

SANDPIPER BAY SCHOOL

PORT ST. LUCIE, FL

TRAFFIC IMPACT STATEMENT

PREPARED FOR:

RPS Academies
4500 SE Pine Valley Street
Port St. Lucie, Florida 34952

JOB NO. 24-124

DATE: 10/16/2024
Revised 10/30/2024

Bryan G. Kelley, Professional Engineer, State of Florida, License No. 74006	
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This Item has been digitally signed and sealed by Bryan G. Kelley, P.E., on 10/30/2024.	
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TABLE OF CONTENTS

PAGE 4

- 1.0 SITE DATA
- 2.0 TRAFFIC GENERATION

PAGE 5

- 3.0 TRAFFIC ANALYSIS
- 4.0 SCHOOL OPERATIONS
- 5.0 CONCLUSION

APPENDICES

APPENDIX A

ROADWAY SEGMENT ANALYSIS

APPENDIX B

ST. LUCIE TPO DATA

APPENDIX C

BACKGROUND DEVELOPMENT TRIPS

APPENDIX D

2023 FDOT Q/LOS TABLES

APPENDIX E

ST. LUCIE COUNTY HISTORICAL POPULATION GROWTH

1.0 SITE DATA

The subject parcel is located within the Sandpiper Bay Resort on SE Pine Valley Street in the City of Port St. Lucie, Florida. As part of the PUD and Site Plan amendment for the approximately 223.72 acre project to known as Club Med/Sandpiper PUD, the applicant is seeking approval for a conditional use request for a school. It should be noted the school is existing and currently operational with 117 students. For purposes of this traffic study, a 150-student private high school will be assumed. Site access is not proposed to change and is existing via SE Pine Valley Street and SE Morningside Boulevard. For additional information on site layout, please refer to the site plan prepared by Keith. Note the existing school is located within building M shown on the Site Plan.

2.0 TRAFFIC GENERATION

The traffic to be generated by the existing development has been calculated in accordance with the ITE Trip Generation Manual, 11th Edition. Note the A.M. and P.M. peak hour of generators were used in the trip generation and not the adjacent street peak hour of traffic. Table 1 shows the daily traffic generation and Tables 2 and 3 show the A.M. and P.M. peak hour traffic generation. The traffic generated by the existing 117-student private high school may be summarized as follows:

Existing Development	
Daily Traffic Generation	= 254 tpd
A.M. Peak Hour Traffic Generation (In/Out)	= 77 pht (45 In/32 Out)
P.M. Peak Hour Traffic Generation (In/Out)	= 47 pht (18 In/29 Out)

The traffic to be generated by the proposed development has also been calculated using a the ITE Trip Generation Manual, 11th Edition. The traffic to be generated by the proposed plan of development consisting of a 150-student private high school is shown in Tables 4-6 and may be summarized as follows:

Proposed Development	
Daily Traffic Generation	= 326 tpd
A.M. Peak Hour Traffic Generation (In/Out)	= 99 pht (58 In/41 Out)
P.M. Peak Hour Traffic Generation (In/Out)	= 60 pht (23 In/37 Out)

The net new trips associated with the difference between the proposed and existing developments is shown in Table 7 and may be summarized as follows:

Net Trips (Proposed – Existing)	
Daily Traffic Generation	= 72 tpd
A.M. Peak Hour Traffic Generation (In/Out)	= 22 pht (13 In/9 Out)
P.M. Peak Hour Traffic Generation (In/Out)	= 13 pht (5 In/8 Out)

The number of existing and proposed trips shown above are based on the ITE Trip Generation rates and can be considered conservative. The school is a specialized private school in which over 50% of the student population are boarding students. These students do not have their own vehicle and are chauffeured by school faculty as needed. Approximately 15% of the student population live in the nearby residences and arrive to school by walking or biking. The remaining students arrive to school by vehicle and are dropped off by 8:00 A.M. and picked up after 5:00 P.M.

3.0 TRAFFIC ANALYSIS

Per Appendix B of the St. Lucie County Standardized TIS Methodology and Procedures, the radius of influence for the project is 1/2 mile based on the daily trips. Figure 1 attached to this report shows the project trip distribution on the surrounding roadway network and the radius of influence. Note several roadways outside the radius of influence were included in the analysis to be conservative. The project's impact to each of the surrounding roadways are shown in Table 8 and Table 9 attached to this report which calculates the project trips relative to the Level of Service (LOS) D service volume threshold. In order to be conservative, the traffic analysis was based on a 150-student private school and not the difference between the proposed 150 student school and the existing 117 student school. Additionally, no discount was taken for the boarding students which significantly reduces trip volumes. The LOS D thresholds were based on the 2023 FDOT Q/LOS tables and the roadway classifications were determined from the FDOT Preliminary Context Classification GIS map.

Roadways in which the project trip impact was greater than 1.0% impact were further evaluated per the St. Lucie TPO Standardized TIS Methodology and Procedures report. The existing traffic counts were taken from the 2024 St. Lucie Traffic Counts and Level of Service Report. A 2.5% background growth rate was applied to the existing traffic counts to the buildout year of 2027 based on historical population growth in St. Lucie County (See Appendix E). Additionally, background traffic was also considered for the Ravello Development and Westmoreland Riverwalk projects.

The roadway segment analysis is shown in Tables 9 and 10 and demonstrate each of the impacted roadways will meet Level of Service requirements.

4.0 SCHOOL OPERATIONS

As previously stated, over 50% of the student population are boarding students and do not own vehicles. An additional 15% of students live in nearby residences and walk and bike to school. The remaining students are dropped off in the morning and picked up in the afternoon. The school does not have a traditional school queue line due to the low number of students being dropped off and picked up on a daily basis. The school shares parking with the resort as shown in Figure 2 attached to this report. Parents will briefly park to allow their students to exit the vehicle. Once the student has safely exited the vehicle, parents will depart the parking lot. School faculty also utilizes this same parking lot. School events are to be coordinated with the resort to minimize peak impact and to ensure adequate parking is available for the resort guests and the school events. School events typically occur within the resort and therefore parking and traffic are already accounted for.

5.0 CONCLUSION

The attached tables document the daily, A.M. peak hour and P.M. peak hour traffic generation for the proposed development. The proposed development will conservatively generate 72 new daily trips, 22 new A.M. peak hour trips and 13 new P.M. peak hour trips. Based on the findings of this report, the surrounding roadway network will continue to meet acceptable Level of Service standards inclusive of the proposed development.

