

CITY OF GALLUP
CENTRAL PURCHASING OFFICE
P.O. BOX 1270
GALLUP, NEW MEXICO 87305-1270
PHONE 505-863-1232; FAX 505-722-5133
EMAIL: frodriguez@gallupnm.gov

AMENDMENT NO. **Three (3)**

BID NO. **1614**
TITLE: **Electrical Materials**

THE FOLLOWING REVISIONS, ADDITIONS AND/OR CLARIFICATIONS SHALL FORM A PART OF THE PROPOSAL DOCUMENTS AND EACH OFFEROR SHALL INDICATE WITH THEIR PROPOSAL THE RECEIPT OF THIS NUMBERED AMENDMENT. REVISIONS, ADDITIONS, AND/OR CLARIFICATIONS ARE AS FOLLOWS:

- 1.) The following questions and/or request for clarifications were received; responses are therefore also as follows:

Corrections:

- Item 65: Receptacle, Elbow #2 STR. Loadbreak with Test Point AL/CU Insulation DIA .760-.950 F/220 MIL Cable. The “Name and Catalog (part) Number” shall now read **Elastimold 162LRJS-B-5220 or APPROVED EQUAL**. *Please disregard original part number listed.*
- Item 66: Receptacle, Elbow 4/0 STR. Loadbreak with Test Point AL/CU Insulation DIA. .980-1.180 F/220 MIL Cable. The “Name and Catalog (part) Number” shall now read **Elastimold 162LRJS-D-5270 or APPROVED EQUAL**. *Please disregard original part number listed.*
- **Cable Specifications**, pages 26-31 of the original bid specifications shall be replaced with the attached specification sheets (5 pages).

Clarifications:

- Item 20: Cross Arm Wood Treated 8ft. Per “City of Gallup Specifications”.
Please refer to APPENDIX B attached for specifications.
- Item 58: Pole Aluminum Streetlight 25’ Wall Thickness .188 Taper 7” to 4.5” Base W/4’ Arm. Per “City of Gallup Specifications”
Please refer to APPENDIX C attached for specifications.
- Specifications for **Items 59, 60, and 61** specifications are on pages 19-25 of the original bid solicitation. *No changes made to specifications.*

**BID OPENING DATE OF SEPTEMBER 9, 2016 AT 2:00 PM REMAINS
UNCHANGED**

This Amendment consists of **10** pages. If you do not receive all pages, please contact our office immediately

DATE: September 2, 2016

BY/S/ Frances Rodriguez
Frances Rodriguez, Purchasing Director

Acknowledge
Receipt Amendment No. Three (3)

BY/S/ _____
Authorized Signature of Offeror/Bidder

COMPANY NAME:

[TO ACKNOWLEDGE RECEIPT, RETURN ONE (1) COPY WITH PROPOSAL]

**Specification for
15kV EPR Insulated, Jacketed**

URD Cable

Stock Numbers

E-6203

E-6208

E-6209

SPECIFICATIONS FOR 15kV EPR INSULATED, JACKETED URD CABLE

1.0 SCOPE AND APPLICATION

- 1.1 This specification covers detail for furnishing medium voltage, jacketed, concentric neutral underground distribution power cable. The cable shall consist of one ethylene propylene rubber (EPR) insulated aluminum conductor, with helically applied copper concentric neutral conductors over the insulation shielding, and an overall jacket of black, linear low density polyethylene. The cable shall be 15kV rated – suitable for use on 7970/13800.
- 1.2 The cable shall be suitable for use in single and three phase, primary underground distribution system installed in conduit, underground duct, riser conduit, aerial where exposed to sunlight, and aerial where exposed to wet conditions.

