



ADDENDUM NO. 1

Issue Date: August 30, 2019

Project Name: Indian River Boulevard and Grand Harbor Boulevard
Signalization (Re-bid)

Bid Number: 2019076

Bid Opening Date: September 17, 2019

The pre-bid meeting scheduled for September 4th is **canceled**, and will not be rescheduled due to Hurricane Dorian. Because the agenda is the same as for the meeting held when this project was originally bid, please find the meeting minutes attached for information and reference.

The due date for the bid is ***not*** changed, so please note the deadline to submit questions remains as September 7, 2019.

This addendum must be acknowledged where indicated on the bid form, or the bid will be declared non-responsive.

Attachments:

Pre-Bid Meeting Minutes



Board of County Commissioners

1801 27th Street
Vero Beach, Florida 32960-3365
Telephone: (772) 567-8000
Fax: (772) 778-9391

MANDATORY PRE-BID MEETING MINUTES

JULY 30, 2019, 2:00 P.M.

INDIAN RIVER COUNTY ADMINISTRATION BUILDING

Room A1-303 Building A

INDIAN RIVER BOULEVARD AND GRAND HARBOR BOULEVARD SIGNALIZATION

PROJECT No. IRC-1806

The following meeting notes set forth our understanding of the discussions and decisions made at the subject meeting. If no objections, questions, additions, or comments are received within three (3) working days from issuance of the meeting notes, we will assume that our understandings are correct. The project will move forward according to the bid plans and specifications and the understandings herein.

Project Name: INDIAN RIVER BOULEVARD AND GRAND HARBOR SIGNALIZATION
Project Number: IRC-1806
Bid Number: 2019071

INTRODUCTIONS / SIGN IN SHEET

Attendance at this conference by all bidders was **MANDATORY**. No bidder arriving after the meeting began was allowed to sign in. This meeting was recorded as part of the project records.

PROJECT DESCRIPTION:

The proposed improvements to the intersection of Indian River Boulevard and Grand Harbor Boulevard consist of the signalization of the intersection by installing mast arm assemblies which will be provided by the County, with all other appurtenances to be furnished by the Contractor. Also included is milling and resurfacing, curb ramp upgrades, signing and pavement markings, and sodding.

CONTRACT DETAILS

Bid opening: Thursday, August 8, 2019 at 2:00 PM
Contract time: 150 days to substantial completion
180 days to final completion
Engineers Estimate: \$472,501.00 (includes force account)
Liquidated Damages: \$1,241.00 per day

CONTACTS BIDDING PROCESS

All communications concerning this bid shall be directed to Indian River County Purchasing Division at purchasing@ircgov.com.

PROJECT CONSULTANTS:

Kimley-Horn and Associates, Inc.

UTILITIES

AT&T
 Comcast Cable Communications, Inc.
 Florida City Gas
 Florida Power and Light, Co.
 Indian River County Department of Utilities Services
 Indian River County Telecommunications
 Indian River County Traffic Operations

OTHER ISSUES

- Bidders to review plan documents and provide comments to Indian River Purchasing Department as soon as possible. No further comments or questions will be addressed from end of business, August 2, 2019.
- Maintenance of Traffic:
 - Contractor shall submit a Maintenance of Traffic Plan to the Indian River County, Engineering Division for approval.
 - The Maintenance of Traffic Plan shall meet the FDOT Index 600, FY2017-2018 Edition and shall be signed and sealed by a Florida Professional Engineer.
 - Traffic shall be maintained at all times.
 - Access for businesses and residences shall be maintained at all times.
 - School buses, sanitation & US Postal Service must be maintained.
- All testing on this project will follow FDOT specifications, this will include subgrade, asphalt, concrete and the drilled shaft testing installation.
- All drilled shaft locations will require a 5 ft hand excavation for utility clearance.
- A Drilled Shaft Installation Plan needs to be submitted for approval.
- The mast arms have been purchased by the County and are in the process of being manufactured. There will be no submittal for the mast arms. Mast arms will be delivered to the site around October 25, 2019. A close coordination between the County and the contractor will be required for the delivery time and the handling of the mast arms.
Kirstin Leiendecker (IRC-Eng) added that the Mast Arm Supplier is Valmont and the current delivery date is an estimate. For further information see approved mast arm submittal attached to this document.
John Ankeny (IRC) added that the contractor is expected to unload the mast arms at the time of arrival.
Al LaShier (Traffic Engineering and Management LLC) asked for a lay down area onsite. Kirstin Leiendecker (IRC) stated that we have enough right-of-way at the northeast corner of the intersection, that can be used for storage. Contractor shall keep in mind that all disturbed areas will need to be restored.
John Ankeny (IRC-Traffic) stated that bolts for the mast arms are at the IRC traffic yard at 41st Street and shall be picked up by the contractor.
- The mast arms shall be handled by the contractor at delivery.
Al LaShier (Traffic Engineering and Management LLC) stated that Valmont will give 2 days advanced notice to the delivery.

Kirstin Leiendecker (IRC-Eng) stated that the contractor shall coordinate directly with IRC for delivery time and the necessary equipment that is needed to unload the mast arms at delivery.

- All areas disturbed by the contractor will need to be restored to original conditions or better.

Tim Rose (Tim Rose Contracting, Inc.) asked if irrigation is present. Mike Forman (KH - Kimley-Horn Associates, Inc.) stated that irrigation is believed to be present and needs to be replaced if damaged.

- Contractor shall submit a “Hurricane Preparedness” plan prior to Notice to Proceed.

PROJECT REQUIREMENTS:

- Subcontractors – per Contract Documents requirements “Section 00458 – List of Subcontractors” must be completed.
- Summary of required contractor form submittals checklist (Section 00300 – Bid Package Contents)
- Invoicing shall be submitted on monthly basis and must include release of liens and Surety’s Consent.

DISCUSSION

Questions & Answers

Mike Forman (KH) stated that the electrical service connection is in the southwest corner behind bushes, underground.

KL (IRC-Eng) stated that the contractor shall look at the submittal from Valmont to determine which items are included with the mast arm purchase by IRC. For example, the luminaires are part of the purchase but no cabinets, cameras, or signals.

ATTACHMENTS

Sign In-sheet

Approved Mast Arm Submittal by DOT Lighting, Inc. for Valmont, Inc.



Transmittal

Dot Lighting, Inc.
6353 Millstone Drive
New Port Richey FL 34655
Phone: (727) 375-0555

Project Indian River Blvd and Grand Harbor Blvd - Traffic

Quote DOT19-13292

To Indian River County
1801 27th Street
Bldg. A
Vero Beach FL 32960
Contact: Kirsten Leiendecker, P.E.

Location Indian River FL
From Nikki Supernor
Distributor: Dot Lighting, Inc.
Municipality Indian River County

ATTACHED WE ARE SENDING YOU 1 COPIES OF THE FOLLOWING ITEMS:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input checked="" type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

| Qty | Type | MFG | Part |
|-----|--------|------------------------|--|
| 1 | 1 | Valmont Traffic (Valle | 649-21-15-70 S FP/GV A70/S - P5/S |
| 1 | 2 | Valmont Traffic (Valle | 649-21-10-60 S FP/GV A60/S - P4/S |
| 1 | 3 | Valmont Traffic (Valle | 649-21-15-70 S FP/GV A70/S - P5/S |
| 1 | 4 | Valmont Traffic (Valle | 649-21-6-50 S FP/GV A50/S - P3/S |
| 4 | 715-5- | General Electric Co. (| ERL2030D340DGRAYGIT Item Note: Qty-4 |

Notes:

1 Valmont Drawings,
* Page 1 of 1, Valmont Cover Page for DB01192 Drawings
* Pages 1 thru 6 of 6, # DB01192 Per FDOT 2017-18 design standard index # 17743 & 17745 (for Reference Only)

1 GELS Cutsheet, ERL2030D340DGRAYGIT

*****PROVIDE HIGHWAY GREEN PAINT SAMPLE IN ORDER TO MATCH*****

DOT19-13292
Sold To: DOT Lighting, Inc.
PO #83638-00
Valmont Order #447652-P1

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

APPROVED

APPROVED AS NOTED

NOT APPROVED - RESUBMIT

REVIEWER: K. Leiendecker

DATE: 6/28/2019



Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic
Distributor: Dot Lighting, Inc. (New Port Richey)
Municipality: Indian River County (Vero Beach)

Catalog Number:

ERL2030D340DGRAYGIT

Notes: Qty-4

Type:

715-5-31

DOT19-13292



GE Evolve™ LED Roadway Lighting ERL1-ERLH-ERL2



**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

APPROVED

APPROVED AS NOTED

NOT APPROVED - RESUBMIT

REVIEWER: *K. Winder*

DATE: 6/28/2019

current
powered by GE





Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic
Distributor: Dot Lighting, Inc. (New Port Richey)
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Catalog Number:

ERL2030D340DGRAYGIT

Notes: Qty-4

Type:

715-5-31

DOT19-13292

GE Evolve™ LED Roadway Lighting ERL1-ERLH-ERL2



The **Evolve** LED Roadway Luminaire is optimized for customers requiring a LED solution for local, collector and major roadways. GE's unique reflective optics are designed to optimize application efficiency and minimize glare. The modern design incorporates the heat sink directly into the unit for heat transfer to prolong LED life. This reliable unit has a 100,000 hour design life, significantly reducing maintenance needs and expense over the life of the fixture. This efficient solution lowers energy consumption compared to a traditional HID fixture for additional operating cost savings.

Features:

- Optimized roadway photometric distributions
- **Evolve™** light engine consisting of reflective technology designed to optimize application efficiency and minimize glare
- 70 CRI at 2700K, 3000K and 4000K typical.
- -40°C to 50°C UL Ambient Typical.
- ULOR = 0 (zero uplight)
- Designed & Assembled in USA

Applications:

- Local Roadways
- Collector
- Major Roadway/Streets

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

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REVIEWER:

DATE:

E. Winder
6/28/2019

Compatible with **LightGrid™** Outdoor Wireless Control System



To learn more about **GE Evolve** LED Roadway Lighting, go to: www.currentbyge.com





Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic Distributor: Dot Lighting, Inc. (New Port Richey) Municipality: Indian River County (Vero Beach)

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715-5-31

Notes: Qty-4

DOT19-13292

GE Evolve™
LED Roadway Lighting

ERL1-ERLH-ERL2

Typical Specifications: ERL1-ERLH-ERL2

LED & Optical

- **Output Range:** 1900 – 30000 lm
- **Photometric Options:** Type II Narrow, Type II Wide, Type III, Type IV
- **System Efficacy:** 100 - 145 LPW
- **CCT:** 2700K, 3000K, 4000K; High brightness LEDs @ 70 CRI

Lumen Maintenance Tables

Projected Lxx per IES TM-21 at 25°C for reference:

| ERL1 LUMEN OUTPUT CODES | LXX(10K)@HOURS | | |
|----------------------------|----------------|-----------|------------|
| | 25,000 HR | 50,000 HR | 100,000 HR |
| 02,03,04,05,06 | L96 | L95 | L91 |
| 07,08,09 | L95 | L91 | L84 |
| 10 | L89 | L80 | L64 |

| ERLH LUMEN OUTPUT CODES | LXX(10K)@HOURS | | |
|----------------------------|----------------|-----------|------------|
| | 25,000 HR | 50,000 HR | 100,000 HR |
| 10, 11 | L97 | L96 | L94 |
| 13, 14 | L95 | L93 | L88 |
| 15, 16 | L94 | L91 | L85 |

| ERL2 LUMEN OUTPUT CODES | LXX(10K)@HOURS | | |
|----------------------------|----------------|-----------|------------|
| | 25,000 HR | 50,000 HR | 100,000 HR |
| 16, 18, 19, 21, 23 | L96 | L94 | L91 |
| 25, 27, 28 | L95 | L93 | L88 |
| 30 | L95 | L93 | L87 |

Note: Projected Lxx based on LM80 (10,000 hour testing). DOE Lighting Facts Verification Testing Tolerances apply to initial luminous flux and lumen maintenance measurements.

Electrical

- **Input Voltage:** 120-277 volt and 347-480 volt
- **Input Frequency:** 50/60Hz
- **Power Factor (PF)*:** >90%
- **Total Harmonic Distortion (THD)*:** <20%

*Power factor and THD tolerance exceptions: ERL1 "02" Lumen output: PF and THD within tolerances above only at 120 volt. ERL1 "03" Lumen output: @120 volt PF-0.89; @ 480 volt THD-26% ERL1 "04" Lumen output: @480 volt THD-22%

Ratings

- **Surge Protection:** per ANSI C136.2-2015: (Driver Internal):
 - 6kV/3kA "Basic: (120 Strikes)" - Standard on ERL1 (02-06)
 - 10kV/5kA "Enhanced: (40 Strikes)" - Standard on ERL1 (07 - 10), ERLH, ERL2
- **(Additional Separate Secondary SPD)**
 - 10kV/5kA "Enhanced: (40 Strikes)" - Option "R"
 - 20kV/10kA "Elevated" (40 Strikes) - Option "T"
- **Safety:** UL/cUL Listed. UL 1598 listed, suitable for wet locations (UL) (cUL)
- **Environmental:** Compliant with the materials restrictions of RoHS
- **EMI:** Title 47 CFR Part 15 Class A
- **Vibration:** 3G per ANSI C136.31-2010
- LM-79 testing in accordance with IESNA Standards
- Std. Optical enclosure rated per ANSI C136.25-2009:
 - ERL1/ERLH/ERL2 = IP65, Optional: IP66



Please refer to the DLC QPL website for the latest and most complete information. www.designlights.org/QPL



International Dark Sky Association listed. 2700K or 3000K must be selected to meet IDA certification and approval.

