

*Mini-Roundabout Feasibility Analysis & Intersection Control
Evaluation (ICE)
for Submittal to the
Florida Department of Transportation*

SR-5 Mini-Roundabouts Analysis
Lake Worth Beach, Florida

Prepared for:
City of Lake Worth Beach; and
Palm Beach Transportation Planning Agency

Prepared by:
Kimley-Horn and Associates, Inc.



©2021 Kimley-Horn and Associates, Inc.
December 2021
140503011

EXECUTIVE SUMMARY

The City of Lake Worth Beach and the Palm Beach Transportation Planning Agency (TPA) are evaluating speed management strategies to proceed with for the SR-5/Federal Highway corridor in advance of the Florida Department of Transportation (FDOT) starting their upcoming SR-5 resurfacing project. The SR-5 resurfacing project (FM# 446173-1) from 10th Ave S to 6th Ave N is currently in design and is scheduled for construction in fiscal year (FY) 2024.

Currently, SR-5/Federal Highway is a two (2)-lane roadway between 10th Ave S and 6th Ave N with dedicated left-turn lanes at most of the intersections north of Lake Ave. The existing posted speed limit varies between 35 miles per hour (mph) and 25 mph. This report summarizes the results of the mini-roundabouts feasibility analysis and the Intersection Control Evaluation (ICE) results for the five (5) intersections where it was determined that a mini-roundabout could be constructed within the existing right-of-way (ROW). The intent of using mini-roundabouts at the intersections identified within the project limits is to provide speed management along the corridor.

A 2031 design year was utilized for the project and existing traffic was grown utilizing a 2.20 percent (2.20%) historical growth rate. The growth rate was determined based upon historical growth trends at nearby FDOT traffic count stations.

The peak period AM and PM peak hour ICE analyses show that mini-roundabouts are anticipated to provide sufficient capacity and safety at each of the five (5) study intersections along the SR-5 corridor.

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	4
FEASIBILITY ANALYSIS.....	6
EXISTING TRAFFIC	8
FUTURE TRAFFIC	11
Growth Rate Calculations	11
INTERSECTION CONTROL EVALUATION (ICE) ANALYSIS	13
CONCLUSION	15

LIST OF FIGURES

	<u>Page</u>
Figure 1: Project Location Map.....	5
Figure 2: Existing Peak Hour Traffic	9
Figure 3: Existing Lane Configuration.....	10

LIST OF TABLES

	<u>Page</u>
Table 1: Mini-Roundabout Feasibility Analysis Results.....	7
Table 2: Historical Growth Rate Summary	12
Table 3: Growth Rate Calculations for SERPM 8.512 Volumes	12
Table 4: CAP-X Results.....	13
Table 5: SPICE Crash Prediction Results	14

LIST OF APPENDICES

APPENDIX A:	Conceptual Development Plans
APPENDIX B:	Traffic Data
APPENDIX C:	Growth Rate Calculations
APPENDIX D:	CAP-X Worksheets
APPENDIX E:	SPICE Worksheets

INTRODUCTION

Kimley-Horn and Associates, Inc. was retained by the City of Lake Worth Beach and the Palm Beach TPA to evaluate the feasibility of constructing mini-roundabouts along SR-5/Federal Highway from 10th Ave S to 6th Ave N and conduct an Intersection Control Evaluation (ICE) study for the feasible locations. The study corridor is shown in Figure 1. The study corridor is programmed by FDOT to be resurfaced in FY 2024 (FM# 446173-1). The intent of this analysis is to assess the feasibility of constructing mini-roundabouts along SR-5 which could be utilized as a form of intersection control to assist with speed management between 10th Ave S and 6th Ave N.

Currently SR-5/Federal Highway is a two (2)-lane roadway between 10th Ave S and 6th Ave N, with dedicated left-turn lanes at most intersections north of Lake Ave. The existing posted speed limit is 35 miles per hour (mph) south of 2nd Ave N and 25 mph north of 2nd Ave N.

The purpose of this report is to summarize the feasibility and ICE analyses conducted for the proposed mini-roundabouts along SR-5/Federal Highway from 10th Ave S to 6th Ave N. This report summarizes the feasibility analysis, data collection, existing traffic, future growth, intersection control evaluation (ICE), and safety performance analyses (SPICE).

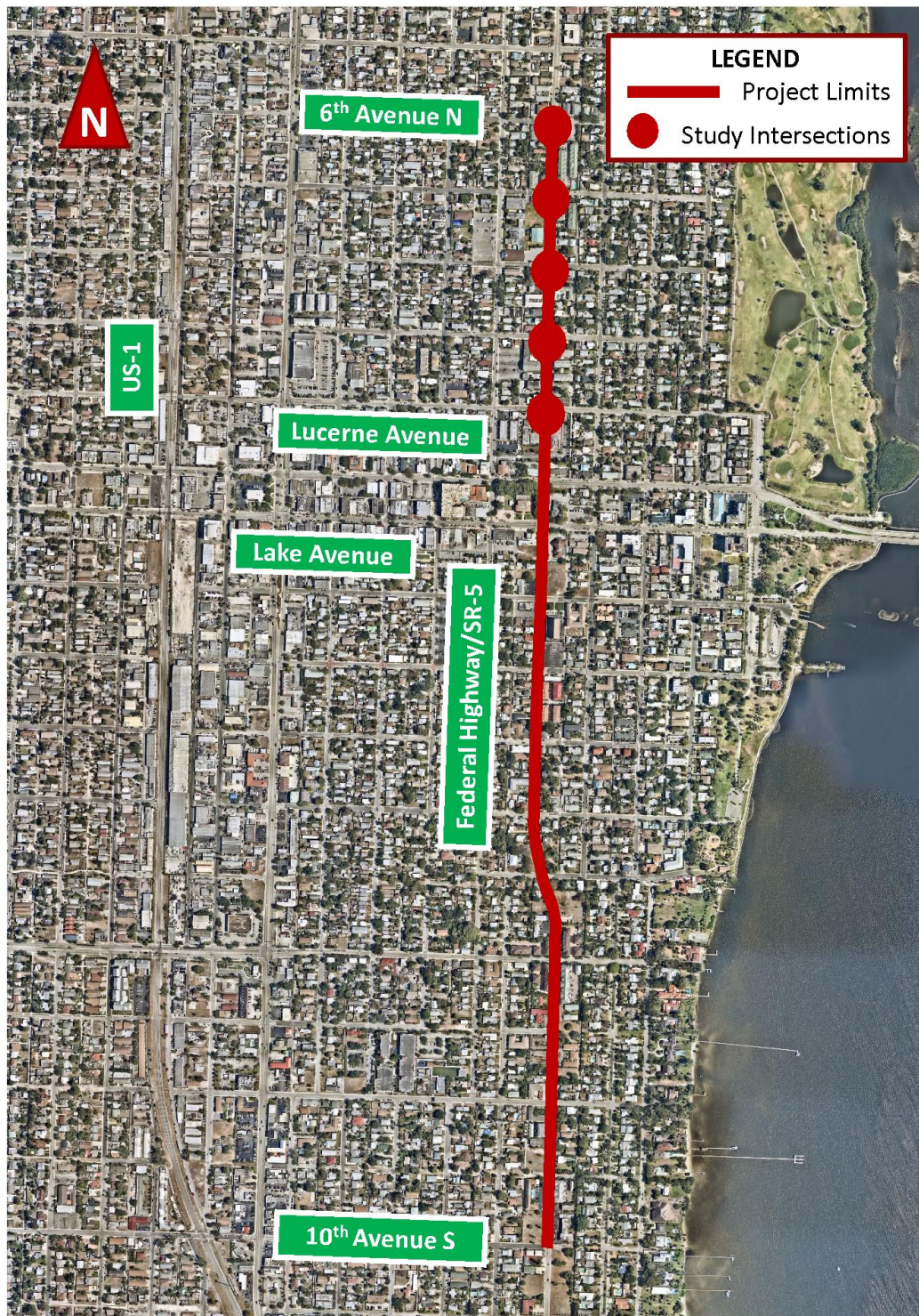


Figure 1: Project Location Map

FEASIBILITY ANALYSIS

A feasibility analysis was conducted to determine if a mini-roundabout could be constructed at each of the 17 study intersections along SR-5/Federal Highway. The 17 study intersections are as follows:

- | | |
|---------------------------|---------------------------|
| 1. 10 th Ave S | 10. 1 st Ave S |
| 2. 9 th Ave S | 11. Lake Ave |
| 3. 8 th Ave S | 12. Lucerne Ave |
| 4. 7 th Ave S | 13. 2 nd Ave N |
| 5. 6 th Ave S | 14. 3 rd Ave N |
| 6. 5 th Ave S | 15. 4 th Ave N |
| 7. 4 th Ave S | 16. 5 th Ave N |
| 8. 3 rd Ave S | 17. 6 th Ave N |
| 9. 2 nd Ave S | |

Right-of-way (ROW) along SR-5/Federal Highway was obtained from the FDOT Right-of-Way (ROW) Mapping website. It was determined that the ROW varied between 40 feet and 50 feet.

The U.S. Department of Transportation (DOT) Federal Highway Administration (FHWA) publication *Roundabouts: An Information Guide* was utilized for the sizing and design requirements of a mini-roundabout. Per Exhibit B-1 the typical inscribed circle diameter of a mini-roundabout should be between 45 and 80 feet. Due to the limited ROW available the smallest 45-foot inscribed diameter was utilized in the feasibility analysis where a 40 feet ROW was provided and a 50-foot inscribed diameter where a 50 feet ROW was available.

Conceptual development plans were developed for each of the 17 study intersections, overlaying a typical mini-roundabout on an aerial which included a ROW layer. The mini-roundabout overlay was then reviewed to determine if the mini-roundabout could be constructed within the existing ROW or if ROW acquisition would be required. The evaluation also considered if the existing sidewalk would need to be relocated to accommodate the mini-roundabout and the impacts to the ROW based on the relocated sidewalk. As ROW acquisition is not included within the scope of the SR-5/Federal Highway resurfacing project (FM# 446173-1), the mini-roundabout was

determined to be “Not Feasible” if ROW was impacted and “Feasible” if ROW was not impacted. Table 1 below summarizes the feasibility results for each of the study intersections. Conceptual development plans for the mini-roundabouts are included in Appendix A.

Table 1: Mini-Roundabout Feasibility Analysis Results				
Intersection(s)	Existing Control	Inscribed Diameter	ROW Impacted?	Feasible?
10th Ave S	TWSC	45 feet	Yes	No
9th Ave S	TWSC	45 feet	Yes	No
8th Ave S	TWSC	45 feet	Yes	No
7th Ave S	TWSC	45 feet	Yes	No
6th Ave S	Signal	45 feet	Yes	No
5th Ave S	TWSC	45 feet	Yes	No
4th Ave S	TWSC	45 feet	Yes	No
3rd Ave S	TWSC	45 feet	Yes	No
2nd Ave S	TWSC	45 feet	Yes	No
1st Ave S	TWSC	45 feet	Yes	No
Lake Ave	Signal	150 feet ⁽¹⁾	Yes	No
Lucerne Ave	Signal	150 feet ⁽¹⁾	Yes	No
2nd Ave N	Signal	50 feet	No	Yes
3rd Ave N	TWSC	50 feet	No	Yes
4th Ave N	TWSC	50 feet	No	Yes
5th Ave N	TWSC	50 feet	No	Yes
6th Ave N	TWSC	45 feet	No	Yes

Note (1): Both Lake Ave and Lucerne Ave are a one-way pair with each roadway having two-lanes requiring a multi-lane roundabout with a 150-foot inscribed diameter.

As shown in Table 1 it was determined that a mini-roundabout was feasible at five (5) intersections. It should be noted that although both Lake Ave and Lucerne Ave are two (2) lane one-way roadways and were determined to be “not feasible” due to the impacts of a multi-lane roundabout, a mini-roundabout was still analyzed for both intersections. However, as mini-roundabouts are single lane only, it would require both Lake Ave and Lucerne Ave to merge down to one (1) lane in advance of the mini-roundabout which would impact operations at adjacent intersections. Therefore, mini-roundabouts were determined to be not feasible at the Lake Ave and Lucerne Ave intersections. Based on the above results, ICE analyses were conducted at the five (5) locations where mini-roundabouts were determined to be feasible.

EXISTING TRAFFIC

A.M. peak period (7:00 A.M. to 9:00 A.M.) and P.M. peak period (4:00 P.M. to 6:00 P.M.) turning movement counts were collected in 15-minute intervals on Tuesday, November 16th, 2021, and included pedestrians and bicyclists at the following five (5) intersections:

- SR-5/Federal Highway and 2nd Avenue North
- SR-5/Federal Highway and 3rd Avenue North
- SR-5/Federal Highway and 4th Avenue North
- SR-5/Federal Highway and 5th Avenue North
- SR-5/Federal Highway and 6th Avenue North

The turning movement count data is included in Appendix B. Figure 2 presents the existing turning movement volumes at the study intersections during the weekday A.M. and P.M. peak hours. Figure 3 summarizes existing lane configurations for the study intersections.

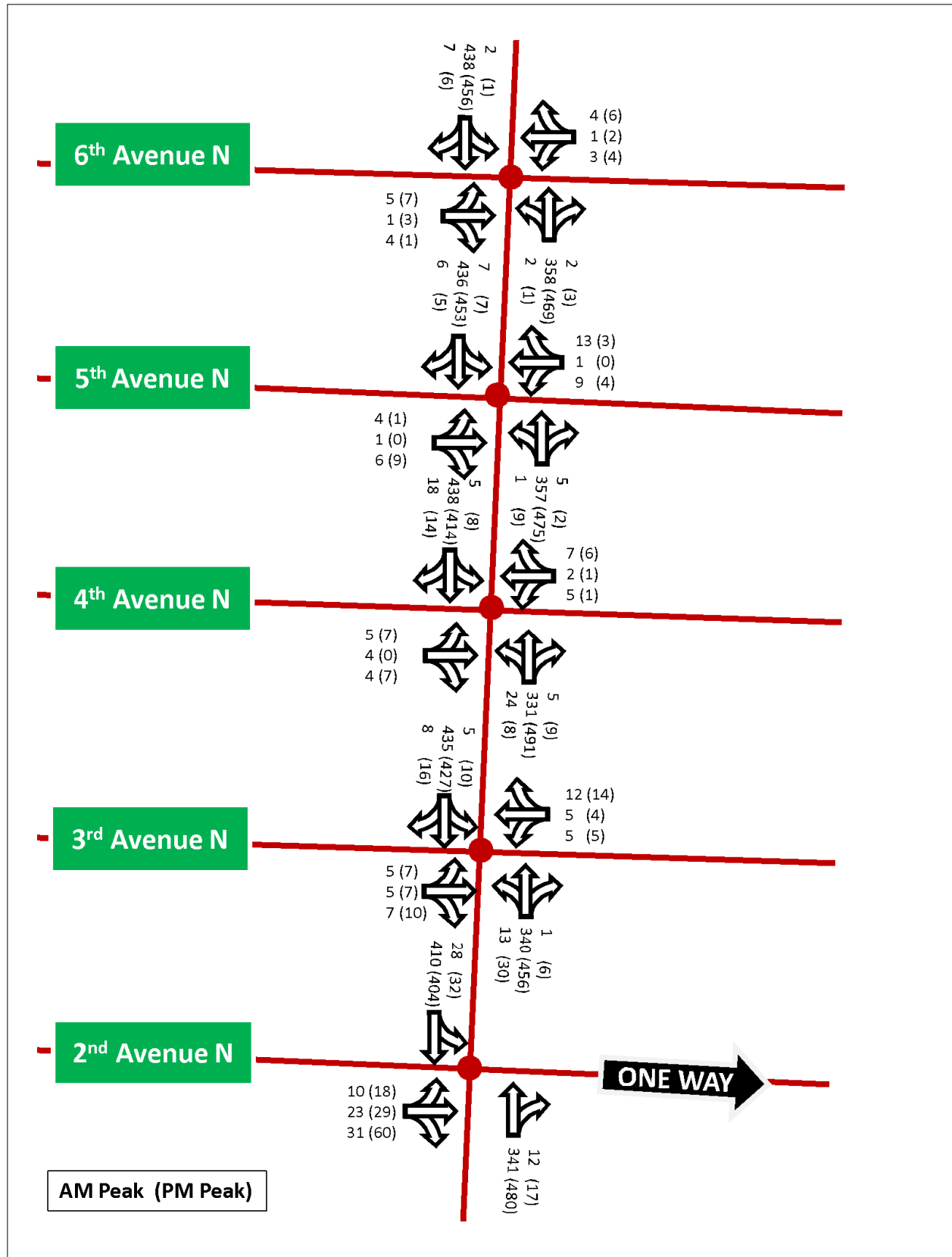


Figure 2: Existing Peak Hour Traffic

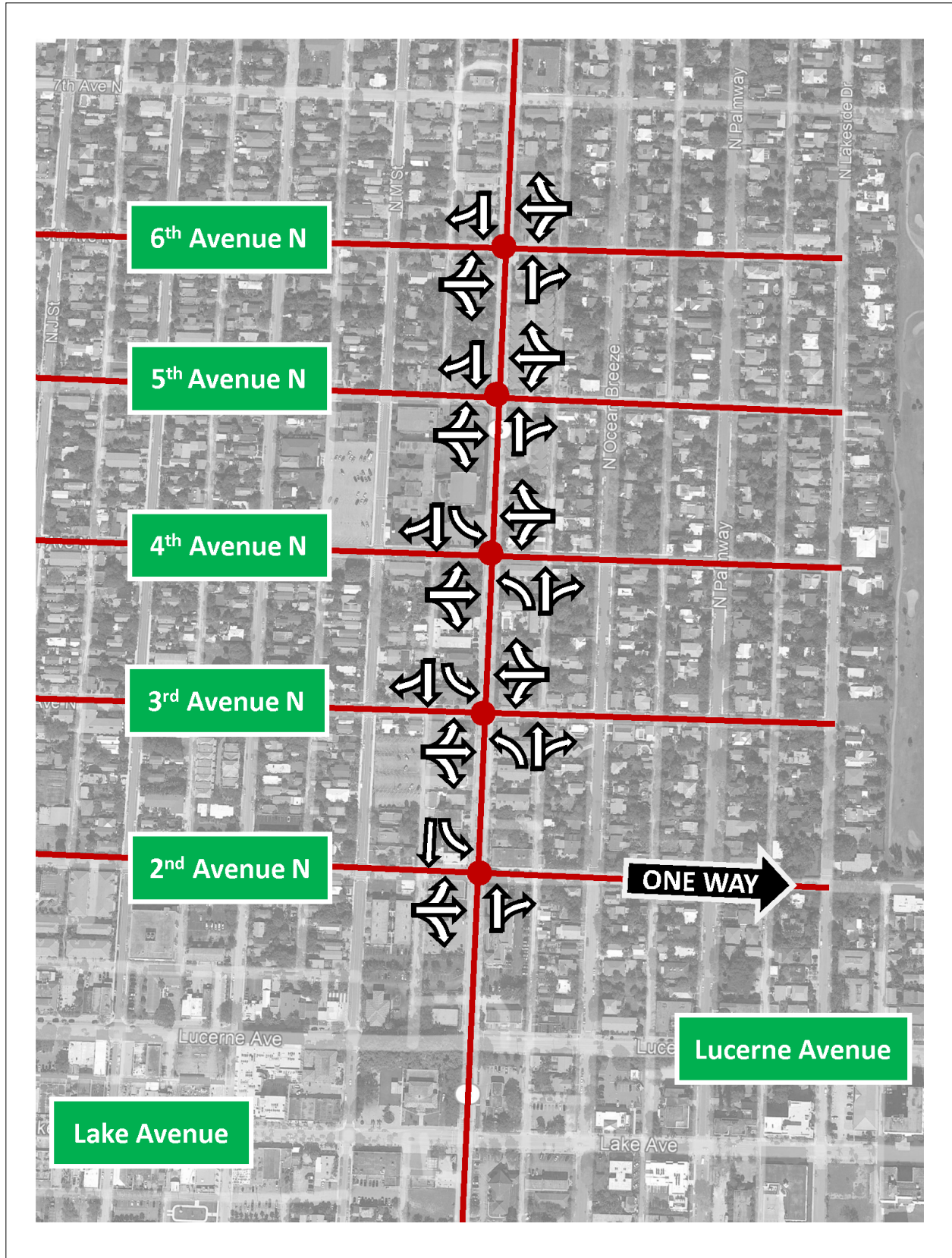


Figure 3: Existing Lane Configuration

FUTURE TRAFFIC

Future traffic conditions are defined as expected traffic conditions on the roadway network during the analysis years due to anticipated future traffic growth. Per Section 2.4.2 Design Year of the *Manual on Intersection Control Evaluation*, the design year for a resurfacing project is 10 years from existing; therefore, the future traffic was developed for a 2031 design year. Future traffic volumes used in the analysis are the sum of the existing traffic and an additional amount of traffic generated by growth in the study area.