2.0 COMPLIANCE WITH STANDARDS

All Cable shall be designed, manufactured and tested to meet all the requirements specified within the latest revision of the following:

- NEMA
- ICEA – NEMA standards for ethylene propylene rubber insulated cable
- AEIC for ethylene propylene rubber
- ANSI
- ASTM

3.0 GENERAL

Cable shall be designed and constructed so that it will operate at normal operating temperature of at least 90° maximum, emergency operating temperature of at least 130°C and short circuit operating temperature of at least 250°C.

Cable Size	Neutral
#2	<i>Full</i>
4/0	1/3
500MCM	1/3

4.0 CABLE CONSTRUCTION

- 4.1 The conductor shall be Class B, stranded compressed concentric round and meet ASTM B231. Conductors shall meet electrical resistance requirements of ICEA S-68-516. The conductor shield shall be a black, semi-conducting or stress grading material, extruded directly over the conductor. The conductor shield material shall be compatible with the conductor and thoroughly bonded to the overlying insulation. The conductor shield shall meet the requirement of ANSI/ICEA latest version.
- 4.2 The insulation shall be ethylene-propylene-rubber (EPR), a flexible thermosetting dielectric based on an ethylene propylene elastomer.
- 4.3 The insulation thickness shall be 220 mil as described in AEIC CS8-13. The minimum point shall be 0.210" and the maximum shall be 0.250".
- 4.4 The insulation shield shall be a black, semi-conducting thermosetting or stress control layer of polymeric material extruded directly over the surface of the insulation. The conductor shield material shall be compatible with the insulation and shall meet the physical requirements of ICEA S-94-649.
- 4.5 The insulation shield shall be readily distinguishable from the insulation and be legibly identified as semi-conducting or stress control layer by surface printing. Indent printing shall not be allowed.
- 4.6 The neutral wire shall be bare copper, evenly and helically wrapped directly over the insulation screen with a lay of 6 to 10 times diameter over the wires. The neutral wires shall be full or one-third (1/3) the current carrying capacity at the conductor.
- 4.7 The complete cable shall be covered by a black sun resistant linear low density polyethylene jacket with a minimum of two rip cords. Jacket shall be marked with a sequential footage indicator.

5.0 REELS

- 5.1 The maximum allowable reel size to be 48"x 84", maximum weight of 4800 lbs. The minimum diameter of the drum of the shipping reel shall not be less than prescribed in NEMA WC 26-2008.
- 5.2 The inner or drum end of the cable, when allowed to project through the flange of the reel shall be protected to avoid damage to the cable or seal.
- 5.3 Each end of the cable shall be firmly and properly secured to the reel. Care shall be taken to prevent looseness of reel cable. The cable end attached through the interior of the reel shall be fastened in such a manner that it remains attached as the cable is dispensed from the reel and does not interfere with other reels or waste cable.
- 5.4 Watertight seals shall be applied to all cable ends to prevent entry of moisture during transit and outside storage.
- 5.5 Markings on Reels
 - 5.5.1 Durable label securely attached to a flange of the reel. The label shall indicate the purchasers name and address, purchase order number, cable description, shipping length of cable on reel, number, type and size of conductors, cable configuration, thickness and type of insulation, voltage rating, gross, tare and net weight.
 - 5.5.2 The recorded shipping length of multiple cable assemblies shall be the measured length after assembly.
 - 5.5.3 Durable number on the outside of the flange of the reel, either branded or the reel or stamped on metal tags permanently attached to the reel.
 - 5.5.4 Shipping reel shall be free of any information not pertaining to the order.
- 5.6 The cable shall be packaged in lengths specified by the City with a tolerance of -0%/+5%.

