

SPECIFICATIONS  
AND  
BID DOCUMENTS  
FOR  
UNDERGROUND DISTRIBUTION CABLE  
CITY OF OAK RIDGE, TENNESSEE

**Bids due by 11:00 AM Local Time  
October 24, 2016**

Specification #: 2016 Purchase of 350 MCM UGD CU Cable II  
City of Oak Ridge Electric Department

**TABLE OF CONTENTS**

|            |   |           |
|------------|---|-----------|
| <b>1.0</b> | <b>INVITATION TO BIDDERS</b> .....        | <b>1</b>  |
| <b>2.0</b> | <b>INSTRUCTIONS TO BIDDERS</b> .....      | <b>2</b>  |
| <b>3.0</b> | <b>TERMS AND CONDITIONS</b> .....         | <b>4</b>  |
| <b>4.0</b> | <b>EQUAL OPPORTUNITY PROVISIONS</b> ..... | <b>8</b>  |
| <b>5.0</b> | <b>SHIPPING</b> .....                     | <b>10</b> |
| <b>6.0</b> | <b>CABLE SPECIFICATION</b> .....          | <b>11</b> |
| <b>7.0</b> | <b>PROPOSAL</b> .....                     | <b>13</b> |

**Attachments:**

Drawing T-23302

Drawing 20127820

## **1.0 INVITATION TO BIDDERS**

Sealed bids will be received by the City of Oak Ridge, Tennessee, at its office in Oak Ridge, Tennessee for the project bid package shown below, until the date and time indicated, and immediately thereafter will be opened, and publicly read.

The City of Oak Ridge reserves the right to reject any or all bids and to waive any informalities or technicalities therein. The bid will be awarded to the lowest and best responsive bidder as determined by the Engineer.

No bidder may withdraw a bid for a period of sixty (60) days after the date set for opening of bids.

Specifications may be obtained from the Engineer. Specifications may be examined at the office of the Engineer.

OWNER: City of Oak Ridge, Tennessee  
Electric Department  
100 Woodbury Lane  
Post Office Box 1  
Oak Ridge, TN 37831-0001

ENGINEER: ATTN : Philip Stokinger  
TEL : 865 425-1864  
FAX : 865 482-8313  
email : pstokinger@oakridgetn.gov

PROJECT / PACKAGE : 2016 Purchase of 15kV 350 MCM Copper Cable – RFQ 150159

BID DATE: **October 24, 2016**

## **2.0 INSTRUCTIONS TO BIDDERS**

- 2.1 You are invited to submit a Bid for Distribution Cable – the City of Oak Ridge, Tennessee.
- 2.2 The Owner does not obligate itself to accept the lowest or any other bid and specifically reserves the right to reject any and all bids.
- 2.3 The Bidder shall provide all information requested. The Bidder shall take care to complete all portions of the Proposal documents and to provide all required submittals. Failure to comply may result in the rejection of the bid.

Bidder shall return three (3) signed and priced copies of the Bid documents and all submittals required at the time of the Bid to:

City of Oak Ridge  
100 Woodbury Lane  
Oak Ridge, TN 37831-0001  
ATTN: Lyn Majeski, Materials Management

sealed and marked in the lower left corner :

"SEALED BID for 15kV 350 MCM CU Distribution Cable  
Confidential - To be delivered to addressee unopened"

- 2.4 No proposal security will be required to accompany proposals.
- 2.5 The Owner invites cost saving and schedule improving alternatives. A Bidder shall first complete the Base Bid as issued by the Owner; Bidder may then submit the alternatives referenced to the base proposal. If the Bidder recommends any changes or deviations from the documents, Bidder shall describe the change fully and furnish complete information so that the Owner can make a decision based upon the alternative information provided.
- 2.6 If the Bidder requires additional information or is in doubt as to the meaning of any part of the Contract documents, Bidder may telephone or submit a written request to the Engineer for such information or clarification. For questions to be answered, they must be received at least five (5) days prior to the Bid due-date. Addenda may be issued as deemed necessary by the Engineer.
- 2.7 The Engineer will represent the Owner in all matters pertaining to the project, including but not limited to, answering technical questions of prospective bidders, bid evaluation and recommendation, review and approval of fabrication drawings and similar documents, and approval of invoices prior to payment by the Owner.
- 2.8 The terms Purchaser and Owner shall refer to the City of Oak Ridge. The terms Bidder, Seller and Manufacturer shall refer to the supplier of the equipment described by the documents.