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

Project name: _____
 Date: _____
 APPROVED
 APPROVED AS NOTED
 NOT APPROVED - RESUBMIT
 REVIEWER: K. Wiendr
 DATE: 6/28/2019

• **Operating Temperature:**

| PRODUCT ID | LUMEN OUTPUT | AMBIENT READING |
|------------|--------------|-----------------|
| ERL1 | 02-10 | -40°C to 50°C |
| ERLH | 10-11, 13 | -40°C to 50°C |
| ERLH | 14-16 | -40°C to 45°C |
| ERL2 | 16-28 | -40°C to 50°C |
| ERL2 | 30 | -40°C to 45°C |

Delayed start may be experienced < -35°C

Construction & Finish

- **Housing:**
 - Die Cast Enclosure
 - Casting-integral heat sink for maximum heat transfer
- **Lensing:** Impact resistant tempered glass, standard
- **Paint:** Corrosion resistant polyester powder painted, minimum 2.0 mil. thickness.
 - Standard Colors: Dark Bronze, Black, & Gray
 - RAL & custom colors available
 - Optional coastal finish available.
- **Weight:** 12.4lbs (5.6kg) – 24lbs (10.9kg)

Warranty

- **System Warranty:** 5 Year Standard, 10 Year Optional

Controls

- **Dimming:**
 - Standard: 0-10V; Optional: DALI (120-277V Only)
- **Sensors:**
 - Photo electric sensors (PE) available.
- LightGrid™ compatible

Mounting

- Slipfitter with +/- 5 degree of adjustment for leveling.
- Integral die cast mounting pipe stop.
- Adjustable for 1.25 in. or 2 in. mounting pipe.

Suggested HID Replacement Lumen Levels

- ~4,000-5,000 lumens to replace 100W HPS Cobra-head
- ~7,000-8,800 lumens to replace 150W HPS Cobra-head
- ~8,500-11,500 lumens to replace 200W HPS Cobra-head
- ~11,500-14,000 lumens to replace 250W HPS Cobra-head
- ~21,000-30,000 lumens to replace 400W HPS Cobra-head

Note: Actual replacement lumens may vary based upon mounting height, pole spacing, design criteria, etc.

| PREVIOUS | DESCRIPTION | CURRENT | DESCRIPTION** |
|----------|--------------------------------|---------|-----------------------------|
| A1, B1 | Extra Narrow/Narrow Asymmetric | A3 | Type II Narrow |
| C1, E1 | Asymmetric Short/Medium | B3 | Type II Wide |
| D1, G1 | Asymmetric Forward/Extra Wide | C3 | Type III |
| F1 | Asymmetric Wide | D3 | Type IV |
| | | E3 | Type II Enhanced Back Light |

**The information above is designed to provide a guideline to select the correct luminaire for a roadway application. The best and most accurate way to ensure the proper design is do a lighting layout Utilizing AGI.



Job Name:
 Indian River Blvd and Grand Harbor Blvd - Traffic
 Distributor: Dot Lighting, Inc. (New Port Richey)
 Municipality: Indian River County (Vero Beach)

Catalog Number:
 ERL2030D340DGRAYGIT

Notes: Qty-4

Type:
715-5-31

DOT19-13292

GE Evolve™
LED Roadway Lighting
 ERL1-ERLH-ERL2



**INDIAN RIVER COUNTY
 SHOP DRAWING REVIEW**

Project name _____
 APPROVED
 Date _____
 APPROVED AS NOTED
 Type _____
 NOT APPROVED - RESUBMIT
REVIEWER: K. Wiendr
DATE: 6/28/2019

ERL 2

| PROD. ID | VOLTAGE | LUMEN OUTPUT | DISTRIBUTION* | CCT | CONTROLS | COLOR | OPTIONS |
|--------------------------|----------------------|--------------|---|---|---|---------------------------|---|
| E = Evolve | 0 = 120-277V* | 16 | A3 = Type II Narrow | 30 = 3000K | A = ANSI C136.41 7-pin | GRAY = Gray | A = 4 Bolt Slipfitter † |
| R = Roadway | 1 = 120 | 18 | B3 = Type II Wide | 40 = 4000K | D = ANSI C136.41 7-pin with Shorting Cap | BLCK = Black | F = Fusing |
| L = Local | 2 = 208 | 19 | C3 = Type III | 50 = 5000K* | E = ANSI C136.41 7-pin with non-Dimming PE Control* | DKBZ = Dark Bronze | G = Internal Bubble Level |
| 2 = Double Module | 3 = 240 | 21 | D3 = Type IV | <> Select 3000K CCT for IDA approved units. | *PE Control Only available for 120-277V or 480V Discrete. Not available for 347-480V or 347V Discrete. | | I = IP66 Optical |
| | 4 = 277 | 23 | E3 = Type II Enhanced Back Light | *50 = 5200K for ERL2 lumen outputs 25, 27, 28, and 30. | NOTE: Dimming controls wired for 0-10V standard unless DALI option "U" requested. | | L = Tool-Less Entry |
| | 5 = 480 | 25 | See Table | | | | R = Secondary 10kV/5kA SPD |
| | D = 347 | 27 | *Nominal IES Type classing subject to typical variation, individual units may differ. | | | | T = Secondary 20kV/10kA SPD |
| | H = 347-480*# | 28 | | | | | U = DALI Programmable ^ |
| | | 30 | | | | | V1 = Variable Output via Field Adjustable Module** |
| | | | | | | | Y = Coastal Finish* |
| | | | | | | | XXX = Special Options |
| | | | | | | | † Contact manufacturer for Lead-Time. |
| | | | | | | | * Recommended for installations within 750 ft. from the coast. Contact Factory for Lead-Time. |
| | | | | | | | + Compatible with LightGrid 2.0 nodes. |
| | | | | | | | ^ Not available in 347V, 480V or 347-480V. |
| | | | | | | | ** Not available with DALI (U) option. |

***Special Color Match Highway Green**

| LUMEN OUTPUT | DISTRIBUTION | TYPICAL INITIAL LUMENS | | TYPICAL SYSTEM WATTAGE | | BUG RATING | | IES FILE NUMBER | | | | | | |
|--------------|--------------|------------------------|-------|------------------------|----------|------------|-------------|-----------------|-------------|--------------|--------------|--------------|--------------|-----|
| | | 4000K/5000-5200K | 3000K | 120-277V | 347-480V | 4000K | 3000K | 120-277V | | 3000K | | 347-480V | | |
| 16 | A3 | 16000 | 15300 | 120 | 120 | B3-U0-G3 | B3-U0-G3 | ERL2_16A340 | IES | | | ERL2_16A330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_16B340 | IES | | | ERL2_16B330 | | IES | |
| | C3 | | | | | B2-U0-G3 | ERL2_16C340 | IES | | | ERL2_16C330 | | IES | |
| | D3 | | | | | B2-U0-G3 | ERL2_16D340 | IES | | | ERL2_16D330 | | IES | |
| 18 | A3 | 18000 | 17300 | 140 | 140 | B3-U0-G3 | B3-U0-G3 | ERL2_18A340 | IES | | | ERL2_18A330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_18B340 | IES | | | ERL2_18B330 | | IES | |
| | C3 | | | | | B2-U0-G3 | ERL2_18C340 | IES | | | ERL2_18C330 | | IES | |
| | D3 | | | | | B2-U0-G3 | ERL2_18D340 | IES | | | ERL2_18D330 | | IES | |
| 19 | A3 | 19000 | 18200 | 149 | 149 | B3-U0-G3 | B3-U0-G3 | ERL2_19A340 | IES | | | ERL2_19A330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_19B340 | IES | | | ERL2_19B330 | | IES | |
| | C3 | | | | | B2-U0-G3 | ERL2_19C340 | IES | | | ERL2_19C330 | | IES | |
| | D3 | | | | | B2-U0-G3 | ERL2_19D340 | IES | | | ERL2_19D330 | | IES | |
| 21 | A3 | 21000 | 20100 | 174 | 177 | B3-U0-G3 | B3-U0-G3 | ERL2_21A340 | IES | ERL2_21A330 | -120-277VIES | ERL2_21A330 | -347-480VIES | |
| | B3 | | | | | B3-U0-G3 | ERL2_21B340 | IES | ERL2_21B330 | -120-277VIES | ERL2_21B330 | -347-480VIES | | |
| | C3 | | | | | B3-U0-G4 | ERL2_21C340 | IES | ERL2_21C330 | -120-277VIES | ERL2_21C330 | -347-480VIES | | |
| | D3 | | | | | B2-U0-G3 | ERL2_21D340 | IES | ERL2_21D330 | -120-277VIES | ERL2_21D330 | -347-480VIES | | |
| 23 | A3 | 23000 | 22100 | 194 | 196 | B3-U0-G3 | B3-U0-G3 | ERL2_23A340 | IES | ERL2_23A330 | -120-277VIES | ERL2_23A330 | -347-480VIES | |
| | B3 | | | | | B3-U0-G3 | ERL2_23B340 | IES | ERL2_23B330 | -120-277VIES | ERL2_23B330 | -347-480VIES | | |
| | C3 | | | | | B3-U0-G4 | ERL2_23C340 | IES | ERL2_23C330 | -120-277VIES | ERL2_23C330 | -347-480VIES | | |
| | D3 | | | | | B2-U0-G4 | ERL2_23D340 | IES | ERL2_23D330 | -120-277VIES | ERL2_23D330 | -347-480VIES | | |
| 25 | A3 | 25000 | 24000 | 214 | 214 | B4-U0-G4 | B3-U0-G3 | ERL2_25E340 | IES | | | ERL2_25E330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_25B340 | IES | | | ERL2_25B330 | | IES | |
| | C3 | | | | | B3-U0-G4 | ERL2_25C340 | IES | | | ERL2_25C330 | | IES | |
| | D3 | | | | | B2-U0-G4 | ERL2_25D340 | IES | | | ERL2_25D330 | | IES | |
| 27 | A3 | 27000 | 25900 | 237 | 237 | B4-U0-G4 | B4-U0-G4 | ERL2_27E340 | IES | | | ERL2_27E330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_27A340 | IES | | | ERL2_27A330 | | IES | |
| | C3 | | | | | B3-U0-G4 | ERL2_27B340 | IES | | | ERL2_27B330 | | IES | |
| | D3 | | | | | B3-U0-G4 | ERL2_27C340 | IES | | | ERL2_27C330 | | IES | |
| 28 | A3 | 28000 | 26900 | 251 | 251 | B4-U0-G4 | B4-U0-G4 | ERL2_28E340 | IES | | | ERL2_28E330 | | IES |
| | B3 | | | | | B3-U0-G3 | ERL2_28A340 | IES | | | ERL2_28A330 | | IES | |
| | C3 | | | | | B3-U0-G4 | ERL2_28B340 | IES | | | ERL2_28B330 | | IES | |
| | D3 | | | | | B3-U0-G4 | ERL2_28C340 | IES | | | ERL2_28C330 | | IES | |
| 30 | A3 | 30000 | 28800 | 278 | 278 | B4-U0-G4 | B4-U0-G4 | ERL2_30E340 | IES | | | ERL2_30E330 | | IES |
| | B3 | | | | | B4-U0-G4 | ERL2_30A340 | IES | | | ERL2_30A330 | | IES | |
| | C3 | | | | | B3-U0-G4 | ERL2_30B340 | IES | | | ERL2_30B330 | | IES | |
| | D3 | | | | | B3-U0-G4 | ERL2_30C340 | IES | | | ERL2_30C330 | | IES | |
| | E3 | | | | | B2-U0-G4 | B2-U0-G4 | ERL2_30D340 | IES | | | ERL2_30D330 | | IES |
| | | | | | | B4-U0-G4 | B4-U0-G4 | ERL2_30E340 | IES | | | ERL2_30E330 | | IES |



Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic
 Distributor: Dot Lighting, Inc. (New Port Richey)
 Municipality: Indian River County (Vero Beach)

Catalog Number:

ERL2030D340DGRAYGIT

Notes: Qty-4

Type:

INDIAN RIVER COUNTY
SHOP DRAWING REVIEW
715-5-31
 DOT19-13292

- APPROVED**
- APPROVED AS NOTED**
- NOT APPROVED - RESUBMIT**

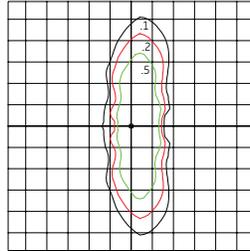
REVIEWER: E. Wiendy
 DATE: 6/28/2019

Photometrics:

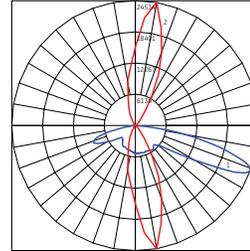
Evolve™ LED Streetlight (ERL2)