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

EXISTING DEVELOPMENT

TABLE 1 - Daily Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips	Internalization			External Trips	Pass-by		Net Trips
				In	Out		%	Total			%	Trips	
Private High School	534	117	Students	2.17			254		0	254	0%	0	254
Grand Totals:							254	0.0%	0	254	0%	0	254

TABLE 2 - AM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization				External Trips			Pass-by		Net Trips			
				In	Out	In	Out	Total	%	In	Out	Total	In	Out	Total	%	Trips	In	Out	Total	
Private High School	534	117	Students	0.66	0.59	0.41	45	32	77	0.0%	0	0	0	45	32	77	0%	0	45	32	77
Grand Totals:							45	32	77	0.0%	0	0	0	45	32	77	0%	0	45	32	77

TABLE 3 - PM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization				External Trips			Pass-by		Net Trips			
				In	Out	In	Out	Total	%	In	Out	Total	In	Out	Total	%	Trips	In	Out	Total	
Private High School	534	117	Students	0.4	0.39	0.61	18	29	47	0.0%	0	0	0	18	29	47	0%	0	18	29	47
Grand Totals:							18	29	47	0.0%	0	0	0	18	29	47	0%	0	18	29	47

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

PROPOSED DEVELOPMENT

TABLE 4 - Daily Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization				External Trips			Pass-by		Net Trips		
				In	Out	In	Out	Total	%	In	Out	Total	In	Out	Total	%	Trips	In	Out	Total
Private High School	534	150	Students	2.17				326			0			326	0%	0			326	
Grand Totals:									326	0.0%	0			326	0%	0			326	

TABLE 5 - AM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization				External Trips			Pass-by		Net Trips					
				In	Out	In	Out	Total	%	In	Out	Total	In	Out	Total	%	Trips	In	Out	Total			
Private High School	534	150	Students	0.66	0.59	0.41	58	41	99	0.0%	0	0	0	58	41	99	0%	0	58	41	99		
Grand Totals:									58	41	99	0.0%	0	0	0	58	41	99	0%	0	58	41	99

TABLE 6 - PM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization				External Trips			Pass-by		Net Trips					
				In	Out	In	Out	Total	%	In	Out	Total	In	Out	Total	%	Trips	In	Out	Total			
Private High School	534	150	Students	0.4	0.39	0.61	23	37	60	0.0%	0	0	0	23	37	60	0%	0	23	37	60		
Grand Totals:									23	37	60	0.0%	0	0	0	23	37	60	0%	0	23	37	60

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

TABLE 7
TRAFFIC GENERATION DIFFERENCE - NET TRIPS

	DAILY	AM PEAK HOUR			PM PEAK HOUR		
		TOTAL	IN	OUT	TOTAL	IN	OUT
EXISTING DEVELOPMENT =	254	77	45	32	47	18	29
PROPOSED DEVELOPMENT =	326	99	58	41	60	23	37
DIFFERENCE =	72	22	13	9	13	5	8