- 2.9 If these specifications call for material, equipment or manufacturing procedures different from the Manufacturer's standard, the Manufacturer shall clearly identify all deviations or substitutions in this bid. When possible, the Manufacturer should bid according to the specifications with the Manufacturer's standard as an option.
- 2.10 Equal shall mean a satisfactory equivalent as approved solely by the Engineer.
- 2.11 Proposals should include Manufacturer's best delivery date that is as close as possible to the requested delivery date.
- 2.12 The Bidder shall clearly state all exceptions to this specification. Unless specifically stated otherwise, the Bidder shall furnish equipment, material and services in exact accordance with this specification, and any modifications to equipment, material and services necessary to comply with this specification shall be made by the Bidder at no additional cost to the Purchaser.
- 2.13 The cost to furnish any and all prints, drawings, diagrams, instruction manuals, cutsheets, AutoCad electronic files, reports, and certified test reports shall be included in the bid process and shall not be listed as a separate item.
- 2.14 All requested options, devices, and equipment are required, and expected per the specifications, and the cost to furnish fully operational equipment with explanatory documentation shall be included in the bid process and shall not be listed as separate items.

### **3.0 TERMS AND CONDITIONS**

#### 3.1 Acceptance; Entire Agreement

Acceptance of this order by acknowledgement, shipment or other performance shall be expressly limited to the terms and conditions contained in this order. Any additional or different terms or conditions proposed by the Seller are objected to and are hereby rejected. Upon acceptance, the terms contained in this order shall constitute the entire agreement between Seller and Purchaser with respect to the subject matter of this agreement (hereinafter referred to as the "Agreement") and may not be modified, added to, or rescinded except by a written document signed by Seller and Purchaser.

#### 3.2 Assignment and Setoff

The Seller shall not assign any right or interest under this Agreement nor delegate any work or other obligation to be performed or owned under this Agreement without the prior written consent of Purchaser. Any attempted assignment or delegation in contravention of this provision shall be void. Purchaser shall be entitled to set off any amounts owed by Seller to Purchaser against any amounts payable to Seller.

#### 3.3 Delivery Terms

All goods ordered hereunder shall be shipped F.O.B. destination, unless otherwise agreed. No charge will be allowed for packing, crating, freight, express, or cartage, unless agreed to and specified on this order. This order shall not be filled at prices higher than last quoted or charged without proper authorization.

#### 3.4 Payment

Upon the shipment of any material hereunder, the Seller shall submit to the Purchaser a detailed invoice duplicate of the materials shipped. Within 30 days after written acknowledged receipt, the Purchaser shall make payment thereof to the Seller.

#### 3.5 Time of Performance

Time is of the essence of this Agreement. If tender of conforming goods is not made by the delivery date specified or services are not completed by the completion date specified, Purchaser may treat such failure as a breach hereof and will have all remedies afforded to it by law including, but not limited to, the rights to cover.

#### 3.6 Identification; Risk of Loss

Identification of the goods ordered herein shall occur at the moment this order is accepted by Seller. Risk of loss shall pass to the Purchaser at the time that conforming goods to the Agreement are confirmed received at the Delivery Site.

#### 3.7 Infringement

Seller shall indemnify Purchaser and Purchaser's customers for any and all loss, damage,

expense, (including but not limited to attorney's fees) claims or liability arising out of any infringement or claim of infringement of any patent, trademark, copyright, trade secret or other proprietary interest based on the manufacture, installation, normal use, lease, or sale of any service of material furnished to Purchaser under this Agreement. Purchaser shall notify Seller promptly of any such claim or infringement and Seller shall, at its own cost, defend, compromise, or settle, any such action or actions to satisfy and discharge the same without any cost or expense whatsoever to the Purchaser.

