SR 406 CORRIDOR PLANNING STUDY

Florida Department of Transportation
District 5
FM#: 436187-1-12-01

Centennial FDOT 1915 ★ 2015

Future Conditions Summary

July 2015

Table of Contents

Table of Contents i
List of Figures ii
List of Tables ii
Introduction 1
1.1 Purpose of Technical Memorandum 1
1.2 Project Background and Purpose 1
Existing Conditions 3
2.1 Roadway and Intersection Characteristics 3
2.2 Existing Volumes 5
2.3 Existing Operational Analysis 5
2.3.1 Roadway Operational Analysis 5
2.3.2 Intersection Operational Analysis 7
2040 Future Conditions 10
3.1 Future Land Use 10
3.2 Planned Improvements 12
3.3 Growth Projections and Assumptions 14
3.4 2040 Future Operational Operations 14
3.4.1 2040 Roadway Operations 15
3.4.2 2040 Intersection Operations 17
Summary 19

List of Figures

Figure 1: Study Area Location Map 2
Figure 2: Intersection Lane Geometry 4
Figure 3: Existing 2015 Roadway Operations 8
Figure 4: Existing 2015 Intersection Operations 9
Figure 5: Future Land Use Map 11
Figure 6: Planned Improvements 13
Figure 7: 2040 Projected Roadway Volumes and Operations 16
Figure 8: 2040 Projected Intersection Volumes and Operations 18

List of Tables

Table 1: Existing Roadway Level of Service 6
Table 2: Existing Intersection Level of Service 7
Table 3: Growth Rate Comparison 14
Table 4: 2040 Projected Roadway Level of Service 15
Table 5: 2040 Projected Intersection Level of Service 17

1

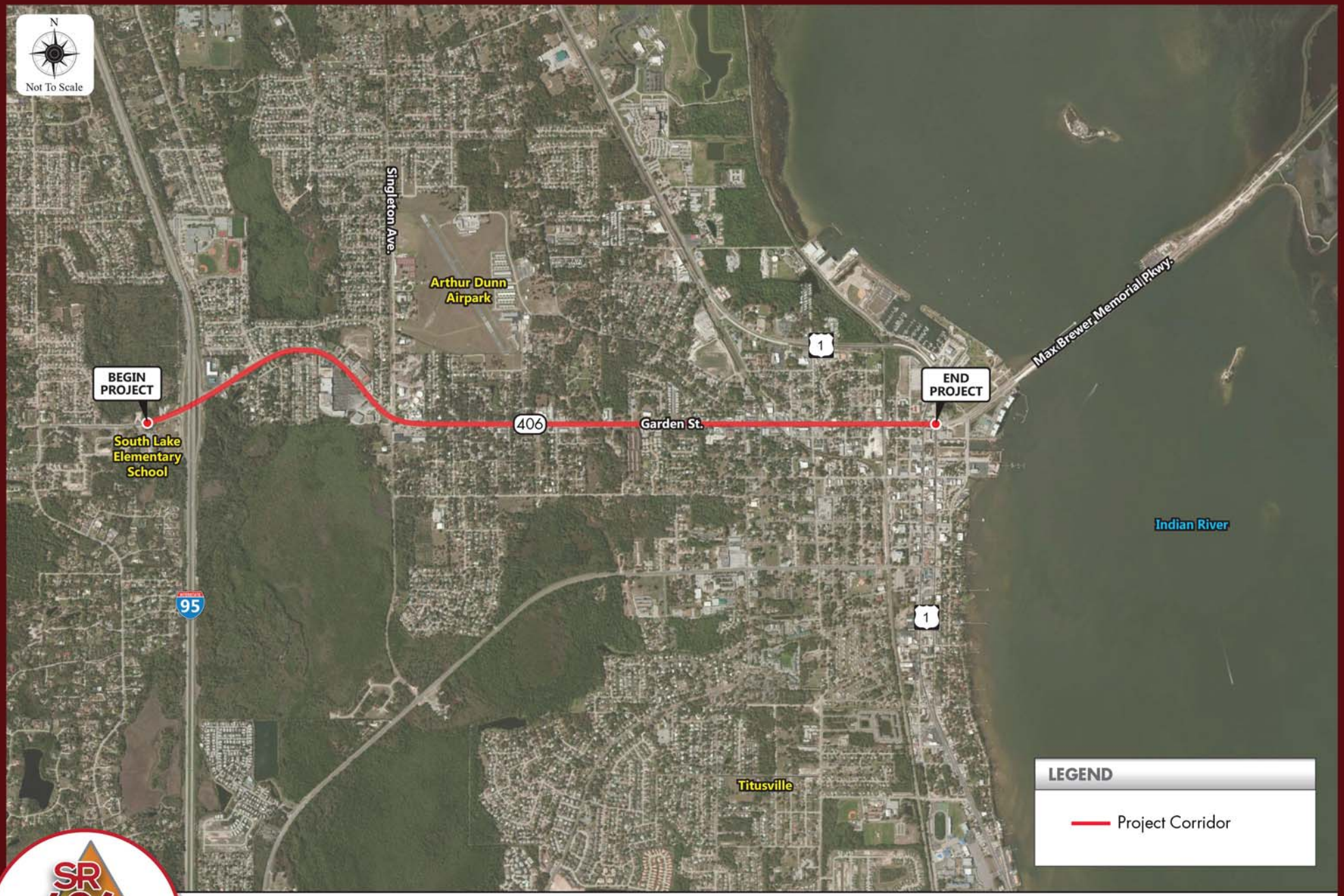
Introduction

1.1 Purpose of Technical Memorandum

The purpose of this technical memorandum is to develop the projected future traffic demand on SR 406, and identify potential capacity deficiencies and additional needs for the corridor through 2040. This technical memorandum includes the methodology used to forecast future traffic conditions for SR 406 from South Lake Elementary School to US 1. The results of this analysis will be used to define the corridor needs and develop potential improvement alternatives.

1.2 Project Background and Purpose

This project has been requested by the Space Coast Transportation Planning Organization (SCTPO) in cooperation with the City of Titusville to coordinate the development of a future vision for the SR 406 corridor that will establish a multimodal approach to providing for future transportation needs. This study involves a community-based evaluation to determine how best to meet the needs of current and future users, and to establish a long-term plan to guide evolution of the corridor that appropriately correlates the balance between land use and transportation planning. Potential solutions will be developed to establish a more multimodal urban environment utilizing a context sensitive approach. Figure 1 illustrates the Study Area.



SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 1
Study Area Location Map

2

Existing Conditions

2.1 Roadway and Intersection Characteristics

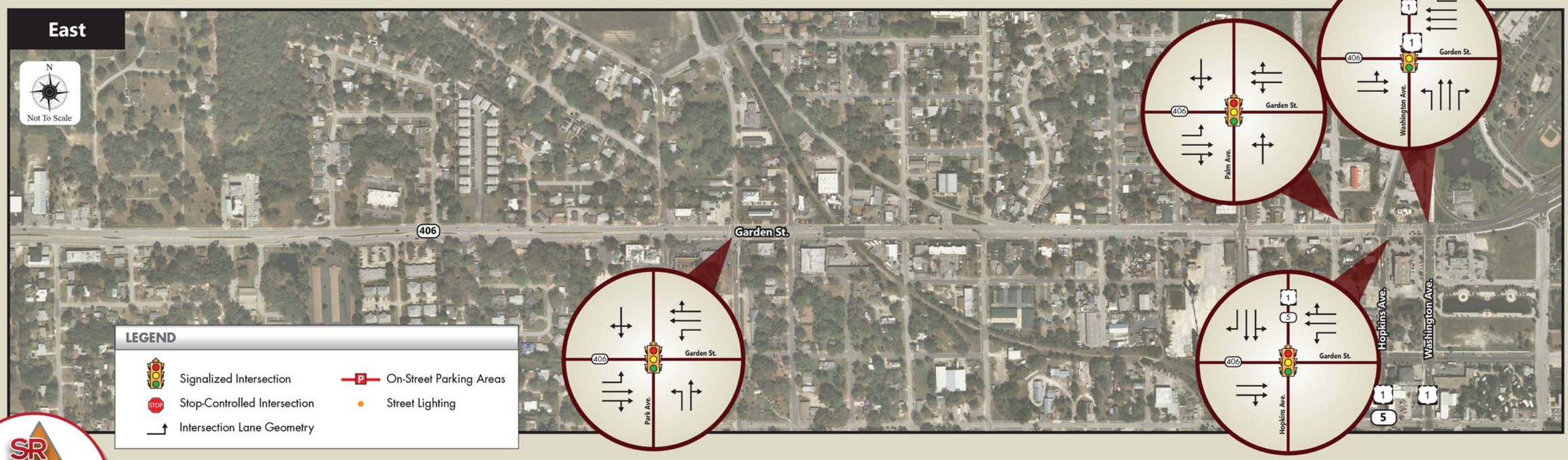
The SR 406 Study Area consists of an approximately 3 mile long segment spanning from South Lake Elementary School, just west of I-95 to US 1 within the City of Titusville in Brevard County, Florida. This corridor is classified as an "urban principal arterial other" and owned and maintained by the Florida Department of Transportation. The posted speed limit on SR 406 from South Lake Elementary School to east of Maiden Lane is 40 mph and transitions to 30 mph for the remainder of the corridor to US 1.