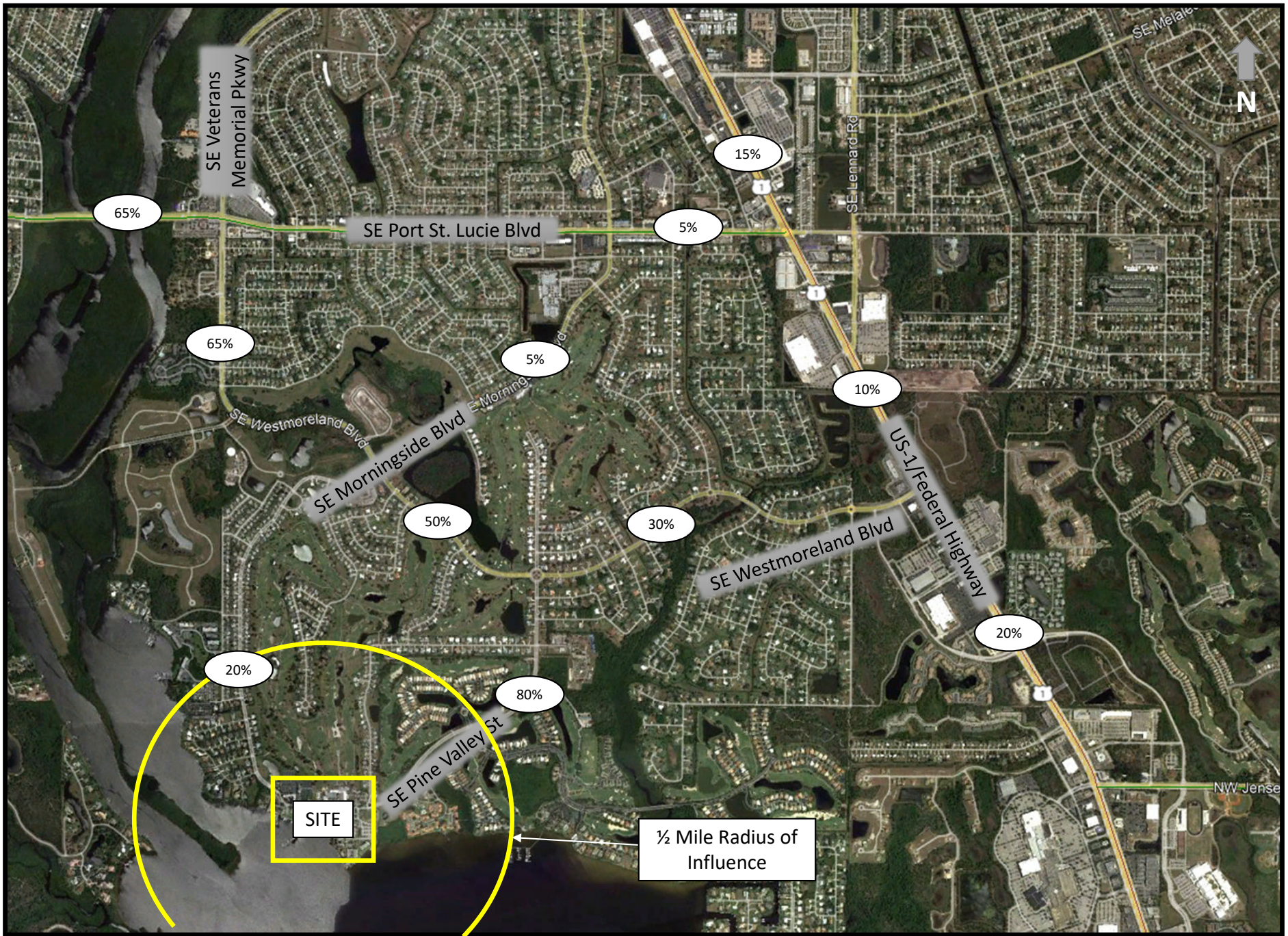


Figure 1 - Trip Distribution
 Sandpiper Bay School
 Project # 24-124

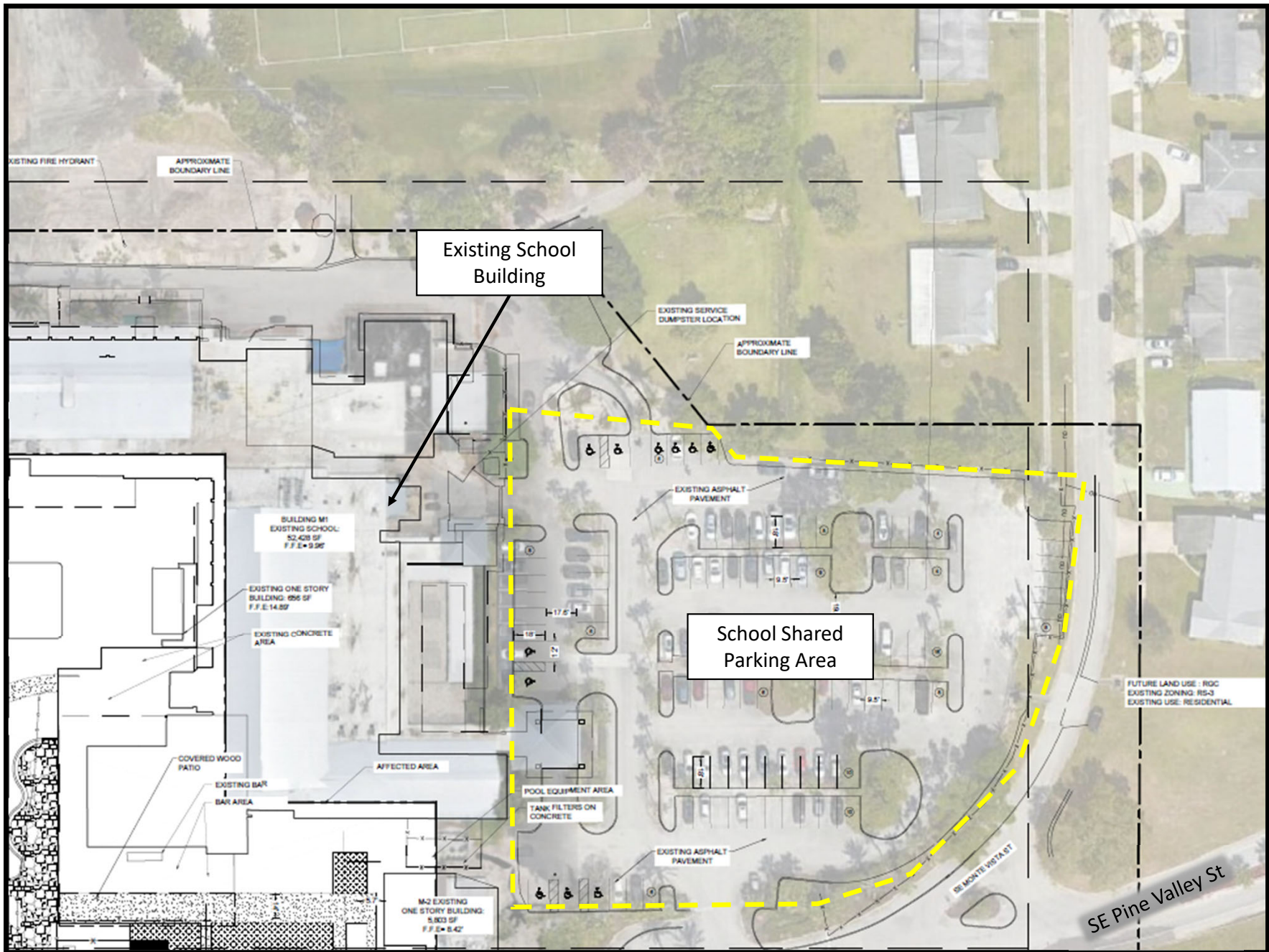


Figure 2 – School Parking Location
 Sandpiper Bay School
 Project # 24-124



APPENDIX A

ROADWAY SEGMENT ANALYSIS

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

**TABLE 8
PROJECT SIGNIFICANCE CALCULATION
AM PEAK HOUR**

TOTAL AM PEAK HOUR PROJECT TRIPS (IN) = 58
TOTAL AM PEAK HOUR PROJECT TRIPS (OUT) = 41

ROADWAY	FROM	TO	PEAK HOUR			CLASS	LOS D STANDARD	TOTAL PROJECT IMPACT	PROJECT SIGNIFICANT
			PROJECT DISTRIBUTION	PROJECT TRIPS	EXISTING LANES				
SE PORT ST. LUCIE BLVD	FLORESTA DRIVE	VETERANS MEMORIAL PKWY	65%	38	6D	C4	2810	1.34%	YES
SE PORT ST. LUCIE BLVD	VETERANS MEMORIAL PKWY	MORNINGSIDE BLVD	0%	0	6D	C3R	2730	0.00%	NO
SE PORT ST. LUCIE BLVD	MORNINGSIDE BLVD	US-1	5%	3	6D	C3R	2730	0.11%	NO
US-1	MARTIN COUNTY LINE	LENNARD ROAD	20%	12	6D	C3C	2680	0.43%	NO
US-1	LENNARD ROAD	SE PORT ST. LUCIE BLVD	10%	6	6D	C3C	2680	0.22%	NO
US-1	LENNARD ROAD	JENNINGS ROAD	15%	9	6D	C3C	2680	0.32%	NO
MORNINGSIDE BOULEVARD	SITE	WESTMORELAND BOULEVARD	20%	12	2	C3R	1110	1.05%	YES
MORNINGSIDE BOULEVARD	WESTMORELAND BOULEVARD	SE PORT ST. LUCIE BLVD	5%	3	2	C3R	1110	0.26%	NO
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	PORT ST LUCIE BOULEVARD	70%	41	2	C3R	1110	3.66%	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	SE PINE VALLEY STREET	55%	32	2	C3R	1110	2.87%	YES
WESTMORELAND BOULEVARD	SE PINE VALLEY STREET	US-1	25%	15	2	C3R	1110	1.31%	YES

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

**TABLE 9
PROJECT SIGNIFICANCE CALCULATION
PM PEAK HOUR**

TOTAL PM PEAK HOUR PROJECT TRIPS (IN) = 23
TOTAL PM PEAK HOUR PROJECT TRIPS (OUT) = 37

ROADWAY	FROM	TO	PEAK HOUR				LOS D STANDARD	TOTAL PROJECT IMPACT	PROJECT SIGNIFICANT
			PROJECT DISTRIBUTION	PROJECT TRIPS	EXISTING LANES	CLASS			
SE PORT ST. LUCIE BLVD	FLORESTA DRIVE	VETERANS MEMORIAL PKWY	65%	24	6D	C4	2810	0.86%	NO
SE PORT ST. LUCIE BLVD	VETERANS MEMORIAL PKWY	MORNINGSIDE BLVD	0%	0	6D	C3R	2730	0.00%	NO
SE PORT ST. LUCIE BLVD	MORNINGSIDE BLVD	US-1	5%	2	6D	C3R	2730	0.07%	NO
US-1	MARTIN COUNTY LINE	LENNARD ROAD	20%	7	6D	C3C	2680	0.28%	NO
US-1	LENNARD ROAD	SE PORT ST. LUCIE BLVD	10%	4	6D	C3C	2680	0.14%	NO
US-1	LENNARD ROAD	JENNINGS ROAD	15%	6	6D	C3C	2680	0.21%	NO
MORNINGSIDE BOULEVARD	SITE	WESTMORELAND BOULEVARD	20%	7	2	C3R	1110	0.67%	NO
MORNINGSIDE BOULEVARD	WESTMORELAND BOULEVARD	SE PORT ST. LUCIE BLVD	5%	2	2	C3R	1110	0.17%	NO
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	PORT ST LUCIE BOULEVARD	70%	26	2	C3R	1110	2.33%	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	SE PINE VALLEY STREET	55%	20	2	C3R	1110	1.83%	YES
WESTMORELAND BOULEVARD	SE PINE VALLEY STREET	US-1	25%	9	2	C3R	1110	0.83%	NO