ERL2
 Type II Narrow
 (23A340)

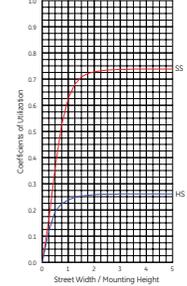
23,000 Lumens
 4000K
 ERL2_23A340__IES



Grid Distance in Units of Mounting Height at 30'
 Initial Footcandle Values at Grade

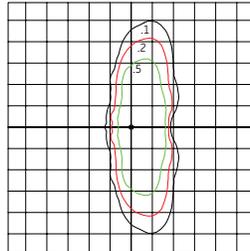


— Vertical plane through horizontal angle of Max. Cd at 80°
 — Horizontal cone through vertical angle of Max. Cd at 69°

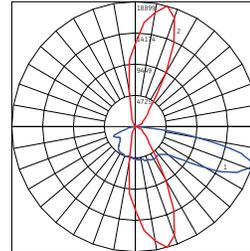


ERL2
 Type II Wide
 (23B340)

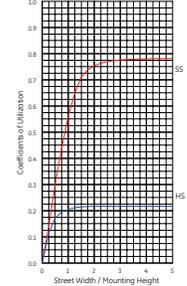
23,000 Lumens
 4000K
 ERL2_23B340__IES



Grid Distance in Units of Mounting Height at 30'
 Initial Footcandle Values at Grade

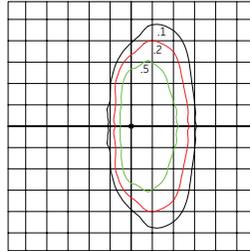


— Vertical plane through horizontal angle of Max. Cd at 75°
 — Horizontal cone through vertical angle of Max. Cd at 72°

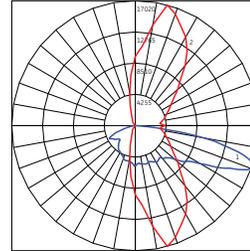


ERL2
 Type III
 (23C340)

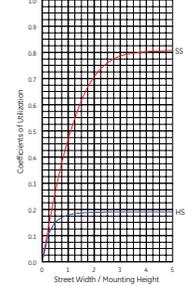
23,000 Lumens
 4000K
 ERL2_23C340__IES



Grid Distance in Units of Mounting Height at 30'
 Initial Footcandle Values at Grade

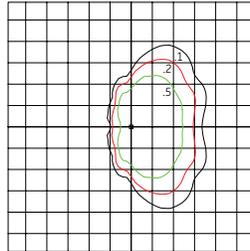


— Vertical plane through horizontal angle of Max. Cd at 75°
 — Horizontal cone through vertical angle of Max. Cd at 71°

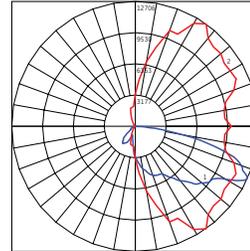


ERL2
 Type IV
 (23D340)

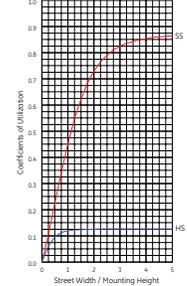
23,000 Lumens
 4000K
 ERL2_23D340__IES



Grid Distance in Units of Mounting Height at 30'
 Initial Footcandle Values at Grade

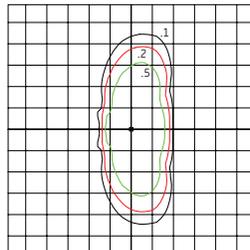


— Vertical plane through horizontal angle of Max. Cd at 55°
 — Horizontal cone through vertical angle of Max. Cd at 65°

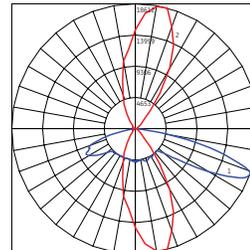


ERL2
 Type II Enhanced Back Light
 (23E340)

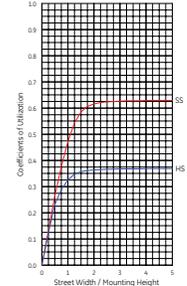
23,000 Lumens
 4000K
 ERL2_23E340__IES



Grid Distance in Units of Mounting Height at 30'
 Initial Footcandle Values at Grade



— Vertical plane through horizontal angle of Max. Cd at 75°
 — Horizontal cone through vertical angle of Max. Cd at 69°





Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic
Distributor: Dot Lighting, Inc. (New Port Richey)
Municipality: Indian River County (Vero Beach)

Catalog Number:

ERL2030D340DGRAYGIT

Notes: Qty-4

Type:

715-5-31

DOT19-13292

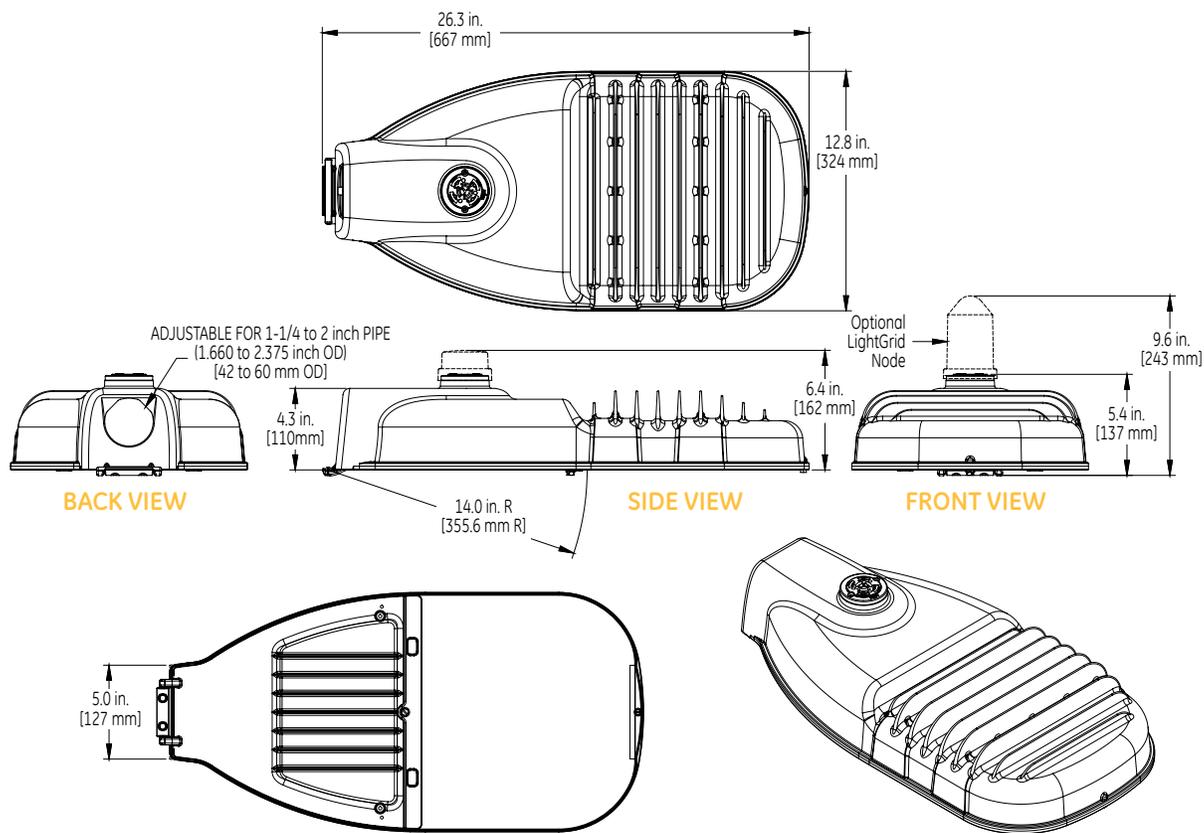
GE Evolve™
LED Roadway Lighting
ERL1-ERLH-ERL2

Product Dimensions:
Evolve™ LED Streetlight (ERL2)

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

- APPROVED**
- APPROVED AS NOTED**
- NOT APPROVED - RESUBMIT**

REVIEWER: E. Viendo
DATE: 6/28/2019



DATA

- Approximate net weight: 24.0 lbs (10.9 kgs)
Contact manufacturer for specific configuration weight.
- Effective Projected Area (EPA): 0.57 sq ft max (0.053 sq m)



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www.currentbyge.com | OLP3128 (Rev 12/21/18)



Job Name:

Indian River Blvd and Grand Harbor Blvd - Traffic
Distributor: Dot Lighting, Inc. (New Port Richey)
Municipality: Indian River County (Vero Beach)

Catalog Number:

ERL2030D340DGRAYGIT

Type:

715-5-31

Notes: Qty-4

DOT19-13292

1/23/2019

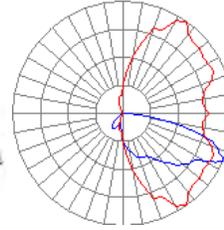
Photometric File Details

Photometric File Details

Filename: ERL2_30D340___.IES

More Information:

| | |
|---|----------|
| Classification: Luminaire Lumens | 30000 |
| Efficiency | N.A. |
| IES Classification | Type IV |
| Longitudinal Classification | Short |
| Cutoff Classification (deprecated) | N.A. |
| Upward Waste Light Ratio | 0.00 |
| CIE Type | Direct |
| Luminaire Efficacy Rating (LER) | 108 |
| NEMA Horizontal Beam | N.A. |
| NEMA Vertical Beam | N.A. |
| Bug Rating | B2-U0-G4 |



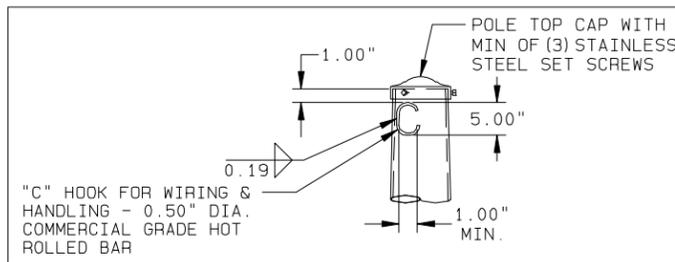
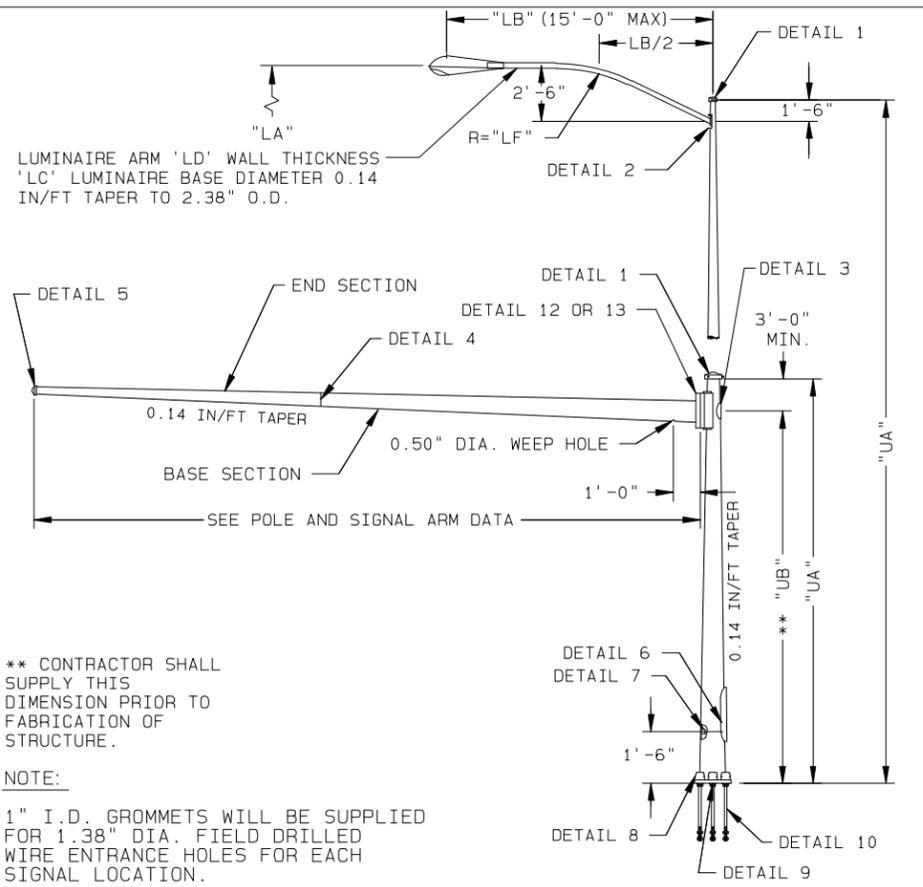
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 [TESTLAB] GE LIGHTING SOLUTIONS-HENDERSONVILLE NC USA
 [ISSUEDATE] 8/07/2017
 [MANUFAC] GE LIGHTING SOLUTIONS
 [LUMCAT] ERL2_30D340___.IES
 [LUMINAIRE] Evolve LED Roadway Streetlight-ERL2
 [DISTRIBUTION] TYPE IV
 [LAMP] LED
 [OTHER]
 [MORE]
 [_DRIVE_CURRENT]
 [_CCT] 4000K
 [_CRI] 70
 [_ABSOLUTELUMENS] 30000
 [_SYSTEM_WATTS] 278W
 [_ACCESSORIES]
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_CRI] 70
 [_SEARCH_COLORTEMP] 4000
 [_SEARCH_APPLICATION] Outdoor, Area, Automotive, Commercial, Educational, Government, Healthcare, Hospitality, Hotel, Industrial, Institutional, Landscape
 [MORE] Retail, Roadway, Sidewalk, Street, Substation, Utility, Walkway, Direct, Security, Wet Location
 [_SEARCH_MOUNTING] Arm, Pole
 [_SEARCH_CERTIFICATION] UL
 [_SEARCH_CLASSIFICATION] IP65
 TILT=NONE