Figure 2 provides the year 2015 intersection geometry for all the following Study Area signalized intersections:

- SR 406 / I-95 Southbound Ramps
- SR 406 / I-95 Northbound Ramps
- SR 406 / Singleton Avenue
- SR 406 / Park Avenue
- SR 406 / Palm Avenue
- SR 406 / US 1 Southbound
- SR 406 / US 1 Northbound

West

East



LEGEND

- Signalized Intersection
- Stop-Controlled Intersection
- Intersection Lane Geometry
- On-Street Parking Areas
- Street Lighting

SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 2
Intersection Lane Geometry

2.2 Existing Volumes

The 24-hour bi-directional volume tube counts were conducted in February 2015 at the following locations:

- West of I-95
- West of Clarewood Boulevard
- East of Lemoine Avenue
- Between US 1 Northbound and US 1 Southbound

Weekday turning movement counts were collected at the following intersections for the AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak hours:

- SR 406 / I-95 Southbound Ramp
- SR 406 / I-95 Northbound Ramp
- SR 406 / Singleton Avenue
- SR 406 / Park Avenue
- SR 406 / Palm Avenue
- SR 406 / US 1 Southbound
- SR 406 / US 1 Northbound

All traffic count data collected was adjusted utilized the latest (2013) FDOT axle (where applicable) and seasonal adjustment factors for Brevard County to provide 2015 annual average conditions. Existing traffic volumes are illustrated in Figure 3 and Figure 4.

2.3 Existing Operational Analysis

Existing 2015 operational analysis was conducted to determine the level-of-service (LOS) for the roadway segments and the Study Area intersections. Peak hour peak direction volumes along the different segments were compared against the latest Generalized Peak Hour Directional Service Volumes Tables from the 2012 FDOT Quality/Level of Service Handbook to obtain the arterial LOS. The LOS for the Study Area intersections were determined using the procedures as outlined in the Transportation Research Board's (TRB) – Highway Capacity Manual (HCM 2000) using Synchro Software (version 8.0).

2.3.1 Roadway Operational Analysis

According to FDOT, SR 406 in the Study Area is classified as an "urban principal arterial other" and has an adopted level of service "D". The generalized peak hour directional service volumes for the LOS letters "A" through "F" were obtained from the 2012 FDOT Quality/Level of Service Handbook and compared with volumes collected from 24-Hour bi-directional tube counts after seasonal and axle adjustments were applied to create average annual daily traffic for SR 406 in the Study Area. A summary of the LOS analysis for the study roadways is included in Table 1.

Table 1: Existing Roadway Level of Service

Roadway/Segment	Daily		AM Peak		PM Peak	
	AADT	LOS	Volume	LOS	Volume	LOS
SR 406						
South Lake Elementary to I-95	6,203	C	307 (EB)	C	303 (WB)	C
I-95 to Singleton Avenue	12,686	C	538 (EB)	C	586 (WB)	C
Singleton Avenue to Einig Avenue	15,148	C	583 (EB)	C	808 (WB)	C
Einig Avenue to US 1 Southbound	15,148	D	583 (EB)	C	808 (WB)	D
US 1 Southbound to US 1 Northbound	8,004	C	324(WB)	C	529 (WB)	C

2012 FDOT Quality/Level of Service Handbook Tables
AM and PM Peak Volumes and LOS are based off of Peak Direction
*AADT = Data Collected * Seasonal Factor (0.92) * Axle Factor (0.99) (if need)*

As shown in Table 1, the SR 406 corridor currently operates within acceptable LOS standards. The existing arterial LOS conditions are illustrated in Figure 3.

2.3.2 Intersection Operational Analysis

The year 2015 intersection level of service is obtained by applying the field TMCs to the existing intersection geometry. Existing signal timings were obtained from the City of Titusville and were utilized at all signalized intersections along the corridor. According to HCM 2000, for signalized intersections, and average control delay per vehicle from 55 seconds up to 80 seconds is considered to be a LOS E condition. Beyond 80 seconds is considered to be a LOS F condition. A summary of the LOS analysis for the study intersections is included in Table 2.

Table 2: Existing Intersection Level of Service

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
SR 406 / I-95 Southbound Ramps	Signalized	10.0	B	8.1	A
SR 406 / I-95 Northbound Ramps	Signalized	11.3	B	12.1	B
SR 406 / Singleton Avenue	Signalized	21.0	C	27.3	C
SR 406 / Park Avenue	Signalized	16.2	B	16.0	B
SR 406 / Palm Avenue	Signalized	2.2	A	4.4	A
SR 406 / US 1 Southbound	Signalized	10.4	B	12.0	B
SR 406 / US 1 Northbound	Signalized	8.6	A	9.7	A

As seen in Table 2, the SR 406 corridor currently operates under acceptable level of service conditions during the AM and PM peak hours. The existing intersection LOS conditions are graphically displayed in Figure 4.

SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 3
Existing 2015 Roadway Volumes & Operations

N
Not To Scale

LEGEND

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Traffic Movement
- AM (PM) Traffic Volume
- Signalized Intersection

Arthur Dunn Airpark

406 Garden St.

Singleton Ave.

Park Ave.

Palm Ave.

Washington Ave.

Hopkins Ave.

I-95 SB Ramps

AM Delay / LOS: 10.0 (B)
PM Delay / LOS: 8.1 (A)

7 (13)
110 (103)
93 (313)
252 (259)
193 (147)
120 (67)

I-95 NB Ramps

AM Delay / LOS: 11.3 (B)
PM Delay / LOS: 12.1 (B)

59 (139)
311 (455)
8 (7)
263 (244)
40 (110)
255 (337)

Singleton Ave.

AM Delay / LOS: 21.0 (C)
PM Delay / LOS: 27.3 (C)

98 (74)
108 (17)
100 (98)
46 (129)
291 (620)
44 (64)
53 (174)
457 (450)
108 (121)
109 (156)
64 (130)
51 (52)

Palm Ave.

AM Delay / LOS: 2.2 (A)
PM Delay / LOS: 4.4 (A)

1 (4)
0 (2)
1 (2)
3 (3)
201 (463)
3 (6)
5 (4)
340 (342)
40 (33)
11 (52)
0 (0)
6 (15)

Washington Ave.

AM Delay / LOS: 8.6 (A)
PM Delay / LOS: 9.7 (A)

0 (3)
45 (197)
47 (66)
167 (133)
178 (303)
350 (661)
39 (48)

Park Ave.

AM Delay / LOS: 16.2 (B)
PM Delay / LOS: 16.0 (B)

38 (50)
212 (220)
22 (19)
6 (6)
198 (531)
32 (75)
44 (55)
357 (311)
104 (140)
131 (184)
198 (247)
34 (52)

Hopkins Ave.