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

**TABLE 10
ROADWAY SEGMENT ANALYSIS - AM PEAK HOUR**

2027 BUILD OUT
TOTAL AM PEAK HOUR PROJECT TRII58
TOTAL AM PEAK HOUR PROJECT TRII41
BACKGROUND GROWTH = 2.5%

ROADWAY	FROM	TO	PROJECT DISTRIBUTION	PEAK HOUR PROJECT TRIPS	COUNT YEAR	EXISTING VOLUMES	2027 BACKGROUND GROWTH	RAVELLO DEVELOPMENT TRAFFIC	WESTMORELAND RIVERWALK TRAFFIC	2027 TOTAL VOLUME	EXISTING LANES	CLASS	LOS D STANDARD	MEETS LOS?
SE PORT ST. LUCIE BLVD	FLORESTA DRIVE	VETERANS MEMORIAL PI	65%	38	2023	2361	245	3	20	2667	6D	C4	2810	YES
MORNINGSIDE BOULEVARD	SITE	WESTMORELAND BOULE	20%	12	2022	113	15	2	3	144	2	C3R	1110	YES
MORNINGSIDE BOULEVARD	WESTMORELAND BOULEVARD	SE PORT ST. LUCIE BLVD	5%	3	2022	113	15	5	3	139	2	C3R	1110	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	PORT ST LUCIE BOULEV/	70%	41	2023	784	81	5	39	950	2	C3R	1110	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	SE PINE VALLEY STREET	55%	32	2022	477	63	5	20	597	2	C3R	1110	YES
WESTMORELAND BOULEVARD	SE PINE VALLEY STREET	US-1	25%	15	2022	477	63	5	20	579	2	C3R	1110	YES

SANDPIPER BAY SCHOOL

10/15/2024
Revised: 10/30/2024

**TABLE 11
ROADWAY SEGMENT ANALYSIS - PM PEAK HOUR**

2027 BUILD OUT
TOTAL PM PEAK HOUR PROJECT TRIP 23
TOTAL PM PEAK HOUR PROJECT TRIP 37
BACKGROUND GROWTH = 2.5%

ROADWAY	FROM	TO	PROJECT DISTRIBUTION	PEAK HOUR PROJECT TRIPS	COUNT YEAR	EXISTING VOLUMES	2027 BACKGROUND GROWTH	RAVELLO DEVELOPMENT TRAFFIC	WESTMORELAND RIVERWALK TRAFFIC	2027 TOTAL VOLUME	EXISTING LANES	CLASS	LOS D STANDARD	MEETS LOS?
MORNINGSIDE BOULEVARD	SITE	WESTMORELAND BOULE	20%	7	2022	113	15	1	4	140	2	C3R	1110	YES
MORNINGSIDE BOULEVARD	WESTMORELAND BOULEVARD	SE PORT ST. LUCIE BLVD	5%	1	2022	113	15	3	4	136	2	C3R	1110	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	PORT ST LUCIE BOULEV/	70%	26	2023	884	92	3	51	1056	2	C3R	1110	YES
WESTMORELAND BOULEVARD	MORNINGSIDE BOULEVARD	SE PINE VALLEY STREET	55%	20	2022	522	69	3	26	640	2	C3R	1110	YES
WESTMORELAND BOULEVARD	SE PINE VALLEY STREET	US-1	25%	9	2022	522	69	3	26	629	2	C3R	1110	YES



APPENDIX B

ST. LUCIE TPO DATA

Traffic Counts and Level of Service Report 2024

Roadway Name	Location	STATION ID	2024 AADT *	Last Physical Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
LENNARD RD	WALTON RD to S OF SAVANNA CLUB BLVD	679	3,734	2021	790	258	C	0.33	245	C	0.31
LYNGATE DR	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	306	10,212	2023	920	645	C	0.70	582	C	0.63
LYNGATE DR	MORNINGSIDE BLVD to US 1	306	10,212	2023	920	645	C	0.70	582	C	0.63
MARIPOSA AVE	LENNARD RD to HALLAHAN ST	166	6,758	2023	880	526	C	0.60	501	C	0.57
MCCARTY RD	WILLIAMS RD to MIDWAY RD	680	368	2022	540	27	C	0.05	25	C	0.05
MCCARTY RD	MIDWAY RD to OKEECHOBEE RD	681	300	2024	540	24	C	0.04	21	C	0.04
MCNEIL RD	OKEECHOBEE RD to KIRBY LOOP RD	682	5,510	2023	790	345	C	0.44	336	C	0.43
MCNEIL RD	KIRBY LOOP RD to EDWARDS RD	682	5,510	2023	540	345	D	0.64	336	D	0.62
MELALEUCA BLVD	LENNARD RD to GREEN RIVER PKWY	683	9,600	2024	920	613	C	0.67	586	C	0.64
MIDWAY RD	EAST TORINO PKWY to MILNER DR	134	25,500	2024	880	1,275	F	1.45	1,380	F	1.57
MIDWAY RD	MILNER DR to W OF SELVITZ RD	134	25,500	2024	790	1,275	F	1.61	1,380	F	1.75
MIDWAY RD	OKEECHOBEE RD to SHINN RD	940732	6,743	2023	760	342	C	0.45	342	C	0.45
MIDWAY RD	SHINN RD to MCCARTY RD	940732	6,743	2023	630	342	C	0.54	342	C	0.54
MIDWAY RD	MCCARTY RD to I-95	940732	6,743	2023	700	342	C	0.49	342	C	0.49
MIDWAY RD	I-95 to GLADES CUT-OFF RD	945140	21,637	2023	2,100	1,060	C	0.50	1,060	C	0.50
MIDWAY RD	GLADES CUT-OFF RD to EAST TORINO PKWY	228	23,000	2024	2,100	1,203	C	0.57	1,193	C	0.57
MIDWAY RD	W OF SELVITZ RD to SELVITZ RD	134	25,500	2024	2,100	1,275	C	0.61	1,380	C	0.66
MIDWAY RD	SELVITZ RD to CHRISTENSEN RD	132	22,500	2024	2,100	1,155	C	0.55	1,222	C	0.58
MIDWAY RD	CHRISTENSEN RD to 25TH ST	132	22,500	2024	2,100	1,155	C	0.55	1,222	C	0.58
MIDWAY RD	25TH ST to SUNRISE BLVD	130	25,000	2024	2,100	1,943	C	0.93	1,569	C	0.75
MIDWAY RD	SUNRISE BLVD to OLEANDER AVE	130	25,000	2024	2,100	1,943	C	0.93	1,569	C	0.75
MIDWAY RD	OLEANDER AVE to US 1	242	19,000	2024	2,100	1,050	C	0.50	972	C	0.46
MIDWAY RD	US 1 to WALLACE ST	940023	3,813	2023	790	189	C	0.24	189	C	0.24
MIDWAY RD	WALLACE ST to WEATHERBEE RD	940023	3,813	2023	920	189	C	0.21	189	C	0.21
MIDWAY RD	WEATHERBEE RD to INDIAN RIVER DR	940023	3,813	2023	630	189	C	0.30	189	C	0.30
MORNINGSIDE BLVD	WESTMORELAND BLVD to PORT ST LUCIE BLVD	333	2,110	2022	920	113	C	0.12	113	C	0.12
MORNINGSIDE BLVD	PORT ST LUCIE BLVD to LYNGATE DR	331	3,200	2024	880	262	C	0.30	258	C	0.29
NEBRASKA AVE	25TH ST to 13TH ST	684	3,437	2022	1,710	228	C	0.13	176	C	0.10
OAKRIDGE DR	MOUNTWELL ST to OAKLYN ST	621	6,100	2024	700	304	C	0.43	289	C	0.41
OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	3,632	2022	540	192	C	0.36	212	C	0.39
OHIO AVE	COLONIAL RD to US 1	686	3,632	2022	750	192	C	0.26	212	C	0.28
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	9,900	2024	1,580	536	B	0.34	542	B	0.34

* **NOTE:** A six digit number in the "STATION ID" column identifies segment counted by FDOT. FDOT count stations use standard K and D factors to determine peak hour values. Peak hour data is not available for locations on State roads due to differences in data availability, LOS Methodologies, and service level thresholds. Please refer to FDOT sources for detailed data on FDOT traffic counts.