### 3.8 Warranties

Seller warrants to Purchaser that material furnished will be merchantable, fit for Purchaser's intended purposes and free from defect in design, material and workmanship and will conform to and perform in accordance with Purchaser's drawings and specifications and will be safe for its intended use. Seller also warrants to Purchaser that services will be performed in a first class workmanlike manner consistent with accepted industry standards. In addition, if material furnished contains one or more manufacturers' warranties, Seller hereby assigns such warranties to Purchaser. All warranties shall survive inspection, acceptance and payment. Material not meeting the warranties shall at Purchaser's option be repaired, adjusted or replaced by Seller at no cost to Purchaser. Services not meeting the warranties shall at Purchaser's option be reperformed by Seller at no cost to Purchaser. Such remedies shall be available to Purchaser in addition to all others afforded to it at law or equity.

### 3.9 Rejected Goods

Purchaser shall give notice to Seller of any rejection of goods, and goods rejected will, at Seller's expense, be returned to Seller or otherwise disposed of as Seller may reasonably request. Payment for the goods prior to inspection and approval shall not constitute acceptance thereof. Neither Purchaser's inspection nor its failure to inspect the goods delivered hereunder shall release Seller from its warranties and obligations under this Agreement.

### 3.10 Termination

- A) Purchaser may terminate this Agreement for default upon notice to Seller if: 1) Seller fails to comply with any of the terms and conditions of this Agreement, including failure to deliver goods or perform services required within the time specified in this Agreement; 2) at any time reasonable grounds for insecurity arise with respect to Seller's expected performance and Seller fails to furnish adequate assurance of due performance within ten (10) days after a written demand by Purchaser for such adequate assurance; 3) Seller shall become insolvent or make an assignment for the benefit of creditors; or 4) Seller shall file a voluntary petition in bankruptcy or insolvency or shall be involuntarily petitioned into bankruptcy or insolvency.
- B) Purchaser may terminate this Agreement, in whole or in part, for its convenience, at any time by giving written notice to Seller, and Seller shall promptly comply with the directions contained in such notice. In such event, Purchaser shall make payment to Seller for all costs incurred by Seller prior to such termination

reasonably allocable to this Agreement under recognized accounting practice, less any scrap or salvage value.

### 3.11 Liens

Seller shall promptly pay for all materials, supplies and labor employed by it in manufacturing the ordered goods to the end that such goods may be kept free from Materialmen's, Warehousemen's and Mechanics' liens. Seller shall promptly discharge any such liens arising from the performance of this Agreement.

### 3.12 Indemnity of the Purchaser

The Seller shall indemnify and hold Purchaser and its officers, employees, and agents harmless from and against all suits or claims that may be based upon any alleged injury to or the death of any person or damage to property that may occur or that may be alleged to have occurred in the course of performance of this Agreement whether or not such claim is made by a third person, except when it shall be proved that the alleged injury was caused solely by a negligent act or omission of the Purchaser. Seller shall, at its own cost and expense, pay all costs and expenses or such suit or claim, including attorney's fees in connection therewith, and if any judgement shall be rendered against the Purchaser in any such action or actions the Seller shall satisfy and discharge the same without cost or expense to Purchaser.

### 3.13 Compliance with Laws

Seller and all material furnished by Seller shall fully comply with all federal, state, and local laws, ordinances, regulations, orders and codes, including identification and procurement of required permits, certificates, approvals and inspections in performance hereunder. Any provision required to be included in this Agreement by any such law, rule or regulation shall be deemed to be included herein. The Equal Opportunity Clause contained in Executive Order 11246 as amended, relating to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, the Affirmative Action Clause contained in 41 C.F.R. Chapter 60.250 relating to affirmative action obligations to disabled veterans and to veterans of the Vietnam Era, and the Affirmative Action Clause contained in 41 C.F.R. Chapter 60.741 relating to affirmative action obligations to handicapped workers, are incorporated herein by reference. The Seller also certifies that it does not engage in and requires that its subcontractor's (if any) employees or agents not engage in, any form of discrimination based on race, color, religion, sex or national origin. Seller agrees to indemnify Purchaser for any loss or damage that may be sustained by reason of any failure to do so.

### 3.14 Labeling

All goods and materials to be supplied by Seller under this Agreement shall be labeled in accordance with the requirements of the Federal Occupational Safety and Health Act Hazard Communication Standard (29 CFR 1910.1200) and/or applicable State law or standard of similar effect. Seller shall immediately send to the Purchaser, referencing this purchase order number, all required written safety information materials including without limitation, Material Safety Data Sheets, required under said standards.