AM Delay / LOS: 10.4 (B)
PM Delay / LOS: 12.0 (B)

29 (54)
429 (508)
86 (63)
192 (415)
29 (100)
136 (147)
200 (211)

SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 4
Existing 2015 Intersection Volume and Operations

3

2040 Future Conditions

3.1 Future Land Use

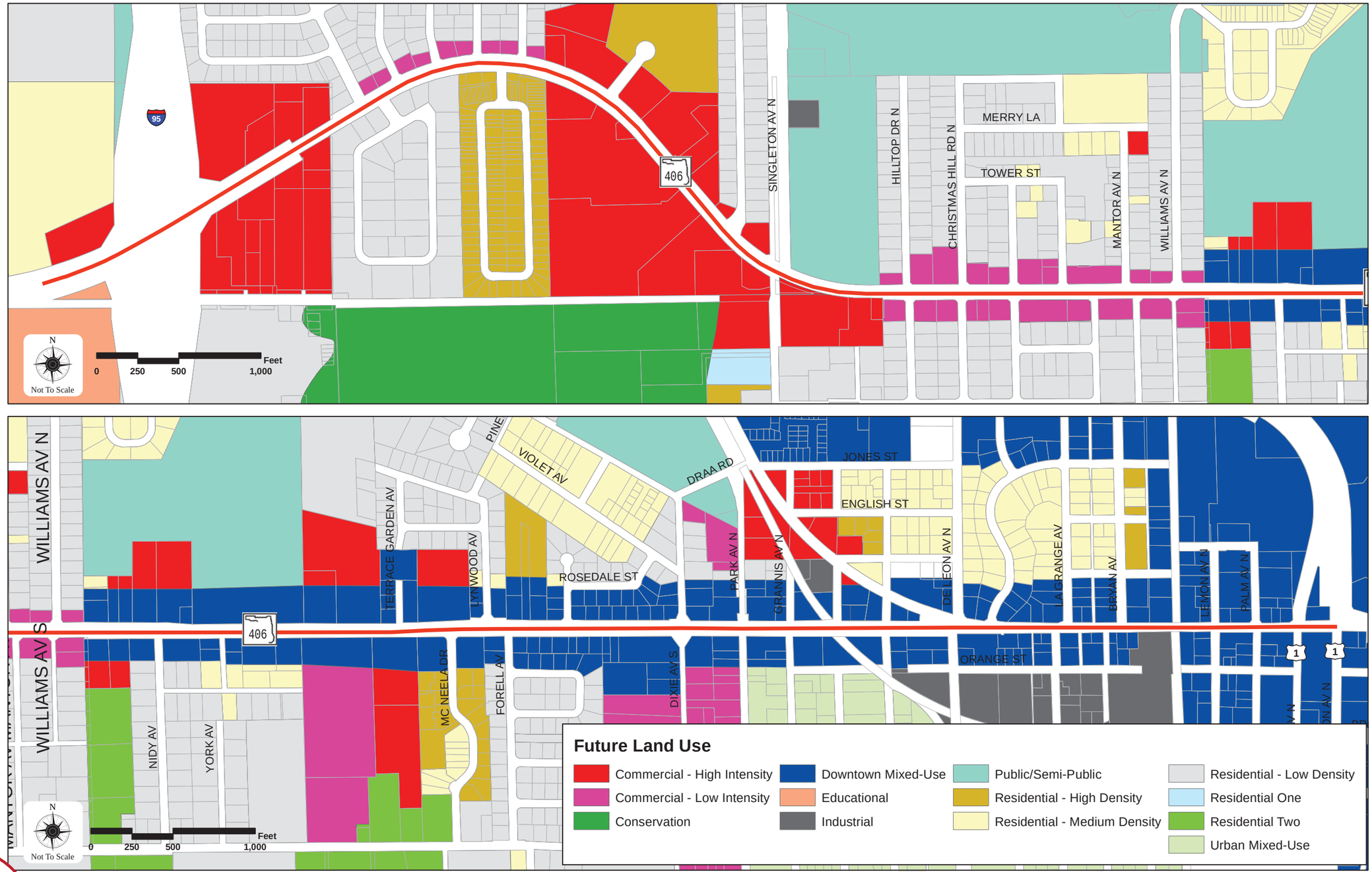
The Future Land Use (FLUs) assigned to the Study Area, Figure 5, are generally consistent with the existing land uses along, and adjacent to the corridor.

All of the land adjacent to the eastern half of the corridor is designated as Downtown Mixed-Use. The City of Titusville specifies that the Downtown Mixed-Use FLU is permitted to have a maximum density of 20 dwelling units per acre and a maximum intensity of 5.0 Floor Area Ratio (FAR). The FAR is the ratio of a buildings total floor area (Gross Floor Area) to the size of the parcel that it is built on, and is generated by dividing the building area by the parcel area. The Downtown Mixed-Use FLU was established by the City of Titusville to "pursue the renewal of Downtown Titusville as the center of professional, governmental, financial and unique retail and redevelop blighted areas." The purpose is to enhance the visual attractiveness of downtown, utilize the waterfront, encourage and promote pedestrian spaces, and emphasize development and redevelopment east of US 1 that uses the waterfront as an amenity.

Moving to the western half of the western terminus of the Study Area, the primary land use transitions to commercial designations, with maximum intensities of 1.0 FAR. Commercial Low (C-L) and Commercial High (C-H) FLUs are adjacent to the Study Area. Both of these commercial FLUs have the same siting criteria, including locations along an arterial or collector, and compatibility with adjacent land uses, as well as the same maximum intensity; the difference however is the intended user. C-H areas can include automotive oriented businesses and service to provide commercial services to the community and region, while C-L areas are intended to be oriented towards neighborhood needs and convenience factors.

Other land use adjacent to the Study Area consist of Educational, Residential and Public, which includes airport.

The majority of the land that is near, but not adjacent to the Study Area is designated as residential. Most of the land is shown as Residential-Low, which allows a maximum of 5 dwelling units per acre. Neighborhoods of Residential-Medium, 10 dwelling units per acre, and Residential-High, 15 dwelling units per acre, also exist in close proximity to the Study Area.



SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 5
Future Land Use Map

The land south of the eastern portion of the Study Area near the SR 406/US 1 intersections, is designated as Industrial and Urban Mixed-Use. The Industrial FLU provides for a maximum intensity of 1.0 FAR, and is intended to be master planned to share infrastructure and to be clustered in limited areas for the purpose of maximizing employment centers and convenient access. The Urban Mixed-Use FLU allows a maximum density of 15 dwelling units per acre

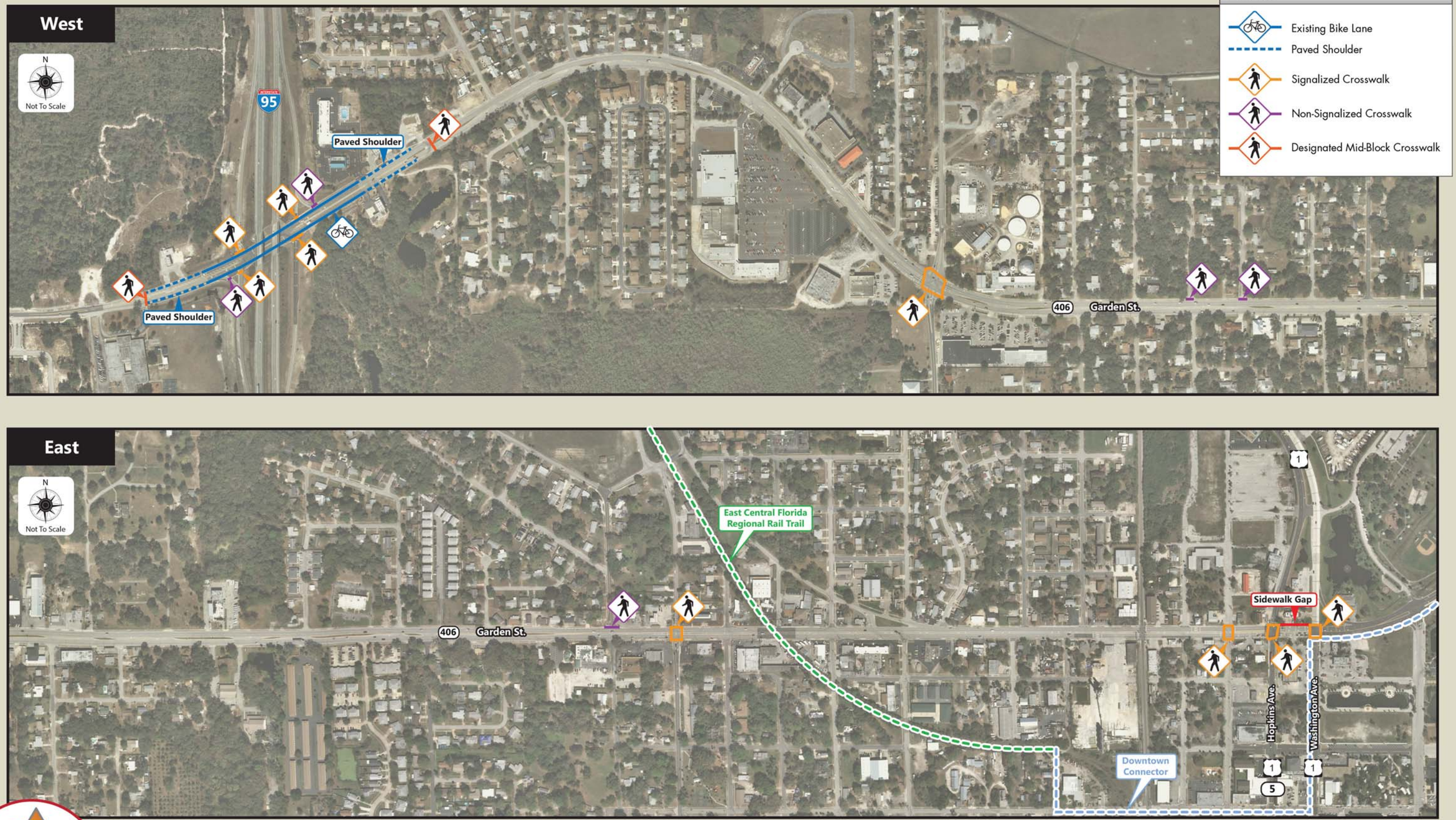
and a maximum intensity of 1.0 FAR. This FLU was established to "focus private and public efforts on redevelopment of blighted structures and maintenance of the built environment" as well as to "encourage a mix of uses including but not limited to high density residential, retail, and public realm areas (pavilions, amphitheaters, and similar open gathering areas) that contain urban elements of increased density, intensity and height."

