COMMSCOPE®

FiberGuide System

Installation Manual

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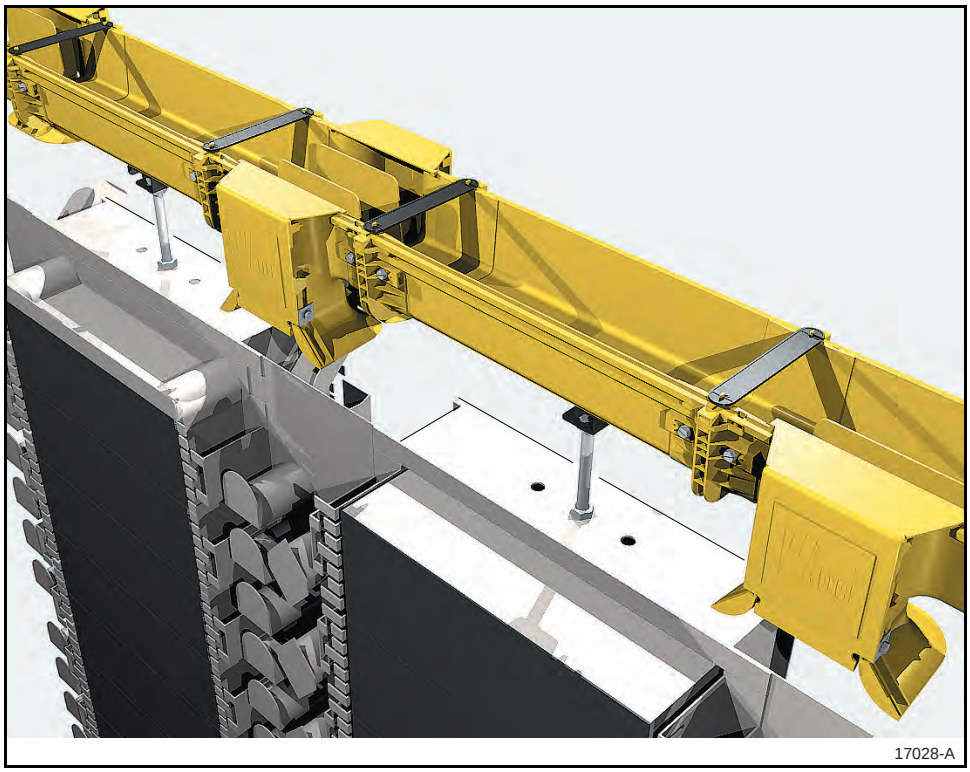

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REVISION HISTORY

ISSUE	DATE	REASON FOR CHANGE
1	09/2002	Original.
2	07/2009	Update cover and customer contact information.
3	12/2009	Add 24-inch FiberGuide product support.
4	2/2013	Convert to TE format.
5	4/2013	Correct error in footers (change to TE).
6	32016	Changed to CommScope format.

TRADEMARK INFORMATION

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TABLE OF CONTENTS

Content	Page
About This Manual	vii
Trademark Information	vii
Admonishments	vii
General Safety Precautions	vii
Nomenclature Used for Kit Catalog Numbers	viii

SECTION 1: INSTALLATION OVERVIEW AND GUIDELINES

1	MAIN STEPS		1-1
2	EXAMPLES OF COMPLETED SYSTEMS		1-2
3	TOOLS REQUIRED		1-5
4	PREPARATION		1-5
5	TOP-LEVEL PROCEDURE		1-6
6	GUIDELINES		1-7
	6.1	Placing Exits With Respect to Racks	1-7
	6.2	Patch Cord Densities and Trough Pile Up	1-12
	6.3	12 and 24-Inch FiberGuide System Guidelines	1-13

