



**COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM REQUEST FORM**

The Board of County Commissioners meets the 1st and 3rd Thursday of each month at 5:30 p.m. in the Columbia County School Board Administrative Complex Auditorium, 372 West Duval Street, Lake City, Florida 32055. All agenda items are due in the Board's office one week prior to the meeting date.

Today's Date: 4/21/2021 Meeting Date: 5/6/2021

Name: Kevin Kirby Department: Public Works

Division Manager's Signature: 

1. Nature and purpose of agenda item:

LED Lighting Agreement between Florida Power and Light and Columbia County Board of County Commissioner for the installation of fourteen (14) street lights located at the SR 41 Roundabout.

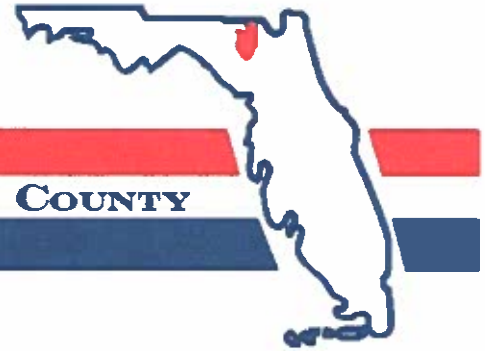
2. Recommended Motion/Action:

Approve

3. Fiscal impact on current budget.

This item has no effect on the current budget.

District No. 1 - Ronald Williams
District No. 2 - Rocky Ford
District No. 3 - Robby Hollingsworth
District No. 4 - Toby Witt
District No. 5 - Tim Murphy



BOARD OF COUNTY COMMISSIONERS • COLUMBIA COUNTY

MEMORANDUM

TO: David Kraus, County Manager

FROM: Kevin Kirby, Assistant County Manager / 

DATE: April 20, 2021

RE: LED Lighting Agreement

Attached you will find a LED Lighting Agreement between Florida Power and Light and Columbia County Board of County Commissioner for the installation of fourteen (14) street lights located at the SR 41 Roundabout.

Your consideration is appreciated.

BOARD MEETS FIRST AND THIRD THURSDAY AT 5:30 P.M.

P.O. BOX 1529

LAKE CITY, FLORIDA 32056-1529

PHONE (386) 755-4100



FPL Account Number: 6931765413

FPL Work Request Number: _____

LED LIGHTING AGREEMENT

In accordance with the following terms and conditions, COLUMBIA COUNTY BOARD OF COMMISSIONERS (hereinafter called the Customer), requests on this 12th day of April, 2021, from FLORIDA POWER & LIGHT COMPANY (hereinafter called FPL), a corporation organized and existing under the laws of the State of Florida, the following installation or modification of lighting facilities at (general boundaries) SR 41 North Roundabout Street Lights, located in Lake City, Florida.

(a) Installation and/or removal of FPL-owned facilities described as follows:

<u>Poles</u>				
Pole Type	Existing Pole Count (A)	# Installed (B)	# Removed (C)	New Pole Count (A+B-C)
Wood				
Standard Concrete		14		14
Standard Fiberglass				
Decorative Concrete				
Decorative Fiberglass				

<u>Underground Conductor</u>				
Type	Existing Footage (A)	Feet Installed (B)	Feet Removed (C)	New Footage (A+B-C)
Under Pavement		N/A ⁽¹⁾		
Not Under Pavement		1135		1135

(1) All new conductor installed is in conduit and billed as Not Under Pavement

- (b) Modification to existing facilities other than described above (explain fully): 45' standard concrete pole with a 12' arm for all locations. Use 12' arm with 72" rise M&S # 172-265-00

That, for and in consideration of the covenants set forth herein, the parties hereto covenant and agree as follows:

FPL AGREES:

1. To install or modify the lighting facilities described and identified above (hereinafter called the Lighting System), furnish to the Customer the electric energy necessary for the operation of the Lighting System, and furnish such other services as are specified in this Agreement, all in accordance with the terms of FPL's currently effective lighting rate schedule on file at the Florida Public Service Commission (FPSC) or any successive lighting rate schedule approved by the FPSC.