Growth Rate Calculations

Future traffic growth on the transportation network was determined based upon (a) historical growth trends at nearby FDOT traffic count stations, and (b) traffic volume comparisons from the year 2015 and 2045 FSUTMS – Southeast Regional Planning Model (SERPM) Version 8.512.

The following nearby FDOT count stations were referenced for this analysis:

- FDOT Count Station #930221 located on SR-5/Olive Ave/Federal Highway, south of Lake and Lucerne Ave (County Link: 4824)
- FDOT Count Station #935056 located on SR-5/Federal Highway, north of SR-802/Lucerne Ave, westbound (County Link: 4802)

A summary of the 10-year historical growth rates based on FDOT count stations is presented in Table 2. The linear growth trend yielded a growth rate of 2.13 percent (2.13%) over the most recent ten (10) year period, and a 2.41 percent (2.41%) on the segment of SR-5/Federal Highway north of Lake Ave and Lucerne Ave which is the segment containing the five (5) intersections determined to be feasible. The exponential growth trend yielded an average growth rate of 1.97 percent (1.97%) over the most recent ten (10) year period, and a 2.20 percent (2.20%) on the segment of SR-5/Federal Highway north of Lake Ave and Lucerne Ave which is the segment containing the five (5) intersections determined to be feasible. It should be noted that the ten (10) year period analyzed was from 2010 to 2019 and did not include 2020 AADTs as 2020 traffic was impacted by the COVID-19 pandemic.

Table 2: Historical Growth Rate Summary			
Station No.	Description	Linear (10-yr)	Exponential (10-yr)
0221	SR-5/Olive Ave/Federal Highway, south of Lake and Lucerne Ave	1.85%	1.73%
5056	SR-5/Federal Highway, north of SR-802/Lucerne Ave, westbound	2.41%	2.20%
Average		2.13%	1.97%

Based on the forecasted volumes obtained from the 2015 and 2045 FSUTMS SERPM, an average annual growth rate of 1.02 percent (1.02%) along the study corridor was calculated as shown in Table 2.

Table 3: Growth Rate Calculations for SERPM 8.512 Volumes				
Roadway Segment	Limits	2015 Model Volumes	2045 Model Volumes	Calculated Annual Growth Rate
SR-5/Federal Highway	south of Lake & Lucerne Ave	5,548	7,317	1.06%
		4,772	7,360	1.81%
	between Lake & Lucerne Ave	6,201	8,298	1.13%
	north of Lake & Lucerne Ave	7,391	9,208	0.82%
		6,695	8,272	0.79%
		6,731	8,279	0.77%
Average				1.02%

As the historical growth rate calculations using FDOT count station information yielded the highest growth rate, it was utilized to provide a conservative analysis. Additionally, as the 2.20 percent (2.20%) exponential growth rate for the segment north of Lake Ave & Lucerne Ave yielded the highest 2031 volumes when applied to the existing 2021 counts, the 2.20 percent (2.20%) exponential growth rate was utilized in the analysis. The worksheets used to analyze the historical growth trends along with the FSUTMS travel demand model outputs are included in Appendix C.

INTERSECTION CONTROL EVALUATION (ICE) ANALYSIS

A Stage 1 ICE analysis was conducted for the five (5) study locations. Stage 1 consists of two (2) parts: (1) FHWA's Capacity Analysis for Planning of Junctions (CAP-X); and (2) FHWA's Safety Performance of Intersection Control Evaluations (SPICE). CAP-X is an operational analysis and SPICE is a safety analysis. The following sections summarize the results of the CAP-X and SPICE analyses.

CAP-X

Table 4 summarizes the results of the CAP-X analyses for each of the five (5) study intersections. As can be seen from the results, the mini-roundabout (50 ICD) provides adequate capacity (i.e. $v/c < 0.70$) for all study intersections during both the A.M. and P.M. peak hours. It should be noted that the two-way stop control and traffic signal configurations provide "Poor" Pedestrian and Bicycle Accommodations per the CAP-X analysis while the mini-roundabout (50 ICD) and all-way stop control configurations provide "Fair" Pedestrian and Bicycle Accommodations and provide the best Multimodal Scores of the four study configurations. Detailed CAP-X results are provided in Appendix D.

Table 4: CAP-X Results										
Type of Intersection	V/C									
	2nd Ave N		3rd Ave N		4th Ave N		5th Ave N		6th Ave N	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Two-Way Stop Control	0.30	0.62	0.31	0.34	0.32	0.35	0.32	0.34	0.32	0.33
All-Way Stop Control	0.72	0.88	0.71	0.85	0.72	0.82	0.72	0.81	0.88	1.01
Traffic Signal	0.35	0.46	0.36	0.38	0.37	0.39	0.36	0.36	0.34	0.36
Mini-Roundabout (50 ICD)	0.55	0.69	0.58	0.63	0.60	0.64	0.57	0.61	0.57	0.60

SPICE

Tables 5 and 6 summarize the results of the SPICE Crash Prediction and SSI Scores, respectively, for each of the five (5) study intersections. As shown in Table 5 the mini-roundabout was ranked 1st for five (5) of the six (6) intersections. As shown in Table 6 the mini-roundabout was ranked

1st for one (1) intersection and 3rd for the other five (5) intersections. Detailed SPICE results are provided in Appendix E.

Table 5: SPICE Crash Prediction Results					
Control Strategy	Crash Prediction Rank				
	2nd Ave N	3rd Ave N	4th Ave N	5th Ave N	6th Ave N
Traffic Signal	2	4	4	4	4
Minor Road Stop	3	3	3	3	3
All-Way Stop	4	2	2	2	1
1-lane (Mini) Roundabout	1	1	1	1	2

Table 6: SPICE SSI Results					
Control Strategy	SSI Rank				
	2nd Ave N	3rd Ave N	4th Ave N	5th Ave N	6th Ave N
Traffic Signal	3	1	2	2	2
Minor Road Stop	4	4	4	4	4
All-Way Stop	2	2	1	1	1
1-lane (Mini) Roundabout	1	3	3	3	3

CONCLUSION

The City of Lake Worth Beach and the Palm Beach TPA are evaluating speed management strategies to proceed with for the SR-5/Federal Highway corridor in advance of the FDOT starting their upcoming SR-5 resurfacing project. The SR-5 resurfacing project (FM# 446173-1) from 10th Ave S to 6th Ave N is currently in design and is scheduled for construction in FY 2024.

The peak period AM and PM peak hour Stage 1 ICE analyses (CAP-X and SPICE) show that mini-roundabouts are anticipated to provide sufficient capacity and safety at each of the study intersections along the SR-5 corridor. Additionally, the CAP-X results show the mini-roundabout configuration has the highest multi-modal score of the four (4) analyzed traffic control strategies and the SPICE results show the mini-roundabout was ranked highest for crash prediction.

Appendix A

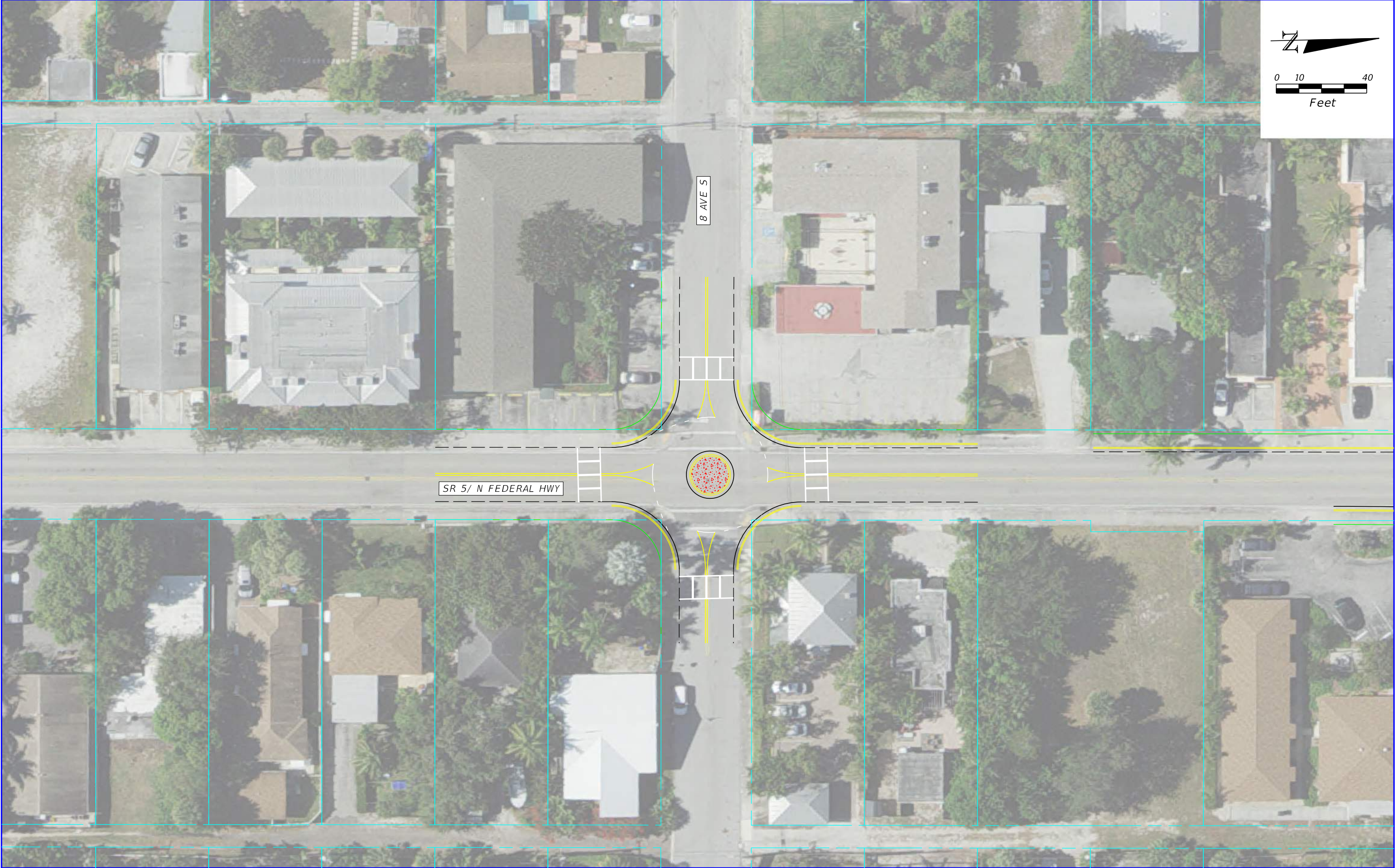
Conceptual Development Plans



REVISIONS				CITY OF LAKE WORTH BEACH			10 AVE S/ SR 5/N FEDERAL HWY ROUNABOUT FEASIBILITY	SHEET NO. 1
DATE	DESCRIPTION	DATE	DESCRIPTION					
				ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				5	PALM BEACH			



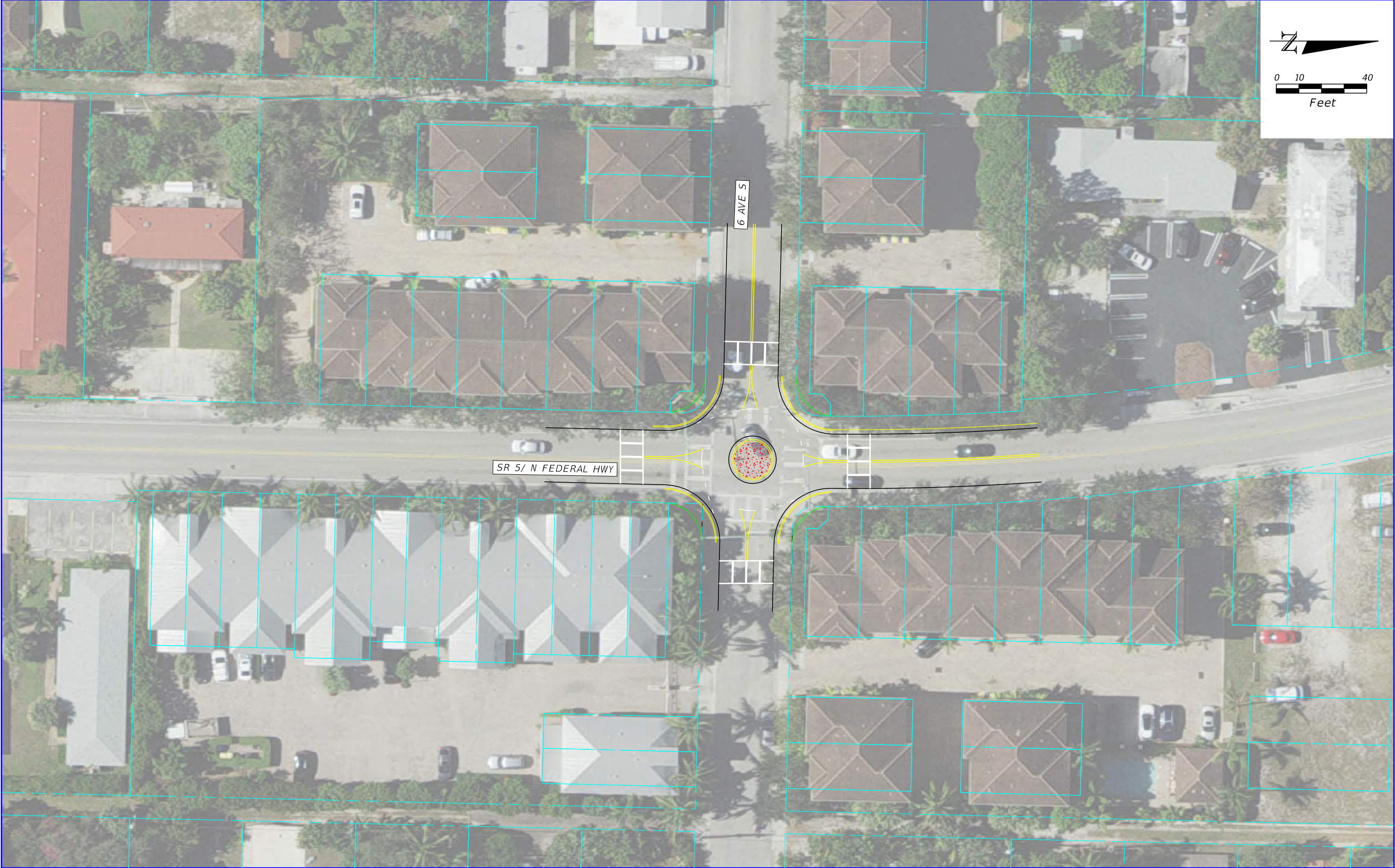
REVISIONS					CITY OF LAKE WORTH BEACH			9 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY		SHEET NO. 2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID			
					5	PALM BEACH				



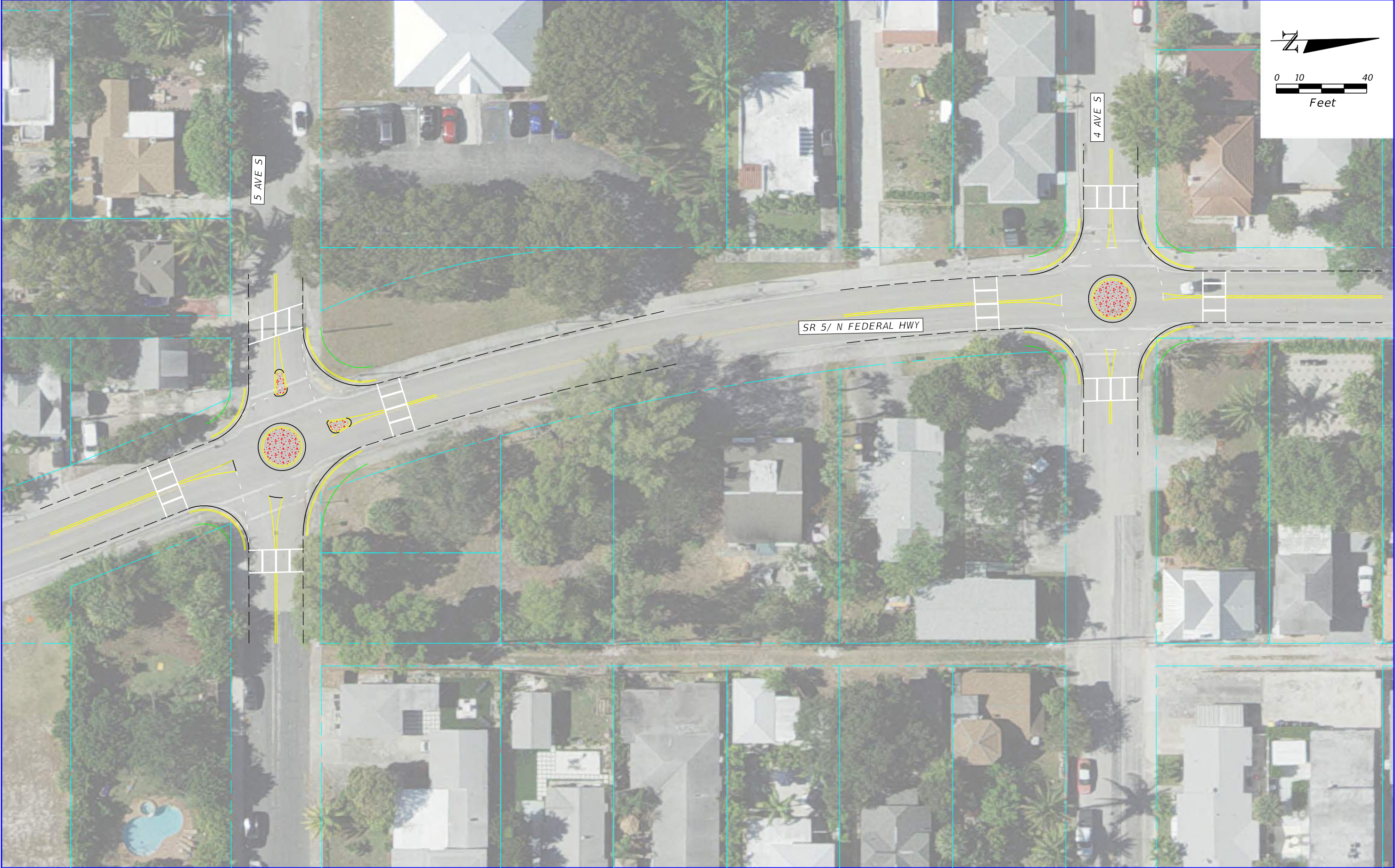
REVISIONS					CITY OF LAKE WORTH BEACH			8 AVE S/ SR 5/N FEDERAL HWY ROUNABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH			3



