.6	5.6	5.6
All-Red Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	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)		8.7	8.7		8.7	8.7	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag							Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio		0.91	0.54		0.42	0.10	0.52	1.07	0.02	0.55	0.74	0.05
Control Delay		136.4	32.9		97.4	0.5	83.2	49.8	0.0	116.9	53.5	13.8
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		136.4	32.9		97.4	0.5	83.2	49.8	0.0	116.9	53.5	13.8
Queue Length 50th (ft)		317	94		83	0	145	~2625	0	52	1087	10
Queue Length 95th (ft)		#447	194		142	0	m118	m313	m0	m88	1409	m55
Internal Link Dist (ft)		555			657			2257			478	
Turn Bay Length (ft)			160			50	300		500	275		175
Base Capacity (vph)		255	423		158	384	166	3648	1164	61	3278	1052
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		0.79	0.49		0.37	0.09	0.52	1.07	0.02	0.54	0.74	0.05

Intersection Summary

Area Type: Other
Cycle Length: 240
Actuated Cycle Length: 240
Offset: 115 (48%), Referenced to phase 2:SBT and 6:NBT, 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: 3: #US 19 & Spruce St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	17	198	33	22	31	83	3704	23	31	2308	49
Future Volume (veh/h)	175	17	198	33	22	31	83	3704	23	31	2308	49
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1900	1900	1900	1885	1885	1900	1900	1885	1900
Adj Flow Rate, veh/h	184	18	59	35	23	7	87	3899	21	33	2429	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	0	0	0	1	1	0	0	1	0
Cap, veh/h	238	20	308	49	27	311	168	3508	1097	47	3161	989
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.68	0.68	0.03	0.61	0.61
Sat Flow, veh/h	1083	106	1598	132	140	1610	1795	5147	1610	1810	5147	1610
Grp Volume(v), veh/h	202	0	59	58	0	7	87	3899	21	33	2429	36
Grp Sat Flow(s),veh/h/ln	1189	0	1598	272	0	1610	1795	1716	1610	1810	1716	1610
Q Serve(g_s), s	0.0	0.0	7.4	6.6	0.0	0.8	11.1	163.6	1.0	4.3	82.8	2.1
Cycle Q Clear(g_c), s	39.7	0.0	7.4	46.3	0.0	0.8	11.1	163.6	1.0	4.3	82.8	2.1
Prop In Lane	0.91		1.00	0.60		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	308	76	0	311	168	3508	1097	47	3161	989
V/C Ratio(X)	0.78	0.00	0.19	0.76	0.00	0.02	0.52	1.11	0.02	0.70	0.77	0.04
Avail Cap(c_a), veh/h	258	0	308	76	0	311	168	3508	1097	56	3161	989
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	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	94.2	0.0	81.2	109.4	0.0	78.5	103.7	38.2	12.3	116.0	33.8	18.3
Incr Delay (d2), s/veh	14.5	0.0	0.3	34.7	0.0	0.0	0.3	50.7	0.0	27.1	1.9	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	13.4	0.0	3.1	4.4	0.0	0.4	5.2	79.8	0.4	2.4	33.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.6	0.0	81.5	144.1	0.0	78.5	103.9	88.9	12.3	143.1	35.7	18.3
LnGrp LOS	F	A	F	F	A	E	F	F	B	F	D	B
Approach Vol, veh/h		261			65			4007			2498	
Approach Delay, s/veh		102.5			137.1			88.8			36.9	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.0	155.0		55.0	13.8	171.2		55.0
Change Period (Y+Rc), s	7.6	7.6		* 8.7	7.6	7.6		* 8.7
Max Green Setting (Gmax), s	22.4	147.4		* 46	7.4	162.4		* 46
Max Q Clear Time (g_c+I1), s	13.1	84.8		48.3	6.3	165.6		41.7
Green Ext Time (p_c), s	0.1	34.9		0.0	0.0	0.0		0.5

Intersection Summary		
HCM 6th Ctrl Delay		70.8
HCM 6th LOS		E

Notes

* HCM 6th 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)	409	394	203	561	395	293	197	3227	1015	333	2000	154
Future Volume (vph)	409	394	203	561	395	293	197	3227	1015	333	2000	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		0	500		270	320		200	300		200
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	100			80			230			300		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		686			1067			4402			2337	
Travel Time (s)		10.4			16.2			54.6			29.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	0%	1%	1%	1%	4%	1%	1%	1%	2%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	431	415	214	591	416	308	207	3397	1068	351	2105	162
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Detector Phase	3	8	8	7	4	4	1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	10.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.2	26.2	26.2	15.2	26.2	26.2	14.6	27.6	27.6	14.6	27.6	27.6
Total Split (s)	33.0	47.0	47.0	35.0	49.0	49.0	36.0	132.0	132.0	26.0	122.0	122.0
Total Split (%)	13.8%	19.6%	19.6%	14.6%	20.4%	20.4%	15.0%	55.0%	55.0%	10.8%	50.8%	50.8%
Yellow Time (s)	4.9	4.9	4.9	4.9	4.9	4.9	5.2	5.2	5.2	5.2	5.2	5.2
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	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	0.0	0.0
Total Lost Time (s)	8.2	8.2	8.2	8.2	8.2	8.2	7.6	7.6	7.6	7.6	7.6	7.6
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
v/c Ratio	1.20	0.83	0.55	1.26	0.69	0.83	0.73	1.28	1.13	1.33	0.80	0.18
Control Delay	197.3	115.2	19.6	208.2	100.1	75.1	135.8	165.6	95.9	230.2	32.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	197.3	115.2	19.6	208.2	100.1	75.1	135.8	165.6	95.9	230.2	32.4	1.8
Queue Length 50th (ft)	~425	343	30	~609	332	296	178	~2477	~883	~368	1155	17
Queue Length 95th (ft)	#554	405	126	#806	402	#458	m181	m#2345	m#989	#501	785	m11
Internal Link Dist (ft)		606			987			4322			2257	
Turn Bay Length (ft)	375			500		270	320		200	300		200
Base Capacity (vph)	358	583	420	468	607	369	410	2662	944	263	2635	893
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.71	0.51	1.26	0.69	0.83	0.50	1.28	1.13	1.33	0.80	0.18

