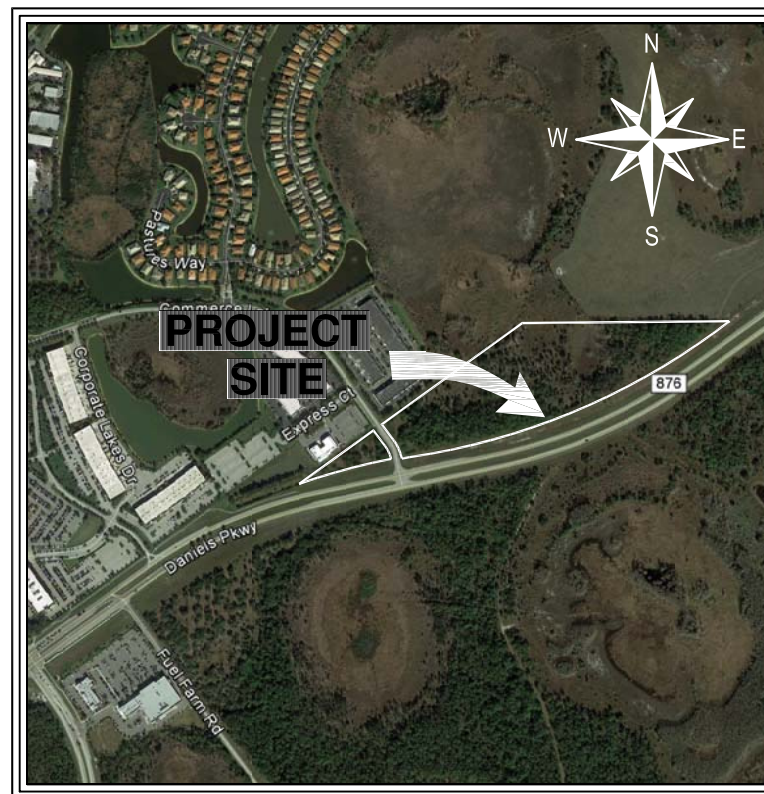


EXTERIOR LIGHTING FOR FORT MYERS BREWING

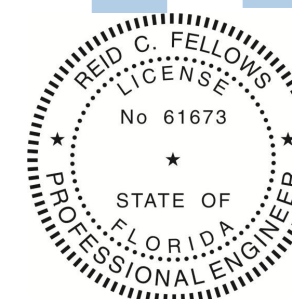


INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	COVER
L-2	POLE DETAIL, STATISTICS AND LUMINAIRE SCHEDULE
L-3	LUMINAIRE SPECIFICATIONS AND LUMINAIRE PROPERTIES
L-4	PROJECT LAYOUT
L-5 THRU L-7	PLAN

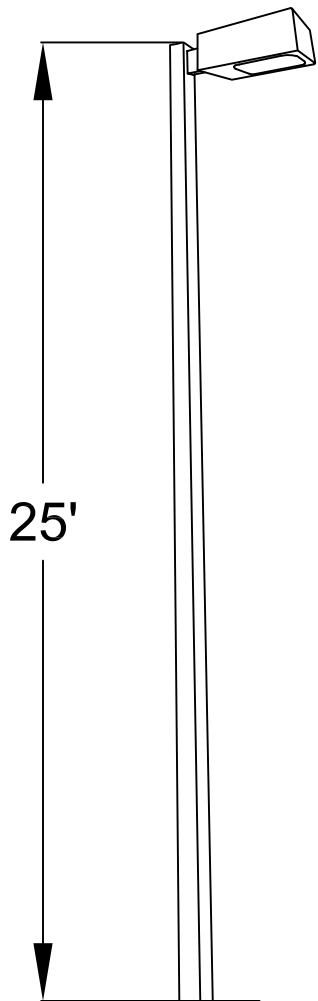
ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN ALTERED IN
SIZE BY REPRODUCTION. THIS MAY BE
CONSIDERED WHEN OBTAINING SCALED DATA.

APPROVED
DOS2022-00075
Ohdet Kleinmann, Plan Reviewer
Lee County Development Services
2/3/2023



Digitally signed by
Reid C. Fellows
P.E. 61673 State of
Florida
DN: C=US,
E=rcf@trtrans.net,
O="TR
Transportation
Consultants, Inc.",
CN=Reid C. Fellows
P.E. 61673 State of
Florida
Date: 2022.04.11
16:26:32-04'00'

JOB NO. F2204.01	DATE	BY	REVISIONS	DESIGNED BY R.C.F.	APPROVED BY:	APRIL 11, 2022	 TRANSPORTATION CONSULTANTS, INC	2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FLORIDA 33901-9356 (239) 278-3090 CERTIFICATE OF AUTHORIZATION: #27003	FORT MYERS BREWING		SHEET NO.
				DRAWN BY W.L.F.	REID C. FELLOWS				COVER		L-1
				CHECKED BY R.C.F.	P.E. 61673						



Utilities
Structures
Inc.

