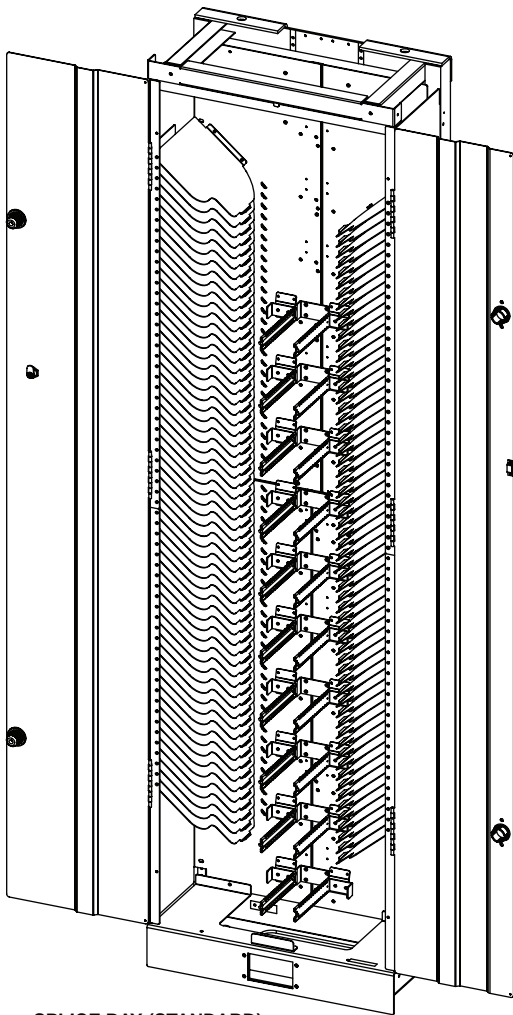


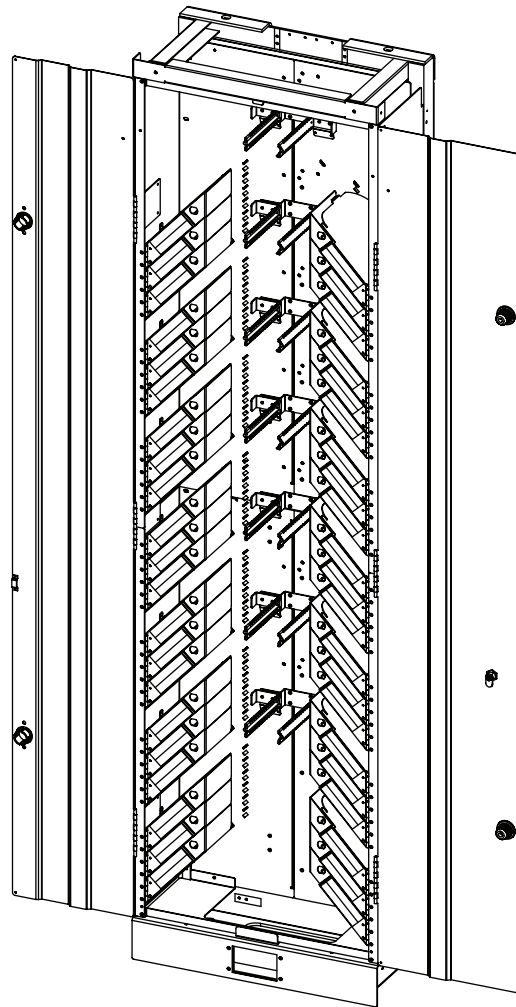


OMX 600 Splice Bay

User Manual



**SPLICE BAY (STANDARD)
(RAISED FLOOR CABLE CONFIGURATION)**



**SPLICE BAY WITH LOCKABLE SPLICE TRAY DOORS
(RAISED FLOOR CABLE CONFIGURATION)**

26051-A

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REVISION HISTORY

| ISSUE | DATE | REASON FOR CHANGE |
|-------|------------|---|
| 1 | 8/2014 | Original. |
| 2 | 8/2015 | Revised to add instructions for ribbon cable. |
| 2 | July 2016 | Updated to CommScope format. |
| Rev C | March 2021 | Corrected Figure 41 and updated format. |

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ABOUT THIS MANUAL

This manual contains OMX Splice Bay component descriptions, installation instructions, and cable routing procedures (including overhead and raised floor cable routing environments) for both the standard and lockable splice tray doors versions. This manual contains OMX Splice Bay component descriptions, installation instructions, and cable routing procedures (including overhead and raised floor cable routing environments) for both the standard and lockable splice tray doors versions.

RELATED PUBLICATIONS

Listed below are related manuals and their publication numbers. Copies of these publications can be ordered by contacting the CommScope Technical Assistance Center at <http://www.commscope.com/SupportCenter>

| Title/Description | ADCP Number |
|--|-------------|
| Round Splice Tray Cable Routing Instructions | 90-321 |

ADMONISHMENTS

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular alert icon (seen below) and are listed in descending order of severity of injury or damage and likelihood of occurrence.



Danger: *Danger is used to indicate the presence of a hazard that **will** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Warning: *Warning is used to indicate the presence of a hazard that **can** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Caution: *Caution is used to indicate the presence of a hazard that **will** or **can** cause minor personal injury or property damage if the hazard is not avoided.*

GENERAL SAFETY PRECAUTIONS



Warning: *Never install communication equipment in a wet location or during a lightning storm. When installing or modifying communication lines, disconnect lines on the network side before working with uninsulated wires or terminals.*



Danger: Do not look into the ends of any optical fiber. Exposure to laser radiation may result. Do not assume the laser power is turned-off or that the fiber is disconnected at the other end.



Danger: Use adequate lifting equipment when moving or installing Fiber Distribution Hub cabinets. Verify that the maximum lift weight rating of the equipment is sufficient to handle the weight of the cabinet.



Danger: Do not stand under a Fiber Distribution Hub cabinet as it is being hoisted into position for mounting. A failure of the lifting equipment or apparatus could result in serious personal injury and cause significant damage to the cabinet.



Warning: Before digging, check with all local utilities for the presence of buried cables or pipes. Contact with underground cables or pipes, especially electric power cables and gas service lines, could interrupt local utility service and cause serious personal injury and extensive property damage.

STANDARDS CERTIFICATION

Telcordia: This equipment complies with the applicable sections of GR-3125-CORE.

LIST OF ACRONYMS AND ABBREVIATIONS

The acronyms and abbreviations used in this manual are detailed in the following list:

| | |
|-------------|-------------------------------|
| AWG | American Wire Gauge |
| C | Centigrade |
| F | Fahrenheit |
| FDH | Fiber Distribution Hub |
| FMS | Fiberglass Mounting Sleeve |
| FTTP | Fiber To The Premises |
| IFDH | Indoor Fiber Distribution Hub |
| OSP | Outside Plant |
| PMF | Pad Mount Frame |
| PNP | Plug and Play |
| RBR | Reduced Bend Radius |
| RMA | Return Material Authorization |

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1 PRODUCT DESCRIPTION

1.1 OMX600 Splice Bay (Equipped with Locking Splice Tray Doors)

The OMX600 Splice Bay provides a splicing location for OSP (outside plant) and IFC (intrafacility cable) cables. The splice bay, equipped with locking splice tray doors, can accommodate up to 84 round splice trays (1008 total splices). [Figure 1](#) shows the main components of the splice bay equipped with locking splice tray doors.

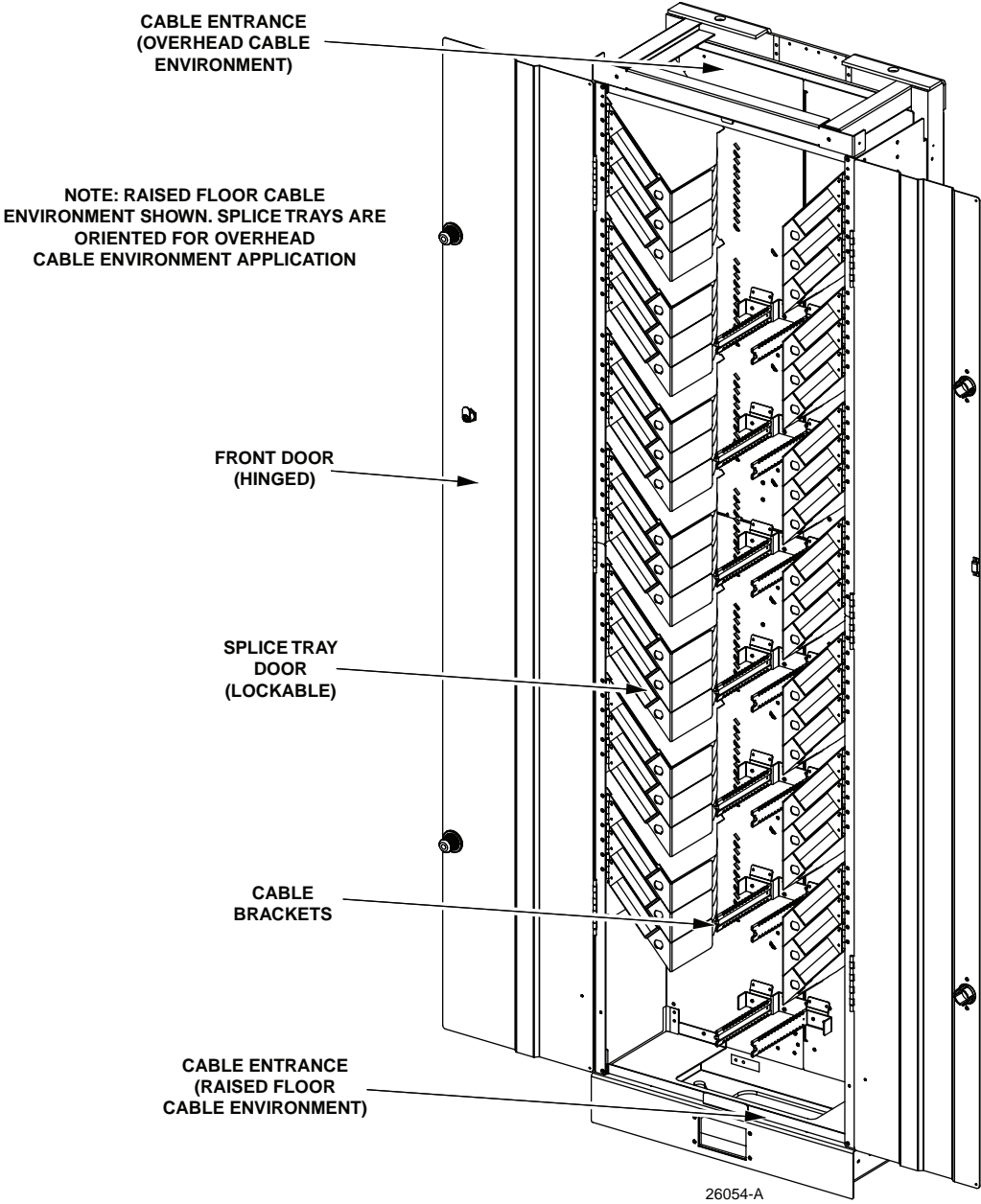


Figure 1. OMX600 Splice Bay (Raised Floor Cable Environment)

1.2 OMX Splice Bay without Locking Splice Tray Doors (Standard)

The OMX600 Splice Bay provides a splicing location for OSP (outside plant) and IFC (intrafacility cable) cables and can accommodate up to 120 round splice trays (1440 splices). The standard version's cable clamp positions also can be custom configured. For IFC counts in multiples of 72 (as shipped), use the 72-fiber IFC configuration (Figure 2 or Figure 3, depending on cable origin, left view); for IFC counts in multiples 96, use the 96-fiber IFC configuration (Figure 2 and 3, depending on cable origin, right view). For IFC counts in multiples of 96, reposition cable brackets as shown in Figures 2 and 3, depending on cable origin.

1.2.1 72- to 96-Fiber IFC Frame Re-Configuration, Raised Floor Cable Environment

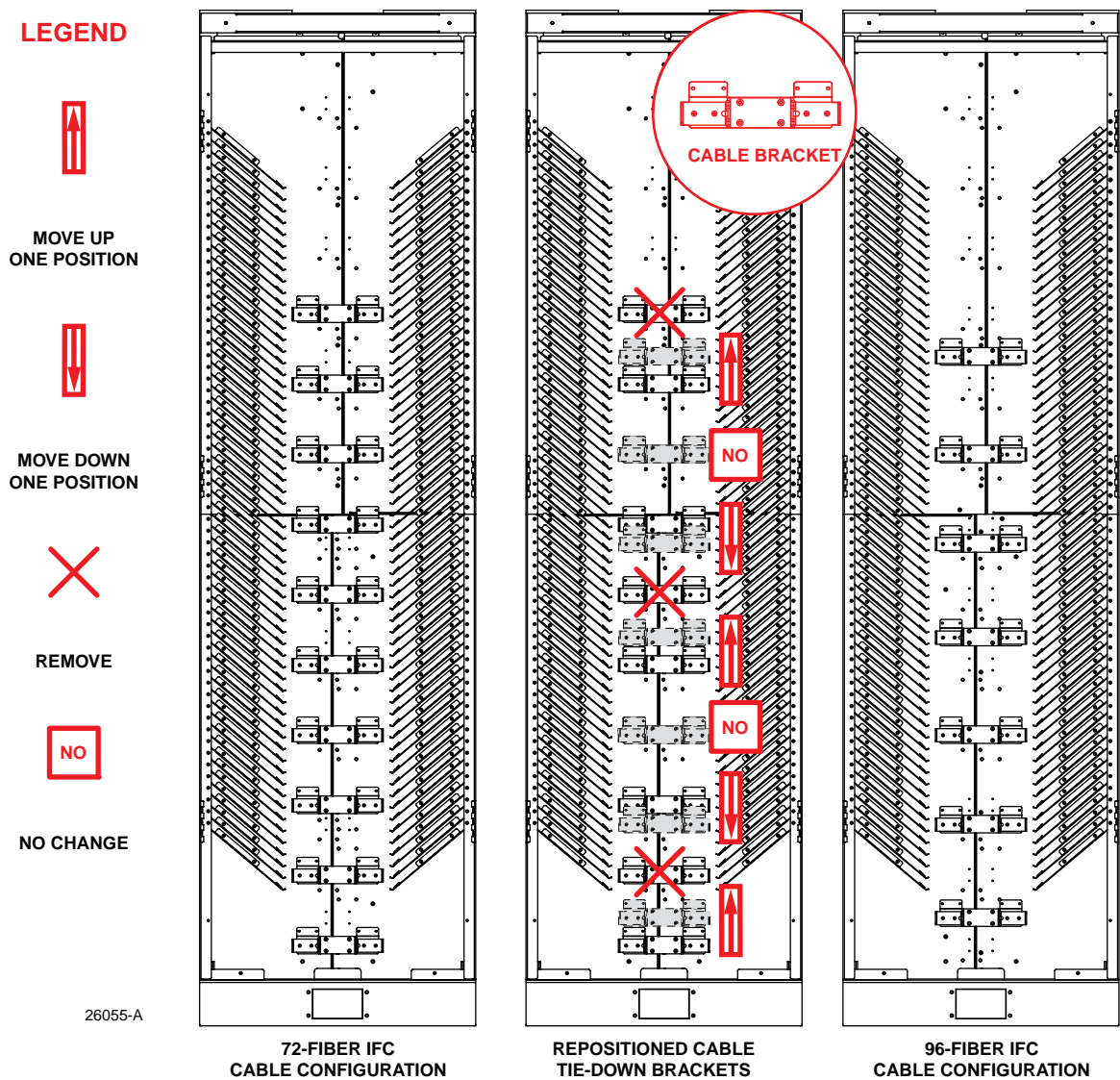


Figure 2. 72- to 96-Fiber IFC Frame Re-Configuration, Raised Floor Cable Environment (Shown without Front Doors) (Front View)

1.2.2 72-to 96-Fiber IFC Frame Re-Configuration, Overhead Cable Environment

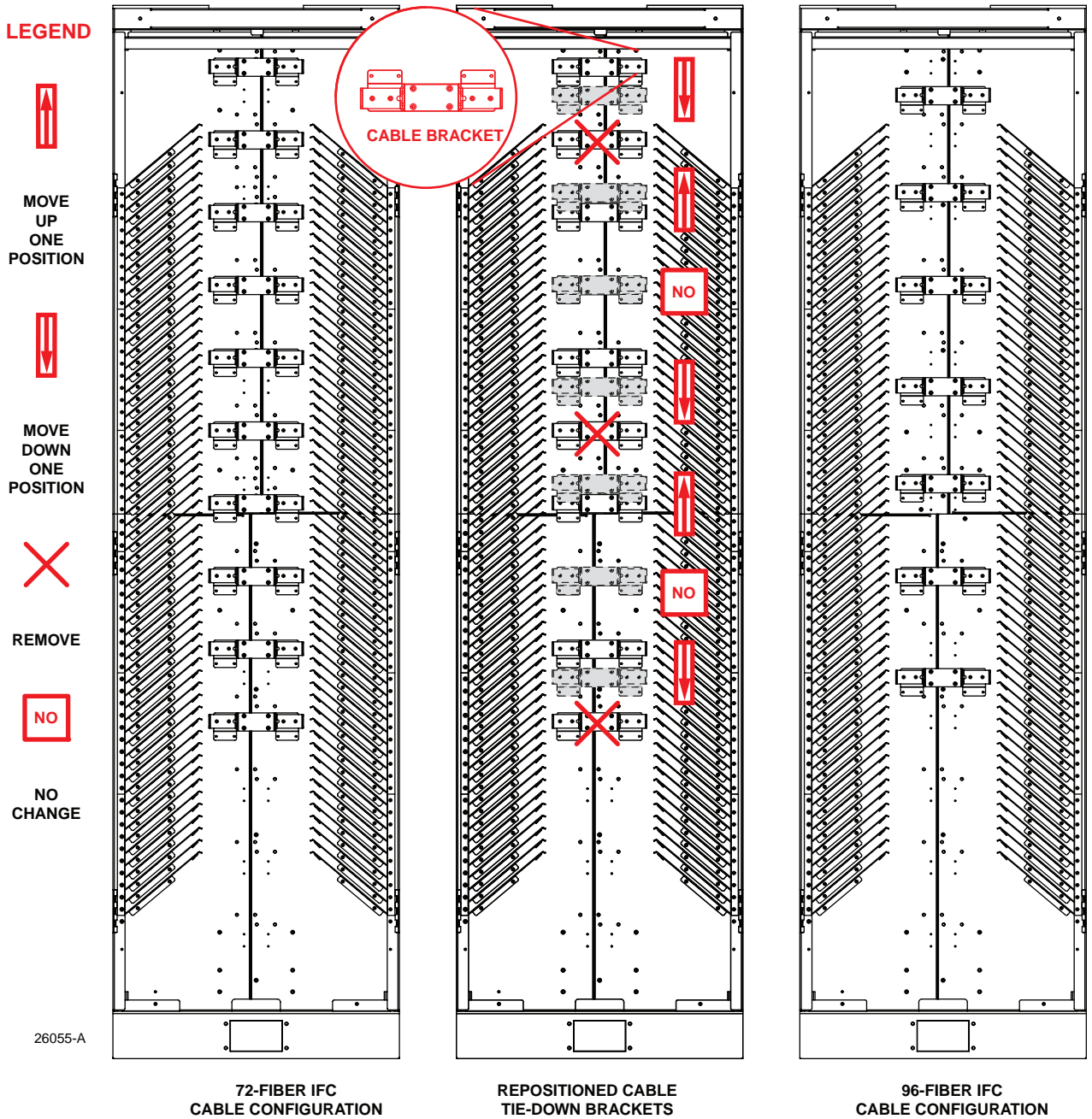


Figure 3. 72- to 96-Fiber IFC Frame Re-Configuration, Overhead Cable Environment
Shown without Front Doors) (Front View)

2 INSTALLATION



Warning: Never install communication equipment in a wet location or during a lightning storm. When installing or modifying communication lines, disconnect lines on the network side before working with uninsulated wires or terminals.

2.1 Door Lock Assembly (Lockable Splice Tray Door Configuration, Only)

2.1.1 Raised Floor Cable Environment

Each splice door provides a location for a lock assembly. [Figure 4](#) and [Figure 5](#) show the lock assembly installation procedure for raised floor and overhead cable environments, respectively.