SECTION 2: INSTALLING SUPPORTS

1	INTRODUCTION		2-2
2	SUPPORT EXAMPLES		2-2
3	INSTALLING NEW THREADED RODS		2-4
	3.1	Ladder Rack Bracket Kit (FGS-HLDR-XX)	2-5
	3.2	Unistrut Bracket Kit (FGS-HDGR)	2-6
	3.3	Auxiliary Framing Kit (FGS-HFCK)	2-7
	3.4	Adjustable Angle Support Brackets Kit (FGS-HASB-XX-XX)	2-8
	3.5	Frame Mounting Hardware Kit (FGS-HKFM-XX)	2-9
4	INSTALLING 2-INCH SUPPORTS		2-10
	4.1	2-Inch Direct Support	2-10
	4.2	2-Inch Track Support	2-14
5	INSTALLING 4-INCH AND 6-INCH SUPPORTS		2-17
	5.1	New Threaded Rod Kit (FGS-HNTR-XX)	2-17
	5.2	Existing Threaded Rod Kit (FGS-HETR-XX)	2-18
	5.3	L-Bracket Kit (FGS-HLBK)	2-19
	5.4	Center Support Bracket Kit (FGS-HTUB-XX)	2-20
	5.5	Top Support C-Bracket Kit (Low Profile) (FGS-HNTS-XX-LP)	2-21
	5.6	Top Support C-Bracket Kit (FGS-HNTS-XX)	2-22
	5.7	Digital Cable Way Bracket Kit (FGS-HCBL-XX)	2-23
	5.8	Ladder Rack Cantilever Support Bracket Kit (FGS-HDLB-4)	2-24

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TABLE OF CONTENTS

Content	Page
5.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-AB)	2-25
5.10 OMX Frame Center Support Bracket Kit, 16 mm (FGS-HOMX-16MM)	2-26
5.11 Under Floor Support Kit (FGS-HUFB-A)	2-28
6 INSTALLING 12-INCH SUPPORTS	2-29
6.1 New Threaded Rod Bracket Kit (FGS-HNTR-F-XX)	2-30
6.2 Existing Threaded Rod Bracket Kit (FGS-HETR-F-XX)	2-31
6.3 Existing Threaded Rod Bracket Kit With Added Support Kit (FGS-F-XX-ACC)	2-32
6.4 Center Support New Threaded Rod Bracket Kit (FGS-HTUB-F-XX)	2-33
6.5 Top Support Threaded Rod C-Bracket Kit (FGS-HNTS-F-XX)	2-34
6.6 Top Support Threaded Rod C-Bracket Kit Low Profile (FGS-HNTS-F-XX-LP)	2-35
6.7 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-F-XX)	2-36
6.8 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-F-XX)	2-37
6.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-F)	2-38
6.10 Variable Support Bracket Kits (FGS-MHRT-F-VS, FGS-MDSP-F-VS, FGS-MH9E-F-VS, FGS-MHRT-F/B-VS, FGS-MHXP-F-VS, FGS-MHXP-F/B-VS, FGS-MDSP-F-VS)	2-39
7 INSTALLING 24-INCH SUPPORTS	2-43
7.1 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-H-XX)	2-44
7.2 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-H-XX)	2-45
7.3 Variable Support Bracket Kits (FGS-MH4E-H-VS, FGS-MHRT-H/F-VS, FGS-MHXP-H-VS, FGS-MHXP-F/H-VS)	2-46