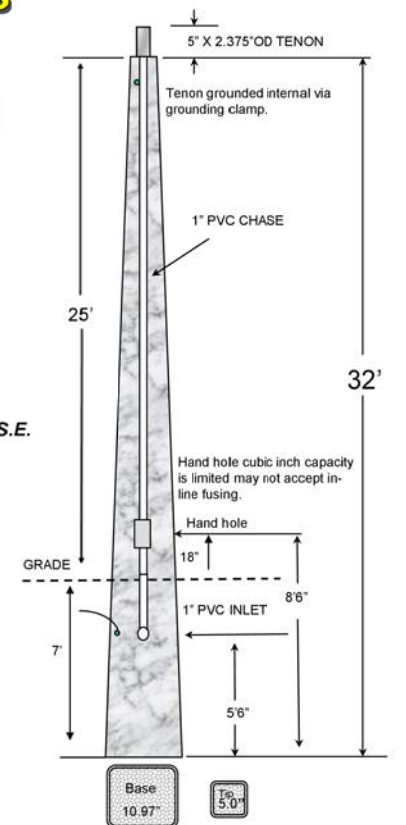
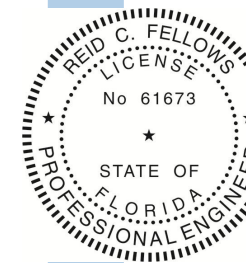
32TII-S-28358

Prestressed Concrete Pole

• Pole Weight = 2,020
• Exposure "C"
• Wind speed = 170mph Vult.
• Risk Cat. II
• Wind gust = 3 seconds
• Gust Factor = 1.2
• Load factor = 1.3
• 2017 FBC 1609, 1620 HVHZ, 1806
• ASCE 7-10
• Concrete = 8,500lbs @ 28 days
• Grd #6 str
• Strand = (4) 1/2" 270 ksi Lo Lax
• Tenon = 2 3/8" OD x 5' Hgt.

SELECT STRUCTURAL, LLC.
SHAWN R. ANDERSON, P.E., S.E.

Digitally signed by
Reid C. Fellows
P.E. 61673 State
of Florida
DN: C=US,
E=rcf@trtrans.net,
O="TR
Transportation
Consultants, Inc.",
CN=Reid C.
Fellows P.E.
61673 State of
Florida
Date: 2022.04.11
16:29:49-04'00'



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING	Illuminance	Fc	1.20	4.8	0.3	4.00	16.00
Property Line	Illuminance	Fc	0.05	0.4	0.0	N.A.	N.A.
10 Foot Off Property Line	Illuminance	Fc	0.02	0.2	0.0	N.A.	N.A.
50 Foot Off Property Line	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.

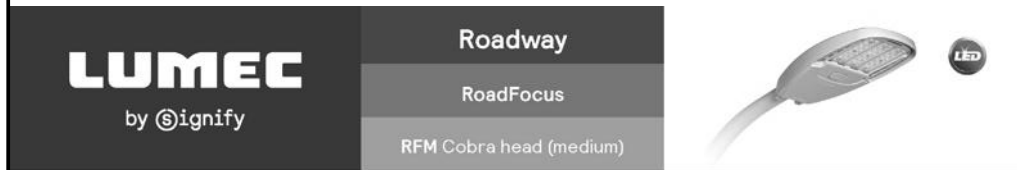
Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Description	Lum. Watts	LLF
	9	SA	SINGLE	RFM-108W48LED4K-G2-4	106	1.000
	1	SB	SINGLE	RFM-108W48LED4K-G2-R3M	106	1.000

PARKING LOT: LOW ACTIVITY

NOTES:

1. LOCATE LIGHT POLES 2 FEET BEHIND BACK OF SIDEWALK/ 4 FEET BEHIND EOP (TYPICAL).
2. POLES SHALL BE DIRECT BURIAL OR FOUNDATION TO BE DESIGNED BY OTHERS.

APPROVED
DOS2022-00075
Ohdet Kleinmann, Plan Reviewer
Lee County Development Services
2/3/2023



Lumec RoadFocus LED cobra head luminaires feature a sleek design that provides seamless replacement of existing HID luminaires. RoadFocus is available in three sizes, offers multiple lumen packages, and a complete array of optical distributions, making it an outstanding solution for all types of roadway applications. Includes Service Tag, innovative way to provide assistance throughout the life of the product.