THE CUSTOMER AGREES:

2. To pay a contribution in the amount of \$0.00 prior to FPL's initiating the requested installation or modification.
3. To purchase from FPL all of the electric energy used for the operation of the Lighting System.
4. To be responsible for paying, when due, all bills rendered by FPL pursuant to FPL's currently effective lighting rate schedule on file at the FPSC or any successive lighting rate schedule approved by the FPSC, for facilities and service provided in accordance with this agreement.
5. To provide access, final grading and, when requested, good and sufficient easements, suitable construction drawings showing the location of existing and proposed structures, identification of all non-FPL underground facilities within or near pole or trench locations, and appropriate plats necessary for planning the design and completing the construction of FPL facilities associated with the Lighting System.
6. To perform any clearing, compacting, removal of stumps or other obstructions that conflict with construction, and drainage of rights-of-way or easements required by FPL to accommodate the lighting facilities.

IT IS MUTUALLY AGREED THAT:

7. Modifications to the facilities provided by FPL under this agreement, other than for maintenance, may only be made through the execution of an additional lighting agreement delineating the modifications to be accomplished. Modification of FPL lighting facilities is defined as the following:
 - a. the addition of lighting facilities;
 - b. the removal of lighting facilities; and
 - c. the removal of lighting facilities and the replacement of such facilities with new facilities and/or additional facilities.

Modifications will be subject to the costs identified in FPL's currently effective lighting rate schedule on file at the FPSC, or any successive schedule approved by the FPSC.

8. Lighting facilities will only be installed in locations that meet all applicable clear zone right-of-way setback requirements.
9. FPL will, at the request of the Customer, relocate the lighting facilities covered by this agreement, if provided sufficient right-of-ways or easements to do so and locations requested are consistent with clear zone right-of-way setback requirements. The Customer shall be responsible for the payment of all costs associated with any such Customer-requested relocation of FPL lighting facilities. Payment shall be made by the Customer in advance of any relocation.
10. FPL may, at any time, substitute for any luminaire installed hereunder another luminaire which shall be of at least equal illuminating capacity and efficiency.
11. This Agreement shall be for a term of ten (10) years from the date of initiation of service, and, except as provided below, shall extend thereafter for further successive periods of five (5) years from the expiration of the initial ten (10) year term or from the expiration of any extension thereof. The date of initiation of service shall be defined as the date the first lights are energized and billing begins, not the date of this Agreement. This Agreement shall be extended automatically beyond the initial the (10) year term or any extension thereof, unless

either party shall have given written notice to the other of its desire to terminate this Agreement. The written notice shall be by certified mail and shall be given not less than ninety (90) days before the expiration of the initial ten (10) year term, or any extension thereof.

12. In the event lighting facilities covered by this agreement are removed, either at the request of the Customer or through termination or breach of this Agreement, the Customer shall be responsible for paying to FPL an amount equal to the fixture, pole, and conductor charges for the period remaining on the currently active term of service plus the cost to remove the facilities.
13. Should the Customer fail to pay any bills due and rendered pursuant to this agreement or otherwise fail to perform the obligations contained in this Agreement, said obligations being material and going to the essence of this Agreement, FPL may cease to supply electric energy or service until the Customer has paid the bills due and rendered or has fully cured such other breach of this Agreement. Any failure of FPL to exercise its rights hereunder shall not be a waiver of its rights. It is understood, however, that such discontinuance of the supplying of electric energy or service shall not constitute a breach of this Agreement by FPL, nor shall it relieve the Customer of the obligation to perform any of the terms and conditions of this Agreement.
14. The obligation to furnish or purchase service shall be excused at any time that either party is prevented from complying with this Agreement by strikes, lockouts, fires, riots, acts of God, the public enemy, or by cause or causes not under the control of the party thus prevented from compliance, and FPL shall not have the obligation to furnish service if it is prevented from complying with this Agreement by reason of any partial, temporary or entire shut-down of service which, in the sole opinion of FPL, is reasonably necessary for the purpose of repairing or making more efficient all or any part of its generating or other electrical equipment.
15. **This Agreement supersedes all previous Agreements or representations, either written, oral, or otherwise between the Customer and FPL, with respect to the facilities referenced herein and constitutes the entire Agreement between the parties. This Agreement does not create any rights or provide any remedies to third parties or create any additional duty, obligation or undertakings by FPL to third parties.**
16. In the event of the sale of the real property upon which the facilities are installed, upon the written consent of FPL, this Agreement may be assigned by the Customer to the Purchaser. No assignment shall relieve the Customer from its obligations hereunder until such obligations have been assumed by the assignee and agreed to by FPL.
17. This Agreement shall inure to the benefit of, and be binding upon the successors and assigns of the Customer and FPL.
18. The lighting facilities shall remain the property of FPL in perpetuity.
19. This Agreement is subject to FPL's Electric Tariff, including, but not limited to, the General Rules and Regulations for Electric Service and the Rules of the FPSC, as they are now written, or as they may be hereafter revised, amended or supplemented. In the event of any conflict between the terms of this Agreement and the provisions of the FPL Electric Tariff or the FPSC Rules, the provisions of the Electric Tariff and FPSC Rules shall control, as they are now written, or as they may be hereafter revised, amended or supplemented.

