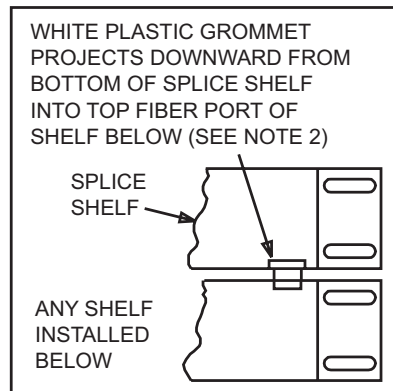
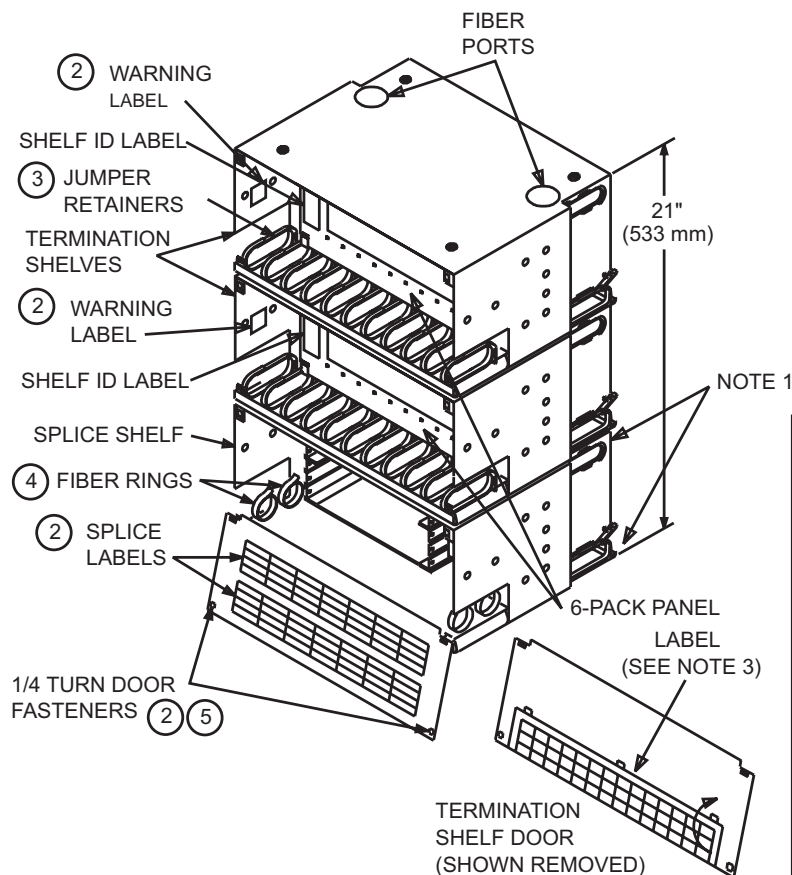


LSC1U-144/21 FIBER OPTIC COMBINATION SPLICE AND TERMINATION SHELF INSTALLATION

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



LOOSE PARTS FURNISHED WITH SHELF (1)		
ID NUMBER	DESCRIPTION	QUAN
846 247 427	Mounting Brackets	6
—	Jumper Retainers	22
—	Fiber Rings	30
—	Splice Labels	2
—	Warning Labels	4
—	Shelf ID Labels	2
848 067 369	Cable Clamp Brackets	6
—	White Plastic Grommets	6
—	Misc. Screws and Nuts	—
—	Bend Limiter, Upper	4
—	Bend Limiter, Lower	4

* For ID purposes, not for ordering.

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

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

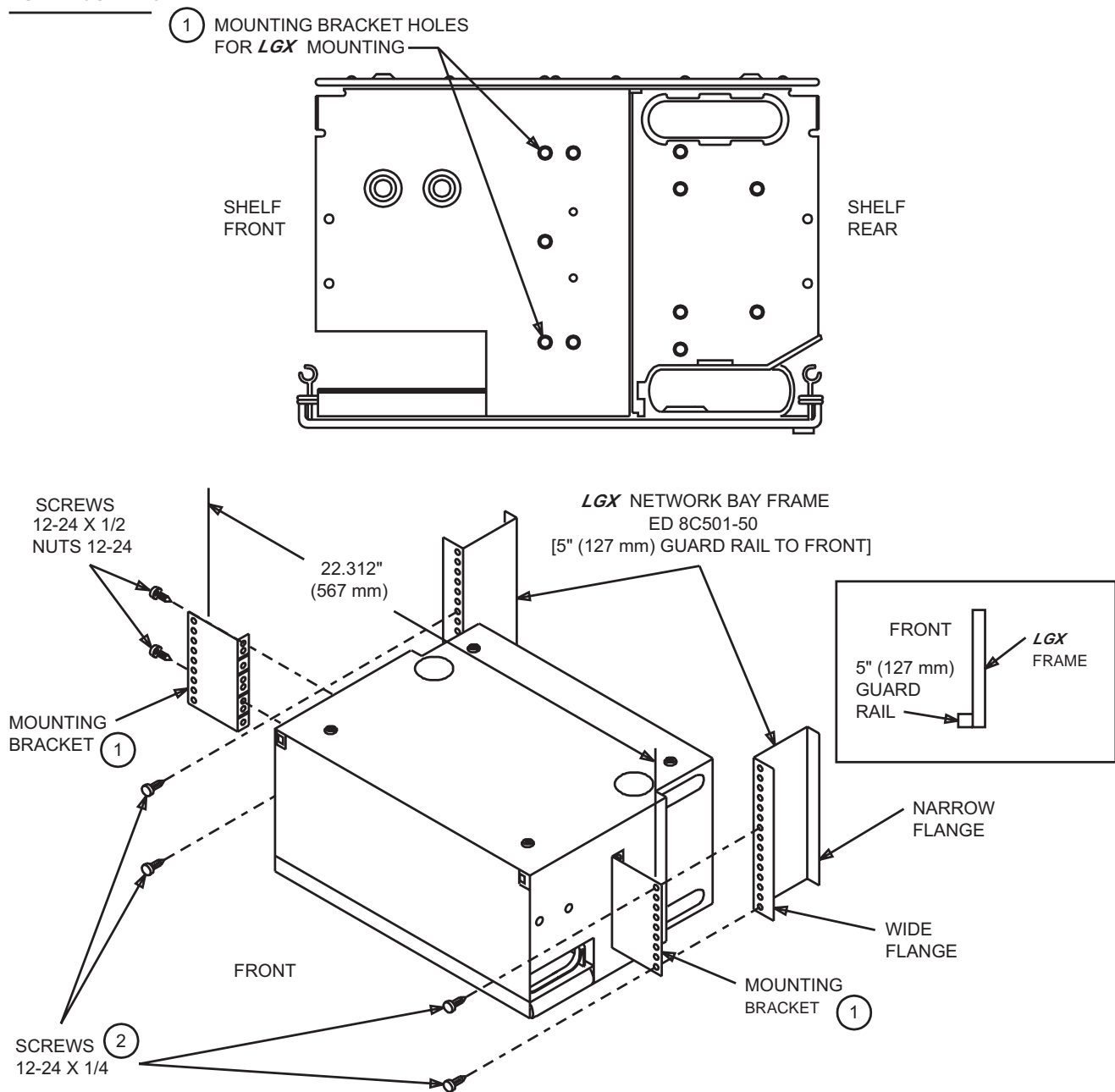
Note 2: Grommets installed in fiber ports allow fibers to be routed internally to other shelves. To install grommets, remove bottom two fiber port plugs. Install grommets from inside shelf projecting downward as shown above. When mounting splice and termination shelf above another shelf, remove top fiber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

