#### Request for Proposals No. JB2016-02

#### FOR AN LED STREETLIGHT UPGRADE PROJECT

# for the JENNESS BEACH DISTRICT TOWN OF RYE, NEW HAMPSHIRE

October 17, 2016

## <u>Introduction</u>

The Jenness Beach District of the Town of Rye, NH is requesting proposals for the replacement of existing mercury vapor, high pressure sodium, and metal halide streetlight fixtures with new LED streetlight fixtures. This RFP covers these three work components:

- 1. Removal of two test streetlights and associated wiring and mounting arms,
- 2. Replacement of 68 existing streetlight fixtures with supplied LED streetlights and photocells, using existing mounting and wiring.
- **3.** Installation of new LED streetlights, mounting, and wiring at three new locations, (occurring concurrently, but quoted separately).

The expected work period is early spring of 2017, before the high beach season.

# **Proposal Submission Time and Place**

Three (3) copies of the proposal must be submitted in a sealed envelope marked "JB2016-02, Jenness Beach Streetlight Upgrade Project" to the address below by **Wednesday, December 7th, 2016 at 5:00 p.m.** Proposals received after this time period will not be accepted. Bids will be opened on Wed., Dec. 7th, 2016 at 5:15 p.m. in the Rye Town Hall Meeting Room.

Address: Jenness Beach District

8 Big Rock Road Rye, NH 03870

Attn: Randy Crapo, Commissioner

Questions concerning this RFP can be directed to the Project Manager:

Michele Sopher

Sopher Energy Analysis and Design LLC

(603) 502-2120

jennessbeachstreetlights@gmail.com

#### **Questions and Answers**

A list of bidders' questions and the answers will be posted on the Town of Rye, NH website, <a href="https://www.town.rye.nh.us">www.town.rye.nh.us</a>. Under "Boards/Committees", click on "Jenness Beach District", then "RFP JB2016-02".

# **Pre-Bid Meeting**

A Pre-Bid Meeting will be held for interested parties on **Tuesday**, **Nov. 15**, **at 3:00 p.m. at the Rye Town Hall**, **10 Central Road**, **Rye**, **NH.** This meeting will be live-streamed for off-site viewing and recorded for later viewing. Click on *Town Hall Streaming* on <a href="www.town.rye.nh.us">www.town.rye.nh.us</a> to access.

# **Definitions**

Contractor – the electrical contracting company bidding on this RFP District – the Jenness Beach District in the town of Rye, NH Utility – electrical utility Eversource NH

# **Project Description**

The Jenness Beach District is located in the Town of Rye, NH. The District is comprised of the neighborhoods surrounding Jenness Beach State Park and is approximately bounded by the following streets, inclusive: Central Road to the west; Cable Road, Surf Lane, and Straw's Point to the north; Old Beach Road and Ocean Boulevard to the east; and Perkins Road and Richard Road to the south.

The District is responsible for 69 streetlights on utility poles, according to the map in Attachment A and the ledger in Attachment B. These streetlights can be grouped by type, as shown in Table 1:

Table 1: Jenness Beach District Streetlight Types

Quantity	Streetlight Lamp Type	Wattage	Lumens
57	Mercury Vapor	100	3500
2	Mercury Vapor	175	7000
2	High Pressure Sodium	50	4000
1	High Pressure Sodium	100	9500
3	Metal Halide	70	5000
4	Metal Halide	100	8000

This RFP covers the main phase of the Jenness Beach Streetlight Upgrade Project, as shown in Table 2, which includes removing two metered test LED streetlights, installing three new LED streetlights at crosswalks, and replacing 68 existing streetlights with LED fixtures and new photocells.

Table 2: Jenness Beach LED Streetlight Project Scope of Work Summary

Work Component	Mercury Vapor (remove)	High Pressure Sodium (remove)	Metal Halide (remove)	LED (remove)	LED - install
Dismantle Test LED Streetlight Assemblies				(2)**	
Add New LED Streetlights at Crosswalks***					3
Replace Existing Streetlights with LED Fixtures	(58)*	(3)*	(7)*		68

<sup>\*</sup> To be recycled through Rye Public Works

<sup>\*\*</sup> To be handed over to Project Manager Michele Sopher

<sup>\*\*\*</sup>This work is pending NHDOT approval, and should be quoted as a separate line item.