IN WITNESS WHEREOF, the parties hereby caused this Agreement to be executed in triplicate by their duly authorized representatives to be effective as of the day and year first written above.

Charges and Terms Accepted:

COLUMBIA COUNTY BOARD OF COMMISSIONERS

Customer (Print or type name of Organization)

FLORIDA POWER & LIGHT COMPANY

By: _____

Signature (Authorized Representative)

By: _____

(Signature)

(Print or type name)

Chris Venoy

(Print or type name)

Title: _____

Title: FPL LT-1 Representative



Construction Notes: (FPL Contractors installing conduits)

- Loc. 1 to 14: Install (1) Cooper Verdeon 182W 4K 22,236 Lumens on NEW 45' Arm Mount Concrete Pole
- Loc. 1, 6 and C: Install a 2" Riser
- Loc. A to 1: Install #6 DPX OH cable
- Loc. B: Install a 24" HH
- Loc. C and D: Install 2" Riser
- **Install lights 3ft behind the drainage.

- Poles on this page to be installed at around 5ft from the EOP. Stake locations of the poles by the property lines where applicable. Verify fixture is working after installation.
 - Poles to be installed behind the sidewalk in-line with existing poles.
 - FPL crew to run #1/0 TPX UG or #1/0 TPX cable to all locations shown in the drawing.
 - All hand-holes to be 17" unless noted.
 - Customer responsible for any restoration required.
- FPL LED Representative: Chris Venoy

Locations were provided by Customer

FDOT permit required

AS-BUILT DRAW PRINT		AS-BUILT COPY	
Easement? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Tree Work? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Survey/Scale? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Designer/Scale? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Work with SMO? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> CT/Spacial Mtr? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	FPL FDOT-SR 41 N ROUNDABOUT Install 14 New Lights v/o US Hwy 41, Lake City, FL 32055
City: WMD County Rd: RR Xing County Air: DR. Dist. State Road: Transm. FAA:	Requested Tel. Co. Set Poles? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Requested Tel. Co. Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Requested CALV Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Pole Line Feet: 0' Pole Line Ft. on Trunk. Poles: 0' Trench Ft.: 0'	Designed by: Jessica Bulles Date: 04/12/21 Drawn by: XX Check by: Dwg No. 1 OF 3 Rural Location Sec. XX TWP. XX S, RGE. XX E. SCALE: N.T.S. St. Lt. MAP No. MAPW Pri Map No. P37904 TLM/LOS MODEL No. - Map Posting? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Posted by: WR XXXXXXXXXX

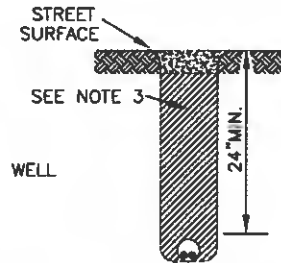
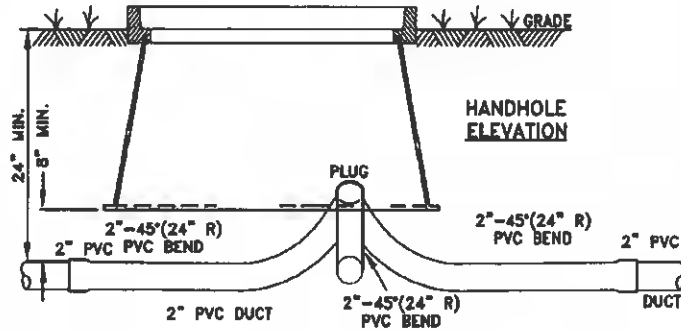
INACCESSIBLE
 13 KV
 FUTURE 23 KV
 23 KV
 SALT SPRAY