Note 3: Termination shelf 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, couplers, and splice organizers used with this shelf are ordered/provided separately.
2. Rotate front door fasteners; 1/4 turn and open shelf front doors. Apply shelf ID labels to 6-pack panel brackets, warning labels to either inside wall of each termination shelf - one in front of 6-pack panels and one behind panels, and splice labels to inner side of splice shelf front door.
3. Position and snap fiber rings into rear of termination shelves (page 9). Jumper retainers (shown above) may be installed now or following 6-pack connector panel/block installation.
4. Position and snap fiber rings into front and back of splice shelf as shown on page 9.
5. Return front doors to closed position and rotate fasteners 1/4 turn to secure.

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

LGX MOUNTING

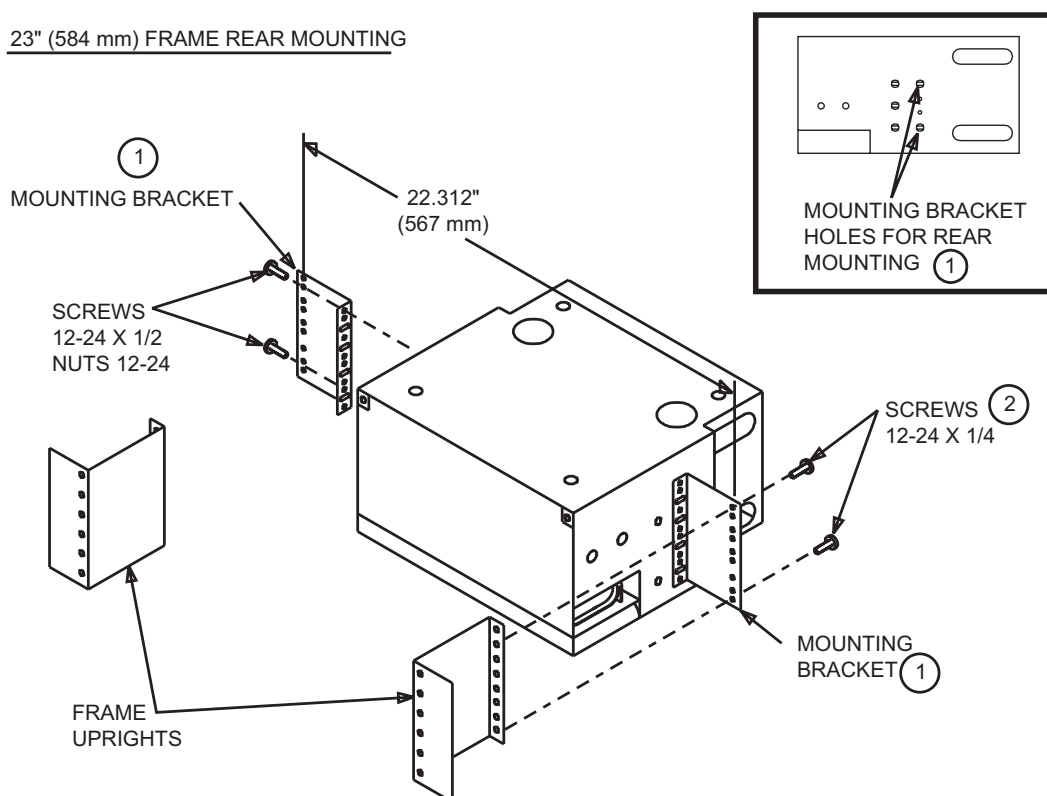


Note: The mounting bracket installation is the same for all three shelves. For simplicity, only one shelf is shown above even though all three shelves require mounting brackets.

