

58th Avenue Corridor Study

From 47th Street to 1/4 mile north of 49th Street

Prepared for:
Indian River Public Works Department
1801 27th Street
Vero Beach, FL 32960

047035101

October 2019

©Kimley-Horn and Associates, Inc.

CA Number 00000696

445 24th Street, Suite 200

Vero Beach, Florida 32960

772-562-7981 TEL

772-562-9689 FAX

58th Avenue Corridor Study

From 47th Street to ¼ mile north of 49th Street

Prepared for:

Indian River Public Works Department
1801 27th Street
Vero Beach, Florida 32960

Prepared by:

Kimley-Horn and Associates, Inc.
445 24th Street, Suite 200
Vero Beach, Florida 32960

October 2019

Brian Good, P.E.

Date: _____

Florida Registration No. 56939

Engineering Business No. 696

047035101

*The entirety of this report, including text and images, is property of
Kimley-Horn and Associates, protected under U.S. copyright law.*

Copyright © 2019, Kimley-Horn and Associates, Inc

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
TABLE OF CONTENTS.....	i
LIST OF FIGURES	ii
LIST OF TABLES.....	ii
1.0 INTRODUCTION.....	3
2.0 EXISTING ROADWAY CONDITIONS.....	6
2.1 FUNCTIONAL CLASSIFICATION	6
2.2 EXISTING LAND USES	6
2.3 TYPICAL SECTION AND RIGHT-OF-WAY	7
2.4 UTILITIES	8
2.5 TRAFFIC VOLUMES	8
3.0 PROPOSED ROADWAY CONDITIONS.....	8
3.1 ROADWAY DESIGN STANDARDS	10
4.0 ALTERNATIVE ROUTE ANALYSIS.....	11
4.1 LONG RANGE PLANNING	11
4.2 PUBLIC SAFETY	11
4.3 ENVIRONMENTAL IMPACTS	11
4.4 ALTERNATIVE ALIGNMENTS	12
4.5 COSTS	14
5.0 RECOMMENDATIONS.....	14
5.1 LONG RANGE PLANNING	15
5.2 PUBLIC SAFETY	15
5.3 ENVIRONMENTAL	15
5.4 ALTERNATIVE ALIGNMENTS	16
5.5 COSTS	16
5.6 CONCLUSION	16
APPENDICES	
A	IRCO ACCIDENT HISTORY DATA
B	OPINION OF PROBABLE CONSTRUCTION COST
C	OPINION OF RIGHT-OF-WAY ACQUISITION COST
D	ALTERNATIVE ALIGNMENT EXHIBITS

LIST OF FIGURES

<i><u>Figure No.</u></i>	<i><u>Title</u></i>	<i><u>Page(s)</u></i>
FIGURE 1-1A	STUDY LIMITS.....	4-5
FIGURE 2A-2B	EXISTING 58 TH AVENUE TYPICAL SECTIONS.....	7
FIGURE 3A-3C	PROPOSED 58 TH AVENUE TYPICAL SECTIONS (47 TH STREET TO 49 TH STREET).....	9-10
FIGURE 4A-4B	PREFERRED ALIGNMENT.....	18-19

LIST OF TABLES

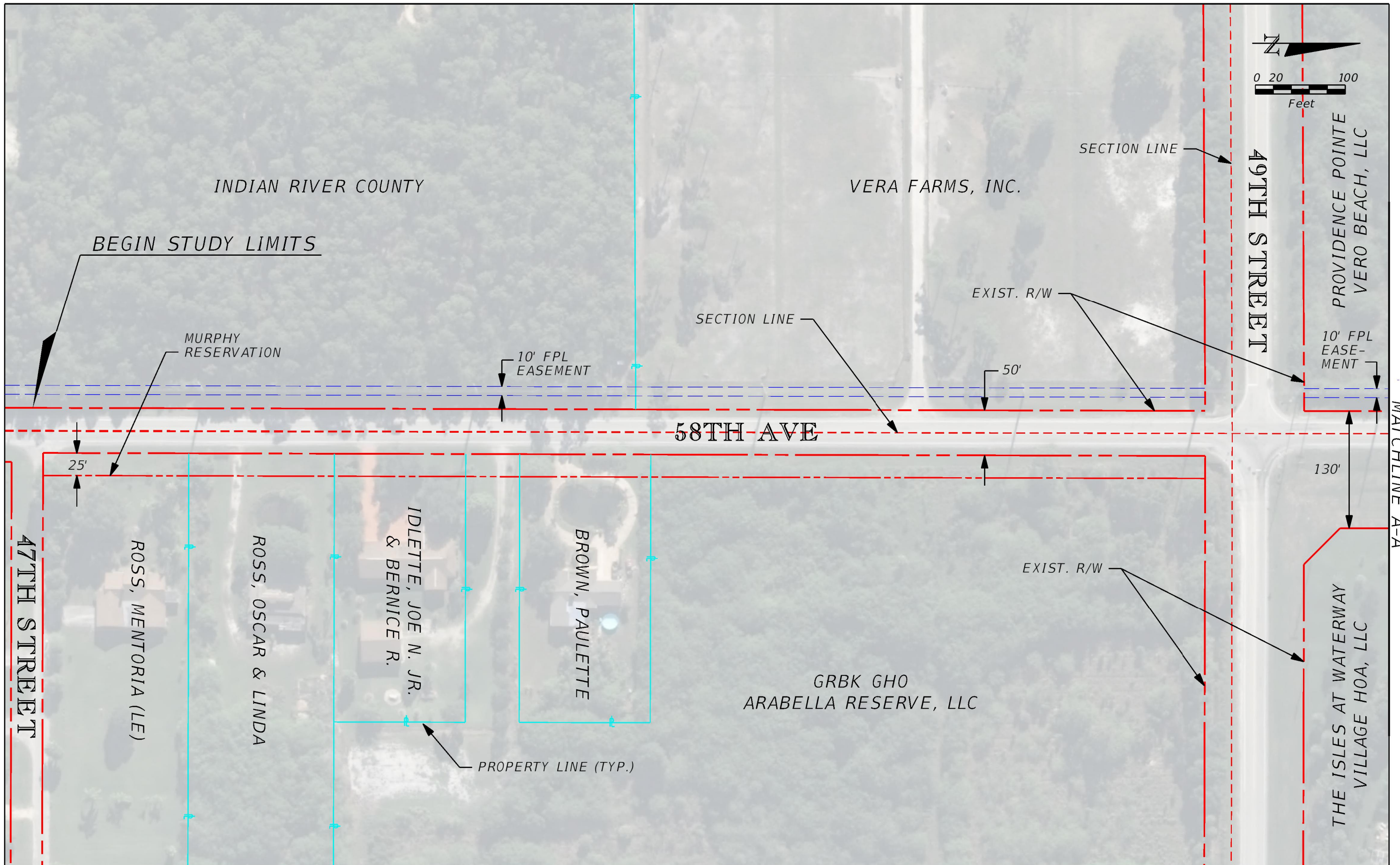
<i><u>Table No.</u></i>	<i><u>Title</u></i>	<i><u>Page</u></i>
Table 1:	Segmental Corridor Traffic Capacity.....	8
Table 2:	Roadway Design Standards.....	10
Table 3:	Alternative Alignment Cost Comparison Summary.....	14
Table 4:	Preferred Alignment Total Project Cost.....	16

1.0 INTRODUCTION

Based upon current traffic volumes and projected growth, the Indian River County Metropolitan Planning Organization (MPO) has identified 58th Avenue between 26th Street and 53rd Street as being potentially capacity deficient within the 2040 Long Range Transportation Plan (2040 LRTP). As such, the County has begun the design process to expand 58th Avenue from a two-lane rural corridor to a four-lane divided corridor.

This Corridor Study evaluates the impacts associated with the contemplated 58th Avenue corridor improvements between 47th Street and ¼ mile north of 49th Street. 58th Avenue roadway right-of-way width south of 49th Street is 50 feet. North of 49th Street, the roadway right-of-way width is 130 feet. The current 58th Avenue roadway section is a two-lane rural corridor. The roadway widening will consist of expanding the 58th Avenue corridor to a four-lane urban section with a raised median, bike lanes and pedestrian facilities.

This study will examine the alternative design routes and the “No-Build” alternative based on factors such as long-range planning, safety, environmental aspects, alignment alternatives and costs. *Figure 1* delineates the study limits.



