O'ROURKE
ENGINEERING & PLANNING

TRAFFIC ANALYSIS

FOR

Lakeside Market Place

Prepared for:

Mr. Osiris Ramos
Coastal Land Development

Prepared by:

O'Rourke Engineering & Planning
969 SE Federal Highway, Suite 402
Stuart, Florida 34994
772-781-7918

April 15, 2020

MR19082.0

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 969 SE Federal Highway, Ste. 402 Stuart, Florida 34994 772-781-7918	Professional Engineer Susan E. O'Rourke, P.E. Date signed and sealed: 4/15/2020 License #: 42684

O'ROURKE
ENGINEERING & PLANNING

August 21, 2019

Mr. Osiris Ramos
Coastal Land Development
5640 SE Grouper Avenue
Stuart, FL 34997

Re: Lakeside Market Place

Dear Mr. Ramos:

O'Rourke Engineering & Planning has completed the traffic analysis of the proposed development of 4,400 square feet of retail and 19,600 square feet of warehouse use located east of US-1/SE Federal Highway and south of Market Place in Stuart, 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, P.E.
President

CH - Lakeside Market Place Report – 4.14.20

969 SE Federal Hwy, Suite 402 | Stuart, FL 34994 | 772-781-7918 | SEORourke@comcast.net

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INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed 4,400 square feet of retail and 19,600 square feet of warehouse use to be located east of SE Federal Highway (US-1) and south of Market Place in Stuart, Florida. The purpose of this report is to determine the project impact on the surrounding roadway system.

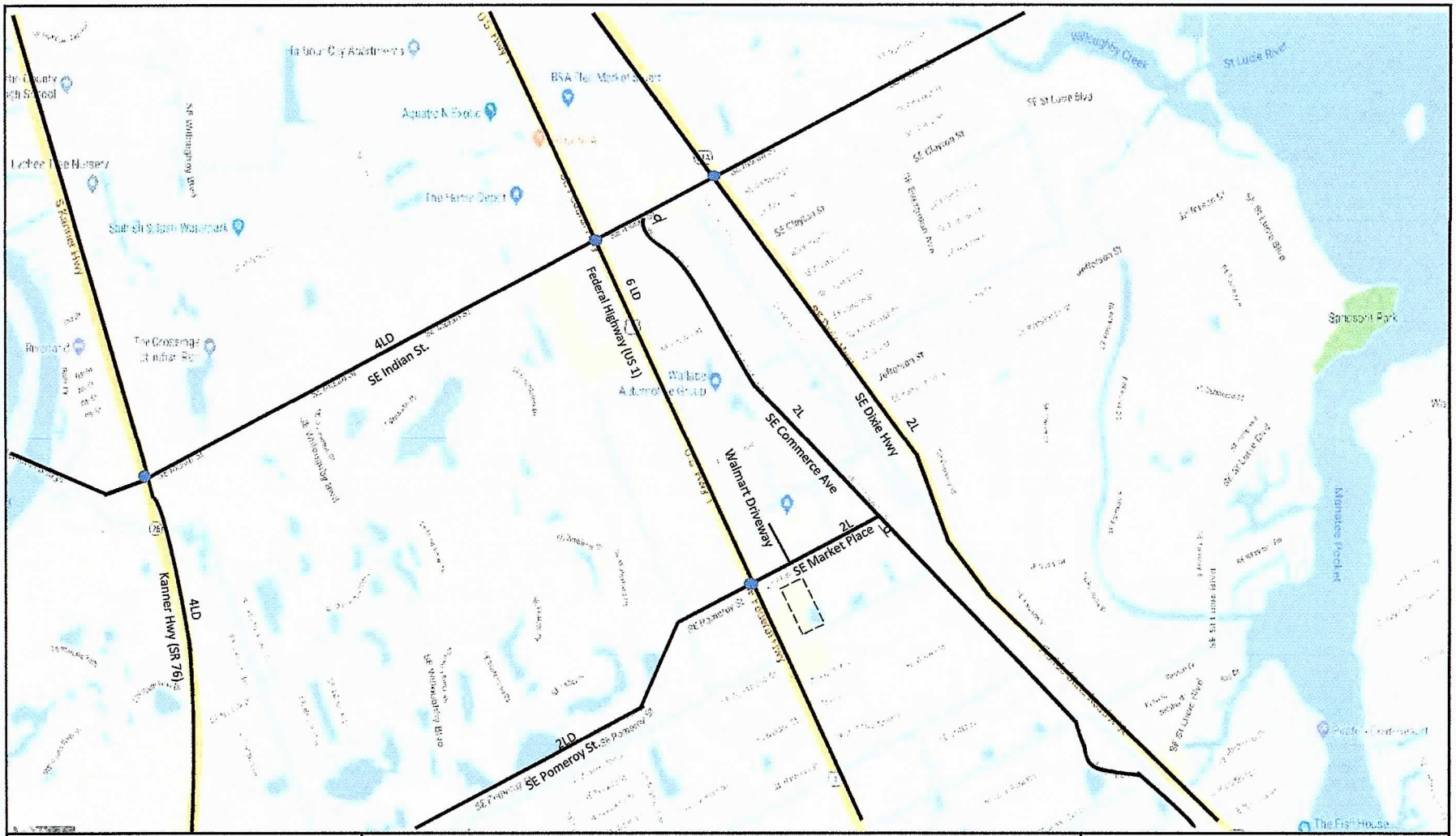
In order to make the determination that the project complies with City of Stuart Concurrency Guidelines, the following analytical steps were taken:

- summary of the project
- summary of existing lane geometries
- summary of existing traffic volumes
- assessment of project traffic
- determination of impact area
- summary of short term cumulative traffic volumes
- summary of levels of service with project traffic added

Each of these steps is outlined herein.

PROJECT DESCRIPTION

The project is 4,400 square feet of retail and 19,600 square feet of warehouse use to be located east of SE Federal Highway (US-1) and south of Market Place. The project location is shown in **Figure 1**. The project site plan is provided in **APPENDIX A.**



N NTS	Legend	Figure 1
O'ROURKE ENGINEERING & PLANNING 969 SE Federal Hwy Suite 402 Stuart, FL 34994	= Project Location = Traffic Signal = Stop Sign (xx) = # of Lanes	Project Location Lakeside Market Place

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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 and immediate accessed link. 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.

Existing Lane Geometrics and Traffic Control

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.

