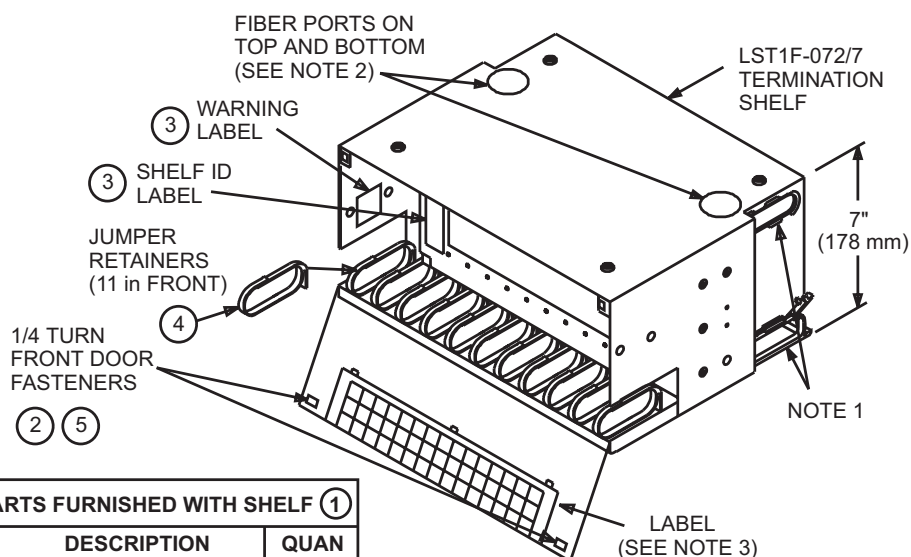


STEP 1—CHECK PARTS AND INSTALL LABELS, GROMMETS, AND RINGS

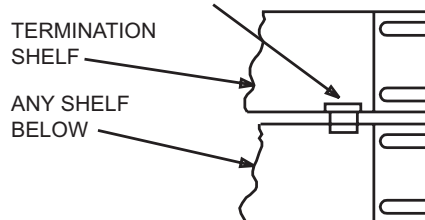
(This product is intended for indoor use, or outdoors in a suitable protective enclosure.)



LOOSE PARTS FURNISHED WITH SHELF ①		
ID NUMBER*	DESCRIPTION	QUAN
846 247 427	Mounting Brackets	2
—	Fiber Rings	8
—	Jumper Retainers	11
—	Shelf ID Label	1
—	Warning Label	2
848 067 369	Cable Clamp Brackets	2
—	White Plastic Grommets	2
—	Tie-Wrap Support	4
—	Tie-Wrap	4
—	Misc. Screws and Nuts	—
—	Bend Limiter, Upper	2
—	Bend Limiter, Lower	2

* For ID purposes, not for ordering.

WHITE PLASTIC GROMMET PROJECTS DOWNWARD FROM BOTTOM OF TERMINATION SHELF INTO TOP FIBER PORT OF SHELF BELOW (SEE NOTE 2)



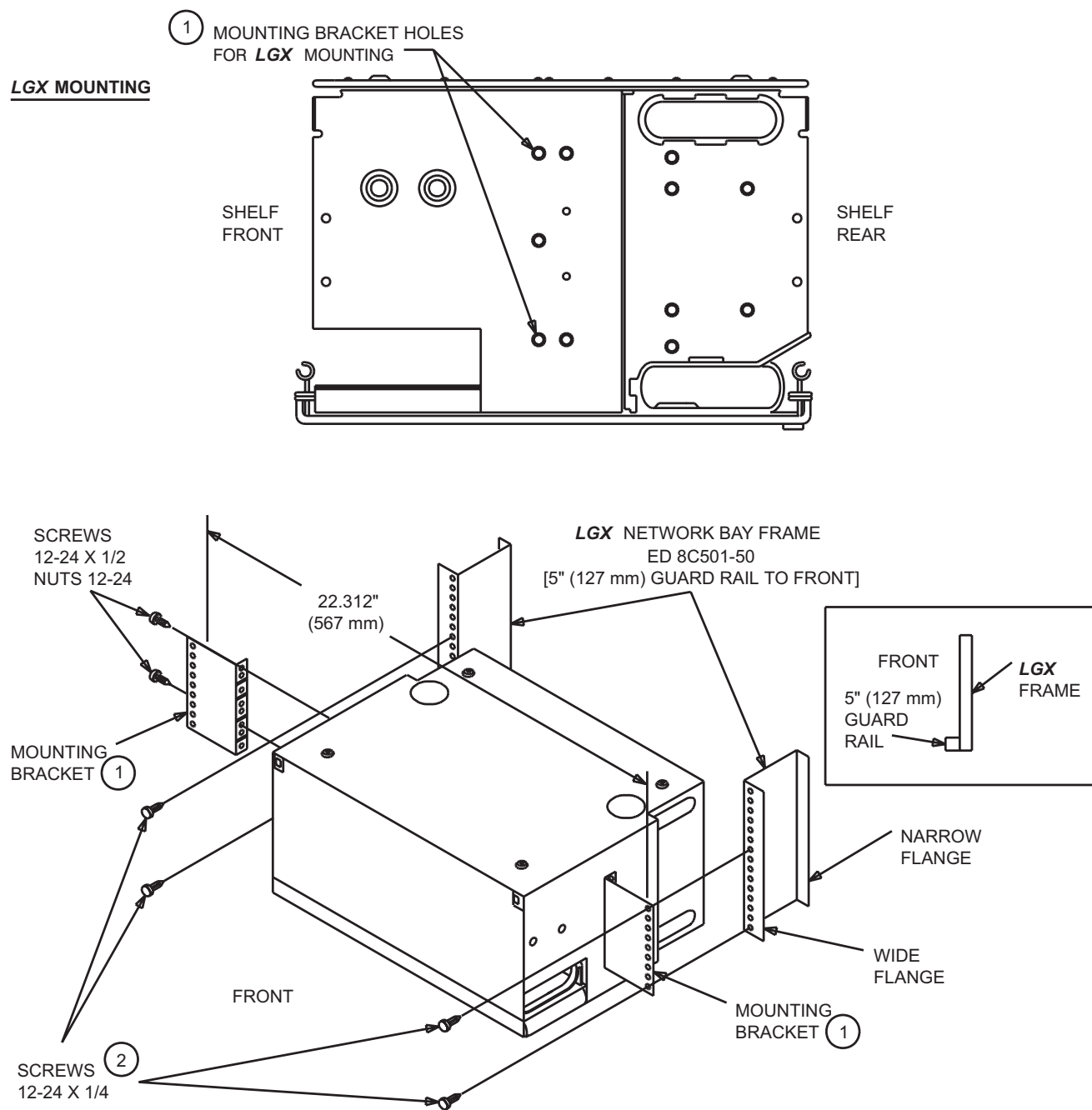
Note 1: LS-type shelves come equipped with plastic grommets in upper entry ports, and slotted out lower cable entry ports. The slots will have grommets and will permit easy lay-in of cables or fibers.