SECTION 3:
INSTALLING HORIZONTAL COMPONENTS

1 INTRODUCTION	3-1
2 EXPANDABLE STRAIGHT SECTIONS (FGS-MVAR-X)	3-2
3 SLACK STORAGE STRAIGHT SECTION KIT (FGS-MSHS-STOR-X)	3-3
4 CUTTING STRAIGHT SECTIONS	3-4
4.1 Cutting 4, 6, or 12-inch Straight Sections	3-4
4.2 Cutting 24-inch Straight Sections	3-5
5 CUT-IN TEE KIT (FGS-MHIS-X)	3-5
6 INSTALLING A JUNCTION KIT	3-8
6.1 2x2 Junction Kit (FGS-MJWR-C)	3-8
6.2 2x6 Junction Kit (FGS-JUNC-G)	3-9
6.3 4x4, 4x6, 4x12 Junction Kits (FGS-JUNC-A/B/F)	3-10
6.4 Snap-Fit Junction Kits (FGS-MFAW-A/B/F/H)	3-11
7 INSTALLING ADAPTER KITS	3-13
7.1 4x4, 4x6, 4x12 Reverse Junction Adapter Kits (FGS-HRJA-A/B/F)	3-13
7.2 4x6 to 4x12 Side In Line Adapter Kits (FGS-MDSA-FB-R or FGS-MDSA-FB-L)	3-15
8 INSTALLING TRANSITION KITS	3-16
8.1 2-to-4-Inch Transition Kit (FGS-MDSA-AC)	3-16
8.2 4-to-6-Inch Transition Kit (FGS-MSDA-AB)	3-17
8.3 6-to-12-Inch Transition Kit (FGS-MSDA-FB)	3-18

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TABLE OF CONTENTS

Content	Page
8.4 12-to-Dual-6-Inch Transition Kit (FGS-MDSA-F2B)	3-19
8.5 12-to-24-Inch Transition Kit (FGS-MSDA-HF)	3-20

SECTION 4: INSTALLING VERTICAL COMPONENTS

1	INTRODUCTION	4-2
2	EXPRESS EXITS	4-4
2.1	2-Inch Express Exit Kit (FGS-MEXP-A/B/F)	4-4
2.2	4-Inch Express Exit Kit (FGS-MEXP-E-A/B/F)	4-6
2.3	2x6 Low Profile Express Exit Kit (FGS-MEXP-LP-G)	4-8
2.4	4x4, 4x6, 4x12 Low Profile Express Exit Kit (FGS-MEXP-LP-A/B/F)	4-10
3	DOWNSPOUTS	4-12
3.1	2-Inch Standard Downspout Kit (FGS-MSDS-C)	4-12
3.2	4-Inch Standard Downspout Kit (FGS-MSDP-X)	4-13
3.3	4x4, 4x6, 4x12 Insertable Downspout Kits (FGS-MDSP-X/I)	4-14
4	EXIT ATTACHMENTS	4-16
4.1	2x2 Exit Attachments	4-16
4.2	4x4, 2x6, 4x6 Exit Attachments	4-20
4.3	4x12 Trumpet Flare Kit (FGS-MTRM-X)	4-30
4.4	4x24 Trumpet Flare Kit (FGS-MTRM-X)	4-31
4.5	4x24 Island T with Single 12-inch Exit (FGS-ISLAND-H/F)	4-32
4.6	Installing 12-inch Junction on 4x24 Island T (FGS-ISLAND-H/F)	4-33
4.7	4x24 45º Up Elbow (FGS-MU4E-H)	4-34
4.8	4x24 45º Down Elbow (FGS-MD4E-H)	4-35
5	VERTICAL DUCTS	4-36
5.1	2x2 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW1-X)	4-36
5.2	4x4 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW2-D)	4-37
5.3	2x4 Vertical Slotted, 1.5 Inch Slot Spacing, Duct Kit (FGS-KTW2-E)	4-38

SECTION 5: INSTALLING COVERS, END CAPS, AND ACCESSORIES

1	INTRODUCTION	5-2
2	STRAIGHT SECTION COVERS	5-3
2.1	4- or 6-Inch Hinged Cover (FGS-MSHC-X)	5-3
2.2	6-Inch Snap-On Cover (FGS-MSSC-B/G)	5-4
2.3	12-Inch Snap-On Cover (FGS-MSSC-F)	5-6
3	FITTING COVERS	5-8
3.1	4-, 6-, or 12-Inch Plastic Fitting Covers (FGS-SXXX)	5-8
3.2	4- or 6-Inch Metallic Fitting Split Covers (FGS-CXXX)	5-9
3.3	24-Inch Fittings Fabric Covers (FGS-FXXX)	5-10

