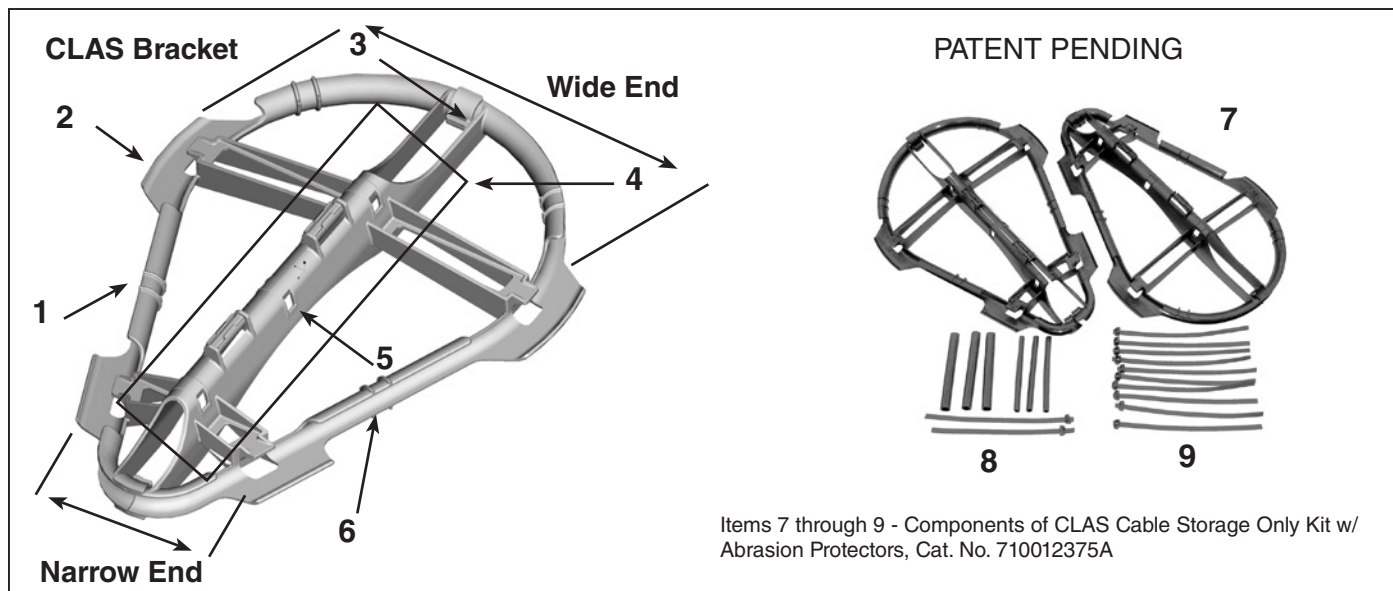




# FIBERLIGN® CLAS (Center-Lock Aerial Slack) Storage System for All Dielectric Self Supporting (ADSS) Cables and Lashed Messenger Cable Systems

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

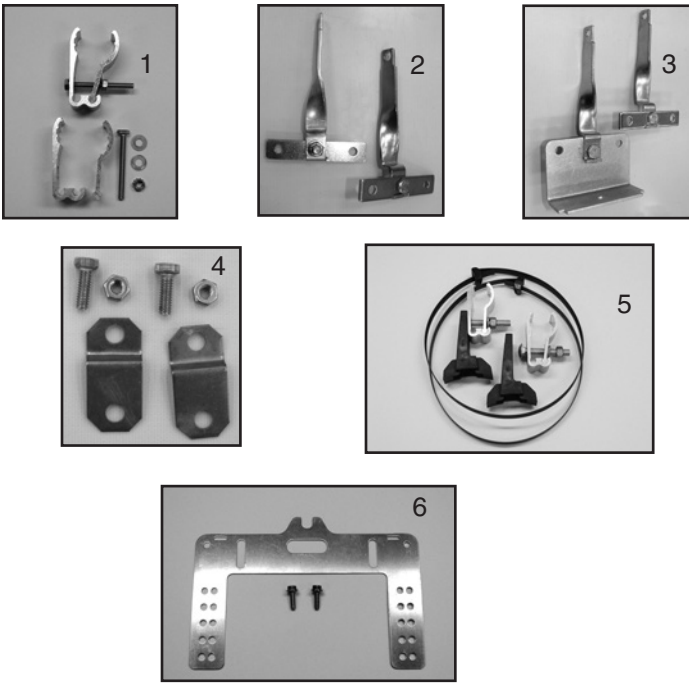


**FIGURE 1: NOMENCLATURE OF FIBERLIGN CLAS STORAGE SYSTEM**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Cable Strap Locator</li> <li>2. Expansion Tab for wider (20") storage options</li> <li>3. Locking Slot – one at narrow end and wide end allows cable strap through.</li> <li>4. Center-Lock Hinge Area</li> <li>5. Aperture – 3 openings to lace straps through and</li> </ol> | <ol style="list-style-type: none"> <li>secure main cable</li> <li>6. Slack/surplus Cable Channel</li> <li>7. 18" (457mm) CLAS Bracket male &amp; female half</li> <li>8. 8" (203mm) Abrasion Protectors with 2 HD ties</li> <li>9. Heavy Duty (HD) 13" (330mm) long Cable Straps</li> </ol> |
|--|---|

## 1.00 NOMENCLATURE

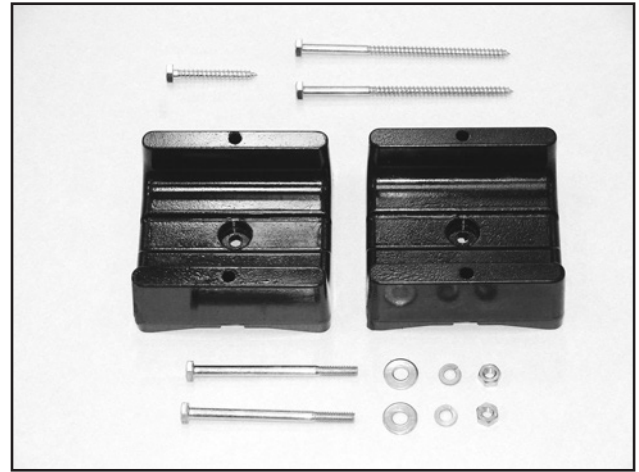
- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1.01 The FIBERLIGN CLAS Storage Bracket shown in Figure 1 is composed of a female and male half joined in the center-lock hinge area. Labels 1 through 6 identify physical features of the CLAS Bracket referenced throughout this application procedure. Items 7 through 9 identify the basic "Cable Storage Only with Abrasion Protectors Kit"</li> </ol> | <ol style="list-style-type: none"> <li>1.02 FIBERLIGN CLAS Storage Systems for Butt Splice and ADSS Cable Storage applications are kitted to include appropriate aerial hanger brackets for the specified splice case or closure. Aerial Splice Case and Closure Hanger Brackets for ADSS Applications are shown in Figure 2.</li> </ol> |
|--|--|