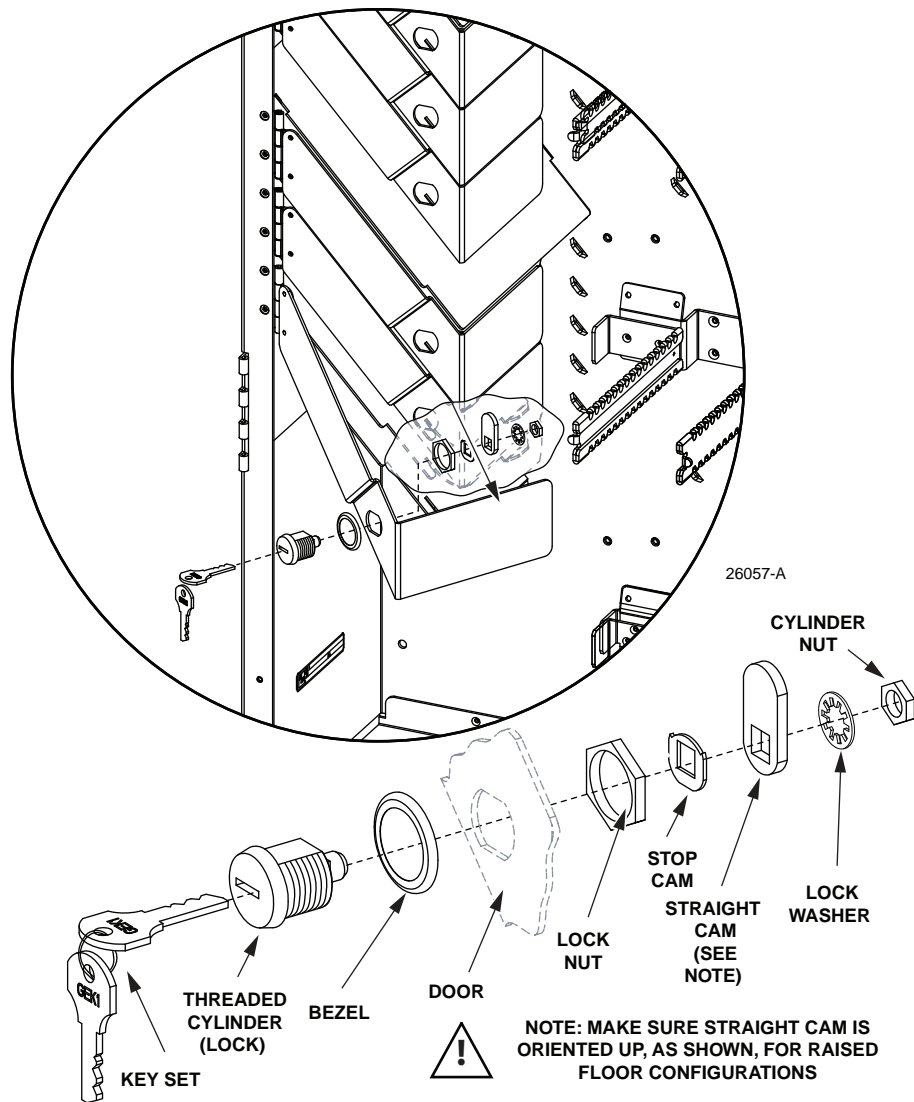


Figure 4. Door Lock Installation (Raised Floor Cable Environment)

2.1.2 Overhead Cable Environment

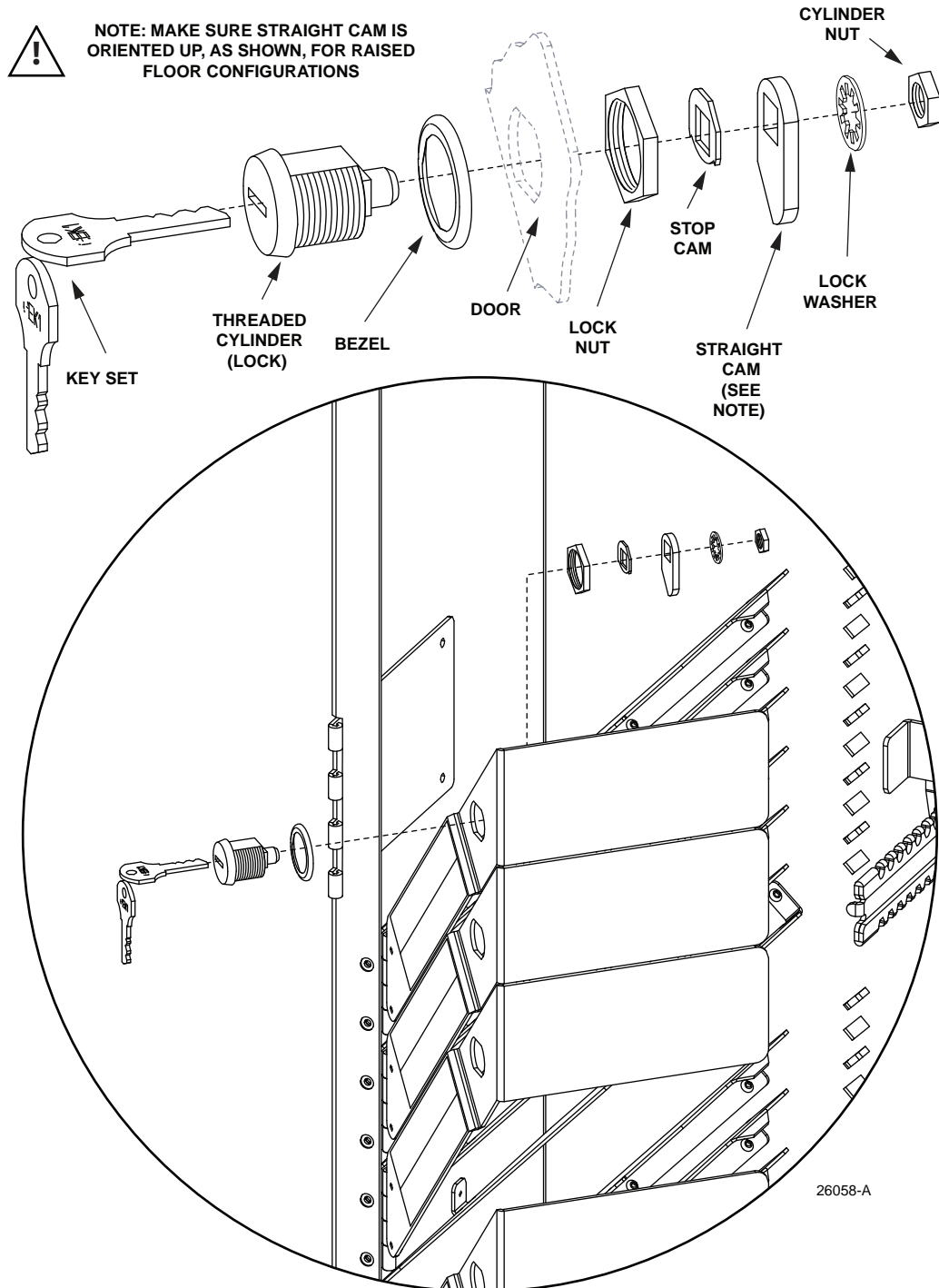


Figure 5. Door Lock Assembly (Overhead Cable Environment)

3 CABLE ROUTING

3.1 OMX Splice Bay with Locking Splice Tray Doors (Raised Floor Cable Environment)

Figure 6 shows an example of a fully cabled splice bay (front view).

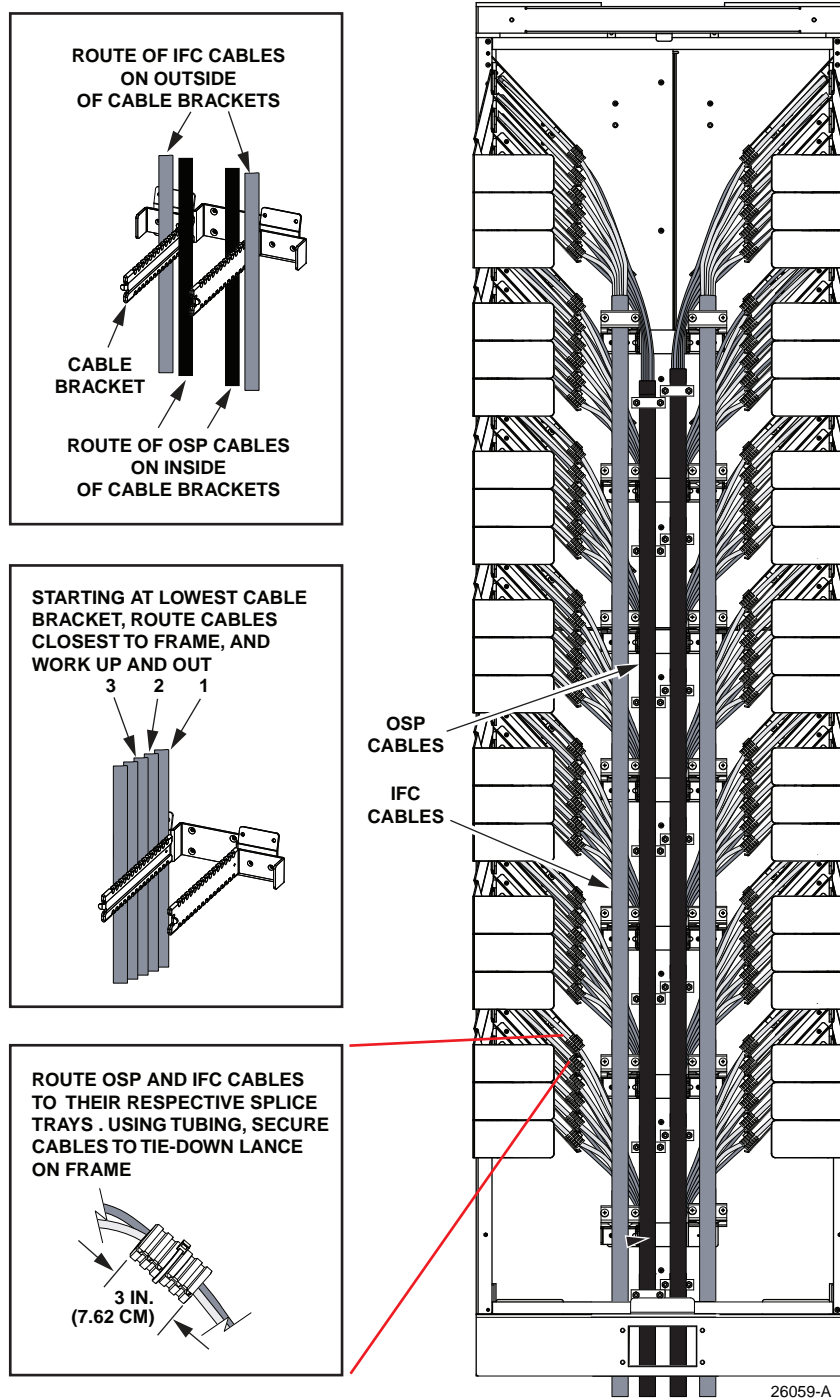


Figure 6. Fully Cabled Splice Bay (Front View)

Use the following procedure.

1. Route and secure OSP cable to the bay as shown in [Figure 7](#).

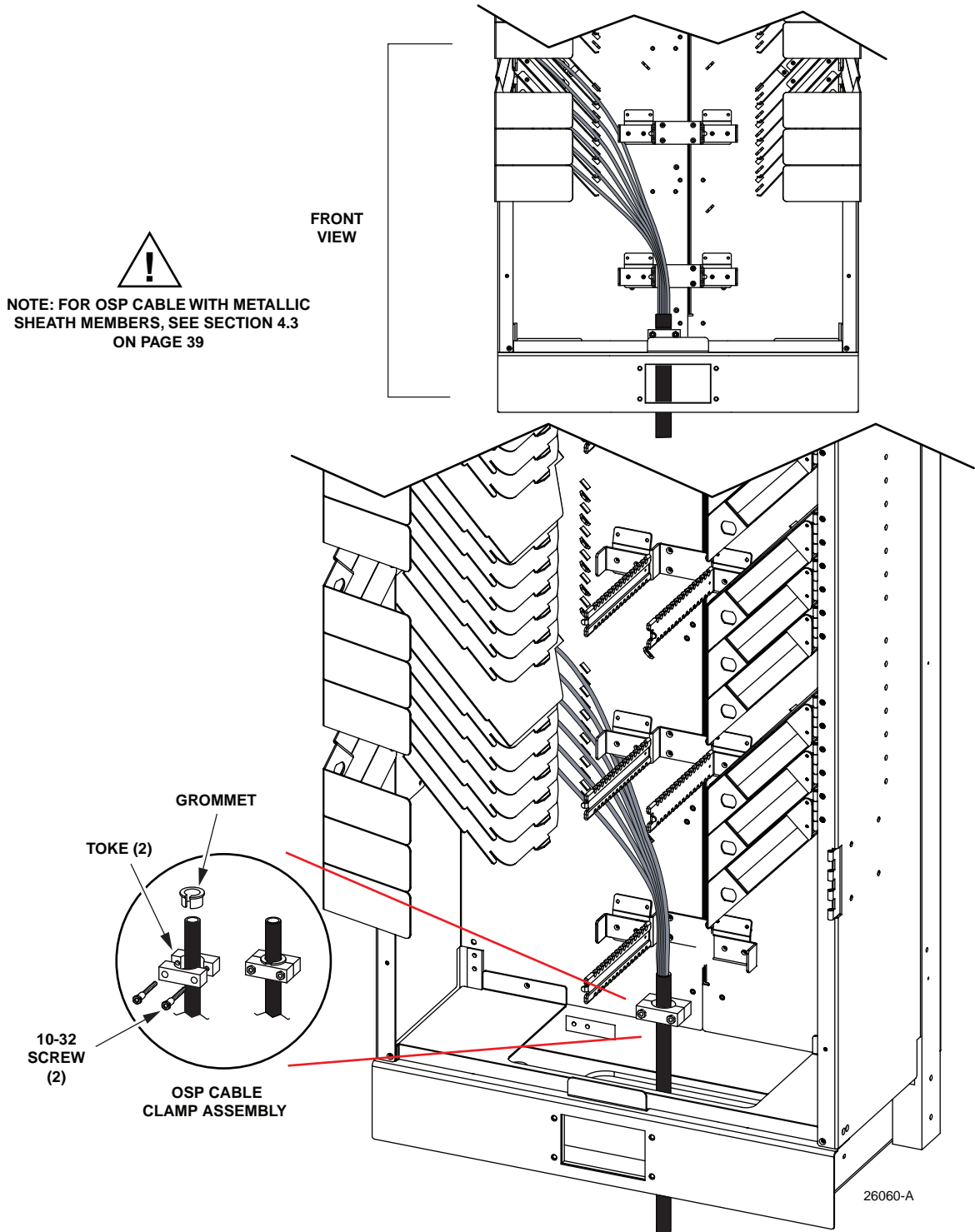


Figure 7. OSP Cable Routing (Raised Floor Cable Environment)

2. Route and secure IFC cable to the bay as shown in Figure 8.

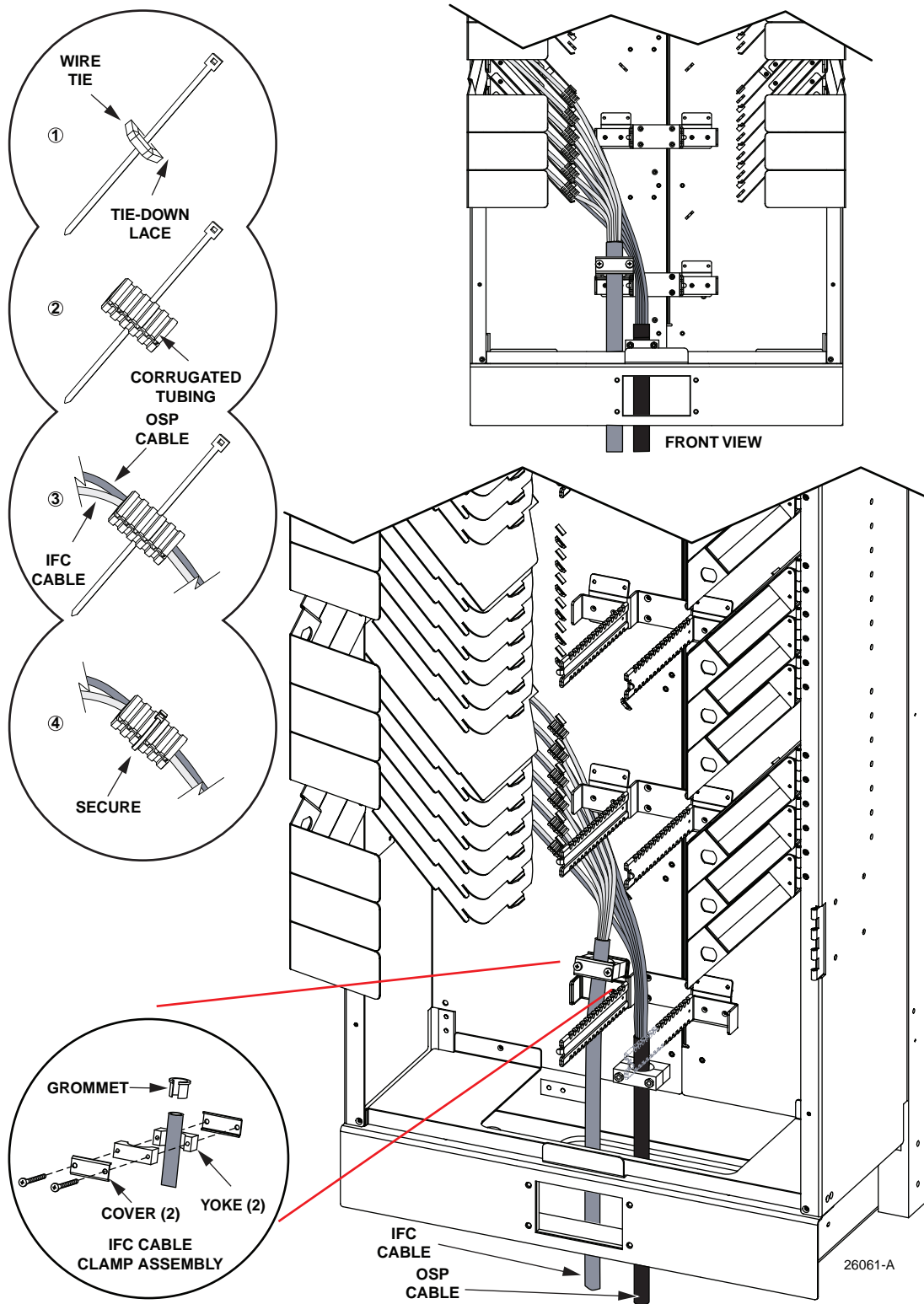


Figure 8. IFC Cable Routing (Raised Floor Cable Environment)

3. Route second OSP and IFC cable, respectively, as shown in [Figure 9](#).

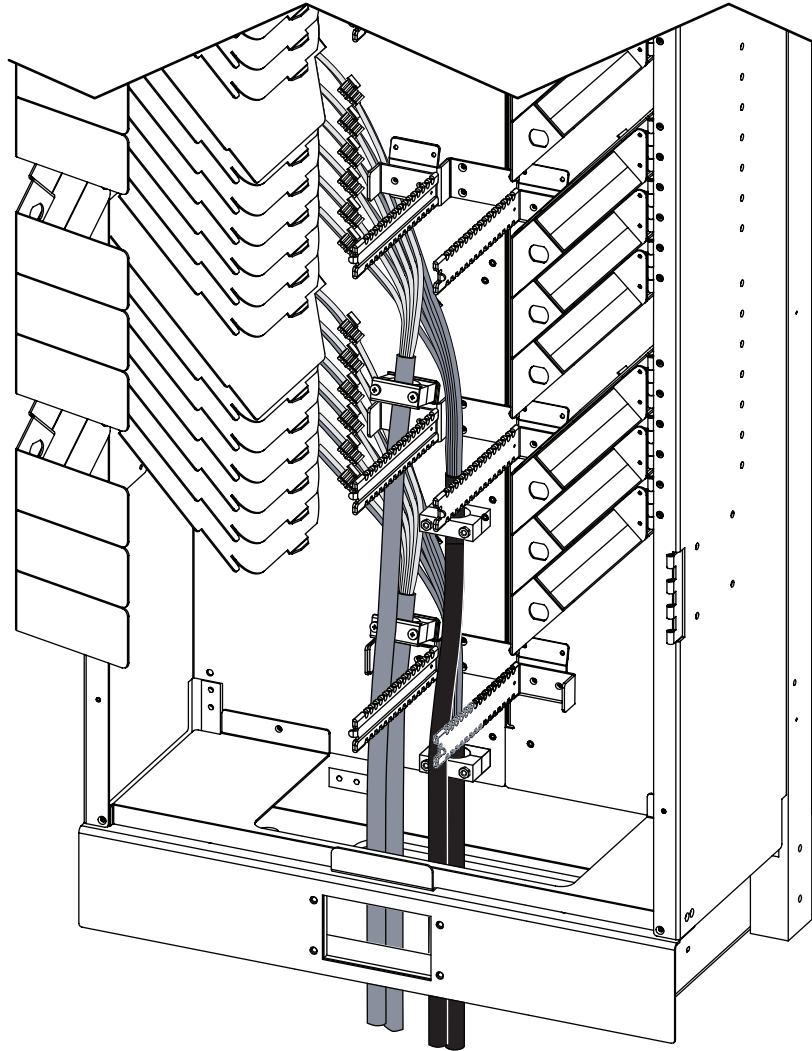


Figure 9. Second OSP and IFC Cable Routing Procedure

3.2 OMX Splice Bay with Locking Splice Tray Doors (Overhead Cable Environment)

Figure 10 shows an example of a fully cabled splice bay (front view).