3.2 Planned Improvements

A list of planned improvements throughout the Study Area listed in various transportation plans are provided below. These plans are programmed for construction prior to FY 2040 and have been included in the future conditions assessment where appropriate.

- Singleton Avenue Intersection Safety Improvement projects is schedule for construction in 2015. This project will extend the eastbound and westbound left-turn lanes from SR 406 onto Singleton Avenue and close two existing full median openings on either side of the intersection. Traffic signals and mast arms will be replaced, and new pedestrian ramps will be constructed on all four quadrants of the intersection.
- The FDOT Five Year Work Program identifies a resurfacing along SR 406 from Petty Circle to US 1 Northbound which is funded for construction FY 2018. This project provides an opportunity to repurpose/restripe the existing pavement if such a strategy is determined beneficial as part of the planning process.
- The SCTPO TIP identifies a trail overpass over SR 406, east of Park Avenue, as part of the East Central Florida Regional Rail Trail (ECRRRT). When completed, this segment will comprise a portion of both the Coast to Coast Trail and Space Coast Loop Trial networks. This overpass is funded for construction in FY 2018. This project presents the potential to allow local pedestrian and bicycle traffic to utilize the bridge.
- The FDOT Five Year Work Program identifies an extension of the left turn lanes and median modifications at Singleton Avenue intersection will start construction at the end of 2015.

The 2040 future conditions analysis assumes no additional improvements are made on the corridor, utilizing the intersection lane geometry provided in Figure 2. The signal timings were optimized under the assumption that signal timings will be regularly maintained through 2040. Figure 6 illustrates the location of the planned pedestrian overpass across SR 406.



SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 6
Existing Bike Lanes, Sidewalk Gaps,
Marked Crosswalks & Proposed Trails

3.3 Growth Projections and Assumptions

In order to determine an acceptable growth the SR 406 Study Area, traffic projections from various available sources were considered. This included the latest year Central Florida Regional Planning Model, Version 5.1 (CFRPM 5.1) released in 2012, FDOT historical Annual Average Daily Traffic (AADT) growth trends, and Brevard County population projections from the Bureau of Economic and Business Research (BEBR). A historic trends analysis, model growth analysis, and population projection was completed to reasonably determine the growth rate for this planning study. Table 3 presents the comparison of resulting growth rates.

Table 3: Growth Rate Comparison

Growth Method	Growth Rate
Historic Trends Analysis	-0.14%
Model Growth Analysis	-0.23%
BEBR Growth Analysis	
Brevard County Medium	0.85%
Brevard County High	1.54%
Average Growth Rate	0.51%

The historic growth rate and model growth rate were not used due to the negative value as illustrated in Table 3. Compared to these two negative growth rates, the BEBR medium and high growth rate are considered too high to utilize. It was observed that a more viable growth rate would be the sum of the BEBR medium growth rate and the model growth rate. Based on these observations, the selected growth rate was 0.62 percent (0.62%). This growth rate was applied to the 2015 existing volumes to develop the 2040 future roadway and intersection volumes for both AM and PM peak hours. The project future volumes are illustrated on Figure 7 and Figure 8.

3.4 2040 Future Operational Operations

Future 2040 operational analysis was conducted to determine the level-of-service (LOS) for the roadway segments and the Study Area intersections. The same methodology used for determining 2015 Existing LOS was applied to the 2040 Future scenario.

3.4.1 2040 Roadway Operations

According to FDOT, the study corridor is classified as an "urban principal arterial other" and has an adopted LOS "D". The generalized peak hour directional service volumes for the LOS letters "A" through "F" were obtained from Table 7 of the 2012 FDOT Quality/Level of Service Handbook and compared with projected 2040 volumes calculated using the 2015 existing volumes with the previously-identified 0.62% annual growth factor applied. The 2040 projected roadway operations are provided in Table 4 and Figure 7 for daily, AM peak hour, and PM peak hour.

Table 4: 2040 Projected Roadway Level of Service

Roadway/Segment	Daily		AM Peak		PM Peak	
	AADT	LOS	Volume	LOS	Volume	LOS
SR 406						
South Lake Elementary to I-95	7,200	C	360	C	350	C
I-95 to Singleton Avenue	15,000	C	620	C	680	C
Singleton Avenue to Einig Avenue	17,000	C	670	C	930	C
Einig Avenue to US 1 Southbound	17,000	D	670	C	930	D
US 1 Southbound to US 1 Northbound	9,200	C	430	C	610	C

2012 FDOT Quality/Level of Service Handbook Tables
AM and PM Peak Volumes and LOS are based off of Peak Direction
*AADT = Data Collected * Seasonal Factor (0.92) * Axle Factor (0.99) (if need)*

As shown in Table 4, the US 1 corridor is anticipated to operate within acceptable LOS standards based upon the future forecast developed for this evaluation. Anticipated roadway operations are illustrated in Figure 7.

SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

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FIGURE 7
Future 2040 Projected Roadway Volumes & Operations

3.4.2 2040 Intersection Operations

According to the HCM 2010, for signalized intersections, and average control delay per vehicle from 55 seconds up to 80 seconds is considered to be a LOS E condition. Beyond 80 seconds is considered to be a LOS F condition. A summary of the 2040 projected intersection operations for all study intersections is provided in Table 5 and Figure 8 for the AM and PM peak hours.

Table 5: 2040 Projected Intersection Level of Service

Intersection	Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
SR 406 / I-95 Southbound Ramps	Signalized	10.0	B	8.7	A
SR 406 / I-95 Northbound Ramps	Signalized	11.3	B	12.7	B
SR 406 / Singleton Avenue	Signalized	21.3	C	27.3	C
SR 406 / Park Avenue	Signalized	15.8	B	18.9	B
SR 406 / Palm Avenue	Signalized	2.8	A	4.4	A
SR 406 / US 1 Southbound	Signalized	11.6	B	13.2	B
SR 406 / US 1 Northbound	Signalized	7.8	A	9.5	A

As presented in Table 5 above, all of the signalized Study Area intersections are anticipated to operate at acceptable LOS levels in 2040. Unsignalized Study Area intersections are all anticipated to have mainline street operations meet LOS standards. The 2040 projected intersection operations are presented in Figure 8 for the AM and PM peak hours. Synchro reports are provided in the appendix that contain additional specifics on the operational assessment.