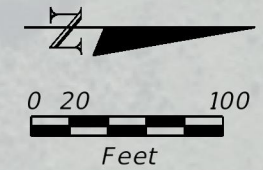
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

STUDY LIMITS

FIG.
 1



PROVIDENCE POINTE
VERO BEACH, LLC

END STUDY LIMITS

EXIST. R/W

SECTION LINE

10' FPL
EASEMENT

58TH AVE

130'

EXIST. R/W

THE ISLES AT WATERWAY
VILLAGE HOA, LLC

MATCHLINE A-A

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

STUDY LIMITS

FIG.
 1A

2.0 EXISTING ROADWAY CONDITIONS

The following sections describe the existing conditions associated with the 58th Avenue Corridor:

2.1 FUNCTIONAL CLASSIFICATION

The 58th Avenue corridor between 26th Street and 53rd Street is designated as an arterial roadway.

2.2 EXISTING LAND USES

Existing land uses located along the corridor consists of the following:

47th Street to 49th Street:

- Agricultural (horse farm) along the west side of the corridor.
- Undeveloped parcel along the west side of the corridor
- Four (4) single-family residential parcels along the east side of the corridor
- Single-family subdivision (currently under construction) along the east side of the corridor.

49th Street to 1/4 mile north:

- Undeveloped parcel along the west side that has an approved mixed-use subdivision
- A single-family Development of Regional Impact (DRI) resides along the east side

Please refer to *Figure 1* for an aerial depiction of the existing land uses located along the corridor.

2.3 TYPICAL SECTION AND RIGHT-OF-WAY

The 58th Avenue corridor is a rural two-lane roadway with approximately 12-foot travel lanes and 4-foot paved shoulders. The existing roadway right-of-way width is 50 feet south of 49th Street, north of 49th Street the roadway right-of-way is 130 feet. There is identified to be a 25 feet wide Murphy Deed right-of-way reservation along the corridor’s east side south of 49th Street. A Murphy Deed reserves a right-of-way easement for future roadway construction. Posted speed within the study limits is 45 mph. *Figure 3* delineates the existing 58th Avenue typical section within the study limits.

Figure 2A: 58th Avenue Typical Section – 47th Street to 49th Street

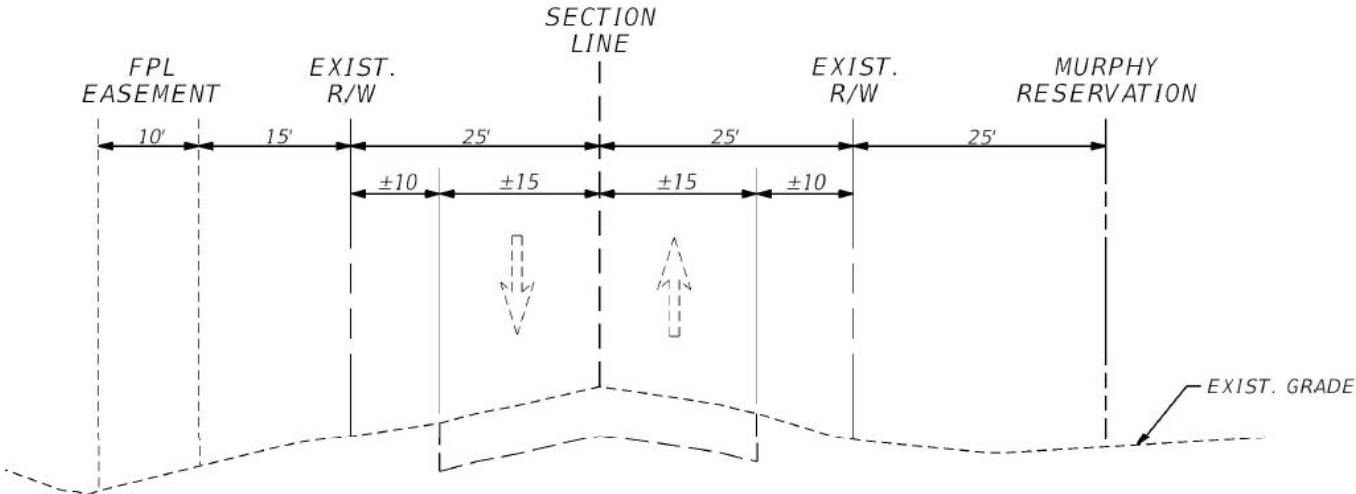
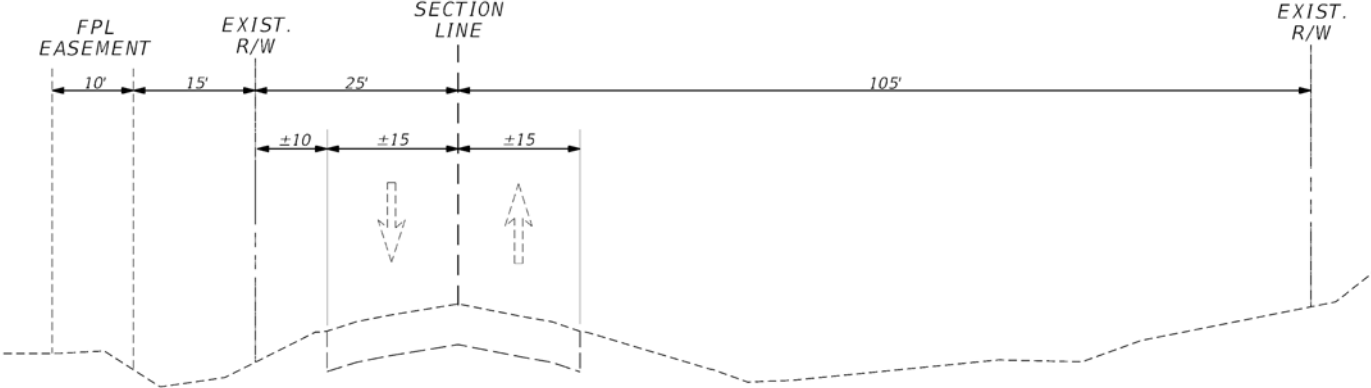


Figure 2B: 58th Avenue Typical Section – North of 49th Street



2.4 UTILITIES

The following utility providers have indicated that they have existing facilities located within the corridor’s study limits:

- Florida Power & Light – transmission and distribution facilities primarily located along the corridor’s west right-of-way
- Comcast Cable – buried and overhead services located along the corridor.
- AT&T - buried duct bank facilities located along the corridor.
- Indian River County Utility Department – maintains force main and potable water main services located within the corridor.

2.5 TRAFFIC VOLUMES

Based upon the existing operating capacities and the IRCO 2019 annual traffic volume counts, the following table summarizes the operating capacities and the percentage of operating capacity.

Table 1: Segmental Corridor Traffic Capacity

Link No.	Roadway	From Street	To Street	Peak Hour Capacity	Exist. 2019 Vol.	Vested Trips	Total Trips	% of Capacity
3040N	58 th Avenue	45 th St	49 th St.	916	905	0	905	99
3040S	58 th Avenue	45 th St	49 th St.	880	924	15	939	107
3050N	58 th Avenue	49 th St.	65 th St.	880	574	0	574	66
3050S	58 th Avenue	49 th St.	65 th St.	880	591	0	591	68

The 58th Avenue corridor, south of 49th Street, has been reviewed and identified to fail IRCO Level of Service (LOS) standards identified within the Comprehensive Plan based upon current geometric roadway conditions.

3.0 PROPOSED ROADWAY CONDITIONS

The 58th Avenue typical section from 47th Street to 49th Street south of 49th Street is proposed to be a 117-foot right-of-way width. The typical section consists of the following elements:

- Two 12-foot wide travel lanes in each direction

- 5-foot wide paved outside shoulders
- 22-foot wide raised median
- 5-foot concrete sidewalks located along the east and west side of the corridor.

The 58th Avenue typical section is proposed to be modified north of 49th Street as the existing right of way is 130-feet. The additional right-of-way width is utilized in providing increased green verge separation between the back of curb and the proposed pedestrian facilities. Two typical sections are identified within the study limits as the corridor transitions from the existing 2-lane rural section to the proposed 4-lane divided urban section.

