



## **INVITATION TO BID PACKAGE**

**FY2014-115**

### **FIBER OPTIC CABLE SPLICING AND TESTING LABOR CONTRACT**

**NOTE: PRE-BID CONFERENCE FEBRUARY 25, 2014  
AT 10:00 A.M., LOCAL TIME, IN THE  
MULTIPURPOSE ROOM OF THE CENTRAL  
SERVICES COMPLEX LOCATED AT 100  
WOODBURY LANE**

#### **BID OPENING**

**March 11, 2014  
2:00 p.m., Local Time**

**at the  
Central Services Complex Multipurpose Room  
City of Oak Ridge  
100 Woodbury Lane  
P. O. Box 1  
Oak Ridge, Tennessee 37831-0001**

**Telephone: (865) 425-1819  
Fax: (865) 482-8475  
Attn: Lyn Majeski**

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**SECTION 00010 NOTICE TO BIDDERS**

Sealed bids will be received by the City of Oak Ridge, Tennessee, (Owner), at its 100 Woodbury Lane office in Oak Ridge, Tennessee, for the project package labeled as FY2014-115 shown below, until the date and time indicated, and immediately thereafter will be opened, and vendor names publicly read.

The Owner 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 Owner.

No bidder may withdraw a bid for a period of ninety (90) days after the date set for opening of bids.

Specifications may be obtained from the Owner after qualification. Only bids from pre-qualified, licensed contractors will be opened. Contact (Denise Frey at Fiber Planners, 18 LaRue, Suite 100, Biltmore Lake, North Carolina 28715, telephone: 864-787-8131) for instructions on qualifying. Specifications may be examined at the office of the Owner. Refer to Page 2 of this Section for a list of current qualified bidders.

OWNER: City of Oak Ridge, Tennessee  
100 Woodbury Lane  
Post Office Box 1  
Oak Ridge, Tennessee 37831-0001  
ATTN: Lyn Majeski  
TEL: (865) 425-1819  
FAX: (865) 482-8475  
EMAIL: [lmajeski@oakridgetn.gov](mailto:lmajeski@oakridgetn.gov)

PROJECT / PACKAGE: FIBER OPTIC CABLE SPLICING & TESTING CONTRACT (FY2014-115)

NON-MANDATORY PRE-BID: FEBRUARY 25, 2014 at 10:00AM

PLACE: CENTRAL SERVICES COMPLEX MULTIPURPOSE ROOM, 100 WOODBURY LANE, OAK RIDGE, TENNESSEE, 37830 FOR DIRECTIONS TO COMPLEX, CALL (865) 425-1819

BIDS DUE: MARCH 11, 2014 AT 2:00 PM

By: Mr. Jack L. Suggs  
Director, Electric Department  
City of Oak Ridge, Tennessee

Celerity Integrated Services, Inc.  
2083 Quaker Pointe Dr.  
Quakertown, PA 18951  
[dleight@cistele.com](mailto:dleight@cistele.com) (215) 538-1600  
Deron Leight fax # (215) 538-1602

Micro Network Services  
P.O. Box 363  
Smithfield, OH 43948 (740) 733-8232  
[ogdenmicro@aol.com](mailto:ogdenmicro@aol.com) fax # (740) 733-7027  
Gary Ogden

Nordstrom Clarke  
1015 Hubbard Road  
Lenoir, NC 28645  
[fibersplice@gmail.com](mailto:fibersplice@gmail.com) (828) 234-4359  
Paul Armbruster

Netversant  
4009 Market St.  
Aston, PA 19014  
Mike Hickman (610) 364-3233  
[mhickman@netversant.com](mailto:mhickman@netversant.com)

Owens Telecom  
204 Revere Court  
Smyrna, TN 37167 (615) 459-2532  
[owens204@lwol.com](mailto:owens204@lwol.com)  
Milt Owens mobile # (615) 289-6778  
fax # (615) 459-2532

Southeast Power  
125 Best St.  
Spartanburg, SC 29303 (864) 599-5656  
Doug Bennett fax # (864) 599-5567  
[dbennett@southeastpower.com](mailto:dbennett@southeastpower.com)

## SECTION 00100 BIDDING INSTRUCTIONS

- 1.0 It is the responsibility of each Bidder, before submitting a Bid, to (a) examine the entire Invitation to Bid package thoroughly; (b) visit the site to become familiar with the local conditions that may affect cost, progress, performance or furnishing of the work; (c) consider federal, state and local laws and regulations that may affect cost, progress, performance or furnishing of the work; (d) study and carefully correlate Bidder's observations with the Invitation to Bid package; and (e) notify the Owner of all conflicts, errors or discrepancies in the Invitation to Bid package.
- 2.0 Three (3) complete sets of the Bid Form are included in this bound copy of the Invitation to Bid for the bidders use. Each Bidder shall: (1) detach two (2) of these forms from the Invitation to Bid; (2) submit Bidder's bid completely and properly on the detached set of forms; (3) leave the third set of forms bound in place in the Invitation to Bid but NOT filled in by the Bidder. Two (2) copies of each bid –WITHOUT the Invitation to Bid package—shall be enclosed in a separate sealed opaque envelope properly marked, addressed, and delivered to the specified location prior to the time set for the opening of bids. Failure to properly mark the outside of the envelope containing the bid will result in the bid being returned to the Bidder unopened. If two (2) or more envelopes are used, the required information must appear on the outer envelope. The bound copy of the Invitation to Bid package SHALL NOT be returned with the bid.
- 3.0 No telegraphic bids will be accepted. Bids must be submitted on the provided Bid Form only. A conditional or qualified bid will not be accepted.
- 4.0 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of the specification, that without exception the Bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedure of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the work.
- 5.0 In the event that the Bidder's Bid is accepted, and Bidder fails or refuses to enter into the contract and furnish the required Performance and Payment Bonds within the time stated in the Bid Form, unless given a written extension of time by the Owner, then the Bidder will be considered as having abandoned their Bid, and Bidder's bid guarantee will be retained by the Owner as liquidated damages. IT NOW BEING AGREED that the specified sum of the bid guarantee is a fair estimate of the amount of damages that the Owner will sustain in the case the Bidder fails to enter into the contract and furnish the Performance and Payment Bonds within the time stated in the Bid Form.
- 6.0 The Bid provides for quotation of a price, or prices, for one or more bid items, which may be lump sum bid prices, alternate bid prices, or a combination thereof. No payment will be made for items not set up in the Bid, unless otherwise provided by contract amendment. All Bidders are cautioned that they should include in the process quoted for the various bid items as necessary allowances for the performance of all work required for the satisfactory completion of the Project.
- 7.0 All questions about the meaning or intent of the Invitation to Bid package are to be directed to the Owner. Interpretations or clarifications considered necessary by the Owner in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the Owner as having received the Invitation to Bid Package. Questions received less than ten (10) days prior to

the date for opening of the Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral or other interpretations or clarifications will be without legal effect.

8.0 The Owner for this project is:

City of Oak Ridge  
100 Woodbury Lane  
Post Office Box 1  
Oak Ridge, Tennessee 37831-0001  
ATTN: Lyn Majeski  
TEL: (865) 425-1819  
FAX: (865) 482-8475  
EMAIL: [lmajeski@oakridgetn.gov](mailto:lmajeski@oakridgetn.gov)

9.0 The Owner will answer all matters pertaining to this project, including but not limited to, answering technical questions of prospective bidders, recommendation of awards, acceptance of shop drawings and similar documents, and approval of invoices prior to payment.

10.0 Each Bidder shall: enter Bidder's unit bid and make and enter the extension or amount bid, based upon the unit bid price, for each unit price bid item; and total the amounts bid for all unit price bid items to obtain the total bid price. In case of discrepancy in any extension or in the total bid price, the UNIT PRICES bid shall govern and the total bid prices will be corrected accordingly.

11.0 Each Bid must be accompanied by a Bid security made payable to the Owner in the amount of five percent (5%) of the Bidder's maximum Bid price and in the form of a bank check or a Bid Bond. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract and furnished the required contract security. If the Successful Bidder fails to execute and deliver the Contract and furnish the required contract security within fifteen (15) days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award, may be retained by the Owner until the earlier of the seventh day after the Effective Date of the Agreement or ninety (90) days after the Bid opening, after which the bid security will be returned upon request by the Bidder.

12.0 Each Bidder shall be a licensed contractor as required by the Contractor's Licensing Act of 1994, and all amendments thereto in effect on bid receipt date (Tennessee Code Annotated §62-6-101 et seq.). Bidder's license number, date of license registration, license expiration date, and license category or classification applying to bid shall be shown on the outside of the envelope containing the bid. The same information must also be provided for major subcontractors. Failure to show these items on outside of the envelope will result in bid being returned to Bidder unopened.

13.0 Bids that are sent by mail shall contain an outer envelope that is clearly marked "Sealed bid for FY2014-115: Fiber Optic Cable Splicing and Testing to be opened March 11, 2014 at 2:00 p.m. local time" to ensure the bid is delivered to the appropriate person at the City in a timely fashion. Late bids are not accepted and will not be opened. addressed as follows:

In Person or By Overnight Delivery  
Attn: Lyn Majeski  
Finance Department  
City of Oak Ridge  
100 Woodbury Lane  
Oak Ridge, TN 37830

Regular Mail  
Attn: Lyn Majeski  
Finance Department  
City of Oak Ridge  
P.O. Box 1  
Oak Ridge, TN 37831-0001

- 14.0 Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope.
- 15.0 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids. If, within twenty-four (24) hours after Bids are opened, any Bidder files a duly signed, written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided by under the Contract Documents.
- 16.0 Bids will be opened and, unless obviously non-responsive, read aloud publicly. An abstract of the amount of the base Bids and major alternatives (if any) will be made available to Bidders after the opening of Bids upon request.
- 17.0 All bids will remain subject to acceptance for ninety (90) days after the day of the Bid opening, but Owner may, in its sole discretion, release any Bid prior to that date. The City of Oak Ridge tentatively plans to award the bid on April 14, 2014.
- 18.0 Owner reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time or changes in the work and to negotiate contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional Bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner.
- 19.0 In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 20.0 Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in Section 00310, 6.0. Owner also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.
- 21.0 If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within ninety (90) days after the day of the Bid opening.
- 22.0 When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Contract with all other written Contract Documents attached. Within fifteen (15) days thereafter Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds. Within ten (10) days thereafter, Owner shall deliver one (1) fully signed counterpart to Contractor. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

- 23.0 All applicable sales and use taxes are to be included in the Bid.
- 24.0 The successful Bidder shall execute a Completion and Performance Bond and a Labor and Material Bond, each in the amount of one hundred percent (100%) of the Total Bid plus \$10,000 (value of Owner furnished materials), issued by a Surety Company licensed to operate in the State of Tennessee. The bonds shall be executed on standard forms furnished by the Surety Company that are acceptable to the Owner. Sample Owner bond forms are included in the Invitation to Bid package and may be used.
- 25.0 No contract shall be made with any officer or employee of the City or any firm or corporation in which any officer or employee of the City has financial interest.
- 26.0 The successful Bidder shall comply with all federal, state, county and local laws, ordinances, statutes, and regulations. Pursuant to City Code § 5-413, the City may not accept bids from Bidders in default of any payment of any nature due to the City, including but not limited to taxes, licenses and fees.
- 27.0 References shall be made available to the Owner upon request. The Bidder may choose to submit references along with the Bid.

NOTE: In accordance with the Invitation to Bid package, the following attachments are to be included with the Bid Form: a Bid Bond in the amount of five percent (5%) of the total bid price (required), the completed Drug Free Workplace Affidavit (required), the Equal Opportunity Compliance Certificate (required), the Title VI Contract Monitoring form (voluntary), and references (voluntary to submit with the bid, required to be given upon the Owner's request).

**SECTION 00310 BID FORM**

**Project: Fiber Optic Cable Splicing and Testing**

1.0 GENERAL

The undersigned Bidder herewith proposes to perform all work, including providing management, information and reports, labor, construction facilities, tools, equipment, and services, except the specific materials to be furnished by the Owner (Section 16050) and Subject to Bonding, required for work and performance of related work for the Fiber Optic Cable Splicing and Testing for the City of Oak Ridge, Oak Ridge, Tennessee; as set forth in the Contract documents, within the time, at the rate and in the manner required, for the prices named in the following Schedule of Prices and agrees to execute a valid contract, which incorporates the Invitation to Bid package and this Bid Form, in the form attached hereto and made a part hereof.

The Bidder further agrees that in case the Contract is awarded to Bidder, Bidder will begin actual work within fourteen (14) calendar days after receipt of a "Notice to Proceed" at the points designated by the Owner, that Bidder will maintain the rate of progress set forth in Bidder's work schedule and that Bidder will complete the work on or before the dates of completion set forth in the Contract.

The Bidder further agrees to adhere to all specifications set forth in this document including the approval of test equipment. The OTDR used must be approved by OWNER prior to the work. The brand and model must be clearly stated at the time of the bid process and if changes are needed, OWNER approval must be acquired in writing.

BRAND: \_\_\_\_\_

MODEL: \_\_\_\_\_

2.0 PRICING

SCHEDULE OF PRICES

It is not the intent of the Owner to subdivide award of the work within the cable splicing and testing.

The Bidder shall insert Bidder's bid prices in the form below.

TOTAL BID \$ \_\_\_\_\_

## UNIT PRICING

Unit prices are established for future additions and/or deletions of work. Owner reserves the right to reduce the quantity or increase quantity and adjust the lump sum price by amounts noted below on a per unit basis.

One (1) Single Fusion Splice	\$ _____
One (1) Termination	\$ _____
One (1) Prep Fee	\$ _____
One (1) Testing per Connector	\$ _____
One (1) Reel Testing per Fiber	\$ _____

### 3.0 MEASUREMENT AND PAYMENT

The Measurement and Payment requirements related to the above prices are as follows:

- A. Payment will be made in accordance with General Conditions 00710.
- B. The work includes furnishing labor for splicing and testing.
- C. Labor cost shall include receiving, maintaining, use of tools and other splicing and testing equipment, inspecting, documenting, and testing.
- D. Mobilization, supervision, temporary facilities, safety, security, insurance, overhead and profit shall be included in the prices.

### 4.0 WORK SCHEDULE

- A. The schedule for the work is as follows:
  - 1. Start Work \_\_\_\_\_ days after receipt of Contract and Notice to Proceed.
  - 2. Complete Work \_\_\_\_\_ days after receipt of Notice to Proceed.
- B. The Bidder agrees that Bidder has reviewed this schedule and understands that time is of the essence of the resulting Contract. Compliance with this schedule is necessary for the complete success of the work and the successful Bidder will take all precautions in preparation and management which may be necessary to ensure completion of the work in accordance with this schedule.

5.0 SUPERINTENDENT'S EXPERIENCE

The Bidder proposes to have as job Superintendent on the work, if awarded the Contract, whose experience record in responsible control on work of this character is as follows:

<u>Project Description</u>	<u>Dates of Service</u>	<u>Position</u>
_____	_____	_____
_____	_____	_____

Will Superintendent act as Quality Control Inspector? \_\_\_\_YES \_\_\_\_NO

If not, name of Quality Control Inspector is: \_\_\_\_\_

6.0 SUBCONTRACTORS

Bidder proposes to subcontract specific portions of the work to the following subcontractors:

<u>Subcontracted Work</u>	<u>Subcontractor's Name and Address</u>
_____	_____
_____	_____
_____	_____
_____	_____

No work, other than that listed above, shall be subcontracted unless approved in advance by the Owner. If a subcontractor is listed above whom the Owner deems unacceptable, the successful Bidder will be given the opportunity to substitute an acceptable subcontractor but no price adjustments will be made to the submitted bid. It is strongly recommended that the Bidder contact the Owner BEFORE submission of the bid, for verification that a potential subcontractor is deemed acceptable. Reasons for disqualifying a particular sub-contractor include but are not limited to insufficient financial credibility, poor reputation with past clients, or a poor past job performance with the Owner, including poor character, poor integrity, poor reputation, poor judgment, insufficient experience, or lack of timeliness.

7.0 CONTRACTOR'S SAFETY PERFORMANCE

Please complete the following:

A. Bidder's full legal name:

\_\_\_\_\_

B. What is your firm's Documented Injury Incident Rate for field operations for the most recent full year?  
\_\_\_\_\_

C. Do you have a written Accident Prevention/Safety Program for field operations?

YES\_\_ NO\_\_

D. Do you conduct Project Safety Inspections?

YES\_\_ NO\_\_

If YES, who conducts these inspections from the site staff?

TITLE: \_\_\_\_\_ HOW OFTEN? \_\_\_\_\_

E. Do you have a home office safety representative who visits and inspects the job?

YES\_\_ NO\_\_

What is his/her name and title? \_\_\_\_\_

How often will s/he visit the site? \_\_\_\_\_

Does s/he have the authority to make corrections? YES\_\_ NO\_\_

F. Do you hold site Safety Meetings of Supervisors?

YES\_\_ NO\_\_ HOW OFTEN? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

G. Do you hold craft "toolbox" safety meetings?

YES\_\_ NO\_\_

If YES, how often? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

Are minutes kept of these meetings? YES\_\_ NO\_\_

H. Does your company have a written policy on drug and alcohol abuse?

YES\_\_ NO\_\_

If so, how is it disseminated? Handout Meeting Other (specify) \_\_\_\_\_

I. Do you have a safety orientation meeting for:

New hires? YES\_\_ NO\_\_

Newly hired or promoted foremen? YES\_\_ NO\_\_

8.0 INSURANCE

The Bidder, as contractor, shall conform to the Insurance Requirements attached and shall include the cost of insurance and performance bonds in the Contract Price.

The successful Bidder shall, before receiving the notice to proceed and commencing work on this Contract, deliver to the Owner, three (3) copies of Certificates of Insurance, completed by Bidder's insurance carrier or agent, certifying that minimum coverage, as required, is in effect. Certificates shall indicate Contractor's name and the contract/project number (FY2014-115, Project #2233). Duplicate copies of insurance policies shall be furnished to the Owner within ten (10) days after the execution of the Contract when so requested by the Owner. The City of Oak Ridge shall be listed as an additional insured. The foregoing shall also apply to subcontractors.

9.0 EXCEPTIONS

If the Bidder takes any exception of either a technical or commercial nature to the Invitation to Bid package, it is **mandatory** that the exceptions shall be itemized, explained, and identified as "Commercial Exceptions" or "Technical Exceptions" by the Bidder on the form provided.

In any instance where Bidder fails to take specific exceptions and provides a quotation with its own formal terms, such terms and conditions shall in no event be binding, and any contract resulting from this invitation will be governed by Owner's terms and conditions. Where no exception is taken, this will constitute a waiver of all rights to take exception to the terms of the bid documents up to and including the date of award of any resulting contract.

Exceptions or clarifications \_\_\_\_\_ (are or are not) included.

10.0 ADDITIONAL INFORMATION

The following person should be contacted for any questions of the Bidder concerning this Bid:

Name \_\_\_\_\_ Telephone \_\_\_\_\_

11.0 RECEIPT OF DOCUMENTS

Bidder acknowledges receipt of the following addenda:

Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____

If no addenda are received, insert "None".

12.0 BID EXECUTION

The undersigned Bidder declares that Bidder or Bidder's agent has carefully examined the location of the proposed work, the proposed form of Contract and the intended Contract documents and is informed as to local conditions affecting the proposed work, and that Bidder understands that the Owner reserves the right to reject any or all Bids. Bidder acknowledges the bid is valid for a period of ninety (90) days following the bid due date/opening date.

Bidder attests that no officers or employees of the City of Oak Ridge are members of, or have financial interest in, the business submitting this bid.

Bidder Information:

Full Legal Company Name: \_\_\_\_\_

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

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

Tax ID Number: \_\_\_\_\_

Contractor's License Number and Classification: \_\_\_\_\_

Contractor's License Monetary Limit: \_\_\_\_\_

Fill in as appropriate:

a corporation organized and existing under the laws of the State of: \_\_\_\_\_

a partnership consisting of: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

an individual trading as: \_\_\_\_\_

\_\_\_\_\_

a joint venture comprised of: \_\_\_\_\_

\_\_\_\_\_

Bidder's Contact Person's (Signatory's) Information:

Contact Person's Name and Title: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Email: \_\_\_\_\_

By signing below I acknowledge submittal of this Bid in compliance with the Invitation to Bid package and have authority to submit this Bid on behalf of the Bidder

Signature: \_\_\_\_\_

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

13.0 EXCEPTIONS AND CLARIFICATIONS

Commercial Exceptions:

Commercial Clarifications:

Technical Exceptions:

Technical Clarifications:

(Bidder may attach additional sheets as necessary)

14.0 INSURANCE REQUIREMENTS

Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall provide and maintain, until the Contract work is completed (unless otherwise indicated), minimum insurance coverage as follows:

TYPE OF INSURANCE	MINIMUM LIMITS OF LIABILITY			
	EACH OCCURRENCE	AGGREGATE		
<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMPREHENSIVE FORM (See Note 1) <input checked="" type="checkbox"/> PREMISES-OPERATIONS <input checked="" type="checkbox"/> EXPLOSION AND COLLAPSE HAZARD <input checked="" type="checkbox"/> CONTRACTUAL INSURANCE (See Note 2) <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE (See Note 3) <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> UNDERGROUND HAZARD <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD (See Note 4) <input checked="" type="checkbox"/> PERSONAL INJURY	BODILY INJURY PROPERTY DAMAGE	\$1,000,000 \$1,000,000	\$1,000,000	
	----- OR -----			
	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000	\$2,000,000	
	PRODUCTS/COMPLETED OPERATIONS			\$3,000,000
	PERSONAL INJURY			\$1,000,000
<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> COMPREHENSIVE FORM <input checked="" type="checkbox"/> OWNED <input checked="" type="checkbox"/> HIRED <input checked="" type="checkbox"/> NON-OWNED	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000		
<b>EXCESS LIABILITY</b> <input checked="" type="checkbox"/> UMBRELLA FORM	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$2,000,000		
<b>WORKERS' COMPENSATION</b> (See Note 5)  <b>AND</b> <b>EMPLOYERS' LIABILITY</b>	STATUTORY			
			\$500,000 (PER ACCIDENT)	

NOTES:

1. Including Contractor's Protective Liability and, if applicable, Incidental Malpractice.
2. Including coverage for liability assumed in construction agreements and other types of contracts or agreements in effect in connection with the insured operations.
3. Coverage for damage to property in the care, custody or control of insured.
4. Completed operations shall remain in effect for at least two years after completion of the project.
5. Including coverage under United States Longshoremen's and Harbor Workers' Act where applicable.

With respect to General Liability, Automobile Liability, and Excess Liability above, coverage shall extend to Owner, and their respective subsidiaries and employees shall each be made Additional Insureds and the cross liability clause below shall be made part of the policy. The insurer shall waive subrogation against the Owner. Contractor shall cause its lower-tier contractors at the jobsite to obtain and maintain insurance policies to protect Owner in accordance with the above requirements. All insurance provided by Contractor and its lower-tier contractors shall be primary and any similar insurance maintained by Owner shall be excess thereof and not contributing with Contractor's or its lower-tier contractors' insurance.

Before commencing work under this Contract, the Contractor shall deliver to the Owner a Certificate of Insurance completed by his insurance carrier or agent certifying that minimum insurance coverage as required above are in effect and will not be cancelled or changed until thirty (30) days after written notice is given to the Owner. The certificate shall indicate the exact coverage as required herein and include, except for Workers' Compensation and Employers' Liability, the following:

#### CROSS LIABILITY CLAUSE

The inclusion of more than one corporation, person, organization, firm or entity as insured under this policy shall not in any way affect the rights of any such corporation, person, organization, firm or entity as respects any claim, demand, suit or judgment made, brought or recovered, by or in favor of any other insured, or by or in favor of any employee of such other insured. This policy shall protect each corporation, person, organization, firm or entity in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurance company's liability as set forth elsewhere in this policy beyond the amount for which the insurance company would have been liable if only one person or interest had been named as insured.

**SECTION 00310 BID FORM**

**Project: Fiber Optic Cable Splicing and Testing**

1.0 GENERAL

The undersigned Bidder herewith proposes to perform all work, including providing management, information and reports, labor, construction facilities, tools, equipment, and services, except the specific materials to be furnished by the Owner (Section 16050) and Subject to Bonding, required for work and performance of related work for the Fiber Optic Cable Splicing and Testing for the City of Oak Ridge, Oak Ridge, Tennessee; as set forth in the Contract documents, within the time, at the rate and in the manner required, for the prices named in the following Schedule of Prices and agrees to execute a valid contract, which incorporates the Invitation to Bid package and this Bid Form, in the form attached hereto and made a part hereof.

The Bidder further agrees that in case the Contract is awarded to Bidder, Bidder will begin actual work within fourteen (14) calendar days after receipt of a "Notice to Proceed" at the points designated by the Owner, that Bidder will maintain the rate of progress set forth in Bidder's work schedule and that Bidder will complete the work on or before the dates of completion set forth in the Contract.

The Bidder further agrees to adhere to all specifications set forth in this document including the approval of test equipment. The OTDR used must be approved by OWNER prior to the work. The brand and model must be clearly stated at the time of the bid process and if changes are needed, OWNER approval must be acquired in writing.

BRAND: \_\_\_\_\_

MODEL: \_\_\_\_\_

2.0 PRICING

**SCHEDULE OF PRICES**

It is not the intent of the Owner to subdivide award of the work within the cable splicing and testing.

The Bidder shall insert Bidder's bid prices in the form below.

TOTAL BID \$ \_\_\_\_\_

## UNIT PRICING

Unit prices are established for future additions and/or deletions of work. Owner reserves the right to reduce the quantity or increase quantity and adjust the lump sum price by amounts noted below on a per unit basis.

One (1) Single Fusion Splice	\$ _____
One (1) Termination	\$ _____
One (1) Prep Fee	\$ _____
One (1) Testing per Connector	\$ _____
One (1) Reel Testing per Fiber	\$ _____

### 3.0 MEASUREMENT AND PAYMENT

The Measurement and Payment requirements related to the above prices are as follows:

- A. Payment will be made in accordance with General Conditions 00710.
- B. The work includes furnishing labor for splicing and testing.
- C. Labor cost shall include receiving, maintaining, use of tools and other splicing and testing equipment, inspecting, documenting, and testing.
- D. Mobilization, supervision, temporary facilities, safety, security, insurance, overhead and profit shall be included in the prices.

### 4.0 WORK SCHEDULE

- A. The schedule for the work is as follows:
  - 1. Start Work \_\_\_\_\_ days after receipt of Contract and Notice to Proceed.
  - 2. Complete Work \_\_\_\_\_ days after receipt of Notice to Proceed.
- B. The Bidder agrees that Bidder has reviewed this schedule and understands that time is of the essence of the resulting Contract. Compliance with this schedule is necessary for the complete success of the work and the successful Bidder will take all precautions in preparation and management which may be necessary to ensure completion of the work in accordance with this schedule.

5.0 SUPERINTENDENT'S EXPERIENCE

The Bidder proposes to have as job Superintendent on the work, if awarded the Contract, whose experience record in responsible control on work of this character is as follows:

<u>Project Description</u>	<u>Dates of Service</u>	<u>Position</u>
_____	_____	_____
_____	_____	_____

Will Superintendent act as Quality Control Inspector? \_\_\_\_YES \_\_\_\_NO

If not, name of Quality Control Inspector is: \_\_\_\_\_

6.0 SUBCONTRACTORS

Bidder proposes to subcontract specific portions of the work to the following subcontractors:

<u>Subcontracted Work</u>	<u>Subcontractor's Name and Address</u>
_____	_____
_____	_____
_____	_____
_____	_____

No work, other than that listed above, shall be subcontracted unless approved in advance by the Owner. If a subcontractor is listed above whom the Owner deems unacceptable, the successful Bidder will be given the opportunity to substitute an acceptable subcontractor but no price adjustments will be made to the submitted bid. It is strongly recommended that the Bidder contact the Owner BEFORE submission of the bid, for verification that a potential subcontractor is deemed acceptable. Reasons for disqualifying a particular sub-contractor include but are not limited to insufficient financial credibility, poor reputation with past clients, or a poor past job performance with the Owner, including poor character, poor integrity, poor reputation, poor judgment, insufficient experience, or lack of timeliness.

7.0 CONTRACTOR'S SAFETY PERFORMANCE

Please complete the following:

B. Bidder's full legal name:

\_\_\_\_\_

B. What is your firm's Documented Injury Incident Rate for field operations for the most recent full year?  
\_\_\_\_\_

C. Do you have a written Accident Prevention/Safety Program for field operations?

YES\_\_\_ NO\_\_\_

D. Do you conduct Project Safety Inspections?

YES\_\_\_ NO\_\_\_

If YES, who conducts these inspections from the site staff?

TITLE: \_\_\_\_\_ HOW OFTEN? \_\_\_\_\_

E. Do you have a home office safety representative who visits and inspects the job?

YES\_\_\_ NO\_\_\_

What is his/her name and title? \_\_\_\_\_

How often will s/he visit the site? \_\_\_\_\_

Does s/he have the authority to make corrections? YES\_\_\_ NO\_\_\_

F. Do you hold site Safety Meetings of Supervisors?

YES\_\_\_ NO\_\_\_ HOW OFTEN? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

G. Do you hold craft "toolbox" safety meetings?

YES\_\_\_ NO\_\_\_

If YES, how often? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

Are minutes kept of these meetings? YES\_\_\_ NO\_\_\_

H. Does your company have a written policy on drug and alcohol abuse?

YES\_\_\_ NO\_\_\_

If so, how is it disseminated? Handout Meeting Other (specify) \_\_\_\_\_

I. Do you have a safety orientation meeting for:

New hires? YES\_\_\_ NO\_\_\_

Newly hired or promoted foremen? YES\_\_\_ NO\_\_\_

8.0 INSURANCE

The Bidder, as contractor, shall conform to the Insurance Requirements attached and shall include the cost of insurance and performance bonds in the Contract Price.

The successful Bidder shall, before receiving the notice to proceed and commencing work on this Contract, deliver to the Owner, three (3) copies of Certificates of Insurance, completed by Bidder's insurance carrier or agent, certifying that minimum coverage, as required, is in effect. Certificates shall indicate Contractor's name and the contract/project number (FY2014-115, Project #2233). Duplicate copies of insurance policies shall be furnished to the Owner within ten (10) days after the execution of the Contract when so requested by the Owner. The City of Oak Ridge shall be listed as an additional insured. The foregoing shall also apply to subcontractors.

9.0 EXCEPTIONS

If the Bidder takes any exception of either a technical or commercial nature to the Invitation to Bid package, it is **mandatory** that the exceptions shall be itemized, explained, and identified as "Commercial Exceptions" or "Technical Exceptions" by the Bidder on the form provided.

In any instance where Bidder fails to take specific exceptions and provides a quotation with its own formal terms, such terms and conditions shall in no event be binding, and any contract resulting from this invitation will be governed by Owner's terms and conditions. Where no exception is taken, this will constitute a waiver of all rights to take exception to the terms of the bid documents up to and including the date of award of any resulting contract.

Exceptions or clarifications \_\_\_\_\_ (are or are not) included.

10.0 ADDITIONAL INFORMATION

The following person should be contacted for any questions of the Bidder concerning this Bid:

Name \_\_\_\_\_ Telephone \_\_\_\_\_

11.0 RECEIPT OF DOCUMENTS

Bidder acknowledges receipt of the following addenda:

Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____

If no addenda are received, insert "None".

12.0 BID EXECUTION

The undersigned Bidder declares that Bidder or Bidder's agent has carefully examined the location of the proposed work, the proposed form of Contract and the intended Contract documents and is informed as to local conditions affecting the proposed work, and that Bidder understands that the Owner reserves the right to reject any or all Bids. Bidder acknowledges the bid is valid for a period of ninety (90) days following the bid due date/opening date.

Bidder attests that no officers or employees of the City of Oak Ridge are members of, or have financial interest in, the business submitting this bid.

Bidder Information:

Full Legal Company Name: \_\_\_\_\_

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

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

Tax ID Number: \_\_\_\_\_

Contractor's License Number and Classification: \_\_\_\_\_

Contractor's License Monetary Limit: \_\_\_\_\_

Fill in as appropriate:

a corporation organized and existing under the laws of the State of: \_\_\_\_\_

a partnership consisting of: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

an individual trading as: \_\_\_\_\_

\_\_\_\_\_

a joint venture comprised of: \_\_\_\_\_

\_\_\_\_\_

Bidder's Contact Person's (Signatory's) Information:

Contact Person's Name and Title: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Email: \_\_\_\_\_

By signing below I acknowledge submittal of this Bid in compliance with the Invitation to Bid package and have authority to submit this Bid on behalf of the Bidder

Signature: \_\_\_\_\_

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

13.0 EXCEPTIONS AND CLARIFICATIONS

Commercial Exceptions:

Commercial Clarifications:

Technical Exceptions:

Technical Clarifications:

(Bidder may attach additional sheets as necessary)

14.0 INSURANCE REQUIREMENTS

Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall provide and maintain, until the Contract work is completed (unless otherwise indicated), minimum insurance coverage as follows:

TYPE OF INSURANCE	MINIMUM LIMITS OF LIABILITY			
	EACH OCCURRENCE	AGGREGATE		
<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMPREHENSIVE FORM (See Note 1) <input checked="" type="checkbox"/> PREMISES-OPERATIONS <input checked="" type="checkbox"/> EXPLOSION AND COLLAPSE HAZARD <input checked="" type="checkbox"/> CONTRACTUAL INSURANCE (See Note 2) <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE (See Note 3) <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> UNDERGROUND HAZARD <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD (See Note 4) <input checked="" type="checkbox"/> PERSONAL INJURY	BODILY INJURY PROPERTY DAMAGE	\$1,000,000 \$1,000,000	\$1,000,000	
	----- OR -----			
	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000	\$2,000,000	
	PRODUCTS/COMPLETED OPERATIONS			\$3,000,000
	PERSONAL INJURY			\$1,000,000
<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> COMPREHENSIVE FORM <input checked="" type="checkbox"/> OWNED <input checked="" type="checkbox"/> HIRED <input checked="" type="checkbox"/> NON-OWNED	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000		
<b>EXCESS LIABILITY</b> <input checked="" type="checkbox"/> UMBRELLA FORM	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$2,000,000		
<b>WORKERS' COMPENSATION</b> (See Note 5)  <b>AND</b> <b>EMPLOYERS' LIABILITY</b>	STATUTORY			
			\$500,000 (PER ACCIDENT)	

NOTES:

1. Including Contractor's Protective Liability and, if applicable, Incidental Malpractice.
2. Including coverage for liability assumed in construction agreements and other types of contracts or agreements in effect in connection with the insured operations.
3. Coverage for damage to property in the care, custody or control of insured.
4. Completed operations shall remain in effect for at least two years after completion of the project.
5. Including coverage under United States Longshoremen's and Harbor Workers' Act where applicable.

With respect to General Liability, Automobile Liability, and Excess Liability above, coverage shall extend to Owner, and their respective subsidiaries and employees shall each be made Additional Insureds and the cross liability clause below shall be made part of the policy. The insurer shall waive subrogation against the Owner. Contractor shall cause its lower-tier contractors at the jobsite to obtain and maintain insurance policies to protect Owner in accordance with the above requirements. All insurance provided by Contractor and its lower-tier contractors shall be primary and any similar insurance maintained by Owner shall be excess thereof and not contributing with Contractor's or its lower-tier contractors' insurance.

Before commencing work under this Contract, the Contractor shall deliver to the Owner a Certificate of Insurance completed by his insurance carrier or agent certifying that minimum insurance coverage as required above are in effect and will not be cancelled or changed until thirty (30) days after written notice is given to the Owner. The certificate shall indicate the exact coverage as required herein and include, except for Workers' Compensation and Employers' Liability, the following:

CROSS LIABILITY CLAUSE

The inclusion of more than one corporation, person, organization, firm or entity as insured under this policy shall not in any way affect the rights of any such corporation, person, organization, firm or entity as respects any claim, demand, suit or judgment made, brought or recovered, by or in favor of any other insured, or by or in favor of any employee of such other insured. This policy shall protect each corporation, person, organization, firm or entity in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurance company's liability as set forth elsewhere in this policy beyond the amount for which the insurance company would have been liable if only one person or interest had been named as insured.

**SECTION 00310 BID FORM**

**Project: Fiber Optic Cable Splicing and Testing**

1.0 GENERAL

The undersigned Bidder herewith proposes to perform all work, including providing management, information and reports, labor, construction facilities, tools, equipment, and services, except the specific materials to be furnished by the Owner (Section 16050) and Subject to Bonding, required for work and performance of related work for the Fiber Optic Cable Splicing and Testing for the City of Oak Ridge, Oak Ridge, Tennessee; as set forth in the Contract documents, within the time, at the rate and in the manner required, for the prices named in the following Schedule of Prices and agrees to execute a valid contract, which incorporates the Invitation to Bid package and this Bid Form, in the form attached hereto and made a part hereof.

The Bidder further agrees that in case the Contract is awarded to Bidder, Bidder will begin actual work within fourteen (14) calendar days after receipt of a "Notice to Proceed" at the points designated by the Owner, that Bidder will maintain the rate of progress set forth in Bidder's work schedule and that Bidder will complete the work on or before the dates of completion set forth in the Contract.

The Bidder further agrees to adhere to all specifications set forth in this document including the approval of test equipment. The OTDR used must be approved by OWNER prior to the work. The brand and model must be clearly stated at the time of the bid process and if changes are needed, OWNER approval must be acquired in writing.

BRAND: \_\_\_\_\_

MODEL: \_\_\_\_\_

2.0 PRICING

**SCHEDULE OF PRICES**

It is not the intent of the Owner to subdivide award of the work within the cable splicing and testing.

The Bidder shall insert Bidder's bid prices in the form below.

TOTAL BID \$ \_\_\_\_\_

## UNIT PRICING

Unit prices are established for future additions and/or deletions of work. Owner reserves the right to reduce the quantity or increase quantity and adjust the lump sum price by amounts noted below on a per unit basis.

One (1) Single Fusion Splice	\$ _____
One (1) Termination	\$ _____
One (1) Prep Fee	\$ _____
One (1) Testing per Connector	\$ _____
One (1) Reel Testing per Fiber	\$ _____

### 3.0 MEASUREMENT AND PAYMENT

The Measurement and Payment requirements related to the above prices are as follows:

- A. Payment will be made in accordance with General Conditions 00710.
- B. The work includes furnishing labor for splicing and testing.
- C. Labor cost shall include receiving, maintaining, use of tools and other splicing and testing equipment, inspecting, documenting, and testing.
- D. Mobilization, supervision, temporary facilities, safety, security, insurance, overhead and profit shall be included in the prices.

### 4.0 WORK SCHEDULE

- A. The schedule for the work is as follows:
  - 1. Start Work \_\_\_\_\_ days after receipt of Contract and Notice to Proceed.
  - 2. Complete Work \_\_\_\_\_ days after receipt of Notice to Proceed.
- B. The Bidder agrees that Bidder has reviewed this schedule and understands that time is of the essence of the resulting Contract. Compliance with this schedule is necessary for the complete success of the work and the successful Bidder will take all precautions in preparation and management which may be necessary to ensure completion of the work in accordance with this schedule.

5.0 SUPERINTENDENT'S EXPERIENCE

The Bidder proposes to have as job Superintendent on the work, if awarded the Contract, whose experience record in responsible control on work of this character is as follows:

<u>Project Description</u>	<u>Dates of Service</u>	<u>Position</u>
_____	_____	_____
_____	_____	_____

Will Superintendent act as Quality Control Inspector? \_\_\_\_YES \_\_\_\_NO

If not, name of Quality Control Inspector is: \_\_\_\_\_

6.0 SUBCONTRACTORS

Bidder proposes to subcontract specific portions of the work to the following subcontractors:

<u>Subcontracted Work</u>	<u>Subcontractor's Name and Address</u>
_____	_____
_____	_____
_____	_____
_____	_____

No work, other than that listed above, shall be subcontracted unless approved in advance by the Owner. If a subcontractor is listed above whom the Owner deems unacceptable, the successful Bidder will be given the opportunity to substitute an acceptable subcontractor but no price adjustments will be made to the submitted bid. It is strongly recommended that the Bidder contact the Owner BEFORE submission of the bid, for verification that a potential subcontractor is deemed acceptable. Reasons for disqualifying a particular sub-contractor include but are not limited to insufficient financial credibility, poor reputation with past clients, or a poor past job performance with the Owner, including poor character, poor integrity, poor reputation, poor judgment, insufficient experience, or lack of timeliness.

7.0 CONTRACTOR'S SAFETY PERFORMANCE

Please complete the following:

C. Bidder's full legal name:

\_\_\_\_\_

B. What is your firm's Documented Injury Incident Rate for field operations for the most recent full year?  
\_\_\_\_\_

C. Do you have a written Accident Prevention/Safety Program for field operations?

YES\_\_\_ NO\_\_\_

D. Do you conduct Project Safety Inspections?

YES\_\_\_ NO\_\_\_

If YES, who conducts these inspections from the site staff?

TITLE: \_\_\_\_\_ HOW OFTEN? \_\_\_\_\_

E. Do you have a home office safety representative who visits and inspects the job?

YES\_\_\_ NO\_\_\_

What is his/her name and title? \_\_\_\_\_

How often will s/he visit the site? \_\_\_\_\_

Does s/he have the authority to make corrections? YES\_\_\_ NO\_\_\_

F. Do you hold site Safety Meetings of Supervisors?

YES\_\_\_ NO\_\_\_ HOW OFTEN? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

G. Do you hold craft "toolbox" safety meetings?

YES\_\_\_ NO\_\_\_

If YES, how often? \_\_\_\_\_

Who conducts these meetings? TITLE \_\_\_\_\_

Are minutes kept of these meetings? YES\_\_\_ NO\_\_\_

H. Does your company have a written policy on drug and alcohol abuse?

YES\_\_\_ NO\_\_\_

If so, how is it disseminated? Handout Meeting Other (specify) \_\_\_\_\_

I. Do you have a safety orientation meeting for:

New hires? YES\_\_\_ NO\_\_\_

Newly hired or promoted foremen? YES\_\_\_ NO\_\_\_

8.0 INSURANCE

The Bidder, as contractor, shall conform to the Insurance Requirements attached and shall include the cost of insurance and performance bonds in the Contract Price.

The successful Bidder shall, before receiving the notice to proceed and commencing work on this Contract, deliver to the Owner, three (3) copies of Certificates of Insurance, completed by Bidder's insurance carrier or agent, certifying that minimum coverage, as required, is in effect. Certificates shall indicate Contractor's name and the contract/project number (FY2014-115, Project #2233). Duplicate copies of insurance policies shall be furnished to the Owner within ten (10) days after the execution of the Contract when so requested by the Owner. The City of Oak Ridge shall be listed as an additional insured. The foregoing shall also apply to subcontractors.

9.0 EXCEPTIONS

If the Bidder takes any exception of either a technical or commercial nature to the Invitation to Bid package, it is **mandatory** that the exceptions shall be itemized, explained, and identified as "Commercial Exceptions" or "Technical Exceptions" by the Bidder on the form provided.

