

## Optical Cross-Connect Cabinet

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### 1. General

**1.1** This instruction describes the installation of the Optical Cross-Connect Cabinet (OCC) shown in Figure 1. The OCC cabinet is pad-mounted in an outdoor environment. The OCC holds distribution and splice housings. The cabinet includes housings for jumper and slack storage and is designed with internal mounting racks that incorporate fiber routing guides.

**1.2** Contact your customer service representative to purchase accessories that are sold separately.

**1.3** This document is being reissued to add fiber precautions and include steps to clarify fiber routing.

**NOTE: Read and understand this procedure (as well as the instructions provided with related assemblies) before beginning an installation.**

### 2. Precautions

#### 2.1 Safety Precautions

**CAUTION:** The wearing of safety glasses to protect the eyes from accidental injury is strongly recommended when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the cornea easily.

**CAUTION:** The wearing of safety gloves to protect hands from accidental injury is strongly recommended when using sharp instruments.



Figure 1

**CAUTION:** The OCC is heavy and requires two persons to maneuver it. Observe all safety precautions while using the cable hoist. Make sure the front door is locked in the open position during installation. Failure to do so may result in personal injury or damage to the cabinet or cables.

#### 2.2 Laser Handling Precautions

**WARNING:** Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.

**WARNING:** DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye examination immediately.

### 2.3 Glass Fiber Precautions

**⚠ WARNING:** *Cleaved glass fibers are very sharp and can pierce the skin easily. Do not let cut pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cut or broken pieces of the glass fibers and place them on a loop of tape kept for that purpose alone. Good housekeeping is very important.*

### 2.4 Chemical Precautions

**⚠ CAUTION:** *Isopropyl alcohol is flammable with a flashpoint at 54°F. It can cause irritation to eyes on contact. In case of eye contact, flush eyes with water for at least 15 minutes. Inhaling fumes may induce mild narcosis. In case of ingestion, consult a physician.*

### 2.5 Cable Handling Precautions

**NOTE:** *Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend the cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink. Doing so may cause damage that can alter the transmission characteristics of the cable — the cable may have to be replaced.*

## 3. Components

Components are illustrated in Figure 2.