Figure 3A – Proposed 58th Avenue Typical Section – Transition Area Section

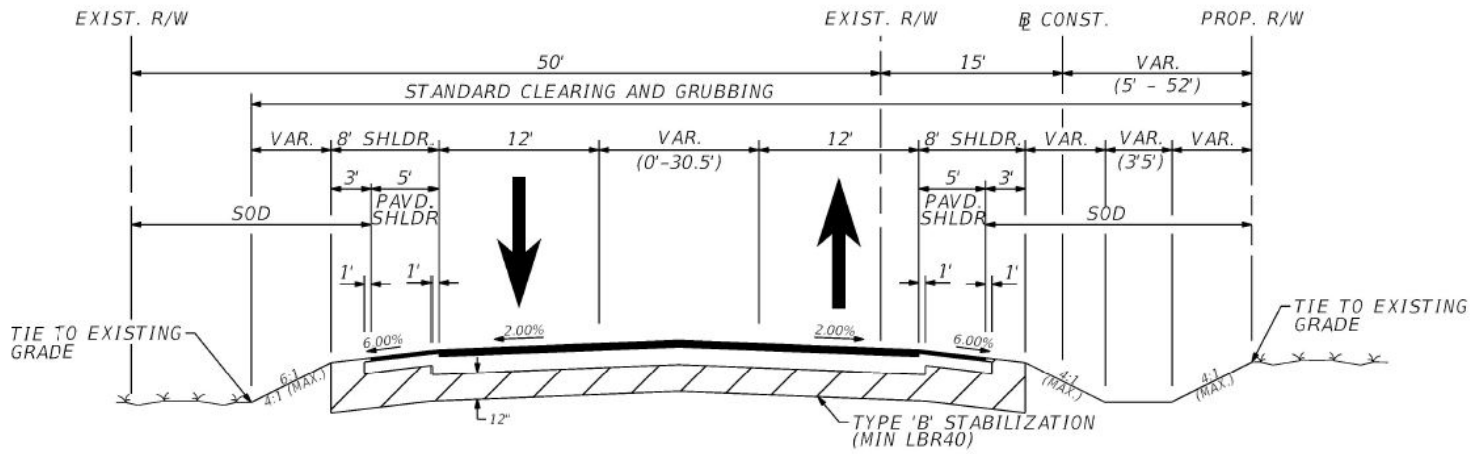


Figure 3B – Proposed 58th Avenue Typical Section – Fully Developed Section South of 49th Street

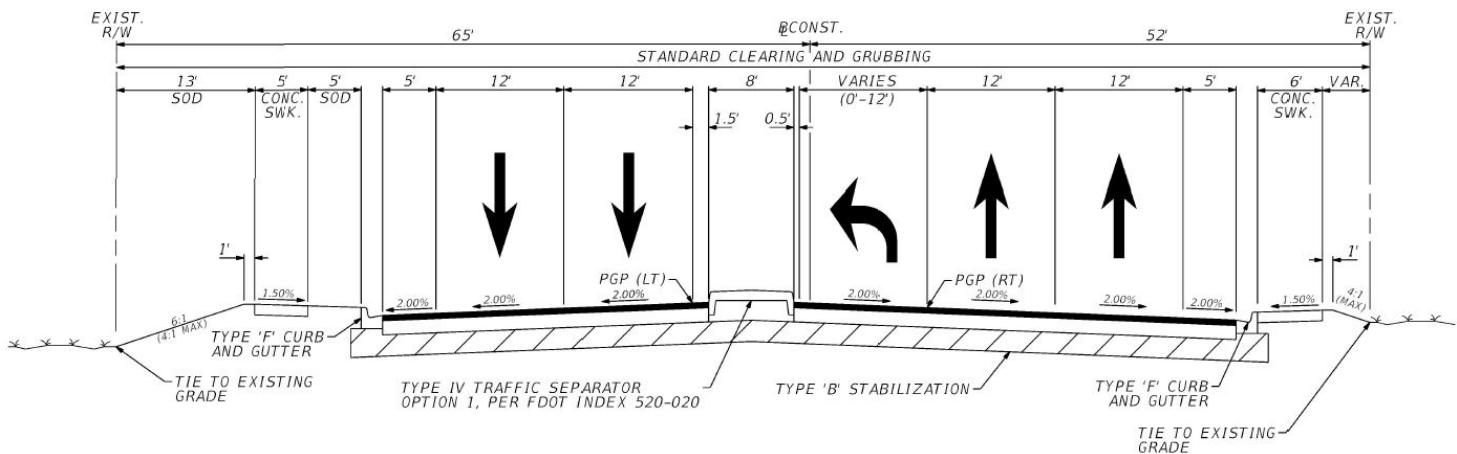
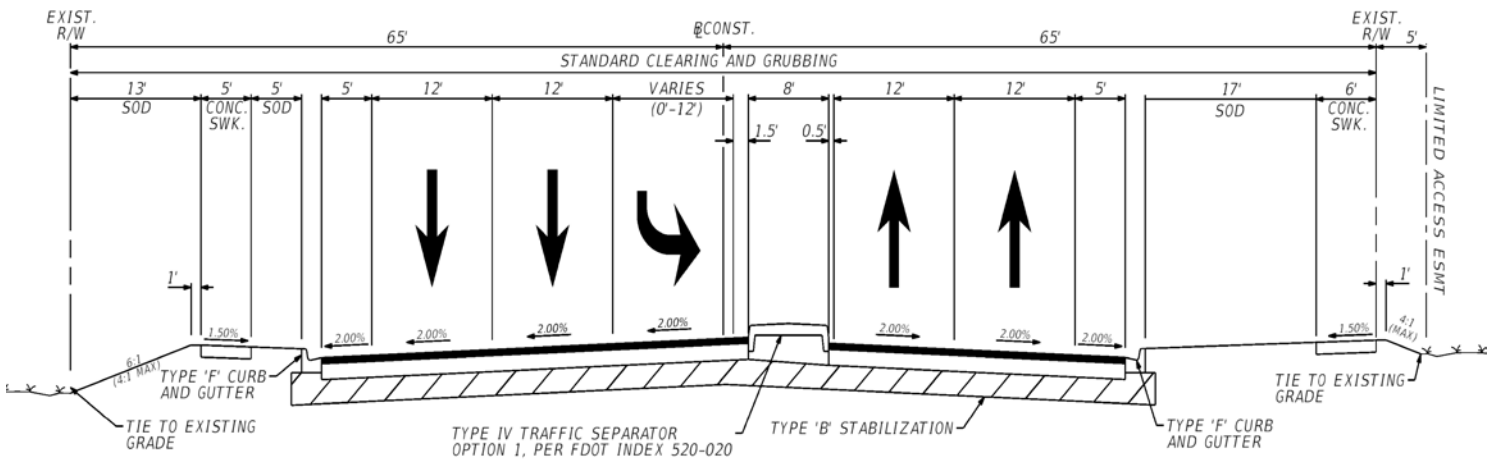


Figure 3C – Proposed 58th Avenue Typical Section – Fully Developed Section North of 49th Street



3.1 ROADWAY DESIGN STANDARDS

The proposed roadway improvements shall be designed and constructed in accordance with the criteria, guidelines and provisions established by the Florida Department of Transportation (FDOT) Florida Design Manual (FDM), FDOT Manual of Uniform Minimum Standards for Design Construction and Maintenance for Streets and Highways (Florida Greenbook) and the IRCO Land Development Code. *Table 2* summarizes the design criteria utilized in developing the proposed typical sections and alternative alignments evaluated:

Table 2: Roadway Design Standards

Design Element	Standards	Reference
Design Speed (DS)	45 mph	IRCO
Design Vehicle	WB-50 P (U-turn Vehicles)	IRCO
Lane Widths	12 feet	IRCO
Median Width	22 feet min.	Florida Greenbook
Minimum Gutter Grade	0.3%	Florida Greenbook
Minimum Clear Zone	4' from face of curb (urban) or 18' from edge of travel (rural)	Florida Greenbook
Max. Horiz. Deflection	1 Degree	Florida Greenbook
Max. Through Lane Deflection at Intersections	3 Degrees (45mph DS) 5 Degrees (40 mph DS)	FDOT FDM
Min. Horiz. Curve Length	400 ft	Florida Greenbook

4.0 ALTERNATIVE ROUTE ANALYSIS

4.1 LONG RANGE PLANNING

The need to widen the 58th Avenue corridor has been identified within the IRCO Metropolitan Planning Organizations 2040 Long Range Transportation Plan. The widening of the 58th Avenue corridor, within the study limits, is also identified within the IRCO 2030 Comprehensive Plan Transportation Element.

4.2 PUBLIC SAFETY

Between December 2014 and May 2019 there were 17 reported accidents within the study limits. The majority of these accidents consisted of right-angle collision (41.1%), left turn collision (17.6%) and pedestrian collision (11.7%). The construction of additional through lanes, additional auxiliary lanes and pedestrian facilities located at the major intersection (58th Avenue & 49th Street) is expected to result in a reduction in these three types of accidents. Refer to *Appendix A* for additional information relating to the corridor's accident history.

The implementation of the selected corridor typical sections will provide an improved safety benefit to motorist, pedestrians and bicyclists. The introduction of a median divided corridor reduces headlight glare, provides a refuge for motorists and pedestrians during crossing movements, provides improved access management by limiting and controlling vehicular turning movements and, most importantly, increases the separation distance between opposing traffic movements.

