Coconut Road Traffic Study

From Estero Bay to Three Oaks Parkway

Village of Estero, FL
06/08/2016

Prepared for:

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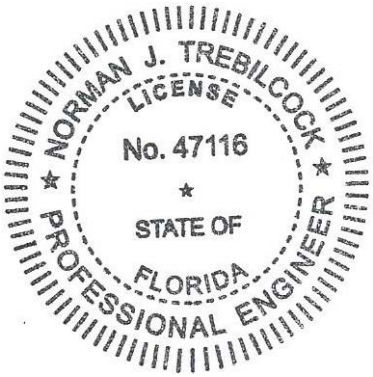
Statement of Certification

I certify that this Traffic Study has been prepared by me or under my immediate supervision and that I have experience and training in the field of Traffic and Transportation Engineering.



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Project Description

Traffic counts on major roadways in Lee County had dropped significantly around 2007-2008 due to the downturn in the economy. With the improved economy, more development activity has been the result. As such, Lee County roadway traffic has been climbing up towards pre-recession levels.

Many roadways in the Village of Estero are faced with increased traffic congestion and delays. The Coconut Road Traffic Study was initiated by the Village of Estero, Department of Community Development, to evaluate the impact of development on this roadway. Coconut Road is an east-west roadway and is located in the southern part of the Village of Estero, within Lee County, Florida (refer to **Fig. 1 – Project Location Map**). Within the Village of Estero the west section of this roadway study runs from the Hyatt Hotel to US 41, a distance of approximately 1.6 miles and the east section of this roadway runs from US 41 to Three Oaks Parkway, a distance of approximately 1.7 miles.

Fig. 1 – Project Location Map

The main objective of this traffic study is to evaluate existing and future traffic conditions and to determine if there are improvement needs for Coconut Road. The study process includes a few steps. The first step involves traffic data collection, to help determine the existing roadway Level of Service (LOS), and estimating future travel demand to evaluate if the existing roadway

LOS will be acceptable in the future. The second step includes evaluating corridor improvement needs and potential conceptual alternative improvements, if needed. A safety review of the roadway is provided as well. Finally, conclusions and recommendations are provided.

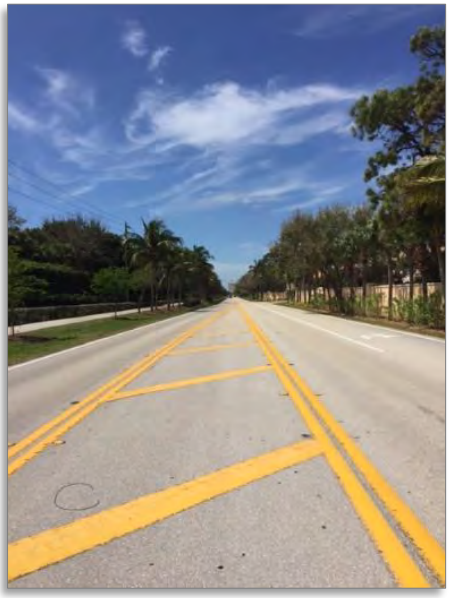
Existing Roadway Conditions

Coconut Road is classified as a major collector under the jurisdiction and maintenance of the Lee County Department of Transportation, and it stretches from Estero Bay to the west to just west of Interstate 75 to the east (Pebble Pointe at the Brooks).

East-west portion of Coconut Road terminates at the Hyatt Hotel and the roads runs north-south for a short length (<500 ft) and then west for another 2,000 ft.

Refer to **Appendix A: Lee County DOT Functional Classification**, **Appendix B: FDOT Federal – Aid Road Report (Excerpts)** and **Appendix C: Lee County Road Maintenance Map.**

Coconut Road is an undivided two-lane roadway at its western terminus and has mainly an open drainage system. East of the Hyatt hotel, the roadway has turn lanes at many access points. There is also a sidewalk along the south side of the roadway. The posted speed limit for the east-west section is 40 mph. About 900 ft. west of the intersection with US 41 the roadway changes to curb and gutter with a closed drainage system and sidewalks on both sides of the roadway. East of US 41, the roadway is a four-lane divided curb and gutter facility with a posted speed limit of 45 mph. In the eastern section (from US 41 to Three Oaks Parkway), there are undesignated on-street bicycle lanes on both sides and an asphalt pathway on the south side. Turn lanes are provided as well.



Coconut Road west of US 41 is mainly an undivided 2-lane section of roadway.

Lee County develops a concurrency report annually that includes an inventory of the maximum utilized and available capacity of public facilities for which minimum Level of Service (LOS) standards are prescribed. The latest report is the October 2015 Concurrency Report. The transportation inventory from the Concurrency

Report shows roadway link traffic volumes and its corresponding LOS by "Existing" 2014 100th Highest Hour, a short-term projected "Future" estimated 2015 100th Highest Hour, and Future Forecast Volume.

Coconut Road east of US 41 is a divided 4-lane section of roadway.

The Lee County Department of Transportation (Lee DOT) continues to comply with the requirements within the Lee County Comprehensive Land Use Plan (the Lee Plan) by updating the calculations of the maximum service volume for LOS A through LOS E. The maximum service volumes are based on the existing roadway characteristics plus any changes that are part of an improvement that has been programmed for construction in the first three (3) years of the adopted 5-year Lee County Capital Improvement Program (CIP) or the Florida Department of Transportation (FDOT) Work Program.

The existing roadway conditions are extracted from the Lee County October 2015 Concurrency Report and illustrated in **Table 1, Existing Roadways Conditions**.

Table 1
Existing Roadways Conditions

Roadway Link Name	Lee County Link No.	Lee County Roadway Link Location	Exist Roadway(1)	Standard LOS	Standard Volume(2)	2014 100th Highest Hour LOS	2014 100th Highest Hour Volume(2)
Coconut Road	05000	Spring Creek Road to US 41	2LN	E	860	C	366
Coconut Road	05030	US 41 to Three Oaks Parkway	4LD	E	1,790	C	588

Note(s): (1) 2LN = 2-narrow lanes roadway; 4LD =4-lane divided roadway, respectively;
(2) Peak Hour, Peak Season, Peak Direction.

Refer to **Appendix D: Lee County 2015 Concurrency Report (Excerpts)**.

Lee DOT operates traffic count programs on its major roadways to provide traffic characteristics and historical data. Coconut Road traffic count data is provided in **Appendix E: Lee County 2015 Traffic Count Report (Excerpts)**.

Traffic Volume Data Collection

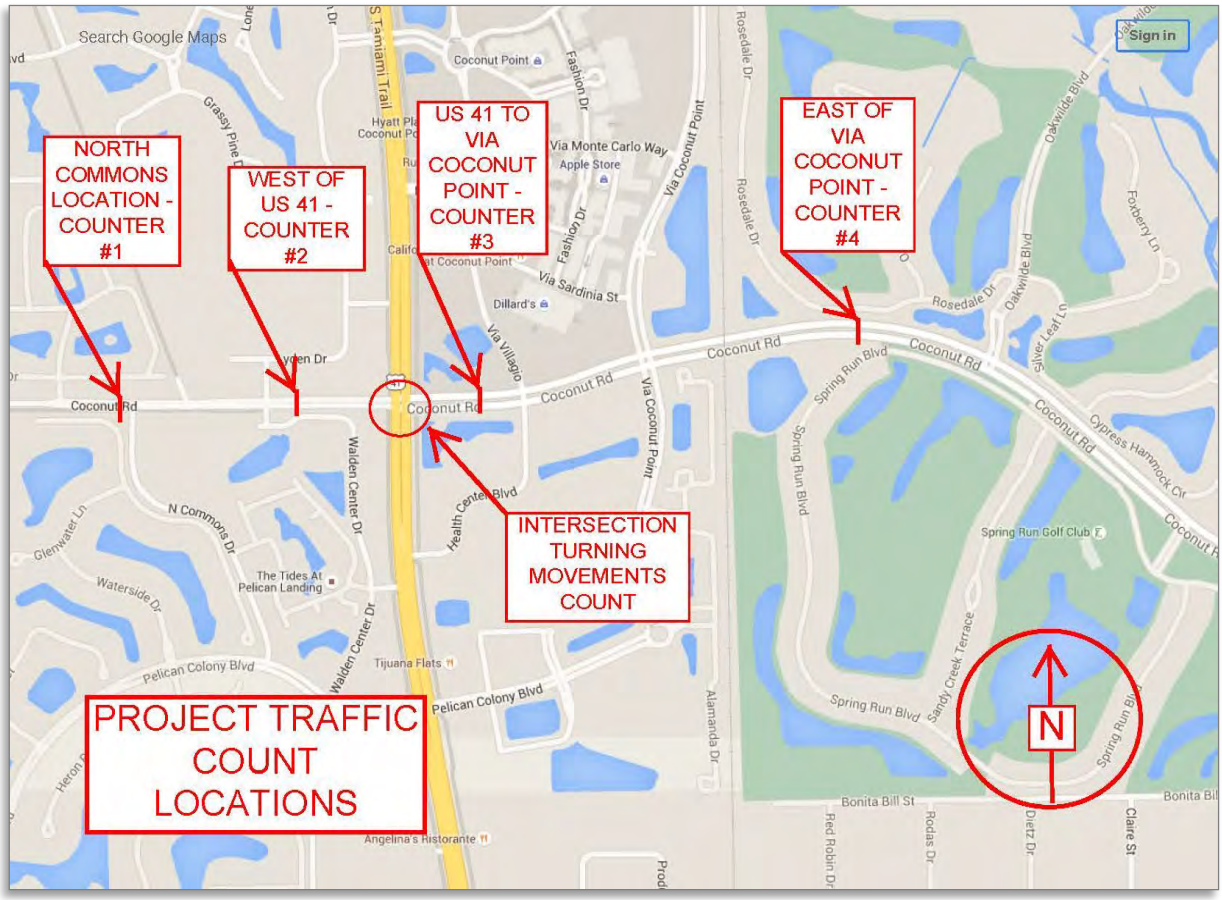
Existing daily and peak hour traffic count data were collected by Trebilcock Consulting Solutions (TCS) for the study corridor. This included traffic counts conducted along the corridor and its intersection with US 41 and count data provided by Lee DOT.

Bi-directional 72-hour machine traffic counts were conducted along the Coconut Road study corridor in February 2016 at four (4) selected locations (refer to **Appendix F: TCS Corridor Volume Counts**).

Selected corridor traffic count locations are illustrated in **Fig. 2** and **Table 2.**

For the purpose of this study, turning movement counts for the intersection of Coconut Road and US 41 were conducted on Wednesday, January 27, 2016, from 7AM to 9AM, and from 4PM to 6PM.

Fig. 2 – Project Traffic Count Locations



Above illustration depicts counting locations along corridor at four locations. In addition, intersection turning movement counts were taken at the US 41 and Coconut Rd.

Table 2
TCS Count Locations

Roadway Link Name	TCS Count Location	TCS Roadway Segment	Lee County Link No.
Coconut Road	1	From Spring Creek Road to US 41	05000
Coconut Road	2	From Spring Creek Road to US 41	05000
Coconut Road	3	From US 41 to Via Coconut Point	05030
Coconut Road	4	From Via Coconut Point to Three Oaks Parkway	05030

Traffic Corridor Level of Service Analysis

Collected daily and peak hour traffic count data was analyzed in accordance with FDOT and Lee DOT procedures.

1. **Annual Average Daily Traffic (AADT)**

   Based on the FDOT procedures outlined in the Project Traffic Forecasting Handbook, the AADT volumes can be determined from short-term traffic count data collected by applying correction factors, such as Weekly Seasonal Correction Factor (SF) and the Axle Correction Factor (AF). The AADT is calculated based on the following formula: AADT = ADT x SF x AF.

   The Average Daily Traffic (ADT) is the total traffic volume during a given time period divided by the number of days in that time period. For the purpose of this report, the 72-hour traffic volume is averaged for Tuesday, Wednesday and Thursday. The calculated 2016 AADT volumes for the field traffic counts are rounded to the nearest hundredths.

   Weekly Seasonal Correction Factor (SF) is extracted from the latest published FDOT Peak Season Factor Category Report as shown in **Appendix G: 2014 FDOT Peak Season Factor Category Report (Excerpt)**.

As illustrated in the FDOT Traffic Monitoring Handbook, axle factor categories are more highway-specific than seasonal factor categories. For the purpose of this report, the AADT has not been adjusted with axle correction factor. Projected 2016 AADT volumes are illustrated in **Table 3.**

Table 3
Coconut Road – 2016 AADT

COCONUT ROAD LINK VOLUMES - 2016 AADT						
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	3 DAY AVERAGE TWO-WAY	FDOT WEEKLY SEASONAL CORRECTION FACTOR (1)	FDOT AXLE CORRECTION FACTOR	2016 AADT TWO-WAY
1	FROM SPRING CREEK RD TO US 41	05000	10,884	0.81	1.0	8,800
2	FROM SPRING CREEK RD TO US 41	05000	11,969	0.82	1.0	9,800
3	FROM US 41 TO VIA COCONUT POINT	05030	15,824	0.82	1.0	13,000
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	17,339	0.82	1.0	14,200
NOTES:	(1) 2014 PEAK SEASON FACTOR CATEGORY REPORT - CATEGORY 1252 BONITA SPRINGS AREA					

2. Traffic Characteristics and Existing 2016 Level of Service (LOS)

The evaluation of existing and future traffic operating conditions along Coconut Road is determined based on Directional Design Hourly Volumes (DDHV). DDHV are obtained by applying a number of traffic factors such as Design Hour Factor (K) and Directional Factor (D).

Consistent with the information contained within the 2015 Lee County Traffic Count Report and the 2015 Lee County Concurrency Report, the current 2016 peak season, peak hour, peak direction is calculated by factoring the 2016 AADT by the appropriate K-100 and D-100 factors, approximating the 100th highest hour of the year.

The Lee County Traffic Count Report provides traffic characteristics for roadway stations located on all major roadways in Lee County. Monthly, daily and hourly factors are available for all permanent count station. Traffic characteristics of the permanent count stations are used to factor the periodic count location. A review of 2015 Lee County Traffic Count Report – Permanent Count Station 15 (PCS) – was conducted to determine K-100 factor.

The Directional Distribution, D-100 factor is the percentage of the total, two-way design hour traffic (the 100th highest hour of the year) traveling in the peak direction. The D-100 factor is used in Lee County in calculating the level of service for a roadway.

A "D" factor associated with a specific roadway link is derived using permanent traffic counters located throughout Lee County. As illustrated in the FDOT Traffic Monitoring Handbook, Florida values for "D" range between 50% and 80%.

Site-specific "D" factors are calculated for all four (4) TCS traffic count locations during the AM peak hour of 7-9 AM, and PM peak hour of 4-6 PM. It is noted that based on collected site traffic counts, the eastbound was the peak direction movement in the AM and PM for the Coconut Road link west of US 41. For the Coconut Road segment located east of US 41, it was observed that westbound was the peak direction in the AM, while eastbound was the peak direction in the PM. Site-specific "D" factor values are illustrated in **Table 4.**

Table 4
Coconut Road – D Factor Site Specific

THURS 2-11-2016		COCONUT RD AT NORTH COMMONS				
		TOTAL	DIRECTIONAL VOLUME		DIRECTIONAL FACTOR	
	PK HR	VOLUME	EB	WB	D FACTOR	DIRECTION
AM	7:15-8:15	611	320	291	52%	EB
PM	4:00-5:00	845	471	374	56%	EB
THURS 2-4-2016		COCONUT RD WEST OF US 41				
		TOTAL	DIRECTIONAL VOLUME		DIRECTIONAL FACTOR	
	PK HR	VOLUME	EB	WB	D FACTOR	DIRECTION
AM	7:30-8:30	788	421	367	53%	EB
PM	4:30-5:30	972	601	371	62%	EB
THURS 2-4-2016		COCONUT RD - US 41 TO VIA COCONUT POINT				
		TOTAL	DIRECTIONAL VOLUME		DIRECTIONAL FACTOR	
	PK HR	VOLUME	EB	WB	D FACTOR	DIRECTION
AM	8:00-9:00	900	281	619	69%	WB
PM	4:00-5:00	1,536	793	743	52%	EB
THURS 2-4-2016		COCONUT RD - EAST OF VIA COCONUT POINT				
		TOTAL	DIRECTIONAL VOLUME		DIRECTIONAL FACTOR	
	PK HR	VOLUME	EB	WB	D FACTOR	DIRECTION
AM	7:45-8:45	1,075	419	656	61%	WB
PM	4:30-5:30	1,462	815	647	56%	EB

As shown in **Table 4** and consistent with the 2015 Lee County Concurrency Report, the design peak hour utilized in this report is the PM peak hour. To better illustrate corridor specific conditions and account for a design 100th peak hour of the year, the estimated "D" factor utilized in this report is calculated by averaging the site-specific "D" factor and the

recommended Lee County PCS 15 "D" factor. A comparison analysis between site-specific "D" factor and the Lee County Traffic Count PSC 15 "D" factor is illustrated in **Table 5**.

Table 5
Coconut Road – Estimated D-100 Factor

COCONUT ROAD LINK VOLUMES - 2016 D-FACTOR SITE SPECIFIC									
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	TIME PERIOD	SITE SPECIFIC D-FACTOR		*LEE COUNTY D-FACTOR		ESTIMATED D-FACTOR	
				VALUE	DIRECTION	VALUE	DIRECTION	VALUE	DIRECTION
1	FROM SPRING CREEK RD TO US 41	05000	AM	0.52	EB	0.53	WB	0.53	EB
			PM	0.56	EB	0.52	EB	0.54	EB
2	FROM SPRING CREEK RD TO US 41	05000	AM	0.53	EB	0.53	WB	0.53	EB
			PM	0.62	EB	0.52	EB	0.57	EB
3	FROM US 41 TO VIA COCONUT POINT	05030	AM	0.69	WB	0.53	WB	0.61	WB
			PM	0.52	EB	0.52	EB	0.52	EB
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	AM	0.61	WB	0.53	WB	0.57	WB
			PM	0.56	EB	0.52	EB	0.54	EB
NOTES:	*2015 LEE COUNTY TRAFFIC COUNT REPORT - PCS 15								

Existing 2016 operating conditions were determined for roadway segments along Coconut Road as follows: from Spring Creek Road to US 41; from US 41 to Via Coconut Point; and from Via Coconut Point to Three Oaks Parkway. Based on our field observations and a review of the Lee County Traffic Count Report data associated with Coconut Road, it is our recommendation to use TCS counter location #2 (west of US 41) to represent data corresponding to Coconut Road segment from Spring Creek to US 41.

In agreement with the Lee DOT level of service calculations, daily volumes are converted to peak hour, peak season, peak directional volumes by applying K-100 factor, the estimated D-100 factor and Lee County PCS 15 day of the week fraction. The estimated Directional Design Hour Volume (DDHV) is illustrated In **Table 6**.

Table 6
Coconut Road – Estimated Directional Design Hour Volume

COCONUT ROAD LINK VOLUMES - 2016 PEAK HOUR PEAK DIRECTION PEAK SEASON							
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	2016 AADT TWO-WAY	*K-100	ESTIMATED D-100	* DAY OF WEEK FRACTION	2016 PEAK HOUR PEAK DIRECTION PEAK SEASON
2	FROM SPRING CREEK RD TO US 41	05000	9,800	0.100	0.57	1.07	522
3	FROM US 41 TO VIA COCONUT POINT	05030	13,000	0.100	0.52	1.07	632
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	14,200	0.100	0.54	1.07	717
NOTES:	* 2015 LEE COUNTY TRAFFIC COUNT REPORT - PCS 15						

The estimated 2016 DDHV is then compared to the directional capacities obtained from 2015 Lee County Concurrency Report and the Lee County Generalized Peak-Hour Directional Service Values. The LOS is reflected in **Table 7.**

Table 7
Coconut Road – Estimated 2016 LOS

COCONUT ROAD LINK VOLUMES - CAPACITY ANALYSIS										
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	2016 PK HR,PK DIR VOLUME	ROAD TYPE (1)	PERFORMANCE STANDARD (1)		2013 LINK SPECIFIC SERVICE VOLUMES, PK HR, PK DIR LOS (2)			PROJECTED 2016 LOS
					LOS	CAPACITY	C	D	E	
2	FROM SPRING CREEK RD TO US 41	05000	522	2LN	E	860	550	860	860	C
3	FROM US 41 TO VIA COCONUT POINT	05030	632	4LD	E	1,790	1,310	1,790	1,790	C
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	717	4LD	E	1,790	1,310	1,790	1,790	C
NOTES:	(1) 2015 LEE COUNTY CONCURENCY REPORT (2) REFER TO 2013 LEE COUNTY LINK SPECIFIC SERVICE VOLUMES									

Consistent with operation performance standard of LOS E for Coconut Road roadway segments as illustrated in the 2015 Lee County Concurrency Report, no level of service deficiencies were identified for existing 2016 peak hour, peak season, peak direction background traffic conditions.

Lee County service volumes for peak hour and peak direction are provided in **Appendix H: 2013 Lee County Link – Specific Service Volumes (Excerpt)**.

3. Future Area Growth

The Coconut Road region has been experiencing significant growth, not only in population but also in economic activities.

The historical traffic data was obtained from the 2015 Lee County Traffic Count Report (excerpts are included in **Appendix E**) and is summarized in **Table 8**.

Table 8
Coconut Road – Historical Traffic Data

ROADWAY SEGMENT	FROM	TO	NUMBER OF LANES	AADT*										GROWTH RATE
				2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Coconut Road	Spring Creek Road	US 41	2 LN	6000	9300	N/A	N/A	N/A	7800	N/A	7600	N/A	9200	4.85%
	US 41	Three Oaks Pkwy	4 LD	15100	15500	12600	9900	10700	9900	N/A	12200	N/A	12200	-2.35%
US 41	South of Hickory Dr		6 LD	43300	41300	41200	40200	38600	42000	N/A	36600	37700	42500	-0.20%

Note(s): *Refer to 2015 Lee Traffic Count Report

A review of the historical traffic data indicates that the annual growth rate is 4.85% for Coconut Road west of US 41, and it is negative for the US 41 and Coconut Road segment located east of US 41. As coordinated with the Village of Estero Transportation staff, a minimum growth rate of one percent (1%) was utilized for the Coconut Road segment east of US 41.

The exponential growth formula was implemented to calculate estimated annual growth rate as follows: $F = P \times (1+r)^n$ where – F = future volume; P = base year traffic volume; r = growth rate percentage; n = number of years from the base year.

4. Coconut Road Corridor Development Potential

Several government documents were reviewed in an effort to determine the consistency with future transportation demand and develop strategies for potential solutions along the corridor. As part of this report, the following documents were reviewed: Lee County Transportation Improvement Program, Fiscal Year 2015/2016 to Fiscal Year 2019/2020 (as adopted September 15, 2015); 2015 Lee County Concurrency Report; and the Lee County Metropolitan Planning Organization (MPO) 2035 Long-Range Transportation Plan (LRTP).

The 2035 LRTP is a long-range plan for transportation needs developed by the Lee County MPO. The 2035 LRTP recommends major transportation projects, systems, strategies, and policies in order to maintain and improve the current transportation system with the objective of meeting future travel demand.

Based on the review of these documents, there are no major improvements depicted in the 2035 LRTP Needs Plan. As such, the existing Coconut Road corridor conditions are consistent with the adopted 2035 LRTP.

The latest Lee County Draft Highway Needs Plan (roadway improvements for Needs Plan) and Lee County Existing and Committed Network are provided in **Appendix I: Lee County 2035 LRTP (Excerpts)**.

Although the economic down-turn since 2007-2008 has decelerated the pace of planned projects from this area, several developments approved by either Lee County staff or the City of Bonita Springs Planning staff are still moving forward. The result of this localized growth and implementation of the approved developments are impacting roadway conditions. In addition to the zoning approved developments, there are undeveloped parcels that may be considered for future construction permitting.

For the purpose of this report, zoning approved developments are expected to be completed within the next five (5) years, while the potential future permitting is expected to develop within the next ten (10) or more years.

The projected Coconut Road development potential is summarized in **Table 9** and **Fig. 3 – Coconut Road Development Potential Map**.

Table 9
Coconut Road – Estimated Development Potential

ID #	STRAP #	PARCEL NAME	DEVELOPMENT PARAMETERS	ZONING APPROVALS NOT YET CONSTRUCTED	POTENTIAL FUTURE CONSTRUCTION PERMITTING
1	07-47-25-B2-00004.00CE	Pelican Landing Community Association	Marina – 20 berths; Restaurant – 3,000sf		X
2A	07-47-25-B2-00003.0370	Estero Bay Marine LLC (Weeks Fish Camp)	Residential – Multi Family – 360 dwelling units – high-rise buildings		X
2B	07-47-25-B2-00003.0000				
3	07-47-25-B2-00000.0010	WCI/Pelican Landing DRI (Raptor Bay)	Residential – Multi Family – 360 dwelling units – high-rise buildings		X
4	06-47-25-00-00002.0030	Pelican Landing Timeshare Ventures LP	Timeshare – Rental Townhouses – 267 dwelling units	X	
5	17-47-25-B1-00001.012A	WCI Communities Inc (Altaira High Rise)	High-Rise Residential Condominium/ Townhouse – 76 dwelling units	X	
6	17-47-25-B1-U1681.1891	WCI Communities Inc (Two Future High Rises)	Residential – Multi Family – 150 dwelling units – high-rise buildings	X	
7	08-47-25-01 +	Eldorado Acres Subdivision	Residential – Single Family – 98 dwelling units – platted lots	X	
8	08-47-25-00-00003.0030	John T. Watson	Residential – Single Family – 2 dwelling units	X	
9	08-47-25-01-00016.0000	Judy K. Doyle	Residential – Single Family – 15 dwelling units	X	
10	08-47-25-00-00004.0000	Dhaliwal + J/T	Residential – Single Family – 3 dwelling units	X	
11	08-47-25-E2-U1757.2005	Dhaliwal + J/T		X	
12	09-47-25-E1-U1823.2024	Dewane/Docese of Venice	Residential – Multi Family – 93 dwelling units		X
13	09-47-25-E4-U1882.1994	Coconut Road Associates LLC	General Office Building – 122,484sf	X	
14	09-47-25-E1-U1874.2023	HG Coconut LLC	Shopping Center – 210,000sf Medical Office Building – 40,000sf Multi-Family Residential – 525 dwelling units Assisted Living – 152 beds Hotel – 130 Rooms	X	
15A	09-47-25-E1-U1877.2039	OBE Florida CRE Holdings LLC			
15B	09-47-25-E2-U1900.2033				
15C	09-47-25-E2-U1902.2012				
16	09-47-25-E3-31000.0050	Allsee Investment LP	General Office Building – 27,500sf	X	
17	09-47-25-E3-31000.0010	Naples Diagnostic Imaging	General Office Building – 15,000sf	X	
22A	09-47-25-E3-373A1.0000	Lee Memorial Health System	Acute Care Hospital – 160 beds Shopping Center – 60,000sf Medical Office Building – 198,000sf General Office Building – 102,000sf	X	
22B	09-47-25-E3-373A2.0000				
22C	09-47-25-E3-373A3.0010				

Note: ID# 2A and 2B development potential were based on developer submittals, which were withdrawn subsequent to initial draft of this study. Development parameters may change in the future, but are retained in this report for review consistency.

Fig. 3 – Coconut Road Development Potential Map

The trip generation for the potential development influencing Coconut Road was determined by referencing the Institute of Transportation Engineer's (ITE) report, titled Trip Generation Manual, the most current edition (9th Edition). The software program OTISS (Online Traffic Impact Study Software, Version 4.0.1) is used to create the raw unadjusted trip generation for the project. The ITE – OTISS trip generation – period analysis reports are provided in **Appendix J: Potential Development – ITE Period Analysis Reports**. A summary of the estimated trip generation for potential development along Coconut Road is summarized in **Tables 10A, 10B** and **10C.**

Table 10A
Trip Generation (Developments with Zoning Approvals – Not Yet Constructed)

Developments		PM Peak Hour		
ID #	**Parcel Name**	**Enter**	**Exit**	**Total**
4	WCI/Pelican Landing Timeshare Ventures LP	98	94	**192**
5	WCI Communities Inc. (Altaira High Rise)	18	11	**29**
6	WCI Communities Inc. (Two Future High Rise)	56	28	**84**
7	Eldorado Acres Subdivision	21	60	**81**
8	John T. Watson	1	1	**2**
9	Judy K. Doyle	12	7	**19**
10/11	Dhaliwal + J/T	2	1	**3**
13	Coconut Road Associates LLC	37	179	**216**
14/15*	HG Coconut LLC/OBE Florida CRE Holdings LLC	627	642	**1,269**
16	Allsee Investment LP	19	90	**109**
17	Naples Diagnostic Imaging	16	79	**95**
22**	Lee Memorial Health System	205	409	**614**
	Total Net External	1,112	1,601	**2,713**

Note(s): *Per approved Coconut Crossing DCI2014-00019 TIS dated October 16, 2014.
**Maximum allowed external trips per February 9, 2016 memorandum from the Village of Estero.
Directional distribution assumed consistent with greatest traffic generator, LUC 720.

Table 10B
Trip Generation (Developments with Potential Future Construction Permitting)

Developments		PM Peak Hour		
ID #	**Parcel Name**	**Enter**	**Exit**	**Total**
1	Pelican Landing Community Association	20	14	**34**
2	Estero Bay Marine LLC (Weeks Fish Camp)	115	57	**172**
3	WCI/Pelican Landing DRI	115	57	**172**
12	Dewane/Diocese of Venice	38	19	**57**
	Total Net External	288	147	**435**

Note: ID# 2 development potential was based on developer submittals, which have been withdrawn subsequent to initial draft of this study. Development parameters may change in the future, but are retained in this report for review consistency.

Table 10C
Trip Generation (Total Future Projected Development Potential)

Developments	PM Peak Hour		
	Enter	**Exit**	**Total**
Zoning Approvals – Not Yet Constructed	1,112	1,601	**2,713**
Potential Future Construction Permitting	288	147	**435**
Total Net External	1,400	1,748	**3,148**

Projected traffic generated by the future potential development is assigned to the Coconut Road segments using the knowledge of the area, associated approved traffic impact statements, and as coordinated with Village of Estero Transportation Planning staff.

The assignment of proposed trip distribution is illustrated consistent with the peak hour, peak direction as shown in **Tables 11A, 11B** and **11C.**

Table 11A
Traffic Distribution* - Developments with Zoning Approvals – Not Yet Constructed

ID #	Parcel Name	Traffic Dist. %	Spring Creek to US 41		Traffic Dist. %	US 41 to Via Coconut Point		Traffic Dist. %	Via Coconut Point to Three Oaks Parkway	
			Enter	Exit		Enter	Exit		Enter	Exit
4	WCI/Pelican Landing Timeshare Ventures LP	100%	WB-98	**EB-94**	25%	WB-25	**EB-24**	20%	WB-20	**EB-19**
5	WCI Communities Inc. (Altaira High Rise)	60%	WB-11	**EB-7**	20%	WB-4	**EB-2**	15%	WB-3	**EB-2**
6	WCI Communities Inc. (Two Future High Rise)	60%	WB-34	**EB-17**	20%	WB-11	**EB-6**	15%	WB-8	**EB-4**
7	Eldorado Acres Subdivision	100%	WB-21	**EB-60**	20%	WB-4	**EB-12**	15%	WB-3	**EB-9**
8	John T. Watson	100%	WB-1	**EB-1**	20%	WB-0	**EB-0**	15%	WB-0	**EB-0**
9	Judy K. Doyle	100%	WB-12	**EB-7**	20%	WB-2	**EB-1**	15%	WB-2	**EB-1**
10/ 11	Dhaliwal + J/T	100%	WB-2	**EB-1**	20%	WB-0	**EB-0**	15%	WB-0	**EB-0**
13	Coconut Road Associates LLC	75%	WB-28	**EB-134**	20%	WB-7	**EB-36**	15%	WB-6	**EB-27**
14/ 15	HG Coconut LLC/OBE Florida CRE Holdings LLC	20%	WB-125	**EB-128**	30%	WB-188	**EB-193**	25%	WB-157	**EB-161**
16	Allsee Investment LP	80%	WB-15	**EB-72**	20%	WB-4	**EB-18**	15%	WB-3	**EB-14**
17	Naples Diagnostic Imaging	80%	WB-13	**EB-63**	20%	WB-3	**EB-16**	15%	WB-2	**EB-12**
22	Lee Memorial Health System	20%	**EB-41**	WB-82	25%	**EB-51**	WB-102	20%	**EB-41**	WB-82
Peak Direction Total			**EB – 625**			**EB – 359**			**EB – 290**	

Note(s): *Peak hour, peak direction traffic volumes are **Bold and Underlined** as applicable.

Table 11B
Traffic Distribution* - Developments with Potential Future Construction Permitting

		Traffic Dist. %	Spring Creek to US 41		Traffic Dist. %	US 41 to Via Coconut Point		Traffic Dist. %	Via Coconut Point to Three Oaks Parkway	
ID #	**Parcel Name**		**Enter**	**Exit**		**Enter**	**Exit**		**Enter**	**Exit**
1	Pelican Landing Community Association	100%	WB-20	**EB-14**	20%	WB-4	**EB-3**	15%	WB-3	**EB-2**
2	Estero Bay Marine LLC (Weeks Fish Camp)	100%	WB-115	**EB-57**	25%	WB-29	**EB-14**	20%	WB-23	**EB-11**
3	WCI/Pelican Landing DRI	100%	WB-115	**EB-57**	25%	WB-29	**EB-14**	20%	WB-23	**EB-11**
12	Dewane/Diocese of Venice	100%	WB-38	**EB-19**	20%	WB-8	**EB-4**	15%	WB-8	**EB-3**
Peak Direction Total			**EB – 147**			**EB – 35**			**EB –27**	

Note(s): *Peak hour, peak direction traffic volumes are **Bold and Underlined** as applicable.

Table 11C
Traffic Distribution* - Total Future Projected Development Potential

Coconut Road Development Potential	Spring Creek to US 41	US 41 to Via Coconut Point	Via Coconut Point to Three Oaks Parkway
Development Zoning Approvals	EB – 625	EB – 359	EB – 290
Development Potential Future Construction Permitting	EB – 147	EB – 35	EB – 27
Total Peak Hour Traffic Volume	**EB – 772**	**EB – 394**	**EB – 317**

Note(s): *Peak hour, peak direction traffic volumes are **Bold and Underlined** as applicable.