Ordering guide

example: RFM-108W48LED3K-G2-R2M-UNV-DMG-HS-PH8-RC07-GY3									
Series	LED module	CCT	Generation	Distribution	Voltage	Options		Finish	
RFM			G2			Controls *	Options		
RFM RoadFocus medium	130W32LED ¹	4K	4000K	G2	Generation 2	DALI ² Digitally addressable lighting interface DMG ³ 0-10V SRD ⁴ Sensor ready driver, standard configuration SRD1 ⁵ Sensor ready driver, alternate configuration	2C API	BK Black BR Bronze GY3 Gray WH White	
	135W40LED ^{1*}	3K	3000K				FAWS ⁶		
	55W48LED ^{1*}	2.7K ⁷	2700K				CSS ^{2,8}		
	80W48LED			R2M	Type II short (ASYM)		FS6 ^{1,9}		
	108W48LED				Type II Medium (ASYM)		HS ^{1,10}		
	160W48LED				Type III short (ASYM)		LSS ^{1,11}		
	50W60LED ^{1*}			R3S	Type III short (ASYM)		RSS ^{1,12}		
	75W60LED ^{1*}				Type III Medium (ASYM)		NRC ²		
	100W60LED ^{1*}				Type IV (SYMM)		PH8 ^{1,13}		
	120W60LED ^{1*}				Type V (SYMM)		PH8/347 ^{10,14}		
	150W60LED ^{1*}						PH8/480 ^{10,15}		
	170W60LED ^{1*}						PHXL ^{1,16}		
							PH9 ¹⁷		
							RC07 ^{1,18}		
							SP2		
							TLRSR ¹⁹		

- ¹ Not available with HVU.

² Refer to Accessories section to confirm compatibility of shields with optical distribution.

³ Use of photoelectric cell or shorting cap is required to ensure proper illumination.

⁴ Select either DALI or DMG or SRD or SRD1 mandatory option.

⁵ Please note this integrated feature come standard with RoadFocus.
- ⁶ Only available with HVU.

⁷ Only available with DMG Driver Options.

⁸ Not available with PH8, PH8/347, PH8/480, PHXL, PH9, DALI, SRD or SRD1 Driver Options.

⁹ Not available with SRD Driver Options.

¹⁰ Either RCD or RCD7 must be selected for this option.
- ¹¹ Extended lead-time may apply. Consult factory.

¹² FAWS table accuracy +/- 15% on these models.

¹³ Not available with UNV.

¹⁴ Only available with R2M or R3M distributions.

¹⁵ 1 shield provided per LED light engine.

Accessories (must be ordered as separate line item - quickly and easily installed in the field)

Interact City connector node (Contact the factory for additional support when connected lighting or additional services are desired)

Shielding accessories

Description	Luminaire Option Code	Accessory Ordering Code		Shield vs Distribution Compatibility				
		12/16 LED version*	20 LED version*	R2M	R2S	R3M	R3S	4
Col-de-sac shield	CSS	ACC-LG66V16LED-CSS	ACC-LG66V20LED-CSS	Yes	Yes	Yes	Yes	Yes
Front side shield	FSS	ACC-LG66V16LED-FSS	ACC-LG66V20LED-FSS	Yes	Yes	Yes	Yes	No
House side shield	HS	ACC-LG66V16LED-HS	ACC-LG66V20LED-HS	Yes	Yes	Yes	Yes	No
Left side shield	LSS	ACC-LG66V16LED-LSS	ACC-LG66V20LED-LSS	Yes	Yes	Yes	Yes	Yes
Right side shield	RSS	ACC-LG66V16LED-RSS	ACC-LG66V20LED-RSS	Yes	Yes	Yes	Yes	Yes

*Refer to Wattage table to confirm light engine configuration. Example: If configuration is 2x66LED, 2 of the desired shields must be ordered per luminaire

RoadFocus-RFM-Spec 11/20 page 1 of 5



RFM RoadFocus
LED Cobra head (medium)

Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance deprecates to 70% of initial lumen output. Calculated per IESNA TM21-11 Addendum B. Published L70 hours limited to 6 times actual LED test hours.

Ambient Temperature °C	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	>60,000 hours	>97.6%

LED Wattage values

Ordering Code	Total LEDs	Light Engine Configuration	Average System Watts ¹⁶	Wattage label ¹⁷
RFM-130W32LED	32	2x16LED	129	130
RFM-135W40LED	40	2x20LED-1x16LED	135	140
RFM-55W48LED	48	3x16LED	55	60
RFM-80W48LED	48	3x16LED	81	80
RFM-108W48LED	48	3x16LED	106	110
RFM-160W48LED ¹⁸	48	3x16LED	161	160
RFM-50W60LED	60	3x20LED	52	50
RFM-75W60LED	60	3x20LED	77	80
RFM-100W60LED	60	3x20LED	99	100
RFM-120W60LED	60	3x20LED	122	120
RFM-150W60LED	60	3x20LED	149	150
RFM-170W60LED ¹⁸	60	3x20LED	170	170

- ¹⁶ Typical values, rounded.

¹⁷ As per ANSI C136.15-2015. Consult factory for other labeling needs.