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)

* **NOTE:** If the Last Count Year is older than the year of the report, the AADT is projected from historical traffic count data.

Traffic Counts and Level of Service Report 2024

Roadway Name	Location	STATION ID	2024 AADT #	Last Physical Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
VIRGINIA AVE	35TH ST to 25TH ST	940032	23,450	2023							
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,526	2023							
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,526	2023							
VIRGINIA AVE	25TH ST to 13TH ST	940033	21,782	2023							
VIRGINIA AVE	13TH ST to 11TH ST	940794	23,667	2023							
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	23,667	2023							
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	20,380	2023							
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,402	2023							
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,402	2023							
WALTON RD	US 1 to VILLAGE GREEN DR	330	10,000	2024	1,710	581	C	0.34	589	C	0.34
WALTON RD	VILLAGE GREEN DR to LENNARD RD	328	17,500	2024	1,710	957	D	0.56	1,057	D	0.62
WALTON RD	LENNARD RD to GREEN RIVER PKWY	326	12,000	2024	880	747	C	0.85	757	C	0.86
WALTON RD	GREEN RIVER PKWY to INDIAN RIVER DR	324	6,014	2022	630	386	C	0.61	366	C	0.58
WEATHERBEE RD	OLEANDER AVE to US 1	721	3,164	2023	750	198	C	0.26	180	C	0.24
WEATHERBEE RD	US 1 to MIDWAY RD	158	5,987	2023	750	379	D	0.51	379	D	0.51
WESTCLIFFE LN	TREMONTE AVE to VILLAGE PKWY	722	6,219	2023	1,470	457	C	0.31	419	C	0.29
WESTMORELAND BLVD	MORNINGSIDE BLVD to PORT ST LUCIE BLVD	339	14,645	2023	920	784	C	0.85	884	D	0.96
WESTMORELAND BLVD	MARTIN C.L. to MORNINGSIDE BLVD	245	9,076	2022	920	477	C	0.52	522	C	0.57

Countywide Performance

Weighted V/C = **64.29**

% VMT below Standard = **77.98%**

* **NOTE:** A six digit number in the "STATION ID" column identifies segment counted by FDOT. FDOT count stations use standard K and D factors to determine peak hour values. Peak hour data is not available for locations on State roads due to differences in data availability, LOS Methodologies, and service level thresholds. Please refer to FDOT sources for detailed data on FDOT traffic counts.

* Volumes shown were adjusted using FDOT Seasonal Factors

* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)

* **NOTE:** If the Last Count Year is older than the year of the report, the AADT is projected from historical traffic count data.

COUNTY: 94
 STATION: 0778
 DESCRIPTION: PORT ST LUCIE BLVD - E OF FLORESTA DR (COUNTY 778)
 START DATE: 05/23/2023
 START TIME: 0000

TIME	DIRECTION: E					DIRECTION: W					COMBINED TOTAL	
	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL		
0000	55	31	22	28	136	54	48	57	32	191	327	
0100	15	18	17	15	65	21	26	28	23	98	163	
0200	7	11	16	15	49	28	20	16	15	79	128	
0300	14	12	22	24	72	16	15	15	16	62	134	
0400	27	34	45	71	177	19	28	22	25	94	271	
0500	66	90	121	150	427	29	42	72	90	233	660	
0600	163	189	271	355	978	97	131	136	190	554	1532	
0700	381	450	588	566	1985	229	253	310	298	1090	3075	
0800	573	600	610	578	2361	257	310	329	274	1170	3531	
0900	510	520	459	530	2019	289	316	287	286	1178	3197	
1000	389	463	419	427	1698	272	292	305	334	1203	2901	
1100	485	403	429	479	1796	340	361	304	337	1342	3138	
1200	410	423	505	436	1774	384	404	393	388	1569	3343	
1300	443	412	400	517	1772	393	415	408	415	1631	3403	
1400	442	483	438	480	1843	418	469	470	447	1804	3647	
1500	476	400	388	487	1751	439	468	514	449	1870	3621	
1600	427	408	440	474	1749	516	592	545	514	2167	3916	
1700	476	469	533	419	1897	580	542	561	539	2222	4119	
1800	417	422	367	337	1543	460	499	370	415	1744	3287	
1900	292	268	253	224	1037	301	340	321	272	1234	2271	
2000	233	185	232	181	831	316	294	300	230	1140	1971	
2100	175	184	147	129	635	235	266	217	189	907	1542	
2200	112	97	113	87	409	170	163	135	111	579	988	
2300	71	53	53	55	232	118	112	99	89	418	650	
24-HOUR TOTALS:					27236						24579	51815

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	800	2361	830	1208	745	3543
P.M.	1645	1952	1615	2231	1645	4149
DAILY	800	2361	1615	2231	1645	4149