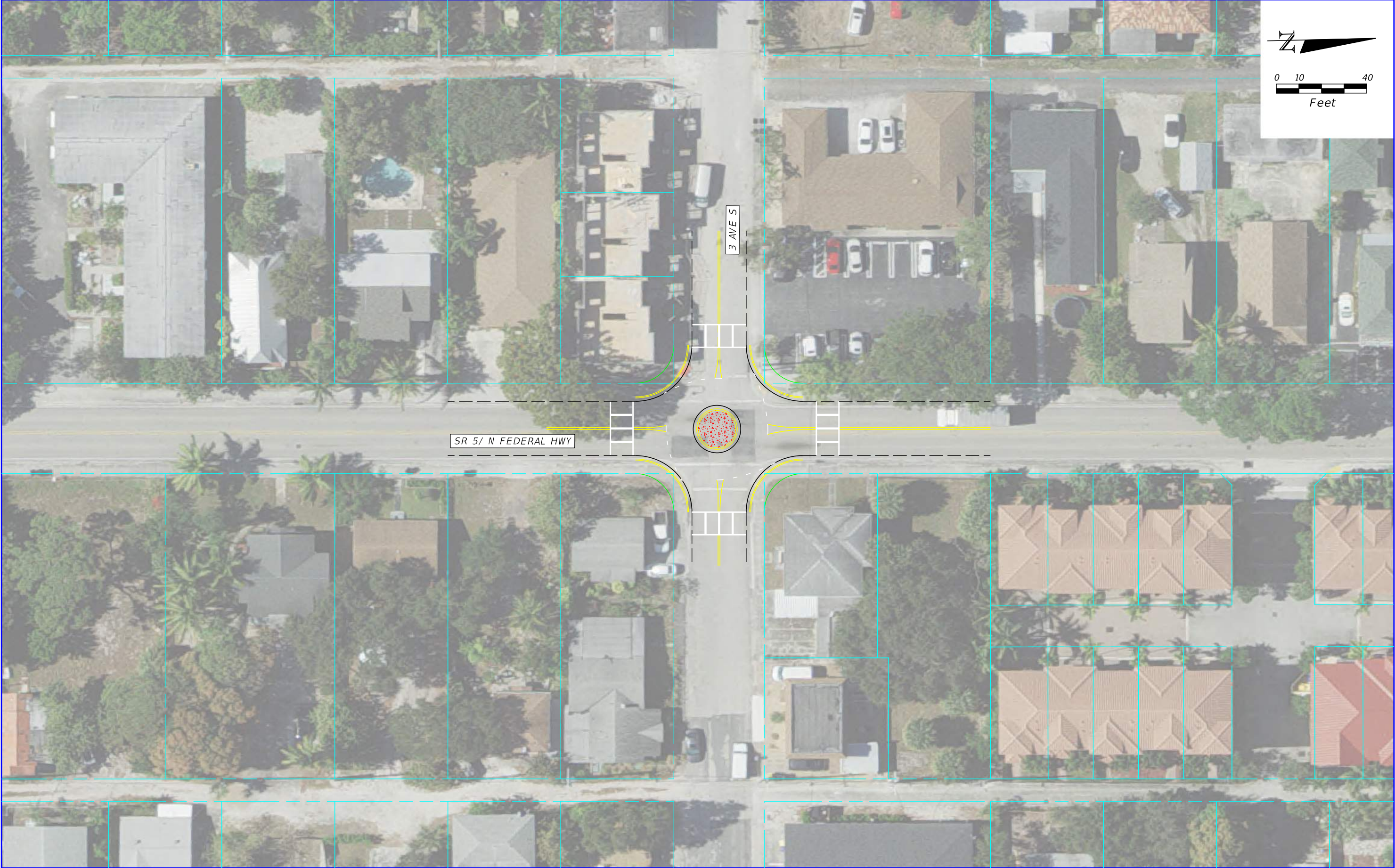
REVISIONS					CITY OF LAKE WORTH BEACH			7 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		4
					5	PALM BEACH			



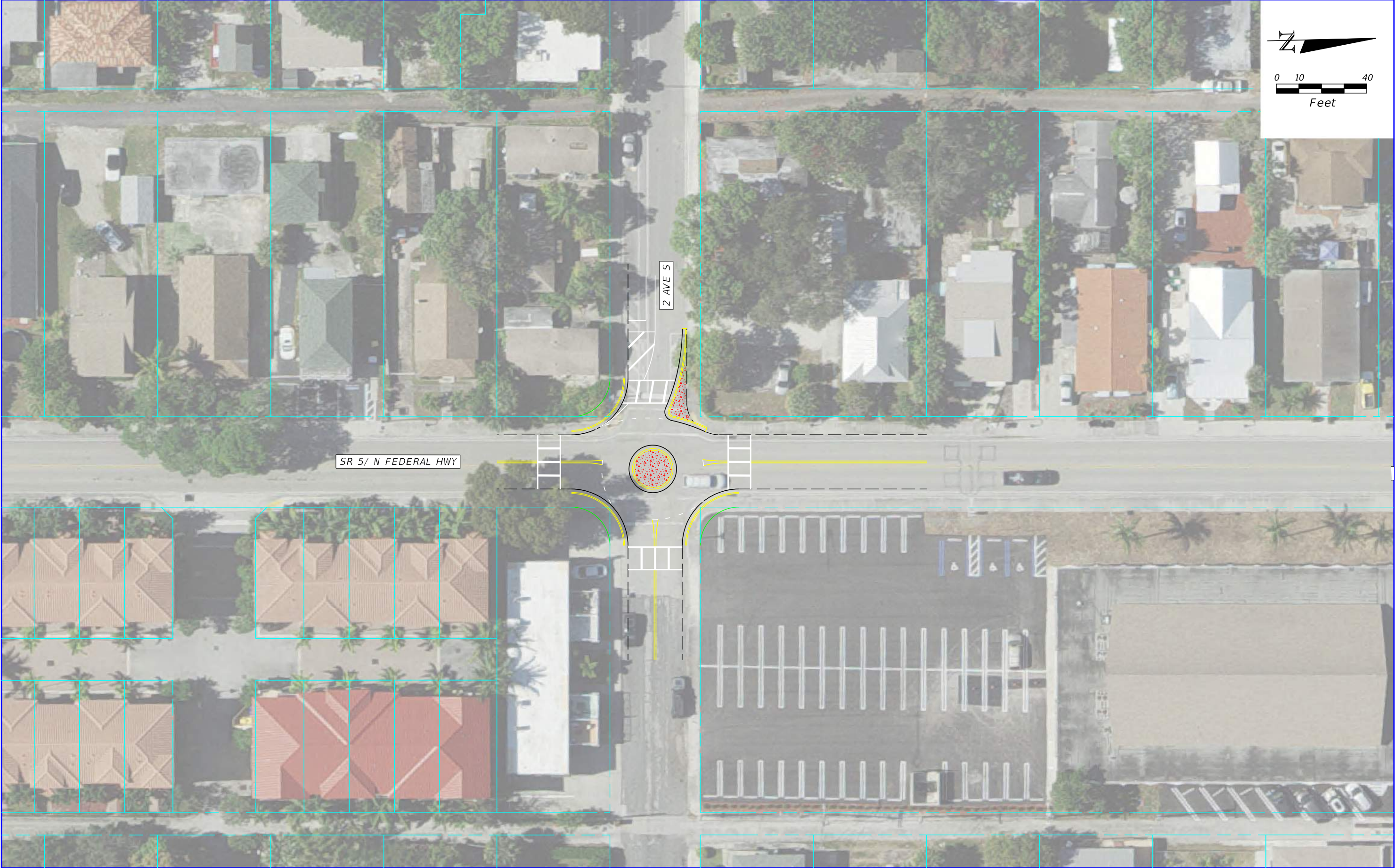
REVISIONS					CITY OF LAKE WORTH BEACH			6 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH		5	




REVISIONS					CITY OF LAKE WORTH BEACH			5 AVE S AND 4 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		6
					5	PALM BEACH			



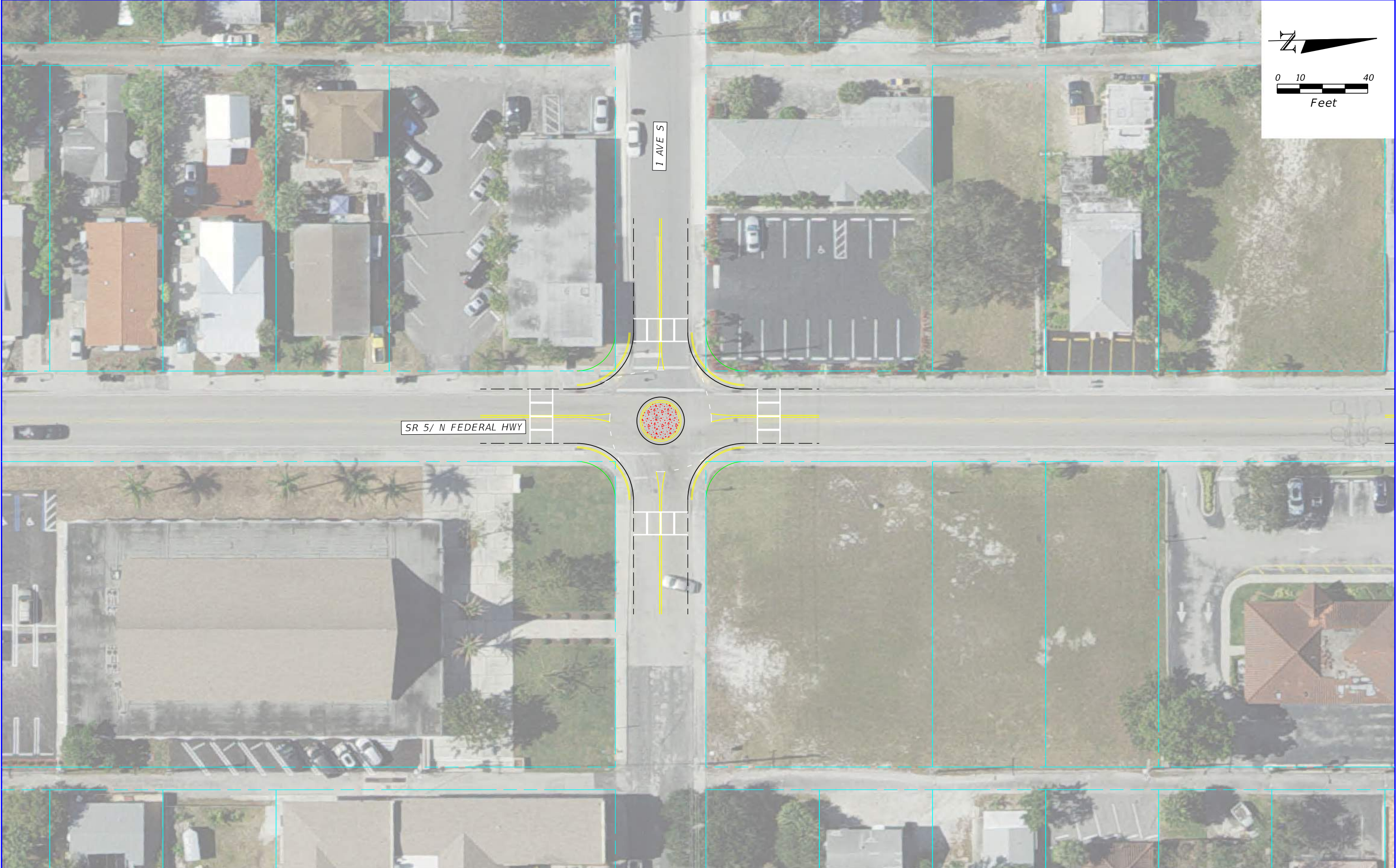
REVISIONS				CITY OF LAKE WORTH BEACH			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
				ROAD NO.	COUNTY	FINANCIAL PROJECT ID	7
				5	PALM BEACH		



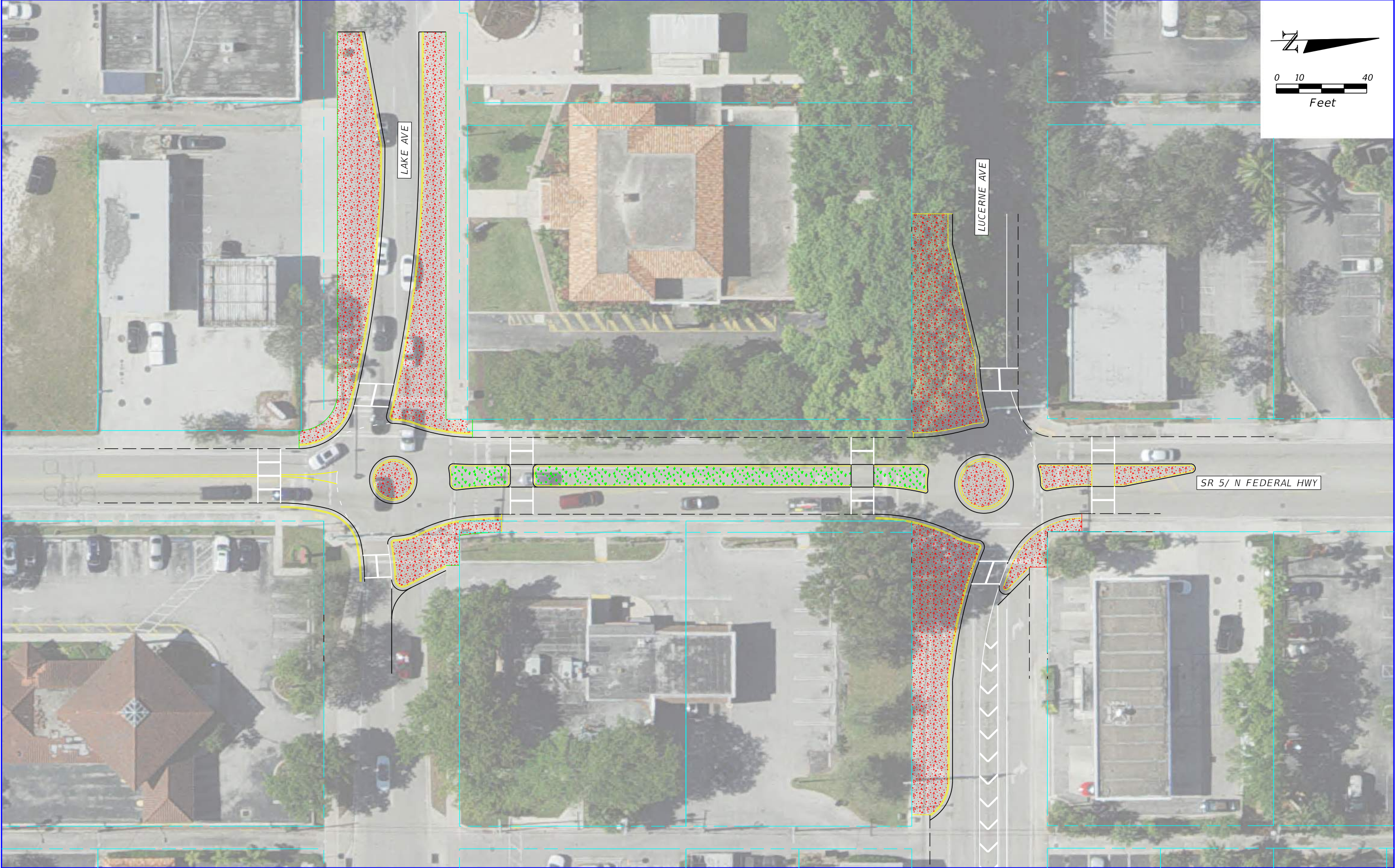


01040
Feet

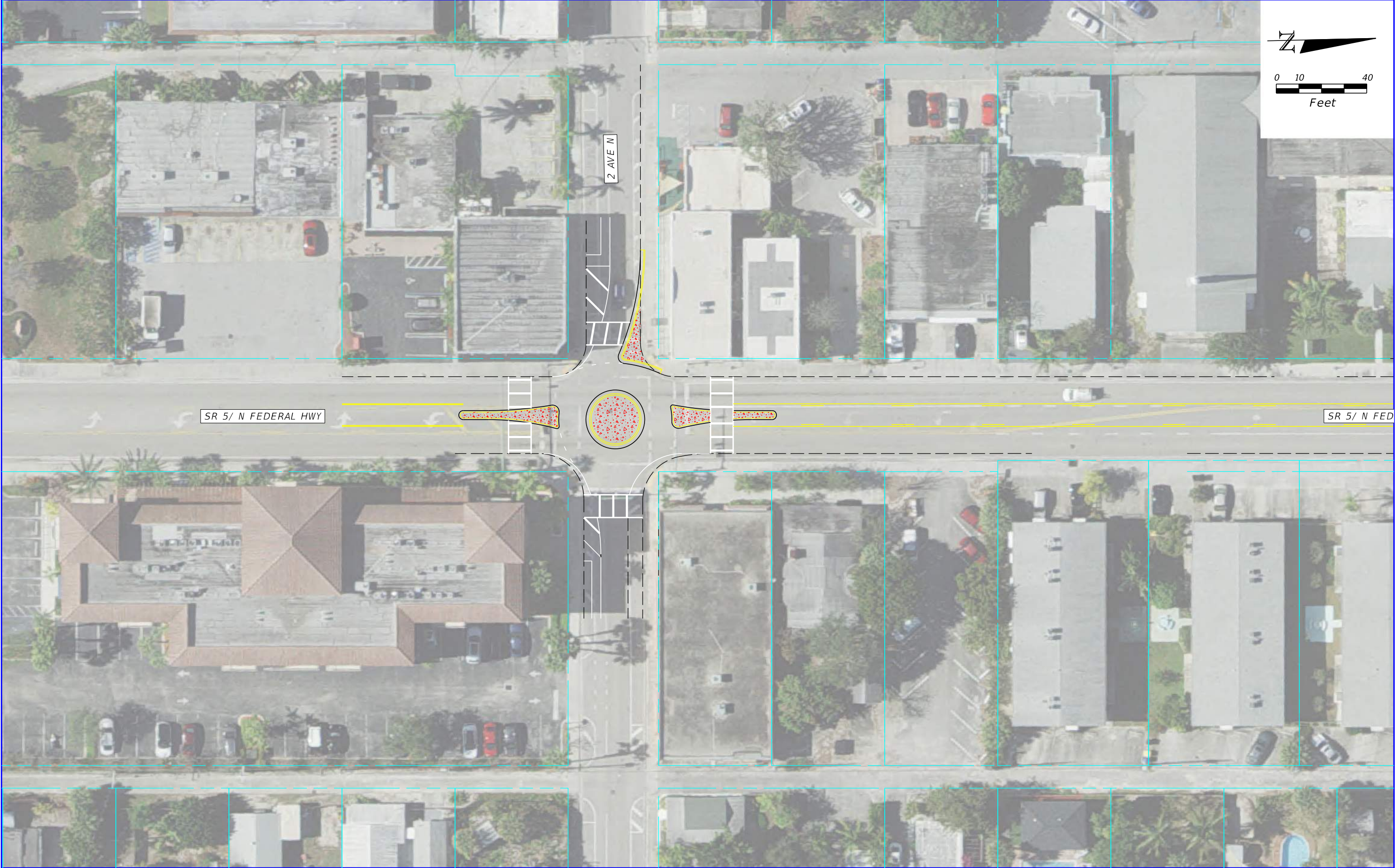
REVISIONS					CITY OF LAKE WORTH BEACH			2 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		8
					5	PALM BEACH			