- Federal Highway (US-1) is a six-lane divided arterial roadway with a north/south alignment

- Market Place is a two-lane undivided collector roadway with an east/west alignment

Existing Traffic Volumes/ Service Volume

Traffic volumes were obtained from the Martin County 2018 Roadway Level of Service Inventory Report. The number of lanes and the associated peak hour/peak direction service volumes will be summarized in the upcoming sections of the report. The service volumes were developed based on the functional classification contained in the County Comprehensive Plan and the 2018 Martin County Level of Service Report. These documents are included in **APPENDIX B.**

PROJECT TRAFFIC

To estimate traffic generated by the project, the ITE Trip Generation, 10th Edition trip rates were applied. Pass by percentage rates were obtained from the Martin County Impact Fee Study. These calculations provide an estimate of the typical generation. Trip generation for the project is shown in **Table 1.**

As shown, the project will generate 443 net new daily trips. There will be 27 AM peak hour trips and 55 PM peak hour trips.

Table 1 Trip Generation

Table 1a- Daily

Description	Land Use Code	Intensity	Units	Daily Trip Generation	Directional Split		Gross Trips			Pass-by Trips		Daily Trips		
					In	Out	In	Out	Total			In	Out	Total
Shopping Center	820	4,400	DU	Ln(T)= .68Ln(X)+5.57	50%	50%	360	359	719	345	48%	187	187	374
Warehousing	150	19,600	SF	T = 1.58(X) + 45.54	50%	50%	38	39	77	8	10%	35	34	69
Total							**398**	**398**	**796**	**353**		**222**	**221**	**443**

Source: ITE 10th Edition

Table 1b- AM Peak Hour

Description	Land Use Code	Intensity	Units	Daily Trip Generation	Directional Split		Gross Trips			Pass-by Trips		AM Trips		
					In	Out	In	Out	Total			In	Out	Total
Shopping Center	820	4,400	DU	T= 0.94(X)	62%	38%	2	2	4	2	48%	1	1	2
Warehousing	150	19,600	SF	T= 0.12(x) + 25.32	77%	23%	22	6	28	3	10%	19	6	25
Total							**24**	**8**	**32**	**5**		**20**	**7**	**27**

Source: ITE 10th Edition

Table 1c - PM Peak Hour

Description	Land Use Code	Intensity	Units	Daily Trip Generation	Directional Split		Gross Trips			Pass-by Trips		PM Trips		
					In	Out	In	Out	Total			In	Out	Total
Shopping Center	210	4,400	DU	Ln(T)=0.74Ln(x)+2.89	48%	52%	26	28	54	26	48%	13	15	28
Warehousing	150	19,600	SF	T= 0.12(x) + 27.82	27%	73%	8	22	30	3	10%	7	20	27
Total							**34**	**50**	**84**	**29**		**20**	**35**	**55**

Source: ITE 10th Edition

PROJECT DISTRIBUTION/ ASSIGNMENT/IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network.

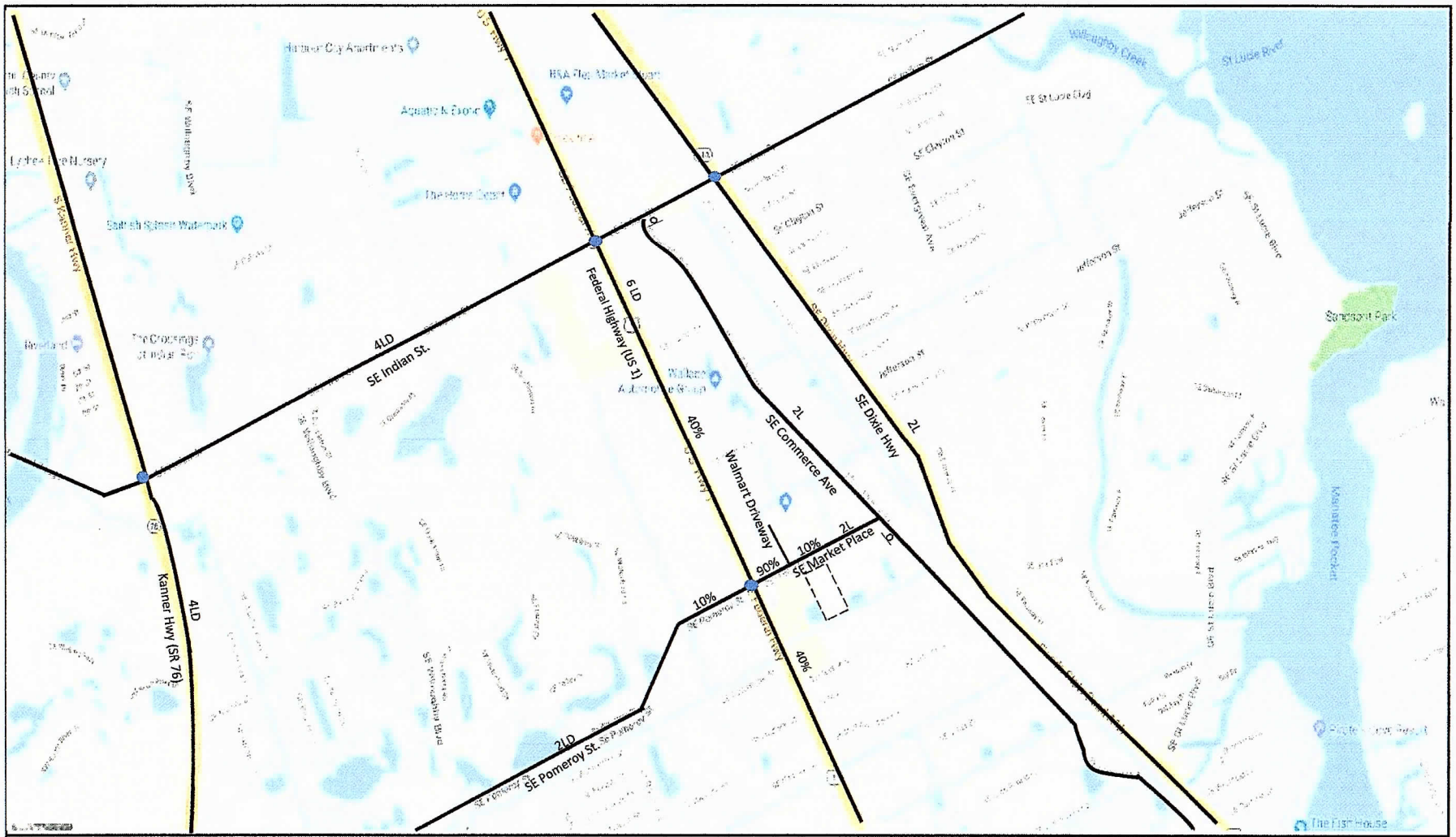
Distribution/ Assignment – This general distribution led to an assignment of trips based on the anticipated ultimate destinations and the roadway paths used to reach those destinations. The project assignment is shown in **Figure 2.**

Impact – Tables 2a and 2b summarize the project impact as a percent of service volume capacity. Project traffic is considered significant when the impact is 5% or more of LOS D.