TRUCK PERCENTAGE 4.51 3.80 4.17

CLASSIFICATION SUMMARY DATABASE

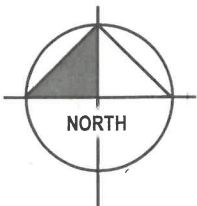
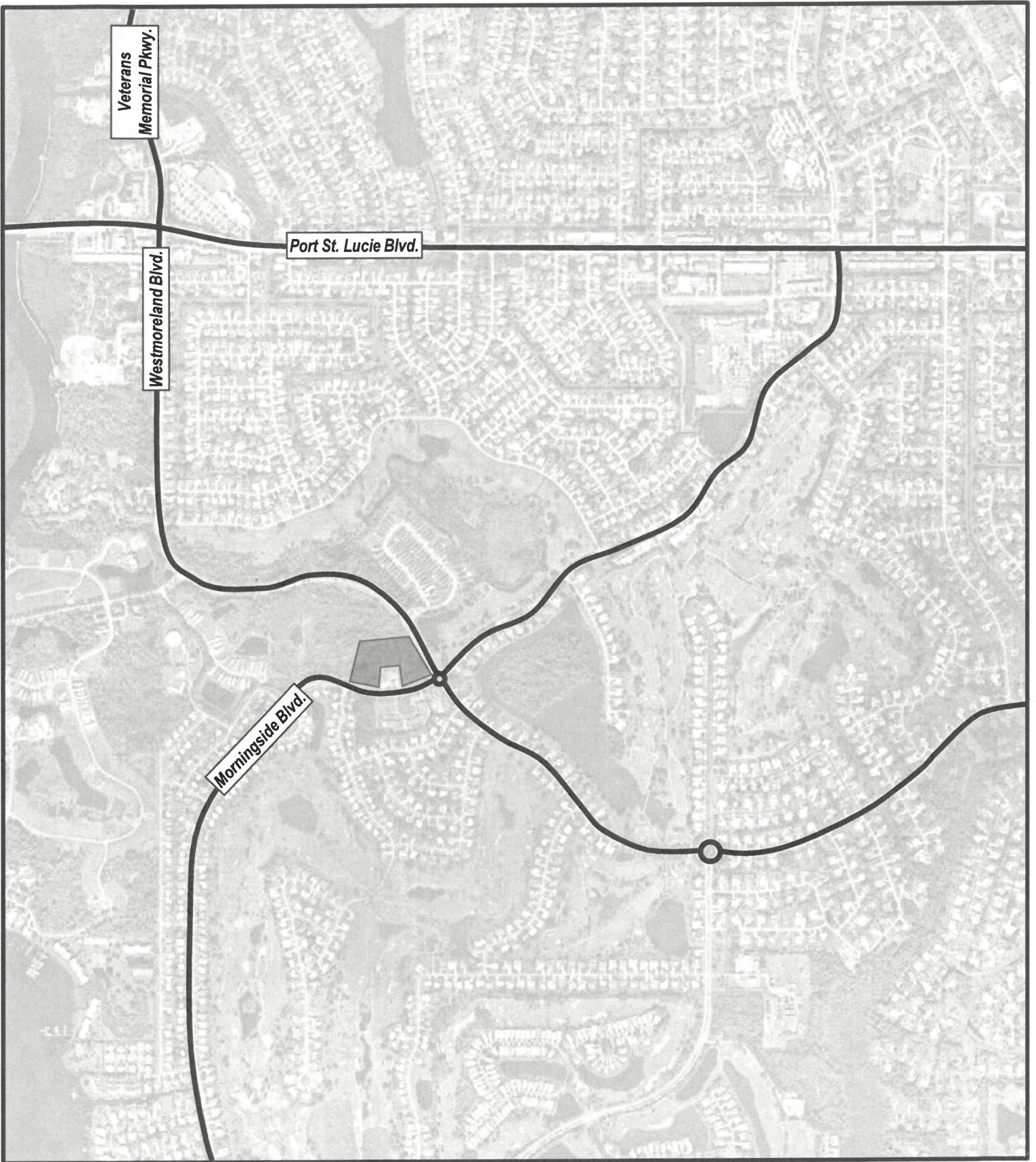
DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
E	12	18483	7512	74	887	53	11	121	80	1	0	0	1	0	1	1228	27236
W	27	17907	5711	87	598	51	12	114	69	2	0	0	1	0	0	934	24579



APPENDIX C

BACKGROUND DEVELOPMENTS





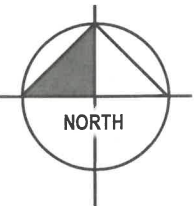
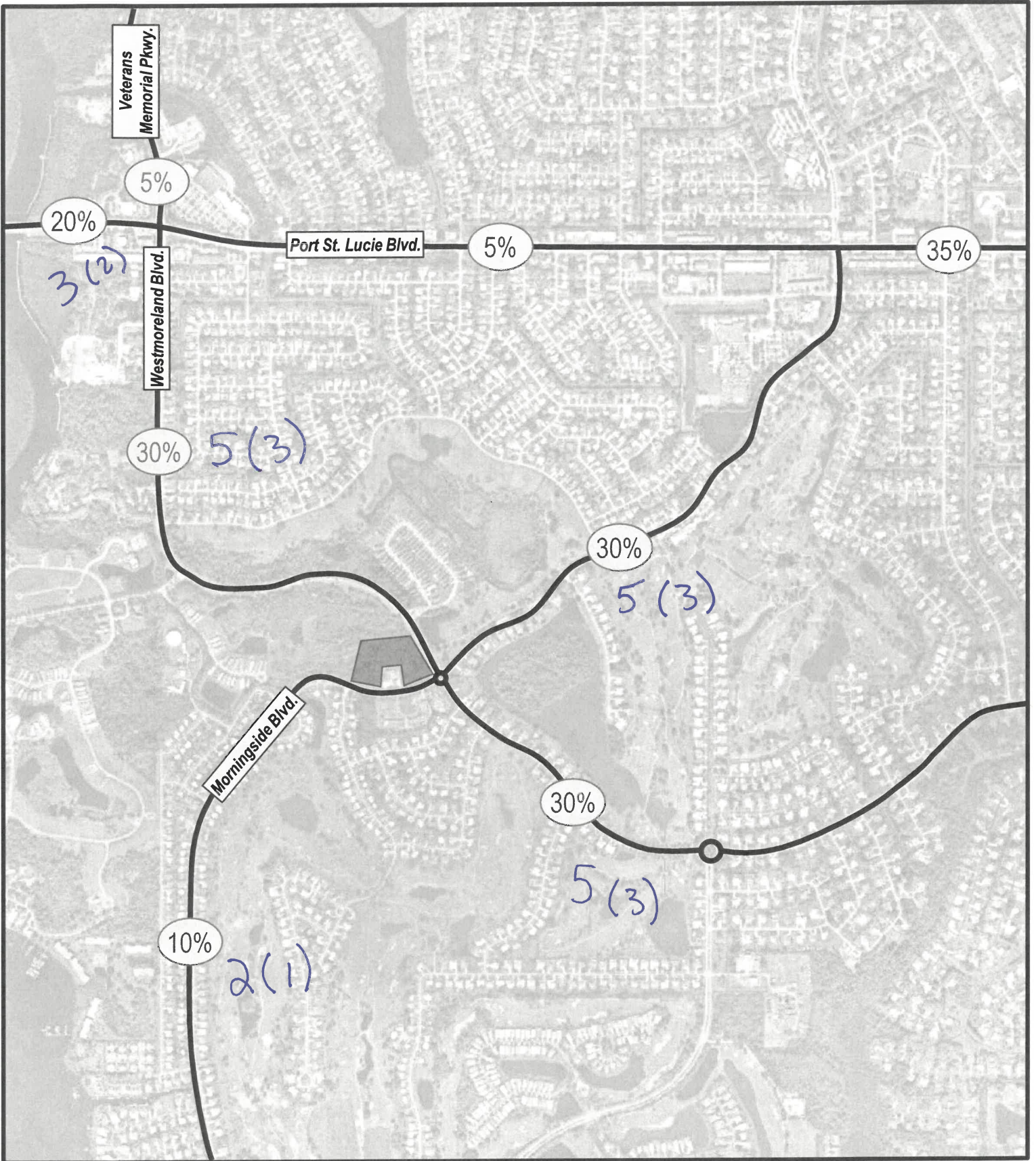
LEGEND