N
Not To Scale

LEGEND

- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Traffic Movement
- AM (PM) Traffic Volume
- Signalized Intersection

Arthur Dunn Airpark

I-95 SB Ramps & Garden St.
AM Delay / LOS: 10.0 (B)
PM Delay / LOS: 8.7 (A)
8 (15)
113 (120)
95 (365)
257 (303)
225 (172)
140 (78)

Singleton Ave. & Garden St.
AM Delay / LOS: 21.3 (C)
PM Delay / LOS: 27.4 (C)
100 (86)
110 (136)
102 (114)
47 (150)
297 (724)
45 (75)
62 (203)
534 (525)
126 (141)
112 (183)
66 (151)
52 (61)

Palm Ave. & Garden St.
AM Delay / LOS: 2.8 (A)
PM Delay / LOS: 4.4 (A)
1 (4)
0 (2)
1 (2)
3 (3)
205 (540)
3 (8)
5 (4)
397 (399)
46 (39)
11 (61)
0 (0)
6 (17)

Washington Ave. & Garden St.
AM Delay / LOS: 7.8 (A)
PM Delay / LOS: 9.5 (A)
0 (3)
46 (230)
55 (77)
195 (156)
182 (353)
357 (771)
39 (56)

I-95 NB Ramps & Garden St.
60 (162)
317 (531)
10 (9)
307 (285)
40 (129)
260 (393)
AM Delay / LOS: 11.3 (B)
PM Delay / LOS: 12.7 (B)

Park Ave. & Garden St.
38 (58)
216 (257)
23 (23)
7 (8)
202 (620)
33 (87)
52 (64)
417 (363)
121 (163)
133 (215)
202 (288)
35 (61)
AM Delay / LOS: 15.8 (B)
PM Delay / LOS: 18.9 (B)

Hopkins Ave. & Garden St.
21 (63)
437 (593)
87 (74)
196 (484)
29 (117)
159 (172)
233 (246)
AM Delay / LOS: 11.6 (B)
PM Delay / LOS: 13.2 (B)

406 Garden St.
Singleton Ave.
Park Ave.
Hopkins Ave.
Washington Ave.
Palm Ave.

SR 406 Corridor Planning Study

South Lake Elementary School to SR 5 (US 1)

FIGURE 8
Future 2040 Projected Intersection Volumes & Operations

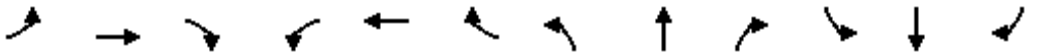
4

Summary

Based on analysis performed to determine the 2040 projected volumes and operations of SR 406 within the Study Area, there are no anticipated roadway capacity or intersection operational issues. The future traffic projections provide the potential to consider improvement alternatives that reduce the focus on vehicular modes and afford more options for other modes. Potential improvement alternatives may consider multimodal enhancements such as bicycle, pedestrian, and transit facilities to complement the planned East Central Florida Rail Trail and the existing facilities on the Max Brewer Bridge, as part of the Florida Coast to Coast Trail network.

A

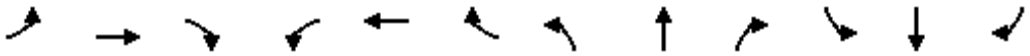
Appendix A – Synchro Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	225	140	257	95	0	0	0	0	113	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0					5.0		5.0
Lane Util. Factor		0.95	1.00	1.00	1.00					1.00		1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		3505	1583	1719	1863					1736		1583
Flt Permitted		1.00	1.00	0.49	1.00					0.95		1.00
Satd. Flow (perm)		3505	1583	880	1863					1736		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	245	152	279	103	0	0	0	0	123	0	9
RTOR Reduction (vph)	0	0	92	0	0	0	0	0	0	0	0	8
Lane Group Flow (vph)	0	245	60	279	103	0	0	0	0	123	0	1
Confl. Peds. (#/hr)												2
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	2%	3%	2%	5%	2%	2%	2%	2%	2%	4%	2%	2%
Turn Type		NA	Perm	pm+pt	NA					Prot		Prot
Protected Phases		2		1	6					4		4
Permitted Phases			2	6								
Actuated Green, G (s)		21.4	21.4	35.3	29.0					9.0		9.0
Effective Green, g (s)		21.4	21.4	35.3	29.0					9.0		9.0
Actuated g/C Ratio		0.39	0.39	0.65	0.53					0.17		0.17
Clearance Time (s)		5.0	5.0	5.0	5.0					5.0		5.0
Vehicle Extension (s)		0.5	0.5	3.0	0.5					3.0		3.0
Lane Grp Cap (vph)		1381	623	709	994					287		262
v/s Ratio Prot		0.07		c0.06	0.06					c0.07		0.00
v/s Ratio Perm			0.04	c0.19								
v/c Ratio		0.18	0.10	0.39	0.10					0.43		0.01
Uniform Delay, d1		10.7	10.4	4.3	6.2					20.3		18.9
Progression Factor		1.00	1.00	1.41	0.54					1.00		1.00
Incremental Delay, d2		0.0	0.0	0.4	0.0					1.0		0.0
Delay (s)		10.7	10.4	6.4	3.4					21.4		18.9
Level of Service		B	B	A	A					C		B
Approach Delay (s)		10.6			5.6			0.0			21.2	
Approach LOS		B			A			A			C	

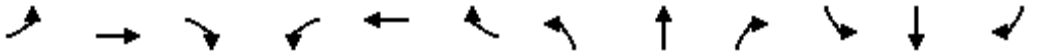
Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	307	0	0	317	60	40	0	260	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Lane Util. Factor	1.00	1.00			0.95	1.00	1.00		1.00			
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1357	1863			3539	1583	1719		1568			
Flt Permitted	0.54	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	778	1863			3539	1583	1719		1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	334	0	0	345	65	43	0	283	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	30	0	0	236	0	0	0
Lane Group Flow (vph)	11	334	0	0	345	35	43	0	47	0	0	0
Confl. Peds. (#/hr)							3					
Heavy Vehicles (%)	33%	2%	2%	2%	2%	2%	5%	2%	3%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm	Prot		Prot			
Protected Phases	5	2			6		8		8			
Permitted Phases	2					6						
Actuated Green, G (s)	22.7	21.4			29.0	29.0	9.0		9.0			
Effective Green, g (s)	22.7	21.4			29.0	29.0	9.0		9.0			
Actuated g/C Ratio	0.42	0.39			0.53	0.53	0.17		0.17			
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Vehicle Extension (s)	3.0	0.5			0.5	0.5	3.0		3.0			
Lane Grp Cap (vph)	339	734			1890	845	284		259			
v/s Ratio Prot	c0.00	c0.18			c0.10		0.03		c0.03			
v/s Ratio Perm	0.01					0.02						
v/c Ratio	0.03	0.46			0.18	0.04	0.15		0.18			
Uniform Delay, d1	9.3	12.1			6.5	6.0	19.4		19.5			
Progression Factor	0.76	0.73			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.0	0.2			0.0	0.0	0.2		0.3			
Delay (s)	7.1	9.1			6.5	6.0	19.6		19.8			
Level of Service	A	A			A	A	B		B			
Approach Delay (s)		9.0			6.5			19.8			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	534	126	45	297	47	112	66	52	102	110	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1629	1676	1676	1644	1660	1676	1644	1658	1710	1644	1651	1710
Adj Flow Rate, veh/h	67	580	137	49	323	51	122	72	57	111	120	109
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	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
Percent Heavy Veh, %	5	2	2	4	3	2	4	4	4	4	5	5
Cap, veh/h	401	1083	474	289	1048	474	296	188	149	375	169	154
Arrive On Green	0.05	0.34	0.34	0.04	0.33	0.33	0.08	0.22	0.22	0.07	0.21	0.21
Sat Flow, veh/h	1551	3185	1395	1566	3154	1425	1566	856	678	1566	796	723
Grp Volume(v), veh/h	67	580	137	49	323	51	122	0	129	111	0	229
Grp Sat Flow(s),veh/h/ln	1551	1593	1395	1566	1577	1425	1566	0	1534	1566	0	1519
Q Serve(g_s), s	2.1	10.9	5.3	1.5	5.6	1.8	4.4	0.0	5.3	4.0	0.0	10.3
Cycle Q Clear(g_c), s	2.1	10.9	5.3	1.5	5.6	1.8	4.4	0.0	5.3	4.0	0.0	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.44	1.00		0.48
Lane Grp Cap(c), veh/h	401	1083	474	289	1048	474	296	0	337	375	0	323
V/C Ratio(X)	0.17	0.54	0.29	0.17	0.31	0.11	0.41	0.00	0.38	0.30	0.00	0.71
Avail Cap(c_a), veh/h	427	1592	697	328	1577	712	319	0	684	388	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.0	19.7	17.9	15.7	18.4	17.1	20.9	0.0	24.6	20.5	0.0	27.0
Incr Delay (d2), s/veh	0.2	0.9	0.7	0.3	0.4	0.2	0.9	0.0	0.7	0.4	0.0	2.9
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	0.9	4.9	2.1	0.7	2.5	0.7	2.0	0.0	2.3	1.8	0.0	4.6
LnGrp Delay(d),s/veh	15.2	20.6	18.6	16.0	18.7	17.3	21.8	0.0	25.3	20.9	0.0	29.8
LnGrp LOS	B	C	B	B	B	B	C		C	C		C
Approach Vol, veh/h		784			423			251			340	
Approach Delay, s/veh		19.8			18.2			23.6			26.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	31.2	11.9	21.8	9.7	30.6	11.4	22.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	5.0	37.0	7.0	32.0	5.0	37.0	6.0	33.0
Max Q Clear Time (g_c+I1), s	3.5	12.9	6.4	12.3	4.1	7.6	6.0	7.3
Green Ext Time (p_c), s	0.0	12.3	0.0	2.0	0.0	13.7	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	52	417	121	33	202	7	133	202	35	23	216	38
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1845	1900	1863	1828	1900	1827	1863	1900	1900	1860	1900
Adj Flow Rate, veh/h	57	453	132	36	220	8	145	220	38	25	235	41
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	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
Percent Heavy Veh, %	4	3	3	2	4	4	4	2	2	2	2	2
Cap, veh/h	452	772	223	300	1395	51	496	639	110	88	343	57
Arrive On Green	0.29	0.29	0.29	0.03	0.41	0.41	0.09	0.41	0.41	0.24	0.24	0.24
Sat Flow, veh/h	1122	2681	775	1774	3419	124	1740	1548	267	76	1450	241
Grp Volume(v), veh/h	57	295	290	36	111	117	145	0	258	301	0	0
Grp Sat Flow(s),veh/h/ln	1122	1752	1703	1774	1737	1806	1740	0	1815	1766	0	0
Q Serve(g_s), s	2.1	8.0	8.2	0.7	2.3	2.3	3.3	0.0	5.4	2.4	0.0	0.0
Cycle Q Clear(g_c), s	2.1	8.0	8.2	0.7	2.3	2.3	3.3	0.0	5.4	8.6	0.0	0.0
Prop In Lane	1.00		0.45	1.00		0.07	1.00		0.15	0.08		0.14
Lane Grp Cap(c), veh/h	452	505	490	300	709	737	496	0	750	487	0	0
V/C Ratio(X)	0.13	0.58	0.59	0.12	0.16	0.16	0.29	0.00	0.34	0.62	0.00	0.00
Avail Cap(c_a), veh/h	550	659	640	373	932	969	843	0	1462	820	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	17.0	17.1	12.9	10.5	10.5	12.5	0.0	11.2	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.3	1.4	0.3	0.1	0.1	0.2	0.0	0.2	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.0	4.0	0.4	1.1	1.2	1.6	0.0	2.8	4.4	0.0	0.0
LnGrp Delay(d),s/veh	15.1	18.3	18.4	13.1	10.6	10.6	12.8	0.0	11.4	20.5	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B		B	C		
Approach Vol, veh/h		642			264			403			301	
Approach Delay, s/veh		18.1			10.9			11.9			20.5	
Approach LOS		B			B			B			C	