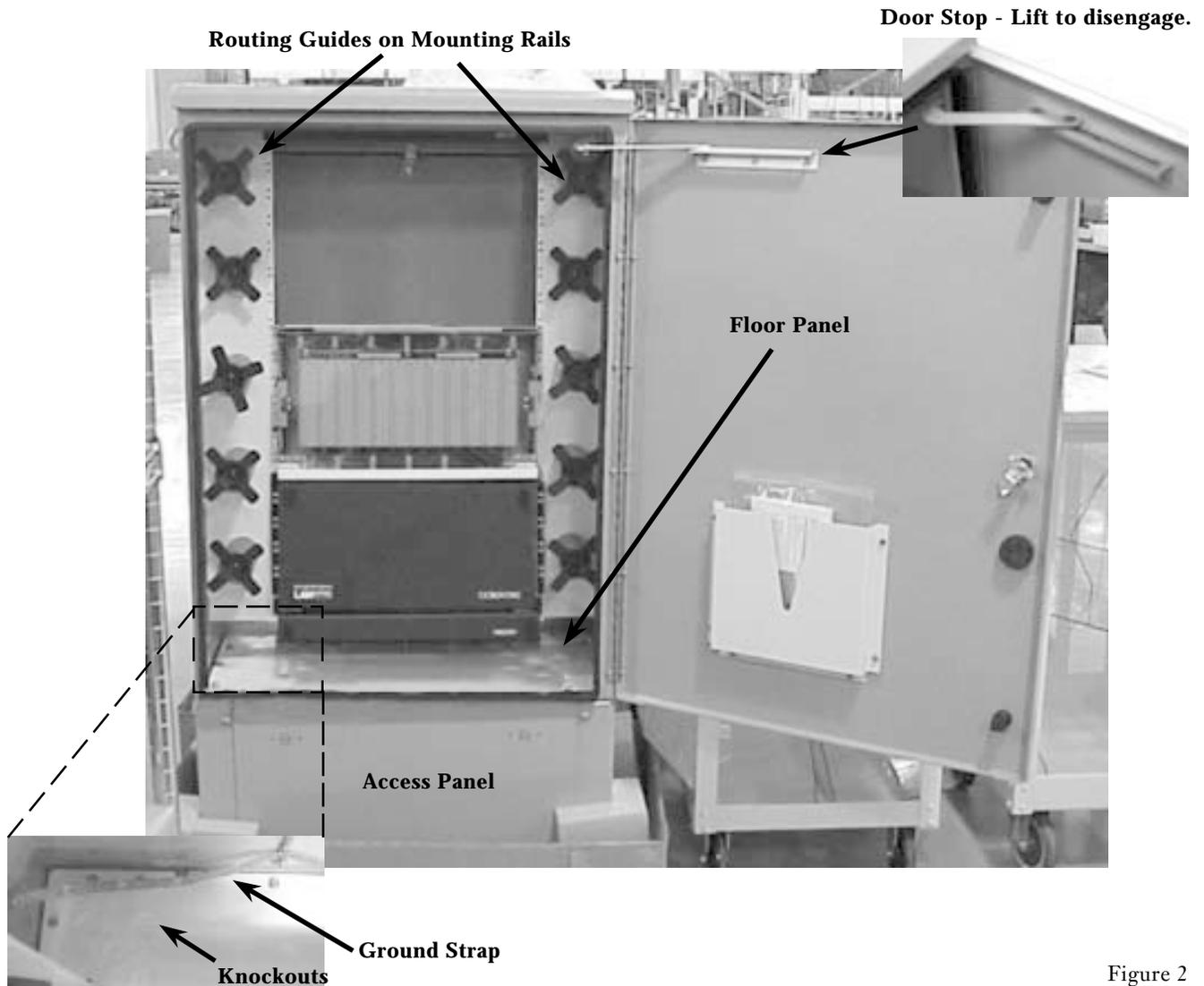


Figure 2

#### 4. Pad-mount the Cabinet

**NOTE:** *This cabinet requires OCC pad-mounting frame, p/n PAD-OCC-01 (purchased separately). Refer to the procedure provided with the frame for detailed installation instructions.*

- Step 1** Remove access covers from the base of the cabinet using a 216B tool or a  $\frac{7}{16}$ -inch nut driver or wrench.
- Step 2** Remove the shims and pad-mounting hardware from the pocket on the inside of the front door.
- Step 3** Open front door and lock in place. Remove back door and set aside.
- Step 4** Attach a cable hoist to the OCC lifting eyes (Figure 3).

**CAUTION:** *The OCC cabinet is heavy and requires two persons to maneuver it. Observe all safety precautions while using the cable hoist. Make sure the door is locked in the open position. Failure to do so may result in personal injury or damage to the cabinet or cables.*

- Step 5** Bring cable up and through the opening in the base.
- Step 6** Carefully lift the OCC and slowly lower it onto the pad-mount frame while simultaneously pulling the cable slack through the top section of the cabinet.
- Step 7** Lower the unit onto the pad-mount frame so that the four holes in the frame are aligned with the four holes in the cabinet's base.
- Step 8** Attach the cabinet to the frame using the supplied hardware. Use shims as needed (Figure 4) between the pad-mount frame and the cabinet to keep the cabinet squared.

