O'ROURKE
ENGINEERING & PLANNING

SIGNAL WARRANT ANALYSIS

FOR

KANNER CPUD
Kanner Highway and Proposed Signalized Driveway

Prepared for:

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June 26, 2029
Revised February 18, 2021
Revised March 16, 2021
Revised April 22, 2021

MR18031.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer Susan E. O'Rourke Susan E. O'Rourke, P.E. Date signed and sealed: 4/22/2021 License #: 42684

Introduction

O'Rourke Engineering & Planning prepared the signal warrant analysis of the proposed full access driveway (Driveway 1) to be referred to as Costco Boulevard, located approximately 2,400 feet north of Indian Street on Kanner Highway. **Figure 1** shows the general project location and the relative location of the proposed full access driveway which is the subject of this analysis.

Attachment A includes the project site plan.

This signal warrant analysis uses existing hourly count data on Kanner Highway and estimated hourly volumes on the minor approach, Costco Boulevard. Each component of the analysis is discussed below.

Trip Generation

Three major developments will have access to Costco Boulevard; the subject property, M&M Retail, Certus ALF and out parcel, and Cleveland Clinic Medical Office. M&M Retail will consist of 157,531 square feet of Discount Warehouse, 16,750 square feet of Shopping Center, 2,500 square feet of fast-food w/ drive-thru, 16,240 square feet of restaurant and 398 apartment units.

The minor street traffic was estimated from the future developments: M&M Retail and Cleveland Clinic Medical Office. The traffic from the Certus ALF and outparcel were not included in the analysis, as the construction of this development could occur after the development of M&M Retail. The volumes were then used to evaluate the signal warrants. Each step is discussed below.

Table 1 includes the daily trip generation for each development referenced above.

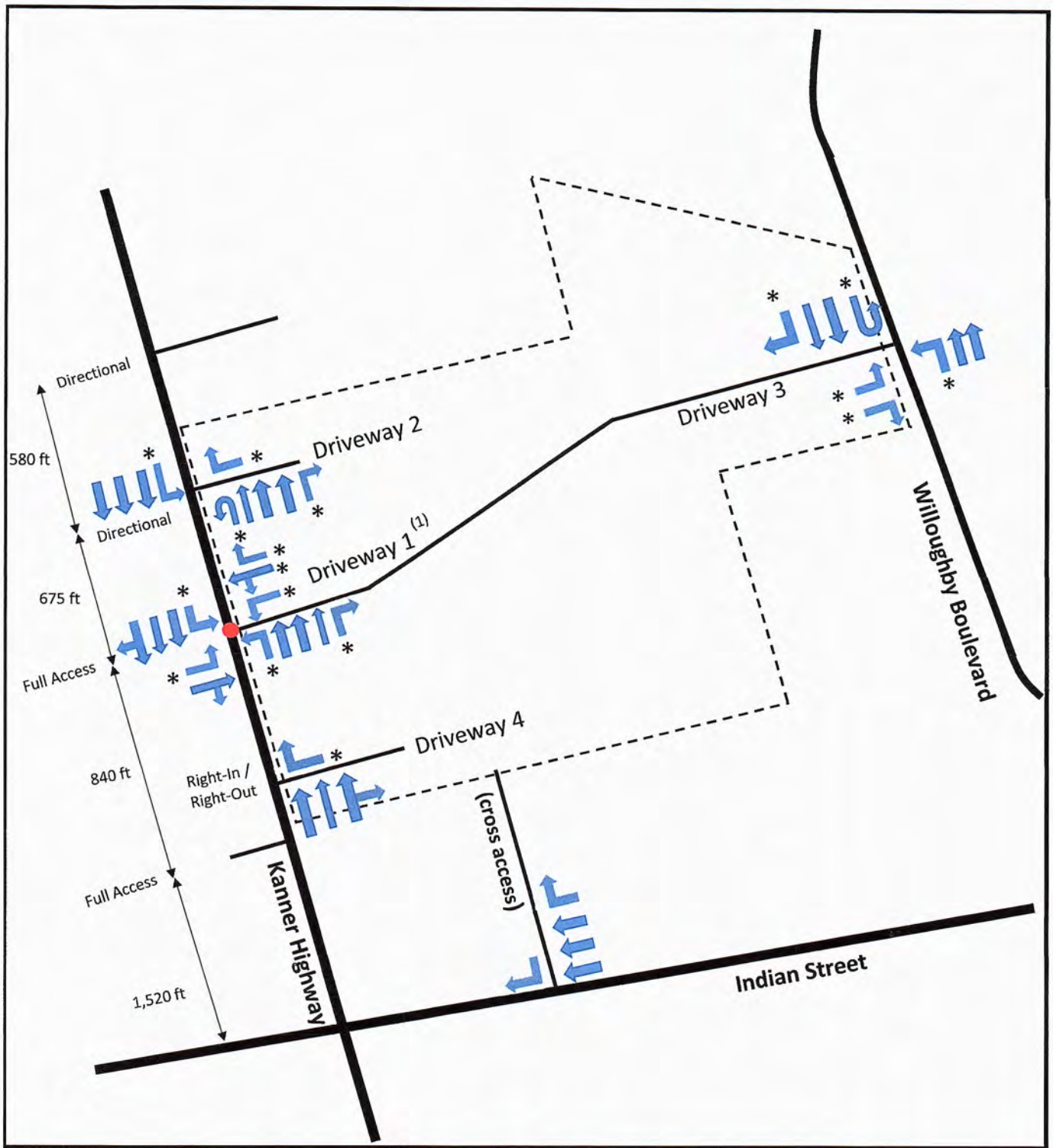
Major Street Traffic

Hourly directional traffic volumes were obtained from the FDOT website for the "Major Street": SR-76 (Kanner Highway). **Table 2** summarizes the existing hourly traffic volumes (2019) on Kanner Highway directly from the FDOT Peak Season 2019 count. The Kanner Highway volumes were compared to the Major Street thresholds. The existing major street volumes far exceed the maximum volume for several hours of the day. Given that the major street traffic is already so high before growth and before other project traffic was added, the existing traffic was used for the major street traffic.

Minor Street Traffic

The estimated movements from Costco Boulevard (minor approach) were developed based on the project traffic assigned to Costco Boulevard. **Attachment B** includes the percent assignment for each development included in the signal warrant.

The development traffic assigned to Costco Boulevard was distributed over the hours in the day based on ITE hourly distribution percentages. The percentages reflect the project traffic during that hour as it relates to daily traffic. The daily trips calculated above were applied to the hourly distribution. **Table 3** summarizes the hourly minor approach volumes. These distribution values are also included in Attachment B.



NTS

O'ROURKE ENGINEERING & PLANNING

22 SE Seminole Street
Stuart, Fl, 34994

Job #: MR18031.0 | Date: 4/21/21

Legend

= Existing Lane
* = Proposed Lane
= Driveway Spacing
= Proposed Signal

(1) Lane Call Out Subject to FDOT Permitting

Figure 1

Lane Geometrics

M & M Retail

Table 1: Daily Trip Generation

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total
Medical Office (Cleveland Clinic)	720	155,080	Sft	T = 38.42(X) - 87.62	50%	50%	2,936	2,935	5,871	0	0	0	0.0%	2,936	2,935	5,871
M&M Retail - Residential Land Use	221	398	DU	T = 5.45(X) - 1.75	50%	50%	1,084	1,083	2,167	76	228	304	14.0%	1,008	855	1,863
M&M Retail - Total Retail Land Use		193,021	Sft		50%	50%	5,685	5,683	11,368	982	830	1,812	15.9%	4,703	4,853	9,556
- Shopping Center	820	16,750	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	892	892	1,784	47	121	168	9.4%	845	771	1,616
- Discount Club	850	157,531	Sft	T = 41.80(X)	50%	50%	3,293	3,292	6,585	174	445	619	9.4%	3,119	2,847	5,966
-Fast Food (w/ Drive Thru)	857	2,500	Sft	T = 470.95(X)	50%	50%	589	588	1,177	299	104	403	34.2%	290	484	774
- High-Turnover (Sit-Down) Restaurant	934	16,240	Sft	T = 112.18(X)	50%	50%	911	911	1,822	462	160	622	34.1%	449	751	1,200
TOTALS							9,705	9,701	19,406	1,058	1,058	2,116		8,647	8,643	17,290

Source: ITE 10th Edition Trip Generation Rates

COUNTY: 89
STATION: 0114
DESCRIPTION: SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK
START DATE: 03/20/2019
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	36	36	28	16	116	19	12	20	19	70	186
0100	28	20	19	20	87	7	11	7	11	36	123
0200	14	11	4	7	36	19	16	4	11	50	86
0300	6	10	17	16	49	14	19	19	31	83	132
0400	17	20	25	25	87	30	37	43	50	160	247
0500	23	38	37	74	172	74	98	85	139	396	568
0600	72	95	148	134	449	150	172	175	206	703	1152
0700	163	230	254	298	945	277	296	253	269	1095	2040
0800	284	329	256	218	1087	265	186	240	198	889	1976
0900	230	218	224	229	901	172	188	184	212	756	1657
1000	245	224	214	224	907	215	197	224	191	827	1734
1100	241	234	229	284	988	210	203	229	218	860	1848
1200	245	270	259	275	1049	212	203	194	188	797	1846
1300	209	202	238	217	866	203	234	198	179	814	1680
1400	256	287	228	241	1012	187	248	218	202	855	1867
1500	270	250	254	276	1050	208	239	206	222	875	1925
1600	317	281	287	240	1125	226	203	212	244	885	2010
1700	275	260	271	292	1098	251	215	222	215	903	2001
1800	260	234	208	184	886	168	157	160	145	630	1516
1900	198	175	160	124	657	176	142	120	125	563	1220
2000	156	134	110	88	488	106	115	131	94	446	934
2100	79	85	82	70	316	108	101	85	77	371	687
2200	72	68	54	54	248	62	52	41	46	201	449
2300	22	52	59	52	185	32	37	23	20	112	297
24-HOUR TOTALS:					14804					13377	28181

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	745	1167	700	1095	715	2149
P.M.	1545	1161	1645	932	1545	2024
DAILY	745	1167	700	1095	715	2149

GENERATED BY SPS 5.0.53P

Table 2: Major Street Traffic

Table 3: Minor Approach Volumes

Hourly	Hourly Distribution			External Volumes			Percent Assignment to Costco Blvd						Minor Approach Volume
	M&M		Cleveland Clinic	M&M		Cleveland Clinic	M&M Lefts		M&M Rights		Cleveland Clinic Lefts	Cleveland Clinic Rights	
	Retail	Residential	Medical Office	Retail	Residential	Medical Office	Retail	Residential	Retail	Residential			
							35%	20%	15.0%	15.0%	15%	0%	
6-7 AM	0.2%	4.0%	1.4%	10	34	41	4	7	2	5	6	0	21
7-8 AM	1.1%	7.5%	5.4%	53	64	158	19	13	8	10	24	0	65
8-9 AM	2.0%	6.2%	8.9%	97	53	261	34	11	15	8	39	0	96
9-10 AM	3.6%	4.3%	10.4%	175	37	305	61	7	26	6	46	0	130
10-11 AM	5.6%	3.7%	10.1%	272	32	296	95	6	41	5	44	0	168
11-12 PM	8.3%	4.5%	9.1%	403	38	267	141	8	60	6	40	0	222
12-1 PM	10.0%	4.7%	7.9%	485	40	232	170	8	73	6	35	0	253
1-2 PM	9.3%	4.4%	8.8%	451	38	258	158	8	68	6	39	0	242
2-3 PM	9.0%	5.4%	9.1%	437	46	267	153	9	66	7	40	0	239
3-4 PM	8.8%	5.8%	9.2%	427	50	270	149	10	64	8	41	0	236
4-5 PM	9.2%	8.3%	7.8%	446	71	229	156	14	67	11	34	0	243
5-6 PM	9.3%	10.1%	5.6%	451	86	164	158	17	68	13	25	0	241
6-7 PM	8.0%	7.9%	2.2%	388	68	65	136	14	58	10	10	0	194
7-8 PM	6.1%	6.3%	1.3%	296	54	38	104	11	44	8	6	0	147
8-9 PM	4.4%	5.1%	0.7%	214	44	21	75	9	32	7	3	0	107
9-10 PM	2.9%	3.9%	0.3%	141	33	9	49	7	21	5	1	0	70

Signal Warrants

Using the resultant volumes shown in Tables 2 and 3, the warrants with the exception of the pedestrian, accident, and school warrants were analyzed. The minor approach of the full access driveway is the westbound approach. The left-turn volumes and 50% of the right-turn volumes will be considered for triggering the need for the signal. There will be two left-turn lanes and one right-turn lane. The speed limit on Kanner Highway is 45 MPH. The thresholds will be based on two or more lanes for the major street and two or more lanes for the minor street.

Attachment C provides the Traffic signal warrant summary of the Costco Boulevard/Kanner Highway intersection at buildout of the development.

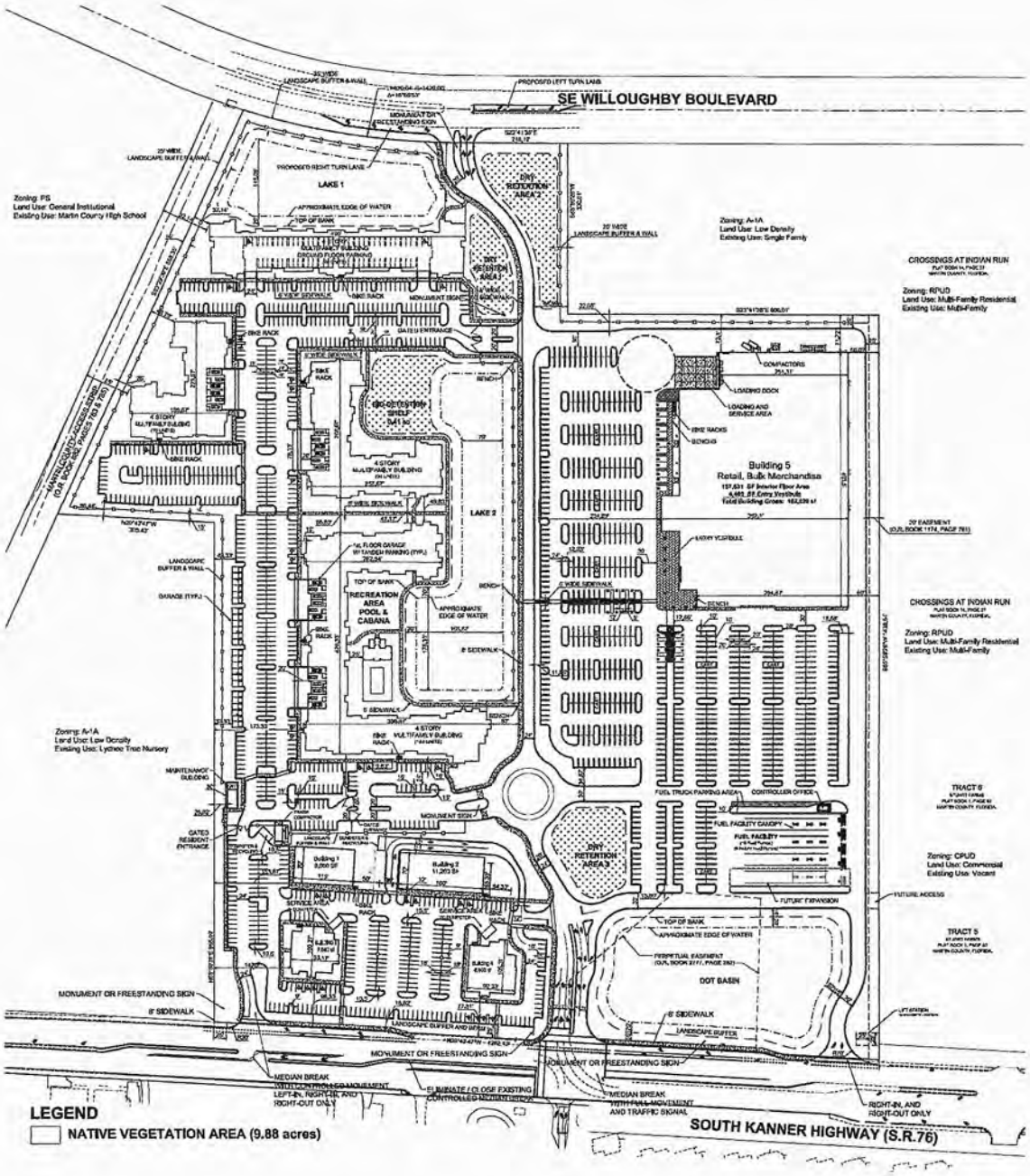
As shown, all warrants will be satisfied at 100% thresholds by completion of M&M Retail.

Conclusion

The M&M Retail development will be commencing construction once approvals are in hand first quarter 2021. The Kanner Highway and full access driveway intersection will be constructed as part of the Discount Club site plan construction. Due to the high volumes already on Kanner, the high speed of travel and the concentration of the development in the southbound left turn lane, a signal will meet monitored warrants within days of the intersection being operational. Therefore, we request that the signal be permitted for installation during the initial construction of the Kanner Highway and full access driveway intersection improvements.

ATTACHMENT A

Site Plan



Site Data

Total Site Area:	2,133,987 sf	(48.99 ac)	100%
Future Land Use Designation (Proposed):	Neighborhood Special District		
Proposed Zoning:	CPUD		
Building Height (max):	45'		
Total Building Area:	370,876 sf	(8.52 ac)	17.4%

Pervious / Impervious Calculations

Impervious Area:	1,525,706 sf	(35.03 ac)	71.5%
Buildings:	370,876 sf	(8.52 ac)	17.4%
Pavement & Curb:	878,518 sf	(20.17 ac)	41.2%
Sidewalks, Patios & Pool:	83,690 sf	(1.92 ac)	3.9%
Lakes:	113,807 sf	(2.61 ac)	5.3%
DOT Basin:	78,815 sf	(1.81 ac)	3.7%
Pervious Area:	608,281 sf	(13.96 ac)	28.5%
Landscape:	535,560 sf	(12.29 ac)	25.1%
Dry Retention Areas:	54,855 sf	(1.26 ac)	2.6%
Bio Detention Area:	17,860 sf	(0.41 ac)	0.8%
Open Space			
Required: (25% of 48.99 ac)		(12.25 ac)	25.0%
Provided*:		(12.25 ac)	25.0%
*Includes Landscape, Dry Retention Areas & Bio Detention Area, Excludes Interior Landscape Areas.			
Interior Landscape Areas:		(1.70 ac)	3.5%

Parking Requirements

Parking Required (per Kanner CPUD):

Retail, bulk merchandise (1 space / 250 sf):	155,906 sf / 250 sf = 624 Spaces
Fuel Facility (1 space / 250 sf + 2 / bay + 1vacuum):	20 Spaces
Retail (1 space / 250 sf):	19,250 sf / 250 sf = 77 Spaces
Restaurant 1 (1 space per Seats + 1 per each employee): @ 270 seats = 14 employees:	104 Spaces
Restaurant 2 (1 space per Seats + 1 per each employee): @ 270 seats = 14 employees:	104 Spaces
Multi-Family	722 Spaces
One Bedroom Units (140) @ 1.3 per unit:	229 Spaces
Two Bedroom Units (240) @ 2.0 per unit:	480 Spaces
Three Bedroom Units (100) @ 2.0 per unit:	20 Spaces
Total Parking Required:	**1,651 Spaces**

Parking Provided:

Retail, bulk merchandise (per Kanner CPUD):	720 Spaces
Standard:	692 Spaces
Handicap:	28 Spaces
Fuel Facility:	20 Spaces
Retail:	80 Spaces
Standard:	74 Spaces
Handicap:	6 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Restaurant:	104 Spaces
Standard:	100 Spaces
Handicap:	4 Spaces
Multi-Family (per Kanner CPUD 1.75 spaces / unit):	700 Spaces
Standard:	683 Spaces
Handicap:	17 Spaces
Total Parking Provided:	**1,725 Spaces**

Bicycle Parking

Retail, Bulk Merchandise		Buildings 3 & 4	
Required:	20 Spaces	Required:	8 Spaces
Provided:	20 Spaces	Provided:	8 Spaces
Buildings 1 & 2		Multifamily	
Required:	8 Spaces	Required:	20 Spaces
Provided:	8 Spaces	Provided:	20 Spaces

Neighborhood Special District

Residential Density		
Maximum UPA (Non- CRA):		15.0
Provided UPA:		8.1 UPA (396 units / 48.99 ac)
Site Area	48.99 ac	
Residential		
Provided Area:	14.70 ac	30.0%
Non-Residential		
Provided Area:	34.29 ac	70.0%
Commercial Area:	22.91 ac	46.8%
Stormwater Tracts:	8.86 ac	18.1%
Right of Way:	2.52 ac	5.1%
Non-Residential Floor Area Ratio		
Maximum Allowable Area:	4,267,974 sf	2.0 FAR
Provided Area:	193,145 sf	0.09 FAR

Building Data

Building Coverage:	370,876 sf
Retail, Bulk Merchandise:	167,531 sf
Fuel Facility Office:	125 sf
Retail:	19,250 sf
Restaurant:	16,243 sf
Multi-Family (Includes Garages, Cabana & Maintenance)	177,730 sf

Native Vegetation Requirement

Total Site Area:	**48.99 acres**
Wetlands:	6.50 acres
Surface Waters:	4.10 acres
Upland Area:	38.39 acres

Required Native Landscape Area (25.0%): 9.60 acres
Provided Native Landscape Area (25.7%): 9.88 acres

General Notes:

- All building, parking and access areas shall document compliance with the requirements of the American Disabilities Act prior to the issuance of a building permit.
- Refer to Landscape Plan for landscape details and specifications.
- All exotic plant species shall be removed and all required landscaping shall be installed prior to the issuance of a Certificate of Occupancy.
- The applicant will request in writing, prior to any land clearing, that the City of Stuart Development Dept. Perform a field inspection to determine if barricades have been properly installed on the site.
- All signs will comply with the sign regulations at the time of permitting.
- "No Trespass" signs to be posted during construction and displayed at all entrances and exits.
- All building numbers to be no less than four (4) inches tall, illuminated, and not blocked by landscaping.
- Building numbers shall be placed at front and rear entrances.
- Sediment control measures shall be maintained in working order at all times.
- Provisions shall be made to minimize the deposit of sediment by transport vehicles onto public paved surfaces.
- Sediment basin and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land activity and shall be made functional before land disturbance takes place.
- All public sidewalks are to be a minimum of 6' in width.
- A crime watch contact shall be established on site, to include all residents and businesses.
- Any sidewalk damaged during construction shall be repaired or replaced.
- A/C Units, trash receptacles, back flow preventer, and other above ground utilities shall be screened with landscape per City of Stuart LDR.
- Knox Box key vaults shall be provided as required.
- No permanent trailers shall be permitted on site. A temporary construction trailer shall be allowed during the course construction activities.
- Detectable warning surfaces shall be provided at all sidewalk ramps and crosswalks.
- Buildings 1, 2, 3, 4 & 5 may include any use allowed in the CPUD Agreement and any additional additional parking required shall be debited against the excess parking provided.

Land Use Site Data

Total Site Area:	48.99 ac	
Right of Way:	2.52 ac	5.1%
Residential:	14.70 ac	30.0%
Commercial:	22.91 ac	46.8%
Retail, Bulk Merchandise:	17.31 ac	
Kanner Highway Parcel:	5.60 ac	
Stormwater Tracts:	8.86 ac	18.1%
Lake 1:	1.80 ac	
Lake 2:	2.09 ac	
Dry Retention Area 1:	0.33 ac	
Dry Retention Area 2:	0.78 ac	
Dry Retention Area 3:	0.48 ac	
DOT Basin:	2.59 ac	

Density & Floor Area Ratio

Residential	
Residential Units:	396
Density Overall Site:	8.1 UPA (396 units / 48.99 ac)
Commercial	
Project Site Area:	2,133,987 s'
Total Commercial Building Area:	193,145 s'
Floor Area Ratio:	0.09 FAR

lucido & associates

Key / Location:

Project Team:

Applicant:
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Piscataway, NJ 07734
732-409-3778

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Surveyor
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Governmental
GW Consultants
Ed Weinberg
1000 SE Monterey Commons Blvd #208
Stuart, Florida 34996

A-1

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal
03.18.2021	SLS	2nd Resubmittal
04.15.2021	SLS	3rd Resubmittal

NORTH

SCALE: 1" = 100'

0 50' 100' 200'

REG. # 1016
Thomas P. Lucido

Designer	—	Sheet	1 of 1
Manager	—		
Project Number	—		
Municipal Number	—		
Computer File	19-035 - Costco Master Site Plan.dwg		

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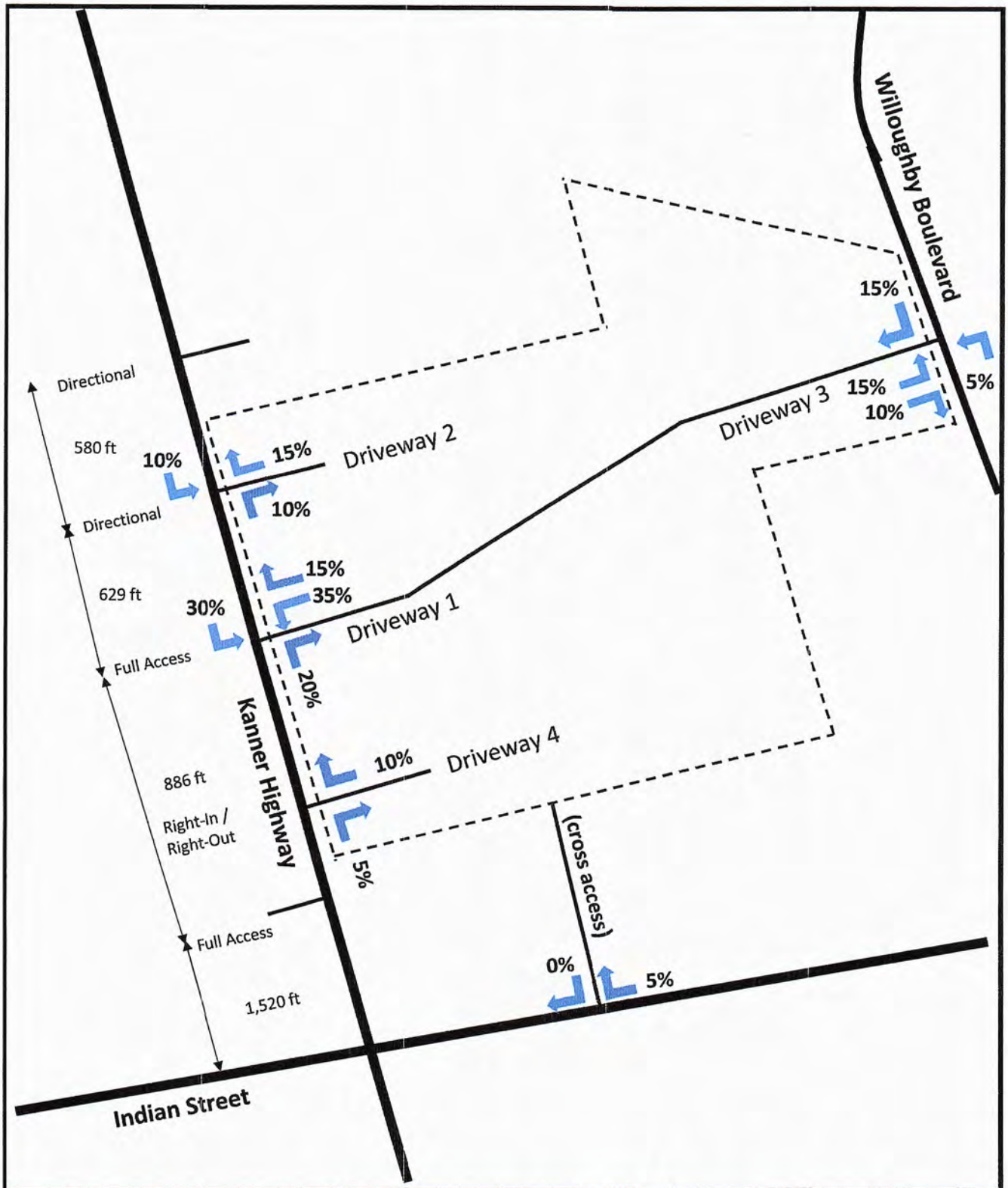
ATTACHMENT B

Percent Assignment
and
Distribution Percentage



NTS

22 SE Seminole St
Stuart, Fl, 34994

Job #: MR18031.0 | Date: 4.22.21

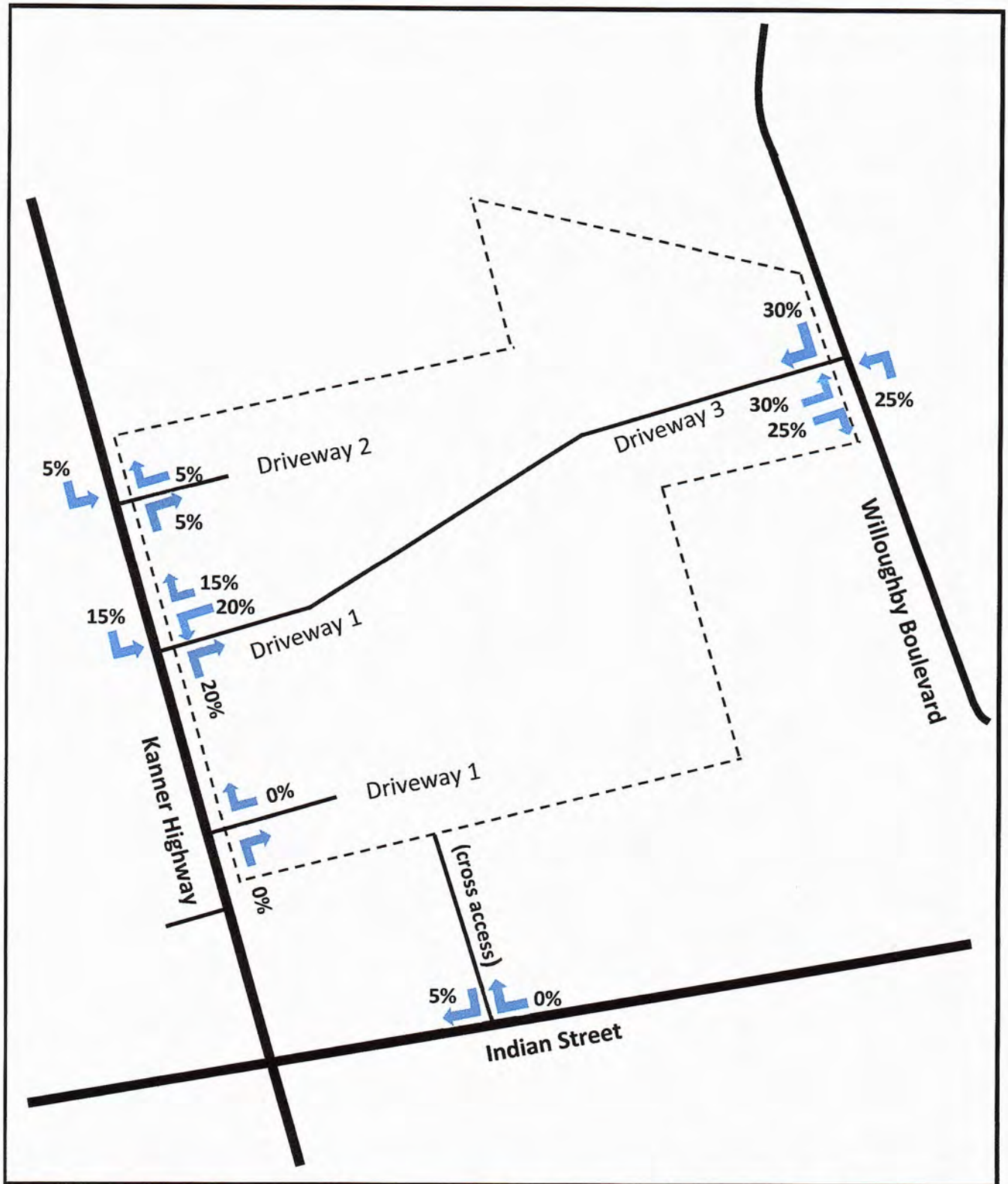
Legend

= Project Location
= Direction
15% = Percent Project Traffic
xx ft. = Driveway Spacing

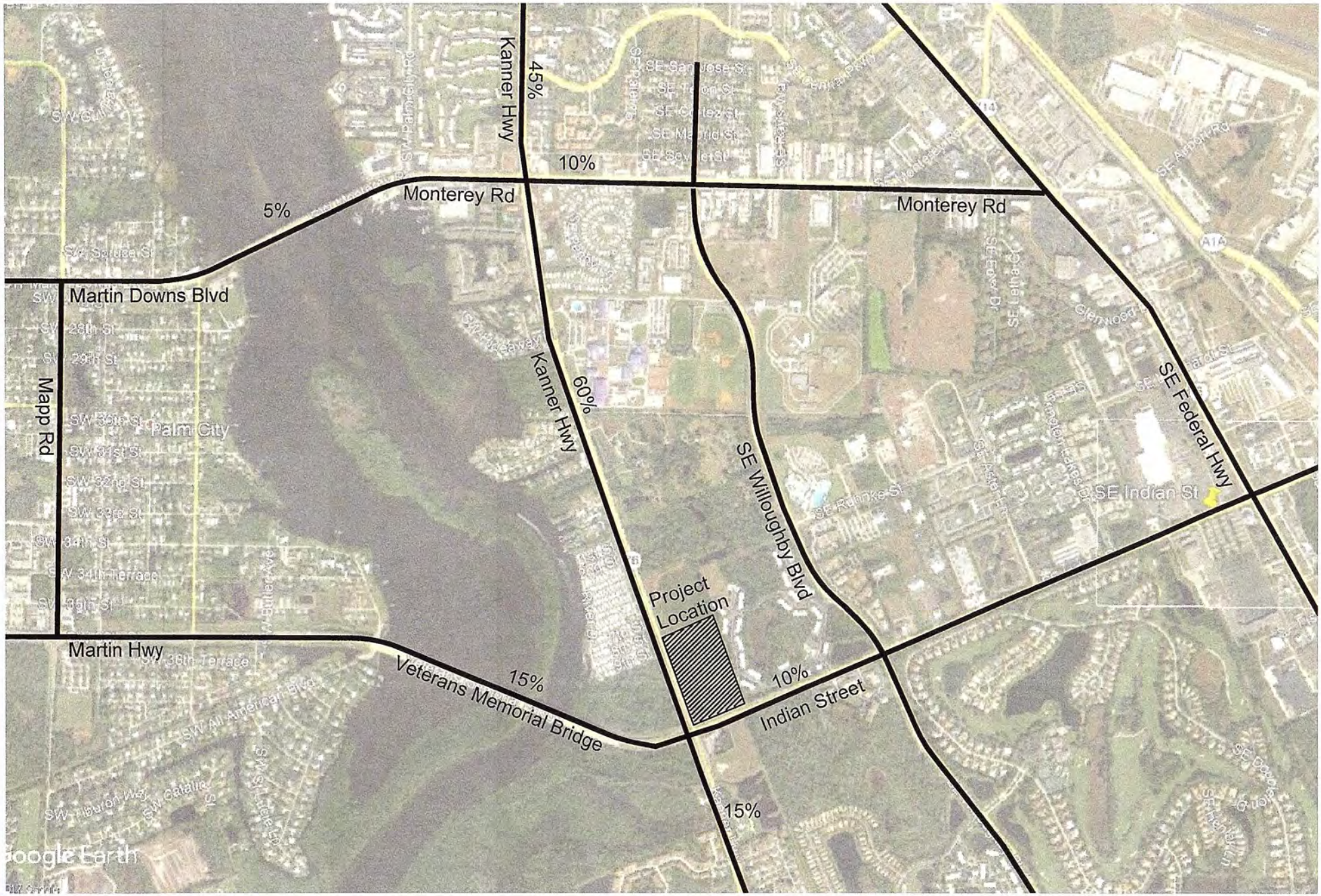
Figure 2a

Driveway Assignment - Retail

M & M Retail



NTS 22 SE Seminole St Stuart, Fl, 34994 Job #: MR18031.0 Date: 8/31/18	Legend = Project Location = Direction 15% = Percent Project Traffic xx ft. = Driveway Spacing	Figure 2b Driveway Assignment - Residential M & M Retail