**FIGURE 2: ADSS HANGER BRACKETS**

1. ADSS Cable Clamp Kit included with CLAS Storage Butt Splice Kits to accommodate COYOTE® Closure, RUNT Closure, Splice Case and In-Line RUNT Assemblies.
2. COYOTE® Closure Brackets included with CLAS Storage Kit #710012375C-- for COYOTE® PUP, 6x22, and 8.5x22 Closures
3. COYOTE RUNT Brackets included with CLAS Storage Kit #710012375R.
4. COYOTE Splice Case Brackets (or aerial hanger brackets) included with every Stainless Steel COYOTE Splice Case – Not with the CLAS Storage Kit CLAS Storage Kit #710012375S-- will include the universal mounting bracket Figure 2 item 1.
5. ADSS COYOTE® DOME Brackets included with CLAS Storage Kit #710012375D1--for 6.5"x17" and 6.5x22" DOME Closures includes two worm gear clamps (Cat. No. 710012121).
6. ADSS COYOTE® IN-LINE RUNT Brackets included with CLAS Storage Kit #710012375R1-- (Cat. No. 8003749).

- 1.03 The Low Profile Uni-Group Cable Guide w/fasteners is shown in Figure 3. One short & two long 1/4" (6mm) Lag Screws are supplied for Wood Pole mount. Two 1/4" (6mm) machine screws w/nuts and washers are supplied for banded concrete/steel pole applications (band material not included)



**FIGURE 3: UNI-GROUP CABLE GUIDE**

## 2.00 DESCRIPTION

- 2.01 The FIBERLIGN® Center-Lock Aerial Slack (CLAS) Storage System can be used to store ADSS cable up to 1" (25mm) in diameter. The center-lock hinge allows the CLAS bracket to open and rest about the cable under tension thus eliminating the need for fasteners and labor normally associated with attaching conventional snow shoe designs. The CLAS bracket rests on the main cable (cable under tension) freeing up the installers hands for strapping the bracket to the cable.
- 2.02 FIBERLIGN® CLAS Storage System is provided in kits for "Cable Storage Only" or kits for "Butt splice & cable storage." For ADSS applications as noted in Section 1.01 the "Cable Storage Only kits" consists of items 1 through 9: For ADSS "Butt splice & cable storage," the appropriate mounting brackets are included with the kits as noted in Section 1.02, items 1 - 6
- 2.03 An optional Low Profile Uni-Group Cable Guide (UCG) can be used to guide surplus cable past the pole within the same plane as the cable under tension – this can be beneficial in limited pole space areas where narrow vertical clearance exists (See Section 1.03). Fasteners are supplied for lagging to wood poles and joining the UCG halves for concrete/ steel pole banded applications. NOTE: Banding material is not supplied – the UCG will accept up to 3/4" (19mm) wide band.

### 3.00 PREPARE CLAS BRACKETS

3.01 The two piece CLAS storage brackets are joined at the center-lock hinge – they can be separated by spreading the male & female halves about 30 degrees from each other to disengage hinged areas. (Figure 4) Separating may allow easier storage or shipment. Join halves to prepare for installation.

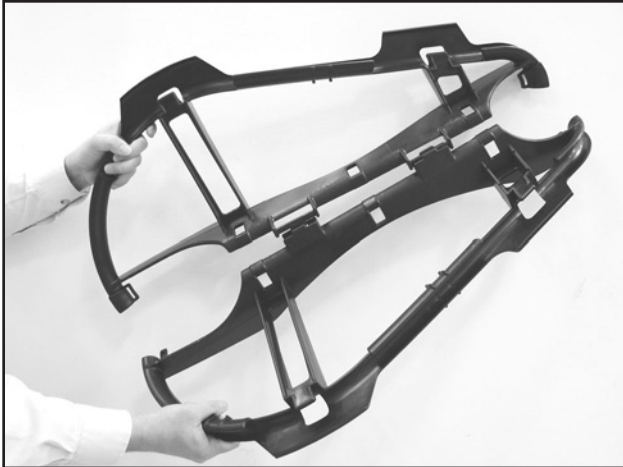


FIGURE 4: JOIN AT CENTER-LOCK HINGE

### 4.00 ADSS CABLE STORAGE ONLY

4.01 For CLAS Storage of a Butt splice & cable, refer to Section 5.00.

4.02 **ADSS Cable:** At the pole location where the cable is to be stored, dead-end the main ADSS cable in each direction leaving the desired (loop) length of surplus cable. Refer to FIBERLIGN Dielectric Dead-end application procedure PLP No. SP2732 for proper dead-end installation. Figure 5 shows the main cable dead-ended with the surplus cable drooping downward.

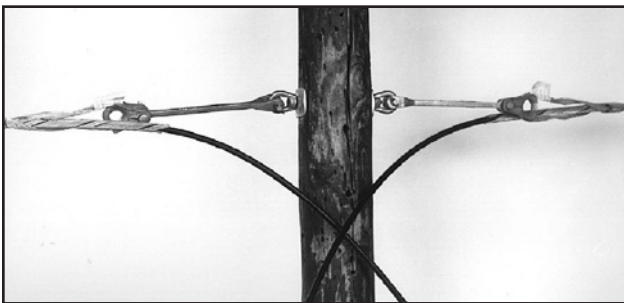


FIGURE 5: SURPLUS CABLE DROOPING DOWN FROM DEAD-ENDS

4.03 Vertical positioning of the surplus cable past the pole is determined by allowable cable deflection and pole space restrictions. To avoid excessive bending of the cables the vertical position can be from a few inches to 12" (76 to 305mm) maximum below the main run.

Cable abrasion protectors with cable straps can be used to group and protect the cable passing the pole. Two sizes of abrasion protectors are provided. Use the small size for cable diameters up to .5" (13mm), and the large size for diameters .5" (13mm) and above. (Figure 6)



FIGURE 6: ABRASION PROTECTORS GROUPED WITH CABLE STRAPS AT POLE.

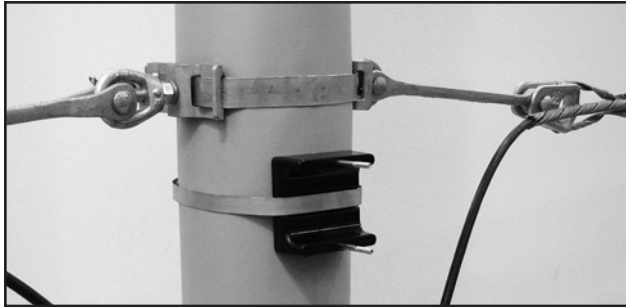
4.04 **UNI-GROUP Cable Guide (UCG):** The UCG can be used instead of Abrasion Protectors to guide the surplus cable within narrow vertical pole space. Position the back half of the UCG at a height as determined in the step 4.03. (A few inches to 12" (76 to 305mm) below the main cable run). Secure the back half of the UCG to the wood pole with the one short lag bolt provided. Do not overtighten. (Figure 7).