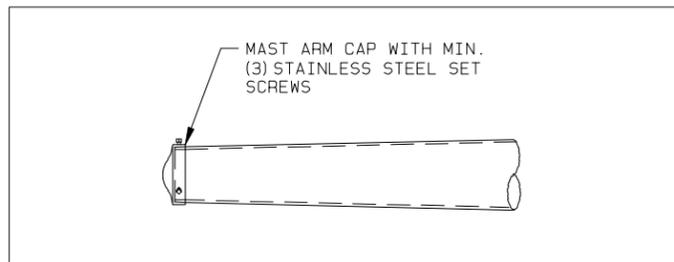
**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

- APPROVED
- APPROVED AS NOTED
- NOT APPROVED - RESUBMIT

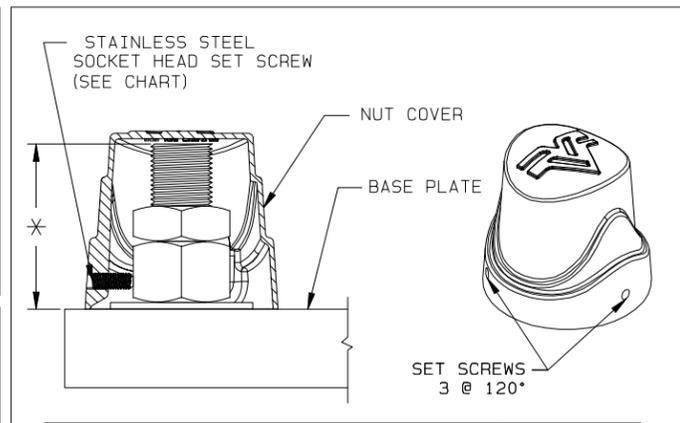
REVIEWER: K. Winder
 DATE: 6/28/2019



DETAIL 1 POLE TOP

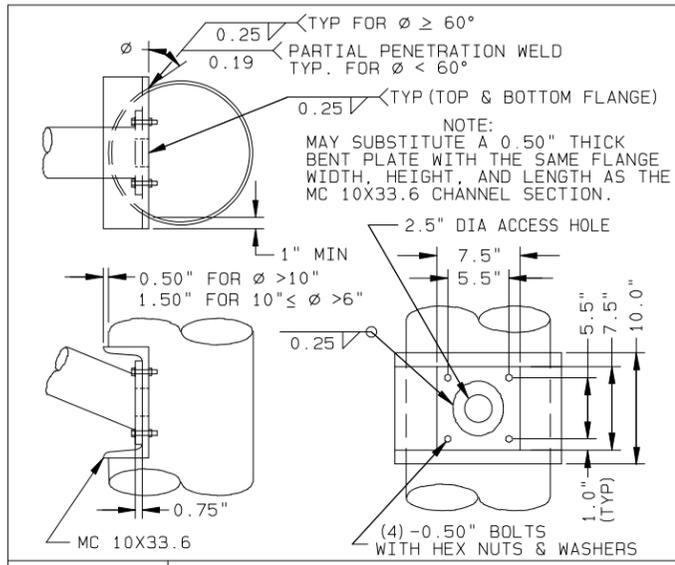


DETAIL 5 ARM END CAP

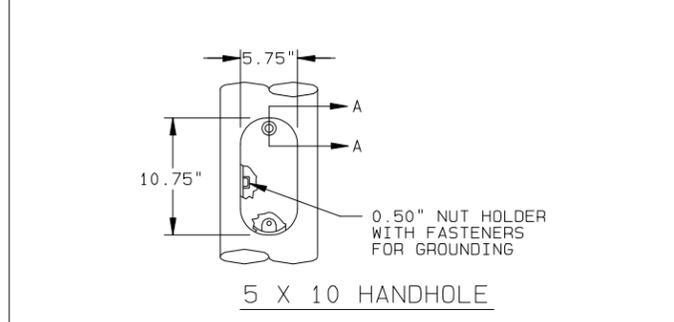
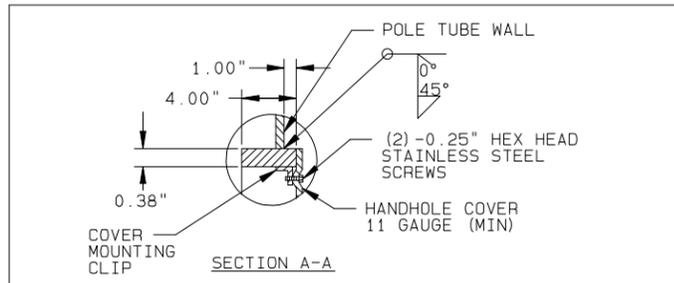


| HARDWARE | | * MAX. BOLT PROJECTION |
|------------------|---------------------|------------------------------|
| ANCHOR BOLT SIZE | SET SCREW SIZE | |
| 1.50" - 1.75" | 0.38"-16UNC X 1.00" | 3.88" |
| 2.00" - 2.25" | 0.38"-16UNC X 1.25" | 5.13" |

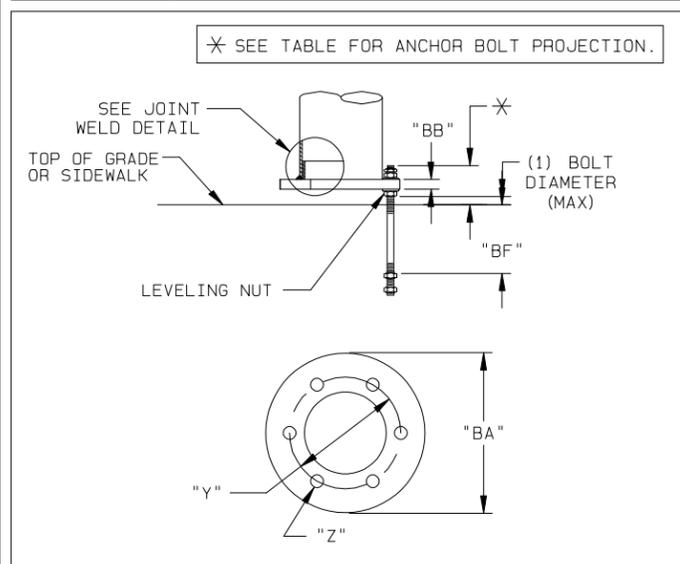
DETAIL 8 WAVE NUT COVER



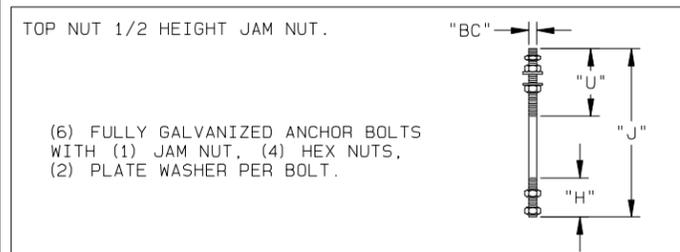
DETAIL 2 LUMINAIRE ARM ATTACHMENT



5 X 10 HANDHOLE

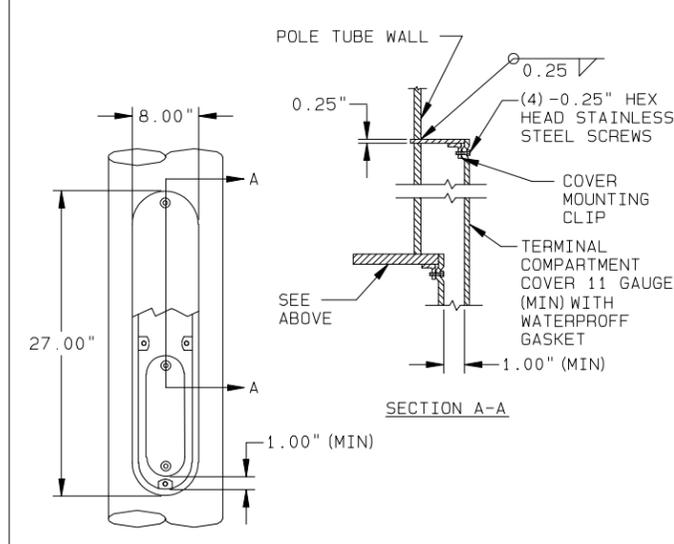
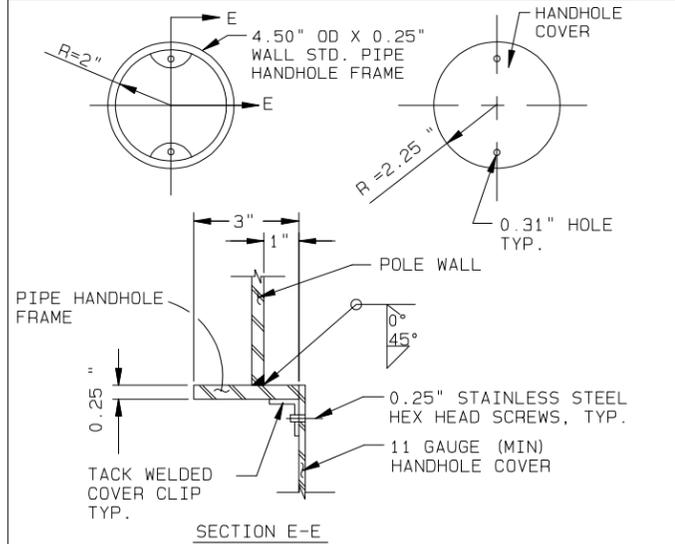
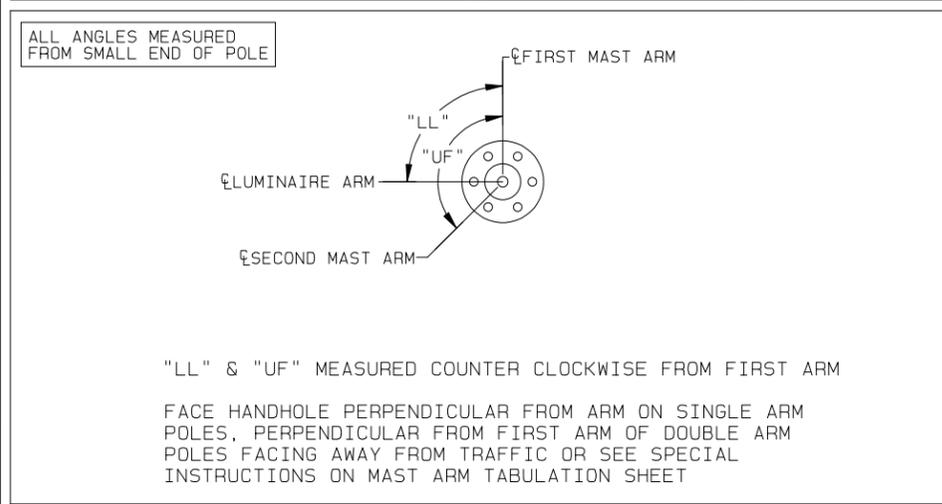


DETAIL 9 6-BOLT POLE BASE



DETAIL 10 ANCHOR BOLT

| MATERIAL DATA | | | |
|-------------------------------|--------------------|------------------|---|
| COMPONENT | ASTM DESIGNATION | MIN. YIELD (KSI) | DESIGNATION |
| TAPERED TUBES & BACK UP RINGS | A595 GR. A OR A572 | 55 | BOLTS (EXCEPT AB'S) ASTM F3125, A325 TYPE 1 |
| STEEL PLATES | A36 | 36 | NUTS (EXCEPT ANCHOR BOLTS) ASTM A563 DH OR EQUIVALENT |
| ANCHOR BOLTS | F1554 GR.55 | 55 | WASHERS (EXCEPT ANCHOR BOLTS) ASTM F436 TYPE 1 |
| HH NUTS FOR ANCHOR BOLTS | A563 GR.A | | STAINLESS STEEL SCREWS AISI TYPE 316 |
| WASHERS FOR ANCHOR BOLTS | A36 | | GALVANIZED HARDWARE F2329 |
| HANDHOLE FRAME | ASTM A36 | | GALVANIZING ALL OTHER ASTM A123 |
| HANDHOLE COVER | A1011/A572 | 50 55 60 | WELD MATERIAL E70XX |
| | | | CAP & NUT COVERS ASTM A1011 ASTM B26 (319-F) ASTM A48 |