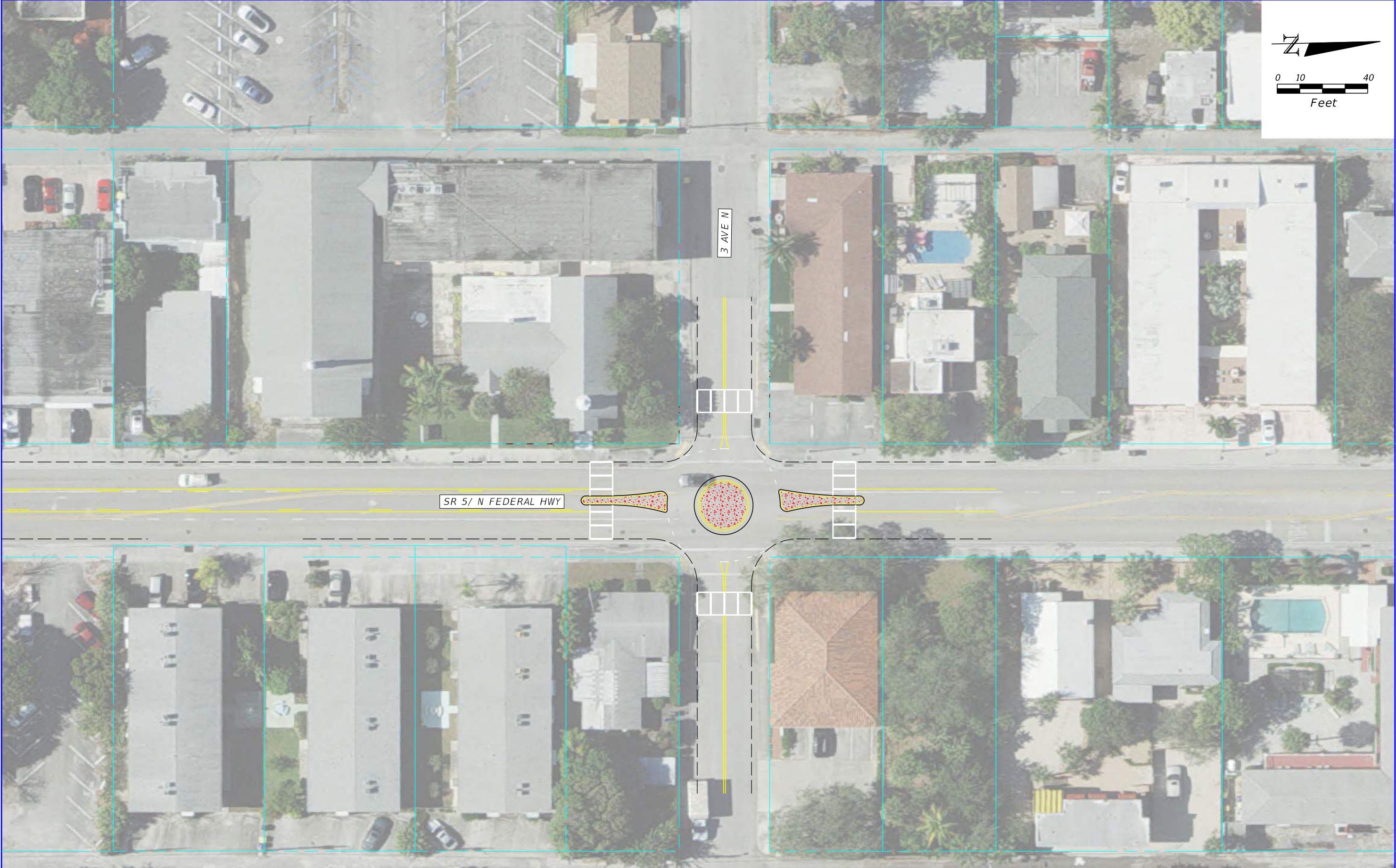
REVISIONS				CITY OF LAKE WORTH BEACH			1 AVE S/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO. 9
DATE	DESCRIPTION	DATE	DESCRIPTION					
				ROAD NO. 5	COUNTY PALM BEACH	FINANCIAL PROJECT ID		



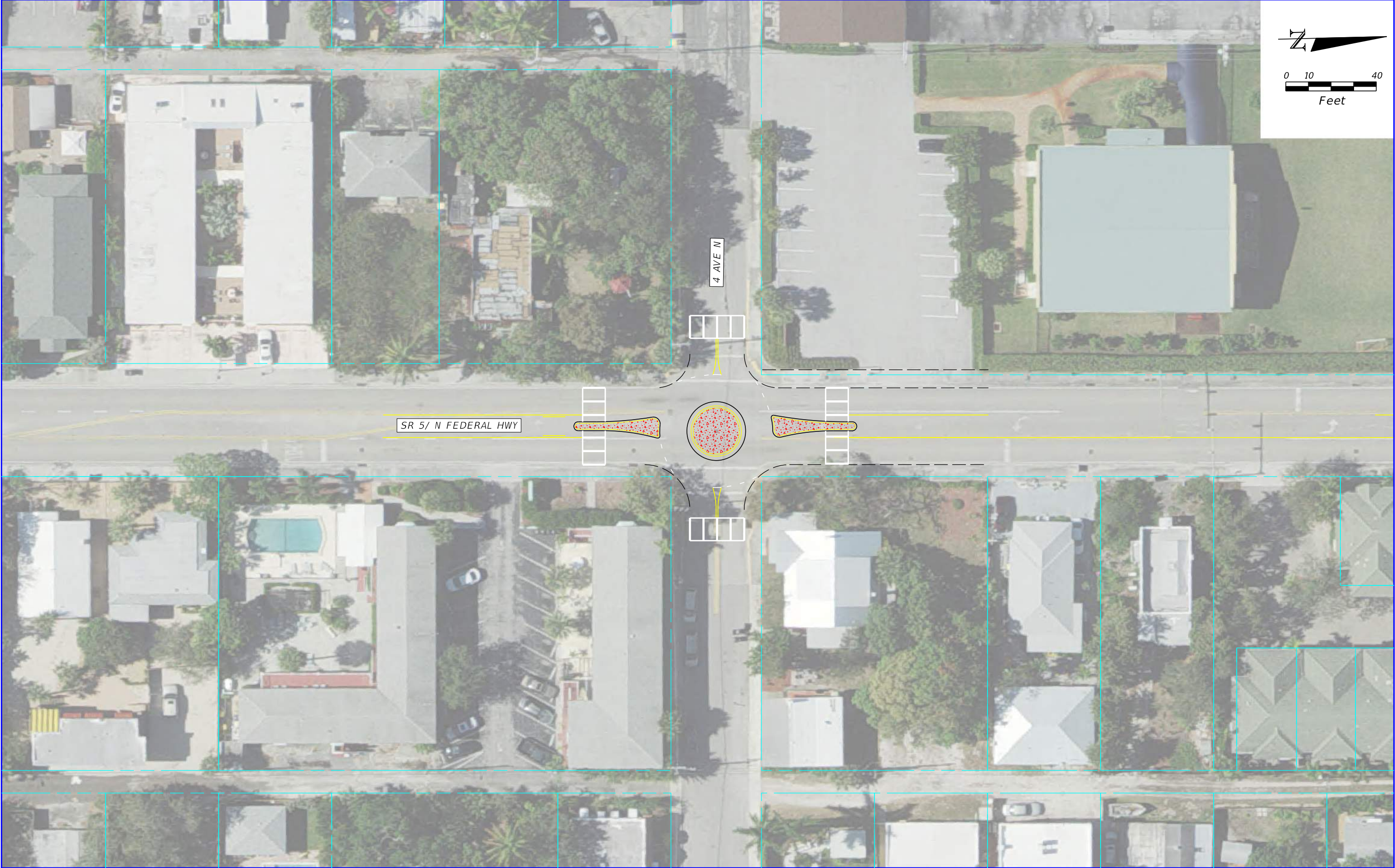
REVISIONS					CITY OF LAKE WORTH BEACH			LAKE AVE AND LUCERNE AVE/ SR 5/N FEDERAL HWY ROUNDBOUT FEASIBILITY	SHEET NO. 10
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH			



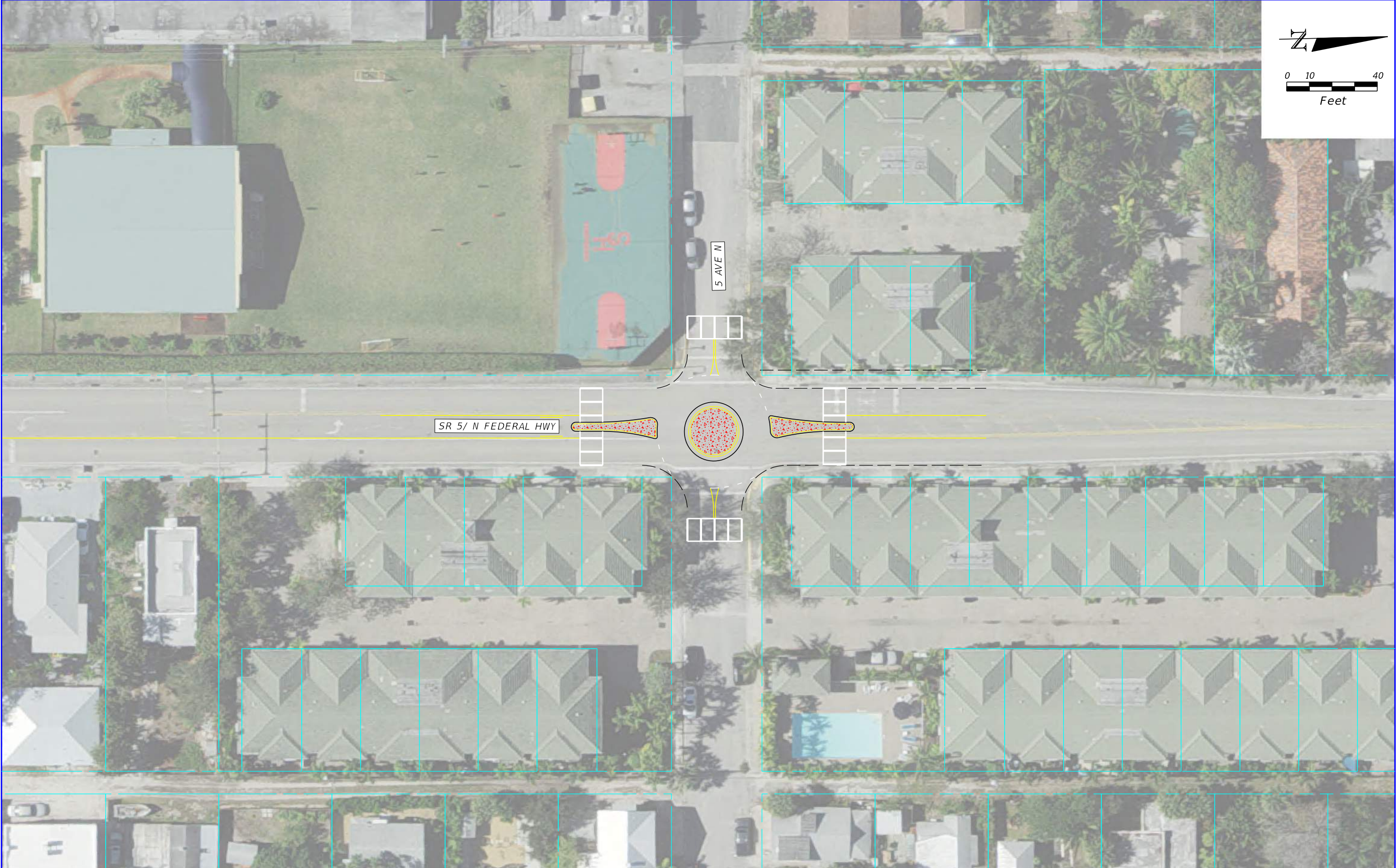
REVISIONS					CITY OF LAKE WORTH BEACH			2 AVE N/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID				
					5	PALM BEACH					11



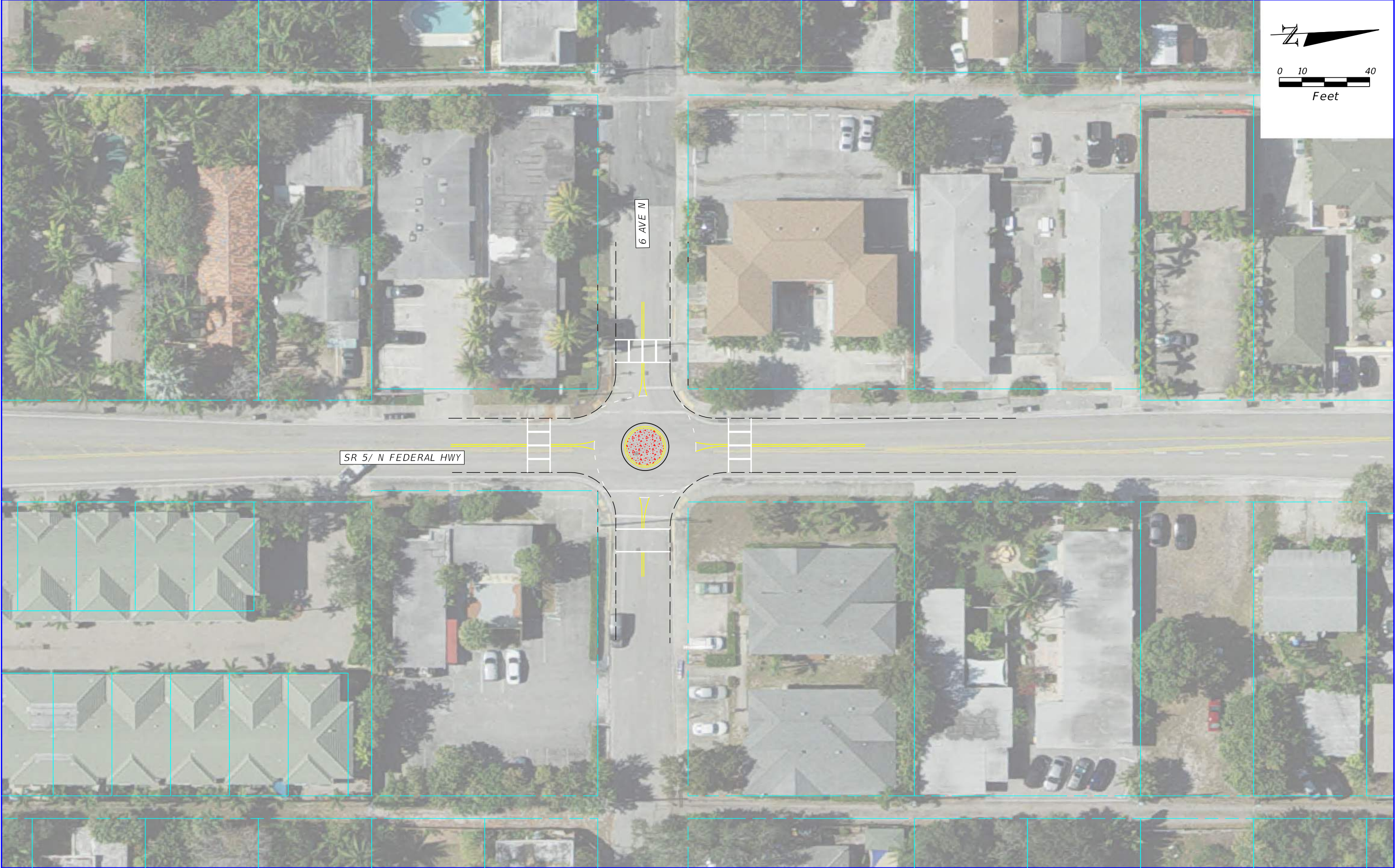
REVISIONS				CITY OF LAKE WORTH BEACH			3 AVE N/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO. 12
DATE	DESCRIPTION	DATE	DESCRIPTION					
				ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				5	PALM BEACH			




REVISIONS					CITY OF LAKE WORTH BEACH			4 AVE N/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH			13



REVISIONS					CITY OF LAKE WORTH BEACH			5 AVE N/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH			14





01040
Feet

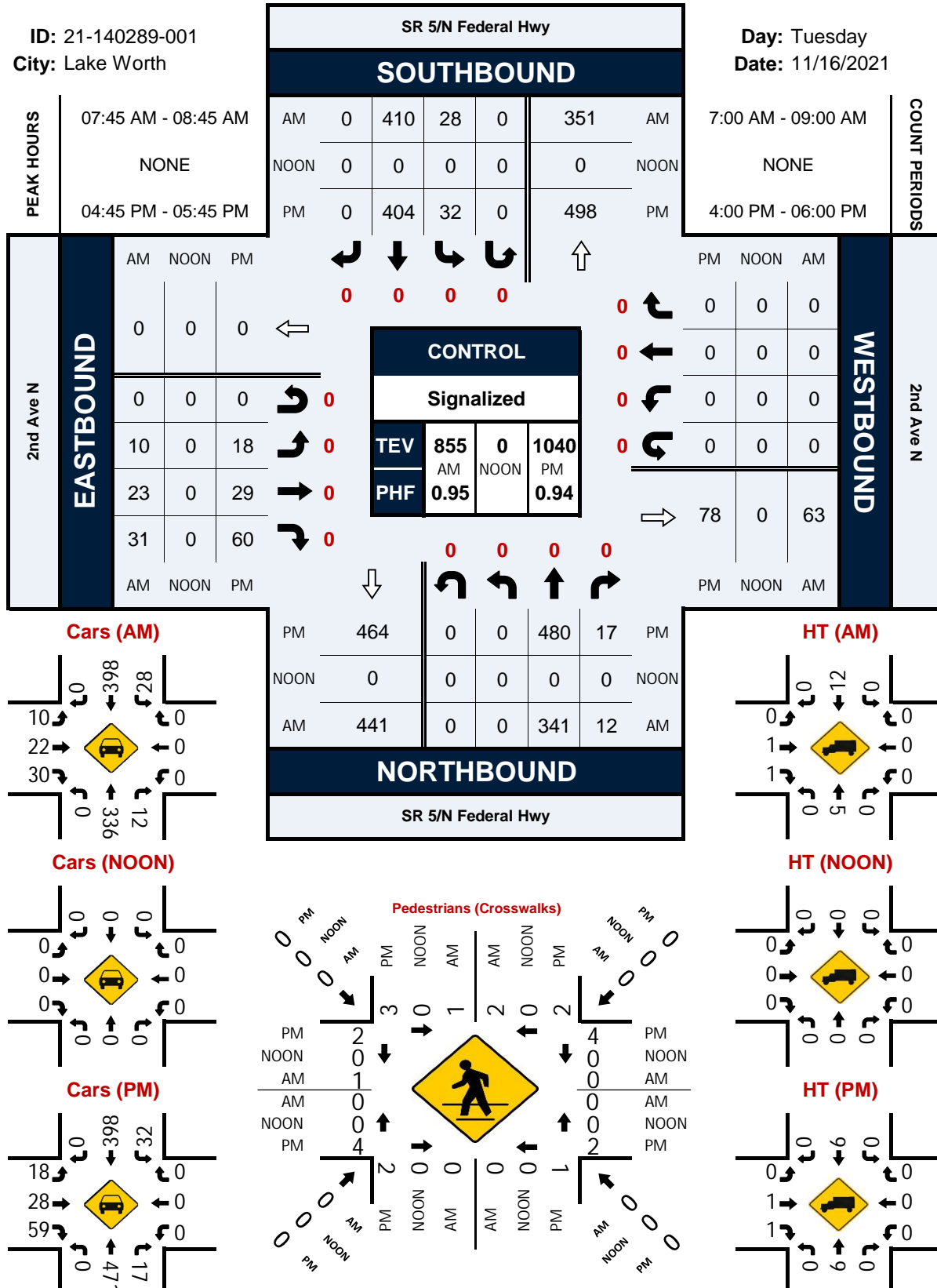
REVISIONS					CITY OF LAKE WORTH BEACH			6 AVE N/ SR 5/N FEDERAL HWY ROUNDAABOUT FEASIBILITY	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					5	PALM BEACH			15