Intersection Summary

Area Type: Other

Cycle Length: 240

Actuated Cycle Length: 240

Offset: 100 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 145

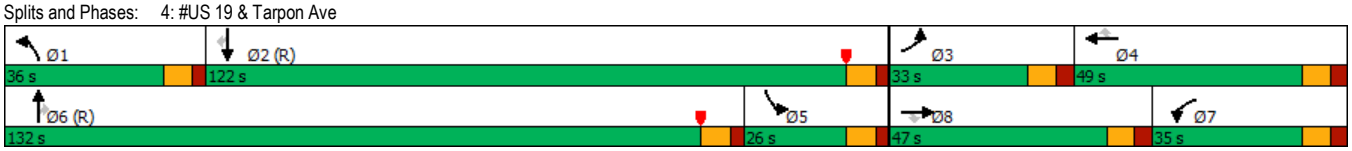
Control Type: Actuated-Coordinated

~ 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: 4: #US 19 & Tarpon Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	409	394	203	561	395	293	197	3227	1015	333	2000	154
Future Volume (veh/h)	409	394	203	561	395	293	197	3227	1015	333	2000	154
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1885	1885	1885	1841	1885	1885	1885	1870	1885	1900
Adj Flow Rate, veh/h	431	415	0	591	416	0	207	3397	0	351	2105	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	1	1	1	4	1	1	1	2	1	0
Cap, veh/h	360	464		389	490		241	2668		380	2877	
Arrive On Green	0.10	0.13	0.00	0.11	0.14	0.00	0.07	0.52	0.00	0.15	0.74	0.00
Sat Flow, veh/h	3483	3610	1598	3483	3582	1560	3483	5147	1598	3456	5147	1610
Grp Volume(v), veh/h	431	415	0	591	416	0	207	3397	0	351	2105	0
Grp Sat Flow(s),veh/h/ln	1742	1805	1598	1742	1791	1560	1742	1716	1598	1728	1716	1610
Q Serve(g_s), s	24.8	27.2	0.0	26.8	27.2	0.0	14.1	124.4	0.0	24.1	55.2	0.0
Cycle Q Clear(g_c), s	24.8	27.2	0.0	26.8	27.2	0.0	14.1	124.4	0.0	24.1	55.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	360	464		389	490		241	2668		380	2877	
V/C Ratio(X)	1.20	0.89		1.52	0.85		0.86	1.27		0.92	0.73	
Avail Cap(c_a), veh/h	360	584		389	609		412	2668		380	2877	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	107.6	103.0	0.0	106.6	101.2	0.0	110.5	57.8	0.0	101.5	20.6	0.0
Incr Delay (d2), s/veh	112.8	14.0	0.0	246.6	9.2	0.0	8.8	126.1	0.0	20.0	1.0	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	16.9	13.7	0.0	25.5	13.3	0.0	6.7	83.0	0.0	11.5	18.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	220.4	116.9	0.0	353.2	110.3	0.0	119.4	183.9	0.0	121.5	21.7	0.0
LnGrp LOS	F	F		F	F		F	F		F	C	
Approach Vol, veh/h		846	A		1007	A		3604	A		2456	A
Approach Delay, s/veh		169.6			252.9			180.2			36.0	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	141.8	33.0	41.0	34.0	132.0	35.0	39.0
Change Period (Y+Rc), s	7.6	7.6	* 8.2	* 8.2	7.6	7.6	* 8.2	* 8.2
Max Green Setting (Gmax), s	28.4	114.4	* 25	* 41	18.4	124.4	* 27	* 39
Max Q Clear Time (g_c+I1), s	16.1	57.2	26.8	29.2	26.1	126.4	28.8	29.2
Green Ext Time (p_c), s	0.5	36.6	0.0	1.9	0.0	0.0	0.0	1.7