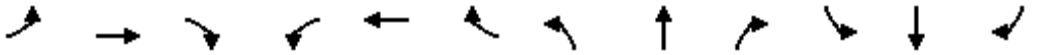
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.8		28.1	6.7	21.1	9.9	18.2
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s		30.0		45.0	4.0	21.0	16.0	24.0
Max Q Clear Time (g_c+I1), s		4.3		7.4	2.7	10.2	5.3	10.6
Green Ext Time (p_c), s		6.3		3.1	0.0	4.2	0.2	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	397	46	3	205	3	11	0	6	1	0	1
Number	5	2	12	1	6	16	3	8	18	7	4	14
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	0.99		1.00	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1811	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	5	432	50	3	223	3	12	0	7	1	0	1
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	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
Percent Heavy Veh, %	2	2	2	5	5	5	2	2	2	2	2	2
Cap, veh/h	923	1911	220	143	2025	27	246	0	16	225	0	24
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.03	0.00	0.03	0.03	0.00	0.03
Sat Flow, veh/h	1150	3199	368	8	3389	45	929	0	542	811	0	811
Grp Volume(v), veh/h	5	238	244	120	0	109	19	0	0	2	0	0
Grp Sat Flow(s),veh/h/ln	1150	1770	1798	1803	0	1640	1471	0	0	1623	0	0
Q Serve(g_s), s	0.1	1.7	1.7	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	1.7	1.7	0.8	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.20	0.02		0.03	0.63		0.37	0.50		0.50
Lane Grp Cap(c), veh/h	923	1057	1074	1215	0	980	262	0	0	249	0	0
V/C Ratio(X)	0.01	0.23	0.23	0.10	0.00	0.11	0.07	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	1610	2115	2148	2269	0	1960	2290	0	0	2306	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.5	2.5	2.5	2.3	0.0	2.3	12.8	0.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.9	0.4	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	2.5	2.6	2.6	2.4	0.0	2.4	12.9	0.0	0.0	12.7	0.0	0.0
LnGrp LOS	A	A	A	A		A	B			B		
Approach Vol, veh/h		487			229			19			2	
Approach Delay, s/veh		2.6			2.4			12.9			12.7	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		21.0		5.8		21.0		5.8
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		32.0		38.0		32.0		38.0
Max Q Clear Time (g_c+I1), s		3.7		2.0		2.8		2.3
Green Ext Time (p_c), s		5.6		0.1		5.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	2.8
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	159	233	29	196	0	0	0	0	87	437	21
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1855	1900	1792	1810	0				1900	1854	1827
Adj Flow Rate, veh/h	0	173	253	32	213	0				95	475	23
Adj No. of Lanes	0	2	0	1	2	0				0	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	3	3	6	5	0				4	2	4
Cap, veh/h	0	468	419	368	1487	0				184	974	500
Arrive On Green	0.00	0.27	0.27	0.04	0.43	0.00				0.32	0.32	0.32
Sat Flow, veh/h	0	1855	1577	1707	3529	0				571	3015	1549
Grp Volume(v), veh/h	0	173	253	32	213	0				304	266	23
Grp Sat Flow(s),veh/h/ln	0	1763	1577	1707	1719	0				1825	1761	1549
Q Serve(g_s), s	0.0	3.3	5.7	0.5	1.5	0.0				5.5	4.9	0.4
Cycle Q Clear(g_c), s	0.0	3.3	5.7	0.5	1.5	0.0				5.5	4.9	0.4
Prop In Lane	0.00		1.00	1.00		0.00				0.31		1.00
Lane Grp Cap(c), veh/h	0	468	419	368	1487	0				589	569	500
V/C Ratio(X)	0.00	0.37	0.60	0.09	0.14	0.00				0.52	0.47	0.05
Avail Cap(c_a), veh/h	0	819	733	542	2522	0				1116	1077	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	12.2	13.1	9.3	7.0	0.0				11.2	11.0	9.5
Incr Delay (d2), s/veh	0.0	0.5	1.4	0.1	0.0	0.0				0.8	0.7	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
%ile BackOfQ(50%),veh/ln	0.0	1.6	2.6	0.2	0.7	0.0				2.9	2.5	0.2
LnGrp Delay(d),s/veh	0.0	12.7	14.5	9.4	7.1	0.0				12.1	11.8	9.6
LnGrp LOS		B	B	A	A					B	B	A
Approach Vol, veh/h		426			245						593	
Approach Delay, s/veh		13.8			7.4						11.8	
Approach LOS		B			A						B	