# **Detailed Scope of Work**

The Contractor shall become familiar with the existing streetlight installations and site conditions in order to evaluate their firm's ability and costs to remove, replace, and add the streetlights as required in the Scope of Work.

# I. Removal of Test Fixtures

Two test LED streetlight assemblies are installed on Ocean Boulevard, one at Perkins Rd. on Eversource pole no. 7/37 and one near the Jenness State Beach bathhouse on pole no. 7/34A. Power for the test lights is being run through Eversource meters mounted on the respective utility poles.

The Contractor shall disconnect power and remove the test LED streetlight fixtures and associated photocells, mounting arms, wiring and conduit. The streetlight fixtures, photocells, mounting arms, and mounting hardware shall be handed over to the Project Manager (contact information above). The Contractor shall ensure that the flashing pedestrian lights powered through the same meters remain operational.

# II. Replacement of Existing Streetlights with LED Fixtures

One existing streetlight will be removed by Eversource in advance of this project phase.

The Contractor shall replace the remaining 68 existing streetlight fixtures in the District with new LED streetlight fixtures and long-life photocells according to the list in Attachment B. Some of the fixtures shall require adjustment of the Field Adjustable Output to dim the luminaire, as noted in Attachment B. The Contractor shall install backlight shields on approximately 15 of the fixtures and shall replace four 2-foot mounting arms with new 6-foot mounting arms, as noted in Attachment B. The Contractor shall use existing Eversource 1-1/4" IPS mounting arms and wiring, wherever possible.

Materials Supplied by the District:

- LED streetlight fixtures,
- backlight shields (snap-on),
- twist-lock photocells
- four replacement 6-foot mounting arms (through Eversource)

Materials supplied by the Contractor:

- 4-1/2" hot dip galvanized lag screws and washers,
- Wire for 120V connection and grounding, as needed
- Other hardware and tools, as needed

#### III. Installation of New Streetlights

NOTE: This installation is expected to occur concurrently with the other work, but it is pending State of NH DOT approval. <u>This installation should be quoted as a separate line item.</u>

New streetlights shall be installed by the Contractor in the three (3) designated locations in Attachment B. These new streetlight fixtures shall be installed on existing Eversource poles to illuminate crosswalks that currently have inadequate nighttime lighting.

The Contractor shall run 120V electrical power from Eversource wires on the respective wood utility poles through the mounting arms to the streetlights. Installation #72 on the Project Map will require running about 100 feet of 120V wire from a neighboring pole.

The new mounting arms shall be installed in the Utility's area of the utility pole so that the height of the streetlight will be approximately 25 feet, though a height of 22.5 feet +/-2.5 feet above grade is acceptable, with the height chosen per specification of the Project Manager and to avoid existing attachments on the poles. The mounting arms shall be positioned so that the lights illuminate the crosswalks. Mounting arms will be installed on the wood poles using 4-1/2" hot dip galvanized lag screws with washers.

Materials supplied by the District:

- Streetlight fixtures
- Photocells
- Backlight shields
- 6-foot mounting arms

Materials supplied by the Contractor:

- Wire
- 4-1/2" hot dip galvanized lag screws and washers
- Any other materials and tools necessary for the required installation, grounding, and testing.

#### IV. General Requirements

#### A. Installations

The Contractor shall install all new and replacement streetlight fixtures according to the ledger in Attachment B, taking note of the proper model number for the location, whether or not a backlight shield or dimming is required, and whether or not a new mounting arm is required.

See Attachment C for the full model numbers of the Cree or GE streetlights and the McLean Power mounting (mast) arms. See Attachments D and E for the specification sheets for the streetlight and for the mounting arm (highlighted in yellow). See Attachment F and the video for the installation instructions for Cree streetlight fixtures.