3.15 Non-Waiver

No course of dealing or failure of either party to strictly enforce any term, right or condition of this Agreement shall be construed as a waiver of such term, right, or condition.

3.16 Choice of Law

The construction, interpretation and performance of this Agreement and all transactions under it shall be governed and resolved in accordance with the laws of the State of Tennessee.

3.17 Notification

The Manufacturer shall acknowledge in writing to the Engineer that the Owner's Purchase Order or acceptance has been received within 5 days ARO. The acknowledgement shall include the date that the Purchase Order or acceptance is received and the date that equipment delivery is expected.

3.18 Terminology

The terms "shall" and "will" which appear in the Proposal and specifications place an absolute obligation on the Manufacturer to do that which is designated and/or specified.

3.19 Taxes

City of Oak Ridge, Tennessee is exempt from sales tax.

#### **4.0 EQUAL OPPORTUNITY PROVISIONS**

- 4.1 This Contract is subject to the provisions of Section 202 of Executive Order Number 11246 of September 24, 1965 as amended relating to Equal Opportunity and to the Affirmative Action requirements of 41CFR60. The Contractor, in performing the work or services of this contract, shall not discriminate against any person seeking employment with or by the contractor because of race, creed, color, sex, sexual orientation, or national origin or other legally protected status.
- 4.2 The City of Oak Ridge, Tennessee encourages the utilization of minority and women-owned businesses in its contracting and subcontracting projects and the Bidder is encouraged to actively solicit the participation of these businesses.
- 4.3 Each Bidder shall complete the following Equal Opportunity Compliance Certificate as part of the submitted proposal.

**EQUAL OPPORTUNITY  
COMPLIANCE CERTIFICATE**

We hereby certify:

As a(n): \_\_\_\_\_ Division of Parent Company \_\_\_\_\_  
\_\_\_\_\_ Subsidiary  
\_\_\_\_\_ Affiliate Address \_\_\_\_\_  
\_\_\_\_\_ Separate Corporation \_\_\_\_\_

And being: \_\_\_\_\_ a Small Business (Ref: ASPR-1-701-1)  
\_\_\_\_\_ Minority Owned Business (Ref: 41CFR-1.701-1)  
\_\_\_\_\_ from a Labor Surplus Area (Ref: 41CFR 1-1.801-1);

Having \_\_\_\_\_ employees in all divisions , subsidiaries, affiliates and parent (number) company;

That we shall comply with the applicable portions of the Equal Opportunity Clause as promulgated under Executive Order 11246. September 24, 1965 as amended, and all other federal laws and regulations pertaining to the Equal Employment Opportunity and Affirmative Action obligations of Federal Government Contractors, and shall submit the required compliance reports, and shall maintain non-segregated facilities.

Contractor \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Signature of Authorized Representative \_\_\_\_\_

Date of Signing \_\_\_\_\_

## 5.0 SHIPPING

- 1 Unit(s) shall be furnished F.O.B. Destination, Freight Prepaid and Allowed to the destination. Unloading will be provided by the Owner. Destination is: City of Oak Ridge Warehouse, 100 Woodbury Lane, Oak Ridge, TN 37830
- 2 Manufacturer shall be responsible for obtaining necessary permits, providing and verifying routing and, in general, making all the necessary arrangements for transporting the equipment provided to Purchaser's destination.
- 3 No incomplete or partial or unfinished shipments shall be accepted or received without written permission from the Engineer.
- 4 **Provide forty-eight (48) hours advance notice to the Engineer of the exact time delivery will be made at destination, along with information listed 5.5 below.**
- 5 The manufacturer shall, at the time arrangements for delivery are to be made, inform the Engineer of:
  - a. Purchase Order Number
  - b. Number of items being shipped per purchase order
  - c. Weight of each item (heaviest)
  - d. Estimated time of arrival
  - e. Location of use ("to be used for:" not "ship to:")

## **6.0 CABLE SPECIFICATION**

### 1.0 Standards

The primary standards to which this equipment shall be constructed and tested are:

- 1.1 National Electric Code
- 1.2 American National Standards Institute
- 1.3 National Electric Safety Code
- 1.4 American Society for Testing Materials
- 1.5 Institute of Electrical and Electronic Engineers
- 1.6 Insulated Power Cable Engineers Association
- 1.7 All applicable local codes including the SSBC

### 2.0 Bid Specification:

The Bid shall be for concentric neutral cable meeting the specifications below:

CABLE, 15 kV, 133% Insulation Level, 350 MCM STRANDED BARE COPPER, 1C, Rated 105 degree C, with polyethylene jacket,  
1/3 Concentric Neutral , 220 MIL EPR INSULATION, TYPE MV-105.  
Quantity of cable required: 7,200' on three 2,400' reels, reels shall be 66" tall x 36" wide. Stamp CORED every 24" on the exterior of the cable.

Approved Manufacturers and Catalog Numbers:

Okonite 350 MCM 140-23-3090 (refer to dwg T-23302)  
Kerite 350 MCM  
Prysmian 350 MCM QND020A (refer to dwg 20127820)

Conductor – Shall be annealed uncoated stranded copper per ASTM B-496.

Neutral – Shall be bare copper wire that meets or exceeds the physical & electrical requirements of ICEA S-94-649, AEIC CS8, and UL 1072 (or latest revision).

Strand Shield and Insulation Shield – Shall be extruded semi conducting EPR and shall meet or exceed the physical and electrical requirements of ICEA S-94-649, AEIC CS8 and UL 1072 (or latest revision).

Insulation – Shall be ethylene-propylene (EPR) compound and shall meet or exceed the physical and electrical requirements of ICEA S-94-649, AEIC CS8 and UL 1072 (or latest revision).

Jacket – Shall be black LLDPE with 3 red stripes, and shall meet or exceed the electrical & physical requirements of ICEA S-94-649 and UL 1072 (or latest revision). Stamp CORED every 24” on the exterior of the cable.

## **7.0 BID PROPOSAL**

In submitting this Proposal, the Manufacturer agrees as follows:

The prices set forth herein do not include any sums which are or may be payable by the Manufacturer on account of taxes imposed by any taxing authority upon the sale, purchase, or use of the equipment. If any such tax is applicable to the sale, purchase, or use of the equipment, the amount thereof shall be added to the purchase price and paid by the Owner.

The prices set forth herein are firm if accepted by the Owner within sixty (60) days and shall include the cost of delivery to the job site, inspection, testing and certification.

The equipment shall be delivered to the Delivery Site on or before Delivery Date and certified for the Owner's use by the Manufacturer on or before the Certification Date. Include delivery and certification dates with proposal.

Certification by the Manufacturer shall include such inspections and tests as required to certify the units for external connection and subsequent energization.

Title of equipment shall pass to the Owner once the equipment has been delivered, satisfactorily inspected for transit damage, and certified ready for energization by the Manufacturer.

The Manufacturer agrees that all requests for time extensions shall be in writing, and that only such time extensions as are granted by the Owner in writing shall be considered.

Descriptive literature, including dimensions and weight of manufacturer equipment, shall be furnished with the proposal.

# PROPOSAL FORM

**BASE BID:**

TO: CITY OF OAK RIDGE, TENNESSEE

Manufacturer \_\_\_\_\_ Supplier \_\_\_\_\_

|                                       |        | Price/Ft | Extended Price |
|---------------------------------------|--------|----------|----------------|
| 350 MCM CU 15KV 1C Concentric Neutral | 7,200' | _____    | _____          |

Base Bid contract amendment budget for overage, shall not exceed:  $5\% \times 7,200 \times \text{Price/Ft} = \underline{\hspace{2cm}}$

---

Bidder : \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Prepared By: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone Number : \_\_\_\_\_