**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

APPROVED
 APPROVED AS NOTED
 NOT APPROVED - RESUBMIT

REVIEWER: K. Wiendr
DATE: 6/28/2019

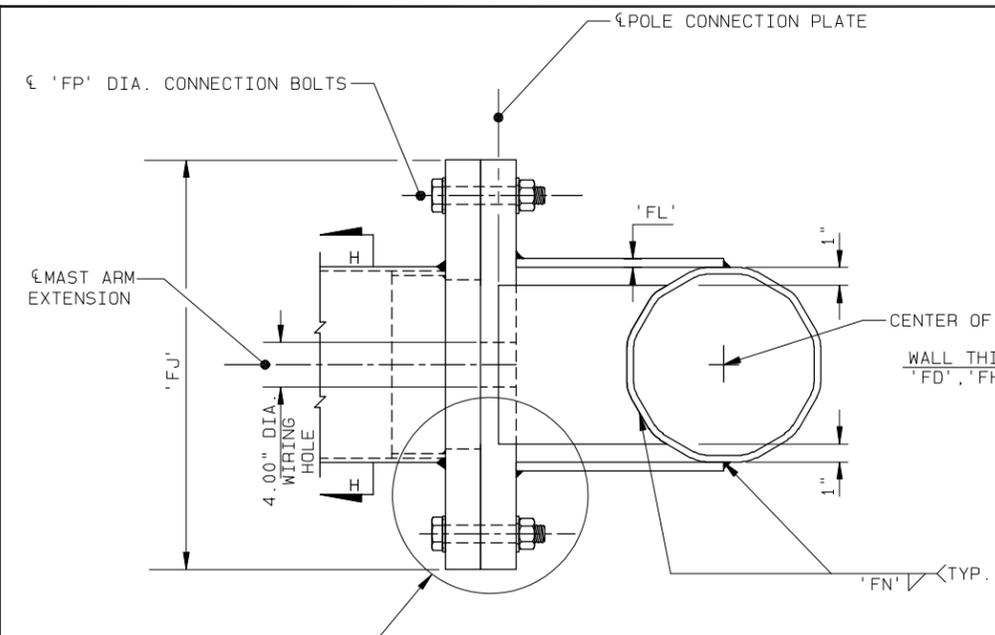
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|-----|---------------|---------------|-------------|
| --- | NKL 05/23/17 | NKL 05/23/17 | |

TITLE FLORIDA-DOT APPROVED PRODUCTS LIST
TRAFFIC SIGNAL STRUCTURES
DESIGN STANDARDS

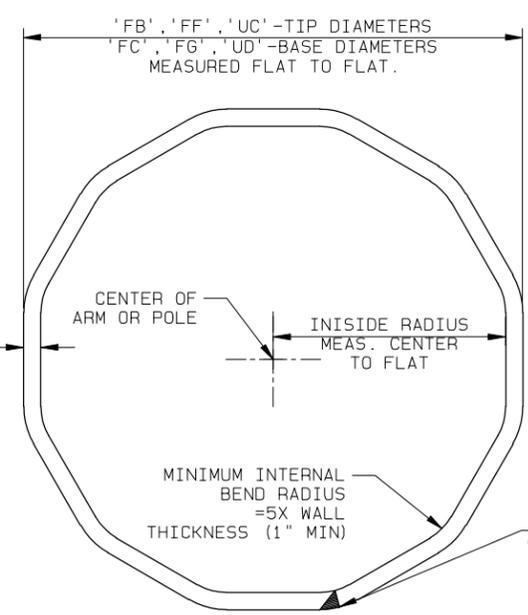
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THE RIGHT TO INSTALL VARIOUS,
ENGINEER APPROVED, MATERIAL HANGING
ACCOMMODATIONS TO FACILITATE THE
MANUFACTURING PROCESS.



| | |
|---------------------|-------------|
| PAGE NUMBER: 1 OF 6 | OVERALL REV |
| DRAWING NUMBER | |
| DB01192 | |

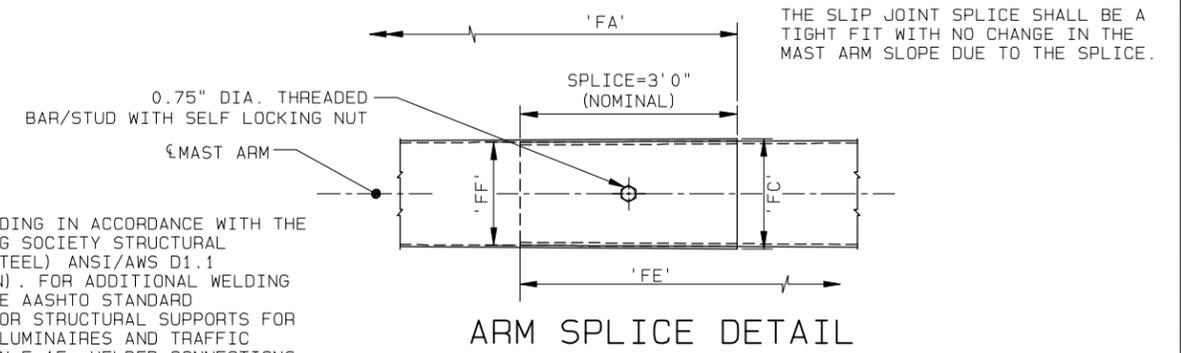


SECTION F-F

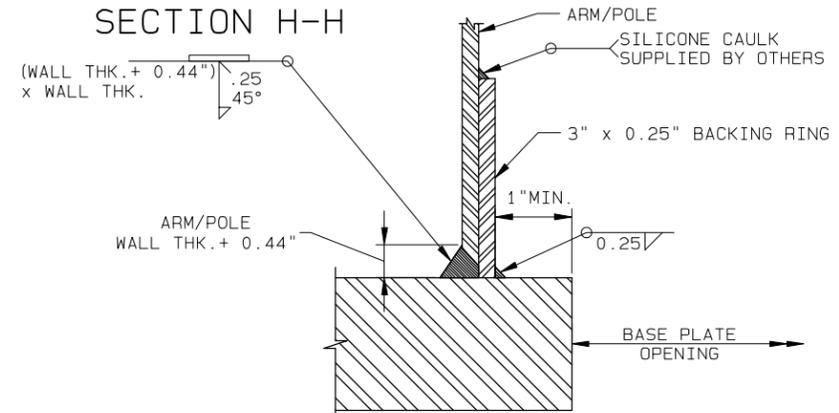


SECTION H-H

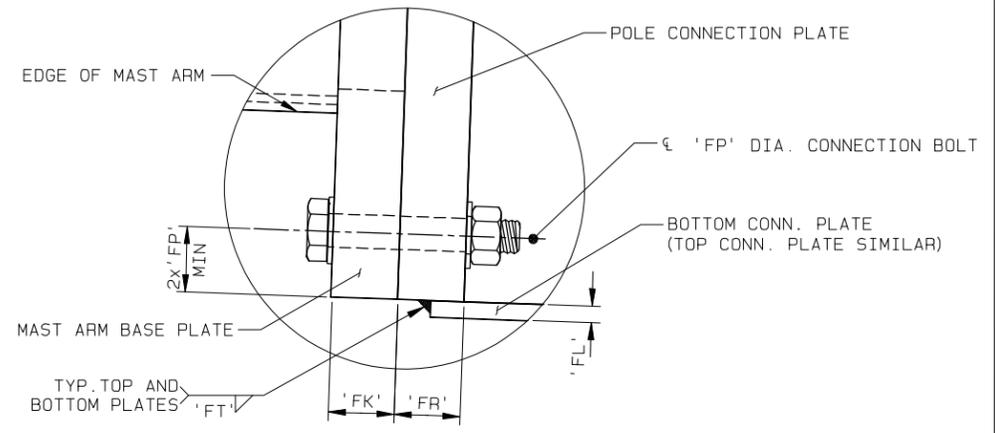
NOTE:
 PERFORM ALL WELDING IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (STEEL) ANSI/AWS D1.1 (CURRENT EDITION). FOR ADDITIONAL WELDING REQUIREMENTS SEE AASHTO STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, SECTION 5.15, WELDED CONNECTIONS.



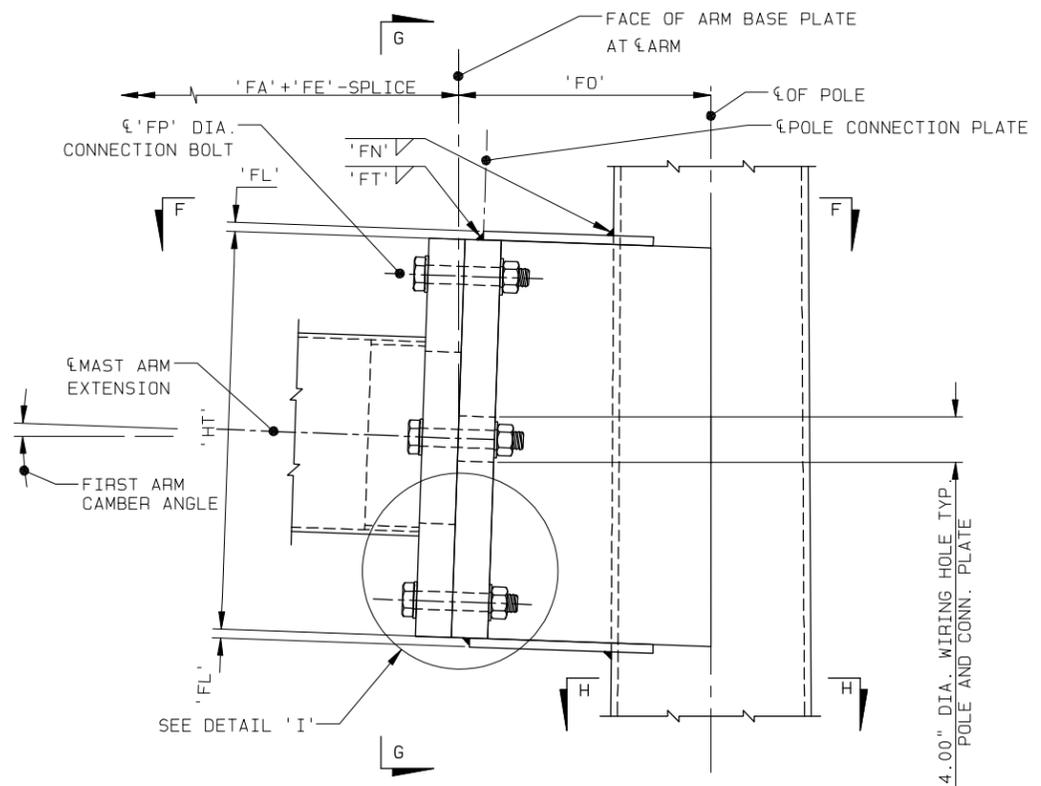
ARM SPLICE DETAIL



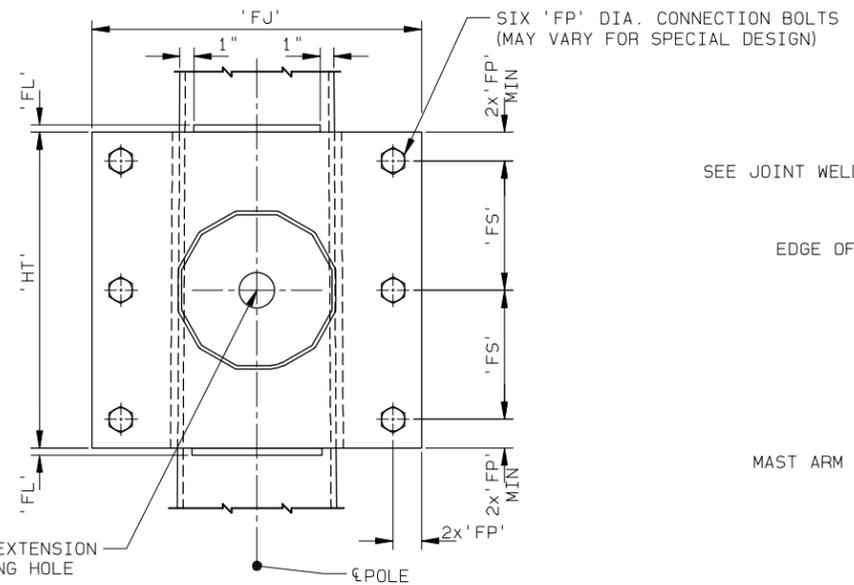
JOINT WELD DETAIL



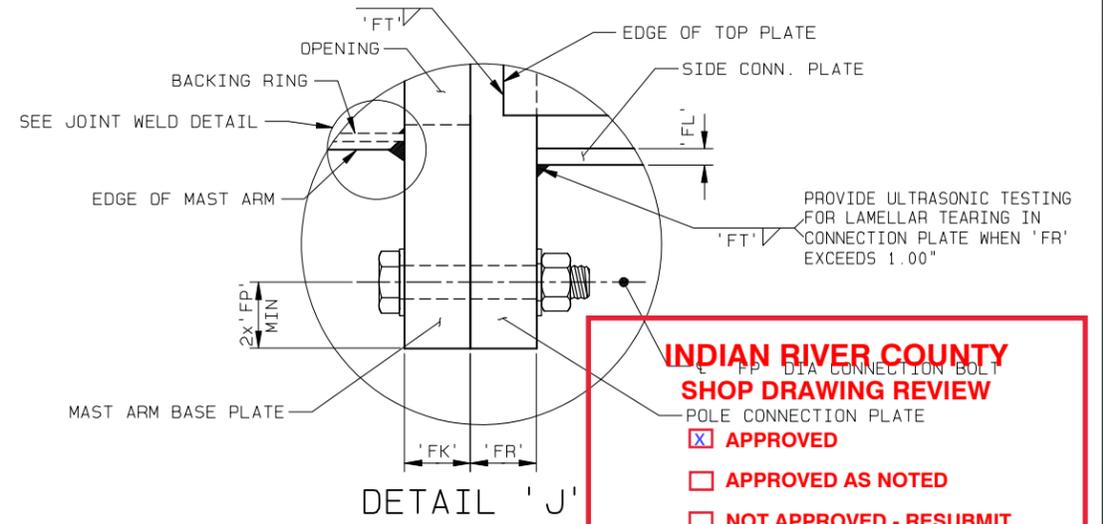
DETAIL 'I'



ELEVATION
(SINGLE ARM CONNECTION)



SECTION G-G



DETAIL 'J'

NOTE: 1. DETAILS SHOWN ON THIS SHEET ARE FOR 12 SIDED POLE SECTIONS. HOWEVER, SECTIONS WITH MORE THAN 12 SIDES AND ROUND SECTIONS ARE PERMITTED PROVIDED OUTSIDE DIAMETER AND WALL THICKNESS ARE NOT REDUCED.