For the purpose of this report, estimated future Coconut Road demand is analyzed under 2021 and 2026 traffic conditions. Future projected background traffic volumes are calculated based on historic growth rates calculated from annual counts illustrated in the Lee County 2015 Traffic Count Report (as previously summarized in **Table 8, Coconut Road – Historical Traffic Data**).

A review of the historical traffic data indicates that the annual growth rate is negative for the Coconut Road segments located east of US 41. As such, a minimum growth rate of one percent (1%) was utilized for Coconut Road segments east of US 41.

For the purpose of this report, the future traffic growth for the Coconut Road segment located west of US 41 is considered associated with the future projected development

potential. As such, no future growth is applied towards the background traffic for this roadway segment.

The peak hour, peak season, peak direction 2016 100th Highest Hour traffic volume is used as determined in **Table 6, Coconut Road – Estimated Directional Design Hour Volume** of this report. Future 2021 and 2026 background traffic conditions are illustrated in **Table 12**.

Table 12
Coconut Road – Future Background Traffic

Roadway Link	Roadway Link Location	2016 100th Highest Hour Volume* (trips/hr)	Projected Traffic Annual Growth Rate** (%/yr)	Growth Factor**	Future 2021 Background Pk Hr, Pk Dir Vol*** (trips/hr)	Future 2026 Background Pk Hr, Pk Dir Vol**** (trips/hr)
Coconut Road	From Spring Creek Rd to US 41	522	0.0%	1.000	522	522
Coconut Road	From US 41 to Via Coconut Point	632	1.0%	1.0510, 1.1046	664	698
Coconut Road	From Via Coconut Point to Three Oaks Parkway	717	1.0%	1.0510, 1.1046	754	792

Note(s): *Refer to **Table 6** of this report.
**1% minimum or historical growth rate; Growth Factor = (1+Annual Growth Rate) ^{P}, P is the number of years from 2016 for that period.
***2021 Projected Volume= 2014 100th Highest Hour Volume x Growth Factor with P = 5.
****2026 Projected Volume= 2014 100th Highest Hour Volume x Growth Factor with P = 10.

5. Coconut Road – Projected Future Level of Service

Future 2021 and 2026 projected traffic capacity and level of service were analyzed for Coconut Road segments. Roadway improvements that are currently under construction or are scheduled to be constructed as depicted within Lee County Transportation Improvement Program, Fiscal Year 2015/2016 to Fiscal Year 2019/2020 (as adopted September 15, 2015), are considered to be committed improvements for the purpose of this study. As no such improvements were identified, the evaluated roadway segments are anticipated to remain as such thru project build out.

The development potential with zoning approvals but not yet constructed is considered within the projected future 2021 traffic conditions. The overall future development potential (to include potential future construction permitting) is included in the future 2026 traffic conditions analysis.

The estimated future 2021 and 2026 peak season, peak hour, peak direction traffic volumes were compared to the to the Level of Service thresholds volumes obtained from 2015 Lee County Concurrency Report and the Lee County Generalized Peak-Hour Directional Service Values. The future projected LOS for Coconut Road segments are reflected in **Table 13** and **Table 14.**

Table 13
Coconut Road – Estimated Future 2021 LOS

COCONUT ROAD LINK VOLUMES - CAPACITY ANALYSIS											
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	2021 BACKGROUND TRAFFIC (1)	2021 ESTIMATED DEVELOPED TRAFFIC (2)	2021 TOTAL ESTIMATED TRAFFIC	PERFORMANCE STANDARD (3)		2013 LINK SPECIFIC SERVICE VOLUMES, PK HR, PK DIR LOS (4)			PROJECTED 2021 LOS
						LOS	CAPACITY	C	D	E	
2	FROM SPRING CREEK RD TO US 41	05000	522	625	1,147	E	860	550	860	860	F
3	FROM US 41 TO VIA COCONUT POINT	05030	664	359	1,023	E	1,790	1,310	1,790	1,790	C
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	754	290	1,044	E	1,790	1,310	1,790	1,790	C

NOTES:
(1) SEE TABLE 12 OF THIS REPORT
(2) SEE TABLE 11 OF THIS REPORT
(3) 2015 LEE COUNTY CONCURENCY REPORT
(4) REFER TO 2013 LEE COUNTY LINK SPECIFIC SERVICE VOLUMES

Table 14
Coconut Road – Estimated Future 2026 LOS

COCONUT ROAD LINK VOLUMES - CAPACITY ANALYSIS											
TCS COUNTER LOCATION	ROADWAY SEGMENT	LEE COUNTY LINK ID NUMBER	2026 BACKGROUND TRAFFIC (1)	2026 ESTIMATED DEVELOPED TRAFFIC (2)	2026 TOTAL ESTIMATED TRAFFIC	PERFORMANCE STANDARD (3)		2013 LINK SPECIFIC SERVICE VOLUMES, PK HR, PK DIR LOS (4)			PROJECTED 2021 LOS
						LOS	CAPACITY	C	D	E	
2	FROM SPRING CREEK RD TO US 41	05000	522	772	1,294	E	860	550	860	860	F
3	FROM US 41 TO VIA COCONUT POINT	05030	698	394	1,092	E	1,790	1,310	1,790	1,790	C
4	FROM VIA COCONUT POINT TO THREE OAKS PARKWAY	05030	792	317	1,109	E	1,790	1,310	1,790	1,790	C

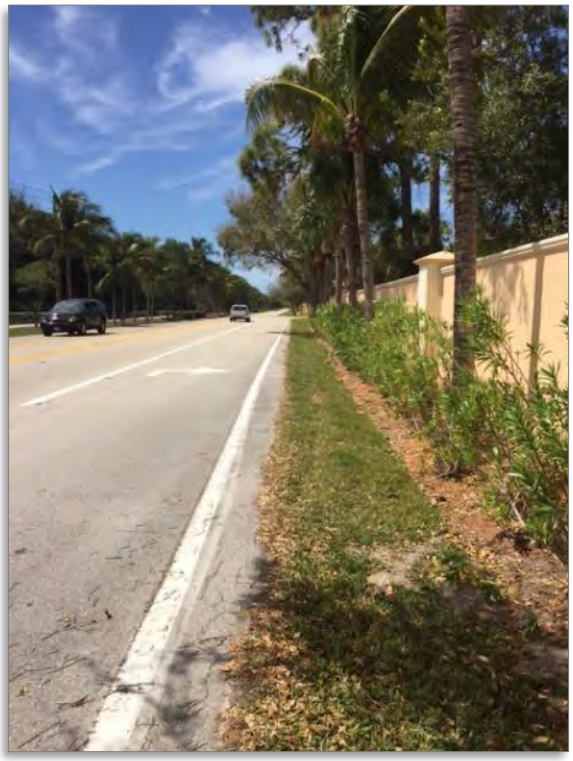
NOTES:
(1) SEE TABLE 12 OF THIS REPORT
(2) SEE TABLE 11 OF THIS REPORT
(3) 2015 LEE COUNTY CONCURENCY REPORT
(4) REFER TO 2013 LEE COUNTY LINK SPECIFIC SERVICE VOLUMES

Based upon the results illustrated in the level of service analysis, the Coconut Road segment located west of US 41 is anticipated to be overcapacity in the year 2021 and 2026 future conditions. All other analyzed segments are projected to operate within the adopted level of service standard at future conditions.

- **<u>Coconut Road – Segment west of US 41 – No build Alternative</u>**
  This option would maintain the existing two-lane geometry for the entire section of Coconut Road, west of US 41. As more developments are be approved for construction as shown within this report, significant congestion and delays will increase due to the generated traffic along this roadway segment.

- **<u>Coconut Road – Segment west of US 41 – Four-Lane Alternative</u>**
  A four-lane divided Coconut Road segment west of US 41 would provide sufficient capacity to allow for future area development. However, due to Right-of-way (ROW) constraints and given that this improvement has not been planned/programmed another alternative may be more cost effective. **<u>Coconut Road – Segment west of US 41 – Two-Lane Enhanced Alternative</u>.**

  Two-lane geometry with enhancements or safety-related improvements may provide sufficient capacity, and result in a safer roadway with more efficient traffic operations. These improvements may include mainly intersection improvements, e.g., roundabouts and/or signal optimization timings. Excluding ROW costs reconstructing this 1.58 mile section of roadway to a 4-lane urban section would be in the $6.6 million dollar range as compared to an estimated $2.6 million dollars to create a series of roundabouts with significantly less ROW impact anticipated (note costs are conceptual).



Existing two lane portion of Coconut Rd west of US 41 is ROW-constrained in many areas as depicted.

  Over the past several years, roundabouts have become more popular for intersection solutions as they offer several advantages over other traffic controls, they may cost less to install, can accommodate a series of U-turns and left-turn lanes and reduce delay. They may have lower operation and maintenance costs as compared to signal alternatives. Roundabouts can improve safety by simplifying conflicts, reducing vehicle speeds and providing a clearer indication of the driver's

right-of way compared to other forms of channelization. They also provide an opportunity to improve aesthetics of an intersection with landscaping in connection with community enhancement projects. Roundabouts are particularly suited at intersections on local roads where it is not desirable to give priority to either road or where overall traffic calming is desired, or needed.

It is our recommendation that a series of roundabouts along this segment should be considered for the roadway west of US 41.

One potential method of improving the capacity and safety of Coconut Road west of US 41 is to install a series of roundabouts at locations as depicted above.

Coconut Road and US 41 Intersection Analysis

1. **<u>Existing 2016 Conditions</u>**

   The intersection of US 41 and Coconut Road is a major four-legged signalized intersection. For the purpose of this report, US 41 is considered as the Major Street, while Coconut Road is analyzed as the Minor Street.

   US 41 (SR 45) is a principal arterial roadway which runs generally north-south and provides connectivity to Naples to the south and Fort Myers to the north. At this location, its typical cross section is a suburban six-lane divided roadway with dedicated bicycle lanes, curbed

median and a paved shoulder (not curbed). The posted legal speed limit is 50 mph in the vicinity of the intersection.

The north approach has three (3) through lanes, one (1) right-turn lane and double dedicated left turn lanes. The south approach has three (3) through lanes, one (1) dedicated left-turn lane and one (1) right turn lane.

Sidewalks are provided on both sides of the roadway. There are overhead power lines along the west side of the roadway. Intersection street lighting is provided.

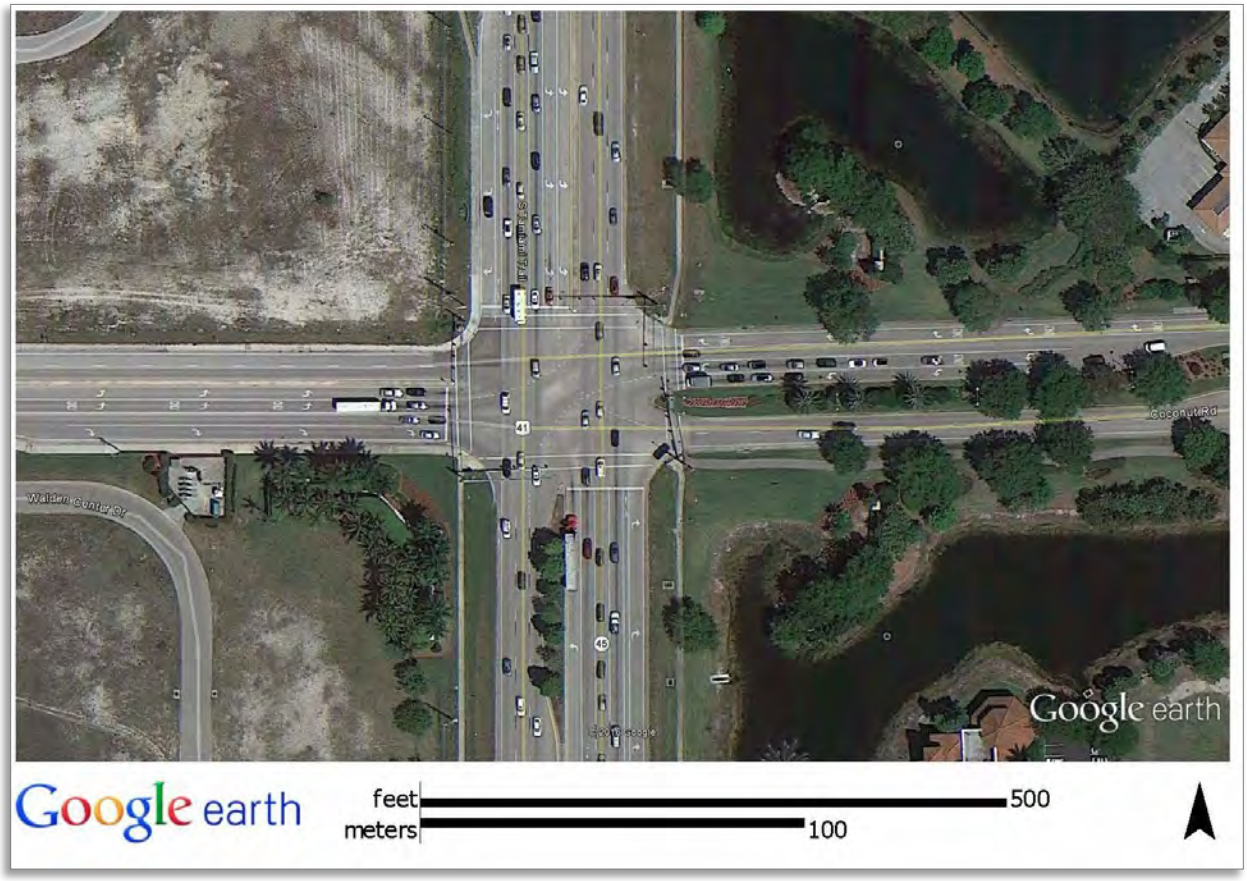
Coconut Road is a major collector roadway. The west approach is a curb and gutter facility with a closed drainage system and no dedicated bicycle lanes. The posted legal speed limit for this approach is 40 mph in the vicinity of the intersection. The east approach typical cross section is a four-lane divided roadway with dedicated bicycle lanes, curb and gutter, and a closed drainage system. The posted legal speed limit for this approach is 45 mph in the vicinity of the intersection.

The west approach has one through lane, one right-turn lane and double dedicated left-turn lanes. The east approach has one through lane, one right-turn lane and double dedicated left-turn lanes.

Sidewalks are provided on both sides of the roadway on the west approach, and on the south side for the east approach. There are overhead power lines along the south side of the roadway on the west approach.

The existing intersection lane configuration is illustrated in **Fig. 4**.

Fig. 4 – Existing Intersection Lane Configuration



2. Intersection Turning Movement Traffic Volumes

For the purpose of this study, turning movement counts for the intersection were conducted on-site on Wednesday, January 27, 2016, from 7AM to 9AM, and from 4PM to 6PM.

Traffic count data is adjusted for peak season by applying a peak season conversion factor to the turning movements. Peak Season Conversion Factor (PSCF) is extracted from the latest published FDOT Peak Season Factor Category Report as shown in **Appendix G: 2014 FDOT Peak Season Factor Category Report (Excerpt)**.

For the purpose of this report, intersection operational analysis was completed following three scenarios: (1) Existing 2016 Conditions; (2) Future 2021 background conditions plus estimated development potential with zoning approvals not yet constructed; and (3) Future 2026 background conditions plus estimated future development potential (to include potential future construction permitting).

In addition, the future traffic growth for the Coconut Road segment located west of US 41 is considered associated with the future projected development potential. As such, no future growth is applied towards the background traffic for this roadway segment.

The historical traffic data was obtained from the 2015 Lee County Traffic Count Report (excerpts are included in **Appendix E**) and it was previously analyzed in this report (refer to **Table 8**). A review of the historical traffic data indicates that the annual growth rate is negative for US 41 and Coconut Road, for the segment located east of US 41. As coordinated with Village of Estero Transportation staff, a minimum growth rate of one percent (1%) was utilized for the Coconut Road segment east of US 41.

The exponential growth formula was implemented to calculate future traffic volumes for the intersection, as follows: $F = P \times (1+r)^n$ where: F = future volume; P = base year traffic volume; r = growth rate percentage; n = number of years from the base year.

A summary of the intersection turning movement count for peak season 2016 existing conditions is illustrated in **Fig. 5A** and **Fig. 5B**.

Fig. 5A – Intersection Count Summary – Existing 2016 Conditions – AM Peak Hour

PROJECT - INTERSECTION EVALUATION REPORT
INTERSECTION - US 41 AND COCONUT ROAD
COUNT DATA - DATE - 1-27-2016
COUNT DATA - TIME - 7.00 AM - 9.00 AM

TRAFFIC COUNTS - 15 MINUTE SUMMARY

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
7.00	7.15	13	157	24	194	33	328	31	372	15	14	21	50	60	4	6	70	686
7.15	7.30	11	191	20	222	13	542	31	586	23	15	31	69	68	13	7	88	965
7.30	7.45	16	204	44	264	12	520	40	572	27	23	31	81	104	18	9	131	1,048
7.45	8.00	21	213	53	287	22	535	40	597	33	24	36	93	107	36	12	155	1,132
8.00	8.15	15	233	41	289	18	469	47	534	45	18	35	98	101	25	14	140	1,061
8.15	8.30	22	206	45	273	17	480	65	562	36	26	30	92	103	40	20	163	1,090
8.30	8.45	21	238	45	304	16	474	41	531	44	24	37	105	107	21	12	140	1,080
8.45	9.00	22	215	62	299	31	491	43	565	47	28	45	120	100	29	19	148	1,132

TRAFFIC COUNTS - HOURLY SUMMARY

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
7.00	8.00	61	765	141	967	60	1,925	142	2,127	98	76	119	293	339	71	34	444	3,831
7.15	8.15	63	841	158	1,062	65	2,066	158	2,289	128	80	133	341	380	92	42	514	4,206
7.30	8.30	74	856	183	1,113	69	2,004	192	2,265	141	91	132	364	415	119	55	589	4,331
7.45	8.45	79	890	184	1,153	73	1,958	193	2,224	158	92	138	388	418	122	58	598	4,363
8.00	9.00	80	892	193	1,165	82	1,914	196	2,192	172	96	147	415	411	115	65	591	4,363

TRAFFIC COUNTS - PEAK HOUR SUMMARY - UNADJUSTED

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
7.45	8.45	79	890	184	1,153	73	1,958	193	2,224	158	92	138	388	418	122	58	598	4,363
		PHF		0.95		PHF		0.94		PHF		0.93		PHF		0.92		
		INTERSECTION PHF								0.97								

TRAFFIC COUNTS - PEAK HOUR SUMMARY - ADJUSTED

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
7.45	8.45	79	890	184	1,153	73	1,958	193	2,224	158	92	138	388	418	122	58	598	4,363
PSCF		1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
ADJUSTED		**81**	**908**	**188**	**1,176**	**74**	**1,997**	**197**	**2,268**	**161**	**94**	**141**	**396**	**426**	**124**	**59**	**610**	

Fig. 5B – Intersection Count Summary – Existing 2016 Conditions – PM Peak Hour

PROJECT - INTERSECTION EVALUATION REPORT
INTERSECTION - US 41 AND COCONUT ROAD
COUNT DATA - DATE - 1-27-2016
COUNT DATA - TIME - 4.00 PM - 6.00 PM

TRAFFIC COUNTS - 15 MINUTE SUMMARY

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
4.00	4.15	23	326	110	463	23	250	34	407	54	25	24	103	110	31	23	164	1,137
4.15	4.30	25	334	113	472	25	342	26	393	54	26	16	96	122	33	14	169	1,130
4.30	4.45	37	335	107	479	15	304	37	356	52	33	35	120	95	31	19	145	1,100
4.45	5.00	30	306	131	467	9	298	39	346	56	27	29	112	101	28	17	146	1,071
5.00	5.15	25	337	128	490	17	325	38	380	96	40	21	157	79	23	14	116	1,143
5.15	5.30	16	340	138	494	14	285	32	331	51	38	27	116	100	27	18	145	1,086
5.30	5.45	17	348	104	469	11	278	47	336	51	35	25	111	86	27	8	121	1,037
5.45	6.00	24	306	95	425	11	274	42	327	41	31	16	88	92	28	18	138	978

TRAFFIC COUNTS - HOURLY SUMMARY

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
4.00	5.00	119	1,301	461	1,881	72	1,294	136	1,502	216	111	104	431	428	123	73	624	4,438
4.15	5.15	117	1,312	479	1,908	66	1,269	140	1,475	258	126	101	485	397	115	64	576	4,444
4.30	5.30	108	1,318	504	1,930	55	1,212	146	1,413	255	138	112	505	375	109	68	552	4,400
4.45	5.45	88	1,331	501	1,920	51	1,186	156	1,393	254	140	102	496	366	105	57	528	4,337
5.00	6.00	82	1,331	465	1,878	53	1,162	159	1,374	239	144	89	472	357	105	58	520	4,244

TRAFFIC COUNTS - PEAK HOUR SUMMARY - UNADJUSTED

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
4.15	5.15	117	1,312	479	1,908	66	1,269	140	1,475	258	126	101	485	397	115	64	576	4,444
		PHF		0.98		PHF		0.94		PHF		0.78		PHF		0.86		
		INTERSECTION PHF								0.98								

TRAFFIC COUNTS - PEAK HOUR SUMMARY - ADJUSTED

TIME		US 41								COCONUT ROAD								INTERSECTION TOTAL
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
FROM	TO	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	
4.15	5.15	117	1,312	479	1,908	66	1,269	140	1,475	258	126	101	485	397	115	64	576	4,444
PSCF		1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	
ADJUSTED		119	1,338	489	1,946	67	1,294	143	1,505	263	129	103	495	405	117	65	588	

Based on the traffic count data, the AM and PM peak hours for the intersection are determined to be 7.45 – 8.45 AM, and 4.15 – 5.15 PM, respectively.

Peak hour factor (PHF) is the hourly volume during the peak hour divided by the peak 15-min flow rate within the peak hour Highway Capacity Manual 2010 (HCM 2010). As illustrated in the 2014 FDOT Project Traffic Forecasting Handbook, PHF is a measure of traffic demand fluctuation within the analysis design hour. For the purpose of this analysis, PHF is determined to be 0.98 for AM and PM peak hour.

Future background traffic is analyzed based on peak season, peak hour traffic for roadway. As such, future 2021 and 2026 future background conditions are illustrated for PM peak hour (refer to **Fig. 6**).

Fig. 6 – Turning Movement Summary – 2021 and 2026 Conditions – PM Peak Hour

PM PEAK HOUR FUTURE TRAFFIC																
	US 41								COCONUT ROAD							
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL
TMCs	117	1,312	479	1,908	66	1,269	140	1,475	258	126	101	485	397	115	64	576
PSCF	1.02	1.02	1.02		1.02	1.02	1.02		1.02	1.02	1.02		1.02	1.02	1.02	
2016 PEAK SEASON VOLUME	**119**	**1,338**	**489**	**1,946**	**67**	**1,294**	**143**	**1,504**	**263**	**129**	**103**	**495**	**405**	**117**	**65**	**587**
ANNUAL GROWTH RATE (AGR)	1.0%	1.0%	1.0%		1.0%	1.0%	1.0%		0.0%	0.0%	0.0%		1.0%	1.0%	1.0%	
YEARS FROM 2016 TO 2021	5	5	5		5	5	5		5	5	5		5	5	5	
2021 BACKGROUND *	**126**	**1,407**	**514**	**2,047**	**71**	**1,361**	**151**	**1,583**	**263**	**129**	**103**	**495**	**426**	**123**	**69**	**618**
YEARS FROM 2016 TO 2026	10	10	10		10	10	10		10	10	10		10	10	10	
2026 BACKGROUND*	**132**	**1,478**	**541**	**2,151**	**75**	**1,430**	**158**	**1,663**	**263**	**129**	**103**	**495**	**448**	**130**	**72**	**650**

Note(s): * Future Projected Volume = Base Volume*$(1+AGR)^n$; n = number of years from the base year.

3. Intersection Analysis – General Description

This is an operational analysis that considers demand volumes, intersection signalization, intersection geometric design and the delay to analyze the quality of operations. The intersection is analyzed for capacity adequacy and level of service provided.

The capacity condition for an intersection is defined by a composite volume/capacity ratio for the critical lane groups for the intersection.

The delay incurred by drivers is used to define the level of service for signalized intersection since it reflects driver's discomfort, frustration, energy consumption and travel time. The level of service is based on the average stopped delay per vehicle in the peak 15 minutes is the criterion used for the traffic movements in the intersection.

Turn lanes are used at intersections to accommodate speed changes and maneuvering of turning traffic, and to increase capacity through an intersection. The length of turn lanes consists of deceleration length (to include entering taper) and storage length. Turn lanes should comply with FDOT Design Standards, Index 301 to the extent practical. The available queue length provided should be based on a traffic study.

The blockage of the turning traffic by the through vehicles should be avoided.

- **Left Turn Lanes**
  Left turn lanes are probably the single item having the most influence on intersection operations. Intersection capacity analysis procedures (as consistent with the most current Highway Capacity Manual – HCM) are used to determine the number and use of the left turn lanes.

  In agreement with FDOT Plan Preparation Manual (PPM), Volume 1, where left turn volumes exceed 300 vehicles per hour (vph), a double left-turn lane should be considered. Fully protected signal phasing is required for double left turns.

- **Right Turn Lanes**
  Exclusive right-turn lanes are less critical in terms of safety than left-turn lanes. As illustrated in FDOT Plan Preparation Manual (PPM), Volume 1, right-turns are generally made more efficient than left-turns. Right-turn storage lanes should be considered when right-turn volume exceeds 300 vph and the adjacent through volume also exceeds 300 vehicles per hour per lane (vphpl).

  Right-turn lanes can significantly improve the level of service of signalized intersection by providing means of deceleration and stacking for right turn traffic.

4. Level of Service Analysis

An assessment of the level of service (LOS) of the analyzed intersection was conducted based on existing (current 2016) traffic conditions, future year 2021 (to account for estimated development potential with zoning approvals not yet constructed) and future year 2026 (to include potential future construction permitting).

The intersection was analyzed for Level of Service (LOS) using the Highway Capacity Software 2010 (HCS 2010) computer modeling software, most current version (Release 6.80). The HCS 2010 analyzes signalized intersections by implementing the HCM 2010 procedures.

According to HCM 2010, the level of service criterion for signalized intersections is shown in **Table 15**.

Table 15
Level of Service for Signalized Intersections

HCM-Based Level of Service and Delay Ranges

Average Delay (seconds / vehicle)		LOS
Signalized Intersections	Unsignalized intersections	
< 10.0	< 10.0	A
> 10.0 to < 20.0	> 10.0 to < 15.0	B
> 20.0 to < 35.0	> 15.0 to < 25.0	C
> 35.0 to < 55.0	> 25.0 to < 35.0	D
> 55.0 to < 80.0	> 35.0 to < 50.0	E
> 80.0	> 50.0	F

Source: HCM 2010

The HCS 2010 percent heavy vehicle is assumed the design hour truck (DHT) – the percent of trucks expected to use the roadway segment during the design hour of the design year. DHT is determined as half of T24 (annual 24-hour percentage of trucks), as illustrated in 2014 FDOT Project Traffic Forecasting Handbook. The T24 factor was extracted from FDOT Florida Traffic Online (T24 = 3.1 for all approaches) and illustrated in **Appendix K: FDOT Traffic Online – T24 Factors**. Conservatively, a 2% heavy vehicle factor was assumed for all movements for the purpose of this analysis.

The existing signal timings/phasing as obtained from Lee County Department of Transportation was utilized in this analysis. The approved signalization plan, signal pattern plan and signal timing plan are illustrated in **Appendix L: Lee County – Intersection Signal Data.**

The level of service standard for Coconut Road and US 41 is E, as illustrated in the Lee County Concurrency Report. Each approach was analyzed to ensure that vehicles do not experience excessive delay.

The results of the traffic HCS 2010 intersection analysis for Existing 2016 Conditions, Future 2021 background conditions plus estimated development potential with zoning approvals not yet constructed, and Future 2026 background conditions plus estimated future development potential (to include potential future construction permitting) are summarized in **Table 13A**, **Table 13B** and **Table 13C**. Based on the existing 2016 conditions data, the weekday PM peak hour had higher intersection volumes than the weekday AM peak hour. The future conditions are based on the trip generation data, percent distributions and an

absorption is included as well. As such, the PM peak hour characteristics were selected for use in establishing the future background weekday design hour traffic.

Future background traffic with potential development is illustrated in **Fig. 7**.

Fig. 7 – 2021 and 2026 Background Traffic with Potential Development – PM Peak Hour

PM PEAK HOUR FUTURE TRAFFIC																
	US 41								COCONUT ROAD							
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	TOTAL
TMCs	117	1,312	479	1,908	66	1,269	140	1,475	258	126	101	485	397	115	64	576
PSCF	1.02	1.02	1.02		1.02	1.02	1.02		1.02	1.02	1.02		1.02	1.02	1.02	
2016 PEAK SEASON VOLUME	**119**	**1,338**	**489**	**1,946**	**67**	**1,294**	**143**	**1,504**	**263**	**129**	**103**	**495**	**405**	**117**	**65**	**587**
ANNUAL GROWTH RATE (AGR)	1.0%	1.0%	1.0%		1.0%	1.0%	1.0%		0.0%	0.0%	0.0%		1.0%	1.0%	1.0%	
YEARS FROM 2016 TO 2021	5	5	5		5	5	5		5	5	5		5	5	5	
2021 BACKGROUND *	**126**	**1,407**	**514**	**2,047**	**71**	**1,361**	**151**	**1,583**	**263**	**129**	**103**	**495**	**426**	**123**	**69**	**618**
2021 POTENTIAL DEVELOPMENT	**94**	**104**	**10**	**208**	**85**	**85**	**145**	**315**	**240**	**210**	**135**	**585**	**20**	**185**	**104**	**309**
FUTURE 2021 TRAFFIC WITH POTENTIAL DEVELOPMENT	**240**	**1,511**	**524**	**2,275**	**156**	**1,446**	**296**	**1,898**	**503**	**339**	**238**	**1,080**	**446**	**308**	**173**	**927**
YEARS FROM 2016 TO 2026	10	10	10		10	10	10		10	10	10		10	10	10	
2026 BACKGROUND†	**132**	**1,478**	**541**	**2,151**	**75**	**1,430**	**158**	**1,663**	**263**	**129**	**103**	**495**	**448**	**130**	**72**	**650**
2026 POTENTIAL DEVELOPMENT	**169**	**104**	**10**	**283**	**85**	**85**	**268**	**438**	**304**	**246**	**174**	**724**	**20**	**256**	**104**	**380**
FUTURE 2026 TRAFFIC WITH POTENTIAL DEVELOPMENT	**301**	**1,582**	**551**	**2,434**	**160**	**1,515**	**426**	**2,101**	**567**	**375**	**277**	**1,219**	**468**	**386**	**176**	**1,030**

Note(s): * Future Projected Volume = Base Volume*$(1+AGR)^n$; n = number of years from the base year.

The HCS intersection worksheets and future projected total traffic are provided in **Appendix M: Intersection Analysis – HCS 2010 Printouts**.

Table 13A
Intersection LOS – Existing 2016 Traffic

Intersection Configuration	EB Approach Delay*/LOS	WB Approach Delay*/LOS	NB Approach Delay*/LOS	SB Approach Delay*/LOS	Overall Delay*/LOS
AM Peak Hour					
Existing 2016	63.7/E	64.8/E	24.2/C	32.8/C	37.7/D
PM Peak Hour					
Existing 2016	85.7/F	85.0/F	24.3/C	22.7/C	38.4/D

NOTE(S) *Approach Delay in s/veh.

Table 13B
Intersection AM LOS – Future Background and Development Traffic (2021 and 2026)

Intersection Configuration	EB Approach Delay*/LOS	WB Approach Delay*/LOS	NB Approach Delay*/LOS	SB Approach Delay*/LOS	Overall Delay*/LOS
AM Peak Hour					
Future 2021	85.4/F	85.3/F	25.4/C	24.0/C	39.0/D
AM Peak Hour					
Future 2026	85.4/F	85.8/F	26.6/C	25.5/C	39.9/D

NOTE(S) *Approach Delay in s/veh.

Table 13C
Intersection PM LOS – Future Background and Development Traffic (2021 and 2026)

Intersection Configuration	EB Approach Delay*/LOS	WB Approach Delay*/LOS	NB Approach Delay*/LOS	SB Approach Delay*/LOS	Overall Delay*/LOS
PM Peak Hour					
Future 2021	156.9/F	148.4/F	49.6/D	40.2/D	80.3/F
PM Peak Hour					
Future 2026	219.5/F	209.9/F	68.0/E	41.3/D	108.5/F

NOTE(S) *Approach Delay in s/veh.

The intersection HCS 2010 analysis for the existing 2016 conditions shows that eastbound and westbound approaches operate at Level of Service (LOS) F. In addition, the overall intersection background traffic will exhibit an acceptable LOS D for future 2026 conditions.

The intersection HCS 2010 analysis for future 2021 and 2026 conditions with projected potential development shows an overall intersection LOS F. As illustrated in **Appendix M**, queue spillover from turn lanes is present (Queue Storage Ratio exceeds 1.0). Additionally, the extended queue generated from downstream intersections can spill back into the upstream intersection and diminish the performance of the upstream treatment. This phenomenon is frequently observed in large urban areas where the traffic volume is heavy, intersection spacing is short and cycle length is long. As such, intersection treatments such as adding/extending turning lanes, turning movement restrictions that are traditionally applied to improve intersection capacity may not realize the expected benefits of relieving congestion and reducing delay.

