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Instructor Corner

Fiber Optic Closure Cost Considerations

Many manufactures provide fiber optic splice closures in both sealed and weather-tight varieties. Things to consider when choosing the right splice closure for your project:

- The cost of a weather-tight fiber optic splice closure is typically less than a sealed one.
- No special tools are required to install a weather-tight closure.
- Initial training and new hire training times are reduced with weather-tight closures.
- Sealed closures typically have more associated kits.
- Sealed closures are a universal product that can be used in any splicing location.
- Weather-tight closures are limited to aerial strand locations.



The variable costs associated with the different types of aerial fiber optic splice closures are highlighted below:

Activity	Sealed Fiber Optic Splice Closure	Weather-tight Splice Closure
Initial material cost of goods	Typically more expensive	Advantage
Installation labor on first pass cable placement and splicing	Additional process needed for sealing	Advantage in most cases
Build as you grow	Fiber must be spliced at grade	Fiber can be spliced on strand; significant time and cost advantage
Routine maintenance; OTDR and VFL functions	Closure must be brought to grade level to perform maintenance	Closure remains on strand while maintenance is performed; significant time and cost advantage
Ease of expansion	Design and product dependent	Designed for expansion with drop in replacement parts; no service interruption
Universal closure to be installed anywhere	Advantage	Aerial only

Did You Know...

Metro traffic surpassed long-haul traffic in 2015?

By 2019, it will account for 66 percent of total global IP traffic and will have grown nearly twice as fast as long-haul traffic. The higher growth in metro networks is due in part to the increasingly significant role of content delivery networks, which bypass long-haul links to deliver traffic directly to metro and regional backbones. ■

Source: Cisco Visual Networking Index: Forecast and Methodology, 2014-2019 White Paper.

Training Spotlight

Webinar Resources

What's New in Fiber Enterprise Networking

From TIA's Fiber Tech Consortium Webinar series

Presenter: John Kamino, OFS

OM3 and OM4 multimode fibers have been the backbone of data center and enterprise cabling for the past decade. Multimode fiber remains the fiber of choice for today's short reach networks, but is its reign coming to an end? Will single-mode fiber become the low cost solution in data centers and enterprise networks?

Other Recorded Light Brigade [Webinars](#)

Light Brigade [White Papers and Training Resources](#)

Improving OTDR Accuracy for Emergency Restorations

Lightwave Online Training and Education Webinar series

Presenter: Larry Johnson, Light Brigade

January 20, 2016 at 1:30 PM EST

Accurate fault location with an OTDR is critical when troubleshooting your fiber network, and can be impacted by everything from variations in fiber optic cable structures to different manufacturing processes. Physical issues such as slack cable and aerial sag also play a significant role. The goal is to learn a method in which accurate index of refraction (IOR) values can be determined and applied to system maintenance and repair. ■

Light Brigade News

Make the Most Out of Industry Conferences

We hear from many people that they would like to get additional training but they just don't have the time. One time-saving solution is to combine your attendance at an industry conference with a Light Brigade training course. In the next few months, Light Brigade will be both exhibiting and hosting training at the following industry events:

Trade Show	Date	Course	Training Dates
CalCom Showcase	February 23-25, 2016	Emergency Restoration	February 25-26 (12 hours)
OFC	March 20-24, 2016	Hands-on Polishing, Inspection and Testing of Connectors	March 21 (5 hours)
		Safety in Fiber Optics: From Components to Systems	March 21 (3 hours)
IWCE	March 21-25, 2016	Fiber Optics 1-2-3	March 20-23 (32 hours)
BBC Summit	April 5-7, 2016	Certified Fiber to the Home Professional	April 4-5 (16 hours)

Training Tidbits

Emergency Restoration Considerations

Emergency restoration is a huge concern for fiber optic network providers, and having a restoration plan in place beforehand is key to an effective response when the eventual network outage occurs. When making your plan, there are some crucial items to consider:

1. How do you keep the restoration plan current?
2. Is your staff's training up to date?
3. Have you graded your staff's fiber optic restoration abilities?
4. Do you have annual/semi-annual procedures for testing and evaluating existing dark fibers?
5. How and where are test reports filed?
6. Has each cable segment been evaluated for worst case failures?
7. Do your emergency restoration kits include a bill of materials/check list of all of the tools, components, and supplies needed to repair the outage?
8. Do you have an adequate amount of inventory and consumables?
9. Is your inventory date coded?
10. Do you photograph or film your restorations? Film and/or photos are good for review and are great training tools. This documentation is invaluable in case of litigation. ■

Source: Light Brigade Emergency Restoration training course manual



Emergency Restoration Training Course

Learn the skills needed to efficiently handle emergency restorations. Troubleshooting strategies and techniques including fault location is emphasized. The hands-on class exercises simulate actual field restorations for both retrievable and non-retrievable slack scenarios.