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

STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELVES - OTHER THAN LGX®FRAMES

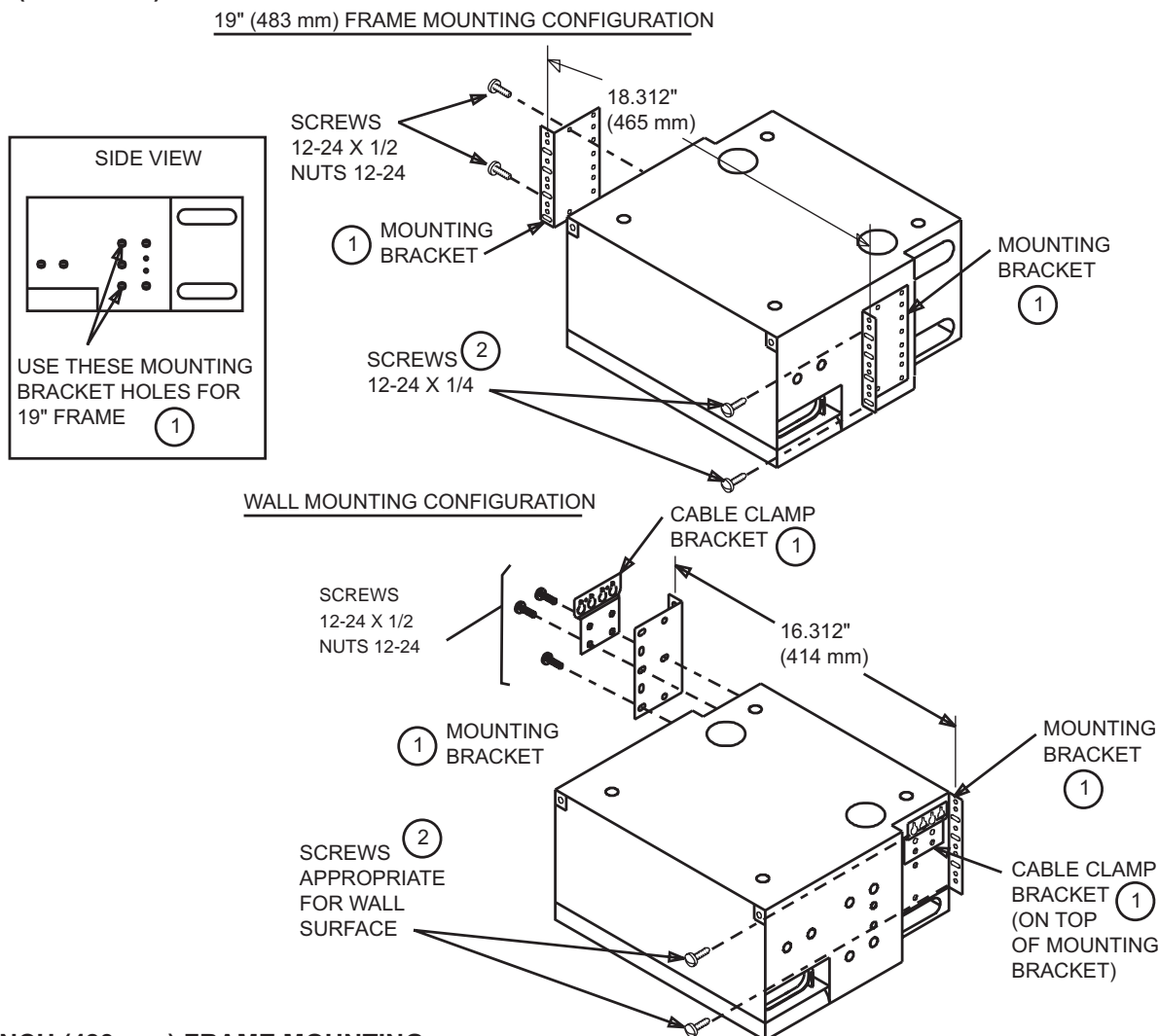
23" (584 mm) FRAME REAR MOUNTING



Note: The mounting bracket installation is the same for all three shelves. For simplicity, only one shelf is shown above even though all three shelves require mounting brackets.

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

STEP 2—INSTALL SHELF MOUNTING BRACKETS AND MOUNT SHELVES - OTHER THAN LGX®FRAMES (Continued)



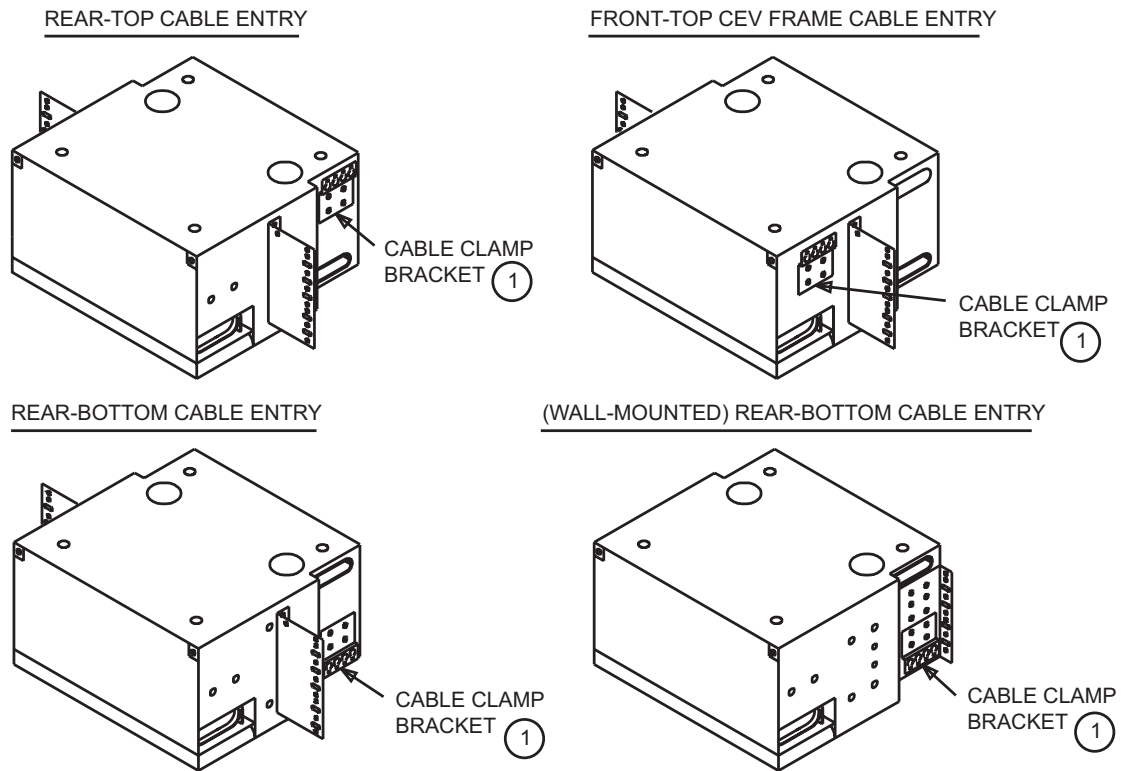
19-INCH (483 mm) FRAME MOUNTING:

1. Position and attach mounting brackets to shelves using proper mounting holes (see above) with two 12-24 by 1/2 screws and 12-24 nuts (with captive lockwashers). See note on page 2.
2. Install shelves to 19-inch (483 mm) frame with two 12-24 by 1/4 screws per mounting bracket.

WALL MOUNTING:

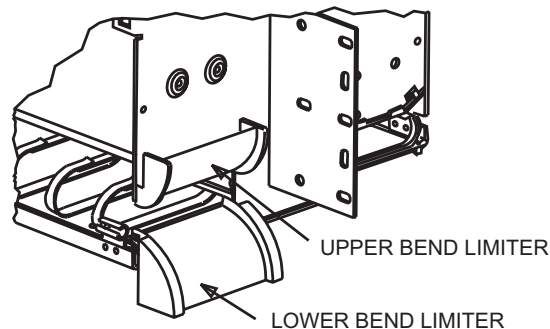
Note: Illustration above shows wall-mounted top cable entry. See Step 3 for wall-mounted bottom cable entry. Shelf may also mount on the 134-type wall bracket.

1. Position and install large mounting bracket and cable clamp bracket to side of termination shelves 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 shelves. See note on page 2.
2. Install shelves to wall surface with two fasteners (locally obtained) per mounting bracket. Fasteners should be appropriate for wall surface.

STEP 3—INSTALL CABLE CLAMP BRACKETS AND RUBBER GROMMETS TO SHELVES


Note: The cable clamp bracket and grommet installation are the same for all three shelves. For simplicity, only one shelf is shown above even though all three shelves require cable clamp brackets and grommets.

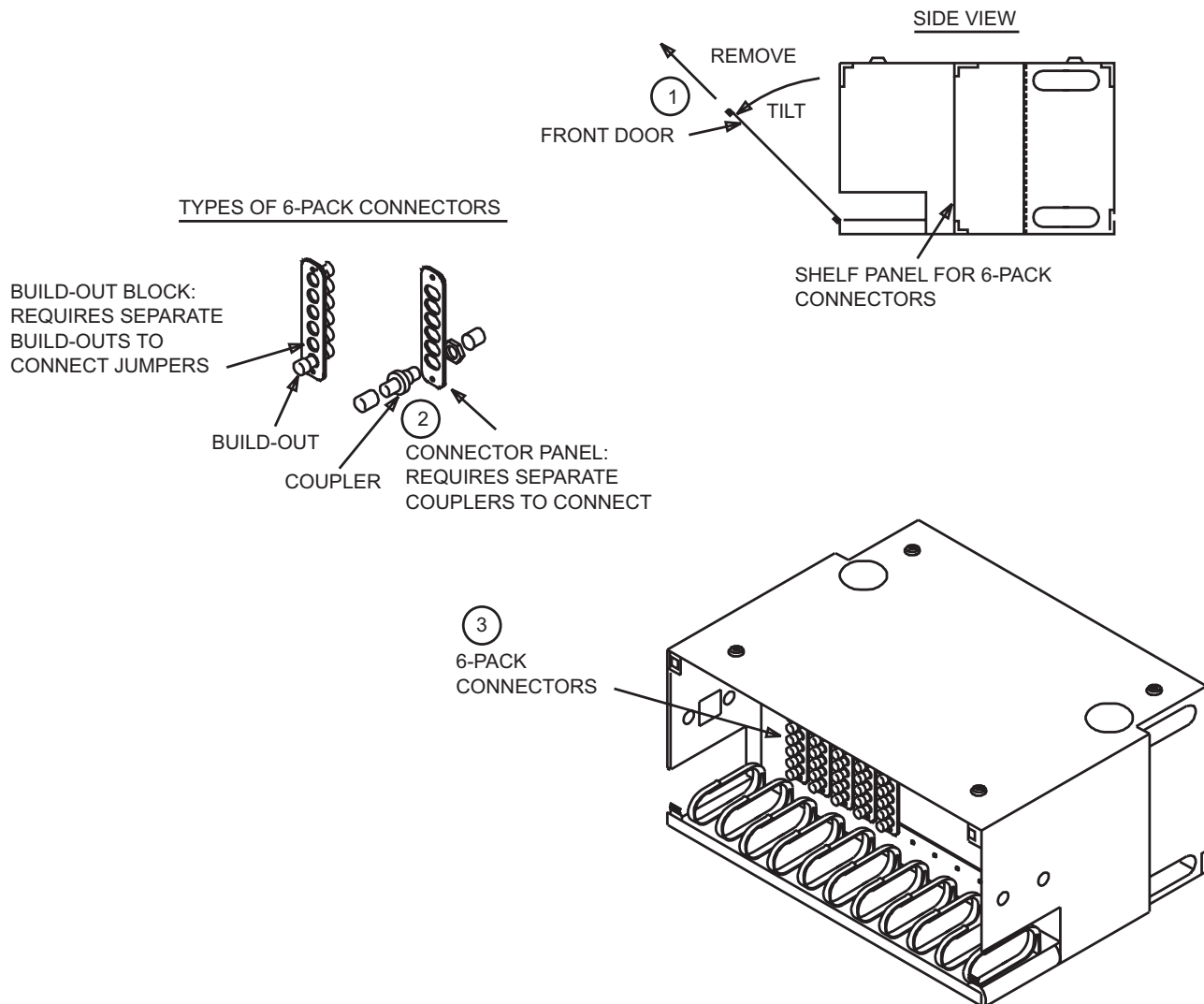
1. Position and install cable clamp brackets to sides of shelves with two 12-24 by 3/8 screws and 12-24 nuts (with captive lockwashers). For wall-mounted shelves, cable clamp brackets were previously installed with mounting brackets.