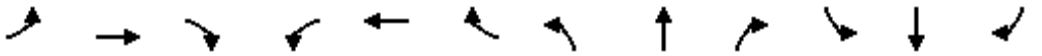
Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			6.8	15.9		18.2		22.7
Change Period (Y+Rc), s			5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s			6.0	19.0		25.0		30.0
Max Q Clear Time (g_c+I1), s			2.5	7.7		7.5		3.5
Green Ext Time (p_c), s			0.0	3.1		3.9		4.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	195	0	0	46	0	182	357	39	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1825	0	0	1863	1863	1792	1827	1863			
Adj Flow Rate, veh/h	60	212	0	0	50	0	198	388	42			
Adj No. of Lanes	0	2	0	0	3	1	1	2	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	3	3	0	0	2	2	6	4	2			
Cap, veh/h	285	805	0	0	1471	458	687	1396	636			
Arrive On Green	0.29	0.29	0.00	0.00	0.29	0.00	0.40	0.40	0.40			
Sat Flow, veh/h	447	2868	0	0	5253	1583	1707	3471	1582			
Grp Volume(v), veh/h	150	122	0	0	50	0	198	388	42			
Grp Sat Flow(s),veh/h/ln	1654	1578	0	0	1695	1583	1707	1736	1582			
Q Serve(g_s), s	0.0	1.9	0.0	0.0	0.2	0.0	2.5	2.4	0.5			
Cycle Q Clear(g_c), s	2.1	1.9	0.0	0.0	0.2	0.0	2.5	2.4	0.5			
Prop In Lane	0.40		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	634	456	0	0	1471	458	687	1396	636			
V/C Ratio(X)	0.24	0.27	0.00	0.00	0.03	0.00	0.29	0.28	0.07			
Avail Cap(c_a), veh/h	1202	1022	0	0	3295	1026	1264	2571	1172			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	8.9	8.9	0.0	0.0	8.3	0.0	6.5	6.5	5.9			
Incr Delay (d2), s/veh	0.9	1.4	0.0	0.0	0.0	0.0	0.5	0.2	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	1.0	0.0	0.0	0.1	0.0	1.2	1.2	0.2			
LnGrp Delay(d),s/veh	9.8	10.3	0.0	0.0	8.3	0.0	7.0	6.7	6.0			
LnGrp LOS	A	B			A		A	A	A			
Approach Vol, veh/h		272			50			628				
Approach Delay, s/veh		10.0			8.3			6.8				
Approach LOS		B			A			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		18.0		14.4				14.4
Change Period (Y+Rc), s		5.0		5.0				5.0
Max Green Setting (Gmax), s		24.0		21.0				21.0
Max Q Clear Time (g_c+I1), s		4.5		4.1				2.2
Green Ext Time (p_c), s		6.0		5.2				5.5

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	172	78	303	365	0	0	0	0	120	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0					5.0		5.0
Lane Util. Factor		0.95	1.00	1.00	1.00					1.00		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		3539	1583	1770	1863					1770		1583
Flt Permitted		1.00	1.00	0.51	1.00					0.95		1.00
Satd. Flow (perm)		3539	1583	959	1863					1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	187	85	329	397	0	0	0	0	130	0	16
RTOR Reduction (vph)	0	0	53	0	0	0	0	0	0	0	0	13
Lane Group Flow (vph)	0	187	32	329	397	0	0	0	0	130	0	3
Turn Type		NA	Perm	pm+pt	NA					Prot		Prot
Protected Phases		2		1	6					4		4
Permitted Phases			2	6								
Actuated Green, G (s)		21.6	21.6	36.6	30.4					10.0		10.0
Effective Green, g (s)		21.6	21.6	36.6	30.4					10.0		10.0
Actuated g/C Ratio		0.38	0.38	0.65	0.54					0.18		0.18
Clearance Time (s)		5.0	5.0	5.0	5.0					5.0		5.0
Vehicle Extension (s)		0.5	0.5	3.0	0.5					3.0		3.0
Lane Grp Cap (vph)		1350	604	763	1000					312		279
v/s Ratio Prot		0.05		c0.08	0.21					c0.07		0.00
v/s Ratio Perm			0.02	c0.20								
v/c Ratio		0.14	0.05	0.43	0.40					0.42		0.01
Uniform Delay, d1		11.4	11.0	4.6	7.7					20.7		19.2
Progression Factor		1.00	1.00	1.18	0.57					1.00		1.00
Incremental Delay, d2		0.0	0.0	0.4	0.1					0.9		0.0
Delay (s)		11.4	11.1	5.9	4.5					21.6		19.2
Level of Service		B	B	A	A					C		B
Approach Delay (s)		11.3			5.1			0.0			21.4	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	285	0	0	531	162	129	0	393	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Lane Util. Factor	1.00	1.00			0.95	1.00	1.00		1.00			
Frpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1612	1863			3539	1583	1770		1583			
Flt Permitted	0.43	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	738	1863			3539	1583	1770		1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	310	0	0	577	176	140	0	427	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	81	0	0	352	0	0	0
Lane Group Flow (vph)	10	310	0	0	577	95	140	0	75	0	0	0
Confl. Peds. (#/hr)									1			
Heavy Vehicles (%)	12%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	NA			NA	Perm	Prot		Prot			
Protected Phases	5	2			6		8		8			
Permitted Phases	2					6						
Actuated Green, G (s)	22.8	21.6			30.4	30.4	10.0		10.0			
Effective Green, g (s)	22.8	21.6			30.4	30.4	10.0		10.0			
Actuated g/C Ratio	0.40	0.38			0.54	0.54	0.18		0.18			
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Vehicle Extension (s)	3.0	0.5			0.5	0.5	3.0		3.0			
Lane Grp Cap (vph)	315	710			1900	850	312		279			
v/s Ratio Prot	c0.00	c0.17			c0.16		c0.08		0.05			
v/s Ratio Perm	0.01					0.06						
v/c Ratio	0.03	0.44			0.30	0.11	0.45		0.27			
Uniform Delay, d1	10.2	13.0			7.2	6.4	20.8		20.1			
Progression Factor	0.87	0.84			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.0	0.2			0.0	0.0	1.0		0.5			
Delay (s)	8.8	11.1			7.3	6.5	21.9		20.7			
Level of Service	A	B			A	A	C		C			
Approach Delay (s)		11.0			7.1			21.0			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	203	525	141	75	724	150	183	151	61	114	136	86
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1660	1676	1676	1676	1676	1676	1662	1710	1676	1676	1710
Adj Flow Rate, veh/h	221	571	153	82	787	163	199	164	66	124	148	93
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	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
Percent Heavy Veh, %	2	3	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	1307	590	348	1134	507	233	227	92	243	194	122
Arrive On Green	0.11	0.41	0.41	0.05	0.36	0.36	0.06	0.20	0.20	0.06	0.20	0.20
Sat Flow, veh/h	1597	3154	1423	1597	3185	1423	1597	1128	454	1597	963	605
Grp Volume(v), veh/h	221	571	153	82	787	163	199	0	230	124	0	241
Grp Sat Flow(s),veh/h/ln	1597	1577	1423	1597	1593	1423	1597	0	1582	1597	0	1569
Q Serve(g_s), s	7.3	11.2	6.1	2.8	18.3	7.2	5.0	0.0	11.8	5.0	0.0	12.6
Cycle Q Clear(g_c), s	7.3	11.2	6.1	2.8	18.3	7.2	5.0	0.0	11.8	5.0	0.0	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.39
Lane Grp Cap(c), veh/h	332	1307	590	348	1134	507	233	0	319	243	0	316
V/C Ratio(X)	0.67	0.44	0.26	0.24	0.69	0.32	0.85	0.00	0.72	0.51	0.00	0.76
Avail Cap(c_a), veh/h	362	1418	640	361	1212	541	233	0	584	243	0	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.5	18.2	16.7	16.4	23.9	20.3	33.4	0.0	32.3	27.5	0.0	32.6
Incr Delay (d2), s/veh	4.1	0.5	0.5	0.3	2.2	0.8	25.2	0.0	3.1	1.8	0.0	3.8
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	3.5	4.9	2.5	1.3	8.3	3.0	4.2	0.0	5.4	0.7	0.0	5.8
LnGrp Delay(d),s/veh	21.6	18.7	17.2	16.7	26.1	21.1	58.6	0.0	35.4	29.2	0.0	36.4
LnGrp LOS	C	B	B	B	C	C	E		D	C		D
Approach Vol, veh/h		945			1032			429			365	
Approach Delay, s/veh		19.1			24.6			46.2			34.0	
Approach LOS		B			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	41.9	11.0	23.5	15.4	36.9	11.0	23.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	5.0	39.0	5.0	32.0	11.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	4.8	13.2	7.0	14.6	9.3	20.3	7.0	13.8
Green Ext Time (p_c), s	0.0	18.9	0.0	2.6	0.1	10.5	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	363	163	87	620	8	215	288	61	23	257	58
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1848	1900	1900	1859	1900
Adj Flow Rate, veh/h	70	395	177	95	674	9	234	313	66	25	279	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	0	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	2	2
Cap, veh/h	290	608	269	293	1377	18	515	688	145	74	376	81
Arrive On Green	0.26	0.26	0.26	0.06	0.39	0.39	0.12	0.47	0.47	0.27	0.27	0.27
Sat Flow, veh/h	753	2384	1054	1774	3576	48	1774	1476	311	61	1387	300
Grp Volume(v), veh/h	70	292	280	95	333	350	234	0	379	367	0	0
Grp Sat Flow(s),veh/h/ln	753	1770	1669	1774	1770	1854	1774	0	1787	1747	0	0
Q Serve(g_s), s	5.2	9.9	10.1	2.5	9.6	9.6	5.9	0.0	9.7	4.1	0.0	0.0
Cycle Q Clear(g_c), s	6.1	9.9	10.1	2.5	9.6	9.6	5.9	0.0	9.7	12.9	0.0	0.0
Prop In Lane	1.00		0.63	1.00		0.03	1.00		0.17	0.07		0.17
Lane Grp Cap(c), veh/h	290	452	426	293	682	714	515	0	833	531	0	0
V/C Ratio(X)	0.24	0.65	0.66	0.32	0.49	0.49	0.45	0.00	0.45	0.69	0.00	0.00
Avail Cap(c_a), veh/h	321	526	496	300	763	799	722	0	1222	702	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	22.3	22.4	16.7	15.7	15.7	13.0	0.0	12.2	22.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	2.5	2.8	0.9	0.7	0.6	0.5	0.0	0.3	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.1	5.0	1.3	4.8	5.0	2.9	0.0	4.8	6.4	0.0	0.0
LnGrp Delay(d),s/veh	21.8	24.8	25.3	17.6	16.3	16.3	13.4	0.0	12.5	24.0	0.0	0.0
LnGrp LOS	C	C	C	B	B	B	B		B	C		
Approach Vol, veh/h		642			778			613			367	
Approach Delay, s/veh		24.7			16.5			12.8			24.0	
Approach LOS		C			B			B			C	