4.3 ENVIRONMENTAL IMPACTS

A Natural Resource Assessment (NRA) has been conducted to evaluate potential impacts associated with constructing the improved 58th Avenue corridor. The NRA evaluation considers and identifies potential development constraints consisting of the following:

- Site Characteristics
- Soils
- Floodplain
- Vegetative Characteristics
- Wetland and Other Surface Waters

- Wildlife
- Endangered, Threatened and Species

Impacts to surface waters and wetlands will require an environmental resource permit (ERP) from St. Johns River Water Management District (SJRWMD) and a Section 404 permit from US Army Corps of Engineers (USACE). No wetlands were identified to exist within the study limits. Minimal other surface water impacts are anticipated with filling of roadside swales and a water control district canal due to drainage culvert extensions.

Kimley-Horn staff reviewed existing available information to determine if any listed species may occur within or in the vicinity of the project area. Based upon our review no listed species have a probability of occurrence or have been observed along the corridor:

4.4 ALTERNATIVE ALIGNMENTS

Several alternative alignments were evaluated in conjunction with widening the 58th Avenue corridor to determine and quantify impacts associated with each. Alternative alignments along the corridor were evaluated to determine impacts to natural features (drainage canals, wetlands, etc.), private property (improved and unimproved) and projected construction costs. The following describes the alternative alignments evaluated and their corresponding advantages and disadvantages:

Alignment A – Left-Side Widening

Alignment A was evaluated to determine the impacts associated with this alignment. Evaluating the corridor related to a left-side widening has clear advantages and disadvantages. One advantage associated with a left side widening alignment, is that Indian River County owns one of the three (3) parcels proposed right-of-way would be needed.

One distinct disadvantage associated with this alignment is Florida Power and Light (FPL) has transmission/distribution facilities that reside within an easement along the corridor's west side that would need to be moved and re-established outside of the proposed right-of-way acquisition.

This alignment will require right-of-way acquisition from 3 parcels; 1 County owned parcel, 1 business parcel impact, 1 planned residential subdivision and

zero residential parcel impacts. Refer to *Exhibit 1* within *Appendix D* for a depiction of this alignment

Alignment B - Center Widening

Alignment B was evaluated to determine the impacts associated with this alignment. Evaluating the corridor related to a center widening has clear advantages and disadvantages. One advantage associated with a center widening is that Indian River County owns one of the seven (7) parcels proposed right-of-way would be needed. A second advantage is that this alignment can utilize the existing Murphy Deed that resides along the east side of 58th Avenue south of 49th Street.

Two disadvantages are associated with this alignment. The first would be that FPL has transmission/distribution facilities that reside within an easement that would need to be moved and re-established outside of the proposed right-of-way acquisition. The second disadvantage would be that this alignment impacts the greatest number of parcels within the study limits.

This alignment will require right-of-way acquisition from 7 parcels, 1 County owned parcel, 1 business parcel impact, 3 residential parcel impacts and 2 planned residential subdivision impacts. Refer to *Exhibit 2* within *Appendix D* for a depiction of this alignment

Alignment C – Right-Side Widening

Alignment C was evaluated to determine the impacts associated with this alignment. Evaluating the corridor related to a right-side widening has clear advantages and disadvantages. The first advantage associated with a right-side widening is that this alignment avoids impacts to the existing FPL transmission/distribution facilities located along the corridor's west side completely. A second advantage is that this alignment maximizes utilization of the existing Murphy Deed located along the corridor's east side. The third advantage is that this alignment does not require acquisition of right-of-way north of 49th Street, as the existing right-of-way along 58th Avenue north of 49th Street aligns well with the proposed typical section geometry.

A disadvantage associated with this alignment is that it has the greatest impact associated with single-family parcels along the corridor.

This alignment will require right-of-way acquisition from 4 parcels, 3 residential parcel impacts and 1 planned residential subdivision impact. Refer to *Exhibit 3* within *Appendix D* for a depiction of this alignment

4.5 COSTS

Table 3 summarizes each alignment cost components associated with widening the 58th Avenue corridor:

Table 3: Alternative Alignment Cost Comparison Summary

Alternative Alignment	Estimated Construction Cost	Estimated Right-of-Way Acquisition Cost	Estimated FPL Relocation Cost	Estimated Total Cost
Alignment A	\$ 1,396,000	\$ 442,000	\$ 1,225,000	\$ 3,063,000
Alignment B	\$ 1,396,000	\$ 253,000	\$ 700,000	\$ 2,349,000
Alignment C	\$ 1,396,000	\$ 167,000	\$ 0	\$ 1,563,000
No-Build	\$ 0	\$ 0	\$ 0	\$ 0

- Notes: 1. Construction costs are based upon FDOT and IRCO historical bid tabulations.
 2. Estimated utility relocation and easement costs based upon \$175,000 per transmission pole relocation.
 3. Right-of-way acquisition costs have been based on upon estimated property acquisition costs.

Refer to Appendix B and Appendix C for additional information related to the estimated construction cost and right-of-way acquisition cost, respectively.

5.0 RECOMMENDATIONS

The improvements to the 58th Avenue corridor has been evaluated based on five critical factors: long-range planning, public safety, environmental impacts, alternative alignments and cost. The alternative alignments considered were those that maximize the utilization of existing roadway right-of-way, minimized impacts to the environment and resulted in minimized impacts to private property. Three (3) alternative alignments, as well as a “No-Build” alternative, were considered. The summary and conclusions are as follows:

5.1 LONG RANGE PLANNING

The Indian River County MPO Long Range Transportation Plan, as well as the Indian River County 2030 Comprehensive Plan Transportation Element has the 58th Avenue corridor identified to be improved to a four-lane divided roadway. The IRCO Concurrency Management Report indicates that the 58th Avenue corridor no longer has capacity to support additional growth within the County while maintaining the County adopted Level of Service (LOS) standards identified within the Comprehensive Plan.

While any of the alternative alignments evaluated will provide for the additional roadway capacity to meet current and future traffic demands, the “No-Build” alternative will not address the transportation needs within the County.

5.2 PUBLIC SAFETY

The improvements to the 58th Avenue corridor will provide for or expand facilities associated with pedestrian mobility, bicyclists and vehicular traffic. The corridor improvements will meet current safety and design standards as set forth in the Florida Department of Transportation (FDOT) “Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways” and Indian River County Design Standards.

The selected proposed typical sections evaluated will provide separation of traffic movements, increased drive expectancy, reduced vehicular congestion and decreased accident potential; resulting in improved corridor safety. The “No-Build” alternative will not improve safety along the corridor.

5.3 ENVIRONMENTAL

An evaluation consisting of site characteristics, wetlands, floodplain, potential threatened and endangered species, soils and vegetative characteristics were reviewed within the study limits as it relates to the impact likelihood based upon the widening of the 58th Avenue corridor.

Identified impacts associated with the various alignments evaluated consists of filling of other surface waters associated with enclosing or filling roadside swales or canals, filling of isolated wetlands located immediately adjacent to the corridor, and potential impacts associated with listed species.

None of the alignments considered are projected to result in a significantly increased or reduced environmental impact relative to one another. The “No-Build” alternative will not result in any environmental impacts along the corridor.

5.4 ALTERNATIVE ALIGNMENTS

Alignment C (right-side widening) is identified to be the preferred corridor. Alignment C results in the maximizing utilization of the existing roadway rights-of-way, eliminates impacts to franchise utilities and results in the lowest projected right-of-way acquisition costs.

5.5 COSTS

The following table summarizes the projected total cost associated with the Preferred Alignment.

Table 4: Preferred Alignment Total Project Cost

Preferred Alignment Segments	Estimated Construction Cost	Estimated Right-of-Way Acquisition Cost	Estimated FPL Relocation Cost	Estimated Total Project Cost
Alignment C	\$ 1,396,000	\$ 167,000	\$ 0	<i>\$ 1,563,000</i>

The Preferred Alignment is projected to result in the most efficient utilization of the Counties capital investment.