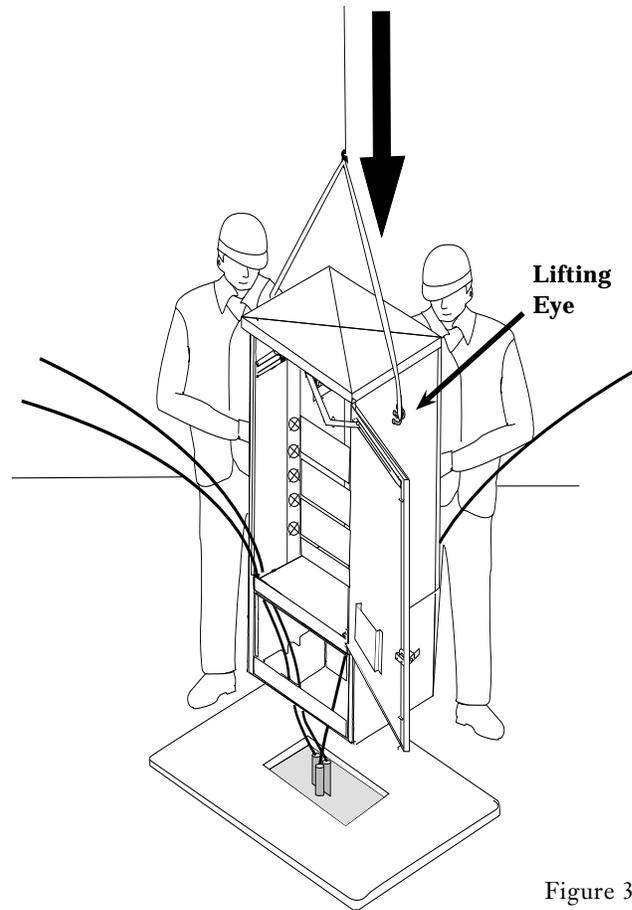


Figure 3

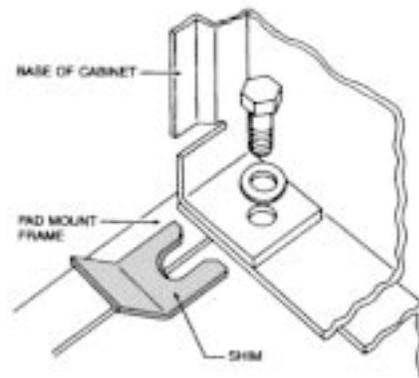


Figure 4

## 5. Remove Cable Sheath

Remove cable sheath as illustrated in Figure 5.

**NOTE:** Do not expose the bare fibers until after the cables have been placed in the splice housing.

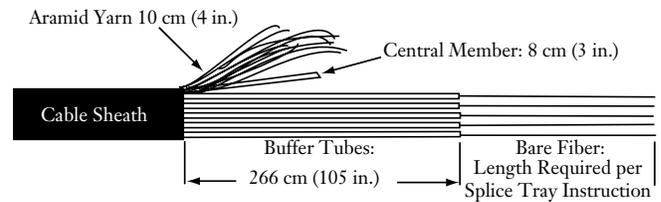


Figure 5

## 6. Strain-relieve Cable to Cabinet

- Step 1** Remove the appropriate knock-out from the floor panel in the cabinet.
- Step 2** Bring the cable through the knockout hole.
- Step 3** Temporarily position the cable out the rear of the cabinet (Figure 6).

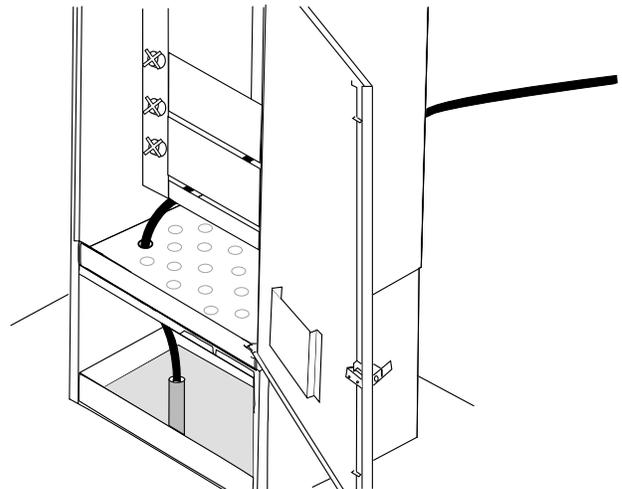


Figure 6

- Step 4** Thread the incoming cable through the provided watertight connector (Figure 7). Do not tighten yet.
- Step 5** Follow the procedure provided with the watertight connector kit for detailed strain-relief instructions.

## 7. Ground Armored Cable

Ground armored cable to the braided ground strap in the cabinet. Use the location nearest the cable entry point.

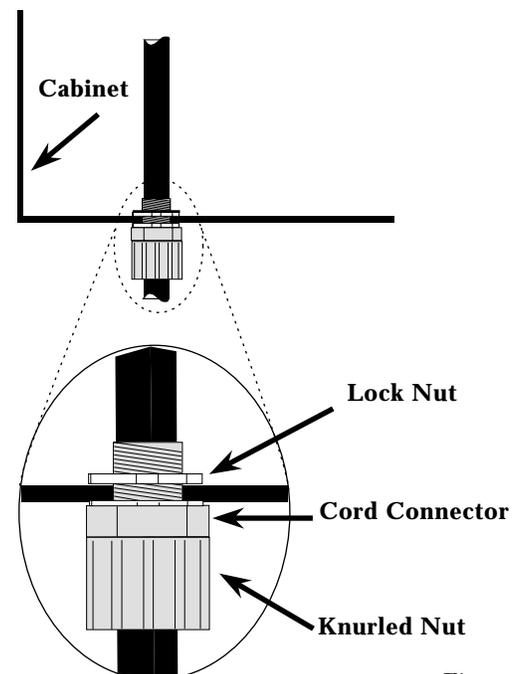


Figure 7

## 8. Splice Incoming Cable

### 8.1 Remove splice trays:

- Step 1** Pull splice shelf out from splice housing. Do not remove shelf completely.
- Step 2** Remove the top splice tray.
- Step 3** Carefully remove pigtailed from around the radius guides in the rear of the splice shelf. Observe fiber precautions in Section 3.
- Step 4** Set tray aside.
- Step 5** Repeat steps 2 through 4 for the remaining splice trays (Figure 8).