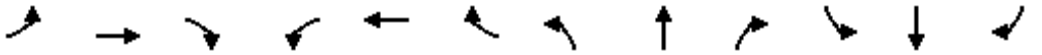
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6	7	8
Phs Duration (G+Y+Rc), s		30.9		36.4	8.7	22.2	13.1	23.2
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s		29.0		46.0	4.0	20.0	16.0	25.0
Max Q Clear Time (g_c+I1), s		11.6		11.7	4.5	12.1	7.9	14.9
Green Ext Time (p_c), s		8.7		4.4	0.0	5.0	0.3	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	399	39	8	540	3	61	0	17	2	2	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
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	0.99		0.99	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1861	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	4	434	42	9	587	3	66	0	18	2	2	4
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	620	1783	172	133	1920	10	345	0	34	184	62	92
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.11	0.00	0.11	0.11	0.11	0.11
Sat Flow, veh/h	823	3259	314	13	3510	18	1127	0	307	273	551	824
Grp Volume(v), veh/h	4	235	241	313	0	286	84	0	0	8	0	0
Grp Sat Flow(s),veh/h/ln	823	1768	1805	1849	0	1692	1434	0	0	1648	0	0
Q Serve(g_s), s	0.1	2.0	2.1	0.0	0.0	2.7	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.8	2.0	2.1	2.7	0.0	2.7	1.6	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		0.17	0.03		0.01	0.79		0.21	0.25		0.50
Lane Grp Cap(c), veh/h	620	967	988	1138	0	926	380	0	0	338	0	0
V/C Ratio(X)	0.01	0.24	0.24	0.28	0.00	0.31	0.22	0.00	0.00	0.02	0.00	0.00
Avail Cap(c_a), veh/h	1068	1929	1970	2122	0	1846	2062	0	0	2189	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.4	3.5	3.5	3.6	0.0	3.6	12.3	0.0	0.0	11.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	1.0	1.4	0.0	1.2	0.7	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	4.4	3.6	3.6	3.8	0.0	3.8	12.7	0.0	0.0	11.7	0.0	0.0
LnGrp LOS	A	A	A	A		A	B			B		
Approach Vol, veh/h		480			599			84			8	
Approach Delay, s/veh		3.6			3.8			12.7			11.7	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		21.0		8.3		21.0		8.3
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0
Max Green Setting (Gmax), s		32.0		38.0		32.0		38.0
Max Q Clear Time (g_c+I1), s		4.8		2.1		4.7		3.6
Green Ext Time (p_c), s		9.0		0.7		9.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	4.4
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	172	246	117	484	0	0	0	0	74	593	63
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1900	1863	1863
Adj Flow Rate, veh/h	0	187	267	127	526	0				80	645	68
Adj No. of Lanes	0	2	0	1	2	0				0	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	493	440	444	1693	0				122	1037	506
Arrive On Green	0.00	0.28	0.28	0.10	0.48	0.00				0.32	0.32	0.32
Sat Flow, veh/h	0	1863	1580	1774	3632	0				381	3232	1579
Grp Volume(v), veh/h	0	187	267	127	526	0				387	338	68
Grp Sat Flow(s),veh/h/ln	0	1770	1580	1774	1770	0				1844	1770	1579
Q Serve(g_s), s	0.0	4.2	7.3	2.2	4.5	0.0				9.0	8.0	1.5
Cycle Q Clear(g_c), s	0.0	4.2	7.3	2.2	4.5	0.0				9.0	8.0	1.5
Prop In Lane	0.00		1.00	1.00		0.00				0.21		1.00
Lane Grp Cap(c), veh/h	0	493	440	444	1693	0				591	568	506
V/C Ratio(X)	0.00	0.38	0.61	0.29	0.31	0.00				0.65	0.60	0.13
Avail Cap(c_a), veh/h	0	675	603	481	2132	0				925	888	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	15.6	10.1	8.0	0.0				14.5	14.2	12.0
Incr Delay (d2), s/veh	0.0	0.5	1.4	0.4	0.1	0.0				1.5	1.2	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
%ile BackOfQ(50%),veh/ln	0.0	2.1	3.4	1.1	2.2	0.0				4.8	4.0	0.7
LnGrp Delay(d),s/veh	0.0	15.0	17.0	10.4	8.1	0.0				16.0	15.4	12.2
LnGrp LOS		B	B	B	A					B	B	B
Approach Vol, veh/h		454			653						793	
Approach Delay, s/veh		16.1			8.5						15.4	
Approach LOS		B			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			10.0	18.9		21.0		28.8
Change Period (Y+Rc), s			5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s			6.0	19.0		25.0		30.0
Max Q Clear Time (g_c+I1), s			4.2	9.3		11.0		6.5
Green Ext Time (p_c), s			0.0	4.4		4.8		7.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	77	156	0	0	230	3	353	771	56	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	84	170	0	0	250	0	384	838	61			
Adj No. of Lanes	0	2	0	0	3	1	1	2	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	360	689	0	0	1569	488	809	1615	720			
Arrive On Green	0.31	0.31	0.00	0.00	0.31	0.00	0.46	0.46	0.46			
Sat Flow, veh/h	723	2318	0	0	5253	1583	1774	3539	1579			
Grp Volume(v), veh/h	136	118	0	0	250	0	384	838	61			
Grp Sat Flow(s),veh/h/ln	1347	1610	0	0	1695	1583	1774	1770	1579			
Q Serve(g_s), s	1.6	2.3	0.0	0.0	1.5	0.0	6.4	7.2	0.9			
Cycle Q Clear(g_c), s	3.1	2.3	0.0	0.0	1.5	0.0	6.4	7.2	0.9			
Prop In Lane	0.62		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	552	497	0	0	1569	488	809	1615	720			
V/C Ratio(X)	0.25	0.24	0.00	0.00	0.16	0.00	0.47	0.52	0.08			
Avail Cap(c_a), veh/h	798	796	0	0	2513	782	1002	1999	892			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	11.1	11.0	0.0	0.0	10.7	0.0	8.0	8.2	6.5			
Incr Delay (d2), s/veh	1.1	1.1	0.0	0.0	0.2	0.0	0.9	0.6	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.4	1.2	0.0	0.0	0.7	0.0	3.3	3.6	0.4			
LnGrp Delay(d),s/veh	12.2	12.1	0.0	0.0	10.9	0.0	8.9	8.8	6.6			
LnGrp LOS	B	B			B		A	A	A			
Approach Vol, veh/h		254			250			1283				
Approach Delay, s/veh		12.2			10.9			8.7				
Approach LOS		B			B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		24.4		18.1				18.1
Change Period (Y+Rc), s		5.0		5.0				5.0
Max Green Setting (Gmax), s		24.0		21.0				21.0
Max Q Clear Time (g_c+I1), s		9.2		5.1				3.5
Green Ext Time (p_c), s		10.2		7.8				8.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

SR 406 CORRIDOR PLANNING STUDY

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Florida Department of Transportation District 5

SR 406 CORRIDOR PLANNING STUDY

406

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