NOTE: 2. MATCH MARK THE ARM AND CONNECTION PLATES TO ENSURE PROPER ASSEMBLY AND THE SEAM WELD IS IN THE PROPER LOCATION (SEAM LOCATED AT THE BOTTOM SIDE OF THE ARM)

INDIAN RIVER COUNTY
SHOP DRAWING REVIEW

POLE CONNECTION PLATE

APPROVED

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NOT APPROVED - RESUBMIT

REVIEWER: *E. Woods*

DATE: 6/28/2019

TYPICAL SINGLE ARM CONNECTION DETAILS

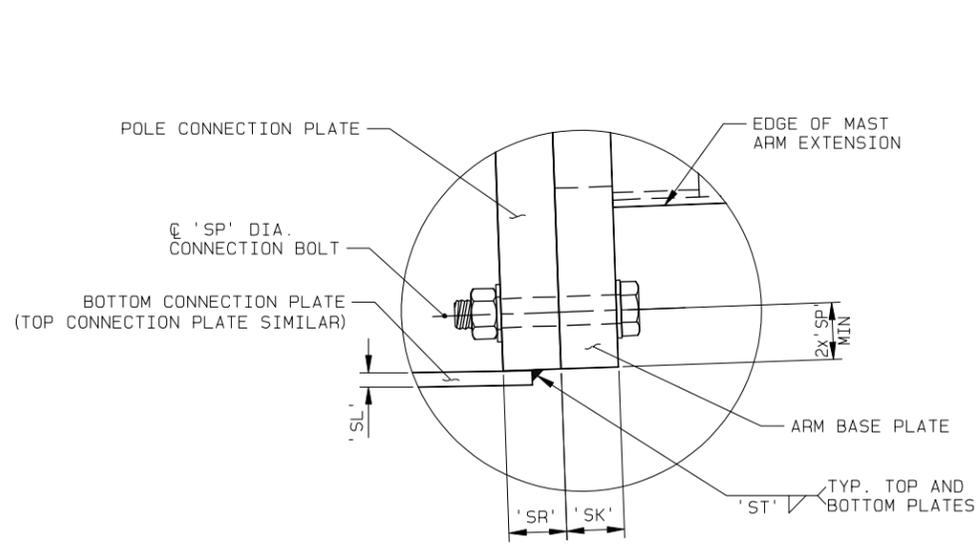
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| — | NKL 05/23/17 | NKL 05/23/17 | |

TITLE: FLORIDA-DOT APPROVED PRODUCTS LIST
 TRAFFIC SIGNAL STRUCTURES
 DESIGN STANDARDS

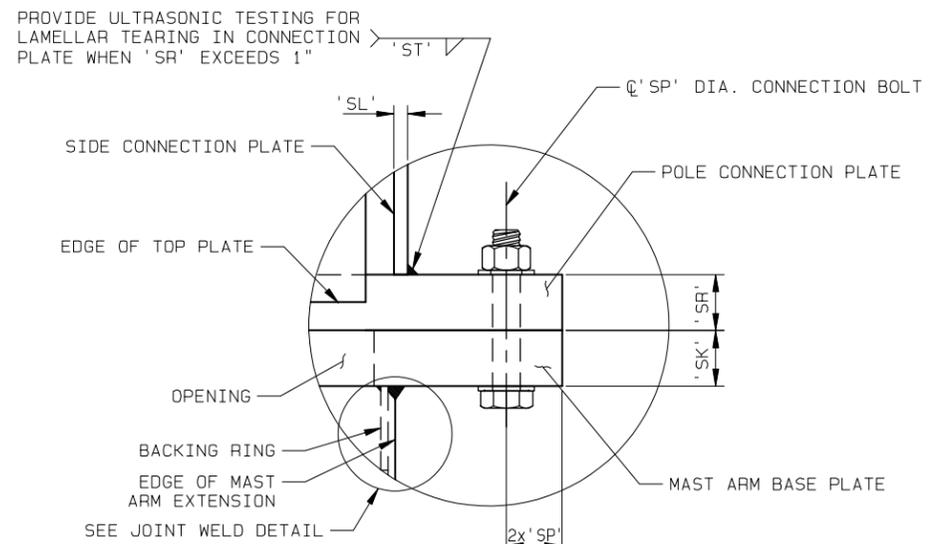
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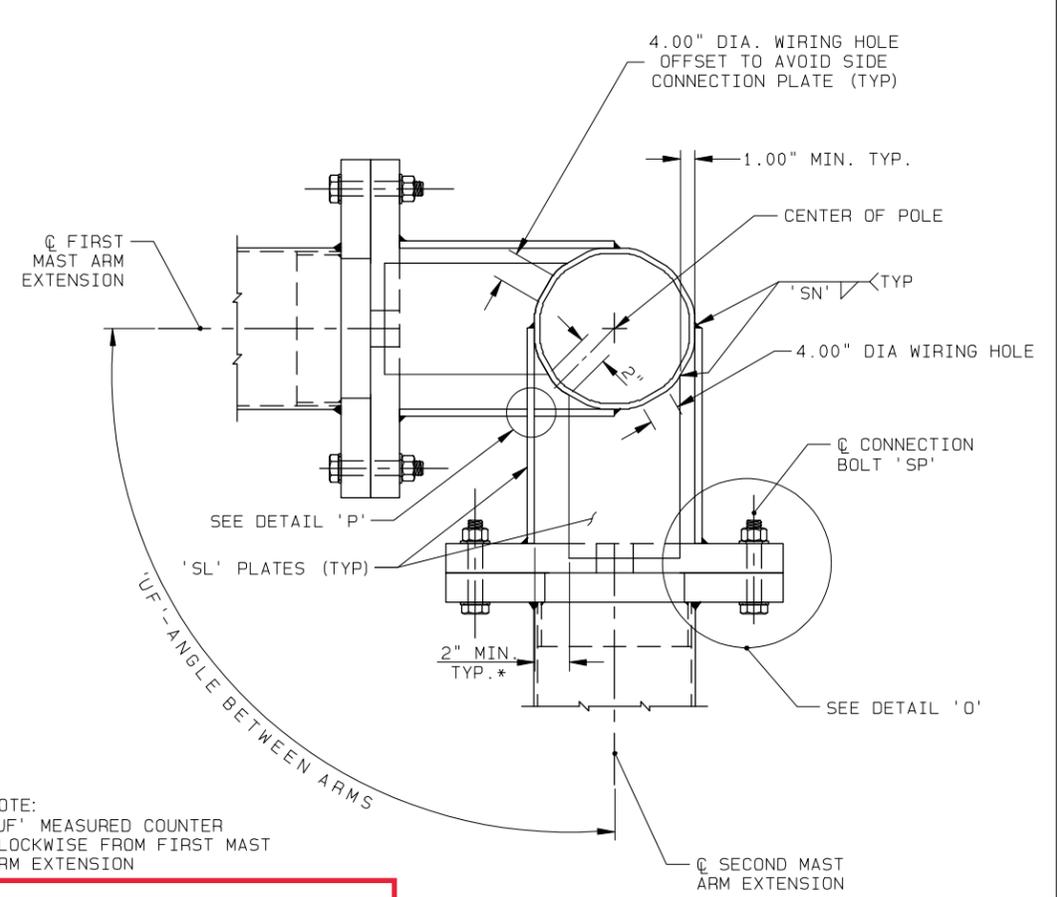
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| DRAWING NUMBER | DB01192 |



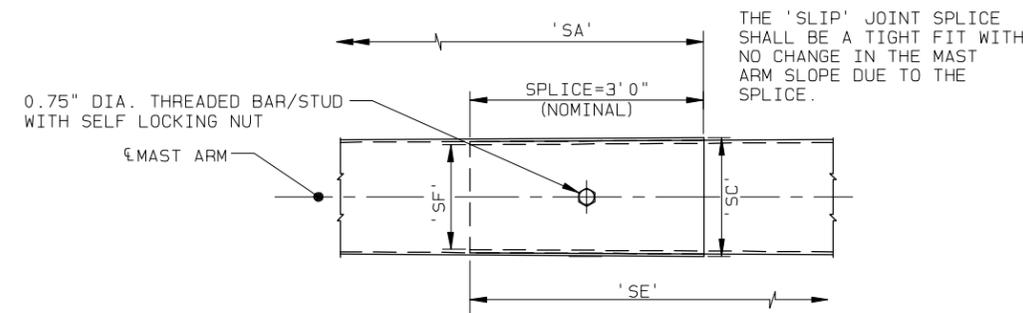
DETAIL 'N'



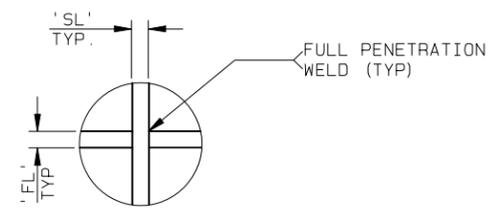
DETAIL 'O'



SECTION 'K-K'



ARM SPLICE DETAIL



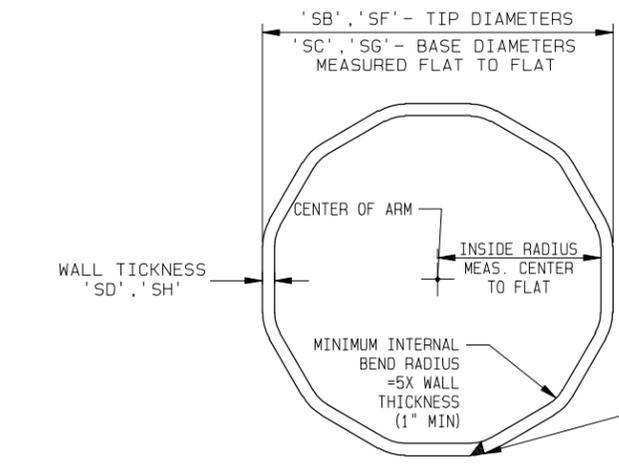
DETAIL 'P'

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

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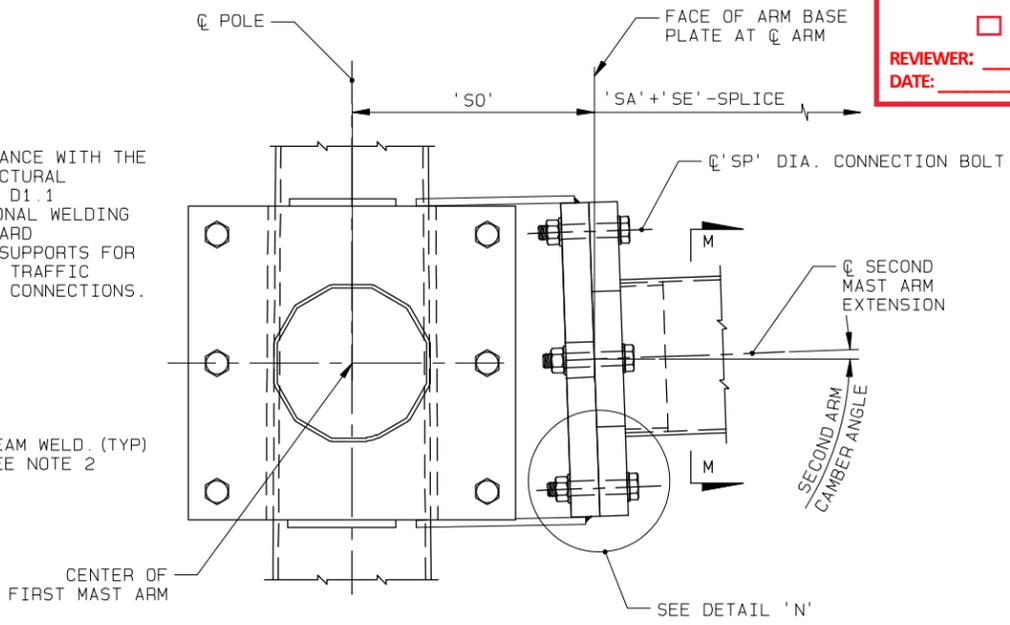
REVIEWER: E. Wiendy
DATE: 6/28/2019