N
NTS

O'ROURKE ENGINEERING & PLANNING

JOB#: MR17034.0 | FILE: C4.SB10_Figure 2_12.08.17 | DATE: December 8, 2017

LEGEND

% = Project Percent Assignment

FIGURE - 2

Project Percent Assignment

MMHS - SB 10

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

Land Use	221 Multifamily Housing (Mid-Rise)						222 Multifamily Housing (High-Rise)											
Setting	General Urban/ Suburban		Dense Multi-Use Urban		Center City Core		Dense Multi-Use Urban						Center City Core					
Time Period	Weekday		Weekday		Weekday		Weekday		Saturday		Sunday		Weekday		Saturday		Sunday	
Trip Type	Vehicle		Vehicle		Vehicle		Person		Person		Person		Person		Person		Person	
# Data Sites	8		4		3		8		8		8		6		6		5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.5	4.7	0.5	5.0	1.3	3.5	1.6	4.2	3.1	6.2	2.4	6.4	0.8	6.1	1.9	7.6	2.4	6.8
12:15	0.4	4.6	0.7	5.0	1.3	4.4	1.3	4.4	2.8	6.0	2.1	6.1	0.8	5.8	1.8	7.5	2.0	6.6
12:30	0.3	4.3	0.5	5.3	0.7	4.6	1.1	4.3	2.5	5.9	1.9	6.0	0.7	5.9	1.3	7.2	1.8	6.6
12:45	0.3	4.5	0.7	4.8	0.4	4.4	0.8	4.5	2.2	5.9	1.6	5.9	0.4	5.4	1.1	7.4	1.6	6.8
1:00	0.3	4.4	0.7	4.5	0.2	5.3	0.7	4.7	1.8	5.8	1.4	6.1	0.3	5.3	1.0	6.6	1.5	6.6
1:15	0.3	4.5	0.5	4.4	0.2	4.6	0.5	4.5	1.4	6.1	1.4	6.3	0.2	5.3	0.9	6.3	1.3	7.1
1:30	0.3	5.0	0.7	3.8	0.7	4.6	0.4	4.9	1.2	6.1	1.3	6.8	0.2	5.3	0.8	6.2	1.0	7.0
1:45	0.3	5.2	0.5	4.7	0.7	4.2	0.4	5.2	1.0	6.3	1.2	7.2	0.2	5.3	0.7	6.2	0.9	6.9
2:00	0.2	5.4	0.6	4.6	0.9	4.4	0.3	5.4	0.9	6.3	1.2	7.0	0.2	4.7	0.9	6.2	0.8	6.8
2:15	0.2	5.4	0.7	4.4	0.9	4.9	0.4	5.7	0.9	6.0	0.9	6.9	0.1	4.7	0.9	6.1	0.6	6.7
2:30	0.2	5.3	0.7	5.2	0.7	4.6	0.4	5.9	0.7	6.3	0.7	6.4	0.2	5.2	0.8	6.1	0.7	6.7
2:45	0.3	5.2	0.6	5.2	0.4	5.3	0.4	5.8	0.8	6.5	0.8	6.3	0.3	5.5	0.8	6.1	0.5	6.7
3:00	0.3	5.8	0.5	5.3	0.2	5.1	0.3	5.6	0.7	6.6	0.6	6.4	0.3	6.1	0.6	6.5	0.4	6.6
3:15	0.4	6.5	0.2	5.8	0.2	4.6	0.3	6.1	0.7	6.5	0.6	6.4	0.3	6.3	0.4	6.8	0.5	6.4
3:30	0.4	7.1	0.2	6.0	0.2	5.7	0.3	5.9	0.7	6.4	0.6	6.6	0.4	6.1	0.4	6.8	0.4	6.4
3:45	0.5	7.9	0.3	7.2	1.1	4.9	0.4	6.0	0.7	6.4	0.5	6.4	0.3	6.0	0.4	6.8	0.4	6.0
4:00	0.5	8.3	0.3	7.4	1.1	5.3	0.6	6.5	0.7	6.5	0.6	7.0	0.4	5.8	0.5	7.0	0.4	6.0
4:15	0.8	9.4	0.5	8.2	1.3	6.8	0.7	6.1	0.6	7.0	0.5	7.4	0.5	5.7	0.4	6.7	0.3	6.1
4:30	1.1	9.8	1.1	8.0	1.5	6.6	0.9	6.6	0.6	7.4	0.5	7.8	0.6	6.0	0.4	7.0	0.3	6.5
4:45	1.5	10.1	1.4	7.0	1.3	7.3	1.0	7.0	0.5	7.3	0.5	8.1	0.8	6.4	0.4	6.6	0.2	7.0
5:00	1.7	10.1	1.9	6.5	1.8	7.9	1.2	7.0	0.6	7.6	0.6	7.7	0.9	6.6	0.4	6.9	0.3	7.3
5:15	1.8	9.5	2.2	6.3	2.0	6.0	1.4	7.5	0.6	7.3	0.7	7.6	1.0	7.2	0.5	7.1	0.3	7.3
5:30	2.3	9.0	2.8	6.5	2.2	6.2	1.7	8.1	0.7	7.1	0.8	7.3	1.2	7.2	0.6	6.5	0.4	6.5
5:45	3.0	8.5	3.4	6.3	2.6	7.5	2.0	7.9	0.8	7.1	0.9	6.8	1.5	7.5	0.6	6.5	0.6	7.2
6:00	4.0	7.9	4.1	7.7	4.9	6.4	2.6	7.9	1.0	6.8	1.0	7.0	2.0	7.9	0.7	6.1	0.7	7.3
6:15	5.1	7.2	5.2	7.1	6.8	7.1	3.5	7.7	1.2	6.6	1.0	6.5	2.7	7.8	1.1	6.1	1.0	7.1
6:30	6.0	6.7	6.0	7.0	7.7	7.1	4.2	7.2	1.5	6.5	1.0	7.0	3.4	7.7	1.3	6.6	1.2	7.6
6:45	6.8	6.3	9.2	6.5	9.3	5.5	5.5	6.9	1.8	6.3	1.2	7.3	4.2	7.8	1.6	6.8	1.4	6.9
7:00	7.5	6.3	10.9	5.5	8.6	6.2	6.8	6.7	2.1	6.0	1.3	7.0	4.7	7.6	2.1	6.6	1.7	6.6
7:15	7.5	6.1	12.0	5.3	7.5	6.4	7.8	6.5	2.5	5.8	1.6	6.8	5.8	7.1	2.1	6.6	2.1	6.6
7:30	7.5	6.1	11.8	5.0	7.9	5.7	8.8	6.2	2.7	5.6	2.0	6.2	7.1	6.7	2.7	6.1	2.4	6.4
7:45	6.9	5.9	9.0	5.1	7.7	5.3	8.5	6.0	3.1	5.5	2.4	5.7	7.8	5.9	3.1	5.6	2.8	6.2
8:00	6.2	5.1	7.2	4.7	7.5	4.6	8.0	5.7	3.6	5.5	2.8	5.6	8.1	5.9	3.3	5.4	3.2	6.0
8:15	5.7	4.7	5.8	4.2	7.1	4.9	6.8	5.5	4.1	5.5	3.3	5.5	7.8	5.5	3.9	4.7	3.7	5.6
8:30	4.9	4.4	4.7	4.3	6.4	4.9	6.1	5.1	4.5	5.3	3.7	5.0	7.2	5.3	4.1	4.4	4.1	5.1
8:45	4.6	4.1	4.8	4.0	5.7	5.7	5.8	4.7	4.9	5.1	3.7	4.8	7.0	5.3	5.1	4.4	4.7	5.0
9:00	4.3	3.9	4.0	3.8	5.3	5.1	5.1	4.4	5.0	4.9	4.1	4.5	6.7	4.7	5.6	4.1	5.0	4.7
9:15	4.1	3.6	3.9	4.1	4.9	4.4	5.1	3.8	4.7	4.8	4.5	4.8	6.1	4.5	5.9	4.4	5.2	4.4
9:30	4.0	3.3	3.7	3.7	5.1	5.3	4.7	3.5	4.6	4.5	4.8	4.9	5.4	4.4	6.3	4.3	5.3	4.1
9:45	3.8	2.8	3.6	3.7	4.2	4.9	4.3	3.4	4.6	4.3	5.3	5.3	4.9	3.8	6.1	4.1	5.7	3.5
10:00	3.7	2.7	4.1	3.6	3.5	5.1	4.3	3.1	4.8	4.2	5.6	5.1	4.6	3.5	6.4	4.1	6.2	3.3
10:15	3.8	2.5	4.3	3.4	3.3	4.6	4.4	3.4	5.2	4.1	5.6	4.6	4.2	3.3	6.4	3.4	6.8	3.1
10:30	4.0	2.2	4.2	3.0	2.4	3.3	4.3	3.1	5.8	4.0	5.5	4.1	4.4	2.7	6.3	3.4	7.5	2.5
10:45	4.3	1.9	3.8	2.5	2.9	2.4	4.2	2.9	5.7	3.9	5.6	3.4	4.6	2.4	6.6	3.3	7.5	2.3
11:00	4.5	1.5	4.4	2.3	3.3	2.4	4.5	2.8	5.6	3.6	5.8	3.0	4.9	2.1	6.6	2.9	7.5	2.0
11:15	4.7	1.2	4.3	1.6	4.0	1.8	4.4	2.3	6.0	3.5	6.2	2.8	5.5	1.6	7.2	2.6	7.1	2.2
11:30	4.9	0.9	4.6	1.2	4.0	1.8	4.4	2.1	5.8	3.4	6.3	2.5	5.4	1.2	7.7	2.5	6.9	2.5
11:45	4.6	0.6	4.8	0.9	4.4	1.8	4.3	1.9	6.0	3.2	6.5	2.5	5.8	1.1	7.3	2.2	6.9	2.5

Land Use	820 Shopping Center		840 Automobile Sales (New)		841 Automobile Sales (Used)		842 Recreational Vehicle Sales		843 Automobile Parts Sales		848 Tire Store	
Setting	General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban		General Urban/ Suburban	
Time Period	Weekday		Weekday		Weekday		Weekday		Weekday		Weekday	
Trip Type	Vehicle		Vehicle		Vehicle		Vehicle		Vehicle		Vehicle	
# Data Sites	10		6		14		5		7		6	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.2	10.0	0.0	9.4	0.0	9.1	0.0	10.9	0.0	8.6	0.0	7.4
12:15	0.1	10.1	0.0	8.7	0.0	9.9	0.0	10.5	0.0	8.9	0.0	8.7
12:30	0.2	9.8	0.0	9.0	0.0	9.9	0.0	10.7	0.0	9.2	0.0	9.4
12:45	0.1	9.6	0.0	8.9	0.0	9.4	0.0	8.7	0.0	9.8	0.0	11.3
1:00	0.1	9.3	0.0	9.5	0.0	8.3	0.0	8.3	0.0	8.6	0.0	11.8
1:15	0.1	9.2	0.0	9.8	0.0	7.5	0.0	8.5	0.0	7.8	0.0	11.9
1:30	0.0	9.2	0.0	10.2	0.0	7.1	0.0	7.7	0.0	7.4	0.0	12.9
1:45	0.0	9.2	0.0	10.2	0.0	6.3	0.0	8.2	0.0	6.7	0.0	11.0
2:00	0.0	9.0	0.0	10.0	0.0	7.7	0.0	8.2	0.0	7.0	0.0	10.4
2:15	0.0	8.8	0.0	9.8	0.0	8.5	0.0	9.0	0.0	7.8	0.0	9.1
2:30	0.0	8.8	0.0	9.1	0.0	8.5	0.0	8.0	0.0	8.4	0.0	8.3
2:45	0.0	8.8	0.0	8.9	0.0	8.6	0.0	7.8	0.0	9.0	0.0	9.3
3:00	0.0	8.8	0.0	8.3	0.0	8.4	0.0	7.8	0.0	8.7	0.0	10.1
3:15	0.0	8.9	0.0	8.1	0.0	8.9	0.0	7.0	0.0	8.7	0.0	10.0
3:30	0.0	9.0	0.0	8.1	0.0	9.8	0.0	9.2	0.0	8.4	0.0	9.4
3:45	0.0	9.0	0.0	7.7	0.0	10.9	0.0	9.0	0.0	8.2	0.0	9.5
4:00	0.0	9.2	0.0	7.4	0.0	11.0	0.0	10.0	0.0	8.8	0.0	9.4
4:15	0.0	9.2	0.0	7.5	0.0	11.1	0.0	9.3	0.0	8.5	0.0	9.1
4:30	0.1	9.3	0.0	8.0	0.0	11.4	0.0	8.0	0.0	8.2	0.2	8.4
4:45	0.1	9.4	0.0	8.1	0.0	10.8	0.0	8.8	0.0	7.6	0.2	8.3
5:00	0.1	9.3	0.0	8.2	0.0	10.2	0.0	6.7	0.0	7.5	0.4	6.9
5:15	0.1	9.1	0.0	8.1	0.0	9.6	0.0	5.8	0.0	7.3	0.5	6.1
5:30	0.2	8.7	0.1	6.8	0.0	7.7	0.0	4.3	0.0	7.0	0.5	5.4
5:45	0.2	8.3	0.2	5.9	0.0	6.3	0.0	2.0	0.1	6.7	0.5	3.8
6:00	0.2	8.0	0.7	5.0	0.0	4.5	0.0	1.3	0.3	6.6	0.4	3.0
6:15	0.4	7.6	1.7	4.1	0.0	3.2	0.3	0.8	0.8	5.5	0.7	2.3
6:30	0.6	7.1	2.9	3.6	0.2	2.4	0.3	0.7	1.0	5.3	1.0	1.9
6:45	0.8	6.7	4.3	3.0	0.7	1.8	2.3	0.5	1.5	5.5	1.8	1.4
7:00	1.1	6.1	5.7	2.9	1.9	1.9	5.5	0.2	2.1	5.0	2.9	1.2
7:15	1.4	5.8	6.6	1.7	3.7	1.7	6.5	0.0	2.5	5.4	3.4	0.7
7:30	1.6	5.5	7.8	1.2	4.3	1.6	8.5	0.0	4.3	5.5	4.9	0.3
7:45	1.8	4.9	8.2	0.7	4.9	1.6	7.0	0.0	4.8	5.2	6.6	0.5
8:00	2.0	4.4	8.3	0.0	5.0	1.1	6.3	0.0	5.5	4.3	7.2	0.5
8:15	2.3	4.2	8.4	0.0	7.2	0.4	9.3	0.0	6.6	3.5	7.7	0.3
8:30	2.6	3.8	7.9	0.0	7.7	0.2	9.5	0.0	6.7	2.7	7.8	0.3
8:45	3.1	3.4	8.2	0.0	9.0	0.0	12.5	0.0	7.6	1.9	8.3	0.0
9:00	3.6	2.9	7.5	0.0	11.0	0.0	14.0	0.0	8.2	1.7	9.4	0.0
9:15	4.1	2.3	7.8	0.0	9.7	0.0	12.2	0.0	8.1	1.3	10.9	0.0
9:30	4.7	1.7	7.6	0.0	10.4	0.0	12.7	0.0	7.8	0.8	11.3	0.0
9:45	5.1	1.4	7.8	0.0	11.0	0.0	12.4	0.0	8.0	0.5	10.9	0.0
10:00	5.6	1.1	8.2	0.0	10.2	0.0	12.4	0.0	8.4	0.1	10.7	0.0
10:15	6.3	0.8	8.4	0.0	9.7	0.0	12.5	0.0	8.0	0.0	9.9	0.0
10:30	6.9	0.7	8.7	0.0	10.4	0.0	11.2	0.0	8.5	0.0	9.2	0.0
10:45	7.6	0.5	8.5	0.0	9.7	0.0	11.7	0.0	8.5	0.0	8.9	0.0
11:00	8.3	0.5	8.8	0.0	9.8	0.0	8.3	0.0	8.6	0.0	8.3	0.0
11:15	8.9	0.4	9.4	0.0	9.0	0.0	8.0	0.0	9.3	0.0	8.5	0.0
11:30	9.5	0.3	9.1	0.0	8.5	0.0	9.2	0.0	8.8	0.0	8.6	0.0
11:45	9.8	0.3	9.4	0.0	9.0	0.0	9.0	0.0	8.4	0.0	7.7	0.0

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

Percent of Daily Traffic During the 60-Minute Period Beginning at Displayed Time

Land Use	720 Medical-Dental Office Building						730 Government Office Building		731 State Motor Vehicles Department	
Setting	General Urban/Suburban						General Urban/Suburban		General Urban/Suburban	
Time Period	Weekday		Saturday		Sunday		Weekday		Weekday	
Trip Type	Vehicle		Vehicle		Vehicle		Vehicle		Vehicle	
# Data Sites	19		1		1		7		1	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	0.1	7.9	0.0	17.9	0.0	20.0	0.0	9.8	0.0	8.9
12:15	0.1	7.9	0.0	21.6	0.0	20.0	0.0	9.3	0.0	12.1
12:30	0.1	8.0	0.0	18.7	0.0	10.0	0.0	9.5	0.0	13.1
12:45	0.1	8.4	0.0	14.9	0.0	0.0	0.0	9.3	0.0	11.9
1:00	0.1	8.8	0.0	10.4	0.0	0.0	0.0	8.8	0.0	10.8
1:15	0.1	8.9	0.0	0.0	0.0	0.0	0.0	9.2	0.4	8.5
1:30	0.0	9.3	0.0	0.0	0.0	0.0	0.0	8.8	0.4	7.5
1:45	0.1	9.2	0.0	0.0	0.0	0.0	0.0	9.5	0.4	8.3
2:00	0.1	9.1	0.0	0.0	0.0	20.0	0.0	9.8	0.4	8.7
2:15	0.1	9.3	0.0	0.0	0.0	20.0	0.0	8.5	0.0	8.3
2:30	0.1	9.2	0.0	0.0	0.0	20.0	0.0	9.3	0.0	7.9
2:45	0.0	9.3	0.0	0.0	0.0	20.0	0.0	8.8	0.0	7.9
3:00	0.1	9.2	0.0	0.0	0.0	0.0	0.0	8.2	0.0	7.9
3:15	0.2	8.7	0.0	0.0	0.0	0.0	0.0	8.8	0.4	6.0
3:30	0.4	8.6	0.0	0.0	0.0	0.0	0.0	7.3	0.4	5.0
3:45	0.5	8.1	0.0	0.0	0.0	0.0	0.0	6.3	0.8	9.4
4:00	0.6	7.8	0.0	0.0	0.0	0.0	0.0	6.3	1.2	8.7
4:15	0.6	8.3	0.0	0.0	0.0	0.0	0.0	8.9	0.8	10.2
4:30	0.5	7.4	0.0	0.0	0.0	0.0	0.0	8.2	0.8	10.0
4:45	0.4	6.7	0.0	0.0	0.0	0.0	0.0	6.9	0.4	5.6
5:00	0.4	5.6	0.0	0.0	0.0	0.0	0.0	5.5	0.0	5.2
5:15	0.5	4.2	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.6
5:30	0.7	3.5	0.0	0.0	20.0	0.0	0.0	0.4	0.0	5.8
5:45	0.9	2.7	0.0	0.0	20.0	0.0	0.0	0.3	0.0	5.8
6:00	1.4	2.2	3.7	0.0	30.0	0.0	0.2	0.0	0.8	8.9
6:15	2.0	1.7	4.5	0.0	30.0	0.0	1.3	0.0	1.2	7.5
6:30	2.8	1.5	4.5	0.0	10.0	0.0	1.8	0.0	1.2	6.2
6:45	4.0	1.4	4.5	0.0	10.0	0.0	3.3	0.0	2.7	5.6
7:00	5.4	1.3	3.0	0.0	0.0	0.0	7.1	0.0	5.2	2.5
7:15	6.7	1.1	5.2	0.0	0.0	0.0	9.3	0.0	8.1	3.3
7:30	7.6	1.1	6.7	0.0	0.0	0.0	12.0	0.0	10.0	3.7
7:45	8.2	1.0	8.2	0.0	0.0	0.0	13.8	0.0	9.8	2.9
8:00	8.9	0.7	9.0	0.0	0.0	0.0	12.4	0.0	8.7	2.5
8:15	9.3	0.6	9.7	0.0	0.0	0.0	11.8	0.0	7.3	1.7
8:30	9.7	0.5	11.2	0.0	0.0	0.0	10.7	0.0	7.3	0.4
8:45	10.3	0.4	11.9	0.0	0.0	0.0	9.5	0.0	8.9	0.0
9:00	10.4	0.3	11.2	0.0	10.0	0.0	8.5	0.0	7.5	0.0
9:15	10.7	0.2	12.7	0.0	10.0	0.0	8.5	0.0	7.1	0.0
9:30	10.7	0.2	17.9	0.0	20.0	0.0	8.1	0.0	6.7	0.0
9:45	10.5	0.2	21.6	0.0	30.0	0.0	8.8	0.0	5.0	0.0
10:00	10.1	0.2	25.4	0.0	20.0	0.0	10.1	0.0	5.4	0.0
10:15	9.9	0.1	23.9	0.0	20.0	0.0	10.2	0.0	5.2	0.0
10:30	9.7	0.1	21.6	0.0	10.0	0.0	12.5	0.0	4.8	0.0
10:45	9.5	0.2	20.1	0.0	0.0	0.0	12.9	0.0	6.2	0.0
11:00	9.1	0.1	19.4	0.0	0.0	0.0	13.4	0.0	6.4	0.0
11:15	8.8	0.2	22.4	0.0	0.0	0.0	13.2	0.0	7.3	0.0
11:30	8.3	0.1	19.4	0.0	10.0	0.0	11.4	0.0	8.7	0.0
11:45	8.0	0.0	18.7	0.0	20.0	0.0	10.6	0.0	8.3	0.0

ATTACHMENT C

Traffic Signal Warrant Summary

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Stuart	Engineer:	James Kemp
County:	89 – Martin	Date:	November 25, 2020
District:	Four		

Major Street:	Kanner Highway	Lanes:	6	Major Approach Speed:	45
Minor Street:	M&M Full Access Dwy (Costco Blvd)	Lanes:	3	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied for eight hours. ☑ Yes ☐ No

Warrant 1 is also satisfied if both Condition A and Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems). ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Major	1,848	1,846	1,680	1,867	1,925	2,010	2,001	1,516
Minor	222	253	242	239	236	243	241	194

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☑ Yes	☐ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM
Major	1,848	1,846	1,680	1,867	1,925	2,010	2,001	1,516
Minor	222	253	242	239	236	243	241	194

Existing Volumes

Form 750-020-01
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Stuart	Engineer:	James Kemp
County:	89 – Martin	Date:	November 25, 2020
District:	Four		

Major Street:	Kanner Highway	Lanes:	6	Major Approach Speed:	45
Minor Street:	M&M Full Access Dwy (Costco Blvd)	Lanes:	3	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ Yes ☐ No

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

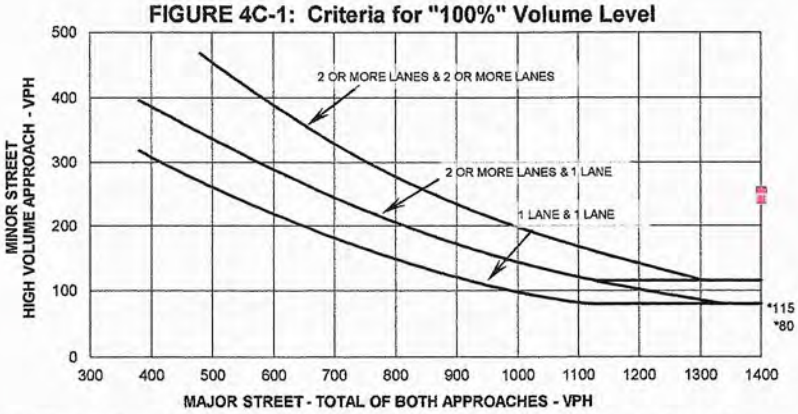
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
12:00 PM	1846	253
1:00 PM	1680	242
4:00 PM	2010	243
5:00 PM	2001	241

FIGURE 4C-1: Criteria for "100%" Volume Level



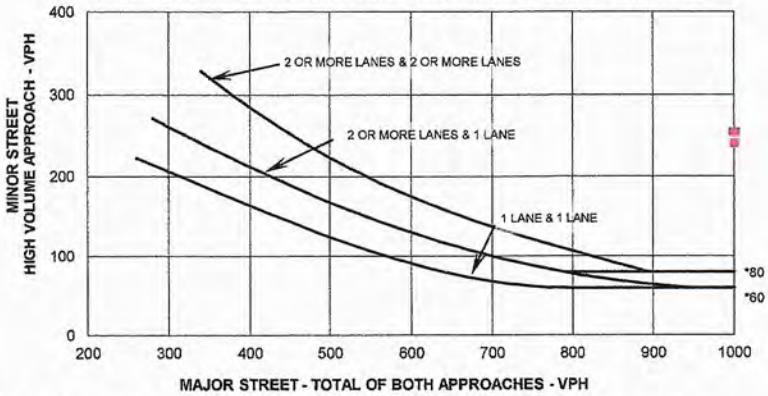
** Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
12:00 PM	1846	253
1:00 PM	1680	242
4:00 PM	2010	243
5:00 PM	2001	241

FIGURE 4C-2: Criteria for "70%" Volume Level

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



** Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Form 750-020-01
TRAFFIC ENGINEERING
10/15

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Stuart	Engineer:	James Kemp
County:	89 – Martin	Date:	November 25, 2020
District:	Four		

Major Street:	Kanner Highway	Lanes:	6	Major Approach Speed:	45
Minor Street:	M&M Full Access Dwy (Costco Blvd)	Lanes:	3	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

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

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
12:00 PM	1846	253

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
12:00 PM	1846	253

Criteria

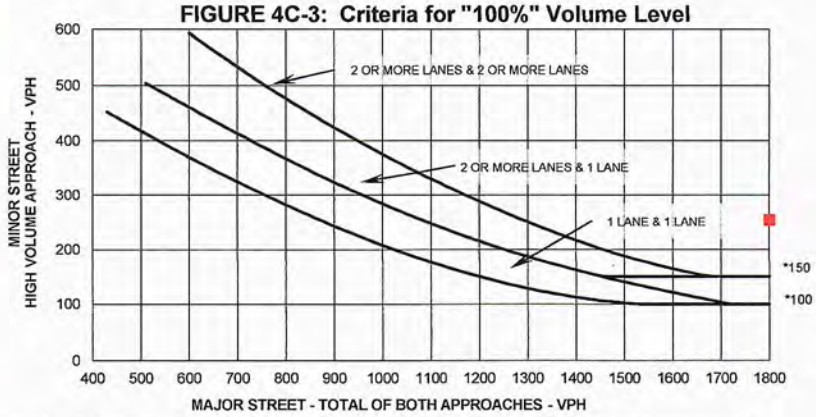
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		89.9
Fulfilled?:	☑ Yes	☐ No

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		253
Fulfilled?:	☑ Yes	☐ No

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	2,099	
Fulfilled?:	☑ Yes	☐ No

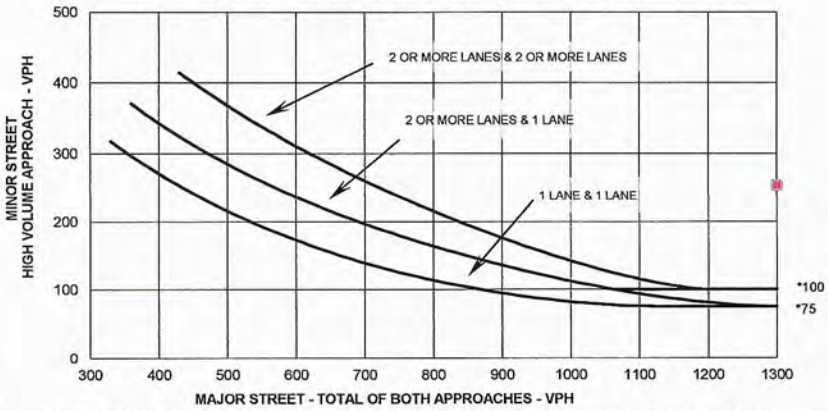
Plot volume combination on the applicable figure below.

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



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

FIGURE 4C-4: Criteria for "70%" Volume Level
(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



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

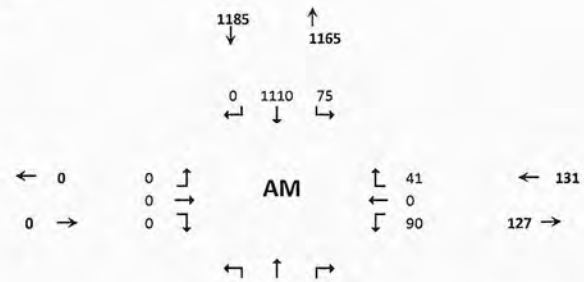
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy
E/W STREET: Driveway 1 (Costco Blvd)
CONTROL:
FILENAME:
COUNT DATE: 3/20/2019
DAY: Wednesday
CITY: Stuart
INTERSECTION:
REPORT DATE: 12/16/2020
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%
PROJECT	0	31	53	75	0	0	0	0	0	83	0	41	0
MMHS										7			
Total	0	1124	53	75	1110	0	0	0	0	90	0	41	2493



Seasonal Factor: 1

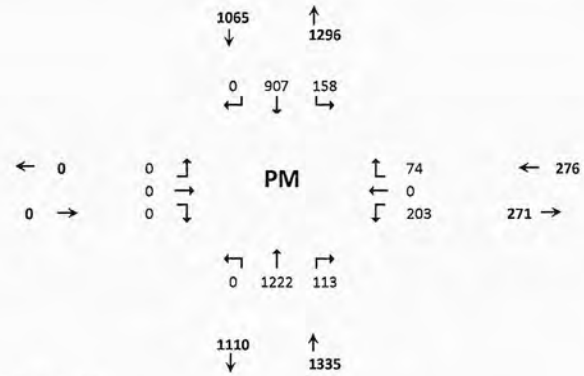
	Retail	Residential
Trips In	233	31
Trips Out	193	77

Growth Rate: 1.005
Years Grown: 5

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	

PM PEAK HOUR IS FROM: 4:00PM TO 5:00PM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%
Project	0	69	113	158	0	0	0	0	0	165	0	74	
MMHS										38			
Total	0	1222	113	158	907	0	0	0	0	203	0	74	2677



Seasonal Factor: 1

	Retail	Residential
Trips In:	488	76
Trips Out:	445	45

Growth Rate: 1.005
Years Grown: 5

HCS7 Two-Way Stop-Control Report

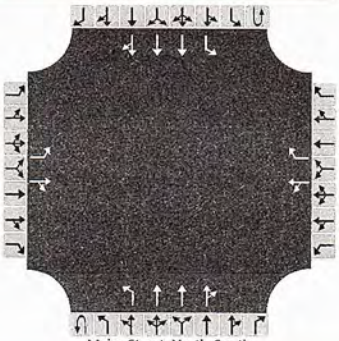
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	11/30/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	M & M Retail

Site Information

Intersection	Kanner Hwy and Driveway 1
Jurisdiction	City of Stuart
East/West Street	Driveway 1
North/South Street	Kanner Hwy
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	1	0		0	1	1	0	1	3	0	0	1	3	0
Configuration		L		TR		LT		R		L	T	TR		L	T	TR
Volume (veh/h)		2	1	2		203	1	74	0	1	1222	113	0	158	907	1
Percent Heavy Vehicles (%)		3	3	3		0	3	0	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized					No											
Median Type | Storage	Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3		
Critical Headway (sec)		6.46	6.56	7.16		6.40	6.56	7.10		5.36				5.36		
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1		
Follow-Up Headway (sec)		3.83	4.03	3.93		3.80	4.03	3.90		3.13				3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2		3		222		80		1				172		
Capacity, c (veh/h)		28		444		53		319		394				233		
v/c Ratio		0.08		0.01		4.16		0.25		0.00				0.74		
95% Queue Length, Q_{95} (veh)		0.2		0.0		24.5		1.0		0.0				5.1		
Control Delay (s/veh)		146.8		13.2		1579.3		20.1		14.2				54.0		
Level of Service (LOS)		F		B		F		C		B				F		
Approach Delay (s/veh)	66.6				1164.3				0.0				8.0			
Approach LOS	F				F											

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O'ROURKE
ENGINEERING & PLANNING

TRAFFIC ANALYSIS

FOR

KANNER CPUD

Prepared for:

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644
973-779-7466

Prepared by

O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
772-781-7918

December 16, 2020
Revised March 16, 2021
Revised April 21, 2021

MR18031.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 (772) 781-7918	Professional Engineer Susan E. O'Rourke, P.E. Date signed and sealed: 4/21/2021 License #: 42684

O'ROURKE
ENGINEERING & PLANNING

December 16, 2020

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644

Re: Kanner CPUD

Dear Mr. Marino:

O'Rourke Engineering & Planning has completed the traffic analysis for the proposed development including 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 398 units of Multifamily Housing (Mid-Rise) to be located east of Kanner Highway and approximately 2,000 feet north of Indian Street in Stuart, FL. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
O'ROURKE ENGINEERING & PLANNING

Susan E. O'Rourke

Susan E. O'Rourke, P.E.
Registered Civil Engineer - Traffic

C6 – Traffic Analysis Report – M&M Retail – 4.21.21

22 SE Seminole Street | Stuart, FL 34994 | 772-781-7918 | SEORourke@comcast.net

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APPENDICES

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APPENDIX B: Non-Motorized Features
APPENDIX C: Internal Capture
APPENDIX D: Martin County 2019 Roadway Level of Service Inventory Report
APPENDIX E: Driveway Data and Analyses

INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed development including 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 398 units of Multifamily Housing (Mid-Rise) to be located east of Kanner Highway and approximately 2,000 feet north on Indian Street in Stuart, Florida. The purpose of this analysis is to determine the impact of the development on the roadway.

PROJECT DESCRIPTION

The approximately 48.97-acre parcel is proposed to be developed with 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 398 units of Multifamily Housing (Mid-Rise). **Figure 1** shows the project location. The project site plan is included in **Appendix A**.

EXISTING CONDITIONS

The study area is defined as the roadways upon which the project has an impact of 5% of the level of service capacity of the roadway. Once the project traffic was assigned, the study area was refined based on the impact percentages.

The study area roadways were defined in terms of existing lane geometrics and existing traffic volumes. The non-motorized transportation components are included in **Appendix B**.

Existing Lane Geometrics

The study area was reviewed to determine the existing number and type of lanes and the traffic control along the roadway. Each roadway is described below.

Kanner Highway is a six-lane divided arterial with a north/south alignment.

Willoughby Boulevard is a four-lane divided arterial with a north/south alignment.

Indian Street is a four-lane divided collector with an east/west alignment.

Monterey Road is a four-lane divided arterial with an east/west alignment.

PROJECT TRAFFIC

To estimate traffic generated by the land uses defined in the scope of this project, the ITE Trip Generation, 10th Edition trip rates for land use codes 221-Multifamily Housing (Mid-Rise), 820-Retail Shopping Center, 932-High-Turnover (Sit-Down) Restaurant, 934 Fast Food (w/ Drive-Thru), and 857-Discount Club were applied. These calculations provide an estimate of the typical generation for the proposed use. Trip generation for the project in the Daily, AM and PM Peak Hours is shown in **Table 1.** The details of the internal capture and pass-by are included in **Appendix C**.

As shown, the project will generate 7,410 daily trips, 341 in the AM peak hour, and 668 in the PM peak hour.

NTS

O'ROURKE ENGINEERING & PLANNING

22 SE Seminole St
Stuart, Fl, 34994

Job Number: MR18031.0

Date: 5/21/18

Legend

●	=	Signalized Intersection
▭	=	Project Location
4LD	=	Roadway Laneage

Figure 1
Project Location
M&M Retail

Figure 1 & 2 - location and assignment (1)

Table 1 - Trip Generation

Table 1a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	T = 5.45(X) - 1.75	50%	50%	1,084	1,083	2,167	76	228	304	14.0%	1,008	855	1,863	-	-	-	0.0%	1,008	855	1,863
Shopping Center	820	16,750	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	892	892	1,784	47	121	168	9.4%	845	771	1,616	388	388	776	48.0%	457	383	840
Discount Club	857	157,531	Sft	T = 41.80(X)	50%	50%	3,293	3,292	6,585	174	445	619	9.4%	3,119	2,847	5,966	1,163	1,163	2,326	39.0%	1,956	1,684	3,640
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 470.95(X)	50%	50%	589	588	1,177	299	104	403	34.2%	290	484	774	190	189	379	49.0%	100	295	395
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 112.18(X)	50%	50%	911	911	1,822	462	160	622	34.1%	449	751	1,200	264	264	528	44.0%	185	487	672
Retail Sub Total							**5,685**	**5,683**	**11,368**	**982**	**830**	**1,812**	**15.9%**	**4,703**	**4,853**	**9,556**	**2,005**	**2,004**	**4,009**	**42.0%**	**2,698**	**2,849**	**5,547**
TOTALS		**193,021**					**6,769**	**6,766**	**13,535**	**1,058**	**1,058**	**2,116**	**15.6%**	**5,711**	**5,708**	**11,419**	**2,005**	**2,004**	**4,009**	**35.1%**	**3,706**	**3,704**	**7,410**

Source: ITE 10th Edition Trip Generation Rates
Total 162,020 w/ OutdoorVestibule 4,489

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	Ln(T) = 0.98Ln(X) - 0.98	26%	74%	35	98	133	3	21	24	18.0%	32	77	109	-	-	-	0.0%	32	77	109
Shopping Center	820	16,750	Sft	T = 0.50(X) + 151.78	62%	38%	99	61	160	9	8	17	10.6%	90	53	143	35	34	69	48.0%	55	19	74
Discount Club	857	157,531	Sft	T = 0.49(X)	70%	30%	54	23	77	4	4	8	10.4%	50	19	69	14	13	27	39.0%	36	6	42
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 40.19(X)	51%	49%	51	49	100	12	5	17	17.0%	39	44	83	21	20	41	49.0%	18	24	42
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.94(X)	55%	45%	89	72	161	19	9	28	17.4%	70	63	133	30	29	59	44.0%	40	34	74
Retail Sub Total							**293**	**205**	**498**	**44**	**26**	**70**	**14.1%**	**249**	**179**	**428**	**100**	**96**	**196**	**45.8%**	**149**	**83**	**232**
TOTALS		**193,021**					**328**	**303**	**631**	**47**	**47**	**94**	**14.9%**	**281**	**256**	**537**	**100**	**96**	**196**	**36.5%**	**181**	**160**	**341**

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips (1)				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	Ln(T)=0.96Ln(X)-0.63	61%	39%	102	65	167	25	20	45	26.9%	77	45	122	-	-	-	0.0%	77	45	122
Shopping Center	820	16,750	Sft	Ln(T) = 0.74Ln(X) + 2.89	48%	52%	70	75	145	4	7	11	7.6%	66	68	134	32	33	65	48.0%	34	35	69
Discount Club	857	157,531	Sft	T = 4.18(X)	50%	50%	329	329	658	19	29	48	7.3%	310	300	610	119	119	238	39.0%	191	181	372
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 32.67(X)	52%	48%	43	39	82	10	7	17	20.7%	33	32	65	16	16	32	49.0%	17	16	33
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.77(X)	62%	38%	99	60	159	18	13	31	19.5%	81	47	128	28	28	56	44.0%	53	19	72
Retail Sub Total							**541**	**503**	**1,044**	**51**	**56**	**107**	**10.2%**	**490**	**447**	**937**	**195**	**196**	**391**	**41.7%**	**295**	**251**	**546**
TOTALS		**193,021**					**643**	**568**	**1,211**	**76**	**76**	**152**	**12.6%**	**567**	**492**	**1,059**	**195**	**196**	**391**	**36.9%**	**372**	**296**	**668**

Source: ITE 10th Edition Trip Generation Rates

PROJECT DISTRIBUTION/ ASSIGNMENT/ IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network. Two different traffic assignments were made for the retail use and the residential use.