STEP 4—INSTALL BEND LIMITERS


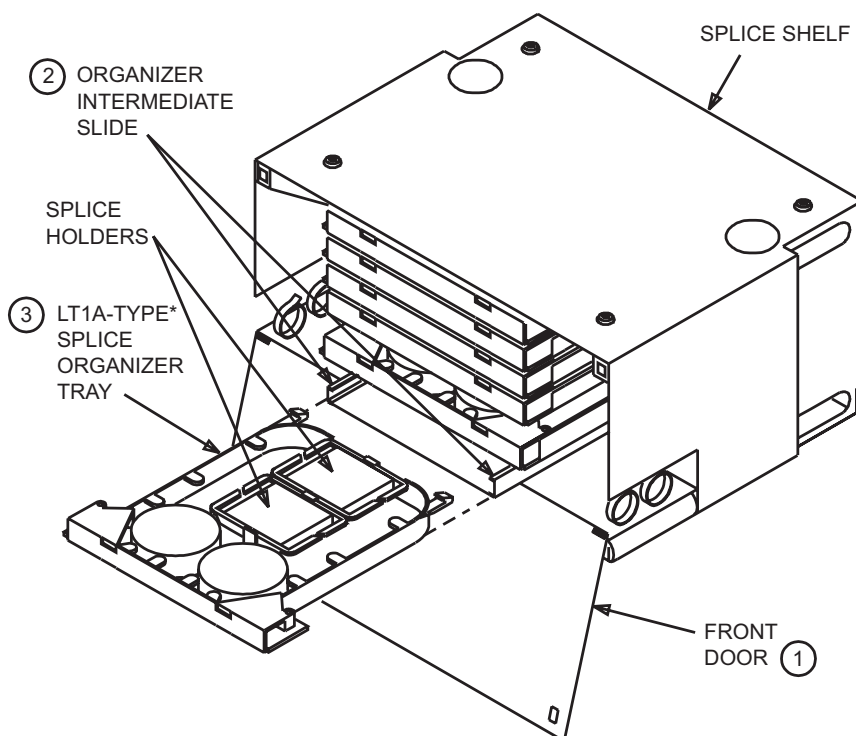
1. Install upper and lower bend limiters in the jumper ports on the left and right side of the shelf. The lower bend limiters are installed by snapping them into position. The upper bend limiters are installed using the double-sided foam tape provided. Make sure surface of shelf is clean, peel release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

Note: Order Comcode No. 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/BLOCKS TO TERMINATION SHELF PANELS



1. Rotate termination shelf front door fasteners 1/4 turn; tilt doors to align with hinge slots, and remove.
2. Install couplers to 6-pack connector panels, if used. Six-pack biconic build-out blocks do not require build-out installation prior to installing.
3. Install 6-pack connector panels or build-out blocks to shelf panels using the snap fasteners on 6-packs.
4. For installations where rear access to termination shelves is available, outside plant fibers may be connected to rear of 6-pack connector panels or build-out blocks with shelf panels in place. See Step 10 for fiber connection to shelf panels with front access only.