* ADJUST WIDTH OF TOP AND BOTTOM CONNECTION PLATES TO MAINTAIN MINIMUM CLEARANCE SHOWN

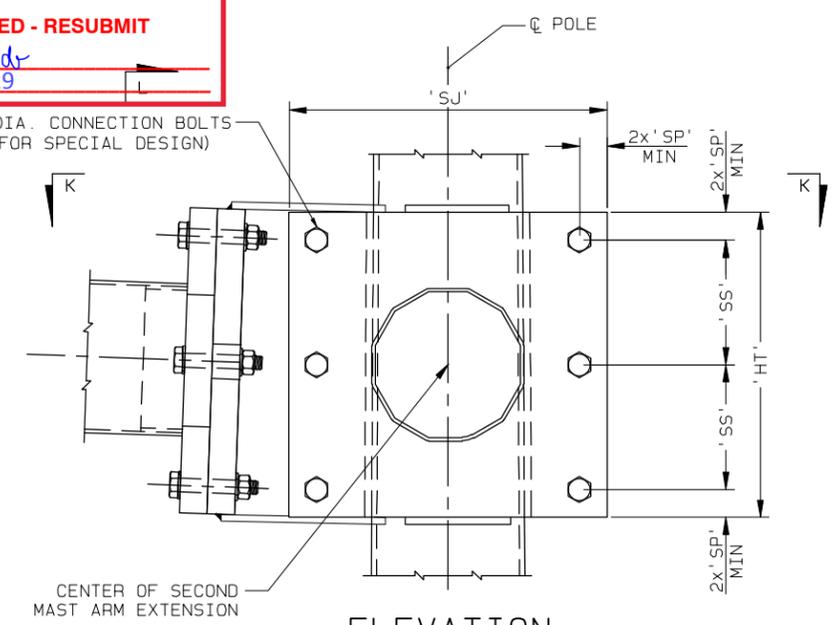


SECTION 'M-M'

NOTE:
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SECTION 'L-L'



ELEVATION
(DOUBLE ARM CONNECTION)

NOTE: 1. DETAILS SHOWN ON THIS SHEET ARE FOR 12 SIDED POLE SECTIONS. HOWEVER, SECTIONS WITH MORE THAN 12 SIDES AND ROUND SECTIONS ARE PERMITTED PROVIDED OUTSIDE DIAMETER AND WALL THICKNESS ARE NOT REDUCED.

NOTE: 2. MATCH MARK THE ARM AND CONNECTION PLATES TO ENSURE PROPER ASSEMBLY AND THE SEAM WELD IS IN THE PROPER LOCATION (SEAM LOCATED AT THE BOTTOM SIDE OF THE ARM)

TYPICAL DOUBLE ARM CONNECTION DETAILS

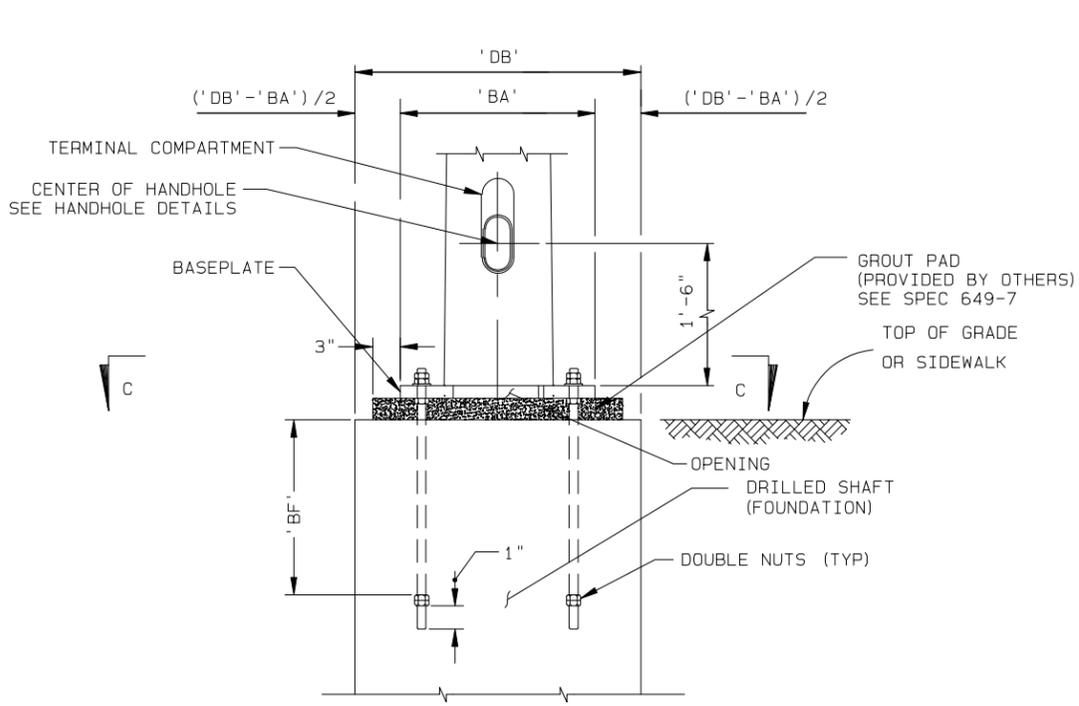
| REV | DRAWN BY-DATE | CHECK BY-DATE | DESCRIPTION |
|-----|---------------|---------------|-------------|
| --- | NKL 05/23/17 | NKL 05/23/17 | --- |

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|-------|------------------------------------|
| TITLE | FLORIDA-DOT APPROVED PRODUCTS LIST |
| | TRAFFIC SIGNAL STRUCTURES |
| | DESIGN STANDARDS |

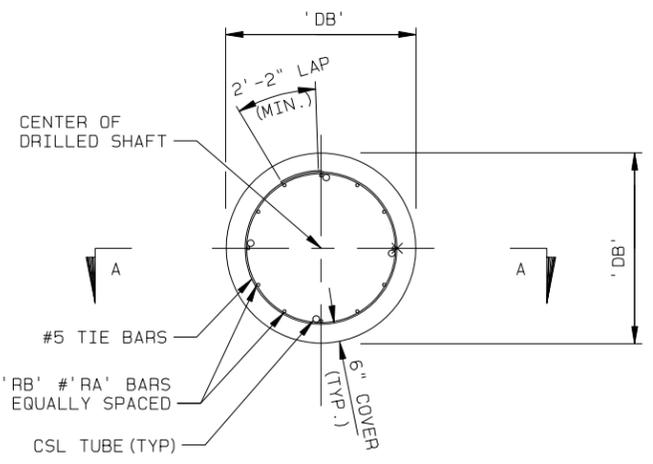
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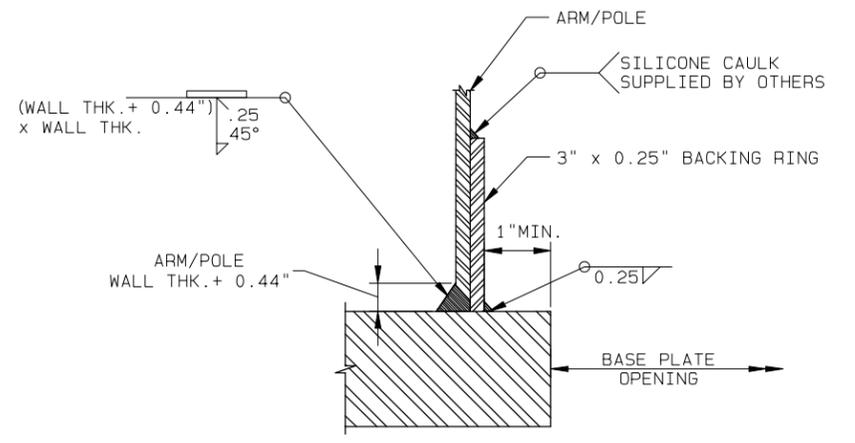
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| DRAWING NUMBER | DB01192 |
| OVERALL REV | --- |



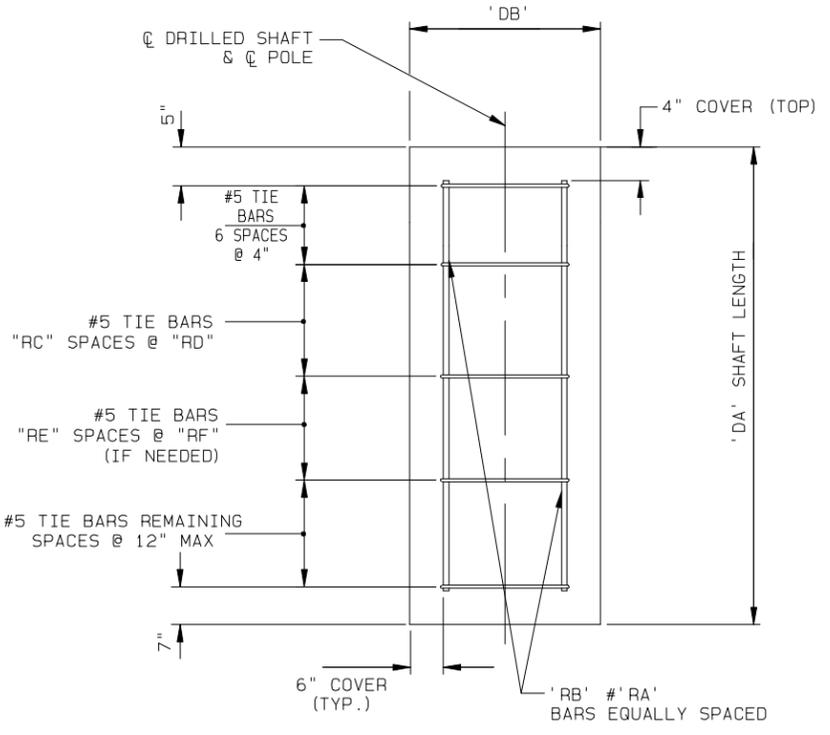
BASE PLATE AND ANCHORAGE ELEVATION
(REINFORCEMENT NOT SHOWN)



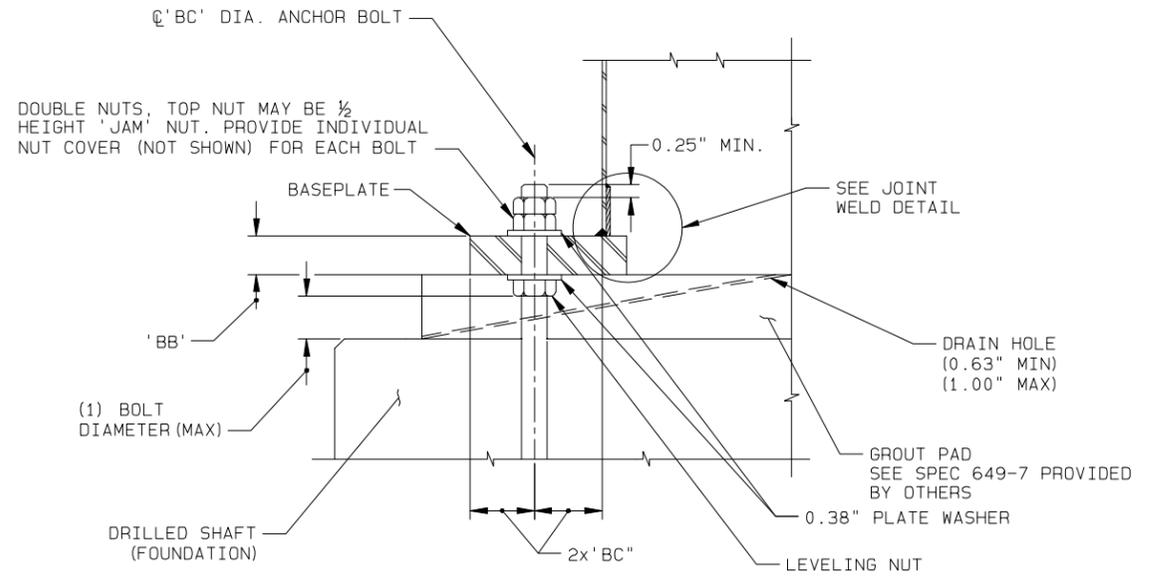
FOUNDATION PLAN



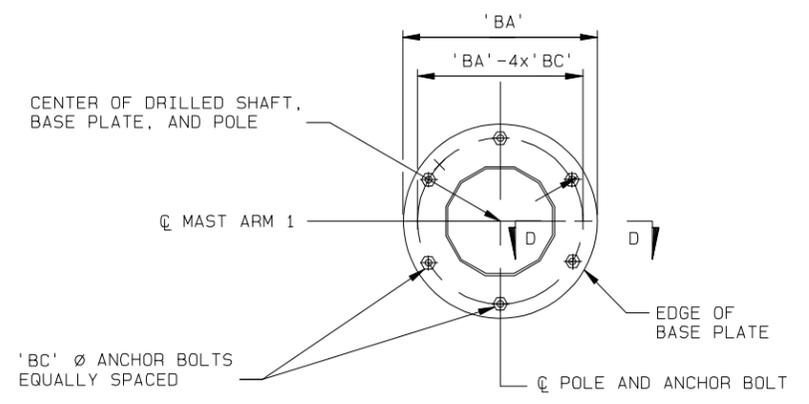
JOINT WELD DETAIL



SECTION A-A



SECTION D-D



SECTION C-C
(6 ANCHOR BOLTS)