Loc	Address	Grid Number	Install					Date Installed
			Manufacturer	Watts	Style	Color Temp	Fixture Color	
1			Cooper	182	Verdeon	4000	Gray	
2			Cooper	182	Verdeon	4000	Gray	
3			Cooper	182	Verdeon	4000	Gray	
4			Cooper	182	Verdeon	4000	Gray	
5			Cooper	182	Verdeon	4000	Gray	
6			Cooper	182	Verdeon	4000	Gray	
7			Cooper	182	Verdeon	4000	Gray	
8			Cooper	182	Verdeon	4000	Gray	
9			Cooper	182	Verdeon	4000	Gray	
10			Cooper	182	Verdeon	4000	Gray	
11			Cooper	182	Verdeon	4000	Gray	
12			Cooper	182	Verdeon	4000	Gray	
13			Cooper	182	Verdeon	4000	Gray	
14			Cooper	182	Verdeon	4000	Gray	



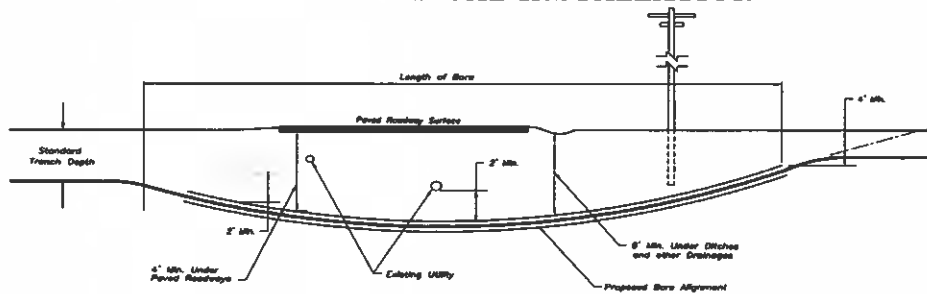
AS-BUILT CROW PRINT		FPL		AS-BUILT COPY	
Equipment? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Survey/State? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Work with SMO? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	FPL FDOT-SR 41 N ROUNDABOUT Install 14 New Lights v/o US Hwy 41, Lake City, FL 32055		
Trans Work? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Designer/State? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CT/Special Mtr? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	City	County Rd.	County Air
City	County Rd.	County Air	State Road	FAA	
Requested Tel. Co. Set Poles? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Requested Tel. Co. Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Request CAVT Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Designed by:	Jessica Builes	Date:
POLE LINE FT. ON TOWER, POLES	0'	DUCT BANK FT.	0'	Drawn by:	XX
POLE LINE FT. ON TOWER, POLES	0'	TRENCH FT.	0'	Check by:	
Map Posting? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Posted by:	WR	XXXXXX	Dwg No.	2 OF 3
				Rural Location Sec.	XX TWP. XX S, RGE. XX E.
				SCALE:	N.T.S. St. Lt MAP No. MAP# Pri Map No. P37904

INACCESSIBLE 13 kV FUTURE 23 kV 23 kV SALT SPRAY



STREET LIGHT CABLE IN 2" PVC CONDUIT

DIRECTIONAL BORE TYPICAL INSTALLATION



H-7.0.1
STREET LIGHT UNDERGROUND INSTALLATIONS
H-7.0.1

NOTES:

- FOR #4 AL TOP OR #1/0 AL TOP RAPS, USE SHEAR BOLT CONNECTOR HAS #163-050-002 AND A SHORT 1/2" POINT SOCKET (HAS #584-855-004) TO CONNECT #120 CONDUCTORS TO FEED INDIVIDUAL LAMPFILES.
- FOR #4/0 AL TOP RAPS, USE SHEAR BOLT CONNECTORS AS SHOWN ON L-17.0.0.
- FOR DIRECT FEED TO SINGLE STREET LIGHT, USE CONNECTOR HAS #163-050-002 AND A SHORT 3/4" & POINT SOCKET (HAS #584-855-004).
- SEE H-7.1.1 FOR INSTALLATION DETAILS.