LINK ANALYSIS / CONCURRENCY REVIEW

In order to assess the impact on the significant links and the adjacent links, the total traffic on the link at project buildout was compared to the roadway capacity. To estimate the total traffic in 2021, the existing link volumes developed from the Martin County 2018 Roadway Level of Service Inventory Report were grown 3 years using the average annual growth rate also provided in the report.

Tables 3a and 3b summarize the results of the link analysis. As shown, the roadways will operate at acceptable levels of service.



N NTS	Legend	Figure 2
O'ROURKE ENGINEERING & PLANNING 969 SE Federal Hwy Suite 402 Stuart, FL 34994	= Project Location = Traffic Signal = Stop Sign (xx) = # of Lanes (xx%) = % Assignment	Percent Assignment Lakeside Market Place

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	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
Indian St	SR-5	Commerce Ave	EB	IN	4LD	no	2000	1	5%	0.05%
	SR-5	Commerce Ave	WB	OUT	4LD	no	2000	0	5%	0.00%
	Commerce Ave	CR-A1A	EB	OUT	4LD	no	2000	1	10%	0.05%
	Commerce Ave	CR-A1A	WB	IN	4LD	no	2000	2	10%	0.10%
US 1	Monroe St	Indian St	NB	OUT	6LD	no	3020	3	40%	0.10%
	Monroe St	Indian St	SB	IN	6LD	no	3020	8	40%	0.26%
	Indian St	SR-714	NB	OUT	6LD	no	3020	2	25%	0.07%
	Indian St	SR-714	SB	IN	6LD	no	3020	5	25%	0.17%
Commerce Ave	Monroe St	Indian St	NB	OUT	2L	no	750	0	5%	0.00%
	Monroe St	Indian St	SB	IN	2L	no	750	1	5%	0.13%
Market Pl	SR-5	Commerce Ave	EB	IN	2L	no	790	18	90%	2.28%
	SR-5	Commerce Ave	WB	OUT	2L	no	790	6	90%	0.76%
Pomeroy St	Willoughby Blvd	SR-5	EB	IN	2LD	no	790	2	10%	0.25%
	Willoughby Blvd	SR-5	WB	OUT	2LD	no	790	1	10%	0.13%

In: 20
Out: 7

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	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity
Indian St	SR-5	Commerce Ave	EB	IN	4LD	no	2000	1	5%	0.05%
	SR-5	Commerce Ave	WB	OUT	4LD	no	2000	2	5%	0.10%
	Commerce Ave	CR-A1A	EB	OUT	4LD	no	2000	4	10%	0.20%
	Commerce Ave	CR-A1A	WB	IN	4LD	no	2000	2	10%	0.10%
US 1	Monroe St	Indian St	NB	OUT	6LD	no	3020	14	40%	0.46%
	Monroe St	Indian St	SB	IN	6LD	no	3020	8	40%	0.26%
	Indian St	SR-714	NB	OUT	6LD	no	3020	9	25%	0.30%
	Indian St	SR-714	SB	IN	6LD	no	3020	5	25%	0.17%
Commerce Ave	Monroe St	Indian St	NB	OUT	2L	no	750	2	5%	0.27%
	Monroe St	Indian St	SB	IN	2L	no	750	1	5%	0.13%
Market Pl	SR-5	Commerce Ave	EB	IN	2L	no	790	18	90%	2.28%
	SR-5	Commerce Ave	WB	OUT	2L	no	790	32	90%	4.05%
Pomeroy St	Willoughby Blvd	SR-5	EB	IN	2LD	no	790	2	10%	0.25%
	Willoughby Blvd	SR-5	WB	OUT	2LD	no	790	1	10%	0.13%

In: 20
Out: 35

Table 3a: Link Analysis - AM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2018 AADT	K Factor	D Factor	2018 Volume Peak Hour Peak Direction	Growth Rate	2021 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?
Market Pl	SR-5	Commerce Ave	EB	IN	2L	no	4431	0.08	0.540	187	1.019	198	790	18	90%	2.28%	216	Yes
	SR-5	Commerce Ave	WB	OUT	2L	no	4431	0.08	0.460	163	1.019	173	790	6	90%	0.76%	179	Yes

Source: Martin County 2018 Roadway Level of Service Inventory Report

In:	20
Out:	7
Years Grown:	3

Table 3b: Link Analysis - PM Peak Hour

Segment	From	To	Direction		Lanes	Is Project Traffic 5% or More of Capacity?	2018 AADT	K Factor	D Factor	2018 Volume Peak Hour Peak Direction	Growth Rate	2021 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?
Market Pl	SR-5	Commerce Ave	EB	IN	2L	no	4431	0.08	0.460	163	1.019	173	790	18	90%	2.28%	191	Yes
	SR-5	Commerce Ave	WB	OUT	2L	no	4431	0.08	0.540	187	1.019	198	790	32	90%	4.05%	230	Yes

Source: Martin County 2018 Roadway Level of Service Inventory Report

In:	20
Out:	35
Years Grown:	3

INTERSECTION ANALYSIS

The intersections of Market Place and Federal Highway (US-1) were counted in December of 2017. A seasonal factor of 1.065 was applied, which is the average of the FDOT seasonal factor for west of US 1 and east of US 1. The existing volumes were grown 4 years to 2021 using the Martin County Average Annual Growth rate for US-1. The project traffic was then added to obtain the total turning movements.

The intersections were analyzed using the Highway Capacity Software. The intersection of US 1 and Market Place operates at level of service D for the AM and PM peak hours at existing condition. Under buildout conditions, the intersections will continue to operate at Level of Service D for the AM and PM peak hours. Substantial delay was calculated for the westbound movements, but the counts were made in December with Walmart being very active. The intersection data and turning movement counts data are shown in **APPENDIX C.**

DRIVEWAYS

The site currently has two driveways onto Market Place, one on either side of the Walmart Driveway. The westernmost driveway is located within the Walmart left-turn lane. Therefore, it will be limited to right-in / right-out only. The two-way left turn lane currently serves the eastern driveway. The easternmost driveway will be full access.

Figure 3 shows the driveway locations and volumes in the AM and PM peak hour. The driveway was analyzed using Highway Capacity Software. The driveway will operate at a LOS of C or better at project buildout. **Appendix D** includes the supporting driveway analysis and data.

CONCLUSION

With 443 daily trips, 27 AM peak hour trips and 55 PM peak hour trips, the project does not create the need for additional improvements to the roadway network. Therefore, the project meets the requirements for concurrency.