In any instance where Bidder fails to take specific exceptions and provides a quotation with its own formal terms, such terms and conditions shall in no event be binding, and any contract resulting from this invitation will be governed by Owner's terms and conditions. Where no exception is taken, this will constitute a waiver of all rights to take exception to the terms of the bid documents up to and including the date of award of any resulting contract.

Exceptions or clarifications \_\_\_\_\_ (are or are not) included.

10.0 ADDITIONAL INFORMATION

The following person should be contacted for any questions of the Bidder concerning this Bid:

Name \_\_\_\_\_ Telephone \_\_\_\_\_

11.0 RECEIPT OF DOCUMENTS

Bidder acknowledges receipt of the following addenda:

Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____
Addendum No. _____	Date: _____	Addendum No. _____	Date: _____

If no addenda are received, insert "None".

12.0 BID EXECUTION

The undersigned Bidder declares that Bidder or Bidder's agent has carefully examined the location of the proposed work, the proposed form of Contract and the intended Contract documents and is informed as to local conditions affecting the proposed work, and that Bidder understands that the Owner reserves the right to reject any or all Bids. Bidder acknowledges the bid is valid for a period of ninety (90) days following the bid due date/opening date.

Bidder attests that no officers or employees of the City of Oak Ridge are members of, or have financial interest in, the business submitting this bid.

Bidder Information:

Full Legal Company Name: \_\_\_\_\_

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

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

Tax ID Number: \_\_\_\_\_

Contractor's License Number and Classification: \_\_\_\_\_

Contractor's License Monetary Limit: \_\_\_\_\_

Fill in as appropriate:

a corporation organized and existing under the laws of the State of: \_\_\_\_\_

a partnership consisting of: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

an individual trading as: \_\_\_\_\_

\_\_\_\_\_

a joint venture comprised of: \_\_\_\_\_

\_\_\_\_\_

Bidder's Contact Person's (Signatory's) Information:

Contact Person's Name and Title: \_\_\_\_\_

Telephone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Email: \_\_\_\_\_

By signing below I acknowledge submittal of this Bid in compliance with the Invitation to Bid package and have authority to submit this Bid on behalf of the Bidder

Signature: \_\_\_\_\_

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

13.0 EXCEPTIONS AND CLARIFICATIONS

Commercial Exceptions:

Commercial Clarifications:

Technical Exceptions:

Technical Clarifications:

(Bidder may attach additional sheets as necessary)

14.0 INSURANCE REQUIREMENTS

Without limiting any of the other obligations or liabilities of the Contractor, the Contractor shall provide and maintain, until the Contract work is completed (unless otherwise indicated), minimum insurance coverage as follows:

TYPE OF INSURANCE	MINIMUM LIMITS OF LIABILITY		
	EACH OCCURRENCE	AGGREGATE	
GENERAL LIABILITY <input checked="" type="checkbox"/> COMPREHENSIVE FORM (See Note 1) <input checked="" type="checkbox"/> PREMISES-OPERATIONS <input checked="" type="checkbox"/> EXPLOSION AND COLLAPSE HAZARD <input checked="" type="checkbox"/> CONTRACTUAL INSURANCE (See Note 2) <input checked="" type="checkbox"/> BROAD FORM PROPERTY DAMAGE (See Note 3) <input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS <input checked="" type="checkbox"/> UNDERGROUND HAZARD <input checked="" type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD (See Note 4) <input checked="" type="checkbox"/> PERSONAL INJURY	BODILY INJURY PROPERTY DAMAGE	\$1,000,000 \$1,000,000	\$1,000,000
	----- OR -----		
	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000	\$2,000,000
	PRODUCTS/COMPLETED OPERATIONS		\$3,000,000
	PERSONAL INJURY		\$1,000,000
AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> COMPREHENSIVE FORM <input checked="" type="checkbox"/> OWNED <input checked="" type="checkbox"/> HIRED <input checked="" type="checkbox"/> NON-OWNED	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,000	
EXCESS LIABILITY <input checked="" type="checkbox"/> UMBRELLA FORM	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$2,000,000	
WORKERS' COMPENSATION (See Note 5)  AND EMPLOYERS' LIABILITY	STATUTORY	\$500,000 (PER ACCIDENT)	

NOTES:

1. Including Contractor's Protective Liability and, if applicable, Incidental Malpractice.
2. Including coverage for liability assumed in construction agreements and other types of contracts or agreements in effect in connection with the insured operations.
3. Coverage for damage to property in the care, custody or control of insured.
4. Completed operations shall remain in effect for at least two years after completion of the project.
5. Including coverage under United States Longshoremen's and Harbor Workers' Act where applicable.

With respect to General Liability, Automobile Liability, and Excess Liability above, coverage shall extend to Owner, and their respective subsidiaries and employees shall each be made Additional Insureds and the cross liability clause below shall be made part of the policy. The insurer shall waive subrogation against the Owner. Contractor shall cause its lower-tier contractors at the jobsite to obtain and maintain insurance policies to protect Owner in accordance with the above requirements. All insurance provided by Contractor and its lower-tier contractors shall be primary and any similar insurance maintained by Owner shall be excess thereof and not contributing with Contractor's or its lower-tier contractors' insurance.

Before commencing work under this Contract, the Contractor shall deliver to the Owner a Certificate of Insurance completed by his insurance carrier or agent certifying that minimum insurance coverage as required above are in effect and will not be cancelled or changed until thirty (30) days after written notice is given to the Owner. The certificate shall indicate the exact coverage as required herein and include, except for Workers' Compensation and Employers' Liability, the following:

#### CROSS LIABILITY CLAUSE

The inclusion of more than one corporation, person, organization, firm or entity as insured under this policy shall not in any way affect the rights of any such corporation, person, organization, firm or entity as respects any claim, demand, suit or judgment made, brought or recovered, by or in favor of any other insured, or by or in favor of any employee of such other insured. This policy shall protect each corporation, person, organization, firm or entity in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurance company's liability as set forth elsewhere in this policy beyond the amount for which the insurance company would have been liable if only one person or interest had been named as insured.

**SECTION 00510 CONSTRUCTION CONTRACT**

**CONTRACT**

**FY2014-115**

This Contract entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2014, by and between the City of Oak Ridge, Tennessee, 200 S. Tulane Avenue, Oak Ridge, Tennessee 37830 (mailing address of P.O. Box 1, Oak Ridge, Tennessee 37831-0001), a municipal corporation, hereinafter called the "City," and \_\_\_\_\_, a \_\_\_\_\_, hereinafter called the "Contractor."

**WITNESSETH**

In consideration of the mutual promises of the parties hereto, the parties do hereby agree as follows:

**ARTICLE 1 – Scope of This Contract**

The work to be done consists of furnishing all labor, materials, supplies, tools, equipment and other incidentals necessary to perform all work and services required for the Fiber Optic Cable Splicing and Testing Project (except for Owner provided equipment set forth in Section 00310). All work performed under this Contract shall be in strict accordance with the terms and provisions of this Contract, the Invitation to Bid package, and the bid of the Contractor, all attached hereto and incorporated herein by reference. The scope of work is more completely set forth in the Summary of Work (Section 01010).

In performance of this Contract, the Contractor binds himself to the City to comply fully with all provisions, undertakings, and obligations hereinafter set forth.

**ARTICLE 2 – Term**

This Contract shall become effective upon the date first written above and shall continue in full force and effect until \_\_\_\_\_.

The Contractor agrees to begin work within fourteen (14) calendar days from the date the "Notice to Proceed" is issued and to ensure the completion of the Project on or before \_\_\_\_\_. Time is of the essence of this Contract and compliance with this schedule is necessary for the complete success of the Project, therefore, the Contractor agrees to take all precautions in preparation and management, which may be necessary to ensure completion in time, as required by this Contract. The Contractor agrees to a penalty of \$50.00 per calendar day for each day after the completion date ensured above for which construction activities remain outstanding.

The Contractor agrees that the Contractor will prosecute the work in accordance with the Schedule provided in the Bid Form.

### ARTICLE 3 – Changes

- A. City may, by written order, and without notice to the Sureties, make changes in the specifications of this Contract within the general scope thereof. If any such changes cause an increase or decrease in the scope of this Contract or in the time required for its performance, an equitable adjustment shall be made and this Contract shall be modified in writing accordingly.
- B. Should the Contractor encounter conditions materially different from those shown in the specifications, the City shall be notified in writing immediately of such conditions before they are disturbed. The City shall thereupon promptly investigate the conditions and if it finds that they do so materially differ from those specified, this Contract shall be modified to provide for any increase or decrease of cost and difference in time resulting from the conditions so found.
- C. Except as otherwise herein provided, no charge for any extra work or material will be allotted unless the same has been approved in writing by the City, and the price stated.

### ARTICLE 4 – Inspections and Defective Work

All workmanship and services shall be subject to inspections, examinations and tests by the City at any and all times during the performance of this Contract. The City shall have the right to reject defective workmanship and to require correction. Rejected workmanship shall be satisfactorily corrected without charge therefore. If the Contractor fails to proceed at once to correct such defective workmanship, the City may proceed with such corrective work and the Contractor shall be liable for all direct cost occasioned in the performance therefore.

This provision does not negate, modify or replace any warranties contained elsewhere in this Contract. This provision shall survive the termination or suspension of this Contract.

Neither payment nor any provisions in the Contract document shall relieve the Contractor of responsibility for faulty materials or defective workmanship. The City shall give notice of observed defects with reasonable promptness. The deterioration due to ordinary use and normal wear is excepted from this guarantee.

The Contractor shall reimburse the City for the cost of damage, if any, as well as the cost of replacing defective materials or workmanship. If replacements are not made within ten (10) days after notice is given of such defect in workmanship, or thirty (30) days in case of materials, then the City shall have the right to make replacements and charge the cost of same to Contractor or the Contractor's surety.

### ARTICLE 5 – Site Investigation

The Contractor represents that it has visited the site and determined the nature of the work and the difficulties and facilities attending execution of the work, and all other matters, which can in any way affect the work under this Contract.

### ARTICLE 6 – Delays, Damages

If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in Article 2, or fails to complete the work within such time, the City may terminate this Contract. In such event, the City may take over the work and prosecute the same to completion by contract or otherwise, and the Contractor shall be liable to the City for any excess cost occasioned thereby. If this Contract is so terminated, the City may take possession of and utilize in completing the work such materials, appliances, tools and equipment as may be on the site of the work and necessary therefore.

## ARTICLE 7 – Payment

The total cost of performance and completion of all work under this Contract shall not exceed \$ \_\_\_\_\_, without further written authorization by the City to exceed such amount. The Contractor shall submit invoices to the City for work performed under this Contract. The Contractor shall furnish such additional information as the City may reasonably require to verify such invoices. Within thirty (30) days of the receipt of such invoice, the City will pay the Contractor for work covered by such invoices and satisfactory completed in accordance with this Contract.

## ARTICLE 8 – Final Payment

Upon completion of the work and services covered by this Contract and before final payment, the Contractor must furnish evidence to satisfy the City that all suppliers of materials used and all labor and other employees working for the Contractor pursuant to this Contract have been fully paid. Upon final payment, the City is to be released from all liability whatsoever growing out of this Contract.

## ARTICLE 9 – Indemnification by Contractor

To the fullest extent permitted by all applicable laws and regulations, the Contractor hereby agrees to protect, indemnify and hold harmless the City and their consultants, agents and employees from and against any and all claims, loss, expense, damage, charges and costs direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professional and court costs), collectively referred to as "claims," for injury to or death of persons and injury to or destruction of property suffered or alleged to have been suffered as a result of any act or omission on the part of the Contractor, any of the Contractor's subcontractors, anyone for whose acts any of them may be liable, or others whose services are engaged by the Contractor or anyone directly or indirectly employed or controlled by either of them in the course of the performance of the work provided for in the Contract, except such injury, destruction or death as may be caused by the sole negligence or fault of the City.

When the City submits notice, the Contractor shall promptly defend any aforementioned action. In any and all claims against the City or any of their consultants, agents or employees by any employee of the Contractor, any of the Contractor's subcontractors, anyone for whose acts any of them may be liable, or others whose services are engaged by the Contractor or anyone directly or indirectly employed or controlled by either of them in the course of the performance of the work provided for in the Contract, the indemnification obligation described herein shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts. The limits of insurance required in this Contract shall not limit the Contractor's obligations under this article.

The terms of this article shall survive the termination or suspension of this Contract.

## ARTICLE 10 – Completion and Performance Bond and Labor and Material Bond

### A. Completion and Performance Bond

Prior to commencing work under this Contract, the Contractor agrees to furnish and to maintain during the term of this Contract a Completion and Performance Bond in the amount of one hundred percent (100%) of the Contract price plus an additional \$10,000.00 (which is the value of the Owner furnished equipment) with good and sufficient surety or sureties acceptable to the City in connection with the performance of the work under this Contract, including any amendments or extensions hereof. The form and conditions of said Performance Bond shall be as prescribed by the City. The bond will be required at the beginning of each contract term and will be in an amount equal to the contract price for that year.

In lieu of a Performance Bond, the City will accept other suitable Securities agreed upon by both parties. At all times during the term of this Contract, the Contractor shall provide the City with evidence that the Contractor has obtained such Performance Bond or Securities. A certificate from the surety showing that the bond premiums have been paid by the Contractor shall accompany the bond.

B. Labor and Material Bond

Prior to commencing work under this Contract, the Contractor agrees to furnish and to maintain during the term of this Contract a Labor and Material Bond in the amount of one hundred percent (100%) of the Contract price plus an additional \$10,000.00 (which is the value of the Owner furnished equipment) with good and sufficient surety or sureties acceptable to the City, conditioned that the Contractor shall promptly make payments to the persons supplying labor, material, or supplies to the Contractor or subcontractors in the performance of the work under this Contract and any amendment or extension thereof. The form and conditions of this bond shall be as prescribed by the City. The bond will be required at the beginning of each contract term and will be in an amount equal to the contract price for that year.

In lieu of a Labor and Material Bond, the City will accept other suitable Securities agreed upon by both parties. At all times during the term of this Contract, the Contractor shall provide the City with evidence that the Contractor has obtained such Labor and Material Bond or Securities. A certificate from the surety showing that the bond premiums have been paid by the Contractor shall accompany the bond.

ARTICLE 11 – Rate of Progress

Notwithstanding any other provisions in this Contract, the Contractor shall furnish sufficient labor, materials, supplies, tools, and equipment, and shall work such hours, including overtime, Sundays, and/or Holidays, as may be necessary to carry out the work in accordance with the approved schedules for its completion not later than the respective times allowed for completion set forth in these Contract Documents. Should the Contractor refuse or fail to comply with its obligations set forth in the preceding sentence after receipt of any written directive or request by the City that the Contractor furnish additional labor, materials, supplies, tools, and equipment, and/or work additional hours, including overtime, Sundays, and/or Holidays, the City may terminate the Contractor's right to proceed with the whole or any part of the work under this Contract.

ARTICLE 12 – Compliance with All Laws, Ordinances, Statutes, and Regulations

The Contractor shall comply with all applicable federal, state, county and local laws, ordinances, statutes, and regulations.

ARTICLE 13 – Insurance

The Contractor shall at all times during the Contract maintain in full force and effect Comprehensive General Liability, Workers' Compensation and Property Damage Insurance in at least the amounts set forth in the Bid Form and naming the City of Oak Ridge, Tennessee as an *additional insured*.

The Contractor shall maintain policies providing the following insurance protection, each policy containing a requirement that, in the event of change or cancellation, thirty (30) days' prior written notice be sent by mail to the City. Certificates of Insurance describing the coverage shall be furnished by the Contractor and shall contain the following express obligation:

"This is to certify that the policies of insurance described herein have been issued to the insured for whom this certificate is issued and are in force at this time. In the event of cancellation or material change in a policy affecting the certificate holder, thirty (30) days' prior written notice will be given the certificate holder."

The Contractor may purchase at its own expense such additional or other insurance protection as it may deem necessary. Maintenance of the required minimum insurance protection does not relieve the Contractor of responsibility for any losses not covered by the above-required policies.

Before commencement of work hereunder, the Contractor agrees to furnish to the City of Oak Ridge (Legal Department, P.O. Box 1, Oak Ridge, Tennessee 37831-0001) a Certificate of Insurance or other evidence satisfactory to the City to the effect that such insurance has been procured and is in force.

#### ARTICLE 14 – Permits and Licenses

The Contractor shall obtain, at the Contractor's expense, all permits, licenses and bonds required by law or ordinance and maintain the same in full force and effect.

#### ARTICLE 15 – Subcontracting and Assignment

- A. The Contractor may utilize the services of specialty subcontractors on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.
- B. The Contractor shall not award, assign, transfer or pledge any work to any subcontractor without prior written approval of the City, which approval will not be given until the Contractor submits to the City a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the City may require.
- C. The Contractor shall be as fully responsible to the City for the acts and omissions of subcontractors, and of persons either directly or indirectly employed by said subcontractors, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- D. The Contractor shall make a condition of all subcontracts and/or cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the City may exercise over the Contractor under any provision of the Contract Documents.
- E. Nothing contained in this Contract shall create any contractual relation between any subcontractor and the City.

#### ARTICLE 16 – Superintendence by the Contractor

The Contractor shall give its personal superintendence to the work or have a competent foreman or superintendent satisfactory to the City on the site at all times during the progress of the work, with authority to act on behalf of the Contractor.

#### ARTICLE 17 – Termination

Notwithstanding any other provisions in this Contract, the Contractor shall furnish all labor, materials, supplies, tools and equipment necessary to perform the work and services within allowed times for completion as set forth in the Contract. Should the Contractor refuse or fail to comply with its obligations, or in the event the Contractor shall violate any of the provisions of this Contract, or the quality or quantity of the work performed is, in the judgment of the City, below standard and therefore unsatisfactory, the City shall notify the Contractor in writing giving the Contractor ten (10) days to correct such work. In the event such work is not corrected within said ten (10) days, the City shall have the right to cancel this Contract, terminate the Contractor's right to continue the work, and complete the work undertaken by the Contractor without incurring any liability to the Contractor except to pay the Contractor the fair value to the City of the work satisfactorily performed by the Contractor.

#### ARTICLE 18 – Termination of Contract for Cause

If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the City shall thereupon have the right to terminate this Contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least twenty-four (24) hours before the effective date of such termination. In such event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports prepared by the Contractor under this Contract shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of any breach of the Contract by the Contractor, and the City may withhold any payments to the Contractor for the purpose of set-off until such time as the exact amount of damages due the City from the Contractor is determined.

#### ARTICLE 19 – Anti-Discrimination

The Contractor, in performing the work or furnishing the services covered by this Contract, shall not discriminate against any person because of race, creed, color, national origin, age, sex, sexual orientation, disability, religion or other legally protected status. The City of Oak Ridge encourages the utilization of minority and women-owned businesses in its contracting and subcontracting projects and the Contractor is encouraged to actively solicit the participation of these businesses. The Contractor shall inform all of its subcontractors and vendors providing work or services under this Contract of this requirement and shall ensure compliance therewith.

#### ARTICLE 20 – Personnel

- A. The Contractor represents that it has, or will, secure at the Contractor's expense, all personnel required to perform the work and services outlined in this Contract. Such personnel shall not be employees of or have any contractual relationship with the City.
- B. All of the services required hereunder will be performed by the Contractor or under the Contractor's supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under state and local laws to perform such services.

ARTICLE 21 – Reports and Information

At such times and in such forms as the City may require, the Contractor shall furnish to the City such periodic reports as are requested by the City pertaining to the work and services covered by this Contract, the costs and obligations incurred or to be incurred in connection herewith, and any other matters covered by this Contract. The City can audit the Contractor's and the Contractor's subcontractors' financial records pertaining to this project.

ARTICLE 22 – Entire Agreement

This Contract constitutes the entire agreement between the parties. There are no other agreements between the parties and no other agreements relative hereto shall be enforceable unless entered into in accordance with the procedures set out herein.

ARTICLE 23 – Modifications

Any modifications to this Contract must be agreed to in writing by the parties.

ARTICLE 24 – Severability

If any term of this Contract is declared by a court of competent jurisdiction to be illegal or unenforceable, the validity of the remaining terms will not be affected, and, if possible, the rights and obligations of the parties are to be construed and enforced as if this Contract did not contain that term.

ARTICLE 25 – Governing Law

This Contract is governed by the laws of the State of Tennessee.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written, the City of Oak Ridge, by its Mayor, by authority duly given.

APPROVED AS TO FORM AND LEGALITY:

CITY OF OAK RIDGE, TENNESSEE

\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
Mayor

(CONTRACTOR)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
(Printed or Typed Name and Title)

Attachments: Invitation to Bid Package  
Contractor's Bid

Approved by Resolution \_\_\_\_\_

**SECTION 00570 WAIVER AND RELEASE OF LIEN**

**Contract# FY2014-115**

WHEREAS, the undersigned \_\_\_\_\_  
(Name of Manufacturer, Materialman, or Subcontractor)

has furnished to \_\_\_\_\_ material and /or services for  
(Name of Contractor)

use in the construction of \_\_\_\_\_, the Project,

belonging to the City of Oak Ridge, Tennessee, the Owner.

NOW THEREFORE, the undersigned \_\_\_\_\_  
for and in consideration of \$1.00 and other good and valuable consideration, the receipt of which is hereby  
acknowledged, does hereby waive and release any and all liens, or right to claim or lien, on the above  
described Project and premises, under any law, common or statutory, on account of labor or material, or  
both, heretofore or hereafter furnished by the undersigned to or for the account of said

\_\_\_\_\_ for said Project.  
(Name of Contractor)

Given under my (our) hand(s) and seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

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

State of \_\_\_\_\_

County of \_\_\_\_\_

I, \_\_\_\_\_, a notary public, in and for said State and County, hereby certify

that \_\_\_\_\_ whose name as

\_\_\_\_\_ of \_\_\_\_\_.

(Title or Office) (Name of Manufacturer, Materialman, or Subcontractor)

is signed to the foregoing and who is known to me, acknowledged before me on this day that he, with full  
authority, executed the foregoing instrument voluntarily for and as the act of said

\_\_\_\_\_  
(Name of Manufacturer, Materialman, or Subcontractor)

Given under my hand and seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Notary Public \_\_\_\_\_

My commission expires: \_\_\_\_\_

**SECTION 00571 RELEASE FROM CONTRACTOR**

**Contract# FY2014-115**

KNOWN ALL MEN BY THESE PRESENTS THAT \_\_\_\_\_,  
a corporation of the state of \_\_\_\_\_, whose address is \_\_\_\_\_,  
\_\_\_\_\_

hereinafter called "Contractor", in consideration of the sum of One Dollar (\$1.00) and other good and valuable considerations, the receipt of which is hereby acknowledged, does hereby release and forever discharge the Owner: City of Oak Ridge, a municipality organized under the laws of the State of Tennessee with a mailing address of P.O. Box 1, Oak Ridge, Tennessee 37831-0001, hereinafter called the "Owner", and assigns of and from any and all actions, causes of actions, debts, dues, accounts, covenants, agreements, judgments, claims and demands of whatsoever nature or character which said Contractor now has or ever has had against the Owner, their successors and assigns, including, but not limited to, any actions, causes of actions, debts, dues, accounts, covenants, agreements, judgments, claims and demands which shall or may arise out of, or be incidental to work undertaken or performed under and/or pursuant to that certain Contract entered into by and between Contractor and Owner on the \_\_\_\_\_ day of the month of \_\_\_\_\_, 20\_\_\_\_, as amended and supplemented for performance of related work for the "Project" :

Fiber Optic Cable Splicing and Testing.

The Contractor hereby represents and warrants that all bills for labor, materials, lands, licenses and other expenses for which the Owner might be sued or for which a lien might be filed have been fully satisfied and paid; and hereby acknowledges receipt of the final payment under said Contract, and in consideration thereof, pursuant to and in accordance with the provisions of said Contract, said Contractor hereby covenants and agrees, for itself, successors and assigns, that they shall and will defend and save harmless the Owner from and against any and all suits, actions, claims, liens, or demands of laborers, mechanics, materialmen or others, or arising out of injury or damage to persons or property, which in any way may arise out of, or be incidental to, work undertaken or performed under and /or pursuant to said Contract.

IN WITNESS WHEREOF, the said Contractor has caused these presents to be duly executed this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Officer or Owner

ATTEST : \_\_\_\_\_  
Secretary

On the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_, before me personally came to me known, who, being by me duly sworn, did depose and say that he resides in \_\_\_\_\_; that he is duly authorized to execute the foregoing instrument and that the foregoing instrument was duly executed by him.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_.

\_\_\_\_\_  
Notary

County of \_\_\_\_\_

State of \_\_\_\_\_

## **SECTION 00710 GENERAL CONDITIONS**

### 1.0 DEFINITIONS

- A. The words and terms specified in this Section, or pronouns used in their stead, shall, for the purposes of this Contract, have the meanings as given below:
1. The word "Owner" shall mean City of Oak Ridge, Tennessee or its authorized representatives, successors, and assigns.
  2. The word "Contractor" shall mean the person, persons, partnership, company, or corporation undertaking the performance of the work required by this Contract.
  3. The word "Contract" shall mean, collectively, all the covenants, terms and stipulations contained in the various portions of this Contract, (the Contract documents), that is: the Agreement, the Insurance Requirements, the General Conditions, the Special Conditions, the Summary of Work, the complete Technical Specifications, and the Drawings.
  4. The words "Technical Specifications" shall mean, collectively, all the technical specifications and attachments listed in the Contract, copies of which are in the possession of the Owner and the Contractor, and also such supplementary specifications as the Owner may issue from time to time in order to clarify or to explain details which are not already specified.
  5. The word "Drawings" shall mean, collectively, all the drawings, sketches, and standards listed in the Contract, copies of which are in the possession of the Owner and the Contractor, and also such supplementary documents as the Owner may issue to the Contractor from time to time in order to clarify said Drawings or to show details which are not shown thereon.
  6. The words "Approved" or "Approved as Noted" shall mean, in the case where the Contractor is required to submit drawings or other documents for approval, that the drawings or documents have been reviewed for general conformity to the Contract requirements and are satisfactory or satisfactory as noted. The Contractor in both cases shall retain responsibility for meeting all Contract requirements.
  7. The words "Contract Price" shall mean either the lump sum named in the Agreement, or the approximate total of all payments as estimated from the unit prices and/or lump sums set forth in the Schedule of Prices of the Agreement, which are to be paid to the Contractor for the work to be performed under this Contract.
  8. The word "day(s)" shall mean calendar day(s).
  9. The word "Elevation" (or an abbreviation of it) shall mean the elevation relative to United States Geological Survey Sea Level Datum, as represented by various benchmarks in the vicinity of the work, or they shall mean the elevation relative to the arbitrary datum plane fixed by the Owner for the particular work.

10. Wherever the word "Manufacturer" is used, it refers to a person or corporation who is furnishing material or equipment to either the Owner or the Contractor, or both.
11. Wherever the words "or Equal" are used in connection with materials, products, processes or equipment designated by manufacturer's or vendors' names, trade names, catalog numbers, etc., they are intended to establish a standard. Other materials, products, processes or equipment meeting the established standard may be used provided that their equivalency has been demonstrated to the satisfaction of the Owner and that the Owner's written acceptance of their use has been obtained. A minimum of thirty (30) days is required to either approve or disapprove any such request.
12. The word "work" includes labor or materials or both, equipment, tools, transportation, or other items, facilities, and services necessary to complete the Contract.
13. The word "subcontractor(s)" as employed herein include only those contractors deriving their authority to perform work under the Contract from the Contractor, after approval by the Owner.

## 2.0 CONTRACT PARTS AND OWNER'S DECISIONS

- A. The various parts of the Contract are intended to be complementary to each other, but should any discrepancy appear, or any misunderstanding arise as to the import of anything contained therein, the interpretation of the Owner shall be final and binding. The correction of any errors or omissions in the Drawings, Technical Specifications, Scope of Work, and Special Conditions may be made by the Owner when such correction is necessary to bring out clearly the intention which is indicated by a reasonable interpretation of the Drawings, Technical Specifications, Scope of Work, and Special Conditions as a whole.
- B. The written decision provided by the Owner as to the true intention and meaning of the Drawings and Technical Specifications shall be binding upon the Contractor.
- C. Whenever, in the Technical Specifications or on the Drawings which are a part of this Contract or which may be furnished to the Contractor for directing his work, the terms or descriptions of various qualities of material, workmanship, structures, processes, plant, or other features of the Contract are described in general terms, the meaning or fulfillment of which must depend upon individual judgment; then in all cases the question of the fulfillment of such specifications or requirements shall be decided by the Owner and said material shall be furnished, said work shall be performed, and said structure, process, plant or feature shall be constructed, furnished or carried on in full and complete accordance with his interpretation of the same and to its full satisfaction and acceptance.
- D. Matters shown either on the Drawings or found in the Technical Specifications shall be performed and furnished as if shown in each except where expressly excepted either in the Technical Specifications or on the Drawings. Figured dimensions shall be used in all cases. Scale measurements shall not be used. Detailed drawings consistent with general drawings shall be taken in preference to general drawings of the same part of the work.

- E. It shall be the responsibility of the Contractor to notify the Owner, without delay, of any omissions, errors, or discrepancies the Contractor may discover in the Technical Specifications or the Drawings. The Contractor shall in no case proceed in uncertainty or without instructions which fully meet his need.

### 3.0 NO WAIVER OF OBLIGATIONS

The Owner shall not have any power to waive any of the obligations of the Contractor under this Contract except under the terms of this Contract.

### 4.0 INDEPENDENT CONTRACTOR

- A. Contractor shall act as an independent contractor and not as a subcontractor, agent, or employee of the Owner in performing the Contract.
- B. Contractor represents that he is fully experienced and properly qualified to perform the class of work provided for herein, and that he is properly licensed, equipped, organized, and financed to perform such work.
- C. The means and methods employed for performing the various classes of work shall be at the option of the Contractor, subject to the Contract provisions.

### 5.0 COLLATERAL WORK

The Contractor may be working in close proximity and, at times, in combined operations with other contractors and/or the Owner. The Contractor shall cooperate with the Owner and all other contractors, coordinate his work with theirs, and arrange his activities so as not to unduly interfere or retard progress of the work of the other contractors or the Owner. The Owner will have the right to coordinate the various contractors. Differences of opinion or disputes between contractors will be decided by the Owner, but such decision shall not result in additional cost to the Owner.

### 6.0 WORK PERFORMED AT CONTRACTOR'S RISK

- A. The Contractor shall protect the work covered by this Contract from damage by the elements or otherwise until completed and delivered hereunder.
- B. All work shall be performed at the Contractor's risk, and if the work or any portion thereof shall be damaged in any way before the final completion and acceptance of the work as a whole, the Contractor shall promptly repair or replace such loss or damage without additional cost or expense to the Owner.
- C. The work shall be carried on to completion without damage to any work or property of the Owner or of others and without interference with the operation of existing machinery or equipment.
- D. All other work completed or in progress, that may be damaged through the execution of the work hereunder, shall be protected by the Contractor, and such protection shall remain and be maintained until its removal is directed by the Owner.
- E. The Contractor shall be responsible for any loss or damage to material, tools or other articles used or held for use in connection with the work.

## 7.0 CONTRACTOR INFORMED AS TO CONDITIONS

- A. The Contractor states that he has examined all the Contract documents and those items referenced therein and has made a field examination of the site, right-of-way, and access and that he has informed himself about the character, quality, and quantity of surface and subsurface materials and water conditions to be encountered; the quantities in the various sections of the work; weather conditions; ecological and environmental requirements; transportation; existing facilities; the character of equipment and facilities needed for the prosecution of the work; the location and suitability of all construction materials; the local labor conditions including availability and productivity; and all other matters in connection with the work and services to be performed under this Contract.
- B. Any records of surface and subsurface conditions, water records or other observations which may have been made by or for the Owner may be made available to the Contractor for his information, but there is no expressed or implied guarantee as to the accuracy of the records or any interpretation of them. The Contractor states that he recognizes this and that he has formed his own opinion of all these conditions from an inspection of the site and has made his own interpretation of the records.
- C. The Contractor further states that the Contract Price is based on his own knowledge and judgment of the conditions and hazards involved, and not upon any representation of the Owner. The Owner assume no responsibility for any understandings or representations made by any of their representatives during or prior to execution of the Contract, unless such understanding or representations are expressly stated in the Contract and the Contract expressly provides that the responsibility therefore is assumed by the Owner.

## 8.0 REMOVAL OF EMPLOYEES

The Owner reserves the right to refuse admittance to or request removal from its premises of any Contractor employee for violating project rules, for disruption to the project or for other reasonable causes and such refusal or request shall be complied with immediately by the Contractor and shall not constitute cause for claiming additional compensation or damages.

## 9.0 EMERGENCY ORDERS

When the Contractor or his authorized site representative is not present on any part of the work where it may be desired to give orders in the event of emergencies, orders may be given by the Owner and shall be received and obeyed by the supervisor or foreman of the Contractor who may have charge of the particular part of the work in reference to which orders are given. If requested to do so, the Owner will confirm such orders in writing.

## 10.0 SKILLED WORKERS

Attention is called to the fact that certain portions of the installation call for persons skilled not only in their trade but specialized in the particular line required. The Contractor shall provide that such work shall be performed by persons who are skilled and specialized in the work to which they are assigned and shall provide copies of applicable certifications to the Owner.

## 11.0 CONTRACTOR'S ADDRESS

Both the addresses appearing in the Agreement and the Contractor's office at or near the site of the work are hereby designated as places to which notices, letters or other communications to the Contractor which will be mailed or delivered. The delivery at either of the above-named places, or depositing in a postpaid wrapper directed thereto in any post office box regularly maintained by the U.S. Postal Service, of any notice, letter or other communication to the Contractor shall be deemed sufficient notice or service thereof upon the Contractor, and the date of such notice of service shall be the date of such delivery or depositing. The first-named address may be changed at any time by an instrument in writing executed and acknowledged by the Contractor and delivered to the Owner. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon the Contractor personally.

## 12.0 PERSONAL ATTENTION OF CONTRACTOR

The Contractor shall provide full-time, on-site management and day-to-day supervision of his craft personnel, subcontractors, suppliers, and site operations. The Contractor shall give his personal attention constantly to the faithful prosecution of the work, and shall be present either in person or by a duly authorized representative on the site of the work, continually during its progress. The Contractor's personal attention shall be interpreted to mean the attention of an officer of the company or corporation or member of the partnership.

## 13.0 REMOVAL OF EQUIPMENT

The Contractor shall not sell, assign, mortgage, hypothecate or remove construction or permanent equipment or materials for the work or which may be necessary for the completion of the Contract, without the written consent of the Owner.

## 14.0 ASSIGNMENT OF CONTRACT

The Contractor agrees that he shall not assign this Contract or any portion thereof to any person, persons, partnership, company or corporation not satisfactory to the Owner, and he shall not make such an assignment until he has received the written permission of the Owner. No such assignment, even though thus consented to, shall relieve the Contractor from his liability under this Contract for the performance and completion of the work by the time and in the manner herein contracted for.

## 15.0 SUBCONTRACTS

- A. If the Contractor shall cause any part of the work to be performed by a subcontractor, the provisions of this Contract shall apply to such subcontractor and his or its officers, agents or employees in all respects as if he or it and they were employees of the Contractor, and the Contractor shall not, in any manner thereby, be discharged from his obligations and liability hereunder, but shall be liable hereunder for all acts and omissions of the subcontractor, his or its officers, agents and employees, as if they were employees of the Contractor.
- B. The Owner will have no responsibility for effecting payment to subcontractors or settling subcontractor claims or disputes.
- C. The Contractor shall not award subcontracts for work or award work to subcontractors not listed in the Agreement without the authorization of the Owner. Should the Contractor intend to award additional subcontracts, he shall provide the Owner with a written notice

including sufficient information concerning the scope of work, subcontractor's capabilities, and subcontract value.

#### 16.0 TIME AND ORDER OF COMPLETION

- A. The Contractor agrees that the work shall be commenced and carried out at such points, and in the order of precedence, and at such times and seasons as may be required to meet the schedule for the completion of the work as set forth in the Agreement.
- B. The Contractor declares that he is aware of the intermittent nature of the work, has familiarized himself with the site, access, rights-of-way, climatic conditions, water, local labor, local conditions, collateral work, and with all the circumstances which may or are likely to affect the performance and completion of the work, and that he has allowed for such conditions in the work schedule.
- C. Each section of work shall be started on the agreed upon schedule dates and rates of progress shall be maintained which will assure timely completion and provide adequate allowance for contingencies.

#### 17.0 INCREASE OF WORKING FORCE AND EQUIPMENT

- A. If at any time the Contractor's working force, services, equipment, and material deliveries, in the opinion of the Owner, are inadequate for securing the necessary progress or required quality of work, as herein stipulated, the Contractor shall, if so directed and at his own expense, increase or supplement the supervision, working force, equipment, and services and/or perform the work on an overtime or multiple shift basis and/or provide additional services to such an extent as to give reasonable assurance of compliance with the work schedule and the required quality of the work.
- B. When so directed by the Owner, the Contractor shall submit for approval such supplementary schedules as may be necessary to demonstrate the manner in which such compliance will be established.
- C. If the Contractor does not promptly comply with such directions, the Owner may proceed under the provisions of Subsection 33.0. The failure of the Owner to make such demands shall not relieve the Contractor of his obligation to secure the quality and the rate of progress required by the Contract; and the Contractor alone shall be and remain liable and responsible for the efficiency and adequacy of his methods, materials, working force and equipment, irrespective of whether or not he makes any change as a result of any order or orders received from the Owner.

#### 18.0 DISCONTINUANCE FOR CAUSES BEYOND THE CONTROL OF THE PARTIES

- A. The Owner shall have the right to require the discontinuance of the work, in whole or part, for such time as may be necessary, should the condition of the weather or of flood or other similar contingencies make it desirable so to do, in order that the work shall be well and properly executed. Extension of time shall be granted the Contractor for discontinuance of work so required, but such extension shall not be a basis for any claim for additional compensation by the Contractor and shall not operate to release the Contractor and the Surety, if any, from any of their obligations.

- B. Failure by the Owner to furnish Drawings, materials, equipment or services so as reasonably to meet the demands of the progress schedule of the work will operate to postpone the date specified for completing the affected portion of the work if such failure actually and substantially delays the Contractor's work. No claim for additional compensation will be allowed unless the Contract completion date is extended.
- C. No necessity for an extension of time is anticipated, but if unforeseen or extraordinary circumstances should arise beyond the control of the Contractor, such as, but not restricted to, Acts of God or the public enemy, fires, floods, epidemics, government edicts, strikes, work stoppages caused by jurisdictional or other disputes, unusually severe weather, or for delays to subcontractors or suppliers due to such reasons, which in the opinion of the Owner should entitle the Contractor to a reasonable extension of time, such extension may be granted but such extension shall not be a basis for any claim for additional compensation by the Contractor, and shall not operate to release the Contractor from any of their obligations.
- D. The Contractor shall notify the Owner in writing within seven (7) days of the start and finish of each circumstance under this Section. Failure to so notify the Owner precludes the Contractor from claiming an extension of time.

#### 19.0 PROGRESS ESTIMATES AND PAYMENTS

- A. The Contractor shall determine on a monthly basis, starting at a date to be specified by the Owner, all the work performed and all the materials actually in place in the work, and prepare and submit a progress estimate and an invoice showing the value of the same on the basis of the Contract Price plus any Change Orders. From the total thus computed, a deduction for retention of 10% shall be made and from the balance there shall further be deducted all previous payments plus any amounts due the Owner in accordance with the terms of this Contract.
- B. The balance payable will be paid by the Owner to the Contractor within thirty (30) days after receipt of a progress estimate acceptable to the Owner and an invoice.
- C. No payments will be made under this Contract except as certified by the Owner under the provisions of this Section. Certification will not be made unless all Contract required reports and submittals are current.
- D. Independent of the retained percentage provided for, the Owner may withhold, apply, or nullify the whole or part of any monthly statement to such extent as may be necessary to protect the Owner's interest in case it is apparent that the Contractor is about to default in the performance of his Contract or is violating any condition or term of this Contract.
- E. No payment shall be construed as acceptance of defective work or improper material or as relieving the Contractor from his responsibility under the Contract.

#### 20.0 FINAL PAYMENT

- A. Whenever the work covered by this Contract has been completed, a final progress estimate shall be prepared in accordance with Subsection 19.0, showing the total amount of work performed by the Contractor and its value according to the terms of the Contract. From the total value thus arrived at, a retention of 10% shall be made and from the remainder there shall further be deducted all previous payments and all deductions made in accordance with the provisions of the Contract.

- B. The remainder will be paid by the Owner to the Contractor within thirty (30) days after the date the final progress estimate and invoice is certified by the Owner. For final payment purposes, specific acceptance or specific rejection will be made by the Owner within thirty (30) days after Contractor's written notification to the Owner of completion of the work.
- C. Before the Contractor will be entitled to the said retention payment, he shall satisfy the Owner that all bills for labor, material, equipment, services, lands, licenses, and other expenses for which the Owner might be sued or for which a lien might be filed, have been fully satisfied. The Contractor shall execute and file with the Owner a Release from Contractor in the form attached hereto, whereby the Contractor shall release any and all claims, actions, and liens against the Owner on account of this Contract, and shall agree to save harmless the Owner from future claims, actions, and liens.
- D. Payment of the final progress estimate by the Owner shall in no way relieve the Contractor of his warranty responsibilities.
- E. Payment of the final progress estimate by the Owner shall not constitute a release of any rights and remedies Owner may have against Contractor under this Contract, at common law, or otherwise.
- F. Acceptance by the Contractor of the final payment on this Contract shall constitute a waiver of all claims against the Owner.
- G. If title to any item hereunder has not otherwise passed, then title shall pass to the Owner upon final payment of retention.
- H. Final payment will not be made until a complete set of acceptable record drawings have been submitted.

#### 21.0 PROVISIONAL ACCEPTANCE

The provisional acceptance of sections of the work for the purposes of utilization, preparing progress estimates, and the payment of money for such progress estimates shall not operate as a waiver of any portion of this Contract, and shall not be construed so as to prevent the Owner from requiring replacement of defective work that may become apparent after the said provisional acceptance, and shall not be construed in any way as the basis for a claim for extra compensation for any cause whatsoever by the Contractor.

#### 22.0 INDEBTEDNESS AND LIENS

The Contractor agrees to furnish the Owner, from time to time during the progress of the work as requested, verified statements showing the Contractor's total outstanding indebtedness in connection with the work covered by the Contract. If during the progress of the work, the Contractor shall allow any indebtedness to accrue to subcontractors or others, and shall fail to pay or discharge same within five (5) days after demand, then the Owner may withhold any money due the Contractor until such indebtedness is paid, or apply same toward the discharge thereof.