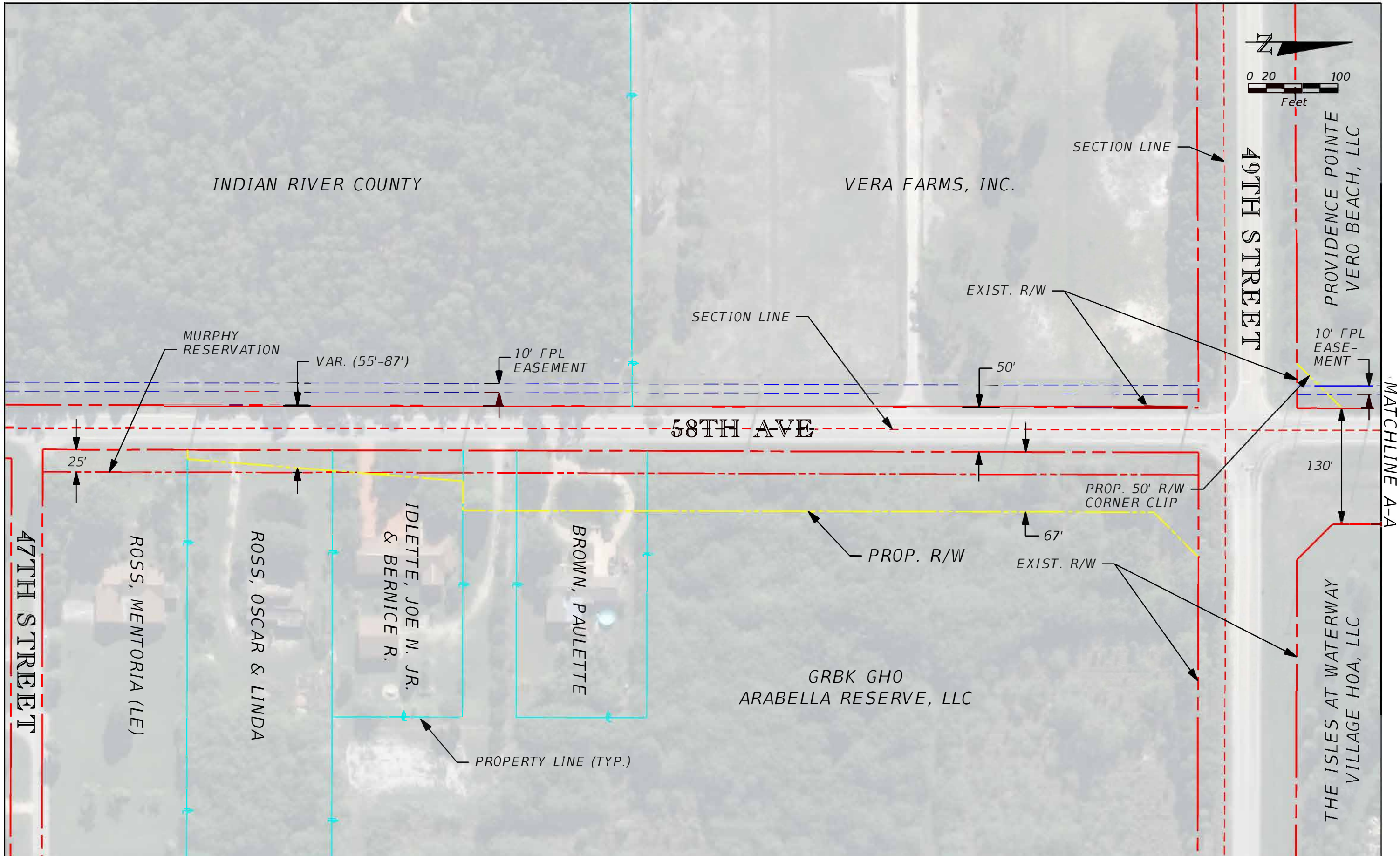
5.6 CONCLUSION

Based upon the alternative alignments evaluated Alignment C is recommended to comprise the Preferred Alignment for the following reasons:

- Addresses the long-range planning and safety objectives set forth by the County.

- Results in the least amount of private property encroachments, while maximizing utilization of existing roadway right-of-way.
- Results in the least amount of impacts to other surface waters, wetland, floodplain and endangered species habitat.
- Is projected to require the least amount of capital investment to achieve the goals and objectives established by the County.

Refer to *Figure 4* for the Preferred Alignment.



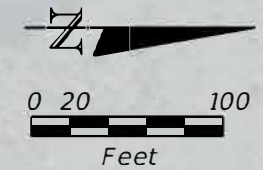
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT C
 RIGHT-SIDE WIDENING

FIGURE
 4A



PROVIDENCE POINTE
VERO BEACH, LLC

EXIST. R/W

SECTION LINE

10' FPL
EASEMENT

58TH AVE

130'

THE ISLES AT WATERWAY
VILLAGE HOA, LLC

EXIST. R/W

MATCHLINE A-A

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT C
 RIGHT-SIDE WIDENING

FIGURE
 4B

APPENDIX A

IRCO ACCIDENT HISTORY DATA

Row Labels	Crash_Date	HSMV_Report_Number	Crash_Type
2014	Dec	84717087	Angle
2015	Feb	85825786	Pedestrian
	Jun	85827470	Rear End
	Nov	86148795	Left Turn
2016	Mar	86460022	Pedestrian
	May	86460751	Left Turn
	Jun	86460940	Rear End
	Aug	86461567	Animal
2017	Mar	86738643	Rollover
	Jun	87005032	Angle
	Jul	87005324	Left Turn
2018	Apr	85539402	Angle
	May	82149301	Angle
	Jun	87138686	Angle
	Nov	88728993	Angle
2019	Apr	88730119	Sideswipe
	May	89233198	Angle
Grand Total			

Row Labels	Sum of Fatalities	Sum of Injuries
2014		
Dec	0	0
2015		
Feb	0	1
Jun	0	0
Nov	0	0
2016		
Mar	0	1
May	0	1
Jun	0	0
Aug	0	0
2017		
Mar	0	2
Jun	0	0
Jul	0	0
2018		
Apr	0	0
May	0	1
Jun	0	2
Nov	0	2
2019		
Apr	0	0
May	0	4
Grand Total	0	14

APPENDIX B

OPINION OF PROBABLE CONSTRUCTION COST



PROJECT: 58TH AVENUE WIDENING (47th Street to 1/4 mile north of 49th Street)

CLIENT: Indian River County

Friday, October 25, 2019

**OPINION OF PROBABLE CONSTRUCTION COSTS - SCALE Report
Roadway and Drainage**

"The Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs."

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY	UNIT COST	PROJECT COST
ROADWAY PAY ITEMS					
101-1A	MOBILIZATION/ DEMOBILIZATION	LS	1	\$50,000	\$50,000
102-1A	MAINTENANCE OF TRAFFIC	LS	1	\$10,000	\$10,000
104-2A	PREVENTION, CONTROL & ABATEMENT OF EROSION AND WATER POLLUTION	LS	1	\$35,000	\$35,000
108-1A	CONSTRUCTION LAYOUT/ RECORD DRAWINGS	LS	1	\$12,500	\$12,500
110-1-1A	CLEARING & GRUBBING	AC	6.6	\$12,500	\$82,500
120-1A	REGULAR EXCAVATION	CY	3,250	\$6.00	\$19,500
120-4A	SUBSOIL EXCAVATION	CY	175	\$12.00	\$2,100
120-6A	EMBANKMENT	CY	2,975	\$8.00	\$23,800
160-4A	TYPE "B" STABILIZATION	SY	15,550	\$4.50	\$69,975
285-701A	CEMENTED COQUINA (LBR 100) (4")	SY	10.0	\$12.00	\$120
285-704A	CEMENTED COQUINA (LBR 100) (6")	SY	1,095	\$15.00	\$16,425
285-709A	CEMENTED COQUINA (LBR 100) (10")	SY	12,915	\$18.00	\$232,470
334-1-13A	SUPERPAVE ASPHALT CONCRETE (SP-12.5) (TRAFFIC C) (1.75")	TN	1,460	\$105	\$153,300
337-7-82A	ASPHALTIC CONCRETE FRICTION COURSE (FC-9.5) (TRAFFIC C) (1.25")	TN	1,150	\$120	\$138,000
400-1-2	CLASS I CONCRETE (ENDWALL)	CY	2.3	\$1,300	\$2,990
425-1-351A	INLET (CURB) (TYPE P-5) (< 10')	EA	3	\$5,300	\$15,900
425-1-361A	INLET (CURB) (TYPE P-6) (< 10')	EA	4	\$5,500	\$22,000
425-1-451A	INLET (CURB) (TYPE J-5) (< 10')	EA	2	\$8,000	\$16,000
452-1-461A	INLET (CURB) (TYPE J-6) (< 10')	EA	2	\$8,800	\$17,600
425-1-521A	INLET (DBI) (TYPE C) (<10')	EA	1	\$4,100	\$4,100
425-1-529A	INLET (DBI) (TYPE C) (WITH SLOTS)	EA	1	\$4,100	\$4,100
425-1-541A	INLET (DBI) (TYPE D) (< 10')	EA	2	\$4,800	\$9,600
425-2-72A	MANHOLE (J-7) (> 10')	EA	1	\$8,200	\$8,200
425-5A	MANHOLE (ADJUST)	EA	1	\$900	\$900
425-6A	VALVE BOX (ADJUST)	EA	7	\$600	\$4,200
425-11A	MODIFY EXISTING DRAINAGE STRUCTURE	EA	2	\$2,500	\$5,000
430-175-115A	CONCRETE PIPE CULVERT (15") (CL III)	LF	30	\$45.00	\$1,350
430-175-118A	CONCRETE PIPE CULVERT (18") (S/CD) (CL III)	LF	300	\$55.00	\$16,500
430-175-124A	CONCRETE PIPE CULVERT (24") (S/CD) (CL III)	LF	300	\$65.00	\$19,500
430-175-124AA	CAP PIPE CULVERT (24") (S/CD)	LF	25	\$55.00	\$1,375
430-175-130A	CONCRETE PIPE CULVERT(30") (S/CD) (CL III)	LF	300	\$75.00	\$22,500
430-175-136A	CONCRETE PIPE CULVERT (36") (S/CD) (CL III)	LF	350	\$85.00	\$29,750
430-175-142A	CONCRETE PIPE CULVERT (42") (S/CD) (CL III)	LF	400	\$105	\$42,000
430-175-166A	CONCRETE PIPE CULVERT (66") (S/CD) (CL III)	LF	70	\$380	\$26,600
430-175-218A	CONCRETE PIPE CULVERT (14"X23") (S/CD) (CL III)	LF	25	\$55.00	\$1,375
430-175-236A	CONCRETE PIPE CULVERT (29"X45") (S/CD) (CL III)	LF	60	\$170.00	\$10,200
430-982-123A	MITERED END SECTION (15")	EA	1	\$1,500	\$1,500
430-982-129A	MITERED END SECTION (24")	EA	1	\$1,750	\$1,750
430-984-625A	MITERED END SECTION (14"X23")	EA	2	\$1,500	\$3,000
515-2-311A	PEDESTRIAN / BICYCLE RAILING (ALUMINUM) (42" PICKET RAIL)	LF	11	\$75.00	\$825
520-1-10A	CONCRETE CURB & GUTTER, TYPE F	LF	3,850	\$16.00	\$61,600
520-5-46A	TRAFFIC SEPARATOR CONCRETE - TYPE IV MOD., 8' WIDE (OPTION 1)	LF	710	\$40.00	\$28,400
522-2A	CONCRETE SIDEWALK AND DRIVEWAYS (6" THICK)	SY	1,550	\$45.00	\$69,750
ROADWAY PAY ITEMS					
527-2A	DETECTABLE WARNINGS	SF	40	\$40.00	\$1,600
570-1-2A	PERFORMANCE TURF (SOD) (BAHIA)	SY	14,000	\$2.75	\$38,500
630-2-11AA	CONDUIT (OPEN TRENCH) (F&I) (2" PVC)	LF	1,175	\$7.50	\$8,813
633-1-123AA	FIBER OPTIC CABLE (F&I) (UNDERGROUND) (96 PAIR)	LF	1,275	\$6.50	\$8,288
633-2-31A	FIBER OPTIC CONNECTION (INSTALL) (SPLICE)	EA	33	\$100	\$3,300