¹⁸ Rated for +40°C / +104°F.

4000K LED Lumen values

Ordering Code	Color Temp.	Type R2M			Type R2S			Type R3M			Type R3S			Type 4			Type 5		
		Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
RFM-130W32LED	4000	14,983	116	B3-U0-G2	15,633	121	B3-U0-G2	14,971	116	B3-U0-G2	15,172	118	B2-U0-G2	14,901	116	B2-U0-G3	15,500	120	B4-U0-G2
RFM-135W40LED	4000	15,954	118	B3-U0-G3	N/A	N/A	N/A	16,040	119	B3-U0-G3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-55W48LED	4000	7,747	141	B2-U0-G1	8,123	147	B2-U0-G1	7,778	141	B2-U0-G1	7,883	143	B1-U0-G2	7,742	141	B1-U0-G2	8,053	146	B3-U0-G1
RFM-80W48LED	4000	11,109	138	B2-U0-G2	11,647	145	B2-U0-G2	11,153	138	B2-U0-G2	11,302	140	B2-U0-G2	11,108	138	B2-U0-G2	11,546	143	B4-U0-G2
RFM-108W48LED	4000	14,024	132	B3-U0-G2	14,702	139	B3-U0-G2	14,079	133	B3-U0-G2	14,268	135	B2-U0-G2	14,063	132	B2-U0-G2	14,576	138	B4-U0-G2
RFM-160W48LED	4000	19,482	121	B3-U0-G3	20,351	127	B3-U0-G2	19,489	121	B3-U0-G3	19,750	123	B2-U0-G3	19,397	121	B3-U0-G3	20,076	126	B4-U0-G2
RFM-50W60LED	4000	8,038	154	B2-U0-G2	N/A	N/A	N/A	8,081	155	B2-U0-G2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-75W60LED	4000	10,979	143	B2-U0-G2	N/A	N/A	N/A	11,038	143	B2-U0-G2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-100W60LED	4000	13,815	138	B3-U0-G3	N/A	N/A	N/A	13,668	138	B3-U0-G2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-120W60LED	4000	16,094	132	B3-U0-G3	N/A	N/A	N/A	16,181	133	B3-U0-G3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-150W60LED	4000	19,078	128	B3-U0-G3	N/A	N/A	N/A	19,180	129	B3-U0-G3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
RFM-170W60LED	4000	21,037	124	B3-U0-G3	N/A	N/A	N/A	21,150	124	B3-U0-G3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at signify.com/outdoorluminaires. Consult DLC GPL to confirm your specific fixture selection is DLC approved.

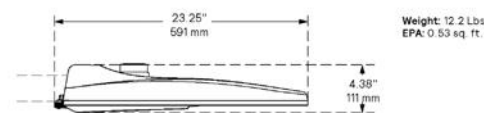
Note: Some data may be scaled based on tests of similar but not identical luminaires.

RoadFocus-RFM-Spec 11/20 page 2 of 5

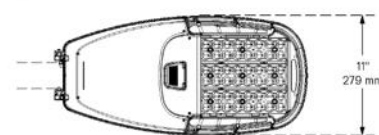
RFM RoadFocus
LED Cobra head (medium)

Dimensions

Side View



Bottom View



Specifications

Housing

Made of a low copper die cast Aluminum alloy (A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.68" (42mm) O.D. (1.25" NPS), 1.9" (48mm) O.D. (1.5" NPS) or 2.3/8" (60mm) O.D. (2" NPS) by 5.1/2" (140mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. A clearance of 13" (330mm) at the rear is required in order to remove the door. Complete with a bird guard protecting against birds and similar intruders and an ANSI label as per C136.15-2015 to identify wattage and source (both included in box). Housing (including electrical compartment) rated IP54 per ANSI C136.37.

Light Engine

Composed of 4 main components: LED Module / Optical System / Heat Sink / Driver. Electrical components are RoHS compliant, IP66 sealed light engine LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

LED Module: Composed of high-performance white LEDs. Color temperature as per ANSI/ NEMA bin 2700 Kelvin nominal (2725 ±145K), 3000 Kelvin nominal (3045K +/- 175K) or 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. Other CCT/CRI also available, consult factory.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max.

DMG: Dimmable driver 0-10V. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Integrated Features

DMG: Dimmable driver 0-10V. RCD7*: Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap.

Optical System: Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 and TM-16 (IESNA) certifying its photometric performance. 0% uplight and U0 per IESNA TM-16.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural vertical convection air flow pattern always close to LEDs and driver, optimizing their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide openings enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of +40°C / -40°F up to +50°C / +122°F unless otherwise specified, refer to LED Wattages Values Table.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max.

DMG: Dimmable driver 0-10V. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Integrated Features

DMG: Dimmable driver 0-10V. RCD7*: Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap.

DMG: Dimmable driver 0-10V. RCD7*: Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap.