Distribution/Assignment – The distributions led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations. **Figure 2a and 2b** shows the project assignment for both retail and residential land uses.

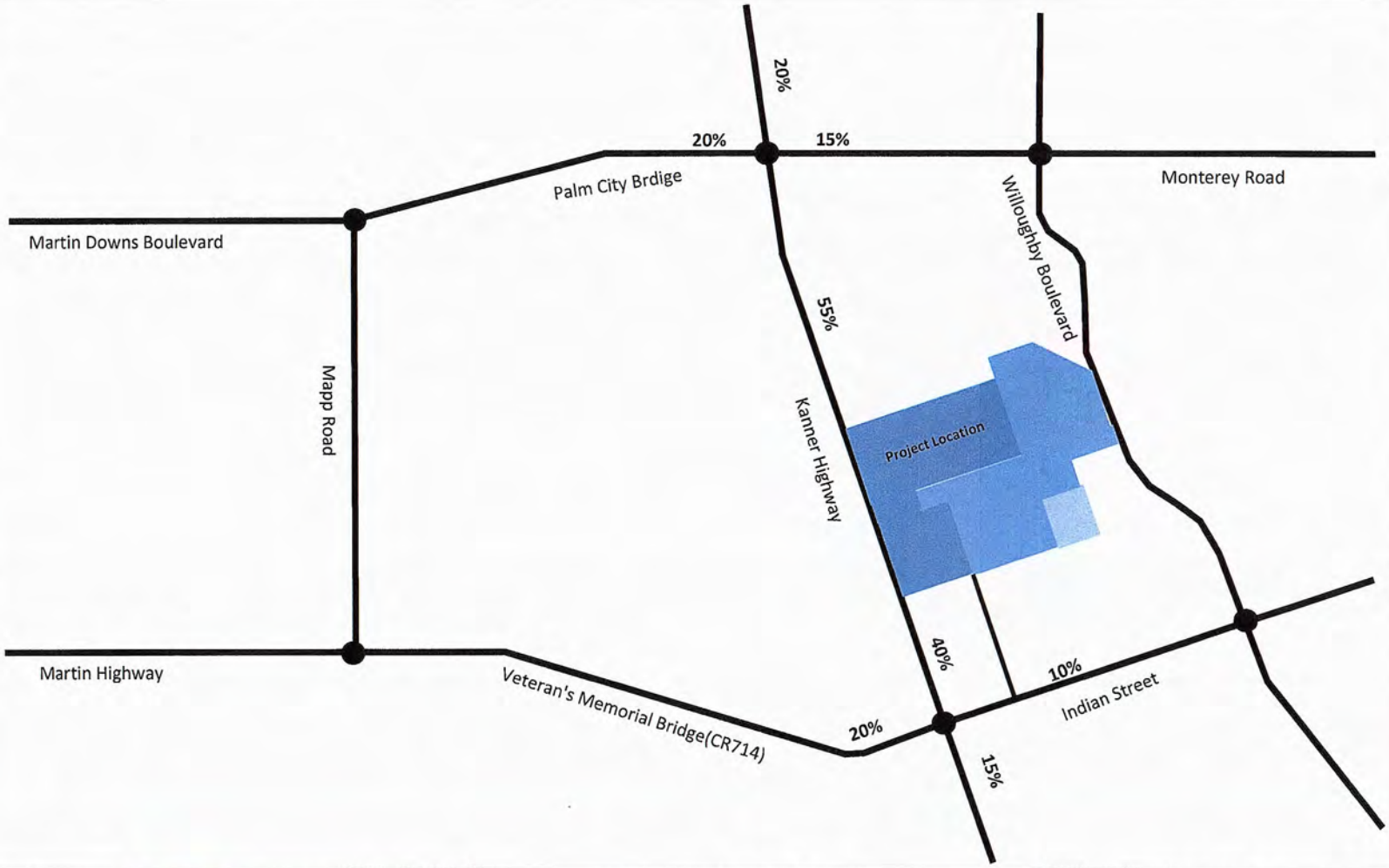
Table 2 summarizes the resultant AM and PM peak hour trips assigned to the network and the project % of capacity.

Impact – As seen in Table 2, there are no links with a 5% or greater impact. Therefore, the directly accessed links on Kanner Highway and Willoughby Boulevard were analyzed.

FUTURE TRAFFIC

Since the project traffic is not significant, the adjacent links were analyzed for future traffic volumes. **Table 3** shows that the total traffic on the adjacent links of Kanner Highway and Willoughby Boulevard will operate at acceptable levels of service at project buildout of 2024. To estimate future 2024 volumes on Kanner Highway and Willoughby Boulevard, the existing (2019) traffic volumes were increased by a growth rate found in the Martin County 2019 Roadway Level of Service Inventory Report. The growth rate was then applied for three years to estimate the 2024 peak hour directional volumes. The project traffic was then added to estimate the 2024 Total Traffic volumes with project traffic added. The total traffic volumes were then compared to the acceptable threshold.

The Martin County 2019 Roadway Level of Service Inventory Report is included in the **Appendix D**.



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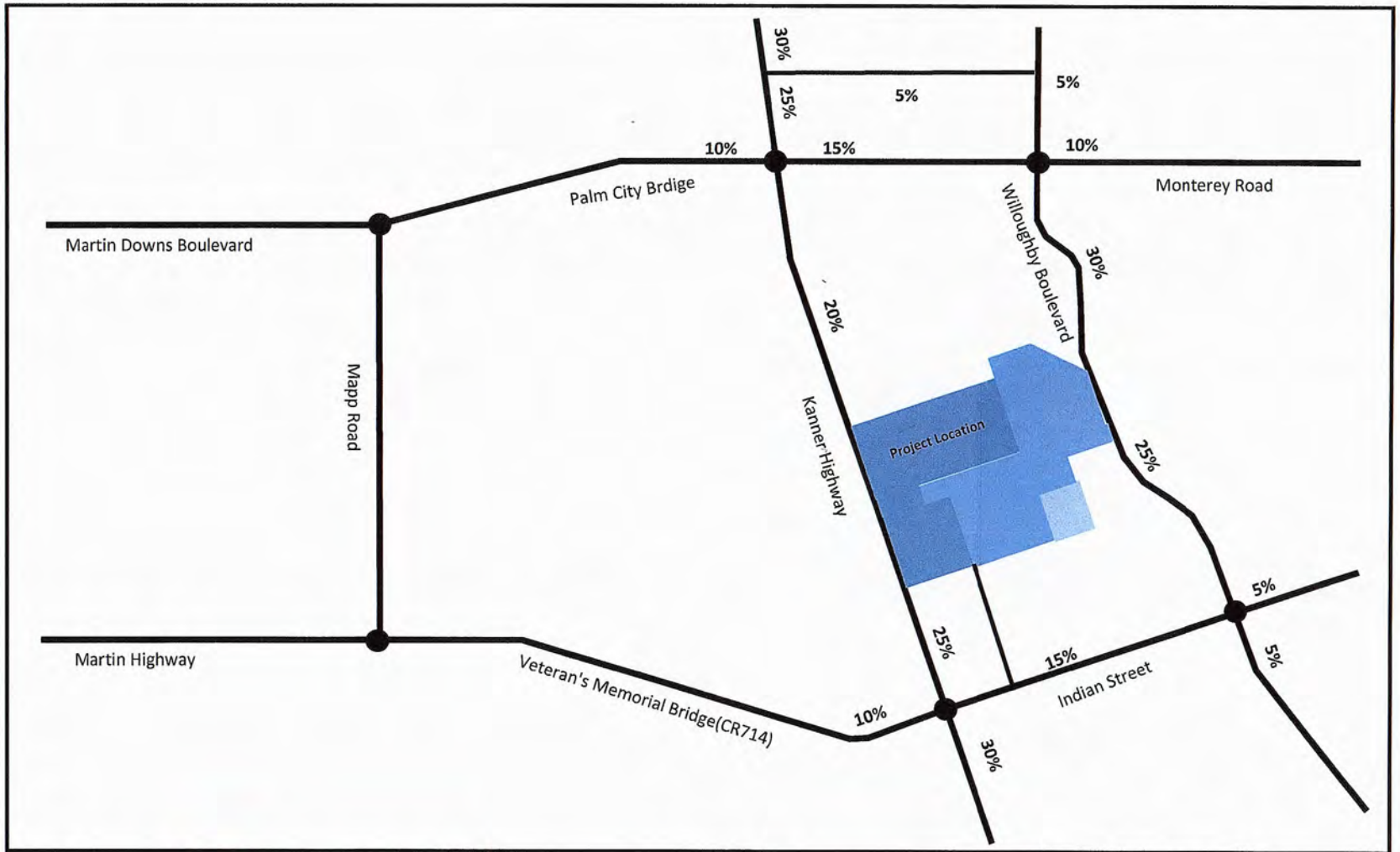
Legend

●	=	Signalized Intersection
▭	=	Project Location
XX%	=	Percent Assignment

Figure 2a

Percent Assignment - Retail

M&M Retail



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Job Number: MR18031.0 | Date: 5/21/18

Legend

● = Signalized Intersection

▭ = Project Location

XX% = Percent Assignment

Figure 2b

Percent Assignment - Residential

M&M Retail

Table 2a: Percent Impact - AM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	22	30%	10	32	1.06%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	12	30%	23	35	1.16%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	52	25%	8	60	1.99%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	29	25%	19	48	1.59%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	33	20%	15	48	1.59%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	60	20%	6	66	2.19%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	17	30%	23	40	1.32%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	30	30%	10	40	1.32%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	7	5%	2	9	1.02%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	4	5%	4	8	0.91%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	7	5%	2	9	0.45%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	4	5%	4	8	0.40%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	7	25%	8	15	0.75%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	8	25%	19	27	1.35%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	12	30%	23	35	1.75%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	22	30%	10	32	1.60%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	10%	8	8	0.40%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	10%	3	3	0.15%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	12	12	0.60%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	7	15%	5	12	0.60%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	30	10%	3	33	1.65%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	17	10%	8	25	1.25%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	149	83
Residential	32	77

Table 2b Percent Impact - PM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	44	30%	23	67	2.22%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	38	30%	14	52	1.72%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	103	25%	19	122	4.04%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	88	25%	11	99	3.28%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	100	20%	9	109	3.61%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	118	20%	15	133	4.40%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	50	30%	14	64	2.12%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	59	30%	23	82	2.72%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	7	5%	4	11	1.25%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	13	5%	2	15	1.70%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	7	5%	4	11	0.55%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	4	5%	2	6	0.30%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	7	25%	19	26	1.30%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	8	25%	11	19	0.95%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	12	30%	14	26	1.30%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	22	30%	23	45	2.25%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	15%	12	12	0.60%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	15	15%	12	27	1.35%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	59	10%	8	67	3.35%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	50	10%	5	55	2.75%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	295	251
Residential	77	45

Table 3a: Link Analysis - AM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2024 Volume Peak Hour Directional	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.376	598	1.005	613	3020	35%	52	25%	8	60	1.99%	673	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.624	993	1.005	1018	3020	35%	29	25%	19	48	1.59%	1066	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.376	598	1.005	613	3020	40%	33	20%	15	48	1.59%	661	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.624	993	1.005	1018	3020	40%	60	20%	6	66	2.19%	1084	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.376	401	1.037	481	2000	5%	8	25%	8	16	0.75%	497	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.624	666	1.037	799	2000	10%	12	25%	19	31	1.35%	830	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.376	401	1.037	481	2000	15%	12	30%	23	35	1.75%	516	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.624	666	1.037	799	2000	15%	22	30%	10	32	1.60%	831	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

(1) FDOT Florida Traffic Online

	IN	OUT
Retail	149	83
Residential	32	77

Years Grown: 5

Table 3b: Link Analysis - PM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2024 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.624	993	1.005	1018	3020	35%	103	25%	19	122	4.04%	1140	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.376	598	1.005	613	3020	35%	88	25%	11	99	3.28%	712	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.624	993	1.005	1018	3020	40%	100	20%	9	109	3.61%	1127	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.376	598	1.005	613	3020	40%	118	20%	15	133	4.40%	746	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.624	666	1.037	799	2000	5%	7	25%	19	26	1.30%	825	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.376	401	1.037	481	2000	10%	8	25%	11	19	0.95%	500	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.624	666	1.037	799	2000	15%	12	30%	14	26	1.30%	825	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.376	401	1.037	481	2000	15%	22	30%	23	45	2.25%	526	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

(1) FDOT Florida Traffic Online

	IN	OUT
Retail	295	251
Residential	77	45

Years Grown: 5

INTERSECTIONS / DRIVEWAYS

The intersection analysis was limited to the intersections of the driveways with Kanner and the driveway with Willoughby. Since the project is not significant on any link, additional intersection analysis was not required.

The project has proposed four driveways.

- Driveway 1 will be a full access signalized intersection to Kanner Highway with two westbound left-turn lanes leaving the project.
- Driveway 2 will have access to Kanner Highway and will be a directional median with a left-in, right-in, right-out only.
- Driveway 3 will have full access onto Willoughby Boulevard.
- Driveway 4 will be a right-in/right-out driveway on Kanner Highway.

The project will also have a cross-access to Indian Street and other driveways on Kanner Highway. For purposes of this study, we have shown traffic at project driveways 1, 2, 3, and 4 and at the cross-access driveway on Indian Street.

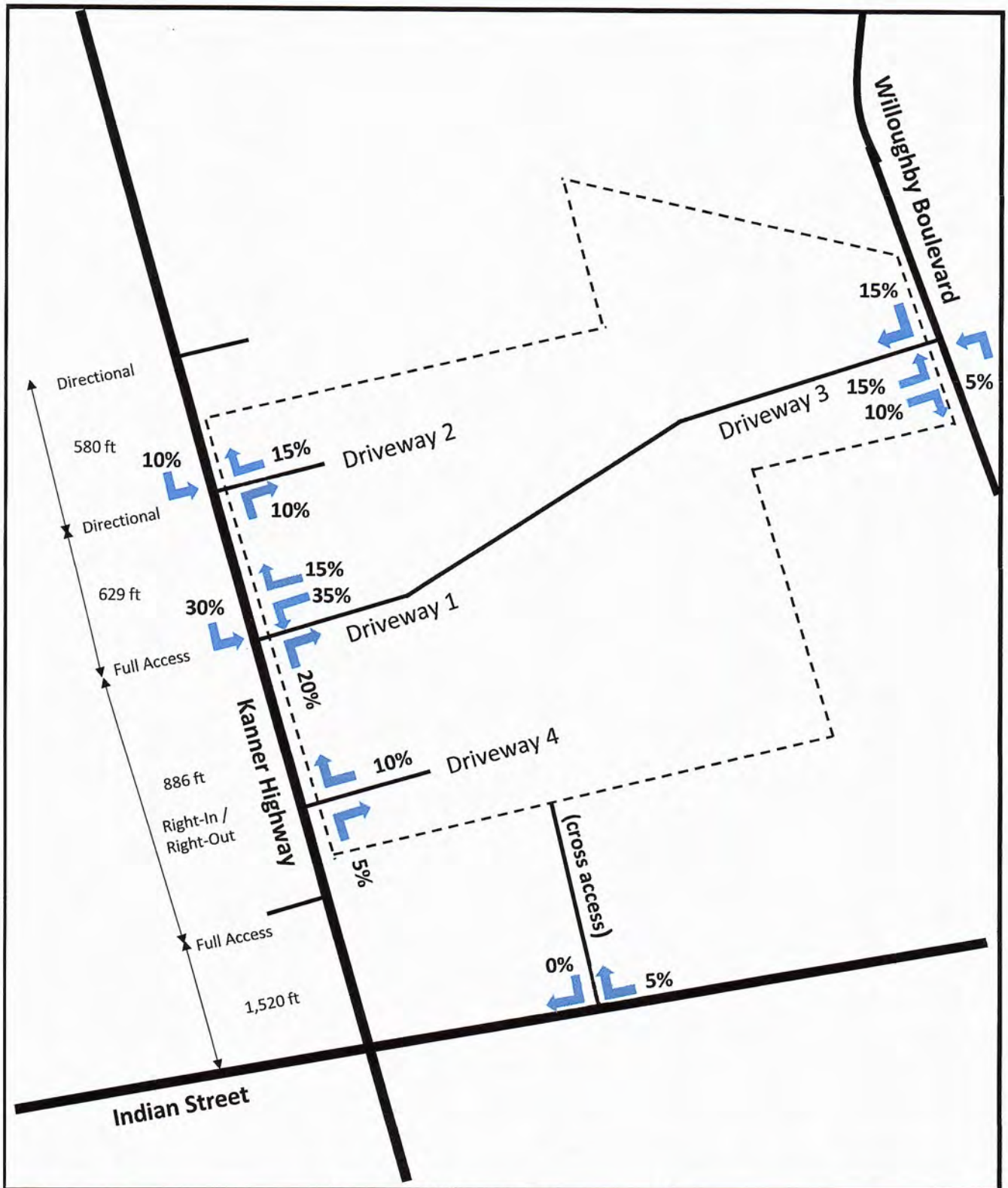
Figures 3a and 3b show the driveway percent assignments for the retail and residential portions, respectively. **Figure 3c** illustrates the total of the retail and residential project volumes in the AM and PM peak hour. The proposed driveway lanes are summarized below:

Driveway 1/ Kanner Highway (Full Access)
(The lane call out is subject to FDOT permitting)
Northbound
1 – U-turn lane
3 - through lanes
1 – right turn lane
Southbound
1 – left turn lane
2 – through lanes
1 – through/right lane
Eastbound
1 – left turn lane
1 – one through/right lane
Westbound
1 – right turn lane
2 – left turn lanes

Driveway 2/ Kanner Highway (Directional Access)
Northbound
1 – U-turn lane
3 – through lanes
1 – right turn lane
Southbound
1 – left turn lane
3 – through lanes
Westbound
1 – right turn

Driveway 3/ Willoughby Boulevard (Full Access)
Northbound
1 – left turn lane
2 – through lanes
Southbound
1 – U-turn lane
2 – through lanes
1 – right turn lane
Eastbound
1 – left turn lane
1 – left turn lane
1 – right turn lane
Westbound
- Future Sailfish Access

Driveway 4/ Kanner Highway (Right-in/Right out)
Northbound
2 – through lanes
1 – through/ right turn lane
Southbound
3 – through lanes
Westbound
1 – right turn lane



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Job #: MR18031.0 | Date: 2/6/20

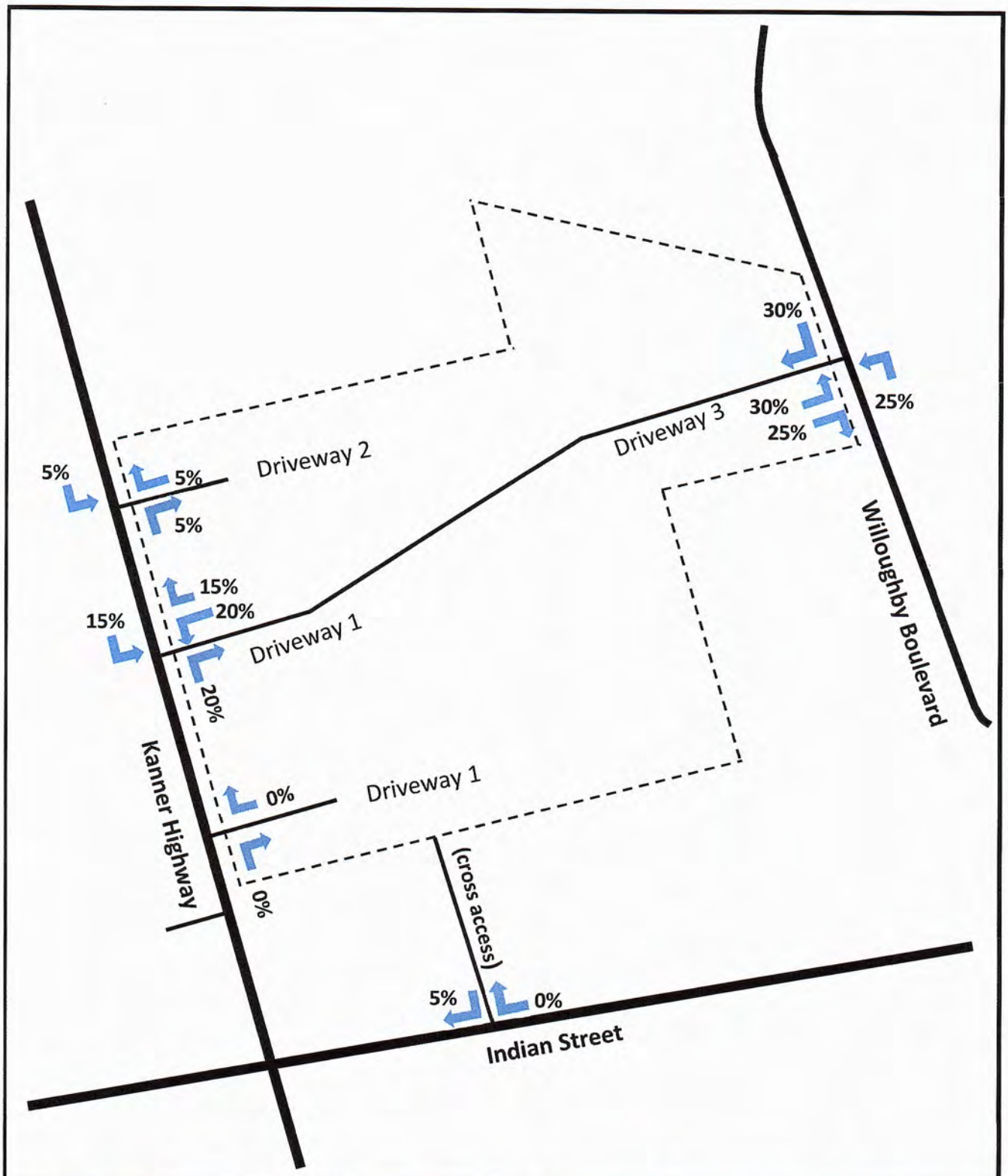
Legend

= Project Location
= Direction
15% = Percent Project Traffic
xx ft. = Driveway Spacing

Figure 3a

Driveway Assignment - Retail

M & M Retail



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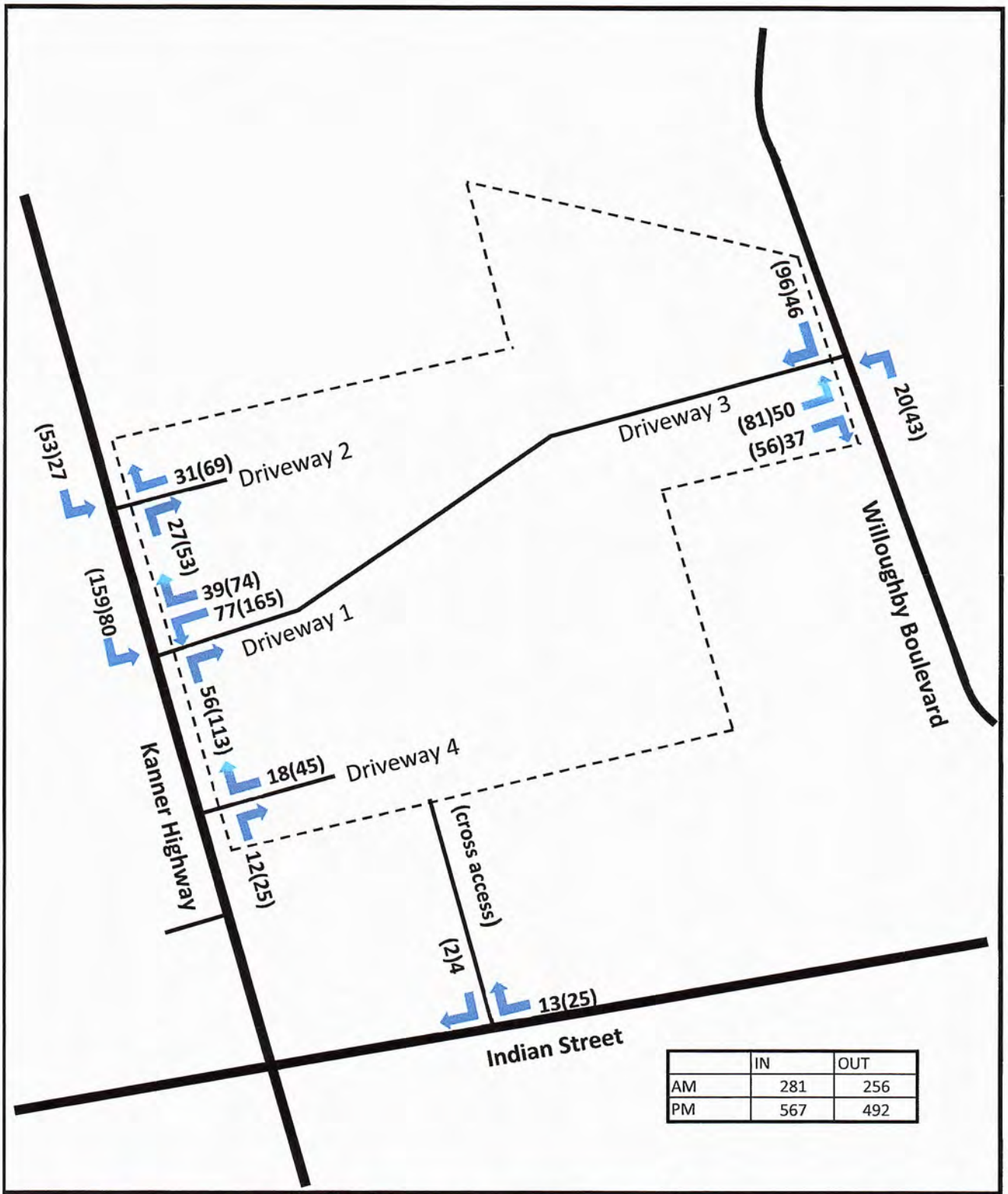
Legend

= Project Location
= Direction
15% = Percent Project Traffic

Figure 3b

Driveway Assignment - Residential

M & M Retail



	IN	OUT
AM	281	256
PM	567	492

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Job #: MR18031.0 | Date: 4/21/21

Legend

XX(XX) = AM(PM)
= Project Location
= Direction
15% = Percent Project Traffic

Figure 3c

Total Driveway Volumes

M & M Retail

As shown, ingress turn lanes are proposed for driveways 1, 2, and 3.

A turn lane analysis was conducted for driveway 4 using the FDOT Access Management Guidebook November 2019. For roadways with a posted speed limit of 45 MPH or less, the lower threshold of 80 right-turn vehicles per hour would be most used for higher volume (greater than 600 vehicles per hour, per lane in one direction on the major roadway) or two-lane roads where lateral movement is restricted. The 125 right-turn vehicles per hour upper threshold would be most appropriate on lower volume roadways, multilane highways, or driveways with a large entry radius (50 feet or greater).

Table 4: Right Turn Lane Analysis - Driveway 4

Major Road Speed Limit (MPH)	Number of Lanes (Directional)	Thru Volume (Veh/hr)	Thru Volume (Veh/hr/ln)	Right Turn Volume	Threshold Volume	Right Turn Warranted?
45	3	1018	339	25	125	No

Roadway Posted Speed Limit	Number of Right Turns Per Hour(1)
45 MPH or Less	80-125
Over 45 MPH	35-55

(1) FDOT Access Management Guidebook November 2019, Table 27

As shown, an ingress right-turn lane is not warranted at driveway 4.

The three driveways on Kanner Highway and the driveway on Willoughby Boulevard were analyzed using HCS.

Existing through volumes on Kanner Highway were obtained from the 2019 FDOT 24-hour count on Kanner Highway and the peak hour volumes were calculated and grown to 2024 using the growth rate contained in the Martin County 2019 Roadway Level of Service Inventory Report. Project traffic was then added to obtain the total traffic at the driveways.

The existing peak hour peak direction volume for Willoughby Boulevard was taken from the Martin County 2019 Roadway Level of Service Inventory Report, the FDOT D Factor was then used to convert the existing peak hour peak direction volume into the peak hour off-peak direction volume. These volumes were then grown to 2024 using the growth rate contained in the Martin County 2019 Roadway Level of Service Inventory Report and project traffic was then added.

Table 5 summarizes the results of the driveway analysis. As shown, all driveways will operate at acceptable levels of service at project buildout. **Table 6** summarizes the turn lane lengths and the projected queue for each turn lane.

Table 5: Driveway Results Summary

Intersection	AM Peak Hour			PM Peak Hour		
	Delay	V/C	LOS	Delay	V/C	LOS
Driveway 1 (Costco Blvd) & Kanner Hwy	26.0	0.36	C	38.9	0.38	D
Driveway 2 & Kanner Hwy	9.6	0.04	A	9.9	0.06	A
Driveway 3 & Willoughby Blvd	16.7	0.05	C	15.5	0.08	C
Driveway 4 & Kanner Hwy	14.0	0.05	B	15.9	0.13	C

Table 6: Turn Lane Queue Analysis

Turn Lane Direction	Turn Lane Length	Queue Length
Driveway 1 (Costco Blvd)		
NBR	295	64.9
NBL	345	25 (1)
SBL	345	98.5
Driveway 2		
NBR	275	0
NBL	265	25 (1)
SBL	290	25 (1)
Driveway 3		
NBL	265	25 (1)
SBR	240	0

(1) Less than 1 vehicle queue, 25' used instead

(2) Based on higher of AM or PM queue

The driveway HCS, the retail and residential driveway volumes, and existing FDOT data are included in **Appendix E.**

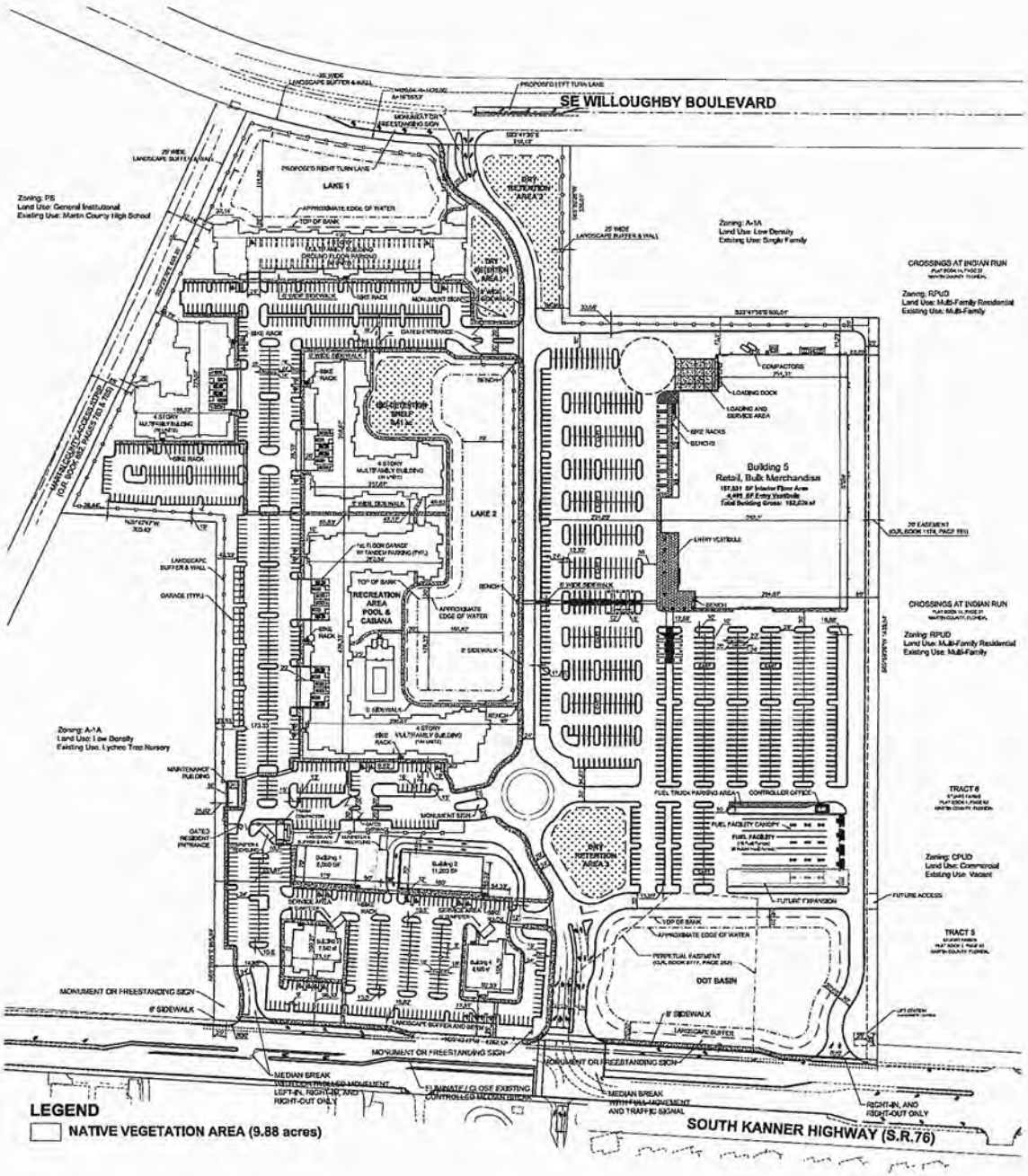
A pre-app meeting was held with FDOT to discuss the driveways. The results of the pre-app will be included in Appendix E when the FDOT finalizes their review. A signal warrant analysis will be required when the applicant applies for a construction permit. Based on the projected volumes at the full-access driveway, it is anticipated that a signal will be warranted. The full warrant analysis was provided to the FDOT under separate cover.

CONCURRENCY REVIEW/ CONCLUSION

The 157,531 square feet of Discount Club, 16,750 square feet of Shopping Center, 16,240 square feet of restaurant, 2,500 square feet of fast food with drive thru, and 398 units of apartment will have a traffic impact of 7,410 Daily trips, 341 AM peak hour trips and 668 PM peak hour trips. With the projects proposed signalization, turn lanes, and inclusion of Costco Boulevard, these project trips will be mitigated. Based on the data and calculations presented herein, the project does not require additional analysis and is deemed to be consistent with transportation concurrency requirements.