5. Volume to Capacity Ratio Analysis

Failure of an intersection is also dependent on the volume over capacity ratio (v/c) being greater than the value of 1 on any approach of the intersection. The outputs provided by HCS (refer to **Appendix M: Intersection Analysis – HCS 2010 Printouts**) include volume over capacity ratios for each approach. The results of the traffic HCS 2010 volume over capacity analysis for Existing 2016 Conditions, Future 2021 background conditions plus estimated development potential with zoning approvals not yet constructed, and Future 2026 background conditions plus estimated future development potential (to include potential future construction permitting) are summarized in **Table 14A**, **Table 14B** and **Table 14C.**

Table 14A
Intersection V/C Ratio – Existing 2016 Traffic

Intersection Configuration	EB Approach V/C Ratio	WB Approach V/C Ratio	NB Approach V/C Ratio	SB Approach V/C Ratio
AM Peak Hour				
Existing 2016	LT – 0.753 TH – 0.484 RT – 0.840	LT – 0.899 TH – 0.370 RT – 0.208	LT – 0.796 TH – 0.374 RT – 0.271	LT – 0.436 TH – 0.837 RT – 0.265
PM Peak Hour				
Existing 2016	LT – 0.864 TH – 0.837 RT – 0.773	LT – 0.902 TH – 0.620 RT – 0.406	LT – 0.861 TH – 0.440 RT – 0.563	LT – 0.528 TH – 0.435 RT – 0.154

Table 14B
Intersection v/c ratio – Future Background Traffic

Intersection Configuration	EB Approach V/C Ratio	WB Approach V/C Ratio	NB Approach V/C Ratio	SB Approach V/C Ratio
PM Peak Hour				
Future 2021	LT – 0.862 TH – 0.836 RT – 0.773	LT – 0.907 TH – 0.607 RT – 0.402	LT – 0.868 TH – 0.467 RT – 0.598	LT – 0.556 TH – 0.465 RT – 0.166
PM Peak Hour				
Future 2026	LT – 0.862 TH – 0.836 RT – 0.773	LT – 0.912 TH – 0.607 RT – 0.397	LT – 0.873 TH – 0.496 RT – 0.636	LT – 0.584 TH – 0.497 RT – 0.177

Table 14C
Intersection v/c ratio – Future Background with Potential Development Traffic

Intersection Configuration	EB Approach V/C Ratio	WB Approach V/C Ratio	NB Approach V/C Ratio	SB Approach V/C Ratio
PM Peak Hour				
Future 2021	LT – 1.031 TH – 1.251 RT – 1.016	LT – 0.912 TH – 1.332 RT – 0.883	LT – 1.156 TH – 0.588 RT – 0.714	LT – 0.813 TH – 0.602 RT – 0.396
PM Peak Hour				
Future 2026	LT – 1.163 TH – 1.445 RT – 1.235	LT – 0.917 TH – 1.669 RT – 0.898	LT – 1.449 TH – 0.616 RT – 0.752	LT – 0.820 TH – 0.631 RT – 0.570

The threshold value of failure for the background traffic volume over capacity ratio (V/C) is not exceeded by any of the scenario years for the intersection.

However, the threshold (V/C) value is exceeded under future 2021 and 2026 traffic conditions when potential development is considered.

6. Intersection Alternatives

Based on the HCS analysis performed for future projected traffic conditions, a significant increase in vehicle delay is expected and one or more pf the following conditions are expected to occur: thru vehicle queues extend back and block access to exclusive left-turn and right-turn lanes, left-turn and right-turn vehicle queues extend back and spill over into the adjacent thru lanes, and vehicles require more than one signal cycle to clear the intersection.

Signal retiming and intersection geometric improvements are recommended to promote safety, decreased vehicle delay and sufficient capacity.

To support future general growth in the area and to provide for improved intersection operations a number of intersection improvements are recommended as follows: intersection signal retiming; on Coconut Road – extend eastbound right-turn lane and extend westbound dual left-turn lanes; on US 41 (SR 45) – extend southbound right-turn lane and provide northbound dual left-turn lanes.

Additional HCS 2010 analyses were conducted to illustrate potential benefits that would be achieved with these improvements. The HCS intersection worksheets and future projected total traffic are provided in **Appendix N: Intersection Alternative – HCS 2010 Analysis**.

The HCS 2010 analysis for year 2026 potential future conditions shows that all approaches operate at Level of Service (LOS) E or better. In addition, all movements exhibit a volume over capacity ratio less than 1.0 for future 2026 estimated traffic.

The results of the traffic HCS 2010 intersection analysis for future 2021 and 2026 estimated overall traffic are summarized in **Table 15A** and **Table 15B**.

Table 15A
Intersection LOS – Potential Alternative

Intersection Configuration	EB Approach Delay*/LOS	WB Approach Delay*/LOS	NB Approach Delay*/LOS	SB Approach Delay*/LOS	Overall Delay*/LOS
PM Peak Hour					
Future 2021	61.6/E	61.3/E	43.2/D	39.4/D	48.0/D
PM Peak Hour					
Future 2026	59.0/E	63.9/E	56.4/E	51.5/D	56.5/E

NOTE(S) *Approach Delay in s/veh.

Table 15B
Intersection v/c ratio – Potential Alternative

Intersection Configuration	EB Approach V/C Ratio	WB Approach V/C Ratio	NB Approach V/C Ratio	SB Approach V/C Ratio
PM Peak Hour				
Future 2021	LT – 0.900 TH – 0.800 RT – 0.475	LT – 0.892 TH – 0.921 RT – 0.461	LT – 0.834 TH – 0.732 RT – 0.655	LT – 0.775 TH – 0.691 RT – 0.323
PM Peak Hour				
Future 2026	LT – 0.910 TH – 0.716 RT – 0.449	LT – 0.896 TH – 0.937 RT – 0.397	LT – 0.859 TH – 0.902 RT – 0.765	LT – 0.781 TH – 0.895 RT – 0.524

Coconut Road – Safety Review

West of US 41

Accident data was supplied by Lee County Transportation staff for the corridor between the west end of Coconut Road, east to Walden Center Drive. The data covers a four year period (12/31/2011 thru 11/13/2015) of accident report information from the Lee County Sheriff's office and Florida Highway Patrol. During this time there were 11 crashes reported. None were fatal. Four of the crashes occurred at night. Weather conditions were clear for 10 of the 11 crashes. Two of the 11 crashes involved possible injuries. None of the accidents involved bikes, motorcycles, pedestrians, intoxication, speeding, loss of control. Five of the crashes involved aggressive driving, two involved distracted driving. One was an angle collision, two were left turn crashes, one was a head on, one involved a heavy truck, one and involved a teen. None of the accidents required an access management review. The table below provides a summary of the crash locations during the reported period. Based on the crash data there does not appear to be any significant crash conditions along the west corridor. Additional crash detail can be found in Appendix O.

Table of Crashes Along Coconut Road West of US 41

EventID	EventCrashDate	EventCrashTime	EventOnStreet	EventCrossStreet	EventNodeDescription
86102035	11/13/2015	14:17:00	NORTH COMMONS DR	COCONUT RD	COCONUT RD @ NORTH COMMONS DR
86101422	10/22/2015	23:00:00	ELDORADO BLVD	COCONUT RD	COCONUT RD @ EL DORADO BLVD
86100668	9/19/2015	7:42:00	COCONUT ROAD	VIA VENETO AT THE COLONY ENTRANCE	COCONUT RD @ VIA VENETO BLVD
85882501	5/17/2015	8:10:00	EL DORADO BLVD	COCONUT RD	COCONUT RD @ EL DORADO BLVD
85615619	2/7/2015	2:45:00	COCONUT RD	SPRING CREEK DR	COCONUT RD @ SPRING CREEK RD
84995514	10/8/2014	23:00:00	COCONUT RD	EL DORADO BLVDVD	COCONUT RD @ EL DORADO BLVD
84794472	7/22/2014	9:00:00	COCONUT RD	SAND FLY CT	COCONUT RD @ VIA VENETO BLVD
81598581	11/9/2013	2:00:00	ELDORADO BLVDVD	COCONUT RD	COCONUT RD @ EL DORADO BLVD
81580877	2/12/2013	6:55:00	COCONUT RD	OLD MEADOWBROOK CIR	COCONUT RD @ OLDE MEADOWBROOK BLVD
81588327	8/15/2012	18:19:00	COCONUT RD	NORTH COMMONS DR	COCONUT RD @ NORTH COMMONS DR
82814081	12/31/2011	1701	COCONUT RD	OLDE MEADOWBROOK CIRCLE	COCONUT RD @ OLDE MEADOWBROOK CIR

East of US 41

Accident data was supplied by Lee County Transportation staff for the corridor between US 41, east to Three Oaks Parkway. The data covers a three year period (1/1/2013 thru 12/30/2015) of accident report information from the Lee County Sheriff's office and Florida Highway Patrol. During this time there were fifty crashes reported, which is nearly six times more than the west section of the corridor for the same period of time. None were fatal. Eight of the crashes occurred at night. Weather conditions were clear for twenty-nine of the fifty crashes. Six of the fifty crashes involved possible injuries. One crash involved a bicycle. Two crashed involved a motorcycle. Fives crashes involved speeding, or driving too fast for conditions. Two crashes involved pedestrians. None of the accidents involved intoxication, or loss of control. Sixteen of the crashes involved aggressive driving, six involved distracted driving. Eleven were angle collisions, ten were left turn crashes, two a head on, three involved a heavy truck, and ten involved a teen. None of the accidents required an access management review. The following table provides a summary of the crash locations during the reported period. Based on the crash data provided, there does not appear to be any particular systemic crash conditions along the east corridor. Additional crash detail can be found in Appendix P. No crash data is provided for the intersection of US 41 and Coconut Road, which is a signalized intersection.

Table of Creshes Along Coconut Road East of US 41 to Three Oaks Parkway

EventID	EventCrashDate	EventCrashTime	EventOnStreet	EventCrossStreet	EventNodeDescription
86103219	12/30/2015	15:34:00	COCONUT RD	IMPERIAL PKWY	THREE OAKS PKWY @ COCONUT RD
86102652	12/6/2015	15:47:00	COCONUT RD	HEALTH CENTER BLVD	COCONUT RD @ VIA VILLAGIO
86102546	12/3/2015	13:54:00	COCONUT RD	VIA VILLAGIO PKWY	COCONUT RD @ VIA VILLAGIO
86102441	11/25/2015	9:22:00	COCONUT RD	IMPERIAL PKWY	THREE OAKS PKWY @ COCONUT RD
86101905	11/9/2015	6:31:00	IMPERIAL BLVD	COCONUT DR	THREE OAKS PKWY @ COCONUT RD
85188983	10/31/2015	11:00:00	THREE OAKS PW	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
86101568	10/28/2015	7:40:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
86101368	10/19/2015	17:35:00	COCONUT RD	OAKWILDE BLVD	COCONUT RD @ OAKWILDE BLVD
86100537	9/14/2015	14:47:00	VIA COCONUT POINT	COCONUT RD	COCONUT RD @ VIA COCONUT POINT
86100546	9/14/2015	19:24:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
86100131	8/28/2015	16:30:00	COCONUT RD	THREE OAKS PKWY	THREE OAKS PKWY @ COCONUT RD
86099780	8/14/2015	7:50:00	THREE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85883659	7/7/2015	0:45:00	COCONUT RD	THREE OAKS PKWY	THREE OAKS PKWY @ COCONUT RD
85883099	6/12/2015	12:40:00	COCONUT RD	VIA COCONUT PT	COCONUT RD @ VIA COCONUT POINT
85882790	5/29/2015	20:44:00	COCONUT RD	SPRING RUN BLVD	COCONUT RD @ SPRING RUN BLVD
85118465	5/28/2015	14:01:00	THREE OAKS PW	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85882711	5/26/2015	16:47:00	VIA COCONUT PT	COCONUT RD	COCONUT RD @ VIA COCONUT POINT
85882715	5/26/2015	15:00:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85882351	5/11/2015	10:45:00	THREE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85776473	4/6/2015	19:00:00	COCONUT RD	THREE OAKS PKWY	THREE OAKS PKWY @ COCONUT RD
85775612	3/10/2015	12:40:00	THREE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85775332	3/2/2015	9:13:00	SPRING RUN BLVD	COCONUT RD	COCONUT RD @ SPRING RUN BLVD
85615128	1/20/2015	16:15:00	SANDY CREEK TERRACE	SPRINGRUN BLVD	SPRING RUN BLVD @ SANDYCREEK TER
85614965	1/14/2015	17:29:00	THREE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
85614893	1/12/2015	15:25:00	COCONUT RD	SPRING RUN BLVD	COCONUT RD @ SPRING RUN BLVD
85614112	12/15/2014	11:25:00	COCONUT DR	SPRING RUN BLVD	COCONUT RD @ SPRING RUN BLVD
84996305	11/12/2014	17:24:00	COCONUT RD	SPRING RUN BLVDVD	COCONUT RD @ SPRING RUN BLVD
84996239	11/10/2014	4:01:00	CR 881	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
84996252	11/10/2014	16:15:00	VIA COCONUT PT	COCONUT RD	COCONUT RD @ VIA COCONUT POINT
84995889	10/26/2014	18:50:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
84995546	10/10/2014	0:08:00	COCONUT RD	VIA COCONUT PT	COCONUT RD @ VIA COCONUT POINT
84794116	7/2/2014	12:14:00	THREE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
84793592	6/3/2014	18:31:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
84152318	3/4/2014	15:58:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
9482355	1/29/2014	13:50:00	COCNUT RD	VIA COCONUT POINT	COCONUT RD @ VIA COCONUT POINT
81585676	12/9/2013	0:34:00	COCONUT RD	VIA COCONUT RD	COCONUT RD @ VIA COCONUT POINT
81588597	10/3/2013	15:27:00	COCONUT RD	VIA COCONUT PT	COCONUT RD @ VIA COCONUT POINT
81586001	9/24/2013	19:24:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
9506440	7/22/2013	8:30:00	CR 881	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
81593383	6/16/2013	15:45:00	COCONUT BLVD		COCONUT RD @ SPRING RUN BLVD
81590299	5/16/2013	8:50:00	IE IMPERIAL PARKWAY IE THREE OAKS	COCONUT ROAD	THREE OAKS PKWY @ COCONUT RD
9499169	4/28/2013	17:40:00	THRE OAKS PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
81589663	3/18/2013	14:58:00	COCONUT RD	HEALTH CENTER BLVDVD	COCONUT RD @ VIA VILLAGIO
83276176	3/14/2013	16:50:00	COCONUT RD	THREE OAKS PKWY	THREE OAKS PKWY @ COCONUT RD
81591774	3/12/2013	8:11:00	IMPERIAL PKWY	COCONUT RD	THREE OAKS PKWY @ COCONUT RD
9502305	2/28/2013	18:04:00	8200 HEALTH CENTER BLVDVD		COCONUT RD @ VIA VILLAGIO
81590065	2/24/2013	14:08:00	COCONUT RD	VIA VILLAGIO WAY	COCONUT RD @ VIA VILLAGIO
81591908	2/13/2013	19:17:00	COCONUT RD	HEALTH CENTER BLVDVD	COCONUT RD @ VIA VILLAGIO
81586566	1/16/2013	18:19:00	COCONUT RD	VIA COCONUT POINT	COCONUT RD @ VIA COCONUT POINT
9492704	1/1/2013	19:05:00	VIA COCONUT POINT AND COCONUT RD	VIA COCONUT POINT AND COCONUT RD	COCONUT RD @ VIA COCONUT POINT

Conclusions and Recommendations

The main objective of this traffic study is to evaluate engineering data, document information, and to determine if there are improvement needs for Coconut Road future traffic conditions.

Once forecasts were developed, a roadway segment analyses was performed for future 2021 and 2026 conditions. The Level of Service E standard was utilized as a screening method to evaluate whether a roadway segment was deficient for the future condition. Based upon the results illustrated in corridor segment level of service analysis, the Coconut Road segment located west of US 41 is anticipated to be over capacity in the year 2021 and 2026 future conditions. All other analyzed segments are projected to the adopted level of service standard at future conditions.

A significant benefit to overall mobility on Coconut Road west of US 41 is provided by a series of roundabouts along this segment. We would recommend analyzing this option as a way to meet the future buildout along this corridor.

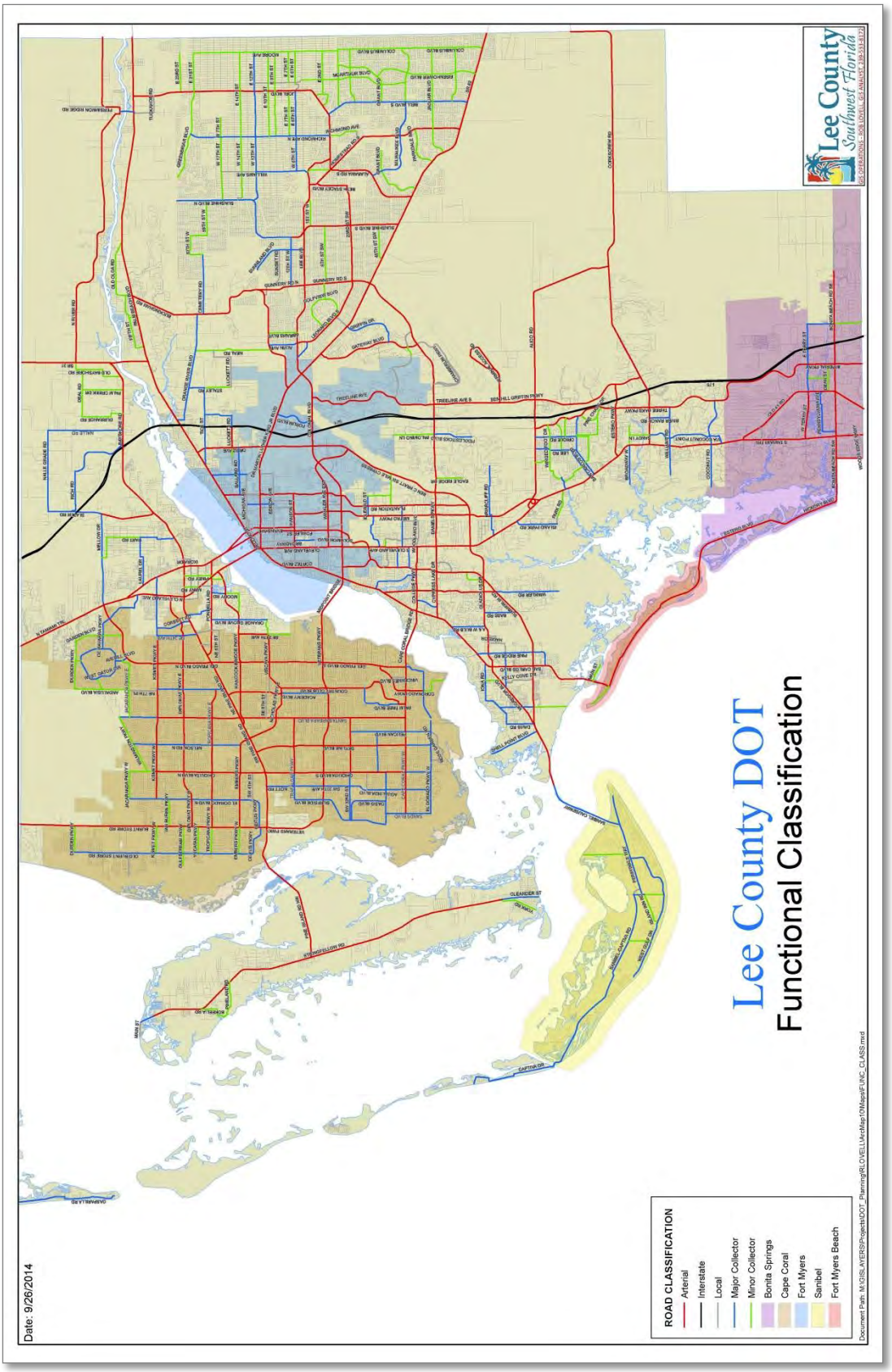
We would recommend working with Lee County and the City of Bonita Springs to identify and agree on needed improvements for Coconut Road and for these to be included in future Lee County Metropolitan Planning Organization Long Range Transportation Plan (MPO LRTP) programing.

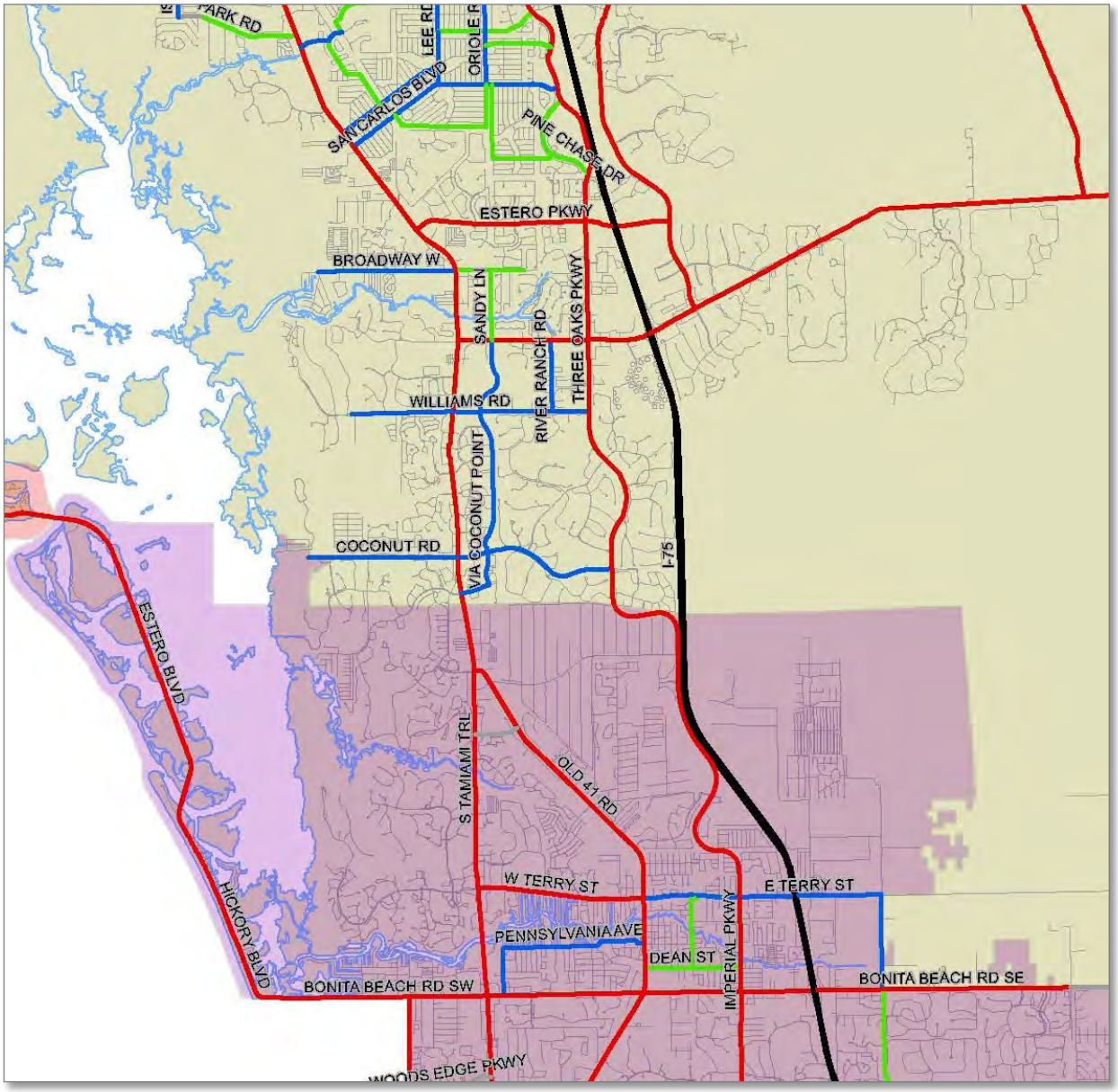
The operational analyses completed for the intersection of Coconut Road and US 41 indicates the need for future intersection improvements to accommodate future volume growth. These improvements include turn lane extensions on Coconut Rd/US 41 and a dual northbound left on US 41.

To provide adequate operations through the 2026 future traffic conditions, new intersection lane configuration and signal retiming are recommended to produce lower delays, sufficient capacity and an acceptable level of service.

Appendix A: Lee County DOT Functional Classification

(2 Sheets)


Lee County DOT
Functional Classification
Lee County
Southwest Florida
GIS OPERATIONS - BOB LOVELL, GIS ANALYST - 239-533-8125
Date: 9/26/2014
ROAD CLASSIFICATION
Arterial
Interstate
Local
Major Collector
Minor Collector
Bonita Springs
Cape Coral
Fort Myers
Sanibel
Fort Myers Beach
Document Path: M:\GIS\LAYERS\Projects\DOT_Planning\RLOVELL\ArcMap10\Maps\FUNC_CLASS.mxd


PARK RD
LEE RD
ORIOLE R
SAN CARLOS BLVD
PINE CHASE DR
ESTERO PKWY
BROADWAY W
SANDY LN
THREE OAKS PKWY
RIVER RANCH RD
WILLIAMS RD
VIA COCONUT POINT
COCONUT RD
I-75
ESTERO BLVD
S TAMIAMI TRL
OLD 41 RD
W TERRY ST
E TERRY ST
HICKORY BLVD
PENNSYLVANIA AVE
DEAN ST
IMPERIAL PKWY
BONITA BEACH RD SW
BONITA BEACH RD SE
WOODS EDGE PKWY

Appendix B: FDOT Federal-Aid Report (Excerpts)

(3 Sheets)

Federal-Aid Road Report

This report provides detailed information about all roads on the State Highway System and many additional public roads. It includes the Federal agency responsible for providing federal aid after a disaster, functional classification, local road name, and the name of the road or boundary at each end of each segment identified by FDOT's Roadway ID.

The roads are listed first by county, and then in the order of the Roadway ID. A given Roadway ID may include portions with several different local road names, and a single local road name may include multiple Roadway IDs.

Key to Codes

Column	Code	Description
Emergency Mgmt Fund	FHWA-ER	Federal Highway Administration - Emergency Relief
(Emergency Management Fund)	FEMA	Federal Emergency Management Agency
Geographic District	1 thru 7	District Number by County Location
Managing District	1 thru 8	District Number by County Location, and Turnpike ("District 8")
Fed. Fun. Class	RPAI	01 - Rural Principal Arterial - Interstate
(Federal Functional Classification)	RPAO	02 - Rural Principal Arterial - Other Freeways & Expressways
	RPAO	04 - Rural Principal Arterial - Other
	RMA	06 - Rural Minor Arterial
	RMJC	07 - Rural Major Collector
	RMIC	08 - Rural Minor Collector
	RL	09 - Rural Local
	UPAI	11 - Urban Principal Arterial - Interstate
	UPAF	12 - Urban Principal Arterial - Other Freeways & Expressways
	UPAO	14 - Urban Principal Arterial - Other
	UMA	16 - Urban Minor Arterial
	UMJC	17 - UrbanMajor Collector
	UMIC	18 - Urban Minor Collector
	UL	19 - Urban Local
Prop. Fun. Class	Codes same as for Fed. Fun Class	
(Proposed Functional Classification)		
Federal System	STP	Surface Transportation Program
	NHS	National Highway System
	FA-NONE	Federal Aid None

Created
Dec. 31, 2015

For More Information

Call	Write	Email
Tina Hatcher or Eric Brickner Local: 850-414-4848 Toll-Free: 800-399-5503	Florida Department of Transportation Transportation Statistics Office 605 Suwannee St, MS 27 Tallahassee, FL 32399-0450	Eric.Brickner@dot.state.fl.us Tina.Hatcher@dot.state.fl.us

Created Dec 11, 2015

Florida Department of Transportation Transportation Statistics Office
Federal-Aid Road Report

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Geo-graphic District	Manag-ing Distrct	County Name	Emerg. Mgmt. Fund.	Roadway ID	US Route Number	State or County Road No.	Local Name	Mile Point +/-.005	From (Beginning of this segment)	Mile Point +/-.005	To (End of this segment)	Net Length	Fed. Fun. Class.	Prop. Fun. Class.	Federal System
1	1	LEE	FHWA-ER	12000084			DEL PRADO BLVD	0.968	MIKADO CT	1.328	WAIKIKI AVE	0.402	UMIC		STP
1	1	LEE	FHWA-ER	12000084			CAPE CORAL ST	1.120	WAIKIKI AVE	1.271	LT=MIRAMAR ST AND RT=WAIKIKI AVE	0.151	UMIC		STP
1	1	LEE	FHWA-ER	12000084			DEL PRADO BLVD	1.271	LT=MIRAMAR ST AND RT=WAIKIKI AVE	1.400	CAPE CORAL PKWY E	0.129	UMIC		STP
1	1	LEE	FHWA-ER	12000085			JOHN MORRIS RD	0.000	SUMMERLIN RD	1.277	IONA RD	1.277	UMIC		STP
1	1	LEE	FHWA-ER	12000085			IONA RD	1.277	IONA RD	3.200	MCGREGOR BLVD	1.923	UMIC		STP
1	1	LEE	FHWA-ER	12000086			A.W. BUES ROAD	0.000	GLADIOLUS ROAD	1.252	MCGREGOR BLVD/SR 867	1.252	UMIC		STP
1	1	LEE	FHWA-ER	12000088		CR 865	GLADIOLUS DR	0.000	LT=MCGREGOR BLVD AND RT=SAN CARLOS BLVD	0.546	PINERIDGE RD	0.546	UMA		STP
1	1	LEE	FHWA-ER	12000090			CRYSTAL DR	0.000	LT=BEACON BLVD AND RT=BEACON ST	0.732	CRYSTAL DR	0.732	UMIC		STP
1	1	LEE	FHWA-ER	12000090			FORDHAM ST	0.732	CRYSTAL DR	1.065	EPHRAIM AVE	0.333	UMIC		STP
1	1	LEE	FHWA-ER	12000091			CRYSTAL DR	0.000	SR45/US41/CLEVELAND	0.240	CRYSTAL DR	0.240	UMIC		STP
1	1	LEE	FEMA	12000091			CRYSTAL DR	0.240	CRYSTAL DR	0.241	CRYSTAL DR	0.001	UL		FA-NONE
1	1	LEE	FEMA	12000091			BEACON BLVD	0.241	CRYSTAL DR	0.883	BEACON BLVD	0.642	UL		FA-NONE
1	1	LEE	FHWA-ER	12000091			BEACON MANOR DR	0.883	BEACON BLVD	1.200	SR45/US41/CLEVELAND	0.317	UMIC		STP
1	1	LEE	FHWA-ER	12000092			ALICO RD	0.476	INDY RD	3.191	I-75 / SR 93	2.715	UMA		STP
1	1	LEE	FHWA-ER	12000094			CAUSEWAY	0.000	BEG OF BRIDGE 12A116	2.700	END OF BRIDGE 12A116	2.700	UMA		STP
1	1	LEE	FHWA-ER	12000095			WEST GULF DR	0.000	ISLAND INN RD	0.685		0.685	RMIC		STP
1	1	LEE	FHWA-ER	12000095			WEST GULF DR	0.685		2.271	END OF RD TERMINUS	1.586	UMIC		STP
1	1	LEE	FHWA-ER	12000097			CORKSCREW ROAD	0.000	BTWN NBAND SB UP I-75	0.557		0.557	UMA		STP
1	1	LEE	FHWA-ER	12000097			CORKSCREW ROAD	0.557		4.807		4.250	UMIC		STP
1	1	LEE	FHWA-ER	12000097			CORKSCREW ROAD	4.807		7.725	SIX LIS FARM RD	2.918	RMIC		STP
1	1	LEE	FHWA-ER	12000098			STALEY RD	0.000	LT=TICE ST AND RT=HOMESTEAD LN	0.600	ORANGE RIVER BLVD	0.600	RMIC		STP
1	1	LEE	FHWA-ER	12000099			HANCOCK BRIDGE PKWY	0.000	DEL PRADO BLVD	3.590	ORANGE GROVE BLVD	3.590	UMA		STP
1	1	LEE	FHWA-ER	12000100			CRYSTAL DR	0.000	FORDHAM ST	0.204	MEED PKWY	0.204	UMIC		STP
1	1	LEE	FEMA	12000101			BEACH PKWY	0.000	DEL PRADO BLVD	0.700	SE 20 PL	0.700	UL		FA-NONE
1	1	LEE	FHWA-ER	12000105			DEL PRADO /MELLOW DR	0.000	US 41/N TAMIAMI TRL	1.832		1.832	UMIC		STP
1	1	LEE	FHWA-ER	12000105			MELLOW DR	1.832		3.401	SLATER RD	1.569	UMIC		STP
1	1	LEE	FEMA	12000107			26TH TER	0.000	ARCHER PKWY	0.095	SHELBY PKWY	0.095	UL		FA-NONE
1	1	LEE	FEMA	12000107			SHELBY PKWY	0.095	SHELBY PKWY	0.812	DEL PRADO BLVD	0.717	UL		FA-NONE
1	1	LEE	FHWA-ER	12000108			FOWLER ST.	0.000	US 41/CLEVELAND AVE	0.928	N. AIRPORT RD	0.928	UMA		STP
1	1	LEE	FHWA-ER	12000110			CRYSTAL DR	0.000	METRO PKWY	0.373	PLANTATION RD	0.373	UMIC		STP
1	1	LEE	FHWA-ER	12000111			PLANTATION RD	0.000	SIX MILE CYPRESS PKW	4.869	COLONIAL BLVD	4.869	UMIC		STP
1	1	LEE	FHWA-ER	12000112			V S SHOEMAKER BLVD	0.000	CR 884/COLONIAL BLVD	3.531	MICHIGAN AVE	3.531	UMIC		STP
1	1	LEE	FHWA-ER	12000113			HANSON ST	0.000	FORD ST	0.500	N SHOEMAKER BLVD	0.500	UMIC		STP
1	1	LEE	FHWA-ER	12000114			ROCKFILL ROAD	0.000	EDISON AVE	0.494	SR 82/AIRK BLVD	0.494	UMIC		STP
1	1	LEE	FHWA-ER	12000116			BONITA BEACH RD SE	0.000	NE CR 6P12075003	2.592		2.592	UMIC		STP
1	1	LEE	FEMA	12000116			BONITA BEACH RD SE	2.592		5.000	TERMINUS (DIRT RD)	2.408	UL		FA-NONE
1	1	LEE	FHWA-ER	12000117			IMPERIAL PKWY	0.000	COLLIER CO LINE	6.468	COCONUT RD	6.468	UMA		STP
1	1	LEE	FHWA-ER	12000122			THREE OAKS PKWY	6.468	COCONUT RD	9.054	CORKSCREW RD	2.586	UMA		STP
1	1	LEE	FHWA-ER	12000122			COCONUT RD	0.000	SR45/US41/S TAMIAMI	1.734	LT=THREE OAKS PKWY AND RT=IMPERIAL PKWY	1.734	UMIC		STP
1	1	LEE	FHWA-ER	12000122			[illegible]	0.000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		STP
1	1	LEE	FHWA-ER	12000122			EDISON AVE.	0.000	HIGHLAND AVE	0.441	EDISON AVE	0.441	UMIC		STP
1	1	LEE	FEMA	12000122			TOWLES ST	0.441	EDISON AVE	0.936	SR 82/AIRLIE BLVD	0.495	UL		FA-NONE
1	1	LEE	FHWA-ER	12000122			CAPE CORAL PKWY	0.000	CORONADO BLVD	0.850	DEL PRADO BLVD	0.850	UMA		STP
1	1	LEE	FHWA-ER	12000124			WEST GULF DR	0.000	ISLAND INN RD	1.045	TARPON BAY RD	1.045	UMIC		STP
1	1	LEE	FHWA-ER	12000125			CAUSEWAY RD	0.000	PERIWINKLE PARK RD	0.452	BEG BRIDGE # 12A116	0.452	UMA		STP
1	1	LEE	FHWA-ER	12000126			CORKSCREW ROAD	0.000	SIX LIS FARM RD	5.794	COLLIER CO/CR 850	5.794	RMIC		STP
1	1	LEE	FHWA-ER	12000128			SLATER ROAD	0.000	SR 78/BAYSHORE RD	1.890	MELLOW DR	1.890	UMIC		STP
1	1	LEE	FHWA-ER	12000129			SUMMERLIN (PKWY/CR867	0.000	SHELL POINT BLVD	0.278	SUMMERLIN RD	0.278	UMA		STP
1	1	LEE	FHWA-ER	12000129			MCGREGOR BLVD	0.278	SUMMERLIN RD	2.949	RT=MCGREGOR BLVD/SR867 AND RT=SANCARLOS BLVD/SR865	2.671	UMA		STP
1	1	LEE	FHWA-ER	12000130			WILLIAMS ROAD	0.000	SR 45/US 41	0.281		0.281	UMIC		STP
1	1	LEE	FHWA-ER	12000130			WILLIAMS ROAD	0.320		1.446	THREE OAKS PKWY	1.126	UMIC		STP
1	1	LEE	FHWA-ER	12000131			WHISKEY CRK DR	0.000	COLLEGE PKWY	1.767	MCGREGOR BLVD	1.767	UMIC		STP
1	1	LEE	FHWA-ER	12000132			WILLIAMS RD ROUNDABO	0.000	W WILLIAMS RD	0.117	W WILLIAMS RD	0.117	UMIC		STP
1	1	LEE	FHWA-ER	12000135			PINE RIDGE RD	0.000	SAN CARLOS BLVD	0.958		0.958	UMIC		STP
1	1	LEE	FHWA-ER	12000135			PINE RIDGE RD	0.958		3.030	SR 867/MCGREGOR BLVD	2.072	UMIC		STP
1	1	LEE	FHWA-ER	12000138			LUCKETT RD	0.000	ORTIZ AVE	0.800	SR 93/I 75 CTR LINE	0.800	UMA		STP
1	1	LEE	FHWA-ER	12000140			CAPE CORAL PKWY	0.000	SANDS BLVD	2.539	SKYLINE BLVD	2.539	UMIC		STP
1	1	LEE	FHWA-ER	12000141			CHIQUITA BLVD	0.082	EL DORADO BLVD W	10.260	KISMET PKWY	10.178	UMIC		STP
1	1	LEE	FHWA-ER	12000142			SKYLINE BLVD	0.000	CAPE CORAL PKWY	5.574	PINE ISLAND RD/SR78	5.574	UMIC		STP
1	1	LEE	FEMA	12000143			SE 26TH TLE	0.000	EMMAL PKWY	0.092	ARCHER PKWY	0.092	UL		FA-NONE
1	1	LEE	FHWA-ER	12000144			GLEASON PKWY.	0.000	CHIQUITA BLVD.	2.029	SANTA BARBARA BLVD.	2.029	UMIC		STP
1	1	LEE	FHWA-ER	12000145			TROPICANA PKWY	0.000	BURNT STORE RD	5.100	ANDALUSIA BLVD	5.100	UMIC		STP
1	1	LEE	FHWA-ER	12000146			ANDALUSIA BLVD	0.000	PINE ISLAND RD/SR 78	2.500	KISMET PKWY	2.500	UMIC		STP
1	1	LEE	FHWA-ER	12000147			DEL PRADO BLVD	0.000	SR78/PINE ISLAND RD	5.415	SR45/US41/N TAMIAMI	5.415	UPAO		NHS
1	1	LEE	FHWA-ER	12000148			ESTERO PKWY	0.000	US 41 / TAMIAMI TRL	2.723	BEN HILL GRIFFIN PKW	2.723	UMIC		STP
1	1	LEE	FHWA-ER	12000149			HANCOCK BRIDGE PKWY	0.000	SANTA BARBARA BLVD	2.071	DEL PRADO BLVD	2.071	UMA		STP
1	1	LEE	FHWA-ER	12000150			VISCAYA PKWY	0.000	COUNTRY CLUB BLVD	1.600	SE 24TH AVE	1.600	UMIC		STP
1	1	LEE	FHWA-ER	12000151			COUNTRY CLUB BLVD	0.000	ROTUNDA PKWY W	2.197	SE 9TH ST	2.197	UMIC		STP