Note 2: Grommets installed in fiber ports allow fibers to be routed internally to other shelves. To install grommets, remove bottom two fiber port plugs. Install grommets from inside shelf projecting downward as shown above. When mounting termination shelf above another shelf, remove top fiber port plugs in shelf below. When mounting under another shelf, remove top two fiber plugs in termination shelf.

Note 3: Flip-type label with fields on either side. Use one side to record fiber termination location and other side to record circuit information. Shelf ID label is provided to key shelf to label which may be removed from door. Shelf location ID information must be written on both the flip-type label and matching shelf ID label prior to use.

1. Verify parts against parts list. Connector panels, build-out blocks, and couplers used with this shelf are ordered/provided separately.
2. Rotate front door fasteners 1/4 turn and tilt open shelf front door.
3. Apply shelf ID label to 6-pack panel and warning labels to either inside wall of shelf: one in front of the 6-pack panel and one behind the panel.
4. Snap eight fiber rings into rear of shelf (as shown on Page 8). Front jumper retainers (shown above) may be installed now or following 6-pack connector panel installation.
5. Return front and rear doors to closed position and rotate fasteners turn to secure.

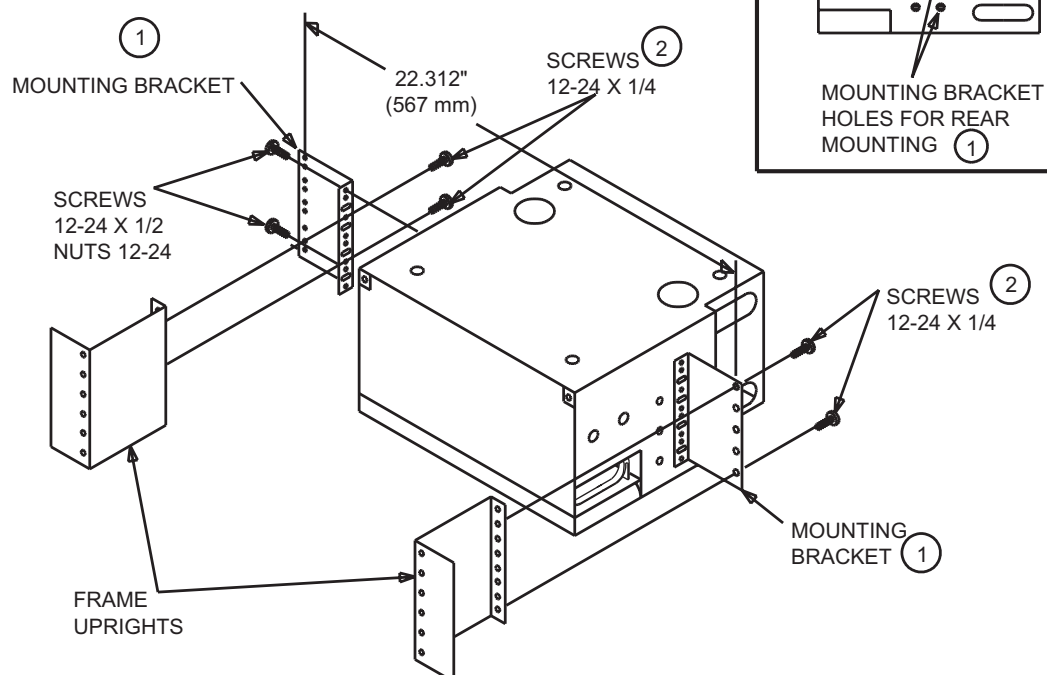
STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELF—**LGX**® FRAME



1. Position and attach each mounting bracket to shelf using proper mounting holes (see above) with two 12-24 by 1/2 screws and 12-24 nuts (with captive lockwashers).
2. Install shelf to front of **LGX** frame with two 12-24 by 1/4 screws per mounting bracket.

STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN LGX® FRAME

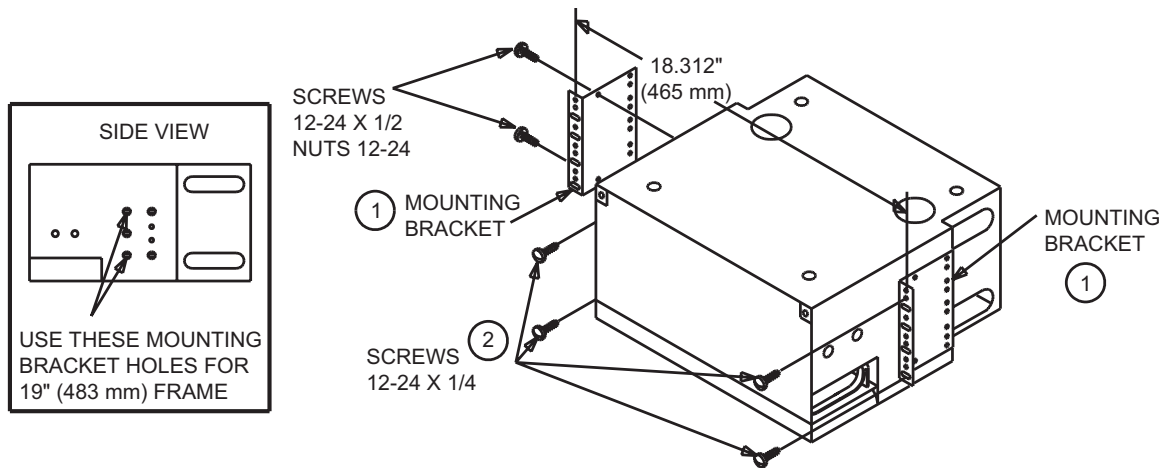
23" (584 mm) FRAME REAR MOUNTING



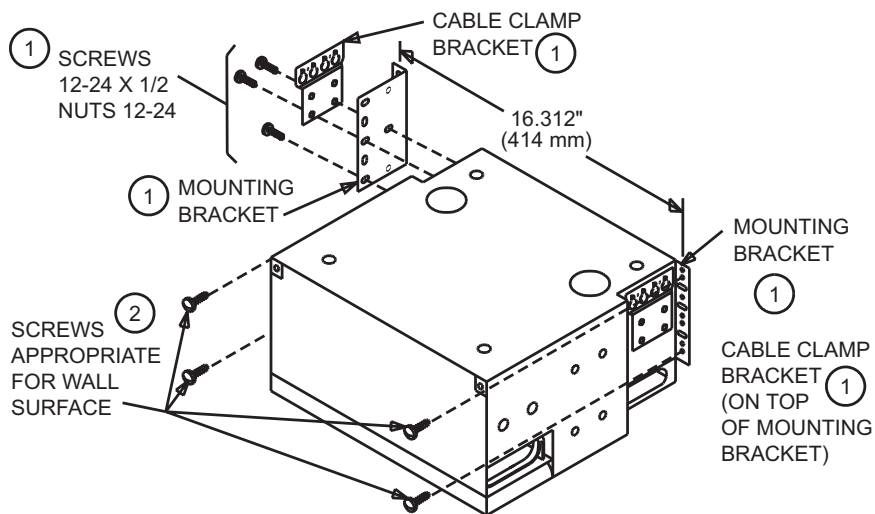
1. Position and attach each mounting bracket to shelf using proper mounting holes (see above) with two 12-24 by 1/2 screws and 12-24 nuts (with captive lockwashers).
2. Install shelf to frame with two 12-24 by 1/4 screws per mounting bracket.

STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN LGX® FRAME

19" (483 mm) FRAME MOUNTING CONFIGURATION



WALL MOUNTING CONFIGURATION



WALL MOUNTING:

Note: Illustration above is for wall mounting with top cable entry. For wall-mounted bottom cable entry, see illustration on Page 6.

LST1F-072/7 shelves typically mount to walls or CEV-type frames against walls. Shelves may be mounted directly to walls, as shown above, or mounted to 134-type wall brackets. When mounting to 134-type brackets, shelf mounting brackets are attached to the shelf for a 23-inch (584 mm) frame, front mounting (**LGX**) arrangement, as shown on Page 2. For these installations, it is recommended that cables be secured to 12A-type cable clamps before the shelf is mounted to 134-type bracket for ease of access to the clamping hardware. Future installation of cables may require removal of the shelf from 134-type bracket.

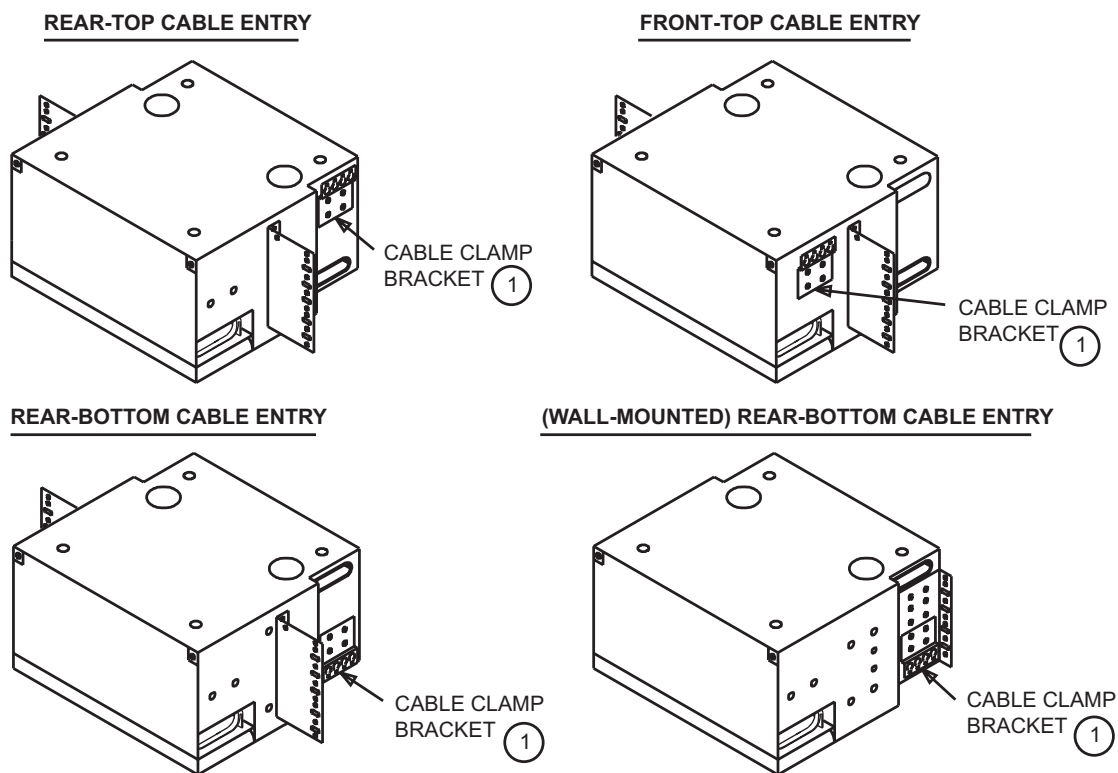
STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELF—OTHER THAN LGX® FRAME

1. Install both mounting bracket and cable clamp bracket to side of shelf with three 12-24 by 1/2 screws and 12-24 nuts (with captive lockwashers). Two screws go through both brackets, while third screw goes through mounting bracket only. Repeat same for opposite side of shelf.
2. Install shelf to wall surface with two fasteners (locally obtained) per mounting bracket. Fasteners should be appropriate for wall surface.