 Site Location

FIGURE 1
Ravello Development
Site Location

Table 2: Trip Generation Table

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Scenario >5 Years								
Assisted Living Facility	150 Beds	390	27	16	11	36	14	22
	<i>Subtotal</i>	390	27	16	11	36	14	22
Pass-By Capture								
Assisted Living Facility	0.0%	0	0	0	0	0	0	0
	<i>Subtotal</i>	0	0	0	0	0	0	0
Driveway Volumes		390	27	16	11	36	14	22
Net New External Trips		390	27	16	11	36	14	22
Proposed Scenario								
Assisted Living Facility	75 Beds	195	14	8	6	18	7	11
Multifamily Mid-Rise	75 DU	341	28	6	22	29	18	11
	<i>Subtotal</i>	536	42	14	28	47	25	22
Pass-By Capture								
Assisted Living Facility	0.0%	0	0	0	0	0	0	0
Multifamily Mid-Rise	0.0%	0	0	0	0	0	0	0
	<i>Subtotal</i>	0	0	0	0	0	0	0
Driveway Volumes		536	42	14	28	47	25	22
Net New External Trips		536	42	14	28	47	25	22
Proposed Net External Trips-Existing Net New External Trips		146	15	-2	17	11	11	0
Radius of Development Influence:			Directly Accessed Links					
Land Use	Daily	AM Peak Hour			PM Peak Hour		Pass By	
Assisted Living Facility	2.6 trips/Beds	0.18 trips/Beds (60% in, 40% out)			0.24 trips/Beds (39% in, 61% out)		0.0%	
Multifamily Mid-Rise	4.54 trips/DU	0.37 trips/DU (23% in, 77% out)			0.39 trips/DU (61% in, 39% out)		0.0%	



LEGEND



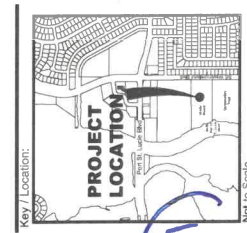
Site Location



Traffic Assignment

FIGURE 2
Ravello Development
 Project Distribution

301-20(26)
Part St. Lucie Blvd



KEY LOCATION
PROJECT LOCATION
Not to Scale

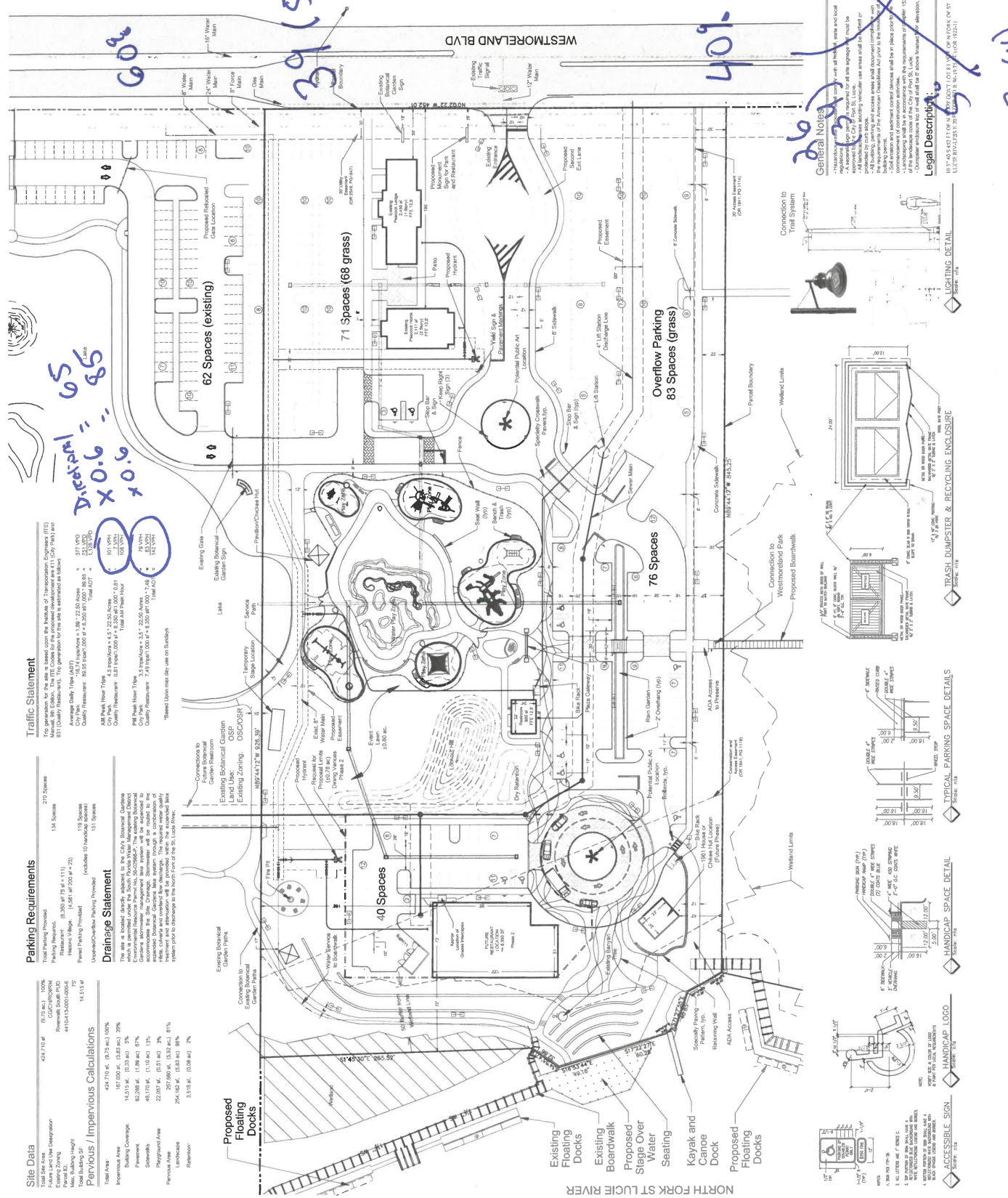
WESTMORELAND RIVERWALK Site Plan

March 17, 2021
City of Fort St. Lucie P# 17-004 A2
PSLUSD No. 5001-31

Date: 5.14.2021 MRY Response to Staff Comment
By: 6.9.2021 MRY Response to Staff Comment

Project Name: WESTMORELAND SOA PARKING
Municipal Number: 20-110
Project Number: 17-2004 A2
Computer File: WESTMORELAND SOA PARKING

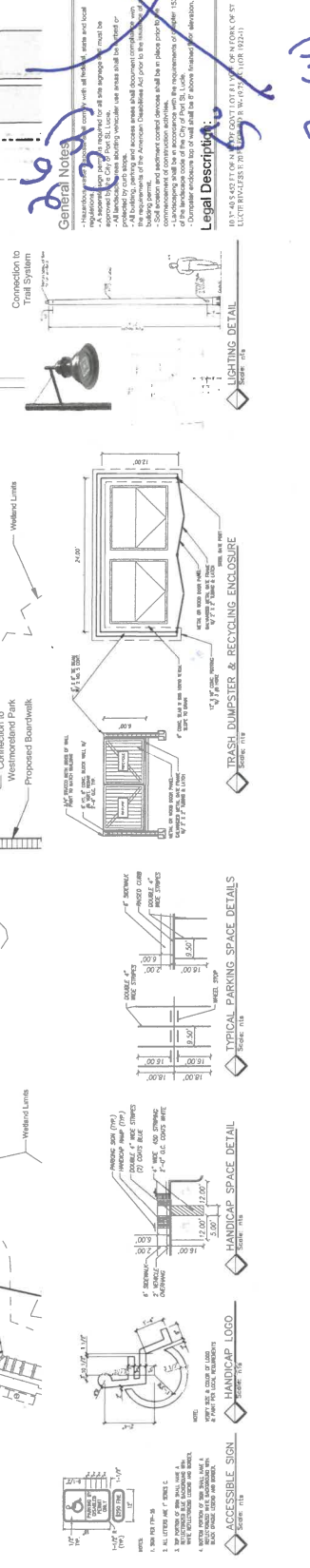
Scale: 1" = 40'
Scale: 1" = 40'
Scale: 1" = 40'
Scale: 1" = 40'