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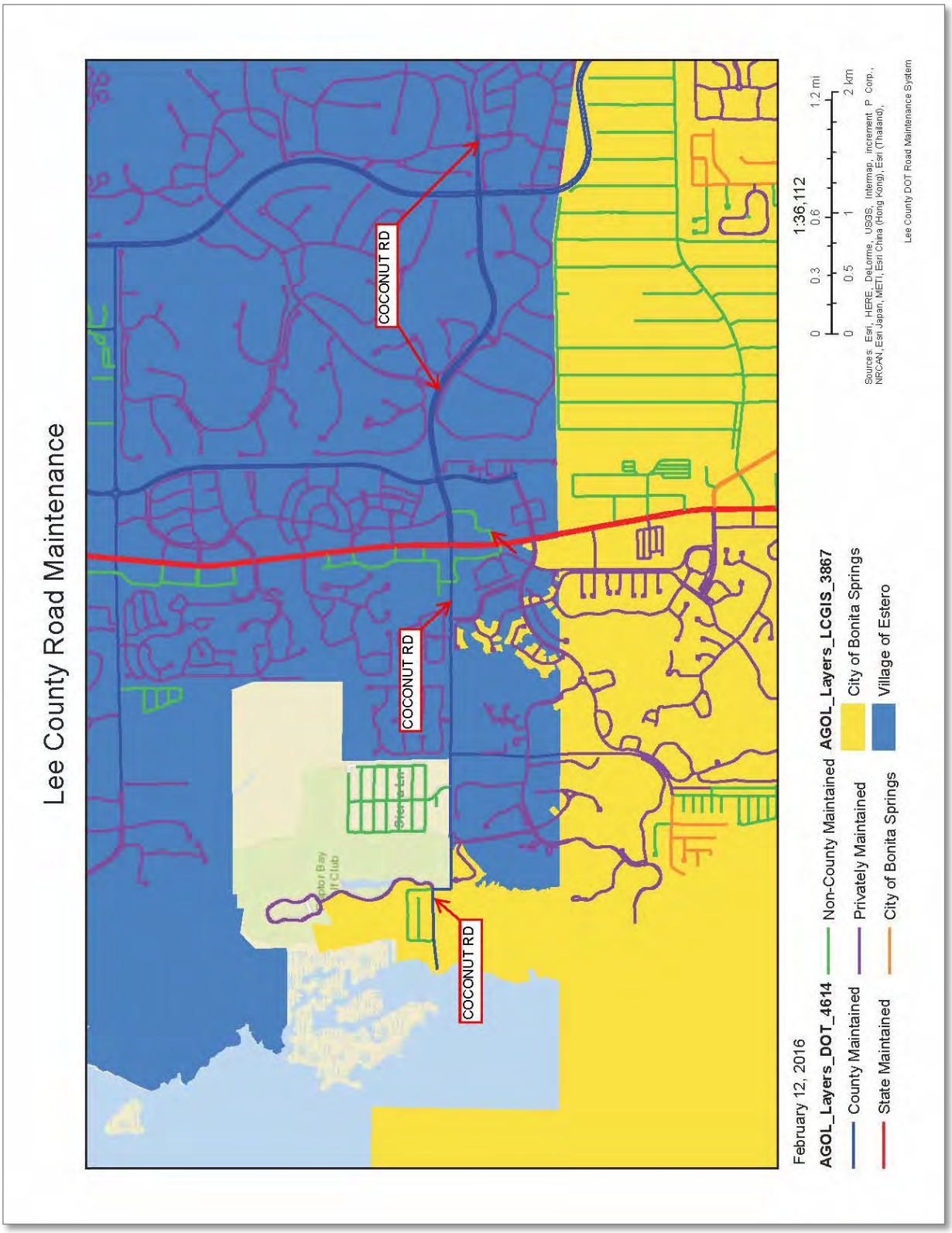
Geo-graphic District	Manag-ing District	County Name	Emerg. Mgmt. Fund.	Roadway ID	US Route Number	State or County Road No.	Local Name	Mile Point +/-.005	From (Beginning of this segment)	Mile Point +/-.005	To (End of this segment)	Net Length	Fed. Fun. Class.	Prop. Fun. Class.	Federal System
1	1	LEE	FHWA-ER	12000152			BENHILL GRIFFIN PKWY	0.000	CORKSCREW RD	5.582	TERMINAL ACCESS RD	5.582	UMA		STP
1	1	LEE	FHWA-ER	12000152			TRUELINE AVE	5.582	TERMINAL ACCESS RD	12.984	CR 884	7.402	UMA		STP
1	1	LEE	FHWA-ER	12000154			CHAMBERLIN PKWY	0.000	DANIELS PKWY	2.824	LEG TO CHAMBERLIN PK	2.824	UMIC		STP
1	1	LEE	FHWA-ER	12000154			PAUL J DOHERTY PKWY	2.824	LEG TO CHAMBERLIN PK	3.575	DANIELS PKWY	0.751	UMIC		STP
1	1	LEE	FHWA-ER	12000155			PAUL J DOHERTY PKWY	0.000	DANIELS PKWY	0.752	CHAMBERLIN PKWY	0.752	UMIC		STP
1	1	LEE	FHWA-ER	12000155			CHAMBERLIN PKWY	0.752	CHAMBERLIN PKWY	3.290	DANIELS PKWY	2.538	UMIC		STP
1	1	LEE	FHWA-ER	12000157			23RD ST SW	0.000	SUNSHINE BLVD	1.493	BETH STACEY BLVD	1.493	UMIC		STP
1	1	LEE	FHWA-ER	12000158			BETH STACEY BLVD	0.000	23RD ST SW	3.343	HOMESTEAD RD	3.343	UMIC		STP
1	1	LEE	FHWA-ER	12000159			HOMESTEAD RD	0.000	SR 82 IMMOKALEE RD	5.377	RT=ALABAMA RD AND RT=LELLAND HTS BLVD	5.377	UMA		STP
1	1	LEE	FHWA-ER	12000160			DANIELS PKWY	0.000	LT=GATEWAY BLVD AND RT=PAUL J DOHERTY PKWY	2.938	SR 82	2.938	UPAO		STP
1	1	LEE	FHWA-ER	12000162			PELICAN BLVD	0.000	EL DORADO PKWY	3.000	GLEASON PKWY	3.000	UMIC		STP
1	1	LEE	FHWA-ER	12000180			ALICO ROAD	0.000	SR45/US41/S TAMIAMI	0.798	INDY DR	0.798	UMA		STP
1	1	LEE	FHWA-ER	12000181			BOY SCOUT DR	0.000	SUMMERLIN RD	0.483	SR45/US41/CLEVELAND	0.483	UMA		STP
1	1	LEE	FHWA-ER	12000182			SUMMERLIN RD	0.000	NEW MCGREGOR BLVD	11.638	SR884/COLONIAL BLVD	11.638	UMA		STP
1	1	LEE	FEMA	12000183			KELLY RD	0.000	MCGREGOR BLVD	1.300	PINE RIDGE RD	1.300	UL		FA-NONE
1	1	LEE	FHWA-ER	12000184			MONA VIE PKWY	0.000	CHIQUITA BLVD	1.500	PELICAN BLVD	1.500	UMIC		STP
1	1	LEE	FEMA	12000188			VINCENNES BLVD	0.000	CAPE CORAL PKWY E	0.536	CORONADO PKWY	0.536	UL		FA-NONE
1	1	LEE	FHWA-ER	12000197			DONAX STREET	0.000	MIDDLE GULF DR	0.584	PERWINKLE WAY	0.584	UMIC		STP
1	1	LEE	FHWA-ER	12000198			LINDGREN BLVD	0.000	EAST GULF DR	0.500	PERWINKLE DR	0.500	UMIC		STP
1	1	LEE	FHWA-ER	12000203			WEST GULF DR	0.000	TARPON BAY RD	0.700	CASA YBEL RD	0.700	UMIC		STP
1	1	LEE	FHWA-ER	12000202			12TH ST W	0.000	GUNNERY RD N	1.828	SUNSHINE BLVD N	1.828	UMIC		STP
1	1	LEE	FHWA-ER	12000203			E 12TH ST	0.000	RICHMOND AVE N	3.154	MOORE AVE S	3.154	UMIC		STP
1	1	LEE	FHWA-ER	12000204			E 23ST ST	0.000	KELL BLVD	1.437	MOORE AVE	1.437	UMIC		STP
1	1	LEE	FHWA-ER	12000205			SANKPORT RD	0.000	SR41/US 41	0.263	S DANLEY DR	0.263	UMIC		STP
1	1	LEE	FHWA-ER	12000206			DANLEY DR	0.263	S DANLEY DR	0.463	UNSIGNED	0.180	UMIC		STP
1	1	LEE	FHWA-ER	12000209			ALVIN AVE	0.000	LEE BLVD	1.058	BUCKINGHAM RD	1.058	UMIC		STP
1	1	LEE	FHWA-ER	12000207			BRANTLEY RD	0.000	SUMMERLIN RD	0.758	S CLEVELAND AVE	0.758	UMIC		STP
1	1	LEE	FHWA-ER	12000208			BRIARCLIFF RD	0.000	US 41 S TAMIAMI TRL	2.721	RT=OLD PINE CT AND RT=TRIPLE CROWN CT	2.721	UMIC		STP
1	1	LEE	FHWA-ER	12000209			BROADWAY AVE W	0.000	PINE TREE LN	1.584	HIGHLANDS AVE	1.584	UMIC		STP
1	1	LEE	FHWA-ER	12000209			BROADWAY AVE E	1.584	HIGHLANDS AVE	1.830	SANBY LN	0.246	UMIC		STP
1	1	LEE	FHWA-ER	12000211			CENTRAL AVE	0.000	UNION AVE	0.185	DR MLK JR BLVD	0.185	UMIC		STP
1	1	LEE	FHWA-ER	12000212			CHALLENGER BLVD	0.000	COLONIAL BLVD	1.328	SIX MILE CYPRESS PKW	1.328	UMIC		STP
1	1	LEE	FHWA-ER	12000213			CHIQUITA BLVD	0.000	KISMET PKWY	0.869		0.604	UMIC		STP
1	1	LEE	FEMA	12000213			CHIQUITA BLVD	0.604		1.729	MCARANDA PKWY W	0.420	RMIC		FA-NONE
1	1	LEE	FHWA-ER	12000214			COCONUT RD	0.000	COCONUT RD	1.586	US 41/S TAMIAMI TRL	1.586	UMIC		STP
1	1	LEE	FHWA-ER	12000215			COLONIAL BLVD	0.000	SR82	3.366	SUNSHINE BLVD	3.366	UMIC		STP
1	1	LEE	FHWA-ER	12000216			DRIFTWOOD PKWY	0.000	BOAT RAMP	0.408	LUCERNE AVE	0.408	UMIC		STP
1	1	LEE	FHWA-ER	12000216			LUCERNE AVE	0.408	LUCERNE AVE	0.763	CORONADA CT	0.355	UMIC		STP
1	1	LEE	FHWA-ER	12000218			CORONADO PKWY	0.763	CORONADA CT	1.044	EL DORADO PKWY	0.281	UMIC		STP
1	1	LEE	FHWA-ER	12000217			CORTEZ BLVD	0.000	IRMAN AVE	1.240	EDISON	1.240	UMIC		STP
1	1	LEE	FHWA-ER	12000218			DANLEY DR	0.000	UNSIGNED	0.908	METRO PKWY	0.908	UMIC		STP
1	1	LEE	FHWA-ER	12000219			DONE BEACH BLVD	0.000	PERWINKLE WAY	0.395	ALBATROSS RD	0.395	UMIC		STP
1	1	LEE	FEMA	12000219			DONE BEACH BLVD	0.395	ALBATROSS RD	1.695	SAN CARLOS BAY DR	1.300	RMIC		FA-NONE
1	1	LEE	FHWA-ER	12000221			EAST GULF DR	0.000	NERITA ST	1.649	PERWINKLE WAY	1.649	UMIC		STP
1	1	LEE	FHWA-ER	12000222			EL DORADO BLVD S	0.000	SW 5TH TER	0.692	EMBERS PKWY	0.692	UMIC		STP
1	1	LEE	FHWA-ER	12000223			SUNSHINE BLVD S	0.000	SR 82	3.263	1ST ST W	3.263	UMIC		STP
1	1	LEE	FHWA-ER	12000223			SUNSHINE BLVD N	3.263	1ST ST W	3.814	SR884/LEE BLVD	0.551	UMIC		STP
1	1	LEE	FHWA-ER	12000224			EL DORADO BLVD N	0.000	LT=NW 24 ST AND RT=KISMET PKWY	0.996	MCARANDA PKWY W	0.996	UMIC		STP
1	1	LEE	FHWA-ER	12000225			EMBERS PKWY	0.000	CLB BURNT STORE RD	0.982	BURNT STORE RD	0.982	UMIC		STP
1	1	LEE	FHWA-ER	12000226			GATOR DR S	0.000	AVERILL BLVD	0.472	NE 34 LN	0.472	UMIC		STP
1	1	LEE	FHWA-ER	12000228			GATOR DR S	0.472	NE 34 LN	1.685	NE 18 PL	1.213	UMIC		STP
1	1	LEE	FHWA-ER	12000226			GATOR DR N	1.685	NE 18 PL	2.663	NE 40 TER	0.978	UMIC		STP
1	1	LEE	FHWA-ER	12000228			GATOR DR W	2.663	NE 40 TER	3.633	NE 13 PL	0.970	UMIC		STP
1	1	LEE	FHWA-ER	12000226			GATOR DR S	3.633	NE 13 PL	4.024	AVERILL BLVD	0.391	UMIC		STP
1	1	LEE	FHWA-ER	12000222			HILL AVE	0.000	MCGREGOR BLVD	0.830	US 41	0.830	UMIC		STP
1	1	LEE	FHWA-ER	12000228			IDLEWILD ST	0.000	METRO PKWY	0.250	RT=RANCHETTE RD AND RT=HIGHLAND AVE	0.250	UMIC		STP
1	1	LEE	FHWA-ER	12000230			ISLAND PARK RD	0.000	PARK RD	1.565	S TAMIAMI TRL	1.565	UMIC		STP
1	1	LEE	FHWA-ER	12000231			MCARANDA BLVD W	0.000	EL DORADO BLVD N	0.541		0.541	UMIC		STP
1	1	LEE	FEMA	12000231			MCARANDA BLVD W	0.541		1.022	CHIQUITA BLVD	0.481	RMIC		FA-NONE
1	1	LEE	FHWA-ER	12000232			MGUARE BLVD	0.000	SR 82	4.528	NAPLES AVE S	4.528	UMIC		STP
1	1	LEE	FHWA-ER	12000233			LAKEWOOD BLVD	0.000	GLADIOLUS DR	1.074	SUMMERLIN RD	1.074	UMIC		STP
1	1	LEE	FHWA-ER	12000235			MEADOW RD	0.000	HEDGEWOOD ST	4.545	NAPLES AVE S	4.545	UMIC		STP
1	1	LEE	FHWA-ER	12000236			MEADOW RD	0.000	FLOYD AVE S	3.449	ALABAMA RD S	3.449	UMIC		STP
1	1	LEE	FHWA-ER	12000232			MEADOW RD	0.000	RAY AVE S	1.793	GUNNERY RD S	1.793	UMIC		STP
1	1	LEE	FHWA-ER	12000238			MIDDLE GULF DR	0.000	CASA YBEL RD	1.768	NERITA ST	1.768	UMIC		STP
1	1	LEE	FHWA-ER	12000239			MILWAUKEE BLVD	0.000	HOMESTEAD BLVD S	3.428	COLUMBUS BLVD	3.428	UMIC		STP
1	1	LEE	FHWA-ER	12000241			MOORE AVE S	0.000	SUNTINELA BLVD	0.337	LEELAND HGTS BLVD	0.337	UMIC		STP
1	1	LEE	FHWA-ER	12000241			MOORE AVE	0.337	LEELAND HGTS BLVD	3.115	E 12 ST	2.778	UMIC		STP

Appendix C: Lee County Road Maintenance Map

(1 Sheet)


Lee County Road Maintenance
COCONUT RD
COCONUT RD
COCONUT RD
February 12, 2016
AGOL_Layers_DOT_4614
County Maintained
State Maintained
Non-County Maintained
Privately Maintained
City of Bonita Springs
AGOL_Layers_LCGIS_3867
City of Bonita Springs
Village of Estero
1:36,112
0 0.3 0.6 1.2 mi
0 0.5 1 2 km
Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand),
Lee County DOT Road Maintenance System

Appendix D: Lee County 2015 Concurrency Report (Excerpts)

(2 Sheets)

ROADWAY LINK NAME	FROM	TO	ROAD TYPE	PERFORMANCE STANDARD		2014 100th HIGHEST HR		EST 2015 100th HIGHEST HR		FORECAST FUTURE VOL		NOTES*	LINK NO.
				LOS	CAPACITY	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME		
BONITA BEACH RD	IMPERIAL ST	I-75	6LD	E	2,740	C	1,876	C	1,876	C	1,876		02800
BONITA BEACH RD	I-75	BONITA GRANDE DR	4LD	E	2,000	B	462	B	462	B	462		02900
BONITA BEACH RD	BONITA GRANDE DR	LOGAN BLVD EXT	4LD	E	2,000	B	462	B	462	B	462		02950
BOY SCOUT DR	SUMMERLIN RD	US 41	6LD	E	2,550	D	998	D	998	D	998		03200
BRANTLEY RD*	SUMMERLIN RD	US 41	2LU	E	860	C	116	C	116	C	116		03300
BRIARCLIFF DR*	US 41	TRIPLE CROWN CT	2LU	E	860	C	203	C	203	C	213		03400
BROADWAY (ALVA)*	PALM BEACH BL (SR 80)	NORTH RIVER RD	2LU	E	860	C	181	C	181	C	181		03500
BROADWAY (ESTERO)*	LOGAN AVE	US 41	2LU	E	860	C	239	C	242	C	262		03600
BUCKINGHAM RD	IMMOKALEE RD (SR 82)	GUNNERY RD	2LU	E	990	C	350	C	350	C	362		03700
BUCKINGHAM RD	GUNNERY RD	ORANGE RIVER BL	2LU	E	990	D	529	D	530	D	530		03730
BUCKINGHAM RD	ORANGE RIVER BL	PALM BEACH BL (SR 80)	2LU	E	990	D	481	D	482	F	1,162		03800
BURNT STORE RD	PINE ISLAND RD (SR 78)	DIPLOMAT PKWY	2LU	E	1,100	C	664	C	664	D	690	4 Ln construction in FY's 16/17 & 18/19	03900
BURNT STORE RD	DIPLOMAT PKWY	CHARLOTTE COUNTY LINE	2LU	E	1,100	B	356	B	357	C	453	4 Ln construction up to Van Buren in FY 14/15	04000
BUS 41 (SR 739)	FORT MYERS CITY LIMIT	PONDELLA RD	6LD	D	2,740	C	2,051	C	2,051	C	2,148		04200
BUS 41 (SR 739)	PONDELLA RD	PINE ISLAND RD (SR 78)	6LD	D	2,740	C	1,414	C	1,414	C	1,414		04300
BUS 41 (SR 739)	PINE ISLAND RD (SR 78)	LITTLETON RD	4LD	D	1,820	B	824	B	824	B	836		04400
BUS 41 (SR 739)	LITTLETON RD	US 41	2LU	D	1,080	A	380	A	380	A	431		04500
CAPE CORAL BR RD	DEL PRADO BL	McGREGOR BL	4L	E	4,000	C	2,616	C	2,616	C	2,616		04600
CAPTIVA RD*	BLIND PASS	SOUTH SEAS PLANTATION	2LU	E	860	C	267	C	267	C	324	Constrained v/c = 0.31	04700
CEMETERY RD	BUCKINGHAM RD	HIGGINS AVE	2LU	E	860	C	285	C	291	C	291		04800
CHAMBERLIN PKWY	AIRPORT ENT	DANIELS PKWY	4LD	E	1,790	C	93	C	94	C	94	Port Authority maintained	04900
COCONUT RD*	SPRING CREEK RD	US 41	2LN	E	860	C	366	C	366	C	411	No count since 2007	05000
COCONUT RD*	US 41	THREE OAKS PKWY	4LD	E	1,790	C	588	C	651	C	805		05030
COLLEGE PKWY*	McGREGOR BL	WINKLER RD	6LD	E	2,980	D	1,831	C	1,837	C	1,878		05100
COLLEGE PKWY	WINKLER RD	WHISKEY CREEK DR	6LD	E	2,980	D	1,872	D	1,872	D	1,872		05200
COLLEGE PKWY*	WHISKEY CREEK DR	SUMMERLIN RD	6LD	E	2,980	D	2,371	C	2,455	C	2,486		05300
COLLEGE PKWY	SUMMERLIN RD	US 41	6LD	E	2,980	D	1,456	D	1,456	D	1,479		05400
COLONIAL BL*	McGREGOR BL	SUMMERLIN RD	6LD	E	2,780	D	2,628	D	2,628	D	2,628		05500
COLONIAL BL	SUMMERLIN RD	US 41	6LD	E	2,780	F	2,836	F	2,836	F	2,836	Alternatives analysis in FY 18/19	05600
COLONIAL BL (SR 884)	US 41	FOWLER ST	6LD	E	2,780	D	2,535	D	2,535	D	2,535		05700
COLONIAL BL (SR 884)	FOWLER ST	METRO PKWY	6LD	E	2,780	F	3,125	F	3,125	F	3,125	N. Airport Rd. Ext. current funding for design & construction	05800

ROADWAY LINK NAME	FROM	TO	ROAD TYPE	PERFORMANCE STANDARD		2014 100th HIGHEST HR		EST 2015 100th HIGHEST HR		FORECAST FUTURE VOL		NOTES*	LINK NO.
				LOS	CAPACITY	LOS	VOLUME	LOS	VOLUME	LOS	VOLUME		

= Road links within incorporated areas of Fort Myers, Fort Myers Beach, Bonita Springs or Cape Coral

D E F = Road links which do not meet the adopted County or State Level of Service Standard. [Note: Some of these links are constrained.]

* = Road links which no traffic count was performed in 2014, so the 2013 AADT was utilized to develop the link volume.

Note: "Constrained" Roads are as indicated in TABLE 2(a) CONSTRAINED ROADS STATE AND COUNTY ROADS OF "THE LEE PLAN".

Funding is by Lee County unless noted otherwise.

v/c ratio = 2014 100th Highest Hour/Capacity at the Performance Standard.

Appendix E: Lee County 2015 Traffic Count Report (Excerpts)

(4 Sheets)

			Daily Traffic Volume (AADT)											
STREET	LOCATION	Sta-tion #	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	PCS	Area
A & W BULB RD	N OF GLADIOLUS DR	215	5800	6100			6400	7700		6800		6600	37	7
ALABAMA RD	N OF IMMOKALEE RD	201	6300	4700	6100	5700	5700					6800	6	5
ALABAMA RD	S OF HOMESTEAD RD	200	9500	9900	8800	9000	9100	8800	11100	9000	9300	10300	6	5
BELL BLVD	N OF IMMOKALEE RD	202	3200	2800	2400	1900	1900						6	5
BELL BLVD	S OF LEELAND HEIGHTS BV	203	8500	9100	7800	7200	7900	7900	9500	8100	8800	9600	6	5
ALICO RD	E OF US 41	204	18900	21200	18100	19500	21400	21800	21700	23400	19900	21900	10	3
ALICO RD	E OF LEE RD	207	22600	22900	20100	19900	22700						10	3
ALICO RD	W OF I - 75	10			28300	26600	26100	25800	27200	29100	38400	41100		3
ALICO RD	E OF I - 75	53	11700		12300	20800	25700	26200	26000	26900	28400	25600		3
ALICO RD	E OF BEN HILL GRIFFIN PKWAY	205	12600	9400	5800	3600	2600				7500		53	3
ALICO RD	N OF CORKSCREW RD	206	2800	2400	2000	1400	1500						53	3
ARROYAL ST	N OF BONITA BEACH RD	496	6400	5300	4700	4000							42	6
BABCOCK RD	E OF US 41	461	900	700	1400	1300	1200						25	4
BALLARD RD	W OF ORTIZ AV	504	6400	4900	4100	3500	3400						20	3
BARRETT RD	S OF PINE ISLAND RD	509	3100	3200	2600	2300							49	2
BASS RD	N OF SUMMERLIN RD	216	5900	10900	9100	10400	10000	8200		8400		8200	36	7
BAYSHORE RD (SR 78)	E OF BUSINESS 41	218	33400	34000	29500	28900							64	2
BAYSHORE RD (SR 78)	W OF HART RD	104										28600		
BAYSHORE RD (SR 78)	E OF HART RD	219	28500	27700	24800	23500							64	2
BAYSHORE RD (SR 78)	W OF WILLIAMSBURG DR	64				18300	19200	19300	18400	20100	21000	22900		
BAYSHORE RD (SR 78)	E OF NALLE RD	217	13700	11600	8700	10600							64	2
BEN HILL GRIFFIN PKWY	S OF MIDFIELD TERMINAL	60	20900	23700	24000	24100	23500	24000	23700	24800	26300	21100		4
BEN HILL GRIFFIN PKWY	S OF ALICO RD	514	20300	26800	21200	15300	18400	18000	16800	26300	29900	22900	60	4
BEN HILL GRIFFIN PKWY	N OF ESTERO PKWY	71								18800	19100	19400		
BEN HILL GRIFFIN PKWY	N OF CORKSCREW RD	517	20500	26200	20300	18800	18000	17300	16200	15100	19500	19600	60	4

BUSINESS 41 (SR 739)	N OF POWELL DR	394	19500	17400	14600	13300							41	2
BUSINESS 41 (SR 739)	N OF LITTLETON RD	76										11500		
BUSINESS 41 (SR 739)	N OF LAUREL DR	396	8300	7700	8500	7300							41	2
CAPE CORAL PKWY	E OF SKYLINE BLVD	13	30100	28200	25900	26800	26200	26700	25000	26400	27700	28800		1
CAPE CORAL PKWY	W OF PALM TREE	56	54000	51000	31900	31800	38500	40800	40100	44800	44100		13	1
CAPE CORAL PKWY	W OF DEL PRADO PKWY													1
CAPE CORAL PKWY	W OF CAPE CORAL BR.													
CAPE CORAL BRIDGE	W OF BRIDGE	234	48400	47500			39700			45600	51600		13	1
CAPE CORAL BRIDGE	AT TOLL PLAZA	122										44000		
CAPTIVA DR	N OF BLIND PASS BRIDGE	319	6000	6500	6500	4600	4700						36	7
CEMETERY RD	E OF BUCKINGHAM RD	486	5200	5400	4700	4700	5400				5700		11	5
CHALLENGER BLVD	S OF COLONIAL BV	628	1700	1800	1500	1600							18	3
CHAMBERLIN PKWY	S OF DANIELS PKWY	33	2100	1800	1500	1400	1400			1200	1200	1200		
CHIQUITA BLVD	N OF SW 27TH ST	58	19600	22200	16500	16700	16600	16500	22200	17100	17700	16800		
COCONUT RD	W OF US 41	495	6000	9300				7800		7600		9200	15	6
COCONUT RD	E OF US 41	490	15100	15500	12600	9900	10700	9900		12200		12200	15	6
COLUMBUS BLVD	N OF IMMOKALEE RD	473	2400	2200	1900	1500	1800						6	5
CONSTITUTION BLVD	E OF US 41	464	6900	5700	5900	5500	4700						25	4
COLLEGE PKWY	E OF McGREGOR BLVD	236	38000	36200	32500	31100	32900						43	3
COLLEGE PKWY	W OF SOUTH POINTE BLVD	83										38000		
COLLEGE PKWY	E OF WINKLER RD	43	40500	37900	31400	32700	31600	30400	30400	31700	32300	36100		3
COLLEGE PKWY	W OF SUMMERLIN RD	238	50000	47500	42600								43	3
COLLEGE PKWY	W OF NEW BRITTANY	87										33500		
COLLEGE PKWY	E OF KENWOOD LN	237	36500	33200	25500	29700	28700				26900		43	3
COLONIAL BLVD	E OF McGREGOR BLVD	243	61400	58800	57400	49300	49600						14	3
COLONIAL BLVD	E OF SUMMERLIN RD	14	60400	57600	53800	51600	51600	51500	51500	52500	53100	54600		3