#### 23.0 CHANGES IN THE WORK

- A. If it becomes necessary or desirable to modify this Contract in a manner not materially affecting the substance thereof, or to make changes by altering, adding to or deducting from the work, or to add correlated work not previously covered by the Contract, the Owner may, without invalidating the Contract, by an order to the Contractor in writing, order such

changes to be made, and the changes shall be made accordingly, provided that in cases where such changes increase or decrease the cost of the work and payment therefore is not covered by the prices provided in the Agreement for the various items, the Contract Price shall be adjusted under a Change Order as hereinafter provided.

- B. Except for minor modifications in the work not involving extra cost and not inconsistent with the purposes of the work, and except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from the Owner authorizing the extra work or change, and no claim for an addition to the Contract amount shall be valid unless so ordered.
- C. If the Contractor intends to assert a claim for an equitable adjustment under this Section by reason of the receipt of a Change Order or by reason of any act or failure to act by the Owner, the Contractor shall within fifteen (15) days after occurrence, submit to the Owner a written notice and complete statement of such claim including a detailed estimate of its value. Any claims not submitted within fifteen (15) days shall be deemed to have been waived.
- D. Changes involving an increase in the work will be ordered by the Owner in the form of written Contract Amendments called "Change Orders" in which the consideration and effect on schedule will be set forth. All such additional work shall be executed under the provisions and conditions of the original Contract except as altered by Change Order. The value of any such additional work shall be determined in one or more of the following ways:
  - (a) By unit prices named in the Contract or subsequently agreed upon.
  - (b) An agreed upon lump sum. Upon notification by the Owner of a proposed change and a request for a written unit price or lump sum proposal covering the change, the Contractor shall provide a proposal within fifteen (15) days after said request. The proposal shall be provided in sufficient detail for analysis and evaluation by the Owner.
- E. Written authorization from the Owner is required prior to undertaking any change order work.
- F. Changes involving a decrease in the work will also be ordered by the Owner in the form of written "Change Orders" in which the decrease in the Contract Price will be set forth. The value of any such decrease in the work shall be determined by unit prices named in the Contract or subsequently agreed upon or by an agreed upon lump sum, as accepted by the Owner. No allowance shall be made for loss of anticipated profit.

#### 24.0 INSPECTION AND RIGHT OF ACCESS

- A. The Owner contemplates and the Contractor hereby agrees to a thorough, minute inspection of the work by the Owner.
- B. The Contractor shall furnish access to the Owner at all times to the work and to the jobsite premises used by the Contractor, and shall provide every reasonable facility for the purpose of inspection even to the extent of discontinuing portions of the work temporarily, or of uncovering or taking down portions of finished work. Prior to covering work, the Contractor shall notify the Owner and obtain its consent.

- C. When finished work is uncovered or taken down for the purpose of inspection, the Contractor shall stand all the expense incident thereto in the event that the Owner was not notified before the work was covered or said work is found to be defective.

## 25.0 MATERIALS AND EQUIPMENT

- A. Unless otherwise specified, all materials and equipment permanently incorporated in the work shall be new, and both workmanship and materials shall be of industry standard quality. The Contractor shall, if required, furnish samples and satisfactory evidence as to source of supply and quality.
- B. All materials and equipment furnished for use in the work shall be subject to shop and field inspection and testing in accordance with standards accepted by the industry. In addition to inspection and testing which may be specified as part of the work, the Owner reserves the right to arrange for such testing and inspection of materials and equipment as it may deem necessary, but such inspection and testing shall not relieve the Contractor of his responsibility for furnishing materials and equipment complying with the Contract documents. The cost of inspection and testing not specified will be borne by the Owner in the event that the materials or equipment tested prove satisfactory. If, however, the inspection and testing prove that materials or equipment are not in accordance with the Contract documents, the entire cost of the inspection and testing as well as the replacement of the defective materials or equipment shall be borne by the Contractor.

## 26.0 GUARANTY

- A. The Contractor warrants that all work furnished under this Contract shall be free from defects either in material or workmanship, and shall be suited in all respects both for the purposes for which it is specified hereunder and for all other uses for which it may be represented in writing by the Contractor to be suited.
- B. If any defects in material or workmanship shall be discovered in work furnished under this Contract during the course of the work or within one (1) year from the date of completion of the work as a whole, the Contractor shall forthwith replace or correct such defective work, free from all expense to the Owner, including the costs associated with affected items outside the scope of the Contract, in a manner satisfactory to the Owner. If the Contractor shall fail to replace or correct any defective work after reasonable notice, the Owner may, at its option, cause such defective work to be replaced or corrected, and all costs and expenses incurred in connection therewith shall be borne by the Contractor.
- C. The guaranty period for equipment, parts, or material replaced or repaired during the guaranty period due to defects in material or workmanship shall be one (1) year from the date of repair or replacement.
- D. Contractor warrants without time limit that the work furnished under this Contract shall be free of defects in title and in his design.

## 27.0 PROTECTION OF PROPERTY

- A. The Contractor shall make all necessary provisions to prevent any damage or undue wear, by reason of the work performed under this Contract, to roads, railroads, land, structures, power and communications lines, pipelines or other items, or interferences with their operation or maintenance, all in a manner satisfactory to the owners thereof, and all cost incidental thereto shall be paid for by the Contractor. Any damage done by the Contractor

to the roads, railroads, land, structures, power or communication lines, pipelines, or other items shall be the Contractor's responsibility and he shall repair or replace them if damaged, at his own expense, to the satisfaction of the governmental authorities or the owner thereof. Claims may be settled and paid for by the Owner and charged to the Contractor.

- B. The Contractor shall, unless otherwise specifically provided for, make suitable arrangements with governmental authorities and railroads for the construction of all structures underneath or within road and railroad rights-of-way and to protect and safeguard the public using the roads and the movement of trains, from accident and/or delay all in accordance with the requirements of the owners thereof.
- C. The Owner assumes no responsibility for the condition or maintenance of any road or structure that may be used by Contractor in performing the work, or in transferring men to and from the site or location of the work. No payment will be made to Contractor by Owner for any work performed in constructing, improving, repairing, or maintaining any road or structure for use in the performance of the work. Roads subject to interference by the work shall be kept open by Contractor insofar as possible. Contractor shall provide, erect, and maintain, at his own expense, effective barricades on which shall be placed acceptable warning and/or detour signs at each side of any road obstruction caused by his operations.

#### 28.0 LANDS FOR CONSTRUCTION PURPOSES

- A. The Contractor may have the use of lands for access, storage, construction facilities, and similar purposes, as assigned by the Owner. The Contractor shall confine his operation to the areas assigned and shall adequately protect the areas and adjacent areas from damage due to his operations.
- B. All other lands or the use of lands necessary for the Contractor's operations or deemed desirable by him shall be furnished by the Contractor at his cost.

#### 29.0 WORK WEEK

- A. The scheduled work week shall consist of five (5) eight (8) hour days, Monday through Friday, for a total of forty (40) hours per week unless the Contractor establishes a variant work week as an exception to the contract.
- B. Unless otherwise specified or ordered by the Owner, work may be performed by night as well as by day, and night work may be required in emergencies or to complete work in progress which cannot be practically stopped, but no other night work of any kind shall be performed without written notification to, and approval obtained from, the Owner, twenty-four (24) hours in advance.
- C. Where night work is in progress, sufficient light shall be provided by the Contractor to safeguard the workers and the public, and to afford adequate facilities for properly installing and inspecting the materials.

#### 30.0 CLEANING UP

- A. The Contractor's working and storage areas shall be cleaned daily with all trash and rubbish removed from the site. All fiber shall be left in a safe manner overnight.

- B. At completion of each area of the work and at final completion of all work, the Contractor shall leave the site of his operations clean and free from all extraneous items, rubbish, and debris resulting from his construction operations.
- C. The Contractor shall, after completion of the work, remove and satisfactorily dispose of all temporary works provided by the Contractor to the extent directed by the Owner. He shall remove all temporary facilities from the site; shall remove, grade or fill excavations and embankments made for construction purposes; shall remove all temporary material and equipment; shall remove all temporary supports and shall repair and finish all temporary attachment and connection points to be in an acceptable condition; and shall perform all work necessary to restore the area of his operations to at least as good an order and condition as at the start of work.
- D. Should the Contractor fail to comply with this Section, the Owner will notify him in writing of his failure and if the Contractor's failure is not corrected within twenty-four (24) hours, the Owner will arrange for all necessary cleaning at the Contractor's expense and the cost of the clean-up will be deducted from the Contractor's monthly progress payment. Should the Contractor's failure to comply with the requirements of this Section result in a hazardous condition to safety of personnel or any portions of the plant, the Owner will immediately arrange for all necessary clean-up without regard to the twenty-four (24) hour correction period.

#### 31.0 OWNER'S RIGHT TO STOP WORK

- A. The Owner shall have the right to order the temporary discontinuance of the work under this Contract or any portion thereof when, in the opinion of the Owner, the performance by the Contractor thereof is unsatisfactory to obtain the required results.
- B. If the unsatisfactory condition is promptly corrected by the Contractor, the Owner will authorize resumption of the work. If the Contractor does not promptly correct the unsatisfactory condition, the Owner may proceed under the provisions of Subsection 34.0. Discontinuances of work by order of the Owner hereunder shall not be construed in any way as the basis for a claim for extra compensation by the Contractor.

#### 32.0 RIGHT TO TEMPORARILY SUSPEND WORK BY THE OWNER

- A. If, for any reason other than those provided for in Subsections 32.0 and 34.0, the Owner elects to temporarily suspend performance of the whole or any part of the work hereunder, the Owner may order the Contractor, in writing, to suspend the Contractor's work. In the event of any such suspension, the Owner will pay the Contractor a per diem rate for each day of suspension, such per diem rate to be established by agreement between the Contractor and the Owner at the time of suspension. The agreed rate for "stand-by" during such suspension will be borne by the Owner as extra work.
- B. Orders for suspension and reinstatement of work under this Section will be issued by the Owner to the Contractor in writing. The time for completion of the work so suspended will be extended for a period equal to the time lost by reason of the suspension.

#### 33.0 SUSPENSION OF WORK IF CONTRACT IS VIOLATED

- A. If the whole or any part of the work to be performed under this Contract is abandoned by the Contractor; or if this Contract is assigned by him without the permission of the Owner;

or if the work is sublet by him without the permission of the Owner; or if he is placed in bankruptcy, or if a receiver is appointed for his properties; or if he makes an assignment for the benefit of creditors; or if at any time the Owner decides that the work schedule is not being maintained; or if at any time the Contractor is violating any of the conditions or agreements of the Contract or is executing said Contract in bad faith or not in accordance with the terms thereof; the Owner may notify the Contractor to discontinue all work under the Contract by written notice to be served upon the Contractor by the Owner.

- B. If within a period of time not exceeding five (5) working days after serving of such notice upon the Contractor, an arrangement, satisfactory to the Owner, has not been made by the Contractor for the continuance of the work, the Contractor shall discontinue the work and the Owner may withhold any or all monies due the Contractor.
- C. If an arrangement, satisfactory to the Owner has not been made by the Contractor, then the Owner, without further notice to the Contractor, shall have the power to complete the work herein described by Contract or otherwise, as it may determine, and the Contractor agrees that the Owner shall have the right to take possession of and use any of the materials, plant, tools, equipment, supplies and property of any and every kind provided by the Contractor for the purpose of this work. The expense of so completing the work, together with a reasonable charge for awarding and administering any resulting contracts, will be charged to the Contractor, and the expense so charged will be deducted by the Owner out of such monies as may be due or may at any time thereafter become due to the Contractor. In case such expense is more than the sum which would otherwise have been payable under the Contract, then the Contractor shall pay the amount of such excess to the Owner upon notice from the Owner of the excess so due. The Owner shall not be required to obtain the lowest figures for the work of completing the Contract, but may make such expenditures as in its sole judgment will best accomplish such completion.

#### 34.0 OPTION OF TERMINATION BY THE OWNER

- A. If, for any reason other than those provided for in Section 33.0, the Owner elects to discontinue the whole or any part of the work hereunder, the Owner may, in writing, terminate the Contractor's work under the Contract, in which event the Contractor will be entitled to payment for the work performed up to the time of such cancellation by multiplying the quantities of completed work by the unit prices contained herein or if a lump sum, by an amount proportional to the lump sum, in the ratio which the work actually completed bears to the entire work, as determined and agreed to by the Owner and the Contractor.
- B. In the event of such termination, the Contractor further will be reimbursed by the Owner for such expenditures as in the sole judgment of the Owner are incurred by the Contractor, such as in preparing for and moving equipment to and from the work, and which are not otherwise compensated for; the intent being that an equitable settlement will be made with the Contractor under such circumstances.

#### 35.0 INDEMNIFICATION

- A. The Contractor, at his own expense, shall protect, defend, indemnify and hold harmless the Owner, and their respective parent corporations, subsidiaries, affiliates, and their respective officers, directors, employees, and agents, from and against any and all claims, demands, causes of action, suits, other litigation, damages, liability, loss or deficiency (including attorneys' fees and other costs and expenses incident to any claim, suit, action or proceeding) (hereinafter collectively and separately referred to in this Section as "Claim") whether in favor of a third party or otherwise, arising out of or resulting from, wholly or in

part, any alleged act or omission of the Contractor, any subcontractor at any tier, anyone directly or indirectly employed by any and/or each of them (including, without limitation, employees, servants and agents of any and/or each of them), or anyone for whose acts or omissions any of them may be liable, in connection with or incidental to the performance of this Contract, regardless whether or not the Claim is caused in part by a party indemnified hereunder.

- B. In the event that any employees of the Owner are used by the Contractor, such employees while so used, shall be considered, for all purposes, including, without limitation, those of this Section, as employees, servants and agents of the Contractor and not of the Owner, irrespective of which party pays them.
- C. In any Claim against the Owner, or any of their agents or employees by any employee, servant or agent of the Contractor, any subcontractor at any tier, anyone directly or indirectly employed by any and/or each of them, or anyone for whose acts any of them may be liable, the obligations of the Contractor under this Section shall not be limited, in any way, by any limitation on the amount or type of damages, compensation or other benefits payable by or for the Contractor or any subcontractor under Workers' Compensation Acts, disability benefit acts, or other employee benefit acts.
- D. If the Contractor shall fail to contest and resist any Claim for which he is obligated under this Section within a reasonable time after receiving notice thereof (but in no event not later than thirty (30) days after receiving such notice), the Owner, as the case may be, shall have the right, but not the duty, to satisfy and discharge the Claim by suit, settlement or otherwise. The amount of such Claim determined to be due by way of suit, settlement or otherwise (and attorneys' fees and other costs and expenses incident thereto), shall immediately become due and payable by the Contractor to the Owner, as the case may be, upon demand.

#### 36.0 INFRINGEMENT OF PATENTS

- A. If the Contractor uses any design, device or material covered by letters patent or copyright, he shall provide for such use by suitable agreement with the owner of such patented or copyrighted design, device or material. It is mutually agreed and understood that, without exception, the Contract Price shall include all royalties or costs arising from the use of such design, device or materials in any way involved in the work.
- B. The Contractor shall assume all liability and indemnify and save harmless the Owner from and against all claims, suits, proceedings, damages, losses, expenses, fees, and royalties arising from any infringement, real or claimed, of any patent on any article, machine, manufacture, structure, composition, arrangement, improvement, design, device, method or process embodied or used in the performance of the Contract. The Owner as the case may be, will give written notice of all such claims and patent infringements suits or proceedings instituted against it or them to the Contractor, who shall defend same, and will give the Contractor authority, assistance and all available information to enable him so to do.

#### 37.0 CONSEQUENTIAL DAMAGES

Neither party to the Contract, nor their agents or employees, shall be liable to the other party for consequential damages.

### 38.0 LAWS, REGULATIONS, AND PERMITS

- A. The Contractor shall at all times observe and comply with all federal and state laws, and local by-laws, ordinances, and regulations in any manner affecting the conduct of the work, and shall indemnify and save harmless the Owner against any claim or liability arising from or based on the violation of any such law, by-law, ordinance, regulation, order or decree, whether by the Contractor or by his employees, or by his subcontractors or their employees.
- B. The Contractor shall give all notices as required by all applicable laws, ordinances, rules, and regulations.
- C. The Contractor shall procure all necessary state, municipal, and other governmental permits, licenses and inspections, and shall pay all fees and charges in connection therewith. The Owner may elect to procure and pay for all or some of the permits, licenses, and inspections; in which case, the Owner will indicate this in writing and be responsible for these costs. In the event of violations, the Contractor shall pay all fines and penalties in connection therewith.
- D. A copy of each permit or license shall be furnished to the Owner.

### 39.0 TAXES AND WITHHOLDINGS

The Contractor shall pay all federal, state and local income, gross receipt and franchise taxes, and taxes of every other nature, due and payable by Contractor in connection with all work provided for in this Contract unless specifically stated otherwise. The Contractor shall make any and all payroll deductions required by law including all interest and penalties payable under said law as a result of noncompliance therewith. The Contractor shall hold the Owner harmless from any liability on account of any such taxes or withholdings.

### 40.0 REQUIREMENTS FOR HEALTH AND SAFETY

- A. The Contractor shall observe all federal, state, and local laws and regulations pertaining to health and safety, handling of foodstuffs, water supply, sanitary facilities, and waste disposal and shall provide and maintain the facilities and services necessary to accomplish these requirements.
- B. The importance of safety of all workers on the project shall be recognized and accident prevention shall be an integral part of the Contractor's operations. The Contractor shall have a safety program and shall conduct his work in a safe manner, take all precautions necessary, and shall be solely responsible for the safety of the work. The Contractor and his subcontractors performing any part of the work shall not require any person employed in the performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety as determined under any applicable construction safety and health standards promulgated by the Secretary of Labor pursuant to the Occupational Safety and Health Act of 1970, any amendments thereto and all orders, rules, and regulations issued thereunder.
- C. The Contractor shall notify the Owner as soon as he is aware of pending federal, state or local safety inspections. A copy of all OSHA inspection reports, as well as any state safety inspection reports, shall be submitted to the Owner immediately upon receipt in each instance by the Contractor. A copy of each serious accident and fatality report shall also be submitted to the Owner.

- D. In the event a citation is issued by the Secretary of Labor or his authorized representative pursuant to the Occupational Safety and Health Act, the Contractor shall be responsible for immediate correction of the situation and prompt payment of penalties assessed.
- E. The Contractor shall furnish all reasonable information concerning the safety of the Contractor's operations at the site as may be required by the Owner, including records of accidents to employees, exposure hours of employees, and lost time due to accidents.
- F. The Contractor shall promptly correct safety deficiencies. Upon the failure of the Contractor to promptly comply with any of the requirements of these provisions, the Owner shall have the authority to correct, modify, or stop any operations of the Contractor affected by such failure until such failure is remedied. No part of the time lost due to any such modification of operations or stop orders shall be made the subject of a claim by the Contractor for extension of time or for increased costs.
- G. Should the timely correction of any violation of these provisions require the use of labor or material not provided by the Contractor, the cost of same will be charged against the Contractor's account.
- H. The furnishing by the Owner of guard service and other safety and security measures at the jobsite shall not relieve the Contractor of his complete responsibility and liability for security and safety pertaining to his operations.

#### 41.0 DISPUTES

- A. In the event of a dispute between the Contractor and Owner, the Contractor agrees to proceed with performance of the work in accordance with the Owner's instructions. Should the dispute be settled in favor of the Contractor, the Contract will be equitably adjusted to reflect the resolution.

\*\* End of Section \*\*

## **SECTION 00810 SPECIAL CONDITIONS**

### 1.0 CONTRACTOR PROVIDED SITE SERVICES AND FACILITIES

- A. The Contractor is responsible for furnishing all temporary facilities, and removing said facilities upon completion of the project.
- B. The Contractor shall be responsible for any temporary lighting required for the Contractor's work.
- C. The Contractor shall make, maintain, and remove the Contractor's own connections at the points of supply and also provide and maintain the Contractor's own piping and/or wiring for all water, air, electric power, and other services required for his erection or construction work. All such connections shall be made at points to be approved by the Owner.
- D. Any services provided by the Owner may be interrupted due to causes beyond the reasonable control of the Owner. The Owner shall incur no liability for such interruptions of service.
- E. The Contractor shall provide and maintain all other facilities and services required to perform the work including sanitary, first aid, trash removal, work area lighting, compressed air, telephone, heat and ventilation.

### 2.0 RECEIPT AND RETURN OF MATERIAL

- A. Receipt of Material Furnished by the Owner:
  - 1. In cases where the Owner is providing material for installation by the Contractor, the Contractor shall receive, check, unload and properly store the materials and equipment.
  - 2. The Contractor will prepare necessary receiving reports and shortage and damage reports. Upon receipt of Material received in an apparently damaged condition, the Contractor shall immediately inform the Owner of said damage. The material shall be set aside or handled as required by the owner.
  - 3. When the material and equipment are turned over to the Contractor for storage or installation, he shall provide a receipt acknowledging quantity and condition. After the Contractor has accepted materials, equipment and services furnished by the Owner as being in good condition and correct quantity, Contractor shall be responsible for their safety from loss or damage of any nature until the finished work and/or surplus materials are accounted for and accepted by the Owner.
  - 4. The Contractor shall pay for damage to equipment as a result of the Contractor's unloading operations.
  - 5. The Owner may furnish material to the Contractor at the Project site or at the Owner's Central Services Complex. The Contractor shall be responsible for all costs, transportation and equipment to transfer the material from the warehouse to the Project site and install.

B. Receipt of Material Furnished by the Contractor:

1. The Contractor shall handle ordering and delivery. Material furnished by the Contractor shall be shipped in care of Contractor.
2. The Owner will not accept deliveries for the Contractor, or assume any liability for the Contractor's materials.

C. Maintenance of Materials and Equipment:

The Contractor shall maintain materials and equipment during storage, transfer, installation, and after installation until acceptance, all in accordance with the Manufacturers' warranty requirements.

D. Return of Unused Material

All unused material shall be returned to the Owner. The Contractor shall notify the Owner of the amount of surplus material and the Owner shall check the material for damage and give the Contractor a receipt of its return. The surplus material will be returned to the Owner's Central Services Complex located at 100 Woodbury Lane, Oak Ridge, Tennessee 37830.

3.0 QUALITY CONTROL

A. The Contractor shall perform inspection and provide and implement a quality control program for the work.

B. The quality control program shall include the following:

1. Organization:

The type, number, and reporting relationship of the personnel and a description of their duties, responsibilities, and authority shall be included.

2. Material Control:

Information showing how procurement documents will reflect Technical Specification requirements. The systems for receiving, inspection, identification, handling, and storage of equipment and material shall be described.

3. Document Control:

The system established to assure that only the latest approved Technical Specifications and Drawings are used for construction shall be described.

4. Special Process Control:

The control of special processes such as splicing, terminations and testing, with the approved test equipment, shall be established.

5. Inspection:

The type and frequency of inspection activities to assure compliance with the Quality Control Program shall be specified. Details of inspector training and qualification and calibration of test equipment shall be described.

6. Control of Nonconformance:

Details of the system to report how conditions not conforming to the requirements shall be identified, documented, controlled, resolved, and verified shall be provided.

7. Records:

Quality control records shall be accumulated, reviewed, and stored.

#### 4.0 LABOR RELATIONS

- A. The Contractor and the Contactor's respective subcontractors shall be responsible for labor relations and work assignments related to this Contract.
- B. The Contractor and the Contactor's subcontractors shall be familiar with work assignments in effect at the Project site. Work assignments for the Project shall be reasonable, non-disruptive, and in accordance with the Procedural Rules and Regulations of the Impartial Jurisdictional Disputes Board (or its successor) or NLRB decisions. The Contractor and the Contactor's subcontractors shall coordinate these work assignments in a manner satisfactory to the Owner whether made prior to the start of the work or during construction.
- C. The Contractor shall keep the Owner fully informed as to potential labor problems and labor conditions which may affect the work.

#### 5.0 ACCIDENT PREVENTION/SAFETY PROGRAM

- A. The Contractor shall provide and follow an Accident Prevention/Safety Program related to the Contactor's work, including, but not limited to, switching, outages and lock-out tag-out procedures.
- B. The Contractor's written Accident Prevention/Safety Program shall, as a minimum, address the following areas:
  - 1. The Contractor shall designate the individual responsible for implementation of the Program including indoctrination of new employees, job site inspection responsibilities, program enforcement, the conduct of Contractor's weekly safety meetings, and submission of reports related to jobsite injuries and/or safety.
  - 2. Accident Prevention:
    - a. The Contractor shall specify the scope of indoctrination for new employees, procedures for weekly safety meetings, and the scope and frequency of jobsite inspections.
    - b. The Contractor shall specify the availability and use of protective devices such as head protection, eye protection, hearing protection, respirators, safety belts and lanyards, protective clothing, and other devices.

c. The program shall cover specific procedures for fire protection and prevention of damage to property.

d. The Contractor's program shall set forth specific actions that will be taken to require compliance of the Contractor's Safety Program by his subcontractors.

3. First Aid:

a. The Contractor shall provide personnel trained in first aid procedures.

b. The Contractor shall provide a clearly marked first aid kit at the work site.

c. The Contractor shall provide first aid equipment including stretchers, splints, personnel lifting devices, and blankets.

d. The Contractor shall provide transportation to health care facilities as required.

6.0 FIRE PROTECTION

A. The Contractor shall participate in the Project Fire Protection Program. The following shall apply:

1. Portable dry chemical fire extinguishers shall be provided by the Contractor and shall be located so as to be immediately available during welding, cutting, or burning operations.

2. Flammables and combustibles shall be stored in a safe manner. Excess combustibles, including lumber not in use, cardboard, paper, and similar materials, shall be removed daily from construction areas.

7.0 ENVIRONMENTAL PROGRAM

A. The Contractor and the Contractor's subcontractors shall maintain and enforce a program for the protection of the environment and take immediate action to correct any environmental problems created by their work operations.

B. Particular attention shall be given to the following:

1. Liquid Wastes:

Liquid wastes shall be collected and disposed of offsite. Liquid wastes shall not be disposed of in the site drainage system.

2. Fugitive Dust:

The Contractor shall remove dust producing material to minimize fugitive dust problems.

3. Vehicular Emissions:

Equipment and vehicles shall be in good operating condition and regularly maintained to minimize air emissions.

4. Open Burning:

Open burning will not be permitted.

5. Traffic:

Traffic shall be confined to construction roads only.

6. Disposal of Water:

Water collected during construction shall be disposed of by the Contractor in such a manner so as to fully comply with all conditions set forth by the Owner and any agency of the local, state or federal government.

7. Sanitary and Hazardous Wastes:

The Contractor shall dispose of sanitary and hazardous waste in accordance with all applicable federal, state, and local regulations.

## 8.0 DETAILED SCHEDULE

- A. The schedule dates, made part of this Contract, shall be the basis for the Contractor's detailed schedule.
- B. The Contractor's detailed schedule shall be submitted by the Contractor, in a form acceptable to the Owner, within five (5) days after Contract award for use in monitoring the work.
- C. The Contractor shall furnish the Owner with an updated detailed schedule monthly, at the time that the progress payment request is presented. The updated schedule shall indicate progress to date for each activity, including all changes. Any activities or dates which have been added, deleted or modified shall be circled to highlight the change. Detailed reasons for changes and their effects shall be provided by the Contractor. If the Contract completion or other critical milestone dates are forecast as being later than the date specified in the Contract, the Contractor shall submit a recovery plan by which he proposes to bring the work back on schedule. The plan shall indicate revised manpower and equipment/material requirements.

## 9.0 CORRESPONDENCE AND INVOICES

A. Correspondence and Transmittals:

- 1. Correspondence and transmittals of information shall reference the Contract number and shall be sent to the Owner in triplicate.

By regular mail – Attn: Gary Blanton, Electric Department, City of Oak Ridge, P.O. Box, Oak Ridge, Tennessee 37831-0001

By hand-delivery or overnight/express mail – Attn: Gary Blanton, Electric Department, City of Oak Ridge, 100 Woodbury Lane, Oak Ridge, Tennessee 37830

- B. Invoices:
  - 1. Contractor Progress Estimates and Invoices shall reference the Contract number and shall be sent to the Owner in duplicate. The Owner will review and approve all invoices prior to payment.

#### 10.0 DRAWINGS AND TECHNICAL DATA

- A. Owner's Drawings:

Up to three (3) prints or a sepia of each required Drawing will be furnished to the Contractor without charge. These sets will be turned over to the Contractor at the pre-construction conference. The Owner will, upon request, supply the Contractor with an electronic copy of each available conceptual drawing for use by the Contractor.
- B. As-Built Drawings:

After work is completed, the Contractor shall furnish one (1) complete set of certified drawings reflecting "as built" conditions.
- C. Contractor-Supplied Drawings:
  - 1. Contractor furnished drawings and data shall be prepared and submitted in accordance with SECTION 16300 5.0 and 6.0.
  - 2. The Owner reserve the right to reproduce and distribute any and all drawings or data considered necessary for installation and/or related purposes received from the Contractor through the Contract despite any notice prohibiting the same appearing on drawings or data.
  - 3. If reel testing is necessary all Acceptance Testing and Records of the reels shall be in accordance with SECTION 16300 4.0.

#### 11.0 GENERAL

- A. In respect to General Conditions, obtaining permits are the responsibility of the Contractor.
- B. Contractor agrees to cooperate with local public officials and civic groups in civic matters in the interest of maintaining good community relations. It is planned that the Owner will issue all public statements, press releases and similar publicity concerning the project, its progress, completion, and characteristics. Contractor shall not make or assist anyone to make, any such statements, releases, photographs, or publicity without prior written approval of the Owner.
- C. Contractor shall submit a written request with description and await approval from the Owner prior to erecting any signs at jobsite other than those required for safety purposes.

\*\* End of Section \*\*

## **SECTION 00820 EQUAL OPPORTUNITY PROVISIONS**

- 1.0 This Contract may be 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 will at all times abide by the equal opportunity provisions of the Civil Rights Act of 1964 as amended.
- 2.0 No Bidder shall in any way, directly or indirectly, discriminate against any person because of race, creed, color, national origin, religion, age, sex, sexual orientation, disability or other legally protected status. This requirement includes the process for the selection and retention of subcontractors, procurements of materials and leases of equipment. The City of Oak Ridge encourages the utilization of minority and women-owned businesses in its contracting and subcontracting projects and the successful Bidder is encouraged to actively solicit the participation of these businesses. The successful Bidder shall inform its subcontractors and vendors of this requirement and shall ensure compliance therewith.
- 3.0 Each Bidder shall complete the following Equal Opportunity Compliance Certificate as part of the submitted bid.

**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.

Bidder \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

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

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

**SECTION 00821 TITLE VI COMPLIANCE**

**THE CITY OF OAK RIDGE, TENNESSEE – CONTRACT MONITORING**

Bidder's:

Name: \_\_\_\_\_

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

\_\_\_\_\_

Telephone: \_\_\_\_ ( \_\_\_\_ ) \_\_\_\_\_

Facsimile: \_\_\_\_ ( \_\_\_\_ ) \_\_\_\_\_

For Title VI compliance, we ask for the voluntary disclosure of the following information pertaining to the composition of the employees of your organization and submit it along with your Bid:

Gender:        Male        \_\_\_\_\_        Female        \_\_\_\_\_

Race:        Number of Caucasians: \_\_\_\_\_

Number of Native Americans: \_\_\_\_\_

Number of African-Americans: \_\_\_\_\_

Number of Hispanics: \_\_\_\_\_

Other (please specify): \_\_\_\_\_

I declare that I have completed this information and to the best of my knowledge, it is correct and complete.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name and Title

\_\_\_\_\_  
Date

**SECTION 00830 DRUG-FREE WORKPLACE AFFIDAVIT**

This Affidavit must be submitted with the Bid.

STATE OF \_\_\_\_\_ )  
 )  
COUNTY OF \_\_\_\_\_ )

The undersigned principal officer of \_\_\_\_\_, an employer of five (5) or more employees, contracting with the City of Oak Ridge, Tennessee, to provide construction services, hereby states under oath as follows:

1. That the undersigned is a principal officer of \_\_\_\_\_ (hereinafter referred to as the "Company") and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to Tennessee Code Annotated § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services or who is awarded a contract to provide construction services or who provides construction services to the state or local government to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9 of the Tennessee Code.
3. The Company is in compliance with Tennessee Code Annotated § 50-9-113.

Further affiant saith not.

\_\_\_\_\_  
Principal Officer

State of \_\_\_\_\_ )  
 )ss.  
County of \_\_\_\_\_ )

Before me personally appeared \_\_\_\_\_ with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_.

## SECTION 01010 SUMMARY OF WORK

### 1.0 GENERAL

The project consist of splicing, terminating, testing and prep work of an ADSS Fiber System installed in the primary zone of the City of Oak Ridge, Oak Ridge, Tennessee. The ADSS Fiber System has North and South Side Loops with taps. All fibers in the loops will be spliced and tested, but the taps will only be spliced and tested where designated. The North Side Loop will be the first part of the project to be spliced, terminated and tested. The Contractor will provide all labor, equipment, splice and test data as specified in Section 16300. The Contractor will work with the Owner to have the fiber lowered in a safe work zone to perform the work. No closure of fiber will be left by the Contractor at the base of pole or within ten (10) feet of the ground overnight. The Contractor shall keep a clean and safe work site in accordance of Section 16300.

### 2.0 SPLICING

Single fusion splices of the three ADSS fibers (288, 96 & 48) will be performed in accordance with the specifications as described in Section 16300. The Owner will supply the closures and splice sleeves. Attached in Section 01010 are the splice and termination counts, fiber assignments and an ADSS Fiber Optic Route Map.

Splice records shall be in ELECTRONIC EXCEL format identifying each location, fiber, buffer tube, color, and fiber number with a picture (JPG Format) as completed and prior to final payment. Each fiber shall be labeled with its assigned fiber number which is attached in an EXCEL spreadsheet in this section. The Contractor shall comply with all Splicing and Testing Specifications in Section 16300.

### 3.0 TERMINATIONS

Terminations of the three ADSS fibers (288, 96 & 48) will be performed by the specifications in Section 16300. The Owner will supply the closures, pigtailed and splice sleeves. Attached in this section are the splice and termination counts, fiber assignments and an ADSS Fiber Optic Route Map.

Termination records shall be in ELECTRONIC EXCEL format identifying each location, fiber, buffer tube, color and fiber number with a picture (JPG Format) as completed and prior to final payment. Each fiber shall be labeled with its assigned fiber number which is attached in an EXCEL spreadsheet in this section. The Contractor shall comply with all Splicing and Testing Specifications in Section 16300.

### 4.0 CLOSURE PREP

The closure prep will be done in accordance with the manufacture's specifications and procedures in Section 16420.

### 5.0 REEL TESTING

The reel testing will be a unit price per fiber as proposed in Section 00310 and will be addressed **as an authorized contract amendment** if such testing becomes necessary due to the purchase of additional fiber reels. The fiber for the Fiber Optic Cable System as shown on the route map will be purchased and reel tested by another entity. The Owner will have a copy of the test results. Reel Testing specifications are in Section 16300.

## 6.0 TESTING

All testing shall follow the specifications in Section 16300.

## 7.0 MATERIAL

The Owner will supply the material for the project and the Contractor will be responsible for the material after receiving it. The material will be issued to the Contractor upon request. The delivery point for the material will be the Owner's Central Services Complex located at 100 Woodbury Lane, Oak Ridge, Tennessee 37830. The Contractor shall submit a request two (2) weeks prior to receiving material.

See attached pdf files that are incorporated as part of the Summary of Work, Section 01010: Fiber Splice Cutsheet (one page), FPI Splice Layout (three pages), a map (one page), and Splice Locations and Hardware Counts (three pages).

Site Name	City	Dept. Net.	Future Sonet	Electric	Oak Ridge Schools	Future Sonet	Site
Sub 100	1,2		85,86	97,98,99,100			1
FS1	3,4	73,74	85,86				2
Robersville Pump	5,6	75,76	85,86				3
Outdoor Pool	7,8	77,78	85,86				4
Muni Building	1_96						5
Data Center	13 - 22	79,80	85,86		193-288		6
Penn Pump	9,10	75,76	85,86				7
FS2	11,12	73,74	85,86				8
Sub 300	25,26		85,86	105,106,107,108			9
Cairo Pump	27,28	75,76	85,86				10
Animal Shelter	29,30		85,86				11
Senior Center	31,32	77,78	85,86				12
Sub 400	33,34		85,86	109,110,111,112			13
Sub 800	35,36		85,86	117-120,133,134			14
Sub 500	47,48		85,86	113,114,115,116			15
Y-12 Water Plant	49,50	75,76	85,86				16
CSC	37 - 46	79,80	85,86	121-132	237-240	251,252	17
Sub 600	51,52		85,86	97-192			18
Sub 200	55,56		85,86	101,102,103,104			19
WWT	57,58	75,76	85,86				20
FS3	53,54	73,74	85,86				21
ORHS					193-198	251,252	22
Robertsville MS					199-204	251,252	23
Willow Brook ES					205-210	251,252	24
Linden ES					211-216	251,252	25
Glenwood ES					217-222	251,252	26
Jefferson MS					223-228	251,252	27
Woodland ES					229-234	251,252	28
Stadium					235,236	251,252	29
Administration					241-250,197,198,203,	251,252	30
					204,209,210,215,216,		
					221,222,227,228,233,		
					234,239,240		

Fiber Assignments

	Fiber #'s	CO location	TO:	# of Fibers
City	1, 2	Muni Bldg	Sub 100 - phones	2
City	3,4	Muni Bldg	FS# 1	2
City	5,6	Muni Bldg	Robertsville Pump	2
City	7,8	Muni Bldg	Outdoor Pool	2
City	9,10	Muni Bldg	PA Pump House	2
City	11,12	Muni Bldg	FS # 2	2
City	13 - 22	Muni Bldg	Data Center	10
City	23 - 24	Muni Bldg	VACANT	2
City	25 - 26	Muni Bldg	Sub 300 phones	2
City	27 - 28	Muni Bldg	Cairo Pump Station	2
City	29 -30	Muni Bldg	Animal Shelter	2
City	31 - 32	Muni Bldg	Senior Center	2
City	33 - 34	Muni Bldg	Sub 400 phones	2
City	35 -36	Muni Bldg	Sub 800 phones	2
City	37 - 46	Muni Bldg	CSC	10
City	47 -48	Muni Bldg	Sub 500 phones	2
City	49 - 50	Muni Bldg	Y12 Water Plant	2
City	51 - 52	Muni Bldg	Sub 600 phones	2
City	53 - 54	Muni Bldg	FS # 3	2
City	55 - 56	Muni Bldg	Sub 200 phones	2
City	57 -58	Muni Bldg	WWTP	2
City	59 - 60	Muni Bldg	VACANT	2
City	61 - 72	Muni Bldg	VACANT	12
City	73 - 74	Muni Bldg	Fire Dept Network	2
City	75 - 76	Muni Bldg	Water Dept Network	2
City	77 - 78	Muni Bldg	Pool/Sr Center Network	2
City	79 - 80	Muni Bldg	CSC/Data Center Network	2
City	81 - 84	Muni Bldg	VACANT	4
City	85 - 86	Muni Bldg	Future SONET - not schools	2
City	87 - 96	Muni Bldg	VACANT	10

Fiber Assignments

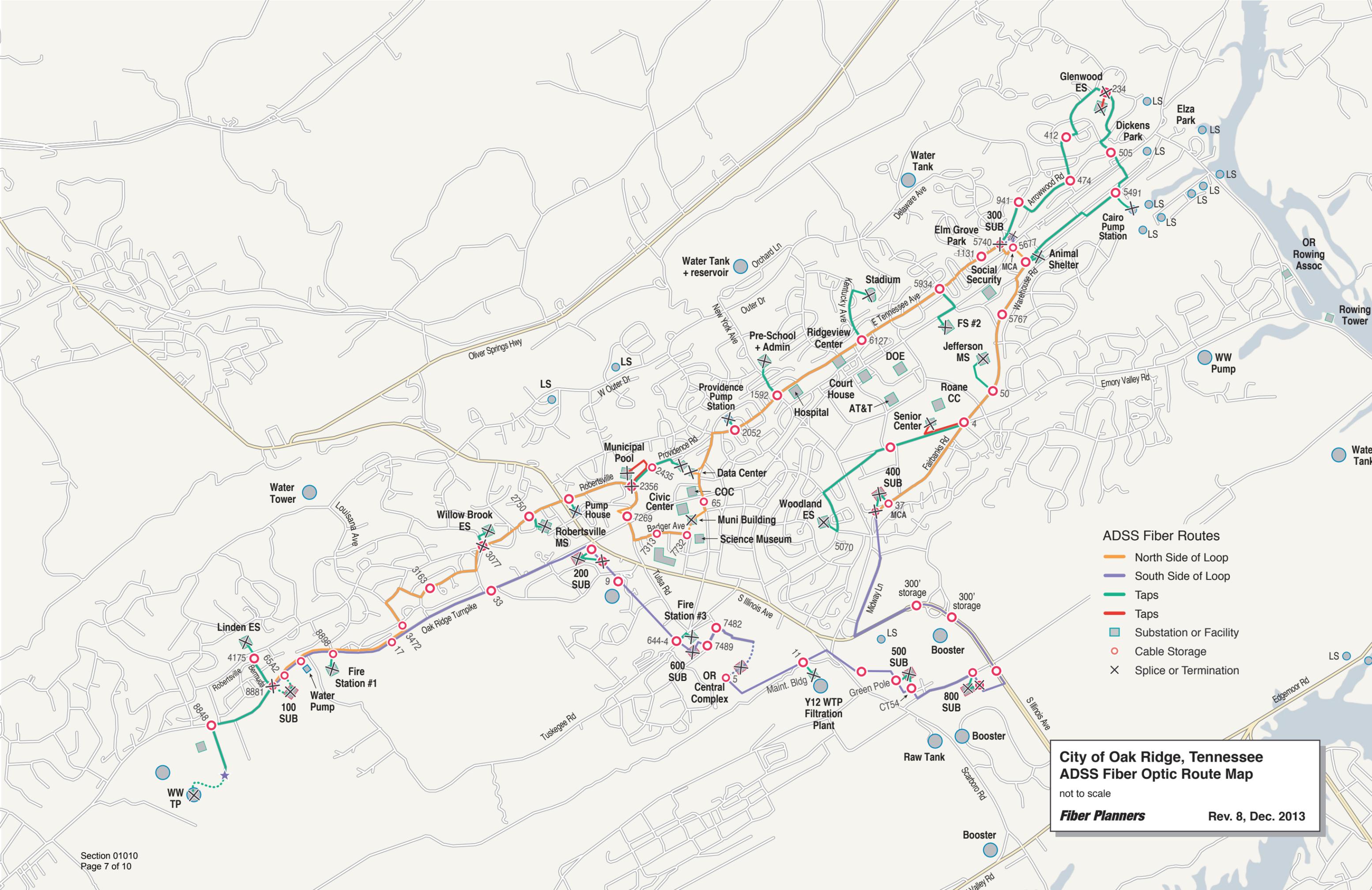
	Fiber #'s	CO location	TO:	# of Fibers
Electric	97 - 100	Sub 600	Sub 100	4
Electric	101 - 104	Sub 600	Sub 200	4
Electric	105 - 108	Sub 600	Sub 300	4
Electric	109 - 112	Sub 600	Sub 400	4
Electric	113 - 116	Sub 600	Sub 500	4
Electric	117 - 120	Sub 600	Sub 800	4
Electric	121 - 132	Sub 600	CSC	12
Electric	133 - 134	Sub 600	Sub 800	2
Electric	135 - 144	Sub 600	VACANT	10
Electric	145 - 156	Sub 600	VACANT	12
Electric	157 - 168	Sub 600	VACANT	12
Electric	169 - 180	Sub 600	VACANT	12
Electric	181 - 192	Sub 600	VACANT	12
Schools	193 - 196	Data Center	High School	4
Schools	197 - 198	DR School Admin	High School	2
Schools	199 - 202	Data Center	Robertsville MS	4
Schools	203 - 204	DR School Admin	Robertsville MS	2
Schools	205 - 208	Data Center	Willow Brook ES	4
Schools	209 - 210	DR School Admin	Willow Brook ES	2
Schools	211 - 214	Data Center	Linden ES	4
Schools	215 - 216	DR School Admin	Linden ES	2
Schools	217 - 220	Data Center	Glenwood ES	4
Schools	221 - 222	DR School Admin	Glenwood ES	2
Schools	223 - 226	Data Center	Jefferson MS	4
Schools	227 - 228	DR School Admin	Jefferson MS	2
Schools	229 - 232	Data Center	Woodland ES	4
Schools	233 - 234	DR School Admin	Woodland ES	2
Schools	235 - 236	Data Center	Blankenship Stadium	2
Schools	237 - 238	Data Center	CSC	2
Schools	239 - 240	DR School Admin	CSC	2