Fax Number : \_\_\_\_\_

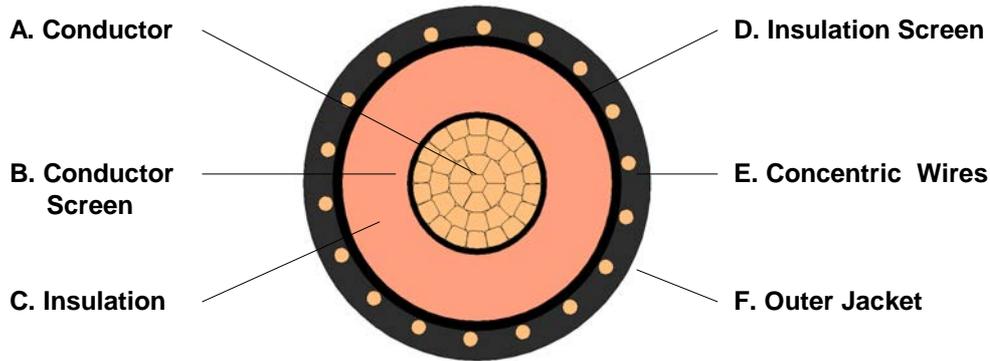
email : \_\_\_\_\_

Date : \_\_\_\_\_



**1/C, 15kV Rated, 133% Insulation Level, URO-J**

- A. CONDUCTOR: 350 kcmil Compact Round Class-B Strand Copper
- B. CONDUCTOR SCREEN: Extruded Semiconducting (SC-EPR)
- C. INSULATION: Extruded Ethylene Propylene Rubber OKOGUARD®
- D. INSULATION SCREEN: Extruded Semiconducting (SC-EPR)
- E. CONCENTRIC WIRES: 18 x #12 AWG Bare Copper Concentric Wires (One Third Neutral)
- F. OUTER JACKET: Encapsulated OKOLENE® LLDPE (Linear Low Density Polyethylene) with 3-ERS



| Dimensions              | Thickness (in.) |               | Diameter (in.) |         | Cable Description  |
|-------------------------|-----------------|---------------|----------------|---------|--|
|                         | Nominal         | Minimum Point |                | Nominal |  |
| Conductor               | N/A             |               |                | 0.616   | 1/C 350 CLASS B COPPER C-RD<br>-SS- 220 OKOGUARD EPR - 024<br>SC EPR - 18 X #12 SOLID<br>COPPER CONC WIRES - 050<br>OKOLENE PE W/3 RED STRIPES -<br>SEQ. PRINT - 15KV "CORED"<br><br><b>TEMPERATURE RATINGS</b><br>105C - Continuous, 140C - Emergency<br>250C - Short Circuit |
| Cond. Screen            | 0.015           | 0.012         |                | 0.650   |  |
| Insulation              | 0.220           | 0.210         |                | 1.096   |  |
| Insul. Screen           | 0.027           | 0.024         |                | 1.164   |  |
| Conc. Neutral           | 0.0808          |               |                | 1.324   |  |
| Outer Jacket            | 0.050           | 0.045         |                | 1.434   |  |
| Cable Weight (lbs./M'): |                 |               |                | 2030    |    |

