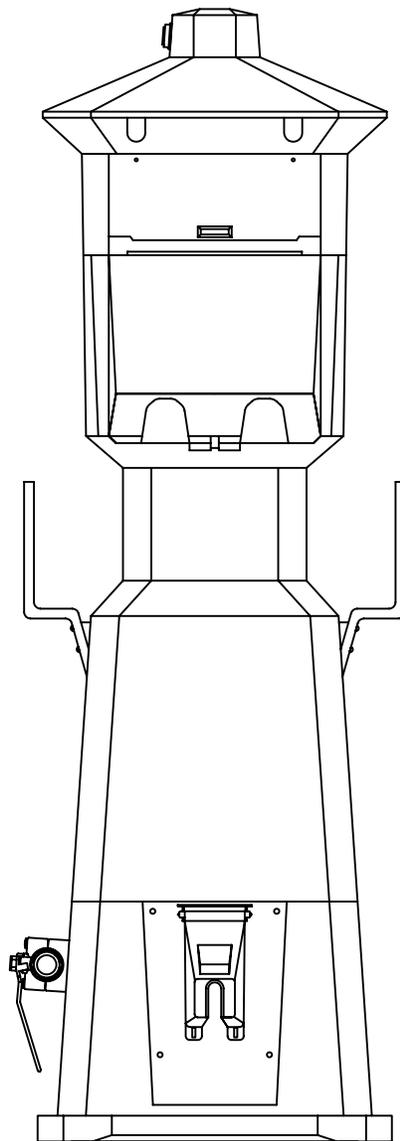




GENERAL SPECIFICATION LIGHTHOUSE



Marina Power and Lighting, Inc.

General Specifications for the Lighthouse Power Pedestal

All Power Pedestals Must Meet the Following:

Part I. General:

1.1 General Requirements-

- A.) Shall be tested and certified to be in compliance with ANSI/UL 231 entitled “power outlets”.
- B.) If a laboratory other than U.L is used that laboratory must certify, in writing, that the power outlet has been tested and meets all of the requirements of ANSI/UL 231, including 746C polymeric materials, and that the unit will pass the 94VO-5V flame test.
- C.) Shall be certified to meet all sections of NFPA 303 DTD “2000 Marinas and Boatyards”.
- D.) Shall meet 406.8 (B)(2)(a) of the national electric code NFPA 70, i.e. “A receptacle installed in a wet location shall be installed in a weatherproof enclosure, the integrity of which is not affected when the attachment plug cap is inserted”.
- E.) The receptacles shall be mounted at a down angle of 35 degrees or greater from vertical to relieve the strain of the cable weight on the receptacle locking mechanism.

Part II. Products:

2.1 Acceptable Manufacturers-Power Pedestals/Lighthouse Enclosures-

- A.) Marina Power and Lighting, Inc. 149 Warwick Court, Williamsburg, VA 23185. Toll Free 1-800-723-8009.

2.2 Power Pedestals/Lighthouse Enclosures-General-

A.) Housing:

- 1. The housing shall be constructed of ¼” thick injection molded Lexan polycarbonate material and shall be coated with a UV-resistant polyurethane. It shall be UL listed as a type 3R weatherproof enclosure.

B.) Wiring:

- 1. The power pedestal shall be completely pre-wired at the factory to the load side of the compression lug assembly.
- 2. All load copper wiring shall be of high stranding and tin plated to resist corrosion.
- 3. The maximum size of the line wiring shall be 350 MCM or 250 Amps.

C.) Loop Feed Buss Bar System:

- 1. The buss system shall be of stud compression terminal type using a 3/8” – 16 silicon-bronze stud with a silicon-bronze Belleville type washer. The 3/8” – 16 silicon-bronze hex-nut shall be torqued to 200 inch-pounds.
- 2. Double Barrel Mechanical Lugs (Optional) – rated for copper and aluminum are available.

D.) Grounding:

- 1. All exposed metallic parts must have an integral ground that is a part of the equipment grounding system.

E.) Receptacles:

- 1. All receptacles shall be of the corrosion resistant type conforming to NEMA L-5 and/or NEMA L-6 requirements and are rated for marine use. 100A receptacles should conform to IEC and CEE standards.