6.0 TESTS

The following production test shall be performed on the cable and submitted to the utility in the form of Certified Test Reports

- 6.1 Production tests shall be performed in compliance with appropriate AEIC Specifications and ICEA Publication.
- 6.2 AC HV tests in accordance with part 6.27 of ICEA S68-516

- 6.3 Corona test shall be performed in accordance with procedures of AEIC CS-8-13 and X-Y recording graph will be furnished showing the partial discharge results.
- 6.4 Each insulated conductor in the completed cable shall be tested and shall meet the requirements of ANSI/ICEA except the test shall be performed on each shipping length.
- 6.5 This data shall be sent to the:
 - City of Gallup, Electric Department
 - Attn: Richard Matzke, Electric Utility Director
 - PO Box 1270
 - Gallup NM 87305

7.0 PACKING SEALING AND SHIPPING

- 7.1 The cable shall be placed on the reels so that it will be protected from damage during shipment. Each end of the cable shall be firmly and properly secured to the reel. Care shall be taken to prevent looseness of reeled cable.
- 7.2 There shall be no water in the completed cable when the reel is shipped. If the conductor shows evidence of slight corrosion and no pitting, then the manufacturer shall verify that the cable was dried prior to shipping. Each end of each length of cable shall be durably sealed before shipment to prevent entrance of moisture.
- 7.3 Each length of cable listed on the purchase order or detailed list shall be shipped on a separate reel, except where the purchaser specifies multiple or parallel cable assemblies.
- 7.4 The reels shall be lagged or covered with suitable material to provide physical protection for the cable during transit and during ordinary storage and handling operations.
- 7.5 Reels shall be shipped upright on their flanges from the manufacturing plant to the city.
- 7.6 All shipment 1900 Warehouse Lane, Gallup, New Mexico 87301.
- 7.7 Deliveries will be accepted on Monday through Friday between the hours of 8:00am-4:30pm. Please notify Municipal Warehouse at (505) 863-1214 24 hours prior to delivery.

8.0 WARRANTY

All bidders shall submit a complete and detailed copy of the manufacturer's warranty. The warranty must state all manufactures conditions, limitations and disclaimers. Said warranty will be subject to review and/or negotiation. Minimum warranty shall be no less than forty-years (40yrs).