All new and replacement streetlights and photocells shall be wired, installed, and leveled according to the manufacturer's instructions. Because the housing of the Cree RSW LED fixtures are made of a bulk molded material, it is critical that mounting bolts are tightened with torque wrenches to the torque value specified in the manufacturer's installation instructions to avoid damage to the housing.

Field Adjustable Output – Some of the LED streetlights, particularly those on straight sections of road, may require that the Contractor set the Field Adjustable Output to a lower setting to dim the light. See specified settings in Attachment B. The Contractor shall then apply the appropriate supplied wattage label to the underside of the luminaire.

Leveling and Testing - The streetlights shall be leveled using a beam level and the integral leveling adjustment in each fixture. Each photocell sensor shall be installed on the streetlight with its sensor positioned in a northerly direction. The streetlight operation shall be tested by covering the photocell and verifying proper operation of the light.

#### B. Coordination with District and Utility

The LED streetlights are pre-approved for rebates through Eversource. All Eversource requirements, including timelines, for the rebates shall be met by the Contractor.

The Contractor shall meet all Eversource requirements for safety, project procedures, installation, and rebates:

. Any private contractor shall have all the requisite training, certifications and insurance to safely perform the required installations, and shall be licensed by the State: Installers should have either a NH Medium/High Voltage License, a Masters Electricians License or be working under someone with a Masters Electricians License. In addition, contractors should be knowledgeable of, and work in compliance with, OSHA 1910.269 the Occupational Safety and Health Standards relating to Electric Power, Generation, Transmission and Distribution.

The Contractor shall observe all applicable OSHA and Eversource safety procedures for workers.

The Contractor shall follow proper procedures to warn approaching pedestrians and motorists of the work area and to divert pedestrians and motorists safely around the work area. The Jenness Beach District will pay for Rye Police to direct traffic when work is occurring in the area of:

- the Jenness Beach State Park entrance (#34 and #72 on Project Map)
- the intersection of Cable Road and Ocean Boulevard (#47 and #73 on Project Map)., and
- the intersection of Cable Road and Central Road (#5 and #6 on Project Map).

The Contractor should plan to use their own flagger, warning signs, and cones when working on other areas of Ocean Boulevard, Central Road, and Cable Road. Warning signs and cones are generally adequate for all other areas.

The Contractor shall notify the Project Manager of the installation plan by date and streets.

A designated parking area in the town of Rye for a bucket truck and a work truck belonging to the Contractor will be provided to the Contractor for duration of the project.

All removed mercury vapor, metal halide, and high pressure sodium fixtures will be stockpiled for proper recycling in a designated area of the Rye Transfer Station at 309 Grove Road, Rye, NH. The Contractor shall deliver removed fixtures to this location each day during the work period. Transfer Station hours are Tuesday through Saturday, 7:30 a.m. - 3:45 p.m.

The Contractor shall recycle all recyclable materials, such as paper, cardboard, and metal, through the Rye Transfer Station at 309 Grove Road, Rye, NH.

Expected work period shall be during early spring of 2017.

No field work shall occur during the high beach season from the week before Memorial Day through the week after Labor Day (May 20th-Sept. 17, 2017).

# **Proposal Requirements**

Interested Contractors must submit a detailed proposal which must include, at the minimum, the following:

- Description of services to be provided and method(s) of providing those services.
- Proposed time frames for beginning and ending the project.
- Fee schedule for the proposed service:
  - Flat fee price must be included for the removal of test streetlights and replacement of existing streetlights
  - Separate flat fee price must be included for the installation of the 3 new streetlights, expected to occur concurrently pending State of NH approval;
  - Per-diem rate for all identified personnel who may be requested to provide additional services.
- Proof of insurance as specified in Insurance Requirements section below.
- Evidence of professional licenses and certifications relevant to streetlight replacement, working on utility poles, and as required by Eversource. Include a copy of the Master Electrician license or NH Medium/High Voltage License for at least one of the crew assigned to this project.
- Identify each key person who will be assigned to the project and his/her role in the assignment.
- Description of Contractor's warranty on their work.
- Any additional information that will assist the Board in evaluating the Contractor's capability to perform the proposed services.
- Description of any previous related work.
- A dated and signed printout of the RFP 2016-02 Questions and Answers from the Town
  of Rye website, accessed via instructions in Questions and Answers section above.
- Three Client References, preferably for related work. Provide customer's full name, address, phone numbers, and a brief description of work performed for each reference.
- Certified statement that the Contractor or any of its consultants are not debarred, suspended or otherwise prohibited from doing business by any federal, state or local governmental agency.