2. All receptacles shall be mounted at an angle that is a minimum 35 degrees from vertical and located behind a lockable weatherproof hinged door that is under tension to ensure proper closing pressure when the receptacle is or is not in use.
3. All receptacles shall be mounted at least 30" above the dock.

F.) Circuit Breakers:

1. All breakers for receptacles shall be of the thermal magnetic type, 10,000 A.I.C., and shall be UL listed.
2. Circuit breakers for the receptacles shall be covered with the same lockable door that covers the receptacles.

2.3 Power Pedestals-

A.) Base:

1. The base shall be hinged to the upper unit to provide ease of wiring and plumbing and shall be of polycarbonate construction with mounting feet that are 3/4" in thickness.

B.) Hose/Cable Bracket:

1. Each pedestal shall have brackets capable of holding a 50' length of 5/8" water hose or 50' of 50 Amp 4 conductor boat S.O. cord.

C.) Receptacles:

1. Receptacles for boat users shall be a locking and grounding type, either single phase, 125volt 30 and/or 50 Amps, and 125/250V 50 and/or 100Amps. Three phase 120/208V 100 Amp or three phase 480 delta or wye 100 Amps, as outlined in the Pedestal Schedule, which is a part of this specification.

D.) Lighting:

1. Each pedestal shall be equipped with a non-metered light. The light shall be a 13 watt fluorescent biaxial light that is controlled by an electromechanical photocell.
2. The light shall provide 360 degree dock illumination such that indirect lighting extends from station to station with a minimum dock lighting of one foot candle at 15 feet. The lighting shall not interfere with boaters' navigation.

E.) Circuit Breakers:

1. Circuit breakers for 30 Amp receptacles shall be a single pole, 125 volt, 30 Amp thermo-magnetic type.
2. Circuit breakers for 50 Amp receptacles shall be single pole 125 volt 50 Amp or a two pole 125/250 volt, 50 Amp thermo-magnetic type.

F.) Metering (Optional):

1. The pedestals shall be equipped with fully electronic meters that display the kilowatts used at each slip on a non-resettable digital counter that is protected from the weather. The accuracy of the meters must be certified by the manufacturer to have a 100 ampere rating and no more than a two percent error when tested in accordance with ANSI.-C12.1. (California requires 1%)

G.) Telephone and Cable TV (Optional):

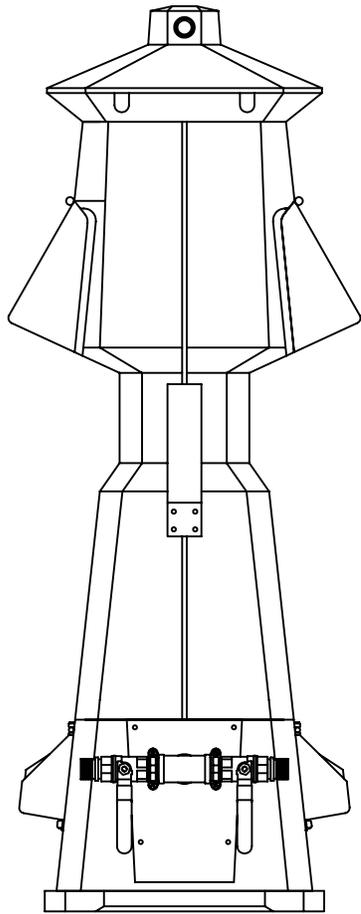
1. Each pedestal shall be equipped with one or two outlets for each slip. Each outlet shall contain a marine telephone locking receptacle and one (1) male cable TV connector under a weatherproof cover.

H.) Water (Optional):

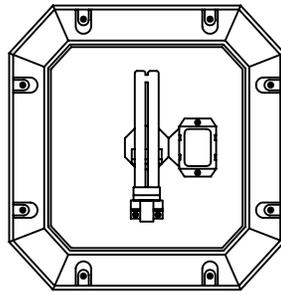
1. The water connection shall be one (1) 3/4" inlet, which divides into two (2) 3/4" hose bibs. The valves shall be 1/4 turn ball valves.