APPENDIX A

SITE PLAN



Site Data

Total Site Area:	2,133,987 sf	(48.99 ac)	100%
Future Land Use Designation (Proposed):	Neighborhood Special District		
Proposed Zoning:	CPUD		
Building Height (max):	45'		
Total Building Area:	370,876 sf	(8.52 ac)	17.4%

Pervious / Impervious Calculations

Impervious Area:	1,525,706 sf	(35.03 ac)	71.5%
Buildings:	370,876 sf	(8.52 ac)	17.4%
Pavement & Curb:	878,018 sf	(20.17 ac)	41.2%
Sidewalks, Patios & Pool:	83,630 sf	(1.92 ac)	3.9%
Lakes:	113,807 sf	(2.61 ac)	5.3%
DOT Basin:	78,815 sf	(1.81 ac)	3.7%
Pervious Area:	608,281 sf	(13.96 ac)	28.5%
Landscape:	535,560 sf	(12.29 ac)	25.1%
Dry Retention Areas:	54,855 sf	(1.26 ac)	2.5%
Bio Detention Area:	17,660 sf	(0.41 ac)	0.8%
Open Space			
Required (25% of 48.99 ac)		(12.25 ac)	25.0%
Provided*		(12.26 ac)	25.0%
* Includes Landscape, Dry Retention Areas & Bio Detention Area. Excludes Interior Landscape Areas.			
Interior Landscape Areas:		(1.78 ac)	3.5%

Parking Requirements

Parking Required (per Kanner CPUD):

Retail, bulk merchandise (1 space / 250 sf):	155,986 sf / 250 sf = 624 Spaces	
Fuel Facility (1 space / 250 sf + 2 / bay + 1 Vacuum):		20 Spaces
Retail (1 space / 250 sf):	19,250 sf / 250 sf = 77 Spaces	
Restaurant 1 (1 space per Seats = 1 per each employee): @ 270 seats = 14 employees:		104 Spaces
Restaurant 2 (1 space per Seats = 1 per each employee): @ 270 seats = 14 employees:		104 Spaces
Multi-Family		722 Spaces
One Bedroom Units (149) @ 1.3 per unit: 193 Spaces		
Two Bedroom Units (240) @ 1.7 per unit: 408 Spaces		
Three Bedroom Units (10) @ 2.0 per unit: 20 Spaces		
Total Parking Required:		**1,651 Spaces**

Parking Provided:

Retail, bulk merchandise (per Kanner CPUD):		720 Spaces
Standard		692 Spaces
Handicap:		28 Spaces
Fuel Facility:		20 Spaces
Retail:		80 Spaces
Standard		74 Spaces
Handicap:		6 Spaces
Restaurant:		104 Spaces
Standard		100 Spaces
Handicap:		4 Spaces
Restaurant:		104 Spaces
Standard		100 Spaces
Handicap:		4 Spaces
Multi-Family (per Kanner CPUD 1.76 spaces / unit):		700 Spaces
Standard		683 Spaces
Handicap:		17 Spaces
Total Parking Provided:		**1,726 Spaces**

Bicycle Parking

Retail, Bulk Merchandise		**Buildings 3 & 4**	
Required:	20 Spaces	Required:	8 Spaces
Provided:	20 Spaces	Provided:	8 Spaces
Buildings 1 & 2		**Multi-Family**	
Required:	8 Spaces	Required:	30 Spaces
Provided:	8 Spaces	Provided:	30 Spaces

Neighborhood Special District

Residential Density		
Maximum UPA (Non-CRA):		15.0
Provided UPA:	8.1 UPA (395 units / 48.99 ac)	
Site Area	48.99 ac	
Residential		
Provided Area:	14.70 ac	30.0%
Non-Residential		
Provided Area:	34.29 ac	70.0%
Commercial Area:	22.91 ac	46.8%
Stormwater Tracts:	8.88 ac	18.1%
Right of Way:	2.52 ac	5.1%
Non-Residential Floor Area Ratio		
Maximum Allowable Area:	4,267,974 sf	2.0 FAR
Provided Area:	193,146 sf	0.09 FAR

Building Data

Building Coverage:	370,876 sf
Retail, Bulk Merchandise:	157,531 sf
Fuel Facility Office:	123 sf
Retail:	19,250 sf
Restaurant:	16,240 sf
Multi-Family (Indoor Garage, Cabana & Maintenance):	177,730 sf

Native Vegetation Requirement

Total Site Area:	**48.99 acres**
Wetlands:	5.58 acres
Surface Waters:	4.10 acres
Upland Area:	38.39 acres

Required Native Landscape Area (25.0%): 9.60 acres
Provided Native Landscape Area (25.7%): 9.88 acres

Land Use Site Data

Total Site Area:	48.99 ac	
Right of Way:	2.52 ac	5.1%
Residential:	14.70 ac	30.0%
Commercial:	22.91 ac	46.8%
Retail, Bulk Merchandise:	17.31 ac	
Kanner Highway Parcel:	5.60 ac	
Stormwater Tracts:	8.88 ac	18.1%
Lake 1:	1.80 ac	
Lake 2:	2.83 ac	
Dry Retension Area 1:	0.33 ac	
Dry Retention Area 2:	0.75 ac	
Dry Retention Area 3:	0.46 ac	
DOT Basin:	2.59 ac	

Density & Floor Area Ratio

Residential	
Residential Units:	395
Density Overall Site:	8.1 UPA (395 units / 48.99 ac)
Commercial	
Project Site Area:	2,133,987 sf
Total Commercial Building Area:	193,146 sf
Floor Area Ratio:	0.09 FAR

General Notes:

- All building, parking and access areas shall document compliance with the requirements of the American Disabilities Act prior to the issuance of a building permit.
- Refer to Landscape Plan for landscape details and specifications.
- All exotic plant species shall be removed and all required landscaping shall be installed prior to the issuance of a Certificate of Occupancy.
- The applicant will request in writing, prior to any land clearing, that the City of Stuart Development Dept. Perform a field inspection to determine if barricades have been properly installed on the site.
- All signs will comply with the sign regulations at the time of permitting.
- "No Trespass" signs to be posted during construction and displayed at all entrances and exits.
- All building numbers to be no less than four (4) inches tall, illuminated, and not blocked by landscaping.
- Building numbers shall be placed at front and rear entrances.
- Sediment control measures shall be maintained in working order at all times.
- Provisions shall be made to minimize the deposit of sediment by transport vehicles onto public paved surfaces.
- Sediment basin and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land activity and shall be made functional before land disturbance takes place.
- All public sidewalks are to be a minimum of 6' in width.
- A crime watch contact shall be established on site, to include all residents and businesses.
- Any sidewalk damaged during construction shall be repaired or replaced.
- A/C Units, trash receptacles, back flow preventer, and other above ground utilities shall be screened with landscape per City of Stuart LDR.
- Knox Box key vaults shall be provided as required.
- No permanent trailers shall be permitted on site. A temporary construction trailer shall be allowed during the course construction activities.
- Detectable warning surfaces shall be provided at all sidewalk ramps and crosswalks.
- Buildings 1, 2, 3, 4 & 5 may include any use allowed in the CPUD Agreement and any additional additional parking required shall be debited against the excess parking provided.

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100 Fax 772-220-2205

Key / Location:

Project Team:

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Environmental:
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Stuart, Florida 34996

KANNER CPUD

City of Stuart, Martin County, Florida

Master Site Plan

Date	By	Description
8.21.2020	SLS	Initial Submittal
12.18.2020	SLS	1st Resubmittal
03.18.2021	SLS	2nd Resubmittal
04.15.2021	SLS	3rd Resubmittal

NORTH

SCALE: 1" = 100'

0 50' 100' 200'

REG. # 1018
Thomas P. Lucido

Designer	—	Sheet	1 of 1
Manager	—		
Project Number	—		
Municipal Number	—		
Computer File	19-035 - Costco Master Site Plan.dwg		

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APPENDIX B

NON-MOTORIZED FEATURES

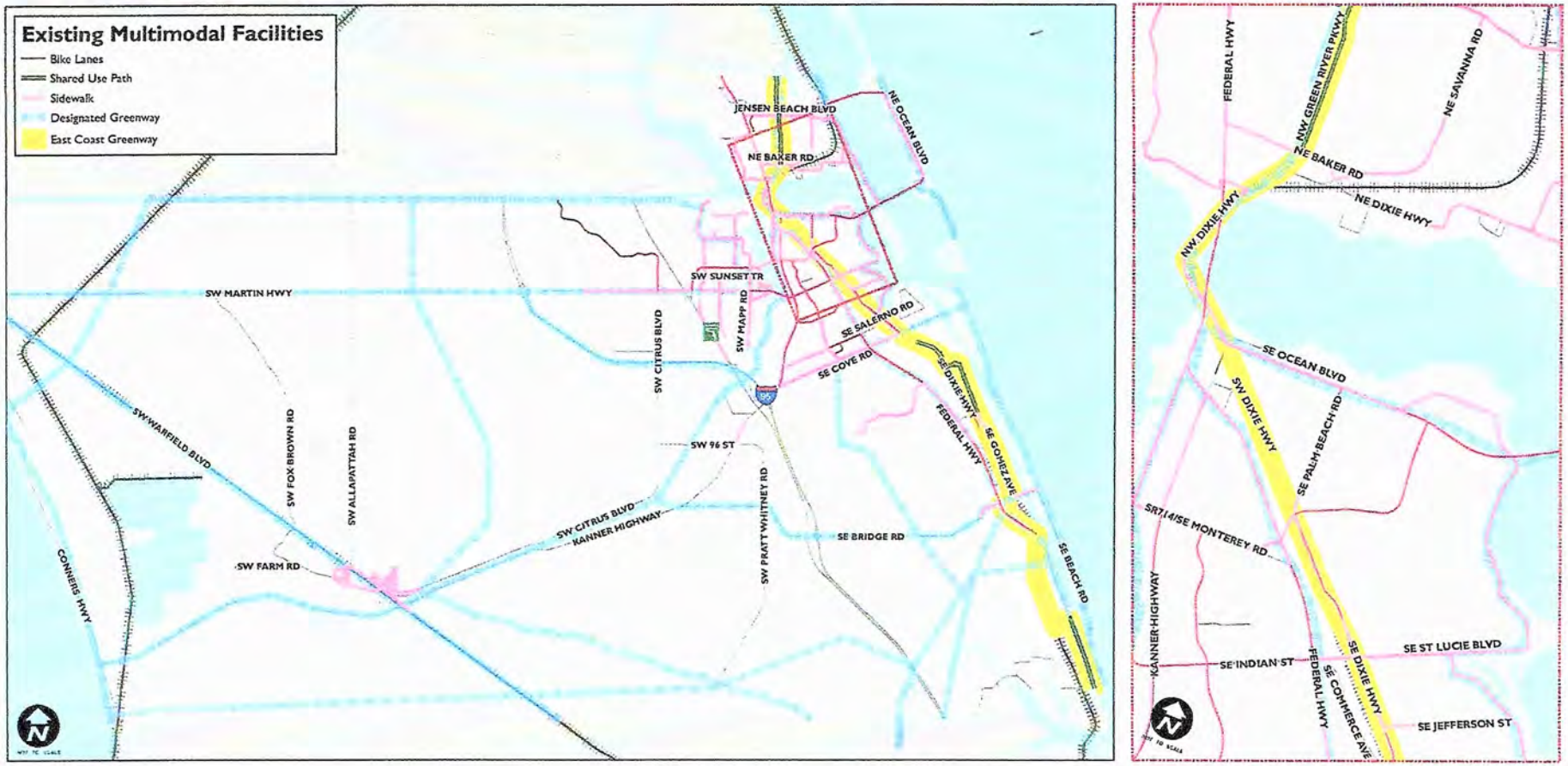


Figure 2-2. Existing Multimodal Facilities

Figure 2-2 provides an overview of existing and designated bicycle and pedestrian facilities. This includes roadways with existing bike lanes, shared use paths, and sidewalks along major roadways. As illustrated, nearly all the existing bike lanes and shared use paths are located within the eastern portion of the County and serve to connect the urbanized areas. Included in Figure 2-2 is the proposed East Coast Greenways (ECG), which are trails of regional and statewide significance and connect to Palm Beach and St. Lucie Counties. The light-green network represents the Designated Greenways – these greenways do not necessarily represent existing bike facilities, rather they identify corridors along which to provide a facility.

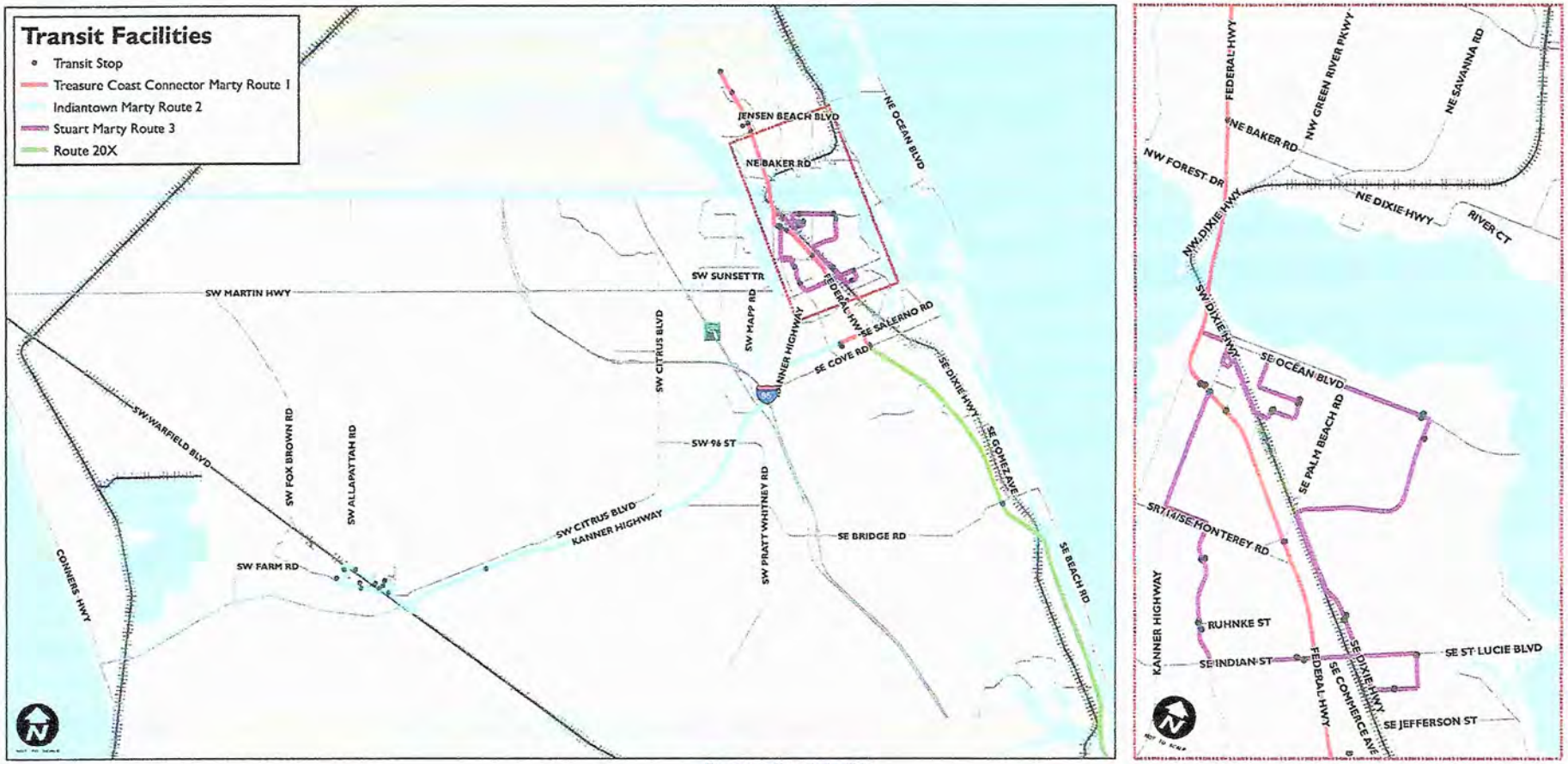


Figure 2-3. Transit Facilities

Figure 2-3 illustrates the locations of the transit routes and stops in Martin County. Four bus routes serve Martin County: Route 1/US 1 Corridor, Route 2/Indiantown, Route 3/Stuart, and Route 20X. Route 1/US 1 Corridor provides service from Port Salerno north to St. Lucie County while Route 20X provides commuter service south to Palm Beach County. Route 2/Indiantown serves as a connector between Indiantown and the urbanized east coast of Martin County while Route 3/Stuart provides a circulator service within the Stuart urbanized area.

APPENDIX C

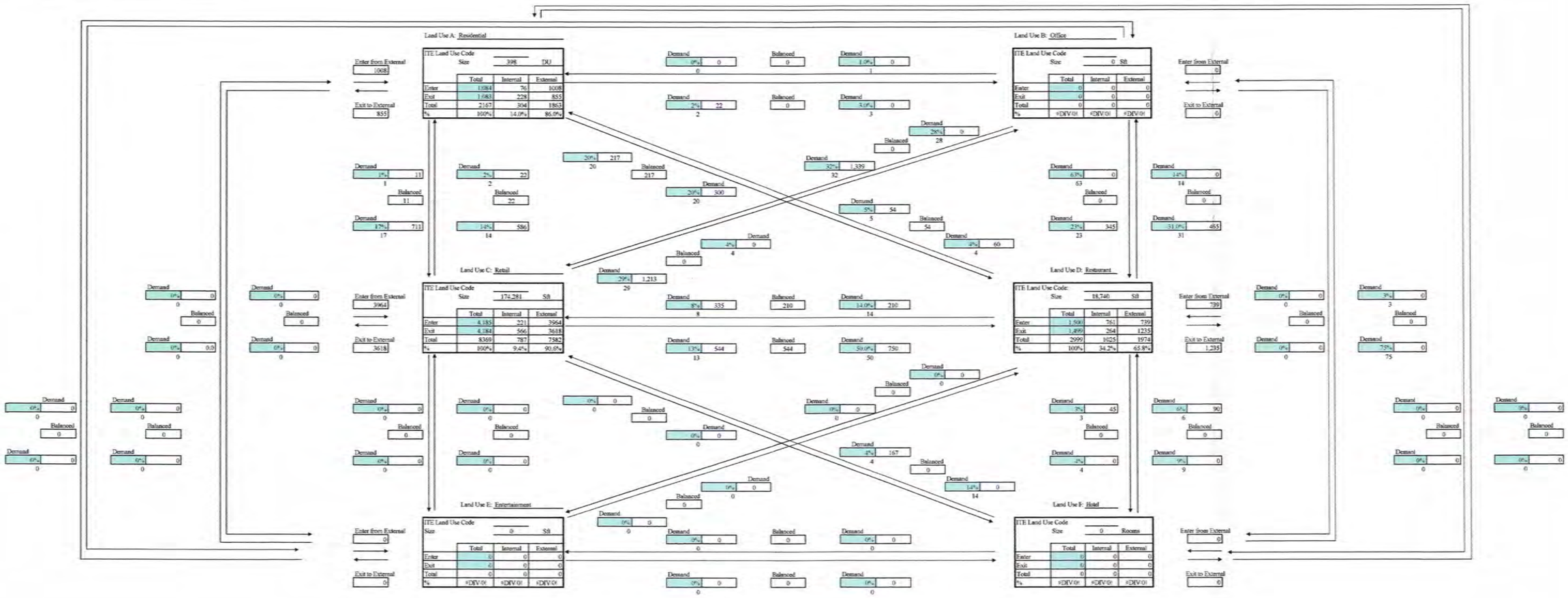
INTERNAL CAPTURE

TABLE 1: Daily Internal Traffic

PROJECT
TRIP INTERNALIZATION - Daily

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: Daily



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	1008	0	3964	739	0	0	5711	
Exit	855	0	3618	1235	0	0	5708	Internal
Total	1863	0	7582	1974	0	0	11419	Capture
Single-Use Trip Gen Estimate	2167	0	8369	2999	0	0	13535	15.6%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

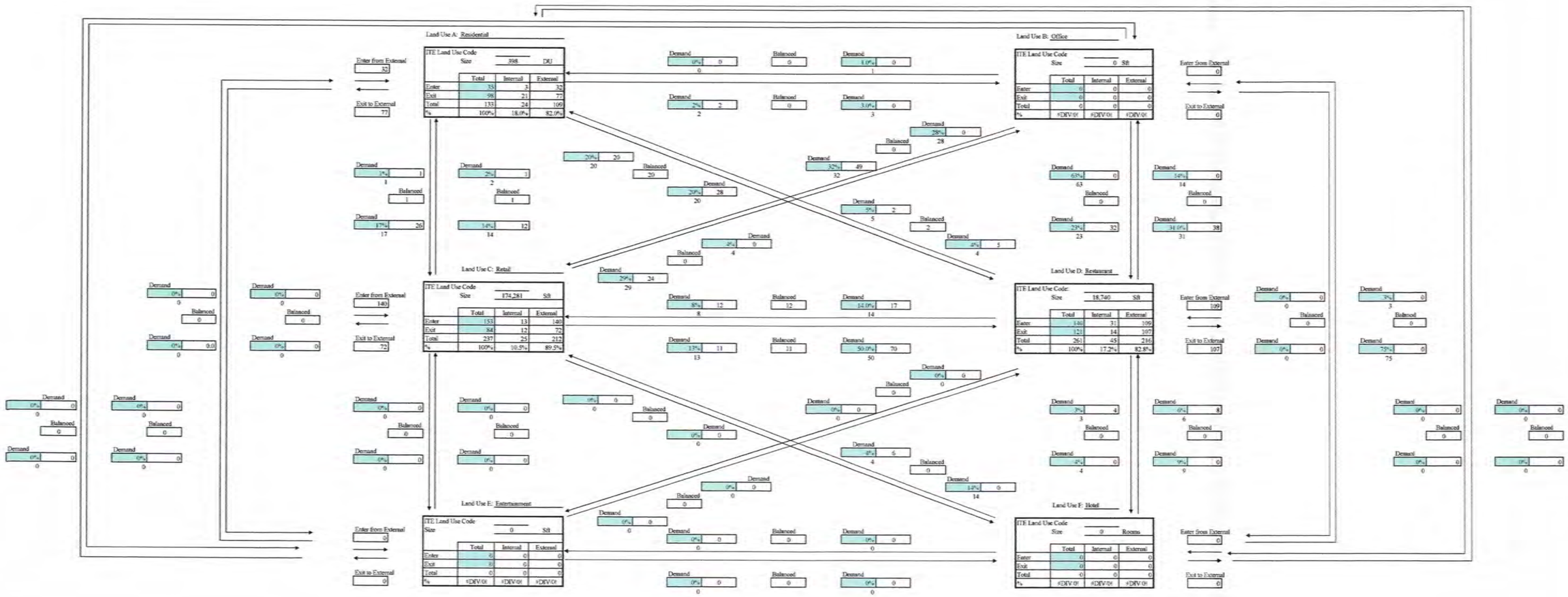
Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: AM Internal Traffic - Phase 1

PROJECT
TRIP INTERNALIZATION - AM

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: AM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	32	0	140	109	0	0	281	
Exit	77	0	72	107	0	0	256	Internal
Total	109	0	212	216	0	0	537	Capture
Single-Use Trip Gen Estimate	133	0	237	261	0	0	631	14.9%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

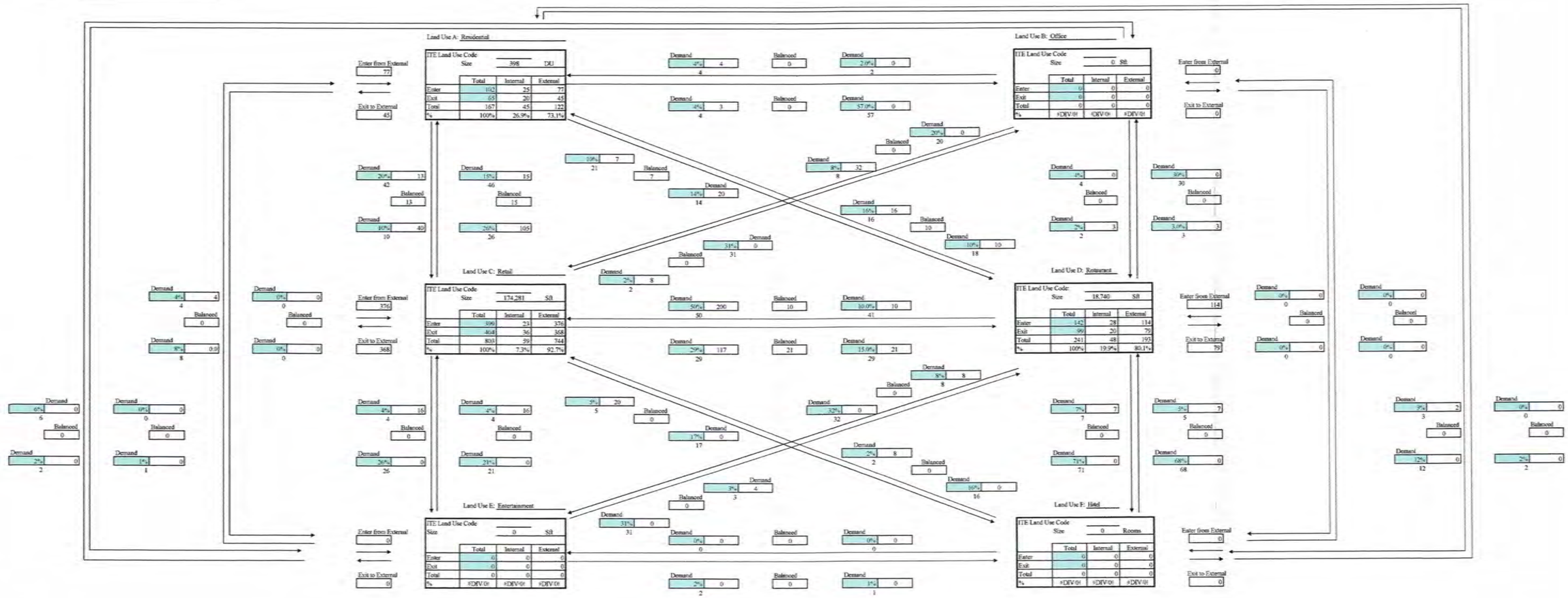
Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: PM Internal Traffic

PROJECT
TRIP INTERNALIZATION - PM

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: PM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	77	0	376	114	0	0	567	
Exit	45	0	368	79	0	0	492	Internal
Total	122	0	744	193	0	0	1059	Capture
Single-Use Trip Gen Estimate	167	0	863	241	0	0	1271	12.6%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

Table 13 – Road Improvement Needs by Land Use Type

Land Use	Unit	Trips	Trip Length	% New	Adj %	VMT	New Rds (Ln Ft)
Residential:							
800 FT² & Under	Dwelling	5.34	5.63	100%	35%	10.66	6.13
801 to 1,100	Dwelling	5.40	5.63	100%	35%	10.78	6.19
1,101 to 2,300	Dwelling	6.63	5.63	100%	35%	13.23	7.60
2,301 & Over	Dwelling	9.57	5.63	100%	35%	19.10	10.98
Non-Residential:							
Hotel/Motel	Room	8.17	5.57	90%	35%	14.52	8.34
RV Park	Per Lot	4.00	5.57	90%	35%	7.11	4.09
Nursing Home	1000 s.f.	7.58	3.46	100%	35%	9.30	5.34
ACLF	1000 s.f.	2.66	3.46	100%	35%	3.26	1.88
Medical Office	1000 s.f.	36.13	3.46	90%	35%	39.88	22.92
Bank Walk In	1000 s.f.	69.60	3.46	53%	35%	45.25	26.00
Bank w/Drive In	1000 s.f.	148.15	3.46	53%	35%	96.31	55.35
Office Under 100,000 FT²	1000 s.f.	13.34	5.63	90%	35%	23.96	13.77
Office 100,000 to 199,999 FT²	1000 s.f.	11.38	5.63	90%	35%	20.44	11.75
Office 200,000 to 399,999 FT²	1000 s.f.	11.44	5.63	90%	35%	20.55	11.81
Office 400,000 TO 599,999 FT²	1000 s.f.	11.10	5.63	90%	35%	19.94	11.46
Office 600,000 TO 799,999 FT²	1000 s.f.	10.93	5.63	90%	35%	19.63	11.28
Office 800,000 TO 999,999 FT²	1000 s.f.	10.83	5.63	90%	35%	19.45	11.18
Office 1,000,000 Ft² or Larger	1000 s.f.	10.75	5.63	90%	35%	19.31	11.10
Manufacturing	1000 s.f.	3.82	5.63	90%	35%	6.86	3.94
Warehouse	1000 s.f.	3.56	5.63	90%	35%	6.40	3.68
Mini-Warehouse	1000 s.f.	2.50	5.63	90%	35%	4.49	2.58
Gen. Industrial	1000 s.f.	6.97	5.63	90%	35%	12.52	7.20
Retail Under 50,000 FT²	1000 s.f.	84.76	1.50	52%	35%	23.44	13.47
Retail 50,000 to 99,999 FT²	1000 s.f.	67.92	2.50	52%	35%	31.30	17.99
Retail 100,000 to 199,999 FT²	1000 s.f.	53.28	3.00	61%	35%	34.57	19.87
Retail 200,000 to 399,999 FT²	1000 s.f.	41.80	4.00	74%	35%	43.86	25.21
Retail 400,000 TO 599,999 FT²	1000 s.f.	36.27	5.73	77%	35%	56.73	32.60
Retail 600,000 TO 799,999 FT²	1000 s.f.	32.80	6.87	79%	35%	63.11	36.27
Retail 800,000 TO 999,999 FT²	1000 s.f.	30.33	8.00	80%	35%	68.81	39.55
Retail 1,000,000 Ft² or Larger	1000 s.f.	28.06	8.00	81%	35%	64.46	37.05
Gasoline/Service Station	Fuel Pstn	168.56	1.50	50%	35%	44.82	25.76
Auto Sales & Repair	1000 s.f.	33.34	3.46	85%	35%	34.76	19.98
Restaurant	1000 s.f.	89.95	3.29	56%	35%	58.75	33.76
Fast Food Restaurant	1000 s.f.	496.12	1.50	51%	35%	134.54	77.33
Car Wash	1000 s.f.	108.00	3.46	100%	35%	132.47	76.13
Convenience Store w/o Gas	1000 s.f.	737.99	1.50	39%	35%	153.05	87.96
Convenience Store w/Gas	1000 s.f.	845.60	1.50	39%	35%	175.36	100.79
Pharmacy w/Drive Thru	1000 s.f.	88.16	3.46	50%	35%	54.07	31.07
Golf Course	Hole	35.74	3.21	95%	35%	38.64	22.21
Racquet Club	1000 s.f.	14.03	3.21	95%	35%	15.17	8.72
Parks	Acre	2.28	3.21	95%	35%	2.47	1.42
Tennis Court	Court	31.04	3.21	95%	35%	33.56	19.29
Marina	Slip	2.96	3.37	95%	35%	3.36	1.93
Boat Storage	Slip	2.96	3.37	95%	35%	3.36	1.93
Post Office	1000 s.f.	108.19	3.21	90%	35%	110.80	63.68
Library	1000 s.f.	56.24	5.63	90%	35%	101.02	58.06
Day Care Center	1000 s.f.	79.26	3.46	50%	35%	48.61	27.94
Hospital	1000 s.f.	16.50	5.63	90%	35%	29.64	17.03
House of Worship	1000 s.f.	9.11	5.36	95%	35%	16.45	9.45
Movie Theatre	1000 s.f.	78.06	3.21	95%	35%	84.39	48.50
Elem School	1000 s.f.	15.43	5.36	100%	35%	29.32	16.85
Middle School	1000 s.f.	13.78	5.36	100%	35%	26.18	15.05
High School	1000 s.f.	12.89	5.36	100%	35%	24.49	14.08
Fitness Center	1000 s.f.	32.93	3.46	95%	35%	38.37	22.05

Source: Institute of Transporation Engineers Trip Generation - 8th Edition
Palm Beach County Trip Generation Rates - September 1, 2011
Walter H. Keller, Inc.

Allowable Pass-By Calculation

Segment	From	To	Existing 2019 AADT	Existing 2019 2-Way Peak Hour Trips	Growth Rate	2024 Daily Trips	Daily Pass-By Allowed	2024 2-Way Peak Hour Trips	Peak Hour Pass-By Allowed
Kanner Hwy	Indian St	Monterey Rd	21116	1631	1.005	21649	2164.9	1672	167.2
Willoughby Blvd	Indian St	Monterey Rd	11100	1280	1.037	13311	1331.1	1535	153.5
Indian St	Kanner Hwy	Willoughby Blvd	29306	2771	1.047	36871	3687.1	3486	348.6
						Total:	7183		669

APPENDIX D

MARTIN COUNTY 2019 ROADWAY LEVEL OF SERVICE INVENTORY REPORT

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	23,957	1,622	C	6.1%
CR-723 (Savanna Rd)	CR-707	NE 24th St	Class I: 2-Ln Undivided	880	9,135	384	C	0.5%
CR-723 (Savanna Rd)	NE 24th St	CR-707A (Jensen Beach Blvd.)	Class I: 2-Ln Undivided	880	9,631	471	C	1.0%
CR-726 (Citrus Blvd)	SR-710	Greenridge Ln	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,783	126	A/B	0.5%
CR-726 (Citrus Blvd)	Greenridge Ln	CR-76A	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,488	137	A/B	0.5%
CR-76A (Citrus Blvd.)	CR-726	SR-714	Transitional 2-Ln Uninter /Undivided Flow	1200	4,269	283	A/B	8.0%
CR-76A (SW 96th St)	CR-726	Pennsylvania Ave	Transitional 2-Ln Uninter /Undivided Flow	1200	3,845	195	A/B	8.0%
CR-76A (SW 96th St)	Pennsylvania Ave	SR-76	Class I: Transitional 2-Ln Undivided	800	8,086	492	C	2.5%
CR-A1A (Dixie Hwy)	SR-5	CR-708	Class II: 2-Ln Undivided	750	3,416	192	C	4.7%
CR-A1A (Dixie Hwy)	CR-708	Osprey St	Class I: 2-Ln Undivided	880	7,552	477	C	3.7%
CR-A1A (Dixie Hwy)	Osprey St	Heritage Blvd	2-Ln Uninter /Undivided Flow	1190	6,595	393	A/B	3.1%
CR-A1A (Dixie Hwy)	Heritage Blvd	Cove Rd	2-Ln Uninter /Undivided Flow	1190	7,147	346	A/B	2.9%
CR-A1A (Dixie Hwy)	Cove Rd	Salerno Rd	Class II: 2-Ln Divided	790	12,131	617	D	3.1%
CR-A1A (Dixie Hwy)	Salerno Rd	St. Lucie Blvd	Class II: 2-Ln Undivided	750	17,261	835	F	3.3%
CR-A1A (Dixie Hwy)	St Lucie Blvd	Jefferson St	Class II: 2-Ln Undivided	750	14,108	748	D	2.9%
CR-A1A (Dixie Hwy)	Jefferson St	Indian St	Class II: 4-Ln Divided	1630	18,389	848	D	2.2%
CR-A1A (Dixie Hwy)	Indian St	SR-714	Class I: 4-Ln Divided	2000	17,161	824	C	3.1%
CR-A1A (Dixie Hwy)	SR-714	SE Fifth St	2-Ln Undivided Non-State	675	6,710	346	D	1.6%
Farm Rd	Dr Martin Luther King Jr Dr	Palm Wy	Class II: 2-Ln Undivided	750	2,817	124	C	3.2%
Fox Brown Rd	SR-710	CR-714	Uninterrupted Rural Hwy: 2-Ln Undivided	740	347	16	A/B	0.0%
Goldenrod Rd	Britt Rd	SR-732	Class II: 4-Ln Divided	1630	4,810	278	A/B	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
Goldenrod Rd	SR-732	SR-5	Class II: 2-Ln Undivided	750	6,877	402	D	1.9%
Goldenrod Rd	SR-5	Westmoreland Blvd	Class II: 2-Ln Undivided	750	4,635	295	C	3.0%
Gomez Ave	CR-708	Crossrip St	Class II: 2-Ln Undivided	750	3,732	199	C	1.4%
Gomez Ave	Crossrip St	Osprey St	Class II: 2-Ln Undivided	750	1,065	61	C	0.5%
Green River Parkway	Dixie Hwy	Baker Rd	Class II: 2-Ln Undivided	750	6,833	351	C	3.1%
Green River Parkway	Baker Rd	SR-732	Class I: 2-Ln Undivided	880	8,341	596	C	4.3%
Green River Parkway	SR-732	St. Lucie County	2-Ln Uninter /Undivided Flow	1190	8,667	576	C	1.8%
Horseshoe Point Rd	CR-A1A	Kubin Ave	2-Ln Undivided Non-State	675	5,647	285	C	0.5%
Indian St	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	29,306	1,729	C	4.7%
Indian St	Willoughby Blvd	SR-5	Class I: 4-Ln Divided	2000	27,852	1,236	C	2.8%
Indian St	SR-5	Commerce Ave	Class I: 4-Ln Divided	2000	22,368	995	C	0.5%
Indian St	Commerce Ave	CR-A1A	Class I: 4-Ln Divided	2000	25,515	1,199	C	2.5%
Indian St	CR-A1A	St Lucie Blvd	2-Ln Undivided Non-State	675	7,051	346	D	1.1%
Indian River Dr	Palmer St	CR-707	Class II: 2-Ln Undivided	750	7,509	374	D	3.7%
Island Way	Palm Beach County	Jupiter Road	Transitional 2-Ln Uninter /Undivided Flow	1200	4,493	302	A/B	3.4%
Island Way	Jupiter Road	Country Club Dr	Class II: 2-Ln Undivided	750	4,855	213	C	0.5%
Jack James Rd	SR-76	Blue Water Wy	Class II: 2-Ln Undivided	750	3,132	294	C	0.5%
Lares St	CR-708	CR-A1A	2-Ln Undivided Non-State	675	3,349	235	C	0.6%
Little Club Wy	Country Club Dr	Wooden Bridge Wy	2-Ln Undivided Non-State	675	2,273	103	C	0.5%
Locks Rd	Canal St	SR-76	2-Ln Undivided Non-State	675	3,667	232	C	2.0%
MacArthur Blvd	Sailfish Point	SR-A1A	2-Ln Undivided Non-State	675	5,989	368	D	6.8%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-5 (US-1)	Britt Rd	SR-732	Class I: 7-Ln Divided	3530	55,878	2,898	C	0.8%
SR-5 (US-1)	SR-732	Westmoreland Blvd	Class I: 8-Ln Divided	4040	64,147	3,522	C	0.5%
SR-5 (US-1)	Westmoreland Blvd	St Lucie County	Class I: 8-Ln Divided	4040	60,343	2,721	C	0.5%
SR-710 (Warfield Blvd)	Okeechobee County	Fox Brown Rd	Uninterrupted Rural Hwy: 2-Ln Undivided	670	6,348	257	C	4.8%
SR-710 (Warfield Blvd)	Fox Brown Rd	CR-609 (Allapattah)	2-Ln Uninter /Undivided Flow	840	7,419	310	A/B	3.0%
SR-710 (Warfield Blvd)	CR-609 (Allapattah)	Van Buren	Class I: 2-Ln Undivided	870	12,335	694	C	4.0%
SR-710 (Warfield Blvd)	Van Buren	CR-726 (Citrus)	Class II: 4-Ln Divided	1710	12,335	694	A/B	4.0%
SR-710 (Warfield Blvd)	CR-726	SR-76 (Kanner)	Transitional 4-Ln Uninter /Divided Flow	2450	11,001	431	A/B	3.4%
SR-710 (Warfield Blvd)	SR-76	Palm Beach County	Transitional 4-Ln Uninter /Divided Flow	2450	6,959	258	A/B	1.4%
SR-714 (Martin Hwy)	I-95	CR-76A (Citrus)	Transitional 2-Ln Uninter /Undivided Flow	1200	13,786	735	C	5.1%
SR-714 (Martin Hwy)	CR-76A (Citrus)	Florida's Turnpike	Class I: 4-Ln Divided	2000	21,291	1,136	C	4.9%
SR-714 (Martin Downs Blvd)	Florida's Turnpike	CR-713	Class I: 4-Ln Divided	2000	20,695	1,038	C	1.7%
SR-714 (Martin Downs Blvd)	CR-713	Matheson Ave	Class I: 4-Ln Divided	2000	27,291	1,267	C	0.5%
SR-714 (Martin Downs Blvd)	Matheson Ave	Mapp Rd	Class I: 4-Ln Divided	2000	32,789	1,738	C	0.5%
SR-714 (Palm City Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	34,751	1,989	D	0.5%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	22,465	1,274	C	0.5%
SR-714 (Monterey Rd)	Willoughby Blvd	Monterey Extension	Class I: 4-Ln Divided	2000	24,716	1,186	C	0.6%
SR-714 (Monterey Rd)	Monterey Extension	SR-5	Class I: 4-Ln Divided	2000	18,136	926	C	0.8%
SR-714 (Monterey Rd)	SR-5	CR-A1A	Class II: 4-Ln Divided	1630	21,333	1,099	D	0.5%
SR-714 (Monterey Rd)	CR-A1A	SR-A1A	Class I: 4-Ln Divided	1910	19,430	1,031	C	1.1%
SR-732 (Causeway Blvd)	CR-707	SR-A1A	2-Ln Uninter /Undivided Flow	1190	12,645	786	C	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	Class I: 4-Ln Divided	2000	25,949	1,349	C	0.5%
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	Class I: 4-Ln Divided	2000	23,804	1,154	C	0.5%
SR-76 (Kanner Hwy)	SR-15	SR-710	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,134	111	A/B	6.1%
SR-76 (Kanner Hwy)	SR-710	CR-708	Uninterrupted Rural Hwy: 2-Ln Undivided	740	3,412	151	A/B	0.9%
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	Transitional 2-Ln Uninter /Undivided Flow	1200	2,889	168	A/B	0.5%
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	Class I: 4-Ln Divided	2000	13,401	831	C	1.7%
SR-76 (Kanner Hwy)	Locks Rd	Jack James	Class I: 4-Ln Divided	2000	19,231	920	C	0.5%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	Class I: 6-Ln Divided	3020	43,880	2,372	C	0.6%
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	Class I: 6-Ln Divided	3020	34,493	1,495	C	1.0%
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	Class I: 6-Ln Divided	3020	30,912	1,293	C	2.6%
SR-76 (Kanner Hwy)	Indian St	SR-714	Class I: 6-Ln Divided	3020	21,116	993	C	0.5%
SR-76 (Kanner Hwy)	SR-714	SR-5	Class I: 6-Ln Divided	3020	25,158	1,006	C	0.5%
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	Class II: 4-Ln Divided	1630	19,437	1,081	D	0.6%
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	Class I: 4-Ln Divided	2000	23,060	1,127	C	1.0%
SR-A1A (Ocean Blvd)	Sewalls Point Rd	Macarthur Blvd	Class I: 2-Ln Divided	925	13,597	845	C	0.5%
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	2-Ln Uninter /Undivided Flow	1190	8,532	407	A/B	3.1%
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	2-Ln Uninter /Undivided Flow	1190	14,752	870	D	1.8%
St Lucie Blvd	CR-A1A	Indian St	2-Ln Undivided Non-State	675	3,305	172	C	0.5%
St Lucie Blvd	Indian St	SR-A1A	2-Ln Undivided Non-State	675	7,524	429	D	3.3%
Westmoreland Blvd	St Lucie County	SR-5	Class II: 2-Ln Divided	790	12,271	601	D	1.0%
Willoughby Blvd	Cove Rd	Salerno Rd	Class I: 2-Ln Undivided	880	4,332	214	C	8.0%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
Willoughby Blvd	Salerno Rd	Pomeroy St	Class I: 2-Ln Undivided	880	9,007	544	C	5.4%
Willoughby Blvd	Pomeroy St	Indian St	Class I: 4-Ln Divided	2000	11,709	597	C	8.0%
Willoughby Blvd	Indian St	SR-714	Class I: 4-Ln Divided	2000	11,100	666	C	3.7%
Wright Blvd	SR-5	Dixie Highway	Class II: 2-Ln Undivided	750	10,460	555	D	4.3%