Intersection Summary		
HCM 6th Ctrl Delay		143.5
HCM 6th LOS		F

Notes

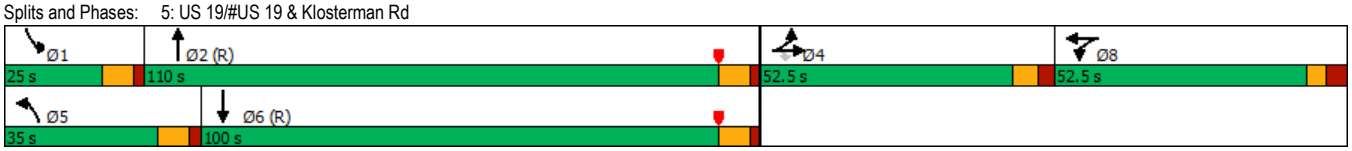
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1032	13	131	24	16	14	190	3610	21	34	2267	395
Future Volume (vph)	1032	13	131	24	16	14	190	3610	21	34	2267	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		350	0		0	500		0	300		0
Storage Lanes	1		1	0		0	2		0	1		0
Taper Length (ft)	100			25			100			125		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			55			55	
Link Distance (ft)		626			411			1496			4104	
Travel Time (s)		10.7			7.0			18.5			50.9	
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 (%)	1%	0%	5%	0%	0%	0%	2%	1%	11%	0%	1%	1%
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	706	360	134	0	54	0	194	3705	0	35	2716	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	25.4	25.4	25.4	25.6	25.6		13.6	27.6		14.6	27.6	
Total Split (s)	52.5	52.5	52.5	52.5	52.5		35.0	110.0		25.0	100.0	
Total Split (%)	21.9%	21.9%	21.9%	21.9%	21.9%		14.6%	45.8%		10.4%	41.7%	
Yellow Time (s)	4.5	4.5	4.5	3.7	3.7		5.6	5.6		5.6	5.6	
All-Red Time (s)	2.9	2.9	2.9	3.9	3.9		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)	7.4	7.4	7.4		7.6		7.6	7.6		7.6	7.6	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	
v/c Ratio	1.16	1.17	0.34		0.58		0.69	0.94		0.49	0.77	
Control Delay	166.9	184.0	15.6		121.8		119.3	49.5		146.4	54.0	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	166.9	184.0	15.6		121.8		119.3	49.5		146.4	54.0	
Queue Length 50th (ft)	~721	~743	12		76		157	1590		53	1289	
Queue Length 95th (ft)	#868	#1006	87		135		206	#1784		m64	m1233	
Internal Link Dist (ft)		546			331			1416			4024	
Turn Bay Length (ft)	175		350				500			300		
Base Capacity (vph)	611	307	390		340		391	3930		130	3518	
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	1.16	1.17	0.34		0.16		0.50	0.94		0.27	0.77	

Intersection Summary	
Area Type:	Other
Cycle Length: 240	
Actuated Cycle Length: 240	
Offset: 35 (15%), Referenced to phase 2:NBT and 6:SBT, 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: 5: US 19/#US 19 & Klosterman Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1032	13	131	24	16	14	190	3610	21	34	2267	395
Future Volume (veh/h)	1032	13	131	24	16	14	190	3610	21	34	2267	395
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1826	1900	1900	1900	1870	1885	1737	1900	1885	1885
Adj Flow Rate, veh/h	1062	0	47	24	16	10	194	3684	20	35	2313	357
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, %	1	0	5	0	0	0	2	1	11	0	1	1
Cap, veh/h	1012	0	291	31	20	13	230	4196	23	45	3339	510
Arrive On Green	0.19	0.00	0.19	0.04	0.04	0.04	0.07	0.63	0.63	0.02	0.58	0.58
Sat Flow, veh/h	5386	0	1547	860	574	358	3456	6706	36	1810	5718	874
Grp Volume(v), veh/h	1062	0	47	50	0	0	194	2670	1034	35	1964	706
Grp Sat Flow(s),veh/h/ln	1795	0	1547	1792	0	0	1728	1621	1879	1810	1621	1728
Q Serve(g_s), s	45.1	0.0	6.1	6.6	0.0	0.0	13.3	109.3	110.0	4.6	67.6	69.0
Cycle Q Clear(g_c), s	45.1	0.0	6.1	6.6	0.0	0.0	13.3	109.3	110.0	4.6	67.6	69.0
Prop In Lane	1.00		1.00	0.48		0.20	1.00		0.02	1.00		0.51
Lane Grp Cap(c), veh/h	1012	0	291	64	0	0	230	3043	1175	45	2840	1009
V/C Ratio(X)	1.05	0.00	0.16	0.78	0.00	0.00	0.84	0.88	0.88	0.77	0.69	0.70
Avail Cap(c_a), veh/h	1012	0	291	335	0	0	395	3043	1175	131	2840	1009
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	97.4	0.0	81.6	114.8	0.0	0.0	110.7	37.3	37.4	116.3	34.8	35.1
Incr Delay (d2), s/veh	42.1	0.0	0.3	18.6	0.0	0.0	11.1	3.9	9.5	18.6	1.4	4.0
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	25.1	0.0	2.5	3.5	0.0	0.0	6.3	42.4	51.3	2.4	26.4	29.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	139.6	0.0	81.9	133.4	0.0	0.0	121.8	41.2	46.9	134.9	36.2	39.1
LnGrp LOS	F	A	F	F	A	A	F	D	D	F	D	D
Approach Vol, veh/h		1109			50			3898			2705	
Approach Delay, s/veh		137.1			133.4			46.7			38.3	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	157.8		52.5	23.6	147.8		16.1				
Change Period (Y+Rc), s	7.6	7.6		7.4	7.6	7.6		7.6				
Max Green Setting (Gmax), s	17.4	102.4		45.1	27.4	92.4		44.9				
Max Q Clear Time (g_c+I1), s	6.6	112.0		47.1	15.3	71.0		8.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.7	20.5		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		57.3
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	148	19	146	213	130	17	772	225	155	481	6
Future Volume (vph)	15	148	19	146	213	130	17	772	225	155	481	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	0	149	350	0	17	1018	0	158	497	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	27.0	27.0		18.0	45.0		82.0	82.0		13.0	95.0	
Total Split (%)	19.3%	19.3%		12.9%	32.1%		58.6%	58.6%		9.3%	67.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.81		0.64	0.74		0.03	1.03		0.90	0.40	
Control Delay		83.3		54.2	54.9		15.4	66.9		80.1	13.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		83.3		54.2	54.9		15.4	66.9		80.1	13.0	
Queue Length 50th (ft)		161		107	271		7	~980		~111	210	
Queue Length 95th (ft)		#264		171	386		20	#1244		#263	285	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		254		239	503		495	992		175	1238	
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		0.73		0.62	0.70		0.03	1.03		0.90	0.40	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 66 (47%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 120