19-INCH (483 mm) FRAME MOUNTING:

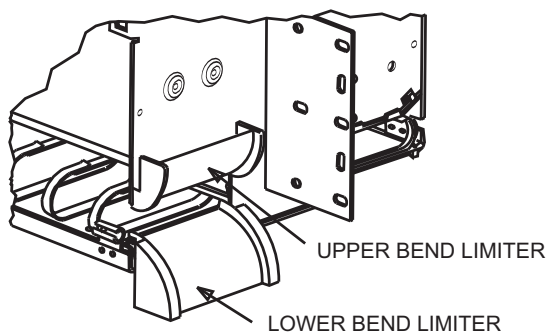
1. Position and attach each mounting bracket using appropriate mounting holes (see previous page) to shelf with two 12-24 by 1/2 screws and 12-24 nuts (with captive lockwashers).
2. Install shelf to 19-inch (483 mm) frame with two 12-24 by 1/4 screws per mounting bracket.

STEP 3—INSTALL CABLE CLAMP BRACKETS TO SHELVES



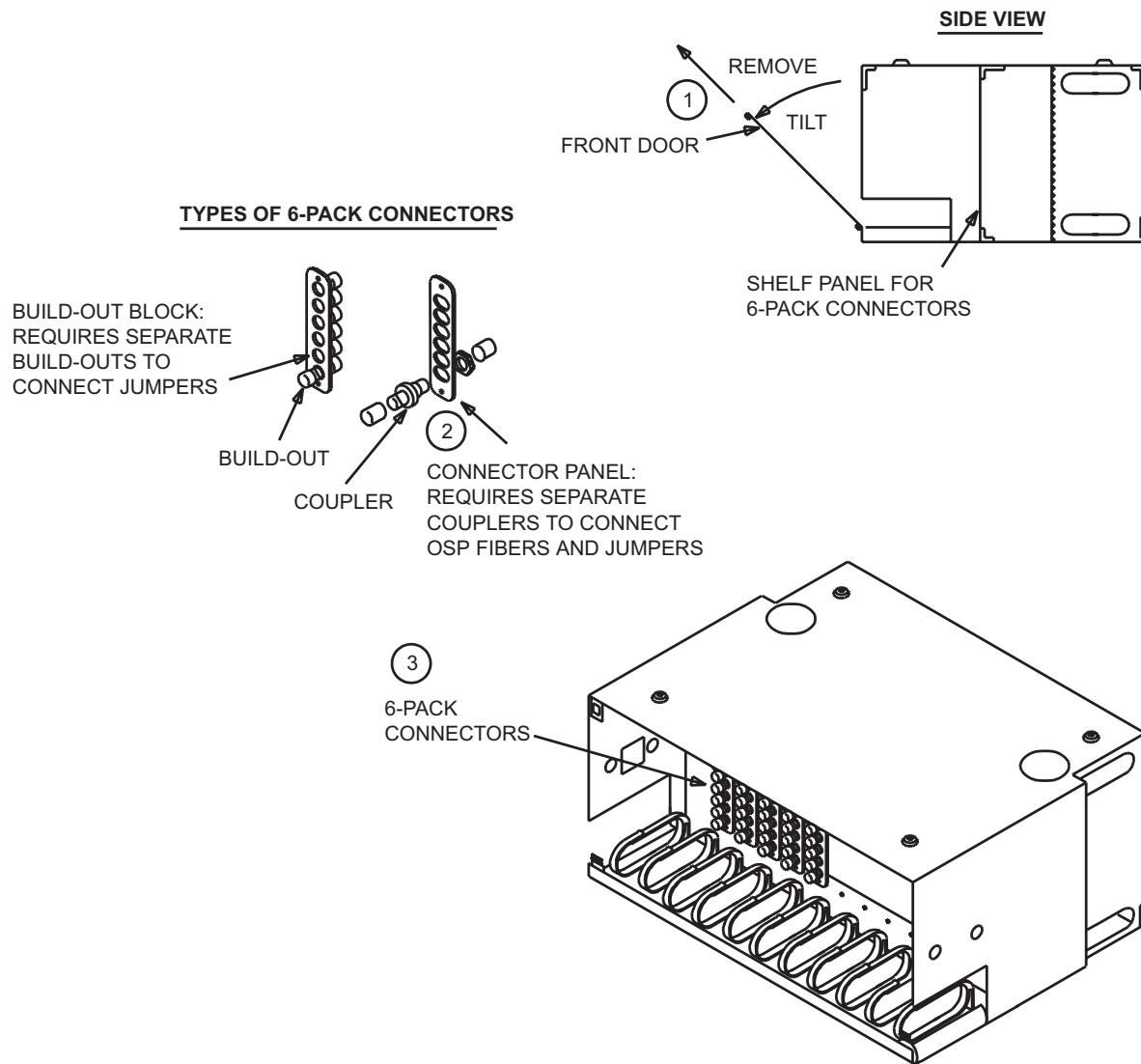
1. Position and install each cable clamp bracket to sides of shelf with two 12-24 by screws and 12-24 nuts (with captive lockwashers). For wall-mounted shelves, cable clamp brackets were previously installed with mounting brackets.