US 41 (SR 45)	N OF COLLIER CO LINE	23		36400	35100	34400	33900	32000	32700	33000	33900	34800		6
US 41 (SR 45)	N OF BONITA BEACH RD	437	42400	47400	49000	40400	40800						23	6
US 41 (SR 45)	N OF BONITA BEACH RD	92										42600		
US 41 (SR 45)	N OF WEST TERRY ST	433		42400	36500	35900	34200						23	6
US 41 (SR 45)	N OF OLD 41 RD	436	53300	53500	50100	46100	42000						25	6
US 41 (SR 45)	S OF COCONUT RD	93										46100		
US 41 (SR 45)	S OF HICKORY DR	25	43300	41300	41200	40200	38600	42000		36600	37700	42500		
US 41 (SR 45)	N OF SANIBEL BLVD	424	45300	41700	37000	37200	33400						25	4
US 41 (SR 45)	N OF CONSTITUTION BLVD	94										33100		
US 41 (SR 45)	N OF ALICO RD	420	57900	55700	57800	54600	53400						25	4
US 41 (SR 45)	N OF ISLAND PARK RD	434	56200	57200	58200	51000	44000						25	4
US 41 (SR 45)	N OF JAMAICA BAY WEST	435	65300	63400	58800	54700	51200						25	4
US 41 (SR 45)	N OF SIX MILE CYPRESS PKWY	418	52400	49400	43100	38100	42200						9	4
US 41 (SR 45)	N OF ANDREA LN	95										40000		
US 41 (SR 45)	N OF CYPRESS LAKE DR	426	61200	56000	53200	54600	49400						9	3
US 41 (SR 45)	N OF BRANTLEY RD	9	61000	58000	50400	53300	53800	52400	50700	49100	50500	52300		3
US 41 (SR 45)	N OF SOUTH RD	422	60800	52500	52100	49800	49900						9	3
US 41 (SR 45)	N OF BOY SCOUT DR	430	45700	42700	38400	36200	32400						9	3
US 41 (SR 45)	N OF BOY SCOUT DR	96										41100		
US 41 (SR 45)	N OF N AIRPORT RD	427	50500	49600	43500	38100							9	3
US 41 (SR 45)	N OF COLONIAL BLVD	432	52000	51600	46800	35500	38800						9	3
US 41 (SR 45)	N OF WINKLER AVE	429	50600	53000	52100	42000							9	3
US 41 (SR 45)	N OF WINKLER AVE	97										42500		
US 41 (SR 45)	N OF HANSON ST	428	46600	46400	43200	40400							9	3
US 41 (SR 45)	S OF VICTORIA AVE	98										35600		
US 41 (SR 45)	N OF NORTH KEY DR	1	51900		42600	41800	41200	39700	36700	36400	41300	42400		2
US 41 (SR 45)	N OF HANCOCK BR. PWY	421	39500	32700	29900	32700							1	2
US 41 (SR 45)	N OF PONDELLA RD	431	32100	26300	24900	26800							1	2
US 41 (SR 45)	S OF PINE ISLAND RD	99										25700		
US 41 (SR 45)	N OF PINE ISLAND RD	419	30800	25100	26100	21600							1	2
US 41 (SR 45)	N OF LITTLETON RD	425	23000	18300	17700	15700							1	2
US 41 (SR 45)	N OF LITTLETON RD	100										18100		
US 41 (SR 45)	S OF TARA WOODS BLVD	103										21000		
US 41 (SR 45)	S OF CHARLOTTE CO.	449	18400	15500	20700	13900							1	2
VANDERBILT RD	S OF BONITA BEACH RD	491	7800	6100	5700	5100							23	6
VETERANS PKWY	S OF PINE ISLAND RD	527	13600	14100	12900	13300	12000	12600	12400	12800	14100	15400	50	1

PCS 15 - Corkscrew Rd west of I-75

2015 AADT = 30,900 VPD

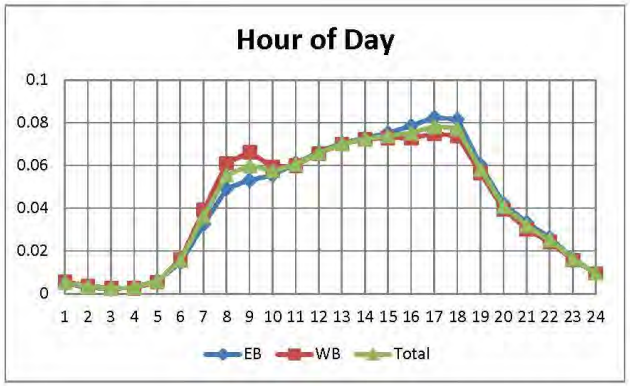
Hour	EB	WB	Total
0	0.49%	0.57%	0.53%
1	0.28%	0.36%	0.32%
2	0.22%	0.27%	0.25%
3	0.30%	0.27%	0.29%
4	0.60%	0.54%	0.58%
5	1.45%	1.61%	1.55%
6	3.23%	3.92%	3.61%
7	4.91%	6.11%	5.54%
8	5.31%	6.63%	6.00%
9	5.55%	5.93%	5.75%
10	6.12%	6.00%	6.05%
11	6.64%	6.57%	6.59%
12	7.06%	7.01%	7.02%
13	7.28%	7.23%	7.24%
14	7.52%	7.30%	7.39%
15	7.86%	7.28%	7.53%
16	8.25%	7.48%	7.84%
17	8.16%	7.39%	7.74%
18	6.01%	5.64%	5.82%
19	4.20%	3.94%	4.08%
20	3.33%	3.01%	3.19%
21	2.63%	2.42%	2.52%
22	1.66%	1.58%	1.62%
23	0.94%	0.94%	0.94%

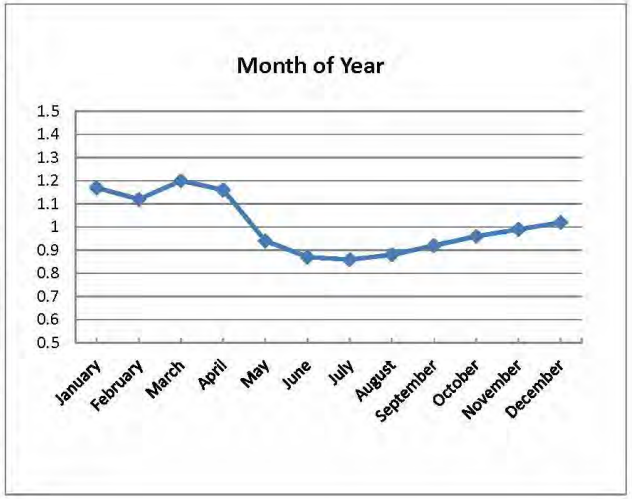
Month of Year	Fraction
January	1.17
February	1.12
March	1.2
April	1.16
May	0.94
June	0.87
July	0.86
August	0.88
September	0.92
October	0.96
November	0.99
December	1.02

Day of Week	Fraction
Sunday	0.75
Monday	1.01
Tuesday	1.05
Wednesday	1.07
Thursday	1.07
Friday	1.11
Saturday	0.93

Directional Factor		
AM	0.55	WB
PM	0.52	EB

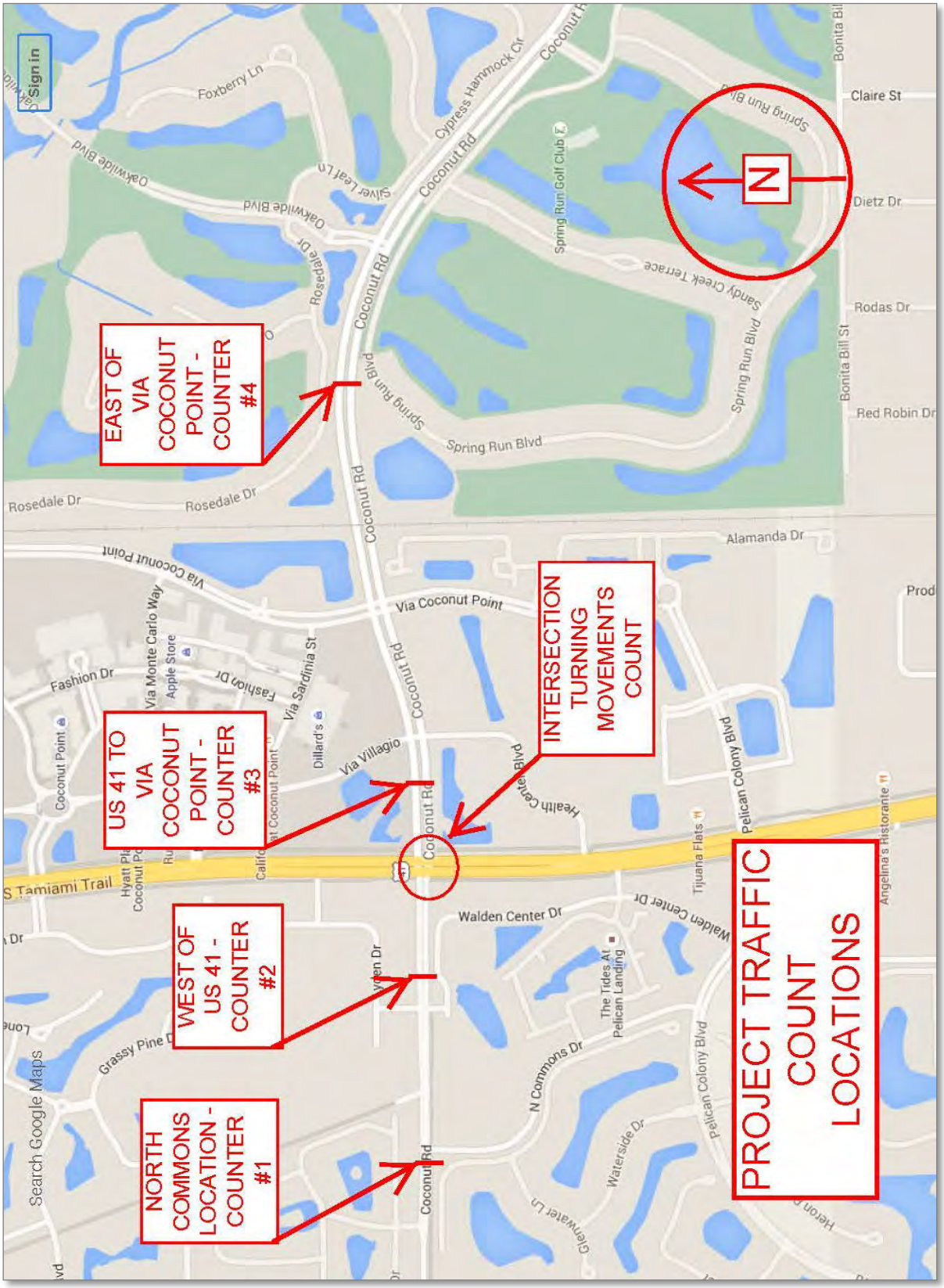
Design Hour Volume		
#	Volume	Factor
5	3514	0.114
10	3428	0.111
20	3325	0.108
30	3283	0.106
50	3222	0.104
100	3094	0.100
150	3023	0.098
200	2956	0.096





Appendix F: TCS Corridor Volume Counts

(11 Sheets)


EAST OF VIA COCONUT POINT - COUNTER #4
US 41 TO VIA COCONUT POINT - COUNTER #3
WEST OF US 41 - COUNTER #2
NORTH COMMONS LOCATION - COUNTER #1
INTERSECTION TURNING MOVEMENTS COUNT
PROJECT TRAFFIC COUNT LOCATIONS
N
Coconut Rd
Via Coconut Point
Spring Run Blvd
Rosedale Dr
Alamanda Dr
Walden Center Dr
Health Center Blvd
Pelican Colony Blvd
S Tamiami Trail
Claire St
Dietz Dr
Rodas Dr
Red Robin Dr
Bonita Bill St
Fashion Dr
Via Monte Carlo Way
Via Villagio
Via Sardinia St
Grassy Pine Dr
N Commons Dr
Waterside Dr
Glenwater Ln
Sandy Creek Terrace
Spring Run Golf Club
Cypress Hammock Cir
Foxberry Ln
Oakville Blvd
Silver Leaf Ln
Rosedale Dr
Search Google Maps
Sign in

Coconut Road Volume Study
North Commons Drive
#29504

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: 029504
Station ID:
North Commons Drive
#29504
Latitude: 0° 0.0000 Undefined

Start	08-Feb-16	Westbound		Eastbound		Combined		09-Feb	Westbound		Eastbound		Combined	
Time	Mon	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	*	*	*	*	*		4	101	11	88	15	189
12:15		*	*	*	*	*	*		7	83	2	88	9	171
12:30		*	*	*	*	*	*		1	96	4	87	5	183
12:45		*	*	*	*	*	*		3	105	3	91	6	196
01:00		*	*	*	*	*	*		2	86	1	121	3	207
01:15		*	*	*	*	*	*		3	102	6	109	9	211
01:30		*	*	*	*	*	*		2	107	2	120	4	227
01:45		*	*	*	*	*	*		2	101	1	102	3	203
02:00		*	*	*	*	*	*		1	105	2	100	3	205
02:15		*	*	*	*	*	*		3	105	0	81	3	186
02:30		*	*	*	*	*	*		2	99	3	98	5	197
02:45		*	*	*	*	*	*		3	111	2	108	5	219
03:00		*	*	*	*	*	*		2	114	0	105	2	219
03:15		*	*	*	*	*	*		1	102	1	104	2	206
03:30		*	*	*	*	*	*		3	102	3	97	6	199
03:45		*	*	*	*	*	*		3	123	2	98	5	221
04:00		*	*	*	*	*	*		2	105	5	119	7	224
04:15		*	*	*	*	*	*		6	112	5	93	11	205
04:30		*	*	*	*	*	*		8	95	8	106	16	201
04:45		*	*	*	*	*	*		13	108	7	90	20	198
05:00		*	*	*	*	*	*		10	108	11	89	21	197
05:15		*	*	*	*	*	*		13	99	10	88	23	187
05:30		*	*	*	*	*	*		18	97	15	84	33	181
05:45		*	*	*	*	*	*		46	107	17	96	63	203
06:00		*	*	*	*	*	*		32	129	23	84	55	213
06:15		*	118	*	69	*	187		39	73	29	62	68	135
06:30		*	115	*	74	*	189		54	82	51	63	105	145
06:45		*	69	*	51	*	120		68	82	47	46	115	128
07:00		*	65	*	37	*	102		53	74	63	49	116	123
07:15		*	62	*	40	*	102		42	58	69	46	111	104
07:30		*	55	*	33	*	88		70	61	101	45	171	106
07:45		*	44	*	40	*	84		86	69	81	42	167	111
08:00		*	50	*	41	*	91		74	52	74	34	148	86
08:15		*	55	*	28	*	83		90	56	78	28	168	84
08:30		*	55	*	27	*	82		74	47	82	35	156	82
08:45		*	47	*	22	*	69		78	49	82	18	160	67
09:00		*	52	*	17	*	69		49	48	91	13	140	61
09:15		*	31	*	87	*	118		65	41	74	18	139	59
09:30		*	30	*	29	*	59		62	47	88	22	150	69
09:45		*	28	*	27	*	55		61	27	101	38	162	65
10:00		*	21	*	24	*	45		52	30	104	33	156	63
10:15		*	22	*	14	*	36		53	22	100	24	153	46
10:30		*	21	*	12	*	33		68	23	86	9	154	32
10:45		*	19	*	15	*	34		96	22	100	18	196	40
11:00		*	12	*	19	*	31		93	7	98	21	191	28
11:15		*	8	*	7	*	15		96	7	107	10	203	17
11:30		*	11	*	15	*	26		90	8	90	8	180	16
11:45		*	4	*	3	*	7		106	8	72	5	178	13
Total		0	994	0	731	0	1725		1809	3595	2012	3133	3821	6728
Day Total		994		731		1725			5404		5145		10549	
% Total		0.0%	57.6%	0.0%	42.4%				17.1%	34.1%	19.1%	29.7%		
Peak	-	-	06:15	-	06:15	-	06:15	-	11:00	03:30	10:45	01:00	10:45	03:45
Vol.	-	-	367	-	231	-	598	-	385	442	395	452	770	851
P.H.F.			0.778		0.780		0.791		0.908	0.898	0.923	0.934	0.948	0.950

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Coconut Road Volume Study
North Commons Drive
#29504

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Station ID:
Site Code: 029504
Station ID:
North Commons Drive
#29504
Latitude: 0° 0.0000 Undefined

Start	10-Feb-16	Westbound		Eastbound		Combined		11-Feb	Westbound		Eastbound		Combined	
Time	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		5	87	10	96	15	183		7	111	7	93	14	204
12:15		9	80	3	98	12	178		5	110	5	104	10	214
12:30		4	111	5	89	9	200		3	102	6	104	9	206
12:45		3	112	1	101	4	213		5	100	4	83	9	183
01:00		2	92	3	81	5	173		5	107	2	97	7	204
01:15		4	102	3	86	7	188		4	98	10	99	14	197
01:30		3	87	2	104	5	191		1	105	1	92	2	197
01:45		4	102	2	107	6	209		2	108	0	97	2	205
02:00		1	114	6	103	7	217		0	93	4	109	4	202
02:15		2	97	3	88	5	185		2	101	2	103	4	204
02:30		1	124	5	110	6	234		3	117	0	105	3	222
02:45		2	103	3	109	5	212		0	106	5	109	5	215
03:00		2	88	1	118	3	206		1	100	1	111	2	211
03:15		1	105	3	110	4	215		3	***106***	2	88	5	194
03:30		0	111	5	89	5	200		2	***115***	2	102	4	***217***
03:45		3	***115***	1	94	4	209		2	***117***	1	98	3	***215***
04:00		2	***108***	2	102	4	210		0	***103***	0	***127***	0	***230***
04:15		4	***133***	3	***107***	7	***240***		7	97	3	***116***	10	***213***
04:30		5	***116***	4	***129***	9	***245***		6	82	4	***103***	12	185
04:45		11	110	2	***112***	13	***222***		13	92	3	***125***	16	217
05:00		13	109	8	***117***	21	***226***		12	112	11	90	23	202
05:15		18	96	10	99	28	195		21	82	11	98	32	180
05:30		20	88	20	111	40	199		14	84	16	116	30	200
05:45		47	105	15	82	62	187		46	96	15	82	61	178
06:00		24	110	16	75	40	185		26	81	27	95	53	176
06:15		43	83	27	73	70	156		35	99	29	74	64	173
06:30		60	71	53	78	113	149		50	95	46	81	96	176
06:45		69	88	72	51	141	139		90	111	59	82	149	193
07:00		51	81	63	48	114	129		58	87	71	71	129	158
07:15		50	76	83	46	133	122		62	66	88	48	150	114
07:30		61	57	83	30	144	87		73	72	82	43	155	115
07:45		90	51	102	34	192	85		89	63	80	34	169	97
08:00		75	44	87	22	162	66		67	58	70	29	137	87
08:15		64	55	87	25	151	80		66	64	72	24	138	88
08:30		72	66	89	34	161	100		74	73	80	27	154	100
08:45		61	62	89	20	150	82		75	57	101	20	176	77
09:00		64	54	80	27	144	81		66	67	88	24	154	91
09:15		77	61	82	24	159	85		65	52	98	35	163	87
09:30		71	38	90	27	161	65		59	57	96	34	155	91
09:45		82	46	99	19	181	65		77	45	81	35	158	80
10:00		79	29	***118***	27	***197***	56		69	40	90	30	159	70
10:15		73	22	***126***	31	***199***	53		73	36	97	17	170	53
10:30		87	19	***91***	20	***178***	39		88	26	***103***	26	191	52
10:45		91	23	***100***	10	***191***	33		90	20	***104***	10	194	30
11:00		***78***	20	95	30	173	50		***89***	14	***138***	17	***227***	31
11:15		***83***	13	103	7	186	20		***115***	6	***113***	9	***228***	15
11:30		***90***	10	100	13	190	23		***104***	19	102	15	***206***	34
11:45		***102***	11	110	11	212	22		***110***	8	98	11	***208***	19
Total		1863	3685	2165	3224	4028	6909		1936	3760	2128	3342	4064	7102
Day Total		5548		5389		10937			5696		5470		11166	
% Total		17.0%	33.7%	19.8%	29.5%				17.3%	33.7%	19.1%	29.9%		
Peak	-	11:00	03:45	10:00	04:15	10:00	04:15	-	11:00	03:15	10:30	04:00	11:00	03:30
Vol.	-	353	472	435	465	765	933	-	418	441	458	471	869	875
P.H.F.		0.865	0.887	0.863	0.901	0.961	0.952		0.909	0.942	0.830	0.927	0.953	0.951

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Coconut Road Volume Study
West of US 41
#28817

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email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #28817
Station ID:
West of US 41
#28817
Latitude: 0' 0.0000 Undefined

Start Time	01-Feb-16 Mon	Westbound A.M.	Westbound P.M.	Channel 2 A.M.	Channel 2 P.M.	Combined A.M.	Combined P.M.	02-Feb Tue	Westbound A.M.	Westbound P.M.	Channel 2 A.M.	Channel 2 P.M.	Combined A.M.	Combined P.M.
12:00		*	75	*	0	*	75		8	84	0	0	8	84
12:15		*	72	*	0	*	72		3	83	0	0	3	83
12:30		*	100	*	0	*	100		3	101	0	0	3	101
12:45		*	83	*	0	*	83		2	79	0	0	2	79
01:00		*	77	*	0	*	77		3	83	0	0	3	83
01:15		*	98	*	0	*	98		1	88	0	0	1	88
01:30		*	132	*	0	*	132		1	109	0	0	1	109
01:45		*	96	*	0	*	96		0	105	0	0	0	105
02:00		*	84	*	0	*	84		3	77	0	0	3	77
02:15		*	97	*	0	*	97		1	91	0	0	1	91
02:30		*	94	*	0	*	94		0	102	0	0	0	102
02:45		*	84	*	0	*	84		2	101	0	0	2	101
03:00		*	79	*	0	*	79		4	100	0	0	4	100
03:15		*	92	*	0	*	92		3	108	0	0	3	108
03:30		*	101	*	0	*	101		7	87	0	0	7	87
03:45		*	90	*	0	*	90		7	106	0	0	7	106
04:00		*	84	*	0	*	84		4	102	0	0	4	102
04:15		*	84	*	0	*	84		7	84	0	0	7	84
04:30		*	92	*	0	*	92		14	96	0	0	14	96
04:45		*	87	*	0	*	87		12	82	0	0	12	82
05:00		*	82	*	0	*	82		15	93	0	0	15	93
05:15		*	82	*	0	*	82		19	76	0	0	19	76
05:30		*	86	*	0	*	86		29	101	0	0	29	101
05:45		*	53	*	0	*	53		30	97	0	0	30	97
06:00		*	69	*	0	*	69		36	73	0	0	36	73
06:15		*	69	*	0	*	69		47	94	0	0	47	94
06:30		*	64	*	0	*	64		65	69	0	0	65	69
06:45		*	47	*	0	*	47		53	54	0	0	53	54
07:00		*	61	*	0	*	61		58	47	0	0	58	47
07:15		*	52	*	0	*	52		78	56	0	0	78	56
07:30		*	48	*	0	*	48		78	61	0	0	78	61
07:45		*	45	*	0	*	45		77	42	0	0	77	42
08:00		*	37	*	0	*	37		103	41	0	0	103	41
08:15		*	39	*	0	*	39		78	51	0	0	78	51
08:30		*	46	*	0	*	46		98	37	0	0	98	37
08:45		*	39	*	0	*	39		62	49	0	0	62	49
09:00		*	35	*	0	*	35		76	37	0	0	76	37
09:15		*	25	*	0	*	25		70	36	0	0	70	36
09:30		*	28	*	0	*	28		82	31	0	0	82	31
09:45		*	29	*	0	*	29		54	21	0	0	54	21
10:00		*	22	*	0	*	22		89	25	0	0	89	25
10:15		*	21	*	0	*	21		68	19	0	0	68	19
10:30		*	21	*	0	*	21		84	10	0	0	84	10
10:45		*	12	*	0	*	12		71	7	0	0	71	7
11:00		83	7	0	0	83	7		81	11	0	0	81	11
11:15		82	4	0	0	82	4		83	5	0	0	83	5
11:30		113	7	0	0	113	7		94	8	0	0	94	8
11:45		86	2	0	0	86	2		90	11	0	0	90	11
Total		364	2933	0	0	364	2933		1953	3130	0	0	1953	3130
Day Total		3297		0		3297			5083		0		5083	
% Total		11.0%	89.0%	0.0%	0.0%				38.4%	61.6%	0.0%	0.0%		
Peak	-	11:00	01:15	-	-	11:00	01:15	-	07:45	02:30	-	-	07:45	02:30
Vol.	-	364	410	-	-	364	410	-	356	411	-	-	356	411
P.H.F.		0.805	0.777			0.805	0.777		0.864	0.951			0.864	0.951

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Coconut Road Volume Study
West of US 41
#28817

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email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #28817
Station ID:
West of US 41
#28817
Latitude: 0° 0.0000 Undefined

Start	03-Feb-16	Westbound		Channel 2		Combined		04-Feb	Westbound		Channel 2		Combined	
Time	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		5	94	0	0	5	94		6	100	0	0	6	100
12:15		2	114	0	0	2	114		9	102	0	0	9	102
12:30		4	102	0	0	4	102		6	93	0	0	6	93
12:45		5	101	0	0	5	101		8	99	0	0	8	99
01:00		2	101	0	0	2	101		1	114	0	0	1	114
01:15		1	120	0	0	1	120		1	106	0	0	1	106
01:30		2	124	0	0	2	124		1	130	0	0	1	130
01:45		1	108	0	0	1	108		2	77	0	0	2	77
02:00		0	95	0	0	0	95		1	104	0	0	1	104
02:15		3	82	0	0	3	82		2	97	0	0	2	97
02:30		1	93	0	0	1	93		1	89	0	0	1	89
02:45		0	88	0	0	0	88		3	94	0	0	3	94
03:00		1	95	0	0	1	95		1	106	0	0	1	106
03:15		0	98	0	0	0	98		3	82	0	0	3	82
03:30		1	92	0	0	1	92		3	105	0	0	3	105
03:45		5	78	0	0	5	78		1	98	0	0	1	98
04:00		3	94	0	0	3	94		7	109	0	0	7	109
04:15		10	108	0	0	10	108		5	80	0	0	5	80
04:30		17	103	0	0	17	103		7	107	0	0	7	107
04:45		16	81	0	0	16	81		14	84	0	0	14	84
05:00		15	85	0	0	15	85		14	84	0	0	14	84
05:15		18	109	0	0	18	109		25	96	0	0	25	96
05:30		34	78	0	0	34	78		35	88	0	0	35	88
05:45		29	89	0	0	29	89		29	99	0	0	29	99
06:00		22	86	0	0	22	86		29	88	0	0	29	88
06:15		59	73	0	0	59	73		53	93	0	0	53	93
06:30		62	79	0	0	62	79		74	92	0	0	74	92
06:45		56	46	0	0	56	46		52	68	0	0	52	68
07:00		55	58	0	0	55	58		58	52	0	0	58	52
07:15		81	58	0	0	81	58		74	57	0	0	74	57
07:30		100	59	0	0	100	59		98	72	0	0	98	72
07:45		92	61	0	0	92	61		100	43	0	0	100	43
08:00		88	52	0	0	88	52		91	41	0	0	91	41
08:15		78	57	0	0	78	57		78	53	0	0	78	53
08:30		81	44	0	0	81	44		81	43	0	0	81	43
08:45		67	41	0	0	67	41		78	54	0	0	78	54
09:00		68	37	0	0	68	37		72	56	0	0	72	56
09:15		80	36	0	0	80	36		69	38	0	0	69	38
09:30		70	30	0	0	70	30		96	36	0	0	96	36
09:45		64	32	0	0	64	32		68	34	0	0	68	34
10:00		80	26	0	0	80	26		79	26	0	0	79	26
10:15		74	22	0	0	74	22		96	23	0	0	96	23
10:30		79	11	0	0	79	11		110	16	0	0	110	16
10:45		80	17	0	0	80	17		85	13	0	0	85	13
11:00		81	5	0	0	81	5		81	10	0	0	81	10
11:15		111	7	0	0	111	7		107	11	0	0	107	11
11:30		95	7	0	0	95	7		98	10	0	0	98	10
11:45		88	7	0	0	88	7		83	6	0	0	83	6
Total		1986	3283	0	0	1986	3283		2095	3378	0	0	2095	3378
Day Total		5269		0		5269			5473		0		5473	
% Total		37.7%	62.3%	0.0%	0.0%				38.3%	61.7%	0.0%	0.0%		
Peak	-	11:00	01:00	-	-	11:00	01:00	-	10:30	00:45	-	-	10:30	00:45
Vol.	-	375	453	-	-	375	453	-	383	449	-	-	383	449
P.H.F.		0.845	0.913			0.845	0.913		0.870	0.863			0.870	0.863

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Coconut Road Volume Study
West of US 41
#29504

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29504
Station ID:
West of US 41
#29504
Latitude: 0' 0.0000 Undefined

Start	01-Feb-16	Eastbound		Channel 2		Combined		02-Feb	Eastbound		Channel 2		Combined	
Time	Mon	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	147	*	0	*	147		5	139	0	0	5	139
12:15		*	109	*	0	*	109		5	121	0	0	5	121
12:30		*	110	*	0	*	110		5	129	0	0	5	129
12:45		*	104	*	0	*	104		4	107	0	0	4	107
01:00		*	106	*	0	*	106		3	165	0	0	3	165
01:15		*	106	*	0	*	106		5	124	0	0	5	124
01:30		*	114	*	0	*	114		1	106	0	0	1	106
01:45		*	111	*	0	*	111		1	109	0	0	1	109
02:00		*	117	*	0	*	117		1	128	0	0	1	128
02:15		*	114	*	0	*	114		0	117	0	0	0	117
02:30		*	122	*	0	*	122		1	136	0	0	1	136
02:45		*	140	*	0	*	140		0	127	0	0	0	127
03:00		*	138	*	0	*	138		2	135	0	0	2	135
03:15		*	87	*	0	*	87		4	134	0	0	4	134
03:30		*	130	*	0	*	130		4	128	0	0	4	128
03:45		*	149	*	0	*	149		2	133	0	0	2	133
04:00		*	137	*	0	*	137		4	162	0	0	4	162
04:15		*	***132***	*	0	*	***132***		5	132	0	0	5	132
04:30		*	***142***	*	0	*	***142***		5	***140***	0	0	5	***140***
04:45		*	***129***	*	0	*	***129***		9	***132***	0	0	9	***132***
05:00		*	***161***	*	0	*	***161***		14	***174***	0	0	14	***174***
05:15		*	111	*	0	*	111		10	***133***	0	0	10	***133***
05:30		*	124	*	0	*	124		23	129	0	0	23	129
05:45		*	118	*	0	*	118		20	138	0	0	20	138
06:00		*	102	*	0	*	102		26	105	0	0	26	105
06:15		*	77	*	0	*	77		32	89	0	0	32	89
06:30		*	76	*	0	*	76		47	82	0	0	47	82
06:45		*	92	*	0	*	92		60	100	0	0	60	100
07:00		*	54	*	0	*	54		68	57	0	0	68	57
07:15		*	43	*	0	*	43		71	49	0	0	71	49
07:30		*	42	*	0	*	42		86	40	0	0	86	40
07:45		*	40	*	0	*	40		90	27	0	0	90	27
08:00		*	34	*	0	*	34		130	37	0	0	130	37
08:15		*	27	*	0	*	27		100	32	***0***	0	100	32
08:30		*	24	*	0	*	24		114	41	***0***	0	114	41
08:45		*	16	*	0	*	16		108	43	***0***	0	108	43
09:00		*	19	*	0	*	19		87	22	***2***	0	89	22
09:15		*	15	*	0	*	15		104	43	0	0	104	43
09:30		*	18	*	0	*	18		101	25	0	0	101	25
09:45		*	15	*	0	*	15		95	19	0	0	95	19
10:00		*	17	*	0	*	17		***113***	34	0	0	***113***	34
10:15		*	19	*	0	*	19		***122***	15	0	0	***122***	15
10:30		*	15	*	0	*	15		***126***	18	0	0	***126***	18
10:45		*	14	*	0	*	14		***131***	7	0	0	***131***	7
11:00		***135***	17	***1***	0	***136***	17		101	15	0	0	101	15
11:15		***125***	5	***0***	0	***125***	5		124	16	0	0	124	16
11:30		***119***	11	***0***	0	***119***	11		116	10	0	0	116	10
11:45		***119***	3	***0***	0	***119***	3		120	2	0	0	120	2
Total		498	3753	1	0	499	3753		2405	4106	2	0	2407	4106
Day Total		4251		1		4252			6511		2		6513	
% Total		11.7%	88.3%	0.0%	0.0%				36.9%	63.0%	0.0%	0.0%		
Peak	-	11:00	04:15	11:00	-	11:00	04:15	-	10:00	04:30	08:15	-	10:00	04:30
Vol.	-	498	564	1	-	499	564	-	492	579	2	-	492	579
P.H.F.		0.922	0.876	0.250		0.917	0.876		0.939	0.832	0.250		0.939	0.832

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Coconut Road Volume Study
West of US 41
#29504

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29504
Station ID:
West of US 41
#29504
Latitude: 0' 0.0000 Undefined