# **Insurance Requirements**

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, with may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

## AMOUNT OF INSURANCE

- A) Comprehensive General Liability:

  Bodily Injury or Property Damage \$2,000,000/\$2,000,000

  Per occurrence and general aggregate
- B) Vehicle Liability:
  Bodily Injury or Property Damage \$2,000,000/\$2,000,000
  Per occurrence and general aggregate

Additionally, the Contractor shall purchase and maintain the following types of insurance

- A) Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

#### ADDITIONAL INSURED

The Jenness Beach District shall be named as an additional insured and identified as a certificate holder on all policies as follows: Jenness Beach District, Town of Rye, 8 Big Rock Rd., Rye, NH 03870.

Coverages shall remain in effect for a period consistent with the Statutes of Limitations under the Law of the State of New Hampshire.

## **Proposal Validation Period**

- Proposals must be valid for a period of 120 days from the date of submission.
- It is anticipated that the selected Contractor will finalize this contract by starting the Streetlight Upgrade Project within 120 days of the awarding of the contract.

#### **Contract Award**

• The contract shall be awarded to the Contractor who satisfies the technical criteria, format, and all administrative requirements, and whose cost is acceptable to the District.

- The District reserves the right to reject any and all proposals, and to negotiate with any
  contractor providing a proposal and to waive any informalities or irregularities in a
  proposal. The District also reserves the right to choose the Contractor who will provide
  the best value, rather than the lowest cost.
- It is anticipated that a Contractor will be selected and be notified by December 22, 2016.

# **Attachments and Links**

- 1. Attachment A: RFP JB2016-02 Map
- 2. Attachment B: Jenness Beach Streetlight Upgrade Ledger
- 3. Attachment C: Equipment Model Nos.
- 4. Attachment D: Cree RSW Streetlight Spec Sheet
- 5. Attachment E: MacLean Power 6-foot Mounting Arm Spec Sheet
- 6. Attachment F: Cree RSW Streetlight Installation Instructions
- 7. Cree XSP (similar, but larger model) Install Video at:

https://www.youtube.com/watch?v=Jc84EoKZhrQ

Prepared by:

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# Attachment A

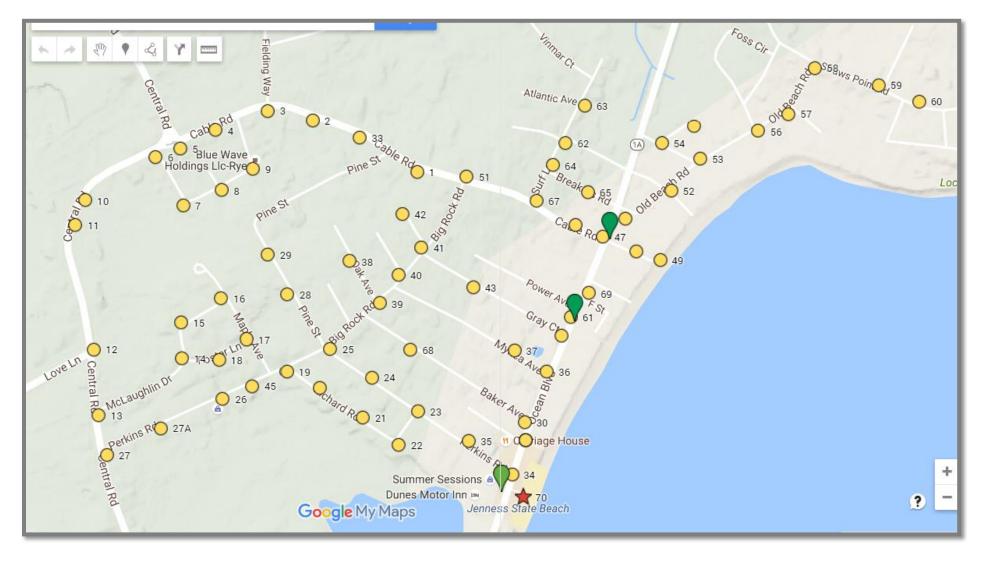
# Map of existing streetlight locations can also be viewed at:

https://www.google.com/maps/d/edit?mid=1azmqMZ\_S0JuRs6GVI5CqIKFdwAE

This online map can be expanded to see all streetlight numbers.