Appendix B

Traffic Data

Turning Movement Counts

Day: Tuesday
Date: 11/16/2021

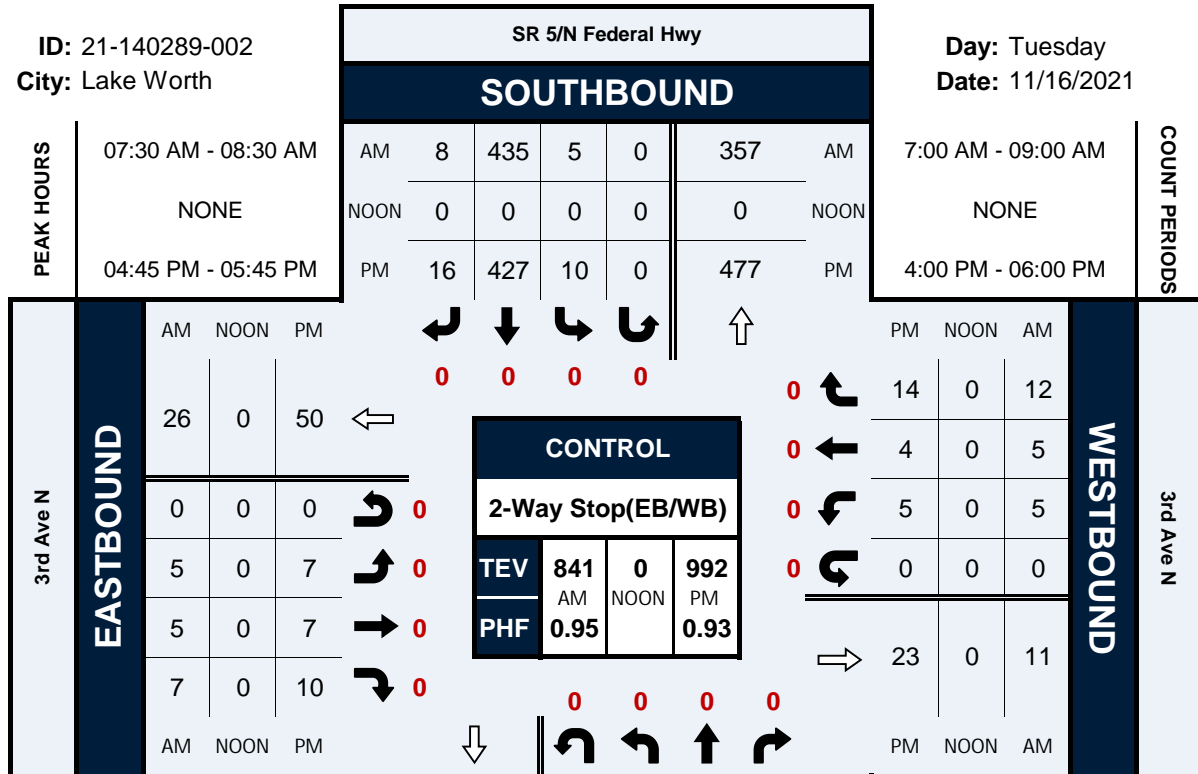


SR 5/N Federal Hwy & 3rd Ave N

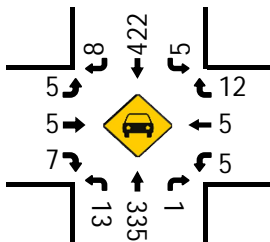
Peak Hour Turning Movement Count

ID: 21-140289-002
City: Lake Worth

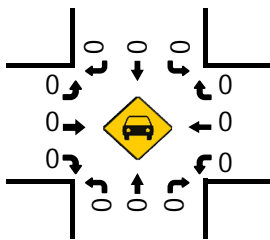
Day: Tuesday
Date: 11/16/2021



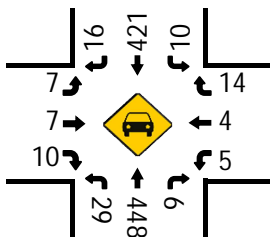
Cars (AM)



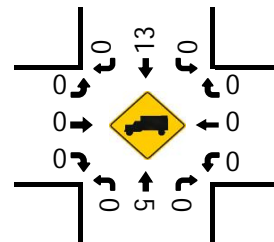
Cars (NOON)



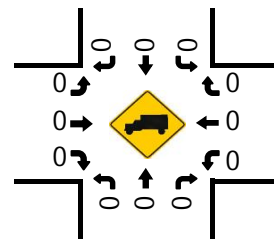
Cars (PM)



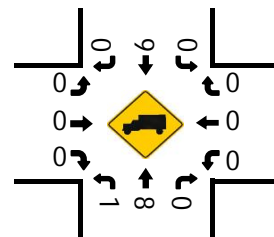
HT (AM)



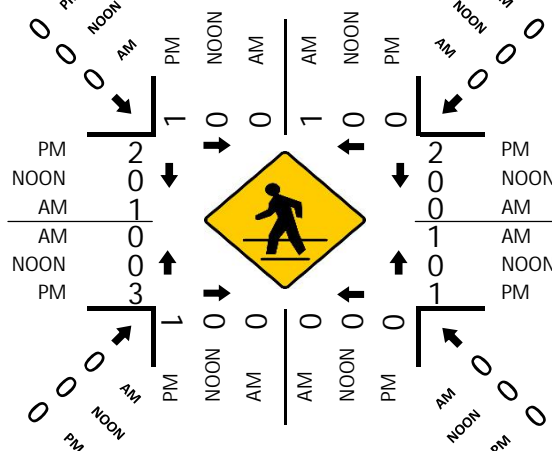
HT (NOON)



HT (PM)



Pedestrians (Crosswalks)

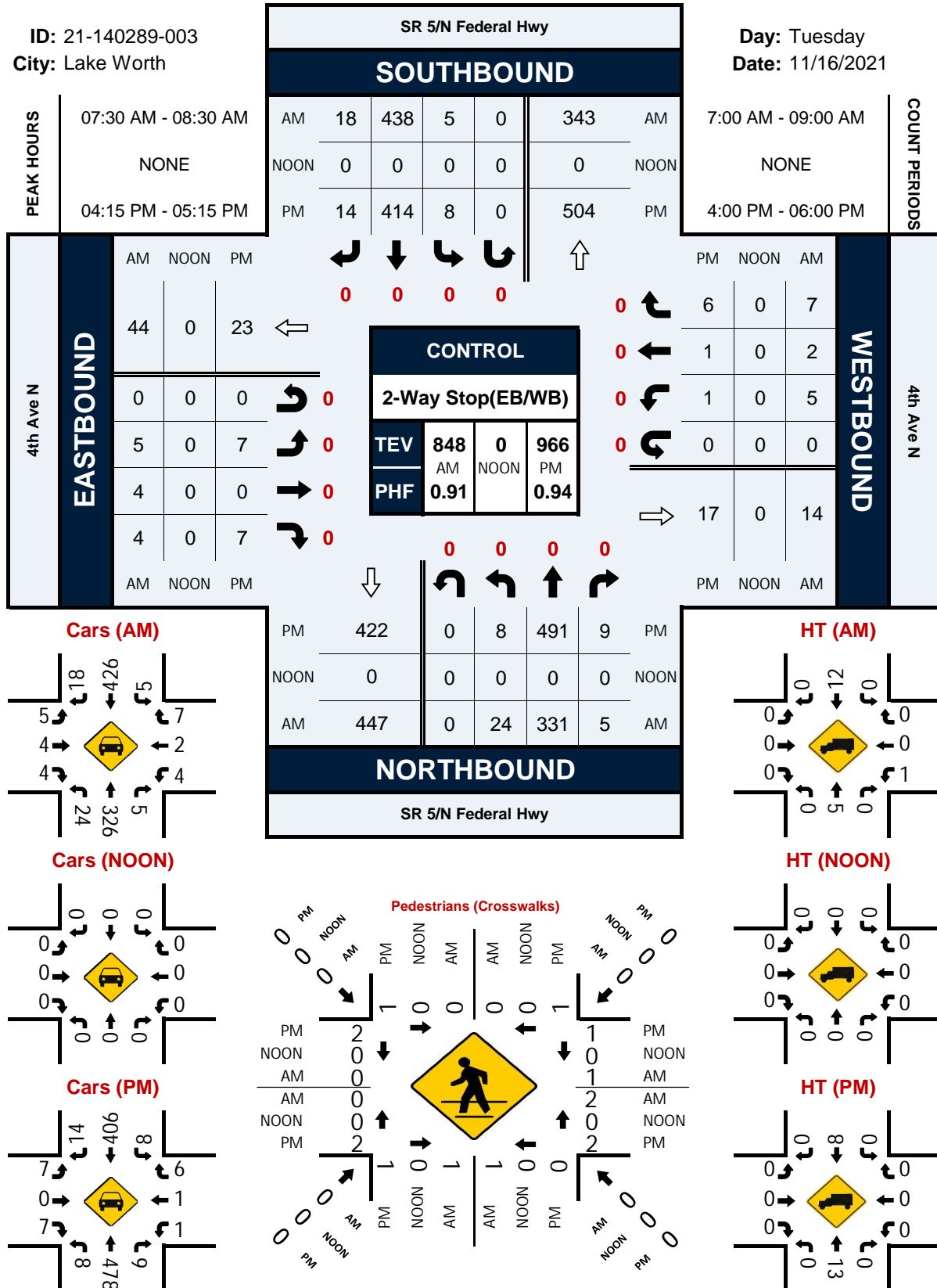


SR 5/N Federal Hwy & 4th Ave N

Peak Hour Turning Movement Count

ID: 21-140289-003
City: Lake Worth

Day: Tuesday
Date: 11/16/2021

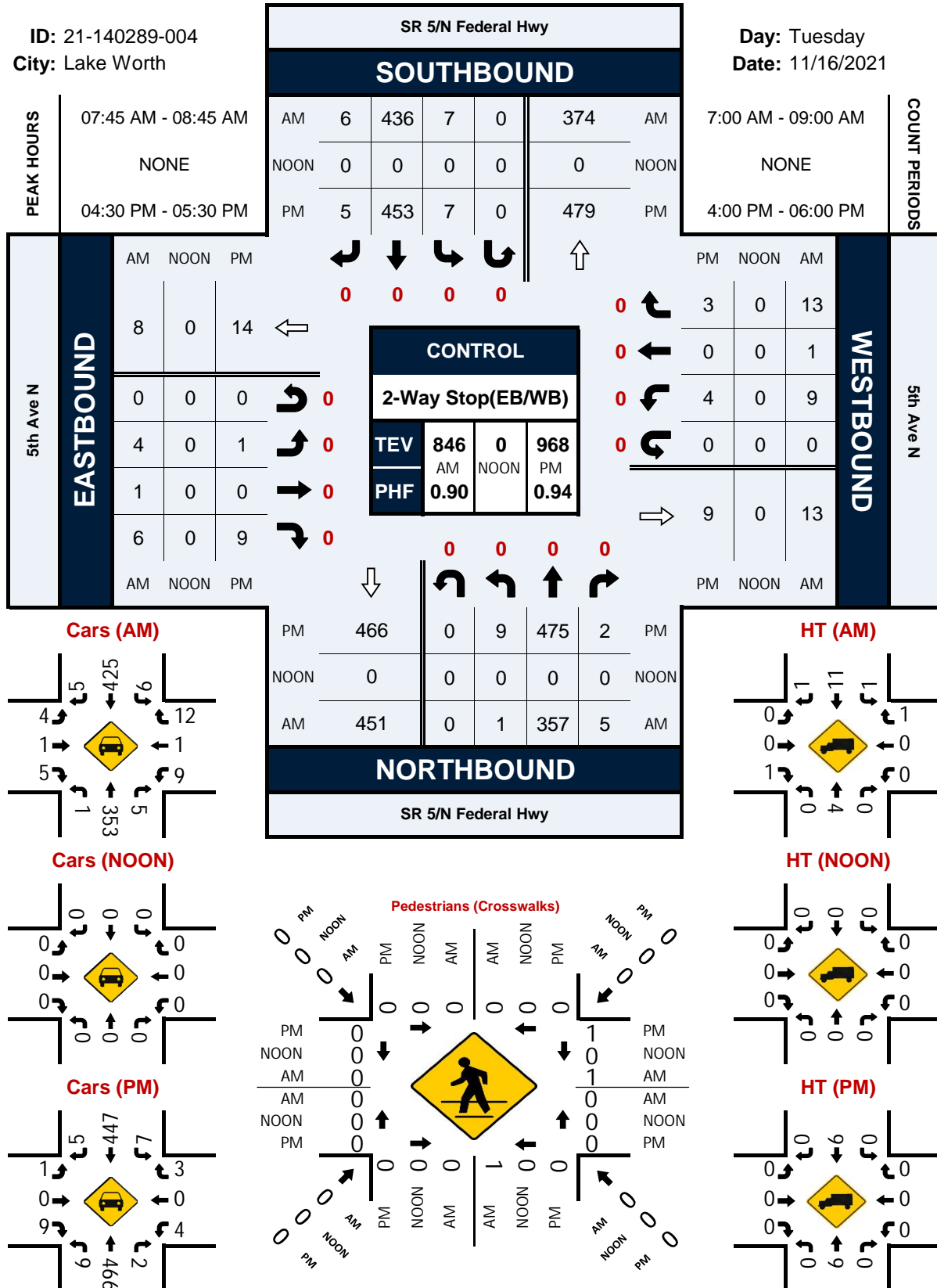


SR 5/N Federal Hwy & 5th Ave N

Peak Hour Turning Movement Count

ID: 21-140289-004
City: Lake Worth

Day: Tuesday
Date: 11/16/2021

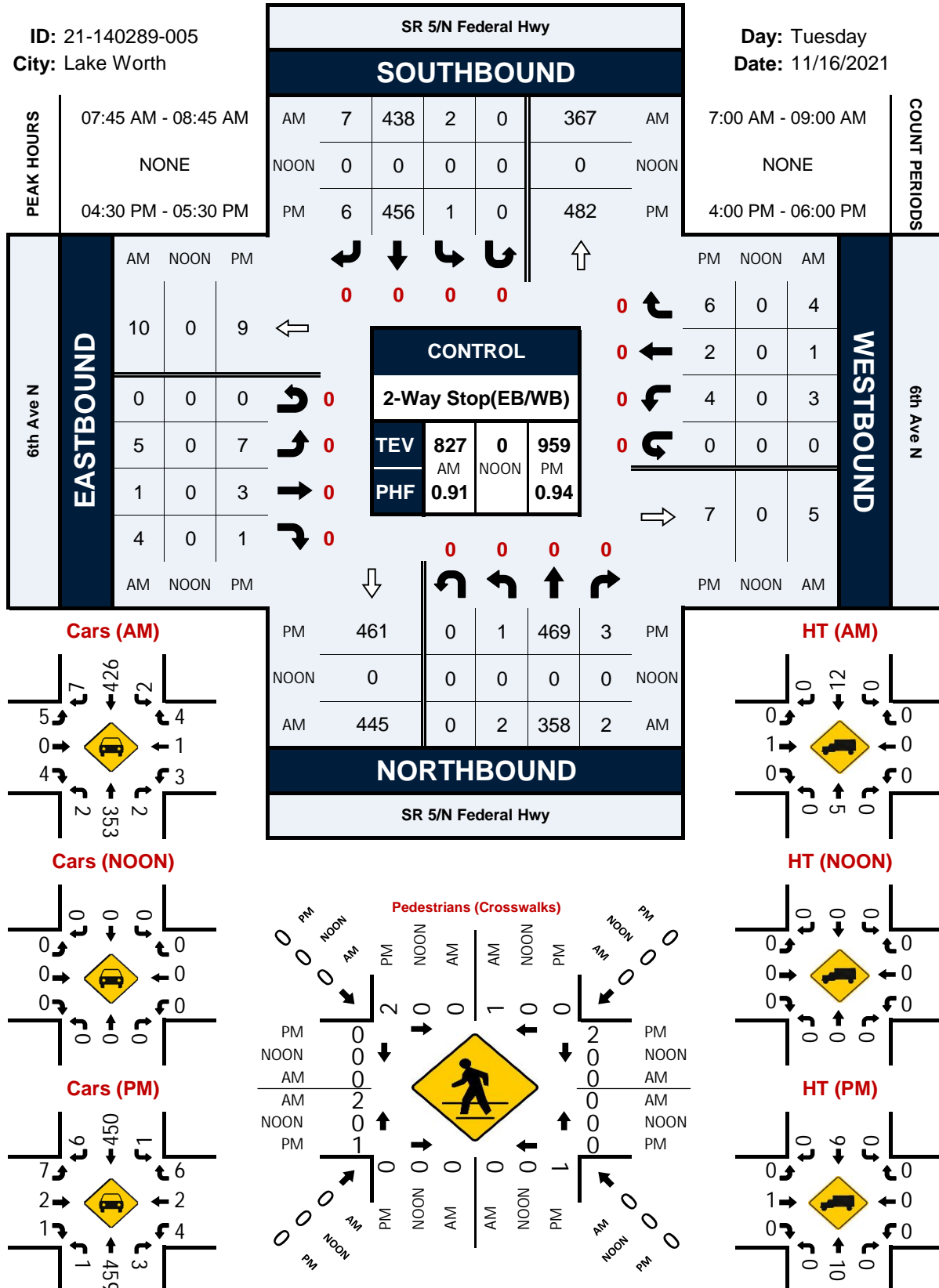


SR 5/N Federal Hwy & 6th Ave N

Peak Hour Turning Movement Count

ID: 21-140289-005
City: Lake Worth

Day: Tuesday
Date: 11/16/2021



Appendix C

Growth Rate Calculations

FDOT Historic Growth Trends

FDOT Growth Rate Summary

Station Number	Location	Historic Growth- Linear				Historic Growth- Exponential			
		5-year	R-squared	10-year	R-squared	5-year	R-squared	10-year	R-squared
0221	SR 5/Olive Ave - S of Lake & Lucerne Ave	2.38%	38.17%	1.85%	43.24%	2.30%	38.83%	1.73%	43.00%
5056	SR 5/Federal Highway - N of SR 802/Lucerne Ave	-0.75%	1.70%	2.41%	37.55%	-0.76%	1.27%	2.20%	41.08%
Total		0.82%	19.94%	2.13%	40.40%	0.77%	20.05%	1.97%	42.04%