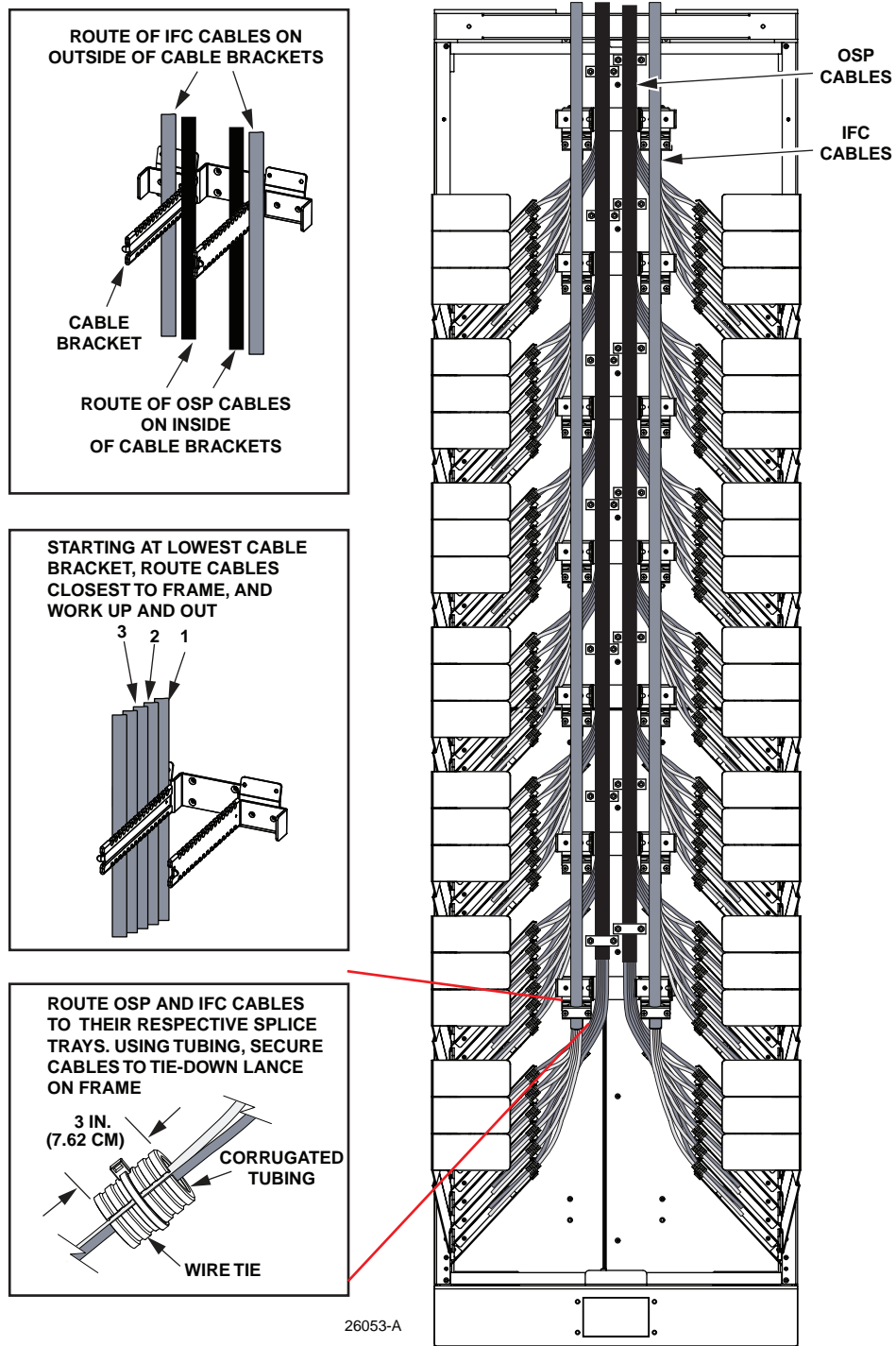


Figure 10. Fully Cabled Splice Bay (Front View)

Use the following procedure.

- 1. Route and secure OSP cable to the bay as shown in [Figure 11](#).

► **Note:** For OSP cable with metallic sheath members, see Section 4.3, “Ground OSP Cable (with Metallic Sheath Members)” on page 34.

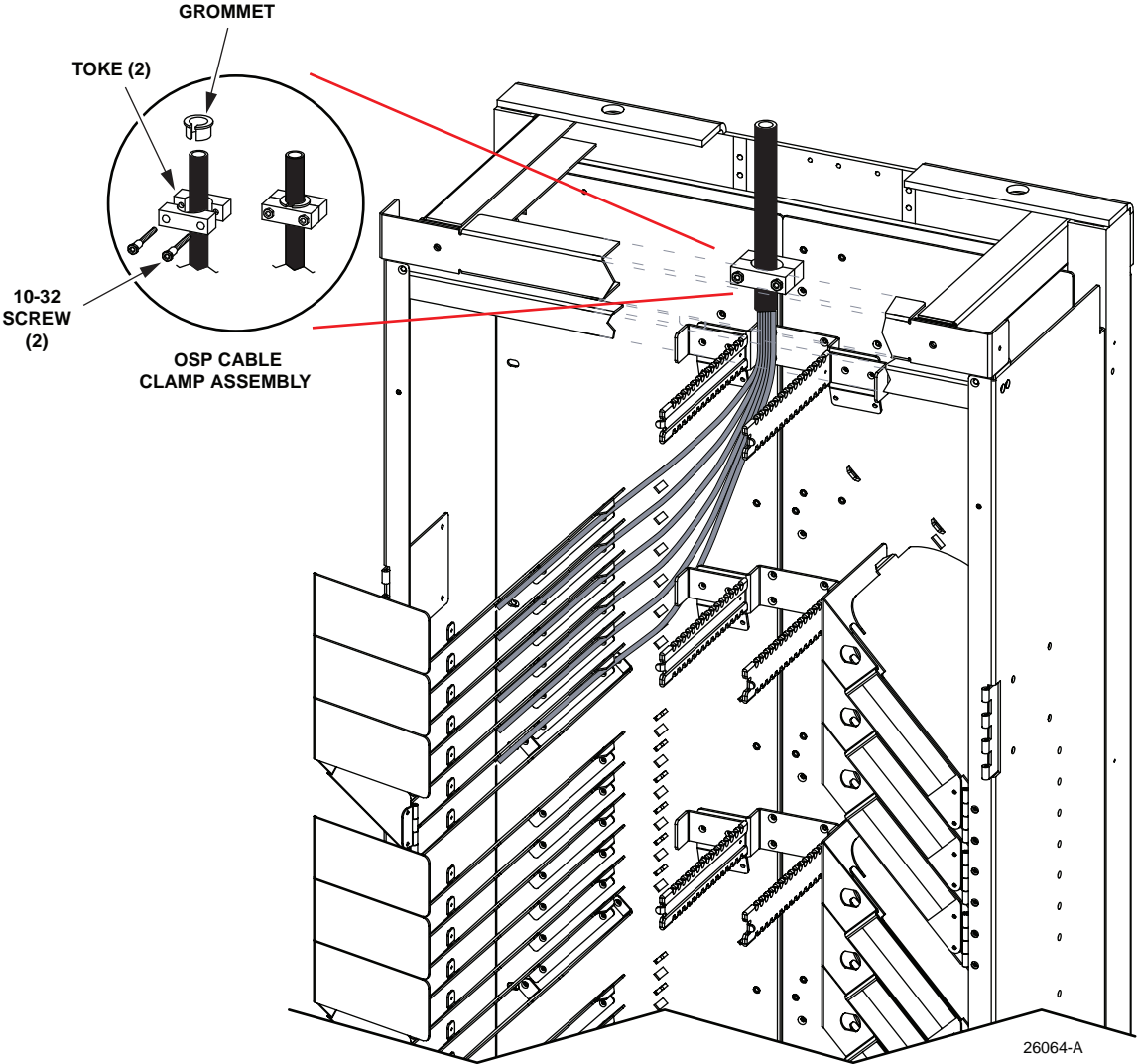


Figure 11. OSP Cable Routing (Overhead Cable Environment)

2. Route and secure IFC cable to the bay as shown in [Figure 12](#).

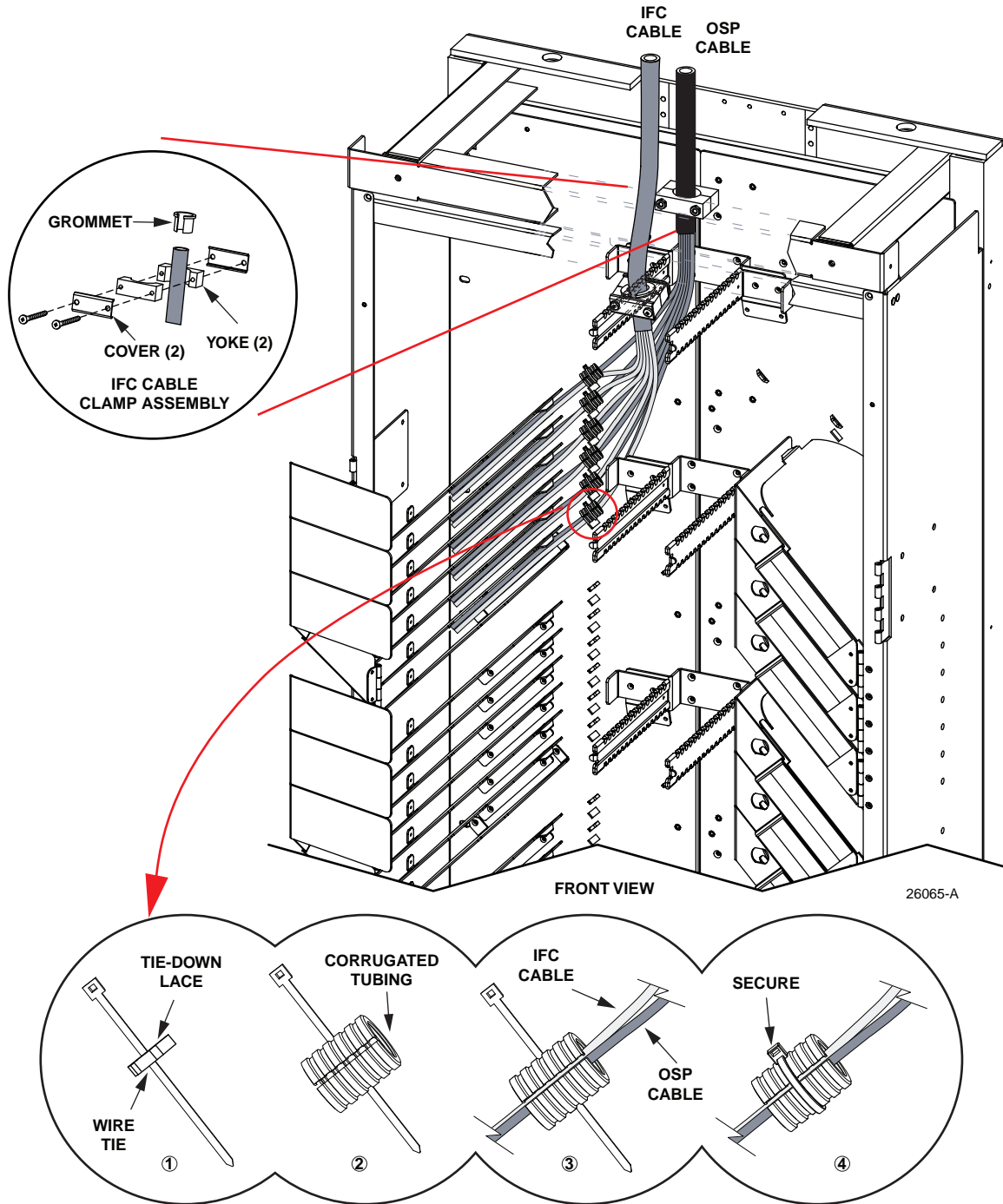


Figure 12. IFC Cable Routing (Overhead Cable Environment)

3. Route second OSP and IFC cable, respectively, as shown in [Figure 13](#).

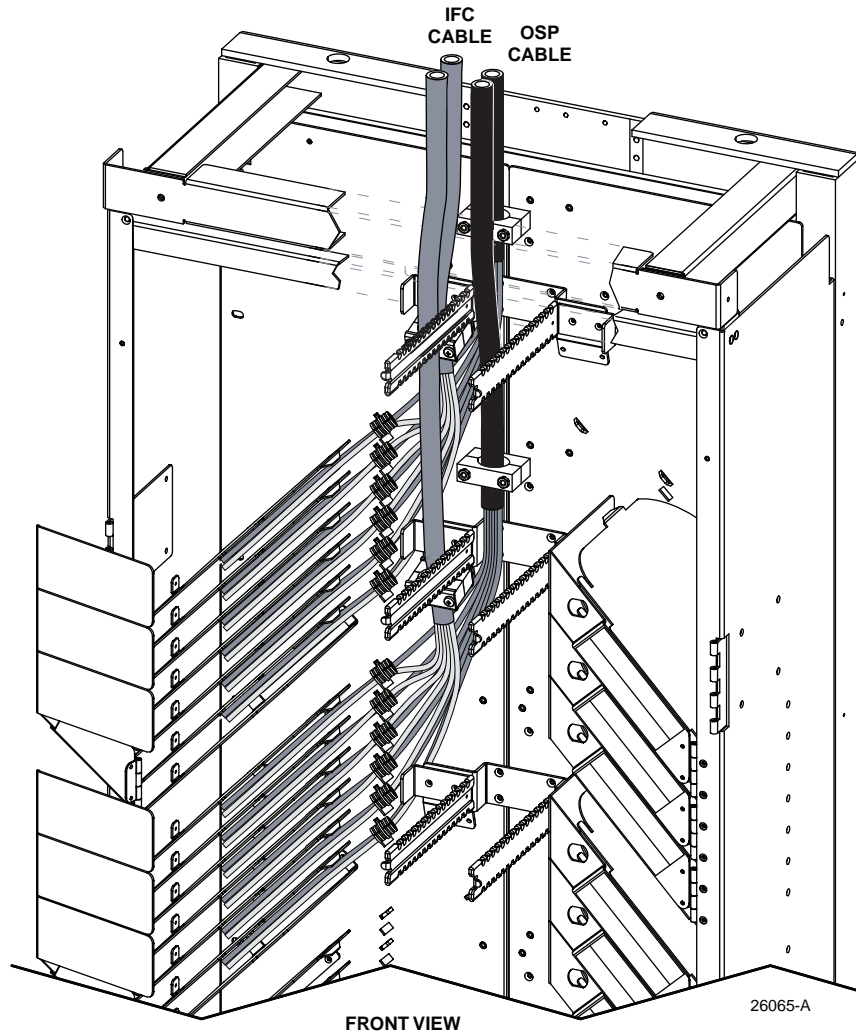


Figure 13. Second OSP and IFC Cable Routing Procedure

3.3 OMX Splice Bay without Locking Splice Tray Doors (Raised Floor Cable Environment)

3.3.1 72-Fiber IFC Configuration

Figure 14 shows an example of a fully cabled splice bay (front view).

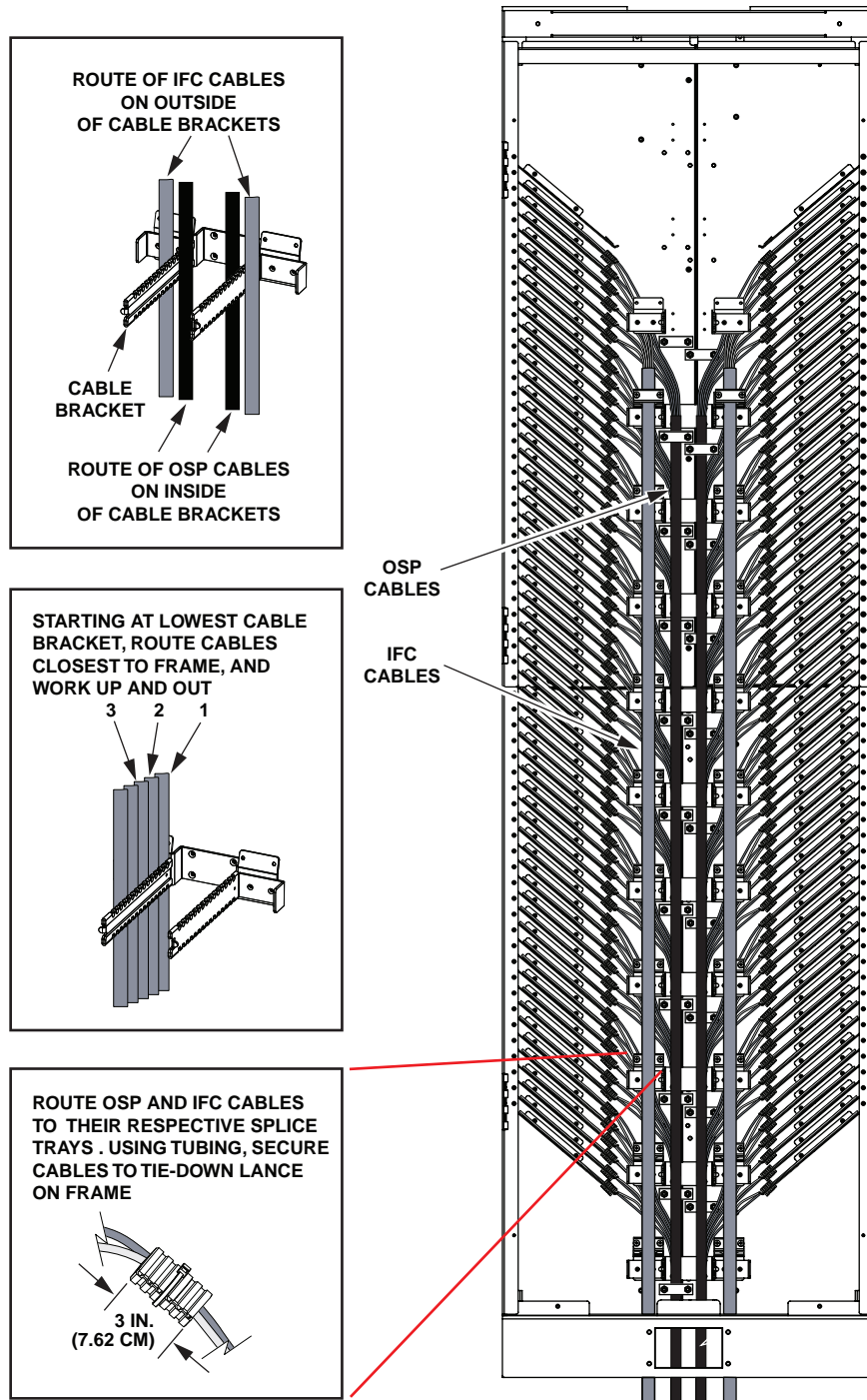


Figure 14. Fully Cabled Bay (Front View, 72-Fiber IFC Configuration)

Use the following procedure.

1. Route and secure first OSP cable to the bay as shown in [Figure 15](#).

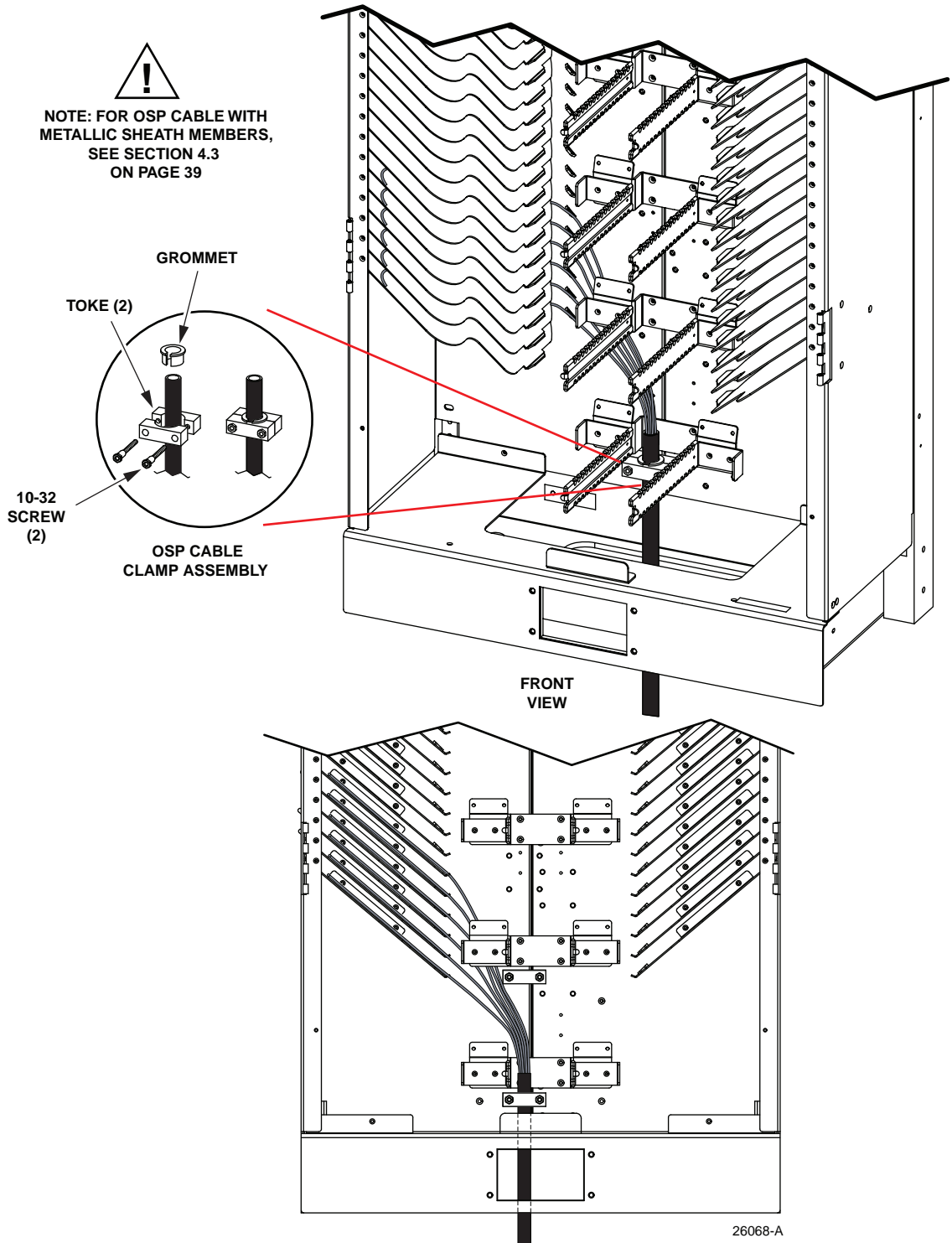


Figure 15. OSP Cable Routing (Raised Floor Cable Environment, 72-Fiber IFC Configuration)

- Route and secure IFC cable to the bay as shown in Figure 8. Route and secure first IFC cable to the bay as shown in Figure 16 Use corrugated tubing to secure IFC and OSP cables to the frame as shown.