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TABLE OF CONTENTS

Content	Page
3.4 24-Inch Straight Section Fabric Covers (FGS-FSFC-H)	5-13
4 END CAPS	5-16
4.1 2x6 End Cap (FGS-HMEC-G)	5-16
4.2 4x4, 4x6, 4x12, 4x24 End Caps (FGS-HMEC-A/B/F/H)	5-18
5 ACCESSORIES	5-19
5.1 IFC Tie Down Kits (FGS-HIFC-A/B/F)	5-19
5.2 4x4, 4x6, 4x12 Slack Storage Spool Kit (FGS-STOR-A/B/F)	5-20
5.3 4x4, 4x6, 4x12 Inline Fin Kit (FGS-MFIN-X)	5-21

SECTION 6:
GENERAL INFORMATION

1 WARRANTY/SOFTWARE	6-1
2 SOFTWARE SERVICE AGREEMENT	6-1
3 REPAIR/EXCHANGE POLICY	6-1
4 REPAIR CHARGES	6-2
5 REPLACEMENT/SPARE PRODUCTS	6-2
6 RETURNED MATERIAL	6-2

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ABOUT THIS MANUAL

This manual provides guidelines and procedures for installing a FiberGuide System. This manual contains exploded views and explanatory text for the main types of FiberGuide kits.

TRADEMARK INFORMATION

The following trademarks are referenced in this manual:

FiberGuide is a registered trademark of CommScope, Inc.

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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

Caution: *CommScope recommends that FiberGuide components should be installed by two or more people working together. When assembling spans of FiberGuide components, take care to keep the length of the spans to such as can be easily handled by available personnel.*

Caution: *Always use appropriate personal safety equipment i.e. ear protection, safety glasses, gloves, etc., when assembling or working with FiberGuide components.*

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NOMENCLATURE USED FOR KIT CATALOG NUMBERS

In this manual the character **X** is used in kit catalog numbers to represent a variable character indicating size. Below is an example (catalog number for an expandable straight section):

FGS-MVAR-X

In this case, **X** could be replaced by the character **A**, **B**, **F,** or **H** for 4-inch, 6-inch, 12-inch, or 24-inch size duct.

X or **XX** may also represent a number or string of numbers. Below is an example (catalog number for a center support bracket):

FGS-HNTS-XX

In this case, **XX** could be replaced by the characters **1/2**, **5/8**, **12**, **14**, or **16** for 1/2-inch, 5/8-inch, 12 mm, 14 mm, or 16 mm (representing the diameter of threaded rod that the kit is used with).

Note: As the above examples suggest, all catalog numbers for FiberGuide kits begin with the same three characters, **FGS**.

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SECTION 1: INSTALLATION OVERVIEW AND GUIDELINES

Content		Page
1	MAIN STEPS	1-1
2	EXAMPLES OF COMPLETED SYSTEMS	1-2
3	TOOLS REQUIRED	1-5
4	PREPARATION	1-5
5	TOP-LEVEL PROCEDURE	1-6
6	GUIDELINES	1-7
6.1	Placing Exits With Respect to Racks	1-7
6.2	Patch Cord Densities and Trough Pile Up	1-12
6.3	12 and 24-Inch FiberGuide System Guidelines	1-13

1 MAIN STEPS

A typical FiberGuide installation involves the main steps shown in Figure 1-1. In Section 5, Steps 2 to 5 correspond to Sections 2 through 5 in this manual.