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

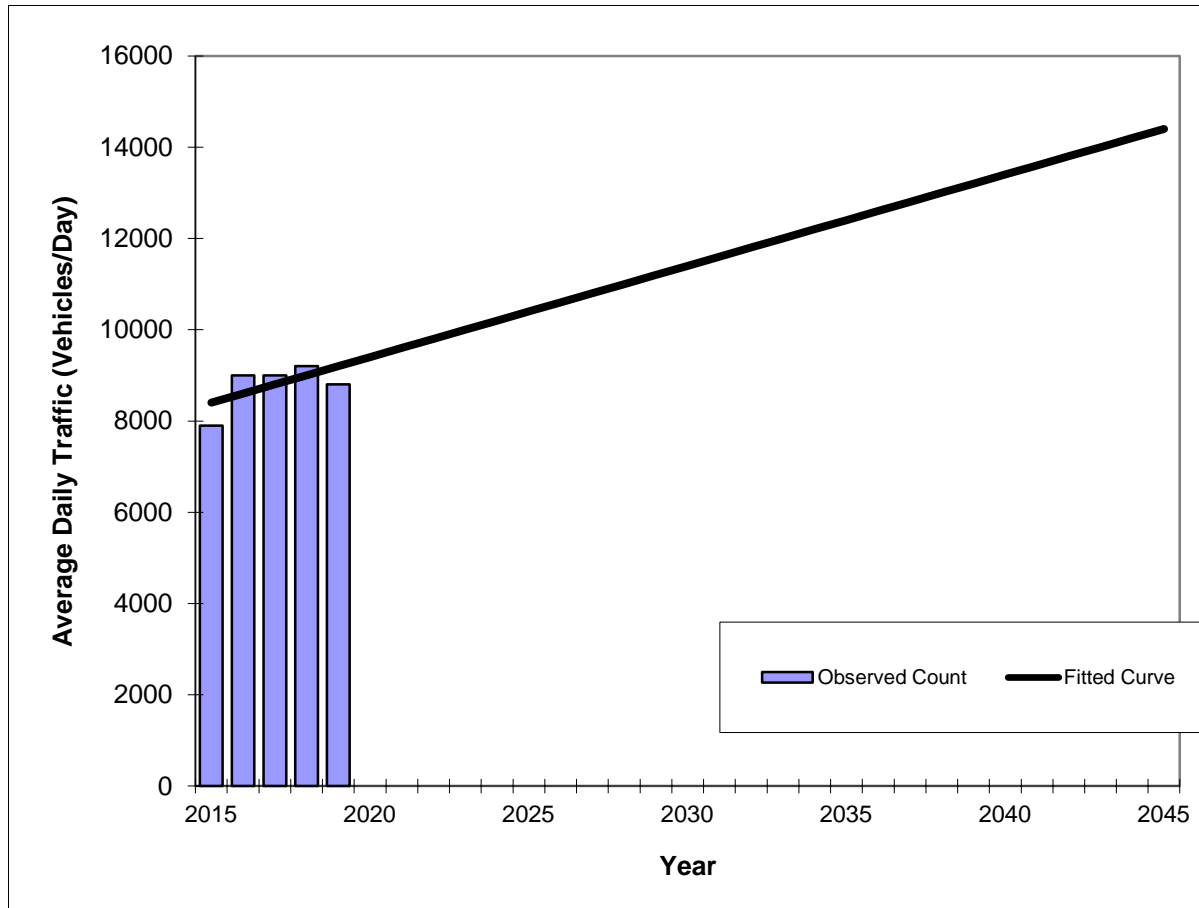
SITE: 5056 - SR 5/FEDERAL HWY - N OF SR 802/LUCERNE AVE,WB (COUNTY LINK: 4802)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
----	-----		-----		-----	-----	-----	-----	
2020	9600	F	N	4900	S	4700	9.00	57.60	2.40
2019	10000	C	N	5100	S	4900	9.00	58.80	2.40
2018	9300	C	N	5000	S	4300	9.00	55.50	2.40
2017	9200	C	N	4700	S	4500	9.00	55.40	2.50
2016	11500	C	N	5600	S	5900	9.00	55.30	2.50
2015	9300	C	N	4900	S	4400	9.00	55.60	2.50
2014	8300	C	N	4300	S	4000	9.00	55.40	2.80
2013	9100	C	N	4800	S	4300	9.00	58.50	2.80
2012	8700	C	N	4400	S	4300	9.00	59.30	0.10
2011	8000	C	N	4100	S	3900	9.00	58.80	6.30
2010	8500	C	N	4200	S	4300	10.86	60.20	11.10
2009	9800	C	N	5000	S	4800	11.11	60.16	11.10
2008	9700	C	N	5100	S	4600	10.95	57.63	11.10
2007	10700	C	N	5600	S	5100	10.80	57.68	2.50
2006	12000	C	N	6200	S	5800	10.77	57.38	5.80
2005	10600	C	N	5300	S	5300	10.80	56.50	5.80

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

Traffic Trends - V03.a **FEDERAL HWY -- South of Lake & Lucerne Ave**

County:	Palm Beach (93)
Station #:	930221
Highway:	FEDERAL HWY



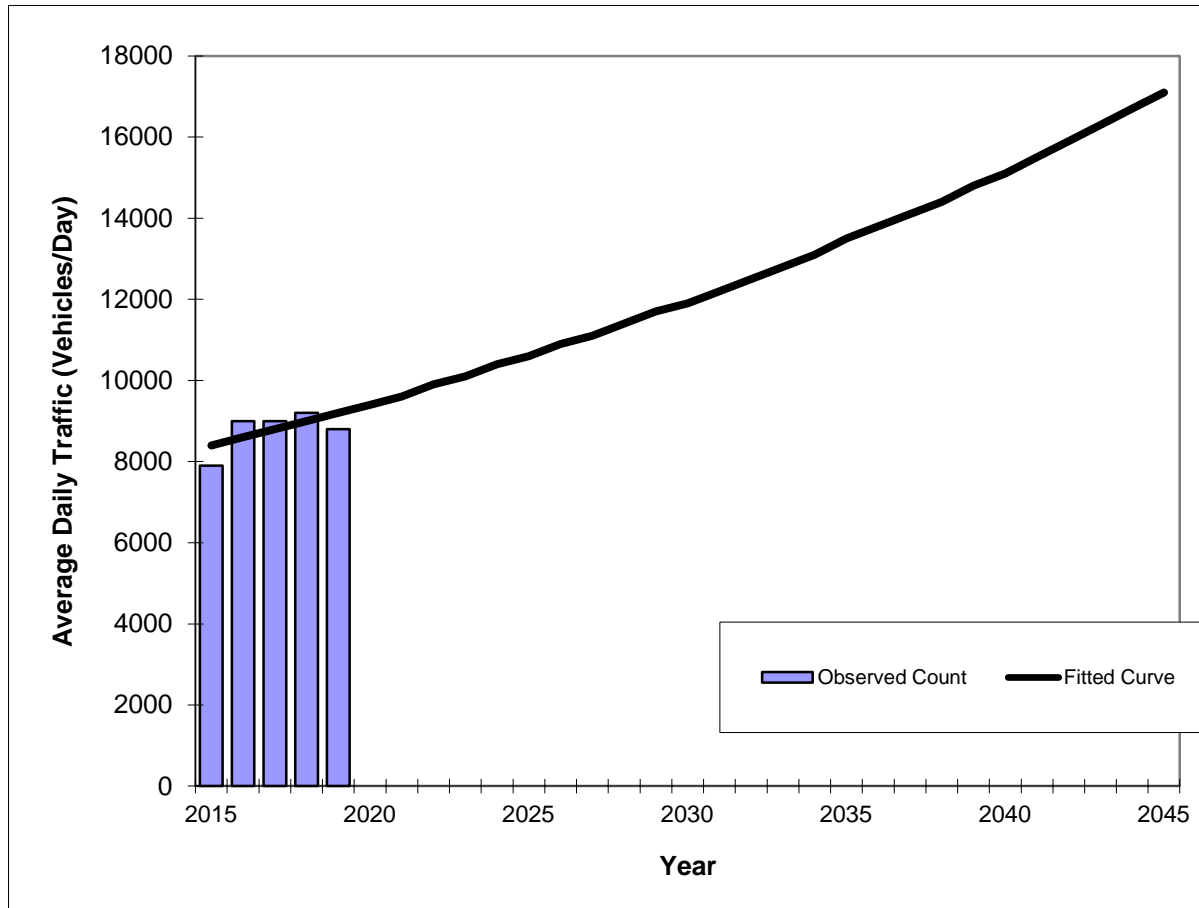
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	7900	8400
2016	9000	8600
2017	9000	8800
2018	9200	9000
2019	8800	9200

Trend R-squared:	38.17%
Trend Annual Historic Growth Rate:	2.38%
Printed:	30-Nov-21
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- South of Lake & Lucerne Ave**

County:	Palm Beach (93)
Station #:	930221
Highway:	FEDERAL HWY



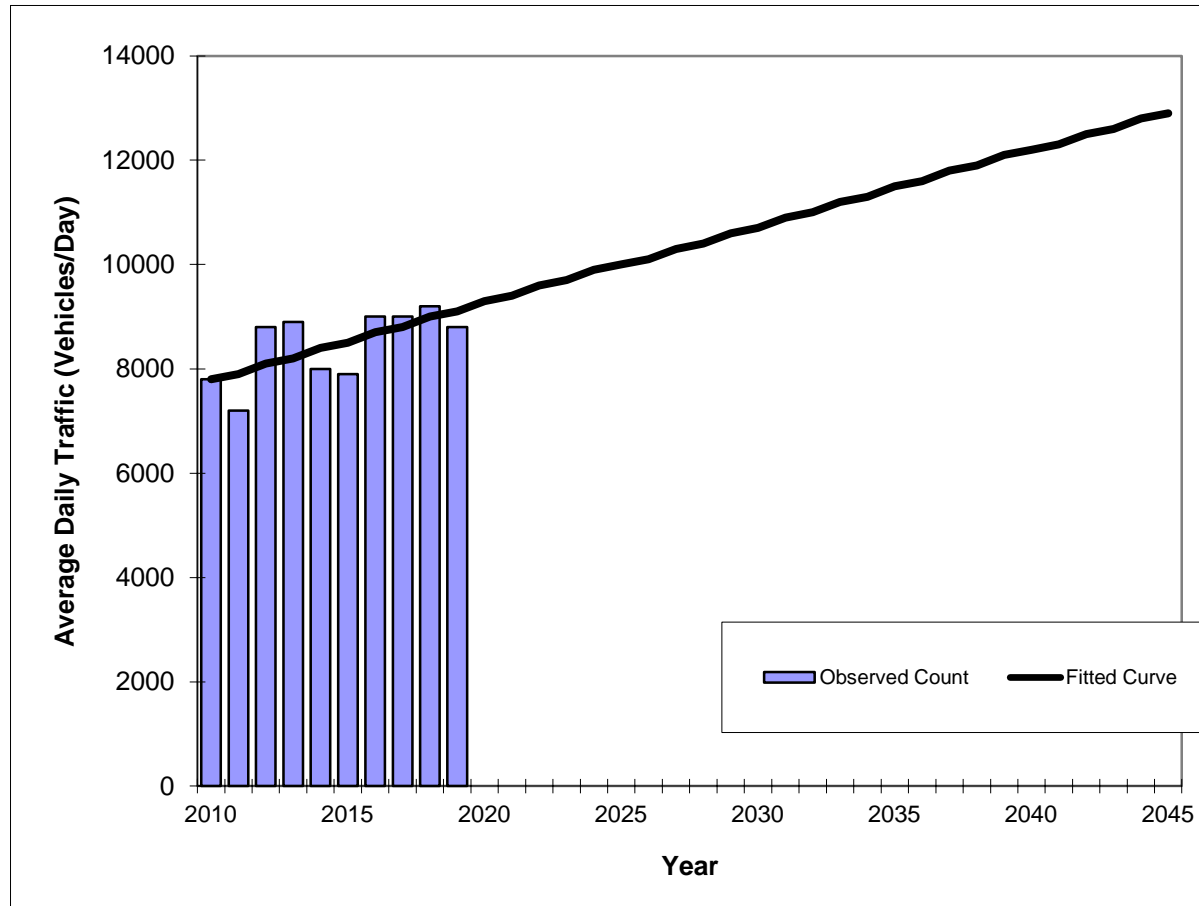
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	7900	8400
2016	9000	8600
2017	9000	8800
2018	9200	9000
2019	8800	9200

Trend R-squared:	38.83%
Compounded Annual Historic Growth Rate:	2.30%
Printed:	30-Nov-21
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- South of Lake & Lucerne Ave**

County:	Palm Beach (93)
Station #:	930221
Highway:	FEDERAL HWY



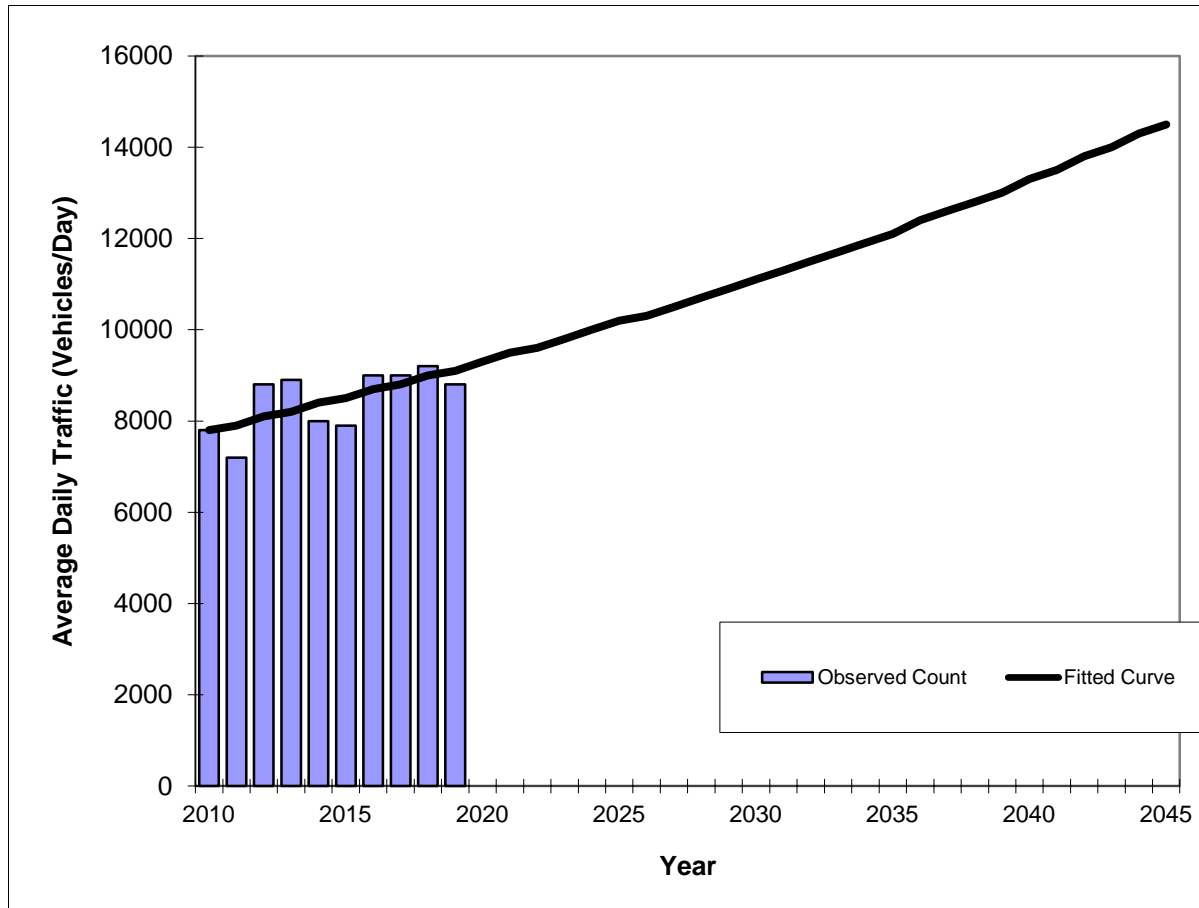
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2010	7800	7800
2011	7200	7900
2012	8800	8100
2013	8900	8200
2014	8000	8400
2015	7900	8500
2016	9000	8700
2017	9000	8800
2018	9200	9000
2019	8800	9100

Trend R-squared:	43.24%
Trend Annual Historic Growth Rate:	1.85%
Printed:	30-Nov-21
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- South of Lake & Lucerne Ave**

County:	Palm Beach (93)
Station #:	930221
Highway:	FEDERAL HWY



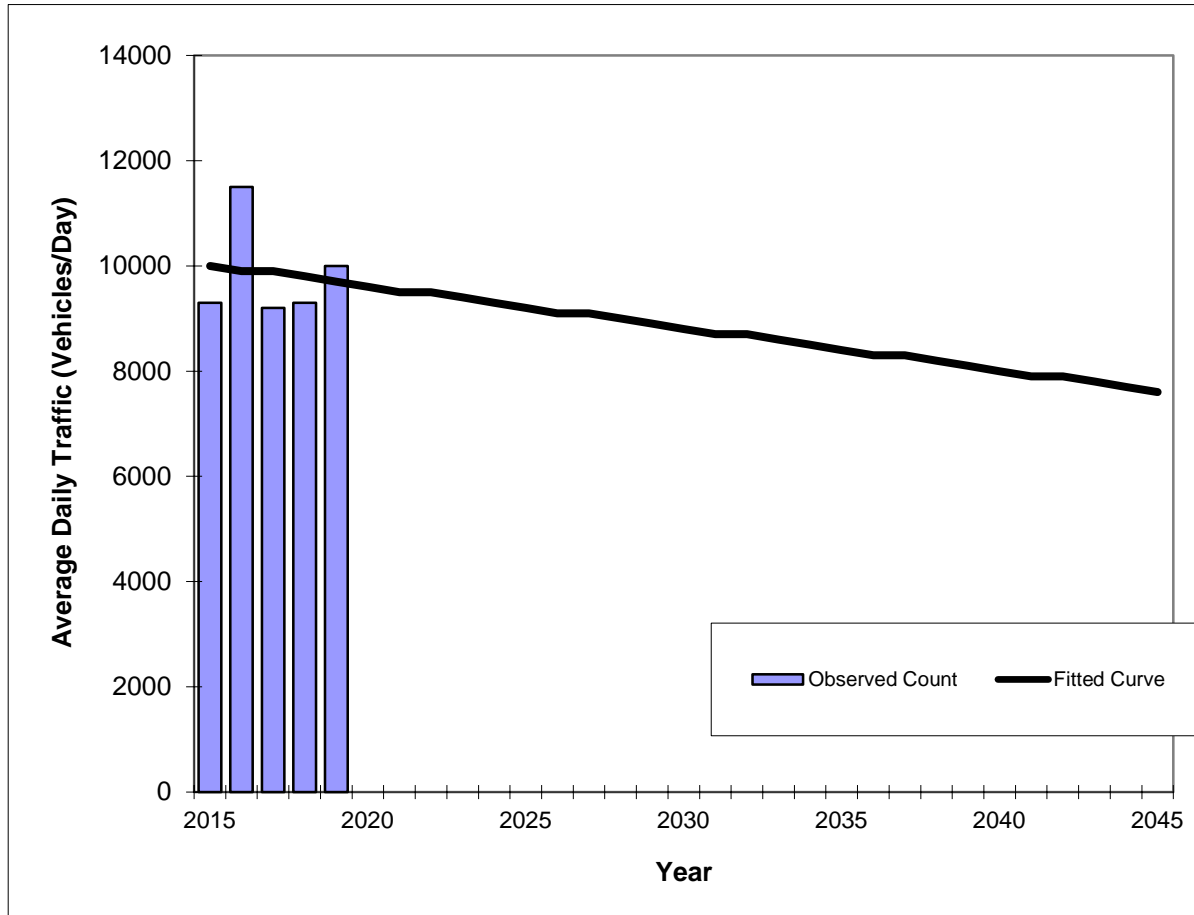
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2010	7800	7800
2011	7200	7900
2012	8800	8100
2013	8900	8200
2014	8000	8400
2015	7900	8500
2016	9000	8700
2017	9000	8800
2018	9200	9000
2019	8800	9100

Trend R-squared:	43.00%
Compounded Annual Historic Growth Rate:	1.73%
Printed:	30-Nov-21
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- south of Lake and Lucerne Ave**