FIGURE 7: POSITION BACK HALF OF UCG AND SECURE WITH SHORT LAG SCREW



For concrete or steel poles, the banding arrangement may be used as shown in Figure 8 and 10. Insert two (2) hex head machine bolts through the back half of the UCG then band to the pole. The UCG band slot will accept maximum 3/4" (19mm) wide banding material (not supplied). (Figure 8 and 10)



**FIGURE 8: INSERT HEX HEAD MACHINE BOLTS THROUGH BACK HALF OF UCG BEFORE BANDING.**

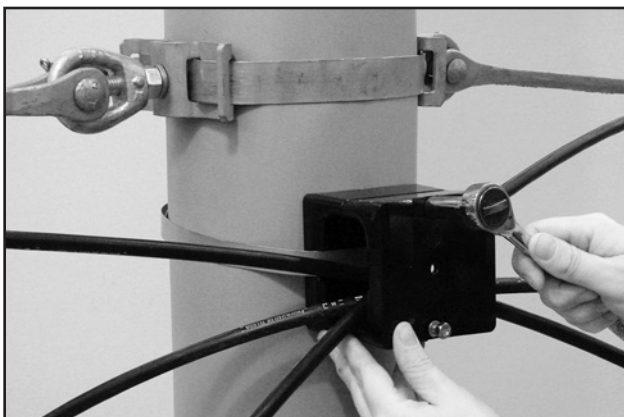
- 4.05 Raise the surplus cable into the back half of the Uni-Group Organizer and capture with the front half.

For wood pole installations, two (2) long lag bolts are used to secure the assembly against the pole (Figure 9).



**FIGURE 9: CAPTURE CABLES AND SECURE UCG FRONT HALF WITH TWO LONG LAG SCREWS**

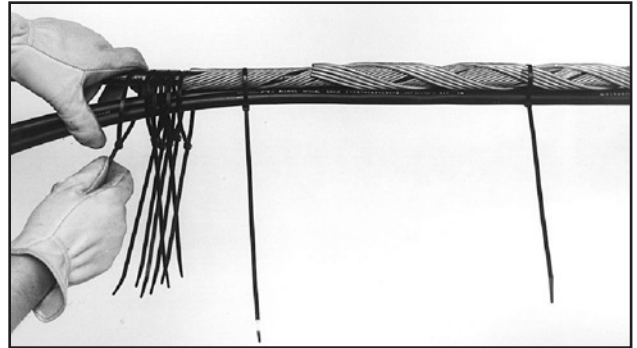
For concrete/metal poles, two machine nuts are used to close the front half against the back half. In both cases, do not over-tighten. (Figure 10)



**FIGURE 10: NUTS SECURE UCG FRONT HALF TO BAND MOUNTED BACK HALF**

- 4.06 Starting in one direction from the pole, secure the surplus cable to the main cable with company approved cable ties (tie wraps) at regular intervals (every 2 to 3 feet (.61 to .91m) for standard UV treated ties and 3 to 5 feet (.91 to 1.52m) for Heavy Duty cable straps).

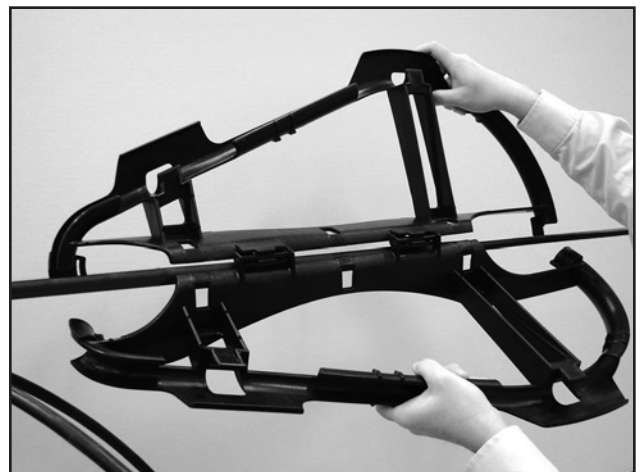
PLP TIP: You may loosely install cable ties near the structure and then slide them into final position before tightening. (Figure 11)



**FIGURE 11: INSTALL CABLE STRAPS LOOSELY, SLIDE INTO POSITION AND TIGHTEN**

- 4.07 Upon approaching the loop end, leave enough slack to fit the CLAS bracket into the loop.

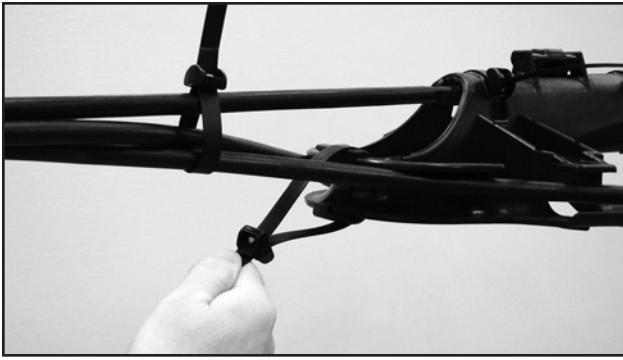
- 4.08 Spread the CLAS bracket open to clear the main cable (cable under tension) – rest the center-lock hinge on the cable and let the bracket halves come together with slack cable channels below the main cable under tension. (Figure 12)



**FIGURE 12: OPEN CLAS BRACKET, REST ONTO MAIN CABLE, AND BRING CHANNEL HALVES TOGETHER.**

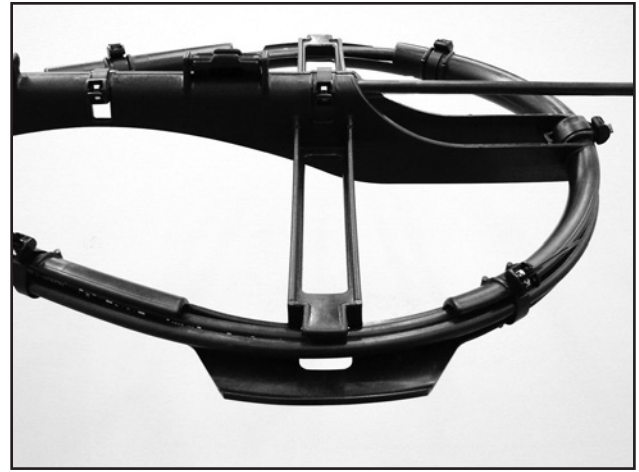
- 4.09 Secure the CLAS Bracket closed with a cable strap through the locking slot on the narrow end (Figure 13).

Bring the slack cable loop up into the cable channel and attach it to the wide end with a cable strap running through the locking slot.