STEP 4—INSTALL BEND LIMITERS



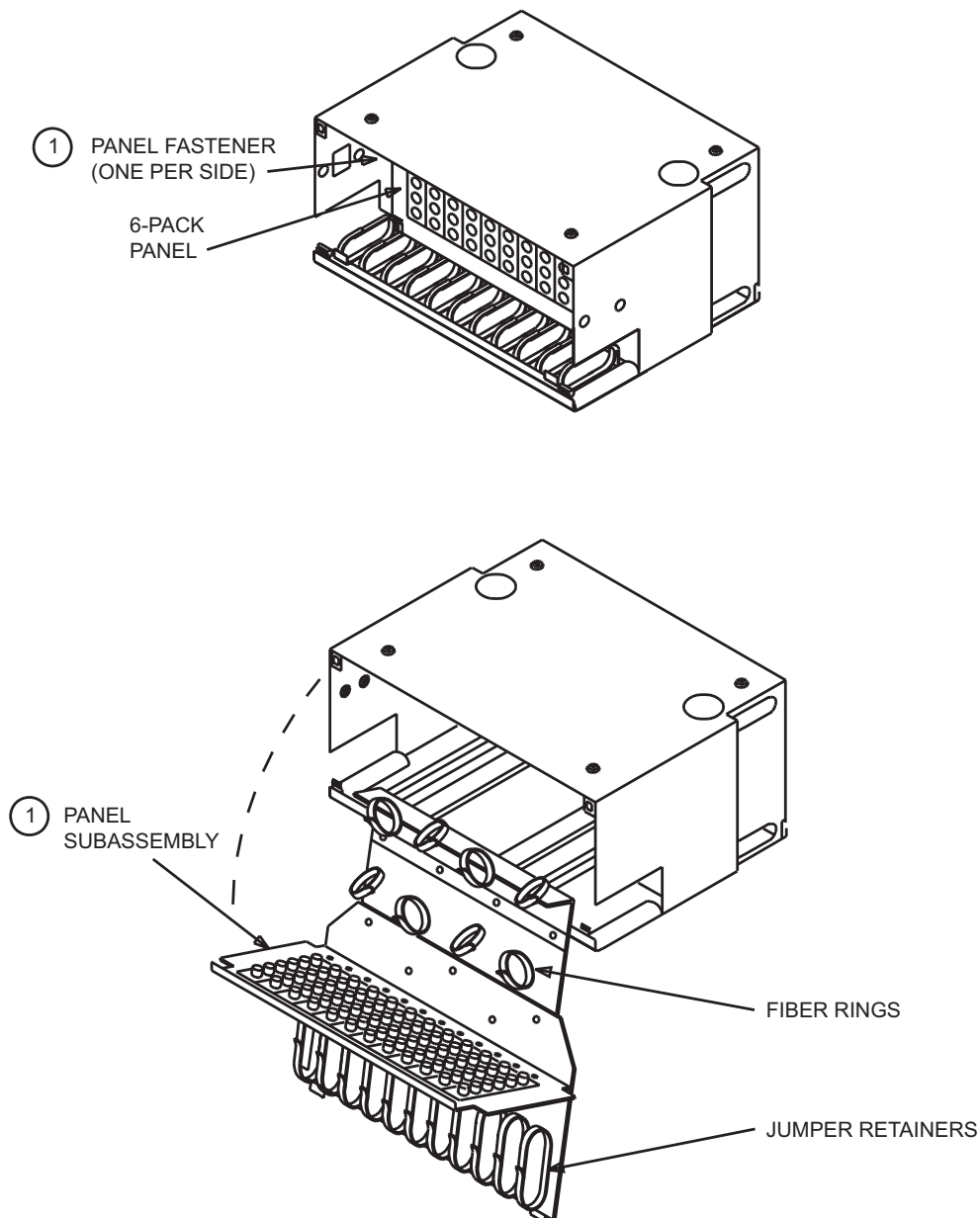
1. Install upper and lower bend limiters in the jumper ports on the left and right side of the shelf. The lower bend limiters are installed by snapping them into position. The upper bend limiters are installed using double-sided foam tape provided. Make sure surface of shelf is clean, peel release paper from tape on upper bend limiter, and press into position.

Note: Order Comcode 107 330 565, Set Bend Limiters (Multipack), to equip existing shelves with bend limiters. Each multipack will equip five shelves.