PROJECT: 58TH AVENUE WIDENING (47th Street to 1/4 mile north of 49th Street)

CLIENT: Indian River County

Friday, October 25, 2019

**OPINION OF PROBABLE CONSTRUCTION COSTS - SCALE Report
Roadway and Drainage**

"The Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs."

PAY ITEM NO.	DESCRIPTION	UNIT	PROJECT QUANTITY	UNIT COST	PROJECT COST
633-2-32A	FIBER OPTIC CONNECTION (INSTALL) (TERMINATION)	EA	33	\$85.00	\$2,805
633-3-11AA	FIBER OPTIC CONNECTION HDWR (SPLICE ENCLOSURE)	EA	1	\$803	\$803
635-2-11A	PULL AND SPLICE BOX (F&I) (17"X30") (PULL BOX)	EA	2	\$1,200	\$2,400
635-2-12A	PULL AND SPLICE BOX (F&I) (30"X48") (SLACK BOX)	EA	1	\$1,750	\$1,750
ROADWAY SUB-TOTAL =					\$1,362,513

SIGNING AND MARKING PAY ITEMS					
700-1-11A	SINGLE POST SIGN (F & I) (< 12 SF)	AS	11	\$350	\$3,850
700-1-50A	SINGLE POST SIGN (RELOCATION)	AS	2	\$270	\$540
700-2-12A	MULTI - POST SIGN (F & I) (12 - 20 SF)	AS	1	\$3,350	\$3,350
706-3A	RETRO-REFLECTIVE MARKERS	EA	240	\$5.00	\$1,200
710-11-290A	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE	SF	116	\$3.00	\$348
711-11-121A	THERMOPLASTIC, STD, WHITE, SOLID, 6"	LF	5,015	\$1.50	\$7,523
711-11-123A	THERMOPLASTIC, STD, WHITE, SOLID, 12"	LF	416	\$3.00	\$1,248
711-11-125A	THERMOPLASTIC, STD, WHITE, SOLID, 24"	LF	95	\$5.00	\$475
711-11-131A	THERMOPLASTIC, STD, WHITE, SKIP (10'-30'), 6"	LF	1,750	\$1.50	\$2,625
711-11-141A	THERMOPLASTIC, STD, WHITE, SKIP (2'-4' / 6'-10'), 6"	LF	500	\$1.50	\$750
711-11-160A	THERMOPLASTIC, STD, WHITE, MESSAGE	EA	5	\$190	\$950
711-11-170A	THERMOPLASTIC, STD, WHITE, ARROW	EA	12	\$75.00	\$900
711-11-221A	THERMOPLASTIC, STD, YELLOW, SOLID, 6"	LF	5,100	\$1.50	\$7,650
711-11-224A	THERMOPLASTIC, STD, YELLOW, SOLID, 18"	LF	300	\$4.00	\$1,200
711-11-241A	THERMOPLASTIC, STD, YELLOW, SKIP, (2'-4' / 6'-10'), 6"	LF	356	\$1.50	\$534
SIGNING AND PAVEMENT MARKING SUB-TOTAL =					\$33,143

TOTAL	\$1,395,656
--------------	--------------------

APPENDIX C

OPINION OF RIGHT-OF-WAY ACQUISITION COST

Project: 58th Avenue Corridor Study
Subject: Alignment A Right-of-Way Acquisition Cost
Date: 10/22/19

APPROXIMATE LOCATION / PROPERTY OWNER	Acquisition, SF	Acquisition, AC	Total Parcel, AC	% of Entire Parcel	Present Zoning	Existing Structure (Yes/No)	Est. Unit Purchase Price, \$/ SF	Est. Purchase Price
---------------------------------------	-----------------	-----------------	------------------	--------------------	----------------	-----------------------------	----------------------------------	---------------------

South of 49th Street

Vera Farms, Inc.	42639.00	0.98	20.22	5%	A-1	Y	\$ 4.00	\$ 170,556
Indian River County	19545.00	0.45	20.22	2%	CON-1	N	\$ -	\$ - * Property owned by County
GRBK GHO Arabella Reserve, LLC	0.00	0.00	26.43	0%	R-6	N	\$ -	\$ - * Property Dedicated to County via LDP process
Paulette Brown	0.00	0.00	0.98	0%	RS-6	Y	\$ 15.00	\$ -
Joe & Bernice Idlette	0.00	0.00	0.97	0%	RS-6	Y	\$ 15.00	\$ -
Oscar & Linda Iross	0.00	0.00	1.92	0%	RS-6	Y	\$ 15.00	\$ -

N. of 49th Street

Providence Pointe Vero Beach, LLC	57953.00	1.33	188.81	1%	PDTND	N	\$ 4.00	\$ 231,812
-----------------------------------	----------	------	--------	----	-------	---	---------	------------

Alignment A Est. Right-of-Way Cost = \$ 402,368

Project: 58th Avenue Corridor Study
Subject: Alignment B Right-of-Way Acquisition Cost
Date: 10/22/19

APPROXIMATE LOCATION / PROPERTY OWNER	Acquisition, SF	Acquisition, AC	Total Parcel, AC	% of Entire Parcel	Present Zoning	Existing Structure (Yes/No)	Est. Unit Purchase Price, \$/ SF	Est. Purchase Price
---------------------------------------	-----------------	-----------------	------------------	--------------------	----------------	-----------------------------	----------------------------------	---------------------

South of 49th Street

Vera Farms, Inc.	21420.00	0.49	20.22	2%	A-1	Y	\$ 4.00	\$ 85,680	
Indian River County	13106.00	0.30	20.22	1%	CON-1	N	\$ -	\$ -	* Property owned by County
GRBK GHO Arabella Reserve, LLC	23410.00	0.54	26.43	2%	R-6	N	\$ -	\$ -	* Property Dedicated to County via LDP process
Paulette Brown	4894.00	0.11	0.98	11%	RS-6	Y	\$ 10.00	\$ 48,940	
Joe & Bernice Idlette	4093.00	0.09	0.97	10%	RS-6	Y	\$ 10.00	\$ 40,930	
Oscar & Linda Iross	2680.00	0.06	1.92	3%	RS-6	Y	\$ 10.00	\$ 26,800	