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Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2019 HISTORICAL AADT REPORT

COUNTY: 89 - MARTIN

SITE: 0114 - SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK: 132)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2019	26000 C	N 13500	S 12500	9.00	62.40	5.50
2018	27500 C	N 13500	S 14000	9.00	61.40	5.50
2017	25500 C	N 13000	S 12500	9.00	61.80	5.50
2016	26000 C	N 13000	S 13000	9.00	62.10	4.90
2015	26000 C	N 13000	S 13000	9.00	62.30	4.90
2014	23000 C	N 12000	S 11000	9.00	62.60	5.30
2013	26500 C	N 13500	S 13000	9.00	62.40	5.90
2012	25000 C	N 12500	S 12500	9.00	60.30	5.90
2011	27500 C	N 14000	S 13500	9.00	59.50	3.40
2010	27500 C	N 14000	S 13500	9.38	58.28	3.40
2009	28000 C	N 15000	S 13000	9.15	62.05	3.40
2007	28000 C	N 14000	S 14000	9.15	59.55	4.90
2006	27000 C	N 14000	S 13000	9.10	57.64	8.50
2005	26000 C	N 13500	S 12500	9.00	59.00	6.10
2004	28000 C	N 14500	S 13500	8.90	61.20	6.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2019 HISTORICAL AADT REPORT

COUNTY: 89 - MARTIN

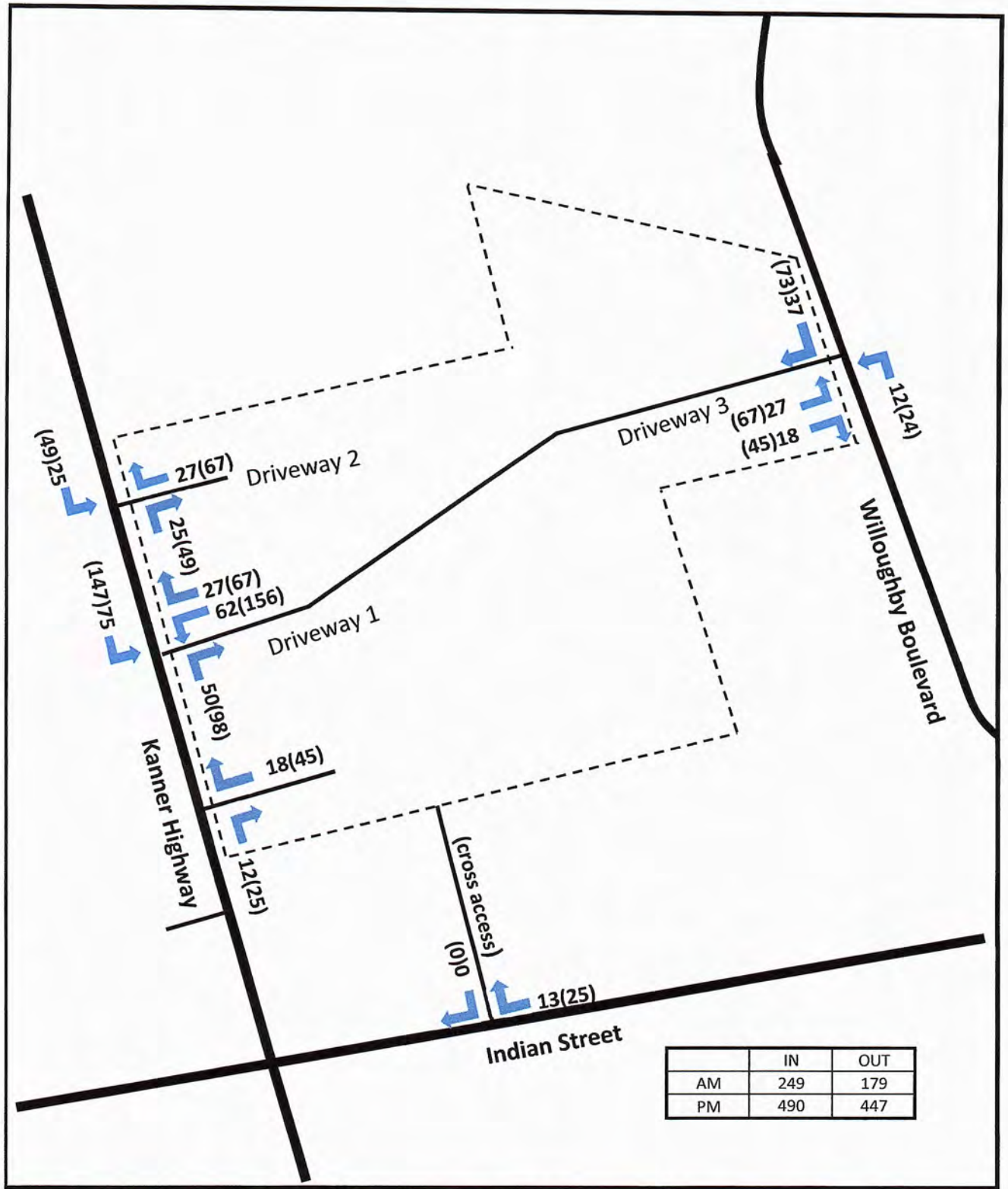
SITE: 0063 - SE WILLOUGHBY BLVD SOUTN FO INDIAN ST(COUNTY LINK: 160)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2019	14900 F	N 7400	S 7500	9.00	62.40	13.80
2018	14700 C	N 7300	S 7400	9.00	61.40	6.10
2017	9900 V	N 4900	S 5000	9.00	61.80	3.90
2016	9700 R	N 4800	S 4900	9.00	62.10	3.80
2015	9300 T	N 4600	S 4700	9.00	62.30	6.50
2014	9100 S	N 4500	S 4600	9.00	62.60	10.10
2013	8900 F	N 4400	S 4500	9.00	62.40	11.00
2012	8700 C	N 4300	S 4400	9.00	60.30	10.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

APPENDIX E

DRIVEWAY DATA AND ANALYSES



	IN	OUT
AM	249	179
PM	490	447

O'ROURKE ENGINEERING & PLANNING

NTS

22 SE Seminole St
Stuart, Fl, 34994

Job #: MR18031.0 | Date: 6/25/20

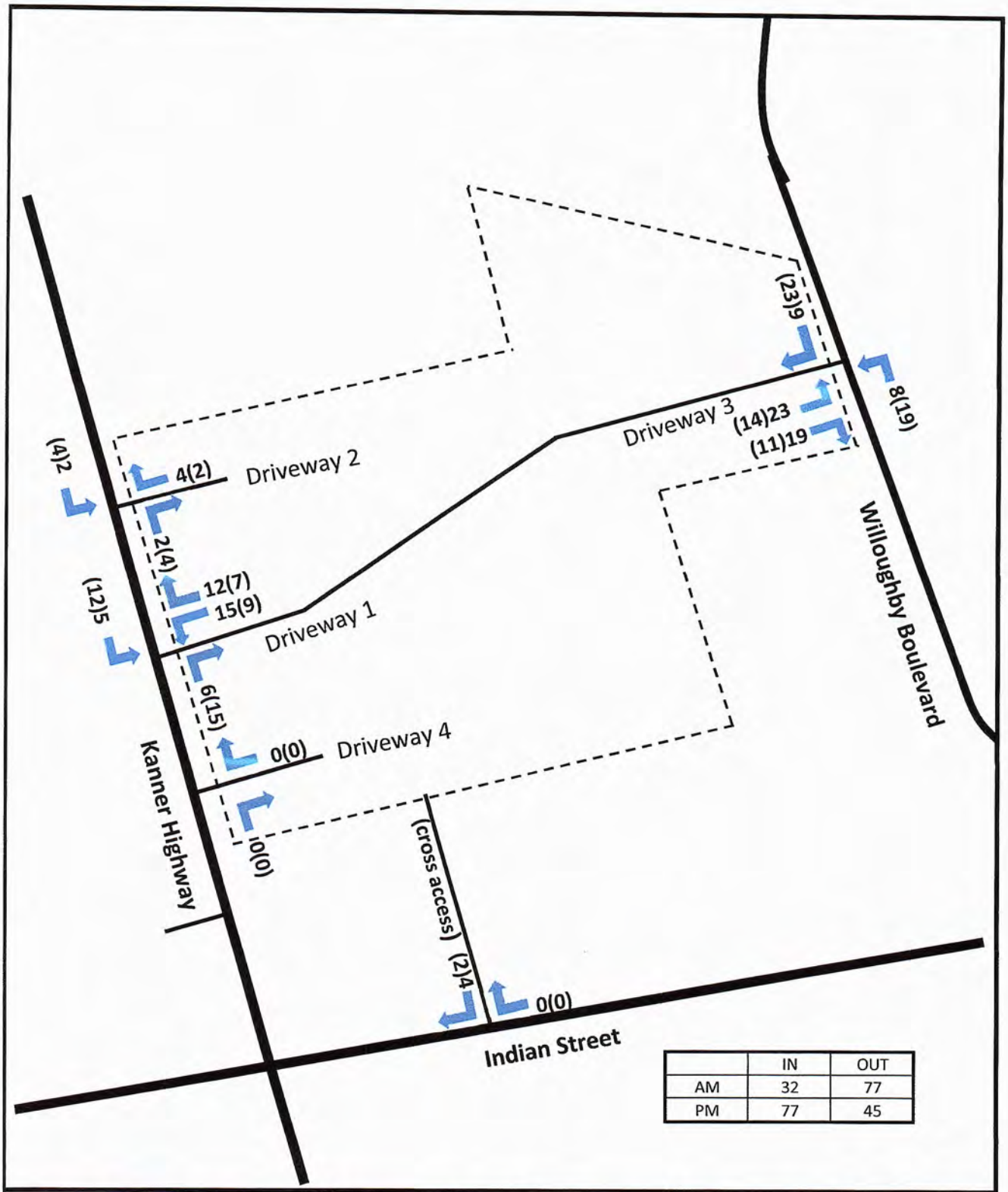
Legend

XX(XX) = AM(PM)
= Project Location
= Direction

Appendix E

Retail Driveway Volumes

M & M Retail



	IN	OUT
AM	32	77
PM	77	45

O'ROURKE ENGINEERING & PLANNING

NTS

22 SE Seminole St
Stuart, Fl, 34994

Job #: MR18031.0 | Date: 4/21/21

Legend

XX(XX) = AM(PM)
= Project Location
= Direction

Appendix E

Residential Driveway Volumes

M & M Retail

COUNTY: 89
STATION: 0114
DESCRIPTION: SR 76/COLORADO AVE - SW OF MONTEREY RD(COUNTY LINK
START DATE: 03/20/2019
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	36	36	28	16	116	19	12	20	19	70	186
0100	28	20	19	20	87	7	11	7	11	36	123
0200	14	11	4	7	36	19	16	4	11	50	86
0300	6	10	17	16	49	14	19	19	31	83	132
0400	17	20	25	25	87	30	37	43	50	160	247
0500	23	38	37	74	172	74	98	85	139	396	568
0600	72	95	148	134	449	150	172	175	206	703	1152
0700	163	230	254	298	945	277	296	253	269	1095	2040
0800	284	329	256	218	1087	265	186	240	198	889	1976
0900	230	218	224	229	901	172	188	184	212	756	1657
1000	245	224	214	224	907	215	197	224	191	827	1734
1100	241	234	229	284	988	210	203	229	218	860	1848
1200	245	270	259	275	1049	212	203	194	188	797	1846
1300	209	202	238	217	866	203	234	198	179	814	1680
1400	256	287	228	241	1012	187	248	218	202	855	1867
1500	270	250	254	276	1050	208	239	206	222	875	1925
1600	317	281	287	240	1125	226	203	212	244	885	2010
1700	275	260	271	292	1098	251	215	222	215	903	2001
1800	260	234	208	184	886	168	157	160	145	630	1516
1900	198	175	160	124	657	176	142	120	125	563	1220
2000	156	134	110	88	488	106	115	131	94	446	934
2100	79	85	82	70	316	108	101	85	77	371	687
2200	72	68	54	54	248	62	52	41	46	201	449
2300	22	52	59	52	185	32	37	23	20	112	297
24-HOUR TOTALS:					14804					13377	28181

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	745	1167	700	1095	715	2149
P.M.	1545	1161	1645	932	1545	2024
DAILY	745	1167	700	1095	715	2149

GENERATED BY SPS 5.0.53P

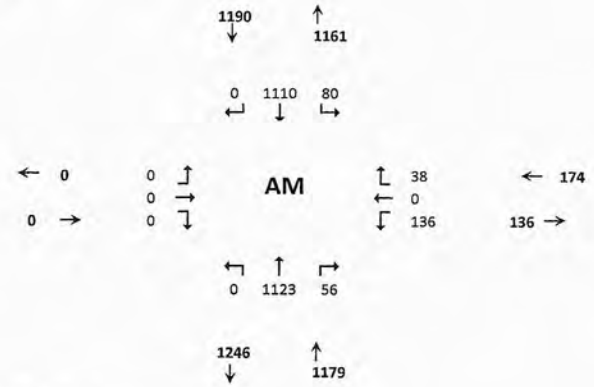
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy
E/W STREET: Driveway 1
CONTROL:
FILENAME:
COUNT DATE: 3/20/2019
DAY: Wednesday
CITY: Stuart
INTERSECTION:
REPORT DATE: 12/16/2020
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%
PROJECT	0	30	56	80	0	0	0	0	0	78	0	38	0
MMHS										7			
Kanner ALF										51			
Total	0	1123	56	80	1110	0	0	0	0	136	0	38	2543



Seasonal Factor: 1

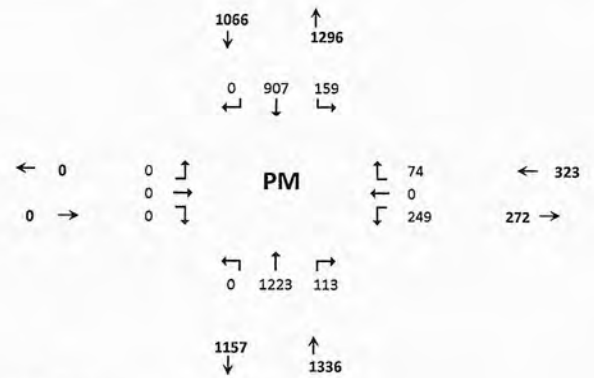
	Retail	Residential
Trips In	249	32
Trips Out	179	77

Growth Rate: 1.005
Years Grown: 5

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	

PM PEAK HOUR IS FROM: 4:00PM TO 5:00PM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061
In/Out	-	IN/OUT	IN	IN	-	-	-	-	-	OUT	-	OUT	-
Res Percentage	0%	0%	20%	15%	0%	0%	0%	0%	0%	20%	0%	15%	0%
Retail Percentage	0%	5%/10%	20%	30%	0%	0%	0%	0%	0%	35%	0%	15%	0%
Project	0	69	113	159	0	0	0	0	0	165	0	74	
MMHS										38			
Kanner ALF										46			
Total	0	1223	113	159	907	0	0	0	0	249	0	74	2725



Seasonal Factor: 1

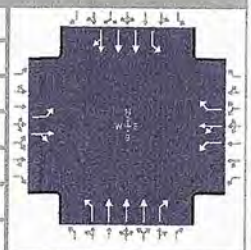
	Retail	Residential
Trips In:	490	77
Trips Out:	447	45

Growth Rate: 1.005
Years Grown: 5

Lane call out subject to FDOT permitting.

HCS7 Signalized Intersection Results Summary

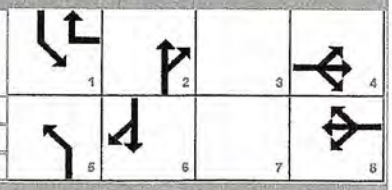
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.250
Analyst	James Kemp	Analysis Date	Apr 21, 2021	Area Type	Other
Jurisdiction	Martin County	Time Period	AM	PHF	0.95
Urban Street	Kanner Highway	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Kanner & Driveway 1	File Name	Kanner and Driveway 1 - AM - Costco - 4.21.21.xus		
Project Description	Costco				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	2	2	2	136	1	38	10	1123	56	80	1110	1

Signal Information			
Cycle, s	120.0	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	6.0	22.0	42.0	6.0	14.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	0.0
Red	2.0	2.0	2.0	2.0	2.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		10.0		9.0	2.0	3.0	2.0	4.0
Phase Duration, s		12.0		20.0	12.0	48.0	40.0	76.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.1		3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s		2.3		6.4	2.7		6.2	
Green Extension Time (g_e), s		0.0		0.2	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	1.00		1.00	
Max Out Probability		0.17		0.01	0.45		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	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	2	4		72	73	40	11	1182	59	84	780	390
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1743		1810	1811	1610	1810	1725	1610	1810	1900	1899
Queue Service Time (g_s), s	0.1	0.3		4.4	4.4	1.8	0.7	23.1	3.0	4.2	12.9	12.9
Cycle Queue Clearance Time (g_c), s	0.1	0.3		4.4	4.4	1.8	0.7	23.1	3.0	4.2	12.9	12.9
Green Ratio (g/C)	0.05	0.05		0.12	0.12	0.40	0.05	0.35	0.35	0.28	0.58	0.58
Capacity (c), veh/h	90	87		211	211	644	90	1811	564	513	2217	1108
Volume-to-Capacity Ratio (X)	0.023	0.048		0.339	0.344	0.062	0.116	0.653	0.105	0.164	0.352	0.352
Back of Queue (Q), ft/ln (95 th percentile)	2.7	5.4		87.6	88.9	30.5	13.6	365	52.4	81.1	223.3	227.8
Back of Queue (Q), veh/ln (95 th percentile)	0.1	0.2		3.5	3.6	1.2	0.5	14.6	2.1	3.2	8.9	9.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	54.2	54.3		48.7	48.8	22.2	54.5	32.9	26.3	32.3	13.1	13.1
Incremental Delay (d_2), s/veh	0.0	0.1		0.4	0.4	0.0	0.2	1.8	0.4	0.1	0.4	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
Control Delay (d), s/veh	54.3	54.4		49.1	49.1	22.2	54.7	34.7	26.7	32.4	13.5	14.0
Level of Service (LOS)	D	D		D	D	C	D	C	C	C	B	B
Approach Delay, s/veh / LOS	54.3	D		43.3	D		34.5	C		14.9	B	
Intersection Delay, s/veh / LOS	26.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.74	C	2.62	C	2.12	B	1.89	B
Bicycle LOS Score / LOS	0.50	A	0.79	A	1.18	A	1.18	A

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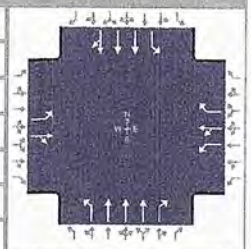
HCS7 Signalized Intersection Results Summary

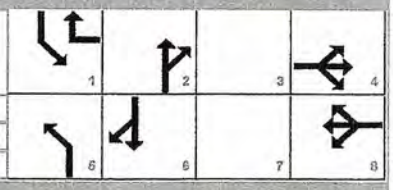
General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.250
Analyst	James Kemp	Analysis Date	Mar 16, 2021	Area Type	Other
Jurisdiction	Martin County	Time Period	PM	PHF	0.95
Urban Street	Kanner Highway	Analysis Year	2024	Analysis Period	1> 7:00
Intersection	Kanner & Driveway 1	File Name	Kanner and Driveway 1 - PM - Costco - 4.21.21.xus		
Project Description	Costco				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	2	2	2	249	1	74	10	1223	113	159	907	1

Signal Information			
Cycle, s	120.0	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	4.0	40.0	30.0	4.0	12.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	0.0
Red	2.0	2.0	2.0	2.0	2.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		10.0		9.0	2.0	3.0	2.0	4.0
Phase Duration, s		10.0		18.0	10.0	36.0	56.0	82.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.1		3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s		2.3		10.5	2.7		7.6	
Green Extension Time (g_e), s		0.0		0.1	0.0	0.0	0.3	0.0
Phase Call Probability		1.00		1.00	1.00		1.00	
Max Out Probability		1.00		1.00	1.00		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	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h	2	4		131	132	78	11	1287	66	167	637	318
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1743		1810	1810	1610	1810	1725	1610	1810	1900	1899
Queue Service Time (g_s), s	0.1	0.3		8.4	8.5	2.9	0.7	29.8	3.9	5.6	4.0	4.0
Cycle Queue Clearance Time (g_c), s	0.1	0.3		8.4	8.5	2.9	0.7	29.8	3.9	5.6	4.0	4.0
Green Ratio (g/C)	0.03	0.03		0.10	0.10	0.52	0.03	0.25	0.25	0.42	0.63	0.63
Capacity (c), veh/h	60	58		181	181	832	60	1294	403	754	2407	1203
Volume-to-Capacity Ratio (X)	0.035	0.072		0.724	0.730	0.094	0.175	0.995	0.165	0.222	0.265	0.265
Back of Queue (Q), ft/ln (95 th percentile)	2.8	5.6		193.3	195.2	46.3	14	505.5	71.1	98.5	60.5	64.9
Back of Queue (Q), veh/ln (95 th percentile)	0.1	0.2		7.7	7.8	1.9	0.6	20.2	2.8	3.9	2.4	2.6
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	56.1	56.2		52.4	52.4	14.7	56.4	39.9	35.2	16.8	3.7	3.8
Incremental Delay (d_2), s/veh	0.1	0.2		11.8	12.3	0.0	0.5	23.8	0.9	0.1	0.3	0.5
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
Control Delay (d), s/veh	56.2	56.4		64.2	64.7	14.7	56.9	63.8	36.1	16.9	4.0	4.3
Level of Service (LOS)	E	E		E	E	B	E	E	D	B	A	A
Approach Delay, s/veh / LOS	56.3	E		53.1	D		62.4	E		6.0	A	
Intersection Delay, s/veh / LOS	38.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.81	C	2.62	C	2.13	B	1.88	B
Bicycle LOS Score / LOS	0.50	A	1.05	A	1.24	A	1.11	A

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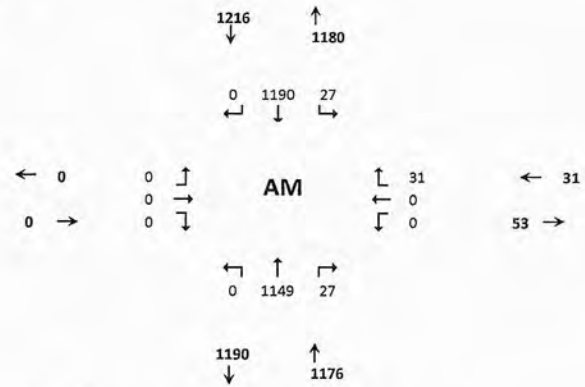
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy
E/W STREET: Driveway 2
CONTROL:
FILENAME:
COUNT DATE: 4/27/2017
DAY: Thursday
CITY: Stuart
INTERSECTION:
REPORT DATE: 5/2/2017
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203
In/Out	-	OUT	IN	IN	IN	-	-	-	-	-	-	OUT	-
Res Percentage	0%	15%	5%	5%	15%	0%	0%	0%	0%	0%	0%	5%	0%
Retail Percentage	0%	25%	10%	10%	30%	0%	0%	0%	0%	0%	0%	15%	0%
PROJECT	0	56	27	27	80	0	0	0	0	0	0	31	0
Total	0	1149	27	27	1190	0	0	0	0	0	0	31	2423



Seasonal Factor: 1

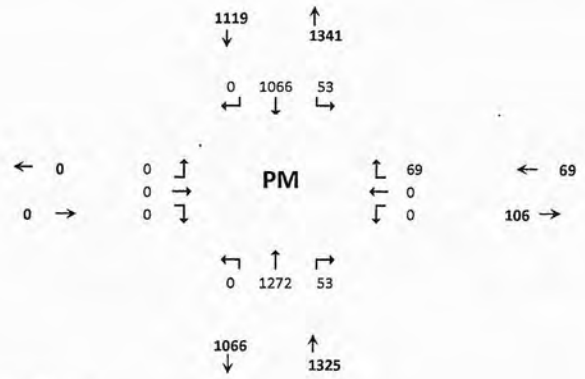
	Retail	Residential
Trips In	249	32
Trips Out	179	77

Growth Rate: 1.005
Years Grown: 5

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	

PM PEAK HOUR IS FROM: 4:00PM TO 5:00PM

Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061
In/Out	-	OUT	IN	IN	IN	-	-	-	-	-	-	OUT	-
Res Percentage	0%	15%	5%	5%	15%	0%	0%	0%	0%	0%	0%	5%	0%
Retail Percentage	0%	25%	10%	10%	30%	0%	0%	0%	0%	0%	0%	15%	0%
Project	0	119	53	53	159	0	0	0	0	0	0	69	
Total	0	1272	53	53	1066	0	0	0	0	0	0	69	2513



Seasonal Factor: 1

	Retail	Residential
Trips In:	490	77
Trips Out:	447	45

Growth Rate: 1.005
Years Grown: 5

HCS7 Two-Way Stop-Control Report

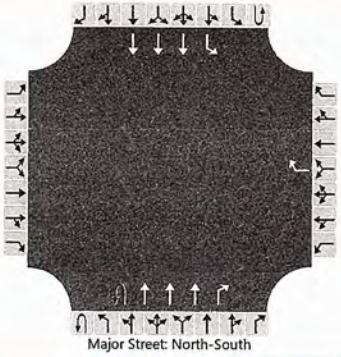
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/21/2021
Analysis Year	2024
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Kanner Hwy & Driveway 2
Jurisdiction	Martin County
East/West Street	Driveway 2
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	1	0	3	1	0	1	3	0
Configuration								R	U		T	R		L	T	
Volume (veh/h)								31	0		1149	27	0	27	1190	
Percent Heavy Vehicles (%)								3	3				3	3		
Proportion Time Blocked								0.250						0.250		
Percent Grade (%)					0											
Right Turn Channelized					Yes				No							
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1	5.6					5.3		
Critical Headway (sec)								7.16	5.66					5.36		
Base Follow-Up Headway (sec)								3.3	2.3					3.1		
Follow-Up Headway (sec)								3.33	2.33					3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								33	0					28		
Capacity, c (veh/h)								811	486					736		
v/c Ratio								0.04	0.00					0.04		
95% Queue Length, Q_{95} (veh)								0.1	0.0					0.1		
Control Delay (s/veh)								9.6	12.4					10.1		
Level of Service (LOS)								A	B					B		
Approach Delay (s/veh)					9.6				0.0				0.2			
Approach LOS					A											

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HCS7 Two-Way Stop-Control Report

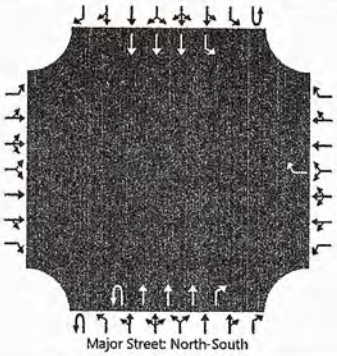
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	3/16/2021
Analysis Year	2024
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Kanner Hwy & Driveway 2
Jurisdiction	Martin County
East/West Street	Driveway 2
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	1	0	3	1	0	1	3	0
Configuration								R	U		T	R		L	T	
Volume (veh/h)								69	0		1272	53	0	53	1066	
Percent Heavy Vehicles (%)								3	3				3	3		
Proportion Time Blocked								0.250						0.250		
Percent Grade (%)					0											
Right Turn Channelized					No				No							
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1	5.6					5.3		
Critical Headway (sec)								7.16	5.66					5.36		
Base Follow-Up Headway (sec)								3.3	2.3					3.1		
Follow-Up Headway (sec)								3.33	2.33					3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								73	0					56		
Capacity, c (veh/h)								811	549					588		
v/c Ratio								0.09	0.00					0.09		
95% Queue Length, Q_{95} (veh)								0.3	0.0					0.3		
Control Delay (s/veh)								9.9	11.6					11.8		
Level of Service (LOS)								A	B					B		
Approach Delay (s/veh)					9.9				0.0				0.6			
Approach LOS					A											

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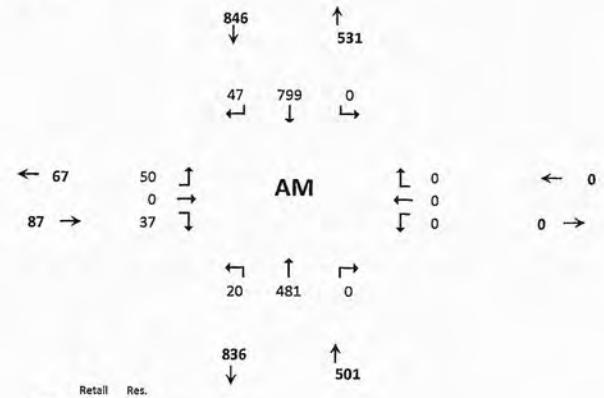
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Willoughby Blvd
E/W STREET: Driveway 3
CONTROL: TWSC
FILENAME:
COUNT DATE: 2019
DAY: Thursday
CITY: Stuart
INTERSECTION:
REPORT DATE: 1/15/2020
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	

AM PEAK HOUR IS FROM: 7:00AM TO 8:00AM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	401	0	0	666	0	0	0	0	0	0	0	0
Season Factor	0	401	0	0	666	0	0	0	0	0	0	0	1067
Growth	0	481	0	0	799	0	0	0	0	0	0	0	1280
In/Out	IN	-	-	-	-	IN	OUT	-	OUT	-	-	-	-
Retail Percent	5%	0%	0%	0%	0%	15%	15%	0%	10%	0%	0%	0%	0%
Res. Percent	25%	0%	0%	0%	0%	30%	30%	0%	25%	0%	0%	0%	0%
Retail Trips	12	0	0	0	0	37	27	0	18	0	0	0	0
Res. Trips	8	0	0	0	0	10	23	0	19	0	0	0	0
Total	20	481	0	0	799	47	50	0	37	0	0	0	1434



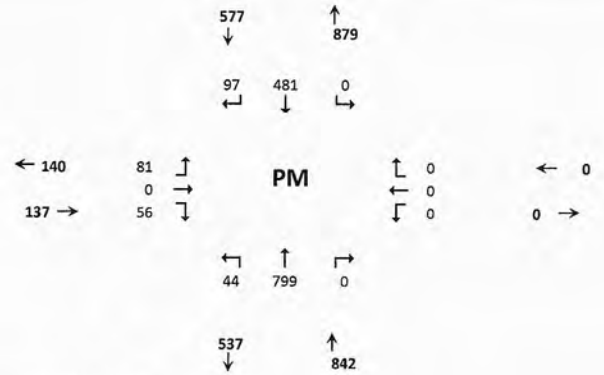
	Retail	Res.
Trips In	249	32
Trips Out	179	77

Seasonal Factor: 1
Growth Rate: 1.037
Years Grown: 5

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30-4:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	

PM PEAK HOUR IS FROM: 4:00PM TO 5:00PM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	666	0	0	401	0	0	0	0	0	0	0	0
Season Factor	0	666	0	0	401	0	0	0	0	0	0	0	1067
Growth	0	799	0	0	481	0	0	0	0	0	0	0	1280
In/Out	IN	-	-	-	-	IN	OUT	-	OUT	-	-	-	-
Retail Percent	5%	0%	0%	0%	0%	15%	15%	0%	10%	0%	0%	0%	0%
Res. Percent	25%	0%	0%	0%	0%	30%	30%	0%	25%	0%	0%	0%	0%
Retail Trips	25	0	0	0	0	74	67	0	45	0	0	0	0
Res. Trips	19	0	0	0	0	23	14	0	11	0	0	0	0
Total	44	799	0	0	481	97	81	0	56	0	0	0	1556



	Retail	Res.
Trips In:	490	77
Trips Out:	447	45

Seasonal Factor: 1
Growth Rate: 1.037
Years Grown: 5

HCS7 Two-Way Stop-Control Report

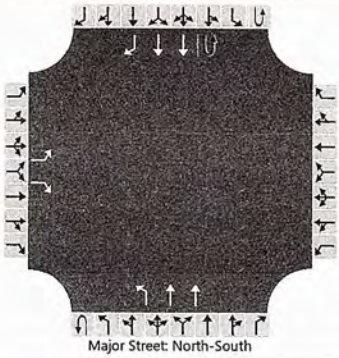
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/21/2021
Analysis Year	2024
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Driveway 3 & Willoughby
Jurisdiction	Martin County
East/West Street	Driveway 3
North/South Street	Willoughby Blvd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	1
Configuration		L		R						L	T		U		T	R
Volume (veh/h)		50		37					0	20	481		0		799	47
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No												No			
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		54		40						22			0			
Capacity, c (veh/h)		290		567						732			665			
v/c Ratio		0.19		0.07						0.03			0.00			
95% Queue Length, Q_{95} (veh)		0.7		0.2						0.1			0.0			
Control Delay (s/veh)		20.3		11.8						10.1			10.4			
Level of Service (LOS)		C		B						B			B			
Approach Delay (s/veh)	16.7								0.4				0.0			
Approach LOS	C															

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HCS7 Two-Way Stop-Control Report

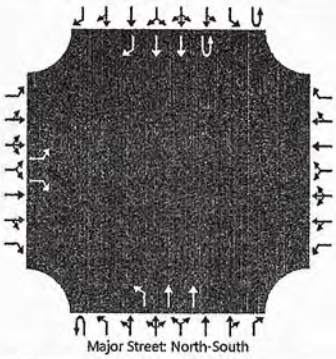
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	3/16/2021
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Costco

Site Information

Intersection	Driveway 3 & Willoughby
Jurisdiction	Martin County
East/West Street	Driveway 3
North/South Street	Willoughby Blvd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	2	0	1	0	2	1
Configuration		L		R						L	T		U		T	R
Volume (veh/h)		81		56					0	44	799		0		481	97
Percent Heavy Vehicles (%)		3		3					3	3			3			
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No												No		
Median Type | Storage		Left Only								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5		6.9						4.1			6.4			
Critical Headway (sec)		6.86		6.96						4.16			6.46			
Base Follow-Up Headway (sec)		3.5		3.3						2.2			2.5			
Follow-Up Headway (sec)		3.53		3.33						2.23			2.53			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		88		61						48			0			
Capacity, c (veh/h)		341		734						943			400			
v/c Ratio		0.26		0.08						0.05			0.00			
95% Queue Length, Q_{95} (veh)		1.0		0.3						0.2			0.0			
Control Delay (s/veh)		19.2		10.3						9.0			14.0			
Level of Service (LOS)		C		B						A			B			
Approach Delay (s/veh)		15.6								0.5				0.0		
Approach LOS		C														

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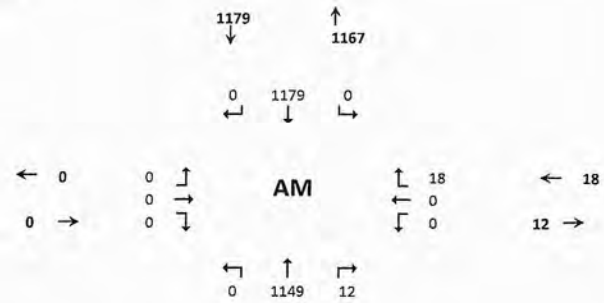
TURNING MOVEMENT VOLUME COUNTS