STEP 5—INSTALL 6-PACK CONNECTORS TO SHELF PANEL

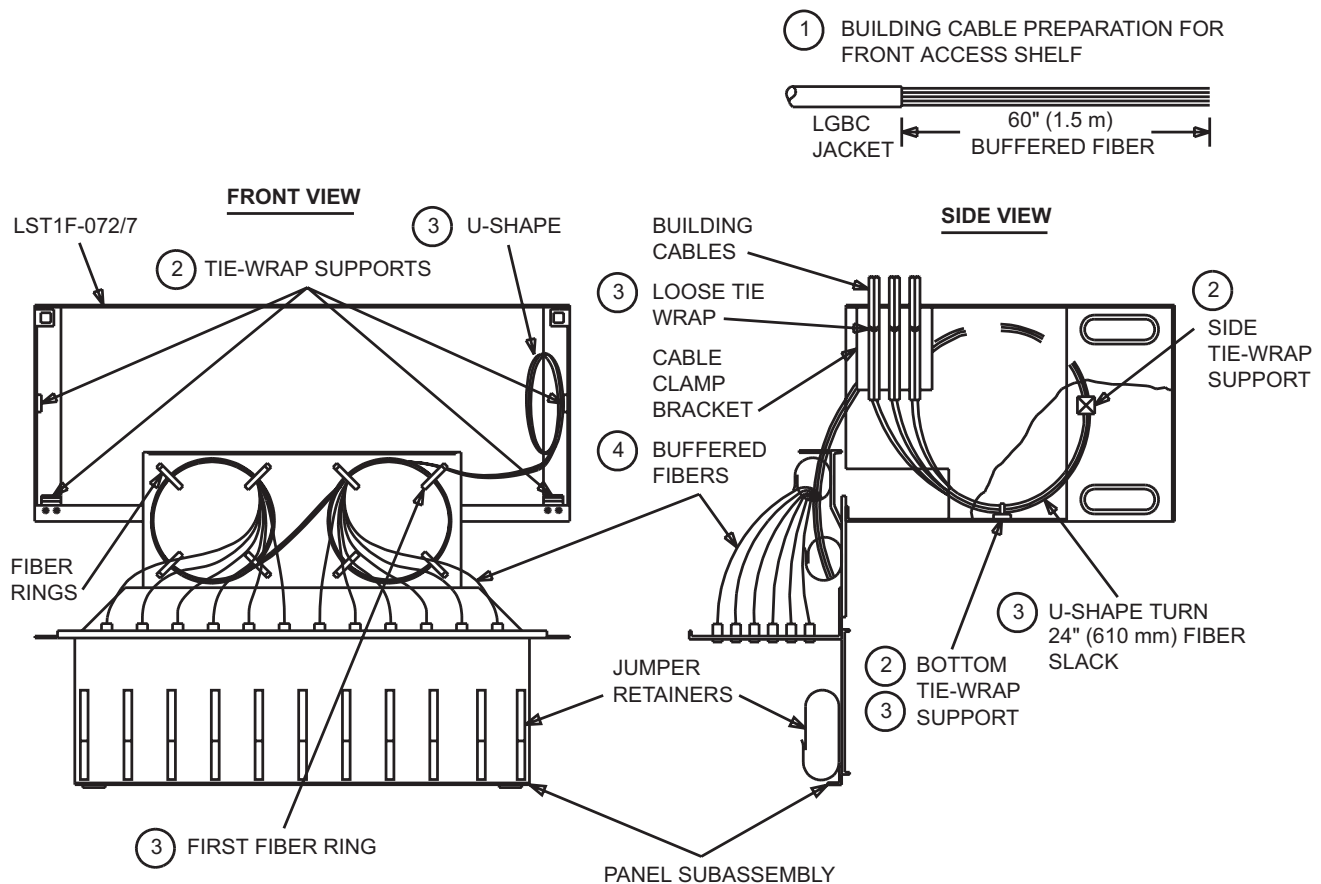
1. Rotate front door fasteners turn; tilt door to align with hinge slots and remove.
2. Couplers must be installed on 6-pack connector panels prior to installation of connector panels. Build-out blocks may be installed on shelf panel prior to build-out installation.
3. Install 6-pack connector panels or build-out blocks to shelf panel using the snap fasteners on 6-pack panels.

STEP 6—PREPARATION TO INSTALL OUTSIDE PLANT (OSP)/BUILDING CABLES



1. Loosen panel fasteners, pull panel subassembly out from shelf until stop is engaged, and pivot down. If not installed, fiber rings may be snapped into position in the rear of the shelf at this time.
2. When installing **building cable** to wall-mounted or CEV frame shelves (frame mounted against wall, no rear access), proceed to Step 7, Page 9.
3. When installing **OSP cable** to wall-mounted or CEV frame shelves (frame mounted against wall, no rear access), proceed to Step 8, Page 10.

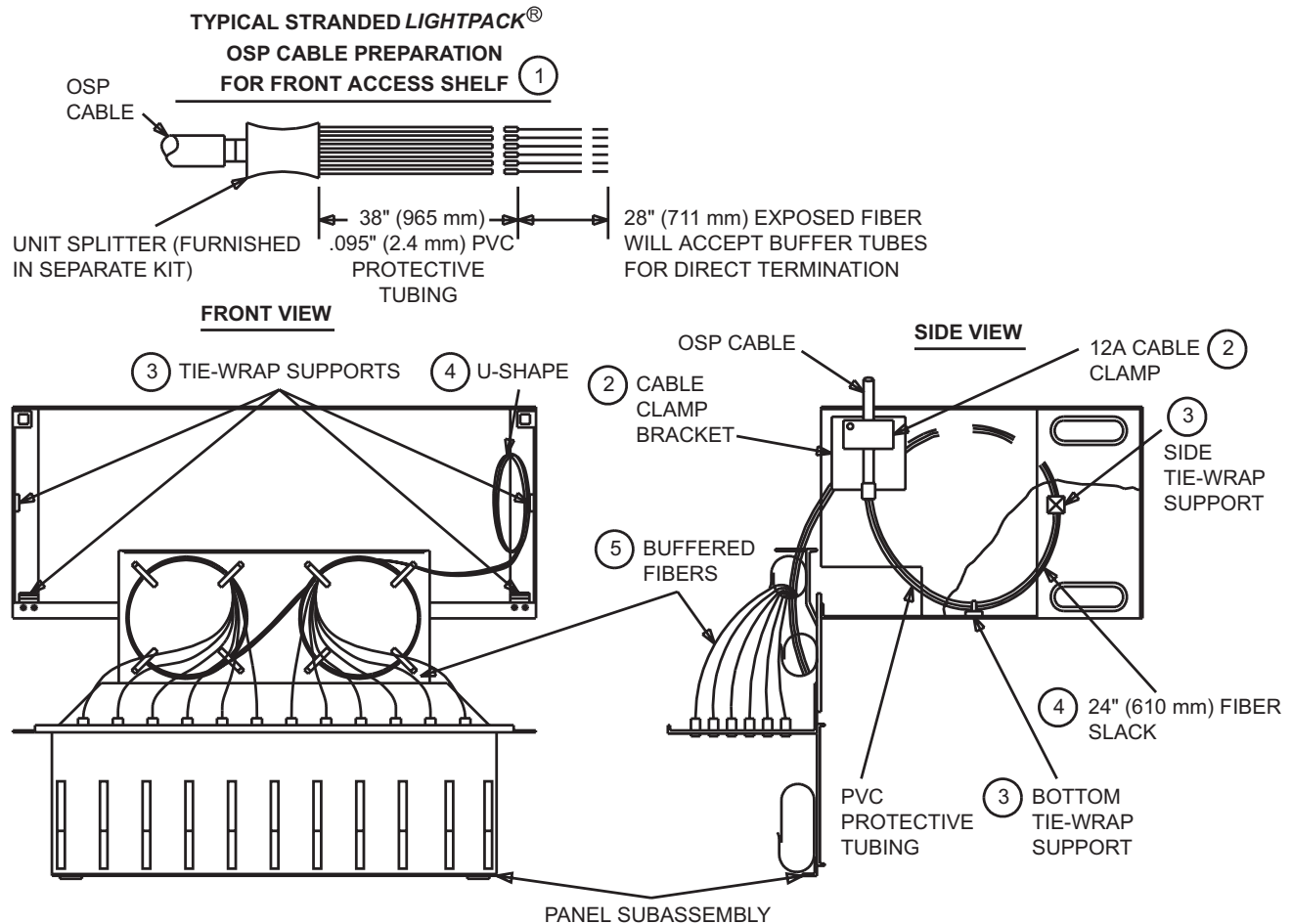
**STEP 7—INSTALL BUILDING CABLES TO SHELF WITH FRONT ACCESS ONLY:
WALL-MOUNTED, CEV, OR SIMILAR FRAME LOCATIONS**