Fiber Assignments

	Fiber #'s	CO location	TO:	# of Fibers
Schools	241 - 246	Data Center	DR School Admin	6
Schools	247 - 250	Data Center	Pre-School/School Admin	4
Schools	251 - 252	Data Center	Future Sonnet (School Locations)	2
Schools	253 - 264	Data Center	VACANT	12
Schools	265 - 276	Data Center	VACANT	12
Schools	277 - 288	Data Center	VACANT	12

96 fiber Mini-Loop Assignments:

City	1 - 6	Muni Bldg	Cairo Pump Station
City	7 - 8	Muni Bldg	Future City SONET
City	9 - 48	VACANT	
Schools	49 - 52	Data Center	Glenwood ES
Schools	53 - 54	School Admin	Glenwood ES
Schools	55 - 56	Data Center	School SONET
Schools	57 - 96	VACANT	



- ADSS Fiber Routes**
- North Side of Loop
  - South Side of Loop
  - Taps
  - Taps
  - Substation or Facility
  - Cable Storage
  - × Splice or Termination

**City of Oak Ridge, Tennessee**  
**ADSS Fiber Optic Route Map**  
 not to scale  
**Fiber Planners**      **Rev. 8, Dec. 2013**

**Provided by Fiber Planners Inc.  
SPLICE LOCATIONS and HARDWARE COUNTS**

location name	type of splice	fusion splices	School terms	City/Water Terms	Electric Terms
WWTP	termination			12	
Pole 8881	full splice	302			
Pole 65A2	MCA	8			
Linden ES	termination		16		
Sub 100	termination			8	8
Pole 3077	full splice	296			
Willow Brook ES	termination		16		
Pole 2750	MCA	16			
Robertsville MS	termination		16		
Pole at Robertsville for pump	MCA	12			
Robertsville Pump	termination			12	
Pole 2356	full splice	302			
Muni Pool	termination			12	
OR HS	termination		16		
Muni Bldg	full splice	192		192	
Data Center	full splice	178	220		
Pole 2052	MCA	12			
Providence Pump House	termination			12	
Pole 1592	MCA	56			
School Admin	termination		56		
Pole 6127	MCA	8			
Stadium	termination		8		
Pole 5934	MCA	12			
FS # 2	termination			12	
Pole 5740	full splice	290			

Last Updated: Dec. 15, 2013, Rev 4  
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**Provided by Fiber Planners Inc.  
SPLICE LOCATIONS and HARDWARE COUNTS**

location name	type of splice	fusion splices	School terms	City/Water Terms	Electric Terms
Sub 300	termination			8	8
Pole 5677	MCA	6			
Animal Shelter pole	MCA	20			
Animal Shelter	termination			8	
Pole 50	MCA	16			
Jefferson MS	termination		16		
Pole 4	MCA	28			
Senior Center	termination			12	
Woodland ES	termination		16		
Pole 37	MCA	8			
Sub 400	termination			8	8
Other pole outside Sub 400	full splice	288			
pole outside Sub 800	full splice	288			
Sub 800	termination			8	12
other pole outside Sub 800	MCA	10			
Pole CT54	MCA	8			
Sub 500	termination			8	8
Green pole outside Sub 500	MCA	8			
Pole 11	MCA	12			
Y12 WTP	termination			12	
CSC	full splice	256	8	28	28
Sub 600	full splice	188		8	192
Pole 644-4	MCA	12			
FS#3	termination			12	
Pole outside Sub 200	full splice	288			

Last Updated: Dec. 15, 2013, Rev 4  
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**Provided by Fiber Planners Inc.**  
**SPLICE LOCATIONS and HARDWARE COUNTS**

location name	type of splice	fusion splices	School terms	City/Water Terms	Electric Terms
Sub 200	termination				16
other pole outside Sub 200	MCA	8			
Pole 8898	MCA	12			
FS#1	termination			12	
Pole 234	full splice	104			
Glenwood ES	termination		16		
pole 5491	MCA	12			
Cairo Pump Station	termination			12	
		3256	404	396	280

Total Water & City Terminations:	396
Total Electric Terminations:	280
Total School Terminations:	404
	1080
 Total Terminations & Fusion Splices	 4336

**SECTION 16050 OWNER FURNISHED MATERIAL**

Dome Closures:

<u>Item</u>	<u>Quantity</u>	<u>Description</u>	<u>Section Reference</u>
1.	8	Coyote One – Buffer 120Ct. w/Hanger #C00Y1-001	16420
2.	29	Coyote Dome 9.5" x 28" w/Hanger #80061055	16420

Wall/Rack Mounted Closures

Installed By OWNER:

<u>Item</u>	<u>Quantity</u>	<u>Description</u>	<u>Section Reference</u>
3.	9	Coyote Axxess Solutions Wall Mount Pre-Terminated Cabinet WDC8A	16420
4.	8	Coyote MPC(Multi-Purpose Closure) MPC-48	16420
5.	4	PLP RDC Cabinet Wall/Rack Mount 288 Port RDC24A	16420

Splice Sleeves:

<u>Item</u>	<u>Quantity</u>	<u>Description</u>
6.	4400	60 mm Heat Shrink Protectors #803509

If necessary the Owner will supply the Contractor with a radio for communications. Radio shall be returned each time the Contractor is gone for an extended time and at the end of the project.

## **SECTION 16300 FIBER OPTIC CABLE SPLICING AND TESTING SPECIFICATIONS**

### 1.0 SCOPE OF WORK

#### A. General:

1. The Contractor shall furnish all equipment and labor required for and incidental to the splicing of All-Dielectric Self Supporting (ADSS) fiber optic cables for the City of Oak Ridge, Tennessee (the Owner).

#### B. Drawings:

1. The route map(s) attached shows the locations and design of the Work and is hereby made a part of this specification. Splice locations, storage locations (i.e. hand hole or pole mounted) and fiber counts to be spliced are shown on the map.
2. Drawings are in general to scale, but calculated dimensions shall not to be scaled from the drawings.
3. In case of discrepancy or omission of dimensions, the Owner shall be consulted for adjustments of any complications resulting from the discrepancy or omission.
4. The Owner shall have the right to issue additional drawings or data necessary to secure completion of the Work.

#### C. Other specifications:

1. The Contractor shall handle the fiber optic cable in strict accordance with the cable manufacturer's specifications and procedures in Section 16410.
2. The Contractor shall use the splice closures provided by the Owner and in accordance with the closure manufacturer's specifications and procedures in Section 16420.

### 2.0 MATERIAL AND SERVICES PROVIDED BY THE CONTRACTOR

#### A. Services:

1. The Contractor shall act as a complete splicing organization, furnishing all supervision and labor to perform the WORK covered in this specification.
2. Splices of ADSS fiber optic cable shall be made only by qualified personnel and equipment approved by the OWNER.
3. The Contractor shall notify the OWNER in advance so that he can be present to witness all splices.
4. The Contractor's work includes, but is not limited to hauling, storing, and protecting all Owner furnished material from the delivery point (City of Oak Ridge Central Services Complex) until final acceptance of the Work.
5. The Contractor shall splice the fiber optic cable as required, in accordance with the cable manufacturer's recommendations in Section 16410, being sure to splice only the designated fibers and take into consideration the minimum bending radius of the fibers.

6. The Contractor shall be responsible for all Owner supplied splice hardware. The Owner shall issue specific instructions for the return of all unused materials.
7. The Contractor shall perform the acceptance testing of the incoming reels from the manufacturer using an approved brand of OTDR. This test shall verify the cables were not damaged during shipment. Readings obtained shall be kept as part of a records package and used later for comparison at completion of the work and acceptance criteria of the work. There shall be NO change in each cable's attenuation at 1550 nm from the cable manufacturer's report. The OTDR data shall be provided in disk and printout form.
8. The Contractor shall fusion splice each fiber of each cable to the corresponding color coded fiber of the next cable in the system or as the specific splicing instructions are provided by the Owner. In which case the Owner shall specify only certain fibers to be spliced in the field or at termination points, per attached map and instructions in Section 01010.

B. Equipment:

1. The Contractor shall provide the equipment, including the OTDR and fusion splicer, tools and materials to be used in the testing and splicing of the fiber optic cables covered in this specification. The Contractor shall furnish at his own cost all temporary or expendable materials required for the performance of the work.
2. The OTDR used shall be Owner approved prior to the work. The brand and model must be clearly stated at the time of the bid process and if changes are needed, Owner approval must be acquired in writing.
3. The fusion splicer shall be of modern technology with accurate and repeatable splice characteristics.

C. Material Reports by Contractor:

1. The Contractor will periodically furnish material status reports to the Owner indicating Owner-furnished materials on hand and materials on order but not delivered.
2. If any Owner-provided, damaged material is encountered, the damaged material must be reported to the Owner and disposition will be given in writing by the Owner.
3. The Contractor will be charged at the replacement cost, plus thirty percent (30%) for handling, for any materials lost or damaged beyond repair after delivery if replacement is procured from the Owner.

D. Material Storage:

1. The Contractor shall take such security measures as are necessary to protect all materials against loss, theft, or destruction.
2. If the cable must be temporarily stored over night while in the process of splicing, the cable ends shall be sealed to prevent water migration and the cable coil(s) stored out of the reach of vandals (10' above ground level min.). The Contractor may opt to use the hand hole, when provided, or provide his own temporary, secure storage. **IT IS UNACCEPTABLE TO TEMPORARILY STORE CABLE AT THE BASE OF A POLE.**

E. Workmanship, Compensation:

1. The unit price per termination or field splice shall include all labor, equipment and materials (except Owner furnished) and expenses and costs which are not to be classified under any other item or items and which may be necessary to completely perform the work to be done under said items in the manner specified herein.
2. All work shall be done and completed in a thoroughly workmanlike manner in accordance with best modern practice for splicing notwithstanding any omissions from this specification or drawings.
3. Contractor shall provide a digital photograph of each splice closure and splice tray after the splice work is complete for each unit and before the closure or tray is closed.

F. Splice Schedules and Progress Reports:

1. The Splice Schedule agreed upon by the Contractor and Owner shall provide for timely and orderly performance of the work in accordance with the specific requirements stated in this specification.
2. The work must adhere to the approved Splice Schedule. If any phase of the work is lagging, the Contractor shall present a plan to show how he will return to the approved schedule.

3.0 MATERIAL AND SERVICES PROVIDED BY THE OWNER

A. Right of Way access and safety:

1. The Owner will secure all right-of-way necessary for the splicing of the fiber optic cable. All restrictions and special provisions in permits, easements, mid-road access or other agreements executed by the Owner shall be strictly observed by the Contractor.
2. Roads subject to interference by the Contractor's work, shall comply with OSHA requirements and State or local laws, whichever is most strenuous.
3. When questions arise as to safe methods or suitable protection, the Contractor shall confer with the Owner but full responsibility for results shall rest with the Contractor.

B. Materials:

1. The Owner will furnish agreed upon materials to be used in the permanent splicing of the fiber optic line. Delivery schedules will be established with the various suppliers by the Owner to provide materials in sufficient quantities for orderly and timely incorporation in the work.

4.0 ACCEPTANCE TESTING OF INCOMING CABLE REELS

- A. Contractor shall test each fiber in each cable using the inside end of the cable to verify that no damage occurred during transportation to the Owner.

1. Each of the fibers in each of the cables shall be completely tested with an OTDR in accordance with EIA-455-59 and EIA-455-61 at 1550 nm and final attenuation test data recorded and reported to the OWNER. Digital OTDR traces shall be supplied to the Owner and if the program is proprietary software, the appropriate program shall also be provided to access the data.
2. All fiber attenuation point discontinuities shall be flagged to the Owner including reel number, cable number and fiber number.
3. Prior to acceptance of each reel of cable, the Owner shall have the option to witness the use of the OTDR by the Contractor to verify each fiber is within the Owner's parameters.

## 5.0 FIBER OPTIC CABLE SPLICES & TERMINATIONS & TESTING

### A. Cable Instructions:

1. End sections of the fiber optic cable (approx. twenty (20) feet) damaged by the application of pulling grips shall be removed before the cables are fusion spliced.
2. The bend radius requirements must be maintained at all times. Particular attention shall be taken when handling the fiber optic cable and when the cable descends the termination structure.

### B. Splice Locations:

1. At the locations where a splice is required, additional cable shall be provided to physically accommodate the splicing process. The length of each cable end shall not be less than thirty (30) feet from the base of the structure, remembering that about twenty (20) feet of cable shall be cut off at the wire mesh grip to assure no damaged fiber is used.
2. In the outdoor environment, splicing shall be accomplished on the ground and not in an aerial bucket. The excess cable at splice points shall be stored in an Owner provided CLAS<sup>®</sup> or pole mounted fixture. Owner shall provide mechanical protection to the cable where it runs along the surface or edge of a structure.
3. Enough cable shall be pulled into the termination buildings to assure that the termination location is reached and enough excess fiber optic cable is available to facilitate cable splicing, remembering that about twenty (20) feet of cable shall be cut off at the wire mesh grip to assure no damaged fiber is used.
4. Inside a termination point, the excess length of fiber required in the splice tray is dependent on the type of fiber organizer and splicing method. Typically, four to six feet of cable is required to facilitate splicing at a termination point, i.e. patch panel. Some excess cable may also be required to provide sufficient cable to splice it at floor level, and not in the cable rack. The Contractor shall mount the splice in the splice rack provided by the Owner.

C. Final Testing and Acceptance:

1. The Contractor shall test each fiber of the 288 fiber cable and only the connected fibers of the 96 fiber cable and the 48 fiber cable after the cable has been installed to verify that no damage has occurred during installation. The Contractor shall perform testing of each splice after all splicing of the particular fiber cable is complete. No splice shall be considered complete until all splice records and pictures are turned into the Owner and approved.
2. Each of the fibers in the 288 fiber cable and only the connected fibers of the 96 fiber cable and 48 fiber shall be completely tested with an OTDR in accordance with EIA-455-59 and EIA-455-61 at 1550 nm on a bidirectional averaged basis and final attenuation test data recorded and reported to the Owner. The final OTDR Traces shall be supplied on a thumb drive to the Owner and if the program is proprietary software, the appropriate program shall also be provided to the Owner at no additional cost.
3. There shall be no fiber attenuation point discontinuity greater than 0.1 dB at 1550 nm using an OTDR.
4. The splice loss of each fiber at each splice location shall be less than 0.20 dB at 1550 nm on a bidirectional averaging basis.
5. Prior to acceptance of each installed fiber optic section of the system, the Owner shall have the option to witness the use of an OTDR by the Contractor to verify each fiber, each fiber pigtail and each splice is within the Owner parameters.

6.0 SPLICE RECORDS

- A. Prior to final payment, the Contractor shall provide the Owner with an accurate record of each splice location compiled in ELECTRONIC EXCEL format. The EXCEL format shall identify each location, fiber, buffer tube, color, and fiber number and contain a picture (JPG Format) when complete. Each fiber shall be labeled with its assigned fiber number. This record shall include digital OTDR traces with legible fiber labels, notes on the splice time factor and cabled refractive index for each cable. The record format shall be approved prior to submission.
- B. The Contractor shall provide clear documentation of each splice location, including the structure number, cable sheath meter markings on each cable end, and nearest street crossing when possible.

7.0 CLEANUP

- A. As part of the work, the Contractor shall completely remove and satisfactorily dispose of all debris and equipment and shall do all work necessary to restore the site to at least as good order and conditions as at the beginning of the work under the Contract.
- B. The Contractor shall make adequate provisions for disposing of all refuse material in accordance with applicable laws or ordinances.
- C. No burying of materials or debris will be permitted on the right-of-way.

**SECTION 16410 CABLE MANUFACTURER'S SPECIFICATIONS AND PROCEDURES**

See the attached pdf file of the Cable Manufacture's Specifications and Procedures, which is a four page document titled "ADSS Cable Installation Safety & Handling Recommendations.

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### 1.0 Scope & Purchase

This guide provides general recommendations for the selection of methods, equipment, and tools for the stringing of Draka Comteq ADSS (All Dielectric Self-Supporting) fiber optic cables including ezSpan and Long Span ADSS cables. The installation methods for Draka’s ADSS cables are essentially the same as those used for installing power utility conductors. The IEEE Guide to the Installation of Overhead Transmission Line Conductors will provide additional relevant information about installation practices.

Questions? Call 1-800-879-9862

### 2.0 References

IEEE Standard 524-1992, Guide to the Installation of Overhead Transmission Line Conductors.  
IEEE 1993 National Electrical Safety Code.  
immediately.

### 3.0 Safety

All safety practices of the Power Utility and the Installation contractor must be followed. These safety procedures take precedence over any information contained in this document.

### 4.0 ADSS Stringing Methods

The “Stationary Reel” method is recommended to install ADSS cable. This method requires the cable reel to be stationed at one end of a pull with the take-up reel at the other end. A pull line is threaded through travelers using a p-line of

matched weight and diameter. Once the p-line is threaded and all the travelers are balanced/tied up, the ADSS cable is attached to the p-line using a woven wire pulling eye and the take-up mechanism can start the pull. The ADSS cable must be pulled through the travelers under tension to prevent damage from minimum bending radius violations. The “Moving Reel” method is not recommended for ADSS installation because pulling tensions and loading on the hardware are uneven. Also, it is difficult to keep constant tension on the cable in the tangent travelers between dead-end points. Uneven tensions can cause damage to the jacket and create minimum bending radius violations. ADSS cable distribution and transmission line installations are similar. Transmission lines require more precautions if the line voltage is 230 kV or greater and grounding of the travelers may be required. Another concern is the distance from the live conductors at the attachment point on the structure. Standard utility precautions should be used if the length of the fiber optic dead-end reaches close to the region of the conductor.

### 5.0 Precautions & Safety

Care must be taken to avoid damage to ADSS cable during handling and placing. It is critical to observe the cable specified minimum bending radius and maximum pulling tensions. Precautions must be taken to avoid sharp bends or exceeding the recommended tensions.

Cable reels should be transported in an upright position, on the flanges only. Never lay the cable reel on its side. Inspect the reel flanges and ensure the inner surfaces do not contain any splinters or nicks that could damage the cable jacket when paying off.

Safety devices such as guard poles or mid-span pulleys need to be installed for protection at all public roadways, utility lines, and railroad crossings. If crossing distribution lines, those lines need to have temporary insulators installed. Survey the cable route before starting to ensure it is clear of obstructions, including fences and walls. Do not allow cable to drag over obstructions.

## 6.0 Installation Equipment

**Grips and Pulling Eyes:** Chinese finger type pulling eyes are recommended to attach the cable to the pulling line.

**Travelers (Sheaves, Pulleys):** The travelers must have a soft neoprene or similar material liner to cushion the cable from the bare metal of the traveler. The liner or insert must be smooth and show no signs of wear and tear. It is unacceptable for a traveler to have sections of cushion missing or worn through at the bottom of the groove.

**Pulling Rope:** The pulling rope must be well matched to the cable diameter and cable weight. This will better prepare the travelers in the system to balance the load as the cable is pulled and allow the cable to ride in the bottom of the traveler groove.

**Tensioner:** A bull wheel tensioner with a brake is recommended for an ADSS installation.

**Puller with sufficient pull rope capacity:** The puller should be equipped with a brake to keep constant tension of the cable as it is being installed.

---

## 7.0 Cable Hardware

### 7.1 Fiber Optic Tangent

**Fiber Optic Tangent:** Used as cable suspension hardware only on spans less than 350 feet when the angle of change, either horizontal or vertical, is less than 15°. The tangent clamp is designed to hold the cable in the air at the pole without gripping the cable as with a suspension (described below). The tangent is designed to allow the cable to slip through the unit at a tension imbalance greater than 400 pounds. There are several different approved suppliers of the tangent hardware, each with different designs. Please refer to Draka for recommendations of the advantages/disadvantages of each for your applications.

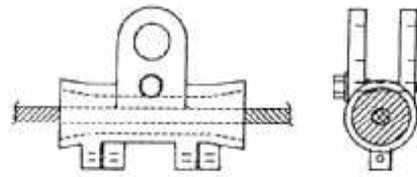


Figure 1. Fiber Optic Tangent

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### 7.2 Armor Grip Suspension (AGS)

**Armor Grip Suspension (AGS):** Used for any span length with an angle change, either horizontal or vertical, less than 30°. An AGS Suspension shall be used for in-line structures if the span is greater than 350 feet.

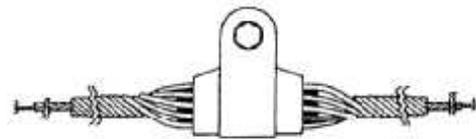


Figure 2. AGS Suspension

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### 7.3 Fiber Optic Dead-ends

**Fiber Optic Dead-ends:** Used in several instances. A dead-end is installed at each end of the cable length to attach to the structures. Two deadends are used at angle changes of 30° or greater, either horizontal or vertical. If the structures are in-line but have a vertical difference greater than 20°, deadends shall be used to distribute the cable through the incline/decline.



Figure 3. Fiber Optic Deadend

## 8.0 Typical Stringing Operations Procedures

### 8.0 Installation Equipment Sites

**Installation Equipment Sites:** It is important to pick proper locations for the pay-off and take-up equipment. The ADSS cable reel (pay-off) must be located directly in line with the first traveler and must be back from the structure four times the height of the traveler (4:1 distance to height ratio). It is recommended to have at least three structures before the first large angle change. The equipment and ADSS cable reel should be in a safe and secure location, worry-free from vandalism or theft since the equipment could sit overnight.

### 8.1 Traveler Installation

**Traveler Installation:** Each structure in the pulling segment must have a traveler installed and a pulling rope threaded (reeved) through it. Each traveler must be balanced so that the rope, and the following ADSS cable, ride at the bottom of the neoprene insert's groove. It is important to tie up the traveler at each angle so the pulling rope and ADSS cable enter and exit the traveler smoothly (See Figures 4 and 5 at right). If the cable enters at an angle, it increases the chance of jumping from the traveler groove into space between the traveler and the yoke holding the traveler to the pole. This would cause severe damage to the cable.

### 8.3 Pulling Lines

**Pulling Lines:** Once the travelers are installed, the pulling rope shall be threaded (reeved) through the system. It is extremely important that the pulling rope and the ADSS cable have the same diameter and approximate weight. This will allow the travelers to float at the same level with the pulling rope as they will when the ADSS cable enters the travelers. The pulling line should be all dielectric and not susceptible to internal, electrical static charge build up. The pulling rope should never be allowed to drape over distribution lines or slump between pole attachments. It should have constant tension throughout the operation.

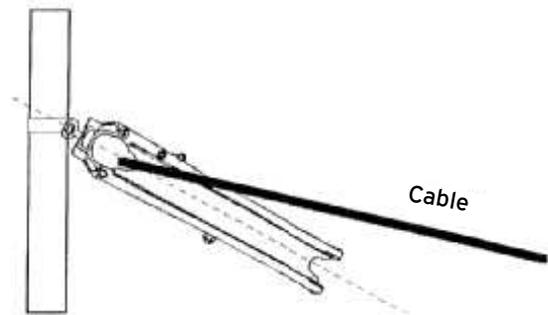


Figure 4. Incorrect Traveler

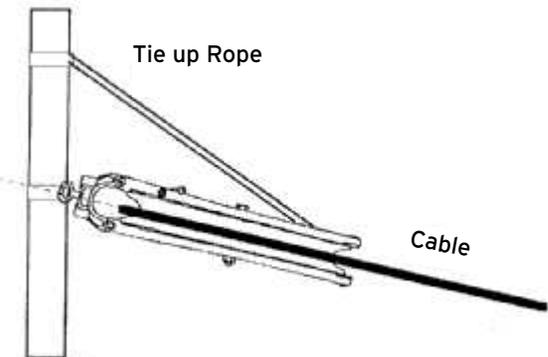


Figure 5. Correct tie up of Traveler

## 9.0 Pulling ADSS

The ADSS cable shall be attached to the pulling rope using a double swivel eye and woven wire grip. The double swivel eye insures the ADSS cable will not see induced torque as the pulling line enters and exits each traveler. A “flag” shall be attached just behind the swivel eye on the ADSS cable jacket.

This flag should stay straight through each traveler. If the flag starts to flip over the cable, it shows the swivel eye is not working properly and the pulling operation should be stopped and oil or fix the swivel. The woven wire grip shall be of sufficient length on the cable jacket to insure even loading of the cable strength members. The edges of the woven wire grip should be taped smooth so the grip does not damage the neoprene inserts

## 10.0 Sagging

The ADSS cable shall be sagged from the pay-off (cable reel) end and work back toward the take-up equipment starting with the deadend at the first structure near the cable reel. The sag can be adjusted using several methods. The recommended method is the ‘line of site’ method. This requires the sag distance to be determined ahead of time for each particular span length. One or more spans between deadend locations should be checked using this method.

“Line of Sight” sagging method requires climbing both structures on either side of a span to be checked. The structure closest to the pay-off end of the system is deadended. Then the next structure is marked using bright colored tape with the appropriate mid-span distance from the attachment height. The lineman returns to the payoff end structure and measures down the mid-span sag distance and places his line of site at that same height. This person should have radio contact with the take-up operator and give instructions of how much to tighten the cable in the system so that the bottom of the sag of this particular span rises to match the bright colored tape mark on the opposite structure. Once the sag matches the requirement, the take-up side deadend structure can be climbed and clipped in. The bottom of the sag shall always be brought up to the proper sag, not loosened or brought down to the correct sag.

There are two methods of pulling the cable back to the structure to deadend it. A deadend can be partially installed to supply a pulling loop, or an aramid yarn braided pulling eye may be used. It is not acceptable to use a hoist or clamping device at mid-segment to temporarily pull cable.

## 11.0 Clipping-in and Deadending

The system segment shall first be sagged and deadended at the appropriate structures. The deadends shall have a sufficient drip loop between two deadends on a structure to allow free movement. The deadends shall be attached to the structure using an extension link (Draka recommends using at least a 12” extension link) in order to get proper distance from the structure to allow the drip loop. The drip loop should be positioned downward and at least 12” deep. Next the AGS Suspensions and Tangents can be installed. The installing of the suspension hardware, i.e. Deadends, Tangents and AGS Suspensions shall be prompt. The ADSS cable shall not be allowed to sit in the travelers more than one week without approval from Draka. Grounding the suspension hardware is the choice of the owner of the system. Transmission line installations typically ground the hardware at each pole, while distribution installations typically don’t use grounding. Refer to Draka for further recommendations for a particular project.

## 12.0 Damper Installation

If the system requires Aeolian vibration dampers, they can be installed after the suspension hardware is in place at each individual structure. Dampers are generally needed only if the installation tension exceeds 15% of the cable breaking strength and if span lengths exceed 350 feet. Please refer to Draka if there is concern about a potential vibration situation.

## 13.0 Splicing

Splicing should be performed on the ground. The splice can then be stored aurally (recommend at least 18 feet off the ground), at ground level in pedestal or cabinet, or underground in a hand hole or manhole. Sufficient length of cable ends should allow the cable to descend the structure and enter a splicing vehicle. Each splice should have at least a small storage loop to allow the splice to be moved from the base of the pole if the splicing vehicle can not be located close by. **Twenty feet of cable shall be discarded from each pulling grip end to remove damaged or stressed cable.** Then typically, each cable end should have at least 50 feet discarded from the deadend attachment. Cable Down Guides should be used to attach the ADSS cable to the structure along the entire pole height.

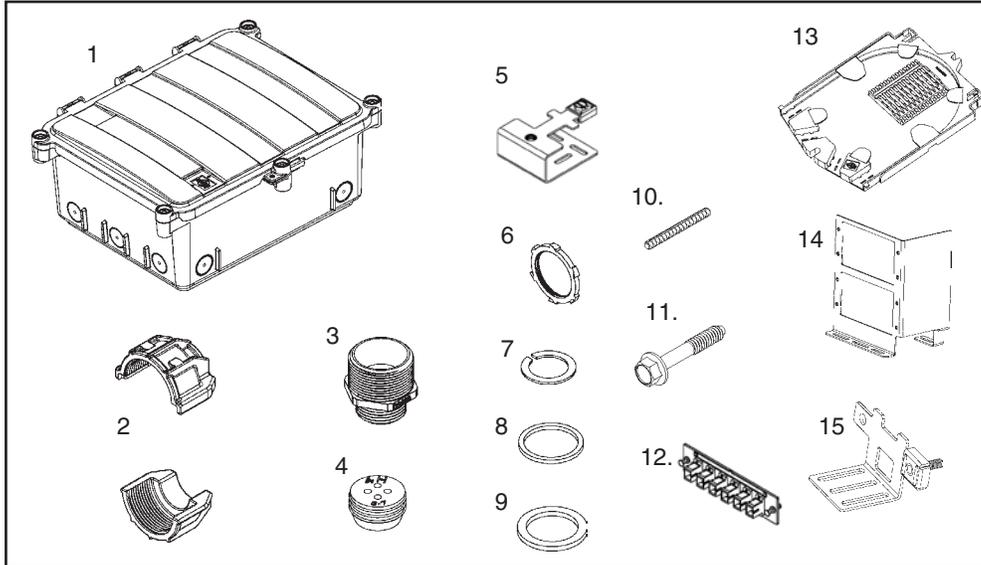
## **SECTION 16420 CLOSURE MANUFACTURER'S SPECIFICATIONS AND PROCEDURES**

See the attached pdf files of the Closure Manufacturer's Specifications and Procedures. Attached documents include specifications on COYOTE® Deep MPC (Multi Purpose Closure) with Internal Bulkhead, COYOTE® AXCESS SOLUTIONS Wall Mount Cabinets, COYOTE® Dome, COYOTE® ONE Closure, and COYOTE® AXCESS SOLUTIONS Rack Mount Cabinets.



# COYOTE® Deep MPC (Multi Purpose Closure) with Internal Bulkhead

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED product before application. **NOTE: Other configurations for this closure are available. Contact your PLP Representative for additional information.**



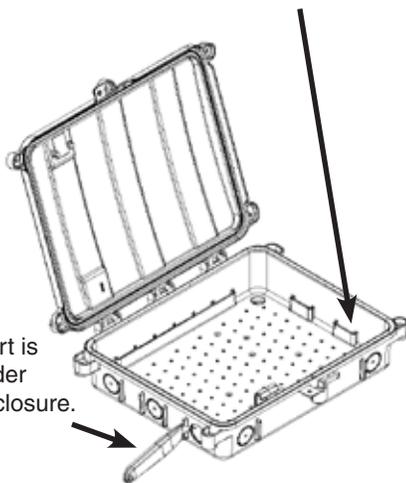
### NOMENCLATURE

- |  |                          |                             |
|--|--------------------------|-----------------------------|
| 1. MPC Closure Assembly (Cover and Base) (1) | 6. Metal Nut             | 11. Hex Head Flange Bolt    |
| 2. Adapter Port Nut                          | 7. Thrust Washer         | 12. Adapter Plate           |
| 3. Grommet Port Adapter                      | 8. Rubber Sealing Washer | 13. Splice Tray             |
| 4. Grommet                                   | 9. Plastic Washer        | 14. Adapter Plate Bulkhead  |
| 5. Tray Bracket (2)                          | 10. Stud                 | 15. Cable Restraint Bracket |

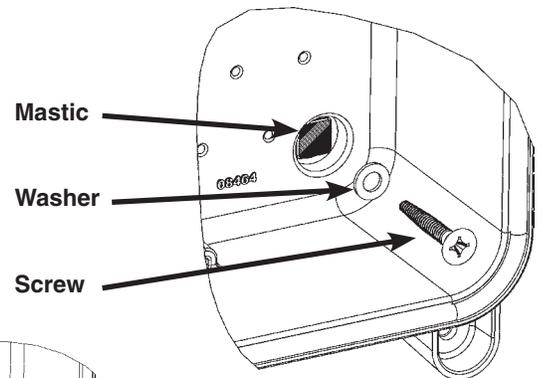
**Step #1** Prepare entry port by tracing around the selected entry port location with a utility knife until the center of the port can be removed. Repeat this step for each entry port location to be removed.

Top right port is the location for local cable exiting closure.

Bottom right port is location for feeder cable entering closure.

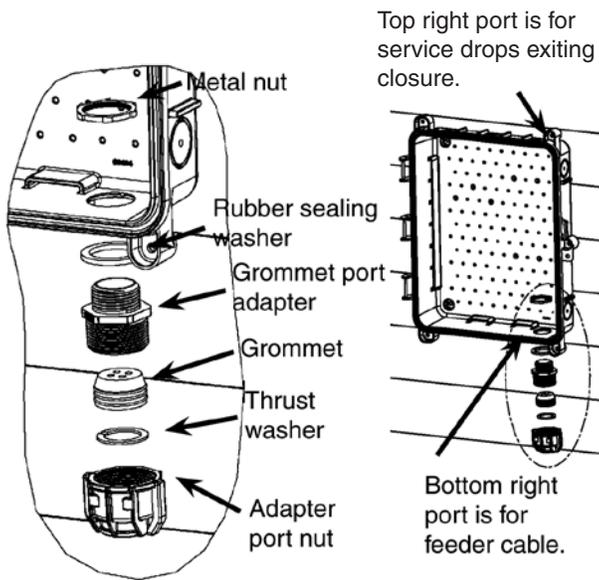


**Step #2** For water prevention into closure, place a square piece of mastic into fastener location and secure closure to wall with screw and washer (not provided).

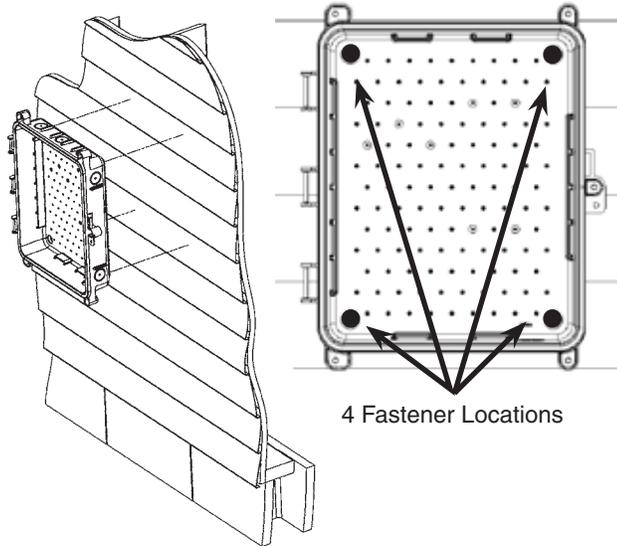


**NOTE:** If mastic is not used, silicone caulk may be used to seal fastener location after the closure has been attached to the wall.

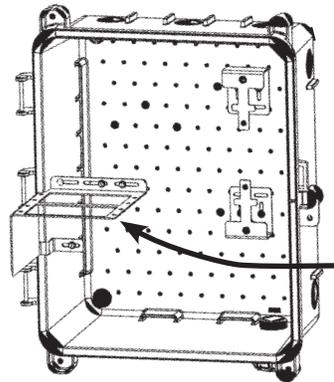
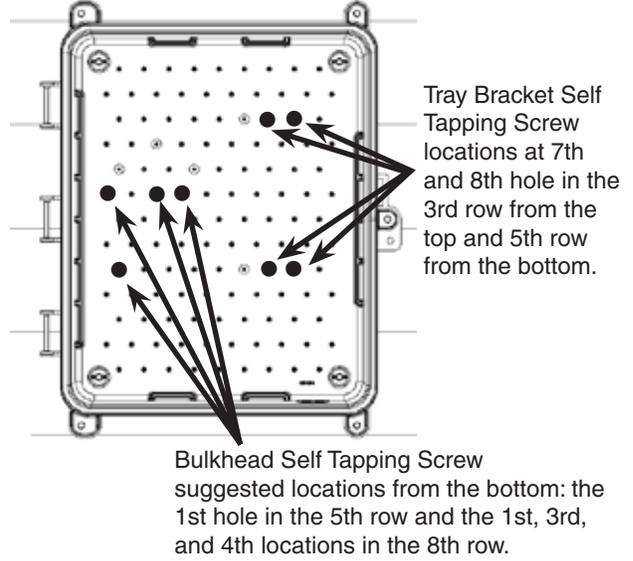
**Step #3 Step Grommet Installation.** Install the step grommet in the selected port by positioning the edge of the port in the groove of the step grommet.



**Step #4** Mount and secure closure assembly to wall at 4 fastener locations.

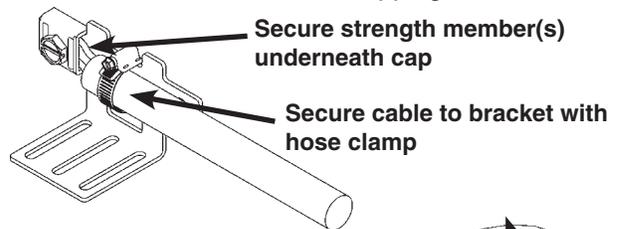


**Step #5 Tray Bracket and Adapter Plate Bulkhead Installation.** Secure brackets and bulkhead using the self tapping screws provided.

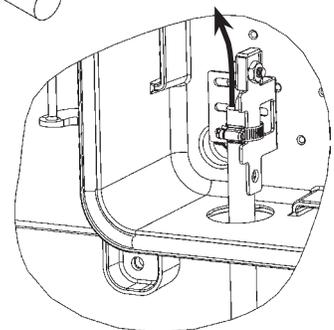


**PLP Tip:** Install adapter plate in bulkhead before installing bulkhead into base.

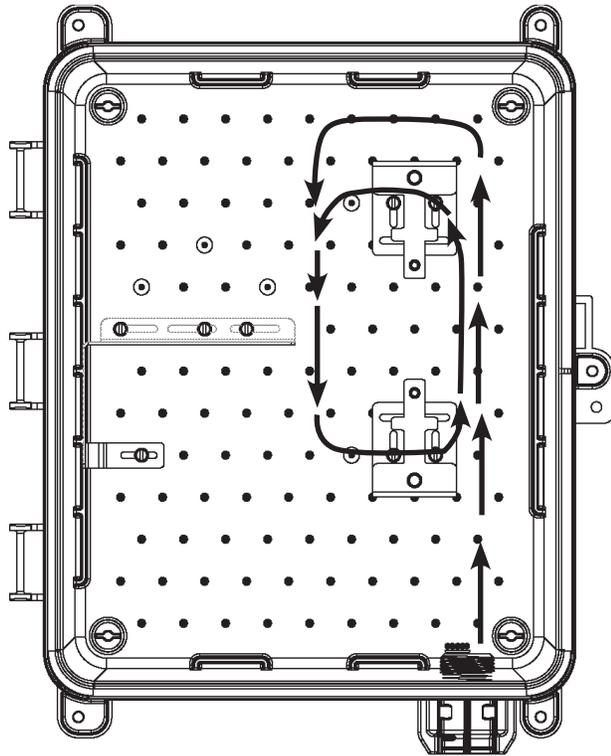
**Step #6 Cable Restraint Bracket Installation.** Secure cable to cable restraint bracket before securing cable restraint bracket to base with self tapping screws.



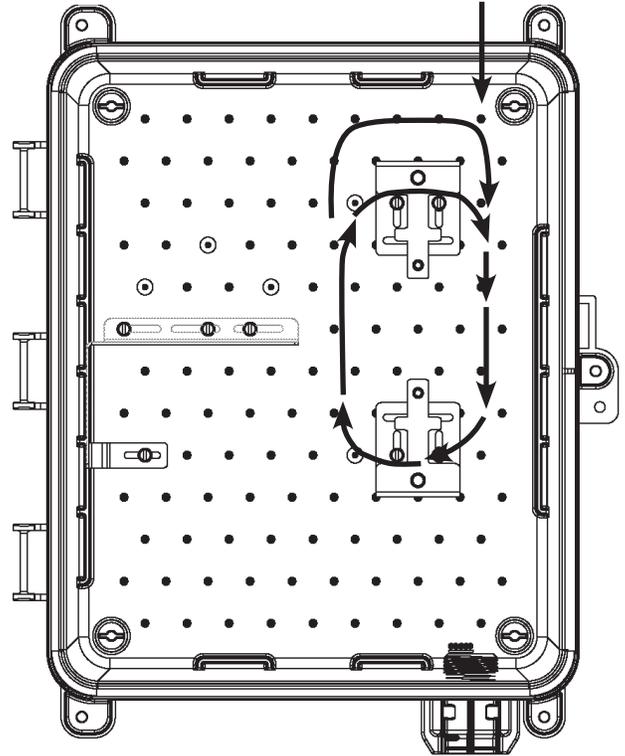
**NOTE:** Make sure cable is secured to the side of the bracket in which the cable will bend.