N/S STREET: Kanner Hwy
E/W STREET: Driveway 4
CONTROL:
FILENAME:
COUNT DATE: 3/20/2019
DAY: Wednesday
CITY: Stuart
INTERSECTION:
REPORT DATE: 12/16/2020
ANALYSIS YEAR: 2024

15 Min Period	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	163	0	0	277	0	0	0	0	0	0	0	440	2040
7:15-7:30	0	230	0	0	296	0	0	0	0	0	0	0	526	2149
7:30-7:45	0	254	0	0	253	0	0	0	0	0	0	0	507	2138
7:45-8:00	0	298	0	0	269	0	0	0	0	0	0	0	567	2127
8:00-8:15	0	284	0	0	265	0	0	0	0	0	0	0	549	1976
8:15-8:30	0	329	0	0	186	0	0	0	0	0	0	0	515	
8:30-8:45	0	256	0	0	240	0	0	0	0	0	0	0	496	
8:45-9:00	0	218	0	0	198	0	0	0	0	0	0	0	416	

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Season Factor	0	1066	0	0	1083	0	0	0	0	0	0	0	2149
Growth	0	1093	0	0	1110	0	0	0	0	0	0	0	2203
In/Out	-	IN	IN	-	OUT	-	-	-	-	-	-	OUT	-
Retail Percent	0%	20%	5%	0%	30%	0%	0%	0%	0%	0%	0%	10%	0%
Res. Percent	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
Retail Trips	0	50	12	0	54	0	0	0	0	0	0	18	0
Res. Trips	0	6	0	0	15	0	0	0	0	0	0	0	0
Total	0	1149	12	0	1179	0	0	0	0	0	0	18	2359



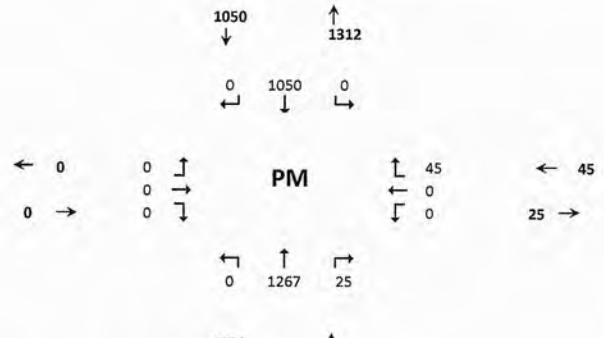
	Retail	Res.
Trips In	249	32
Trips Out	179	77

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 5

15 Min Period lanes	Northbound NBL	NBT	NBR	Southbound SBL	SBT	SBR	Eastbound EBL	EBT	EBR	Westbound WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	317	0	0	226	0	0	0	0	0	0	0	543	2010
4:15-4:30	0	281	0	0	203	0	0	0	0	0	0	0	484	1993
4:30-4:45	0	287	0	0	212	0	0	0	0	0	0	0	499	1984
4:45-5:00	0	240	0	0	244	0	0	0	0	0	0	0	484	1978
5:00-5:15	0	275	0	0	251	0	0	0	0	0	0	0	526	2001
5:15-5:30	0	260	0	0	215	0	0	0	0	0	0	0	475	
5:30-5:45	0	271	0	0	222	0	0	0	0	0	0	0	493	
5:45-6:00	0	292	0	0	215	0	0	0	0	0	0	0	507	

PM PEAK HOUR IS FROM: 4:00PM TO 5:00PM

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Volumes	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Season Factor	0	1125	0	0	885	0	0	0	0	0	0	0	2010
Growth	0	1153	0	0	907	0	0	0	0	0	0	0	2061
In/Out	-	IN	IN	-	OUT	-	-	-	-	-	-	OUT	-
Retail Percent	0%	20%	5%	0%	30%	0%	0%	0%	0%	0%	0%	10%	0%
Res. Percent	0%	20%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
Retail Trips	0	98	25	0	134	0	0	0	0	0	0	45	0
Res. Trips	0	15	0	0	9	0	0	0	0	0	0	0	0
Total	0	1267	25	0	1050	0	0	0	0	0	0	45	2386



	Retail	Res.
Trips In:	490	77
Trips Out:	447	45

Seasonal Factor: 1
Growth Rate: 1.005
Years Grown: 5

HCS7 Two-Way Stop-Control Report

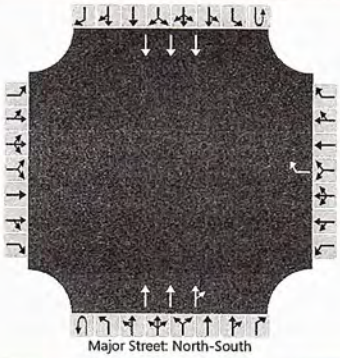
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/21/2021
Analysis Year	2024
Time Analyzed	AM
Intersection Orientation	North-South
Project Description	M&M Retail

Site Information

Intersection	Kanner Hwy & Driveway 4
Jurisdiction	Martin County
East/West Street	Driveway 4
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	3	0	0	0	3	0
Configuration								R			T	TR			T	
Volume (veh/h)								18			1149	12			1179	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					Yes											
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1								
Critical Headway (sec)								7.16								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								19								
Capacity, c (veh/h)								420								
v/c Ratio								0.05								
95% Queue Length, Q_{95} (veh)								0.1								
Control Delay (s/veh)								14.0								
Level of Service (LOS)								B								
Approach Delay (s/veh)					14.0											
Approach LOS					B											

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HCS7 Two-Way Stop-Control Report

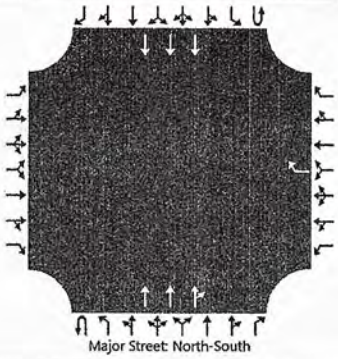
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	3/16/2021
Analysis Year	2024
Time Analyzed	PM
Intersection Orientation	North-South
Project Description	M&M Retail

Site Information

Intersection	Kanner Hwy & Driveway 4
Jurisdiction	Martin County
East/West Street	Driveway 4
North/South Street	Kanner Hwy
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	1	0	0	3	0	0	0	3	0
Configuration								R			T	TR			T	
Volume (veh/h)								45			1267	25			1050	
Percent Heavy Vehicles (%)								3								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type | Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)								7.1								
Critical Headway (sec)								7.16								
Base Follow-Up Headway (sec)								3.3								
Follow-Up Headway (sec)								3.33								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)								47								
Capacity, c (veh/h)								377								
v/c Ratio								0.13								
95% Queue Length, Q_{95} (veh)								0.4								
Control Delay (s/veh)								15.9								
Level of Service (LOS)								C								
Approach Delay (s/veh)					15.9											
Approach LOS					C											

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O'ROURKE
ENGINEERING & PLANNING

LAND USE PLAN AMENDMENT

TRAFFIC ANALYSIS

Prepared for:

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644

Prepared by:

O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
(772) 781-7918

December 18, 2020
Revised March 16, 2021
Revised April 21, 2021

MR18031.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer Susan E. O'Rourke Susan E. O'Rourke, P.E. Date signed and sealed: 4/21/2021 License #: 42684

O'ROURKE
ENGINEERING & PLANNING

December 18, 2020

Mr. Joe Marino
M & M Retail Partners, LLC.
Lodi, NJ 07644

Re: Land Use Plan Amendment Traffic Analysis

Dear Mr. Marino:

O'Rourke Engineering & Planning has completed the traffic analysis of the proposed land use plan amendment for a change of 48.97 acres from Low Density Residential to a Neighborhood Special District category. The parcels affected by the land use plan amendment are located on SR-76 (Kanner Highway) in the city of Stuart, Martin County, Florida. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you, if you have any questions or comments, please do not hesitate to contact our office.

Respectfully submitted,
O'ROURKE ENGINEERING & PLANNING

Susan E. O'Rourke

Susan E. O'Rourke, P.E.
Registered Civil Engineer – Traffic

C6 – LUPA Report – Costco – 4.21.21

22 SE Seminole Street | Stuart, FL 34994 | 772-781-7918 | SEORourke@comcast.net

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APPENDICES

APPENDIX A: Roadway Network Data/Non-Motorized and Transit Data
APPENDIX B: Internal Capture Matrices / Pass-By Calculation
APPENDIX C: Martin County 2019 Roadway Level of Service Inventory Report and Martin County 2040 Roadway Level of Service Inventory Report

INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed land use plan amendment of 48.97-acres. The following components were addressed:

- Summary of the project description; existing land use and proposed land use
- Summary of road network, existing and 2045
- Assessment of the change in trip generation
- Summary of 2025 traffic volumes
- Assessment of net change in 2045 impact

Each of these components is outlined herein.

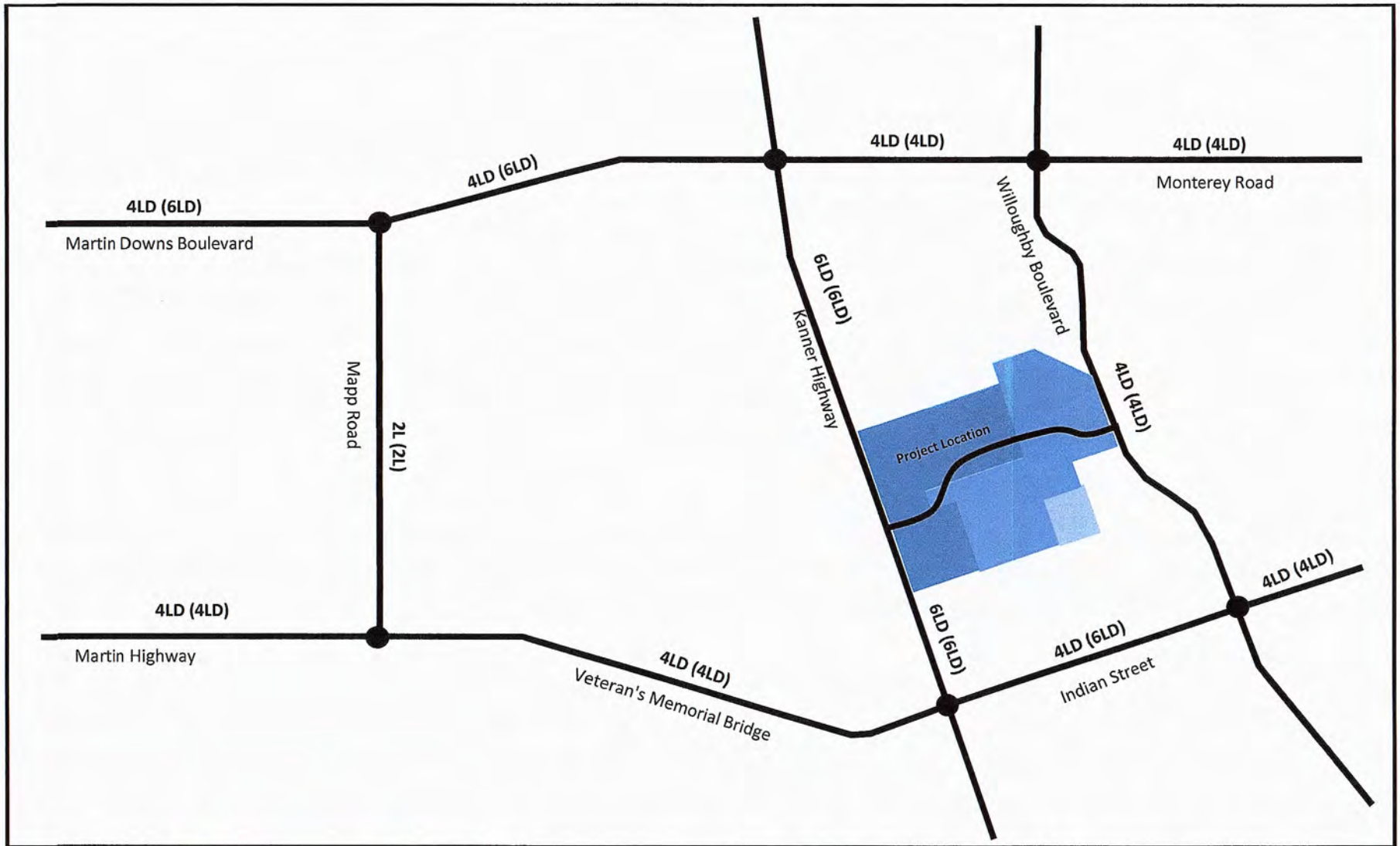
PROJECT DESCRIPTION

The proposed land use plan amendment involves parcels of land located on SR-76 (Kanner Highway) in the city of Stuart, Martin County, Florida. The project location and lanes are shown in **Figure 1**.

The existing future land use designation of the 48.97-acres was previously Low Density Residential in the Martin County Future Land Use Map. The parcels were annexed by the City of Stuart on January 17, 2017. The future land use of the parcels has not been designated by the City of Stuart, therefore, the previous Existing Land Use from Martin County was considered in the analysis. Under the existing future land use a maximum of 5 dwelling units per acre is allowed, allowing for a total of 244 single-family dwelling units.

The future land use would be amended to Neighborhood Special District allowing 398 multi-family dwelling units and 193,021 square feet of Non-Residential Development.

The analysis of the project impacts in the five-year period and the long-range scenario, 2045 are discussed herein.



NTS

O'ROURKE ENGINEERING & PLANNING

22 SE Seminole St
Stuart, FL, 34994

Job Number: MR18031.0 | Date: 12/18/20

Legend

● = Signalized Intersection

4LD = Roadway Laneage

= Project Location

(4LD) = 2045 Lanes

Figure 1
Project Location
M&M Retail

ROADWAY NETWORK

The study area was reviewed to determine the existing number and type of lanes, and the traffic control along the roadway. Each roadway is described below.

SR-714 (Monterey Road/Palm City Bridge) is a four-lane divided major arterial with a general east/west alignment. From Matheson to Palm City Road is included in the Cost Feasible Plan for 6 laning.

Indian Street is a four-lane divided major arterial with a primarily east/west alignment.

SR 76 (Kanner Highway) is a six- lane, divided major arterial from I-95 to US-1. It has a generally east/west alignment from west of I-95 to I-95 and then travels in a generally north/south alignment.

CR-714 (Veteran's Memorial Bridge) is a four-lane divided major arterial with a primarily east/west alignment.

Appendix A includes the roadway network information to include the 2045 LRTP Cost Feasible Network and the non-motorized transit facilities.

MAXIMUM ALLOWABLE USE/TRIP GENERATION

To determine the worst-case scenario from a traffic standpoint, the trip generation for allowable uses under each existing and future land use were calculated. The Existing Future Land Use is Low Density Residential which allows for up to 244 single-family dwelling units. The trip generation for the existing future land use is shown in **Table 1a, 1b,** and **1c** for the daily, AM peak hour and PM peak hours, respectively.

The Proposed Future Land Use will be Neighborhood Special District. Under this land use there would be a cap limiting development of 193,021 square feet of retail or equivalent and 398 multi-family dwelling units. **Table 2a, 2b,** and **2c** summarizes the trip generation for the proposed future land use for the daily, AM peak hour and PM peak hours, respectively. The internal capture matrices for the proposed future land use are included in **Appendix B**. **Table 3** summarizes the net change in trips.

As shown, the existing future land use generates 2,362 daily trips; 178 AM Peak hour trips and 239 PM Peak hour trips. Under the proposed future land use, the site generates 7,410 daily trips; 341 AM Peak hour trips and 668 PM peak hour trips. The change in trips between the Proposed and Existing future land uses is an increase of 5,048 daily trips; 163 AM peak hour trips and 429 PM peak hour trips.

Table 1 - Trip Generation - Existing FLU

Table 1a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	244	DU	Ln(T)=0.92Ln(X)+2.71	50%	50%	1,181	1,181	2,362
TOTALS							**1,181**	**1,181**	**2,362**

Source: ITE 10th Edition Trip Generation Rates

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	244	DU	T=0.71(X)+4.80	25%	75%	45	133	178
TOTALS							**45**	**133**	**178**

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Single Family Detached	210	244	DU	Ln(T)=0.96Ln(X)+0.20	63%	37%	151	88	239
TOTALS							**151**	**88**	**239**

Source: ITE 10th Edition Trip Generation Rates

Table 2 - Trip Generation - Proposed FLU

Table 2a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	T = 5.45(X) - 1.75	50%	50%	1,084	1,083	2,167	76	228	304	14.0%	1,008	855	1,863	-	-	-	0.0%	1,008	855	1,863
Shopping Center	820	16,750	Sft	Ln(T) = 0.68Ln(X) + 5.57	50%	50%	892	892	1,784	47	121	168	9.4%	845	771	1,616	388	388	776	48.0%	457	383	840
Discount Club	857	157,531	Sft	T = 41.80(X)	50%	50%	3,293	3,292	6,585	174	445	619	9.4%	3,119	2,847	5,966	1,163	1,163	2,326	39.0%	1,956	1,684	3,640
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 470.95(X)	50%	50%	589	588	1,177	299	104	403	34.2%	290	484	774	190	189	379	49.0%	100	295	395
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 112.18(X)	50%	50%	911	911	1,822	462	160	622	34.1%	449	751	1,200	264	264	528	44.0%	185	487	672
Retail Sub Total							**5,685**	**5,683**	**11,368**	**982**	**830**	**1,812**	**15.9%**	**4,703**	**4,853**	**9,556**	**2,005**	**2,004**	**4,009**	**42.0%**	**2,698**	**2,849**	**5,547**
TOTALS		**193,021**					**6,769**	**6,766**	**13,535**	**1,058**	**1,058**	**2,116**	**15.6%**	**5,711**	**5,708**	**11,419**	**2,005**	**2,004**	**4,009**	**35.1%**	**3,706**	**3,704**	**7,410**

Source: ITE 10th Edition Trip Generation Rates
Total 162,020 w/ OutdoorVestibule 4,489

Table 2b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	Ln(T) = 0.98Ln(X) - 0.98	26%	74%	35	98	133	3	21	24	18.0%	32	77	109	-	-	-	0.0%	32	77	109
Shopping Center	820	16,750	Sft	T = 0.50(X) + 151.78	62%	38%	99	61	160	9	8	17	10.6%	90	53	143	35	34	69	48.0%	55	19	74
Discount Club	857	157,531	Sft	T = 0.49(X)	70%	30%	54	23	77	4	4	8	10.4%	50	19	69	14	13	27	39.0%	36	6	42
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 40.19(X)	51%	49%	51	49	100	12	5	17	17.0%	39	44	83	21	20	41	49.0%	18	24	42
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.94(X)	55%	45%	89	72	161	19	9	28	17.4%	70	63	133	30	29	59	44.0%	40	34	74
Retail Sub Total							**293**	**205**	**498**	**44**	**26**	**70**	**14.1%**	**249**	**179**	**428**	**100**	**96**	**196**	**45.8%**	**149**	**83**	**232**
TOTALS		**193,021**					**328**	**303**	**631**	**47**	**47**	**94**	**14.9%**	**281**	**256**	**537**	**100**	**96**	**196**	**36.5%**	**181**	**160**	**341**

Source: ITE 10th Edition Trip Generation Rates

Table 2c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips			Internalization Trips (1)				Net External Trips			Pass-by Trips				Net New Trips		
					In	Out	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	%	In	Out	Total
Multifamily Housing (Mid-Rise)	221	398	DU	Ln(T)=0.96Ln(X)-0.63	61%	39%	102	65	167	25	20	45	26.9%	77	45	122	-	-	-	0.0%	77	45	122
Shopping Center	820	16,750	Sft	Ln(T) = 0.74Ln(X) + 2.89	48%	52%	70	75	145	4	7	11	7.6%	66	68	134	32	33	65	48.0%	34	35	69
Discount Club	857	157,531	Sft	T = 4.18(X)	50%	50%	329	329	658	19	29	48	7.3%	310	300	610	119	119	238	39.0%	191	181	372
Fast Food (w/ Drive Thru)	934	2,500	Sft	T = 32.67(X)	52%	48%	43	39	82	10	7	17	20.7%	33	32	65	16	16	32	49.0%	17	16	33
High-Turnover (Sit-Down) Restaurant	932	16,240	Sft	T = 9.77(X)	62%	38%	99	60	159	18	13	31	19.5%	81	47	128	28	28	56	44.0%	53	19	72
Retail Sub Total							**541**	**503**	**1,044**	**51**	**56**	**107**	**10.2%**	**490**	**447**	**937**	**195**	**196**	**391**	**41.7%**	**295**	**251**	**546**
TOTALS		**193,021**					**643**	**568**	**1,211**	**76**	**76**	**152**	**12.6%**	**567**	**492**	**1,059**	**195**	**196**	**391**	**36.9%**	**372**	**296**	**668**

Source: ITE 10th Edition Trip Generation Rates
(1) ITE Pairings reduced. Residential to Retail from 42 to 20 and Retail to Residential from 46 to 15, Residential to Restaurant from 21 to 10 and Restaurant to Residential from 18 to 10, Restuarant to Retail from 41 to 10 and Retail to Restaurant from 29 to 15 to avoid overstating internal capture for PM Peak Hour and Daily

Table 3 Trip Generation Proposed FLU - Existing FLU

Table 3a- Daily

Description	Gross Trips			Daily Net New Trips		
	In	Out	Total	In	Out	Total
Proposed FLU	6,769	6,766	13,535	3,706	3,704	7,410
Existing FLU	1,181	1,181	2,362	1,181	1,181	2,362
Net Change	**5,588**	**5,585**	**11,173**	**2,525**	**2,523**	**5,048**

Table 3b- AM Peak Hour

Description	Gross Trips			AM Net New Trips		
	In	Out	Total	In	Out	Total
Proposed FLU	328	303	631	181	160	341
Existing FLU	45	133	178	45	133	178
Net Change	**283**	**170**	**453**	**136**	**27**	**163**

Table 3c - PM Peak Hour

Description	Gross Trips			PM Net New Trips		
	In	Out	Total	In	Out	Total
Proposed FLU	643	568	1,211	372	296	668
Existing FLU	151	88	239	151	88	239
Net Change	**492**	**480**	**972**	**221**	**208**	**429**

PROJECT ASSIGNMENT

The project traffic was distributed by general geographic direction and then assigned to the roadway network. This general distribution led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations. **Figure 2a** and **Figure 2b** show the project assignment for the retail and residential uses, respectively.

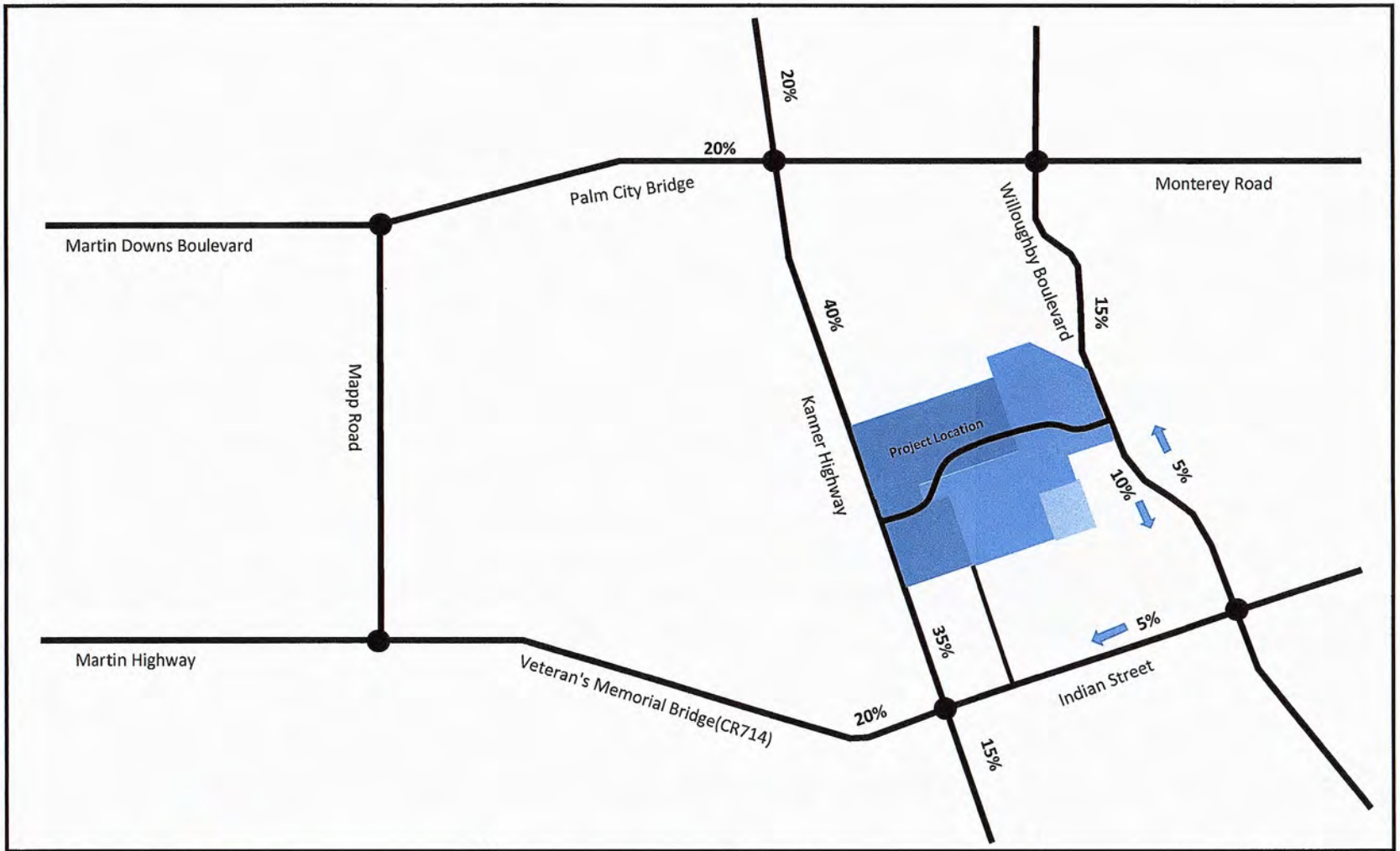
STUDY AREA

The study area was defined as the area upon which the project traffic (the net increase in traffic) represented 5% or more on the roadway link, the adjacent links and any currently failing link. **Table 4a** and **4b** summarize the project % impact on the 2045 long range cost feasible roadway network.

LONG RANGE ANALYSIS – 2040/2045

The 2045 LRTP has been adopted. However, 2045 future traffic volumes have not been available. Therefore, the 2045 volumes were used as the best available for this analysis. To determine the impact of the change in traffic for the 2045 long term analysis, the projected 2040 daily volume from the Martin County 2040 Roadway Level of Service Inventory Report were converted to peak hour directional volumes using the K and D factors obtained from the FDOT Florida Traffic Online Historical AADT for Kanner Highway (site 0114) and Willoughby Boulevard (site 0063). The project traffic was then added to the peak hour directional volumes and compared to the cost feasible service capacities to determine the impacts of the land use plan amendment. As shown, all roads will operate at an acceptable level of service with the 2045 long range cost feasible network. **Table 5** includes the 2040/2045 link analysis.

Appendix C includes the Martin County 2040 Roadway Level of Service Inventory Report.



NTS

O'ROURKE ENGINEERING & PLANNING

22 SE Seminole St
Stuart, FL, 34994

Job Number: MR18031.0 | Date: 12/18/20

Legend

● = Signalized Intersection

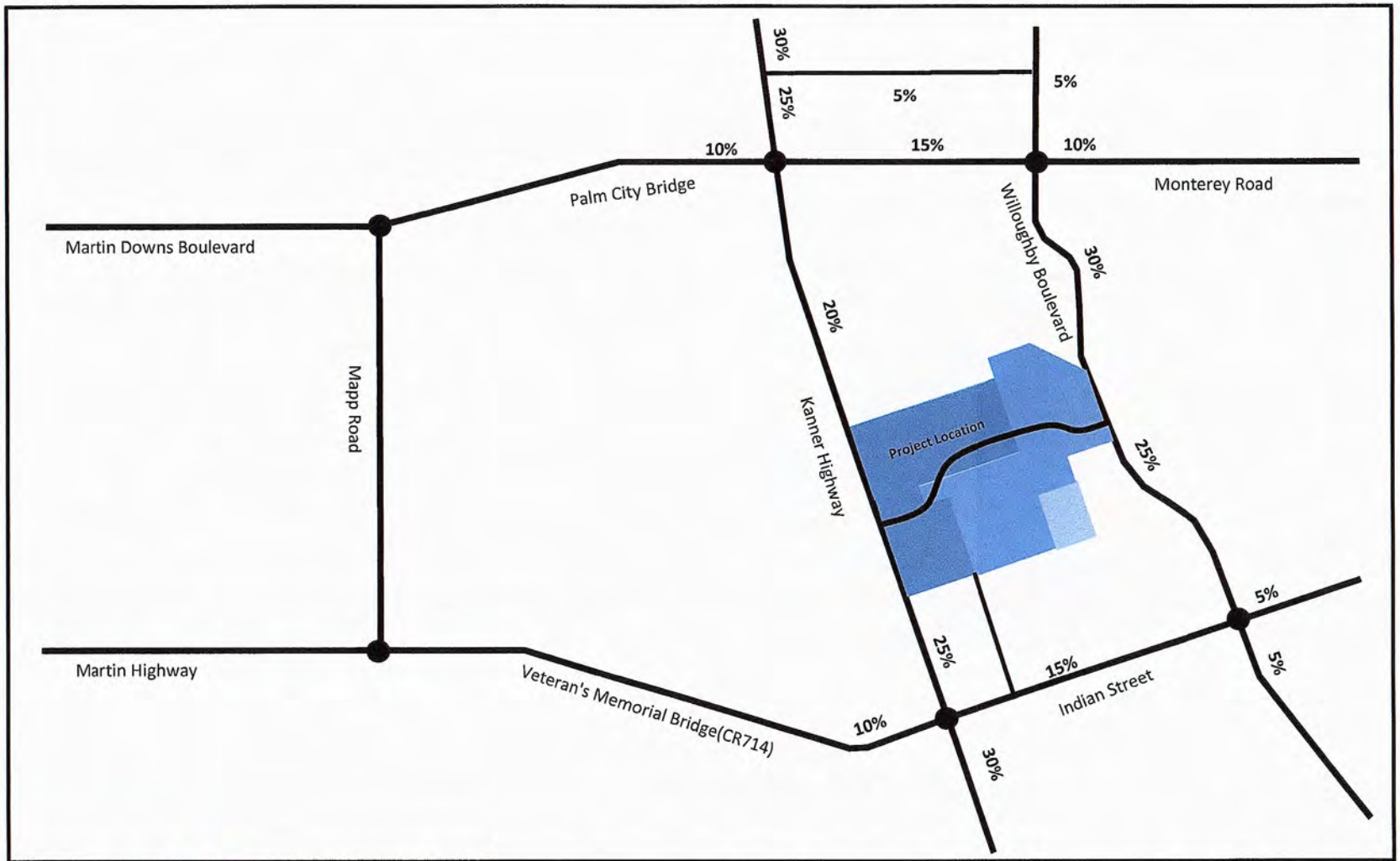
▭ = Project Location

XX% = Percent Assignment

Figure 2a

Percent Assignment - Retail

M&M Retail



NTS

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22 SE Seminole St
Stuart, FL, 34994

Job Number: MR18031.0 | Date: 12/18/20

Legend

● = Signalized Intersection

= Project Location

XX% = Percent Assignment

Figure 2b

Percent Assignment - Residential

M&M Retail

Table 4a: Percent Impact - AM Peak Hour - 2045

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	20	15%	0.66%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	4	15%	0.13%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	61	45%	2.02%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	12	45%	0.40%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	15	55%	0.50%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	75	55%	2.48%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	5	20%	0.17%
	SR-714	SR-5	SB	IN	6LD	no	3,020	27	20%	0.89%
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	2,000	34	25%	1.70%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	7	25%	0.35%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	8	30%	0.40%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	41	30%	2.05%
SR-714 *	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	27	20%	1.35%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	5	20%	0.25%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	4	15%	0.20%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	20	15%	1.00%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	3	10%	0.15%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	14	10%	0.70%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	27	20%	1.35%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	5	20%	0.25%

* Note: Mapp Road to Palm City Road included as 6LD in LRTP

In: 136
Out: 27

Table 4b: Percent Impact - PM Peak Hour - 2045

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	33	15%	1.09%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	31	15%	1.03%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	99	45%	3.28%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	94	45%	3.11%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	114	55%	3.77%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	122	55%	4.04%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	42	20%	1.39%
	SR-714	SR-5	SB	IN	6LD	no	3,020	44	20%	1.46%
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	2,000	55	25%	2.75%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	52	25%	2.60%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	62	30%	3.10%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	66	30%	3.30%
SR-714 *	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	44	20%	2.20%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	42	20%	2.10%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	31	15%	1.55%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	33	15%	1.65%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	21	10%	1.05%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	22	10%	1.10%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	44	20%	2.20%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	42	20%	2.10%

* Note: Mapp Road to Palm City Road included as 6LD in LRTP

In: 221
Out: 208

Table 5a: Link Analysis - AM Peak Hour - 2045

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2040 Model AADT	(1) K Factor	(1) D Factor	2040 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
SR-76 (Kanner Hwy)	Indian St	Project Entrance	NB	IN	6LD	no	35510	0.09	0.376	1202	3020	61	45%	2.02%	1263	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	35510	0.09	0.624	1994	3020	12	45%	0.40%	2006	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	35510	0.09	0.376	1202	3020	15	55%	0.50%	1217	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	35510	0.09	0.624	1994	3020	75	55%	2.48%	2069	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	13616	0.09	0.376	613	2000	34	25%	1.70%	647	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	13616	0.09	0.624	613	2000	7	25%	0.35%	620	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	13390	0.09	0.376	554	2000	8	30%	0.40%	562	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	13390	0.09	0.624	651	2000	41	30%	2.05%	692	Yes

Source: Martin County 2040 Roadway Level of Service Inventory Report
(1) FDOT Florida Traffic Online (Station 0114 and 0063)

In: 136
Out: 27

Table 5b: Link Analysis - PM Peak Hour - 2045

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2040 Model AADT	(1) K Factor	(1) D Factor	2040 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
SR-76 (Kanner Hwy)	Indian St	Project Entrance	NB	IN	6LD	no	35510	0.09	0.624	1994	3020	99	45%	3.28%	2093	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	35510	0.09	0.376	1202	3020	94	45%	3.11%	1296	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	35510	0.09	0.624	1994	3020	114	55%	3.77%	2108	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	35510	0.09	0.376	1202	3020	122	55%	4.04%	1324	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	13616	0.09	0.624	613	2000	55	25%	2.75%	668	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	13616	0.09	0.376	613	2000	52	25%	2.60%	665	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	13390	0.09	0.624	651	2000	62	30%	3.10%	713	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	13390	0.09	0.376	554	2000	66	30%	3.30%	620	Yes

Source: Martin County 2040 Roadway Level of Service Inventory Report
(1) FDOT Florida Traffic Online (Station 0114 and 0063)

In: 221
Out: 208

FIVE YEAR ANALYSIS - 2025

For M&M Retail, the entire 193,021 square feet of non-residential and 398 multi-family dwelling units could be completed in five-years. The trip generation for the 5-year analysis as shown in Table 2a, 2b, and 2c for the daily, AM peak hour and PM peak hours, respectively. As shown, the project would generate 7,410 Daily trips, 341 AM peak hour trips, and 668 PM peak hour trips in the first five years of development.

The purpose of the 5-year analysis is to demonstrate that concurrency could be obtained. To determine the study area for the 5-year analysis, the 5-year project traffic was compared to the existing plus committed roadway network. The study area is defined as the area upon which the project traffic represented 5% or more on the roadway link, the adjacent links and any currently failing link. **Table 6a** and **6b** summarize the project % impact on the existing plus committed roadway network.

To develop total traffic estimates for 2025, existing 2019 traffic was grown to 2025 using historic growth rates. The project traffic was then added to achieve the 2025 total traffic volumes. These volumes were then compared to the capacity of the roadway network (existing plus committed network). The 2019 Martin County Roadway Level of Service Inventory Report was used as the source of the existing 2019 AADT, peak hour data and growth rate. **Table 7a and Table 7b** show the link analysis for the total traffic conditions with the proposed land use plan amendment in place in 2025. **Appendix C** provides the Martin County 2019 Roadway Level of Service Inventory Report.

As shown all links will operate at acceptable levels of service on the existing plus committed roadway network.

CONCLUSION

The proposed land use plan amendment will result in an increase in trips of 5,048 daily trips; 163 AM peak hour trips and 429 PM peak hour trips over the Existing Future Land Use.

On the links within the study area, there would be an increase in traffic associated with the land use plan amendment over what could be developed with the existing future land use. The analysis demonstrates that the roadway has sufficient infrastructure funded in the next five years and the 2040/2045 long range to support the project. Therefore, the project satisfies the requirements for a Land Use Plan Amendment.