Traffic Statement
The generation for this site is estimated as follows:
Average Daily Trip (ADT) 371 VPD
Quality of Service (QoS) Level 2
AM Peak Hour Trips 101 VPH
PM Peak Hour Trips 101 VPH
Total ADT 371 VPD
Total AM Peak Hour Trips 101 VPH
Total PM Peak Hour Trips 101 VPH

Parking Requirements
Total Required: 375 Spaces
Existing: 134 Spaces
Required: 241 Spaces
Handicap: 15 Spaces
Total: 256 Spaces

Drainage Statement
The site is located directly adjacent to the City Botanical Garden...
Total Area: 424,750 sq. ft.
Impervious Area: 187,000 sq. ft. (44%)
Permeable Area: 237,750 sq. ft. (56%)



1 of 2
20(26)
3(4)
3(4)
20(26)



APPENDIX D

2023 FDOT Q/LOS TABLES

C3C & C3R

Motor Vehicle Arterial Generalized Service Volume Tables

Peak Hour Directional

Peak Hour Two-Way

AADT



(C3C-Suburban Commercial)

	B	C	D	E
1 Lane	*	760	1,070	**
2 Lane	*	1,520	1,810	**
3 Lane	*	2,360	2,680	**
4 Lane	*	3,170	3,180	**

	B	C	D	E
2 Lane	*	1,380	1,950	**
4 Lane	*	2,760	3,290	**
6 Lane	*	4,290	4,870	**
8 Lane	*	5,760	5,780	**

	B	C	D	E
2 Lane	*	15,300	21,700	**
4 Lane	*	30,700	36,600	**
6 Lane	*	47,700	54,100	**
8 Lane	*	64,000	64,200	**



(C3R-Suburban Residential)

	B	C	D	E
1 Lane	*	970	1,110	**
2 Lane	*	1,700	1,850	**
3 Lane	*	2,620	2,730	**

	B	C	D	E
2 Lane	*	1,760	2,020	**
4 Lane	*	3,090	3,360	**
6 Lane	*	4,760	4,960	**

	B	C	D	E
2 Lane	*	19,600	22,400	**
4 Lane	*	34,300	37,300	**
6 Lane	*	52,900	55,100	**

Adjustment Factors

The peak hour directional service volumes should be adjusted by multiplying by 1.2 for one-way facilities
 The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities
 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05
 2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80

Exclusive right turn lane(s): Multiply by 1.05
 Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95
 Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75
 Non-State Signalized Roadway: Multiply by 0.90

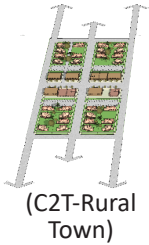
This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

C2T, C4, C5, & C6

Motor Vehicle Arterial Generalized Service Volume Tables



(C2T-Rural Town)

Peak Hour Directional

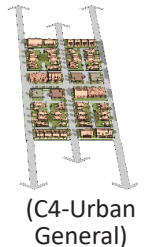
	B	C	D	E
1 Lane	*	720	940	**
2 Lane	*	1,140	1,640	**
3 Lane	*	2,120	2,510	**

Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,310	1,710	**
4 Lane	*	2,070	2,980	**
6 Lane	*	3,850	4,560	**

AADT

	B	C	D	E
2 Lane	*	13,800	18,000	**
4 Lane	*	21,800	31,400	**
6 Lane	*	40,500	48,000	**



(C4-Urban General)

	B	C	D	E
1 Lane	*	*	870	1,190
2 Lane	*	1,210	1,790	2,020
3 Lane	*	2,210	2,810	2,990
4 Lane	*	2,590	3,310	3,510

	B	C	D	E
2 Lane	*	*	1,580	2,160
4 Lane	*	2,200	3,250	3,670
6 Lane	*	4,020	5,110	5,440
8 Lane	*	4,710	6,020	6,380

	B	C	D	E
2 Lane	*	*	17,600	24,000
4 Lane	*	24,400	36,100	40,800
6 Lane	*	44,700	56,800	60,400
8 Lane	*	52,300	66,900	70,900

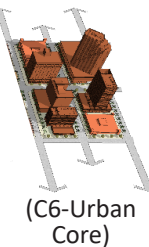


(C5-Urban Center)

	B	C	D	E
1 Lane	*	*	690	1,080
2 Lane	*	1,290	1,900	2,130
3 Lane	*	1,410	2,670	3,110
4 Lane	*	2,910	3,560	3,640

	B	C	D	E
2 Lane	*	*	1,250	1,960
4 Lane	*	2,350	3,450	3,870
6 Lane	*	2,560	4,850	5,650
8 Lane	*	5,290	6,470	6,620

	B	C	D	E
2 Lane	*	*	13,900	21,800
4 Lane	*	26,100	38,300	43,000
6 Lane	*	28,400	53,900	62,800
8 Lane	*	58,800	71,900	73,600



(C6-Urban Core)

	B	C	D	E
1 Lane	*	***	790	1,030
2 Lane	*	***	1,490	1,920
3 Lane	*	***	2,730	2,940
4 Lane	*	***	3,250	3,490

	B	C	D	E
2 Lane	*	***	1,440	1,870
4 Lane	*	***	2,710	3,490
6 Lane	*	***	4,960	5,350
8 Lane	*	***	5,910	6,350

	B	C	D	E
2 Lane	*	***	16,000	20,800
4 Lane	*	***	30,100	38,800
6 Lane	*	***	55,100	59,400
8 Lane	*	***	65,700	70,600

Adjustment Factors

The peak hour directional service volumes should be adjusted by multiplying by 1.2 for one-way facilities
 The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities
 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05
 2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80

Exclusive right turn lane(s): Multiply by 1.05
 Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95
 Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75
 Non-State Signalized Roadway: Multiply by 0.90

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.
 *Cannot be achieved using table input value defaults. **Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.
 ***LOS C thresholds are not applicable for C6 as C6 roadway facilities are neither planned nor designed to achieve automobile LOS C.



APPENDIX E

ST. LUCIE COUNTY HISTORICAL POPULATION GROWTH



Our Changing Population: St. Lucie County, Florida

The ages, races, and population density of St. Lucie County, Florida tell a story. Understand the shifts in demographic trends with these charts visualizing decades of population data.

2010 Population
278,290

2022 Population
358,704

Population Change
+ 28.9 %

Latest update on July 2022

[Home](#) / ... / Our Changing Population

USA

Florida ▾

St. Lucie County ▾

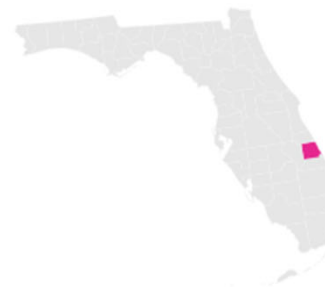
Year
2010 ▾

TO

Year
2022 ▾

How has the population changed in St. Lucie County?

The population of **St. Lucie County, Florida** in **2022** was **358,704, 28.9% up** from the **278,290** who lived there in **2010**. For comparison, the US population grew **7.7%** and Florida's population grew **18%** during that period.



12-year annual growth = 2.14%. Use 2.5% to be conservative