DMG: Dimmable driver 0-10V. RCD7*: Tool less orientable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap.

Field Adjustable Wattage (FAWS) Multiplier Chart

FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

Note: Typical value accuracy +/- 5%

SP1: Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA.

Please note that these integrated features always come with RoadFocus luminaire. * Use of photoelectric cell or shorting cap is required to ensure proper illumination.

Driver and Luminaire Options

DALI: Pre-set driver compatible with the DALI control system. SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle and bottom TLRSR receptacle, if this option included/chosen. This configuration is compatible with Interact City controllers.

SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock. If TLRSR receptacle option included, standard SR communication, 24V auxiliary supply and LSI are connected to the TLRSR receptacle.

FAWS: Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level - see the FAWS multiplier chart for more details.

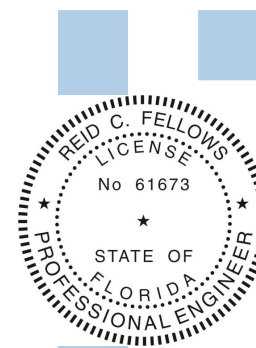
Note: It is not recommended to use FAWS with other dimming or controls, if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.

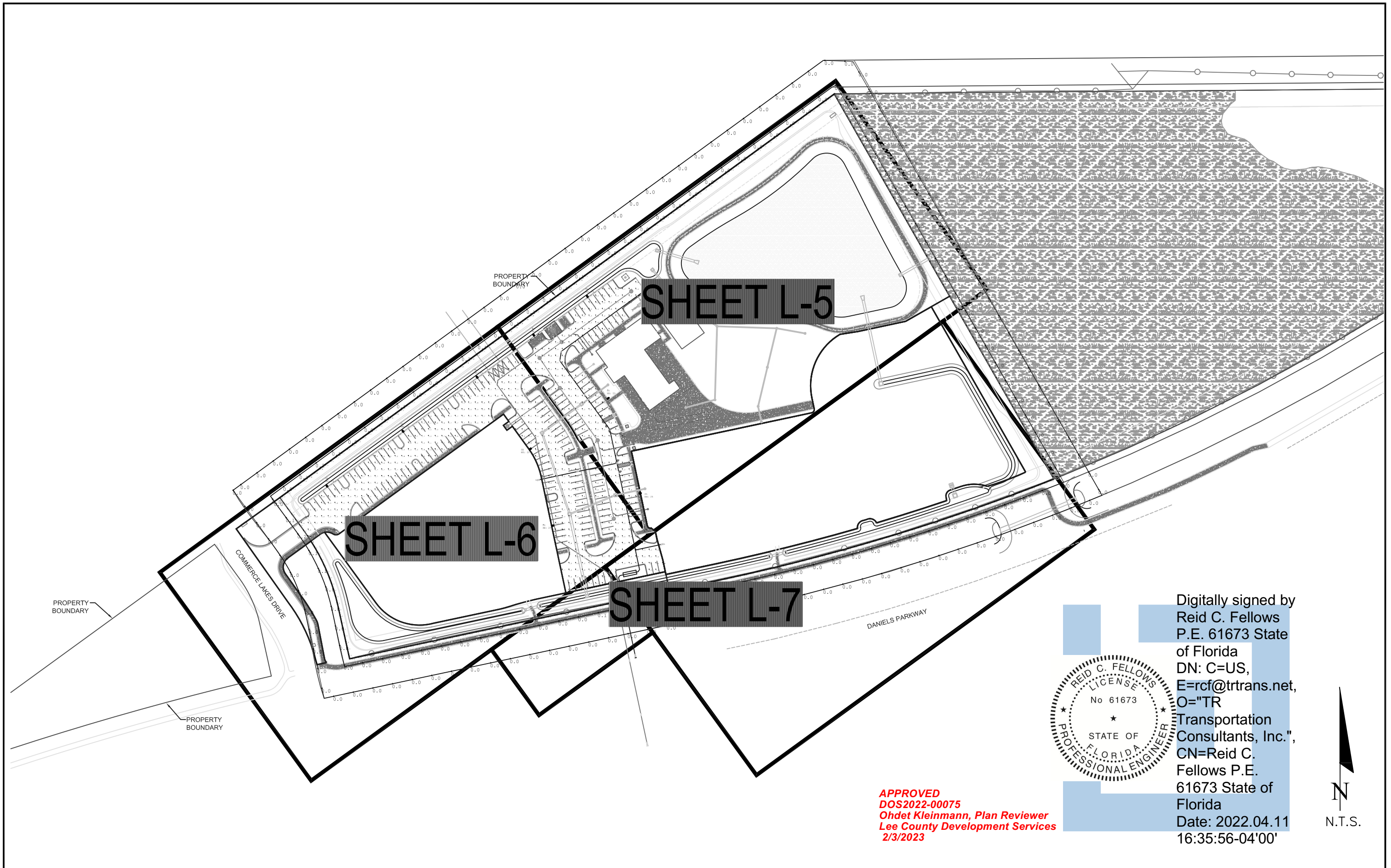
NOTES:

1. FIXTURES ARE TO BE LUMEC ROADFOCUS LED SERIES 110 WATT LED, MOUNTED AT 25 FEET AS SHOWN ON PLAN.
2. POLES SHALL BE DIRECT BURIAL OR FOUNDATION TO BE DESIGNED BY OTHERS.