Start	03-Feb-16	Eastbound		Channel 2		Combined		04-Feb	Eastbound		Channel 2		Combined	
Time	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		7	116	0	0	7	116		4	146	0	0	4	146
12:15		4	112	0	0	4	112		4	145	0	0	4	145
12:30		8	130	0	0	8	130		10	124	0	0	10	124
12:45		4	128	0	0	4	128		2	118	0	0	2	118
01:00		4	114	0	0	4	114		3	113	0	0	3	113
01:15		9	99	0	0	9	99		1	115	0	0	1	115
01:30		2	123	0	0	2	123		3	146	0	0	3	146
01:45		2	125	0	0	2	125		4	89	0	0	4	89
02:00		0	123	0	0	0	123		9	119	0	0	9	119
02:15		1	128	0	0	1	128		4	126	0	0	4	126
02:30		4	136	0	0	4	136		1	139	0	0	1	139
02:45		1	123	0	0	1	123		1	118	0	0	1	118
03:00		0	143	0	0	0	143		1	159	0	0	1	159
03:15		1	103	0	0	1	103		0	145	0	0	0	145
03:30		5	162	0	0	5	162		3	134	0	0	3	134
03:45		1	126	0	0	1	126		4	121	0	0	4	121
04:00		2	165	0	0	2	165		3	149	0	0	3	149
04:15		4	***142***	0	0	4	***142***		5	128	0	0	5	128
04:30		5	***165***	0	0	5	***165***		6	***148***	0	0	6	***148***
04:45		2	***154***	0	0	2	***154***		5	***160***	0	0	5	***160***
05:00		11	***192***	0	0	11	***192***		11	***151***	0	0	11	***151***
05:15		9	135	0	0	9	135		11	***142***	0	0	11	***142***
05:30		17	137	0	0	17	137		24	141	0	0	24	141
05:45		20	124	0	0	20	124		14	139	0	0	14	139
06:00		24	118	0	0	24	118		31	127	0	0	31	127
06:15		37	112	0	0	37	112		33	92	0	0	33	92
06:30		49	89	0	0	49	89		42	98	0	0	42	98
06:45		59	71	0	0	59	71		57	93	0	0	57	93
07:00		76	66	0	0	76	66		61	70	0	0	61	70
07:15		87	47	0	0	87	47		76	52	0	0	76	52
07:30		102	42	0	0	102	42		108	55	0	0	108	55
07:45		102	23	0	0	102	23		101	51	0	0	101	51
08:00		110	39	0	0	110	39		99	36	0	0	99	36
08:15		119	33	0	0	119	33		113	41	0	0	113	41
08:30		121	36	0	0	121	36		108	40	0	0	108	40
08:45		109	32	0	0	109	32		116	45	0	0	116	45
09:00		98	28	0	0	98	28		102	54	0	0	102	54
09:15		90	66	0	0	90	66		130	22	0	0	130	22
09:30		***118***	35	0	0	***118***	35		125	40	0	0	125	40
09:45		***141***	23	0	0	***141***	23		135	29	0	0	135	29
10:00		***113***	18	0	0	***113***	18		***132***	21	0	0	***132***	21
10:15		***113***	14	0	0	***113***	14		***138***	34	0	0	***138***	34
10:30		104	21	0	0	104	21		***118***	14	0	0	***118***	14
10:45		114	10	0	0	114	10		***146***	23	0	0	***146***	23
11:00		114	13	0	0	114	13		104	22	0	0	104	22
11:15		126	12	0	0	126	12		120	6	0	0	120	6
11:30		108	9	0	0	108	9		148	12	0	0	148	12
11:45		133	6	0	0	133	6		132	13	0	0	132	13
Total		2490	4168	0	0	2490	4168		2608	4305	0	0	2608	4305
Day Total		6658		0		6658			6913		0		6913	
% Total		37.4%	62.6%	0.0%	0.0%				37.7%	62.3%	0.0%	0.0%		
Peak	-	09:30	04:15	-	-	09:30	04:15	-	10:00	04:30	-	-	10:00	04:30
Vol.	-	485	653	-	-	485	653	-	534	601	-	-	534	601
P.H.F.		0.860	0.850			0.860	0.850		0.914	0.939			0.914	0.939

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Coconut Road Volume Study
41 to Via Vilagio
#29856

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29856
Station ID:
41 to Via Vilagio
#29856
Latitude: 0' 0.0000 Undefined

Start	01-Feb-16	Westbound		Eastbound		Combined		02-Feb	Westbound		Eastbound		Combined	
Time	Mon	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	186	*	182	*	368		0	183	3	122	3	305
12:15		*	178	*	149	*	327		3	202	1	145	4	347
12:30		*	168	*	161	*	329		0	169	1	99	1	268
12:45		*	172	*	168	*	340		1	200	2	117	3	317
01:00		*	161	*	140	*	301		2	181	3	114	5	295
01:15		*	183	*	156	*	339		0	205	0	116	0	321
01:30		*	188	*	148	*	336		2	174	1	119	3	293
01:45		*	212	*	167	*	379		1	193	0	127	1	320
02:00		*	168	*	178	*	346		4	202	1	126	5	328
02:15		*	164	*	155	*	319		1	156	0	138	1	294
02:30		*	182	*	202	*	384		0	189	2	113	2	302
02:45		*	186	*	149	*	335		2	196	0	130	2	326
03:00		*	190	*	170	*	360		0	197	0	96	0	293
03:15		*	198	*	152	*	350		0	181	1	139	1	320
03:30		*	186	*	185	*	371		0	186	1	126	1	312
03:45		*	169	*	185	*	354		0	188	1	142	1	330
04:00		*	163	*	190	*	353		5	184	2	135	7	319
04:15		*	170	*	167	*	337		2	190	6	146	8	336
04:30		*	165	*	197	*	362		4	158	9	141	13	299
04:45		*	178	*	179	*	357		6	191	8	123	14	314
05:00		*	189	*	185	*	374		6	190	10	133	16	323
05:15		*	180	*	177	*	357		7	166	6	133	13	299
05:30		*	153	*	178	*	331		5	148	19	111	24	259
05:45		*	147	*	162	*	309		19	148	19	131	38	279
06:00		*	158	*	143	*	301		18	157	17	107	35	264
06:15		*	122	*	121	*	243		34	139	29	85	63	224
06:30		*	136	*	114	*	250		60	133	41	91	101	224
06:45		*	115	*	104	*	219		73	99	86	88	159	187
07:00		*	86	*	87	*	173		81	84	52	53	133	137
07:15		*	84	*	86	*	170		114	67	70	57	184	124
07:30		*	66	*	75	*	141		143	67	75	38	218	105
07:45		*	61	*	74	*	135		165	66	85	27	250	93
08:00		*	52	*	68	*	120		159	54	107	55	266	109
08:15		*	39	*	57	*	96		164	53	95	43	259	96
08:30		*	36	*	54	*	90		141	46	120	38	261	84
08:45		*	43	*	46	*	89		153	74	124	43	277	117
09:00		*	51	*	44	*	95		119	59	92	27	211	86
09:15		*	52	*	45	*	97		138	50	91	35	229	85
09:30		*	32	*	29	*	61		156	50	94	25	250	75
09:45		*	34	*	27	*	61		154	37	77	26	231	63
10:00		*	27	*	20	*	47		146	22	92	22	238	44
10:15		*	22	*	28	*	50		169	23	95	25	264	48
10:30		*	21	*	15	*	36		164	16	98	12	262	28
10:45		*	15	*	8	*	23		149	16	100	4	249	20
11:00		*	12	*	10	*	22		159	14	101	6	260	20
11:15		*	5	*	4	*	9		156	10	105	4	261	14
11:30		112	7	75	5	187	12		184	4	119	5	303	9
11:45		196	3	190	9	386	12		190	6	128	3	318	9
Total		308	5515	265	5355	573	10870		3259	5723	2189	3941	5448	9664
Day Total		5823		5620		11443			8982		6130		15112	
% Total		2.7%	48.2%	2.3%	46.8%				21.6%	37.9%	14.5%	26.1%		
Peak	-	-	02:45	-	03:45	-	04:30	-	11:00	01:15	11:00	03:45	11:00	03:30
Vol.	-	-	760	-	739	-	1450	-	689	774	453	564	1142	1297
P.H.F.			0.960		0.938		0.969		0.907	0.944	0.885	0.966	0.898	0.965

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Coconut Road Volume Study
41 to Via Vilagio
#29856

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29856
Station ID:
41 to Via Vilagio
#29856
Latitude: 0' 0.0000 Undefined

Start	03-Feb-16	Westbound		Eastbound		Combined		04-Feb	Westbound		Eastbound		Combined	
Time	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		3	191	2	122	5	313		6	196	4	188	10	384
12:15		6	226	5	98	11	324		2	206	2	186	4	392
12:30		2	187	6	122	8	309		3	207	1	177	4	384
12:45		0	197	2	122	2	319		2	198	2	162	4	360
01:00		2	155	1	96	3	251		3	188	2	183	5	371
01:15		1	209	1	112	2	321		4	186	0	184	4	370
01:30		1	193	2	123	3	316		0	216	0	176	0	392
01:45		1	211	0	132	1	343		0	204	1	171	1	375
02:00		3	176	0	104	3	280		1	188	1	170	2	358
02:15		2	170	0	117	2	287		1	180	0	185	1	365
02:30		1	171	0	115	1	286		2	185	0	166	2	351
02:45		2	180	2	129	4	309		0	162	0	186	0	348
03:00		1	181	0	108	1	289		0	152	0	147	0	299
03:15		1	187	0	134	1	321		0	169	0	204	0	373
03:30		0	203	0	132	0	335		3	186	0	184	3	370
03:45		2	185	1	127	3	312		0	170	2	195	2	365
04:00		4	174	1	138	5	312		4	172	2	194	6	366
04:15		2	176	2	148	4	324		1	205	5	191	6	396
04:30		5	189	1	118	6	307		5	180	3	211	8	391
04:45		3	211	2	142	5	353		3	186	3	197	6	383
05:00		6	158	8	138	14	296		5	153	6	171	11	324
05:15		4	171	3	151	7	322		7	181	3	191	10	372
05:30		14	144	8	129	22	273		9	153	9	169	18	322
05:45		22	131	7	110	29	241		20	131	13	194	33	325
06:00		15	159	10	114	25	273		23	154	10	166	33	320
06:15		32	139	19	98	51	237		26	123	21	122	47	245
06:30		55	127	29	82	84	209		46	133	32	104	78	237
06:45		69	109	65	74	134	183		73	131	66	104	139	235
07:00		87	86	37	64	124	150		72	105	26	96	98	201
07:15		122	82	44	59	166	141		98	82	30	54	128	136
07:30		143	58	65	55	208	113		145	80	61	78	206	158
07:45		167	71	57	42	224	113		158	80	63	59	221	139
08:00		150	68	69	46	219	114		165	77	75	72	240	149
08:15		176	61	58	41	234	102		174	67	58	57	232	124
08:30		161	56	59	31	220	89		133	54	73	53	206	107
08:45		149	48	74	29	223	77		147	56	75	55	222	111
09:00		142	51	72	26	214	77		134	58	84	68	218	126
09:15		135	48	62	31	197	79		145	63	116	45	261	108
09:30		167	39	73	31	240	70		164	56	138	28	302	84
09:45		144	31	97	26	241	57		175	36	119	33	294	69
10:00		156	43	106	19	262	62		146	30	162	31	308	61
10:15		155	25	104	14	259	39		183	25	140	30	323	55
10:30		168	24	104	11	272	35		187	13	158	20	345	33
10:45		180	11	112	4	292	15		204	12	197	13	401	25
11:00		165	10	108	10	273	20		184	13	200	17	384	30
11:15		181	8	122	3	303	11		195	4	173	6	368	10
11:30		199	2	108	2	307	4		190	8	178	6	368	14
11:45		196	6	143	2	339	8		209	7	189	6	398	13
Total		3402	5740	1851	3881	5253	9621		3457	5821	2503	5705	5960	11526
Day Total		9142		5732		14874			9278		8208		17486	
% Total		22.9%	38.6%	12.4%	26.1%				19.8%	33.3%	14.3%	32.6%		
Peak	-	11:00	12:00	11:00	04:45	11:00	04:00	-	11:00	12:00	10:45	04:00	10:45	04:00
Vol.	-	741	801	481	560	1222	1296	-	778	807	748	793	1521	1536
P.H.F.		0.931	0.886	0.841	0.927	0.901	0.918		0.931	0.975	0.935	0.940	0.948	0.970

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Coconut Road Volume Study
East of Via Cocnut Point
#29737

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
Naples, Florida 34110
Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29737
Station ID:
East of Via Cocnut Point
#29737
Latitude: 0' 0.0000 Undefined

Start	01-Feb-16	Westbound		Eastbound		Combined		02-Feb	Westbound		Eastbound		Combined	
Time	Mon	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Tue	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	*	*	*	*	*		1	198	2	175	3	373
12:15		*	*	*	*	*	*		4	178	3	176	7	354
12:30		*	*	*	*	*	*		0	162	3	171	3	333
12:45		*	178	*	153	*	331		0	197	4	167	4	364
01:00		*	153	*	150	*	303		2	155	3	179	5	334
01:15		*	161	*	156	*	317		0	194	0	186	0	380
01:30		*	166	*	140	*	306		2	170	1	179	3	349
01:45		*	176	*	191	*	367		2	186	0	189	2	375
02:00		*	181	*	187	*	368		2	176	0	148	2	324
02:15		*	166	*	170	*	336		1	157	0	192	1	349
02:30		*	170	*	186	*	356		1	164	1	168	2	332
02:45		*	161	*	169	*	330		1	175	0	181	1	356
03:00		*	145	*	199	*	344		0	159	0	179	0	338
03:15		*	149	*	181	*	330		0	142	2	190	2	332
03:30		*	152	*	203	*	355		1	139	1	211	2	350
03:45		*	153	*	188	*	341		0	164	0	219	0	383
04:00		*	156	*	198	*	354		3	149	4	218	7	367
04:15		*	150	*	177	*	327		3	160	5	217	8	377
04:30		*	155	*	226	*	381		5	157	10	199	15	356
04:45		*	174	*	179	*	353		8	172	6	178	14	350
05:00		*	150	*	209	*	359		5	162	11	186	16	348
05:15		*	160	*	183	*	343		7	164	6	207	13	371
05:30		*	154	*	168	*	322		5	160	20	183	25	343
05:45		*	142	*	169	*	311		15	156	19	188	34	344
06:00		*	128	*	153	*	281		21	137	11	165	32	302
06:15		*	135	*	144	*	279		34	128	23	127	57	255
06:30		*	127	*	121	*	248		53	134	23	124	76	258
06:45		*	109	*	114	*	223		63	105	42	120	105	225
07:00		*	86	*	103	*	189		69	82	44	97	113	179
07:15		*	54	*	77	*	131		92	64	62	103	154	167
07:30		*	64	*	110	*	174		136	40	76	88	212	128
07:45		*	33	*	80	*	113		168	46	97	83	265	129
08:00		*	36	*	89	*	125		151	28	112	93	263	121
08:15		*	34	*	82	*	116		152	33	98	88	250	121
08:30		*	21	*	82	*	103		156	25	113	84	269	109
08:45		*	22	*	71	*	93		168	42	110	86	278	128
09:00		*	24	*	65	*	89		126	30	94	81	220	111
09:15		*	25	*	52	*	77		152	19	89	74	241	93
09:30		*	14	*	51	*	65		164	20	129	62	293	82
09:45		*	24	*	43	*	67		167	21	122	44	289	65
10:00		*	20	*	31	*	51		177	13	109	48	286	61
10:15		*	11	*	31	*	42		176	9	149	36	325	45
10:30		*	18	*	18	*	36		170	14	149	27	319	41
10:45		*	9	*	11	*	20		174	8	156	10	330	18
11:00		*	11	*	11	*	22		185	8	148	13	333	21
11:15		*	3	*	5	*	8		182	4	175	8	357	12
11:30		*	5	*	8	*	13		174	5	163	8	337	13
11:45		*	2	*	7	*	9		189	5	162	3	351	8
Total		0	4367	0	5341	0	9708		3367	5016	2557	6158	5924	11174
Day Total		4367		5341		9708			8383		8715		17098	
% Total		0.0%	45.0%	0.0%	55.0%				19.7%	29.3%	15.0%	36.0%		
Peak	-	-	01:45	-	04:30	-	04:30	-	11:00	12:00	11:00	03:30	11:00	03:45
Vol.	-	-	693	-	797	-	1436	-	730	735	648	865	1378	1483
P.H.F.			0.957		0.882		0.942		0.966	0.928	0.926	0.987	0.965	0.968

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Coconut Road Volume Study
East of Via Cocnut Point
#29737

Trebilcock Consulting Solutions
1205 Piper Blvd, Suite 202
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Ph:239 566 9551 Fax:239 566 9553
email: ntrebilcock@trebilcock.biz

Station ID:
Site Code: #29737
Station ID:
East of Via Cocnut Point
#29737
Latitude: 0' 0.0000 Undefined

Start	03-Feb-16	Westbound		Eastbound		Combined		04-Feb	Westbound		Eastbound		Combined	
Time	Wed	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Thu	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		1	200	4	156	5	356		3	199	3	193	6	392
12:15		4	195	5	176	9	371		2	186	4	199	6	385
12:30		1	176	8	158	9	334		2	196	3	171	5	367
12:45		0	191	4	151	4	342		0	171	1	155	1	326
01:00		1	133	1	151	2	284		2	194	2	185	4	379
01:15		0	191	1	146	1	337		5	162	1	193	6	355
01:30		0	156	1	181	1	337		0	188	0	205	0	393
01:45		1	159	2	176	3	335		1	175	1	174	2	349
02:00		1	162	0	178	1	340		0	155	1	177	1	332
02:15		1	149	0	171	1	320		1	177	1	199	2	376
02:30		3	158	1	193	4	351		2	164	1	184	3	348
02:45		0	159	2	200	2	359		0	142	1	206	1	348
03:00		1	144	1	200	2	344		0	154	0	190	0	344
03:15		1	172	2	196	3	368		0	149	2	213	2	362
03:30		0	157	1	212	1	369		4	141	0	214	4	355
03:45		3	168	1	200	4	368		1	158	2	202	3	360
04:00		4	145	2	224	6	369		4	162	3	189	7	351
04:15		2	159	4	190	6	349		0	163	6	194	6	357
04:30		4	151	5	226	9	377		5	148	6	213	11	361
04:45		7	182	5	203	12	385		5	173	7	198	12	371
05:00		6	146	15	219	21	365		5	145	10	200	15	345
05:15		5	171	4	206	9	377		7	181	4	204	11	385
05:30		18	158	17	200	35	358		9	173	21	174	30	347
05:45		20	139	15	157	35	296		20	158	18	189	38	347
06:00		20	161	17	165	37	326		25	147	17	177	42	324
06:15		30	121	25	162	55	283		29	135	27	135	56	270
06:30		53	145	31	117	84	262		39	144	27	134	66	278
06:45		56	121	45	109	101	230		62	121	38	114	100	235
07:00		71	78	64	98	135	176		68	74	53	124	121	198
07:15		106	72	62	125	168	197		88	81	55	85	143	166
07:30		148	38	86	91	234	129		125	53	90	91	215	144
07:45		176	39	100	86	276	125		173	65	95	92	268	157
08:00		138	42	92	92	230	134		165	50	106	109	271	159
08:15		149	44	97	81	246	125		172	47	102	85	274	132
08:30		151	28	87	99	238	127		146	35	116	78	262	113
08:45		171	24	112	61	283	85		145	39	101	88	246	127
09:00		134	18	95	59	229	77		170	27	113	100	283	127
09:15		145	23	111	67	256	90		179	27	132	65	311	92
09:30		172	21	101	53	273	74		205	29	148	49	353	78
09:45		164	15	127	54	291	69		201	23	118	47	319	70
10:00		175	13	139	51	314	64		169	21	152	42	321	63
10:15		139	17	149	21	288	38		196	22	136	30	332	52
10:30		160	19	115	15	275	34		204	10	157	24	361	34
10:45		178	6	150	11	328	17		207	9	174	19	381	28
11:00		171	6	177	10	348	16		181	9	172	17	353	26
11:15		178	6	152	6	330	12		181	3	181	8	362	11
11:30		184	3	171	4	355	7		190	4	190	4	380	8
11:45		193	2	171	5	364	7		194	6	172	5	366	11
Total		3346	4983	2577	6112	5923	11095		3592	5195	2770	6343	6362	11538
Day Total		8329		8689		17018			8787		9113		17900	
% Total		19.7%	29.3%	15.1%	35.9%				20.1%	29.0%	15.5%	35.4%		
Peak	-	11:00	12:00	11:00	04:30	11:00	04:30	-	10:15	12:00	10:45	02:45	10:45	01:00
Vol.	-	726	762	671	854	1397	1504	-	788	752	717	823	1476	1476
P.H.F.		0.940	0.953	0.948	0.945	0.959	0.977		0.952	0.945	0.943	0.961	0.969	0.939

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Appendix G: 2014 FDOT Peak Season Factor Category Report (Excerpt)

(1 Sheet)

2014 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1252 BONITA SPRINGS AREA

MOCF: 0.82

WEEK	DATES	SF	PSCF
1	01/01/2014 - 01/04/2014	0.98	1.20
2	01/05/2014 - 01/11/2014	0.92	1.12
* 3	01/12/2014 - 01/18/2014	0.87	1.06
* 4	01/19/2014 - 01/25/2014	0.85	1.04
* 5	01/26/2014 - 02/01/2014	0.84	1.02
* 6	02/02/2014 - 02/08/2014	0.82	1.00
* 7	02/09/2014 - 02/15/2014	0.81	0.99
* 8	02/16/2014 - 02/22/2014	0.79	0.96
* 9	02/23/2014 - 03/01/2014	0.79	0.96
*10	03/02/2014 - 03/08/2014	0.79	0.96
*11	03/09/2014 - 03/15/2014	0.78	0.95
*12	03/16/2014 - 03/22/2014	0.78	0.95
*13	03/23/2014 - 03/29/2014	0.81	0.99
*14	03/30/2014 - 04/05/2014	0.84	1.02
*15	04/06/2014 - 04/12/2014	0.86	1.05
16	04/13/2014 - 04/19/2014	0.89	1.09
17	04/20/2014 - 04/26/2014	0.93	1.13
18	04/27/2014 - 05/03/2014	0.96	1.17
19	05/04/2014 - 05/10/2014	1.00	1.22
20	05/11/2014 - 05/17/2014	1.04	1.27
21	05/18/2014 - 05/24/2014	1.08	1.32
22	05/25/2014 - 05/31/2014	1.10	1.34
23	06/01/2014 - 06/07/2014	1.13	1.38
24	06/08/2014 - 06/14/2014	1.16	1.41
25	06/15/2014 - 06/21/2014	1.19	1.45
26	06/22/2014 - 06/28/2014	1.20	1.46
27	06/29/2014 - 07/05/2014	1.21	1.48
28	07/06/2014 - 07/12/2014	1.21	1.48
29	07/13/2014 - 07/19/2014	1.22	1.49
30	07/20/2014 - 07/26/2014	1.22	1.49
31	07/27/2014 - 08/02/2014	1.23	1.50
32	08/03/2014 - 08/09/2014	1.23	1.50
33	08/10/2014 - 08/16/2014	1.23	1.50
34	08/17/2014 - 08/23/2014	1.24	1.51
35	08/24/2014 - 08/30/2014	1.24	1.51
36	08/31/2014 - 09/06/2014	1.25	1.52
37	09/07/2014 - 09/13/2014	1.25	1.52
38	09/14/2014 - 09/20/2014	1.26	1.54
39	09/21/2014 - 09/27/2014	1.21	1.48
40	09/28/2014 - 10/04/2014	1.16	1.41
41	10/05/2014 - 10/11/2014	1.11	1.35
42	10/12/2014 - 10/18/2014	1.07	1.30
43	10/19/2014 - 10/25/2014	1.04	1.27
44	10/26/2014 - 11/01/2014	1.02	1.24
45	11/02/2014 - 11/08/2014	1.00	1.22
46	11/09/2014 - 11/15/2014	0.97	1.18
47	11/16/2014 - 11/22/2014	0.95	1.16
48	11/23/2014 - 11/29/2014	0.96	1.17
49	11/30/2014 - 12/06/2014	0.97	1.18
50	12/07/2014 - 12/13/2014	0.97	1.18
51	12/14/2014 - 12/20/2014	0.98	1.20
52	12/21/2014 - 12/27/2014	0.92	1.12
53	12/28/2014 - 12/31/2014	0.87	1.06

* PEAK SEASON

09-MAR-2015 16:07:48 830UPD 1_1252_PKSEASON.TXT

Appendix H: 2013 Lee County Link – Specific Volumes (Excerpt)

(1 Sheet)

May, 2014

LINK-SPECIFIC SERVICE VOLUMES ON ARTERIALS IN LEE COUNTY (2013 DATA)

PAGE 7

ROAD SEGMENT	FROM	TO	TRAFFIC DISTRIC	LENGTH (MILE)	ROAD TYPE	SERVICE VOLUMES (PEAK HOUR PEAK DIRECTION)					SERVICE VOLUMES (PEAK HOUR--BOTH DIRECTIONS)				
						A	B	C	D	E	A	B	C	D	E
VETERANS MEM. PKWY	McGREGOR BLVD	DEL PRADO BLVD	1 & 5	3.5	4LB	1,120	1,900	2,680	3,440	4,000	1,740	2,930	4,120	5,280	6,150
	DEL PRADO BLVD	SANTA BARBARA BLVD	5	2.0	6LD	2,860	3,120	3,120	3,120	3,120	4,770	5,220	5,220	5,220	5,220
	SANTA BARBARA BLVD	SKYLINE BLVD	5	1.0	6LD	2,860	3,120	3,120	3,120	3,120	4,770	5,220	5,220	5,220	5,220
	SKYLINE BLVD	SR 78	5	3.5	4LD	1,830	2,080	2,080	2,080	2,080	3,060	3,460	3,460	3,460	3,460
WINKLER RD	SUMMERLIN RD	GLADIOLUS DR	4	0.4	4LD	0	0	0	950	1,520	0	0	0	1,620	2,590
	GLADIOLUS DR	BRANDYWINE CIR	4	0.9	2LN	0	790	920	920	920	0	1,340	1,570	1,570	1,570
	BRANDYWINE CIR	CYPRESS LAKE DR	4	0.9	2LN	0	790	920	920	920	0	1,340	1,570	1,570	1,570
	CYPRESS LAKE DR	COLLEGE PKWY	4	0.7	4LD	0	0	830	1,800	1,800	0	0	1,410	3,040	3,040
	COLLEGE PKWY	SUNSET VISTA	4	0.5	2LN	0	810	840	840	840	0	1,380	1,430	1,430	1,430
	SUNSET VISTA	McGREGOR BLVD	4	0.8	2LN	0	810	840	840	840	0	1,380	1,430	1,430	1,430

SERVICE VOLUMES ON COLLECTORS IN LEE COUNTY (2013 DATA)

ROAD SEGMENT	FROM	TO	TRAFFIC DISTRIC	LENGTH (MILE)	ROAD TYPE	SERVICE VOLUMES (PEAK HOUR PEAK DIRECTION)					SERVICE VOLUMES (PEAK HOUR--BOTH DIRECTIONS)				
						A	B	C	D	E	A	B	C	D	E
COLLECTORS					2LU	0	0	550	860	860	0	0	990	1,530	1,530
					2LD	0	0	580	910	910	0	0	1,040	1,610	1,610
					4LU	0	0	1,240	1,700	1,700	0	0	2,200	3,030	3,030
					4LD	0	0	1,310	1,790	1,790	0	0	2,340	3,190	3,190

Appendix I: Lee County 2040 LRTP (Excerpts)

(3 Sheets)

LEE COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

2040 TRANSPORTATION PLAN

ROADWAY PROJECTS

ID	Facility	From	To	Improvement
1	I-75	at SR 884		Intersection
2	San Carlos Boulevard	Reconstruction/Transit, Pedestrian, and Capacity Improvements		Capacity
3	SR 78	W. of Santa Barbara	East of Pondella	Widening
4	I-75	at Corkscrew Road		Intersection
5	Ortiz Avenue	Martin Luther King	Luckett Road	Widening
6	SR 82	Alabama	Homestead	Widening
7	US 41	at Daniels Parkway		Intersection
8	Veterans	at Santa Barbara		Intersection
9	SR 82	at Colonial Blvd		Intersection
10	Old US 41	Bonita Beach Road	Collier Co. Line	Widening
11	Colonial	at Summerlin		Intersection
12	SR 78	Business 41	I-75	Widening
13	SR 82	Shawnee	Alabama	Widening
14	Pine Island Road	Del Pine Dr	Hancock Creek Blvd (NE 24th Ave)	Widening
15	SR 78	Chiquita Boulevard	w/o Santa Barbara	Widening
16	SR 78	24th Ave	US 41	Widening
17	Estero	Segment 4		Resurfacing
18	Leeland Heights Boulevard	Lee Blvd	Bell Blvd	Widening
19	Ortiz Avenue	Colonial Blvd	SR 82 (MLK)	Widening
20	Corkscrew Road	US 41	e/o Ben Hill Griffin Pkwy	Widening
21	Hanson Street	Evans Avenue	Veronica Shoemaker	Widening
22	SR 80	SR 31	Buckingham Rd	Widening
23	Estero	Segment 5		Resurfacing
24	Estero	Segment 6		Resurfacing
25	Lee Blvd	Leeland Heights Blvd	SR 82	Widening
26	Daniels Parkway	Chamberlin Pkwy	Gateway Blvd	Widening
27	Bonita Beach Road	I-75	Bonita Grande Drive	Widening
28	Homestead Road	Milwaukee	Sunrise	Widening
29	SR 82	at Daniels Parkway/Gunnery Road		Intersection
30	Luckett Road	Ortiz Avenue	I-75	Widening
31	Littleton Road	NE 24TH	Business 41	Widening
32	Daniels Parkway	Gateway Blvd	SR 82	Widening
33	Hanson Street	US 41	Fowler St	Widening
34	Gunnery Road	Lee Blvd	Buckingham Rd	Widening
35	Metro Parkway	Daniels Parkway/Gunnery Road	South of Winkler Avenue	Widening
36	Homestead Road	Sunrise	Alabama	Widening
37	Corkscrew Road	Ben Hill Griffin	Alico Road	Widening
38	Ortiz Avenue	Luckett Road	SR 80	Widening
39	Terry Street	Bonita Grande Drive	West Imperial Parkway	Widening
40	SR 31	SR 80	Charlotte Co. Line	Widening
41	Leonard Boulevard	Lee Blvd	Gunnery Rd	Widening
42	SR 82	Homestead	Hendry County Line	Widening
43	Three Oaks Ext.	North of Alico Road	Daniels Parkway	New Roadway
44	23rd Street SW	Gunnery Rd	Beth Stacey Blvd	Widening
45	Beth Stacey Boulevard	23rd St SW	Homestead Rd	Widening
46	Chiquita Boulevard	Pine Island Road	Cape Coral Parkway	Widening
47	Alabama Street	SR 82	Homestead Rd	Widening
48	Livingston/Imperial Parkway	Collier Co. Line	Bonita Beach Road	Widening
49	Orange River Road	Buckingham Rd	SR 80	Widening
50	Sunshine Boulevard	SR 82	Lee Blvd	Widening
51	Buckingham Road	Orange River Blvd.	SR 80	Widening
52	Joel Boulevard	17th St	Palm Beach Blvd	Widening

Lee MPO 2040 Long Range Transportation Plan Update
Roadway Needs Project List

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Draft 7/27/2015

LEE COUNTY MPO
METROPOLITAN PLANNING ORGANIZATION

2040 TRANSPORTATION PLAN

ROADWAY PROJECTS

ID	Facility	From	To	Improvement
53	**Bell Boulevard**	SR 82	Leeland Heights Blvd	Widening
54	**Winkler Road**	Gladiolus Drive	Cypress Lake Drive	Widening
55	**Crystal Drive**	US 41	Metro Pkay	Resurfacing
56	**Edison Avenue**	US 41	Fowler St	Widening
57	**Cape Coral Bridge**			Replace Bridge
58	**Fowler Street**	Metro/Fowler	SR 82	Resurfacing
59	**Veronica Shoemaker**	Michigan Avenue	SR 80	Widening
60	**Burnt Store Road**	Van Buren Parkway	Charlotte Co. Line	Widening
61	**SR 82**	Michigan Avenue	Ortiz Avenue	Widening
62	**Little Pine Island Bridge**			Replace Bridge
63	**Alico Road**	Ben Hill Griffin	Airport Haul Road	Widening
64	**2nd Street**	Fowler St	Palm Beach Blvd	Widening
65	**Andalusia Boulevard**	Pine Island Road	Tropicana Parkway	Widening
66	**Andalusia Boulevard**	Jacaranda Parkway	Kismet Parkway	New Roadway
67	**Kismet Parkway**	NW 18th Avenue	Chiquita Boulevard	Widening
68	**NE 24th Avenue**	Pondella Road	Garden Boulevard	Widening
69	**I-75**	at Bonita Beach Rd		Intersection
70	**Little Carlos Pass Bridge**			Replace Bridge
71	**1st Street**	Fowler St	Palm Beach Blvd	Widening
72	**SR 78**	US 41	Business 41	Widening
73	**Bonita Grande Drive**	Terry Street	Bonita Beach Road	Widening
74	**Littleton Road**	US 41/N. Tamiami Trl	SR 78	New Roadway
75	**North Airport Rd Extension**	Metro Parkway	Plantation Road	New Roadway
76	**I-75**	Collier Co. Line	s/o Caloosahatchee Bridge	New Roadway
77	**I-75**	at Daniels Parkway		Intersection
78	**Big Carlos Bridge**			Replace Bridge
79	**Tropicana Parkway**	Chiquita Boulevard	Nelson Road	Widening
80	**Nelson Road North**	Embers Parkway	Tropicana Parkway	Widening
81	**Luckett Road ext.**	Sunshine Blvd	Hendry County Line	New Roadway
82	**Del Prado Extension**	US 41	I-75	New Roadway
83	**Del Prado Extension**	e/o US 41	e/o Prarie Pines	New Roadway
84	**Luckett Road**	I-75	12th St	Widening
85	**Big Hickory Pass Bridge**			Replace Bridge
86	**New Pass Bridge**			Replace Bridge
87	**Sandy Lane Extension**	Strike Lane	Pelican Colony	New Roadway
88	**East West**	Ben Hill Griffin	Airport Haul Road	New Roadway
89	**Luckett Road Extension**	Buckingham Rd	Gunnery Rd	New Roadway
90	**Luckett Road Extension**	Gunnery Rd	Sunshine Blvd	New Roadway
91	**Homestead Road**	SR 82	Milwaukee	Widening
92	**Alico Road**	Airport Haul Road	Alico Connector	Widening
93	**Kismet Parkway**	Burnt Store Road	El Dorado Parkway	Widening
94	**NE 24th Avenue**	Garden Boulevard	Del Prado Boulevard	New Roadway
95	**Surfside Boulevard**	Trafalgar Parkway	Pine Island Road	New Roadway
96	**Del Prado Extension**	I-75	SR 31	New Roadway
97	**Luckett Road ext.**	e/o I-75	Buckingham Rd	New Roadway
98	**Alico Connector**	Alico	SR 82	New Roadway
99	**Garden Boulevard**	North of DeNavarra Parkway	NE 23rd Place	Widening
100	**Hanson Extension**	Veronica Shoemaker	Ortiz Avenue	New Roadway
101	**Del Prado Extension**	Mellow Dr	I-75	New Roadway
102	**Jacaranda Parkway**	Old Burnt Store Road	Burnt Store Road	New Roadway
103	**CR 951 Extension**	Corkscrew Road	Alico Road	New Roadway

Lee MPO 2040 Long Range Transportation Plan Update
Roadway Needs Project List

Page 2
Draft 7/27/2015

CHAPTER 6: THE 2040 COST FEASIBLE PLAN

DEFINING THE 2040 COST FEASIBLE PLAN

Note: Cost Feasible Plan projects are presented in year of expenditure (YOE).