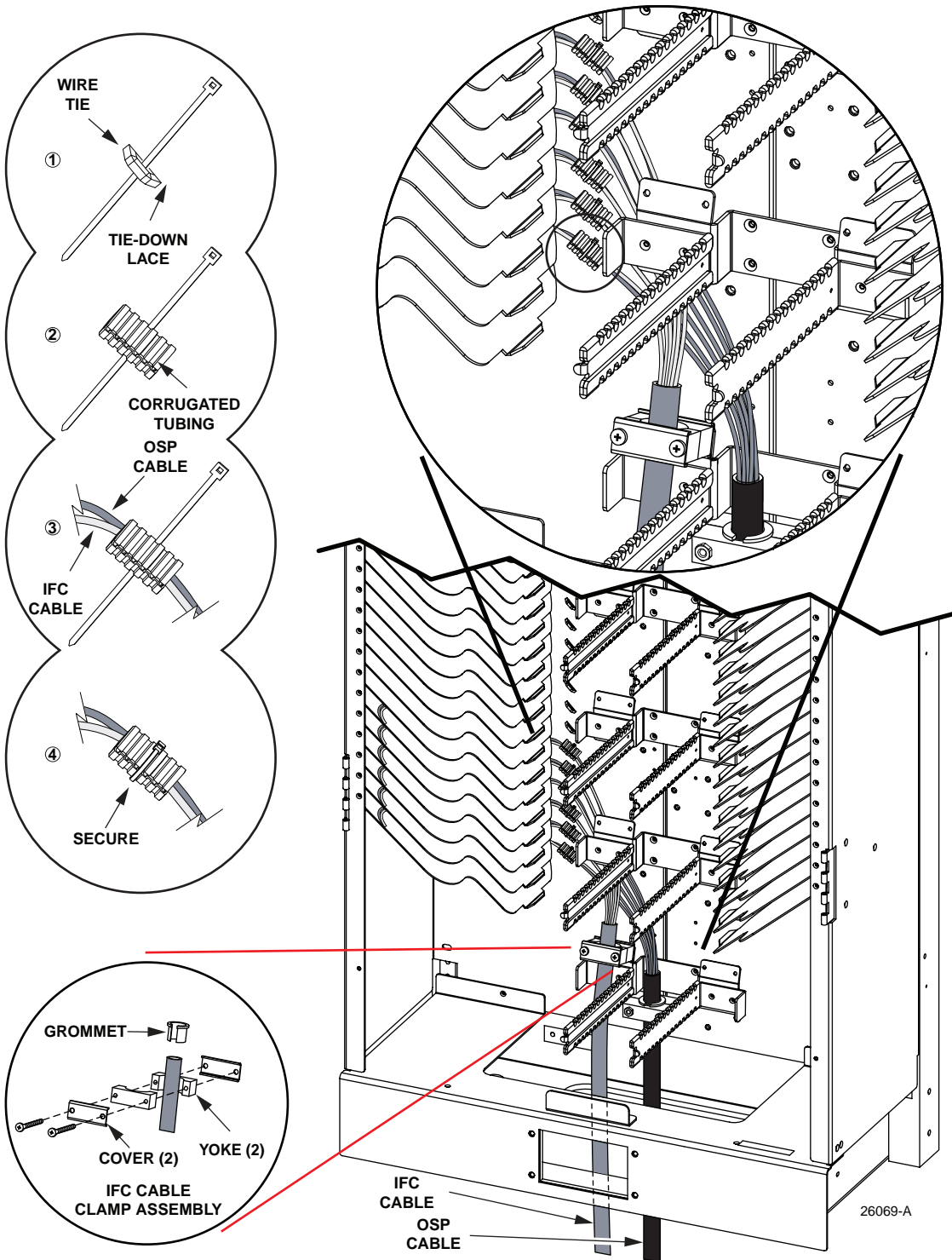


Figure 16. IFC Cable Routing (Raised Floor Cable Environment, 72-Fiber IFC Configuration)

Figure 17 shows a front view of the OSP and IFC cable routing.

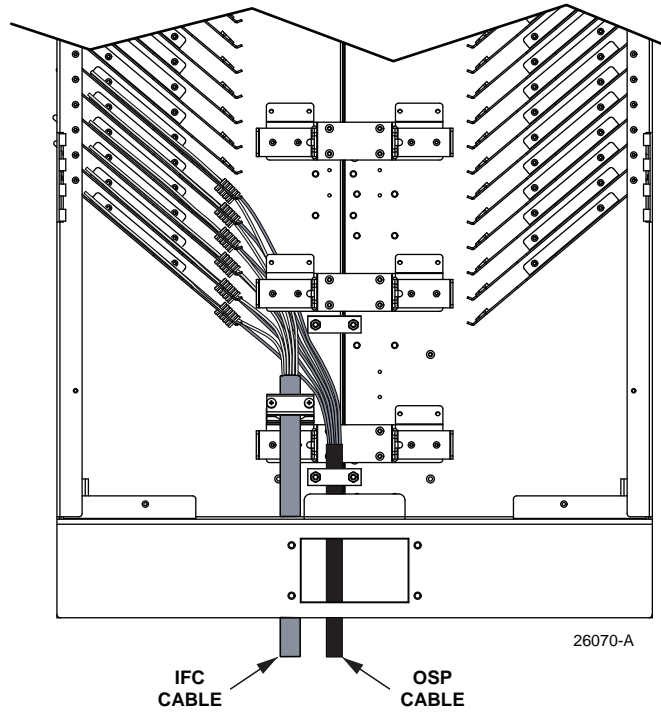


Figure 17. OSP and IFC Cable Routing (Front View, 72-Fiber IFC Configuration)

3. Continue routing OSP and IFC cables as shown in [Figure 18](#).

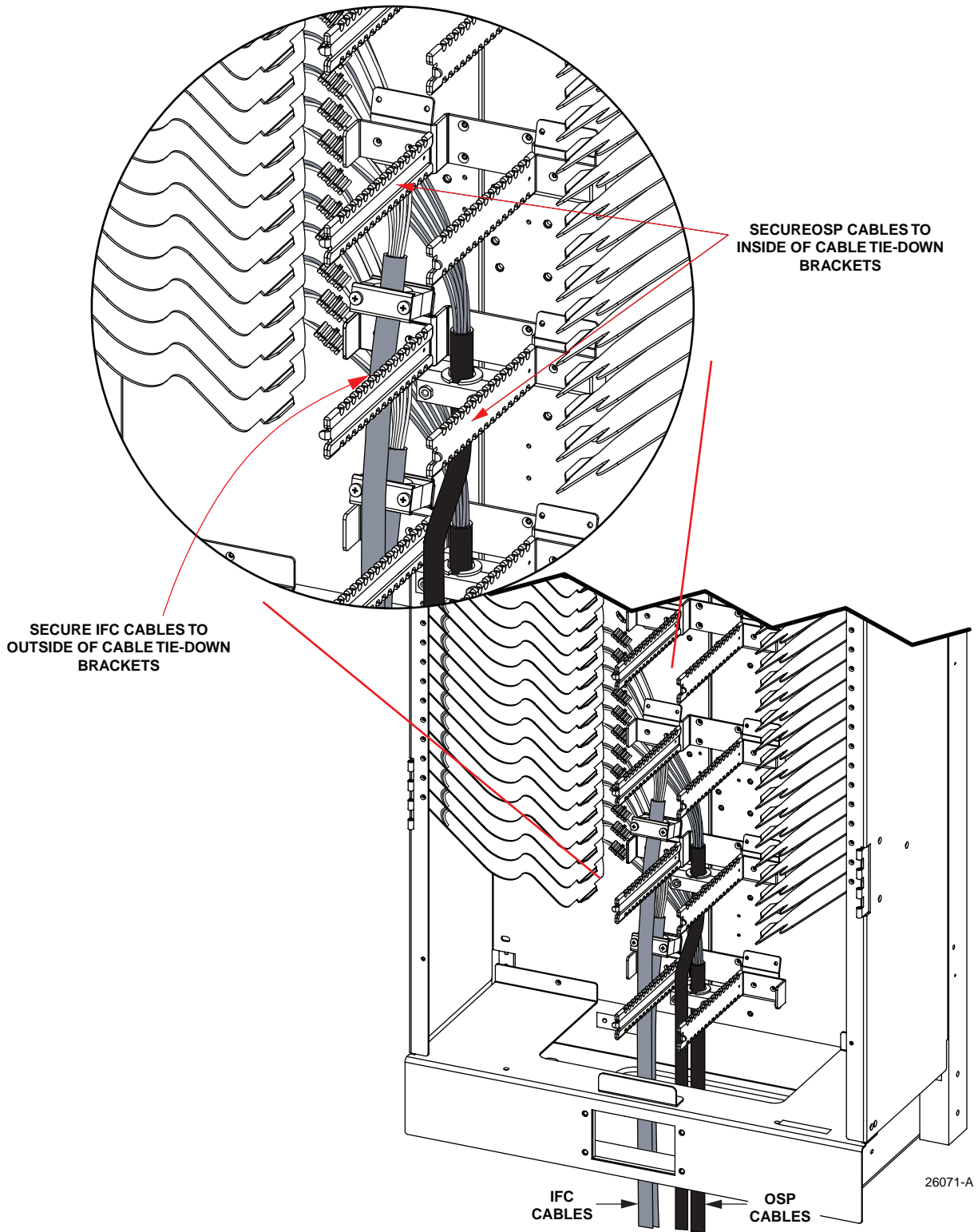


Figure 18. OSP and IFC Cable Routing Method (72-Fiber IFC Configuration)

3.3.2 96-Fiber IFC Configuration

Figure 19 shows an example of a fully cabled splice bay (front view). Refer to Figure 2 on Page 2 to configure the bay from a 72-fiber to a 96-fiber configuration.

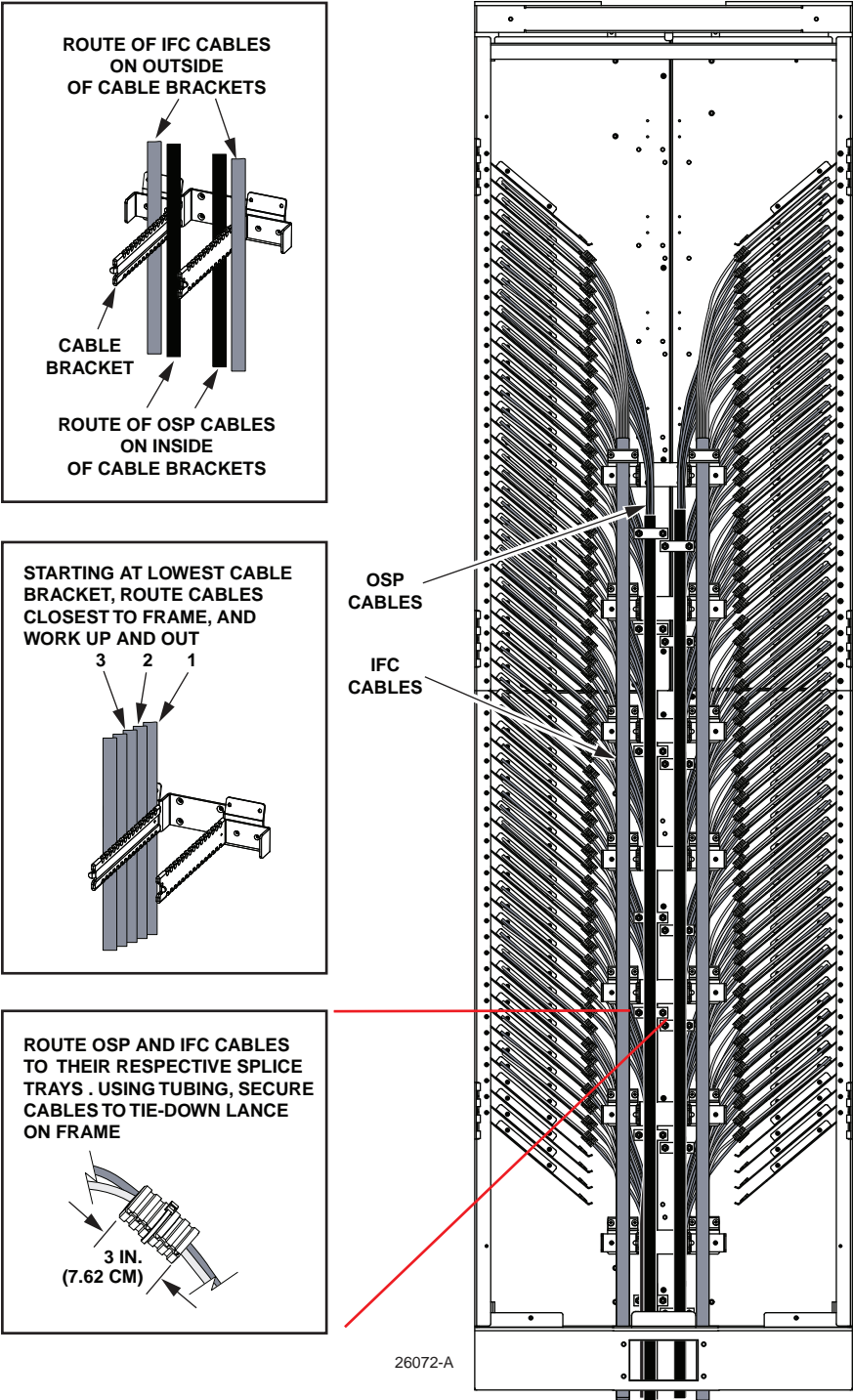


Figure 19. Fully Cabled Splice Bay (Front View, 96-Fiber IFC Configuration)

Use the following procedure.

1. Route and secure first OSP cable to the bay as shown in [Figure 20](#).

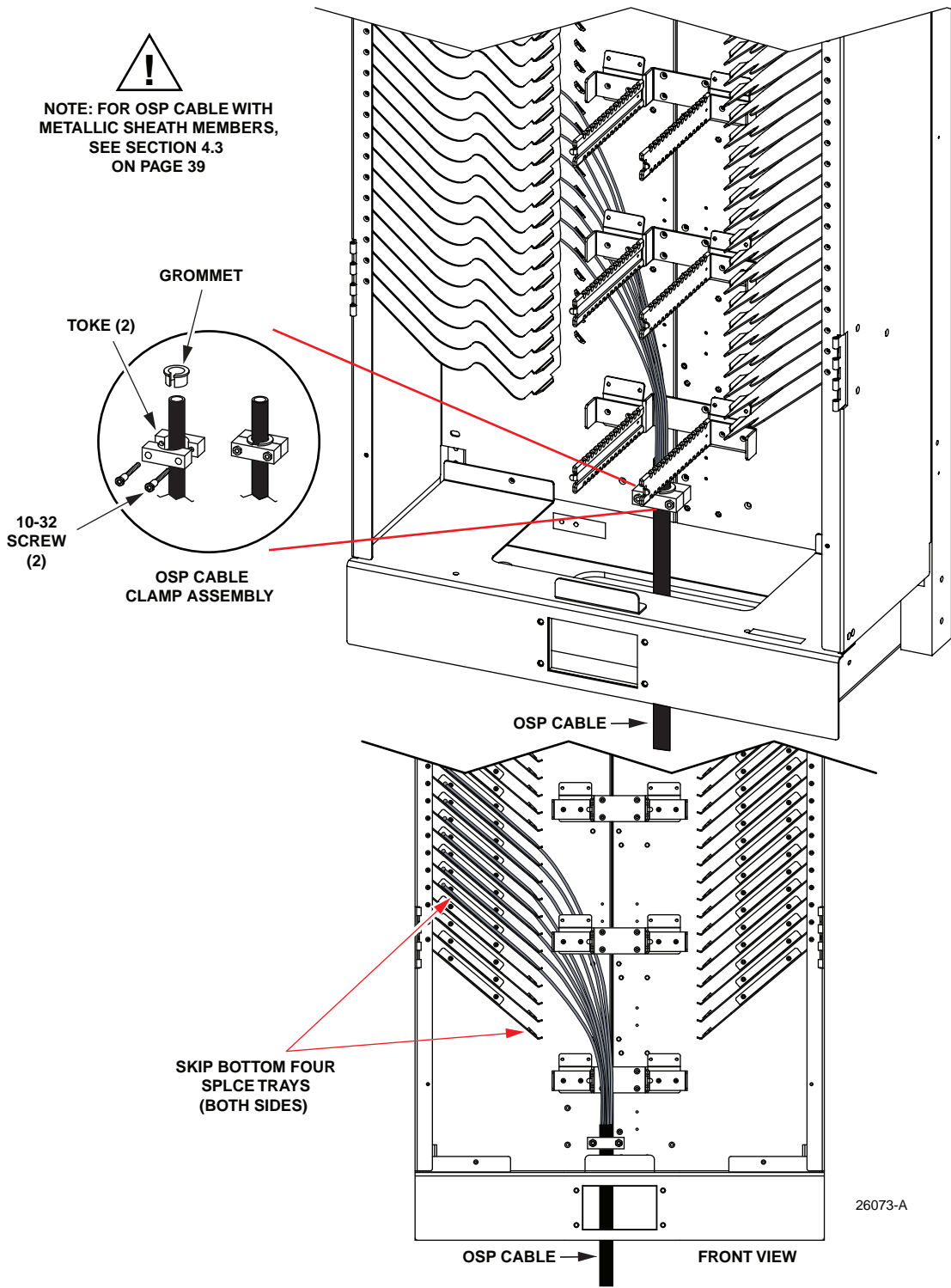


Figure 20. OSP Cable Routing (Raised Floor Cable Environment, 96-Fiber IFC Configuration)

2. Route and secure first IFC cable and OSP cable to the bay as shown in [Figure 21](#).

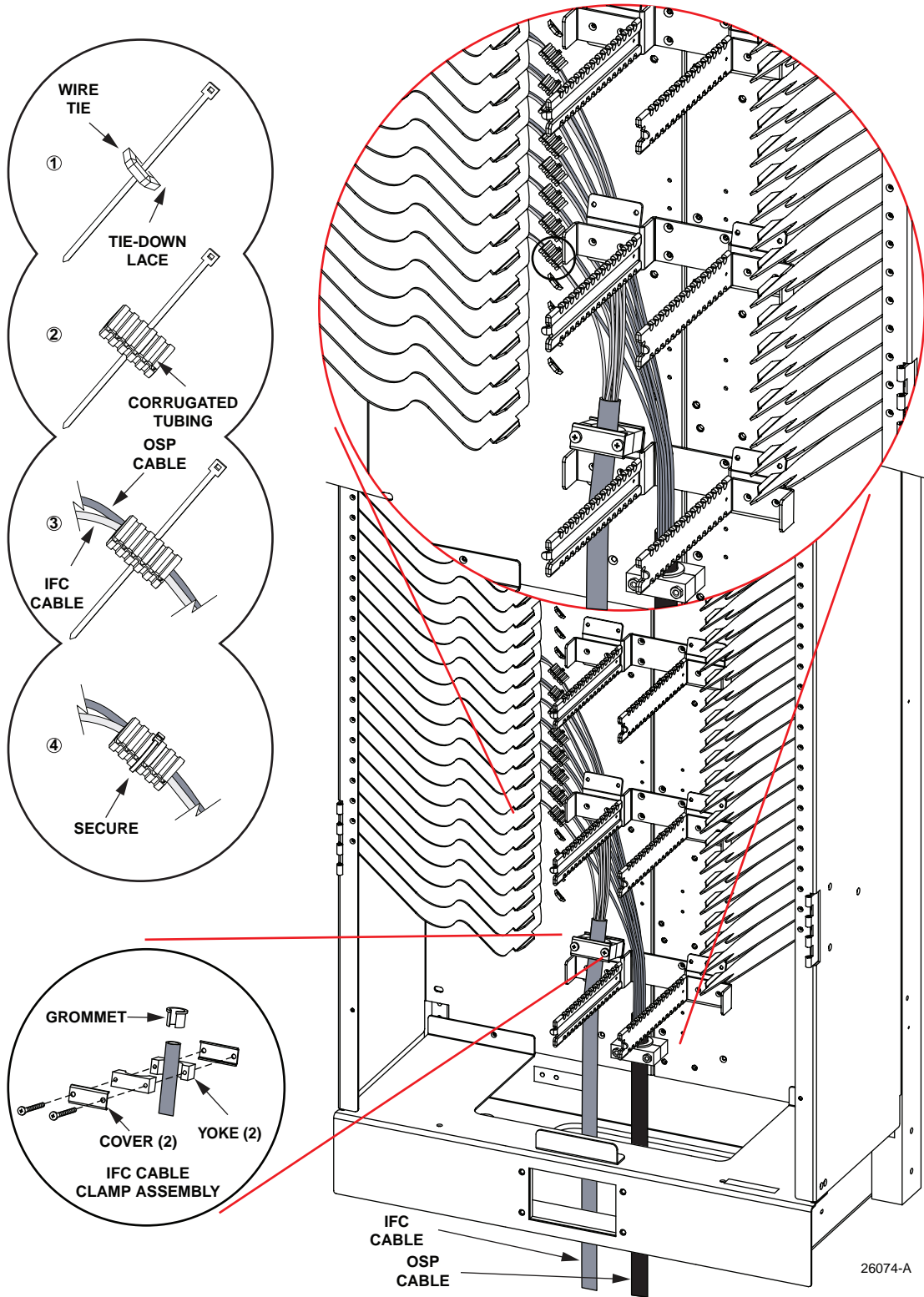


Figure 21. IFC Cable Routing (Raised Floor Cable Environment, 96-Fiber IFC Configuration)

3.4 OMX Splice Bay without Locking Splice Tray Doors (Overhead Cable Environment)

3.4.1 72-Fiber IFC Configuration

Figure 22 shows an example of a fully cabled splice bay (front view).