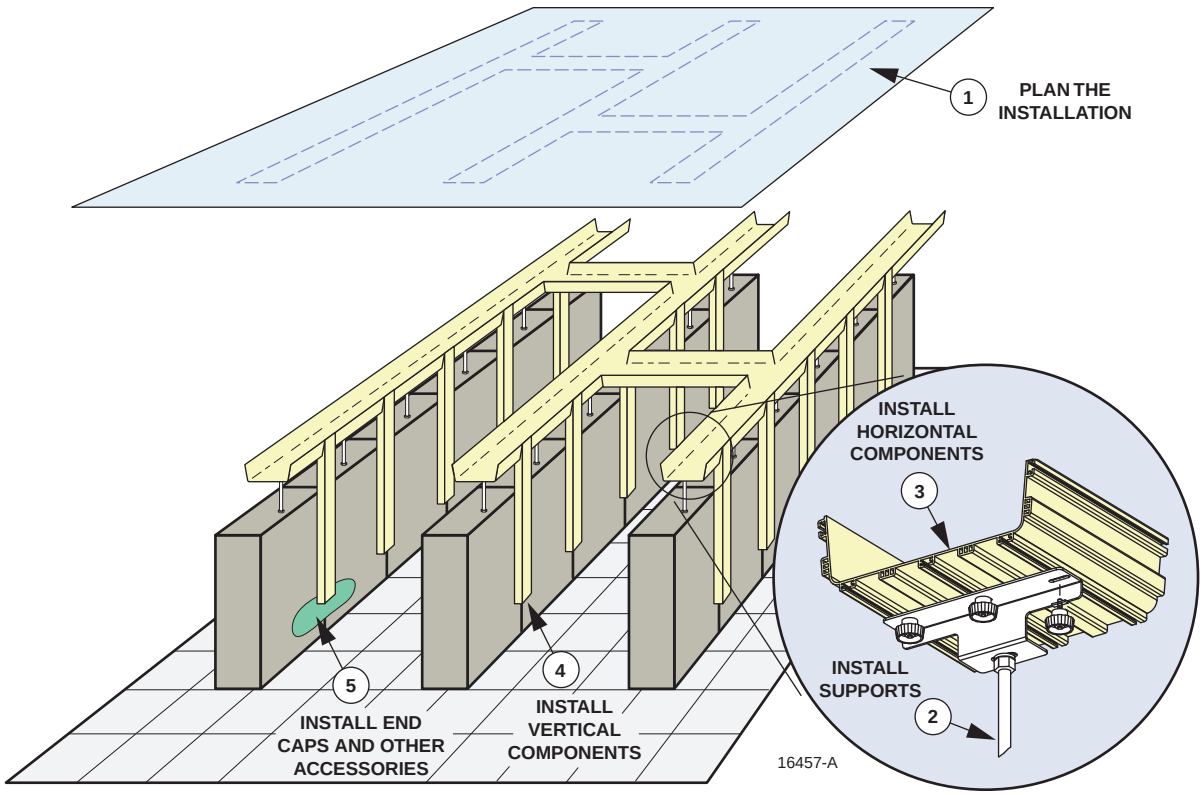

Figure 1-1. Main Steps in a Typical Installation

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2 EXAMPLES OF COMPLETED SYSTEMS

A FiberGuide system consists of basic components such as straight sections, fittings, junctions, downspout attachments, and support kits. Figure 1-2 shows an example of a completed system with key components labeled.