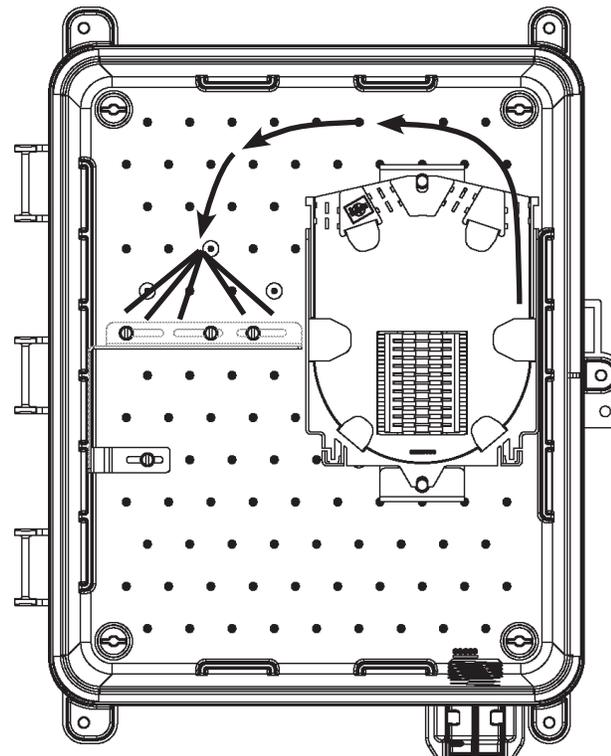
**Step #7 Cable Routing – Incoming Feeder Cable**



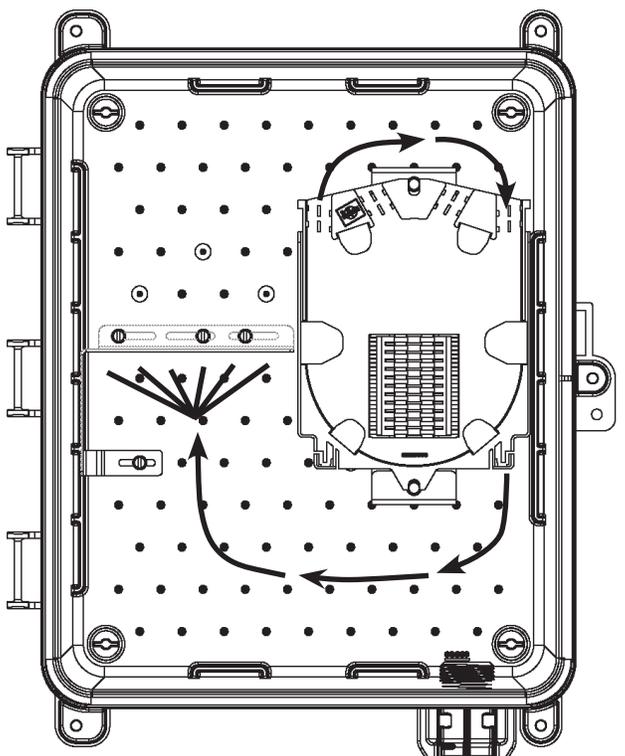
**Step #9 Pigtail Routing – Incoming Local Cable**



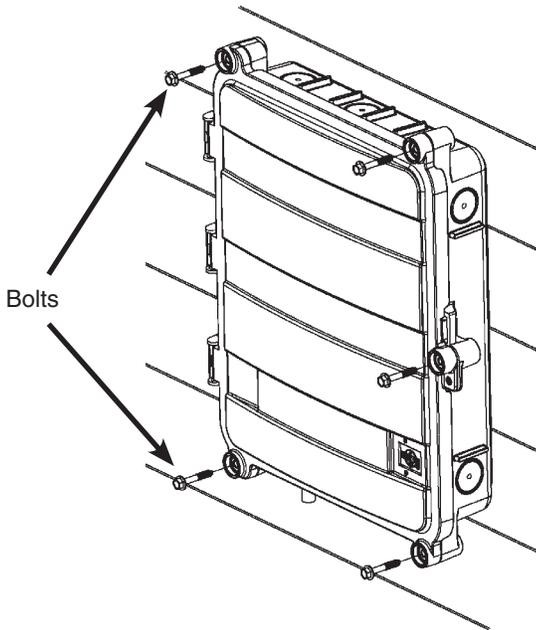
**Step #8 Pigtail Routing – Feeder Pigtails**



**Step #10 Pigtail Routing – Local Pigtails**



**Step #11** Secure closure door with bolts. Hand tighten bolts until closure door is fully seated on base.



## SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

**Do not modify this product under any circumstances.**

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



# PREFORMED LINE PRODUCTS

P.O. Box 91129, Cleveland, Ohio 44101 • 440.461.5200 • [www.preformed.com](http://www.preformed.com) • e-mail: [inquiries@preformed.com](mailto:inquiries@preformed.com)  
**SP3097**

## COYOTE® AXCESS SOLUTIONS WALL MOUNT CABINETS (for 12 and 24 fibers)

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before application.

Catalog Number	Product Description
WDC2	Wall Mount Cabinet with Splice Tray Holder up to 12 Fiber Connections
WDC4	Wall Mount Cabinet with Splice Tray Holder, up to 24 Fiber Connections

CONTENTS	PAGE	CONTENTS	PAGE
1. NOMENCLATURE.....	1	5. PIGTAIL PREPARATION AND ROUTING .....	2,3
2. DESCRIPTION .....	1,2	6. FIBER SPLICING AND ROUTING .....	3
3. MOUNTING ON WALL .....	2	7. JUMPER ROUTING.....	3
4. PREPARATION AND ROUTING OF FEEDER CABLE .....	2	8. ACCESSORIES .....	3,4
		9. SAFETY CONSIDERATIONS.....	4



**FIGURE 1 - NOMENCLATURE**

### 1.00 NOMENCLATURE

- 1.01**
1. Wall Mount Cabinet Assembly
  2. Adapter Module (sold separately)
  3. Small Parts Bag (mounting screws, tie wraps, ground lug)

### 2.00 DESCRIPTION

- 2.01** The COYOTE AxcCESS Solutions Wall Mount Cabinets are designed to protect and organize optical fiber splices and connectors in the central office, equipment room, CEV and building entrances.

**2.02** Two sizes of cabinets with optional Splice Trays are available to accommodate from 12 to 24 fiber splices and connectors. Cabinets with COYOTE Splicing Systems are available for 48 to 144 splices and connectors.

**2.03** Adapter Modules are available with all standard fiber optic connectors and are ordered separately.

### **3.00 MOUNTING ON WALL**

**3.01** Remove the front cover by lifting it off the lower hinge section.

**3.02** Remove the cover from the splicing chamber by lifting it out of the slots on the left side.

**3.03** Position the rear section of the cabinet against the plywood backboard or wall where it is to be located, level, and mark the center of the four mounting hole locations.

**3.04** If a plywood backboard is used, drill a small pilot hole at the marks, otherwise install the appropriate anchors at the marked locations.

**3.05** Fasten cabinet securely to the wall.

**3.06** Secure the provided ground lug to the threaded hole in the left side of the cabinet with the 1/4-20 x 1/2" pan head screw provided.

**3.07** Ground the cabinet to an approved ground with a #6 solid copper wire (or equivalent) attached to the ground lug.

### **4.00 PREPARATION AND ROUTING OF FEEDER CABLE**

**4.01** Remove the plug from the cable entry to be used (top or bottom) and install the appropriate non-metallic conduit fitting (if required).

**4.02** Install the L-Bracket assembly adjacent to the entry being used with the 1/4" bolt, nut and lockwasher provided.

**4.03** Feed the cable through the conduit (if required) into and through the cabinet.

**4.04** With the end of the cable jacket extending 1-1/2" (38 mm) into the cabinet, remove a minimum of 80" (2032 mm) of sheath from the cable for the WDC2, and 100" (2540 mm) for the WDC4.

**4.05** Thoroughly remove all filling compound from the buffer tubes or unitube using your accepted company practices.

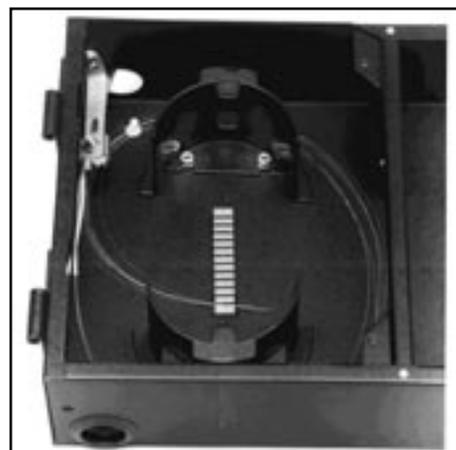
**4.06** If required, install a bond connector at the end of the cable jacket, and secure it to the L-Bracket Assembly.

**4.07** Capture the central strength member and any other strength member into the clip on the L-Bracket Assembly.

**4.08** Mark the buffer tubes or unitube about 3" (76 mm) beyond the end of the L-Bracket Assembly.

**4.09** Remove the buffer tube or unitube up to the mark and clean according to your accepted company practices.

**4.10** Loosely route the bare fibers twice around the splicing compartment and into the bottom groove of the Splice Block as shown in Figure 2. Cut off excess fiber length just beyond the end of the Splice Block.



**FIGURE 2 - ROUTE FIBER**

**4.11** Drape the fibers over the Fiber Radius Hoops and use the felt strips to secure the fibers to the back of the splicing compartment.

### **5.00 PIGTAIL PREPARATION & ROUTING**

**5.01** The following are the required pigtail lengths for each COYOTE Axxess Wall Mount Cabinet:

- WDC2.....2 meters
- WDC4.....2 meters

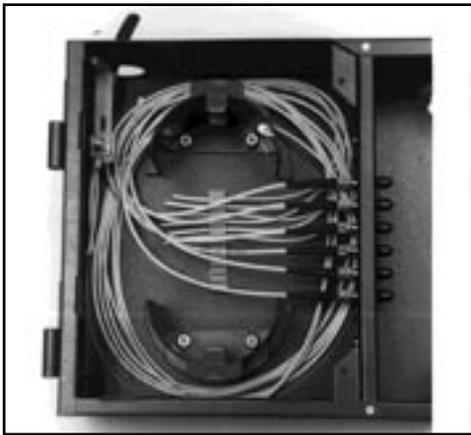
**5.02** Select one of the Adapter Modules (purchased separately) and install it in one of the locations in the cabinet bulkhead with the locking

fasteners on the inside of the splicing compartment. Push the locking fasteners at the ends of the Adapter Modules to secure it in place.

**PLP TIP:** Install the back Adapter Modules first to ease assembly.

**5.03** Select six pigtails, clean the fiber connector, and connect them to the splice chamber side of the Adapter Modules.

**5.04** Route the pigtails through the center of the Fiber Radius Hoops, around the splicing compartment one and one-half turns and into the Splice Block as illustrated in Figure 3. Remove excess pigtail length.



**FIGURE 3 - ROUTE THE PIGTAILS**

**5.05** Mark the jacket of each of the pigtails at a point 2" (51 mm) beyond the bending radius as shown in Figure 4.



**FIGURE 4 - MARK PIGTAILS**

**5.06** Carefully remove the jacket on each pigtail up to the mark. Number or color code the connector strain relief and the 900 micron tight buffer for fiber identification.

**PLP TIP:** PLP® has pigtails available with different colored 900 micron tight buffer coatings to simplify fiber identification.

## **6.00 FIBER SPLICING AND ROUTING**

**6.01** Lay the pigtail fibers into individual grooves of the Splice Block and mark the pigtail fibers just beyond the center of the Splice Block.

**6.02** Disconnect the Adapter Modules with installed pigtails from the bulkhead and remove the pigtails from the splicing compartment for the splicing operation.

**6.03** Mark the feeder cable fibers just beyond the center of the Splice Block and uncoil the fibers from the splicing compartment for the splicing operation.

**PLPTIP:** Use felt tape to secure the fibers to the back of the splicing compartment just beyond the end of the buffer tubes or unitube to avoid undue bending of the fibers during this operation.

**6.04** Splice the pigtail fibers to the feeder cable fibers using accepted company practices.

**PLP TIP:** Use the cover of the splicing compartment as a work table by placing it into the grooves at the bottom of the splicing compartment.

**6.05** Lay the completed splices into individual grooves of the Splice Block.

## **7.00 JUMPER ROUTING**

**7.01** Clean the fiber connectors and attach the jumpers to the right side of the Adapter Modules.

**7.02** Gently bend the jumpers toward and through the grommet on either the top or bottom of the cabinet.

**7.03** Lightly secure the jumpers to the tie down post with the tie wraps provided.

## **8.00 ACCESSORIES**

**8.01** Page 4 tables detail the Adapter Modules and Pigtail Assemblies available for the COYOTE Access Solutions Wall Mount Cabinets.

<b>Adapter Modules</b>			
<b>Catalog No.</b>	<b>Description</b>	<b>Adapters</b>	<b>Sleeve</b>
6SMSC	SC	6	Ceramic
6SCAPC	SC/APC	6	Ceramic
12SMDSC	SC	12 (6 Duplex)	Ceramic
8SMSC	SC	8	Ceramic
6SMST	ST	6	Ceramic
8SMST	ST	8	Ceramic
6SMFC	FC	6	Ceramic
8SMFC	FC	8	Ceramic
6FCAPC	FC/APC	6	Ceramic
6SMLC	LC	6	Ceramic
12SMLC	LC	12	Ceramic
600	Blank Plate	-	-

<b>Pigtail Cable Assemblies - Bundled 900 Micron Fibers in Yellow Sleeve</b>		
<b>Catalog No.</b>	<b>Connector</b>	<b>Fiber Count</b>
P6SCU_*	SC/UPC	6
P12SCU_*	SC/UPC	12
P6SCA_*	SC/APC	6
P12SCA_*	SC/APC	12
P6ST_*	ST	6
P12ST_*	ST	12
P6FC_*	FC	6
P12FC_*	FC	12
P6LC_*	LC	6
P12LC_*	LC	12

\*Cable length in meters  
Contact PLP for other options

## 9.00 SAFETY CONSIDERATIONS

**9.01** This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures may result in personal injury.

**9.02** When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

**9.03** For proper performance and personal safety, be sure to select the proper size PREFORMED Product before application.

**9.04** This product is intended for use by trained technicians only. This product **should not be used** by anyone who is not familiar with, and not trained to use it.

**PREFORMED** LINE PRODUCTS 

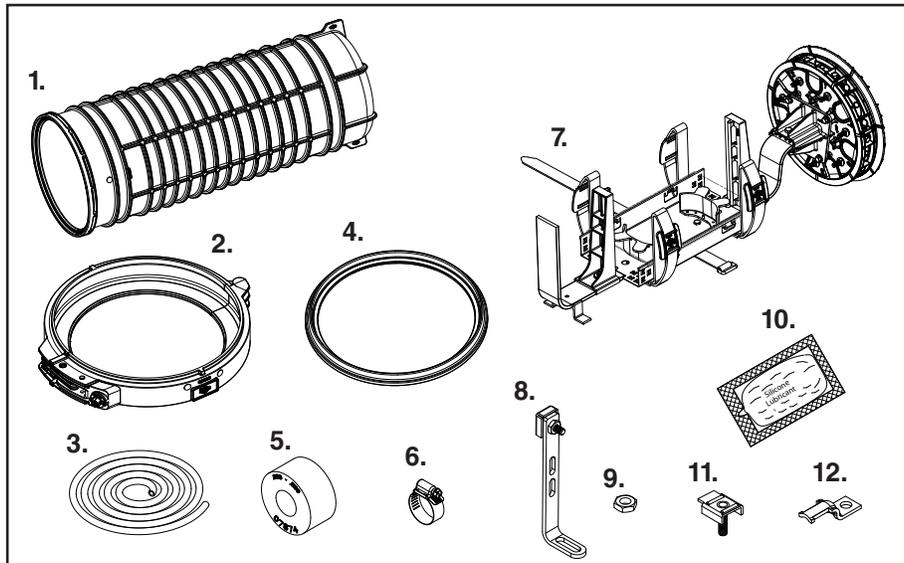
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SP2982



## COYOTE® Dome 9.5” x 28”

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED product before application.



### NOMENCLATURE

- |  |   |
|--|---|
| 1. Dome Cover (1)  | 7. Organizer Assembly with 7-Port End Plate (1)<br>(Unitube/Ribbon Version Shown) |
| 2. Dome Collar (1)   | 8. Extended Strength Member Bracket (4)   |
| 3. Transport Tubing Kit (1)<br>(In Dome Kit for Unitube/<br>Ribbon Applications) | 9. 1/4-20 Hex Nut (4)   |
| 4. Dome Gasket (1)   | 10. Silicone Lubricant (4 five gram packets)                                      |
| 5. Cable Grommet (4)   | 11. Strength Member Adapter Cap Stud (2)  |
| 6. Hose Clamp (4)  | 12. Strength Member Adapter (2)   |

### Tools Required:

- 3/8” and 7/16” can wrench or Socket
- 1/4” nut driver or screwdriver
- Snips
- Fiber optic cable opening tools

COYOTE Drop Closure Kits	
Catalog Number	Description
80061055	<b>COYOTE 9.5”x28” Dome Closure for Buffer Tube Applications.</b> Includes: (4) Grommets, (1) Buffer Tube Organizer Assembly with 7-Port End Plate, (1) Collar Assembly, (1) Gasket, (4) Extended Strength Member Brackets, (1) Strength Member Adapter Kit, (1) Disposable Glove, (4) Silicone Lubricant Packets & (4) Hose Clamps
80061056	<b>COYOTE 9.5”x28” Dome Closure for Unitube/Ribbon Applications.</b> Includes: (4) Grommets, (1) Transition Tray Organizer Assembly with 7-Port End Plate, (1) Collar Assembly, (1) Gasket, (4) Extended Strength Member Brackets, (1) Strength Member Adapter Kit, (1) Transition Tubing Kit, (1) Disposable Glove, (4) Silicone Lubricant Packets & (4) Hose Clamps
80061057	<b>COYOTE 9.5”x28” Dome Closure for Maximum Tray Capacity.</b> Includes: (4) Grommets, (1) Splice Tray Only Organizer Assembly with 7-Port End Plate Assembly, (1) Collar Assembly, (1) Gasket, (4) Extended Strength Member Brackets, (1) Strength Member Adapter Kit, (1) Tray Retention Clip Kit, (1) Disposable Glove, (4) Silicone Lubricant Packets & (4) Hose Clamps
Accessory Kits	
80808456	<b>COYOTE Dome End Plate Fixture</b>
80808651	<b>Extended Strength Member Bracket Kit</b>
80808878	<b>Large Strength Member Accommodation Kit</b>
Mounting Brackets	
8003940	<b>Aerial Mounting Bracket (Dome Mount) – for Strand Mounted Applications</b>
8003869	<b>Aerial Mounting Bracket (Dome Mount) – for ADSS Applications</b>
8003941	<b>Aerial Mounting Bracket (End Plate Mount) – for ADSS Applications</b>
8003942	<b>Pole/Wall Mounting Bracket</b>

**COYOTE Grommet Chart**  
For use in COYOTE GLC, Arial , LCC, Dome, In-Line RUNT, Taut & Terminal Closures

PLP Catalog Number	Cable Range Inches (mm)	Description	Splitting Location
8003701	.42 - .85 (11 - 22 mm)	2-entry grommet	
8003691	.42 - .60 (11 - 15 mm)	1-entry grommet	
8003692	.60 - .85 (15 - 22 mm)	1-entry grommet	
8003693	.85 - 1.0 (22 - 25 mm)	1-entry grommet	
8003694	1.0 - 1.25 (25 - 32 mm)	1-entry grommet	
8003663	.42 - .60 (11 - 15 mm)	2-entry grommet	
8003664	.30 - .43 (8 - 11mm)	4-entry grommet	
8003990	.50 - .60 (12.7 - 15.2) .125 - .25 (3.2 - 6.4) and flat drop	4-entry grommet	
8003989	Flat Drop Only	4-entry grommet	
8003665	.125 - .25 (3 - 6 mm)	6-entry grommet	
8003676	.42 - .60 (11 - 15 mm) .125 - .25 (3 - 6 mm)	7-entry grommet	
8003677	.125 - .25 (3 - 6 mm)	8-entry grommet	

**NOTE:** Grommet Kit contains (1) Grommet, (1) Cable Measure Tape, (2) Silicone Lubricant Packs, (1) Set of Plugs & (1) Glove

**Splice Trays for COYOTE 9.5" x 28" Dome**

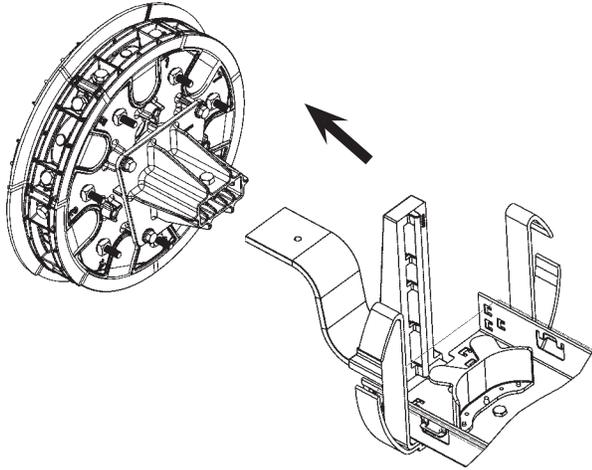
Catalog Number	Description
8001127	Low Profile Splice Tray with plastic splice blocks (36 splice count)
80807769	Low Profile Splice Tray (blank) – no splice blocks (36 splice count)
80805514	Standard Splice Tray with elastomeric splice blocks – single fusion and mechanical splices (36 splice count)
80805110	Standard Splice Tray with rigid slots (36 splice count)
80805509	Standard Splice Tray (blank) – no splice blocks (36 splice count)
80805515	Ribbon Splice Tray with elastomeric splice blocks (144 splice count)
80805146	Ribbon Splice Tray with rigid slots (144 splice count)
80805510	Ribbon Splice Tray (blank) – no splice blocks (144 splice count)
LGSTS40	LITE-GRIP® Splice Tray with Yellow 8-Hole LITE-GRIP splice blocks – single fusion splices (Splice tray is provided with splice blocks to support 40 splices but has the capacity for 80 splices). Splice Block Kit (Cat. # LGSBS8-5) is required to achieve maximum tray capacity.
LGSTR216	LITE-GRIP® Splice Tray with Purple 3-Hole LITE-GRIP splice blocks – mass fusion/ribbon splices (216 splice count)

**Splice Tray/Closure Capacities**

Splice Tray	Splice Tray	Buffer Tube Application P/N 80061055		Unitube/Ribbon Application P/N 80061056		Maximum Tray Capacity P/N 80061057	
		Trays per Closure	Closure Splice Capacity	Trays per Closure	Closure Splice Capacity 80061055	Trays per Closure 80061056	Closure Splice Capacity 80061057
Low Profile	Single Fusion	13	468	14	504	20	720
Standard	Single Fusion or Mechanical	10	360	12	432	16	576
Ribbon	Mass Fusion	7	1,008	8	1,152	10	1,440
LITE-GRIP	Single Fusion	7	560	8	640	10	800
LITE-GRIP	Mass Fusion	7	1,512	8	1,728	10	2,160

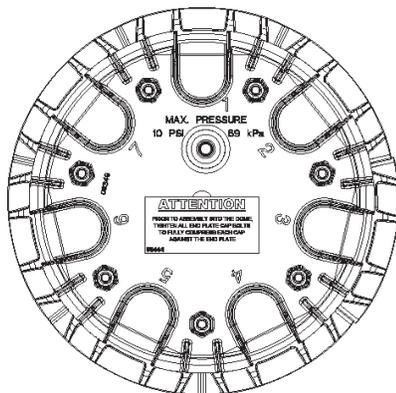
## END PLATE PREPARATION

**Step #1a** Remove end plate and organizer from dome.



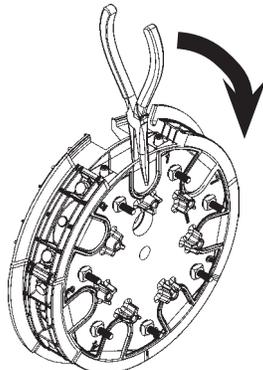
**Step #1b** Determine which cable ports will be used and mark the respective breakout tabs of end plate.

**NOTE:** If cables are routed in bottom storage brackets, use cable ports 4 & 5. If cables are routed in side storage brackets, use cable ports 3 & 6.



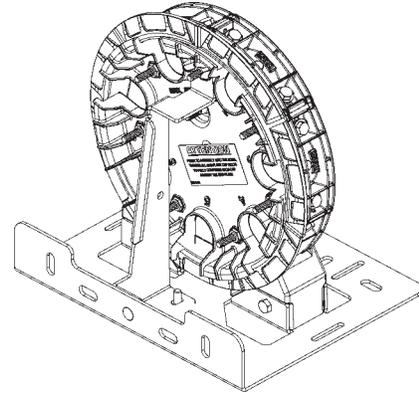
**Step #1c** Remove the end plate caps from the selected cable ports and break out the tabs.

**PLP Tip:** Scoring edges of tabs with knife makes them break out easier.



### Step #2 Optional Step

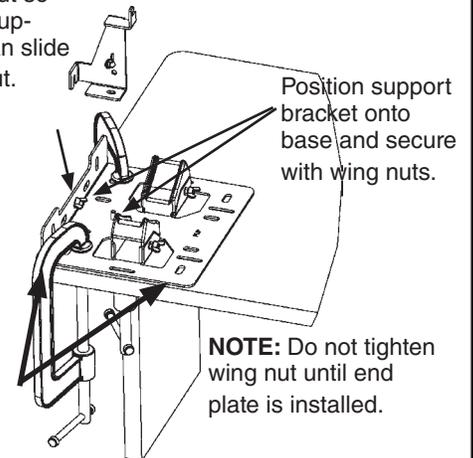
For better stability during cable installation and fiber splicing, install the end plate onto the COYOTE® Dome End Plate Fixture (see Steps 3a-b for installation details).



### Step #3a Optional Step

Install support bracket onto base.

Loosen wing nut so slotted tab of support bracket can slide behind wing nut.



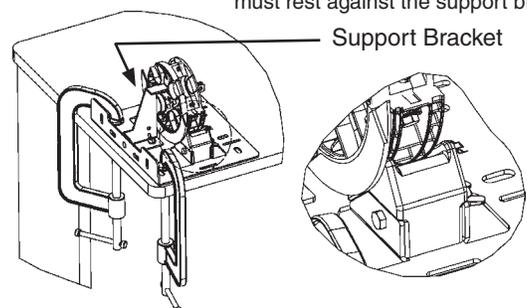
Base can be secured to work surface with either clamps or with bolts.

**NOTE:** Do not tighten wing nut until end plate is installed.

### Step #3b Optional Step

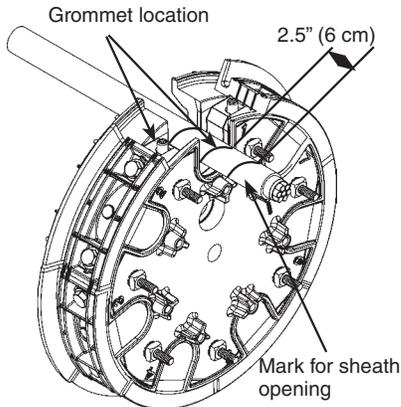
Seat the end plate onto the cushion wedges and secure support bracket to stud of end plate.

The outside surface of the end plate must rest against the support bracket

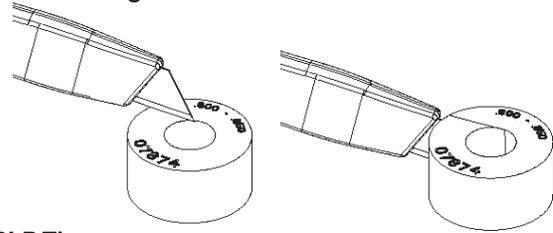


Hand tighten any loose wing nuts to secure end plate to fixture.

**Step #4** Lay cable into entry point and mark for grommet and sheath opening locations.

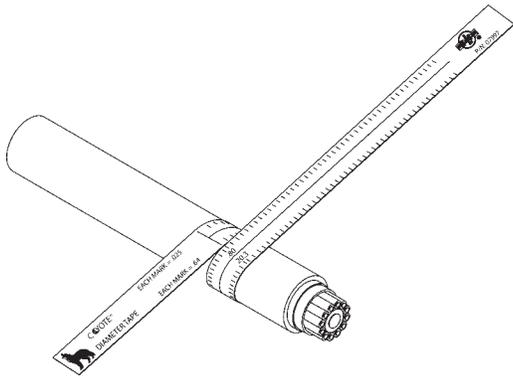


**Step #7 Grommet Slitting** – If slitting is required, lay grommet on a stable flat surface. Position utility knife with the cutting edge against the top surface and cut through grommet. **Consult grommet chart on page 2 for slitting locations of all grommets.**



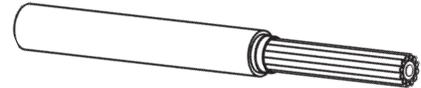
**PLP Tip:** Use a pen to sketch slitting lines on top surface of grommet prior to cutting.

**Step #5** Measure cable to determine diameter and hole location to use in grommet.



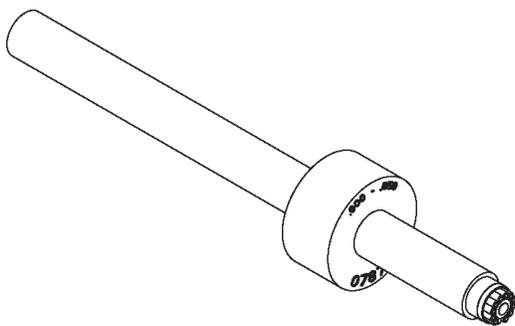
**Step #8a** Cable preparation for loose tube or ribbon cables.

**PLP Tip:** Leave about 8" (203 mm) of strength member to trim later.



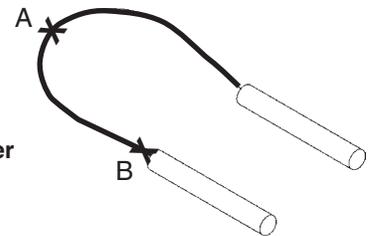
Configuration	Sheath Opening
Cut Cable	96" (2.4 m)

**Step #6** If using cut cable, insert cable through grommet. If your application requires express cable, see Step 7 for grommet slitting procedure.



**Step #8b** Cable preparation for loose tube or ribbon cables.

**PLP Tip:** Leave about 8" (203 mm) of strength member to trim later.



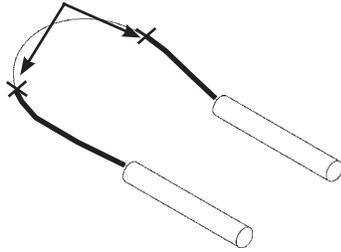
Configuration	Cut Location	Sheath Opening
Buffer Tube Expressed (Mid Sheath)	A	146" (3.7 m)
Buffered or Non-Buffered Ribbon Expressed (Mid Sheath)	A	150" (3.8 m) <sup>1</sup>
Buffer Tube or Non-Buffered Ribbon Expressed (Mid Sheath)	B	80" (2.0 m)
Buffered Ribbon Expressed (Mid Sheath)	B	96" (2.4 m)

<sup>1</sup>When expressing ribbons in the transition tray of the closure at this measurement, the maximum number of ribbons that can be expressed is 36 (432 fibers).

**Step #8c** Cable preparation for expressed fiber (buffer tube window cut) applications.

Window cut locations for buffer tube(s).

**PLP Tip:**  
Leave about 8" (203 mm) of strength member to trim later.

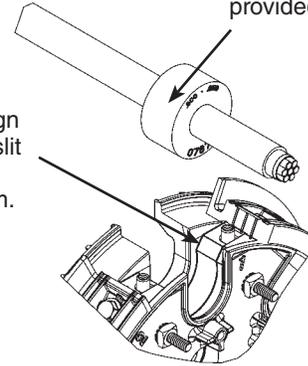


Configuration	Sheath Opening
Expressed Fiber (Buffer Tube Window Cut)	146" (3.7 m)

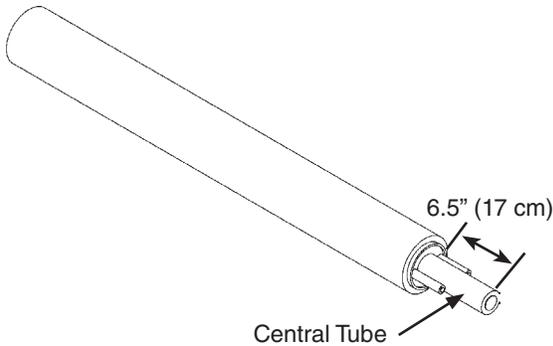
**Step #11a** Lubricate the outer surface of the grommet.

Lubricate sealing surface of grommet with silicone lubricant provided.

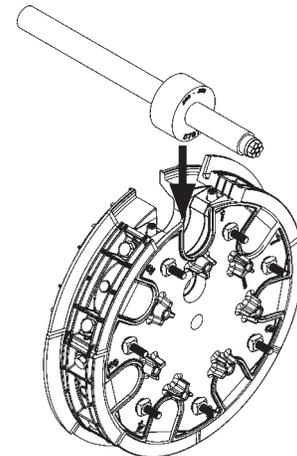
Do not align grommet slit with end plate seam.



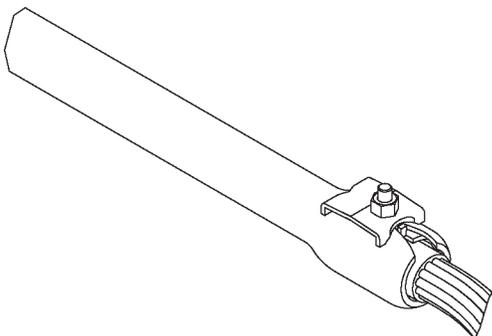
**Step #9** For ribbon feeder cables, leave 6.5" (17 cm) of the central tube from the sheath opening when removing the central tube.



**Step #11b** Position grommet in end plate slot.



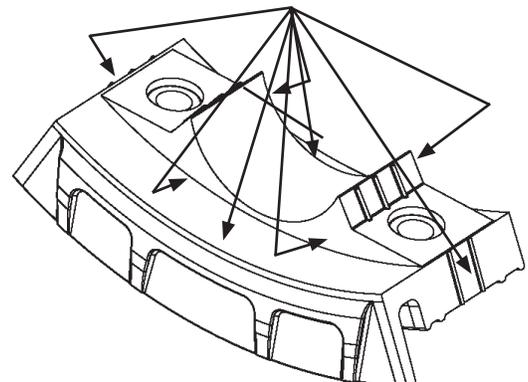
**Step #10** If shielded cable is being used, install shield connector on shielded cables. See Step #13b and 13c for recommended bonding practice.



Follow standard company practices.

**Step #12a** Re-lubricate the cable cap with the silicone lubricant provided.

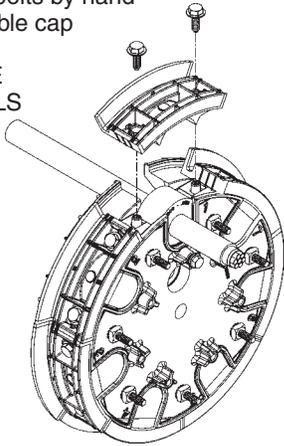
**SURFACES TO BE LUBRICATED**



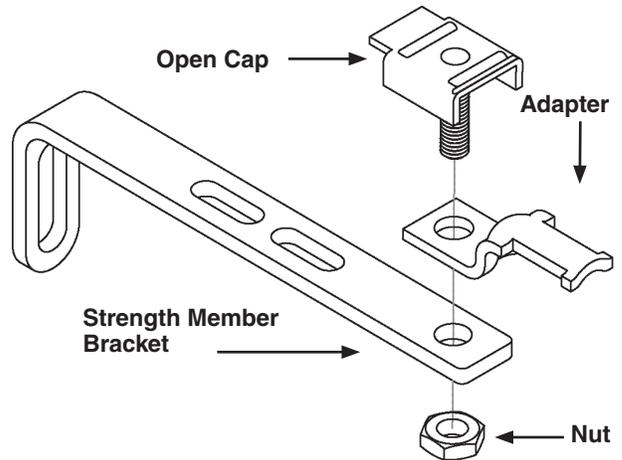
**Step #12b** Install cable cap and secure with hex bolts. Tighten bolts by hand evenly until cable cap is fully seated (DO NOT USE POWER TOOLS TO TIGHTEN BOLTS).

**NOTE:** Do not exceed more than 50 in-lbs. of torque when tightening bolts.

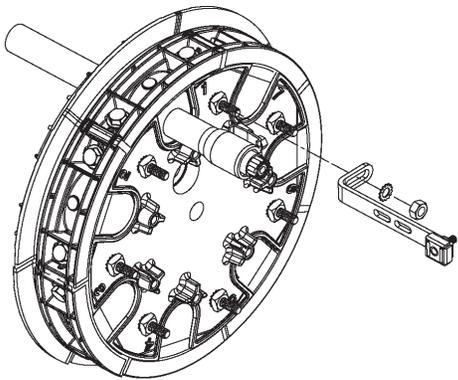
**NOTE:** TIGHTEN ALL UNUSED CABLE CAPS.



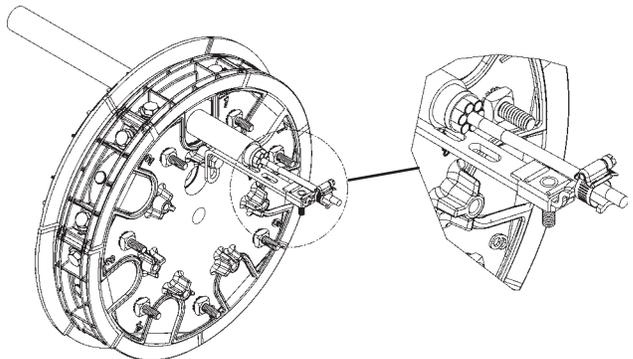
**Step #15a** For large cable strength members, assemble the adapter to the bracket as shown.



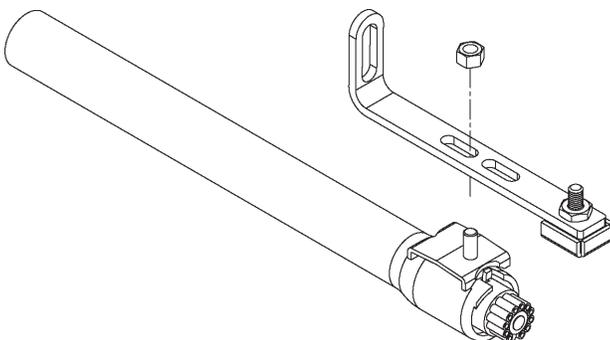
**Step #13** Secure extended strength member bracket to grounding stud with external tooth lock washer and hex nut. For bonding, orientate cable so the shield connector faces the top of the strength member bracket.



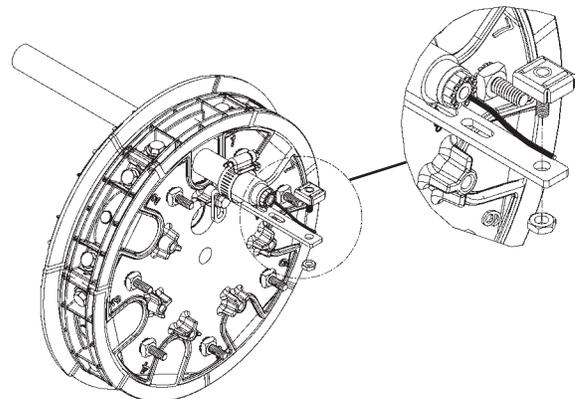
**Step #15b** Trim large cable strength member(s) 1/2" past the end of the adapter. Secure cable strength member(s) to adapter with small hose clamp.



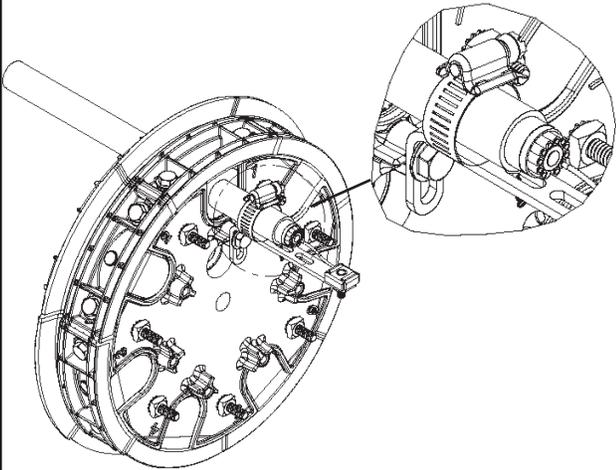
**Step #14** If bonding is required, install the stud of the shield connector through the slot of the extended strength member bracket and secure with nut.



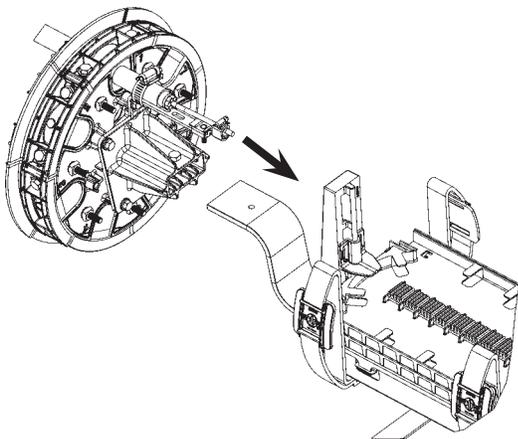
**Step #15c** Trim small cable strength member(s) even with edge of strength member bracket. Secure strength member(s) under clip and tighten nut.



**Step #16** Secure cable sheath with hose clamp.

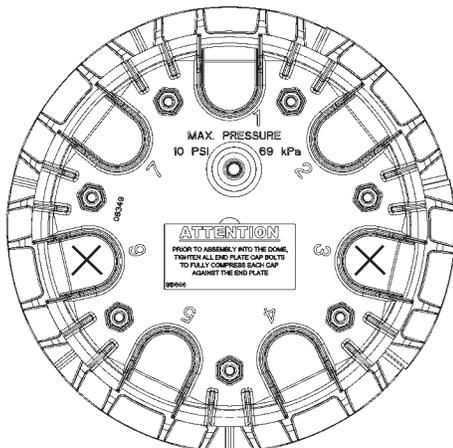


**Step #17** Re-install end plate onto organizer assembly and secure with bolt.

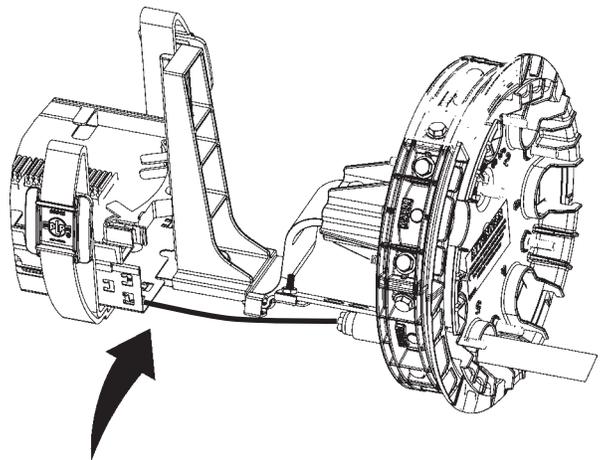


### Ribbon Applications

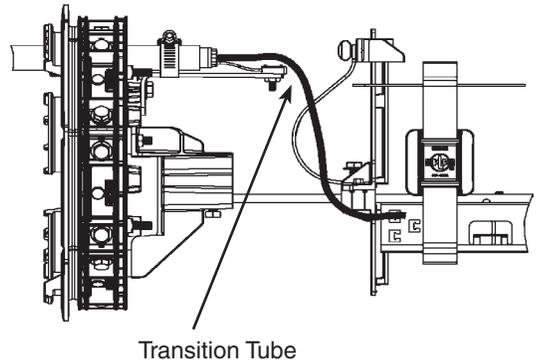
**Reminder:**  
If cables are routed in side storage brackets, use cable ports 3 & 6.