Table 6a: Percent Impact - AM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Retail		Residential		Total Project Traffic	Directional Percent Project of Capacity
								Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume		
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	22	30%	10	32	1.06%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	12	30%	23	35	1.16%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	52	25%	8	60	1.99%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	29	25%	19	48	1.59%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	33	20%	15	48	1.59%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	60	20%	6	66	2.19%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	17	30%	23	40	1.32%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	30	30%	10	40	1.32%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	7	5%	2	9	1.02%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	4	5%	4	8	0.91%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	7	5%	2	9	0.45%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	4	5%	4	8	0.40%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	7	25%	8	15	0.75%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	8	25%	19	27	1.35%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	12	30%	23	35	1.75%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	22	30%	10	32	1.60%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	10%	8	8	0.40%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	10%	3	3	0.15%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	12	12	0.60%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	7	15%	5	12	0.60%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	30	10%	3	33	1.65%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	17	10%	8	25	1.25%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	149	83
Residential	32	77

Table 6b Percent Impact - PM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	LOS D Directional Peak Hour	Retail		Residential		Total Project Traffic	Directional Percent Project of Capacity
								Project Percent Assignment	Directional Peak Project Volume	Project Percent Assignment	Directional Peak Project Volume		
Kanner Highway (SR-76)	Salerno Rd	Indian St	NB	IN	6LD	no	3,020	15%	44	30%	23	67	2.22%
	Salerno Rd	Indian St	SB	OUT	6LD	no	3,020	15%	38	30%	14	52	1.72%
	Indian St	Project Entrance	NB	IN	6LD	no	3,020	35%	103	25%	19	122	4.04%
	Indian St	Project Entrance	SB	OUT	6LD	no	3,020	35%	88	25%	11	99	3.28%
	Project Entrance	SR-714	NB	OUT	6LD	no	3,020	40%	100	20%	9	109	3.61%
	Project Entrance	SR-714	SB	IN	6LD	no	3,020	40%	118	20%	15	133	4.40%
	SR-714	SR-5	NB	OUT	6LD	no	3,020	20%	50	30%	14	64	2.12%
	SR-714	SR-5	SB	IN	6LD	no	3,020	20%	59	30%	23	82	2.72%
Willoughby Blvd	Salerno Rd	Pomeroy St	NB	IN	2L	no	880	5%	15	5%	4	19	2.16%
	Salerno Rd	Pomeroy St	SB	OUT	2L	no	880	5%	13	5%	2	15	1.70%
	Pomeroy St	Indian St	NB	IN	4LD	no	2,000	5%	15	5%	4	19	0.95%
	Pomeroy St	Indian St	SB	OUT	4LD	no	2,000	5%	13	5%	2	15	0.75%
	Indian St	Project Entrance	NB	IN	4LD	no	2,000	5%	15	25%	19	34	1.70%
	Indian St	Project Entrance	SB	OUT	4LD	no	2,000	10%	25	25%	11	36	1.80%
	Project Entrance	SR-714	NB	OUT	4LD	no	2,000	15%	38	30%	14	52	2.60%
	Project Entrance	SR-714	SB	IN	4LD	no	2,000	15%	44	30%	23	67	3.35%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	0%	0	15%	12	12	0.60%
Indian St	SR-76	Willoughby Blvd	EB	OUT	4LD	no	2,000	0%	0	15%	7	7	0.35%
	SR-76	Willoughby Blvd	WB	IN	4LD	no	2,000	5%	15	15%	12	27	1.35%
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	EB	IN	4LD	no	2,000	20%	59	10%	8	67	3.35%
	Mapp Rd	SR-76	WB	OUT	4LD	no	2,000	20%	50	10%	5	55	2.75%

Source: Martin County 2019 Roadway Level of Service Inventory Report

	IN	OUT
Retail	295	251
Residential	77	45

Table 7a: Link Analysis - AM Peak Hour - 2025

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2025 Volume Peak Hour Directional	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	2025 Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.376	598	1.005	617	3020	35%	52	25%	8	60	1.99%	677	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.624	993	1.005	1023	3020	35%	29	25%	19	48	1.59%	1071	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.376	598	1.005	617	3020	40%	33	20%	15	48	1.59%	665	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.624	993	1.005	1023	3020	40%	60	20%	6	66	2.19%	1089	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.376	401	1.037	499	2000	5%	8	25%	8	16	0.75%	515	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.624	666	1.037	828	2000	10%	12	25%	19	31	1.35%	859	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.376	401	1.037	499	2000	15%	12	30%	23	35	1.75%	534	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.624	666	1.037	828	2000	15%	22	30%	10	32	1.60%	860	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

(1) FDOT Florida Traffic Online

	IN	OUT
Retail	149	83
Residential	32	77

Years Grown: 6

Table 7b: Link Analysis - PM Peak Hour - 2025

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2019 AADT	D Factor (1)	2019 Volume Peak Hour Peak Direction	Growth Rate	2025 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Retail: Project Percent Assignment	Retail: Directional Peak Project Volume	Residential: Project Percent Assignment	Residential: Directional Peak Project Volume	Total Project Traffic	Directional Percent Project of Capacity	2025 Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	Indian St	Project Entrance	NB	IN	6LD	no	21,116	0.624	993	1.005	1023	3020	35%	103	25%	19	122	4.04%	1145	Yes
	Indian St	Project Entrance	SB	OUT	6LD	no	21,116	0.376	598	1.005	617	3020	35%	88	25%	11	99	3.28%	716	Yes
	Project Entrance	SR-714	NB	OUT	6LD	no	21,116	0.624	993	1.005	1023	3020	40%	100	20%	9	109	3.61%	1132	Yes
	Project Entrance	SR-714	SB	IN	6LD	no	21,116	0.376	598	1.005	617	3020	40%	118	20%	15	133	4.40%	750	Yes
Willoughby Blvd	Indian St	Project Entrance	NB	IN	4LD	no	11,100	0.624	666	1.037	828	2000	5%	15	25%	19	34	1.70%	862	Yes
	Indian St	Project Entrance	SB	OUT	4LD	no	11,100	0.376	401	1.037	499	2000	10%	25	25%	11	36	1.80%	535	Yes
	Project Entrance	SR-714	NB	OUT	4LD	no	11,100	0.624	666	1.037	828	2000	15%	38	30%	14	52	2.60%	880	Yes
	Project Entrance	SR-714	SB	IN	4LD	no	11,100	0.376	401	1.037	499	2000	15%	44	30%	23	67	3.35%	566	Yes

Source: Martin County 2019 Roadway Level of Service Inventory Report

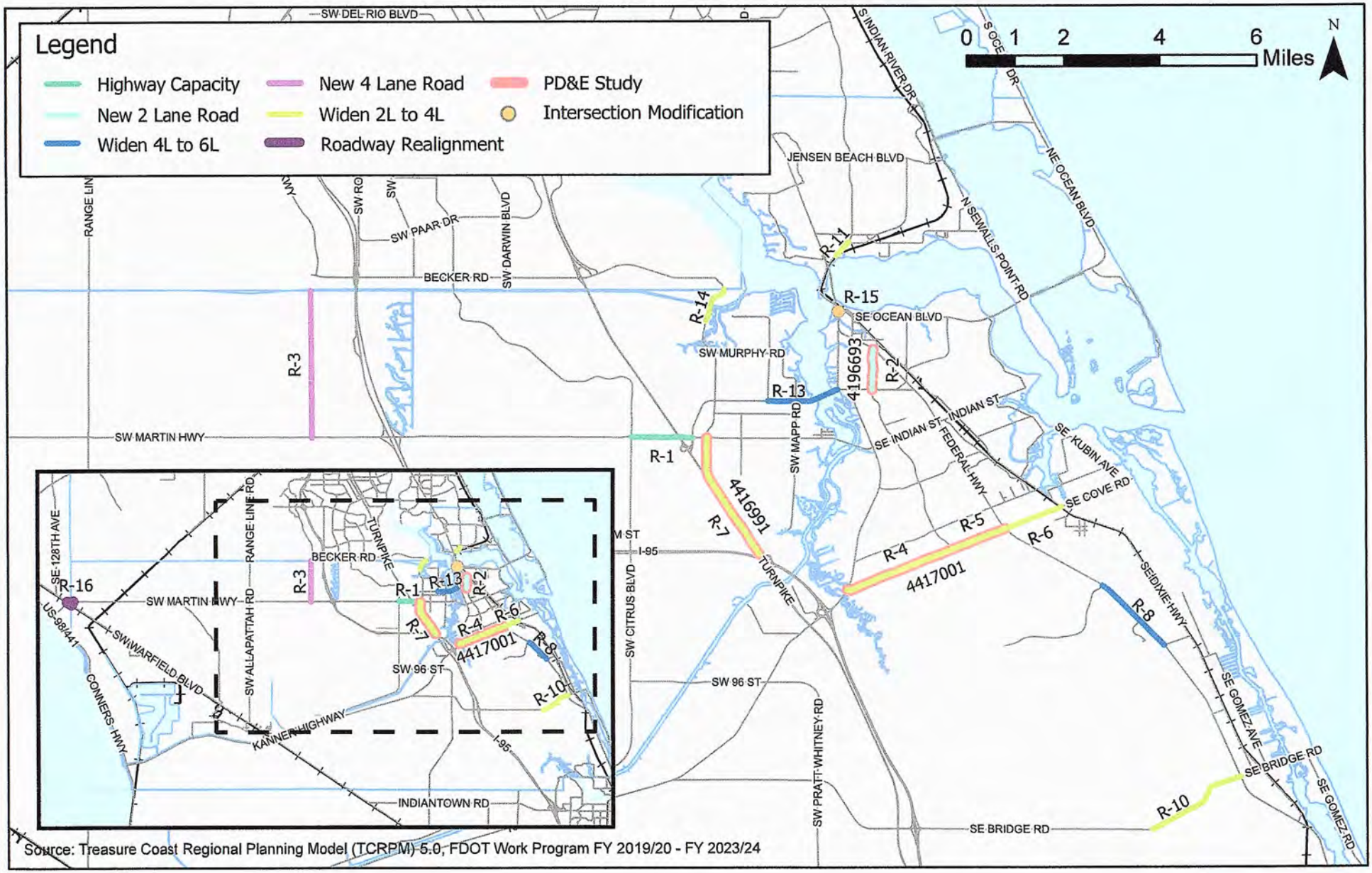
(1) FDOT Florida Traffic Online

	IN	OUT
Retail	295	251
Residential	77	45

Years Grown: 6

APPENDIX A

Roadway Network Data/Non-Motorized and Transit Data



Source: Treasure Coast Regional Planning Model (TCRPM) 5.0, FDOT Work Program FY 2019/20 - FY 2023/24

MARTIN MPO Metropolitan Planning Organization

TY·LIN INTERNATIONAL

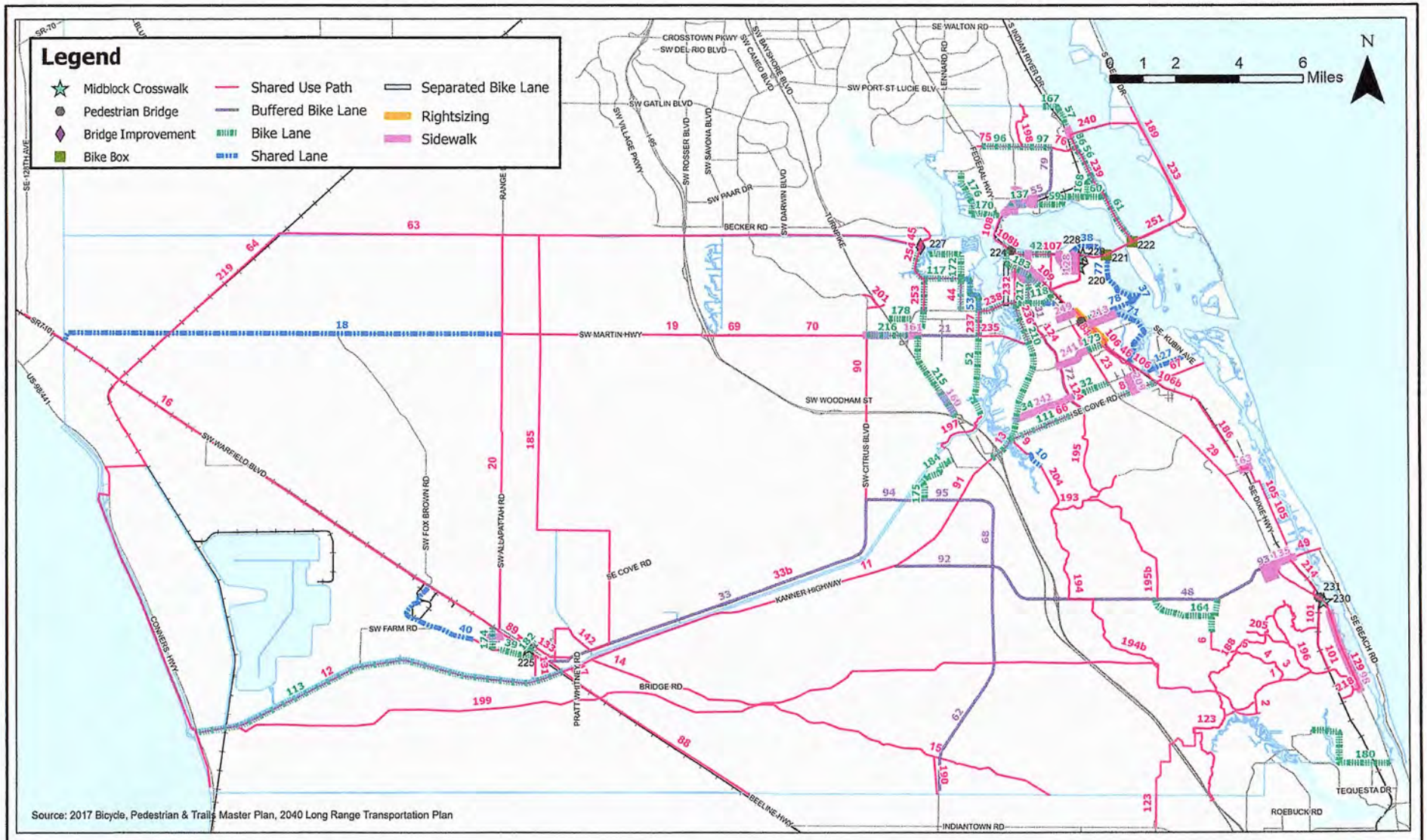
2045 Cost Feasible Plan

Roadways

Martin County

MARTIN IN MOTION 2045

Figure 7-3



MARTIN MPO Metropolitan Planning Organization

T·Y·LIN INTERNATIONAL

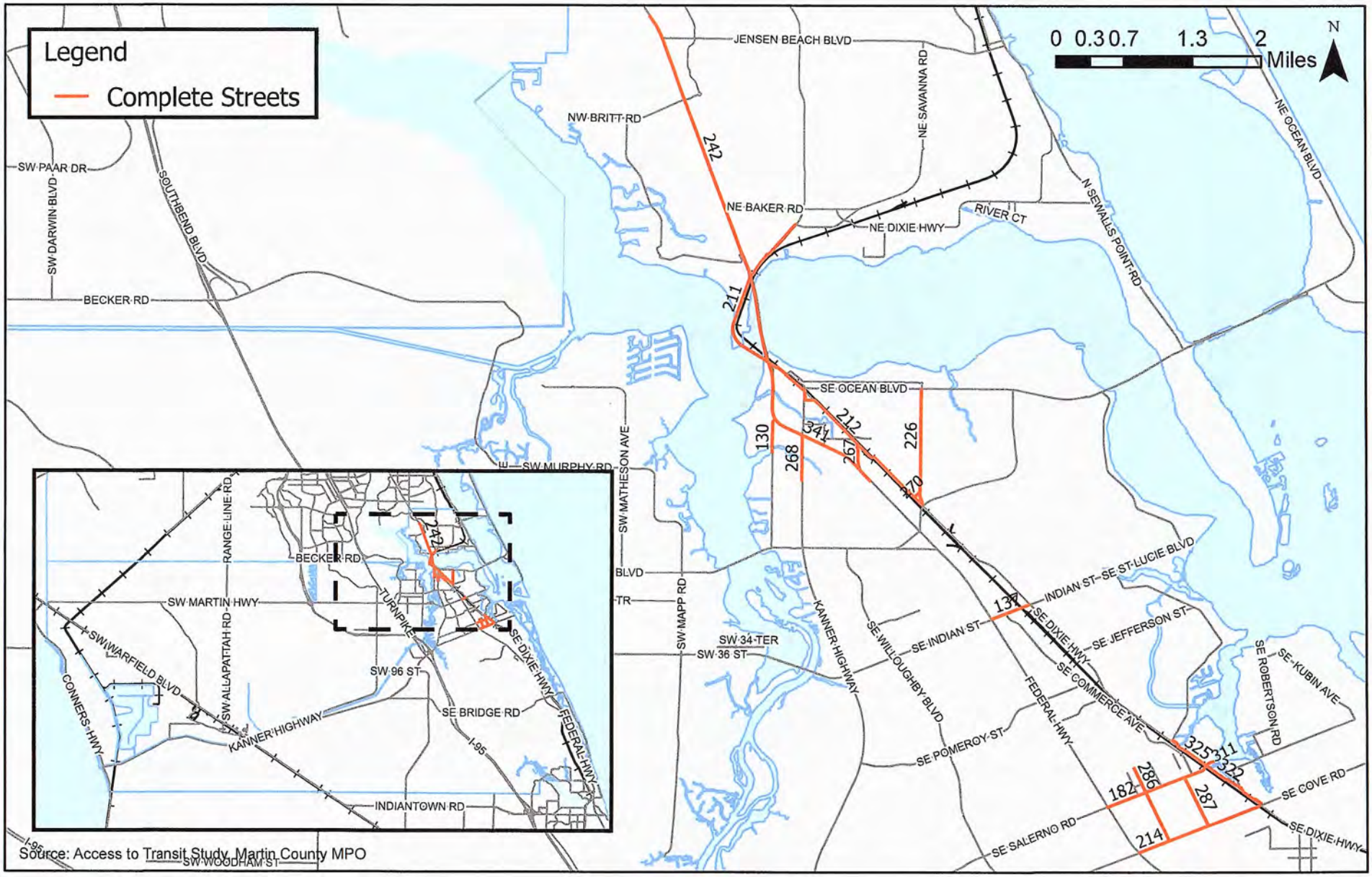
2045 Cost Feasible Plan

Nonmotorized

Martin County

MARTIN IN MOTION 2045

Figure 7-9



Source: Access to Transit Study, Martin County MPO

MARTIN MPO Metropolitan Planning Organization

T·Y·LIN INTERNATIONAL

2045 Cost Feasible Plan

Complete Streets

Martin County

MARTIN IN MOTION 2045

Figure 7-8

APPENDIX B

Pass-By Calculation
Internal Capture Matrices

Allowable Pass-By Calculation

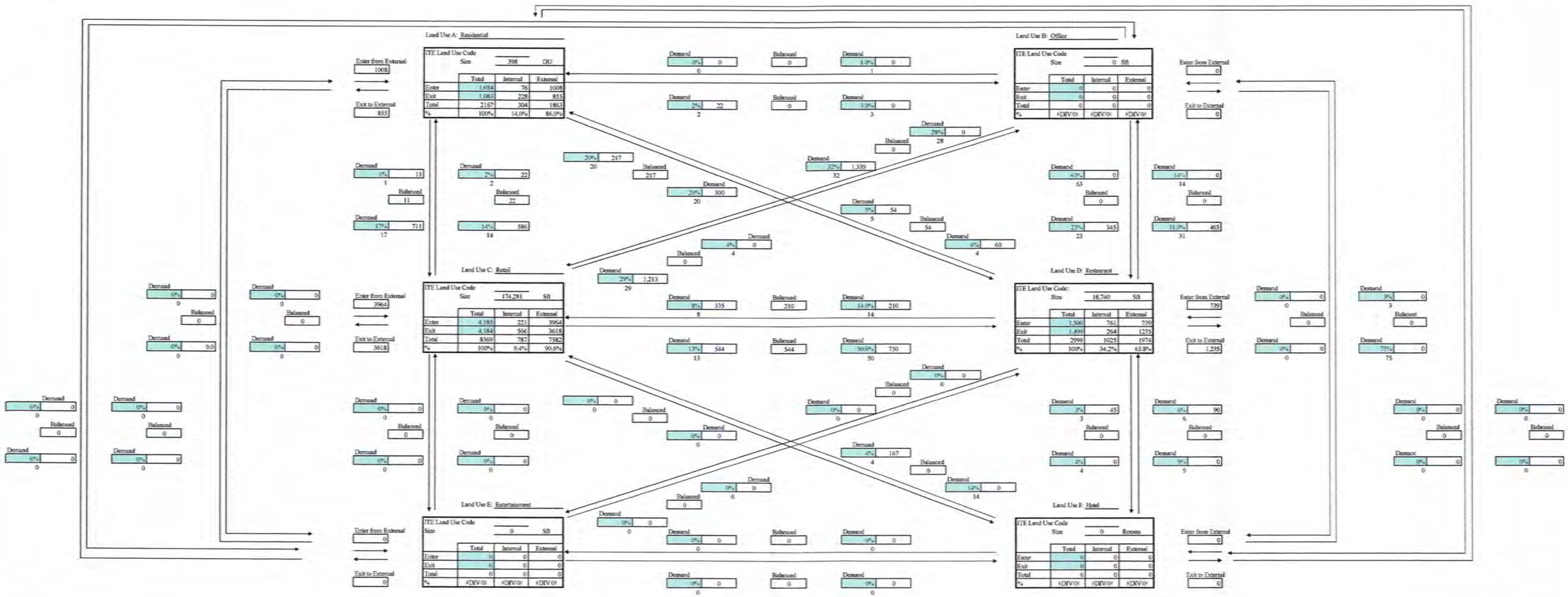
Segment	From	To	Existing 2019 AADT	Existing 2019 2-Way Peak Hour Trips	Growth Rate	2024 Daily Trips	Daily Pass-By Allowed	2024 2-Way Peak Hour Trips	Peak Hour Pass-By Allowed
Kanner Hwy	Indian St	Monterey Rd	21116	1631	1.005	21649	2164.9	1672	167.2
Willoughby Blvd	Indian St	Monterey Rd	11100	1280	1.037	13311	1331.1	1535	153.5
Indian St	Kanner Hwy	Willoughby Blvd	29306	2771	1.047	36871	3687.1	3486	348.6
						Total:	7183		669

TABLE 1: Daily Internal Traffic

PROJECT
TRIP INTERNALIZATION - Daily

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: Daily



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	1008	0	3964	739	0	0	5711	
Exit	855	0	3618	1235	0	0	5708	Internal
Total	1863	0	7582	1974	0	0	11419	Capture
Single-Use Trip Gen Estimate	2167	0	8369	2999	0	0	13535	15.6%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

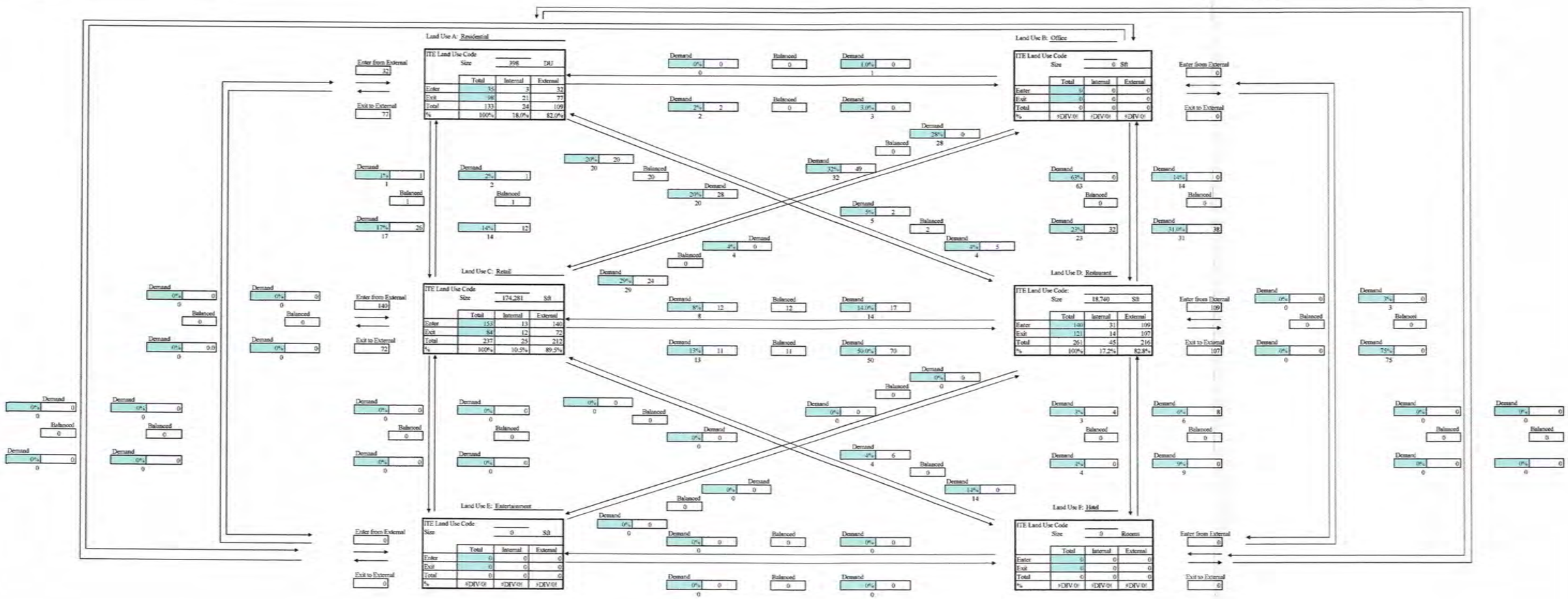
Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: AM Internal Traffic

PROJECT
TRIP INTERNALIZATION - AM

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: AM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total	
Enter	32	0	140	109	0	0	281	
Exit	77	0	72	107	0	0	256	Internal
Total	109	0	212	216	0	0	537	Capture
Single-Use Trip Gen Estimate	133	0	237	261	0	0	631	14.9%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

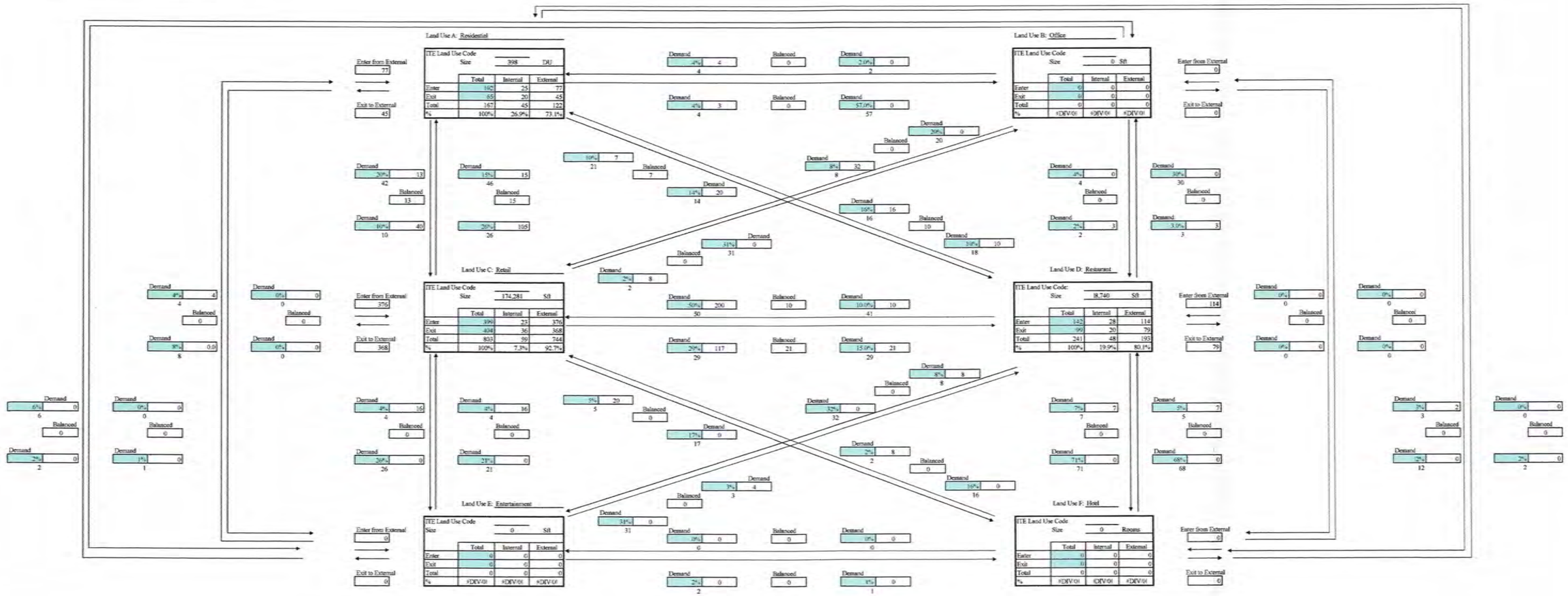
Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

TABLE 1: PM Internal Traffic

PROJECT
TRIP INTERNALIZATION - PM

Analyst _____
Date _____

Name of Devlpt: PROJECT
Time Period: PM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A		Land Use B		Land Use C		Land Use D		Land Use E		Land Use F		Total	
Enter	77		0		376		114		0		0		567	
Exit	45		0		368		79		0		0		492	Internal
Total	122		0		744		193		0		0		1059	Capture
Single-Use Trip Gen Estimate	167		0		803		241		0		0		1211	12.6%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Note: Numbers outside of the Box are the ITE Pairing Values. Numbers inside the Box are Actual Values used.

APPENDIX C

Martin County 2040
Roadway Level of Service Inventory Report
and
Martin County 2019
Roadway Level of Service Inventory Report

Martin County 2040 Roadway Level of Service Inventory Report

Road Name	From	To	# Lane Each Direct	Class for los lookup (uniter, I, II, NS)	Div	E+C Lanesge (# Lane Each Direct)	Urban Transit Rural	Road attrib. for LOS lookup	Road Class	2040 Road Class	Type	2040 Type	Generalized Service Capacity	2040 Generalized Service Capacity	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	Annual Historical Growth Rate (Linear Regression)	Model 2010 AADT	Model 2040 AADT	Model Growth Rate (30 Years)	Annual Model Growth Rate	Growth Rate	Projected 2040 Daily Volume	V/C
CR-711 (Pratt Whitney Rd)	CR-708	South Fork High School	1	I	U		Transit	I_U_Transit_1	1-1U		Class I: Transitional 2-Ln Undivided		16200		3,173	3,073	3,262	3,540	3,437	3,664	3,442	3,509	0.22%	5285	6351	20.74%	0.69%	0.69%	4164	0.26
CR-711 (Pratt Whitney Rd)	South Fork High School	SR-76	1	I	U		Transit	I_U_Transit_1	1-1U		Class I: Transitional 2-Ln Undivided		16200		4,561	3,957	4,591	4,946	4,051	4,644	4,736	4,972	0.21%	6564	8465	28.96%	0.97%	0.97%	6268	0.39
CR-713 (High Meadow Ave)	I-95	CR-714	1	I	U		Urban	I_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		14,966	14,847	14,705	14,279	13,752	13,494	13,521	13,900	-0.19%	16538	22251	20.03%	0.67%	0.67%	16406	1.03
CR-713 (High Meadow Ave)	CR-714	SR-714	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		12,495	11,614	11,459	10,471	9,425	9,495	9,433	9,530	-0.47%	13464	15503	15.14%	0.50%	0.50%	10829	0.61
CR-713 (High Meadow Ave)	SR-714	Murphy Rd	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		16,511	15,669	13,412	11,565	10,868	11,105	10,777	11,057	-0.68%	15879	18711	17.83%	0.50%	0.50%	12832	0.72
CR-714 (Martin Hwy)	SR-710	Fox Brown Rd	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		2,447	2,788	2,535	2,465	2,476	2,454	2,400	2,500	-0.07%	4036	5083	25.94%	0.86%	0.86%	3084	0.22
CR-714 (Martin Hwy)	Fox Brown Rd	CR-609	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		2,720	2,759	2,871	2,883	2,719	2,712	2,625	2,736	-0.06%	4872	6791	39.39%	1.31%	1.31%	3706	0.26
CR-714 (Martin Hwy)	CR-609	I-95	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		3,716	3,916	3,971	3,994	4,016	3,924	3,837	4,079	0.09%	7700	22250	188.96%	6.30%	6.30%	11016	0.77
CR-714 (Martin Hwy)	Florida's Turnpike	CR-713	1	II	U	2	Urban	II_U_Urban_1	2-1U	2-2D	Class II: 2-Ln Undivided	Class II: 4-Ln Divided	14800	32400	11,556	11,629	11,464	11,826	11,447	11,649	11,816	11,590	-0.02%	19718	37535	90.36%	3.01%	3.01%	21015	0.65
CR-714 (Martin Hwy)	CR-713	Berry Ave	1	II	U	2	Urban	II_U_Urban_1	2-1U	2-2D	Class II: 2-Ln Undivided	Class II: 4-Ln Divided	14800	32400	12,435	11,339	9,843	10,030	10,034	10,216	9,943	9,712	-0.31%	10,034	23135	130.57%	4.35%	4.35%	21125	0.65
CR-714 (Martin Hwy)	Berry Ave	Mapp Rd	1	II	U	2	Urban	II_U_Urban_1	2-1U	2-2D	Class II: 2-Ln Undivided	Class II: 4-Ln Divided	14800	32400	12,646	12,155	10,967	11,179	11,260	11,144	10,964	14,007	0.06%	11,260	22404	98.97%	3.30%	3.30%	26483	0.82
CR-714 (Veteran's Memorial Bridge)	***Mapp Rd***	***SR-76***	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600										#DIV/0!			#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CR-723 (Savanna Rd)	CR-707	NE 24th St	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		11,628	11,669	10,569	11,111	11,509	8,910	8,457	8,440	-0.53%	12772	16595	29.93%	1.00%	1.00%	10714	0.67
CR-723 (Savanna Rd)	NE 24th St	CR-707A(Jensen Beach Blvd.)	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		13,383	13,248	12,318	12,666	12,836	10,524	10,501	10,244	-0.46%	7826	10647	36.05%	1.20%	1.20%	13567	0.85
CR-726 (Citrus Blvd)	SR-710	Greenridge Ln	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		2,603	2,743	2,335	2,777	2,188	2,363	2,496	2,257	-0.27%	1363	4156	204.92%	6.83%	6.83%	6419	0.45
CR-726 (Citrus Blvd)	Greenridge Ln	CR-76A	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		2,648	2,419	2,272	2,526	2,288	2,383	2,107	2,009	-0.29%	1979	5019	153.61%	5.12%	5.12%	5001	0.35
CR-76A (Citrus Blvd.)	CR-726	SR-714	1	UN	U		Transit	UN_U_Transit_1	UN-1		Transitional 2-Ln Uninter /Undivided Flow		24400		3,380	3,135	3,082	3,343	3,491	3,381	3,257	3,321	0.11%	3164	5889	86.13%	2.87%	2.87%	5895	0.24
CR-76A (SW 96th St)	CR-726	Pennsylvania Ave	1	UN	U		Transit	UN_U_Transit_1	UN-1		Transitional 2-Ln Uninter /Undivided Flow		24400		3,878	3,237	3,080	3,549	3,325	3,448	3,072	3,375	-0.15%	2477	6320	155.15%	5.17%	5.17%	8088	0.33
CR-76A (SW 96th St)	Pennsylvania Ave	SR-76	1	I	U		Transit	I_U_Transit_1	1-1U		Class I: Transitional 2-Ln Undivided		18200		6,555	6,563	6,558	7,243	6,751	7,226	6,774	6,991	0.05%	5748	10374	80.48%	2.68%	2.68%	11365	0.70
CR-A1A (Dixie Hwy)	SR-5	CR-708	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		3,197	3,010	2,730	2,535	2,464	2,489	2,418	2,457	-0.42%	4042	6107	51.09%	1.70%	1.70%	3567	0.24
CR-A1A (Dixie Hwy)	CR-708	Osprey St	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		7,491	6,950	6,524	6,449	6,397	6,307	6,362	6,387	-0.25%	4656	7649	64.21%	2.14%	2.14%	10078	0.57
CR-A1A (Dixie Hwy)	Osprey St	Heritage Blvd	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		6,107	5,812	5,416	6,529	5,256	5,144	5,113	5,205	-0.29%	5097	9723	90.76%	3.03%	3.03%	9457	0.39
CR-A1A (Dixie Hwy)	Heritage Blvd	Cove Rd	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		6,415	6,149	5,781	5,678	5,712	5,754	5,862	5,692	-0.15%	5068	11042	94.81%	3.16%	3.16%	10549	0.44
CR-A1A (Dixie Hwy)	Cove Rd	Salerno Rd	1	II	D		Urban	II_D_Urban_1	2-1D		Class II: 2-Ln Divided		15640		11,452	11,339	11,315	10,735	10,583	10,989	10,672	11,026	-0.10%	13563	15295	12.77%	0.43%	0.50%	12515	0.81
CR-A1A (Dixie Hwy)	Salerno Rd	St. Lucie Blvd	1	II	D		Urban	II_D_Urban_1	2-1D		Class II: 2-Ln Divided		15640		15,938	15,938	14,923	14,377	14,037	14,746	14,313	14,921	-0.15%	10857	12772	17.64%	0.59%	0.59%	17290	1.11
CR-A1A (Dixie Hwy)	St Lucie Blvd	Jefferson St	1	II	D		Urban	II_D_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		12,799	12,495	11,768	11,562	11,563	11,755	11,899	12,094	-0.09%	3361	4573	34.86%	1.16%	1.16%	15868	1.07
CR-A1A (Dixie Hwy)	Jefferson St	Indian St	2	II	D		Urban	II_D_Urban_2	2-2D		Class II: 4-Ln Divided		32400		16,843	16,596	15,689	14,744	15,083	15,503	15,091	16,040	-0.09%	12059	14494	20.19%	0.67%	0.67%	18955	0.59
CR-A1A (Dixie Hwy)	Indian St	SR-714	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		13,514	13,004	13,518	12,296	12,268	13,310	13,522	14,335	0.08%	15254	15687	2.84%	0.09%	0.50%	16270	0.41
CR-A1A (Dixie Hwy)	SR-714	SE Fifth St	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		15000		6,009	5,811	5,521	5,087	5,339	5,559	5,403	5,796	-0.09%	13643	15027	10.14%	0.34%	0.50%	6578	0.42
Crossrip St	CR-A1A	Gomez Ave	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		2,876	2,533	2,638	2,628	2,863	2,639	2,436	2,455	-0.19%	1723	2253	30.76%	1.03%	1.03%	3135	0.20
Dixie Hwy	Joan Jefferson Wy	Wright Blvd	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		15600		9,853	8,372	8,272	7,507	8,288	8,534	7,899	8,239	-0.22%	16373	20777	26.90%	0.90%	0.90%	10234	0.66
Dr Martin Luther King Jr Blvd	Farm Rd	SR-710	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		1,977	1,934	1,646	1,915	1,782	1,764	1,722	1,768	-0.19%	N/A	N/A	0.00%	0.00%	0.50%	2007	0.13
Farm Rd	Dr Martin Luther King Jr Dr	Palm Wy	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		3,198	2,879	2,515	2,850	2,334	2,303	2,238	2,267	-0.54%	N/A	N/A	0.00%	0.00%	0.50%	2573	0.16

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Shaded volume exceeds generalized LOS volume and requires additional analysis.