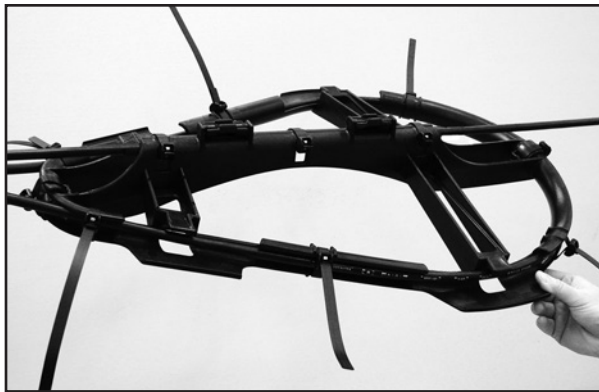
**FIGURE 13: SECURING THE CLAS BRACKET CLOSED**

4.10 The CLAS bracket is designed to store slack cable against the channel for 18" (457mm) loop diameters. Expansion tabs provide a surface to secure cable up to 20" (508mm) loop diameters. The expansion tabs can also provide support for an outer loop wrap for butt splice applications. In each case, cable straps are used to secure the slack cable against the CLAS bracket. For 18" (457mm) loop diameters, a cable strap should be applied at each of the Cable Strap Locators. For 20" (508mm) loop diameters, a cable strap should be applied through the hole in each expansion tab. (Figure 14A, 14B, 14C)

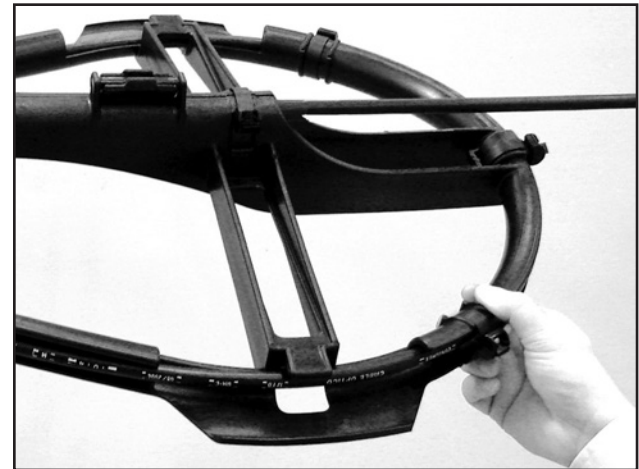


**FIGURE 14C: EXPANSION TABS FOR OUTER CABLE WRAP**

4.11 Adjust the position of the CLAS bracket to remove loop cable slack. (Figure 15)

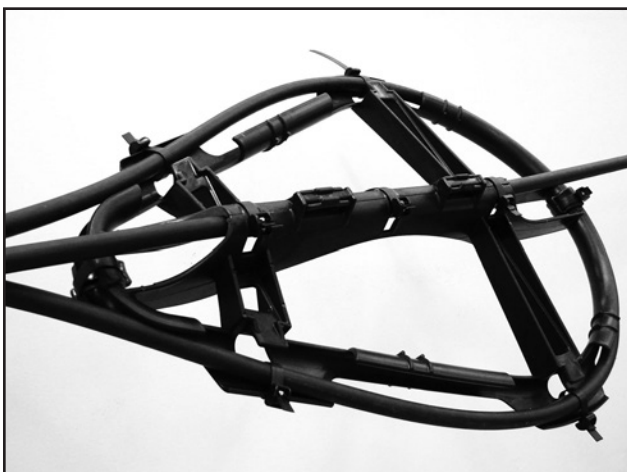


**FIGURE 14A: FOR 18" (457MM) LOOPS, TIE CABLE TO CLAS CHANNEL WITH CABLE STRAPS AT THE CABLE STRAP LOCATORS.**



**FIGURE 15: ADJUST CLAS TO FINAL POSITION**

4.12 Lace cable straps through the three (3) apertures in the center-lock hinge area and secure the CLAS bracket to the main cable. (Figure 16)

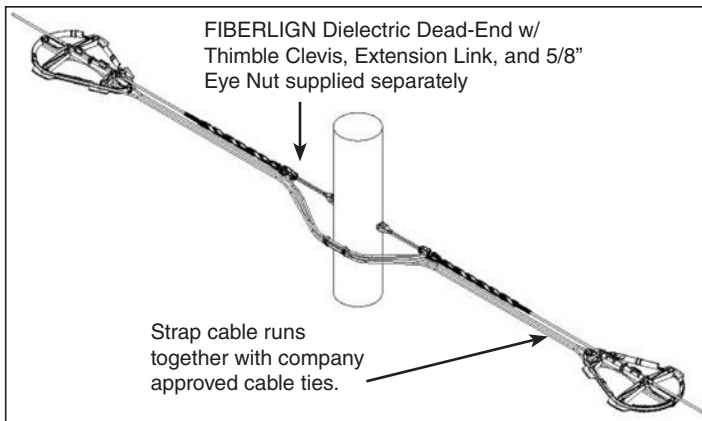


**FIGURE 14B: FOR 20" (508MM) LOOPS, TIE CABLE TO CLAS EXPANSION TABS WITH CABLE STRAPS APPLIED THROUGH THE HOLES.**

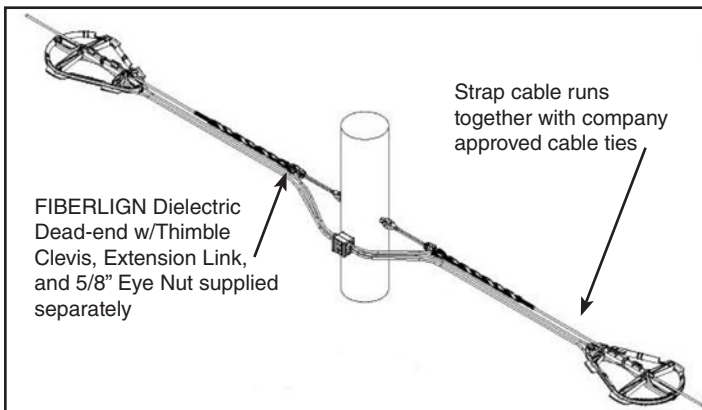


**FIGURE 16: SECURE CLAS WITH CABLE STRAPS**

4.13 Repeat steps 4.06 - 4.12 for the surplus cable on the other side of the pole. Figure 17A and B illustrates the overall cable storage configuration.



**FIGURE 17A: COMPLETED ADSS CABLE STORAGE ONLY W/ABRASION PROTECTORS**



**FIGURE 17B: COMPLETED ADSS CABLE STORAGE ONLY W/UNI-GROUP CABLE GUIDE**

## 5.00 ADSS Butt Splice and Cable Storage

5.01 For a butt splice and cable storage, the minimum length of the surplus cable is generally associated with the length required to bring the splice case down and into a splicing trailer or van (see Figure 18). The overall configuration is depicted in Figure 20. NOTE: Keep in mind that in addition to this length, the breakout cable length required to execute splicing and allow for adequate buffer tube storage inside the closure or splice case must be taken into consideration. This information is covered in the respective COYOTE Product application procedure. This breakout length can be as much as 178" (4.5m) for each cut cable entry depending on the size of the closure or splice case.