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: 10: Alt US 19 & Tarpon Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	148	19	146	213	130	17	772	225	155	481	6
Future Volume (veh/h)	15	148	19	146	213	130	17	772	225	155	481	6
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	15	151	19	149	217	133	17	788	230	158	491	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	37	180	22	279	275	168	542	792	231	146	1232	15
Arrive On Green	0.12	0.12	0.12	0.09	0.25	0.25	0.56	0.56	0.56	0.05	0.66	0.66
Sat Flow, veh/h	77	1481	178	1781	1103	676	915	1402	409	1781	1873	23
Grp Volume(v), veh/h	185	0	0	149	0	350	17	0	1018	158	0	497
Grp Sat Flow(s),veh/h/ln	1736	0	0	1781	0	1778	915	0	1812	1781	0	1896
Q Serve(g_s), s	6.9	0.0	0.0	10.0	0.0	25.8	1.2	0.0	78.1	7.1	0.0	17.0
Cycle Q Clear(g_c), s	14.7	0.0	0.0	10.0	0.0	25.8	5.3	0.0	78.1	7.1	0.0	17.0
Prop In Lane	0.08		0.10	1.00		0.38	1.00		0.23	1.00		0.01
Lane Grp Cap(c), veh/h	238	0	0	279	0	443	542	0	1023	146	0	1247
V/C Ratio(X)	0.78	0.00	0.00	0.53	0.00	0.79	0.03	0.00	0.99	1.09	0.00	0.40
Avail Cap(c_a), veh/h	277	0	0	280	0	484	542	0	1023	146	0	1247
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.4	0.0	0.0	46.4	0.0	49.1	15.3	0.0	30.2	45.4	0.0	11.1
Incr Delay (d2), s/veh	11.3	0.0	0.0	1.0	0.0	7.9	0.1	0.0	26.9	99.3	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	7.2	0.0	0.0	4.5	0.0	12.4	0.3	0.0	40.3	9.2	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	0.0	0.0	47.4	0.0	57.1	15.4	0.0	57.1	144.8	0.0	12.1
LnGrp LOS	E	A	A	D	A	E	B	A	E	F	A	B
Approach Vol, veh/h		185			499			1035			655	
Approach Delay, s/veh		71.6			54.2			56.5			44.1	
Approach LOS		E			D			E			D	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		98.2		41.8	13.0	85.2	17.9	23.9				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 89		38.1	7.1	* 76	12.0	20.1				
Max Q Clear Time (g_c+I1), s		19.0		27.8	9.1	80.1	12.0	16.7				
Green Ext Time (p_c), s		4.6		1.6	0.0	0.0	0.0	0.3				

Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Notes

* HCM 6th 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)	133	47	55	25	43	208	63	929	15	123	650	78
Future Volume (vph)	133	47	55	25	43	208	63	929	15	123	650	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	400		0	100		0	230		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	125			150			225			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		418			497			312			175	
Travel Time (s)		9.5			11.3			7.1			4.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	2%	0%	0%	0%	2%	1%	0%	4%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	111	0	27	47	226	68	1026	0	134	792	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		
Detector Phase	8	8		4	4	4	1	6		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	20.0		20.0	20.0	
Minimum Split (s)	13.6	13.6		24.6	24.6	24.6	13.3	26.4		26.4	26.4	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	20.0	100.0		80.0	80.0	
Total Split (%)	28.6%	28.6%		28.6%	28.6%	28.6%	14.3%	71.4%		57.1%	57.1%	
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.7	3.7		3.7	3.7	
All-Red Time (s)	2.2	2.2		2.2	2.2	2.2	2.6	2.6		2.6	2.6	
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)	5.9	5.9		5.9	5.9	5.9	6.3	6.3		6.3	6.3	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
v/c Ratio	0.74	0.39		0.16	0.17	0.62	0.17	0.71		0.49	0.62	
Control Delay	78.4	36.6		51.4	51.1	26.3	5.8	13.0		21.1	16.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	78.4	36.6		51.4	51.1	26.3	5.8	13.0		21.1	16.5	
Queue Length 50th (ft)	128	58		22	38	63	13	420		56	381	
Queue Length 95th (ft)	194	112		49	73	143	32	737		151	628	
Internal Link Dist (ft)		338			417			232			95	
Turn Bay Length (ft)	250			400			100			230		
Base Capacity (vph)	326	450		286	462	506	469	1439		272	1276	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.44	0.25		0.09	0.10	0.45	0.14	0.71		0.49	0.62	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 1 (1%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 26: Alt US 19 & Live Oak/Dodacense Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	47	55	25	43	208	63	929	15	123	650	78
Future Volume (veh/h)	133	47	55	25	43	208	63	929	15	123	650	78
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1870	1900	1900	1900	1870	1885	1900	1841	1885	1900
Adj Flow Rate, veh/h	145	51	60	27	47	226	68	1010	16	134	707	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	0	2	0	0	0	2	1	0	4	1	0
Cap, veh/h	216	136	160	200	325	275	400	1373	22	285	1074	129
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.74	0.74	0.65	0.65	0.65
Sat Flow, veh/h	1097	796	936	1302	1900	1610	1781	1851	29	541	1651	198
Grp Volume(v), veh/h	145	0	111	27	47	226	68	0	1026	134	0	792
Grp Sat Flow(s),veh/h/ln	1097	0	1732	1302	1900	1610	1781	0	1880	541	0	1849
Q Serve(g_s), s	18.1	0.0	7.9	2.6	2.9	18.9	1.6	0.0	43.4	26.2	0.0	36.7
Cycle Q Clear(g_c), s	21.1	0.0	7.9	10.6	2.9	18.9	1.6	0.0	43.4	56.8	0.0	36.7
Prop In Lane	1.00		0.54	1.00		1.00	1.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	216	0	296	200	325	275	400	0	1395	285	0	1203
V/C Ratio(X)	0.67	0.00	0.37	0.13	0.14	0.82	0.17	0.00	0.74	0.47	0.00	0.66
Avail Cap(c_a), veh/h	296	0	422	295	463	392	492	0	1395	285	0	1203
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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.3	0.0	51.4	56.1	49.3	56.0	12.0	0.0	10.3	30.1	0.0	15.0
Incr Delay (d2), s/veh	3.6	0.0	0.8	0.3	0.2	9.0	0.2	0.0	3.5	5.5	0.0	2.8
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	5.3	0.0	3.5	0.9	1.4	8.4	0.6	0.0	17.5	3.9	0.0	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	0.0	52.2	56.4	49.5	65.0	12.2	0.0	13.8	35.5	0.0	17.8
LnGrp LOS	E	A	D	E	D	E	B	A	B	D	A	B
Approach Vol, veh/h		256			300			1094			926	
Approach Delay, s/veh		57.7			61.8			13.7			20.4	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.8	97.4		29.8		110.2		29.8				
Change Period (Y+Rc), s	* 6.3	* 6.3		5.9		* 6.3		5.9				
Max Green Setting (Gmax), s	* 14	* 74		34.1		* 94		34.1				
Max Q Clear Time (g_c+I1), s	3.6	58.8		20.9		45.4		23.1				
Green Ext Time (p_c), s	0.1	6.5		0.9		12.0		0.9				

Intersection Summary		
HCM 6th Ctrl Delay		26.1
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	70	3905	108	0	2464
Future Volume (vph)	0	70	3905	108	0	2464
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		300	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		55			55
Link Distance (ft)	1300		588			599
Travel Time (s)	29.5		7.3			7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	4245	117	0	2678
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	70	3905	108	0	2464
Future Volume (Veh/h)	0	70	3905	108	0	2464
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	76	4245	117	0	2678
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	5138	1415			4362	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5138	1415			4362	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	40			100	
cM capacity (veh/h)	0	127			31	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	76	1415	1415	1415	117	893	893	893
Volume Left	0	0	0	0	0	0	0	0
Volume Right	76	0	0	0	117	0	0	0
cSH	127	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.60	0.83	0.83	0.83	0.07	0.53	0.53	0.53
Queue Length 95th (ft)	76	0	0	0	0	0	0	0
Control Delay (s)	68.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	F							
Approach Delay (s)	68.8	0.0				0.0		
Approach LOS	F							

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	86.5%	ICU Level of Service		E
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	70	3905	108	0	2464
Future Vol, veh/h	0	70	3905	108	0	2464
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	300	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	76	4245	117	0	2678

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	2123	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	-	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		2	-	-		-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	0
HCM LOS	-		

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	46	3929	2356	0
Future Volume (vph)	0	0	46	3929	2356	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	400			0
Storage Lanes	0	0	1			0
Taper Length (ft)	25		75			
Link Speed (mph)	30			55	55	
Link Distance (ft)	270			599	1543	
Travel Time (s)	6.1			7.4	19.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	50	4271	2561	0
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	46	3929	2356	0
Future Volume (Veh/h)	0	0	46	3929	2356	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	50	4271	2561	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	4085	854	2561			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4085	854	2561			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	71			
cM capacity (veh/h)	1	302	170			