County:	Palm Beach (93)
Station #:	5056
Highway:	FEDERAL HWY



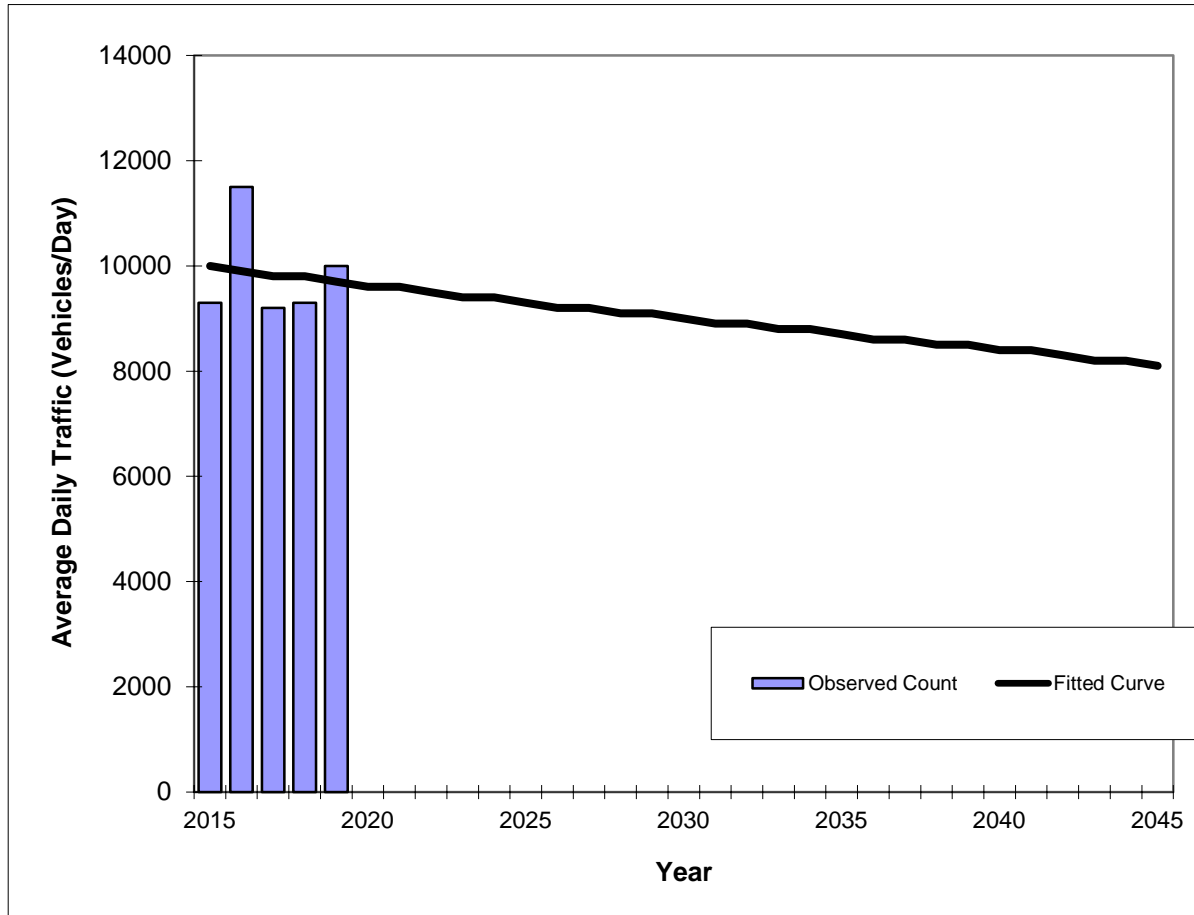
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	9300	10000
2016	11500	9900
2017	9200	9900
2018	9300	9800
2019	10000	9700

Trend R-squared:	1.70%
Trend Annual Historic Growth Rate:	-0.75%
Printed:	30-Nov-21
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- south of Lake and Lucerne Ave**

County:	Palm Beach (93)
Station #:	5056
Highway:	FEDERAL HWY



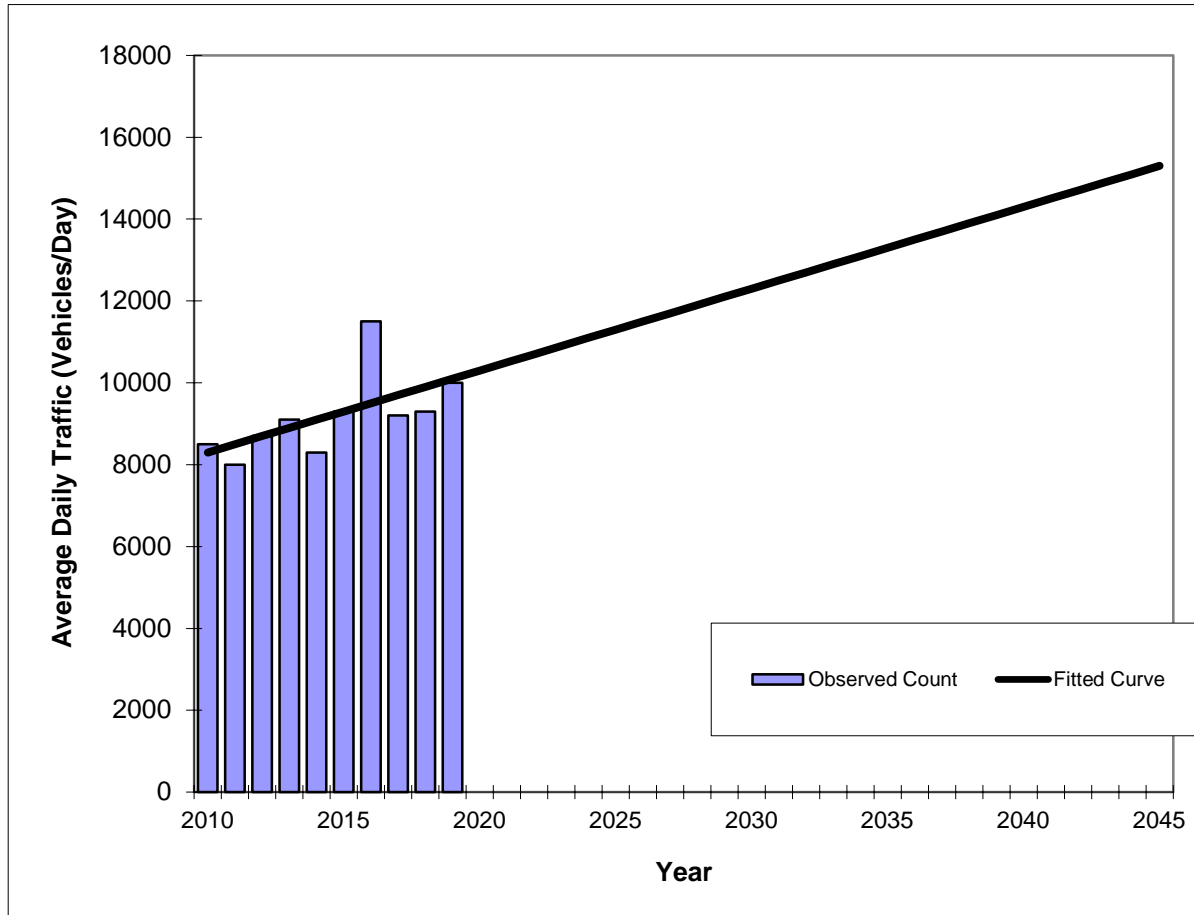
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	9300	10000
2016	11500	9900
2017	9200	9800
2018	9300	9800
2019	10000	9700

Trend R-squared:	1.27%
Compounded Annual Historic Growth Rate:	-0.76%
Printed:	1-Dec-21
Exponential Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- south of Lake and Lucerne Ave**

County:	Palm Beach (93)
Station #:	5056
Highway:	FEDERAL HWY



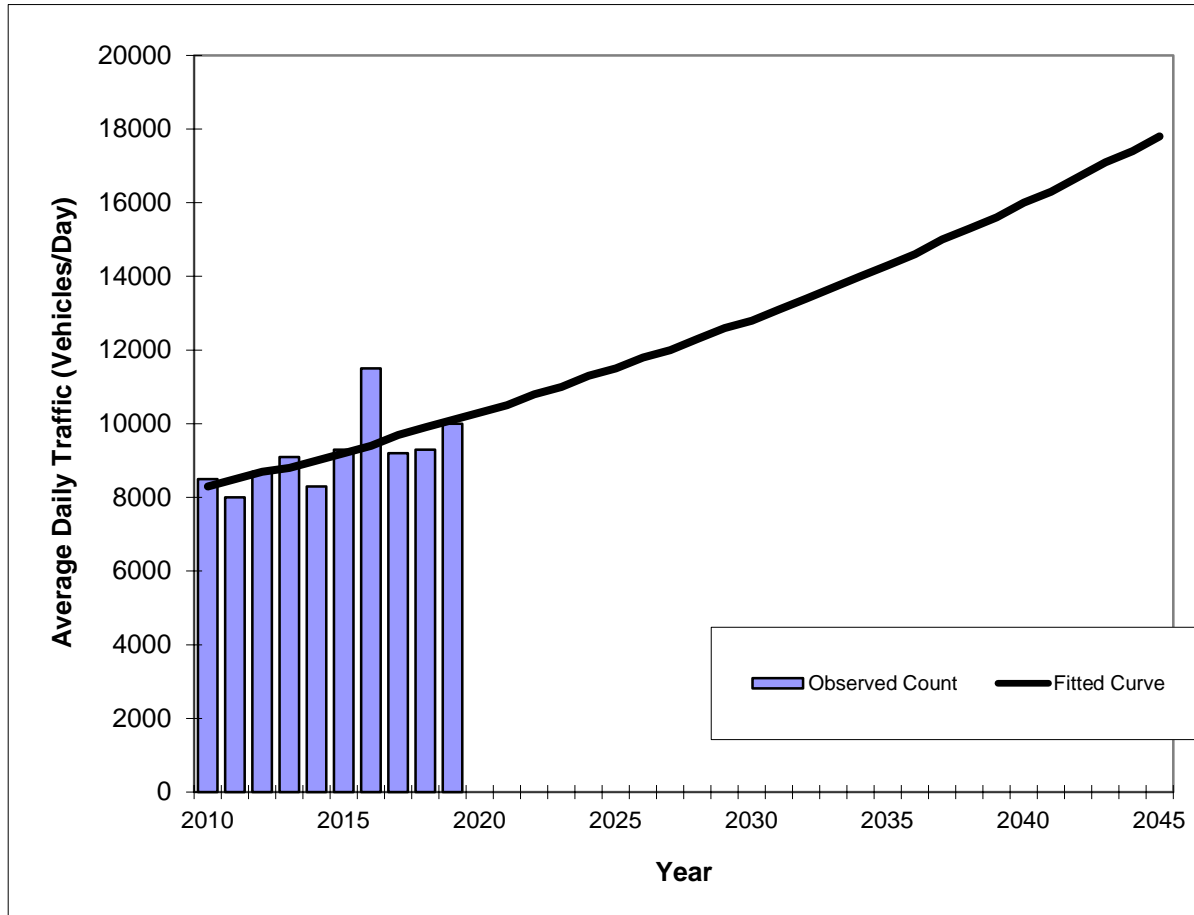
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2010	8500	8300
2011	8000	8500
2012	8700	8700
2013	9100	8900
2014	8300	9100
2015	9300	9300
2016	11500	9500
2017	9200	9700
2018	9300	9900
2019	10000	10100

Trend R-squared:	37.55%
Trend Annual Historic Growth Rate:	2.41%
Printed:	30-Nov-21
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **FEDERAL HWY -- south of Lake and Lucerne Ave**

County:	Palm Beach (93)
Station #:	5056
Highway:	FEDERAL HWY



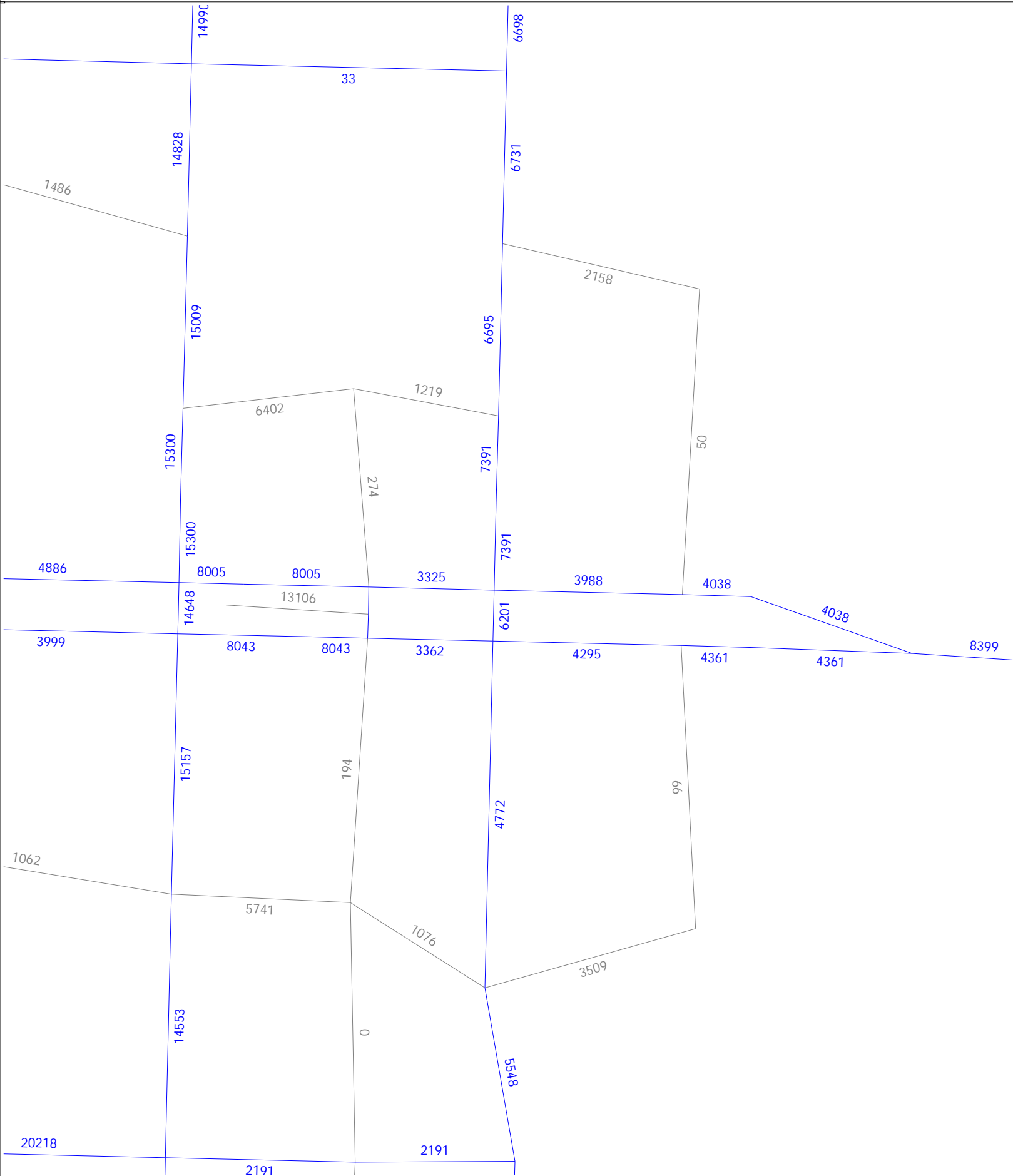
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2010	8500	8300
2011	8000	8500
2012	8700	8700
2013	9100	8800
2014	8300	9000
2015	9300	9200
2016	11500	9400
2017	9200	9700
2018	9300	9900
2019	10000	10100

Trend R-squared:	41.08%
Compounded Annual Historic Growth Rate:	2.20%
Printed:	30-Nov-21
Exponential Growth Option	

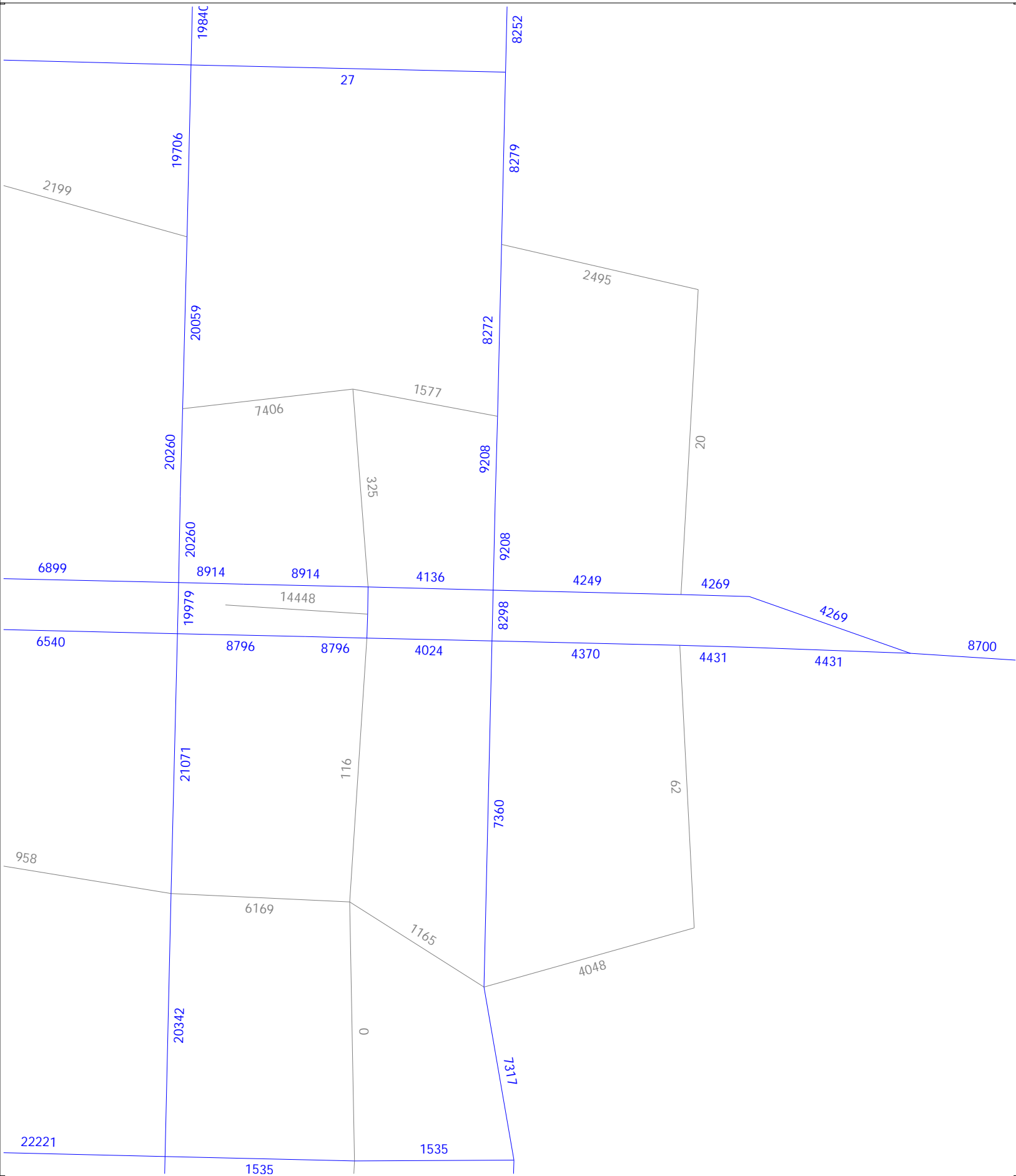
*Axle-Adjusted

SERPM 8.512 Analysis

SR 5 / Federal Highway
SERPM 8.512
B2015
Lake Worth Mini Roundabouts



SR 5 / Federal Highway
SERPM 8.512
2045
Lake Worth Mini Roundabouts







Appendix D

CAP-X Worksheets

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 2nd Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	3
Which leg is the minor street?	W