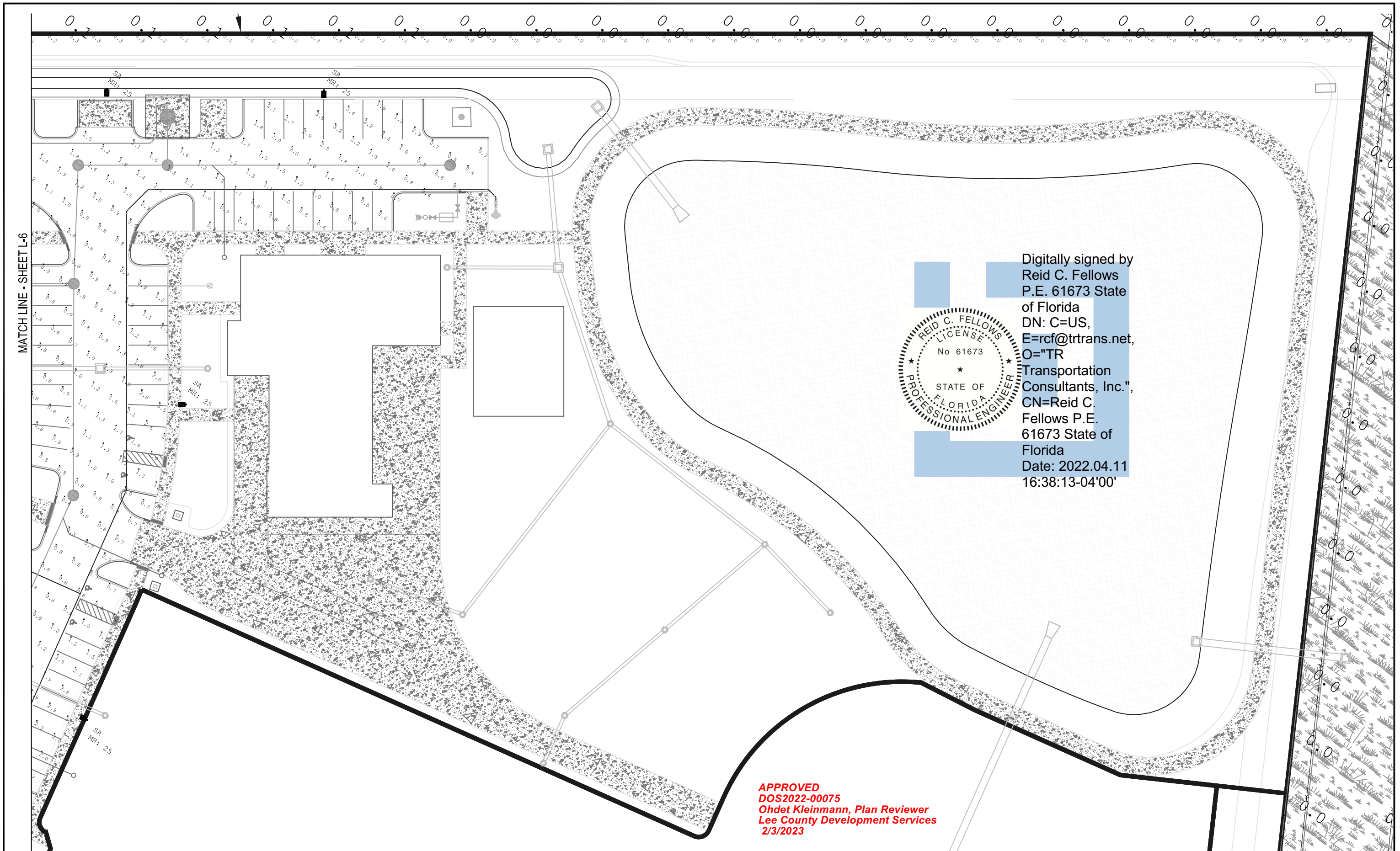
APPROVED
DOS2022-00075
Ohdet Kleinmann, Plan Reviewer
Lee County Development Services
2/3/2023

Digitally signed by
Reid C. Fellows
P.E. 61673 State of
Florida
DN: C=US,
E=rcf@trtrans.net,
O="TR
Transportation
Consultants, Inc.",
CN=Reid C.
Fellows P.E. 61673
State of Florida
Date: 2022.04.11
16:32:55-04'00'