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	50	1424	1424	1424	854	854	854
Volume Left	50	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	170	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.84	0.84	0.84	0.50	0.50	0.50
Queue Length 95th (ft)	29	0	0	0	0	0	0
Control Delay (s)	34.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	D						
Approach Delay (s)	0.4				0.0		
Approach LOS							

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	3905	0	38	2356
Future Volume (vph)	0	0	3905	0	38	2356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	400	
Storage Lanes	0	0		0	1	
Taper Length (ft)	25				50	
Link Speed (mph)	30		55			55
Link Distance (ft)	328		1851			588
Travel Time (s)	7.5		22.9			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	4245	0	41	2561
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	3905	0	38	2356
Future Volume (Veh/h)	0	0	3905	0	38	2356
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	4245	0	41	2561
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	5181	1415			4245	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5181	1415			4245	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	100			0	
cM capacity (veh/h)	0	127			35	

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4
Volume Total	1415	1415	1415	41	854	854	854
Volume Left	0	0	0	41	0	0	0
Volume Right	0	0	0	0	0	0	0
cSH	1700	1700	1700	35	1700	1700	1700
Volume to Capacity	0.83	0.83	0.83	1.18	0.50	0.50	0.50
Queue Length 95th (ft)	0	0	0	108	0	0	0
Control Delay (s)	0.0	0.0	0.0	387.5	0.0	0.0	0.0
Lane LOS				F			
Approach Delay (s)	0.0			6.1			
Approach LOS							

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	78.8%	ICU Level of Service		D
Analysis Period (min)	15			

Arterial Level of Service: NB #US 19

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Tarpon Ave	I	55	105.5	165.6	271.1	1.61	21.4	D
Spruce St	I	55	34.5	49.8	84.3	0.44	18.9	E
Beckett Way	I	55	63.6	20.9	84.5	0.97	41.5	B
Total	I		203.6	236.3	439.9	3.03	24.8	D

Arterial Level of Service: SB #US 19

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Spruce St	I	55	63.6	53.5	117.1	0.97	29.9	C
Tarpon Ave	I	55	34.5	32.4	66.9	0.44	23.8	D
Klosterman Rd	I	55	105.5	54.0	159.5	1.61	36.4	B
Total	I		203.6	139.9	343.5	3.03	31.7	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	148	19	146	213	130	17	772	225	155	481	6
Future Volume (vph)	15	148	19	146	213	130	17	772	225	155	481	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	115		0	125		0	120		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			125			125			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		313			430			527			338	
Travel Time (s)		7.1			9.8			12.0			7.7	
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 (%)	0%	0%	0%	2%	0%	0%	0%	1%	1%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	0	149	350	0	17	1018	0	158	497	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		7	4		6	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		20.0	20.0		5.0	20.0	
Minimum Split (s)	24.9	24.9		11.0	24.9		26.1	26.1		10.9	26.1	
Total Split (s)	27.0	27.0		18.0	45.0		82.0	82.0		13.0	95.0	
Total Split (%)	19.3%	19.3%		12.9%	32.1%		58.6%	58.6%		9.3%	67.9%	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.4	3.4		3.4	3.4	
All-Red Time (s)	2.9	2.9		2.0	2.9		2.7	2.7		2.5	2.7	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.9		6.0	6.9		6.1	6.1		5.9	6.1	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
v/c Ratio		0.81		0.64	0.74		0.03	1.03		0.90	0.40	
Control Delay		83.3		54.2	54.9		15.4	66.9		80.1	13.0	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		83.3		54.2	54.9		15.4	66.9		80.1	13.0	
Queue Length 50th (ft)		161		107	271		7	~980		~111	210	
Queue Length 95th (ft)		#264		171	386		20	#1244		#263	285	
Internal Link Dist (ft)		233			350			447			258	
Turn Bay Length (ft)				115			125			120		
Base Capacity (vph)		254		239	503		495	992		175	1238	
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		0.73		0.62	0.70		0.03	1.03		0.90	0.40	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 66 (47%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 120

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: 10: Alt US 19 & Tarpon Ave