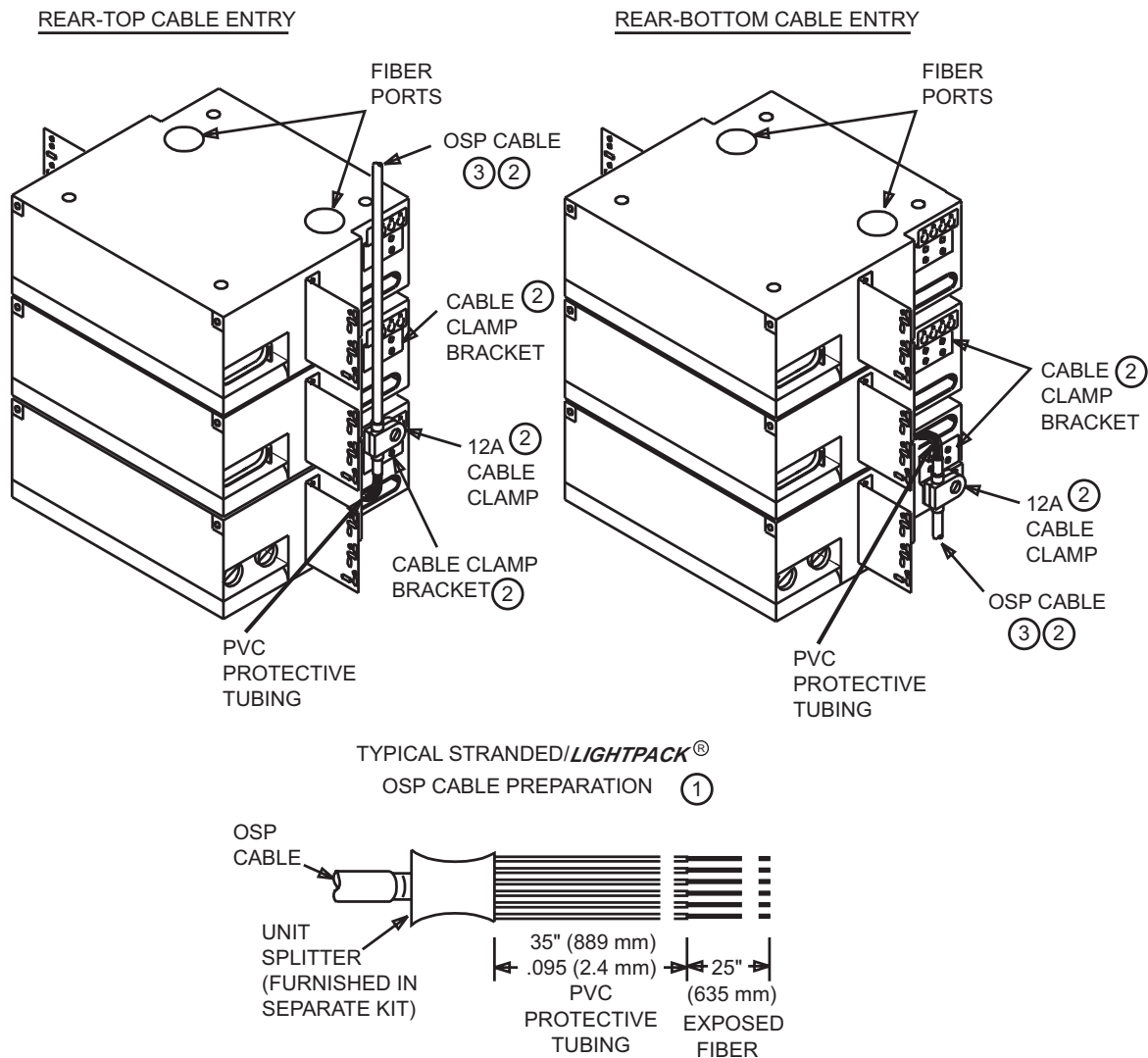
STEP 6—INSTALL LT1A-TYPE SPLICE ORGANIZERS

* LT1A-M/M FOR MECHANICAL/ROTARY SPLICES
LT1A-FF FOR FUSION SPLICES

Note: Six LT1A-type splice organizers may be installed in the splice shelf. Splice organizers may be installed and accessed from rear of shelf for special applications. For more information on installing LT1A-type splice organizers, see 636-299-103-15 furnished with organizer.

1. Rotate splice shelf front door fasteners 1/4 turn, and tilt door down.
2. Install organizer intermediate slides in splice shelf.
3. Install splice organizer trays into intermediate slides and push into splice shelf.

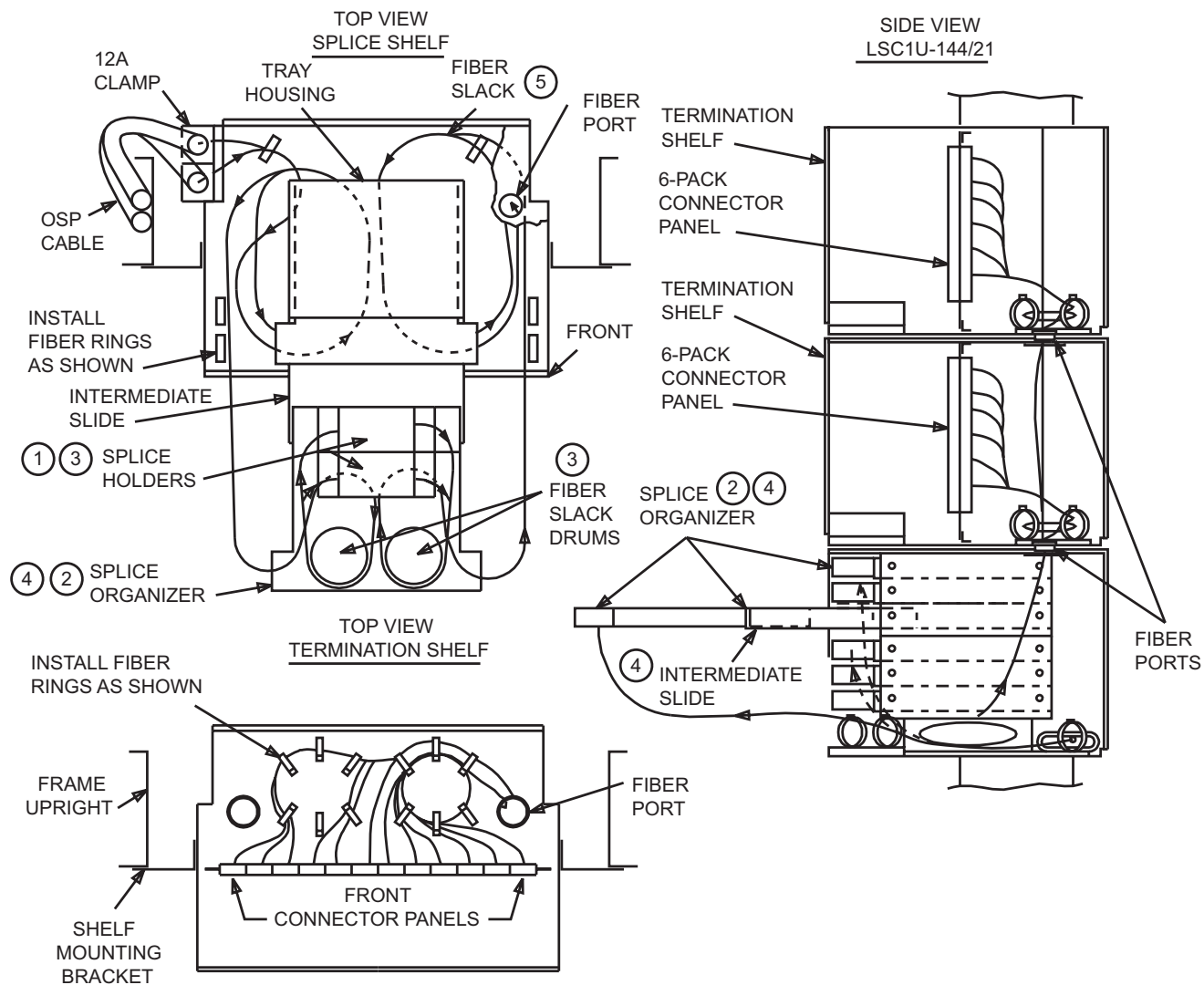
STEP 7—SECURE AND GROUND OUTSIDE PLANT TYPE CABLES TO SHELVES (FRONT AND REAR ACCESS INSTALLATIONS)