Customer Name: IRBY STUART C.-JACKSONVILLE

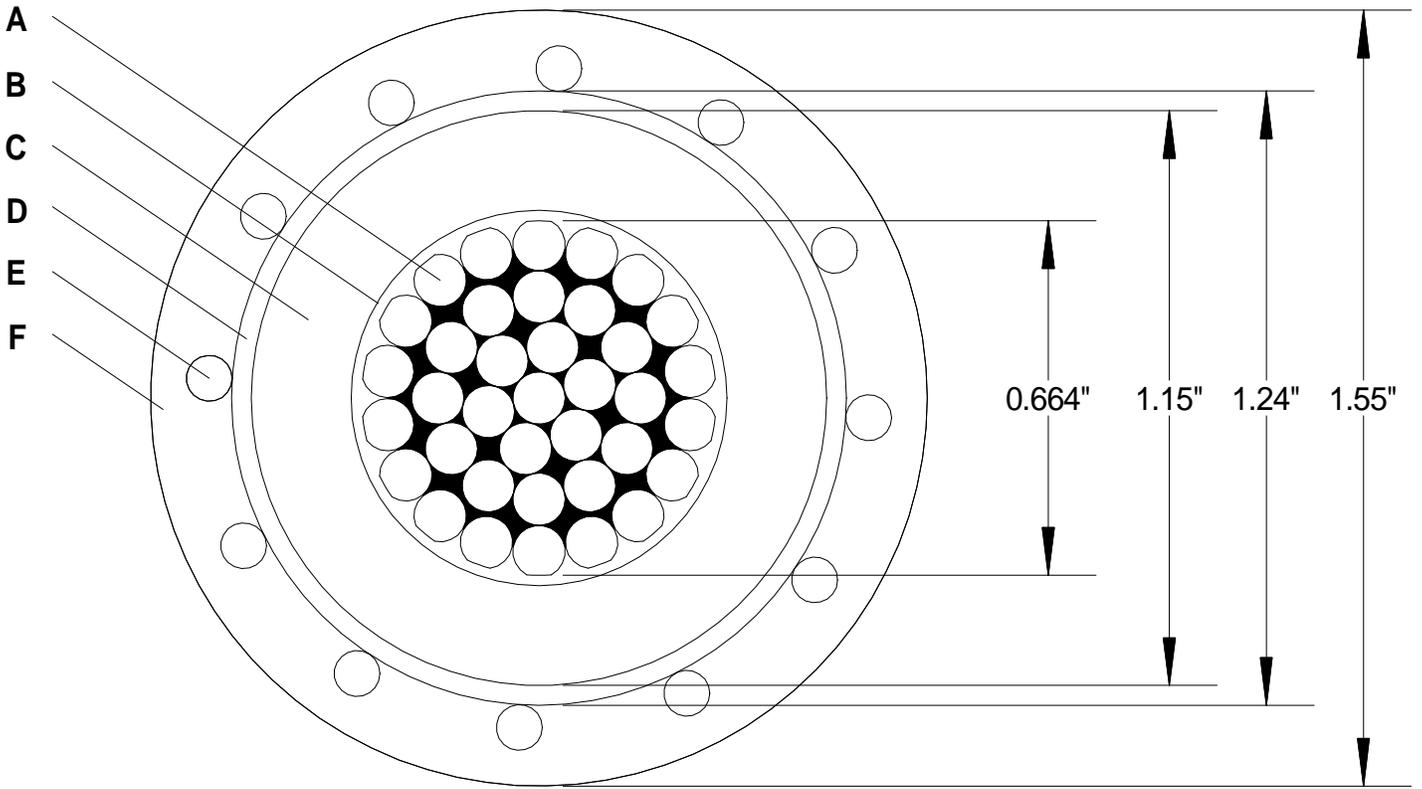
End User: OAK RIDGE CITY OF

Customer Spec:

Industry Standards: AEIC CS8-13 and ICEA S-94-649.

|                           |                                    |                 |               |                     |                          |
|---------------------------|------------------------------------|-----------------|---------------|---------------------|--------------------------|
| APPROVED BY:              | <b>Okonite Product Code 140-23</b> |                 |               |                     | Date: 4/20/2015          |
| PREP. BY:<br>CMJ 04/20/15 | INQUIRY NO.<br>41-50202            | ITEM NO.<br>001 | SCALE<br>None | SERIAL NO.<br>79147 | DRAWING NO.<br>T - 23302 |

*Cable Image is representative and meant to display individual cable components and is not to scale.  
Nominal Dimensions are Subject to Normal Manufacturing Tolerances.*



**A.** 350 kcmil Class B compressed, 37 strand copper with Strandseal®

**B.** Semi-conducting, thermoset conductor shield  
16 mils minimum point

**C.** EPR insulation, 15 kV 133%  
210 mils minimum point  
220 mils nominal  
250 mils maximum point

**D.** Semi-conducting, thermoset insulation shield  
40 mils minimum point  
75 mils maximum point

**E.** 12 - #10 AWG bare copper concentric neutral wires with water-swellable powder

**F.** Black encapsulating linear low density polyethylene jacket with three longitudinal red stripes  
45 mils minimum point  
80 mils maximum point

**Standards**

ICEA S-94-649

**Cable Weight**

2.16 lbs/ft

**Notes**

1. Cable weights and dimensions are nominal and subject to normal manufacturing tolerances.
2. Drawing is not to scale.
3. Minimum point insulation shield thickness does not include concentric neutral indent.



Cable Type  
**15 kV 350 kcmil Doubleseal®**

Customer

Drawn By  
**S. Johnson**

Approved By  
**N. Wigfall**

Date  
**03/24/15**

Drawing Number  
**20127820**