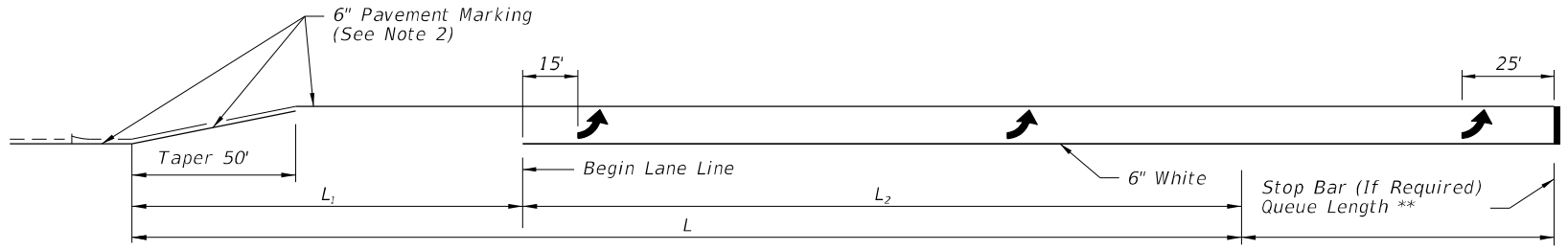
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	148	19	146	213	130	17	772	225	155	481	6
Future Volume (veh/h)	15	148	19	146	213	130	17	772	225	155	481	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1870	1900	1900	1900	1885	1885	1870	1900	1900
Adj Flow Rate, veh/h	15	151	19	149	217	133	17	788	230	158	491	6
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, %	0	0	0	2	0	0	0	1	1	2	0	0
Cap, veh/h	37	180	22	279	275	168	542	792	231	146	1232	15
Arrive On Green	0.12	0.12	0.12	0.09	0.25	0.25	0.56	0.56	0.56	0.05	0.66	0.66
Sat Flow, veh/h	77	1481	178	1781	1103	676	915	1402	409	1781	1873	23
Grp Volume(v), veh/h	185	0	0	149	0	350	17	0	1018	158	0	497
Grp Sat Flow(s),veh/h/ln	1736	0	0	1781	0	1778	915	0	1812	1781	0	1896
Q Serve(g_s), s	6.9	0.0	0.0	10.0	0.0	25.8	1.2	0.0	78.1	7.1	0.0	17.0
Cycle Q Clear(g_c), s	14.7	0.0	0.0	10.0	0.0	25.8	5.3	0.0	78.1	7.1	0.0	17.0
Prop In Lane	0.08		0.10	1.00		0.38	1.00		0.23	1.00		0.01
Lane Grp Cap(c), veh/h	238	0	0	279	0	443	542	0	1023	146	0	1247
V/C Ratio(X)	0.78	0.00	0.00	0.53	0.00	0.79	0.03	0.00	0.99	1.09	0.00	0.40
Avail Cap(c_a), veh/h	277	0	0	280	0	484	542	0	1023	146	0	1247
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.4	0.0	0.0	46.4	0.0	49.1	15.3	0.0	30.2	45.4	0.0	11.1
Incr Delay (d2), s/veh	11.3	0.0	0.0	1.0	0.0	7.9	0.1	0.0	26.9	99.3	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	7.2	0.0	0.0	4.5	0.0	12.4	0.3	0.0	40.3	9.2	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	0.0	0.0	47.4	0.0	57.1	15.4	0.0	57.1	144.8	0.0	12.1
LnGrp LOS	E	A	A	D	A	E	B	A	E	F	A	B
Approach Vol, veh/h		185			499			1035			655	
Approach Delay, s/veh		71.6			54.2			56.5			44.1	
Approach LOS		E			D			E			D	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		98.2		41.8	13.0	85.2	17.9	23.9				
Change Period (Y+Rc), s		* 6.1		6.9	5.9	* 6.1	6.0	6.9				
Max Green Setting (Gmax), s		* 89		38.1	7.1	* 76	12.0	20.1				
Max Q Clear Time (g_c+I1), s		19.0		27.8	9.1	80.1	12.0	16.7				
Green Ext Time (p_c), s		4.6		1.6	0.0	0.0	0.0	0.3				