Note: OSP cables can be connected to cable clamp brackets on any of three shelves and run externally or internally (through fiber ports) to splice shelf.

1. Prepare stranded/**Lightpack** cables only as shown above using unit splitter. See 636-299-110 for cable preparation procedures for other types of cable.
2. Secure and ground OSP metallic cables to cable clamp bracket and frame, respectively, with 12A1 clamps. Use 12A2 clamps for nonmetallic cables. The 12A clamps are ordered/provided separately - one per OSP cable to be secured. Refer to 636-299-110 for details.
3. Route OSP cable fibers into shelf for splicing to pigtails or buffering, connectorizing, and terminating to connector panels or build-out blocks.

STEP 8—SPlice FIBERS IN SHELF (FRONT AND REAR ACCESS INSTALLATIONS)



Note: Splicing can be accomplished with splice organizer tray installed or removed from the intermediate slide. For more information on splicing and installing LT1A-type splice organizers, see 636-299-103-15 provided with organizer.

SPlicing PROCEDURE WITH SPLICE ORGANIZER INSTALLED IN SHELF

1. Obtain rotary/mechanical or fusion splice materials as required per type of splice to be made.
2. Pull out splice organizer to "stop" position.
3. Splice fibers, place into holders, and coil two loose turns of excess fiber slack around fiber-slack drums in organizer tray.
4. Slide splice organizer into shelf.
5. Carefully coil and store excess fiber slack in bottom of splice shelf.

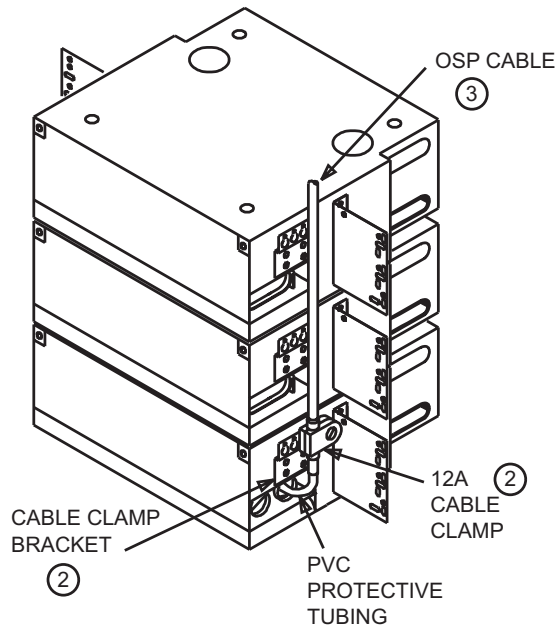
STEP 8—SPlice FIBERS IN SHELF (FRONT AND REAR ACCESS INSTALLATIONS) (Contd)

SPLICING PROCEDURE WITH SPLICE ORGANIZER REMOVED FROM SHELF

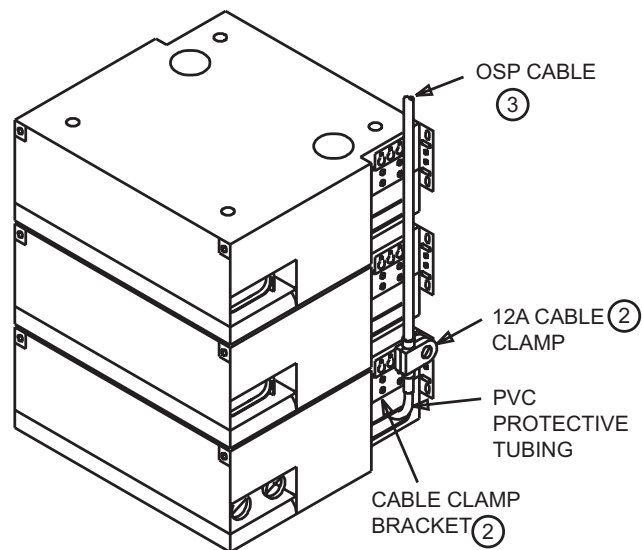
1. Obtain rotary/mechanical or fusion splice materials as required per type of splice to be made.
2. Pull out splice organizer to "stop" position. Press in tabs on rear side of organizer and remove from intermediate slide.
3. Splice fibers, place into holders, and coil two loose turns of fiber slack around fiber-slack drums in organizer tray.
4. Insert splice organizer tray into intermediate slide and push in to stop.
5. Carefully coil and store excess fiber slack in bottom of splice shelf.