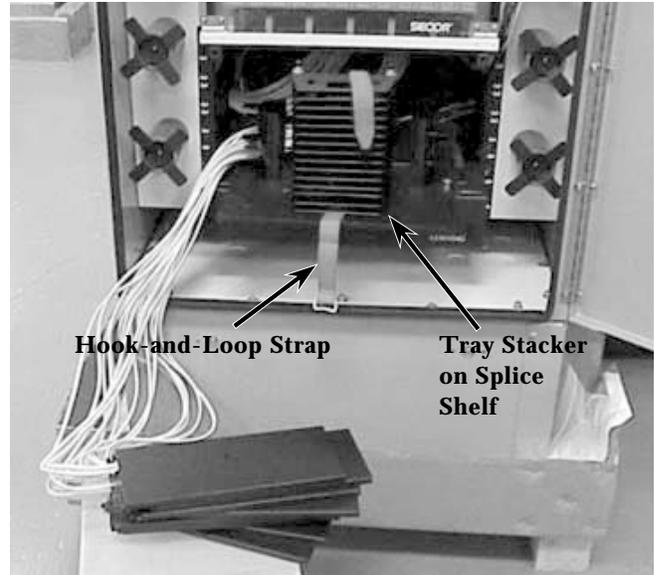


Figure 8

### 8.2 Route incoming cable into the splice housing:

- Step 1** Bundle cable together loosely using cable ties.
- Step 2** Route cable up toward the top and out the front of the splice housing.
- Step 3** Secure cable to the back side of the splice shelf using cable ties as shown in Figure 9 to provide appropriate clearance for fiber routing.

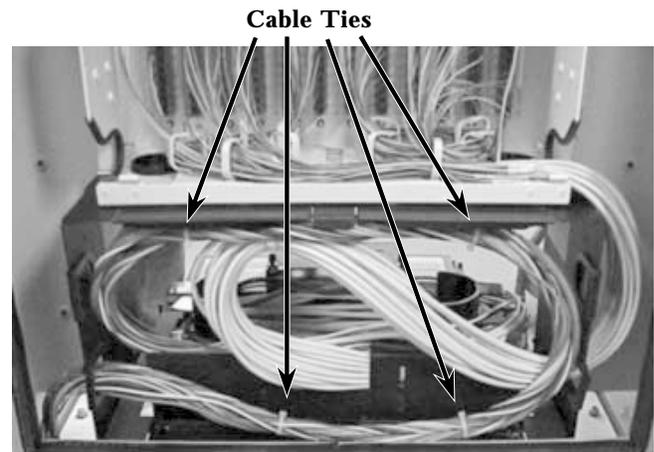


Figure 9

**IMPORTANT:** *Work on one splice tray at a time beginning with the tray first removed from the splice tray stacker. The pigtail fibers in each tray correspond to a specific location in the connector housing.*

**8.3** Splice fiber into the tray according to the instruction provided with the splice tray:

- Step 1** Secure incoming cable to the tray according to the instruction provided with the splice trays.
- Step 2** Route fiber around the radius guides on the splice shelf (Figure 10).
- Step 3** Slide tray into the tray stacker, working from bottom up.
- Step 4** Repeat Section 8.3 for the remaining trays.