Intersection Summary		
HCM 6th Ctrl Delay		53.7
HCM 6th LOS		D

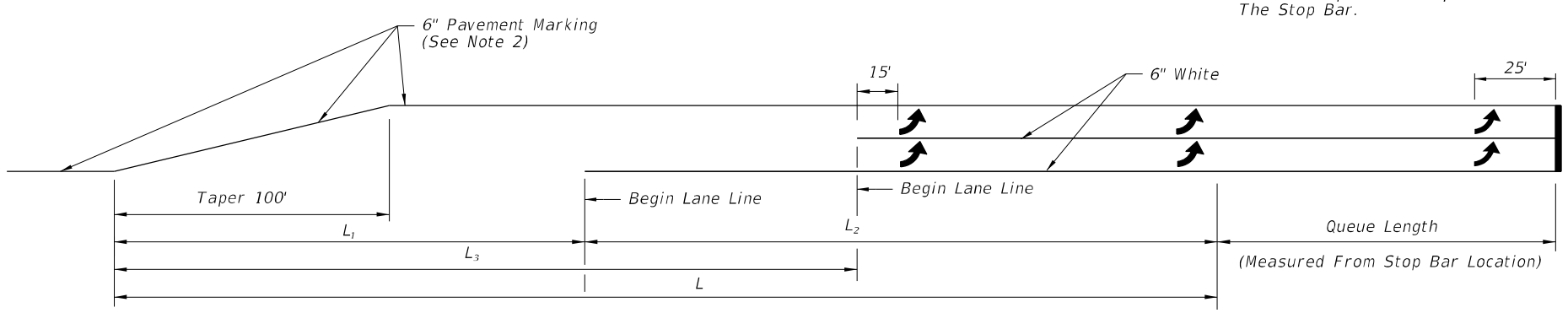
Notes

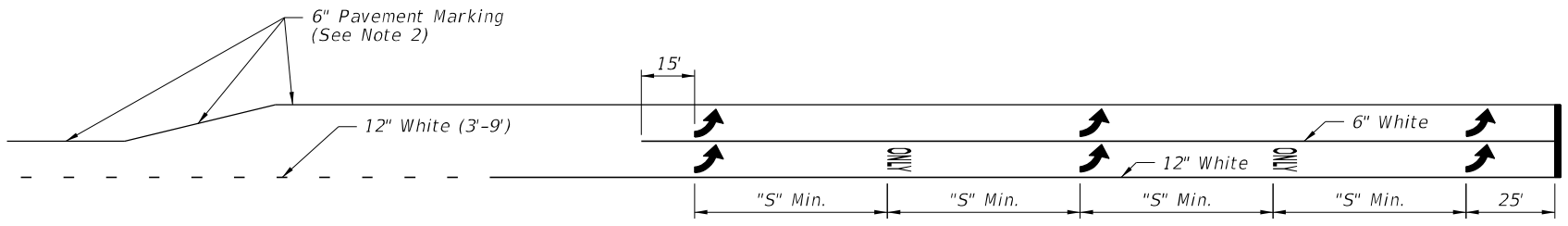
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



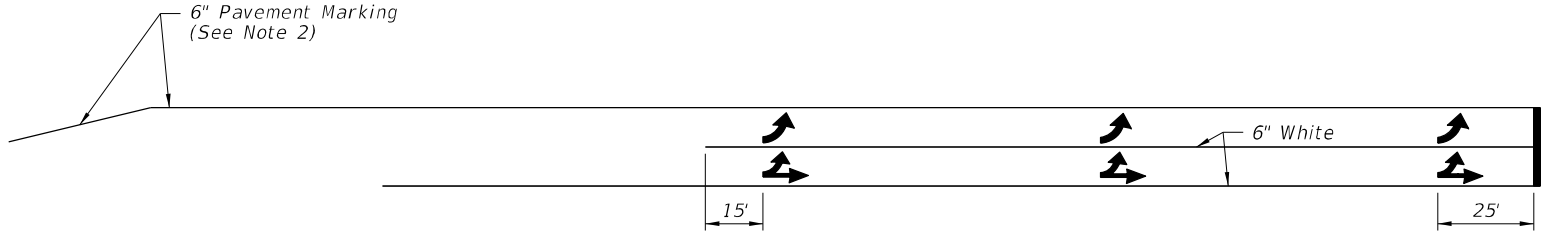
SINGLE LEFT TURNS

** Queue Length Is Measured From The Median Nose Radial Point Or, When A Stop Bar Is Required, From The Stop Bar.





Through Lane Becomes Exclusive Left Turn



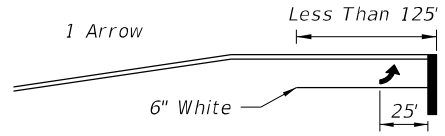
Through Lane Becomes Optional Left Turn

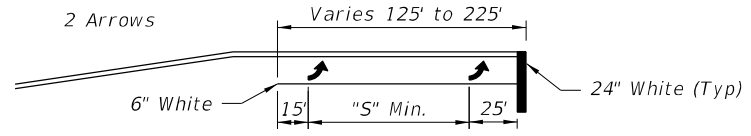
DOUBLE LEFT TURNS

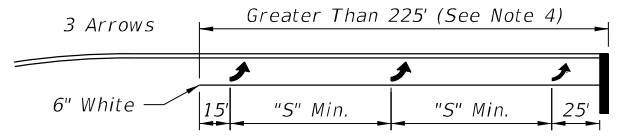
TURN LANES ◦ CURBED AND UNCURBED MEDIANS

Posted Speed (mph)	Clearance Distance L_1	URBAN CONDITIONS			RURAL CONDITIONS		
		Brake To Stop Distance L_2	Total Decel. Distance L	Clearance Distance L_3	Brake To Stop Distance L_2	Total Decel. Distance L	Clearance Distance L_3
≤30	70'	75'	145'	110'	— —	— —	— —
35	80'	75'	155'	120'	— —	— —	— —
40	85'	100'	185'	135'	— —	— —	— —
45	105'	135'	240'	160'	185'	290'	160'
50	125'	— —	— —	— —	225'	350'	195'
55	145'	— —	— —	— —	260'	405'	230'
≥60	170'	— —	— —	— —	290'	460'	270'

NOTE: When installing lane lines for turn lanes, use the dimensions in the Plans, or use the above values for turn lanes not dimensioned in the Plans.







ARROW SPACING

NOTES:

1. This Index also applies to right turn lanes.
2. Make pavement marking yellow for left-turn lanes and white for right-turn lanes.
3. See Sheet 1 for "S" value.
4. Space arrows evenly between the first and last arrow with a minimum spacing of "S" between arrows.
5. For turn lanes greater than 225' in length, use a minimum of three arrows. Use additional arrows in accordance with the Plans or as directed by the Engineer. Space arrows evenly throughout the available length with a minimum spacing of "S" between arrows.

12/18/2019 3:10:06 PM

TURN LANE MARKINGS

LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FDOT FY 2020-21 STANDARD PLANS	PAVEMENT MARKINGS	INDEX 711-001	SHEET 11 of 13