	IN	OUT
Daily	398	398
AM	24	8
PM	34	50

NTS

O'ROURKE ENGINEERING & PLANNING

969 SE Federal Hwy, Suite 402
Stuart, Fl, 34994

Legend

XX(XX) = AM(PM)

= Distance from Edge to Edge of Driveways

Figure 3

Driveway Volumes

Lakeside Marketplace

APPENDIX A

Site Plan

EXISTING WALMART

SE MARKET PLACE

PROP. BLDG. #1
BLDG. AREA - 8,000 S.F.

PROP. BLDG. #2
BLDG. AREA - 8,000 S.F.

PROP. BLDG. #3
BLDG. AREA - 8,000 S.F.

EXISTING GAS STATION

EXISTING COMMERCIAL PLAZA

LOT 213

"MARKET PLACE CENTER"

UNDER CONSTRUCTION

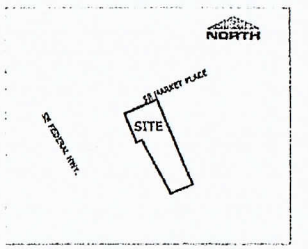
LOT 213

EXIST. LAKE

LOT 214

EXISTING COMMERCIAL PLAZA

"SPS COMMERCIAL CENTER"



LOCATION MAP

GRAPHIC SCALE

NO TRESPASSING SIGN DETAIL

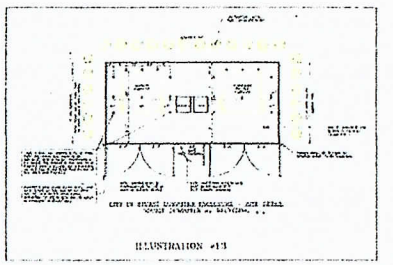


ILLUSTRATION #13



DATE | REVISION

Lakeside Marketplace

CITY OF STUART, FLORIDA

SITE PLAN A-1

1

APPENDIX B

Martin County 2018 LOS Report

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Baker Rd	SR-5	CR-723	750	5,134	0.09	0.51	230	C	2.2%
Berry Ave	Golden Bear Wy	CR-714	750	3,496	0.09	0.50	157	C	0.9%
Berry Ave	CR-714	Sunset Tr	750	1,917	0.09	0.53	91	C	1.0%
Britt Rd	Pine Lake Dr	SR-5	750	4,538	0.08	0.58	208	C	0.5%
Citrus Blvd.	CR-714 (Martin Hwy)	Port St. Lucie Blvd.	1200	5,145	0.12	0.81	479	C	6.3%
Commerce Ave	Salerno Rd	Monroe St	750	6,810	0.10	0.60	413	D	2.5%
Commerce Ave	Monroe St	Indian St	750	6,726	0.11	0.60	432	D	1.2%
Country Club Dr	Palm Beach County	Island Way	750	2,978	0.08	0.53	120	C	4.2%
Country Club Dr	Island Way	Little Club Dr	750	3,665	0.08	0.59	164	C	4.4%
County Line Rd	Little Club Dr	SR-5	750	2,517	0.08	0.53	105	C	0.5%
Cove Rd	SR-76	Willoughby Blvd	880	13,912	0.10	0.51	681	C	3.3%
Cove Rd	Willoughby Blvd	SR-5	880	14,894	0.09	0.54	732	C	2.1%
Cove Rd	SR-5	CR-A1A	750	12,683	0.08	0.52	547	D	4.2%
Cove Rd	CR-A1A	End	675	5,547	0.09	0.57	285	C	0.5%
CR-609 (Allapattah Rd)	SR-710	CR-714	740	1,793	0.09	0.53	85	A/B	5.3%
CR-609 (Allapattah Rd)	CR-714	St Lucie County	740	1,812	0.09	0.65	106	A/B	6.0%
CR-707 (Beach Rd)	Palm Beach County	CR-708	675	1,928	0.09	0.63	111	C	5.3%
CR-707 (Dixie Hwy)	CR-723/CR-707	CR-707 (Indian River Dr)	750	5,401	0.09	0.51	237	C	0.5%
CR-707 (Indian River Dr)	CR-707 (Dixie Hwy)	CR-707A (Jensen Beach Blvd.)	675	10,488	0.10	0.54	578	D	2.2%
CR-707 (Indian River Dr)	CR-707A	SR-732	675	5,683	0.08	0.53	241	C	0.5%
CR-707 (Indian River Dr)	SR-732	St. Lucie County	675	6,216	0.09	0.61	334	C	3.1%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); CR-713 (PM/NB); Murphy Rd (PM/NB); SR-5 (AM/SB); SR-714 [Palm City Bridge] (PM/WB) and SR-714 (PM/WB).

Effective February 18, 2019

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
CR-714 (Veteran's Memorial Bridge)	Mapp Rd	SR-76	2000	23,323	0.11	0.59	1,500	C	8.0%
CR-723 (Savanna Rd)	CR-707	NE 24th St	880	9,023	0.09	0.50	393	C	2.4%
CR-723 (Savanna Rd)	NE 24th St	CR-707A (Jensen Beach Blvd.)	880	10,500	0.09	0.53	473	C	1.6%
CR-726 (Citrus Blvd)	SR-710	Greenridge Ln	740	2,779	0.08	0.58	132	A/B	4.7%
CR-726 (Citrus Blvd)	Greenridge Ln	CR-76A	740	2,553	0.09	0.57	131	A/B	5.3%
CR-76A (Citrus Blvd.)	CR-726	SR-714	1200	4,204	0.09	0.55	215	A/B	5.6%
CR-76A (SW 96th St)	CR-726	Pennsylvania Ave	1200	3,768	0.09	0.56	190	A/B	4.7%
CR-76A (SW 96th St)	Pennsylvania Ave	SR-76	800	8,115	0.09	0.63	435	C	4.5%
CR-A1A (Dixie Hwy)	SR-5	CR-708	750	3,233	0.09	0.50	147	C	4.6%
CR-A1A (Dixie Hwy)	CR-708	Osprey St	880	7,508	0.11	0.53	454	C	3.6%
CR-A1A (Dixie Hwy)	Osprey St	Heritage Blvd	1190	6,641	0.08	0.55	292	A/B	4.1%
CR-A1A (Dixie Hwy)	Heritage Blvd	Cove Rd	1190	7,348	0.09	0.54	341	A/B	4.7%
CR-A1A (Dixie Hwy)	Cove Rd	Salerno Rd	790	12,223	0.09	0.53	602	D	3.6%
CR-A1A (Dixie Hwy)	Salerno Rd	St. Lucie Blvd	750	16,587	0.09	0.51	753	E	3.1%
CR-A1A (Dixie Hwy)	St Lucie Blvd	Jefferson St	750	13,991	0.10	0.50	700	D	2.5%
CR-A1A (Dixie Hwy)	Jefferson St	Indian St	1630	18,643	0.08	0.52	756	D	4.0%
CR-A1A (Dixie Hwy)	Indian St	SR-714	2000	16,285	0.10	0.50	790	C	0.9%
CR-A1A (Dixie Hwy)	SR-714	SE Fifth St	675	6,585	0.09	0.55	340	D	2.0%
Dr Martin Luther King Jr Blvd	Farm Rd	SR-710	675	2,169	0.07	0.53	83	C	4.0%
Farm Rd	Dr Martin Luther King Jr Dr	Palm Wy	750	2,588	0.06	0.59	93	C	2.0%
Fox Brown Rd	SR-710	CR-714	740	333	0.08	0.60	16	A/B	0.0%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); CR-713 (PM/NB); Murphy Rd (PM/NB); SR-5 (AM/SB); SR-714 [Palm City Bridge] (PM/WB) and SR-714 (PM/WB).