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	10	23	31	3.10%	24.31%
Westbound	0	0	0	0	0.00%	24.31%
Southbound	0	28	410	0	2.70%	24.31%
Northbound	0	0	341	12	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





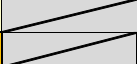
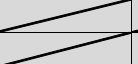

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 2nd Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	3
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	10	23	31	3.10%	24.31%
Westbound	0	0	0	0	0.00%	24.31%
Southbound	0	28	410	0	2.70%	24.31%
Northbound	0	0	341	12	1.40%	24.31%
Adjustment Factor	0.80	0.95				
Suggested	0.80	0.95				
Truck to PCE Factor				Suggested = 2.00		2.00
FDOT Context Zone			C4-General Urban Residential			
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	0	1	0	/	1	1	0	/	0	1	0	/	0	0	0
Two-Way Stop Control	N-S	/	0	1	0	/	1	1	0	/	0	1	0	/	0	0	0
All-Way Stop Control	FULL	/	0	1	0	/	1	1	0	/	0	1	0	/	0	0	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									605	0.35	0.35	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.30	0.30	Poor	Poor	Fair
All-Way Stop Control	FULL									1086	0.72	0.72	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.55			0.20			0.48			0.00			0.55	Fair	Fair	Fair





Results for Interchanges

[illegible]

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 2nd Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	3
Which leg is the minor street?	W

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	18	29	60	1.90%	24.31%
Westbound	0	0	0	0	0.00%	24.31%
Southbound	0	32	404	0	1.40%	24.31%
Northbound	0	0	480	17	1.80%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





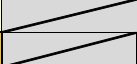
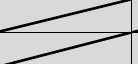

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 2nd Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	3
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	18	29	60	1.90%	24.31%
Westbound	0	0	0	0	0.00%	24.31%
Southbound	0	32	404	0	1.40%	24.31%
Northbound	0	0	480	17	1.80%	24.31%
Adjustment Factor	0.80	0.95				
Suggested	0.80	0.95				
Truck to PCE Factor				Suggested = 2.00		2.00
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
Two-Way Stop Control	N-S	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0
All-Way Stop Control	FULL	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections





TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									809	0.46	0.46	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.62	0.62	Poor	Poor	Fair
All-Way Stop Control	FULL									1314	0.88	0.88	Fair	Fair	Fair

[illegible]

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 3rd Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	5	7	0.00%	24.31%
Westbound	0	5	5	12	0.00%	24.31%
Southbound	0	5	435	8	2.90%	24.31%
Northbound	0	13	340	1	1.50%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





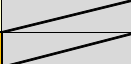
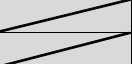

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 3rd Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	5	7	0.00%	24.31%
Westbound	0	5	5	12	0.00%	24.31%
Southbound	0	5	435	8	2.90%	24.31%
Northbound	0	13	340	1	1.50%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									611	0.36	0.36	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.31	0.31	Poor	Poor	Fair
All-Way Stop Control	FULL									1066	0.71	0.71	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.58			0.07			0.45			0.05			0.58	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 3rd Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	7	10	0.00%	24.31%
Westbound	0	5	4	14	0.00%	24.31%
Southbound	0	10	427	16	1.40%	24.31%
Northbound	0	30	456	6	5.10%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





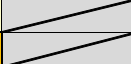
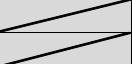

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 3rd Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	7	10	0.00%	24.31%
Westbound	0	5	4	14	0.00%	24.31%
Southbound	0	10	427	16	1.40%	24.31%
Northbound	0	30	456	6	5.10%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00		2.00
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									648	0.38	0.38	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.34	0.34	Poor	Poor	Fair
All-Way Stop Control	FULL									1272	0.85	0.85	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.60			0.09			0.63			0.08			0.63	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Overall v/c Ratio												Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)				
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C			

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 4th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	4	4	0.00%	24.31%
Westbound	0	5	2	7	7.10%	24.31%
Southbound	0	5	438	18	2.60%	24.31%
Northbound	0	24	331	5	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





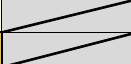
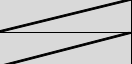

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 4th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	4	4	0.00%	24.31%
Westbound	0	5	2	7	7.10%	24.31%
Southbound	0	5	438	18	2.60%	24.31%
Northbound	0	24	331	5	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00		2.00
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									634	0.37	0.37	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.32	0.32	Poor	Poor	Fair
All-Way Stop Control	FULL									1076	0.72	0.72	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.60			0.06			0.46			0.03			0.60	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 4th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	0	7	0.00%	24.31%
Westbound	0	1	1	6	0.00%	24.31%
Southbound	0	8	414	14	1.80%	24.31%
Northbound	0	8	491	9	2.60%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





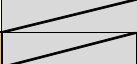
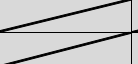

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 4th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	0	7	0.00%	24.31%
Westbound	0	1	1	6	0.00%	24.31%
Southbound	0	8	414	14	1.80%	24.31%
Northbound	0	8	491	9	2.60%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	1	1	0	/	1	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									666	0.39	0.39	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.35	0.35	Poor	Poor	Fair
All-Way Stop Control	FULL									1226	0.82	0.82	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations	
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3					
50 ICD	0.56			0.06			0.64				0.03			0.64	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 5th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	4	1	6	9.10%	24.31%
Westbound	0	9	1	13	4.30%	24.31%
Southbound	0	7	436	6	2.90%	24.31%
Northbound	0	1	357	5	1.10%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





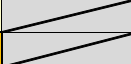
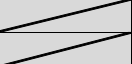

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 5th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	4	1	6	9.10%	24.31%
Westbound	0	9	1	13	4.30%	24.31%
Southbound	0	7	436	6	2.90%	24.31%
Northbound	0	1	357	5	1.10%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0
Two-Way Stop Control	N-S	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0
All-Way Stop Control	FULL	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									606	0.36	0.36	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.32	0.32	Poor	Poor	Fair
All-Way Stop Control	FULL									1075	0.72	0.72	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDBABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.57			0.05			0.46			0.05			0.57	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 5th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	1	0	9	0.00%	24.31%
Westbound	0	4	0	3	0.00%	24.31%
Southbound	0	7	453	5	1.30%	24.31%
Northbound	0	9	475	2	1.90%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





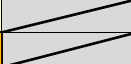
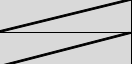

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 5th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	1	0	9	0.00%	24.31%
Westbound	0	4	0	3	0.00%	24.31%
Southbound	0	7	453	5	1.30%	24.31%
Northbound	0	9	475	2	1.90%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	1	1	0	/	0	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	1	1	0	/	0	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	1	1	0	/	0	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									617	0.36	0.36	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.34	0.34	Poor	Poor	Fair
All-Way Stop Control	FULL									1222	0.81	0.81	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDBABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.60			0.05			0.61			0.02			0.61	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 6th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	1	4	10.00%	24.31%
Westbound	0	3	1	4	0.00%	24.31%
Southbound	0	2	438	7	2.70%	24.31%
Northbound	0	2	358	2	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





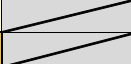
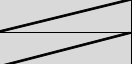

Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 6th Ave N - AM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	5	1	4	10.00%	24.31%
Westbound	0	3	1	4	0.00%	24.31%
Southbound	0	2	438	7	2.70%	24.31%
Northbound	0	2	358	2	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0
Two-Way Stop Control	N-S	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0
All-Way Stop Control	FULL	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections															
TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									584	0.34	0.34	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.32	0.32	Poor	Poor	Fair
All-Way Stop Control	FULL									1051	0.88	0.88	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDBOAT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.57			0.05			0.45			0.02			0.57	Fair	Fair	Fair





Results for Interchanges

TYPE OF INTERCHANGE	Sheet	Zone 1 (Rt Mrg)		Zone 2 (Lt Mrg)		Zone 3 (Ctr. 1)		Zone 4 (Ctr. 2)		Zone 5 (Lt Mrg)		Zone 6 (Rt Mrg)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				

Capacity Analysis for Planning of Junctions

Summary Report - Page 1 of 2

Project Name:	SR-5 & 6th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	3	1	0.00%	24.31%
Westbound	0	4	2	6	10.00%	24.31%
Southbound	0	1	456	6	2.70%	24.31%
Northbound	0	1	469	3	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone		C4-General Urban Residential				
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800		1800
		3-phase signal		Suggested = 1750		1750
		4-phase signal		Suggested = 1700		1700

Capacity Analysis for Planning of Junctions





Summary Report - Page 2 of 2

[illegible]

Capacity Analysis for Planning of Junctions

Detailed Report - Page 1 of 4

Project Name:	SR-5 & 6th Ave N - PM
Project Number:	Work Order 11
Location:	Lake Worth Beach, FL
Date:	November 22, 2021
Number of Intersection Legs:	4
Major Street Direction:	North-South

Traffic Volume Demand						
	Volume (Veh/hr)				Percent (%)	
	U-Turn 	Left 	Thru 	Right 	Heavy Vehicles	Volume Growth
Eastbound	0	7	3	1	0.00%	24.31%
Westbound	0	4	2	6	10.00%	24.31%
Southbound	0	1	456	6	2.70%	24.31%
Northbound	0	1	469	3	1.40%	24.31%
Adjustment Factor	0.80	0.95		0.85		
Suggested	0.80	0.95		0.85		
Truck to PCE Factor				Suggested = 2.00	2.00	
FDOT Context Zone			C4-General Urban Residential			
Critical Lane Volume Threshold		2-phase signal		Suggested = 1800	1800	
		3-phase signal		Suggested = 1750	1750	
		4-phase signal		Suggested = 1700	1700	

Capacity Analysis for Planning of Junctions

Detailed Report - Page 2 of 4

Number of Lanes for Non-roundabout Intersections																	
TYPE OF INTERSECTION	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Traffic Signal	FULL	/	0	1	0	/	0	1	0	/	0	1	0	/	0	1	0
Two-Way Stop Control	N-S	/	0	1	0	/	0	1	0	/	0	1	0	/	0	1	0
All-Way Stop Control	FULL	/	0	1	0	/	0	1	0	/	0	1	0	/	0	1	0

Number of Lanes for Interchanges																	
TYPE OF INTERCHANGE	Sheet	Northbound				Southbound				Eastbound				Westbound			
		U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R

Capacity Analysis for Planning of Junctions

Detailed Report - Page 3 of 4

Results for Non-roundabout Intersections

TYPE OF INTERSECTION	Sheet	Zone 1 (North)		Zone 2 (South)		Zone 3 (East)		Zone 4 (West)		Zone 5 (Center)		Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
		CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C	CLV	V/C				
Traffic Signal	FULL									612	0.36	0.36	Poor	Poor	Fair
Two-Way Stop Control	N-S									--	0.33	0.33	Poor	Poor	Fair
All-Way Stop Control	FULL									1217	1.01	1.01	Fair	Fair	Fair

Capacity Analysis for Planning of Junctions

Detailed Report - Page 4 of 4

Results for Roundabouts

TYPE OF ROUNDABOUT	Zone 1 (North)			Zone 3 (East)			Zone 2 (South)			Zone 4 (West)			Overall v/c Ratio	Pedestrian Accommodations	Bicycle Accommodations	Transit Accommodations
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3				
50 ICD	0.59			0.05			0.60			0.04			0.60	Fair	Fair	Fair

Results for Interchanges

[illegible]

Appendix E

SPICE-X Worksheets

Federal Highway Administration (FHWA)										
Safety Performance for Intersection Control Evaluation Tool										
Results										
Summary of crash prediction results for each alternative										
Project Information										
Project Name:	SR 5 Roundabouts			Intersection Type			At-Grade Intersections			
Intersection:	2nd Ave N			Opening Year			2021			
Agency:	Lake Worth			Design Year			2031			
Project Reference:				Facility Type			On Urban and Suburban Arterial			
City:	Lake Worth			Number of Legs			4-leg			
State:	Florida			1-Way/2-Way			1-way Intersecting 2-way			
Date:	11/29/2021			# of Major Street Lanes (both directions)			5 or fewer			
Analyst:	Ian M. Rairden, P.E.			Major Street Approach Speed			Less than 55 mph			
Crash Prediction Summary										
Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Crash Prediction Rank	AADT Within SPF Prediction Range?	Source of Prediction	SSI Score		
								Open Year	Design Year	Rank
Traffic Signal	Total	1.35	1.59	16.17	2	Yes	Uncalibrated SPF	95	93	3
	Fatal & Injury	0.31	0.35	3.60						
Minor Road Stop	Total	1.87	2.60	24.51	3	Yes	Calibrated SPF w/ EB	91	88	4
	Fatal & Injury	0.35	0.46	4.47						
All Way Stop	Total	1.19	1.55	15.05	4	N/A	N/A	97	96	2
	Fatal & Injury	0.40	0.55	5.22						
1-lane Roundabout	Total	1.51	1.83	18.42	1	Yes	Uncalibrated SPF	97	96	1
	Fatal & Injury	0.27	0.34	3.32						
Other 1 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						
Other 2 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						

Federal Highway Administration (FHWA)										
Safety Performance for Intersection Control Evaluation Tool										
Results										
Summary of crash prediction results for each alternative										
Project Information										
Project Name:	SR 5 Roundabouts			Intersection Type			At-Grade Intersections			
Intersection:	3rd Ave N			Opening Year			2021			
Agency:	Lake Worth			Design Year			2031			
Project Reference:				Facility Type			On Urban and Suburban Arterial			
City:	Lake Worth			Number of Legs			4-leg			
State:	Florida			1-Way/2-Way			2-way Intersecting 2-way			
Date:	11/29/2021			# of Major Street Lanes (both directions)			5 or fewer			
Analyst:	Ian M. Rairden, P.E.			Major Street Approach Speed			Less than 55 mph			
Crash Prediction Summary										
Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Crash Prediction Rank	AADT Within SPF Prediction Range?	Source of Prediction	SSI Score		
								Open Year	Design Year	Rank
Traffic Signal	Total	2.77	3.82	36.18	4	Yes	Calibrated SPF	97	96	1
	Fatal & Injury	0.91	1.28	12.01						
Minor Road Stop	Total	1.41	1.82	17.78	3	Yes	Calibrated SPF w/ EB	95	93	4
	Fatal & Injury	0.58	0.77	7.39						
All Way Stop	Total	1.03	1.35	13.08	2	N/A	N/A	97	96	2
	Fatal & Injury	0.35	0.48	4.58						
1-lane Roundabout	Total	1.47	1.79	17.94	1	Yes	Uncalibrated SPF	97	96	3
	Fatal & Injury	0.26	0.33	3.21						
Other 1 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						
Other 2 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						

Federal Highway Administration (FHWA)										
Safety Performance for Intersection Control Evaluation Tool										
Results										
Summary of crash prediction results for each alternative										
Project Information										
Project Name:	SR 5 Roundabouts			Intersection Type			At-Grade Intersections			
Intersection:	4th Ave N			Opening Year			2021			
Agency:	Lake Worth			Design Year			2031			
Project Reference:				Facility Type			On Urban and Suburban Arterial			
City:	Lake Worth			Number of Legs			4-leg			
State:	Florida			1-Way/2-Way			2-way Intersecting 2-way			
Date:	11/29/2021			# of Major Street Lanes (both directions)			5 or fewer			
Analyst:	Ian M. Rairden, P.E.			Major Street Approach Speed			Less than 55 mph			
Crash Prediction Summary										
Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Crash Prediction Rank	AADT Within SPF Prediction Range?	Source of Prediction	SSI Score		
								Open Year	Design Year	Rank
Traffic Signal	Total	2.59	3.52	33.53	4	Yes	Calibrated SPF	97	97	2
	Fatal & Injury	0.85	1.18	11.17						
Minor Road Stop	Total	0.97	1.22	12.03	3	Yes	Calibrated SPF w/ EB	95	94	4
	Fatal & Injury	0.41	0.53	5.19						
All Way Stop	Total	0.93	1.19	11.68	2	N/A	N/A	97	97	1
	Fatal & Injury	0.32	0.43	4.12						
1-lane Roundabout	Total	1.45	1.76	17.67	1	Yes	Uncalibrated SPF	97	96	3
	Fatal & Injury	0.25	0.32	3.15						
Other 1 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						
Other 2 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						

Federal Highway Administration (FHWA)										
Safety Performance for Intersection Control Evaluation Tool										
Results										
Summary of crash prediction results for each alternative										
Project Information										
Project Name:	SR 5 Roundabouts			Intersection Type			At-Grade Intersections			
Intersection:	5th Ave N			Opening Year			2021			
Agency:	Lake Worth			Design Year			2031			
Project Reference:				Facility Type			On Urban and Suburban Arterial			
City:	Lake Worth			Number of Legs			4-leg			
State:	Florida			1-Way/2-Way			2-way Intersecting 2-way			
Date:	11/29/2021			# of Major Street Lanes (both directions)			5 or fewer			
Analyst:	Ian M. Rairden, P.E.			Major Street Approach Speed			Less than 55 mph			
Crash Prediction Summary										
Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Crash Prediction Rank	AADT Within SPF Prediction Range?	Source of Prediction	SSI Score		
								Open Year	Design Year	Rank
Traffic Signal	Total	2.61	3.61	34.18	4	Yes	Calibrated SPF	97	97	2
	Fatal & Injury	0.86	1.21	11.41						
Minor Road Stop	Total	1.36	1.74	17.04	3	Yes	Calibrated SPF w/ EB	95	94	4
	Fatal & Injury	0.54	0.71	6.84						
All Way Stop	Total	0.81	1.06	10.28	2	N/A	N/A	97	97	1
	Fatal & Injury	0.28	0.38	3.66						
1-lane Roundabout	Total	1.43	1.74	17.46	1	Yes	Uncalibrated SPF	97	96	3
	Fatal & Injury	0.25	0.32	3.11						
Other 1 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						
Other 2 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						

Federal Highway Administration (FHWA)										
Safety Performance for Intersection Control Evaluation Tool										
Results										
Summary of crash prediction results for each alternative										
Project Information										
Project Name:	SR 5 Roundabouts			Intersection Type			At-Grade Intersections			
Intersection:	6th Ave N			Opening Year			2021			
Agency:	Lake Worth			Design Year			2031			
Project Reference:				Facility Type			On Urban and Suburban Arterial			
City:	Lake Worth			Number of Legs			4-leg			
State:	Florida			1-Way/2-Way			2-way Intersecting 2-way			
Date:	11/29/2021			# of Major Street Lanes (both directions)			5 or fewer			
Analyst:	Ian M. Rairden, P.E.			Major Street Approach Speed			Less than 55 mph			
Crash Prediction Summary										
Control Strategy	Crash Type	Opening Year	Design Year	Total Project Life Cycle	Crash Prediction Rank	AADT Within SPF Prediction Range?	Source of Prediction	SSI Score		
								Open Year	Design Year	Rank
Traffic Signal	Total	2.47	3.24	31.39	4	Yes	Calibrated SPF	97	97	2
	Fatal & Injury	0.82	1.10	10.55						
Minor Road Stop	Total	1.71	2.07	20.77	3	Yes	Calibrated SPF w/ EB	95	94	4
	Fatal & Injury	0.70	0.87	8.62						
All Way Stop	Total	0.64	0.77	7.76	1	N/A	N/A	97	97	1
	Fatal & Injury	0.23	0.29	2.82						
1-lane Roundabout	Total	1.41	1.71	17.18	2	No	Uncalibrated SPF	97	96	3
	Fatal & Injury	0.24	0.31	3.05						
Other 1 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						
Other 2 *	Total	No SPF	No SPF	No SPF	--	N/A	CMF	--	--	--
	Fatal & Injury	No SPF	No SPF	No SPF						