STEP 9—SECURE AND GROUND OUTSIDE PLANT TYPE CABLES TO SHELVES (FRONT ACCESS ONLY INSTALLATIONS)

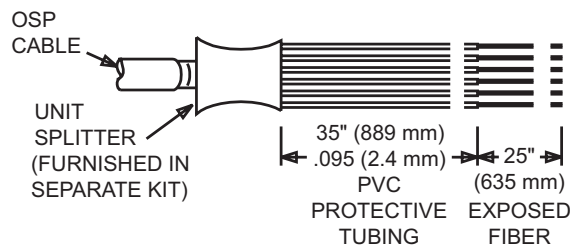
FRONT-TOP CEV FRAME CABLE ENTRY



(WALL-MOUNTED) TOP CABLE ENTRY

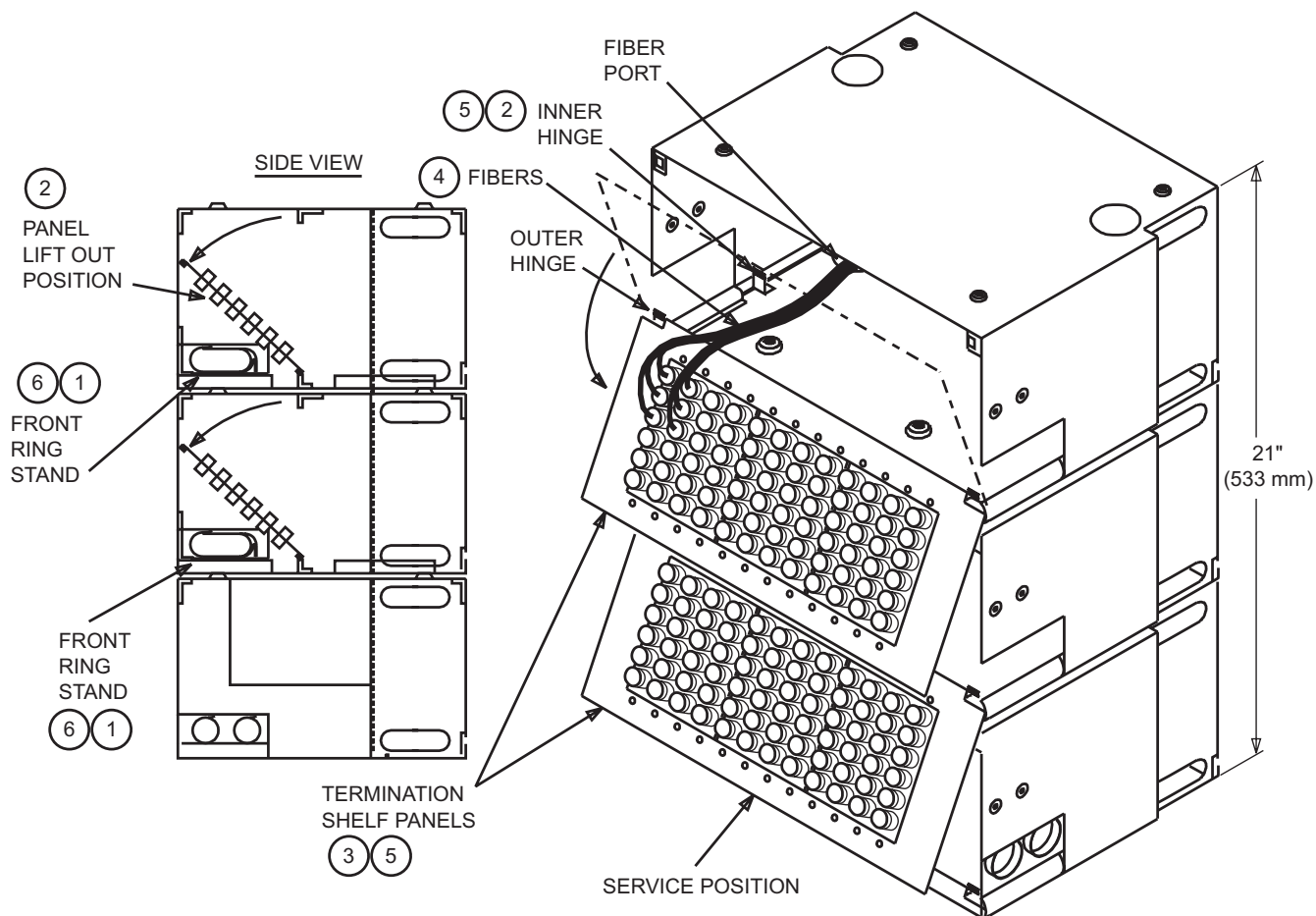


TYPICAL STRANDED/LIGHTPACK
OSP CABLE PREPARATION (1)



1. Prepare stranded/**Lightpack** cables only as shown above using unit splitter. See 636-299-110 for cable preparation procedures for other types of cable.
2. Secure and ground OSP metallic cables to cable clamp bracket and frame or suitable ground, respectively, with 12A1 clamps. Use 12A2 clamps for nonmetallic cables. The 12A clamps are ordered/provided separately - one per OSP cable to be secured. Refer to 636-299-110 for details.
3. Route OSP cable fibers into shelf for splicing to pigtails or buffering, connectorizing, and terminating to connector panels or build-out blocks.

STEP 10—REPOSITION TERMINATION SHELF PANELS (FRONT ACCESS ONLY INSTALLATIONS)



1. Pull plungers up on front ring stand fasteners and remove stand from shelf. Any jumper cables in the jumper retainers must be removed first.
2. Loosen panel fasteners, tilt and align panels with inner hinge slots, and remove panels from shelves.
3. Place panels in outer hinges (service position) and tilt down.
4. Connect fibers to 6-pack connectors on panels.
5. Tilt up panels and move from outer hinges to inner hinges. Store fiber slack in back of shelf or route back through fiber port into shelf below. Be careful not to pinch or excessively bend fibers.
6. Reinstall front ring stands and front doors.