[For More Info](#)

End of Year Sales

Fiber Optic Cleaning and Inspection Products

Did you know that dirty connectors are the leading cause of fiber optic network performance problems? Today's high speed networks need the lowest possible connector losses for peak performance. **Save up to 20%** until December 31 on fiber optic cleaning and inspection products. Promotion details [here](#).



Staff Development Training DVDs

Light Brigade fiber optic training DVDs are a great way to learn and to keep current on fiber optic technology and disciplines. There are thirteen titles. Buy **any single DVD for \$99**, a **20% savings** (coupon code **2015DVD**). Get the **entire set of DVDs for just \$995**, a **38% savings** over the single unit price (coupon code **2015SET**). For more information including video previews and to order, visit our [website](#). Prices good through December 31.



Lite Bites Online Training Series – Single-mode Technology: Theory and Fibers

A good understanding of optical theory as it applies to single-mode fibers and systems is critical to anyone working in fiber optics. This course covers topics that go beyond the fundamentals, to provide a deeper understanding of optical theory and of single-mode applications. The introductory price of **\$125** is good through December 31. [Learn More](#) ■

Upcoming Classes

Click on Location to Register

Fiber Optics 1-2-3

Huntsville, AL	January 5-8
Little Rock, AR	January 5-8
Boise, ID	January 5-8
Vancouver, BC	January 12-15
San Diego, CA	January 12-15
Des Moines, IA	January 19-22
Minot, ND	January 19-22
Washington, DC	January 26-29
Houston, TX	January 26-29
San Jose, CA	February 2-5
Long Island, NY	February 2-5
Miami, FL	February 9-12
Lowell, MA	February 9-12
Austin, TX	February 9-12
Atlanta, GA	February 16-19
Springfield, IL	February 16-19
Seattle, WA	February 16-19
Frankfort, KY	February 23-26
Anchorage, AK	March 1-4
Colorado Springs, CO	March 1-4
Richmond, VA	March 1-4
Orlando, FL	March 8-11
Newark, NJ	March 8-11
Edmonton, AB	March 15-18
Las Vegas, NV*	March 20-23
Kansas City, KS	March 29 - April 1
State College, PA	March 29 - April 1

* at IWCE Expo

Advanced Hands-on Training

Seattle, WA	January 5-8
Anchorage, AK	March 15-18

Emergency Restoration

Spartanburg, SC	January 19-21
Sacramento, CA**	February 25-26

** at CalCom Showcase and Tech Expo

FTTx for Installers and Technicians

Madison, WI	January 26-29
Kansas City, MO	February 2-5
Salt Lake City, UT	March 15-18
Sacramento, CA	March 21-24

FTTx OSP Design

Minneapolis, MN	February 23-25
Salt Lake City, UT	March 29-31

Certified Fiber to the Home Professional (CFHP)

Spartanburg, SC	March 22-24
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Fiber Optics for Utilities

Level 1 Technician	
Dallas, TX	January 26-28
Memphis, TN	March 8-10
Level 2 Designer	
Dallas, TX	January 29
Memphis, TN	March 11

Fiber Optics for ITS, Traffic, Fire Alarm, and Communication Systems

Technician Level I	
Seattle, WA	January 11-12
Richmond, VA	February 8-9
Houston, TX	February 22-23
Field Technician Level II	
Seattle, WA	January 13-14
Richmond, VA	February 10-11
Houston, TX	February 24-25
Design Technician Level II	
Seattle, WA	January 15
Richmond, VA	February 12
Houston, TX	February 26



2016 Training Catalog

Take a look at the catalog featuring a complete schedule of 2016 training dates and locations throughout the United States and Canada for each of Light Brigade's 18 training courses.

[Download a Copy](#)

Custom Fiber Optic Training

Light Brigade can develop and deliver a custom onsite course specific to your needs and application.

[Learn More](#)