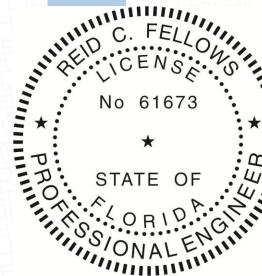




JOB NO. F2204.01	DATE	BY	REVISIONS	DESIGNED BY R.C.F.	APPROVED BY:	APRIL 11, 2022	 TRANSPORTATION CONSULTANTS, INC 2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FLORIDA 33901-9356 (239) 278-3090 CERTIFICATE OF AUTHORIZATION: #27003	FORT MYERS BREWING		SHEET NO.
				DRAWN BY W.L.F.	REID C. FELLOWS			PROJECT LAYOUT		L-4
			CHECKED BY R.C.F.	P.E. 61673						



MATCH LINE - SHEET L-6



Digitally signed by
Reid C. Fellows
P.E. 61673 State
of Florida
DN: C=US,
E=rcf@trtrans.net,
O="TR
Transportation
Consultants, Inc.",
CN=Reid C.
Fellows P.E.
61673 State of
Florida
Date: 2022.04.11
16:38:13-04'00'

APPROVED
DOS2022-00075
Ohdet Kleinmann, Plan Reviewer
Lee County Development Services
2/3/2023

MATCH LINE - SHEET L-7

JOB NO. F2204.01	DATE	BY	REVISIONS	DESIGNED BY R.C.F.	APPROVED BY:	APRIL 11, 2022	 TRANSPORTATION CONSULTANTS, INC	2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FLORIDA 33901-9356 (239) 278-3090 CERTIFICATE OF AUTHORIZATION: #27003	FORT MYERS BREWING PLAN	SHEET NO. L-5
				DRAWN BY W.L.F.	REID C. FELLOWS					
				CHECKED BY R.C.F.	P.E. 61673					

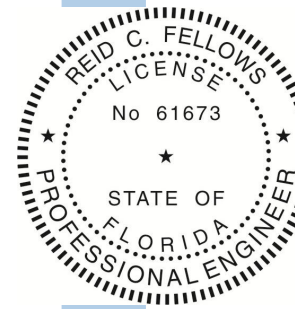
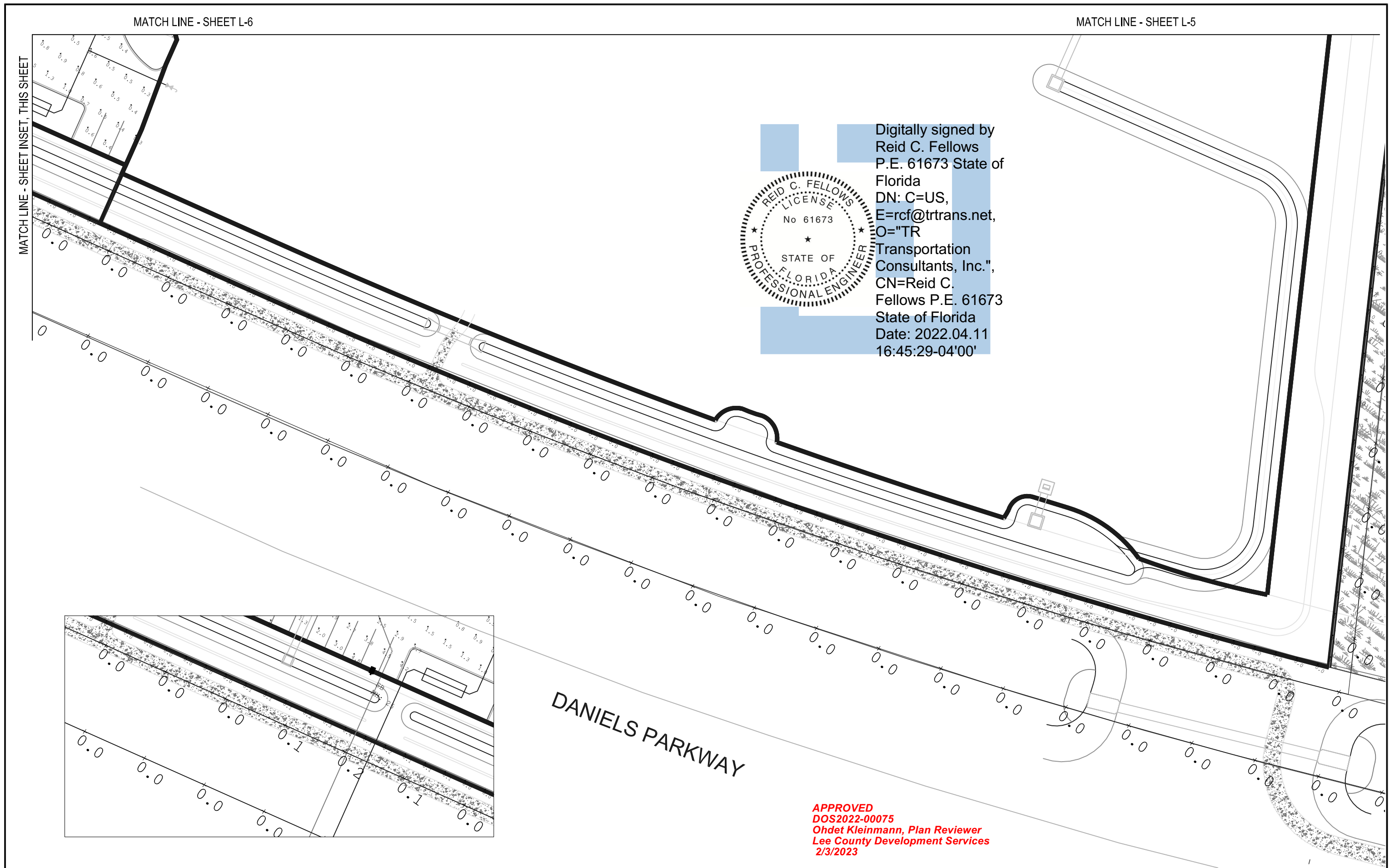
MATCH LINE - SHEET L-5