N. of 49th Street

Providence Pointe Vero Beach, LLC	12484.00	0.29	188.81	0%	PDTND	N	\$ 4.00	\$ 49,936	
-----------------------------------	----------	------	--------	----	-------	---	---------	-----------	--

Alignment B Est. Right-of-Way Cost = \$ 252,286

Project: 58th Avenue Corridor Study
Subject: Alignment C Right-of-Way Acquisition Cost
Date: 10/22/19

APPROXIMATE LOCATION / PROPERTY OWNER	Acquisition, SF	Acquisition, AC	Total Parcel, AC	% of Entire Parcel	Present Zoning	Existing Structure (Yes/No)	Est. Unit Purchase Price, \$/ SF	Est. Purchase Price
---------------------------------------	-----------------	-----------------	------------------	--------------------	----------------	-----------------------------	----------------------------------	---------------------

South of 49th Street

Vera Farms, Inc.	0.00	0.00	20.22	0%	A-1	Y	\$ 4.00	\$ -
Indian River County	0.00	0.00	20.22	0%	CON-1	N	\$ 2.00	\$ -
GRBK GHO Arabella Reserve, LLC	0.00	0.00	26.43	0%	R-6	N	\$ -	\$ - * Property Dedicated to County via LDP process
Paulette Brown	9787.00	0.22	0.98	23%	RS-6	Y	\$ 10.00	\$ 97,870
Joe & Bernice Idlette	4179.00	0.10	0.97	10%	RS-6	Y	\$ 10.00	\$ 41,790
Oscar & Linda Iross	2712.00	0.06	1.92	3%	RS-6	Y	\$ 10.00	\$ 27,120

N. of 49th Street

Providence Pointe Vero Beach, LLC	0.00	0.00	188.81	0%	PDTND	N	\$ 6.00	\$ -
-----------------------------------	------	------	--------	----	-------	---	---------	------

Alignment C Est. Right-of-Way Cost = \$ 166,780

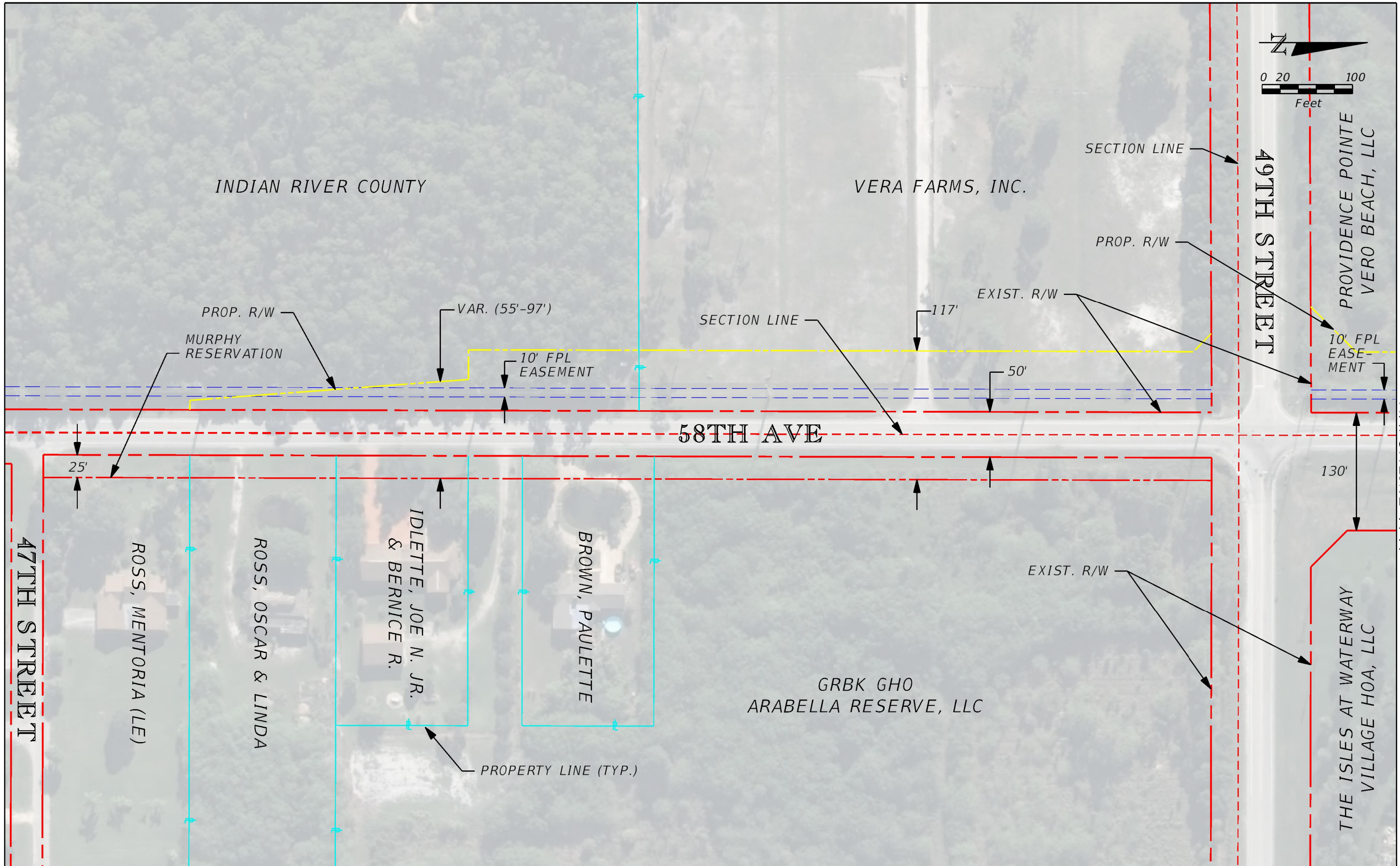
APPENDIX D

ALTERNATIVE ALIGNMENT EXHIBITS

ALIGNMENT A (LEFT SIDE WIDENING) – SHEETS A1 & A2

ALIGNMENT B (CENTER WIDENING) – SHEETS B1 & B2

ALIGNMENT C (RIGHT SIDE WIDENING) – SHEETS C1 & C23



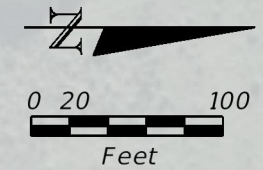
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT A
 LEFT SIDE WIDENING

SHEET NO.
 A1



PROVIDENCE POINTE
VERO BEACH, LLC

PROP. R/W

EXIST. R/W

SECTION LINE

10' FPL
EASEMENT

67'

58TH AVE

130'

THE ISLES AT WATERWAY
VILLAGE HOA, LLC

EXIST. R/W

MATCHLINE A-A

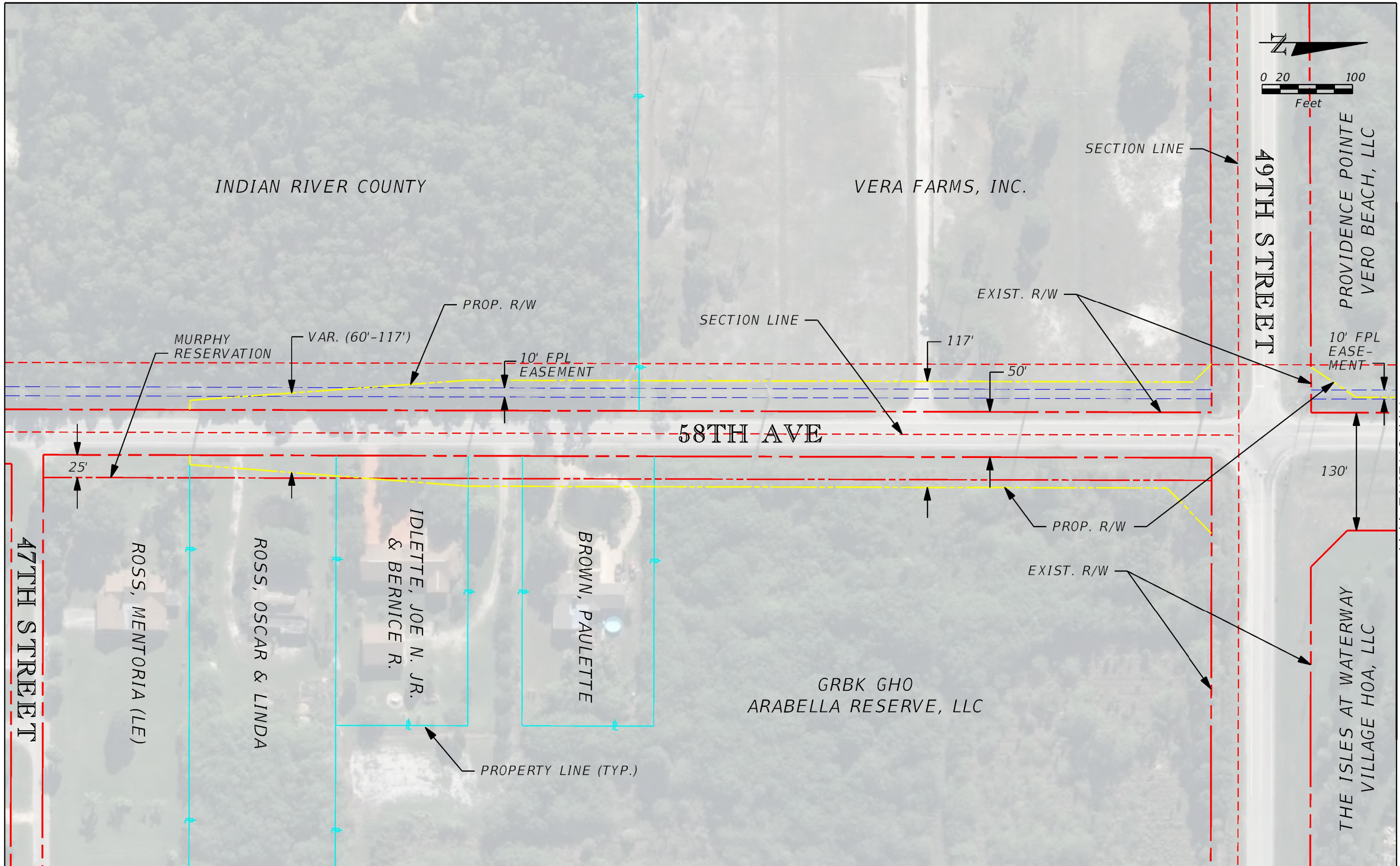
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT A
 LEFT-SIDE WIDENING