9.0 APPROVED MANUFACTURERS

OKONITE

SOUTHWIRE

KERITE

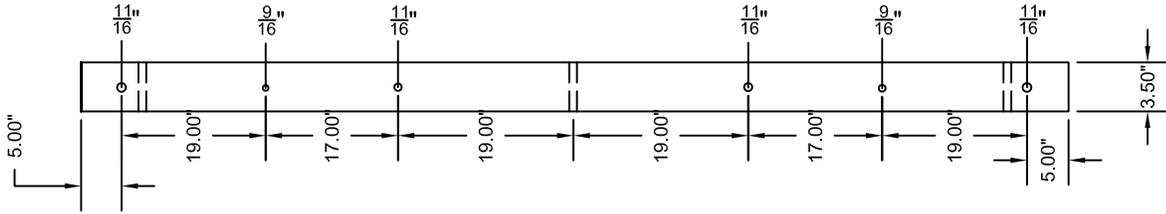
GENERAL CABLE

PRYSMIAN

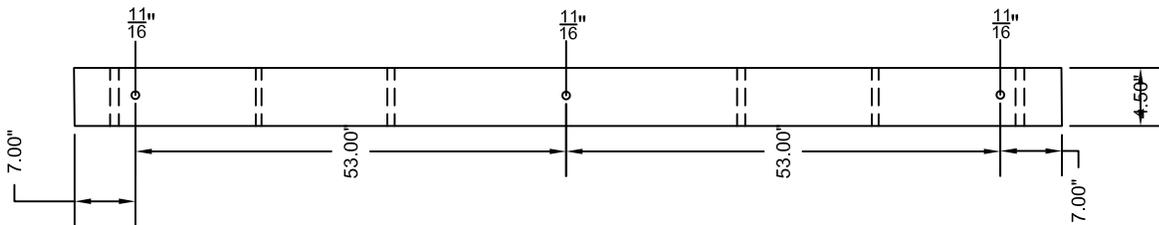
APPENDIX B

Standard 10 ft Crossarm

Top View

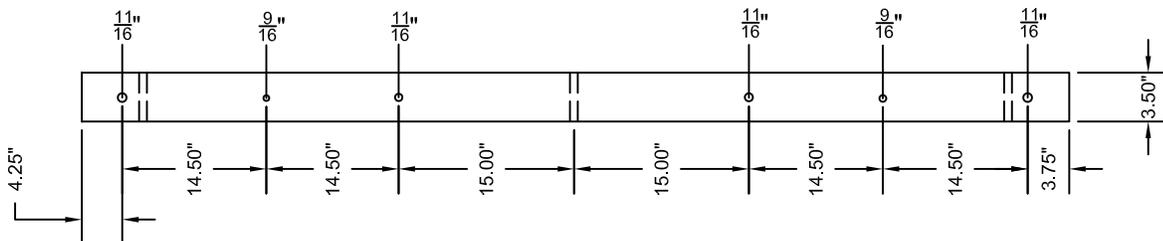


Face View

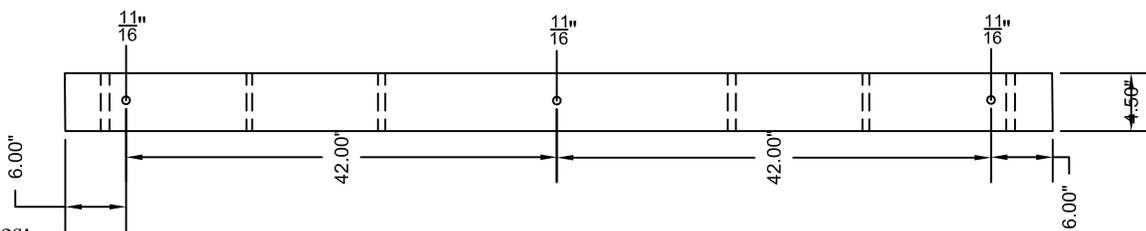


Standard 8 ft Crossarm

Top View



Face View



Notes:

1. All arms to be fully pressure treated and free of knots.
2. All crossarms shall be marked according to E.E.I. specifications for Douglas Fir crossarms bulletin TD-90, 1949 paragraph 5, 4.
3. All crossarm edges shall be chamfered or rounded.



**GALLUP
JOINT
UTILITIES**

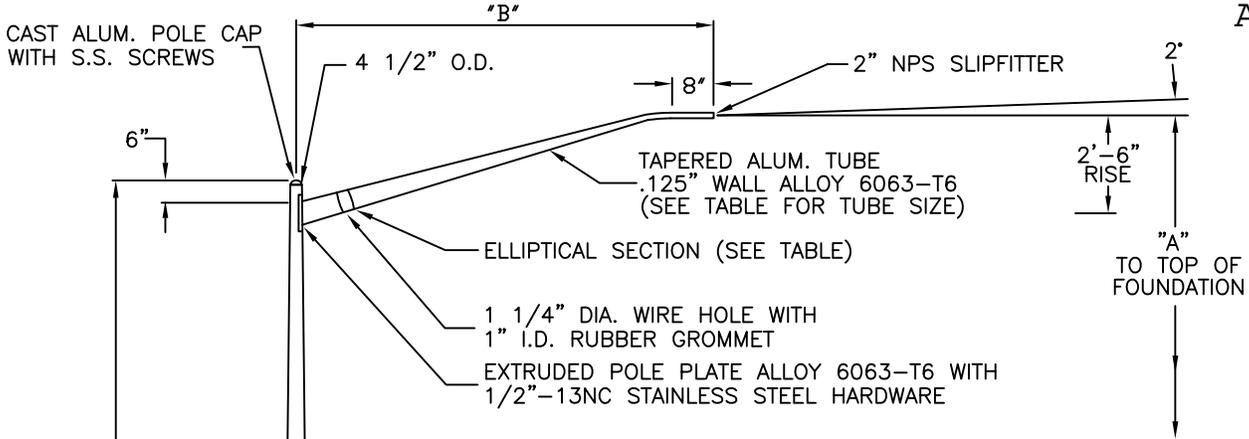
DATE: 11/02/11
DRAWN BY: E.J.W.
APRVD BY: P.J.G.
APRVD BY:
SCALE: N.T.S.