SUPERSEDES H-7.0.1 LAST REVISED ON 1-29-92

REV	DATE	BY	CHKD	APPV	DESCRIPTION
1	1/29/92	JJ	MS	JJ	ISSUE FOR CONSTRUCTION
2	1/29/92	JJ	MS	JJ	REVISED TO ADD 2 1/2" ST. LT. CBL.
3	1/29/92	JJ	MS	JJ	REVISED TO ADD 2" ST. PVC CONDUIT
4	1/29/92	JJ	MS	JJ	REVISED TO ADD 24" MIN. COVER UNDER STREET PAVEMENT
5	1/29/92	JJ	MS	JJ	REVISED TO ADD 24" MIN. COVER UNDER UNPAVED AREAS

F P L
OH & UG DISTRIBUTION SYSTEM STANDARDS
DRAWN BY: RAS

AS-BUILT CROW PRINT APPROVED: _____ DATE: _____ APPROVED: _____ DATE: _____		AS-BUILT COPY APPROVED: _____ DATE: _____ APPROVED: _____ DATE: _____	
Easement? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Tree Work? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Survey/State? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Designer/State? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Work with SAO? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> CI/Shared Mty? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	F P L FOOT-SR 41 N ROUNDABOUT Install 14 New Lights v/o US Hwy 41, Lake City, FL 32055		
City: WMD County Rd.: RR Xing County Air: DR. Dist. State Road: Transm. FAA: _____ Requested Tel. Co. Set Poles? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Requested Tel. Co. Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Request CAVT Transfer? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Designed by: Jessica Builes Date: 04/12/21 Drawn by: XX Check by: _____ Dwg No.: 3 OF 3	Rural Location Sec. XX TWP. XX S. RGE. XX E.	
POLE LINE FEET: 0' DUCT BANK FT.: 0' POLE LINE FT. ON TRAMMIS, POLES: 0' TRENCH FT.: 0'	SCALE: N.T.S. St. Lt MAP No. MAP# Pri Map No. P37904 TLM/DBS MODEL No. _____ Map Posting? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> Posted by: _____	WR XXXXXXXXXX M/A XX	



Member of the SNC-Lavalin Group

Summary

US 41 (SR 100) AND BASCOM NORRIS DR
ROUNDAABOUT AND TRANSITION LIGHTING
FPID 446295-1-52-01
COLUMBIA COUNTY, FLORIDA

Ver. 3

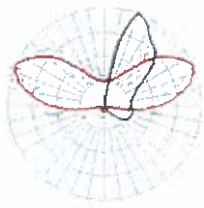
ATKINS NORTH AMERICA, INC.
800 WATERFORD WAY
SUITE 700
MIAMI, FL 33126
CONTRACT NO.: CA281
VENDOR NO.: F-590-896-138-001
CERTIFICATE OF AUTHORIZATION NO. 24

EOR: PEDRO L. TREVIN, P.E
P.E. NO.: 15309

Luminaire Summary

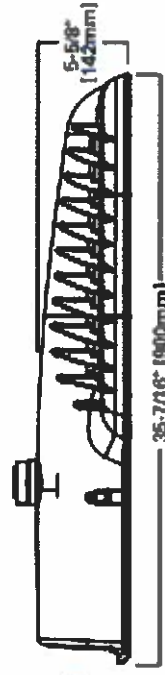
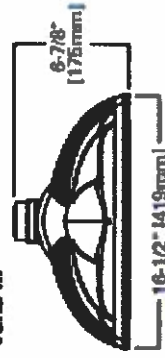
Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
□	15	VERD-M-A03-E-U-T3-AP	SINGLE	N.A.	1.000	VERD-M-A03-E-U-T3-AP