I.) Power Pedestals for A.D.A Slips (Designated as Handicap Accessible):

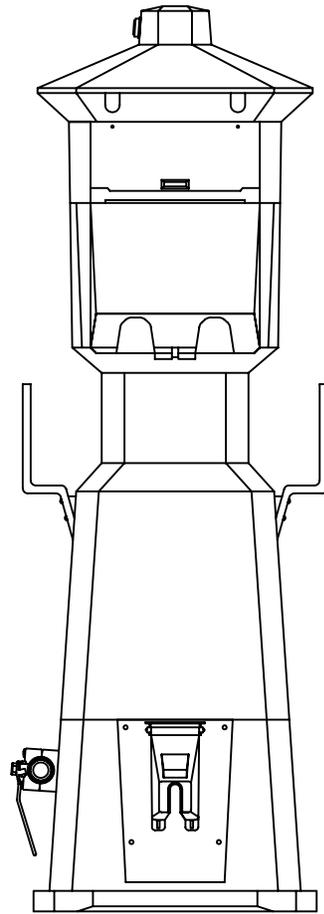
1. Power pedestals installed on designated handicap accessible slips shall comply with the guidelines of the Americans With Disabilities Act of 1990.



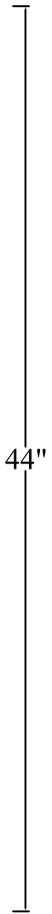
SIDE VIEW



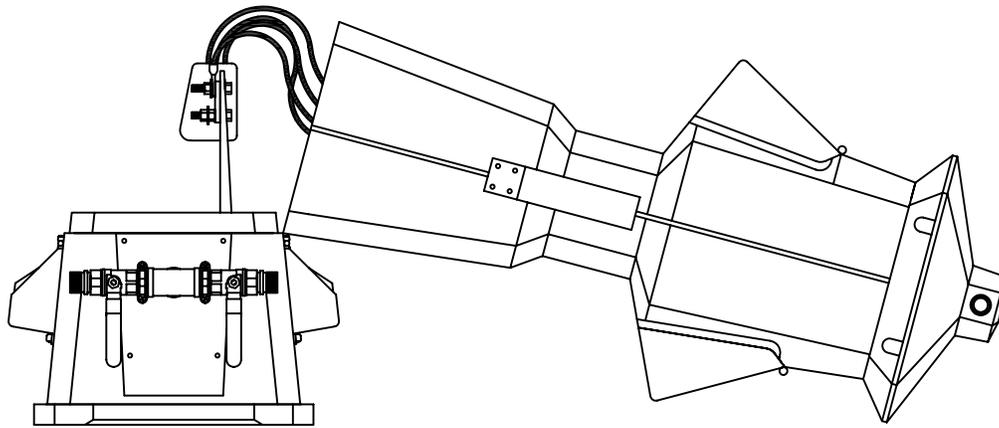
TOP



FRONT VIEW



44"



13.75"

"BROKEN" VIEW



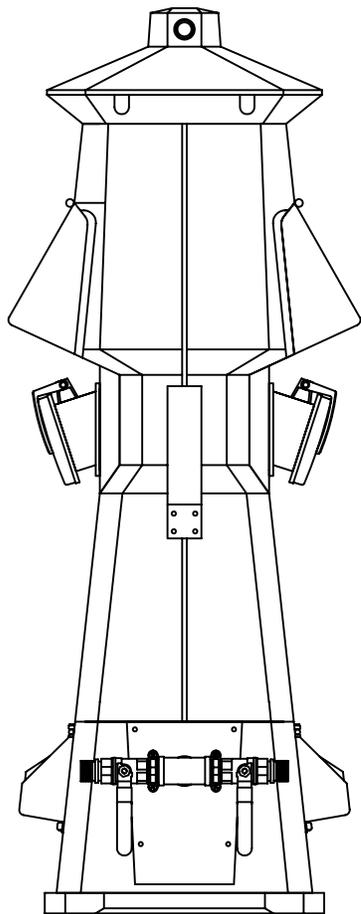
MARINA POWER &
LIGHTING, INC.