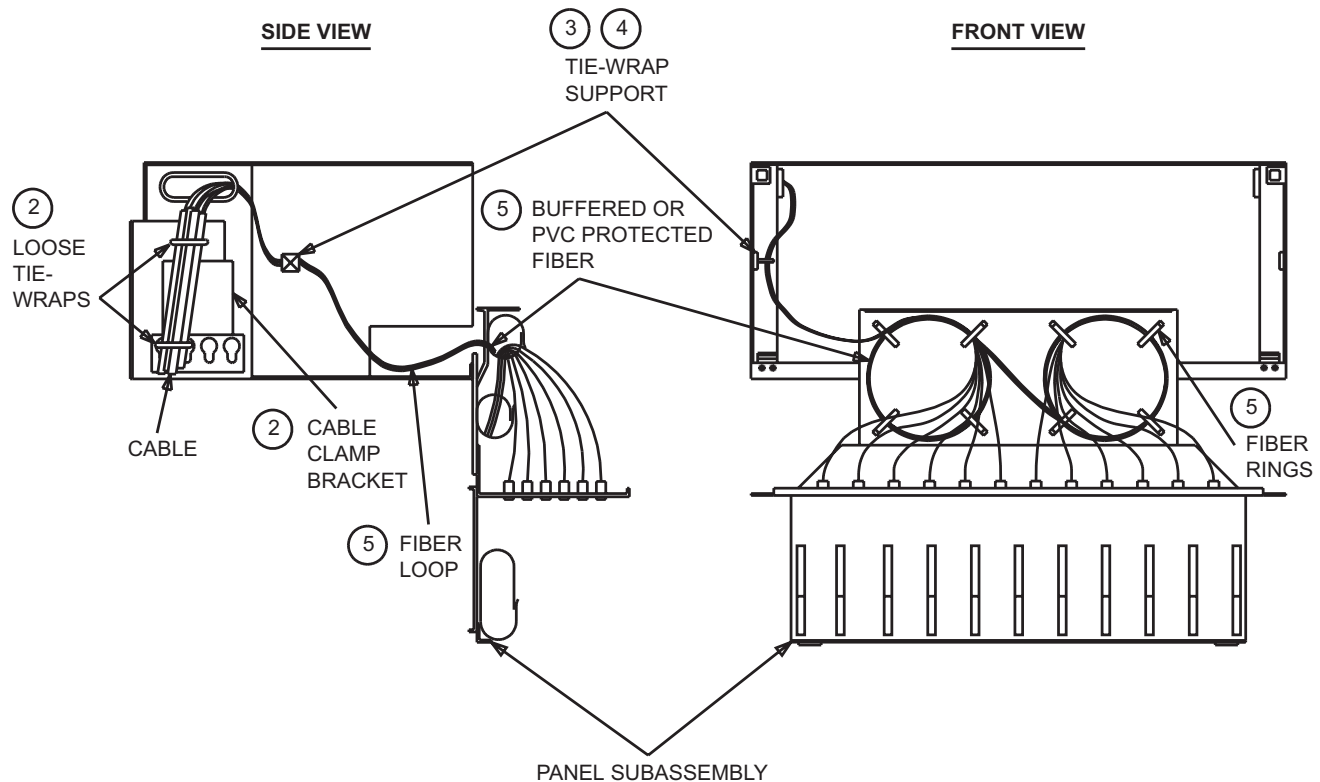
Note: Ideal procedure for securing building cables is to use spiral wrap, if available, around each building cable at the cable clamp bracket. Tie-wrap should only loop through spiral wrap to secure cable.

1. Prepare building cable typically as shown above.
2. Locate and secure adhesive backed tie-wrap supports as indicated. The bottom tie-wrap support must be located at the notch in the bottom. If cable is routed through the rear of the shelf from the bottom or top, see Steps 9 and 10, respectively.
3. Loosely secure (tie-wrap) building cables to cable clamp bracket on shelf. Route buffered fibers into shelf, from a U-shaped turn with approximately 24 inches (610 mm) of slack (from end of building cable jacket to first fiber ring on panel subassembly), and loosely tie-wrap the buffered fiber to the tie-wrap supports. If spiral wrap is used with building cables, secure spiral wrap portion at the bottom tie-wrap support.
4. Route the remainder of the buffered fiber bundle to the panel subassembly for connectorization and termination.
5. If no other cables are to be installed, proceed to Step 11.