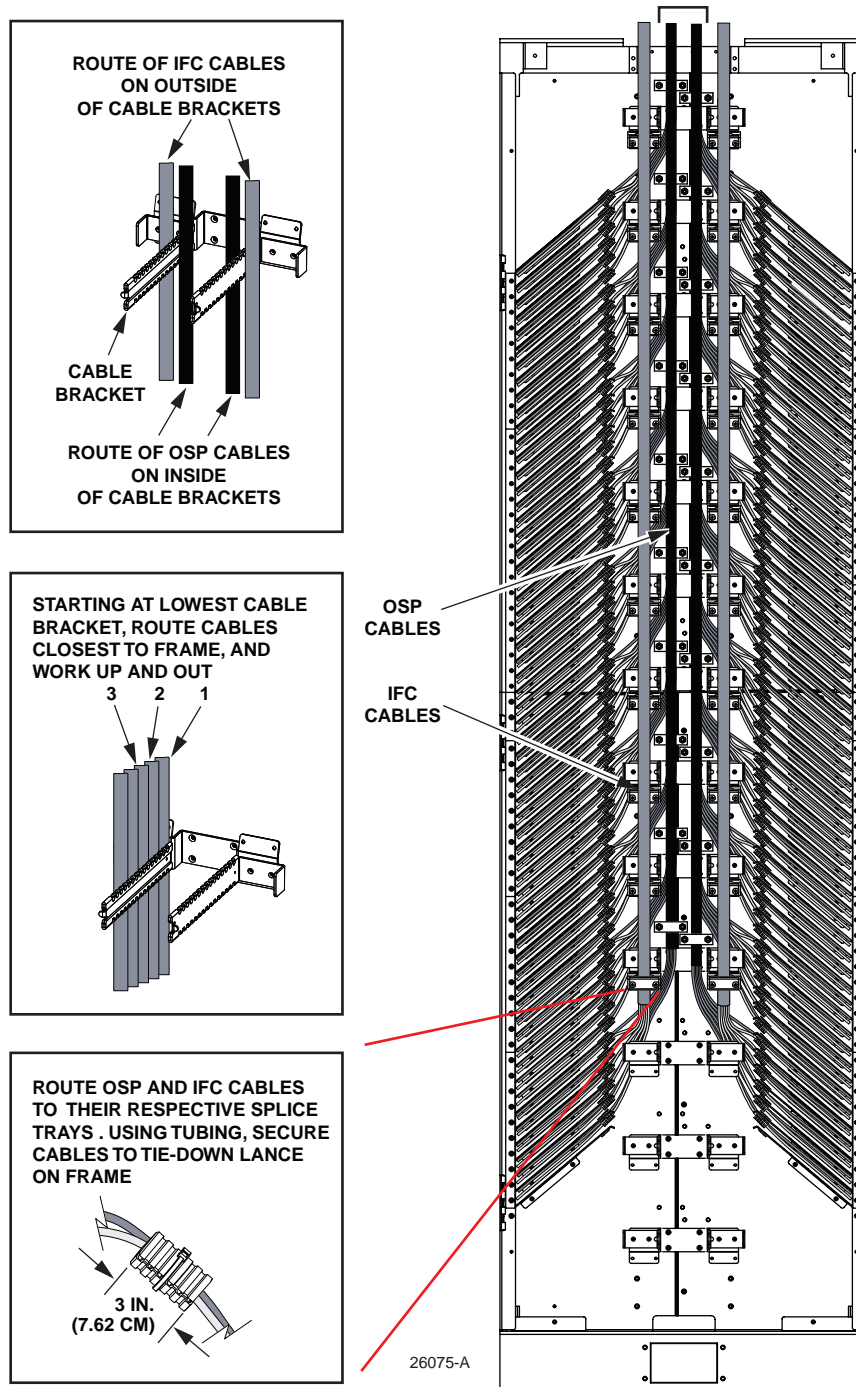


Figure 22. Fully Cabled Splice Bay (Front View)

Use the following procedure.

- 1. Route and secure the first OSP cable to the bay as shown in [Figure 23](#).

► **Note:** For OSP cable with metallic sheath members, see Section 4.3, “Ground OSP Cable (with Metallic Sheath Members)” on page 34.

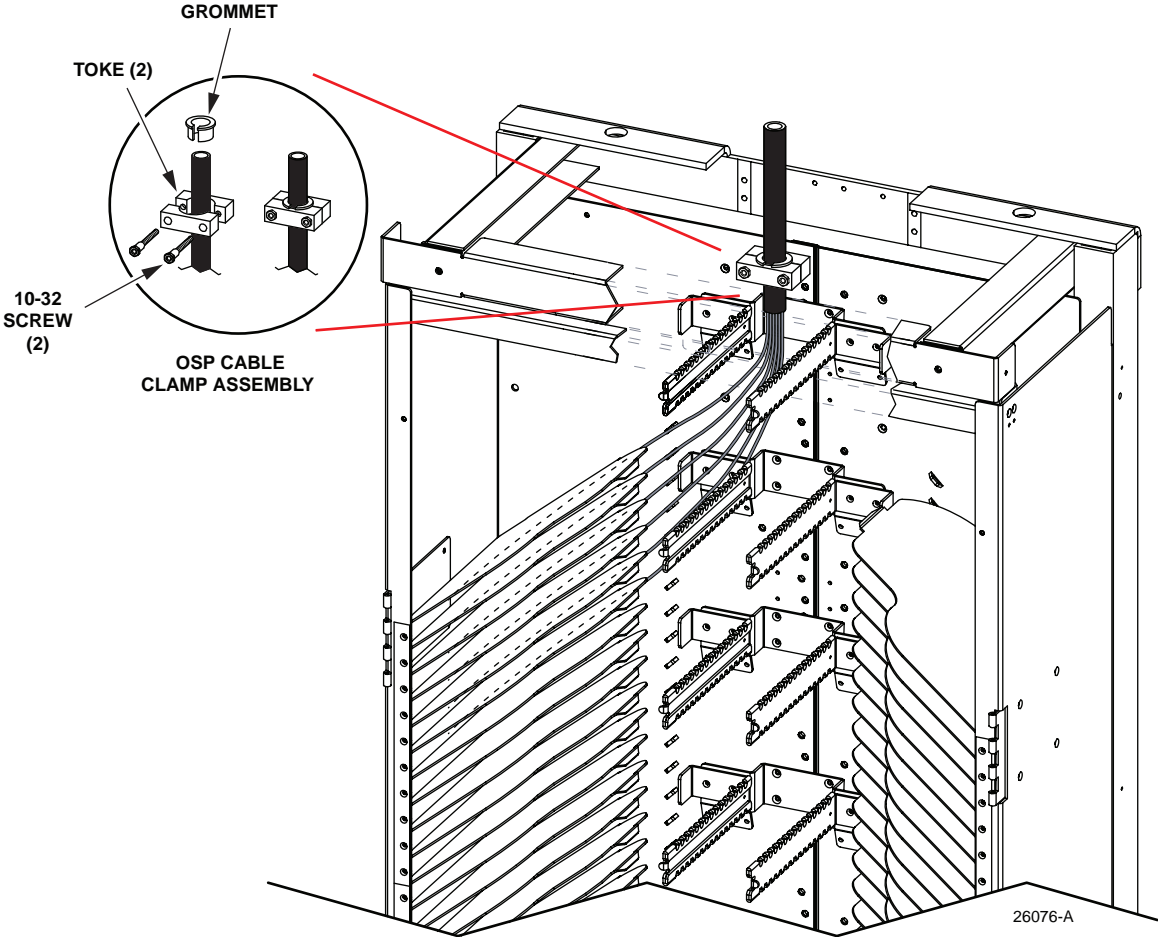


Figure 23. OSP Cable Routing (Overhead Cable Environment, 72-Fiber IFC Configuration)

2. Route and secure the first IFC and OSP cable to the bay as shown in Figure 24.

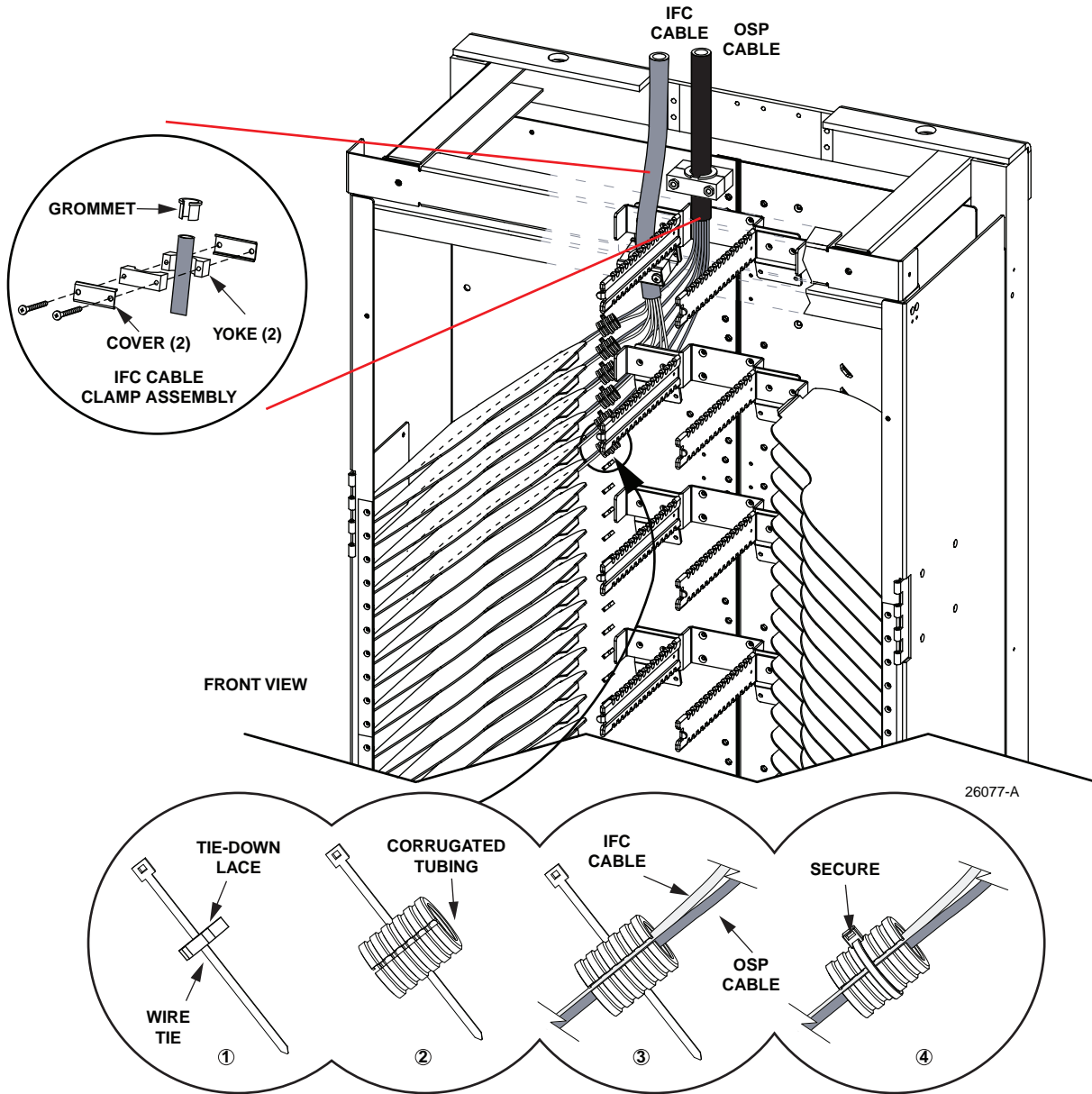


Figure 24. IFC Cable Routing (Overhead Cable Environment, 72-Fiber IFC Configuration)

Figure 25 shows a front view of the cable routing procedure for the first and second OSP and IFC cables. Continue routing cables in the same manner.

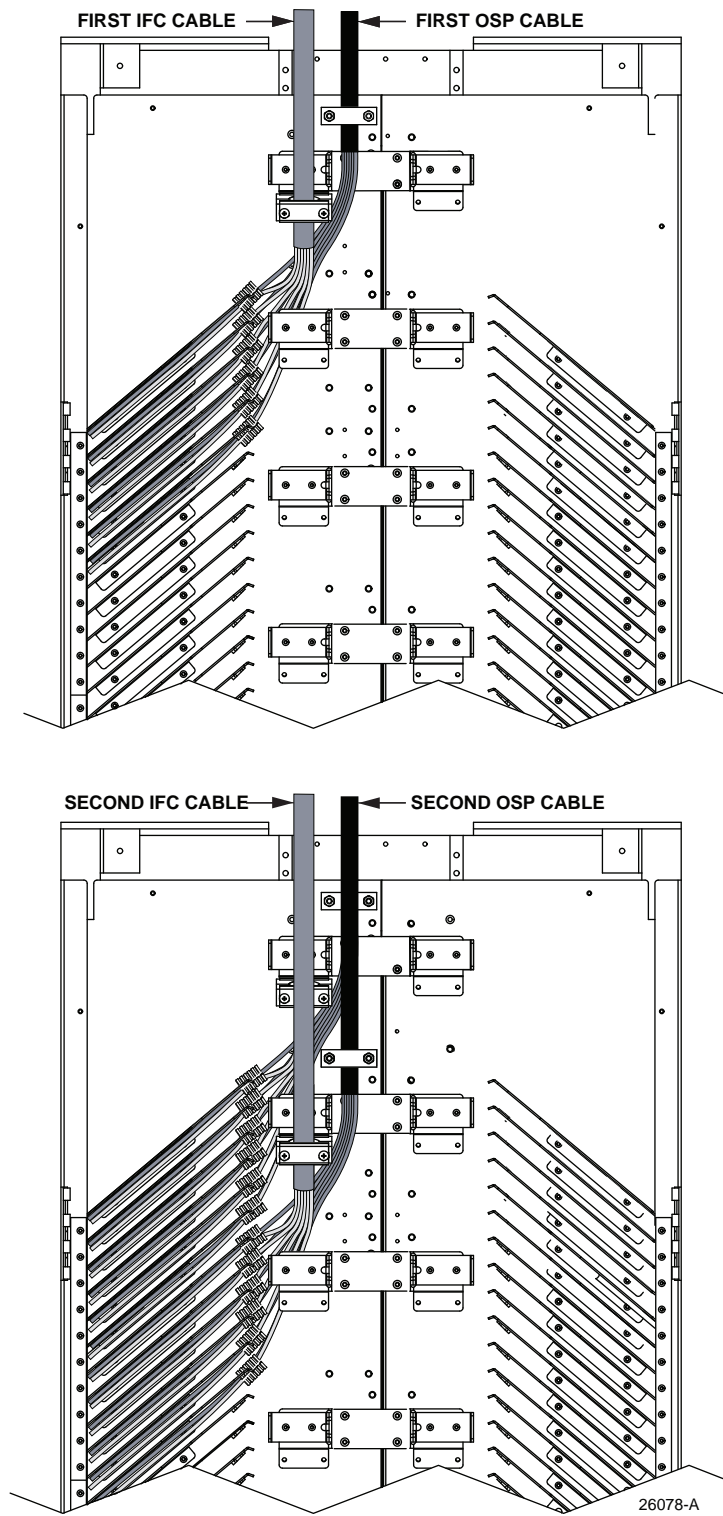


Figure 25. OSP and IFC Cable Routing Procedure (Overhead Cable Environment)

3.4.2 96-Fiber IFC Configuration

Figure 26 shows an example of a fully cabled splice bay (front view).

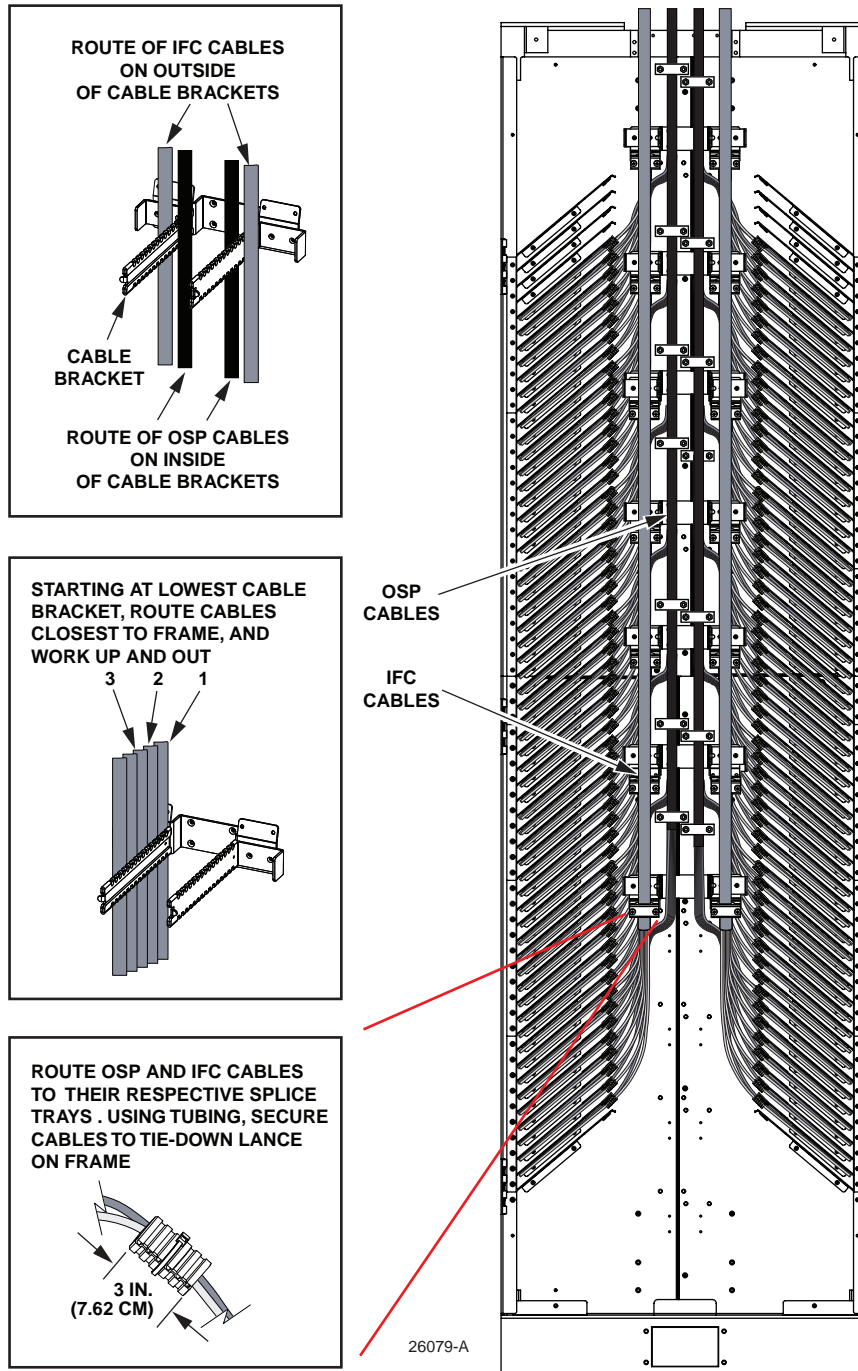


Figure 26. Fully Cabled Bay, Front View (96-Fiber IFC Configuration)

Use the following procedure.