GENERAL
SPECIFICATION

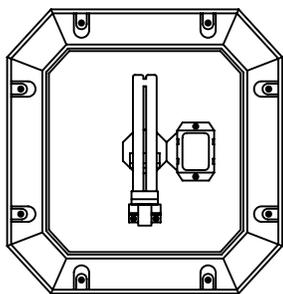
PRODUCT:
LIGHTHOUSE

DIMENSIONS

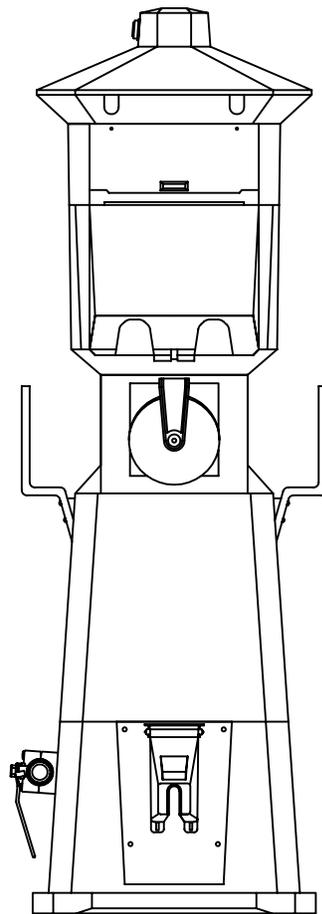




SIDE VIEW

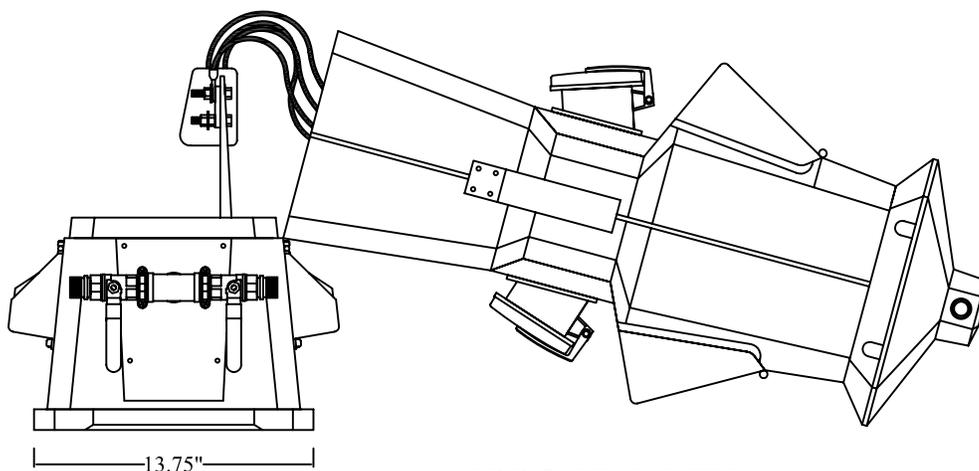


TOP



44"

FRONT VIEW



13.75"

"BROKEN" VIEW



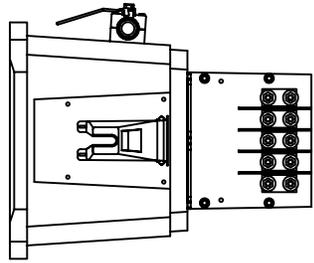
MARINA POWER &
LIGHTING, INC.

GENERAL
SPECIFICATION

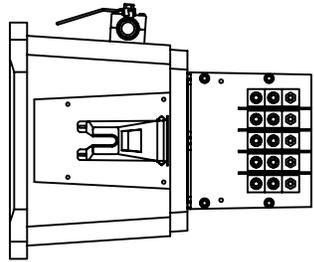
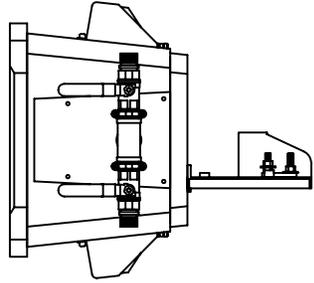
PRODUCT:
LIGHTHOUSE