Using this, one can estimate the length of surplus cable needed with the following formula:

$$L_{\text{cable}} = 2 \times (D_{\text{van}} + A_{\text{backspan}}) + C_{\text{breakout}}$$

Where  $L_{\text{cable}}$  = Overall Length of surplus cable

$D_{\text{van}}$  = Minimum Distance to bring splice case into a van

$A_{\text{backspan}}$  = Backspan distance from pole to end of CLAS Bracket

$C_{\text{breakout}}$  = Total Cable Breakout Length for splicing and adequate fiber storage inside closure or splice case.

Example: If 80 feet is required to bring the splice case into the splicing van, the backspan storage rack is positioned 10 feet from the pole beyond the end of the dead-end, and the breakout length required is 6.5 feet/cut cable entry (quantity 2 entries), the overall cable length can be calculated as follows:

$$L_{\text{cable}} = 2 \times (80' + 10') + (6.5' \times 2)$$

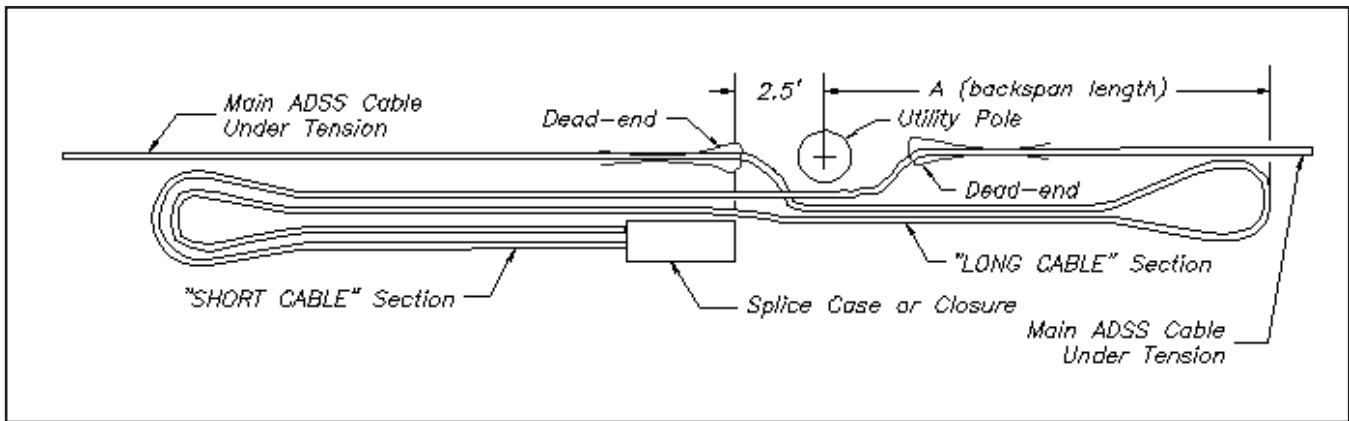
$$L_{\text{cable}} = 193'$$

For proper positioning of the closure or splice case, the Long Cable shown in Figure 18 is longer than the short cable by distance approximately twice "A". In the previous example, the Long cable would be 20' longer or about 106.5' (80+20+6.5). The short cable would be about 86.5' (80+6.5).

NOTE 1: For mid-sheath cable breakout, find the center of the surplus cable loop and measure distance "A" from center – use a china marker or tape to distinguish the short cable from the long cable.

NOTE 2: The backspan CLAS bracket can be placed just beyond the end of the dead-end or more if desired. This position will determine distance "A" shown in Figure 18, and allow the calculation of an estimated overall cable length as explained earlier in this section.





**FIGURE 18: ADSS OVERHEAD LAYOUT OF BUTT SPLICE & CABLE STORAGE**

5.02 Once the cable layout lengths are determined (section 5.01), dead-end the ADSS cable from both directions using the appropriate FIBERLIGN Dielectric Dead-end and associated attachment hardware. Refer to FIBERLIGN Dielectric Dead-end application procedure PLP No. SP2732 for proper dead-end installation. Figure 5 shows the main cable dead-ended with the surplus cable drooping downward.

5.08 Lace cable straps through the three (3) apertures in the center-lock area and secure the main cable (cable under tension) to the CLAS Bracket. Beginning at the secured CLAS bracket and working back to the pole, continue application of cable ties every 2 to 3 feet (.61 to .91m) (3 to 5 feet (.91 to 1.52m) for HD cable straps) to secure the two remaining cables to the main cable under tension.

5.03 Install the selected closure per the application procedures found in the respective product kits.

5.04 Beginning at the splice closure and working away from the pole, attach both cables exiting the closure or splice case end plates to the main ADSS cable with approved cable ties. Continue placing cable ties every two to three feet (.61 to .91m) HD Cable Straps can be spaced 3 to 5 feet (.91 to 1.52m) until the location of the first CLAS bracket is reached. This location will be determined by the length limitation of the short cable. Upon approaching the loop end, leave enough slack to fit the CLAS bracket into the loop.

5.05 Spread the CLAS bracket open to clear the main cable – rest the center-lock hinge on the cable and let the bracket halves come together below the main cable. (Figure 12)

5.06 Position the loop ends of the surplus cable one within the channel of the CLAS bracket and the other overlapping the cable in the channel and resting on the expansion tabs - secure both cables with cable straps against the bracket. If it is necessary to achieve 20" (508mm) bend diameter for both loops, wrap one below and one above the expansion tabs and secure through the adjacent openings with cable straps. (Figure 19)

5.07 Adjust the position of the CLAS bracket to remove loop cable slack. (Figure 15).



**FIGURE 19A: CABLE LOOPS SECURED ON SAME PLANE**



**FIGURE 19B: CABLE SECURED TO EXPANSION TABS FOR 20" (508MM) LOOP - OVER & UNDER.**

5.09 Vertical positioning of the surplus cable past the pole is determined by allowable cable deflection and pole space restrictions. To avoid excessive bending of the cables the vertical position can be from a few inches to 12" (76 to 305mm) maximum below the main run. Cable abrasion protectors with cable straps can be used to group and protect the cable passing the pole. (Figure 6).

5.10 UNI-GROUP Cable Guide (UCG): The UCG can be used instead of Abrasion Protectors to guide the surplus cable within narrow vertical pole space. Position the back half of the UCG at a height as determined in section 5.16. (A few inches to 12" (76 to 305mm) below the main cable run). Secure the back half of the UCG to the wood pole with the one short lag bolt provided. Do not over tighten. (Figure 7).

For concrete or steel poles, the banding arrangement may be used as shown in Figure 8 and 10. Insert two (2) hex head machine bolts through the back half of the UCG then band to the pole. The UCG band slot will accept maximum 3/4" (19mm) wide banding material (not supplied).

5.11 Continue to tie-wrap the two cables to the main cable in the backspan from the pole until the location for the second CLAS bracket is reached. Attach the CLAS Bracket to the main cable as in Section 5.04 and 5.05.