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Goldenrod Rd	Britt Rd	SR-732	1630	4,838	0.08	0.61	242	C	0.5%
Goldenrod Rd	SR-732	SR-5	750	6,933	0.09	0.56	357	C	2.1%
Goldenrod Rd	SR-5	Westmoreland Blvd	750	4,350	0.09	0.73	273	C	4.6%
Gomez Ave	CR-708	Crossrip St	750	3,616	0.09	0.64	199	C	0.5%
Gomez Ave	Crossrip St	Osprey St	750	1,079	0.08	0.58	49	C	0.5%
Green River Parkway	Dixie Hwy	Baker Rd	750	6,728	0.10	0.64	444	D	5.2%
Green River Parkway	Baker Rd	SR-732	880	8,203	0.12	0.65	635	C	6.1%
Green River Parkway	SR-732	St. Lucie County	1190	8,395	0.10	0.63	513	C	4.2%
Horseshoe Point Rd	CR-A1A	Kubin Ave	675	5,725	0.08	0.53	252	C	0.5%
Indian St	SR-76	Willoughby Blvd	2000	28,668	0.10	0.58	1,679	C	7.0%
Indian St	Willoughby Blvd	SR-5	2000	28,304	0.08	0.50	1,189	C	3.9%
Indian St	SR-5	Commerce Ave	2000	22,456	0.09	0.54	1,031	C	0.5%
Indian St	Commerce Ave	CR-A1A	2000	24,848	0.09	0.50	1,068	C	1.0%
Indian St	CR-A1A	St Lucie Blvd	675	7,214	0.09	0.53	359	D	0.5%
Indian River Dr	Palmer St	CR-707	750	7,243	0.09	0.57	363	C	0.5%
Island Way	Palm Beach County	Jupiter Road	1200	4,326	0.10	0.58	261	A/B	2.6%
Island Way	Jupiter Road	Country Club Dr	750	5,230	0.08	0.52	204	C	3.1%
Jack James Rd	SR-76	Blue Water Wy	750	2,999	0.13	0.66	255	C	4.2%
Lares St	CR-708	CR-A1A	675	3,430	0.09	0.69	206	C	2.8%
Little Club Wy	Country Club Dr	Wooden Bridge Wy	675	2,382	0.08	0.55	103	C	1.2%
Locks Rd	Canal St	SR-76	675	3,722	0.08	0.53	154	C	1.1%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); CR-713 (PM/NB); Murphy Rd (PM/NB); SR-5 (AM/SB); SR-714 [Palm City Bridge] (PM/WB) and SR-714 (PM/WB).

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
MacArthur Blvd	Sailfish Point	SR-A1A	675	5,386	0.10	0.58	306	C	0.5%
Mapp Rd	South End	CR-714	750	5,277	0.08	0.67	297	C	0.5%
Mapp Rd	CR-714	SR-714	750	11,742	0.09	0.53	529	D	0.5%
Mapp Rd	SR-714	Matheson Ave	750	5,650	0.09	0.53	275	C	1.9%
Mapp Rd	Matheson Ave	North End	750	7,637	0.08	0.54	322	C	0.5%
Market Pl	SR-5	Commerce Ave	790	4,431	0.08	0.54	187	C	1.9%
Matheson Ave	SR-714	Mapp Rd	750	5,077	0.09	0.61	279	C	0.5%
Monroe St	SR-5	Commerce Ave	750	1,775	0.11	0.64	130	C	1.7%
Murphy Rd	Mapp Rd	High Meadow Ave	750	5,986	0.10	0.51	302	C	0.5%
Murphy Rd	High Meadow Ave	St Lucie County	750	9,699	0.13	0.72	887	F	4.5%
Ocean Blvd	Flagler Ave	Palm Beach Rd	790	9,760	0.10	0.60	556	D	1.7%
Ocean Blvd	Palm Beach Rd	SR-714	1465	12,209	0.10	0.52	635	C	0.5%
Osprey St	SR-5	CR-A1A	750	5,057	0.07	0.54	197	C	1.0%
Osprey St	CR-A1A	Gomez Ave	750	1,864	0.09	0.61	100	C	0.5%
Palm Beach Rd	SR-714	Ocean Blvd	710	8,272	0.09	0.55	428	D	0.5%
Palm City Rd	SR-714	SR-5	750	7,323	0.08	0.59	363	C	1.1%
Palmer St	CR-707	Indian River Dr	750	3,007	0.11	0.61	205	C	1.8%
Pineapple Wy	CR-707A(Jensen Beach Blvd.)	SR-732	750	11,663	0.10	0.53	593	D	2.5%
Pomeroy St	SR-76	Willoughby Blvd	790	8,804	0.08	0.62	442	D	2.4%
Pomeroy St	Willoughby Blvd	SR-5	790	8,898	0.08	0.57	380	C	3.9%
Salerno Rd	SR-76	Willoughby Blvd	880	7,950	0.09	0.52	389	C	3.5%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); CR-713 (PM/NB); Murphy Rd (PM/NB); SR-5 (AM/SB); SR-714 [Palm City Bridge] (PM/WB) and SR-714 (PM/WB).