DUAL
100 AMP

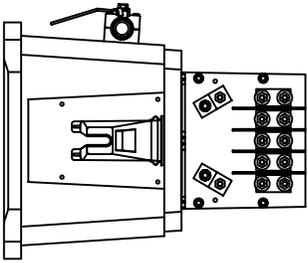
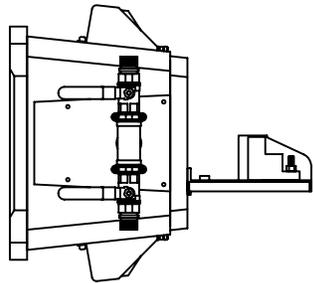




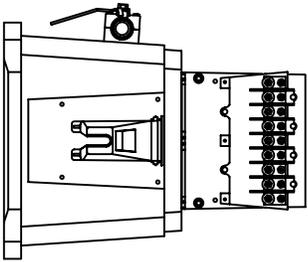
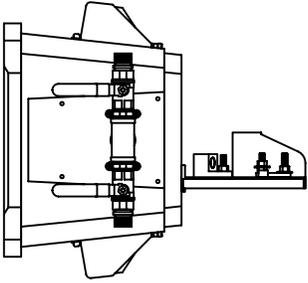
STANDARD LOOP FEED
BUSS BAR ASSEMBLY
SINGLE PHASE OR THREE PHASE



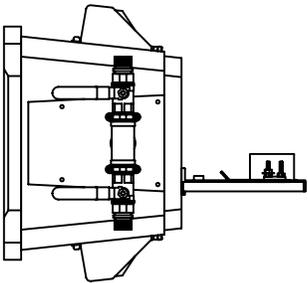
MECHANICAL LUG
BUSS BAR ASSEMBLY
SINGLE PHASE OR THREE PHASE



FIELD MODIFIED SPLIT
BUSS BAR ASSEMBLY
SINGLE PHASE OR THREE PHASE



STANDARD SPLIT
BUSS BAR ASSEMBLY
SINGLE PHASE OR THREE PHASE



PRODUCT:
LIGHTHOUSE

BUSS BAR
ASSEMBLIES

MARINA POWER &
LIGHTING, INC.