Martin County 2040 Roadway Level of Service Inventory Report

Road Name	From	To	# Lane Each Direct	Class for los lookup (uniter, I, II, NS)	Div	E+C Laneage (# Lane Each Direct)	Urban Transit Rural	Road attrib. for LOS lookup	Road Class	2040 Road Class	Type	2040 Type	Generalized Service Capacity	2040 Generalized Service Capacity	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	Annual Historical Growth Rate (Linear Regression)	Model 2010 AADT	Model 2040 AADT	Model Growth Rate (30 Years)	Annual Model Growth Rate	Growth Rate	Projected 2040 Daily Volume	V/C
Fork Rd	Pine Lake Dr	SR-5	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		1,370	1,359	1,336	1,428	1,164	1,244	1,283	1,240	-0.26%	N/A	N/A	0.00%	0.00%	0.50%	1407	0.09
Fox Brown Rd	SR-710	CR-714	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		429	467	477	543	346	354	299	301	-0.71%	194	538	177.32%	5.91%	5.91%	781	0.05
Goldenrod Rd	Britt Rd	SR-732	2	II	D		Urban	II_D_Urban_2	2-2D		Class II: 4-Ln Divided		32400		4,317	5,320	4,473	4,989	5,650	4,976	4,886	5,127	0.19%	N/A	N/A	0.00%	0.00%	0.50%	5819	0.18
Goldenrod Rd	SR-732	SR-5	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		7,115	7,390	6,487	6,076	6,101	6,633	6,534	6,459	-0.20%	N/A	N/A	0.00%	0.00%	0.50%	7331	0.50
Goldenrod Rd	SR-5	Westmoreland Blvd	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		4,114	3,399	3,616	3,445	3,402	3,494	3,521	3,496	-0.15%	N/A	N/A	0.00%	0.00%	0.50%	3970	0.27
Gomez Ave	CR-708	Crossrip St	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		4,311	4,052	3,870	3,893	3,739	3,719	3,481	3,473	-0.34%	N/A	N/A	0.00%	0.00%	0.50%	3942	0.27
Gomez Ave	Crossrip St	Osprey St	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		1,273	1,211	1,125	1,137	1,123	1,054	1,106	1,094	-0.15%	N/A	N/A	0.00%	0.00%	0.50%	1242	0.08
Green River Parkway	CR-707	Baker Rd	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		15600							4,039	4,791	5,063	4.47%	4682	5560	18.75%	0.63%	4.47%	11174	0.72
Green River Parkway	Baker Rd	SR-732	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700							4,859	5,307	5,974	3.74%	8570	12179	40.47%	1.35%	3.74%	12007	0.68
Green River Parkway	SR-732	St. Lucie County	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		4,665	5,128	4,814	4,576	4,643	5,178	6,402	6,810	0.73%	9149	12908	41.09%	1.37%	1.37%	9328	0.39
Horseshoe Point Rd	CR-A1A	Kubin Ave	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		6,118	5,952	5,891	5,690	5,561	5,715	5,575	5,589	-0.12%	N/A	N/A	0.00%	0.00%	0.50%	6457	0.41
Indian St	SR-76	Willoughby Blvd	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		17,289	16,402	14,974	14,750	15,317	15,569	15,569	15,569	-0.13%	16659	37291	123.85%	4.13%	4.13%	32923	0.83
Indian St	Willoughby Blvd	SR-5	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		21,975	21,042	18,974	19,172	19,174	19,746	18,983	18,886	-0.21%	15989	26440	65.36%	2.18%	2.18%	29990	0.75
Indian St	SR-5	Commerce Ave	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		22,170	21,590	19,489	19,255	19,699	19,929	19,845	19,410	-0.19%	25470	28713	12.73%	0.42%	0.50%	22030	0.55
Indian St	Commerce Ave	CR-A1A	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		23,781	23,160	20,577	20,791	21,087	21,274	21,757	21,523	-0.13%	20138	23956	18.96%	0.63%	0.63%	25196	0.63
Indian St	CR-A1A	St Lucie Blvd	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		9,093	8,632	6,639	8,080	7,402	7,003	6,667	6,816	-0.44%	7718	8755	13.44%	0.45%	0.50%	7738	0.49
Indian River Dr	Palmer St	CR-707	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		6,983	7,789	6,653	6,316	6,872	6,571	6,319	6,602	-0.20%	5246	7292	39.00%	1.30%	1.30%	8919	0.56
Island Way	Palm Beach County	Jupiter Road	1	UN	U		Transit	UN_U_Transit_1	UN-1		Transitional 2-Ln Uninter /Undivided Flow		24400		4,147	3,624	3,333	3,755	4,226	3,649	3,610	3,815	-0.05%	N/A	N/A	0.00%	0.00%	0.50%	4330	0.18
Island Way	Jupiter Road	Country Club Wy	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		4,610	4,452	4,113	5,402	4,772	4,299	4,339	4,433	-0.08%	N/A	N/A	0.00%	0.00%	0.50%	5031	0.32
Jack James Rd	SR-76	Blue Water Wy	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		3,068	2,546	2,477	2,122	2,234	2,440	2,394	2,487	-0.27%	N/A	N/A	0.00%	0.00%	0.50%	2823	0.19
Jefferson St	CR-A1A	St Lucie Blvd	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		961	977	911	886	855	865	868	842	-0.36%	9131	10447	14.41%	0.48%	0.50%	956	0.06
Lares Avenue	CR-708	CR-A1A	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		3,534	3,650	2,856	2,806	2,789	2,827	2,842	2,975	-0.41%	N/A	N/A	0.00%	0.00%	0.50%	3377	0.21
Little Club Wy	Country Club Dr	Wooden Bridge Wy	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		2,547	2,364	2,212	4,434	4,218	2,233	2,233	2,158	-0.12%	N/A	N/A	0.00%	0.00%	0.50%	2449	0.15
Locks Rd	Canal St	SR-76	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		5,673	3,675	3,511	3,768	3,590	3,413	3,432	3,490	-0.58%	N/A	N/A	0.00%	0.00%	0.50%	3961	0.25
MacArthur Blvd	Sailfish Point	SR-A1A	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		5,626	5,913	4,750	4,856	4,916	5,395	5,171	5,221	-0.16%	5853	6980	19.26%	0.64%	0.64%	6126	0.38
Mapp Rd	South End	CR-714	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		5,588	5,458	5,218	5,414	5,159	5,771	5,661	5,306	0.03%	10068	13887	38.03%	1.27%	1.27%	7122	0.48
Mapp Rd	CR-714	SR-714	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		14,152	13,299	12,804	13,149	12,925	13,737	13,510	13,302	-0.04%	10382	12417	19.63%	0.65%	0.65%	15676	0.98
Mapp Rd	SR-714	Matheson Ave	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		5,523	3,811	5,114	5,148	4,969	4,846	4,954	4,993	0.07%	6994	8359	19.52%	0.65%	0.65%	5870	0.40
Mapp Rd	Matheson Ave	North End	1	NS	U		Urban	NS_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		7,674	7,667	7,539	7,537	7,425	7,379	7,284	7,107	-0.12%	5893	7528	27.74%	0.92%	0.92%	8682	0.50
Market Place	SR-5	Commerce Ave	1	II	D		Urban	II_D_Urban_1	2-1D		Class II: 2-Ln Divided		15540		2,520	2,657	3,351	3,248	3,404	3,253	3,199	4,154	0.73%	N/A	N/A	0.00%	0.00%	0.73%	4970	0.32
Matheson Ave	SR-714	Mapp Rd	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		6,491	9,666	6,283	5,976	6,212	6,119	5,864	5,630	-0.49%	5470	8827	61.37%	2.05%	2.05%	8740	0.59
Monroe St	SR-5	Commerce Ave	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		2,327	2,113	1,898	1,830	1,843	1,817	1,769	1,694	-0.41%	N/A	N/A	0.00%	0.00%	0.50%	1923	0.13
Murphy Rd	Mapp Rd	High Meadow Ave	1	II	U		Urban	II_U_Urban_1	2-1U		Class II: 2-Ln Undivided		14800		5,790	5,002	5,569	6,912	5,277	5,453	5,535	5,714	0.00%	9438	12016	27.32%	0.91%	0.91%	7119	0.48

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Road Name	From	To	# Lane Each Direct	Class for los lookup (uniter, I, II, NS)	Div	E+C Lanesge (# Lane Each Direct)	Urban Transit Rural	Road attrib. for LOS lookup	Road Class	2040 Road Class	Type	2040 Type	Generalized Service Capacity	2040 Generalized Service Capacity	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	Annual Historical Growth Rate (Linear Regression)	Model 2010 AADT	Model 2040 AADT	Model Growth Rate (30 Years)	Annual Model Growth Rate	Growth Rate	Projected 2040 Daily Volume	V/C
SR-5 (US-1)	SR-714	SR-5A	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		42,025	40,175	38,011	37,643	37,997	37,999	37,003	36,847	-0.19%	30479	37195	22.03%	0.73%	0.73%	44154	0.74
SR-5 (US-1)	SR-5A(Cut-off Rd)	SR-76	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		36,594	38,668	36,155	35,609	36,105	35,403	35,596	35,657	-0.09%	20115	25931	28.91%	0.96%	0.96%	44936	0.75
SR-5 (US-1)	SR-76	Palm City Rd	3	II	D		Urban	II_D_Urban_3	2-3D		Class II: 6-Ln Divided		50000		47,958	46,668	45,360	44,700	46,568	45,180	46,340	46,372	0.00%	31513	40556	28.70%	0.96%	0.96%	58348	1.17
SR-5 (US-1)	Palm City Rd	Joan Jefferson Wy	3	II	D		Urban	II_D_Urban_3	2-3D		Class II: 6-Ln Divided		50000		53,367	54,402	52,870	51,973	52,724	51,100	53,643	53,336	-0.02%	52745	63076	19.59%	0.65%	0.65%	62738	1.25
SR-5 (US-1)	Joan Jefferson Wy	Wright Blvd	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		65,617	54,685	56,154	56,339	57,038	57,073	57,412	57,104	-0.11%	52745	63076	19.59%	0.65%	0.65%	67170	1.12
SR-5 (US-1)	Wright Blvd	Baker Rd	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		54,134	54,968	52,321	52,200	54,330	51,498	52,121	52,835	-0.07%	53670	65197	21.48%	0.72%	0.72%	63048	1.05
SR-5 (US-1)	Baker Rd	Britt Rd	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		56,604	57,796	55,668	54,392	55,912	53,469	52,776	53,361	-0.14%	54035	63580	17.66%	0.59%	0.59%	61844	1.03
SR-5 (US-1)	Britt Rd	SR-732	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		62,404	60,039	56,586	56,320	57,366	56,092	55,234	57,070	-0.15%	51173	58925	15.15%	0.50%	0.50%	64851	1.08
SR-5 (US-1)	SR-732	Westmoreland Blvd	4	I	D		Urban	I_D_Urban_4	1-4D		Class I: 8-Ln Divided		80100		69,838	69,490	64,018	63,736	64,669	63,766	62,684	62,036	-0.19%	75236	89191	18.55%	0.62%	0.62%	72450	0.90
SR-5 (US-1)	Westmoreland Blvd	St Lucie County	4	I	D		Urban	I_D_Urban_4	1-4D		Class I: 8-Ln Divided		80100		65,168	67,687	60,447	60,881	62,929	60,355	60,445	58,875	-0.18%	68771	79667	15.84%	0.53%	0.53%	67270	0.84
SR-710 (Warfield Blvd)	Okeechobee County	Fox Brown Rd	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		8400		8,020	7,307	5,769	4,474	5,596	5,372	5,133	5,513	-0.60%	3301	4418	33.84%	1.13%	1.13%	7192	0.86
SR-710 (Warfield Blvd)	Fox Brown Rd	CR-609 (Allapattah)	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		8400		8,748	6,869	6,070	7,373	6,660	6,274	6,304	6,685	-0.31%	4718	7528	59.56%	1.99%	1.99%	10576	1.26
SR-710 (Warfield Blvd)	**CR-609 (Allapattah)**	**Van Buren**	1	I	U		Transit	I_U_Transit_1	1-1D		Class I: Transitional 2-Ln Divided		14400		11,022	10,698	8,982	9,914	9,843	9,238	9,595		-0.31%	9759	15586	59.71%	1.99%	1.99%	14942	1.04
SR-710 (Warfield Blvd)	**Van Buren**	**CR-726 (Citrus)**	1	II	D		Transit	II_D_Transit_1	2-2D		Class II: Transitional 4-Ln Divided		6500		11,022	10,698	8,982	9,914	9,843	9,238	9,595		-0.31%	9162	16884	83.68%	2.80%	2.80%	17107	2.63
SR-710 (Warfield Blvd)	***CR-726***	***SR-76 (Kanner)***	2	UN	D		Transit	UN_D_Transit_2	UN-2		Transitional 4-Ln Uninter /Divided Flow		49600		11,697	11,022	9,094	9,648	8,873	8,373	8,823		-0.66%	8856	12739	42.24%	1.41%	1.41%	12301	0.25
SR-710 (Warfield Blvd)	SR-76	Palm Beach County	1	UN	U	2	Transit	UN_U_Transit_1	UN-1	UN-2	Transitional 2-Ln Uninter /Undivided Flow	Transitional 4-Ln Uninter /Divided Flow	17300	49600	7,682	6,514	5,604	6,353	6,125	5,778	5,925	6,404	-0.26%	6234	8520	36.67%	1.22%	1.22%	8518	0.17
SR-714 (Martin Hwy)	I-95	CR-76A (Citrus)	1	UN	U		Transit	UN_U_Transit_1	UN-1		Transitional 2-Ln Uninter /Undivided Flow		24400		10,950	11,031	10,238	9,879	9,756	9,540	9,421	9,650	-0.26%	6399	10110	57.99%	1.93%	1.93%	14687	0.60
SR-714 (Martin Hwy)	CR-76A (Citrus)	Florida's Turnpike	1	I	D		Urban	I_D_Urban_1	1-1D		Class I: 2-Ln Divided		18565		14,645	14,660	14,003	15,606	15,816	15,634	15,357	15,362	0.14%	14799	23501	58.80%	1.96%	1.96%	23492	1.26
SR-714 (Martin Downs Blvd)	Florida's Turnpike	CR-713	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		20,243	19,543	18,524	19,094	19,217	19,378	19,332	18,890	-0.06%	11925	14433	21.03%	0.70%	0.70%	22584	0.57
SR-714 (Martin Downs Blvd)	CR-713	Matheson Ave	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		30,456	31,614	29,146	29,030	28,847	29,119	29,520	28,954	-0.11%	26817	28278	5.45%	0.18%	0.18%	30374	0.76
SR-714 (Martin Downs Blvd)	Matheson Ave	Mapp Rd	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		30,948	34,089	29,318	29,213	30,403	30,021	31,528	28,503	-0.12%	34089	36598	7.36%	0.25%	0.50%	32419	0.81
SR-714 (Palm City Bridge)	***Mapp Rd***	***SR-76***	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		47,008	46,465	44,364	43,396	43,542	44,507	44,026	43,861	-0.11%	54740	48657	-11.11%	-0.37%	0.50%	49805	1.25
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		28,975	28,624	27,235	26,368	26,599	28,365	26,624	27,999	-0.05%	36119	35123	-2.76%	-0.09%	0.50%	31779	0.80
SR-714 (Monterey Rd)	Willoughby Blvd	Monterey Extension	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		26,833	25,537	24,620	24,592	24,774	24,740	25,316	25,689	-0.05%	27467	29567	7.65%	0.25%	0.50%	29157	0.73
SR-714 (Monterey Rd)	Monterey Extension	SR-5	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		18,351	16,557	16,663	16,660	17,190	17,159	17,057	17,614	-0.01%	16333	22994	40.78%	1.36%	1.36%	24079	0.61
SR-714 (Monterey Rd)	SR-5	CR-A1A	2	II	D		Urban	II_D_Urban_2	2-2D		Class II: 4-Ln Divided		32400		24,073	20,516	21,460	22,254	23,000	23,283	23,438	23,361	0.11%	28563	35941	25.83%	0.86%	0.86%	28829	0.89
SR-714 (Monterey Rd)	CR-A1A	SR-A1A	2	II	D		Urban	II_D_Urban_2	2-2D		Class II: 4-Ln Divided		33600		13,531	13,659	12,681	14,146	15,336	15,668	16,552	16,863	0.56%	16768	21612	29.00%	1.00%	1.00%	21405	0.63
SR-732 (Causeway Blvd)	CR-707	SR-A1A	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		12,581	13,082	11,820	11,678	12,547	12,764	12,627	12,628	0.03%	10211	13461	31.83%	1.06%	1.06%	16503	0.68
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		28,144	27,345	25,736	24,851	25,408	25,816	25,542	25,124	-0.16%	24324	29093	19.61%	0.65%	0.65%	29557	0.74
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39800		25,789	20,441	23,868	23,018	25,113	24,115	25,454	24,677	0.13%	15815	21142	33.68%	1.12%	1.12%	32158	0.81
SR-76 (Kanner Hwy)	SR-15	SR-710	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		2,374	2,048	1,604	1,523	1,751	1,567	1,727	1,958	-0.27%	3962	5001	26.22%	0.87%	0.87%	2420	0.17
SR-76 (Kanner Hwy)	SR-710	CR-708	1	UN	U		Rural	UN_U_Rural_1	UN-1		Uninterrupted Rural Hwy: 2-Ln Undivided		14300		4,720	3,717	2,809	2,666	3,160	2,904	2,905	3,100	-0.55%	12090	16947	40.17%	1.34%	1.34%	4221	0.30
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	1	UN	U		Transit	UN_U_Transit_1	UN-1		Transitional 2-Ln Uninter /Undivided Flow		24400		3,453	3,232	2,857	2,990	2,058	2,653	2,650	2,736	-0.38%	3794	4303	13.42%	0.45%	0.50%	3105	0.13

Bold Italic volume has been assumed or adjusted to account for recently constructed or committed projects.
Shaded volume exceeds generalized LOS volume and requires additional analysis.

Road Name	From	To	# Lane Each Direct	Class for los lookup (uniter, I, II, NS)	Div	E+C Laneage (# Lane Each Direct)	Urban Transit Rural	Road attrib. for LOS lookup	Road Class	2040 Road Class	Type	2040 Type	Generalized Service Capacity	2040 Generalized Service Capacity	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	Annual Historical Growth Rate (Linear Regression)	Model 2010 AADT	Model 2040 AADT	Model Growth Rate (30 Years)	Annual Model Growth Rate	Growth Rate	Projected 2040 Daily Volume	V/C
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		15,583	12,639	11,605	11,399	11,879	11,989	11,422	11,772	-0.34%	15158	18375	21.22%	0.71%	0.71%	14021	0.79
SR-76 (Kanner Hwy)	Locks Rd	Jack James	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		19,759	19,629	19,128	19,126	18,947	18,568	18,375	18,781	-0.12%	18769	23782	26.71%	0.89%	0.89%	23296	0.59
SR-76 (Kanner Hwy)	Jack James	Cove Rd	2	I	D	3	Urban	I_D_Urban_2	1-2D	1-3D	Class I: 4-Ln Divided	Class I: 6-Ln Divided	30600	59900	41,722	41,118	38,147	38,027	39,213	39,143	39,547	40,838	-0.04%	43301	61552	42.15%	1.40%	1.40%	56330	0.94
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	2	I	D	3	Urban	I_D_Urban_2	1-2D	1-3D	Class I: 4-Ln Divided	Class I: 6-Ln Divided	39600	59900	30,402	30,205	29,232	29,348	29,650	29,328	30,025	30,411	0.00%	34701	50601	48.40%	1.55%	1.55%	43110	0.72
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	2	I	D	3	Urban	I_D_Urban_2	1-2D	1-3D	Class I: 4-Ln Divided	Class I: 6-Ln Divided	39600	59900	26,631	25,923	24,675	26,621	26,884	26,700	26,112	25,887	0.01%	28207	42192	49.58%	1.65%	1.65%	37438	0.63
SR-76 (Kanner Hwy)	Indian St	SR-714	2	I	D	3	Urban	I_D_Urban_2	1-2D	1-3D	Class I: 4-Ln Divided	Class I: 6-Ln Divided	39600	59900	23,633	22,321	22,286	23,612	24,048	23,800	23,454	22,929	0.04%	23309	37520	60.97%	2.03%	2.03%	35510	0.89
SR-76 (Kanner Hwy)	SR-714	SR-5	3	I	D		Urban	I_D_Urban_3	1-3D		Class I: 6-Ln Divided		59900		32,625	28,406	28,715	27,060	25,526	27,064	27,300	25,266	-0.31%	29408	40937	39.20%	1.31%	1.31%	34224	0.57
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	2	II	D		Urban	II_D_Urban_2	2-2D		Class II: 4-Ln Divided		33600		15,702	17,164	17,600	16,929	16,856	17,133	17,799	17,810	0.14%	15158	22476	48.28%	1.61%	1.61%	25549	0.76
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		20,648	20,497	17,711	17,765	19,347	20,347	20,350	21,025	0.09%	21926	31673	44.45%	1.48%	1.48%	29437	0.74
SR-A1A (Ocean Blvd)	Sewalls Point Rd	Macarthur Blvd	1	I	U		Urban	I_U_Urban_1	1-1D		Class I: 2-Ln Divided		18585		#REF!	12,167	11,636	11,385	12,273	12,716	11,526	13,067	0.16%	11513	14698	27.66%	0.92%	0.92%	16320	0.88
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		7,302	7,977	6,705	6,909	7,179	7,252	7,297	7,161	-0.03%	9568	12465	30.28%	1.01%	1.01%	9112	0.38
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	1	UN	U		Urban	UN_U_Urban_1	UN-1		2-Ln Uninter /Undivided Flow		24200		12,245	12,484	11,506	11,735	12,264	13,179	12,694	11,919	0.04%	8192	10006	22.14%	0.74%	0.74%	14294	0.59
St Lucie Blvd	CR-A1A	Indian St	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		3,396	3,445	3,110	3,372	3,175	2,935	2,855	2,816	-0.36%	3222	5325	65.27%	2.18%	2.18%	4473	0.28
St Lucie Blvd	Indian St	SR-A1A	1	NS	U		Urban	NS_U_Urban_1	NS-1		2-Ln Undivided Non-State		15930		9,435	8,663	6,756	8,713	7,419	6,977	6,607	6,821	-0.48%	9086	12040	32.51%	1.08%	1.08%	8817	0.55
Westmoreland Blvd	St Lucie County	SR-5	1	II	D		Urban	II_D_Urban_1	2-1D		Class II: 2-Ln Divided		15540		13,073	10,971	11,685	11,286	11,303	11,297	11,204	11,130	-0.18%	9595	13095	36.48%	1.22%	1.22%	14764	0.95
Willoughby Blvd	Cove Rd	Salerno Rd	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		3,046	2,923	2,461	2,880	2,675	2,736	2,917	2,924	0.00%	3723	7076	90.06%	3.00%	3.00%	5294	0.30
Willoughby Blvd	Salerno Rd	Pomeroy St	1	I	U		Urban	I_U_Urban_1	1-1U		Class I: 2-Ln Undivided		17700		8,145	7,230	7,618	7,200	7,149	7,039	7,210	6,718	-0.23%	5939	9734	63.90%	2.13%	2.13%	10582	0.60
Willoughby Blvd	Pomeroy St	Indian St	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		8,896	8,559	8,892	8,539	8,419	8,378	8,008	8,496	-0.06%	8495	14180	66.92%	2.23%	2.23%	13616	0.34
Willoughby Blvd	Indian St	SR-714	2	I	D		Urban	I_D_Urban_2	1-2D		Class I: 4-Ln Divided		39600		11,492	11,157	11,439	10,630	10,786	10,706	11,121	11,797	-0.02%	16020	12047	-24.80%	-0.83%	0.50%	13390	0.34
Wright Blvd	SR-5	Dixie Highway	1	II	D		Urban	II_D_Urban_1	2-1D		Class II: 2-Ln Divided		16380		9,000	8,716	8,218	7,607	8,461	8,478	9,139	8,600	0.02%	8377	9100	8.63%	0.29%	0.29%	9365	0.57
SR 9 (I-95)	N of SR 706 (Indiantown Road)		3		D		Transit	_D_Transit_3	FR-1-3D		Transitional 6-Ln Freeway		65600		82,500	64,000	103,500	65,000	66,000	66,000	69,000	67,000	-0.51%	62690	81813	30.50%	1.02%	1.02%	85394	1.00
SR 9 (I-95)	N of CR 708 (Bridge Road)		3		D		Transit	_D_Transit_3	FR-1-3D		Transitional 6-Ln Freeway		65600		64,500	62,500	70,000	69,500	67,500	66,500	71,000	73,000	0.21%	58316	77809	33.43%	1.11%	1.11%	94961	1.11
SR 9 (I-95)	N of SR 76 (Kanner Highway)		3		D		Transit	_D_Transit_3	FR-1-3D		Transitional 6-Ln Freeway		65600		68,500	68,000	62,500	64,000	61,000	55,500	61,000	54,500	-0.34%	71193	94956	33.38%	1.11%	1.11%	70972	0.83
SR 9 (I-95)	S of SR 714 (Martin Highway)		3		D		Transit	_D_Transit_3	FR-1-3D		Transitional 6-Ln Freeway		65600		52,000	47,500	46,500	48,000	50,000	39,000	48,500	48,500	-0.12%	51846	80245	54.78%	1.83%	1.83%	72410	0.85
SR 91	S of SR 714 (Martin Highway)		2		D		Transit	_D_Transit_2	FR-1-2D		Transitional 4-Ln Freeway		57600		35,600	39,200	36,000	35,000	36,000	36,000	35,000	32,000	-0.18%	36513	47591	30.34%	1.01%	1.01%	46922	0.81
SR 91	SR 714 (Stuart)	Becker Road	2		D		Transit	_D_Transit_2	FR-1-2D		Transitional 4-Ln Freeway		57600			43,100	42,100	40,700	41,100	41,000	40,000	37,000	-0.27%	41752	61211	46.61%	1.55%	1.55%	52520	0.91
																	13,767	13,537	13,630	13,307	13,441	13,522								

N/A = Roadway Segment that does not appear in the Travel Demand Model (TCRPM4)

Bold Italic volume has been assumed or adjusted to account for recently constructed or committed projects.
Shaded volume exceeds generalized LOS volume and requires additional analysis.

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	23,957	1,622	C	6.1%
CR-723 (Savanna Rd)	CR-707	NE 24th St	Class I: 2-Ln Undivided	880	9,135	384	C	0.5%
CR-723 (Savanna Rd)	NE 24th St	CR-707A (Jensen Beach Blvd.)	Class I: 2-Ln Undivided	880	9,631	471	C	1.0%
CR-726 (Citrus Blvd)	SR-710	Greenridge Ln	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,783	126	A/B	0.5%
CR-726 (Citrus Blvd)	Greenridge Ln	CR-76A	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,488	137	A/B	0.5%
CR-76A (Citrus Blvd.)	CR-726	SR-714	Transitional 2-Ln Uninter /Undivided Flow	1200	4,269	283	A/B	8.0%
CR-76A (SW 96th St)	CR-726	Pennsylvania Ave	Transitional 2-Ln Uninter /Undivided Flow	1200	3,845	195	A/B	8.0%
CR-76A (SW 96th St)	Pennsylvania Ave	SR-76	Class I: Transitional 2-Ln Undivided	800	8,086	492	C	2.5%
CR-A1A (Dixie Hwy)	SR-5	CR-708	Class II: 2-Ln Undivided	750	3,416	192	C	4.7%
CR-A1A (Dixie Hwy)	CR-708	Osprey St	Class I: 2-Ln Undivided	880	7,552	477	C	3.7%
CR-A1A (Dixie Hwy)	Osprey St	Heritage Blvd	2-Ln Uninter /Undivided Flow	1190	6,595	393	A/B	3.1%
CR-A1A (Dixie Hwy)	Heritage Blvd	Cove Rd	2-Ln Uninter /Undivided Flow	1190	7,147	346	A/B	2.9%
CR-A1A (Dixie Hwy)	Cove Rd	Salerno Rd	Class II: 2-Ln Divided	790	12,131	617	D	3.1%
CR-A1A (Dixie Hwy)	Salerno Rd	St. Lucie Blvd	Class II: 2-Ln Undivided	750	17,261	835	F	3.3%
CR-A1A (Dixie Hwy)	St Lucie Blvd	Jefferson St	Class II: 2-Ln Undivided	750	14,108	748	D	2.9%
CR-A1A (Dixie Hwy)	Jefferson St	Indian St	Class II: 4-Ln Divided	1630	18,389	848	D	2.2%
CR-A1A (Dixie Hwy)	Indian St	SR-714	Class I: 4-Ln Divided	2000	17,161	824	C	3.1%
CR-A1A (Dixie Hwy)	SR-714	SE Fifth St	2-Ln Undivided Non-State	675	6,710	346	D	1.6%
Farm Rd	Dr Martin Luther King Jr Dr	Palm Wy	Class II: 2-Ln Undivided	750	2,817	124	C	3.2%
Fox Brown Rd	SR-710	CR-714	Uninterrupted Rural Hwy: 2-Ln Undivided	740	347	16	A/B	0.0%
Goldenrod Rd	Britt Rd	SR-732	Class II: 4-Ln Divided	1630	4,810	278	A/B	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
Goldenrod Rd	SR-732	SR-5	Class II: 2-Ln Undivided	750	6,877	402	D	1.9%
Goldenrod Rd	SR-5	Westmoreland Blvd	Class II: 2-Ln Undivided	750	4,635	295	C	3.0%
Gomez Ave	CR-708	Crossrip St	Class II: 2-Ln Undivided	750	3,732	199	C	1.4%
Gomez Ave	Crossrip St	Osprey St	Class II: 2-Ln Undivided	750	1,065	61	C	0.5%
Green River Parkway	Dixie Hwy	Baker Rd	Class II: 2-Ln Undivided	750	6,833	351	C	3.1%
Green River Parkway	Baker Rd	SR-732	Class I: 2-Ln Undivided	880	8,341	596	C	4.3%
Green River Parkway	SR-732	St. Lucie County	2-Ln Uninter /Undivided Flow	1190	8,667	576	C	1.8%
Horseshoe Point Rd	CR-A1A	Kubin Ave	2-Ln Undivided Non-State	675	5,647	285	C	0.5%
Indian St	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	29,306	1,729	C	4.7%
Indian St	Willoughby Blvd	SR-5	Class I: 4-Ln Divided	2000	27,852	1,236	C	2.8%
Indian St	SR-5	Commerce Ave	Class I: 4-Ln Divided	2000	22,368	995	C	0.5%
Indian St	Commerce Ave	CR-A1A	Class I: 4-Ln Divided	2000	25,515	1,199	C	2.5%
Indian St	CR-A1A	St Lucie Blvd	2-Ln Undivided Non-State	675	7,051	346	D	1.1%
Indian River Dr	Palmer St	CR-707	Class II: 2-Ln Undivided	750	7,509	374	D	3.7%
Island Way	Palm Beach County	Jupiter Road	Transitional 2-Ln Uninter /Undivided Flow	1200	4,493	302	A/B	3.4%
Island Way	Jupiter Road	Country Club Dr	Class II: 2-Ln Undivided	750	4,855	213	C	0.5%
Jack James Rd	SR-76	Blue Water Wy	Class II: 2-Ln Undivided	750	3,132	294	C	0.5%
Lares St	CR-708	CR-A1A	2-Ln Undivided Non-State	675	3,349	235	C	0.6%
Little Club Wy	Country Club Dr	Wooden Bridge Wy	2-Ln Undivided Non-State	675	2,273	103	C	0.5%
Locks Rd	Canal St	SR-76	2-Ln Undivided Non-State	675	3,667	232	C	2.0%
MacArthur Blvd	Sailfish Point	SR-A1A	2-Ln Undivided Non-State	675	5,989	368	D	6.8%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-5 (US-1)	Britt Rd	SR-732	Class I: 7-Ln Divided	3530	55,878	2,898	C	0.8%
SR-5 (US-1)	SR-732	Westmoreland Blvd	Class I: 8-Ln Divided	4040	64,147	3,522	C	0.5%
SR-5 (US-1)	Westmoreland Blvd	St Lucie County	Class I: 8-Ln Divided	4040	60,343	2,721	C	0.5%
SR-710 (Warfield Blvd)	Okeechobee County	Fox Brown Rd	Uninterrupted Rural Hwy: 2-Ln Undivided	670	6,348	257	C	4.8%
SR-710 (Warfield Blvd)	Fox Brown Rd	CR-609 (Allapattah)	2-Ln Uninter /Undivided Flow	840	7,419	310	A/B	3.0%
SR-710 (Warfield Blvd)	CR-609 (Allapattah)	Van Buren	Class I: 2-Ln Undivided	870	12,335	694	C	4.0%
SR-710 (Warfield Blvd)	Van Buren	CR-726 (Citrus)	Class II: 4-Ln Divided	1710	12,335	694	A/B	4.0%
SR-710 (Warfield Blvd)	CR-726	SR-76 (Kanner)	Transitional 4-Ln Uninter /Divided Flow	2450	11,001	431	A/B	3.4%
SR-710 (Warfield Blvd)	SR-76	Palm Beach County	Transitional 4-Ln Uninter /Divided Flow	2450	6,959	258	A/B	1.4%
SR-714 (Martin Hwy)	I-95	CR-76A (Citrus)	Transitional 2-Ln Uninter /Undivided Flow	1200	13,786	735	C	5.1%
SR-714 (Martin Hwy)	CR-76A (Citrus)	Florida's Turnpike	Class I: 4-Ln Divided	2000	21,291	1,136	C	4.9%
SR-714 (Martin Downs Blvd)	Florida's Turnpike	CR-713	Class I: 4-Ln Divided	2000	20,695	1,038	C	1.7%
SR-714 (Martin Downs Blvd)	CR-713	Matheson Ave	Class I: 4-Ln Divided	2000	27,291	1,267	C	0.5%
SR-714 (Martin Downs Blvd)	Matheson Ave	Mapp Rd	Class I: 4-Ln Divided	2000	32,789	1,738	C	0.5%
SR-714 (Palm City Bridge)	Mapp Rd	SR-76	Class I: 4-Ln Divided	2000	34,751	1,989	D	0.5%
SR-714 (Monterey Rd)	SR-76	Willoughby Blvd	Class I: 4-Ln Divided	2000	22,465	1,274	C	0.5%
SR-714 (Monterey Rd)	Willoughby Blvd	Monterey Extension	Class I: 4-Ln Divided	2000	24,716	1,186	C	0.6%
SR-714 (Monterey Rd)	Monterey Extension	SR-5	Class I: 4-Ln Divided	2000	18,136	926	C	0.8%
SR-714 (Monterey Rd)	SR-5	CR-A1A	Class II: 4-Ln Divided	1630	21,333	1,099	D	0.5%
SR-714 (Monterey Rd)	CR-A1A	SR-A1A	Class I: 4-Ln Divided	1910	19,430	1,031	C	1.1%
SR-732 (Causeway Blvd)	CR-707	SR-A1A	2-Ln Uninter /Undivided Flow	1190	12,645	786	C	0.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).

Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	Class I: 4-Ln Divided	2000	25,949	1,349	C	0.5%
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	Class I: 4-Ln Divided	2000	23,804	1,154	C	0.5%
SR-76 (Kanner Hwy)	SR-15	SR-710	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,134	111	A/B	6.1%
SR-76 (Kanner Hwy)	SR-710	CR-708	Uninterrupted Rural Hwy: 2-Ln Undivided	740	3,412	151	A/B	0.9%
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	Transitional 2-Ln Uninter /Undivided Flow	1200	2,889	168	A/B	0.5%
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	Class I: 4-Ln Divided	2000	13,401	831	C	1.7%
SR-76 (Kanner Hwy)	Locks Rd	Jack James	Class I: 4-Ln Divided	2000	19,231	920	C	0.5%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	Class I: 6-Ln Divided	3020	43,880	2,372	C	0.6%
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	Class I: 6-Ln Divided	3020	34,493	1,495	C	1.0%
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	Class I: 6-Ln Divided	3020	30,912	1,293	C	2.6%
SR-76 (Kanner Hwy)	Indian St	SR-714	Class I: 6-Ln Divided	3020	21,116	993	C	0.5%
SR-76 (Kanner Hwy)	SR-714	SR-5	Class I: 6-Ln Divided	3020	25,158	1,006	C	0.5%
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	Class II: 4-Ln Divided	1630	19,437	1,081	D	0.6%
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	Class I: 4-Ln Divided	2000	23,060	1,127	C	1.0%
SR-A1A (Ocean Blvd)	Sewalls Point Rd	Macarthur Blvd	Class I: 2-Ln Divided	925	13,597	845	C	0.5%
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	2-Ln Uninter /Undivided Flow	1190	8,532	407	A/B	3.1%
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	2-Ln Uninter /Undivided Flow	1190	14,752	870	D	1.8%
St Lucie Blvd	CR-A1A	Indian St	2-Ln Undivided Non-State	675	3,305	172	C	0.5%
St Lucie Blvd	Indian St	SR-A1A	2-Ln Undivided Non-State	675	7,524	429	D	3.3%
Westmoreland Blvd	St Lucie County	SR-5	Class II: 2-Ln Divided	790	12,271	601	D	1.0%
Willoughby Blvd	Cove Rd	Salerno Rd	Class I: 2-Ln Undivided	880	4,332	214	C	8.0%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB) and Murphy Rd (PM/NB).