Digitally signed by
Reid C. Fellows
P.E. 61673 State
of Florida
DN: C=US,
E=rcf@trtrans.net,
O="TR
*
Transportation
Consultants, Inc.",
CN=Reid C.
Fellows P.E. 61673
State of Florida
Date: 2022.04.11
16:41:37-04'00'

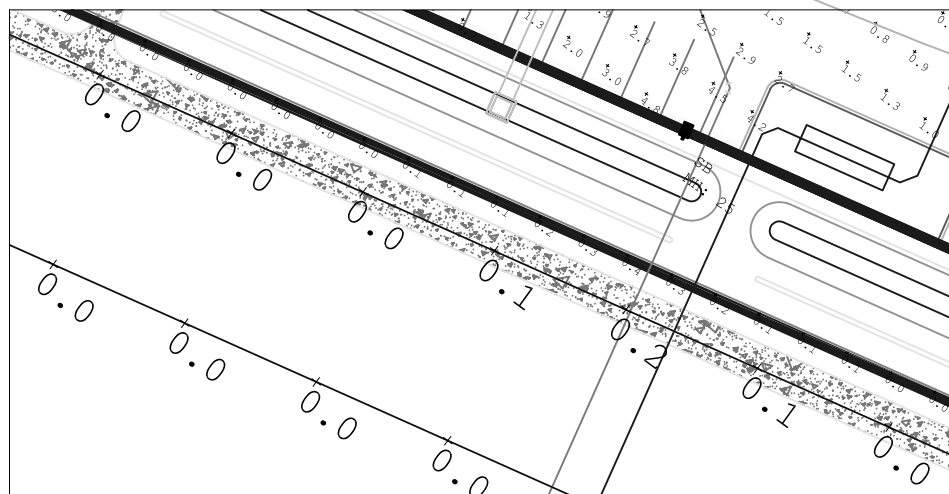
APPROVED
DOS2022-00075
Ohdet Kleinmann, Plan Reviewer
Lee County Development Services
2/3/2023

MATCH LINE - SHEET L-7

JOB NO. F2204.01	DATE	BY	REVISIONS	DESIGNED BY R.C.F.	APPROVED BY:	APRIL 11, 2022	 TRANSPORTATION CONSULTANTS, INC	2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FLORIDA 33901-9356 (239) 278-3090	FORT MYERS BREWING	SH
				DRAWN BY W.L.F.	REID C. FELLOWS			CERTIFICATE OF AUTHORIZATION: #27003	PLAN	L



Digitally signed by
 Reid C. Fellows
 P.E. 61673 State of
 Florida
 DN: C=US,
 E=rcf@trtrans.net,
 O="TR
 Transportation
 Consultants, Inc.",
 CN=Reid C.
 Fellows P.E. 61673
 State of Florida
 Date: 2022.04.11
 16:45:29-04'00'



JOB NO. F2204.01	DATE	BY	REVISIONS	DESIGNED BY R.C.F. DRAWN BY W.L.F. CHECKED BY R.C.F.	APPROVED BY: REID C. FELLOWS P.E. 61673	APRIL 11, 2022	TR TRANSPORTATION CONSULTANTS, INC.	2726 OAK RIDGE COURT, SUITE 503 FORT MYERS, FLORIDA 33901-9356 (239) 278-3090 CERTIFICATE OF AUTHORIZATION: #27003	FORT MYERS BREWING PLAN	SHEET NO. L-7
---------------------	------	----	-----------	--	---	----------------	---	---	--------------------------------	---------------------