# **ATTACHMENT A**

RFP 2016-02 Jenness Beach Streetlight Project Upgrade Map



Yellow circles – replace with LED; Green markers – install new LED streetlights; Red star – to be removed by Eversource

# Attachment B Jenness Beach Streetlight Upgrade Ledger

# **ATTACHMENT B**

# Jenness Beach District Streetlight Upgrade Ledger

05/04/15

EVERSOURCE LA82200 RUN

MUNICIPAL STREET LIGHTING INVENTORY & WORK DATE:

JENNESS BEACH PRECINCT-OLCYCLE MONTH:04/15ACCT.8001075-01DISTRICT63TOWN 55

MH-Metal Halide MERC-Mercury Vapor HPS-High Pressure Sodium

MAP LOCATION	STREET	POLE NO.	EXIST. SIZE CODE	EXISTING TYPE	EXIST- ING WATTS	EXISTING LUMENS	WORK	REPLACE WITH	REPLACE MOUNTING ARM?	INSTALL BACKLIGHT SHIELD?	FIELD ADJUSTABLE OUTPUT SETTING
54	ATLANTIC AVE	7/60-BB	161	MH	100	8000	Replace	Α			Q9
68	BAKER AVE	7/41E2	140	MERC	100	3500	Replace	Α			Q3
22	BERNARD DR	53/2	140	MERC	100	3500	Replace	A w/B		Υ	Q3
41	BIG ROCK RD	23/4*	140	MERC	100	3500	Replace	Α			Q9
40	BIG ROCK RD	23/6	140	MERC	100	3500	Replace	Α			Q9
39	BIG ROCK RD	23/8	140	MERC	100	3500	Replace	Α			Q9
65	BREAKERS RD	26/3	140	MERC	100	3500	Replace	A w/B		Y	Q3
5	CABLE RD	6/1	141	MERC	175	7000	Replace	Α			Q9
4	CABLE RD	6/4	140	MERC	100	3500	Replace	Α			Q9
3	CABLE RD	6/7	161	MH	100	8000	Replace	Α			Q9
2	CABLE RD	6/10	140	MERC	100	3500	Replace	Α			Q9
33	CABLE RD	6/13	140	MERC	100	3500	Replace	A w/B		Y	Q3
1	CABLE RD	6/16	140	MERC	100	3500	Replace	Α			Q9
51	CABLE RD	6/19A*	140	MERC	100	3500	Replace	Α			Q9