Martin County 2018 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2018 Average Annual Daily Traffic	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2018 Peak Hour Directional Volume	2018 Generalized LOS	Avg. Annual Growth Rate
Salerno Rd	Willoughby Blvd	SR-5	790	9,765	0.12	0.62	727	D	1.8%
Salerno Rd	SR-5	Commerce Ave	750	9,439	0.08	0.55	431	D	0.5%
Salerno Rd	Commerce Ave	CR-A1A	750	7,502	0.09	0.51	337	C	0.5%
Seabranch Blvd	Doubletree Dr	SR-5	2000	6,403	0.09	0.55	310	C	0.5%
Sewalls Pt Rd	SR-A1A	Palmer St	675	9,542	0.09	0.52	461	D	1.0%
Skyline Dr	CR-707A	CR-707	675	2,064	0.08	0.55	87	C	3.0%
SR-5 (US-1)	Palm Beach County	CR-A1A	3110	21,690	0.09	0.56	1,032	A/B	3.8%
SR-5 (US-1)	CR-A1A	CR-708	2000	17,113	0.09	0.68	1,094	C	3.1%
SR-5 (US-1)	CR-708	Osprey St	2000	24,451	0.10	0.65	1,589	C	2.0%
SR-5 (US-1)	Osprey St	Seabranch Blvd	2000	24,010	0.08	0.61	1,128	C	1.2%
SR-5 (US-1)	Seabranch Blvd	Cove Rd	3020	30,639	0.08	0.51	1,313	C	0.5%
SR-5 (US-1)	Cove Rd	Salerno Rd	3020	34,682	0.08	0.54	1,461	C	0.5%
SR-5 (US-1)	Salerno Rd	Monroe St	3020	42,146	0.08	0.52	1,775	C	0.9%
SR-5 (US-1)	Monroe St	Indian St	3020	45,627	0.08	0.52	1,922	C	1.3%
SR-5 (US-1)	Indian St	SR-714	3020	45,758	0.09	0.51	2,194	C	0.9%
SR-5 (US-1)	SR-714	SR-5A	3020	38,109	0.09	0.54	1,934	C	0.7%
SR-5 (US-1)	SR-5A(Cut-off Rd)	SR-76	3020	36,130	0.09	0.51	1,640	C	0.5%
SR-5 (US-1)	SR-76	Palm City Rd	2520	49,890	0.08	0.57	2,247	D	1.4%
SR-5 (US-1)	Palm City Rd	Joan Jefferson Wy	2520	55,868	0.08	0.64	2,860	F	0.8%
SR-5 (US-1)	Joan Jefferson Wy	Wright Blvd	3020	59,857	0.08	0.60	2,892	C	1.4%
SR-5 (US-1)	Wright Blvd	Baker Rd	3020	54,975	0.08	0.50	2,172	C	1.1%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); CR-713 (PM/NB); Murphy Rd (PM/NB); SR-5 (AM/SB); SR-714 [Palm City Bridge] (PM/WB) and SR-714 (PM/WB).

APPENDIX C

Intersection Analysis Data

MARTIN COUNTY TRAFFIC

Intersection: 83 SR-5 (US1) @ POMEROY/MARKET ST

	SBLT	NB	EBLT	WB	NBLT	SB	WBLT	EB
PHASE	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Min green	10	25	7	10	10	25	7	10
Vehicle Ext	4	4	3	3	3	4	3	3
Max 1	20	60	20	30	20	60	20	30
Max 2								
Yellow	4.4	4.8	3.7	4	4.4	4.8	3.7	4
Red Clear	2.3	2.1	3.4	3.1	2.6	2.1	2.7	3.4
Walk	0	7	0	5	0	7	0	5
Ped Clear	0	23	0	32	0	26	0	33
Start Up		Green				Green		
Locking Detector		X				X		
Veh. Recalls		Min				Min		
Assigned ph.			3				7	
Cross Switch Ph			8				4	

April 1, 2020

MARTIN COUNTY TRAFFIC

LOCATION: **83** **SR-5 (US1) @ POMEROY/MARKET ST**

Day Plan

Day 2 = Weekdays Day 1 = Weekends

DAY		START		COBALT plan			
1		9:00		1			
1		21:00		99	Free		
2		6:00		3			
2		9:30		5			
2		15:00		7			
2		18:30		9			
2		20:30		99	Free		

Plan		1		3	5	7	9	
OFFSET		94		66	89	37	21	
CYCLE LENGTH		160		160	160	160	140	
Cobalt Sequence		5		1	5	1	5	
PHASE		SPLITS (SECONDS)						
1	SBLT	44		39	39	39	36	
2	NB	65		69	72	66	57	
3	EBLT	22		25	22	20	18	
4	WB	29		27	27	35	29	
5	NBLT	**25**		23	**22**	31	**23**	
6	SB	84		85	89	74	70	
7	WBLT	26		25	22	30	20	
8	EB	25		27	27	25	27	

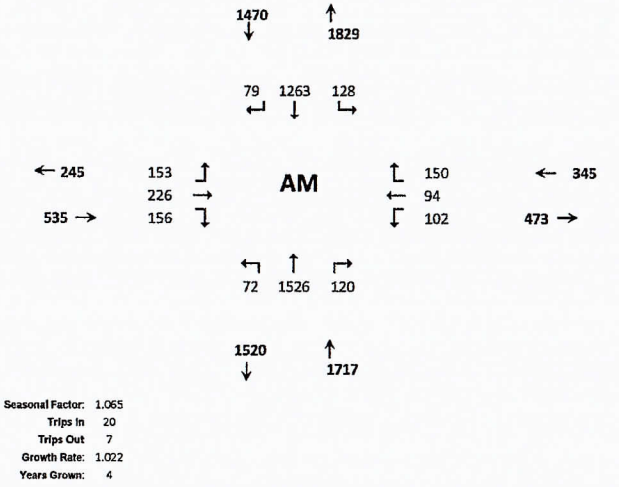
Lagging phase when **BOLD** type & gray box

Printed 04/01/20

TURNING MOVEMENT VOLUME COUNTS

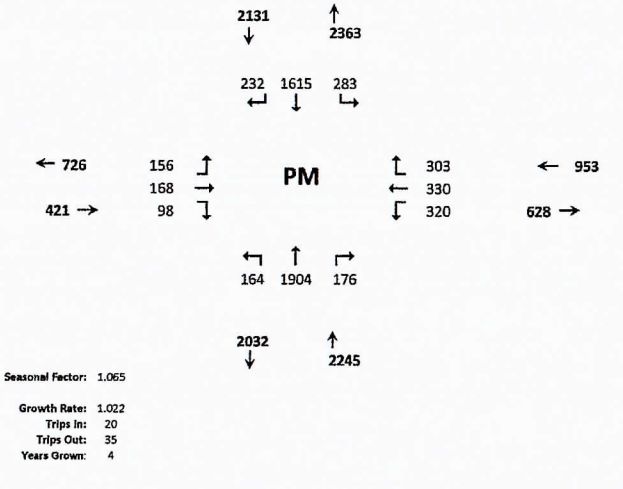
N/S STREET: US 1 **E/W STREET:** Pomeroy St / Market Pl **CONTROL:**
FILENAME: Lake Side Market Place
COUNT DATE: 12/19/2017 **DAY:** Tuesday **CITY:** Stuart **INTERSECTION:**
REPORT DATE: 8/22/2019 **ANALYSIS YEAR:** 2021