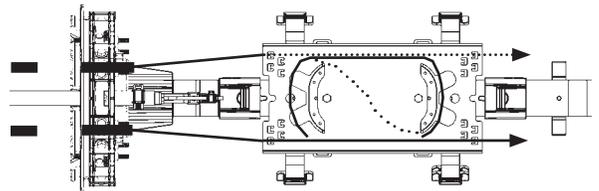
**Step #18a** Route and secure central tube of unitube cables to transition compartment with tie wraps.



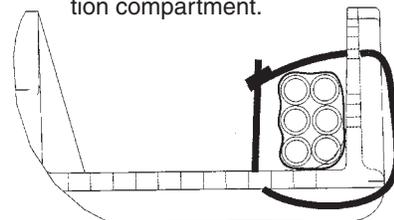
**Step #18b** For branch unitube cables, use transition tubes to route fiber onto transition tray.



**Step #19a** Route fiber within transition compartment.

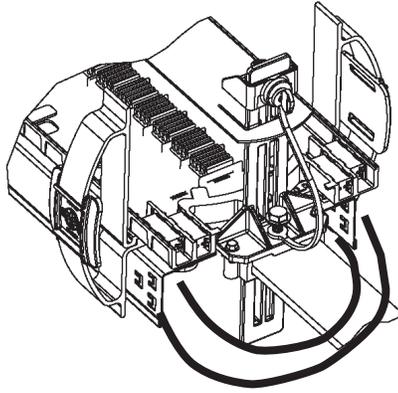


**Step #19b** Insert fibers to be routed to splice trays into transport tubes and secure to transition compartment.



**PLP Tip:** For ease of handling, group the transition tubes in multiples of six.

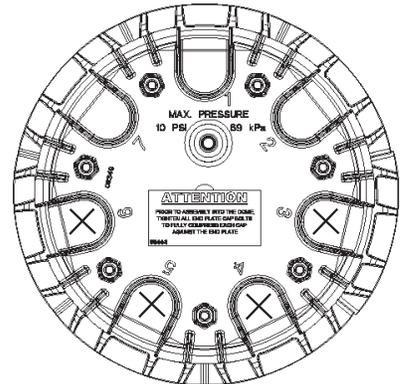
**Step #19c** Route transport tubes to splice trays and secure.



**Skip to Step #23**

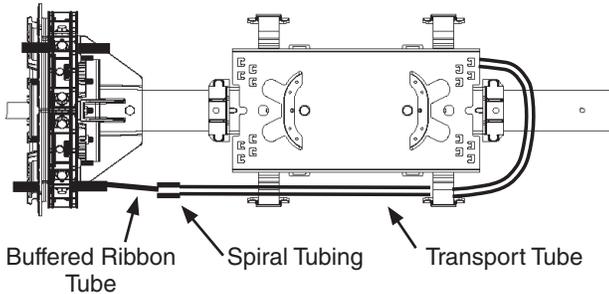
**Loose Tube/Buffer Tube Applications**

If cables are routed in bottom storage brackets, use cable ports 4 & 5. If cables are routed in side storage brackets, use cable ports 3 & 6.



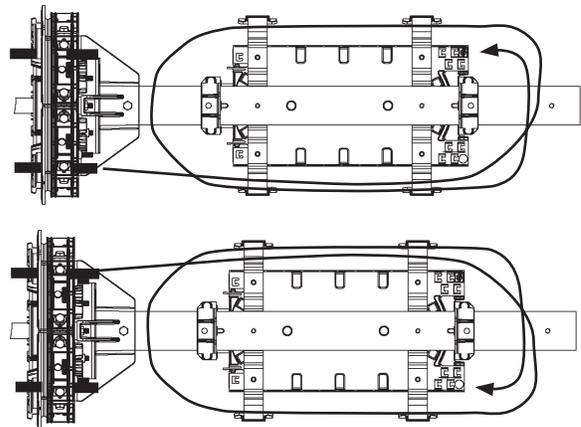
**Alternative Routing Method for Buffered Ribbon Applications (Step 20a & b)**

**Step #20a** Remove the buffer tube 1-1/2" from the sheath opening and route fibers to the splice tray with transport tubing. Connect buffer tube to transport tube with a 3" piece of spiral tubing. Route transport tubing through side storage brackets and install retainer clips. (see Step 20b)

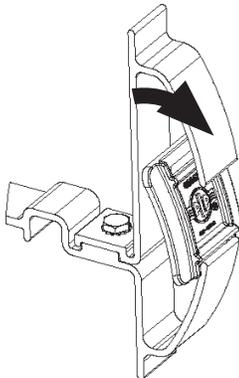


**Note:** Wrap tape around the spiral tubing once it is connecting the buffer tube with the transport tube to keep spiral tubing from coming undone.

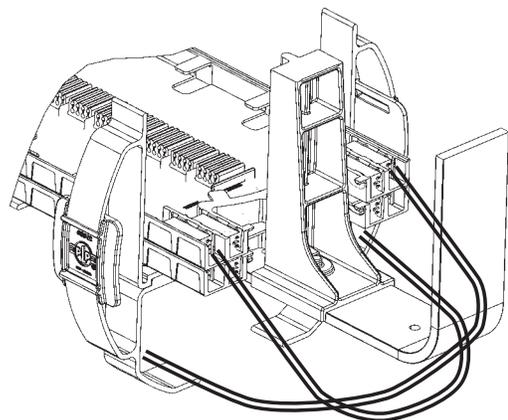
**Step #21** Route and store buffer tubes in storage brackets. If routing in side storage brackets see Step #20b for installation of retainer clips.



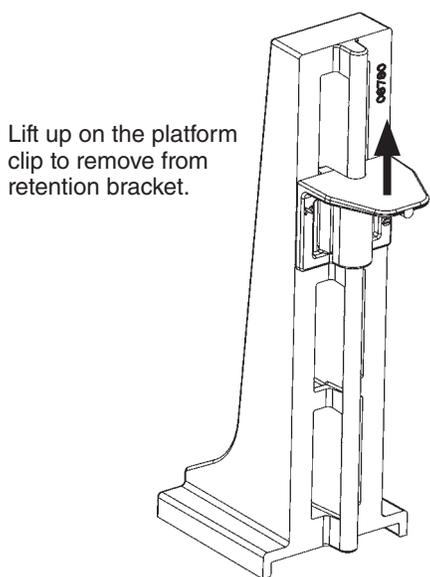
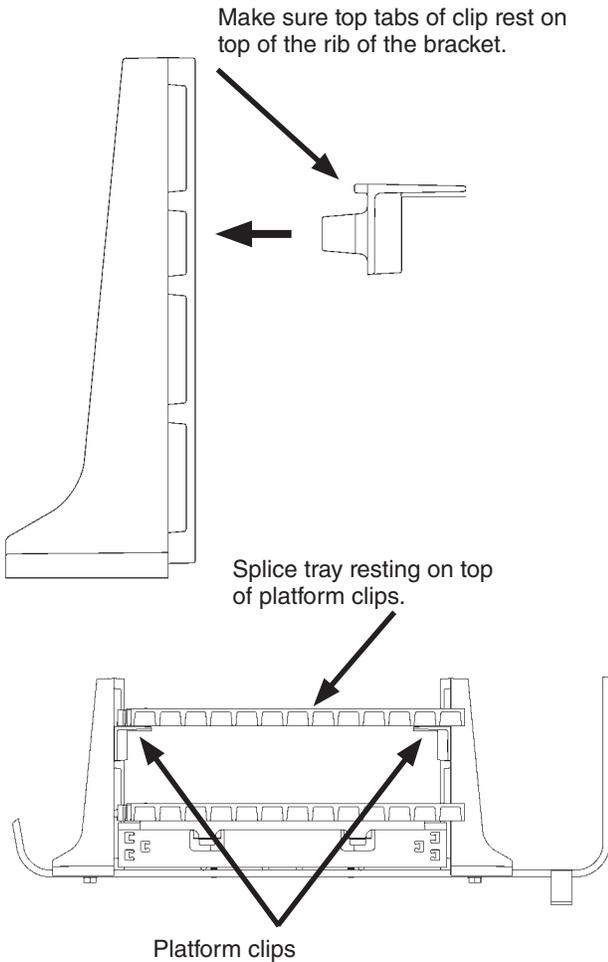
**Step 20b** To install retainer clip, position the bottom slot of the retainer clip onto the bottom of the bracket. Tilt retainer clip forward until the top of the bracket snaps into the top slot of the retainer clip.



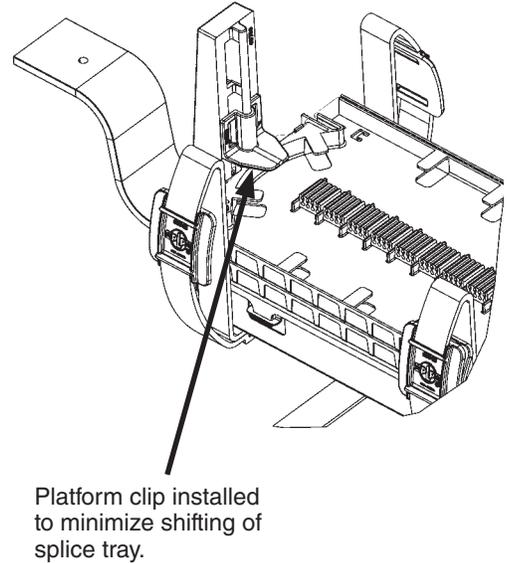
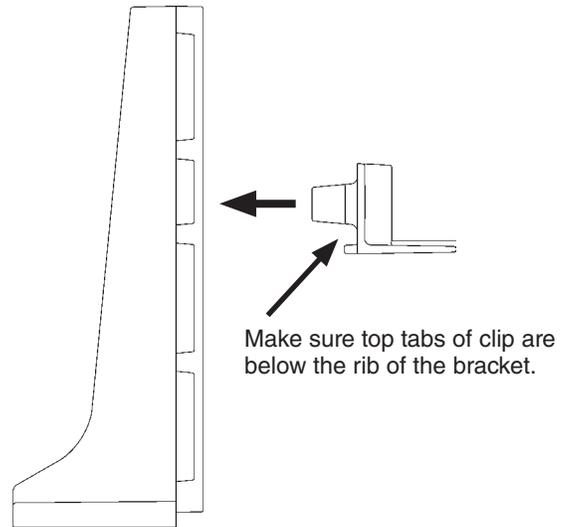
**Step 22** Route buffer tubes to splice trays and secure.



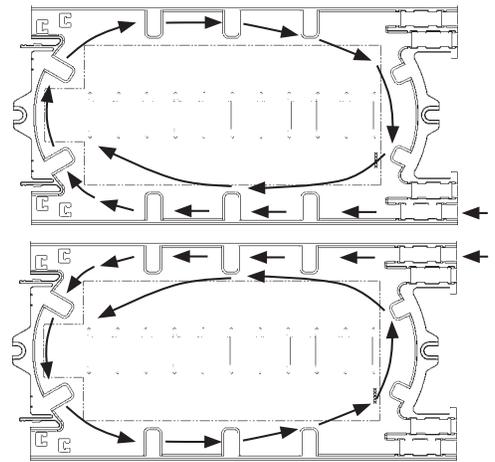
**Step #23** To improve splice tray accessibility, install platform clips onto tray retention brackets to raise splice tray.



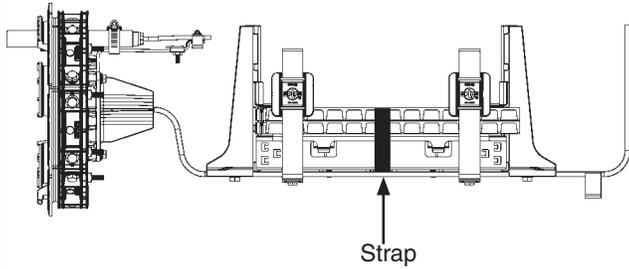
**PLP Tip:** Platform clips can be installed upside down on tray retention brackets to minimize shifting of splice trays in case strap comes undone.



**Step #24** Route incoming and outgoing fibers and splice per standard company practice.



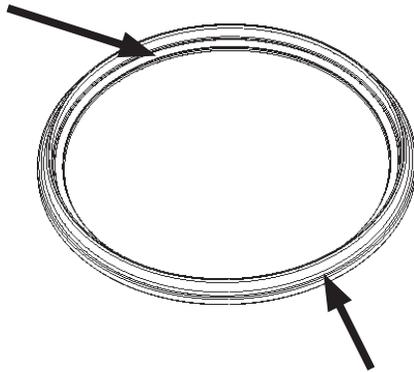
**Step #25** Secure splice trays with strap.



### Dome Preparation & Installation

**Step #26** Lubricate all surfaces around gasket with silicone lubricant to assure easy assembly and closure re-entry.

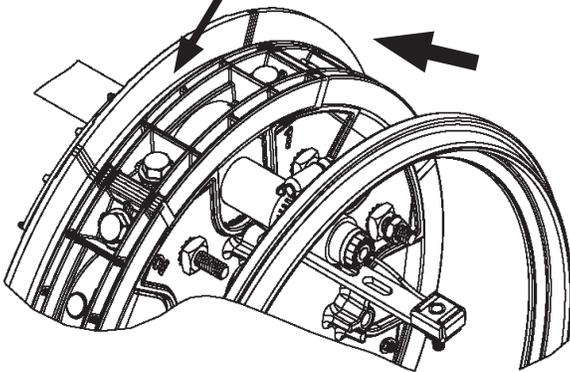
Lubricate all inner surfaces of the gasket.



Lubricate all outer surfaces

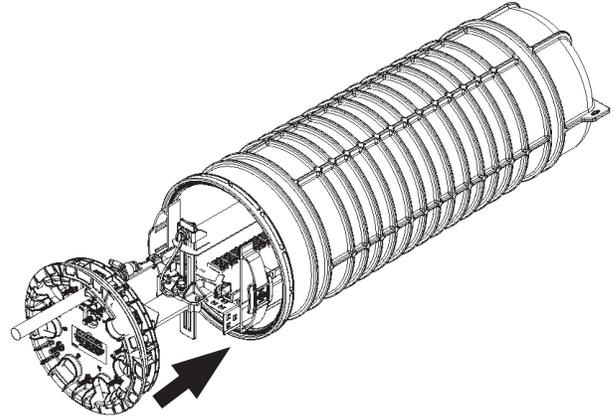
**Step #27** Slide end plate gasket onto end plate and press into groove.

Make sure gasket is fully seated in groove of end plate.

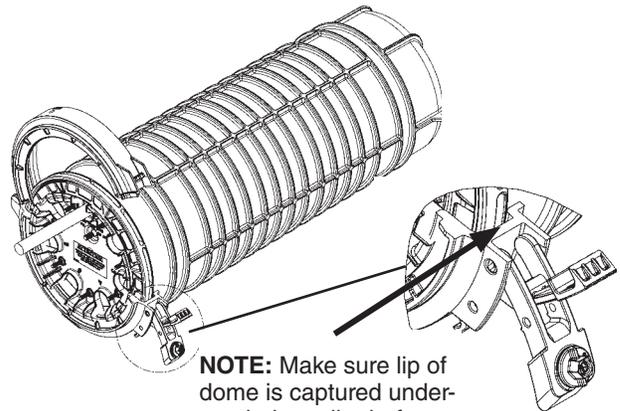


**Step #28** Re-tighten all cable cap bolts (Step #12b) to assure that the cable caps are fully seated.

**Step #29** Position dome over end plate.



**Step #30** Install dome collar.

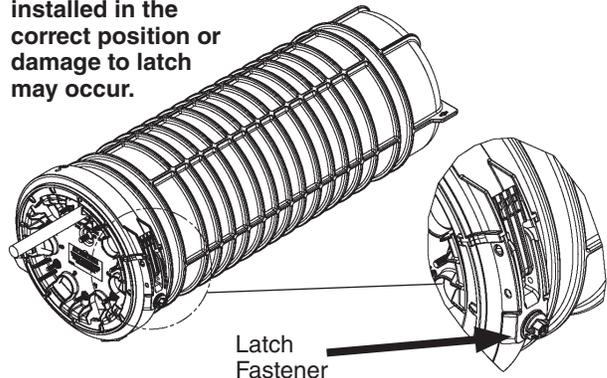


**NOTE:** Make sure lip of dome is captured underneath the collar before securing the latch.

**Step #31** Lock collar by twisting the latch fastener clockwise 90 degrees.

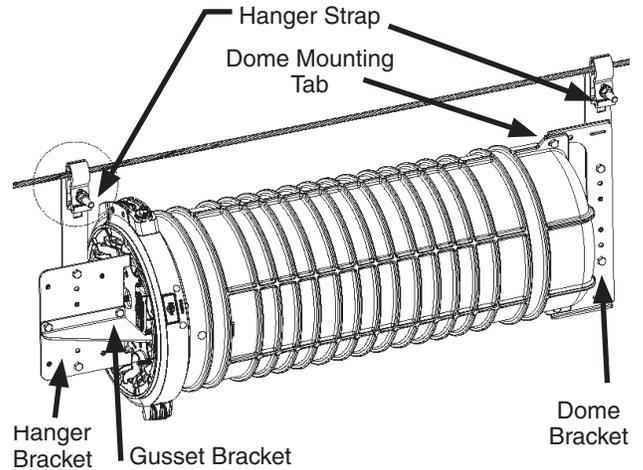
**CAUTION:** Do not fasten latch until collar is completely installed in the correct position or damage to latch may occur.

Flash test to 10 psi max.

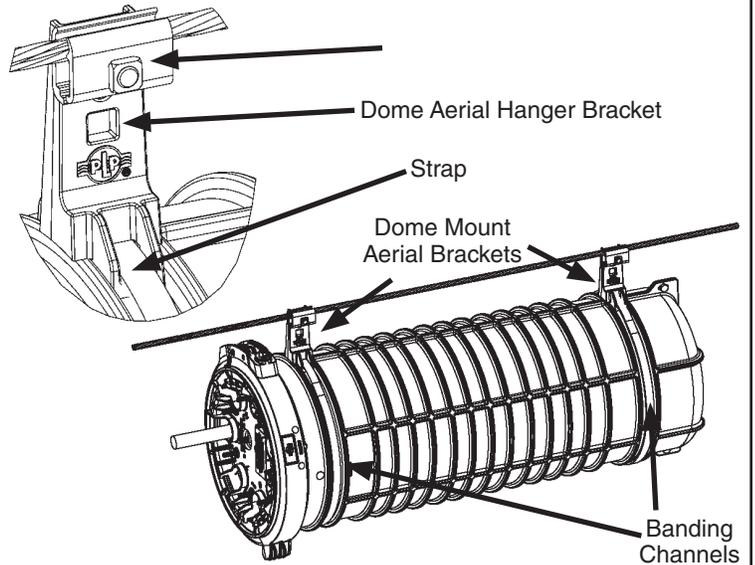


## Optional Hardware for Mounting

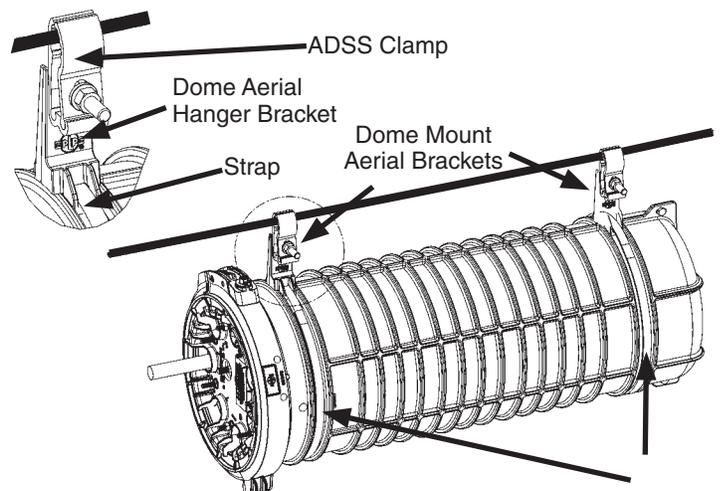
**Step #32 9.5" x 28" Dome Aerial Mounting Bracket – End Plate Mount – for ADSS Applications.** The COYOTE 9.5" x 28" Dome Aerial Mounting Bracket Kit (Cat. No. 8003941) can be used to suspend the COYOTE 9.5" x 28" Dome Closure from ADSS cable. To install the aerial mounting bracket, first secure the gusset bracket to the hanger bracket before attaching both to the studs of dome end plate. Next, attach the dome bracket to the mounting tabs of the dome. Lastly, attach a hanger strap bracket to the dome bracket and one to the back side of the hanger bracket before mounting the dome closure to the ADSS cable using the clamps of the hanger strap brackets.



**Step #33a 9.5" x 28" Dome Aerial Mounting Bracket – Dome Mount – for Strand Applications.** The COYOTE 9.5" x 28" Dome Mount Aerial Bracket Kit (Cat. No. 8003940) can be used to suspend the COYOTE 9.5" x 28" Dome Closure from messenger wire. To install the dome mount aerial brackets, position the brackets in the banding channels of the dome and insert banding (plastic or metal) through the slots of the brackets. Tighten the banding until the brackets are secure before mounting the closure to the messenger wire with the bug nuts of the brackets.

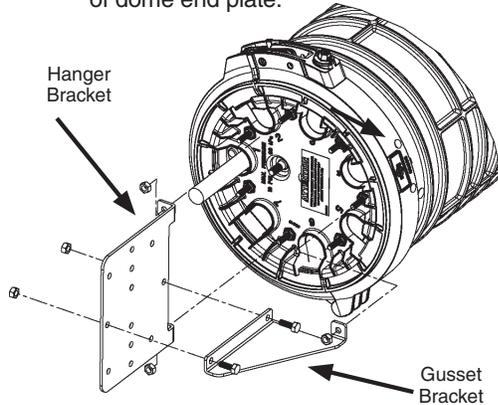


**Step #33b 9.5" x 28" Dome Aerial Mounting Bracket – Dome Mount – for ADSS Applications.** The COYOTE 9.5" x 28" Dome Mount Aerial Bracket Kit for ADSS (Cat. No. 8003869) can be used to suspend the COYOTE 9.5" x 28" Dome Closure from ADSS cable. To install the Dome Mount Aerial Brackets, position the brackets in the banding channels of the dome and insert banding (plastic or metal) through the slots of the brackets. Tighten the banding until the brackets are secure before mounting the closure to the ADSS cable with the ADSS clamp.

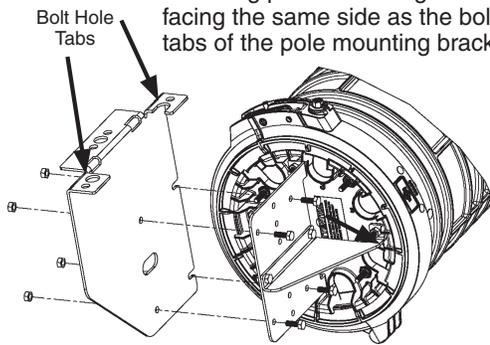


**Step #34a 9.5" x 28" Dome Pole Mounting Bracket.**

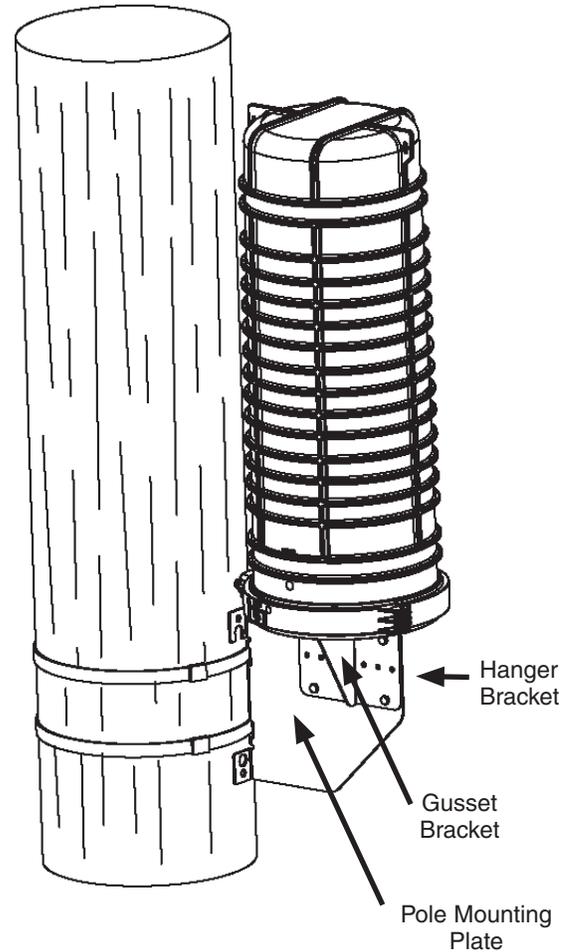
The COYOTE 9.5" Dome Pole Mounting Bracket Kit (Cat. No. 8003942) can be used to secure the COYOTE 9.5" x 28" Dome Closure to wood, concrete, or steel poles. To install the pole mounting bracket, first secure the gusset bracket to the hanger bracket before attaching both to the studs of dome end plate.



**Step #34b Attach the hanger bracket to the pole mounting plate with the gusset side facing the same side as the bolt hole tabs of the pole mounting bracket.**



**Step 34c Attach the dome pole mounting plate to the pole with either 5/8" through bolts, 1/4" lag screws, or metal banding.**



**SAFETY CONSIDERATIONS**

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

**Do not modify this product under any circumstances.**

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



**PREFORMED** LINE PRODUCTS

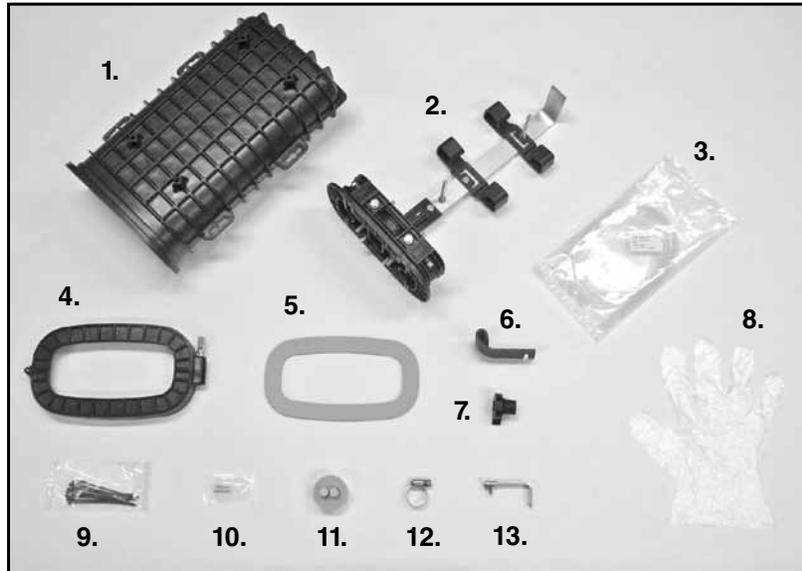
P.O. Box 91129, Cleveland, Ohio 44101 • 440.461.5200 • www.preformed.com • e-mail: inquiries@preformed.com

SP3036-3



# COYOTE® ONE Closure

Be sure to read and completely understand this procedure before applying product.  
Be sure to select the proper PREFORMED™ product before application.



### NOMENCLATURE

- |   |   |   |
|---|---|---|
| 1. Dome Cover (1)   | 4. Dome Collar (1)  | 6. Buffer Tube Side Storage Clip (2)<br>(In Universal Organizer Kit Only) |
| 2. Organizer with 3-Port End Plate<br>Assembly (Buffer Tube Organizer<br>Shown) (1) | 5. Dome Gasket (1)  | 7. 6-Hole Bobbin (1)*   |
| 3. Transport Tubing Kit (1)<br>(In Universal Organizer Kit Only)                    | 6. Buffer Tube Side Storage Clip (2)<br>(In Universal Organizer Kit Only) | 8. Disposable Glove (1)   |
|   | 7. 6-Hole Bobbin (1)*   | 9. Cable Tie Wraps (1 Bag)  |
|   | 8. Disposable Glove (1)   | 10. Silicone Lubricant<br>(4 five gram packets)                           |
|   | 9. Cable Tie Wraps (1 Bag)  | 11. Cable Grommet (3)   |
|   |   | 12. Hose Clamp (3)  |
|   |   | 13. Short Strength Member Bracket (3)                                     |

\*Accessory can be purchased separately.

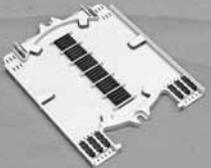
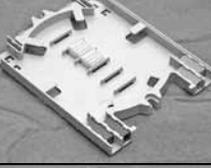
### TOOLS REQUIRED

- 3/8" & 7/16" Can wrench or socket
- 1/4" Nut driver or screwdriver
- Snips
- Fiber optic cable opening tools

COYOTE® ONE Closure Kits	
Catalog Number	Description
COY1-001	<b>COYOTE ONE Closure for Buffer Tube Applications.</b> Includes: (3) Grommets - (2) P/N: 8003663 & (1) P/N: 8003665, (1) Organizer Assembly with 3-Port End Plate, (1) Collar Assembly, (1) Gasket, & (1) Small Parts Bag
COY1-002	<b>COYOTE ONE Closure for Unitube/Ribbon Applications.</b> Includes: (3) Grommets - (2) P/N: 8003663 & (1) P/N: 8003665, (1) Organizer Assembly with 3-Port End Plate, (1) Collar Assembly, (1) Gasket, (1) Small Parts Bag, & (1) Transition Tube Kit
Mounting Brackets and Accessories	
8004005	<b>Aerial Low Clearance Mounting Bracket (Dome Mount) - Strand Mounting</b>
8004031	<b>Aerial Low Clearance Mounting Bracket (Dome Mount) - ADSS Mounting</b>
8004027	<b>Aerial Offset Mounting Bracket (Dome Mount) - Strand Mounting</b>
8004032	<b>Aerial Offset Mounting Bracket (Dome Mount) - ADSS Mounting</b>
8004004	<b>Pole/Wall Mounting Bracket</b>
8003835	<b>Universal Mounting Bracket Kit for Hand Hole Applications</b>
8004033	<b>Provides flat surface to apply closure identification labels</b>

COYOTE® ONE Grommet Chart			
For use in COYOTE® GLC, Aerial, LCC, Dome, In-Line RUNT, Taut & Terminal Closures			
PLP Catalog Number	Cable Range Inches (mm)	Description	Slitting Location
8003691	.42 - .60 (11 - 15 mm)	1-entry grommet	
8003692	.60 - .85 (15 - 22 mm)	1-entry grommet	
8003663	.42 - .60 (11 - 15 mm)	2-entry grommet	
8003664	.30 - .43 (8 - 11 mm)	4-entry grommet	
8003989	Flat Drop Only	4-entry grommet	
8003665	.125 - .25 (3 - 6 mm)	6-entry grommet	
8003676	.42 - .60 (11 - 15 mm) .125 - .25 (3 - 6 mm)	7-entry grommet	
8003677	.125 - .25 (3 - 6 mm)	8-entry grommet	

**NOTE:** Grommet Kit contains (1) Grommet, (1) Cable Measure Tape, (2) Silicone Lubricant Packs, (1) Set of Plugs & (1) Glove

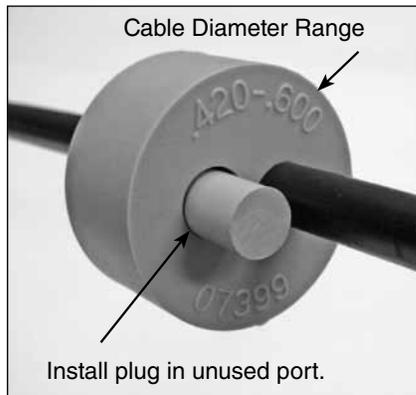
Splice Tray/Closure Capacities for COYOTE® ONE Closure					
	Splice Tray	Catalog Number	Splice Type	Trays per Closure	Closure Splice Capacity
	Low Profile LITE-GRIP® (24 ct.)	80809958	Single Fusion	4 (Universal Version)	96
				5 (Buffer Tuber Version)	120
	Deep Profile LITE-GRIP® (40 ct.)	80808945	Single Fusion	2	80
	Deep Profile LITE-GRIP® (144 ct.)	LGSTR144	Mass Fusion/ Ribbon	2	144 Suggested 288 Max

## Cable Preparation

**Step #1** Measure cable to determine diameter and hole location to use in grommet.



**Step #2a** If using cut cable, insert cable through grommet. If your application requires express/balloon/ring cut cables, **see Step 3 for grommet slitting procedure.**



**Step #2b** **Installing Figure 8 Style Cables and Cables with Tracer Wires** - Remove tracer wire or ground wire from the portion of the cable that will be positioned in the grommet and insert cable into grommet.

### Cable with Tracer Wire



Not Correct Installation



Correct Installation

### Figure 8 Style Cable

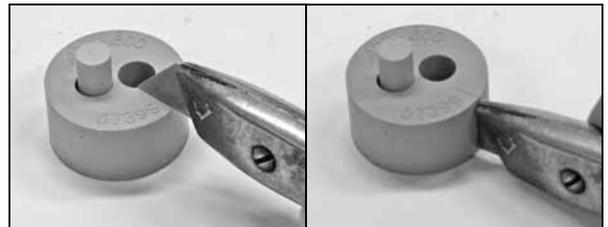


Not Correct Installation

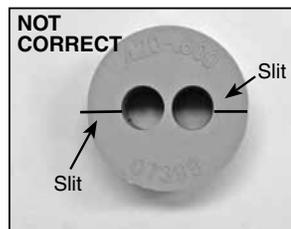


Correct Installation

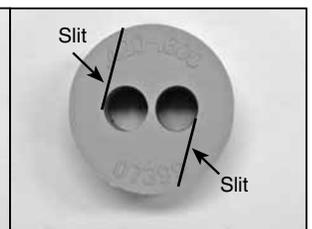
**Step #3** **Grommet Slitting** – If slitting is required, lay grommet on a stable flat surface. Position utility knife with the cutting edge against the top surface and cut through grommet. **Consult grommet chart on page 2 for slitting locations of all grommets.**



**PLP Tip:** Use a pen to sketch slitting lines on top surface of grommet prior to cutting.

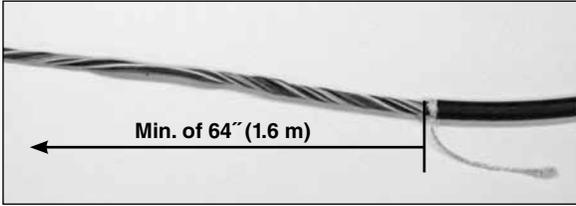


Not Correct Slitting Angle



Correct Slitting Angle

**Step #4** Prepare loose tube/buffer tube or unitube/  
ribbon cable(s) for cut applications.



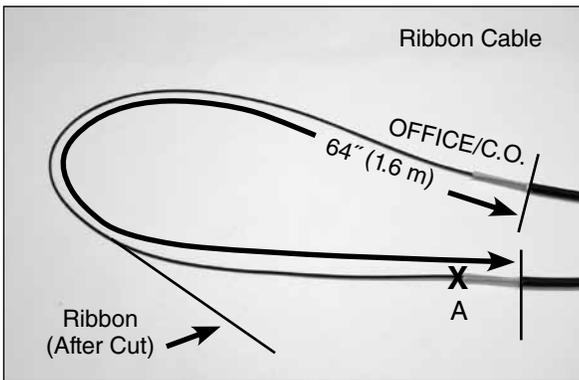
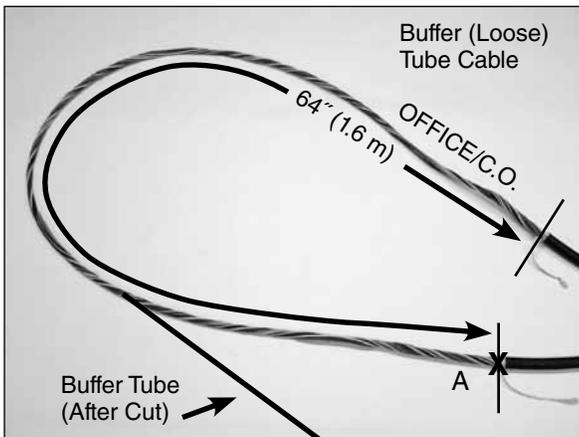
**Minimum Sheath Opening for Cut  
Cable Applications**

64"	1.6 m
-----	-------

**PLP Tip:** Leave about 8" (203 mm) of strength  
member to trim later.

**Cable Sheath Opening for Applications Where  
Fiber is Dedicated to the Splice Point**

**Step #5a** Prepare loose tube/buffer tube or unitube/  
ribbon cable(s) for mid sheath applications  
(Express/Balloon/Ring Cut).



**NOTE:** When expressing ribbons in the transition tray of  
the closure at this measurement, the maximum number of  
ribbons that can be expressed is 24 ribbons (288 fibers).

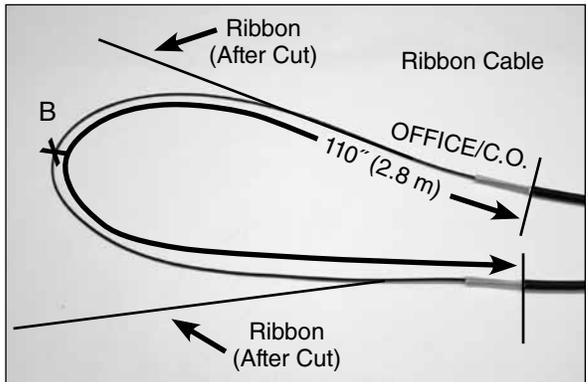
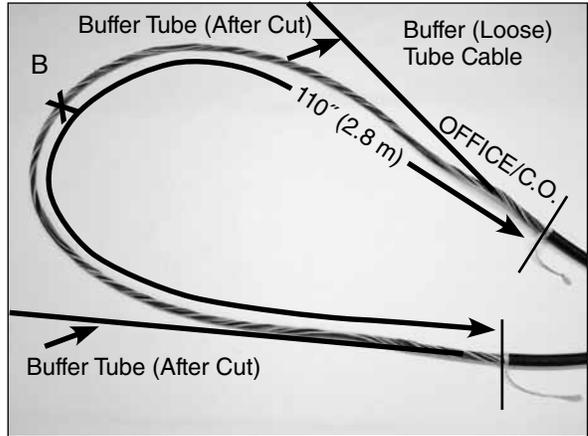
**For Applications Where Fiber is  
Dedicated to the Splice Point**

Sheath Opening	Min. of 64" (1.6 m)
Fiber/Buffer Tube Cut Location	A (see image above)

**PLP Tip:** Leave about 8" (203 mm) of strength  
member to trim later.

**Cable Sheath Opening for Applications Where  
Fiber is NOT Dedicated to the Splice Point**

**Step #5b** Prepare loose tube/buffer tube or unitube/  
ribbon cable(s) for mid sheath applications  
(Express/Balloon/Ring Cut).



**NOTE:** When expressing ribbons in the transition tray of  
the closure at this measurement, the maximum number of  
ribbons that can be expressed is 12 ribbons (144 fibers).

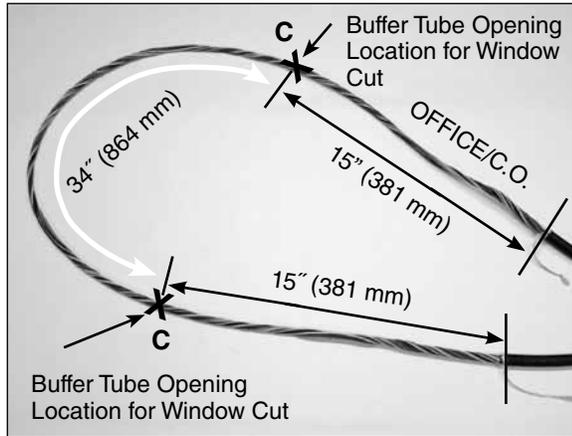
**For Applications Where Fiber is  
NOT Dedicated to the Splice Point**

Sheath Opening	Max. of 110" (2.8 m)
Fiber/Buffer Tube Cut Location	B (see image above)

**PLP Tip:** Leave about 8" (203 mm) of strength  
member to trim later.

**Cable Sheath Opening for Applications Where Fiber is Expressed through the Buffer Tube**

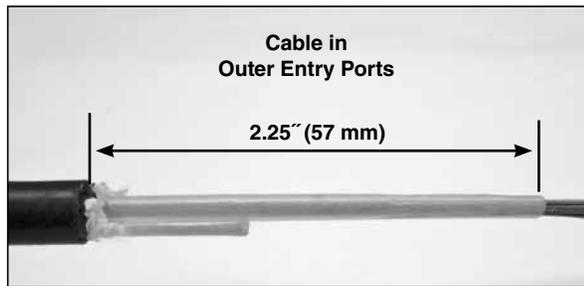
**Step #5c** Prepare loose tube/buffer tube cable(s) for expressed fiber (buffer tube window cut).



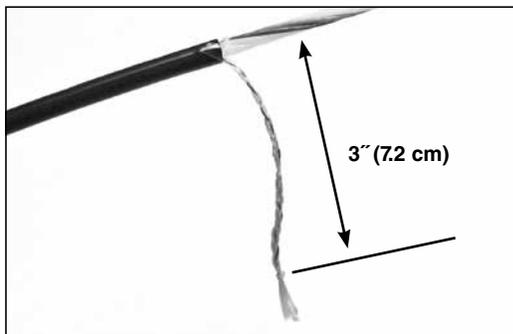
For Applications Where Fiber is Expressed through the Buffer Tube	
Sheath Opening	64" (1.6 m)
Buffer Tube Opening Location	C (see image above)

**PLP Tip:** Leave about 8" (203 mm) of strength member to trim later.

**Step #6** Prepare Central/Buffer Tube(s) for Unitube/Ribbon Cable Applications.

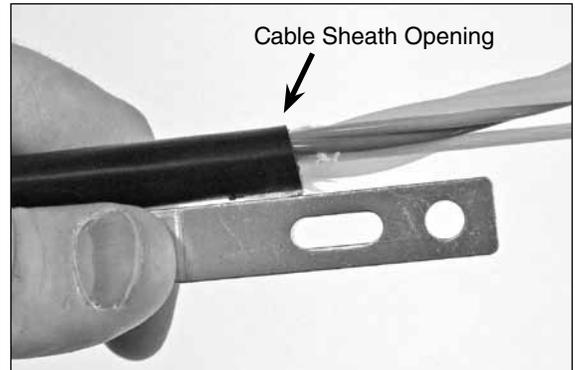


**Step #7** If the cable contains Kevlar®, braid roughly 3" (7.2 cm) of the Kevlar.

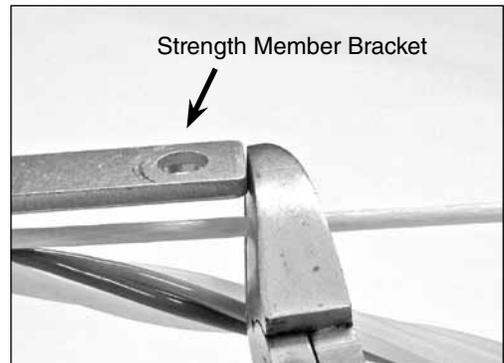


**Attaching Cables to Strength Member Bracket**

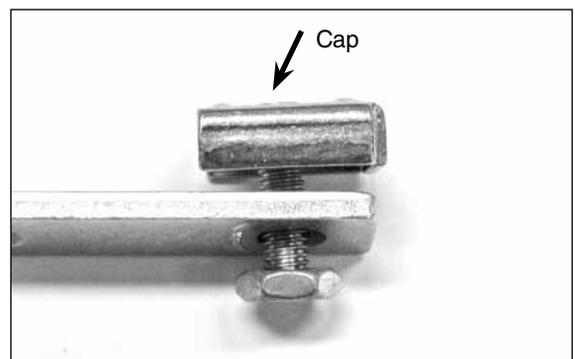
**Step #8a** Align sheath opening with end of slot of the strength member bracket as shown.