STEP 8— INSTALL OSP CABLES TO SHELF WITH FRONT ACCESS ONLY: WALL-MOUNTED, CEV FRAME, OR SIMILAR FRAME LOCATIONS

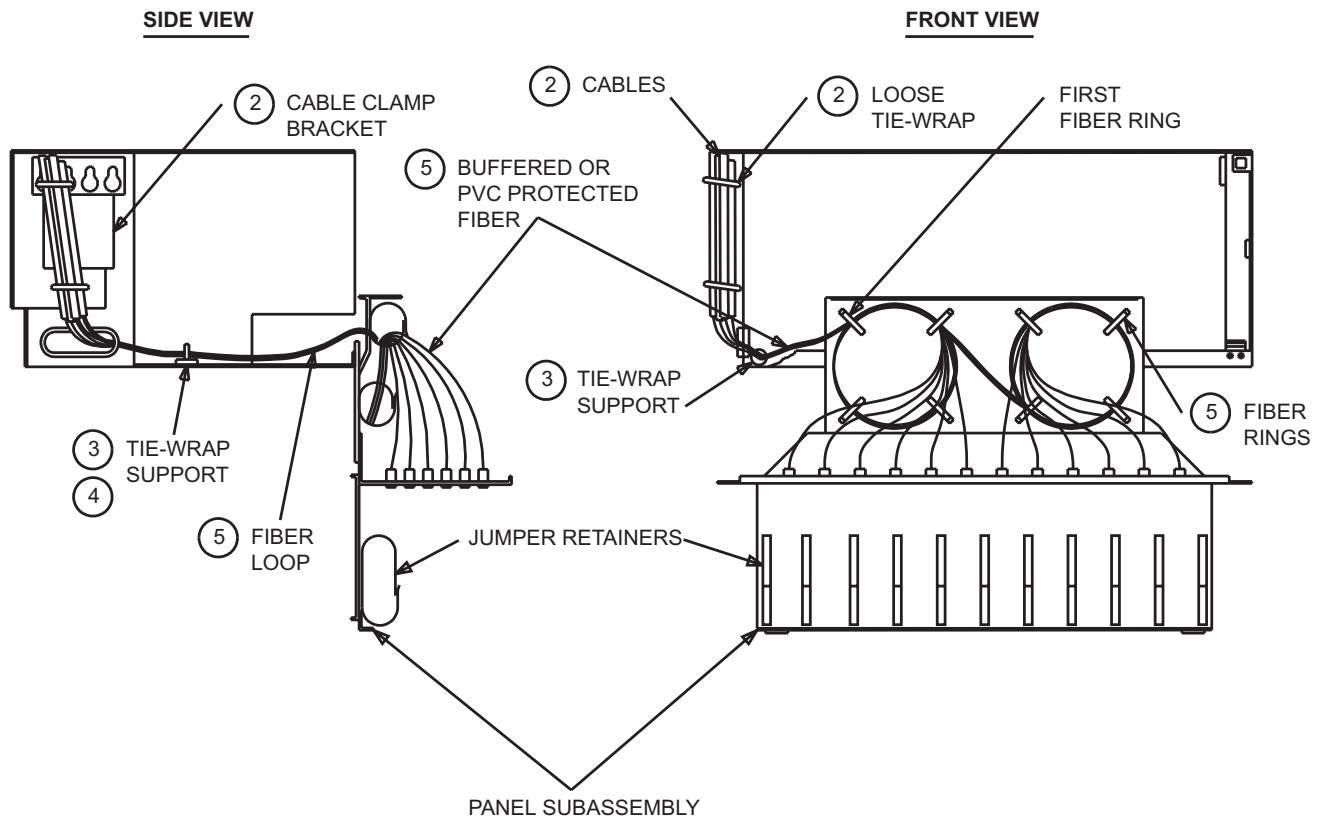


1. Prepare stranded/*Lightpack* Cables typically as shown above using unit splitter. See 636-299-110 for cable preparation procedures for this and other types of cables.
2. Secure OSP cables to clamp bracket and ground metallic cables to frame, or suitable ground, with 12A-type cable clamps (refer to 636-299-110 for details). 12A-type clamps are ordered and provided separately (one per OSP cable to be secured).
3. Locate and secure the enclosed adhesive backed tie-wrap supports as indicated. The bottom tie-wrap support must be located at the notch in the bottom. If cable is routed through the rear of the shelf from the bottom or top, see Steps 9 and 10, respectively.
4. Route protected fibers into shelf, form a U-shaped turn with approximately 24 inches (610 mm) of slack (from end of unit splitter to first ring on panel subassembly), and loosely tie-wrap the protective tubing to the tie-wrap supports.
5. Route the fibers with buffer tubing to the panel subassembly for connectorization and termination.
6. If no other cables are to be installed, proceed to Step 11.

STEP 9—CABLE ENTRY FROM BOTTOM REAR OF SHELF

1. Prepare Fiber Optic Building Cable (LGBC) or Outside Plant (OSP) Cable. See 636-299-110 for cable preparation procedures for these and other types of cables.
2. Secure LGBC cables to the cable clamp bracket with tie-wraps as indicated. Secure OSP cables to clamp bracket and ground metallic cables to frame, or suitable ground, with 12A-type cable clamps (refer to 636-299-110 for details). The 12A-type clamps are ordered and provided separately (one per OSP cable to be secured).
3. Locate and secure the enclosed adhesive backed tie-wrap supports as indicated.
4. Route buffered LGBC or PVC protected OSP fibers into shelf and attach to tie-wrap support.
5. Route fibers to panel subassembly for connectorization and termination. Store slack in fiber rings. Enough fiber should be left between the first fiber ring and tie-wrap support so that a loop is formed when the subassembly is pushed back into the shelf.
6. If no other cables are to be installed, proceed to Step 11.

STEP 10—CABLE ENTRY FROM TOP REAR OF SHELF



1. Prepare Fiber Optic Building Cable (LGBC) or Outside Plant (OSP) Cable. See 636-299-110 for cable preparation procedures for these and other types of cables.
2. Secure LGBC cables to the cable clamp bracket with tie-wraps as indicated. Secure OSP cables to clamp bracket and ground metallic cables to frame, or suitable ground, with 12A-type cable clamps (refer to 636-299-110 for details). The 12A-type clamps are ordered and provided separately (one per OSP cable to be secured).
3. Locate and secure the enclosed adhesive-backed tie-wrap supports as indicated.
4. Route buffered LGBC or PVC protected OSP fibers into shelf and attach to tie-wrap support.
5. Route fibers to panel subassembly for connectorization and termination. Store slack in fiber rings. Enough fiber should be left between the first fiber ring and tie-wrap support so that a loop is formed when the subassembly is pushed back into the shelf.
6. If no other cables are to be installed, proceed to Step 11.

STEP 11—RETURN PANEL SUBASSEMBLY TO ORIGINAL POSITION AND SECURE