5.12 Secure the single cable loop to the CLAS bracket with cable ties as described in section 4.09 through

4.12. Figure 16 shows the cable straps used to complete CLAS bracket installation.

Figure 20 shows CLAS Storage System with butt splice. A COYOTE Closure is shown attached to a FIBERLIGN Dielectric Dead-end and cable ties are used to secure surplus cables to the main cable and dead-ends.

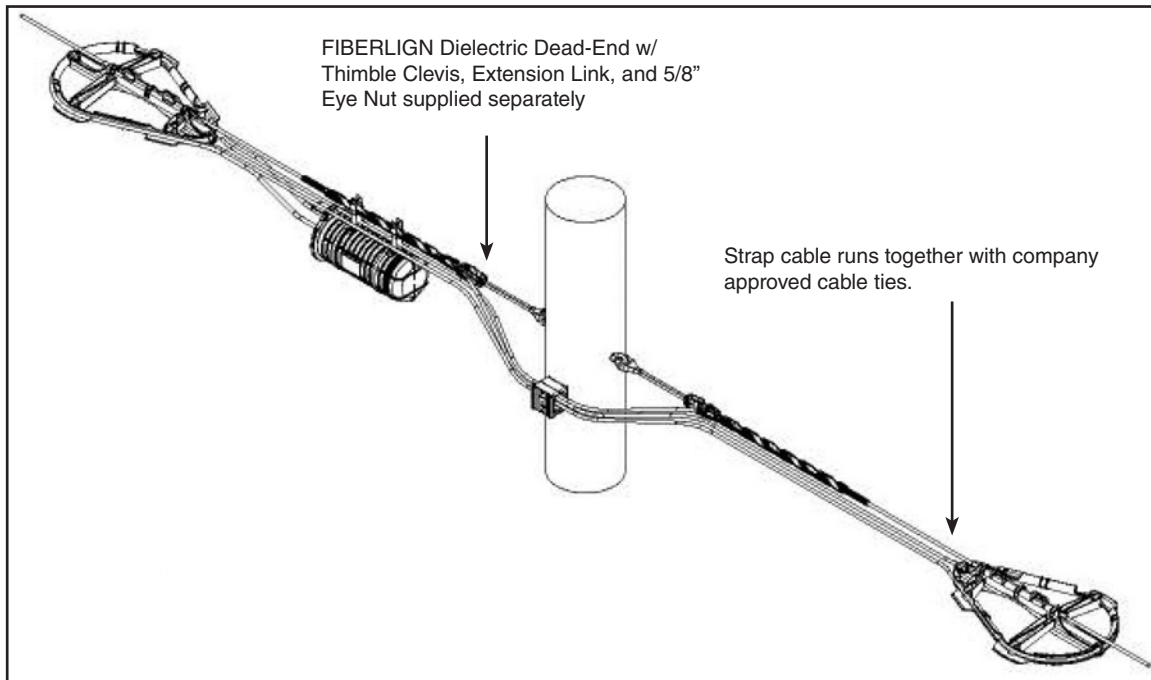
5.13 Continue to tie-wrap the two cables to the main cable in the backspan from the pole until the location for the second CLAS bracket is reached. Attach the CLAS Bracket to the main cable as in Section 5.04 and 5.05.

## 6.00 Lashed Messenger Applications

6.01 Lashed Messenger systems include a metallic messenger cable (typically 1/4" (6mm) galvanized steel strand) that supports the load of the fiber optic cable lashed to the messenger. Slack cable in the messenger system may be stored at poles similar to ADSS (sections 4 & 5), or between poles with both CLAS brackets located within a single span.

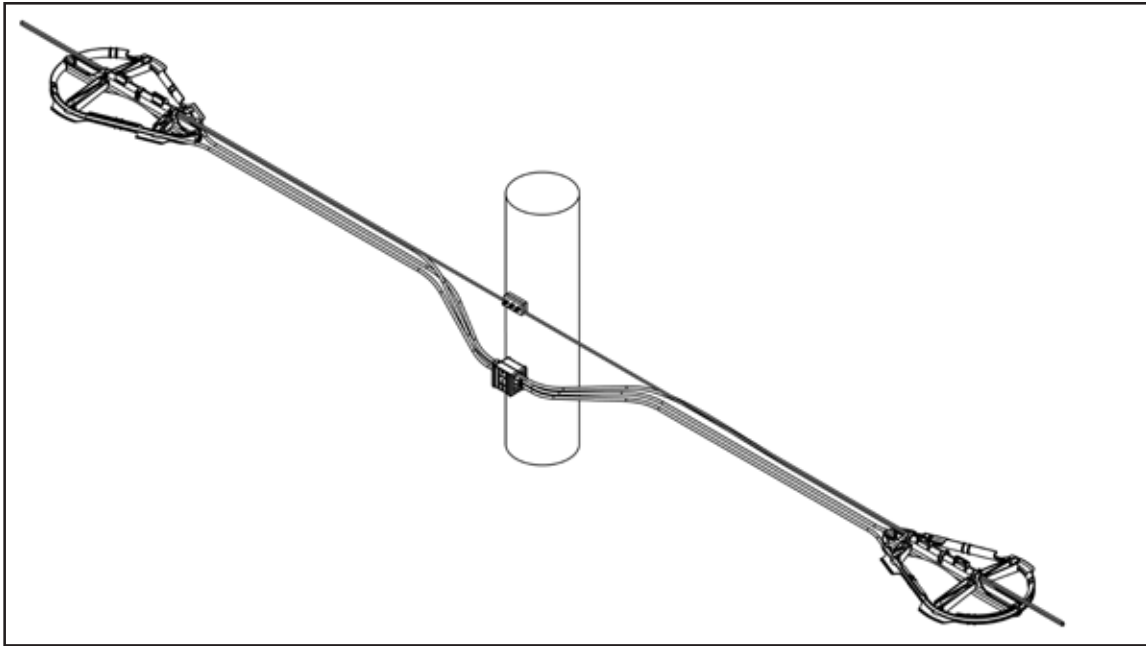
NOTE: Unlike ADSS systems, the strength member of lashed messenger systems is installed separate from the fiber optic cable. Thus for lashed messenger systems, slack cable can be supported at dead-end or tangent support locations.

6.02 The CLAS Storage Brackets will accommodate lashed messenger bundles up to 1-1/4" (32 mm) in diameter. Add messenger and cable diameters for the overall diameter, or measure around the complete bundle.