1. Refer to [Figure 3 on Page 3](#) to configure the bay from a 72-fiber to a 96-fiber configuration.
2. Route OSP cable as shown in [Figure 27](#).

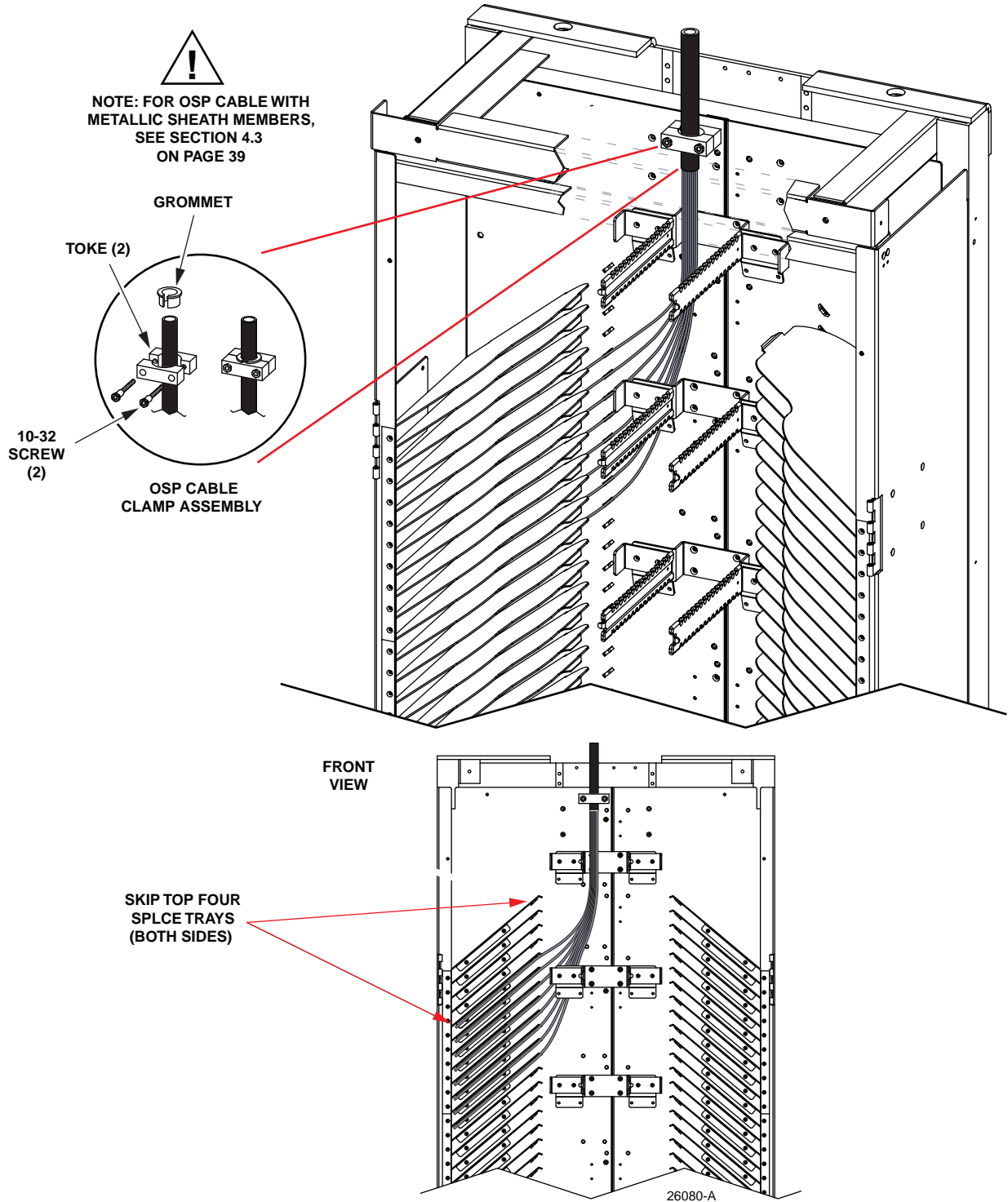


Figure 27. OSP Cable Routing (Overhead Cable Environment, 96-Fiber IFC Configuration)

3. Route IFC cable. Secure IFC with OSP cable to the bay as shown in Figure 28.

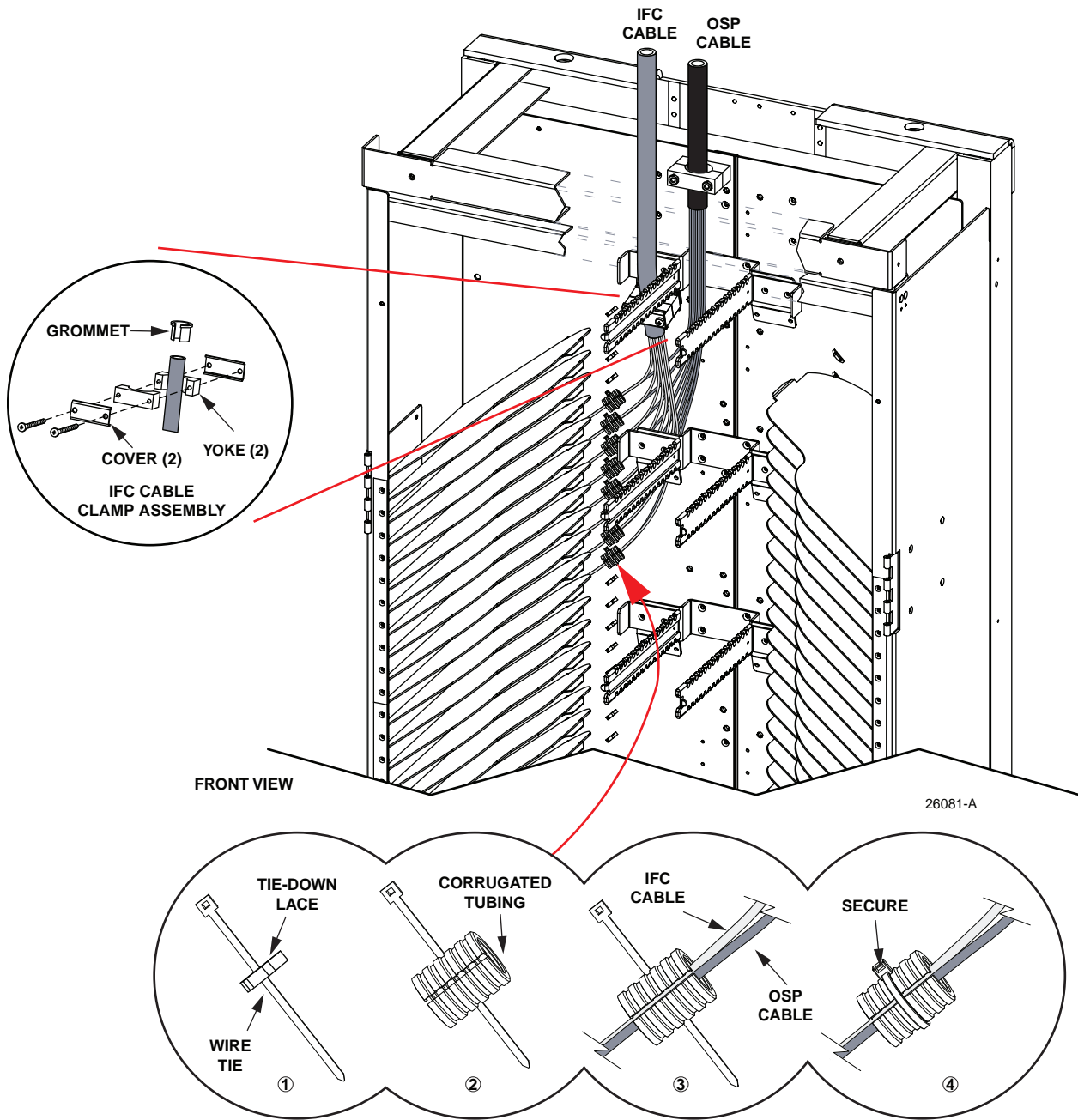


Figure 28. IFC Cable Routing (Overhead Cable Environment, 96-Fiber IFC Configuration)

4. Continue routing OSP and IFC cables as shown in [Figure 29](#).

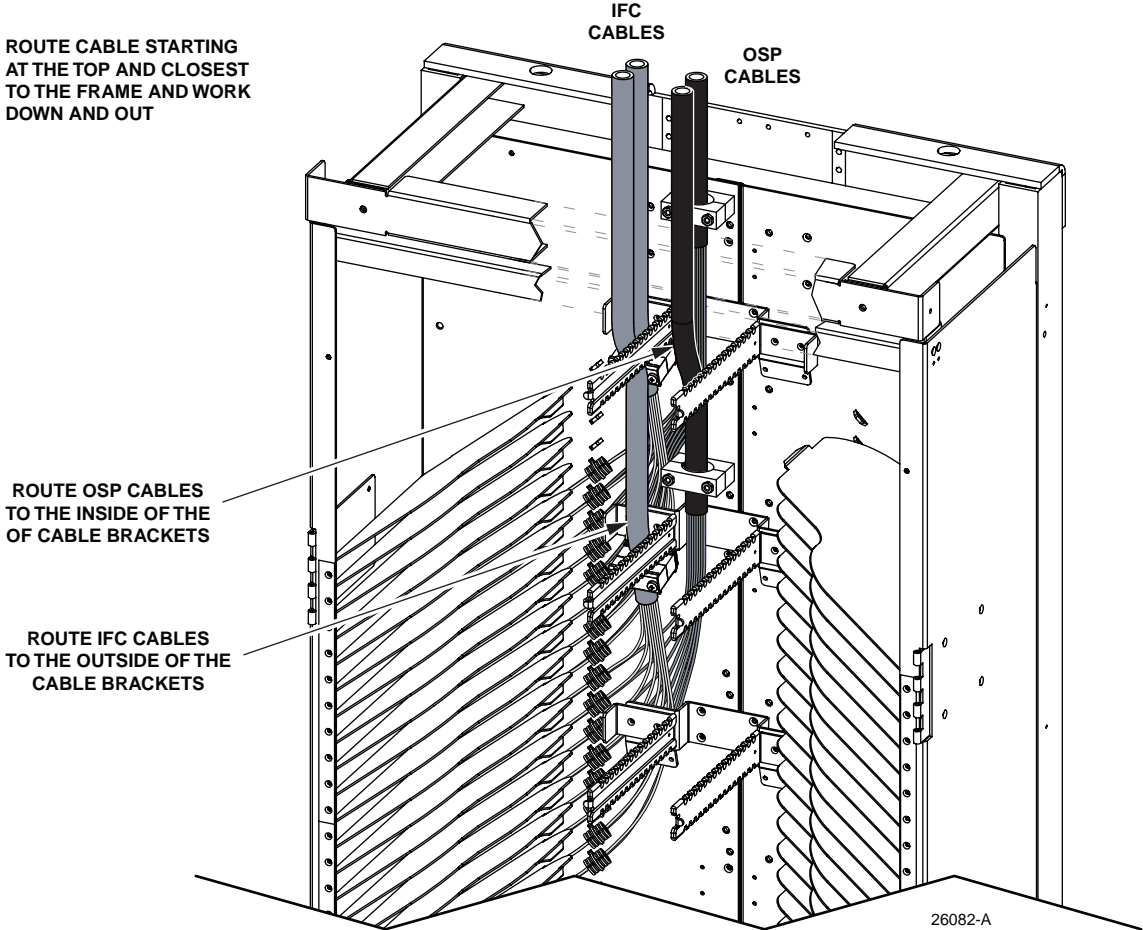


Figure 29. OSP and IFC Cable Routing Method (96-Fiber IFC, Overhead Cable Environment)

3.5 OMX Splice Cabinet Density Using Ribbon Cables

This application for the OMX Splice Cabinet utilizes 48-fibers (4x12 fibers per ribbon) per splice wheel arrangement for a total cabinet capacity of 5,184 splices. This would be using six 864-fiber OSP cables as input to the splice trays, and twenty seven 192-fiber IFC cables or eighteen 288-fiber IFC cables as output from the splice trays, within one OMX Splice Cabinet.

The splice wheel count would be:

- 120 trays total in the OMX Splice cabinet to hold splice wheels - 60 right verticals and 60 left verticals.
- 108 splice wheels to be used for the 5,184 fiber application – 54 right verticals and 54 left verticals.

With six splice trays not being used in each vertical (six on each side), room is available to secure the large fiber count blocking kits within the OMX Splice Cabinet. By using splice tray position #13 as the starting point for the splice wheels, ample room is available for two 864-Ribbon Fiber Central Tube Blocking Kits to be mounted at the top of the frame with a minimum of 7 inches from the base of the two Blocking Kits to the first splice wheel.

Use the following procedure to install the ribbon cables:

1. Corrugated tubing installation: Remove OMX Vertical Management hardware from inside center of cabinet marking on back wall of cabinet the position they came from to aid in reinstallation later. Refer to [Figure 30](#).

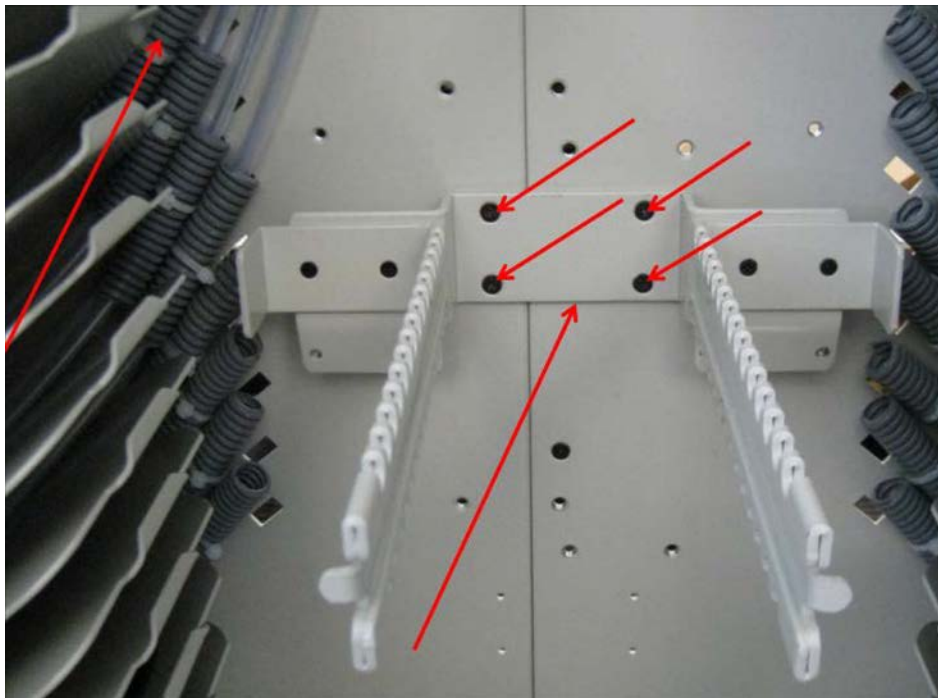


Figure 30. OMX Cabinet Vertical Management Removed

- 2. Pre-install small cable ties into tie-down lances on the rear of the OMX Splice Cabinet by inserting the cable tie through the tie-down lances and pulling the cable tie into the locking end engaging the tie one or two clicks. Do this for all tray locations except the top four on each side.
- 3. Cut corrugated tubing to 2.5" lengths and add to every position on the back wall of the OMX cabinet (see [Figure 31](#)). Snug down the cable ties making sure not to crush the corrugated tubing.

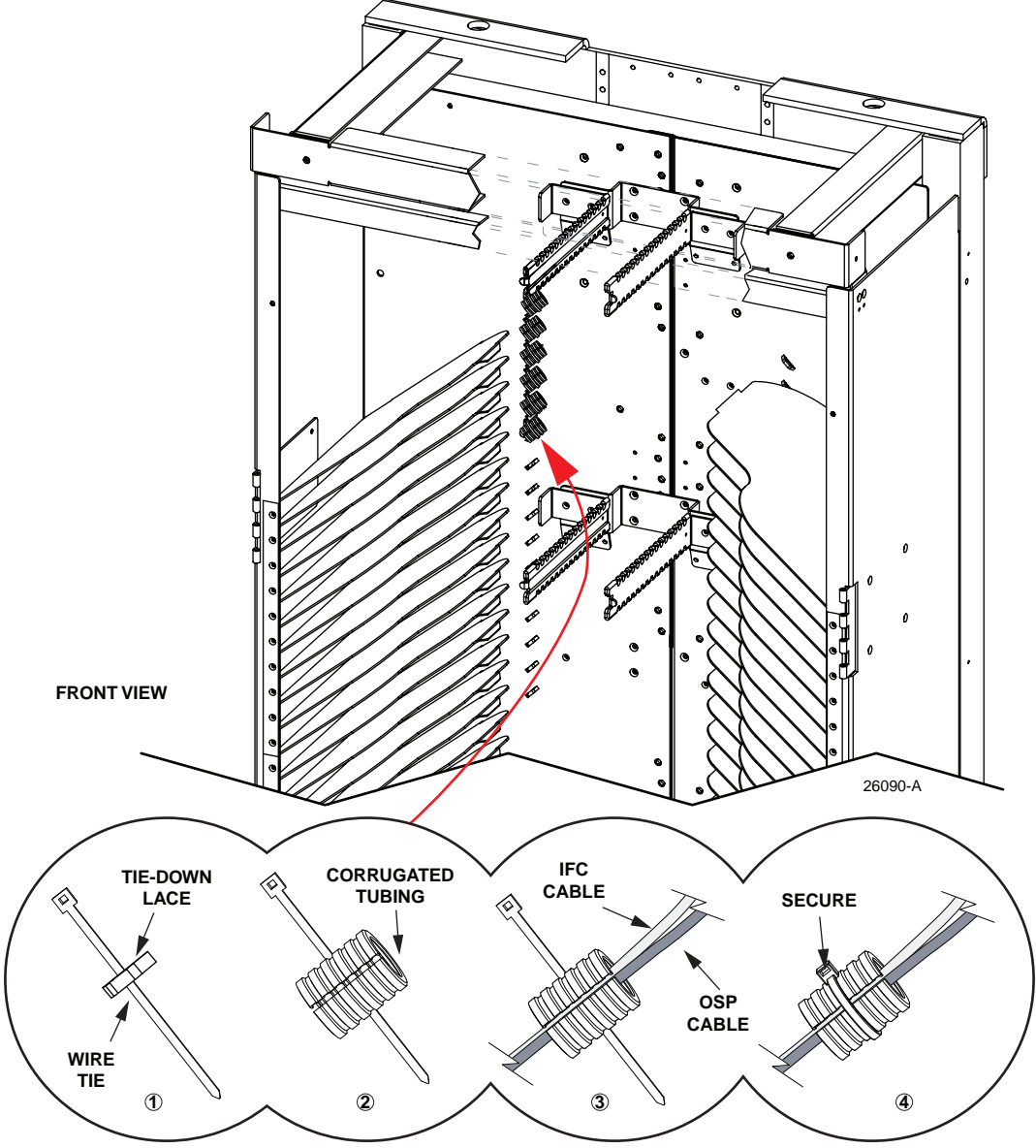


Figure 31. Cutting Corrugated Tubing

4. Reinstall some of the vertical cable management removed in step “a” starting with the second position marked from the top and use every other location marked. This allows for more working room inside the OMX frame.
5. Locate 864-fiber cable and Blocking Kit within OMX Cabinet, as follows:
 - a. Route the 864-Fiber Cable across the horizontal pathway to OMX splice cabinet. Secure cable to ladder racking above OMX splice cabinet (see [Figure 32](#)) making sure cable is routed over the outer edge of the cable rack and not through the center of the cable rack.



Figure 32. Ladder Racking Above OMX Splice Cabinet

- b. Place 864-fiber cable inside OMX Splice Cabinet into the center area of the cable management channels as shown in [Figure 33](#) and [Figure 34](#).