Luminaire Images



DIMENSIONS

VERD-M



Luminaire Location Summary

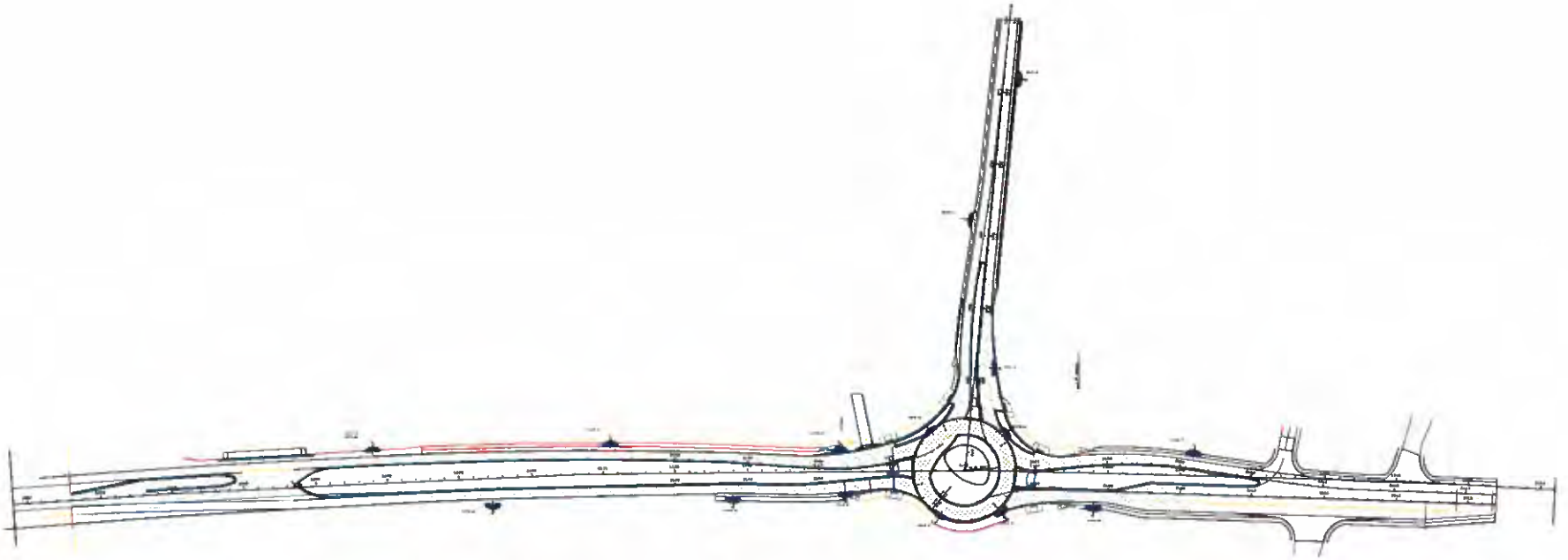
Coordinates In Feet

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
1	VERD-M-A03-E-U-T3-AP	2553815.	443441.9	40	80.623	0
2	VERD-M-A03-E-U-T3-AP	2553740.	443536.5	40	349.913	0
3	VERD-M-A03-E-U-T3-AP	2553841.	443610.5	40	256.107	0
4	VERD-M-A03-E-U-T3-AP	2553908.	443539.5	40	189.914	0
5	VERD-M-A03-E-U-T3-AP	2553687	443472	40	308.797	0
6	VERD-M-A03-E-U-T3-AP	2553564.	443297.8	40	124.509	0
7	VERD-M-A03-E-U-T3-AP	2553359.	443241.8	40	305.346	0
12	VERD-M-A03-E-U-T3-AP	2553908.	443367.3	40	41.159	0
13	VERD-M-A03-E-U-T3-AP	2554074.	443311.7	40	220.03	0
15	VERD-M-A03-E-U-T3-AP	2554327.	442870.1	40	41.819	0
16	VERD-M-A03-E-U-T3-AP	2554294.	443061.7	40	220.03	0
17	VERD-M-A03-E-U-T3-AP	2554107.	443117.7	40	39.998	0
18	VERD-M-A03-E-U-T3-AP	2553760.	443701.1	40	218.213	0
19	VERD-M-A03-E-U-T3-AP	2553595.	443745.3	40	31.767	0
20	VERD-M-A03-E-U-T3-AP	2553965.	443427.7	40	225.611	0