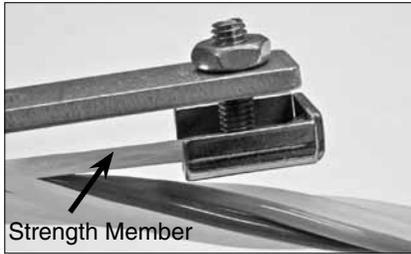
**Step #8b** Trim strength member(s) flush with end of the strength member bracket(s).



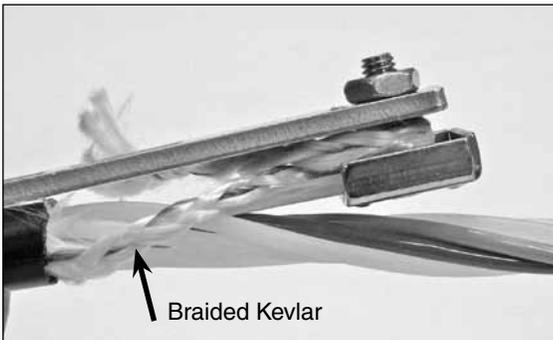
**Step #9** Install cap on strength member bracket.



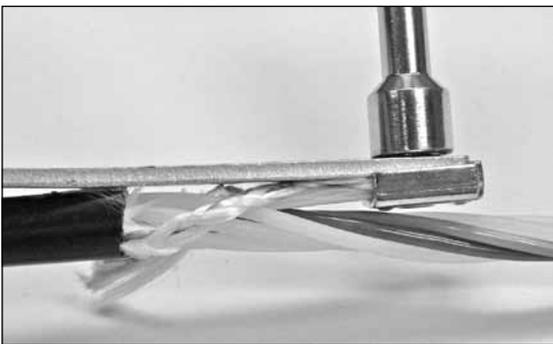
**Step #10** Position strength member under cap of strength member bracket.



**Step #11** If the cable contains Kevlar®, wrap the braided Kevlar around the stud of the cap as shown.



**Step #12** Tighten nut of cap to secure strength member and braid under the cap.

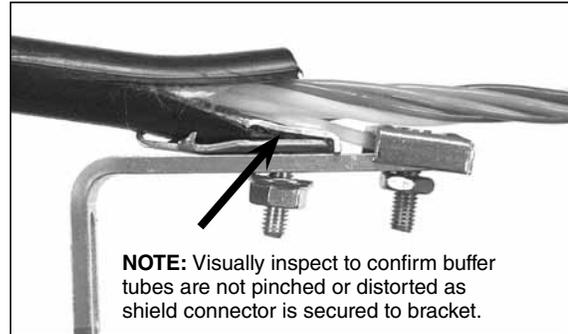


**Step #13** Secure cable to strength member bracket with hose clamp.



## Attaching Shielded Cable to Strength Member Bracket

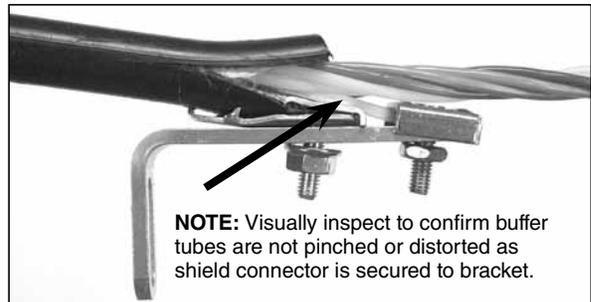
**Step #14a** For shielded cable applications, PLP recommends using a 3M 4460-D/FO Fiber Optic Shield Connector (PN: 80803989). Install shield connector on cable and insert stud of shield connector through slot of strength member bracket.



**NOTE:** Visually inspect to confirm buffer tubes are not pinched or distorted as shield connector is secured to bracket.

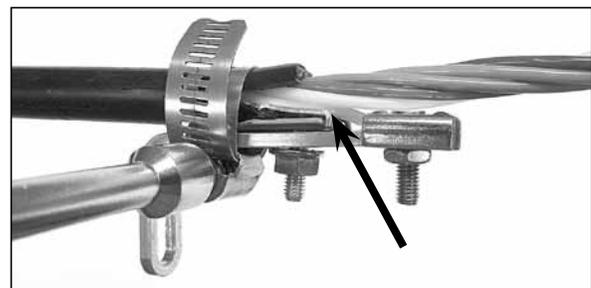
**Follow standard company practices when applying shield connector to cable.**

**Step #14b** Secure shield connector to strength member bracket with nut and secure cable strength member under cap of the strength member bracket.



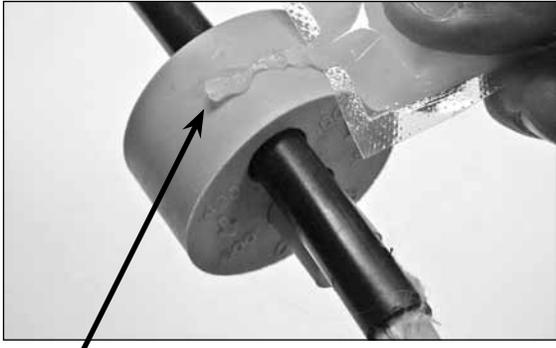
**NOTE:** Visually inspect to confirm buffer tubes are not pinched or distorted as shield connector is secured to bracket.

**Step #14c** Secure shielded cable to strength member bracket with hose clamp.



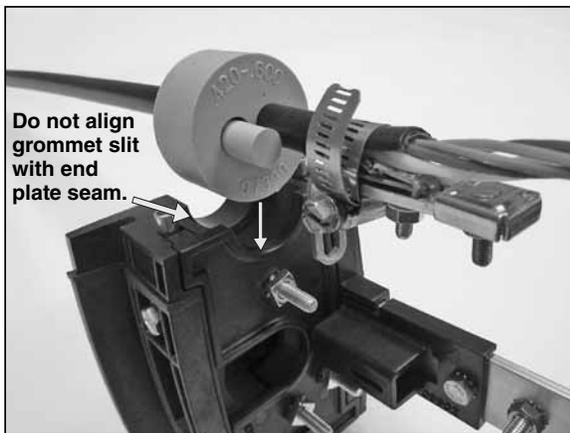
**NOTE:** Visually inspect to confirm buffer tubes are not pinched or distorted as cable is secured to bracket with hose clamp.

**Step #15a** Lubricate the outer surface of the grommet.

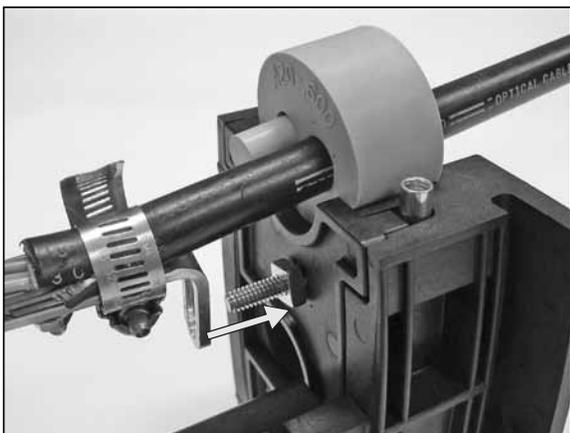


Lubricate sealing surface of grommet with silicone lubricant provided.

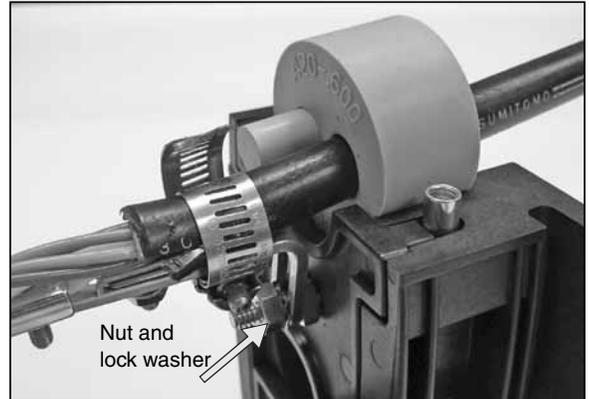
**Step #15b** Position grommet in end plate slot.



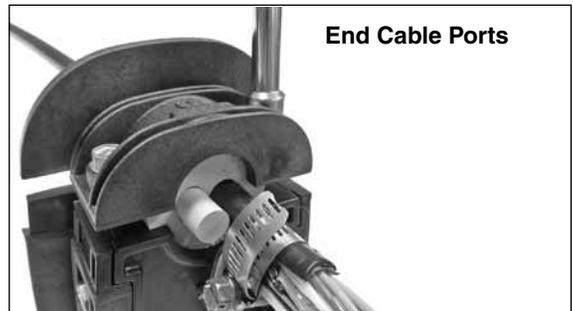
**Step #16** Position slot of strength member bracket leg over stud and pull back cable.



**Step #17a** Lightly secure strength member bracket on stud with lock washer and nut, allowing bracket to move.



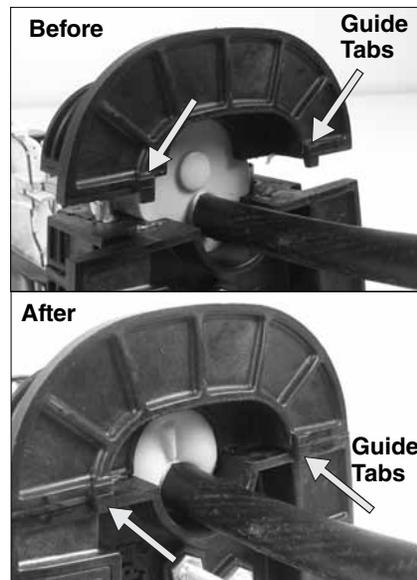
**Step #17b** Install the cable end cap and secure with hex bolts.



**NOTE:** Tighten bolts by hand, evenly until cable cap is fully seated (Do Not Use Power Tools to Tighten Bolts) Repeat process for remaining end cap. When using a can wrench or nut driver the installed torque is 35 to 40 in. lbs.

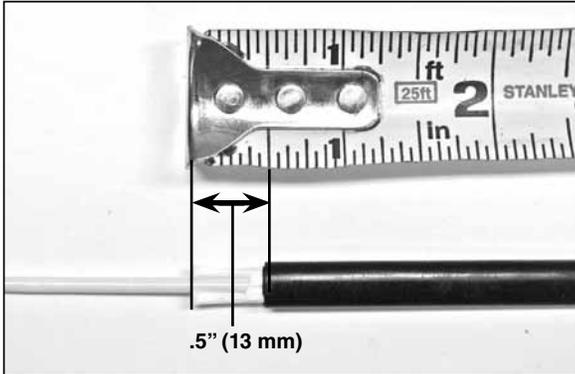
**IMPORTANT: TIGHTEN AND SECURE THE STRENGTH MEMBER BRACKET**

**Step #17c** Small guide tabs are on each end plate cap to insure proper alignment during end plate assembly. See assembly images below.

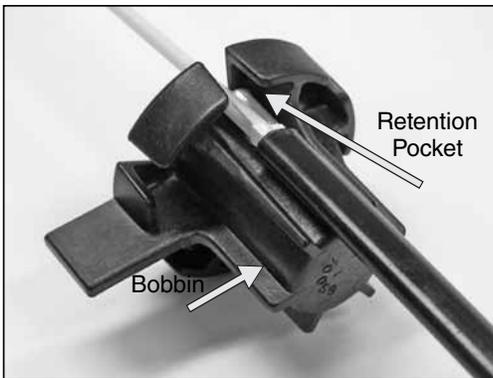


## Attaching Drop Cables to 6-Hole Grommet Bobbin

**Step #18** Trim strength members of drop cables as shown.



**Step #19a** Place end(s) of strength member(s) in the retention pocket of the bobbin.

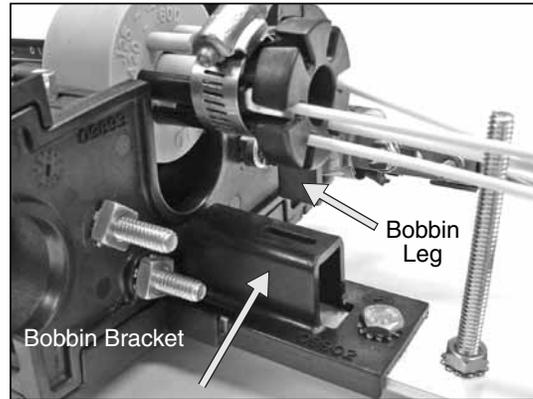


**Step #19b** Secure cable(s) to bobbin with hose clamp.

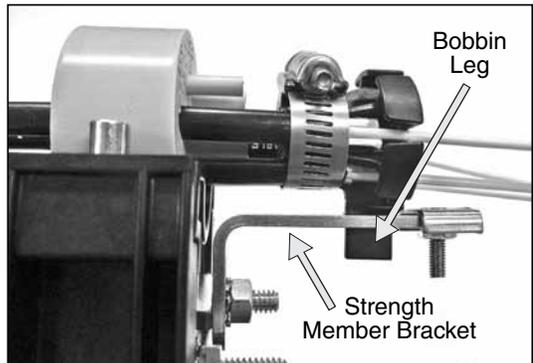


## Center Cable Cap Installation

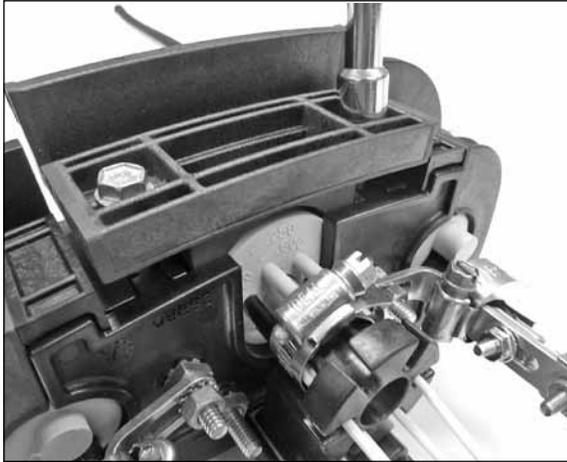
**Step #20a** For cables entering the closure in the middle cable port, insert the leg of the bobbin in the slot of the bobbin bracket.



**Step #20b** For cables entering the closure in the outer cable ports, place the leg of the bobbin in the slot of the strength member bracket and lightly secure the strength member bracket on the stud. The bracket is not tightened down yet.

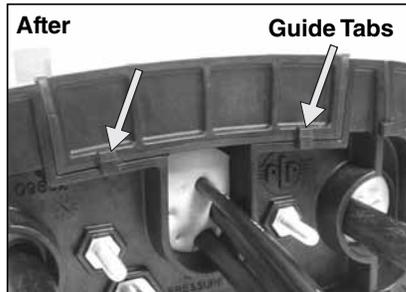
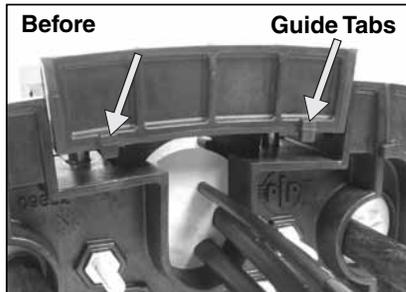


**Step #21a** Install center cable caps and secure with hex bolts.



**NOTE:** Tighten bolts by hand evenly until cable cap is fully seated (**DO NOT USE POWER TOOLS TO TIGHTEN BOLTS**). When using a can wrench or nut driver, the installed torque is 35 to 40 in. lbs. **IMPORTANT: TIGHTEN AND SECURE THE STRENGTH MEMBER BRACKET**

**Step #21b** Small guide tabs are on each end plate cap to insure proper alignment during end plate assembly. See assembly images below.

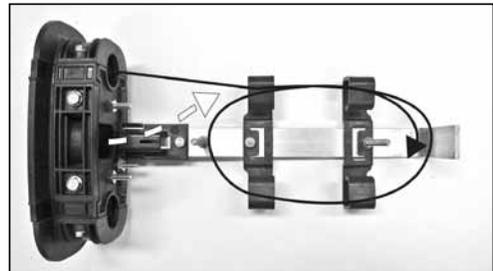
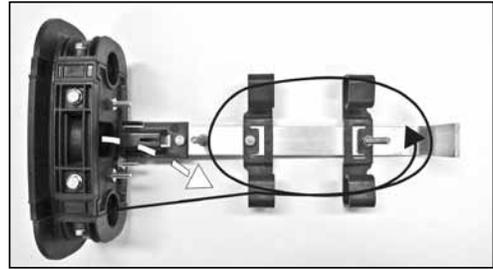


**Step #22** Complete end plate assembly.

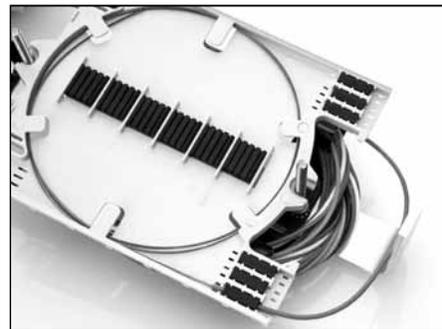


## Routing in Buffer Tube Organizer

**Step #23** Route and store buffer tubes in storage brackets.

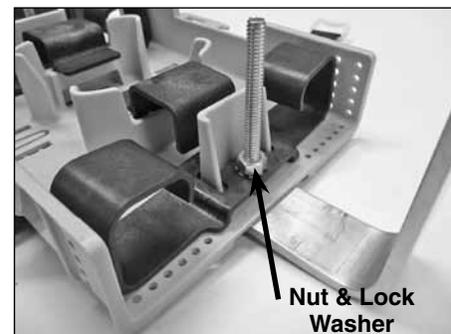


**Step #24** Route buffer tube(s) to splice tray(s) and secure.

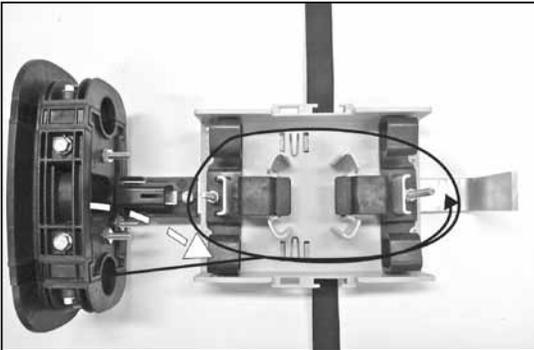
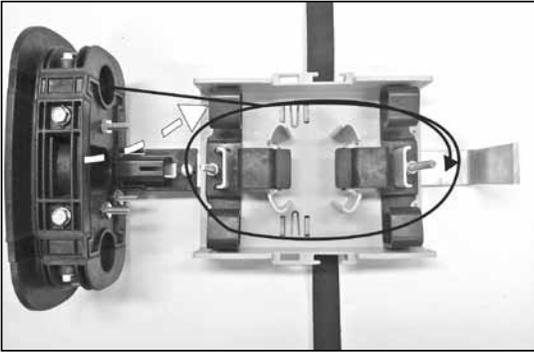


## Routing in Universal Organizer for Buffer Tube Applications

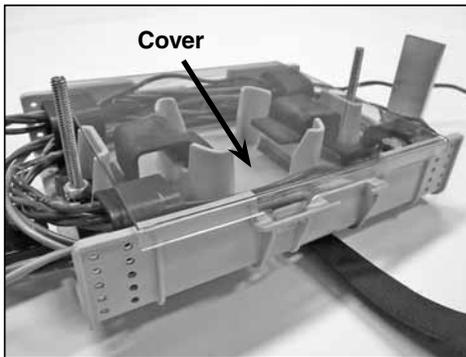
**Step #25** Secure buffer tube storage brackets with nut and lock washer.



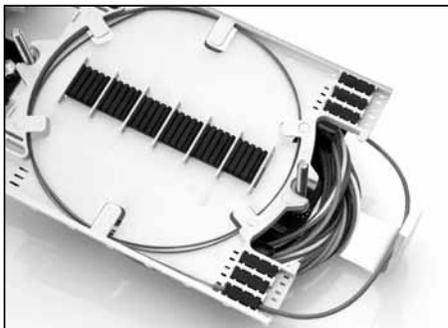
**Step #26** Route and store buffer tubes in storage brackets.



**Step #27** Install cover on transition tray.

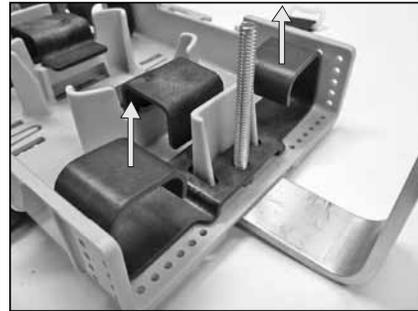


**Step #28** Route buffer tube(s) to splice tray(s) and secure.

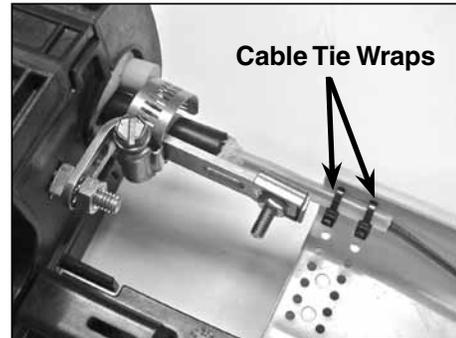


## Routing in Universal Organizer for Unitube/Ribbon Applications

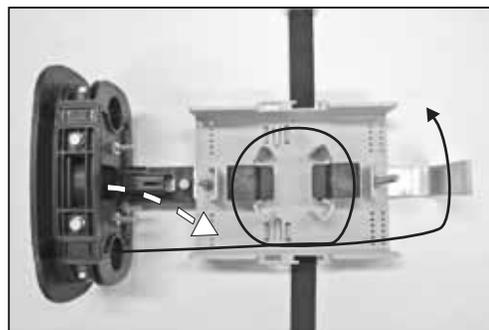
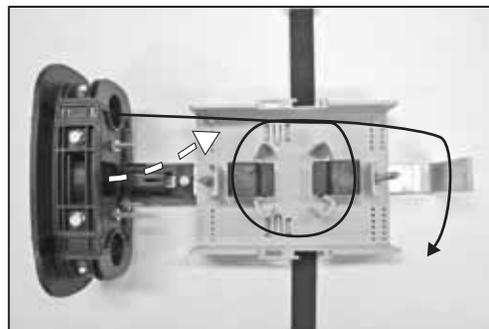
**Step #29** Remove buffer tube storage brackets from transition tray.



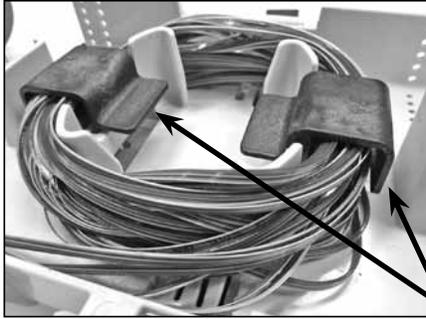
**Step #30** Route and secure central tube of unitube cables to transition tray with cable tie wraps.



**Step #31** Route and store fibers or ribbons within transition tray.

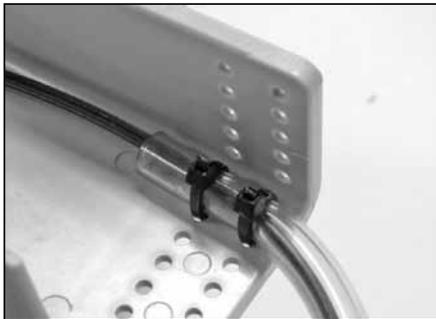


**Step #32** Route expressed fibers or ribbons under organizer clips

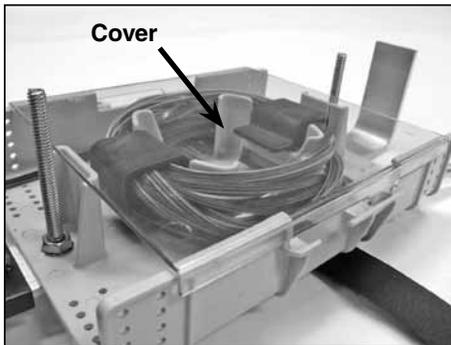


**Organizer Clips**

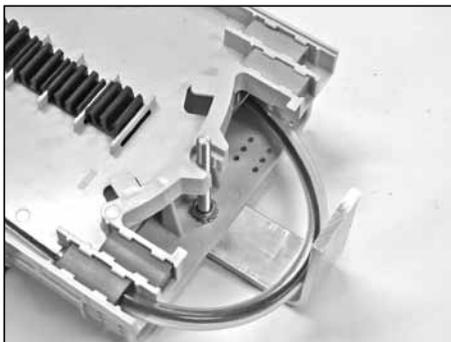
**Step #33** Insert fibers or ribbons to be routed to splice tray(s) into transport tube(s) and secure tubes to transition tray.



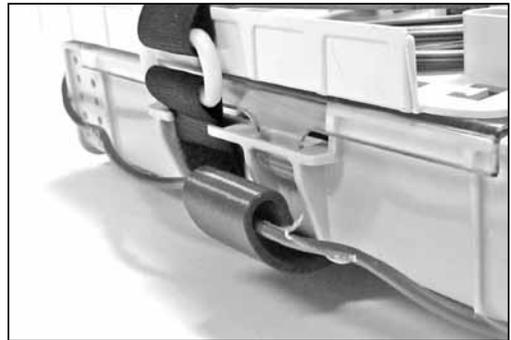
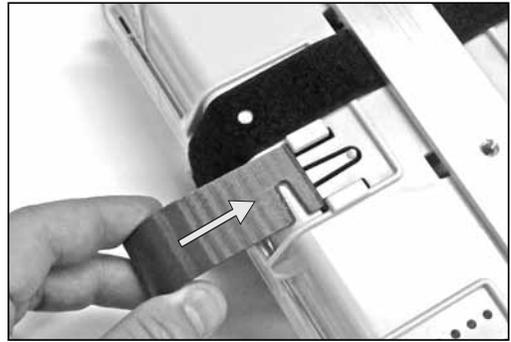
**Step #34** Install cover on transition tray.



**Step #35** Route transport tube(s) to splice tray(s) and secure.

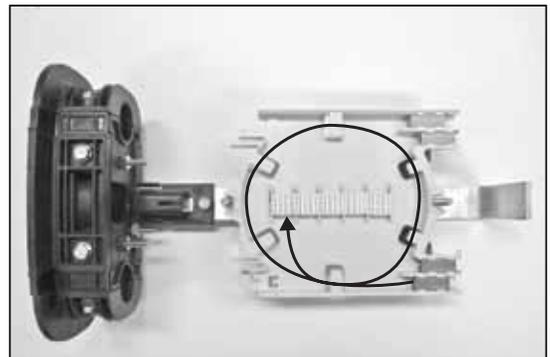


**Step #36** If buffer tubes need to be routed to splice trays, install buffer tube side storage clips to route buffer tubes.

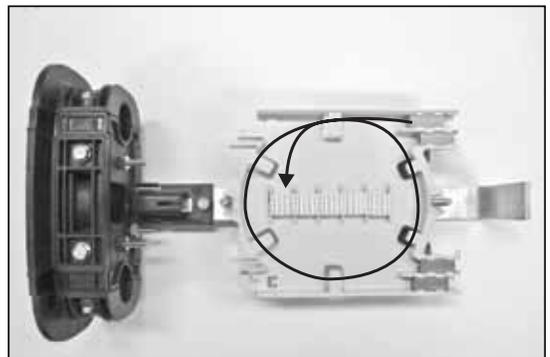


### Splice Tray Management

**Step #37** Route incoming fibers in splice tray.

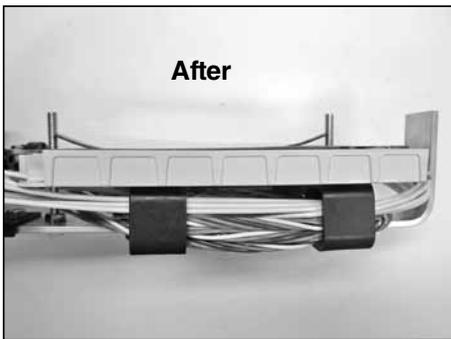
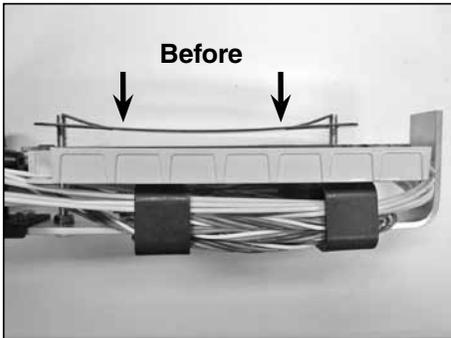


**Step #38** Route outgoing fibers in splice tray.

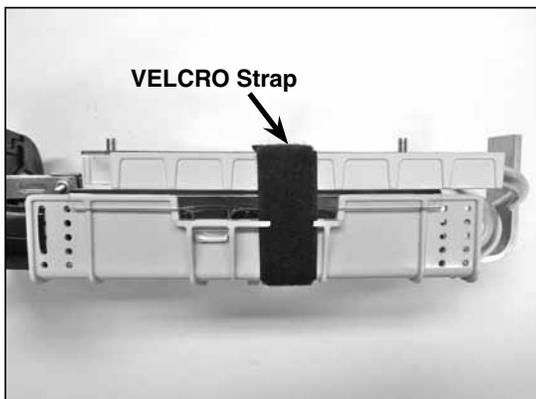


**Step #39** Splice incoming fibers to outgoing fibers per your accepted company practices.

**Step #40a** Secure splice tray(s) in buffer tube organizer with plastic hold down strap.



**Step #40b** Secure splice tray(s) in universal organizer with VELCRO® strap.



## Cross-Connect Applications

**Step #41** Measure and mark pigtail. Remove the pigtail jacket and Kevlar® beyond this mark.

Measurement from connector edge  
(See Chart Below)

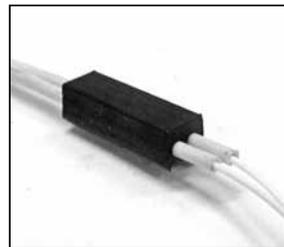


### For 6 or 12 Adapters

### For 8 Adapters

Position 1&7 = 16" (41cm)	Position 1 = 16" (41cm)
Position 2&8 = 15" (38 cm)	Position 2 = 15.5" (39 cm)
Position 3&9 = 14" (36 cm)	Position 3 = 15" (38 cm)
Position 4&10 = 13" (33 cm)	Position 4 = 14.5" (37 cm)
Position 5&11 = 12" (31 cm)	Position 5 = 14" (36 cm)
Position 6&12 = 11" (28 cm)	Position 6 = 13.5" (34 cm)
	Position 7 = 13" (33 cm)
	Position 8 = 12.5" (32 cm)

**Step #42** Install pigtails into LITE-GRIP® 2-Hole Sleeve or bundle up to 6 pigtails together with felt.

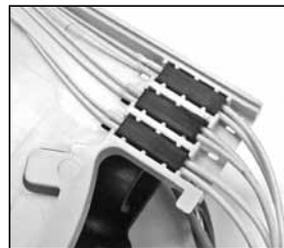


**Pigtails in 2-Hole  
LITE-GRIP® Sleeve**

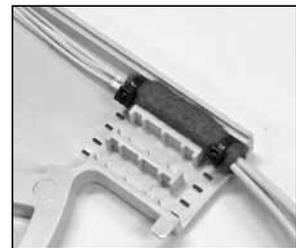


**Pigtails wrapped  
with felt**

**Step #43** Install LITE-GRIP® Sleeve(s) with pigtails into splice tray or tie wrap pigtails bundled together to splice tray.



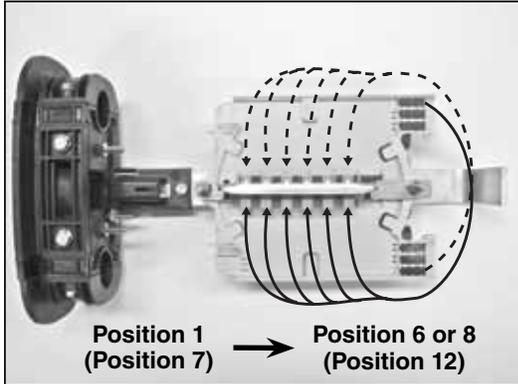
**Pigtails in 2-Hole  
LITE-GRIP® Sleeves**



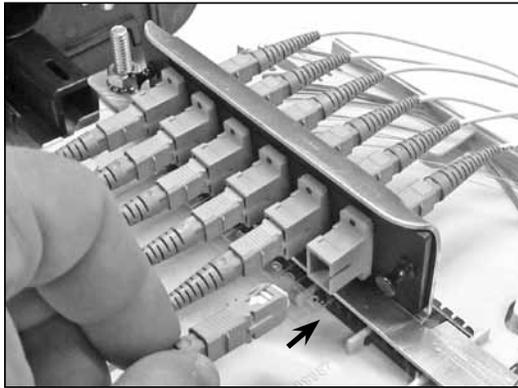
**Tie Wrapped  
Pigtail Bundle**

## Pigtail Routing

**Step #44** Route pigtails to bulkhead as shown.

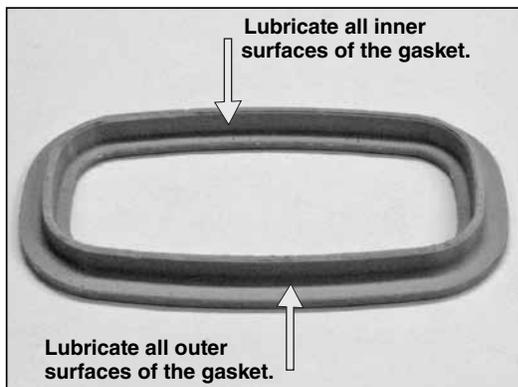


**Step #45** Install pigtail connectors into adapters.



## Dome Preparation

**Step #46** Lubricate all surfaces around gasket with silicone lubricant to assure easy assembly and closure re-entry.



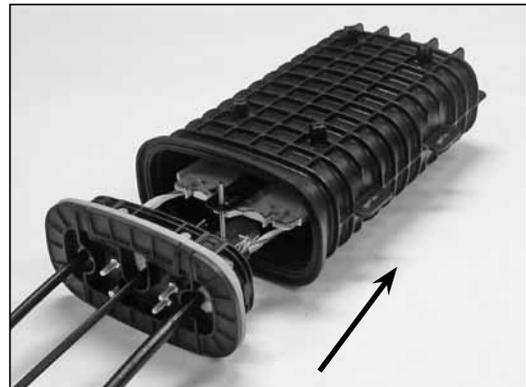
**Step #47** Slide end plate gasket onto end plate and press into groove.

**Make sure gasket is fully seated in groove of end plate**



**Step #48** Re-tighten all cable cap bolts (Step #21) to assure that the cable caps are fully seated. When using a can wrench or nut driver, the installed torque is 35 to 40 in. lbs.

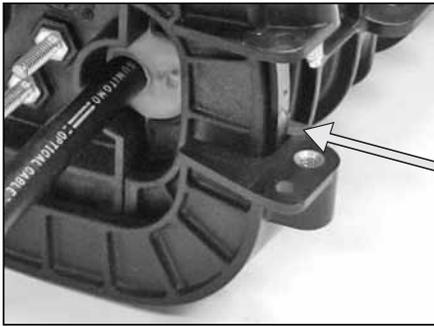
**Step #49** Position dome over end plate.



**Step #50a** Install dome collar.

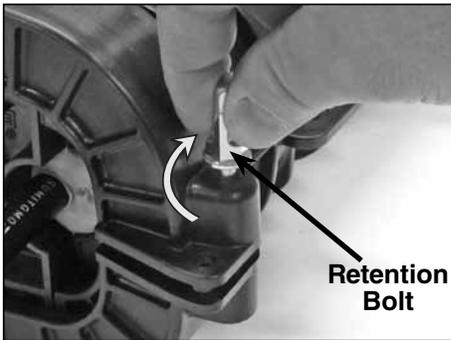


**Step #50b** Make sure lip of dome is captured underneath the collar before securing the latch.

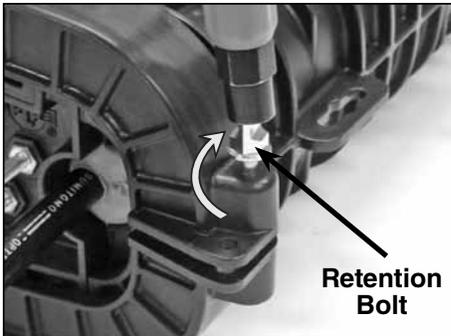


Lip of Dome

**Step #51** Fasten collar by screwing retention bolt by hand or with 7/16" end of a can wrench.

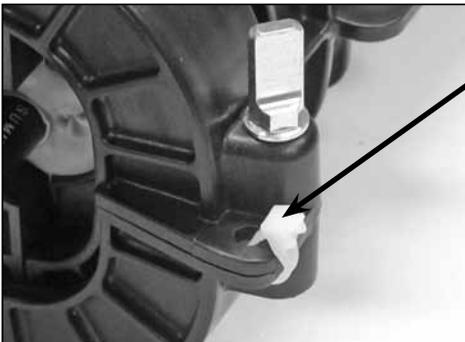


Retention Bolt



Retention Bolt

**PLP Tip:** Secure collar by placing a tie wrap or some other locking device in the hole of the collar flange



Tie Wrap in Hole of Collar Flange

## Flash Test Procedure

**Step #52** Remove cap from air valve of end plate.



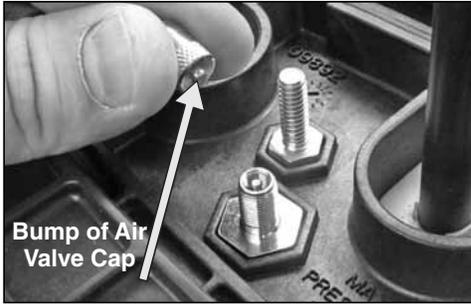
**Step #53** Pressurize closure up to a max of 5 psi.



**Step #54** Spray all sealing surfaces of the dome end plate with soapy water to determine if there are any leaks



**Step #55** Release the pressure in the closure using the bump on the top of the air valve cap.

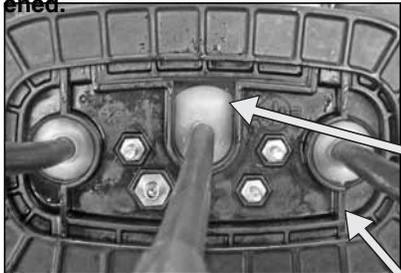


Bump of Air Valve Cap



**Common End Plate Leaks During Flash Testing**

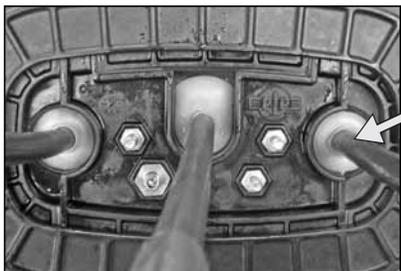
**Leak occurring at the corner of the cable port due to the cap of the cable port not being fully tightened.**



Leak occurring at the corner of the cable port

To resolve, remove collar, remove End Plate/Organizer Assembly from the Dome, and tighten bolts on end cap where leak occurred. Reassemble and flash test to confirm that the leak has stopped.

**Leak occurring at the cable entry of the grommet due to the cable not being within the stated cable diameter range of the grommet.**

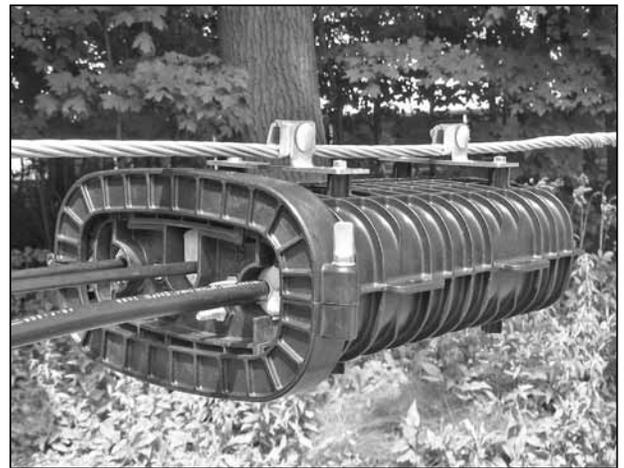
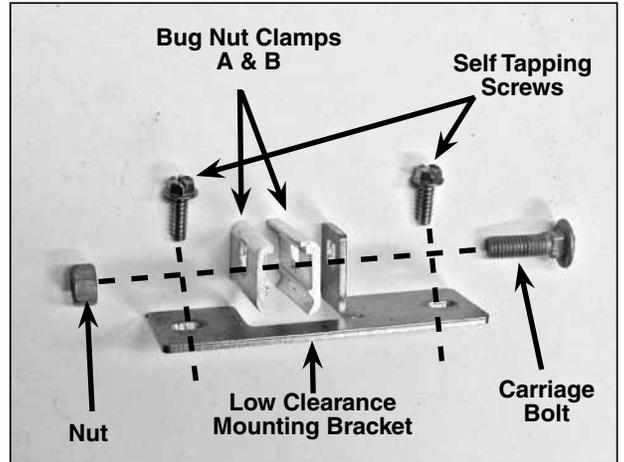


Leak occurring at the cable entry of the grommet

To resolve, remove collar, and remove End Plate/Organizer Assembly from the Dome. Remove end cap where leak occurred, remove grommet, remeasure cable with measure tape provided and select proper grommet. Reassemble the components and flash test the closure to confirm that the leak has stopped.