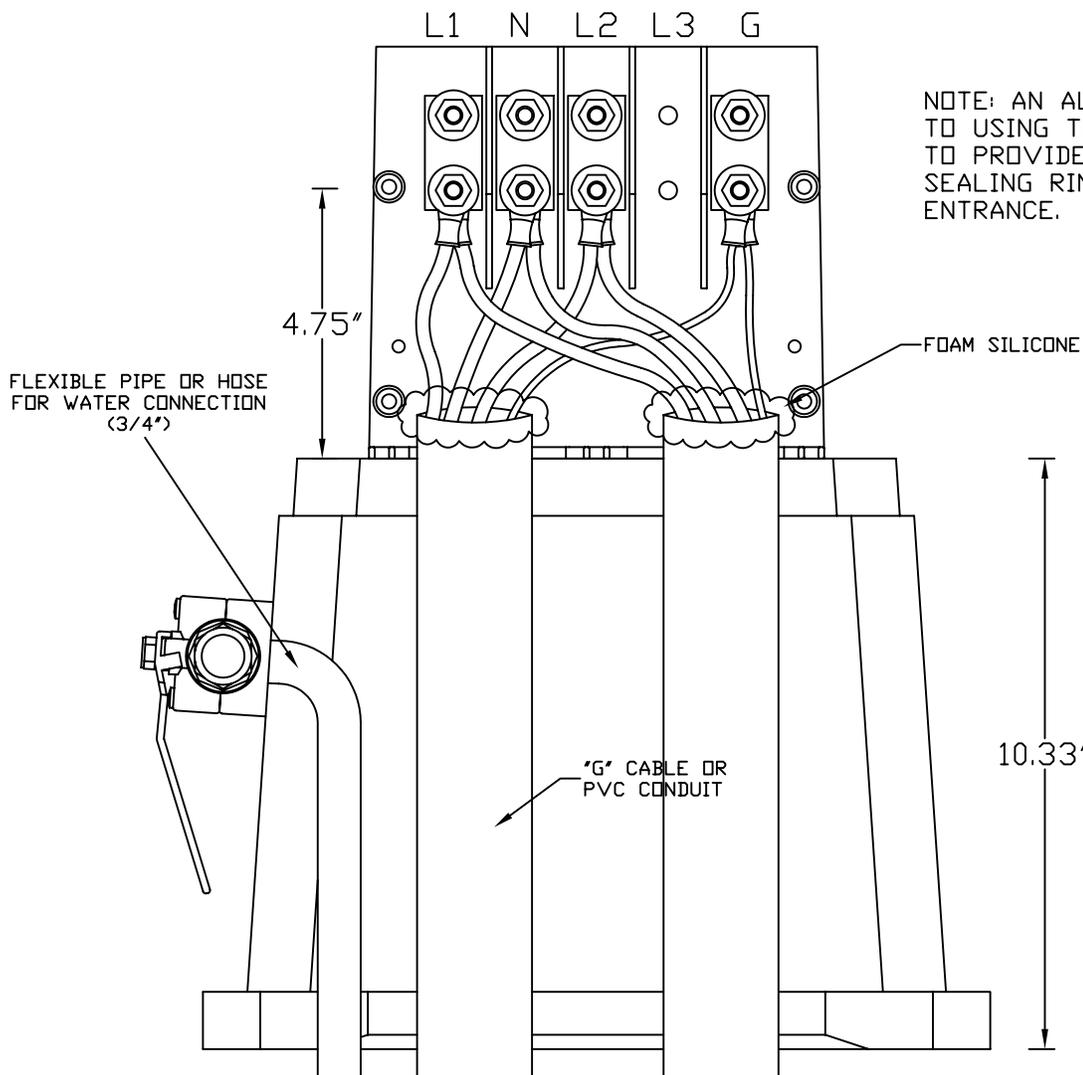
GENERAL
SPECIFICATION



COMPRESSION TERMINALS:
 CONTRACTOR NEEDS TO CRIMP
 TERMINALS TO LINE WIRES
 AND PLACE ON PROVIDED
 STUD LUG CONNECTOR.