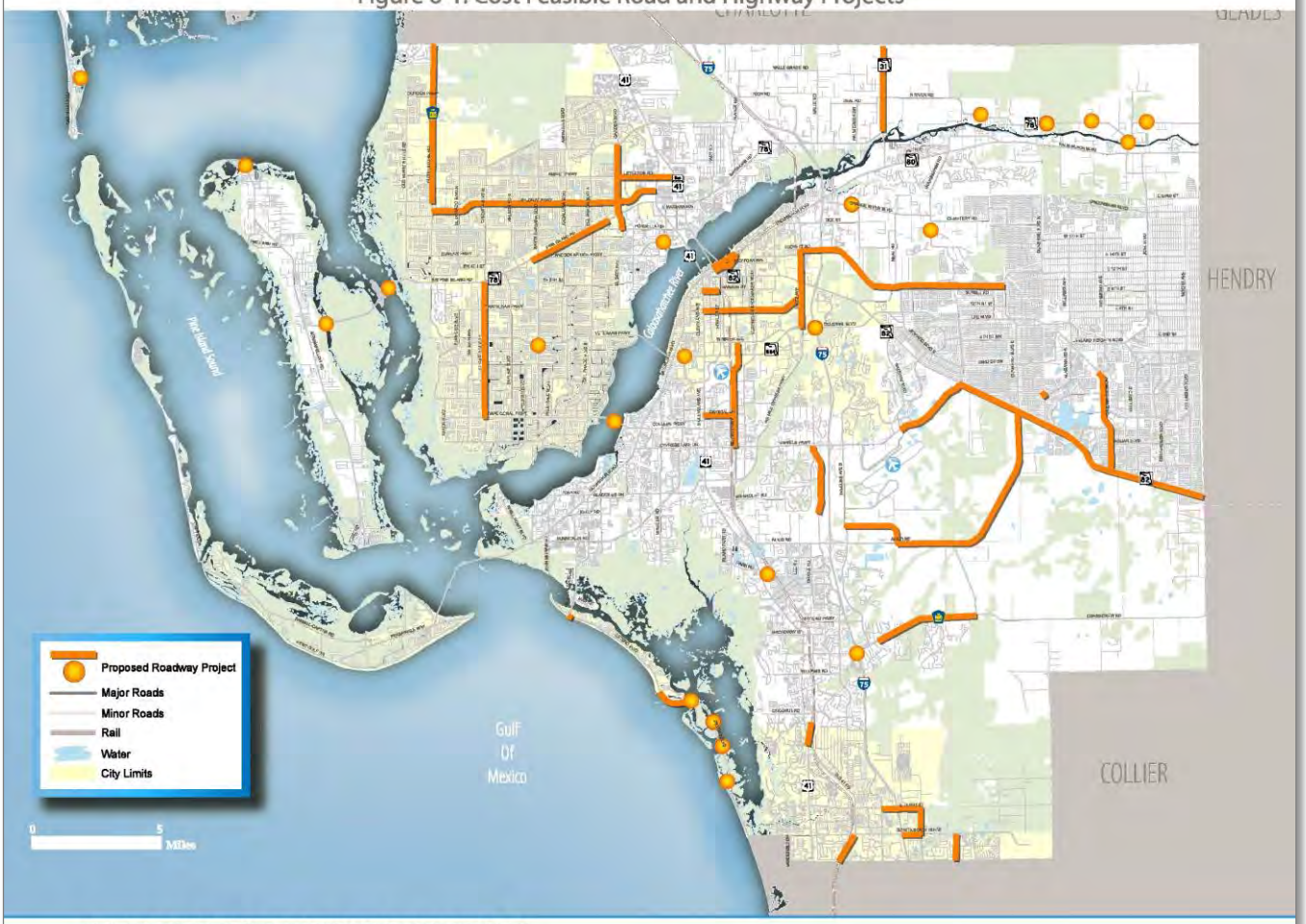
Projects included in the Cost Feasible Plan were selected based on their performance against the established set of evaluation criteria. The best performing projects for each mode were then balanced against the revenues forecasted over the next 25 years and vetted for public opinion to arrive at the Cost Feasible Plan. Project size and geography were also considered.

The Cost Feasible Plan reflects approximately $3 billion (YOE) worth of implementable projects. Improvements between 2015 and 2020 are considered committed projects, as they are already funded in the work program. These projects are included in the Existing Plus Committed list. All Cost Feasible Plan projects are listed in this chapter beginning on page 63.

ROAD/HIGHWAY PROJECTS

Figure 6-1 shows the cost feasible road and highway projects. The major road projects included in the Cost Feasible Plan support economic growth, provide for a balanced multimodal transportation network, and improve the safety and security for the Lee County community. The Cost Feasible Plan includes $2 billion (YOE) in road expansion projects. Highlights of the proposed Cost Feasible road projects include:

Figure 6-1: Cost Feasible Road and Highway Projects



Appendix J: Potential Development – ITE Period Analysis Reports

(6 Sheets)

ID #	STRAP #	PARCEL NAME	DEVELOPMENT PARAMETERS	ZONING APPROVALS NOT YET CONSTRUCTED	POTENTIAL FUTURE CONSTRUCTION PERMITTING
1	07-47-25-B2-00004.00CE	Pelican Landing Community Association	Marina – 20 berths; Restaurant – 3,000sf		X
2A	07-47-25-B2-00003.0370	Estero Bay Marine LLC (Weeks Fish Camp)	Residential – Multi Family – 360 dwelling units – high-rise buildings		X
2B	07-47-25-B2-00003.0000				
3	07-47-25-B2-00000.0010	WCI/Pelican Landing DRI (Raptor Bay)	Residential – Multi Family – 360 dwelling units – high-rise buildings		X
4	06-47-25-00-00002.0030	Pelican Landing Timeshare Ventures LP	Timeshare – Rental Townhouses – 267 dwelling units	X	
5	17-47-25-B1-00001.012A	WCI Communities Inc (Altaira High Rise)	High-Rise Residential Condominium/ Townhouse – 76 dwelling units	X	
6	17-47-25-B1-U1681.1891	WCI Communities Inc (Two Future High Rises)	Residential – Multi Family – 150 dwelling units – high-rise buildings	X	
7	08-47-25-01 +	Eldorado Acres Subdivision	Residential – Single Family – 98 dwelling units – platted lots	X	
8	08-47-25-00-00003.0030	John T. Watson	Residential – Single Family – 2 dwelling units	X	
9	08-47-25-01-00016.0000	Judy K. Doyle	Residential – Single Family – 15 dwelling units	X	
10	08-47-25-00-00004.0000	Dhaliwal + J/T	Residential – Single Family – 3 dwelling units	X	
11	08-47-25-E2-U1757.2005	Dhaliwal + J/T		X	
12	09-47-25-E1-U1823.2024	Dewane/Docese of Venice	Residential – Multi Family – 93 dwelling units		X
13	09-47-25-E4-U1882.1994	Coconut Road Associates LLC	General Office Building – 122,484sf	X	
14	09-47-25-E1-U1874.2023	HG Coconut LLC	Shopping Center – 210,000sf Medical Office Building – 40,000sf Multi-Family Residential – 525 dwelling units Assisted Living – 152 beds Hotel – 130 Rooms	X	
15A	09-47-25-E1-U1877.2039	OBE Florida CRE Holdings LLC			
15B	09-47-25-E2-U1900.2033				
15C	09-47-25-E2-U1902.2012				
16	09-47-25-E3-31000.0050	Allsee Investment LP	General Office Building – 27,500sf	X	
17	09-47-25-E3-31000.0010	Naples Diagnostic Imaging	General Office Building – 15,000sf	X	
22A	09-47-25-E3-373A1.0000	Lee Memorial Health System	Acute Care Hospital – 160 beds Shopping Center – 60,000sf Medical Office Building – 198,000sf General Office Building – 102,000sf	X	
22B	09-47-25-E3-373A2.0000				
22C	09-47-25-E3-373A3.0010				

Project Name:	Coconut Road - 1	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
420 - Marina	20 (1)	30	29	1	1	2	2
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		30	29	1	1	2	2
932 - High-Turnover (Sit-Down) Restaurant	3 (2)	191	190	18	12	18	12
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		191	190	18	12	18	12
Total		221	219	19	13	20	14
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		221	219	19	13	20	14

(1) Berths
(2) 1000 Sq. Feet Gross Floor Area

Project Name:	Coconut - 2	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
230 - Residential Condominium/Townhouse	360 (1)	980	980	24	120	115	57
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		980	980	24	120	115	57
Total		980	980	24	120	115	57
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		980	980	24	120	115	57

(1) Dwelling Units

Project Name:	Coconut - 3	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
230 - Residential Condominium/Townhouse	360 (1)	980	980	24	120	115	57
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		980	980	24	120	115	57
Total		980	980	24	120	115	57
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		980	980	24	120	115	57

(1) Dwelling Units

Project Name:	Coconut - 4	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**
224 - Rental Townhouse	267 (1)	62	125	98	94
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		62	125	98	94
Total		62	125	98	94
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		62	125	98	94

(1) Dwelling Units

Project Name:	Coconut - 5	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
232 - High-Rise Residential Condominium/Townhouse	76 (1)	159	159	5	21	18	11
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		159	159	5	21	18	11
Total		159	159	5	21	18	11
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		159	159	5	21	18	11

(1) Dwelling Units

Project Name:	Coconut - 6	**No:**	
Date:	3/10/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
230 - Residential Condominium/Townhouse	150 (1)	458	457	56	28	56	28
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		458	457	56	28	56	28
Total		458	457	56	28	56	28
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		458	457	56	28	56	28

(1) Dwelling Units

Project Name:	Coconut - 7	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
210 - Single-Family Detached Housing	98 (1)	516	515	20	58	21	60
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		516	515	20	58	21	60
Total		516	515	20	58	21	60
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		516	515	20	58	21	60

(1) Dwelling Units

Project Name:	Coconut - 8	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
210 - Single-Family Detached Housing	2 (1)	10	9	1	1	1	1
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		10	9	1	1	1	1
Total		10	9	1	1	1	1
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		10	9	1	1	1	1

(1) Dwelling Units

Project Name:	Coconut - 9	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
210 - Single-Family Detached Housing	15 (1)	92	91	5	15	12	7
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		92	91	5	15	12	7
Total		92	91	5	15	12	7
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		92	91	5	15	12	7

(1) Dwelling Units

Project Name:	Coconut - 10 & 11	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	Exit	Entry	Exit	Entry	Exit
210 - Single-Family Detached Housing	3 (1)	15	14	1	1	2	1
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		15	14	1	1	2	1
Total		15	14	1	1	2	1
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		15	14	1	1	2	1

(1) Dwelling Units

Project Name:	Coconut - 12	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	Exit	Entry	Exit	Entry	Exit
230 - Residential Condominium/Townhouse	93 (1)	302	302	8	41	38	19
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		302	302	8	41	38	19
Total		302	302	8	41	38	19
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		302	302	8	41	38	19

(1) Dwelling Units

Project Name:	Coconut - 13	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	Exit	Entry	Exit	Entry	Exit
710 - General Office Building	122.48 (1)	766	766	198	27	37	179
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		766	766	198	27	37	179
Total		766	766	198	27	37	179
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		766	766	198	27	37	179

(1) 1000 Sq. Feet Gross Floor Area

Project Name:	Coconut - 16	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
710 - General Office Building	27.5 (1)	246	246	60	8	19	90
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		246	246	60	8	19	90
Total		246	246	60	8	19	90
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		246	246	60	8	19	90

(1) 1000 Sq. Feet Gross Floor Area

Project Name:	Coconut - 17	**No:**	
Date:	3/11/2016	**City:**	
State/Province:		**Zip/Postal Code:**	
Country:		**Client Name:**	
Analyst's Name:		**Edition:**	ITE-TGM 9th Edition

LAND USE	SIZE	DAILY		AM PEAK HOUR		PM PEAK HOUR	
		Entry	**Exit**	**Entry**	**Exit**	**Entry**	**Exit**
710 - General Office Building	15 (1)	155	155	37	5	16	79
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		155	155	37	5	16	79
Total		155	155	37	5	16	79
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		155	155	37	5	16	79

(1) 1000 Sq. Feet Gross Floor Area

Appendix K: FDOT Traffic Online – T24 Factors

(1 Sheet)

FDOT Florida Traffic Online Identify Information Page 1 of 1

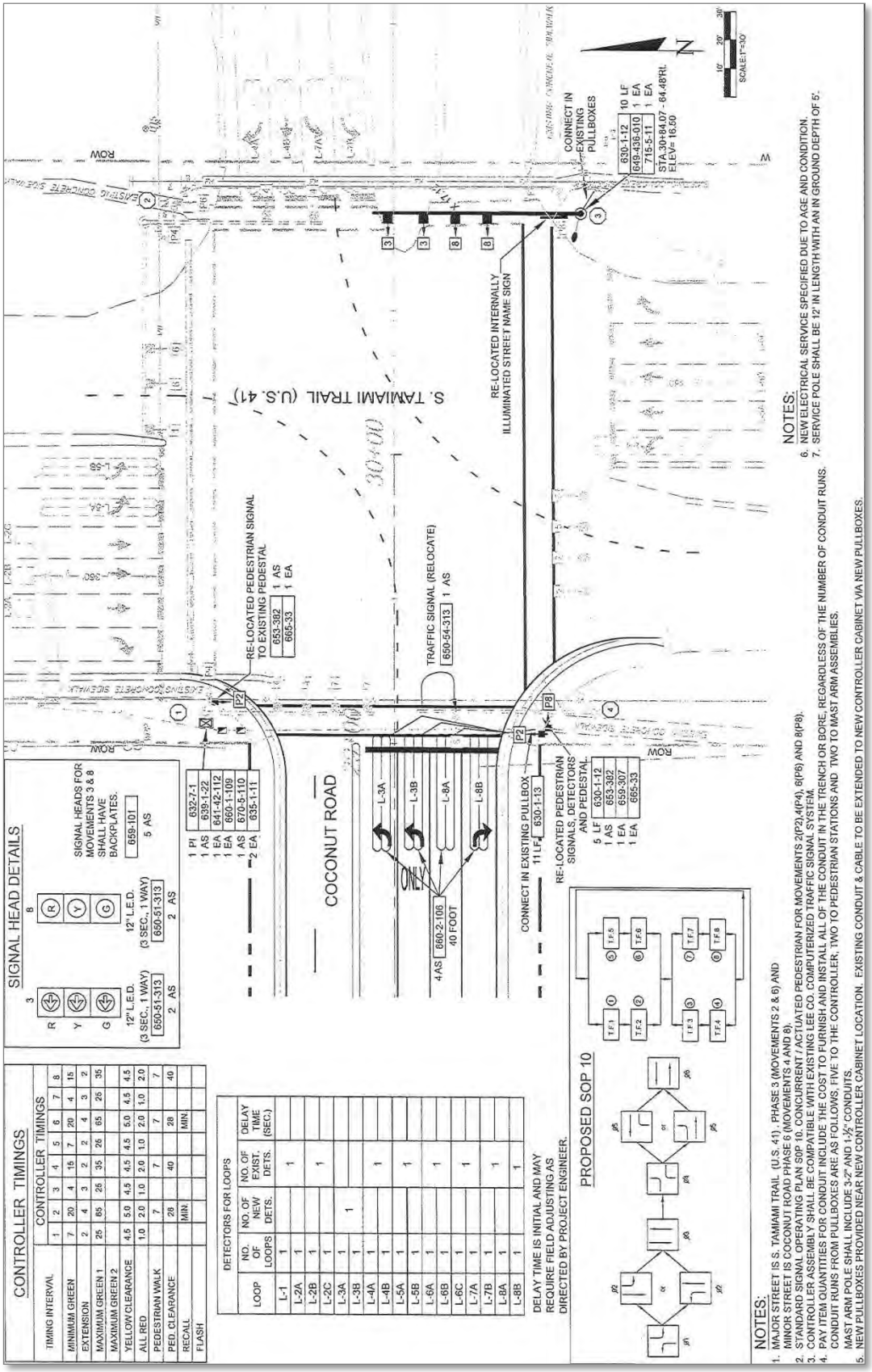
Site Information	
Feature	**1**
Site	124490
Description	COCONUT RD, E OF SR 45/US 41 LC 490
Section	12000119
Milepoint	0.04
AADT	**11100**
Site Type	Portable
Class Data	Yes
K Factor	10.3
D Factor	52
T Factor	3.1
TRAFFIC REPORTS (provided in format)	
Lee County	**Annual Average Daily Traffic**
	Annual Vehicle Classification
	Historical AADT Data
	Synopsis 124490CL-20140611
	Vehicle Class History

FDOT Florida Traffic Online Identify Information Page 1 of 1

Site Information	
Feature	**1**
Site	120065
Description	SR 45/US 41, NORTH OF CR 887/OLD US 4 1 LC436
Section	12010000
Milepoint	4.45
AADT	**48000**
Site Type	Portable
Class Data	Yes
K Factor	10.05
D Factor	54.6
T Factor	3.1
TRAFFIC REPORTS (provided in format)	
Lee County	**Annual Average Daily Traffic**
	Annual Vehicle Classification
	Historical AADT Data
	Synopsis 120065CL-20140402
	Vehicle Class History

Appendix L: Lee County – Intersection Signal Data

(10 Sheets)


CONTROLLER TIMINGS
TIMING INTERVAL
CONTROLLER TIMINGS
MINIMUM GREEN
EXTENSION
MAXIMUM GREEN 1
MAXIMUM GREEN 2
YELLOW CLEARANCE
ALL RED
PEDESTRIAN WALK
PED. CLEARANCE
RECALL
FLASH
DETECTORS FOR LOOPS
LOOP
NO. OF LOOPS
NO. OF NEW DETS.
NO. OF EXIST. DETS.
DELAY TIME (SEC.)
DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.
SIGNAL HEAD DETAILS
SIGNAL HEADS FOR MOVEMENTS 3 & 8 SHALL HAVE BACKPLATES.
659-101
5 AS
12" L.E.D.
(3 SEC., 1 WAY)
650-51-313
2 AS
PROPOSED SOP 10
COCONUT ROAD
S. TAMIAMI TRAIL (U.S. 41)
RE-LOCATED PEDESTRIAN SIGNAL TO EXISTING PEDESTAL
653-382
665-33
1 AS
1 EA
TRAFFIC SIGNAL (RELOCATE)
650-54-313
1 AS
RE-LOCATED INTERNALLY ILLUMINATED STREET NAME SIGN
CONNECT IN EXISTING PULLBOXES
630-1-12
649-436-010
715-5-11
10 LF
1 EA
1 EA
STA.30+84.07 - 64.48RL
ELEV= 16.60
CONNECT IN EXISTING PULLBOX
11 LF
630-1-13
RE-LOCATED PEDESTRIAN SIGNALS, DETECTORS AND PEDESTAL
5 LF
630-1-12
653-382
659-307
665-33
632-7-1
639-1-22
641-42-112
660-1-109
670-5-110
635-1-11
660-2-106
40 FOOT
4 AS
ONLY
L-3A
L-3B
L-8A
L-8B
ROW
SCALE:1"=30'
NOTES:
1. MAJOR STREET IS S. TAMIAMI TRAIL (U.S. 41). PHASE 3 (MOVEMENTS 2 & 6) AND MINOR STREET IS COCONUT ROAD PHASE 6 (MOVEMENTS 4 AND 8).
2. STANDARD SIGNAL OPERATING PLAN SOP 10. CONCURRENT / ACTUATED PEDESTRIAN FOR MOVEMENTS 2(P2),4(P4), 6(P6) AND 8(P8).
3. CONTROLLER ASSEMBLY SHALL BE COMPATIBLE WITH EXISTING LEE CO. COMPUTERIZED TRAFFIC SIGNAL SYSTEM.
4. PAY ITEM QUANTITIES FOR CONDUIT INCLUDE THE COST TO FURNISH AND INSTALL ALL OF THE CONDUIT IN THE TRENCH OR BORE, REGARDLESS OF THE NUMBER OF CONDUIT RUNS. CONDUIT RUNS FROM PULLBOXES ARE AS FOLLOWS, FIVE TO THE CONTROLLER, TWO TO PEDESTRIAN STATIONS AND TWO TO MAST ARM ASSEMBLIES. MAST ARM POLE SHALL INCLUDE 3-2" AND 1-½" CONDUITS.
5. NEW PULLBOXES PROVIDED NEAR NEW CONTROLLER CABINET LOCATION. EXISTING CONDUIT & CABLE TO BE EXTENDED TO NEW CONTROLLER CABINET VIA NEW PULLBOXES.
6. NEW ELECTRICAL SERVICE SPECIFIED DUE TO AGE AND CONDITION.
7. SERVICE POLE SHALL BE 12' IN LENGTH WITH AN IN GROUND DEPTH OF 5'.

Lee County, FL

409 - US 41 & Coconut Rd - - Econolite Type - ASC3

Coordination Pattern Data
Pattern Data (MM)3-2

Pattern - 33

Split Pattern	33	TS2 (Pat-Off)	10-3	Splits in	Percent
Cycle	130	Std (COS)	333	Offsets in	Percent
Offset Value	43%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 33)	12	50	15	23	12	50	19	19	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 34

Split Pattern	34	TS2 (Pat-Off)	11-1	Splits in	Percent
Cycle	130	Std (COS)	344	Offsets in	Percent
Offset Value	35%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 34)	12	54	13	21	12	54	17	17	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 36

Split Pattern	36	TS2 (Pat-Off)	11-3	Splits in	Percent
Cycle	130	Std (COS)	312	Offsets in	Percent
Offset Value	30%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 36)	12	50	14	24	12	50	20	18	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 37

Split Pattern	37	TS2 (Pat-Off)	12-1	Splits in	Percent
Cycle	130	Std (COS)	313	Offsets in	Percent
Offset Value	49%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 37)	15	52	12	21	12	55	15	18	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 41

Split Pattern	41	TS2 (Pat-Off)	13-2	Splits in	Percent
Cycle	150	Std (COS)	411	Offsets in	Percent
Offset Value	38%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 41)	15	43	18	24	15	43	24	18	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 42

Split Pattern	42	TS2 (Pat-Off)	13-3	Splits in	Percent
Cycle	150	Std (COS)	422	Offsets in	Percent
Offset Value	60%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 42)	15	42	21	22	16	41	22	21	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 43

Split Pattern	43	TS2 (Pat-Off)	14-1	Splits in	Percent
Cycle	150	Std (COS)	433	Offsets in	Percent
Offset Value	92%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 43)	16	43	16	25	16	43	25	16	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 44

Split Pattern	44	TS2 (Pat-Off)	14-2	Splits in	Percent
Cycle	150	Std (COS)	444	Offsets in	Percent
Offset Value	2%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	2		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 44)	15	46	20	20	12	48	22	18	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 45

Split Pattern	45	TS2 (Pat-Off)	14-3	Splits in	Percent
Cycle	150	Std (COS)	453	Offsets in	Percent
Offset Value	82%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 45)	15	50	18	17	10	55	18	17	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 51

Split Pattern	51	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	160	Std (COS)	511	Offsets in	Percent
Offset Value	56%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 51)	17	43	20	20	12	48	20	20	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 53

Split Pattern	53	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	200	Std (COS)	151	Offsets in	Percent
Offset Value	13%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 53)	10	50	14	26	8	52	26	14	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 57

Split Pattern	57	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	200	Std (COS)	152	Offsets in	Percent
Offset Value	97%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 57)	16	54	15	15	8	62	15	15	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 60

Split Pattern	60	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	180	Std (COS)	644	Offsets in	Percent
Offset Value	7%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 60)	16	42	13	29	9	49	23	19	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 61

Split Pattern	61	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	180	Std (COS)	611	Offsets in	Percent
Offset Value	21%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 61)	13	49	16	22	13	49	22	16	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Pattern - 62

Split Pattern	62	TS2 (Pat-Off)	0-0	Splits in	Percent
Cycle	180	Std (COS)	622	Offsets in	Percent
Offset Value	24%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Splits (Split Pat 62)	13	52	18	17	10	55	19	16	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat.	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls																
Ped Recalls																
Max Recalls		X				X										
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

Lee County, FL

409 - US 41 & Coconut Rd - - Econolite Type - ASC3

Controller Timing Plan (MM)2-1
Plan 1

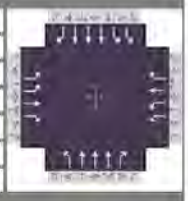
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB								
Min Green	7	26	7	10	7	26	7	10	0	0	0	0	0	0	0	0
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	26	0	38	0	28	0	40	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	25	90	25	25	20	90	30	25	0	0	0	0	0	0	0	0
Max 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.1	5.1	4.0	4.7	5.1	5.1	4.0	4.7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	2.5	2.0	2.0	2.5	2.5	2.0	2.0	2.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	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
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	30	30	30	30	30	30	30	30	30	30	30	30	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix M: Intersection Analysis - HCS 2010 Printouts

(9 Sheets)

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 21, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2016 AM Pk Hr - 03-22-2016.xus		
Project Description	2016 AM Pk Hr				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	161	94	141	426	124	59	81	908	188	74	1997	197

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.5	1.1	62.4	8.2	4.0	13.8
Yellow	5.1	0.0	5.1	4.0	4.0	4.7
Red	2.5	0.0	2.0	2.0	2.0	2.5

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	14.2	21.0	24.3	31.1	15.2	70.6	14.1	69.5
Change Period, ($Y+R_c$), s	6.0	7.2	6.0	7.2	7.6	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	8.1	13.4	18.1	9.7	8.0		4.8	
Green Extension Time (g_e), s	0.2	0.4	0.1	0.7	0.0	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.95		0.93	
Max Out Probability	0.03	0.25	1.00	0.00	0.18		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	164	96	144	435	127	60	83	927	192	76	2038	201
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	6.1	6.3	11.4	16.1	7.7	4.2	6.0	14.9	10.2	2.8	45.4	9.9
Cycle Queue Clearance Time (g_c), s	6.1	6.3	11.4	16.1	7.7	4.2	6.0	14.9	10.2	2.8	45.4	9.9
Green Ratio (g/C)	0.06	0.11	0.11	0.14	0.18	0.18	0.06	0.49	0.49	0.05	0.48	0.48
Capacity (c), veh/h	218	198	171	484	342	290	104	2477	708	173	2436	758
Volume-to-Capacity Ratio (X)	0.753	0.484	0.840	0.899	0.370	0.208	0.796	0.374	0.271	0.436	0.837	0.265
Back of Queue (Q), ft/ln (95 th percentile)	122.9	135.3	225.3	321.7	162.1	73.5	126.5	242.8	154.5	54.6	628.3	163.4
Back of Queue (Q), veh/ln (95 th percentile)	4.8	5.3	9.0	12.7	6.4	2.9	5.0	9.6	6.2	2.1	24.7	6.5
Queue Storage Ratio (RQ) (95 th percentile)	0.20	0.00	0.56	0.71	0.00	0.11	0.26	0.00	0.21	0.09	0.00	0.59
Uniform Delay (d_1), s/veh	59.9	54.7	57.0	55.0	46.5	45.1	60.4	20.8	19.6	59.9	29.4	20.1
Incremental Delay (d_2), s/veh	2.0	0.7	14.4	17.8	0.2	0.1	5.1	0.4	0.9	0.6	3.6	0.9
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	61.9	55.4	71.4	72.7	46.7	45.2	65.6	21.3	20.6	60.6	33.0	21.0
Level of Service (LOS)	E	E	E	E	D	D	E	C	C	E	C	C
Approach Delay, s/veh / LOS	63.7	E		64.8	E		24.2	C		32.8	C	
Intersection Delay, s/veh / LOS	37.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	C	2.9	C	2.6	B
Bicycle LOS Score / LOS	1.2	A	1.5	A	1.1	A	1.8	A

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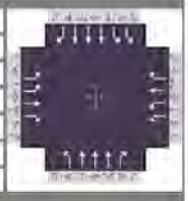
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 22, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2016 PM Pk Hr - 03-22-2016.xus		
Project Description	2016 PM Pk Hr				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	268	129	103	405	117	65	119	1338	489	67	1294	143

Signal Information			
Cycle, s	180.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	2.4	107.7	16.5	1.4	15.2
Yellow	5.1	0.0	5.1	4.0	0.0	4.7
Red	2.5	0.0	2.0	2.0	2.0	2.5

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.5	22.4	25.9	25.8	16.8	117.3	14.4	114.8
Change Period, ($Y+R_c$), s	6.0	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	16.1	14.5	23.3	13.1	14.2		5.5	
Green Extension Time (g_e), s	0.4	0.7	0.7	0.7	0.2	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		0.97	
Max Out Probability	0.00	0.00	0.01	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	273	132	105	413	119	66	121	1365	499	68	1320	146
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	14.1	12.5	11.5	21.3	11.1	7.1	12.2	25.7	36.7	3.5	25.4	7.4
Cycle Queue Clearance Time (g_c), s	14.1	12.5	11.5	21.3	11.1	7.1	12.2	25.7	36.7	3.5	25.4	7.4
Green Ratio (g/C)	0.09	0.08	0.08	0.13	0.10	0.10	0.08	0.61	0.61	0.04	0.60	0.60
Capacity (c), veh/h	317	157	136	458	193	163	141	3106	887	130	3037	945
Volume-to-Capacity Ratio (X)	0.864	0.837	0.773	0.902	0.620	0.406	0.861	0.440	0.563	0.528	0.435	0.154
Back of Queue (Q), ft/ln (95 th percentile)	271.1	261.2	213.3	387.9	231.4	129.8	245.2	381	458	71.7	380.1	121.8
Back of Queue (Q), veh/ln (95 th percentile)	10.7	10.3	8.5	15.3	9.1	5.2	9.7	15.0	18.3	2.8	15.0	4.9
Queue Storage Ratio (RQ) (95 th percentile)	0.45	0.00	0.53	0.86	0.00	0.20	0.51	0.00	0.62	0.12	0.00	0.44
Uniform Delay (d_1), s/veh	80.6	81.2	80.7	76.9	77.3	75.5	81.9	18.5	20.7	85.0	19.6	16.0
Incremental Delay (d_2), s/veh	5.7	4.4	3.5	11.5	1.2	0.6	5.8	0.5	2.6	1.2	0.5	0.3
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	86.3	85.6	84.2	88.3	78.5	76.1	87.7	19.0	23.2	86.3	20.1	16.3
Level of Service (LOS)	F	F	F	F	E	E	F	B	C	F	C	B
Approach Delay, s/veh / LOS	85.7	F		85.0	F		24.3	C		22.7	C	
Intersection Delay, s/veh / LOS	38.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	D	2.9	C	2.6	B
Bicycle LOS Score / LOS	1.3	A	1.5	A	1.6	A	1.3	A

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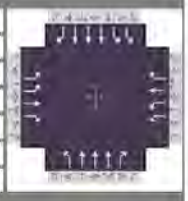
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 22, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2021 PM Pk Hr - 03-23-2016.xus		
Project Description	2021 PM Pk Hr				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	263	129	103	426	123	69	126	1407	514	71	1361	151

Signal Information			
Cycle, s	180.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	0.6	105.9	16.3	2.8	15.2	
Yellow	5.1	0.0	5.1	4.0	0.0	4.7	
Red	2.5	2.5	2.0	2.0	2.0	2.5	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.3	22.4	27.0	27.2	17.5	116.1	14.4	113.0
Change Period, ($Y+R_c$), s	6.0	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	15.8	14.5	24.4	13.6	14.9		5.7	
Green Extension Time (g_e), s	0.4	0.7	0.7	0.7	0.2	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		0.97	
Max Out Probability	0.00	0.00	0.03	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	268	132	105	435	126	70	129	1436	524	72	1389	154
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	13.8	12.5	11.5	22.4	11.6	7.5	12.9	28.0	40.3	3.7	27.9	8.0
Cycle Queue Clearance Time (g_c), s	13.8	12.5	11.5	22.4	11.6	7.5	12.9	28.0	40.3	3.7	27.9	8.0
Green Ratio (g/C)	0.09	0.08	0.08	0.14	0.11	0.11	0.08	0.61	0.61	0.04	0.59	0.59
Capacity (c), veh/h	311	157	136	479	207	175	148	3074	878	130	2986	929
Volume-to-Capacity Ratio (X)	0.862	0.836	0.773	0.907	0.607	0.402	0.868	0.467	0.598	0.556	0.465	0.166
Back of Queue (Q), ft/ln (95 th percentile)	266.3	261.2	213.3	407.5	239.7	136.8	256.7	410.2	498	76.1	412.6	133.3
Back of Queue (Q), veh/ln (95 th percentile)	10.5	10.3	8.5	16.0	9.4	5.5	10.1	16.1	19.9	3.0	16.2	5.3
Queue Storage Ratio (RQ) (95 th percentile)	0.44	0.00	0.53	0.91	0.00	0.21	0.53	0.00	0.68	0.13	0.00	0.48
Uniform Delay (d_1), s/veh	80.8	81.2	80.7	76.3	76.3	74.4	81.5	19.5	21.9	85.1	21.0	16.9
Incremental Delay (d_2), s/veh	5.1	4.4	3.5	13.0	1.1	0.6	5.8	0.5	3.0	1.4	0.5	0.4
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	85.8	85.6	84.2	89.3	77.3	75.0	87.3	20.0	24.9	86.5	21.5	17.3
Level of Service (LOS)	F	F	F	F	E	E	F	C	C	F	C	B
Approach Delay, s/veh / LOS	85.4	F		85.3	F		25.4	C		24.0	C	
Intersection Delay, s/veh / LOS	39.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	D	2.9	C	2.6	B
Bicycle LOS Score / LOS	1.3	A	1.5	A	1.6	A	1.4	A