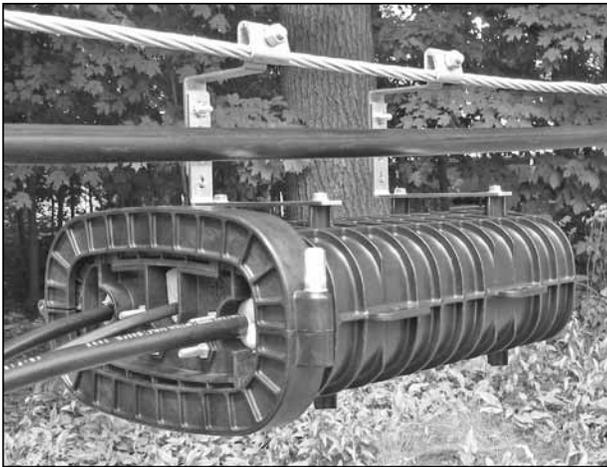
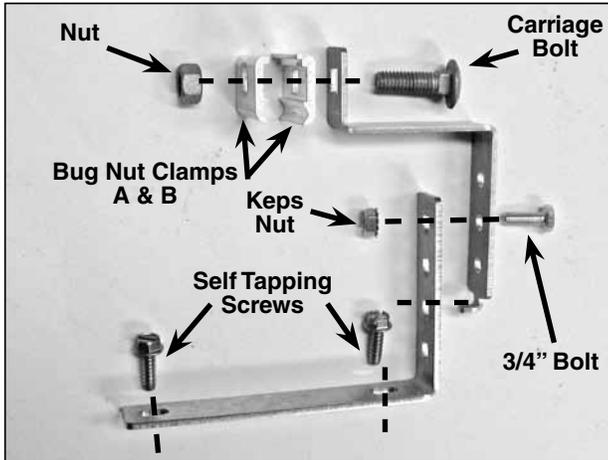
**Aerial Mounting Options - Strand**

**Step #56** **COYOTE ONE Low Clearance Aerial Bracket for Strand Mounting (Cat. No. 8004005).** Assemble each bracket as shown in photo below and attach the brackets to the dome cover with the self tapping screws.



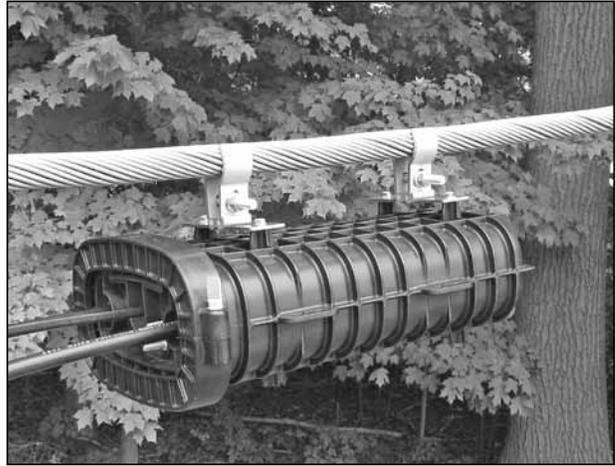
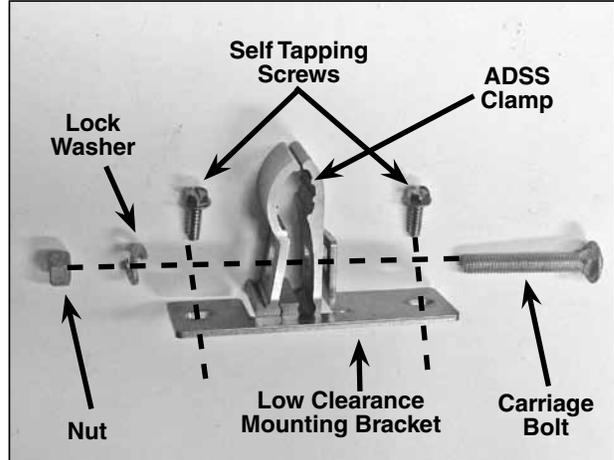
## Aerial Mounting Options - Strand

**Step #57** **COYOTE ONE Adjustable Offset Aerial Bracket for Strand Mounting (Cat. No. 8004027).** Assemble each bracket as shown in photo and attach the brackets to the dome cover with the self tapping screws.



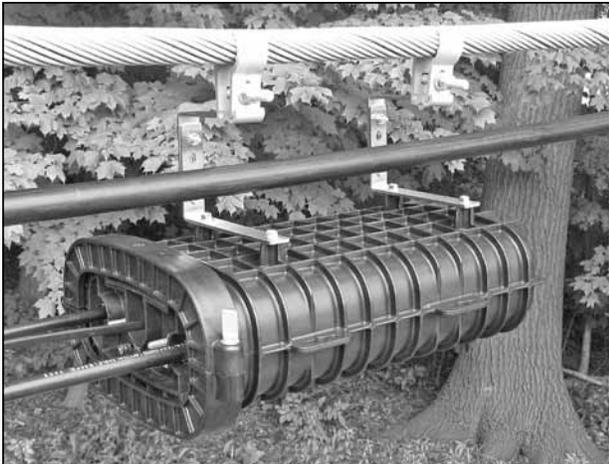
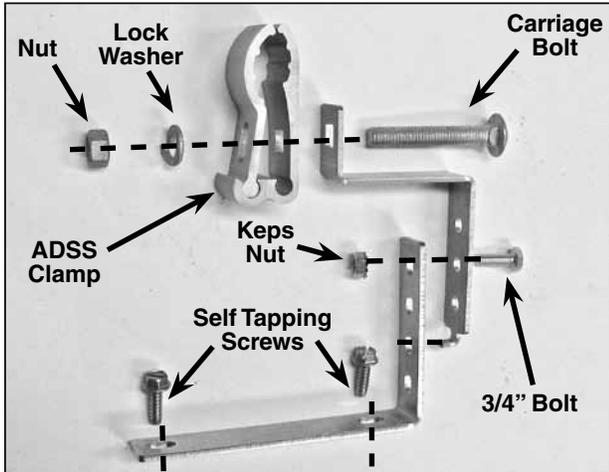
## Aerial Mounting Options - ADSS

**Step #58** **COYOTE ONE Low Clearance Aerial Bracket for ADSS Mounting (Cat. No. 8004031).** Assemble each bracket as shown in photo below and attach the brackets to the dome cover with the self tapping screws.



## Aerial Mounting Options - ADSS

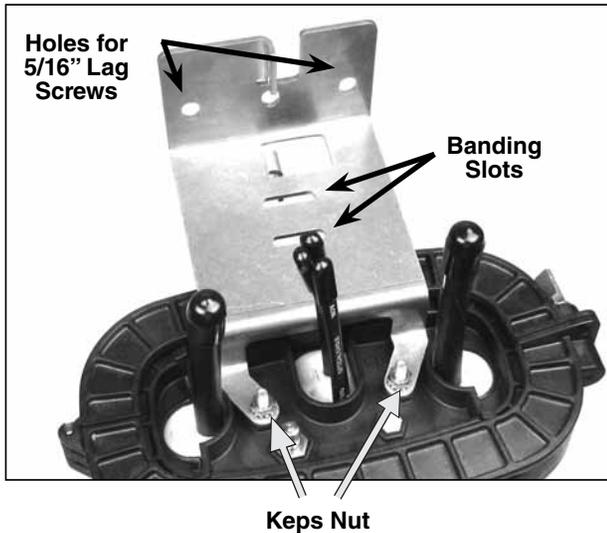
**Step #59** **COYOTE ONE Adjustable Offset Aerial Bracket for ADSS Mounting (Cat. No. 8004032).** Assemble each bracket as shown in photo and attach the brackets to the dome cover with the self tapping screws.



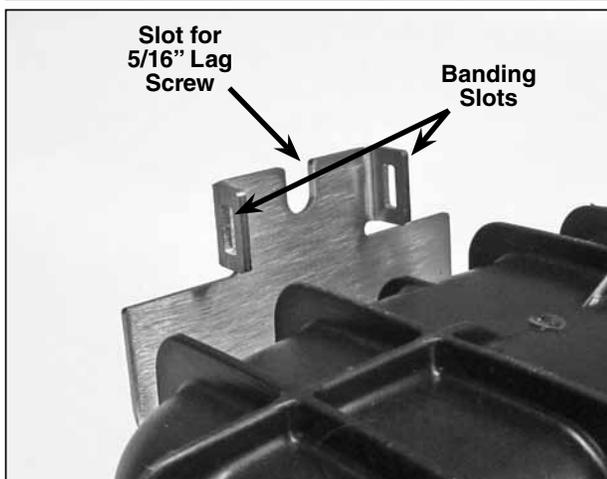
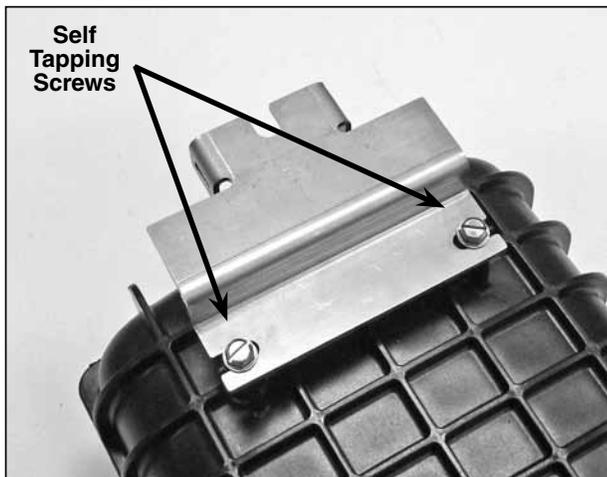
## Pole/Wall Mounting Options

**Step #60** **COYOTE ONE Closure Pole/Wall Mounting Bracket (Cat. No. 8004004).** Install the end plate mounting plate by placing the mounting plate on the end plate studs and securing with the keps nuts provided as seen below. Install the dome mounting plate to the dome with self tapping screws as seen below. Attach the mounting plates to a pole or wall with either 5/16" lag screws or banding (not provided).

### End Plate Mounting Plate

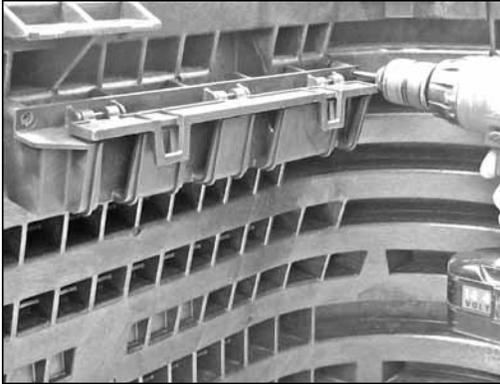


### Dome Mounting Plate

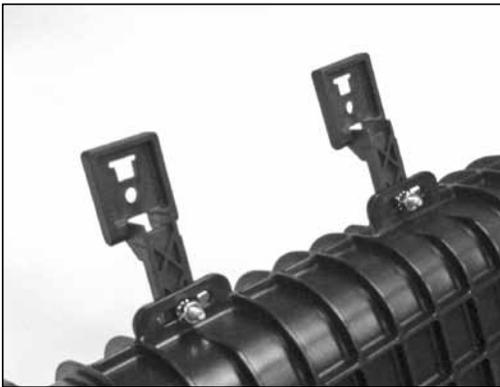


## Hand Hole Mounting Options

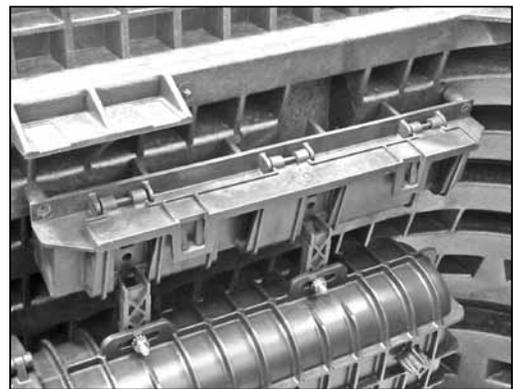
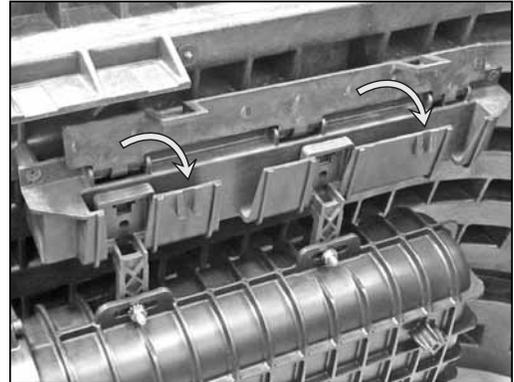
### Step #61 COYOTE Universal Mounting Bracket for Hand Hole Applications (Cat. No. 8003835).



1. Secure the Universal Mounting Bracket to the inner wall of the hand hole using the 2 screws provided.



2. Secure the hanger brackets to the ears of the COYOTE ONE with the hex head bolts and keps nuts provided.



3. Slide the hanger brackets into the proper slots of the Universal Mounting Bracket and snap the hinged lid into place to secure the hanger brackets.

## SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

**Do not modify this product under any circumstances.**

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



# PREFORMED LINE PRODUCTS

P.O. Box 91129, Cleveland, Ohio 44101 • 440.461.5200 • [www.preformed.com](http://www.preformed.com) • e-mail: [inquiries@preformed.com](mailto:inquiries@preformed.com)

SP3114-3

## COYOTE® AXCESS SOLUTIONS RACK MOUNT CABINETS

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before application.

Catalog Number	Product Descriptions
RDC3	Rack Mount Cabinet - Splice and Connect up to 36 Fibers
RDC6	Rack Mount Cabinet with - Splice and Connect up to 72 Fibers
RDC12	Rack Mount Cabinet - Splice and Connect up to 144 Fibers
RDC24	Rack Mount Cabinet - Splice and Connect up to 288 Fibers

CONTENTS	PAGE	CONTENTS	PAGE
1. NOMENCLATURE.....	1	6. FIBER SPLICING AND SPLICE TRAY .....	4,5
2. DESCRIPTION .....	2	7. JUMPER ROUTING.....	6
3. MOUNTING ON RACK.....	2	8. ACCESSORIES .....	6
4. PREPARATION AND ROUTING OF FEEDER CABLE.....	2,3	9. SAFETY CONSIDERATIONS.....	7
5. PIGTAIL PREPARATION AND ROUTING .....	3,4		

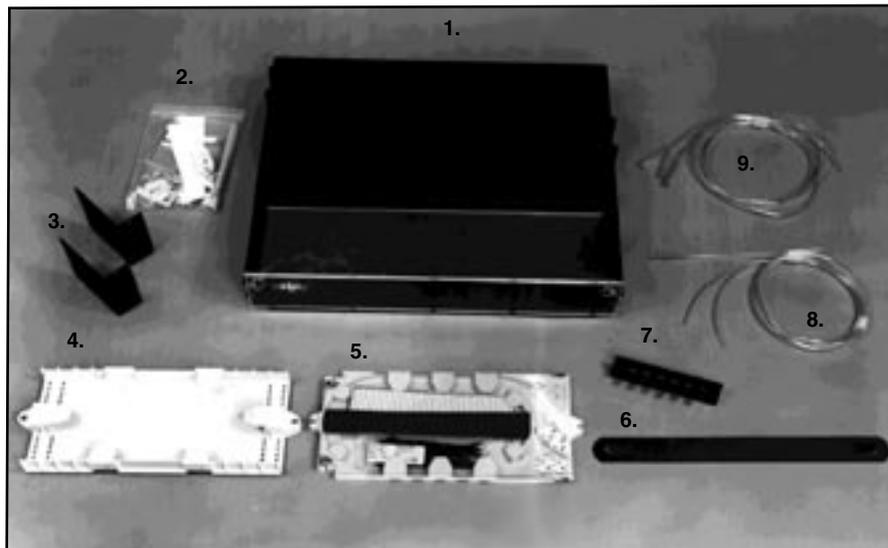


FIGURE 1 - NOMENCLATURE

### 1.00 NOMENCLATURE

#### 1.01

- |   |                                     |
|---|-------------------------------------|
| 1. Rack Mount Cabinet Assembly                                      | 5. Splice Tray(s) (sold separately) |
| 2. Small Parts Bag (mounting screws, tie wraps, splice tray labels) | 6. Splice Tray Hold Down Strap      |
| 3. Mounting Brackets (2)  | 7. Adapter Module (sold separately) |
| 4. Transition Assembly  | 8. Transport Tubes                  |
|   | 9. Pigtail Tube Assemblies          |

## 2.00 DESCRIPTION

**2.01** The COYOTE® Rack Mount Cabinets are designed to protect and organize optical fiber splices and connectors in the central office, equipment room, CEV and building entrances.

**2.02** Four sizes of cabinets are available to accommodate from 6 to 288 fiber splices and connectors, using the COYOTE Splicing System.

**2.03** The Transition Assembly and Splice Tray(s) in the rear splicing area are the same as used in the COYOTE Closure. Each Splice Tray accommodates 24 splices per tray in this application.

**2.04** The Mounting Brackets allow mounting the cabinets to either 19" (483 mm) or 23" (584 mm) equipment racks or cabinets.

**2.05** Adapter Modules are available with all standard fiber optic connectors and are ordered separately.

## 3.00 MOUNTING ON RACK

**3.01** Attach the appropriate Mounting Bracket to each side of the cabinet using the screws provided. Shorter brackets are included for mounting to a 19" (483 mm) equipment rack. The longer brackets are used for mounting to a 23" (584 mm) equipment rack.

**3.02** Mount the cabinet to the equipment rack at the desired height with the screws provided.

**PLP Tip:** Cabinets have keyhole slots for wall mounting.

## 4.00 PREPARATION AND ROUTING OF FEEDER CABLE

**4.01** Remove a minimum of 90" (2,286 mm) of sheath from the cable, and clean cable according to accepted company practices.

**4.02** Remove the rear cover from the cabinet by turning the 1/4-turn fasteners counter clockwise.

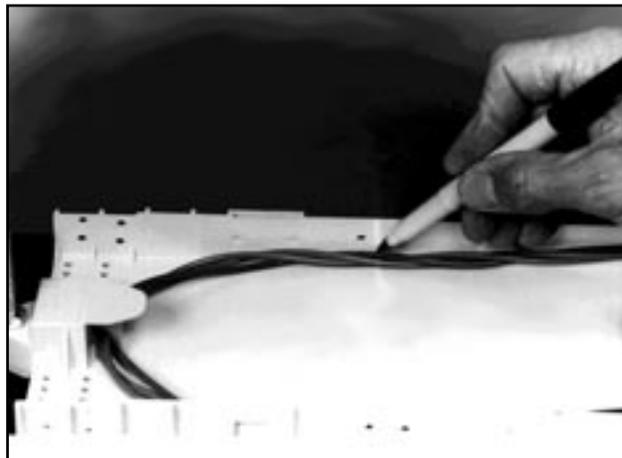
**4.03** Remove the Splice Tray Hold Down Strap from the threaded posts, and remove the Splice Tray(s) to expose the Transition Assembly.

**4.04** Slit the grommet in the cable entry at the rear of the cabinet on the side being used for cable entry, and position the cable into the entry.

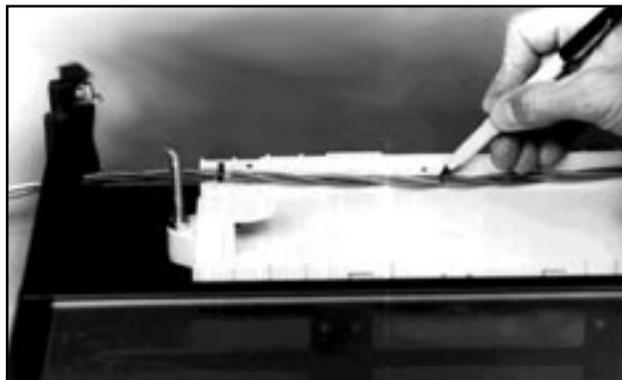
**4.05** Lay the buffer tubes or unitube into the Transition Assembly. For unitube application, skip to Step 4.11.

**PLP TIP:** The retaining tabs on top of the Transition Assembly are removable to facilitate placement of buffer tubes.

**4.06** Mark the buffer tubes at the back wall centerline of the Transition Assembly as shown in Figure 2. (Note that for cable entry into the right side of the cabinet the buffer tubes are routed against the front of the Transition Assembly and then around to the back wall.)



**FIGURE 2A - MARK BUFFER TUBES FOR RIGHT SIDE CABLE ENTRY**



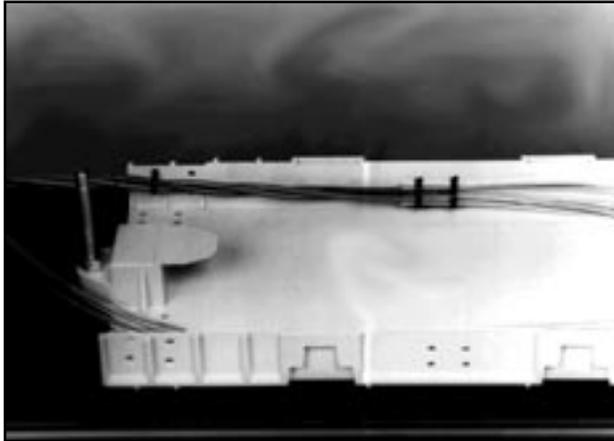
**FIGURE 2B - MARK BUFFER TUBES FOR LEFT SIDE CABLE ENTRY**

**4.07** Starting with one of the buffer tubes, remove the buffer tube up to the mark, and clean the fibers per your accepted company practices.

**4.08** Feed the fibers from this buffer tube into one of the Transport Tubes provided with the cabinet. Insert the end of the buffer tube 1/2" (13 mm) into the Transport Tube.

**4.09** Repeat Steps 4.07 and 4.08 for the remaining buffer tubes.

**4.10** Using two of the tie wraps supplied with the Splice Tray(s), secure the buffer tubes and Transport Tubes to the back wall of the Transition Assembly. (Figure 3) Proceed to Step 4.16.



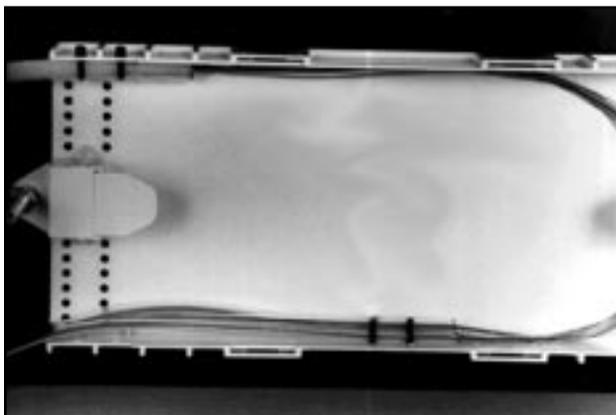
**FIGURE 3 - SECURE BUFFER TUBES & TRANSPORT TUBES TO TRANSITION ASSEMBLY**

**4.11** Mark the unitube at a point 2" (51 mm) from where it enters the Transition Assembly (for either right or left side cable entry).

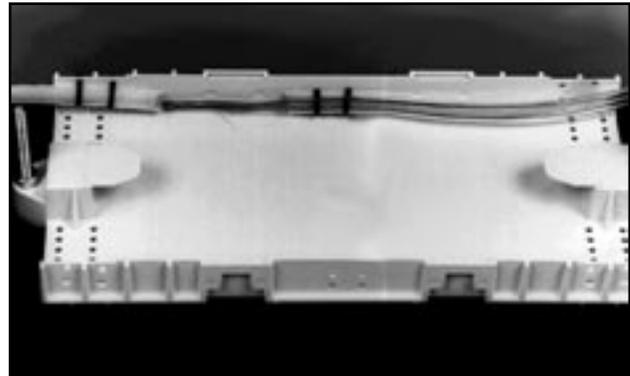
**4.12** Remove the unitube and clean the fibers per your accepted company practices. Make sure to maintain the identity of each bundle of twelve fibers.

**4.13** Secure the unitube to the Transition Assembly with the tie wraps provided. Use two sets of the tie down holes in the side of the Transition Assembly.

**4.14** Feed each bundle of fibers into one of the Transport Tubes provided with the cabinet so that the end of the Transport Tubes will be located just beyond the center-line of the back wall of the Transition Assembly. (Figure 4)



**FIGURE 4A - FIBER ROUTING & TRANSPORT TUBE LOCATION FOR RIGHT SIDE CABLE ENTRY**



**FIGURE 4B - FIBER ROUTING & TRANSPORT TUBE LOCATION FOR LEFT SIDE CABLE ENTRY**

**4.15** Secure the Transport Tubes to the back wall of the Transition Assembly with two of the tie wraps provided. Be sure that the fibers are not bent as they enter the Transport Tubes. If necessary, use some of the felt tape provided to secure the fibers to the Transition Assembly.

**4.16** Carefully coil the Transport Tubes and bare fibers into the base of the Transition Assembly until a later step in this procedure.

## **5.00 PIGTAIL PREPARATION & ROUTING**

**5.01** The following are the required pigtail lengths for each COYOTE Access Solutions Rack Mount Cabinet:

RDC3.....	3 meters
RDC6.....	3 meters
RDC12.....	3 meters
RDC24.....	3 meters

**5.02** Select one of the Adapter Modules (purchased separately) and install it in one of the locations in the cabinet bulkhead. Push the locking fasteners at the ends of the Coupler Plate to secure it in place.

**PLP TIP:** For the RDC6 Cabinet, install the lower row of Coupler Plates first.

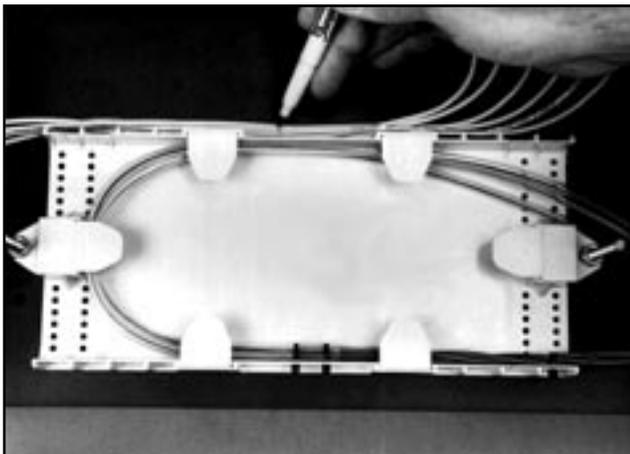
**5.03** Select six pigtails, clean the fiber connector, and connect them to the rear side of the Coupler Plate.

**5.04** Route the pigtails along the Transition Assembly toward the right side of the cabinet, while maintaining a smooth bending radius behind the Adapter Modules. (Figure 5)



**FIGURE 5 - ROUTE THE PIGTAILS**

**5.05** Mark the jacket of each of the pigtails at a point about 2" (13 mm) beyond the bending radius as shown in Figure 6.



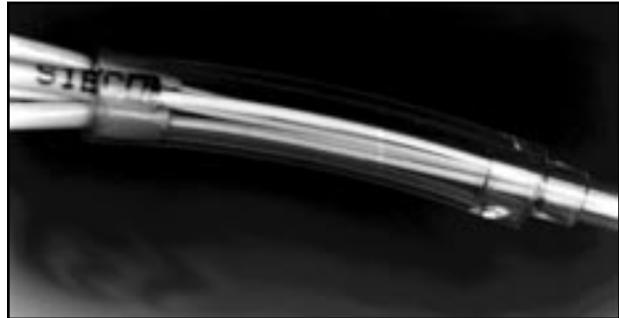
**FIGURE 6 - MARK PIGTAILS**

**5.06** Carefully remove the jacket on each pigtail up to the mark. Number or color code the connector strain relief and the 900 micron tight buffer of each pigtail for fiber identification.

**PLP TIP:** PLP® has pigtails available with different colored 900 micron tight buffer coatings to simplify fiber identification.

**5.07** Feed the group of six buffered fibers into the end of one of the Pigtail Tube Assemblies with the larger diameter tube section, until the pigtail jackets are within the larger tube 3/8" to 1/2" (10 mm to 13 mm). (Figure 7)

**PLP TIP:** Moisten the ends of the pigtail jackets to ease insertion into the tube.

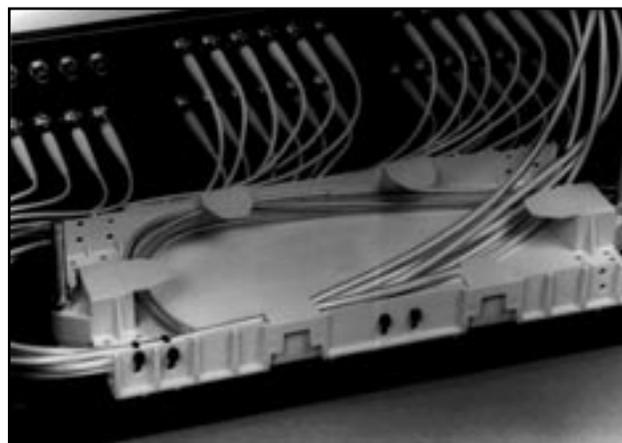


**FIGURE 7 - INSERT PIGTAILS INTO PIGTAIL TUBE ASSEMBLY**

**5.08** Repeat Steps 5.05 through 5.07 for each group of pigtails.

## **6.00 FIBER SPLICING AND ROUTING**

**6.01** Route the Transport Tubes with the feeder cable fibers and the Pigtail Tube Assemblies within the Transition Assembly so that they will exit at the front left corner of the Transition Assembly. (Figure 8)

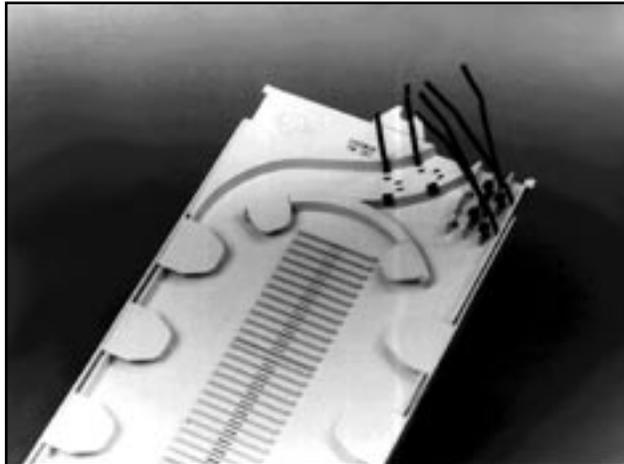


**FIGURE 8 - ROUTE TRANSPORT & PIGTAIL TUBES WITHIN TRANSITION ASSEMBLY**

**6.02** Use two tie wraps to gently secure the Pigtail Assembly Tubes to the back right side of the Transition Assembly as shown in Figure 8.

**6.03** Place a Splice Tray on the threaded studs over the Transition Assembly.

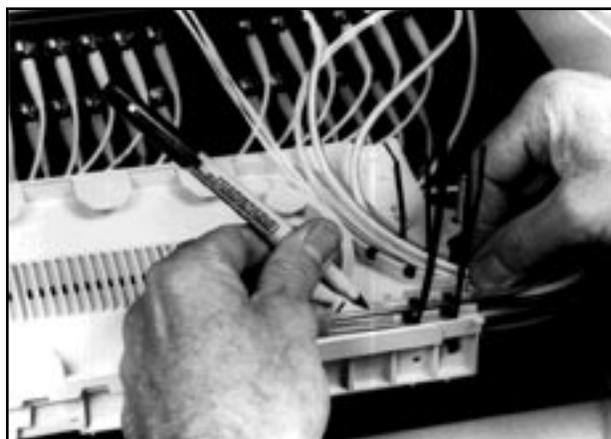
**PLP TIP:** Install the tie wraps into the Splice Tray tie down holes prior to installing the Splice Tray. (Figure 9)



**FIGURE 9 - INSTALL TIE WRAPS INTO SPLICE TRAY**

**6.04** Select four Pigtail Assembly Tubes (use three if working with the RDC3) and two Transport Tubes for installation onto the Splice Tray.

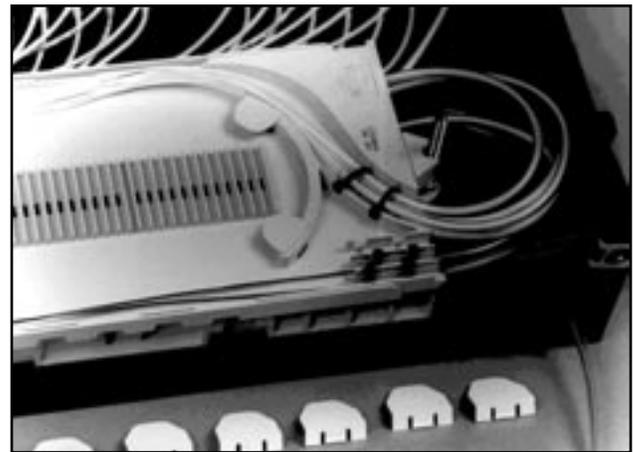
**6.05** Lay the Pigtail Assembly Tubes within the wide entry slot of the Splice Trays and the Transport Tubes within the first two narrow slots, and mark the tubes slightly beyond the tie down locations. (Figure 10)



**FIGURE 10 - MARK TUBES IN SPLICE TRAY**

**6.06** Carefully cut the tubes at the marks, and remove the excess length.

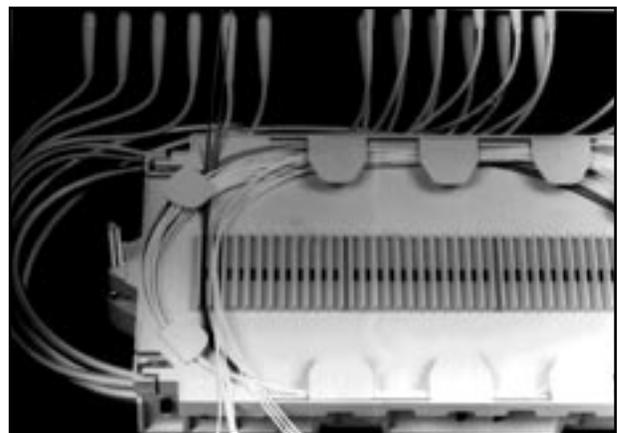
**6.07** Secure the Pigtail Tubes and Transport Tubes to the Splice Tray with the tie wraps. (Figure 11)



**FIGURE 11 - SECURE TUBES TO SPLICE TRAY**

**6.08** Route the Pigtail and Feeder Cable fibers one complete turn around the Splice Tray and into the splice groove furthest from the entry point of the tubes. (Figure 12)

**PLP TIP:** Temporarily remove the retaining tabs from the Splice Tray to ease fiber placement.

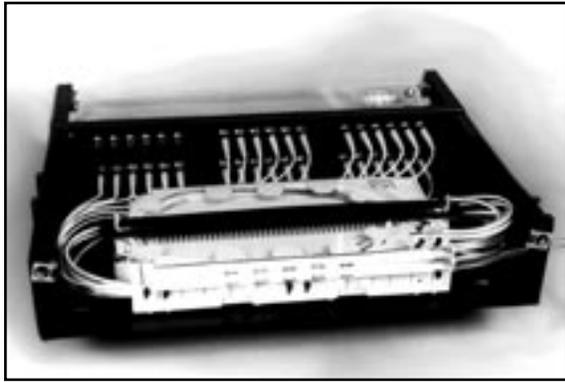


**FIGURE 12 - ROUTE FIBERS WITHIN SPLICE TRAY**

**6.09** Splice Feeder Cable fibers to Pigtail fibers per accepted company practices. Place each splice in a groove, starting from the furthest groove from the tube entry.

**6.10** Repeat Steps 6.03 through 6.09 for additional Splice Trays.

**6.11** Secure Splice Trays in place with Splice Tray Hold Down Strap. (Figure 13)



**FIGURE 13 - SECURE SPLICE TRAYS WITH SPLICE TRAY HOLD DOWN STRAP**

## 7.00 JUMPER ROUTING

**7.01** Clean the fiber connectors and attach the jumpers to the front side of the Adapter Modules.

**7.02** Gently bend the jumpers towards and through the grommet on either side of the cabinet.

**7.03** Lightly secure the jumpers to the tie down post with the tie wraps provided.

**7.04** Lightly secure the jumpers to the equipment rack with the tie wraps.

## 8.00 ACCESSORIES

**8.01** Table 1 details the Adapter Modules and Pigtail Assemblies available for the COYOTE Access Solutions Rack Mount Cabinets.

<b>Adapter Modules</b>			
<b>Catalog No.</b>	<b>Description</b>	<b>Adapters</b>	<b>Sleeve</b>
6SMSC	SC	6	Ceramic
6SCAPC	SC/APC	6	Ceramic
12SMDC	SC	12 (6 Duplex)	Ceramic
8SMSC	SC	8	Ceramic
6SMST	ST	6	Ceramic
8SMST	ST	8	Ceramic
6SMFC	FC	6	Ceramic
8SMFC	FC	8	Ceramic
6FCAPC	FC/APC	6	Ceramic
6SMLC	LC	6	Ceramic
12SMLC	LC	12	Ceramic
600	Blank Plate	-	-

<b>Pigtail Cable Assemblies - Bundled 900 Micron Fibers in Yellow Sleeve</b>		
<b>Catalog No.</b>	<b>Connector</b>	<b>Fiber Count</b>
P6SCU_*	SC/UPC	6
P12SCU_*	SC/UPC	12
P6SCA_*	SC/APC	6
P12SCA_*	SC/APC	12
P6ST_*	ST	6
P12ST_*	ST	12
P6FC_*	FC	6
P12FC_*	FC	12
P6LC_*	LC	6
P12LC_*	LC	12
*Cable length in meters Contact PLP for other options		

**TABLE 1**

## **9.00 SAFETY CONSIDERATIONS**

- 9.01** This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures may result in personal injury.
- 9.02** When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.
- 9.03** For proper performance and personal safety, be sure to select the proper size PREFORMED Product before application.
- 9.04** This product is intended for use by trained technicians only. This product **should not be used** by anyone who is not familiar with, and not trained to use it.

# **PREFORMED** LINE PRODUCTS

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**SP2985**

## **SECTION 17000 BOND FORMS**

The pages attached contain the Owner's standard bond forms: Bid Bond, Completion and Performance Bond, and Labor and Material Bond.

**BID BOND**

**FY2014-115**

KNOW ALL MEN BY THESE PRESENTS,

That we, \_\_\_\_\_,

(hereinafter called the "Principal"), as Principal, and the \_\_\_\_\_, of

\_\_\_\_\_ a

corporation duly organized under the laws of the State of \_\_\_\_\_

(hereinafter called the "Surety"), as Surety, are held and firmly bound unto the City of Oak Ridge, Tennessee, (hereinafter called the "Obligee"), as Obligee, in the sum of five percent (5%) of the bid price for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for:

\_\_\_\_\_.

NOW THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the Invitation to Bid and Instructions to Bidders with good and sufficient surety for the faithful performance of such contract, or in the event of the failure of the Principal to enter such contract and give such bond, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ A.D. 2014.

IN THE PRESENCE OF:

\_\_\_\_\_(Seal)  
Principal

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Title

\_\_\_\_\_  
Witness

\_\_\_\_\_(Seal)  
Surety

\_\_\_\_\_  
Title

**LABOR AND MATERIAL BOND**

FY2014-115

Know all men by these presents

That We \_\_\_\_\_

AS PRINCIPAL, and

\_\_\_\_\_ AS SURETY are held firmly bound unto the

\_\_\_\_\_ hereinafter called the Obligee, in the penal sum of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

lawful money of the United States, for payment of which sum well and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS: Said Principal has entered into a certain Contract with said Obligee dated \_\_\_\_\_ 20\_\_\_\_\_ (hereinafter called the Contract) for the full and complete performance of

\_\_\_\_\_ , which Contract and the specifications for said work shall be deemed a part hereof as fully as if set out herein.

NOW, THEREFORE, the condition of this obligation is such that if said Principal and all contractors to whom any portion of the work provided for in said Contract is sublet and all assignees of said Principal and of such contractors shall promptly make payments to the persons supplying him, or them, with labor, material, fuel or supplies, for or in the prosecution of the work provided for in said Contract, or in any amendment or extension of or addition to said Contract, and for payment of reasonable attorney's fees, incurred by the Claimant or Claimants in suits on said Bond, then the above obligation shall be void; otherwise to remain in full force and effect. Provided, however, that this Bond is subject to the following conditions and limitations:

- (a) Any person, firm or corporation that has furnished labor, materials, fuel or supplies for or in the prosecution of the work provided for in said Contract shall have a direct right of action against the Principal and Surety of this Bond which right of action shall be asserted in a proceeding, instituted in the county in which the Principal does business. Such right of action shall be asserted in a proceeding instituted in the name of the Claimant or Claimants for his or their use and benefit against said Principal and Surety or either of them, (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

Labor and Material Bond  
(continued)

(b) The Principal and Surety hereby designate and appoint

\_\_\_\_\_  
Tom Beehan  
(Executive Officer of the Obligee)

as the agent of each of them to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this Bond and hereby consent that such service shall be the same as personal service on the Principal and/or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under any worker's compensation or employers' liability statute.

(d) This bond is furnished in compliance with Tennessee Code Annotated Section 12-4-201 et seq.

In Witness whereof the parties hereto have executed this agreement on the day and date first above written in two counterparts, each of which shall without proof or accounting for the other counterpart, be deemed an original contract.

SIGNED, SEALED AND DELIVERED this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

Attest: \_\_\_\_\_

By: \_\_\_\_\_ (Seal)  
Principal

Attest: \_\_\_\_\_

By: \_\_\_\_\_ (Seal)

**COMPLETION AND PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

FY2014-115

THAT \_\_\_\_\_  
(Name and address of legal title of Contractor)

as Principal, hereinafter called Contractor, and \_\_\_\_\_  
SURETY, hereinafter called Surety, and held and firmly bound unto the City of Oak Ridge, as Obligee, in  
the amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators,  
successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, 20\_\_\_\_ entered into a  
Contract with the City of Oak Ridge for \_\_\_\_\_  
in accordance with the specifications and approved amendments, which Contract is by reference made a  
part hereof, including all the obligations thereunder, and is hereinafter referred to as the Contract.

NOW, THEREFORE, the condition of this obligation is such that, if Contractor shall promptly and faithfully  
perform said Contract, including all the obligations thereunder, then this obligation shall be null and void,  
otherwise it shall remain in full force and effect.

Whenever Contractor shall be, and declared by City to be, in default under the Contract or any part  
thereof, the City having performed the City's obligation thereunder, the Surety may promptly remedy the  
default, or shall promptly at the City's option:

- (1) Complete the Contract in accordance with its terms and conditions; OR
- (2) Obtain a bid or bids for submission to the City for completing the Contract in accordance with  
the terms and conditions, and upon determination by Owner and Surety of lowest responsible  
bidder, arrange for a contract between such bidder and the City and make available as work  
progresses (even though there shall be a default or a succession of defaults under the  
Contract or contracts of completion arranged under this paragraph) sufficient funds to pay the  
cost of completion or any obligations thereunder.

Any suit under this bond must be instituted before the expiration of two years from the date on which final  
payment under the Contract falls due.

SIGNED AND SEALED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D., 2014  
IN THE PRESENCE OF:

\_\_\_\_\_  
Witness

By \_\_\_\_\_  
Principal (Seal)

\_\_\_\_\_  
Witness

By \_\_\_\_\_  
Surety (Seal)