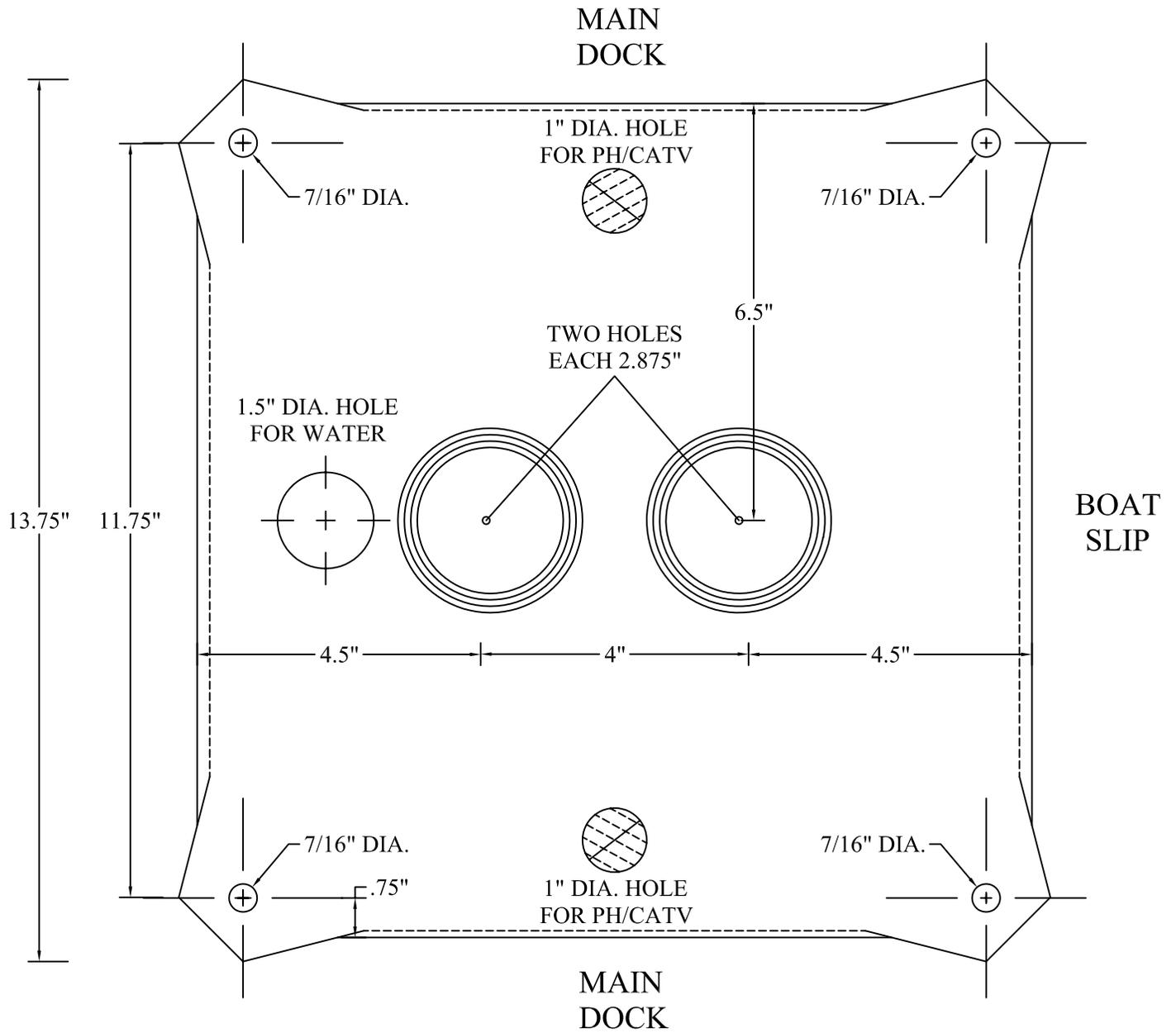
WIRE COLORS

- (LINE 1) L1 - BLACK
- (NEUTRAL) N - WHITE
- (LINE 2) L2 - RED
- (LINE 3) L3 - BLUE
- (GROUND) G - GREEN



NOTE: AN ALTERNATE
 TO USING THE FOAM IS
 TO PROVIDE A COMPRESSION
 SEALING RING AT THE "G" CABLE
 ENTRANCE.

	<p>MARINA POWER & LIGHTING, INC.</p>	<p>PRODUCT: LIGHTHOUSE</p>	
	<p>GENERAL SPECIFICATION</p>	<p>WIRING DIAGRAM</p>	



MARINA POWER & LIGHTING, INC.

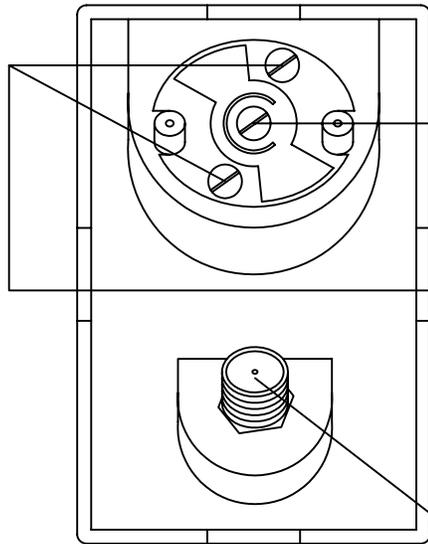
GENERAL SPECIFICATION

PRODUCT: LIGHTHOUSE

BASE SINGLE PHONE / CABLE TV



INTERNAL

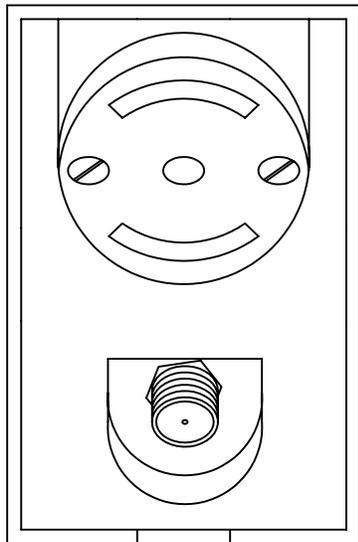


CONNECT TO LH BUS
BAR GROUND USING
#14 WIRE.

CONNECT USING
REGULAR PHONE
WIRE.

CONNECT USING
REGULAR COAX
CABLE.

EXTERNAL



PHONE

CABLE TV



MARINA POWER &
LIGHTING, INC.