67	CABLE RD	6/24	140	MERC	100	3500	Replace	Α			Q9
66	CABLE RD	6/27	140	MERC	100	3500	Replace	A w/B		Y	Q9
47	CABLE RD	6/29	140	MERC	100	3500	Replace	A w/B		Y	Q9
48	CABLE RD	7/54A	151	HPS	100	9500	Replace	Α			Q9
49	CABLE RD	7/54A-1***	046	HPS	50	4000	Replace	A w/B	Υ	Υ	Q9
6	CENTRAL RD	5/76	140	MERC	100	3500	Replace	Α			Q9
10	CENTRAL RD	5/82	140	MERC	100	3500	Replace	Α			Q9
11	CENTRAL RD	5/84	140	MERC	100	3500	Replace	Α			Q9
12	CENTRAL RD	5/92*	140	MERC	100	3500	Replace	Α			Q9
13	CENTRAL RD	5/95	140	MERC	100	3500	Replace	Α			Q9
27	CENTRAL RD	5/98	140	MERC	100	3500	Replace	Α			Q9
18	FOSTER LN	78/4B	140	MERC	100	3500	Replace	Α			Q3
43	GRAY CT	48/4	140	MERC	100	3500	Replace	Α			Q3
•	HUNTERVALE	54.10	4.40	MEDO	400	0.500					
9	AVE HUNTERVALE	51/2	140	MERC	100	3500	Replace	A w/B		Y	Q3
8	AVE	51/4	140	MERC	100	3500	Replace	Α			Q3
	HUNTERVALE						_				
7	AVE	51/6	140	MERC	100	3500	Replace	A w/B		Y	Q3
55	VENDUU AVE	7/60000	4.40	MEDC	100	2500	Donloos	A/D		Y	Q3
33	KENPHIL AVE	7/60BB2	140	MERC	100	3500	Replace	A w/B		T	Q3
17	MAPLE AVE	78/9	140	MERC	100	3500	Replace	Α			Q3
14	MCLAUGHLIN DR	78/4	140	MERC	100	3500	Replace	Α			Q3
15	MCLAUGHLIN DR	78/5	140	MERC	100	3500	Replace	Α			Q3
16	MCLAUGHLIN DR	78/7	140	MERC	100	3500	Replace	Α			Q3
				_			•				
37	MYRICA AVE	27/2	140	MERC	100	3500	Replace	А			Q3
38	OAK AVE	23/8B	140	MERC	100	3500	Replace	Α			Q3

None	OCEAN BLV	7/34A	Test	LED	42		REMOVE				Q9
34	OCEAN BLV	7/37	Test	LED	30		REMOVE				Q9
34	OCEAN BLV	7/37	161	MH	100	8000	Replace	Α			Q9
70	OCEAN BLV	7/37A	140	MERC	100	3500	No Action				
31	OCEAN BLV	7/40	159	MH	70	5000	Replace	Α			Q9
30	OCEAN BLV	7/41*	140	MERC	100	3500	Replace	Α	Υ		Q9
36	OCEAN BLV	7/44	159	MH	70	5000	Replace	Α			Q9
44	OCEAN BLV	7/47	140	MERC	100	3500	Replace	Α			Q9
61	OCEAN BLV	7/48B-2**	140	MERC	100	3500	Replace	Α	Υ		Q9
69	OCEAN BLV	7/50	140	MERC	100	3500	Replace	Α			Q9
50	OLD BEACH RD	7/55	140	MERC	100	3500	Replace	Α			Q3
52	OLD BEACH RD	7/58A	140	MERC	100	3500	Replace	Α			Q3
53	OLD BEACH RD	7/60	140	MERC	100	3500	Replace	A w/B		Y	Q3
56	OLD BEACH RD	7/64	161	MH	100	8000	Replace	Α			Q3
57	OLD BEACH RD	7/66	140	MERC	100	3500	Replace	Α			Q3
58	OLD BEACH RD	7/70	140	MERC	100	3500	Replace	Α			Q3
35	PERKINS RD	21/3	140	MERC	100	3500	Poplace	۸			Q9
23	PERKINS RD	21/6	140	MERC	100	3500	Replace	A A			Q9 Q9
24	PERKINS RD	21/9	140	MERC	100	3500	Replace Replace	A			Q9
25	PERKINS RD	21/13	140	MERC	100	3500	Replace	A			Q9 Q9
19	PERKINS RD	21/16	140	MERC	100	3500	Replace	A			Q9
45	PERKINS RD	21/18	047	HPS	50	4000	Replace	A			Q9
26	PERKINS RD	21/20	140	MERC	100	3500	Replace	A			Q9
27A	PERKINS RD	21/24	140	MERC	100	3500	Replace	A			Q9
28	PINE ST	66/4	140	MERC	100	3500	Replace	Α			Q3
29	PINE ST	66/6	141	MERC	175	7000	Replace	A w/B	Υ	Y	Q3
24	DICHARD DD	E 4 /0	440	MEDO	400	2500	Derless	٨			00
21	RICHARD RD	54/2	140	MERC	100	3500	Replace	A			Q3
20	RICHARD RD	54/4	140	MERC	100	3500	Replace	Α			Q3
59	STRAWS PT RD	41/4	160	MH	70	5000	Replace	A			Q3
60	STRAWS PT RD	41/6A	140	MERC	100	3500	Replace	A			Q3