15 Min Period	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
7:00-7:15	7	254	19	16	262	16	22	24	28	17	16	8	689	3167
7:15-7:30	12	252	14	27	237	19	36	43	47	18	10	19	734	3378
7:30-7:45	14	362	25	28	252	9	28	69	40	9	21	32	889	3480
7:45-8:00	21	329	21	22	252	19	33	47	37	22	23	29	855	3371
8:00-8:15	13	331	33	21	279	22	43	36	32	35	28	27	900	3434
8:15-8:30	14	291	17	32	304	18	28	41	25	19	8	39	836	
8:30-8:45	16	298	28	25	231	15	42	35	31	21	16	22	780	
8:45-9:00	10	319	29	40	298	18	30	51	23	41	20	39	918	
AM PEAK HOUR IS FROM:			7:30 AM TO 8:30AM											
Volumes	62	1313	96	103	1087	68	132	193	134	85	80	127	3480	
Season Factor	66	1398	102	110	1158	72	141	206	143	91	85	135	3706	
Growth	72	1526	112	120	1263	79	153	224	156	99	93	148	4043	
In/Out	-	-	In	In	-	-	-	In	-	Out	Out	Out	-	
Percentage	0%	0%	40%	40%	0%	0%	0%	10%	0%	40%	10%	40%	0%	
PROJECT	0	0	8	8	0	0	0	2	0	3	1	3	0	
Total	72	1526	120	128	1263	79	153	226	156	102	94	150	4067	



Seasonal Factor: 1.065
Trips In 20
Trips Out 7
Growth Rate: 1.022
Years Grown: 4

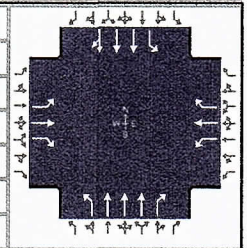
15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound				ONE HOUR SUM
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	
4:00-4:15	40	469	32	57	306	36	34	29	19	87	80	101	1290	4906
4:15-4:30	22	370	42	64	378	45	29	33	23	66	73	53	1198	4834
4:30-4:45	30	388	47	67	359	60	30	36	17	65	77	59	1235	4824
4:45-5:00	49	412	24	49	347	59	41	45	25	45	51	36	1183	4784
5:00-5:15	64	355	32	63	375	62	30	27	28	48	85	49	1218	4628
5:15-5:30	27	432	23	51	378	59	27	30	25	49	44	43	1188	
5:30-5:45	30	372	37	61	375	65	34	27	25	40	77	52	1195	
5:45-6:00	41	319	39	40	311	69	28	46	23	36	31	44	1027	
PM PEAK HOUR IS FROM:			4:00PM TO 5:00PM											
Volumes	141	1639	145	237	1390	200	134	143	84	263	281	249	4906	
Season Factor	150	1746	154	252	1480	213	143	152	89	280	299	265	5225	
Growth	164	1904	168	275	1615	232	156	166	98	306	326	289	5700	
In/Out	-	-	In	In	-	-	-	In	-	Out	Out	Out	-	
Percentage	0%	0%	40%	40%	0%	0%	0%	10%	0%	40%	10%	40%	0%	
Project	0	0	8	8	0	0	0	2	0	14	4	14	0	
Total	164	1904	176	283	1615	232	156	168	98	320	330	303	5750	



Seasonal Factor: 1.065
Growth Rate: 1.022
Trips In: 20
Trips Out: 35
Years Grown: 4

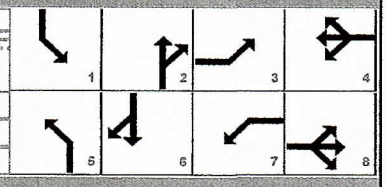
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 14, 2020	Area Type	Other
Jurisdiction	City of Stuart	Time Period	AM Peak Hour	PHF	0.95
Urban Street	US 1	Analysis Year	2021	Analysis Period	1> 7:00
Intersection	Market Place/Pomeroy	File Name	CH - US-1 & Market Place - AM - 4.14.20.xus		
Project Description	Lakeside Market Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	153	226	156	102	94	150	72	1526	120	128	1263	79

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			NB			SB		
Green	9.7	4.0	85.3	10.3	4.9	18.5					
Yellow	4.4	0.0	4.8	3.7	0.0	4.0					
Red	2.6	0.0	2.1	2.7	0.0	3.1					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	21.6	30.5	16.7	25.6	16.7	92.2	20.6	96.2
Change Period, ($Y+R_c$), s	7.1	7.4	6.4	7.4	7.0	6.9	6.7	6.9
Max Allow Headway (*MAH*), s	3.0	3.1	3.0	3.1	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	14.4	21.6	10.3	17.4	8.6		13.8	
Green Extension Time (g_e), s	0.1	0.8	0.1	0.8	0.1	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	0.99	1.00	0.97		1.00	
Max Out Probability	0.60	0.19	0.00	0.28	0.00		0.00	

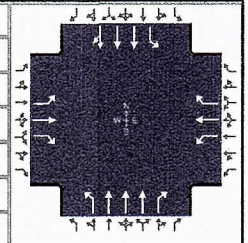
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	161	238	164	107	99	158	76	1606	126	135	952	461
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1725	1610	1810	1900	1840
Queue Service Time (g_s), s	12.4	19.6	15.5	8.3	7.8	15.4	6.6	33.6	6.4	11.8	23.6	23.6
Cycle Queue Clearance Time (g_c), s	12.4	19.6	15.5	8.3	7.8	15.4	6.6	33.6	6.4	11.8	23.6	23.6
Green Ratio (*g/C*)	0.20	0.14	0.14	0.18	0.11	0.11	0.06	0.53	0.53	0.09	0.56	0.56
Capacity (*c*), veh/h	295	274	232	172	216	183	109	2759	858	157	2120	1027
Volume-to-Capacity Ratio (*X*)	0.547	0.867	0.706	0.623	0.458	0.863	0.694	0.582	0.147	0.856	0.449	0.449
Back of Queue (Q), ft/ln (95 th percentile)	239.1	398.7	269.5	172.2	169.9	292.2	140.1	491.3	109.8	237.4	392.9	389.1
Back of Queue (Q), veh/ln (95 th percentile)	9.6	15.9	10.8	6.9	6.8	11.7	5.6	19.7	4.4	9.5	15.7	15.6
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	0.00
Uniform Delay (d_1), s/veh	55.8	67.0	65.2	58.4	66.3	69.7	73.7	25.3	18.9	72.1	20.9	20.9
Incremental Delay (d_2), s/veh	0.6	16.2	4.3	1.4	0.6	19.5	2.9	0.9	0.4	5.1	0.7	1.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	56.4	83.2	69.5	59.8	66.9	89.2	76.7	26.2	19.3	77.1	21.6	22.3
Level of Service (LOS)	E	F	E	E	E	F	E	C	B	E	C	C
Approach Delay, s/veh / LOS	71.5	E		74.5	E		27.8	C		26.6	C	
Intersection Delay, s/veh / LOS	37.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.75	C	2.62	C	2.10	B	2.10	B
Bicycle LOS Score / LOS	1.42	A	1.09	A	1.48	A	1.34	A