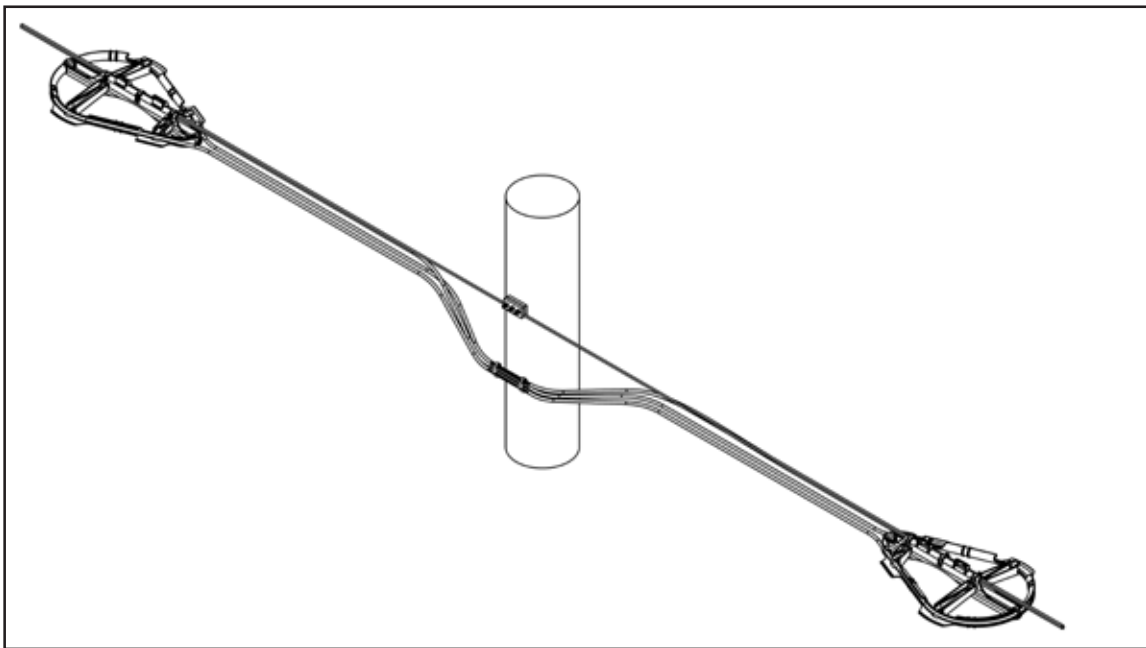


**FIGURE 20: COMPLETED ADSS SYSTEM WITH BUTT SPLICE – COYOTE CLOSURE IS SHOWN.**





**FIGURE 21A: COMPLETED LASHED MESSENGER CABLE STORAGE ONLY WITH UNI-GROUP CABLE GUIDE**



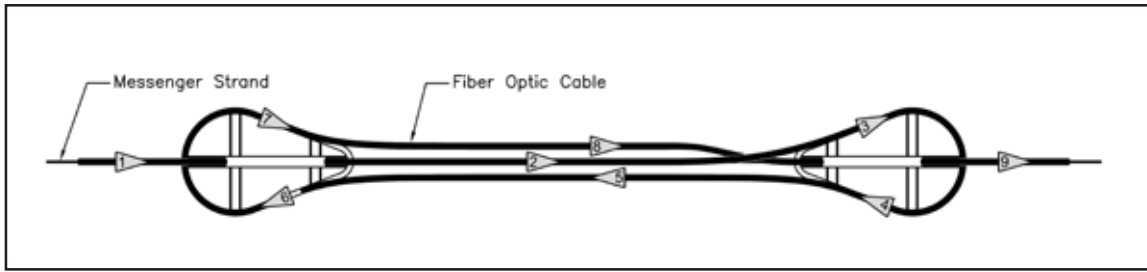
**FIGURE 21B: COMPLETED LASHED MESSENGER CABLE STORAGE ONLY WITH ABRASION PROTECTORS**

**7.00 CABLE STORAGE ONLY**

7.01 The CLAS Brackets are positioned based on the total amount of slack cable storage required. For example, if 80' of slack storage is required, the CLAS Brackets can be positioned 40' apart from one another. When installed at a pole location, position brackets 20' to either side of the pole (4 x 20 = 80'). Figure 21 A and B shows how the slack cable can be stored passing the pole with CLAS brackets on either side of the pole.

7.02 With the messenger already installed, spread open each CLAS Bracket to clear the messenger cable and rest on the messenger loosely at positions determined in the previous step.

7.03 In Figure 22, assuming the cable is fed from left to right, the left CLAS Bracket can be spread open slightly, enough to accept the feeder cable into the center channel from underneath. Lace cable straps through the three (3) apertures in the center-lock area and secure the feeder cable and messenger to



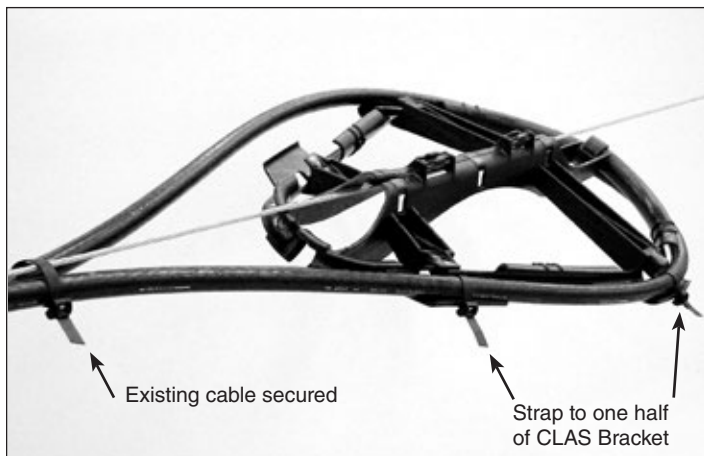
**FIGURE 22: ROUTING OF CABLE USING TWO SNOWSHOES**

the CLAS Bracket. One cable strap can be installed through the locking slot at the narrow end of the CLAS bracket to keep the halves together.

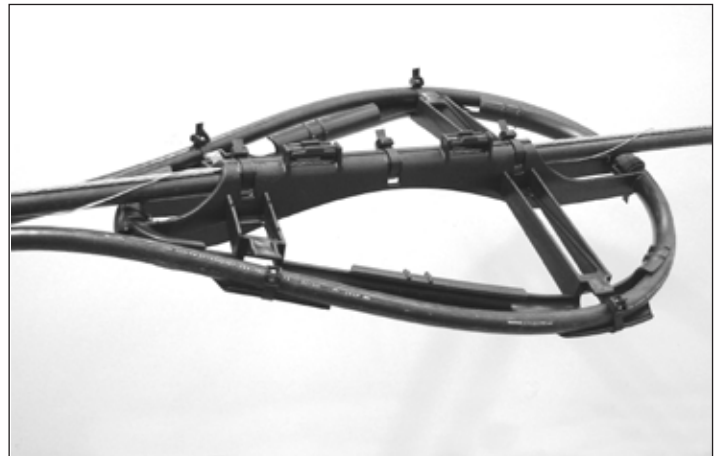
- 7.04 Moving from the left CLAS Bracket towards the right, use company approved cable ties or HD cable straps to secure the feeder cable against the messenger. If installed at a pole location, abrasion protectors or the UCG can be used to protect or guide the passing cable slightly below the messenger cable (refer to section 4). For applications between poles, omit the steps associated with the UCG and Abrasion Protectors. Continue to secure the slack cable to the messenger up to the right CLAS Bracket.
- 7.05 At the right CLAS Bracket, secure the cable to only one half of the CLAS bracket. Continue to wrap the cable around the other half, but do not secure it with cable straps. Also, do not secure either locking slot, as the CLAS bracket must still be able to open (See Figure 23). These steps will be performed later, outlined in section 7.08. Near the narrow end of the CLAS Bracket, secure the exiting cable to the messenger and cable entering the CLAS bracket. Moving back towards the left bracket, continue securing the cable to itself and the messenger. At pole locations, keep the cable grouped with the other cable – then continue to secure the cable to itself and the

messenger moving from the pole to the left CLAS Bracket.