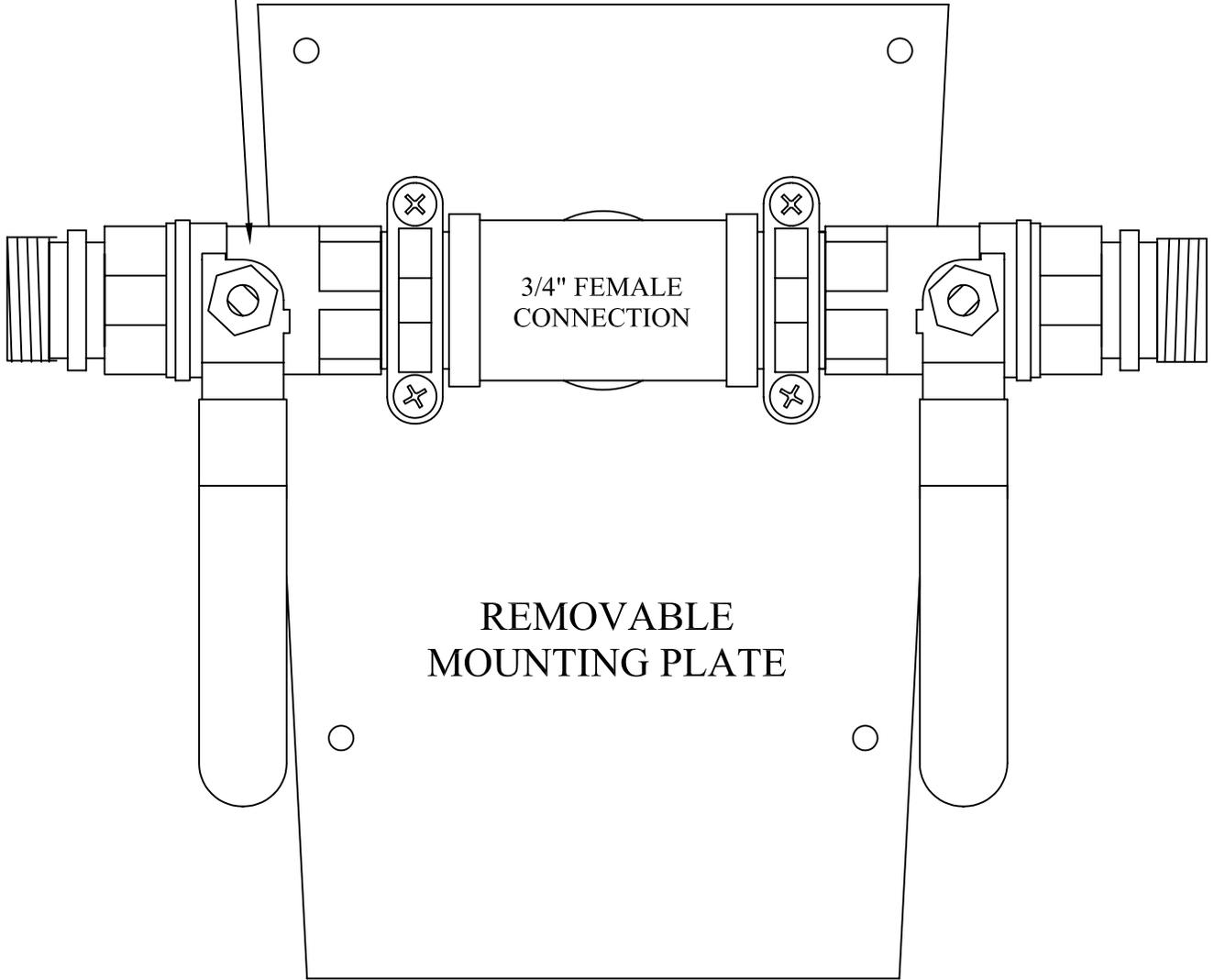
GENERAL
SPECIFICATION

PRODUCT:
LIGHTHOUSE

TELEPHONE AND
CABLE TV ASSEMBLY



3/4" BALL
VALVE



MARINA POWER &
LIGHTING, INC.

GENERAL
SPECIFICATION

PRODUCT:
LIGHTHOUSE

WATER
ASSEMBLY