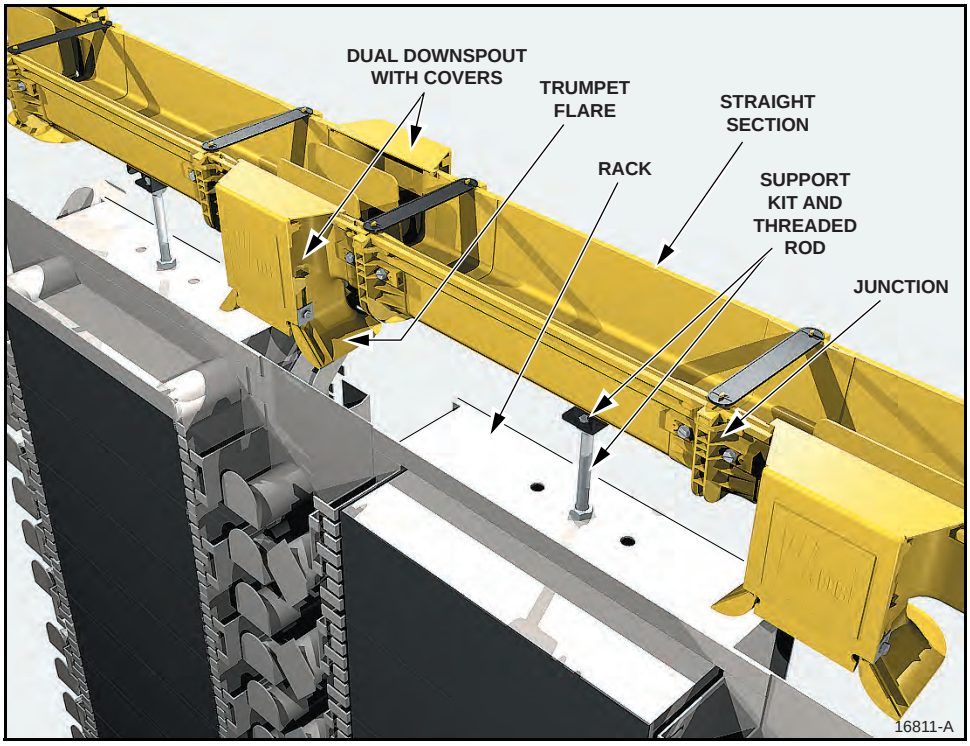

Figure 1-2. Example of Completed System

Figure 1-3, Figure 1-4, Figure 1-5, and Figure 1-6, on the following pages, show other examples of completed FiberGuide systems.

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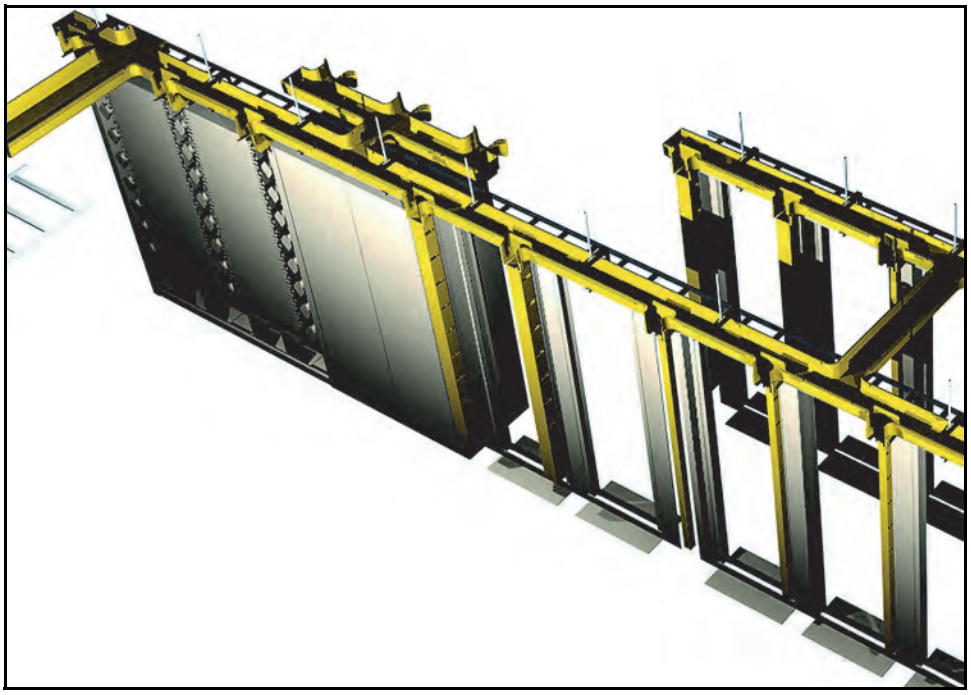