Calculation Summary

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
BASCOM NORRIS DR	Illuminance	Fc	1.58	3.5	0.6	2.63	5.83
Crosswalk	Illuminance	Fc	2.39	2.7	1.8	1.33	1.50
Roundabout	Illuminance	Fc	2.91	3.7	1.8	1.62	2.06
US 41 NORTH OF ROUNDABOUT	Illuminance	Fc	1.34	2.6	0.4	3.35	6.50
US 41 SOUTH OF ROUNDABOUT	Illuminance	Fc	1.55	3.6	0.4	3.88	9.00

Viewpoint



VIEWPOINT: Viewpoint_1

DESCRIPTION

The Verdeon LED roadway luminaire combines optical performance, energy efficiency, and outstanding versatility to meet the requirements of any roadway application. Advanced optical technology delivers unparalleled uniformity, scalability, and budget-beating operating costs for municipal streets and highways. UL/cUL listed for wet locations with an optional IP66 enclosure rating available.

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

SPECIFICATION FEATURES

Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

Optics

Optics are precisely designed to shape the distribution maximizing efficiency and fixture spacing. Offered standard in 4000K (+/- 275K) CCT and 70 CRI. Optional 5000K CCT and 3000K CCT are available.

Electrical

120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 10kV/10kA common and differential mode surge protection available. Thermal

management transfers heat away from the LED source for optimal efficiency, light output and lumen maintenance. Operates in ambient temperatures from -40°C to 40°C. 50°C HA (high ambient) option available. Standard three-position tunnel type terminal block. LED modules are IP66 rated.

Mounting

Four-bolt slipfitter with cast-in pipe stop and 2.5° leveling steps. Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm available with round pole adapter and mounting hardware included.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult your lighting representative at Cooper Lighting Solutions for a complete selection of standard colors.

Warranty

Standard five-year warranty. Optional ten-year warranty, please see your Cooper Lighting Solutions Streetworks sales representative for more information.

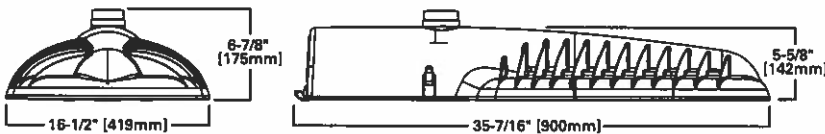


**VERD-M
VERDEON**

ROADWAY LUMINAIRE

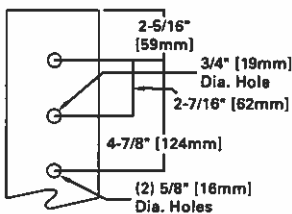
DIMENSIONS

VERD-M



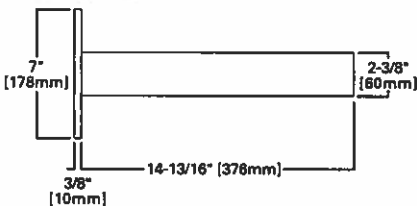
ARM DRILLING

TYPE "M"

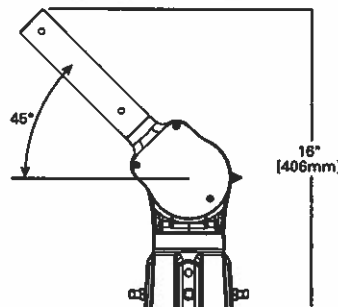


OPTIONAL ARM

15" STRAIGHT ARM



ADJUSTABLE SLIPFITTER OFFSET ARM



CERTIFICATION DATA

UL and cUL Wet Location Listed

IP66-Rated Optics

3G Vibration Rated

ISO 9001

DesignLights Consortium® Qualified*

ENERGY DATA

Electronic LED Driver

0.9 Power Factor

<20% Total Harmonic Distortion

120-277V/50 and 60Hz,

347V 60Hz, 480V 60Hz

-40°C Minimum Temperature Rating

+40°C Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): 0.8

SHIPPING DATA

Approximate Net Weight:

35 lbs. (15.9 kgs.)