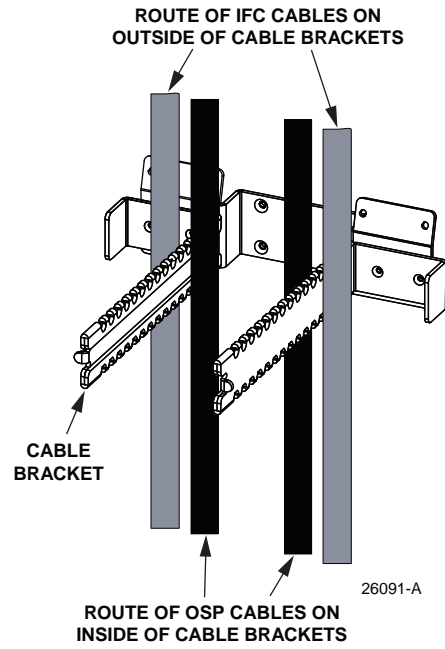


Figure 33. OMX Vertical Management

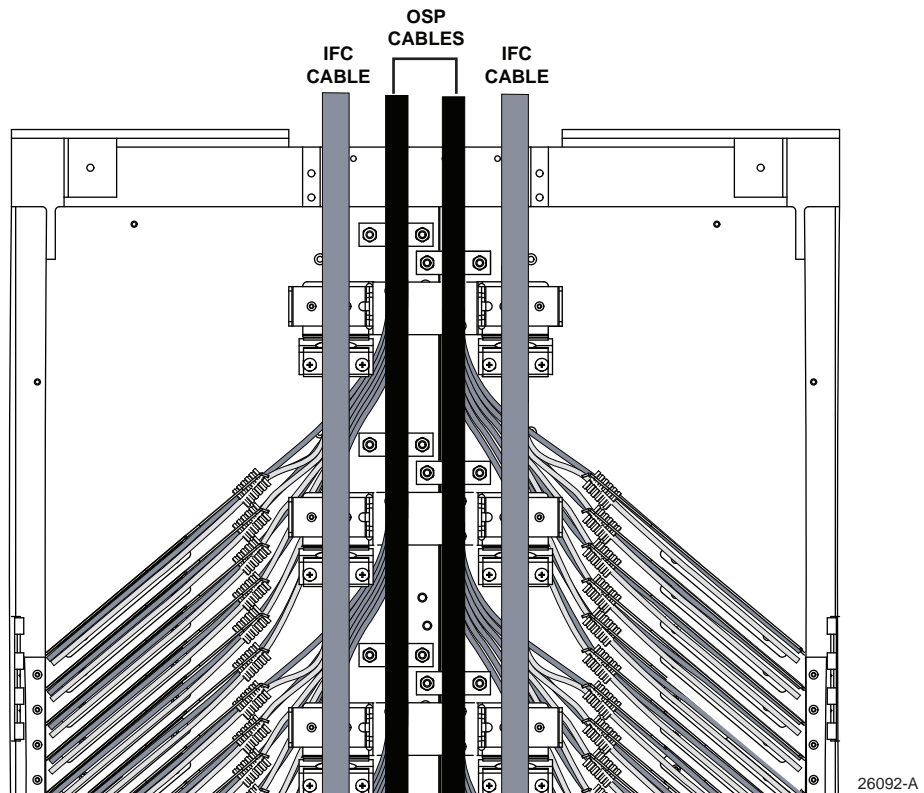


Figure 34. OMX Splice Cabinet Vertical Management Channels

- c. Mark the cable to identify the blocking kit location as well as the front of the cable for positioning of the Blocking Kit as shown in [Figure 35](#).

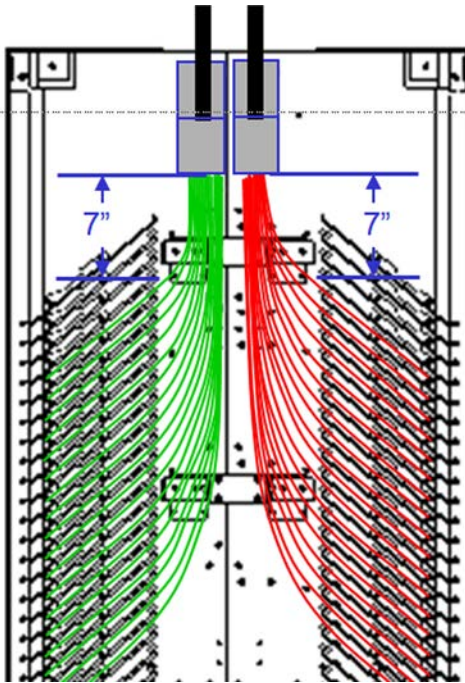


Figure 35. 864-Fiber OSP Blocking Kit Position

- ▶ **Note:** The final positioning of the 864-fiber Blocking Kit within the center portion of the cable management channel of the OMX Splice Cabinet is critical. The Blocking Kit will be positioned to allow room for additional cables and blocking kits within the central channel of the OMX Splice Cabinet. Make sure that the bottom of the OSP blocking kit is 7-inches above the first splice tray location. If this dimension is any closer, there is a risk of the oval tubing kinking and needs to be avoided.
6. Complete the OSP routing per [Figure 34](#),

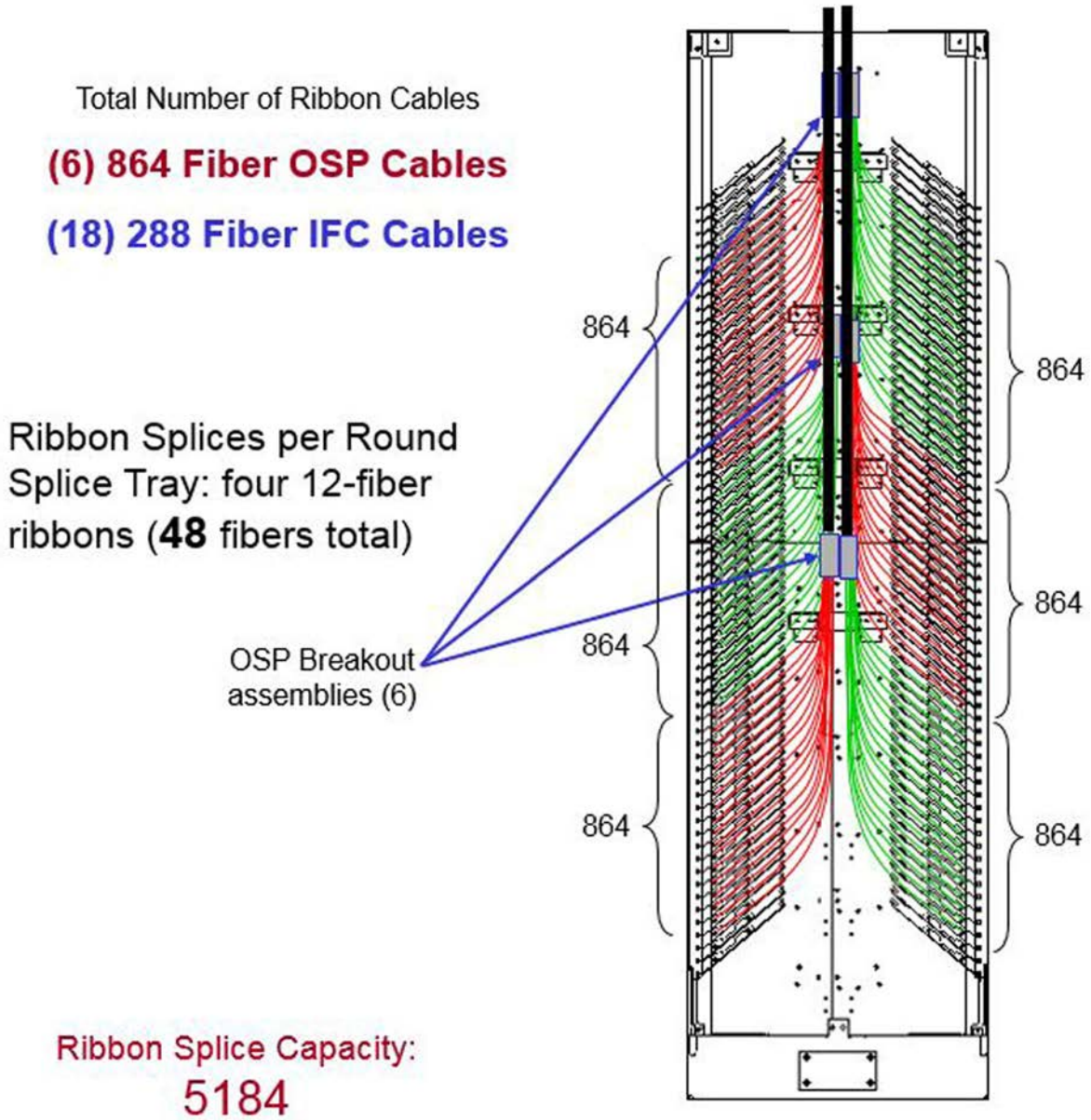


Figure 36. OSP Breakout Assemblies

7. Locate 192-fiber or 288-fiber IFC cables and Blocking Kit within OMX Cabinet. as follows:
 - a. Place 192-fiber or 288-fiber cables inside OMX Splice Cabinet into either the outer right or left area of the cable management channels as shown in [Figure 33 on Page 33](#) and [Figure 34 on Page 33](#).
 - b. Mark the cable to identify the blocking kit location as well as the front of the cable for positioning of the Blocking Kit as shown in [Figure 37](#)
- ▶ **Note:** The final positioning of the IFC fiber Blocking Kit within the outer portions of the cable management channel of the OMX Splice Cabinet is important. The Blocking Kit will be positioned to allow room for additional cables and blocking kits in the two outer cable management channels of the OMX Splice Cabinet. Make sure that the bottom of the IFC blocking kits are 7-inches above the first splice tray location. If this dimension is any closer, there is a risk of the oval tubing kinking and needs to be avoided.
8. Complete the IFC routing per [Figure 38](#),

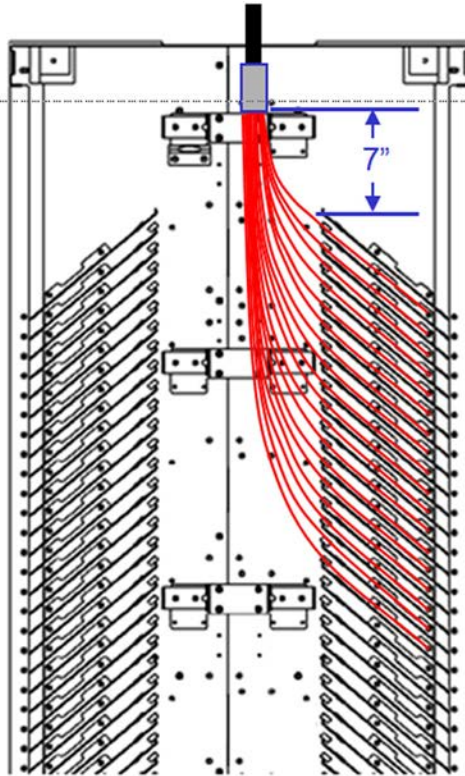


Figure 37. 192-Fiber IFC Blocking Kit Position

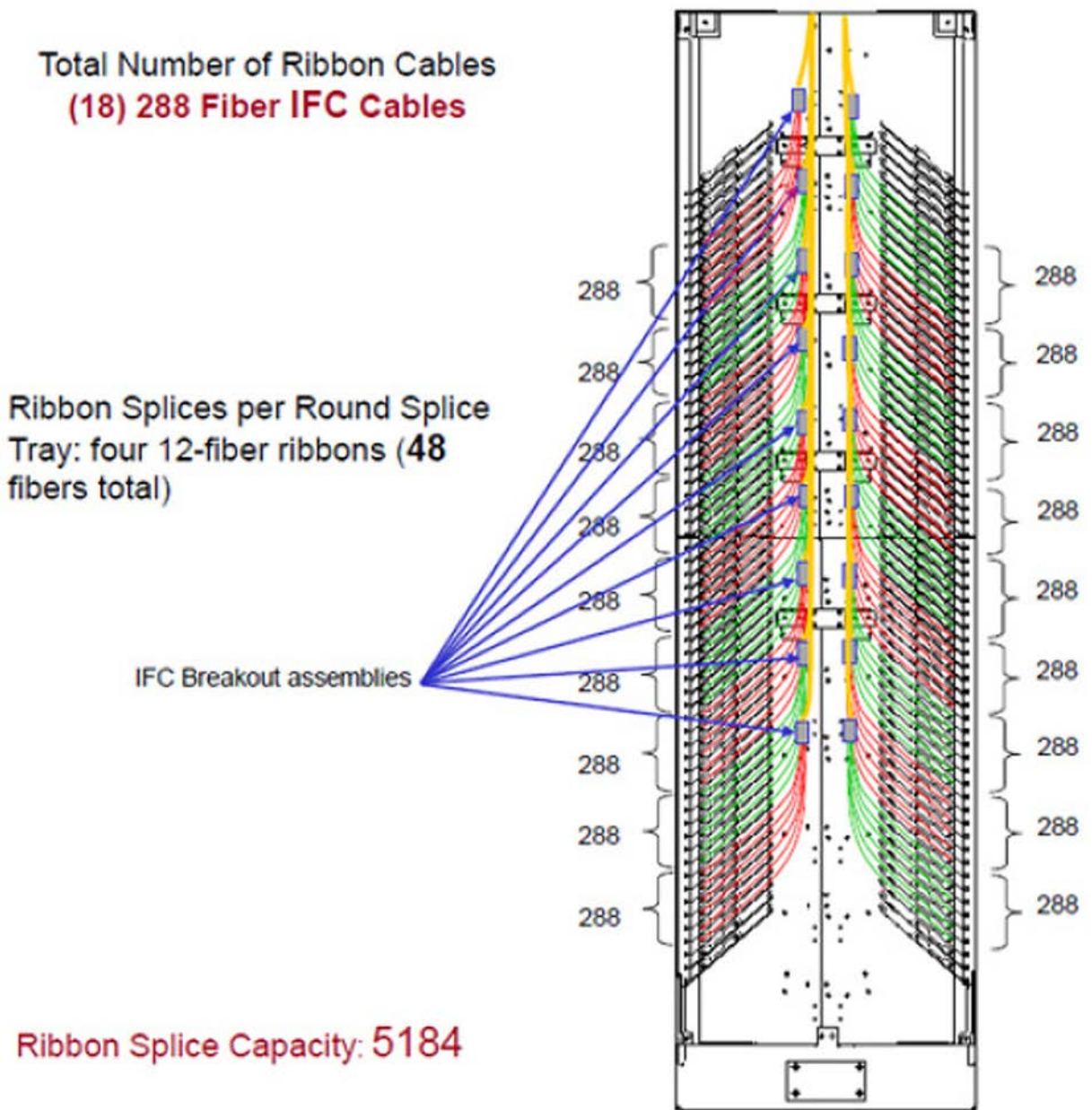


Figure 38. IFC Breakout Assemblies

4 GROUND INSTRUCTIONS

4.1 Ground Front Doors to Frame

Using ground kit (provided), ground front doors of bay to frame as shown in [Figure 39](#).

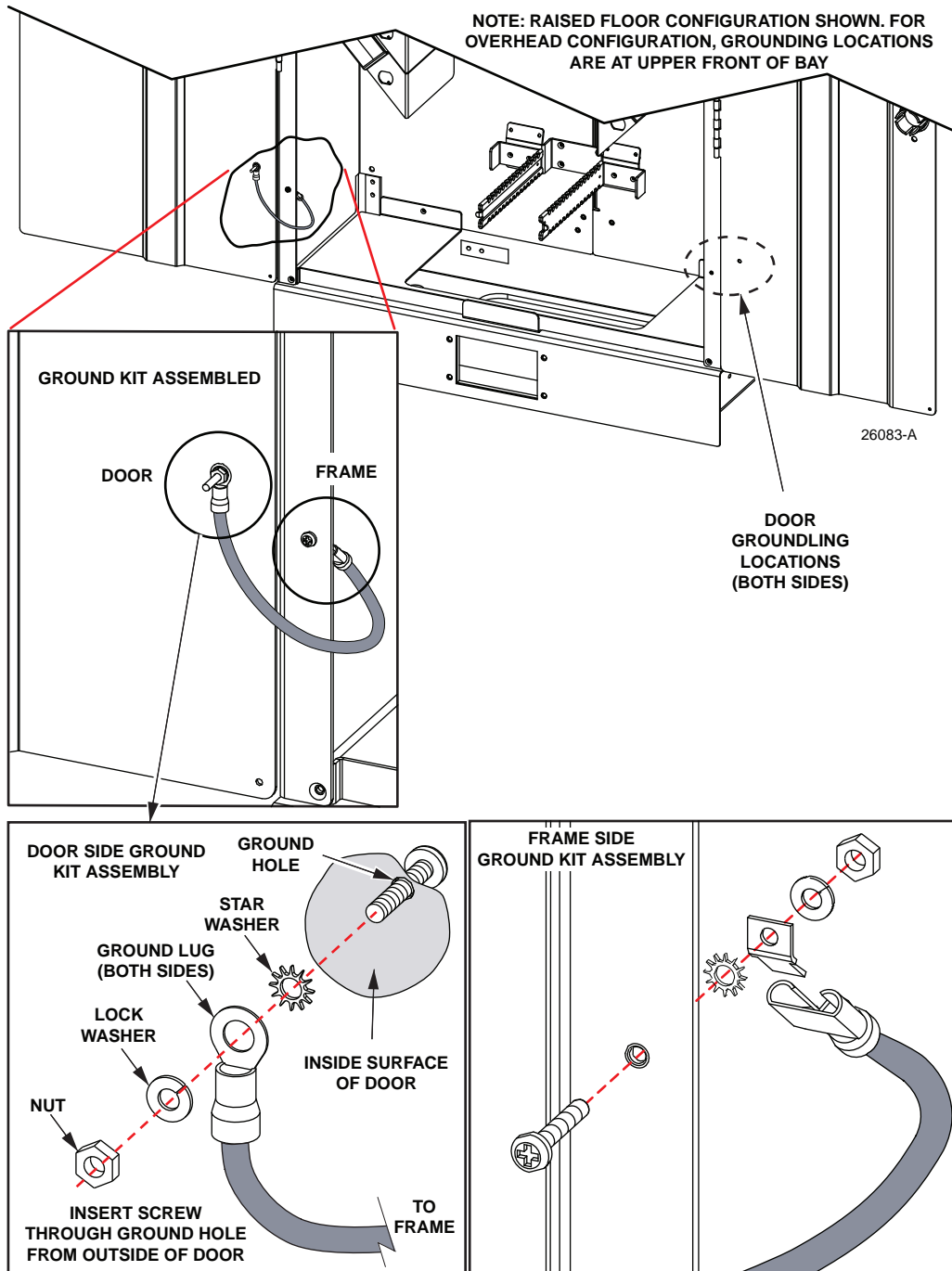


Figure 39. Front Door Grounding Procedure

4.2 Ground OMX Splice Frame

Using ground lug kit (ordered separately), ground the frame as shown in [Figure 40](#).

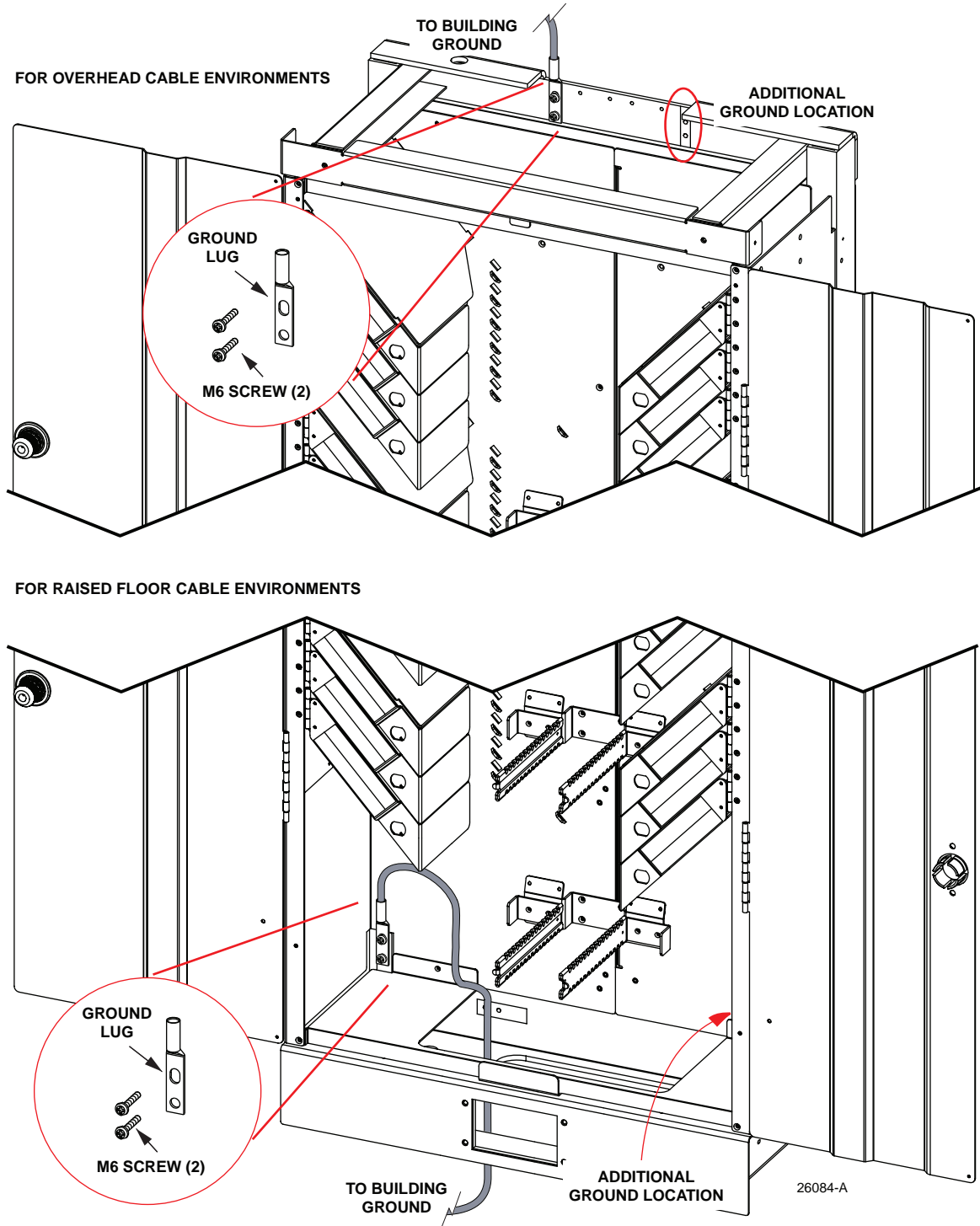


Figure 40. Frame Grounding Method

4.3 Ground OSP Cable (with Metallic Sheath Members)

When routing OSP cable with metallic sheath members, install a ground lug (in either location) and route a solid ground wire, as shown in [Figure 41](#).