TYPICAL FOUNDATION AND BASE PLATE DETAILS

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

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REVIEWER: E. Woods

DATE: 6/28/2019

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|-----|---------------|---------------|-------------|
| --- | NKL 05/23/17 | NKL 05/23/17 | --- |

TITLE FLORIDA-DOT APPROVED PRODUCTS LIST
TRAFFIC SIGNAL STRUCTURES
DESIGN STANDARDS

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Valley, NE 68064
(402) 359-2201

PAGE NUMBER: 4 OF 6
DRAWING NUMBER: DB01192
OVERALL REV: ---

POLE, BASE PLATE AND ARM CONNECTION

| POLE ID PX-POLE NO S-SINGLE ARM D-DOUBLE ARM H-HEAVY DUTY | UPRIGHT | | | | BASE PLATE | | | | | ANCHOR BOLT DATA | | | | | | ARM-UPRIGHT CONNECTION | | | | | | | | | | | | | | | | | | | | |
|---|--------------------------|--------------------|-------------------------|--------------------------------|------------|----------------|------------------------|---------------------|--------------------|---------------------------|-----------------------|------------------------------|------------------------------|----------------------------------|---------------------|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|
| | UPRIGHT HEIGHT "UA" (FT) | BASE DIA "UD" (IN) | POLE WALL THK "UE" (IN) | LUMINAIRE ATTACHMENT "UG" (FT) | NO BOLTS | DIA. "BA" (IN) | (MIN) BOLT CIRCLE (IN) | PLATE THK "BB" (IN) | BOLT HOLE DIA (IN) | ANCHOR BOLT DIA "BC" (IN) | (MIN) LENGTH "J" (IN) | (MIN) THREAD LENGTH "U" (IN) | (MIN) THREAD LENGTH "H" (IN) | BOLT PROJECTION ABOVE GRADE (IN) | EMBEDMENT "BF" (IN) | HT (IN) | FJ/SJ (IN) | FL/SL (IN) | FN.SN (IN) | FO/SO (IN) | FP/SP (IN) | FR/SR (IN) | FS/SS (IN) | FT/ST (IN) | | | | | | | | | | | | |
| P1/S | 25.00 | 16.00 | 0.375 | | 6 | 30.00 | 23.00 | 2.50 | 2.00 | 1.75 | 54.50 | 12.00 | 8.00 | 10.00 | 40.00 | 22.00 | 25.00 | 0.75 | 0.438 | 14.00 | 1.25 | 2.00 | 8.50 | 0.438 | | | | | | | | | | | | |
| P1/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 30.00 | | | 23.00 | | 2.50 | 2.00 | | 1.75 | 54.50 | 12.00 | 8.00 | 10.00 | 40.00 | 22.00 | 25.00 | 0.75 | 0.438 | 14.00 | 1.25 |
| P1/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P1/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P2/S | 25.00 | 18.00 | 0.375 | | 6 | 34.00 | 26.00 | 2.50 | 2.25 | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 27.00 | 0.75 | 0.438 | 15.00 | 1.25 | 2.00 | 8.50 | 0.438 | | | | | | | | | | | | |
| P2/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 34.00 | | | 26.00 | | 2.50 | 2.25 | | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 27.00 | 0.75 | 0.438 | 15.00 | 1.25 |
| P2/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P2/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P3/S | 25.00 | 20.00 | 0.375 | | 6 | 36.00 | 28.00 | 2.50 | 2.25 | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.438 | 16.00 | 1.25 | 2.00 | 8.50 | 0.438 | | | | | | | | | | | | |
| P3/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 36.00 | | | 28.00 | | 2.50 | 2.25 | | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.438 | 16.00 | 1.25 |
| P3/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P3/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P4/S | 25.00 | 22.00 | 0.375 | | 6 | 38.00 | 30.00 | 2.50 | 2.25 | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.438 | 17.00 | 1.25 | 2.50 | 12.50 | 0.438 | | | | | | | | | | | | |
| P4/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 38.00 | | | 30.00 | | 2.50 | 2.25 | | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.438 | 17.00 | 1.25 |
| P4/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P4/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P5/S | 25.00 | 24.00 | 0.375 | | 6 | 40.00 | 32.00 | 2.50 | 2.25 | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.500 | 18.00 | 1.25 | 2.50 | 12.50 | 0.500 | | | | | | | | | | | | |
| P5/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 40.00 | | | 32.00 | | 2.50 | 2.25 | | 2.00 | 56.00 | 13.00 | 8.00 | 11.00 | 40.00 | 22.00 | 29.00 | 0.75 | 0.500 | 18.00 | 1.25 |
| P5/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P5/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P6/S | 25.00 | 24.00 | 0.500 | | 6 | 42.00 | 33.00 | 2.50 | 2.50 | 2.25 | 62.50 | 14.00 | 8.00 | 12.00 | 45.00 | 22.00 | 29.00 | 0.75 | 0.625 | 18.00 | 1.50 | 2.50 | 12.00 | 0.625 | | | | | | | | | | | | |
| P6/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 42.00 | | | 33.00 | | 2.50 | 2.50 | | 2.25 | 62.50 | 14.00 | 8.00 | 12.00 | 45.00 | 22.00 | 29.00 | 0.75 | 0.625 | 18.00 | 1.50 |
| P6/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P6/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P7/S | 25.00 | 26.00 | 0.500 | | 6 | 44.00 | 35.00 | 2.50 | 2.50 | 2.25 | 62.50 | 14.00 | 8.00 | 12.00 | 45.00 | 22.00 | 29.00 | 0.75 | 0.625 | 19.00 | 1.50 | 2.50 | 12.00 | 0.625 | | | | | | | | | | | | |
| P7/S/L | 39.00 | | | | | | | | | | | | | | | 37.50 | 44.00 | | | 35.00 | | 2.50 | 2.50 | | 2.25 | 62.50 | 14.00 | 8.00 | 12.00 | 45.00 | 22.00 | 29.00 | 0.75 | 0.625 | 19.00 | 1.50 |
| P7/D | 25.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |
| P7/D/L | 39.00 | | | | | | | | | | | | | | | | 37.50 | | | | | | | | | | | 30.00 | 36.00 | | | 23.00 | | 2.75 | 12.50 | |

| DRILLED SHAFT | | | | | | | | |
|------------------|---------|---------|----|----|----|---------|----|---------|
| DRILLED SHAFT ID | DA (FT) | DB (FT) | RA | RB | RC | RD (IN) | RE | RF (IN) |
| DS/12/4.0 | 12 | 4.0 | 11 | 14 | 8 | 12 | | |
| DS/12/4.5 | 12 | 4.5 | 11 | 16 | 8 | 12 | | |
| DS/14/4.5 | 14 | 4.5 | 11 | 16 | 10 | 8 | | |
| DS/14/5.0 | 14 | 5.0 | 11 | 18 | 10 | 8 | | |
| DS/16/4.5 | 16 | 4.5 | 11 | 16 | 10 | 8 | | |
| DS/16/5.0 | 16 | 5.0 | 11 | 18 | 10 | 8 | | |
| DS/18/5.0 | 18 | 5.0 | 11 | 18 | 10 | 8 | | |
| DS/20/5.0 | 20 | 5.0 | 11 | 18 | 10 | 6 | 10 | 9 |

LUMINAIRE CONNECTION DATA SHOWN IN DETAIL 2 ON SHEET 1 OF 6.

| LUMINAIRE ARM DATA | | | | | | |
|--------------------|---------|------------------------|-------------------|----------------|-------|---------|
| LA (FT) | LB (FT) | (MIN) LC BASE DIA (IN) | FREE END DIA (IN) | (MIN) LD GAUGE | LE | LF (FT) |
| 40.00 | 10.00 | 3.00 | 2.38 | 10 | 0.500 | 9.00 |

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

APPROVED
 APPROVED AS NOTED
 NOT APPROVED - RESUBMIT

REVIEWER: K. Ulander
 DATE: 6/28/2019

| REV | DATE | DESCRIPTION |
|--------------|--------------|-------------|
| NKL 05/23/17 | NKL 05/23/17 | |

TITLE FLORIDA-DOT APPROVED PRODUCTS LIST
TRAFFIC SIGNAL STRUCTURES
DESIGN STANDARDS

VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.

valmont
Valley, NE 68064
(402) 359-2201

PAGE NUMBER: 5 OF 6
DRAWING NUMBER: DB01192
OVERALL REV

ARM AND BASE PLATE

| ARM ID AXX-ARM LENGTH S-SINGLE ARM D-DOUBLE ARM H-HEAVY DUTY | TOTAL ARM LENGTH (FT) | ARM | | | ARM EXTENSION | | | BASE PLATE | | | |
|--|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------|---------------|---------------|-------|
| | | FA/SA (FT) | FC/SC (IN) | FD/SD (IN) | FE/SE (FT) | FG/SG (IN) | FH/SH (IN) | HT (IN) | FJ/SJ (IN) | FK/SK (IN) | |
| A30/S | 30.00 | 30.00 | 11.00 | 0.250 | | | | 22.00 | 25.00 | 3.00 | |
| A30/S/H | | 30.00 | 12.00 | 0.250 | | | | | | | |
| A30/D | | 30.00 | 11.00 | 0.250 | | | | 30.00 | 36.00 | | |
| A30/D/H | | 30.00 | 12.00 | 0.250 | | | | | | | |
| A40/S | 40.00 | 40.00 | 13.00 | 0.250 | | | | 22.00 | 27.00 | 3.00 | |
| A40/S/H | | 40.00 | 14.00 | 0.250 | | | | | | | |
| A40/D | | 40.00 | 13.00 | 0.250 | | | | 30.00 | 36.00 | | |
| A40/D/H | | 40.00 | 14.00 | 0.250 | | | | | | | |
| A50/S | 50.00 | 32.50 | 12.00 | 0.250 | 20.50 | 14.00 | 0.313 | 22.00 | 29.00 | 3.00 | |
| A50/S/H | | 32.50 | 13.00 | 0.250 | 20.50 | 15.00 | | | | | |
| A50/D | | 32.50 | 12.00 | 0.250 | 20.50 | 14.00 | | | 30.00 | | 36.00 |
| A50/D/H | | 32.50 | 13.00 | 0.250 | 20.50 | 15.00 | | | | | |
| A60/S | 60.00 | 35.50 | 12.00 | 0.250 | 27.50 | 15.00 | 0.375 | 30.00 | 36.00 | 3.00 | |
| A60/S/H | | 35.50 | 13.00 | 0.250 | 27.50 | 16.00 | | | | | |
| A60/D | | 35.50 | 12.00 | 0.250 | 27.50 | 15.00 | | | | | |
| A60/D/H | | 35.50 | 13.00 | 0.250 | 27.50 | 16.00 | | | | | |
| A70/S | 70.00 | 38.00 | 13.00 | 0.250 | 35.00 | 17.00 | 0.375 | 30.00 | 36.00 | 3.00 | |
| A70/S/H | | 38.00 | 14.00 | 0.250 | 35.00 | 18.00 | | | | | |
| A70/D | | 38.00 | 13.00 | 0.250 | 35.00 | 17.00 | | | | | |
| A70/D/H | | 38.00 | 14.00 | 0.250 | 35.00 | 18.00 | | | | | |
| A78/S | 78.00 | 39.00 | 13.00 | 0.250 | 42.00 | 18.00 | 0.375 | 30.00 | 36.00 | 3.00 | |
| A78/S/H | | 39.00 | 15.00 | 0.250 | 42.00 | 20.00 | | | | | |
| A78/D | | 39.00 | 13.00 | 0.250 | 42.00 | 18.00 | | | | | |
| A78/D/H | | 39.00 | 15.00 | 0.250 | 42.00 | 20.00 | | | | | |

**INDIAN RIVER COUNTY
SHOP DRAWING REVIEW**

- APPROVED
- APPROVED AS NOTED
- NOT APPROVED - RESUBMIT

REVIEWER: E. Uindt
DATE: 6/28/2019

| REV | DRAWN BY-DATE | CHECK BY-DATE | DESCRIPTION |
|-----|---------------|---------------|-------------|
| --- | NKL 05/23/17 | NKL 05/23/17 | --- |

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TRAFFIC SIGNAL STRUCTURES
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| | |
|----------------|-------------|
| PAGE NUMBER: 6 | OF 6 |
| DRAWING NUMBER | OVERALL REV |
| DB01192 | |