POWER AND LUMENS

Light Engine	M-A0385	M-A03	M-A0485	M-A04	
Power (Watts)	152	182	210	247	
Current (a) @ 120V	1.41	1.69	1.95	2.29	
Current (a) @ 277V	0.61	0.74	0.85	1.00	
Power (Watts)	167	197	211	255	
Current (a) @ 347V	0.49	0.58	0.62	0.75	
Current (a) @ 480V	0.36	0.41	0.45	0.54	
Optics					
Type II	Lumens	19,571	22,456	26,419	29,829
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
Type III	Lumens	19,380	22,236	26,161	29,537
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
Type IV	Lumens	19,377	22,233	26,157	29,533
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
Type V	Lumens	19,690	22,592	26,579	30,010
	BUG Rating	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5

NOTE: Lumen output for AP Grey fixture color, 120-277V.

LUMEN MAINTENANCE

M-A03, M-A0385, M-A04, M-A485		
Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	>92%	>259,000
40°C	>92%	>259,000

* A01 Not available in 347V or 480V.

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

ORDERING INFORMATION

Sample Number: VERD-M-A04-D-U-T2-4N7-AP

Product Family ^{1,2}	Light Engine ³	Driver ⁴	Voltage	Distribution
VERD=Verdeon	M-A03=3 LEDs, Full Output M-A0385=3 LEDs, Approximately 85% Output M-A04=4 LEDs, Full Output M-A0485=4 LEDs, Approximately 85% Output	E=Non-Dimming D=Dimming (0-10V) SLTD=DALI	U=Universal (120-277V) 8=480V * 9=347V	T2=Type II T3=Type III T4=Type IV T5=Type V
Options (Add as Suffix)			Color ¹³	Accessories (Order Separately)
7030=70 CRI / 3000K CCT ⁴ 7050=70 CRI / 5000K CCT ⁴ 4=NEMA Twistlock Photocontrol Receptacle 4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁷ 10K=10kV UL 1449 Surge Protective Device 10MSP=10kV MOV Surge Protective Device IP66=IP66 Rated Housing HA=50°C High Ambient Temperature ⁸ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{7,9,10} MS/DIM-L20=Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height ^{7,9,10} MS/DIM-L40=Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height ^{7,9,10} LWR-LN=Factory Installed LumaWatt RF Dimming Control System (Mounting Height 16' and Up) ^{14,11} LWR-LW=Factory Installed LumaWatt RF Dimming Control System (Mounting Height below 16') ^{14,11} K=Level Indicator A15=Arm Included (15" Straight Arm) ¹² HSS=House Side Shield ¹⁴ ASJS15=Adjustable slipfitter (Factory set at 15 degrees) ASJS25=Adjustable slipfitter (Factory set at 25 degrees) ASJS45=Adjustable slipfitter (Factory set at 45 degrees)			AP=Grey (Standard) BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White	OA1223=10kV UL 1449 Surge Module Replacement OA/RA1013=Photocontrol Shorting Cap OA/RA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V FSIR-100=Wireless Configuration Tool for Motion Sensor ¹⁴ HS/VERD=Verdeon House Side Shield ¹⁴ VGS-F/B=Vertical Glare Shield, Front/Back VGS-SIDE=Vertical Glare Shield, Side ASJS15-XX=Adjustable slipfitter (Factory set at 15 degrees) ¹⁴ ASJS25-XX=Adjustable slipfitter (Factory set at 25 degrees) ¹⁴ ASJS45-XX=Adjustable slipfitter (Factory set at 45 degrees) ¹⁴

- NOTES:**
- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
 - DesignLights Consortium® Qualified. Refer to www.designlights.org qualified products list under family model details.
 - Standard 4000K CCT and 70 CRI.
 - Consult factory for driver surge protection values.
 - Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 - Extended lead times apply. Use dedicated IES files for 3000K and 5000K when performing layouts. These files are published on the VERD-M Verdeon luminaire product page on the website.
 - Must specify dimming driver.
 - HA option not available for M-A04 light engines.
 - The FSIR-100 accessory is required to adjust parameters.
 - Not available with photocontrol receptacle (not required).
 - LumaWatt wireless sensors are factory installed and require network components RF-EM-1, RF-GW-1 and RF-ROUT-1 in appropriate quantities. See website for LumaWatt application information.
 - Round pole adapter and mounting hardware included. "M" drill pattern.
 - Standard photometry based on grey housing. Consult web for alternate color data.
 - This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
 - Option will come factory-installed. Must order one per optic as an accessory. House Side Shield not suitable for T5 distribution.
 - Replace XX with color selection.