64	SURF LN	25/2	140	MERC	100	3500	Replace	Α			Q3
62	SURF LN	25/4	140	MERC	100	3500	Replace	Α			Q3
63	SURF LN	25/6	140	MERC	100	3500	Replace	A w/B		Υ	Q3
46	TOWER AVE	23/4B	140	MERC	100	3500	Replace	Α			Q2
72	OCEAN BLVD at Jenness Beach	7/36					NEW	А	NEW		Q9
73	OCEAN BLVD at Cable Rd. Ext.	7/54					NEW	А	NEW		Q9
74	OCEAN BLVD at Rye General Store	7/48A					NEW	A w/B	NEW	Υ	Q3

<sup>\*</sup> Eversource pole numbers missing from pole

THIS LEDGER IS SUBJECT TO MINOR CHANGES. A FINAL VERSION WILL BE SUBMITTED TO THE CHOSEN CONTRACTOR.

<sup>\*\*</sup> missing light or wrong pole number (7/48?)

<sup>\*\*\*</sup> For access, may need to cut beach roses and/or move lifeguard box

# **Attachment C**

# **Equipment Model Numbers**

# Cree RSW Streetlight Model Numbers

Project Letter Designation	Cree, Inc. Model Number	Optic	сст	Input Power	Options
Α	RSW-HT-2LG-30W-30K-UL-GY-N-Q	Type II Long	3000K	30W	Field Adjustable Output
	RSW-HT-2LG-30W-30K-UL-GY-N-Q				Field Adjustable Output and
A w/B	with RSW-BLSS	Type II Long	3000K	30W	Field-Installed Backlight Shield

Long-life twist-lock photocell: Intermatic

LED4536SC or equivalent

# McLean Power Systems Mast Arm Model Number

Model Number	Material	OD	Pipe Size	Nominal Length
S-125-6G	Hot dip galvanized steel	1.66"	1-1/4" IPS	6 ft

# **Attachment D**

**Cree RSW**<sup>TM</sup>**LED Street Luminaire** 

Spec Sheet (electronic attachment)

# **Attachment E**

# **MacLean Power Systems 6-Foot Mast Arm Spec Sheet**

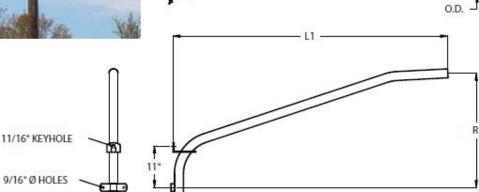


## Mast Arm, Wood Pole Mounting

#### Features

· 3/8" grounding hardware included

Steel hot dip galvanized or aluminum



Catalog Number	Material	OD (in)	L1	R	Weight Ea (lbs)
S-125-2G	Steel	1.66	24	18	9.0
S-125-2.5G	Steel	1.66	30	18	10.0
S-2-2.5G	Steel	2.38	30	18	13.0
S-125-4G	Steel	1.66	42	18	12.0
S-125-6G	Steel	(1.68)	66	30	15.5
S-2-6G	Steel	2.38	66	30	21.5
S-125-8G	Steel	1.66	90	42	19.5
S-2-8G	Steel	2.38	90	42	27.0
A-2-6G	Aluminum	2.38	66	30	11.0
A-2-8G	Aluminum	2.38	90	42	14.0

Notes: 1) 1.66" OD equals 1 1/4" IPS 2) 2.38" OD equals 2" IPS

# **Attachment F**

# **Cree RSW Luminaire Installation Instructions** (electronic attachment)

# **Videos**

Cree XSP Install Video at:

https://www.youtube.com/watch?v=Jc84EoKZhrQ

This is a larger, but similar model. RSW does not have two-axis levels.

Cree RSW Short Product Videos

https://www.youtube.com/watch?v=UetFfRu2HjA https://www.youtube.com/watch?v=oh5eJrvkx5c