TITLE:
**Crossarm Dimensions
For 8 Ft and 10 Ft
Wood Treated**

REVISIONS	
BY:	DATE:

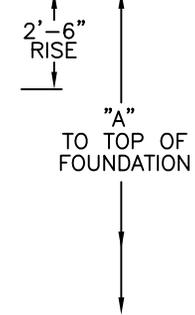
STANDARD No.

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HAPCO CAT.#	A	B	C	BRACKET TUBE SIZE	ELLIPTICAL SECTION
76625-001	25'	4'	23'	3.5" O.D.	2 3/8" x 4 3/8"
76625-002	25'	6'	23'	4" O.D.	2 1/2" x 5 1/8"

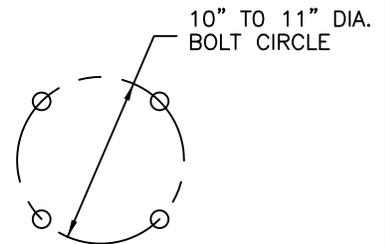
OR APPROVED EQUAL MAYBE SUBSTITUTE



TAPERED ALUM. TUBE
.188" WALL ALLOY 6063-T6
SATIN GROUND FINISH

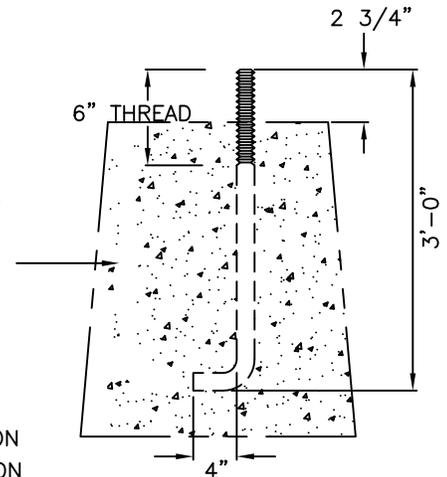
*
BASE APPROVED BY FHWA AS MEETING
1985 AASHTO BREAKAWAY CRITERIA

7" O.D. →
GROUND LUG OPPOSITE HANDHOLE Ⓞ
REINFORCED HANDHOLE (4"x6") WITH COVER
AND TORX T30 TAMPER RESISTANT
STAINLESS STEEL SCREWS
BREAKAWAY BASE FLANGE *(72785)
ALLOY 356-T5 WITH BOLT COVERS
AND STAINLESS STEEL HEX. HD.
SCREWS



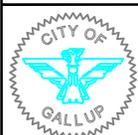
10 1/2" SQ. →

- (4) 1"-8NC GALV. STL. ANCHOR BOLTS, AASHTO M314-90 GRADE 55, 10" OF THREADED END GALV. PER ASTM A153.
- (4) 1"-8NC GALV. STL. HEX. NUTS
- (4) 1" GALV. STL. LOCKWASHERS
- (4) 1" GALV. STL. FLATWASHERS



NOTE:

SCREW IN ANCHOR MAY BE USED IN PLACE OF POURED FOUNDATION
USE CHANGE # C11232JG4VP OR APPROVED EQUAL DIXIE FOUNDATION



**GALLUP
JOINT
UTILITIES**

DATE: 03/19/97
DRAWN BY: A.G.W.
APRV'D BY:
APRV'D BY:
SCALE: N.T.S.

TITLE:

**25' MOUNTING HEIGHT
STREET LIGHTING POLES**

REVISIONS	
BY:	DATE:
MJ	9/2/16

STANDARD No.
12-25-1
PAGE:
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