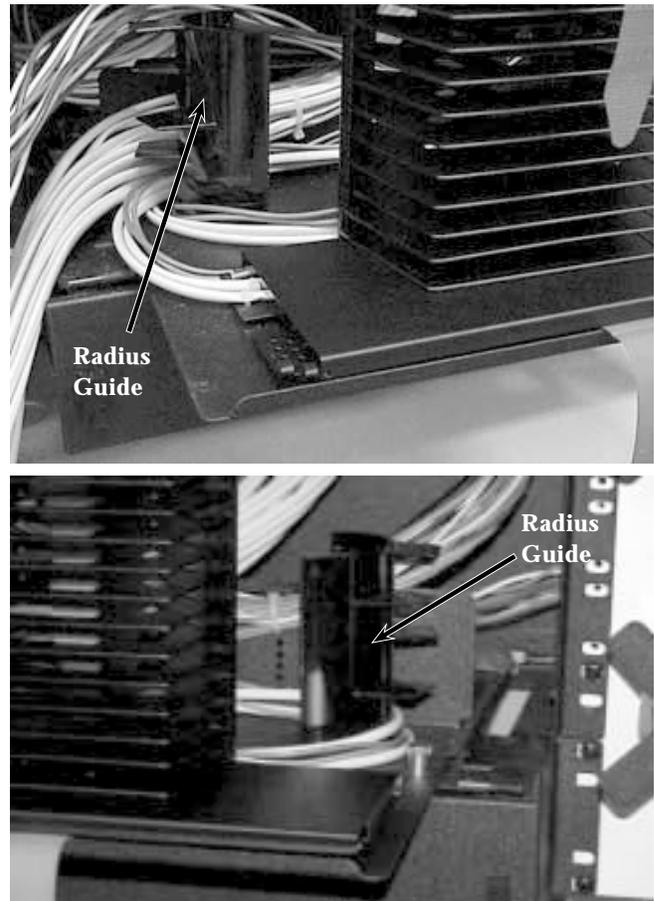


Figure 10

**8.4** Secure splice trays inside the tray stacker using the hook-and-loop strap (Figure 11).

**8.5** Slide shelf back into splice housing and close door.

**8.6** Once all cable is routed, hand-tighten the watertight connector and replace rear door of cabinet.

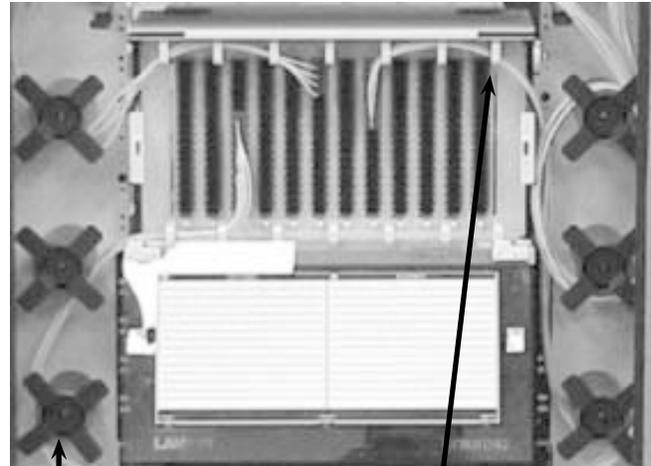


Figure 11

## 9. Install Jumpers

Install jumpers as specified on planning diagrams:

- Step 1** Route jumpers through the appropriate fiber guides in the connector housing (Figure 12).
- Step 2** Route the jumpers around the radius guides on the mounting rails.



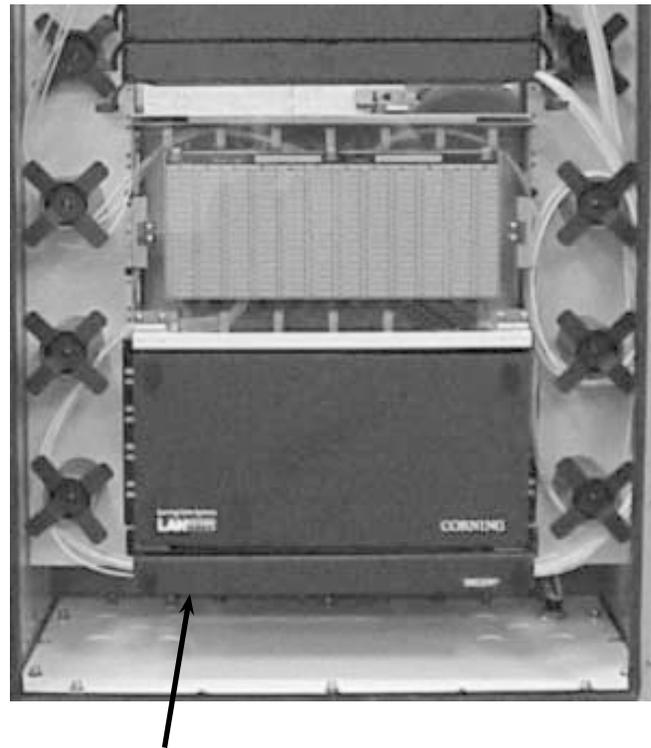
**Radius Guides**

**Fiber Guides**

Figure 12

- Step 3** Use bottom horizontal jumper management panel (Figure 13) to:

- Route jumpers from one side to the other.
- Route jumpers to rear through grommetted holes.



**Horizontal Jumper Management Panel**

Figure 13

Corning Cable Systems welcomes your comments concerning this Standard Recommended Procedure. You may send your comments to the following address:

Technical Publications Department  
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Keller, TX 76248 USA

You may also submit comments via email to:  
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