SHEET NO.
 A2



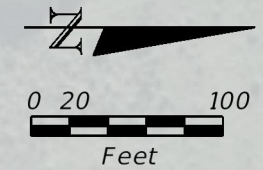
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

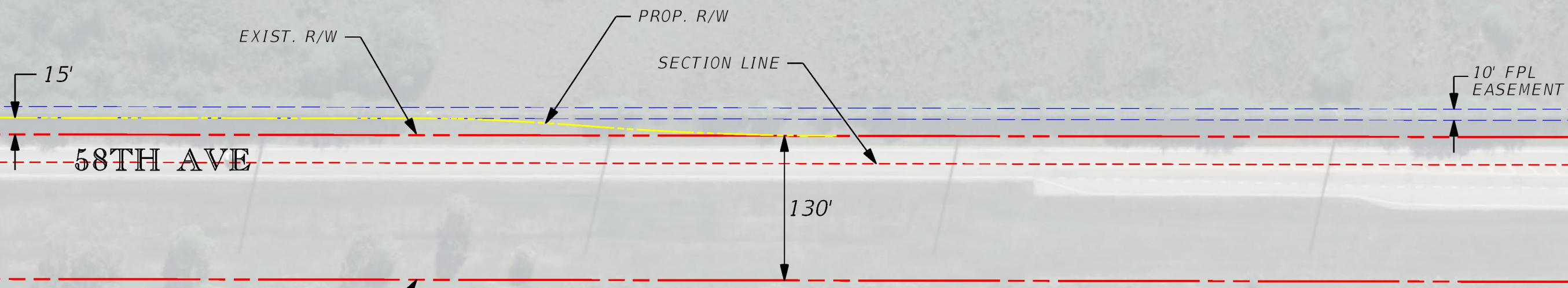
ALIGNMENT B
 CENTER WIDENING

SHEET NO.
 B1



PROVIDENCE POINTE
VERO BEACH, LLC

MATCHLINE A-A



58TH AVE

THE ISLES AT WATERWAY
VILLAGE HOA, LLC

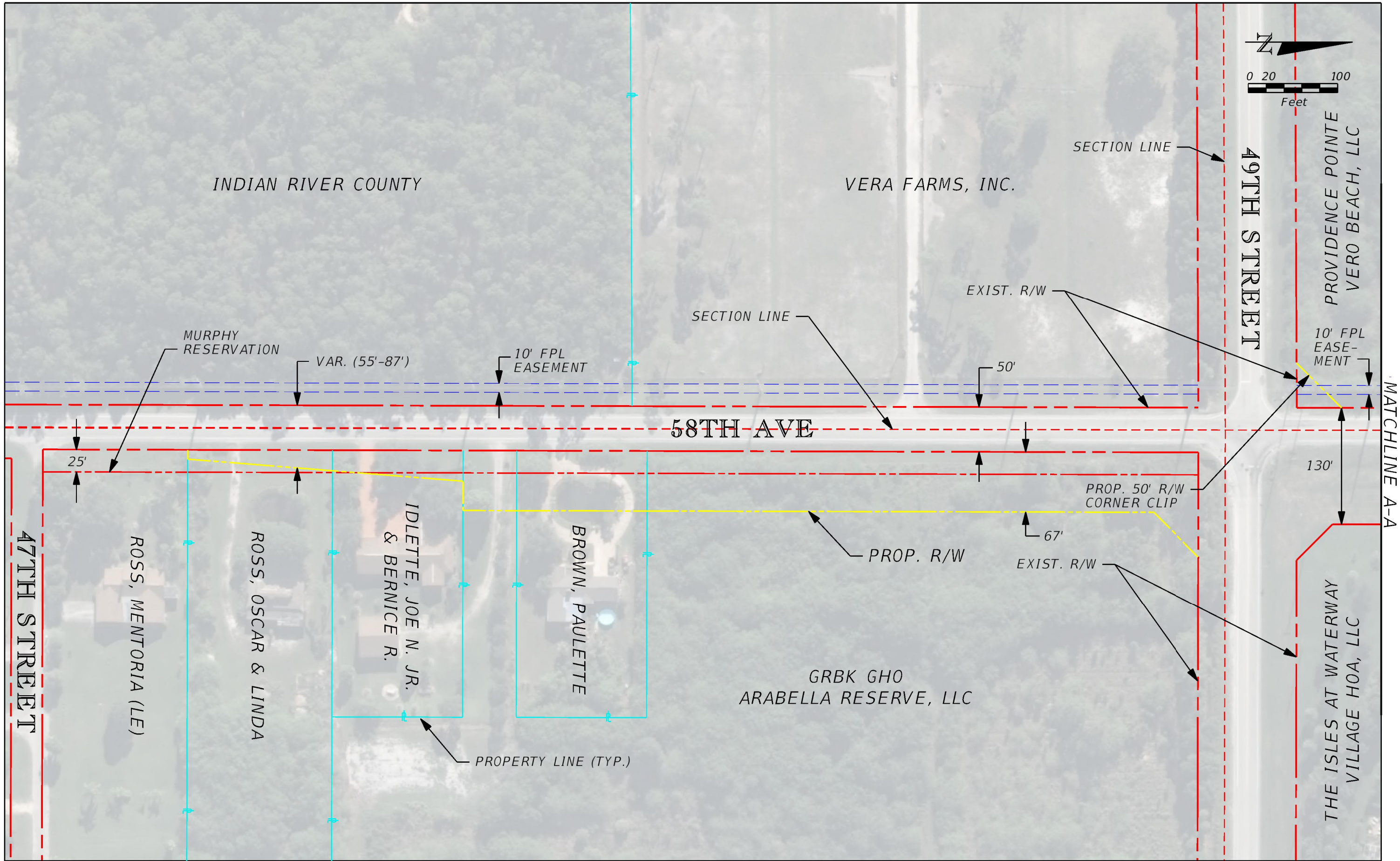
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT B
 CENTER WIDENING

SHEET NO.
 B2



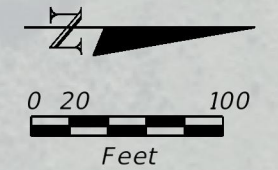
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT C
 RIGHT-SIDE WIDENING

SHEET NO.
 C1



PROVIDENCE POINTE
VERO BEACH, LLC

EXIST. R/W

SECTION LINE

10' FPL
EASEMENT

58TH AVE

130'

EXIST. R/W

THE ISLES AT WATERWAY
VILLAGE HOA, LLC

MATCHLINE A-A

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
 BRIAN A. GOOD, P.E.
 P.E. LICENSE NUMBER 56939
 445 24th STREET, SUITE 200
 VERO BEACH, FL 32960
 (772) 794-4100
 CERTIFICATE OF AUTHORIZATION: 00000696

INDIAN RIVER COUNTY
 58TH AVENUE SCALE REPORT

ALIGNMENT C
 RIGHT-SIDE WIDENING

SHEET NO.
 C2