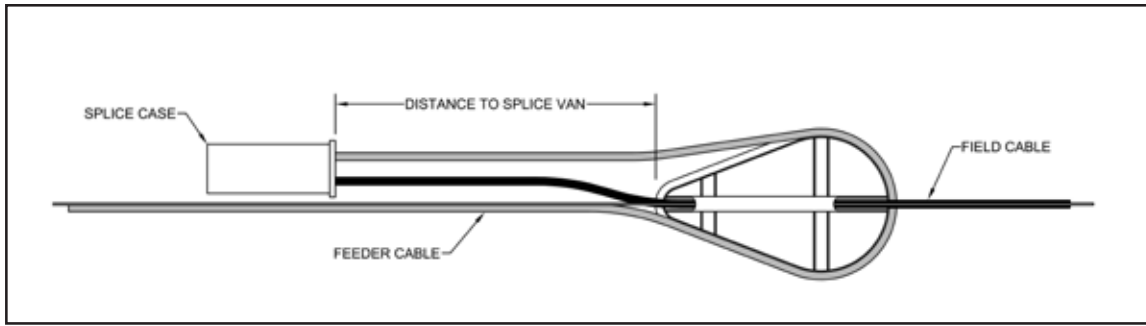
- 7.06 Wrap and secure the cable around the left CLAS Bracket – finish locking the CLAS bracket halves at the wide end of the bracket.
- 7.07 Moving back towards the right bracket secure the cable to itself and the messenger. At pole locations, the last abrasion protector can be installed and the group of passing cables can be strapped together with cable straps. If the UCG is used, install the outer half as described in section 4.
- 7.08 Continue to secure the cable to itself and the messenger from the pole to the right CLAS bracket. Position the cable above the unsecured half of the slack cable loop (from section 7.05). Spread open the unsecured half of the bracket enough to accept the cable into the center channel. Lace cable straps through the three (3) apertures in the center-lock area and secure the cable and messenger to the CLAS Bracket. Lace a cable strap through the locking slot at the wide end and secure the remaining slack cable to the CLAS Bracket (See Figure 24).
- 7.09 The cable can be strapped once more beyond the right CLAS bracket. Lashing can then be resumed per accepted company practices.



**FIGURE 23: SECURE SLACK CABLE TO ONLY ONE HALF OF CLASS BRACKET. DO NOT SECURE OTHER HALF OR LOCKING SLOTS.**



**FIGURE 24: FINISH STRAPPING SLACK CABLE TO CLAS BRACKET, AND SECURE LOCKING SLOTS AND CENTER-LOCK HINGE.**



**FIGURE 25: CABLE ROUTING DIAGRAM FOR CLOSURE AND ONE SNOWSHOE**

## 8.00 BUTT SPLICE & CABLE STORAGE

8.01 A single CLAS Storage Bracket may be used to store enough slack to reach the splicing van. As noted with the ADSS application, allow additional cable length for storage and splicing within the splice closure or case. This information can be found in the respective closure or splice case instructions – break out length can be as much as 178" (4.52m).

In Figure 25 the distance that the CLAS Bracket is mounted away from the splice case is equal to the length of slack cable necessary to reach the splicing van. Assuming this, the following formula can be used to determine the overall slack length of the cables:

$$L_{\text{cable}} = D_{\text{van}} + C_{\text{breakout}}$$

Where:

$L_{\text{cable}}$  = Overall Length of surplus cable

$D_{\text{van}}$  = Minimum Distance to bring splice case into a van

$C_{\text{breakout}}$  = Total Cable Breakout Length for splicing and adequate fiber storage inside closure or splice case

Figure 25 shows the proper positioning of the CLAS bracket and Splice Case, and routing of the cables. The feeder cable is looped around the cable channels of the CLAS bracket, while the field cable is routed through the center channel. If the field cable is lashed to the messenger previous to splicing, the position of the CLAS bracket will need to be adjusted to equalize the length of slack from the feeder and field cables. If the cables will pass a pole during installation, follow the steps for abrasion protectors or UCG described in section 2.

8.02 Begin installation by positioning the CLAS bracket in the desired location, spreading it open, and allowing it to rest on the messenger. Approaching the CLAS bracket with the feeder cable from left to right, loosely hang the feeder cable from the messenger with cable ties. Loop the feeder cable around the CLAS bracket and secure it loosely to only one half of the bracket. Just beyond the narrow end of the

CLAS bracket, loosely secure the cable again to the messenger to complete the loop. The feeder cable is now running in the opposite direction, and can be brought down to the ground for splicing.

8.03 If the field cable is lashed previous to splicing, follow the steps in this section. If not, follow the steps in section 8.04. Continue by spreading open the CLAS bracket to route the field cable through the center-lock area (above the feeder cable). Lace cable straps through the 3 apertures to loosely capture the field cable and messenger to the CLAS bracket. Next, bring the field cable to the ground and complete splicing with the feeder cable and assembly of the splice case. Beginning at the CLAS bracket and working towards the splice case, raise the slack cables to the messenger and loosely secure with cable straps. Secure splice case to the messenger with the appropriate attachment brackets. Working away from the splice case, tighten cable straps and pull any excess slack from the feeder cable towards the CLAS bracket. Move the CLAS bracket away from the splice case to remove any remaining slack. Finish securing the feeder cable to the cable channels of the CLAS bracket and tighten the cable straps in the center-lock area.

8.04 For a field cable not previously lashed, continue by completing splicing to the feeder cable and assembly of the splice case. Beginning at the CLAS bracket and working towards the splice case, raise the slack cables to the messenger and loosely secure with cable straps. Secure splice case to the messenger with the appropriate attachment brackets. Working away from the splice case, tighten cable straps, and pull any excess cable slack toward the CLAS bracket. At the CLAS bracket, spread open the bracket halves to route the field cable through the center-lock area (above the feeder cable). Lace cable straps through the 3 apertures to loosely capture the field cable and messenger to the CLAS bracket. If necessary, adjust the position of the CLAS bracket to remove any remaining slack in the feeder cable. Finish securing the feeder cable to the cable channels of the CLAS bracket and tighten the cable straps in the center-lock area. Lashing of the field cable can then begin per accepted company practices.

## **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.



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