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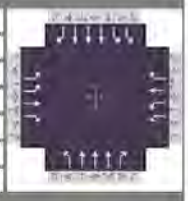
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 22, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2026 PM Pk Hr - 03-23-2016.xus		
Project Description	2026 PM Pk Hr				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	263	129	103	448	130	72	132	1478	541	75	1430	158

Signal Information			
Cycle, s	180.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	1.2	104.1	16.3	3.9	15.2
Yellow	5.1	0.0	5.1	4.0	0.0	4.7
Red	2.5	2.5	2.0	2.0	2.0	2.5

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.3	22.4	28.2	28.3	18.2	115.0	14.4	111.2
Change Period, ($Y+R_c$), s	6.0	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	15.8	14.5	25.5	14.2	15.5		5.9	
Green Extension Time (g_e), s	0.4	0.7	0.7	0.7	0.2	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		0.98	
Max Out Probability	0.00	0.00	0.07	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	268	132	105	457	133	73	135	1508	552	77	1459	161
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	13.8	12.5	11.5	23.5	12.2	7.8	13.5	30.5	44.4	3.9	30.6	8.6
Cycle Queue Clearance Time (g_c), s	13.8	12.5	11.5	23.5	12.2	7.8	13.5	30.5	44.4	3.9	30.6	8.6
Green Ratio (g/C)	0.09	0.08	0.08	0.15	0.12	0.12	0.09	0.60	0.60	0.04	0.58	0.58
Capacity (c), veh/h	311	157	136	501	219	185	154	3041	868	131	2936	913
Volume-to-Capacity Ratio (X)	0.862	0.836	0.773	0.912	0.607	0.397	0.873	0.496	0.636	0.584	0.497	0.177
Back of Queue (Q), ft/ln (95 th percentile)	266.3	261.2	213.3	428	249.6	141.9	266.2	442.7	544.4	80.5	447.8	144.4
Back of Queue (Q), veh/ln (95 th percentile)	10.5	10.3	8.5	16.8	9.8	5.7	10.5	17.4	21.8	3.2	17.6	5.8
Queue Storage Ratio (RQ) (95 th percentile)	0.44	0.00	0.53	0.95	0.00	0.22	0.55	0.00	0.74	0.14	0.00	0.52
Uniform Delay (d_1), s/veh	80.8	81.2	80.7	75.8	75.5	73.5	81.2	20.6	23.4	85.2	22.4	17.8
Incremental Delay (d_2), s/veh	5.1	4.4	3.5	14.5	1.0	0.5	5.8	0.6	3.5	1.5	0.6	0.4
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	85.8	85.6	84.2	90.3	76.5	74.1	87.0	21.2	26.9	86.7	23.0	18.2
Level of Service (LOS)	F	F	F	F	E	E	F	C	C	F	C	B
Approach Delay, s/veh / LOS	85.4	F		85.8	F		26.6	C		25.5	C	
Intersection Delay, s/veh / LOS	39.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	D	2.9	C	2.6	B
Bicycle LOS Score / LOS	1.3	A	1.6	A	1.7	A	1.4	A

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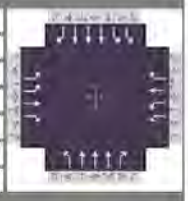
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 25, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2021 PM Pk Hr w Developments - 03-25-2016.xus		
Project Description	2021 PM Pk Hr w Developments				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	503	339	238	446	308	173	240	1511	524	156	1446	296

Signal Information			
Cycle, s	180.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.2	3.7	86.9	26.1	3.9	22.8	
Yellow	5.1	0.0	5.1	0.0	0.0	4.7	
Red	2.5	2.5	2.0	2.0	0.0	2.5	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	32.0	33.9	28.1	30.0	24.0	100.2	17.8	94.0
Change Period, ($Y+R_c$), s	6.0	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	28.0	28.7	25.4	24.8	23.5		10.2	
Green Extension Time (g_e), s	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	1.00	0.07	1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	513	346	243	455	314	177	245	1542	535	159	1476	302
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	26.0	26.7	26.7	23.4	22.8	19.8	21.5	37.9	50.8	8.2	38.2	22.0
Cycle Queue Clearance Time (g_c), s	26.0	26.7	26.7	23.4	22.8	19.8	21.5	37.9	50.8	8.2	38.2	22.0
Green Ratio (g/C)	0.14	0.15	0.15	0.14	0.13	0.13	0.12	0.52	0.52	0.06	0.48	0.48
Capacity (c), veh/h	498	276	239	499	236	200	212	2624	749	196	2450	762
Volume-to-Capacity Ratio (X)	1.031	1.251	1.016	0.912	1.332	0.883	1.156	0.588	0.714	0.813	0.602	0.396
Back of Queue (Q), ft/ln (95 th percentile)	545	881.7	542.9	426.1	858.4	373.1	615	550.6	637.1	190.8	560.1	334.4
Back of Queue (Q), veh/ln (95 th percentile)	21.5	34.7	21.7	16.8	33.8	14.9	24.2	21.7	25.5	7.5	22.1	13.4
Queue Storage Ratio (RQ) (95 th percentile)	0.90	0.00	1.34	0.95	0.00	0.57	1.27	0.00	0.87	0.32	0.00	1.21
Uniform Delay (d_1), s/veh	77.0	76.6	76.6	75.8	78.6	77.3	79.3	30.2	33.3	83.9	33.9	29.8
Incremental Delay (d_2), s/veh	48.6	139.3	62.4	14.4	175.5	32.8	110.2	1.0	5.7	20.4	1.1	1.5
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	125.6	215.9	139.1	90.2	254.1	110.1	189.4	31.1	39.0	104.3	35.1	31.3
Level of Service (LOS)	F	F	F	F	F	F	F	C	D	F	D	C
Approach Delay, s/veh / LOS	156.9	F		148.4	F		49.6	D		40.2	D	
Intersection Delay, s/veh / LOS	80.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	D	2.9	C	2.6	B
Bicycle LOS Score / LOS	2.3	B	2.0	B	1.8	A	1.6	A

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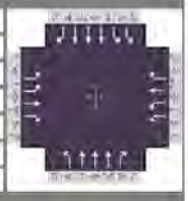
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 25, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2026 PM Pk Hr w Developments - 03-25-2016.xus		
Project Description	2026 PM Pk Hr w Developments				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	567	375	277	468	386	176	301	1582	551	160	1515	426

Signal Information											
Cycle, s	180.0	Reference Phase	2								
Offset, s	0	Reference Point	End	Green	10.4	3.5	86.9	27.2	2.8	22.8	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.1	0.0	5.1	0.0	0.0	4.7	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.5	2.5	2.0	2.0	0.0	2.5	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	32.0	32.8	29.2	30.0	24.0	100.0	18.0	94.0
Change Period, ($Y+R_c$), s	6.0	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	28.0	27.6	26.6	24.8	23.5		10.4	
Green Extension Time (g_e), s	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	1.00	0.17	1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	579	383	283	478	394	180	307	1614	562	163	1546	435
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1774	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	26.0	25.6	25.6	24.6	22.8	20.2	21.5	40.6	55.2	8.4	40.8	35.4
Cycle Queue Clearance Time (g_c), s	26.0	25.6	25.6	24.6	22.8	20.2	21.5	40.6	55.2	8.4	40.8	35.4
Green Ratio (g/C)	0.14	0.14	0.14	0.15	0.13	0.13	0.12	0.52	0.52	0.06	0.48	0.48
Capacity (c), veh/h	498	265	229	521	236	200	212	2619	748	199	2450	762
Volume-to-Capacity Ratio (X)	1.163	1.445	1.235	0.917	1.669	0.898	1.449	0.616	0.752	0.820	0.631	0.570
Back of Queue (Q), ft/ln (95 th percentile)	676.5	1094.9	726.5	446.7	1244.8	383.8	901	584.6	688.3	196	593.1	500.3
Back of Queue (Q), veh/ln (95 th percentile)	26.6	43.1	29.1	17.6	49.0	15.4	35.5	23.0	27.5	7.7	23.4	20.0
Queue Storage Ratio (RQ) (95 th percentile)	1.12	0.00	1.79	0.99	0.00	0.59	1.86	0.00	0.94	0.33	0.00	1.82
Uniform Delay (d_1), s/veh	77.0	77.2	77.2	75.3	78.6	77.5	79.3	30.9	34.4	83.9	34.6	33.2
Incremental Delay (d_2), s/veh	93.4	220.2	137.3	15.9	319.2	36.1	226.7	1.1	6.9	21.8	1.2	3.1
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	170.4	297.4	214.6	91.2	397.8	113.5	306.0	32.0	41.3	105.6	35.9	36.3
Level of Service (LOS)	F	F	F	F	F	F	F	C	D	F	D	D
Approach Delay, s/veh / LOS	219.5	F		209.9	F		68.0	E		41.3	D	
Intersection Delay, s/veh / LOS	108.5						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.4	C	3.5	D	2.9	C	2.6	B
Bicycle LOS Score / LOS	2.5	B	2.2	B	1.9	A	1.7	A

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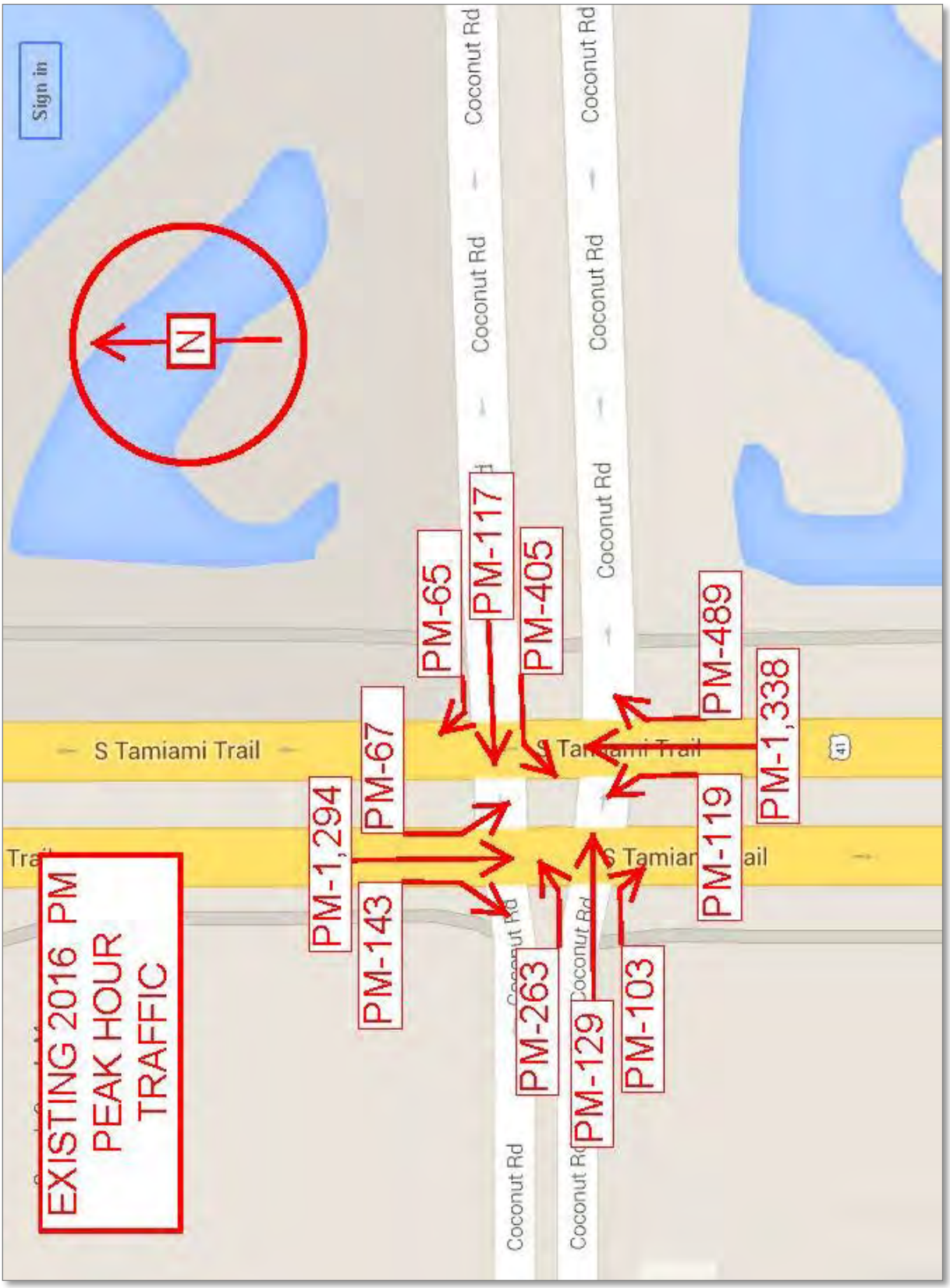
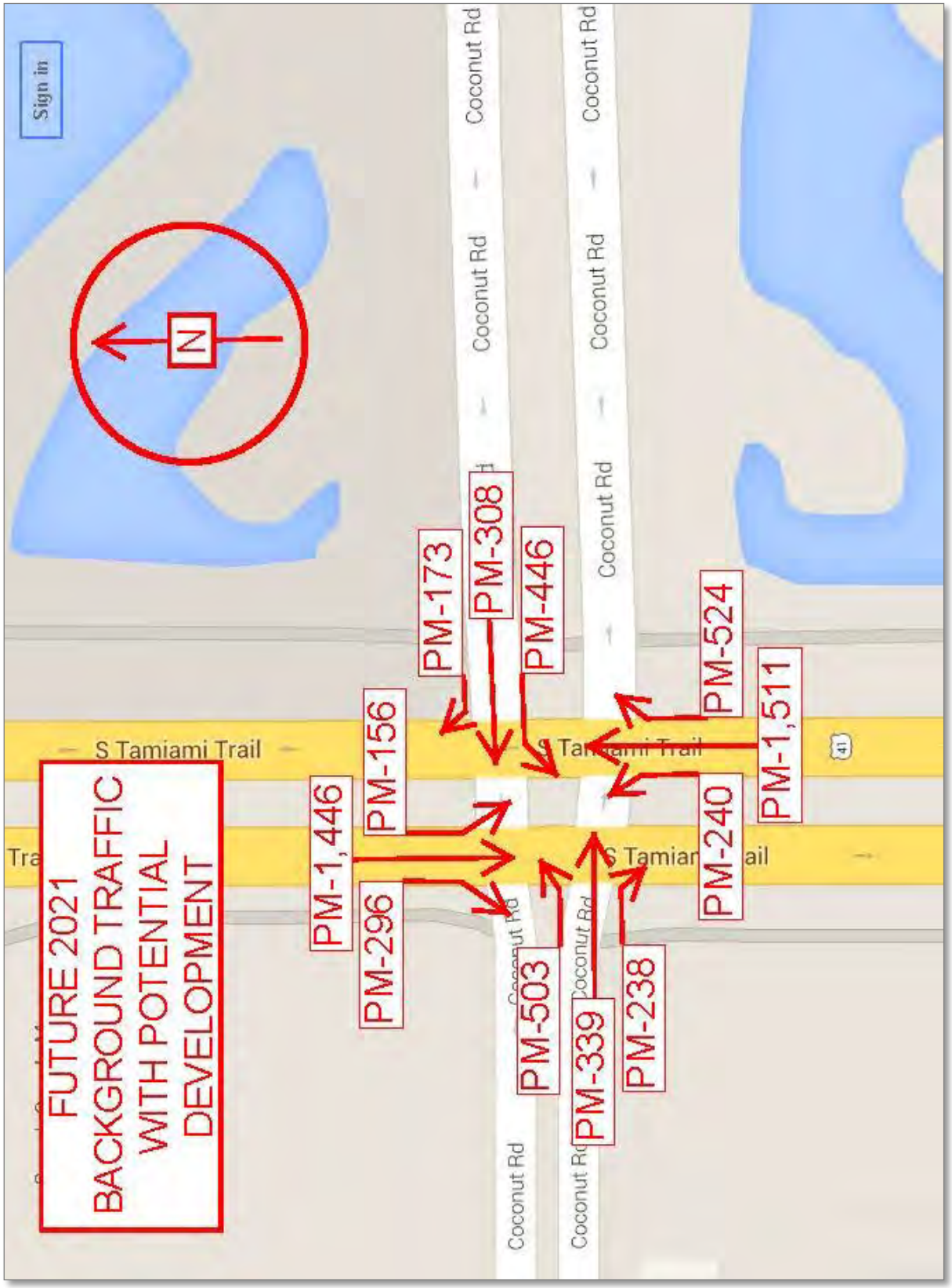

EXISTING 2016 PM
PEAK HOUR
TRAFFIC
N
Sign in
S Tamiami Trail
Coconut Rd
PM-1,294
PM-143
PM-67
PM-65
PM-117
PM-263
PM-129
PM-405
PM-103
PM-119
PM-489
PM-1,338


FUTURE 2021
BACKGROUND TRAFFIC
WITH POTENTIAL
DEVELOPMENT
N
Sign in
S Tamiami Trail
Coconut Rd
PM-1,446
PM-296
PM-156
PM-173
PM-308
PM-503
PM-339
PM-238
PM-446
PM-240
PM-524
PM-1,511

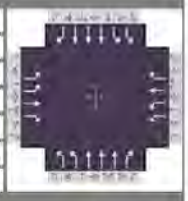

FUTURE 2026
BACKGROUND TRAFFIC
WITH POTENTIAL
DEVELOPMENT
N
Sign in
S Tamiami Trail
Coconut Rd
PM-1,515
PM-426
PM-160
PM-176
PM-386
PM-468
PM-567
PM-375
PM-277
PM-301
PM-551
PM-1,582

Appendix N: Intersection Alternative – HCS 2010 Analysis

(2 Sheets)

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 25, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2021 PM Pk Hr w Development - Improved - 03-2...		
Project Description	2021 PM Pk Hr w Developments - Improved				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	503	339	238	446	308	173	240	1511	524	156	1446	296

Signal Information			
Cycle, s	165.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	14.1	0.9	68.5	24.4	3.8	28.5
Yellow	0.0	0.0	5.1	0.0	4.7	4.0
Red	2.5	0.0	2.0	2.0	2.5	2.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	34.5	45.5	26.4	37.4	16.6	75.6	17.4	76.5
Change Period, ($Y+R_c$), s	7.2	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	26.1	30.9	23.4	29.4	13.5		9.5	
Green Extension Time (g_e), s	1.2	1.1	1.0	0.9	0.5	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.00	0.00	0.00	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	513	346	243	455	314	177	245	1542	535	159	1476	302
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1723	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	24.1	28.9	20.0	21.4	27.4	15.7	11.5	42.1	42.1	7.5	39.2	16.2
Cycle Queue Clearance Time (g_c), s	24.1	28.9	20.0	21.4	27.4	15.7	11.5	42.1	42.1	7.5	39.2	16.2
Green Ratio (g/C)	0.17	0.23	0.32	0.15	0.18	0.24	0.09	0.42	0.56	0.06	0.42	0.59
Capacity (c), veh/h	570	432	511	510	341	383	294	2108	817	205	2134	925
Volume-to-Capacity Ratio (X)	0.900	0.800	0.475	0.892	0.921	0.461	0.834	0.732	0.655	0.775	0.691	0.326
Back of Queue (Q), ft/ln (95 th percentile)	407.9	501.8	316.8	368.3	494.3	201.1	224.6	616.3	523.7	153.1	578	120
Back of Queue (Q), veh/ln (95 th percentile)	16.1	19.8	12.7	14.5	19.5	8.0	8.8	24.3	20.9	6.0	22.8	4.8
Queue Storage Ratio (RQ) (95 th percentile)	0.67	0.00	0.62	0.65	0.00	0.31	0.31	0.00	0.71	0.26	0.00	0.28
Uniform Delay (d_1), s/veh	67.5	59.7	45.3	69.0	66.2	14.6	74.3	40.5	24.9	76.5	39.0	10.3
Incremental Delay (d_2), s/veh	2.2	1.3	0.3	2.2	6.8	0.3	2.4	2.3	4.1	2.4	1.9	0.9
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	69.7	61.1	45.5	71.2	73.0	14.9	76.7	42.8	29.0	78.9	40.9	11.2
Level of Service (LOS)	E	E	D	E	E	B	E	D	C	E	D	B
Approach Delay, s/veh / LOS	61.6	E		61.3	E		43.2	D		39.4	D	
Intersection Delay, s/veh / LOS	48.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.5	C	3.5	D	3.0	C	3.0	C
Bicycle LOS Score / LOS	2.3	B	2.0	B	1.8	A	1.6	A

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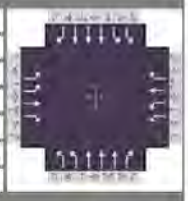
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency				Duration, h	0.25
Analyst	CM	Analysis Date	Mar 25, 2016	Area Type	Other
Jurisdiction		Time Period		PHF	0.98
Urban Street	US 41 (SR 45)	Analysis Year	2016	Analysis Period	1> 4:00
Intersection	Coconut Road	File Name	2026 PM Pk Hr w Development - Improved - 03-2...		
Project Description	2026 PM Pk Hrw Developments - Improved				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	567	375	277	468	386	176	301	1582	551	160	1515	426

Signal Information			
Cycle, s	165.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	10.0	2.0	56.2	25.5	9.7	31.7
Yellow	5.1	0.0	5.1	0.0	4.7	4.0
Red	2.5	0.0	2.0	2.0	2.5	2.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	37.7	54.6	27.5	44.4	19.6	65.3	17.6	63.3
Change Period, ($Y+R_c$), s	7.2	7.2	2.0	7.2	2.5	7.1	7.6	7.1
Max Allow Headway (MAH), s	3.1	3.1	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	29.2	32.4	24.4	36.3	16.5		9.7	
Green Extension Time (g_e), s	1.3	1.3	1.1	1.0	0.6	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	0.00	0.00	0.00	0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	579	383	283	478	394	180	307	1614	562	163	1546	435
Adjusted Saturation Flow Rate (s), veh/h/ln	1723	1863	1610	1723	1863	1579	1723	1691	1449	1723	1691	1579
Queue Service Time (g_s), s	27.2	30.4	21.4	22.4	34.3	15.1	14.5	49.8	51.5	7.7	47.7	29.8
Cycle Queue Clearance Time (g_c), s	27.2	30.4	21.4	22.4	34.3	15.1	14.5	49.8	51.5	7.7	47.7	29.8
Green Ratio (g/C)	0.18	0.29	0.39	0.15	0.23	0.29	0.10	0.35	0.51	0.06	0.34	0.53
Capacity (c), veh/h	636	535	629	533	420	452	357	1790	735	209	1728	829
Volume-to-Capacity Ratio (X)	0.910	0.716	0.449	0.896	0.937	0.397	0.859	0.902	0.765	0.781	0.895	0.524
Back of Queue (Q), ft/ln (95 th percentile)	463.2	521.6	330.7	382.8	626.3	191.2	268.1	746.3	646.9	156.9	719.2	197.2
Back of Queue (Q), veh/ln (95 th percentile)	18.2	20.5	13.2	15.1	24.7	7.6	10.6	29.4	25.9	6.2	28.3	7.9
Queue Storage Ratio (RQ) (95 th percentile)	0.77	0.00	0.64	0.67	0.00	0.29	0.36	0.00	0.88	0.26	0.00	0.46
Uniform Delay (d_1), s/veh	65.9	52.8	37.1	68.4	62.7	14.6	72.8	50.7	32.7	76.4	51.6	11.4
Incremental Delay (d_2), s/veh	6.9	1.4	0.2	2.2	15.5	0.2	2.4	7.9	7.4	2.4	7.6	2.4
Initial Queue Delay (d_3), 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
Control Delay (d), s/veh	72.9	54.1	37.3	70.6	78.2	14.8	75.1	58.6	40.1	78.8	59.2	13.8
Level of Service (LOS)	E	D	D	E	E	B	E	E	D	E	E	B
Approach Delay, s/veh / LOS	59.0	E		63.9	E		56.4	E		51.5	D	
Intersection Delay, s/veh / LOS	56.5						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.5	C	3.5	C	3.0	C	3.0	C
Bicycle LOS Score / LOS	2.5	B	2.2	B	1.9	A	1.7	A

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Appendix O: Crash Data – West of US 41

(1 Sheet)

EventCrash Date	EventCrash Time	EventOnStreet	EventCrossStreet	EventCrash Node	Event County	EventCityCode	EventAddress	Event RoadwayID	EventMP	EventDD X	EventDD Y	EventNodeDescription
11/13/2015	14:17:00	NORTH COMMONS DR	COCONUT RD	12_2041	LEE	BONITA SPRINGS	No Data	No Data	0	-81.81602706	26.39797639	COCONUT RD @ NORTH COMMONS DR
10/22/2015	23:00:00	ELDORADO BLVD	COCONUT RD	12_2039	LEE	BONITA SPRINGS	No Data	No Data	0	-81.82856346	26.39798352	COCONUT RD @ EL DORADO BLVD
9/19/2015	7:42:00	COCONUT ROAD	VIA VENETO AT THE COLONY ENTRANCE	12_2035	LEE	BONITA SPRINGS	No Data	No Data	0	-81.8327298	26.3979703	COCONUT RD @ VIA VENETO BLVD
5/17/2015	8:10:00	EL DORADO BLVD	COCONUT RD	12_2039	LEE	BONITA SPRINGS	No Data	No Data	0	-81.82856346	26.39798352	COCONUT RD @ EL DORADO BLVD
2/7/2015	2:45:00	COCONUT RD	SPRING CREEK DR	12_2038	LEE	BONITA SPRINGS	No Data	No Data	0	-81.82616265	26.39797925	COCONUT RD @ SPRING CREEK RD
10/8/2014	23:00:00	COCONUT RD	EL DORADO BLVDVD	12_2039	LEE	BONITA SPRINGS	No Data	No Data	0	-81.82856346	26.39798352	COCONUT RD @ EL DORADO BLVD
7/22/2014	9:00:00	COCONUT RD	SAND FLY CT	12_2035	LEE	FORT MYERS	5001 COCONUT RD	No Data	0	-81.8327298	26.3979703	COCONUT RD @ VIA VENETO BLVD
11/9/2013	2:00:00	ELDORADO BLVDVD	COCONUT RD	12_2039	LEE	FORT MYERS	No Data	No Data	0	-81.82856346	26.39798352	COCONUT RD @ EL DORADO BLVD
2/12/2013	6:55:00	COCONUT RD	OLD MEADOWBROOK CIR	12_2037	LEE	BONITA SPRINGS	No Data	No Data	0	-81.82355981	26.39797461	COCONUT RD @ OLDE MEADOWBROOK BLVD
8/15/2012	18:19:00	COCONUT RD	NORTH COMMONS DR	12_2041	LEE	UNINCORPORATED	No Data	No Data	0	-81.81599	26.39789	COCONUT RD @ NORTH COMMONS DR
12/31/2011	1701	COCONUT RD	OLDE MEADOWBROOK CIRCLE	DATA_ENTRY	LEE	No Data	No Data	No Data	0	-81.823605	26.39795333	COCONUT RD @ OLDE MEADOWBROOK CIR

Appendix P: Crash Data – East of US 41

(1 Sheet)

EventID	EventCrash Date	EventCrash Time	EventOnStreet	EventCrossStreet	Event Crash Node	Event County	EventCityCode	EventAddress	Event RoadwayID	Event MP	EventDD X	EventDD Y	EventNodeDescription
86103219	12/30/2015	15:34:00	COCONUT RD	IMPERIAL PKWY	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
86102652	12/6/2015	15:47:00	COCONUT RD	HEALTH CENTER BLVD	12_2045	LEE	UNINCORPORATED	No Data	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
86102546	12/3/2015	13:54:00	COCONUT RD	VIA VILLAGIO PKWY	12_2045	LEE	UNINCORPORATED	No Data	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
86102441	11/25/2015	9:22:00	COCONUT RD	IMPERIAL PKWY	12_2023	LEE	FORT MYERS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
86101905	11/9/2015	6:31:00	IMPERIAL BLVD	COCONUT DR	12_2023	LEE	FORT MYERS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85188983	10/31/2015	11:00:00	THREE OAKS PW	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78431702	26.39620972	THREE OAKS PKWY @ COCONUT RD
86101568	10/28/2015	7:40:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
86101368	10/19/2015	17:35:00	COCONUT RD	OAKWILDE BLVD	12_2053	LEE	FORT MYERS	No Data	No Data	0	-81.79877218	26.39876629	COCONUT RD @ OAKWILDE BLVD
86100537	9/14/2015	14:47:00	VIA COCONUT POINT	COCONUT RD	12_2054	LEE	UNINCORPORATED	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
86100546	9/14/2015	19:24:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
86100131	8/28/2015	16:30:00	COCONUT RD	THREE OAKS PKWY	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
86099780	8/14/2015	7:50:00	THREE OAKS PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85883659	7/7/2015	0:45:00	COCONUT RD	THREE OAKS PKWY	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85883099	6/12/2015	12:40:00	COCONUT RD	VIA COCONUT PT	12_2054	LEE	FORT MYERS	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
85882790	5/29/2015	20:44:00	COCONUT RD	SPRING RUN BLVD	12_2019	LEE	UNINCORPORATED	No Data	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
85118465	5/28/2015	14:01:00	THREE OAKS PW	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78450775	26.39582253	THREE OAKS PKWY @ COCONUT RD
85882711	5/26/2015	16:47:00	VIA COCONUT PT	COCONUT RD	12_2054	LEE	UNINCORPORATED	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
85882715	5/26/2015	15:00:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85882351	5/11/2015	10:45:00	THREE OAKS PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85776473	4/6/2015	19:00:00	COCONUT RD	THREE OAKS PKWY	12_2023	LEE	UNINCORPORATED	10020 COCONUT RD	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85775612	3/10/2015	12:40:00	THREE OAKS PKWY	COCONUT RD	12_2023	LEE	FORT MYERS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85775332	3/2/2015	9:13:00	SPRING RUN BLVD	COCONUT RD	12_2019	LEE	BONITA SPRINGS	9520 SPRING RUN BLVD	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
85615128	1/20/2015	16:15:00	SANDY CREEK TERRACE	SPRINGRUN BLVD	12_2031	LEE	BONITA SPRINGS	23506 SANDY CREEK TERRACE	No Data	0	-81.79763869	26.39756156	SPRING RUN BLVD @ SANDYCREEK TER
85614965	1/14/2015	17:29:00	THREE OAKS PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
85614893	1/12/2015	15:25:00	COCONUT RD	SPRING RUN BLVD	12_2019	LEE	UNINCORPORATED	No Data	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
85614112	12/15/2014	11:25:00	COCONUT DR	SPRING RUN BLVD	12_2019	LEE	BONITA SPRINGS	No Data	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
84996305	11/12/2014	17:24:00	COCONUT RD	SPRING RUN BLVDVD	12_2019	LEE	BONITA SPRINGS	No Data	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
84996239	11/10/2014	4:01:00	CR 881	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
84996252	11/10/2014	16:15:00	VIA COCONUT PT	COCONUT RD	12_2054	LEE	FORT MYERS	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
84995889	10/26/2014	18:50:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
84995546	10/10/2014	0:08:00	COCONUT RD	VIA COCONUT PT	12_2054	LEE	BONITA SPRINGS	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
84794116	7/2/2014	12:14:00	THREE OAKS PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
84793592	6/3/2014	18:31:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
84152318	3/4/2014	15:58:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
9482355	1/29/2014	13:50:00	COCNUT RD	VIA COCONUT POINT	12_2054	LEE	UNINCORPORATED	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
81585876	12/9/2013	0:34:00	COCONUT RD	VIA COCONUT RD	12_2054	LEE	UNINCORPORATED	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
81588597	10/3/2013	15:27:00	COCONUT RD	VIA COCONUT PT	12_2054	LEE	BONITA SPRINGS	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
81586001	9/24/2013	19:24:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
9506440	7/22/2013	8:30:00	CIR 881	COCONUT RD	12_2023	LEE	FORT MYERS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
81593383	6/16/2013	15:45:00	COCONUT BLVD		12_2019	LEE	BONITA SPRINGS	No Data	No Data	0	-81.79493925	26.39571431	COCONUT RD @ SPRING RUN BLVD
81590299	5/16/2013	8:50:00	IE IMPERIAL PARKWAY IE THREE OAKS	COCONUT ROAD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
9499169	4/28/2013	17:40:00	THRE OAKS PKWY	COCONUT RD	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
81589663	3/18/2013	14:58:00	COCONUT RD	HEALTH CENTER BLVDVD	12_2045	LEE	BONITA SPRINGS	No Data	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
83276176	3/14/2013	16:50:00	COCONUT RD	THREE OAKS PKWY	12_2023	LEE	UNINCORPORATED	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
81591774	3/12/2013	8:11:00	IMPERIAL PKWY	COCONUT RD	12_2023	LEE	BONITA SPRINGS	No Data	No Data	0	-81.78456793	26.39613154	THREE OAKS PKWY @ COCONUT RD
9502905	2/28/2013	18:04:00	8200 HEALTH CENTER BLVDVD		12_2045	LEE	FORT MYERS	8200 HEALTH CENTER BLVD	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
81590065	2/24/2013	14:08:00	COCONUT RD	VIA VILLAGIO WAY	12_2045	LEE	UNINCORPORATED	No Data	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
81591908	2/13/2013	19:17:00	COCONUT RD	HEALTH CENTER BLVDVD	12_2045	LEE	BONITA SPRINGS	No Data	No Data	0	-81.80814806	26.39810394	COCONUT RD @ VIA VILLAGIO
81586566	1/16/2013	18:19:00	COCONUT RD	VIA COCONUT POINT	12_2054	LEE	UNINCORPORATED	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT
9492704	1/1/2013	19:05:00	VIA COCONUT POINT AND COCONUT RD	VIA COCONUT POINT AND COCONUT RD	12_2054	LEE	BONITA SPRINGS	No Data	No Data	0	-81.80574015	26.39874023	COCONUT RD @ VIA COCONUT POINT