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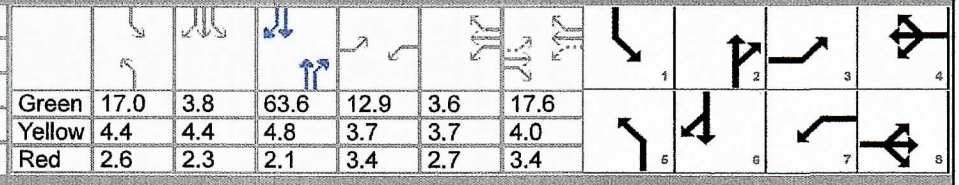
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
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Analyst	James Kemp	Analysis Date	Apr 14, 2020	Area Type	Other
Jurisdiction	City of Stuart	Time Period	PM Peak Hour	PHF	0.95
Urban Street	US 1	Analysis Year	2021	Analysis Period	1> 7:00
Intersection	Market Place/Pomeroy	File Name	CH - US-1 & Market Place - PM - 4.14.20.xus		
Project Description	Lakeside Market Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	156	168	98	320	330	303	164	1904	176	283	1615	232

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	17.0	3.8		63.6	12.9	3.6	17.6					
Yellow	4.4	4.4		4.8	3.7	3.7	4.0					
Red	2.6	2.3		2.1	3.4	2.7	3.4					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	5	2	1	6
Case Number	1.1	3.0	1.1	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	20.0	25.0	30.0	35.0	24.0	70.5	34.5	81.0
Change Period, ($Y+R_c$), s	7.1	7.4	6.4	7.4	7.0	6.9	6.7	6.9
Max Allow Headway (*MAH*), s	3.0	2.9	3.0	2.9	3.0	0.0	3.0	0.0
Queue Clearance Time (g_s), s	14.6	16.4	27.3	31.2	16.8		27.6	
Green Extension Time (g_e), s	0.0	0.2	0.0	0.0	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	1.00		1.00	
Max Out Probability	1.00	1.00	1.00	1.00	0.01		0.23	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	164	177	0	337	347	21	173	2004	185	298	1322	623
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1899	1610	1810	1898	1775
Queue Service Time (g_s), s	12.6	14.4	0.0	25.3	29.2	1.7	14.8	50.8	12.2	25.6	44.4	44.9
Cycle Queue Clearance Time (g_c), s	12.6	14.4	0.0	25.3	29.2	1.7	14.8	50.8	12.2	25.6	44.4	44.9
Green Ratio (*g/C*)	0.21	0.12	0.12	0.29	0.18	0.18	0.12	0.41	0.41	0.62	0.48	0.48
Capacity (*c*), veh/h	210	233	197	369	352	298	219	2363	668	342	1825	853
Volume-to-Capacity Ratio (*X*)	0.782	0.760	0.000	0.914	0.988	0.071	0.788	0.848	0.277	0.871	0.724	0.730
Back of Queue (Q), ft/ln (95 th percentile)	270.2	306.4	0	509.9	631.2	31.5	288.7	801.4	213	475	695.6	683.4
Back of Queue (Q), veh/ln (95 th percentile)	10.8	12.3	0.0	20.4	25.2	1.3	11.5	32.1	8.5	19.0	27.8	27.3
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	0.00
Uniform Delay (d_1), s/veh	55.8	68.9	0.0	50.9	65.2	53.8	68.3	43.4	31.0	63.0	34.1	33.2
Incremental Delay (d_2), s/veh	15.8	12.3	0.0	26.0	44.6	0.0	6.4	4.0	1.0	15.6	2.5	5.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	71.6	81.1	0.0	76.9	109.8	53.9	74.7	47.5	32.0	78.6	36.6	38.7
Level of Service (LOS)	E	F		E	F	D	E	D	C	E	D	D
Approach Delay, s/veh / LOS	76.5	E		92.4	F		48.2	D		42.8	D	
Intersection Delay, s/veh / LOS	53.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.75	C	2.61	C	2.53	C	2.25	B
Bicycle LOS Score / LOS	1.05	A	1.65	B	1.79	B	1.72	B

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APPENDIX D

Driveway Analysis Data

HCS7 Two-Way Stop-Control Report

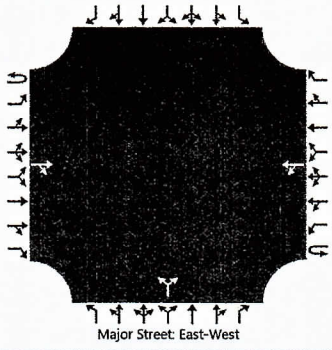
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/14/2020
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Marketplace

Site Information

Intersection	Project Driveway
Jurisdiction	Martin County
East/West Street	Market Place
North/South Street	Project Driveway
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	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			305	8		2	205			7		4				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						2					12					
Capacity, c (veh/h)						1224					558					
v/c Ratio						0.00					0.02					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
Control Delay (s/veh)						7.9					11.6					
Level of Service (LOS)						A					B					
Approach Delay (s/veh)					0.1				11.6							
Approach LOS									B							

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HCS7 Two-Way Stop-Control Report

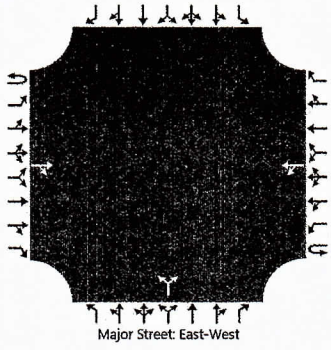
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/14/2020
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Marketplace

Site Information

Intersection	Project Driveway
Jurisdiction	Martin County
East/West Street	Market Place
North/South Street	Project Driveway
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	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			504	13		3	525			24		16				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						3					42					
Capacity, c (veh/h)						1020					303					
v/c Ratio						0.00					0.14					
95% Queue Length, Q_{95} (veh)						0.0					0.5					
Control Delay (s/veh)						8.5					18.8					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					0.1				18.8							
Approach LOS									C							

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