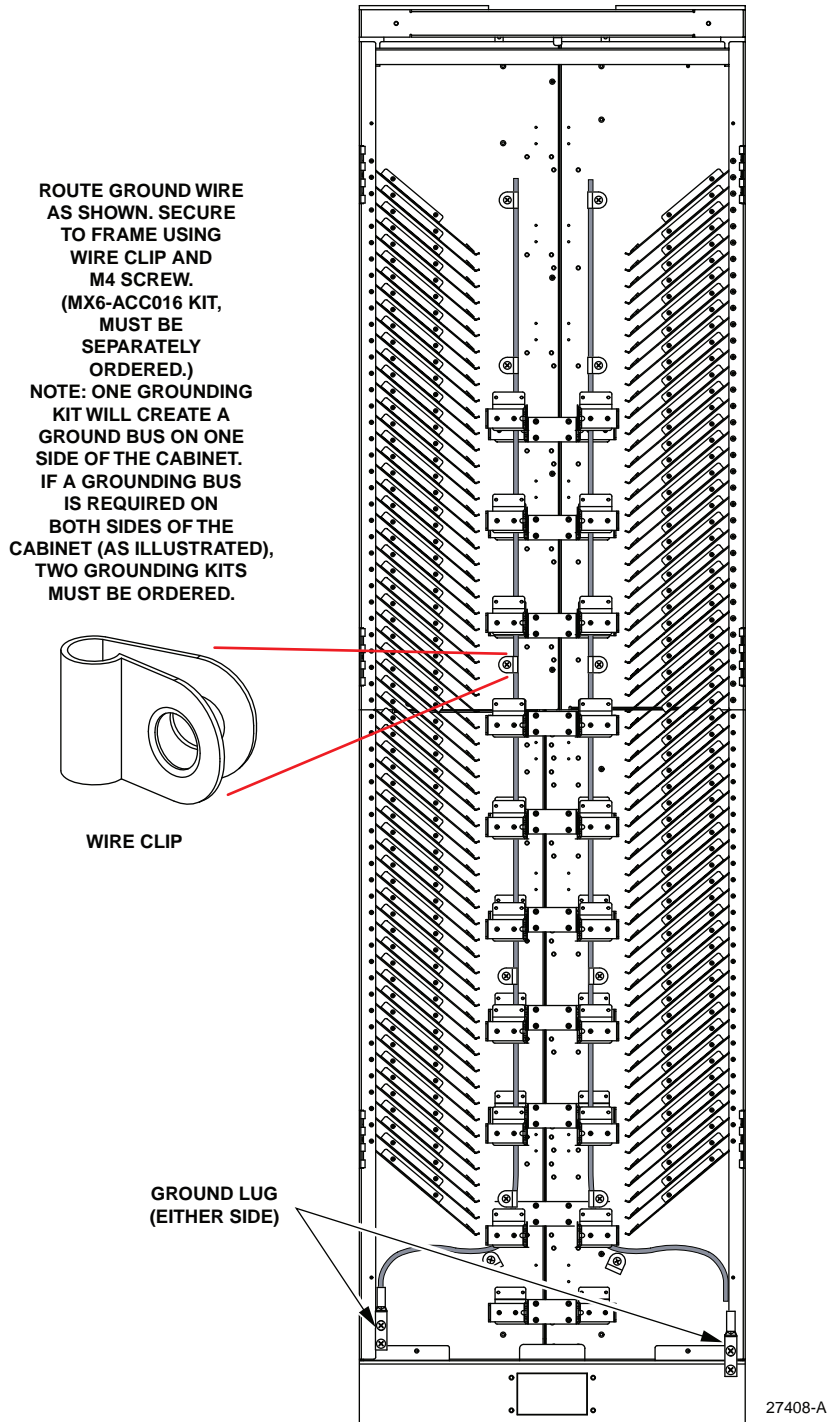


Figure 41. Ground Lug and Ground Wire Procedure (Raised Floor Cable Environment)

Figure 42 shows an overview of an OSP cable with metallic sheath members routed and terminated.

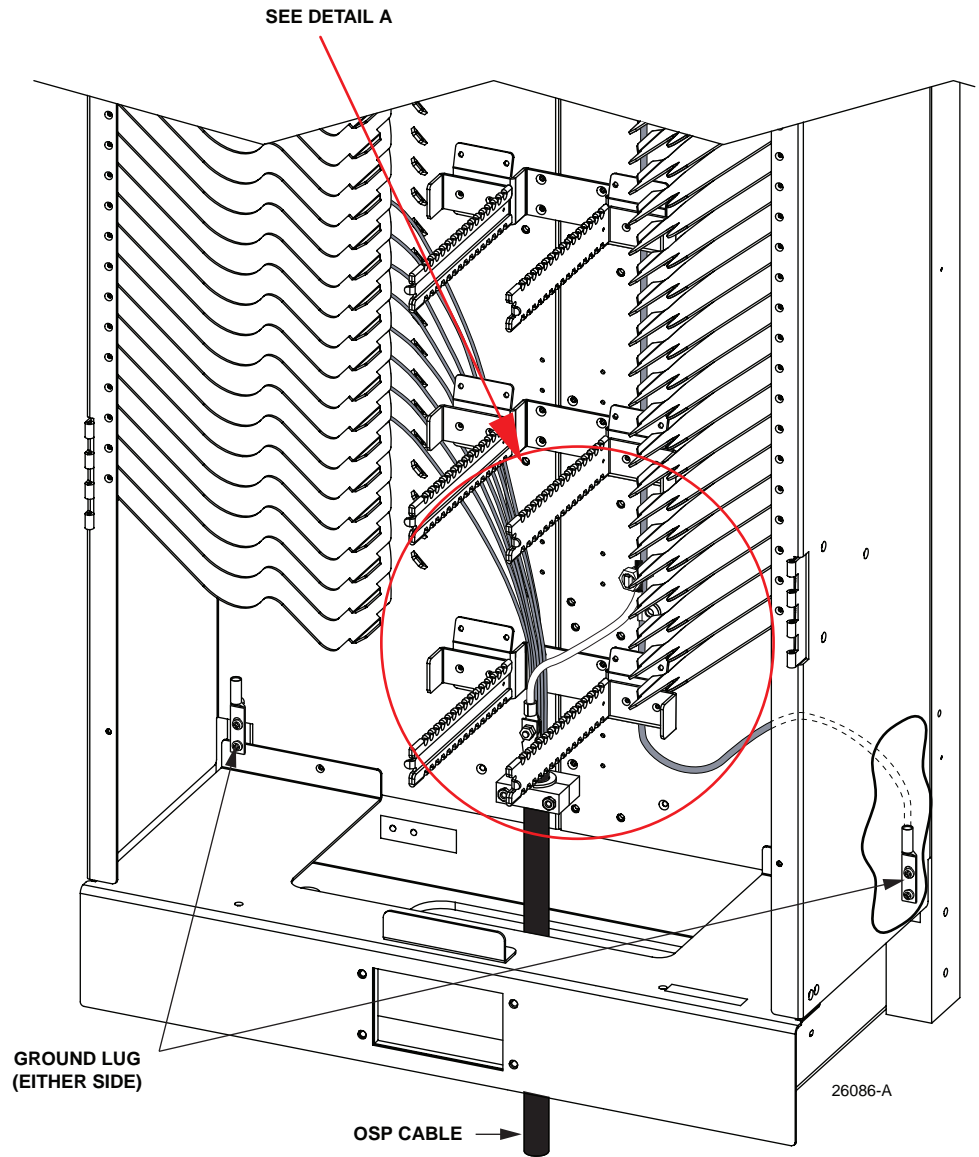


Figure 42. OSP Cable Metallic Sheath Members Routing Overview

Figure 34 shows Detail A, refer to [Figure 43](#). For OSP cable preparation, follow the steps shown in Figures 35 and 36.

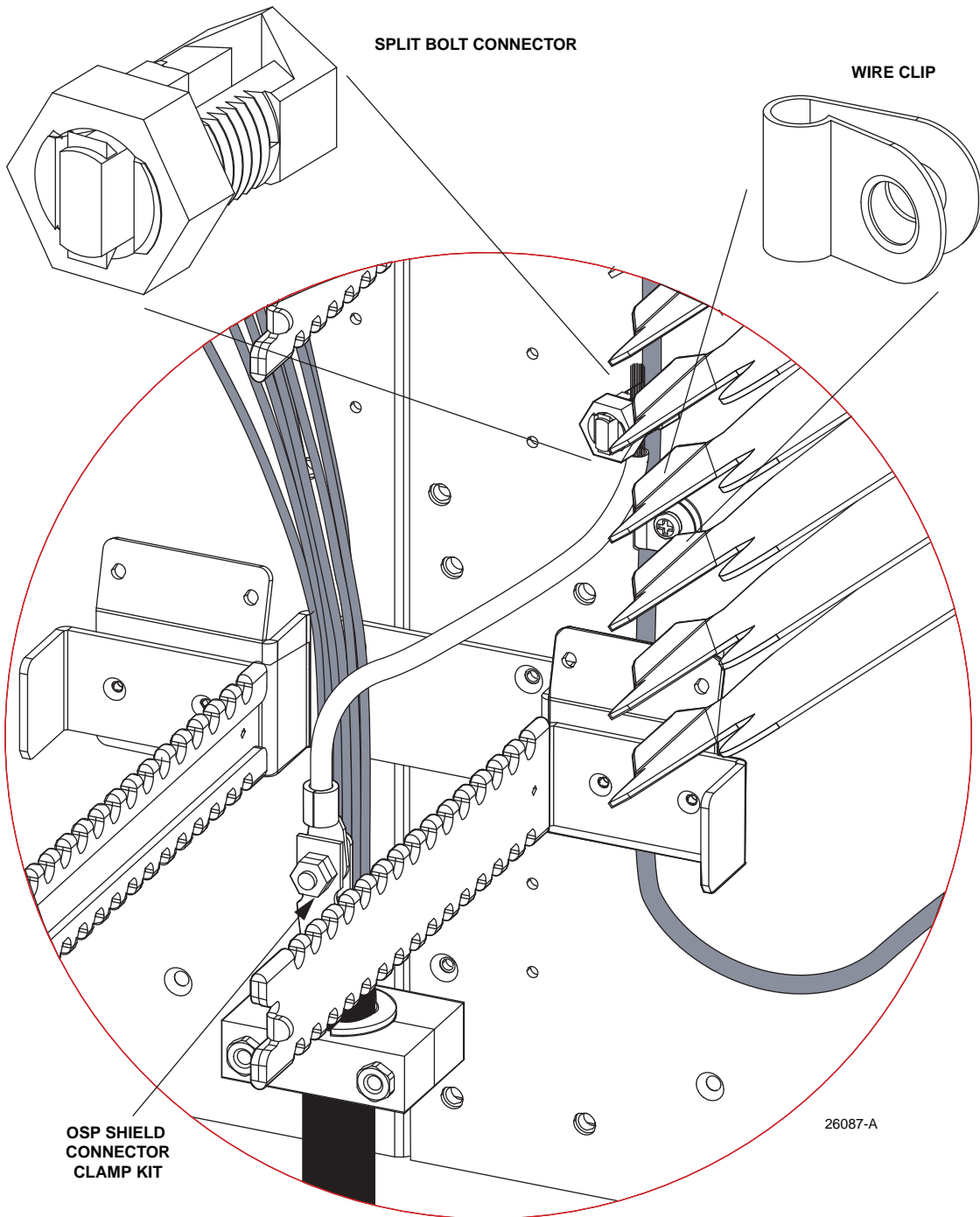
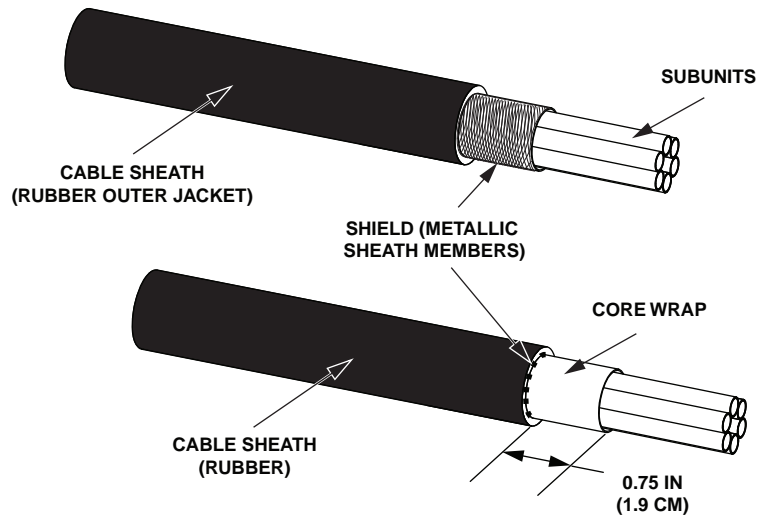


Figure 43. Detail A

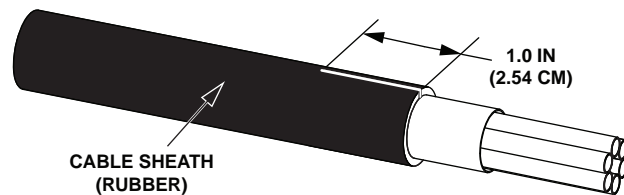
4.4 OSP Cable Grounding Procedure

Proceed as shown in [Figure 44](#) and [Figure 45](#).

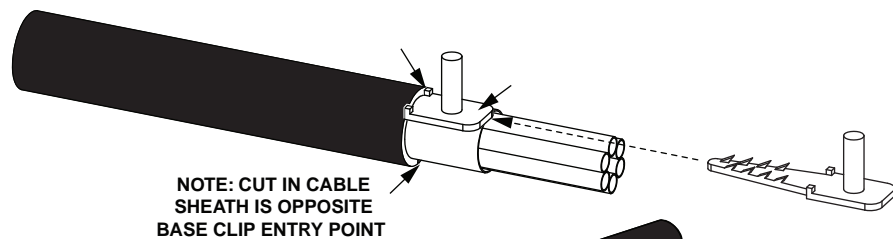
- ① CUT SHIELD (METALLIC SHEATH MEMBERS) FLUSH WITH CABLE SHEATH EXPOSING 0.75 INCHES OF CORE WRAP



- ② MAKE A 1.0 INCH CUT IN CABLE SHEATH OPPOSITE POINT AT WHICH BASE CLIP WILL BE INSERTED



- ③ INSERT BASE BETWEEN SHIELD AND CORE WRAP. SLIDE BASE CLIP INTO CABLE UNTIL CONTACT SHEATH



- ④ TAP ON CABLE SHEATH AT POINT SHOWN

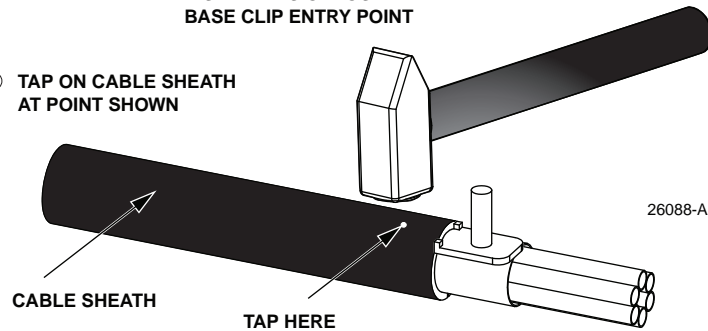


Figure 44. OSP Cable Ground Procedure (Steps 1 Through 4)

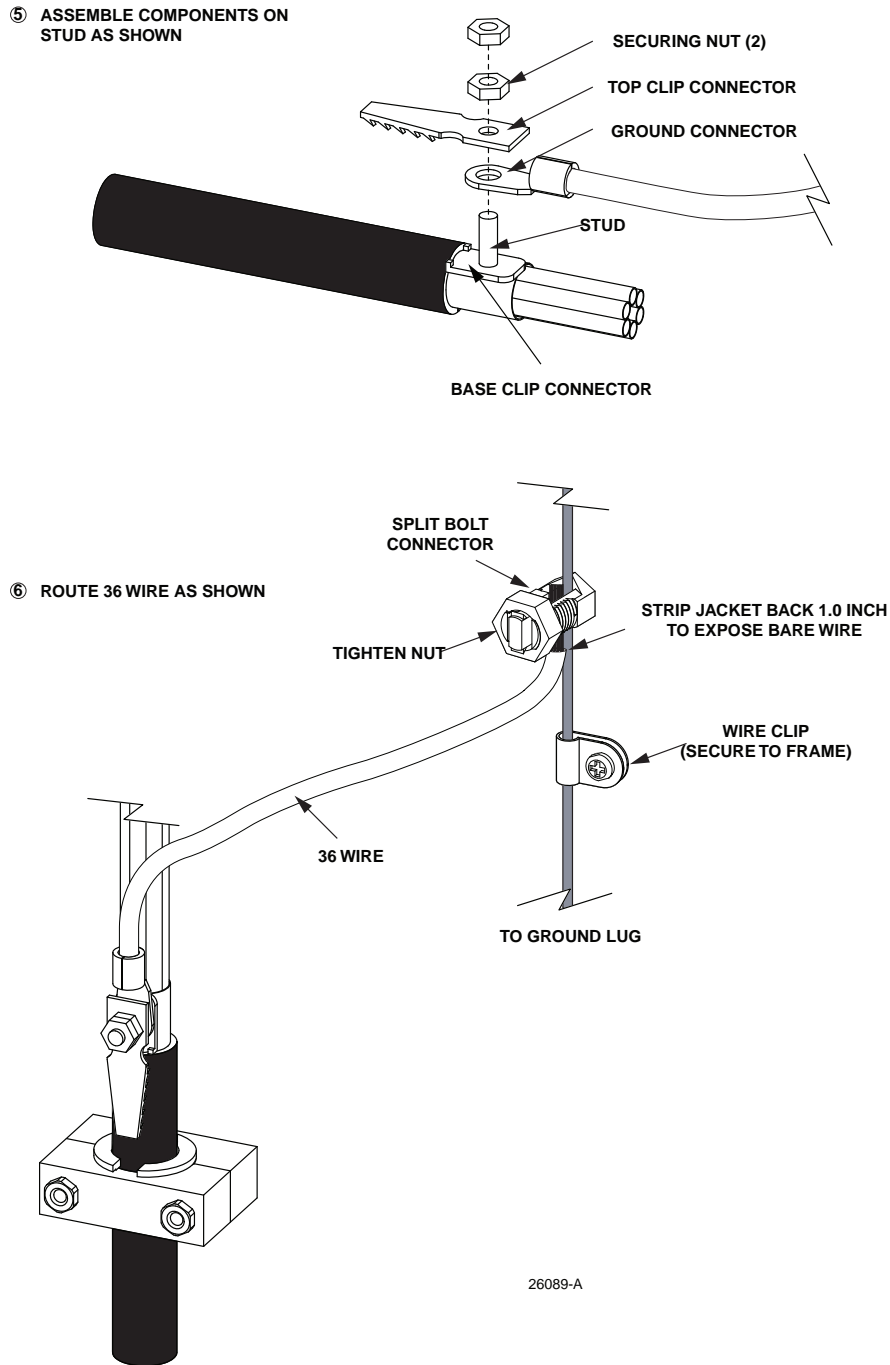


Figure 45. OSP Cable Ground Procedure (Steps 5 and 6)

5 TECHNICAL ASSISTANCE

For technical assistance, contact the CommScope Support Center using the following website address: <http://www.commscope.com/SupportCenter>