Figure 1-3. Top View of Completed System

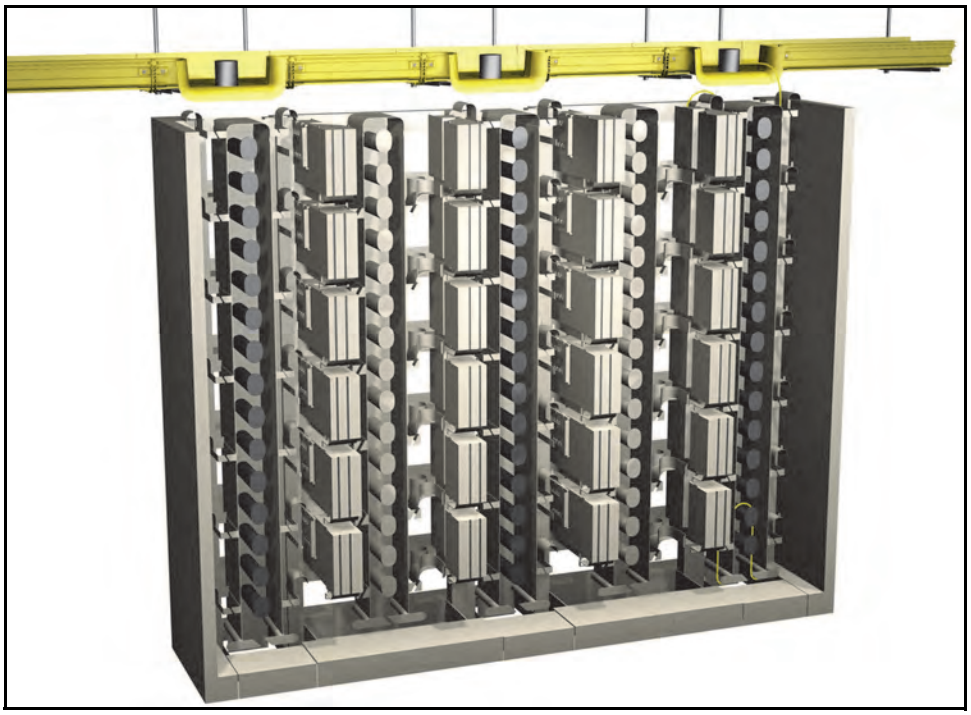

Figure 1-4. NGF Lineup With Island Ts

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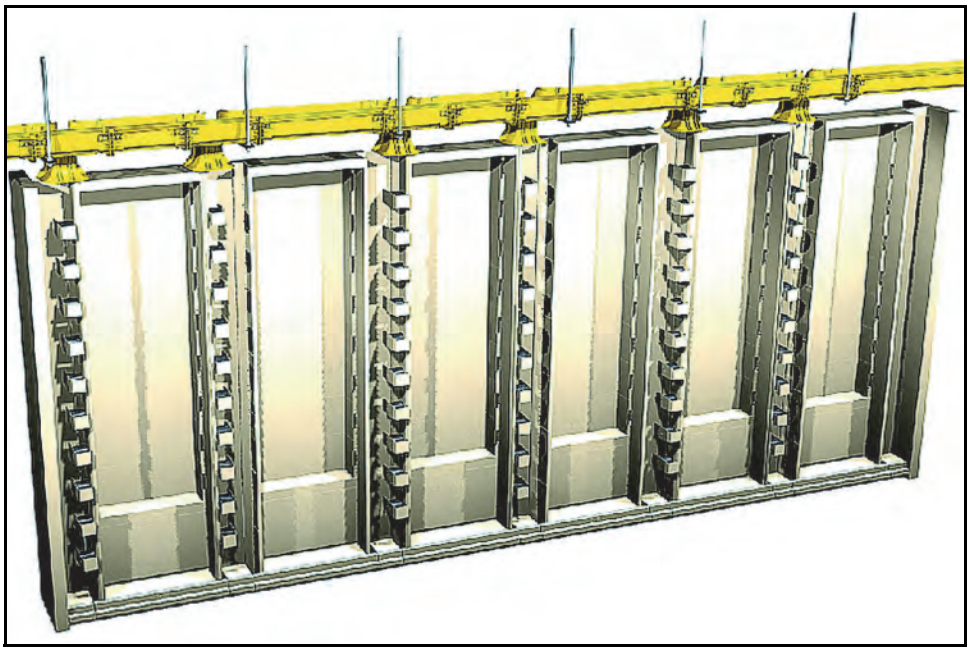

Figure 1-5. FDF Cross-Connect Lineup (Rear View)

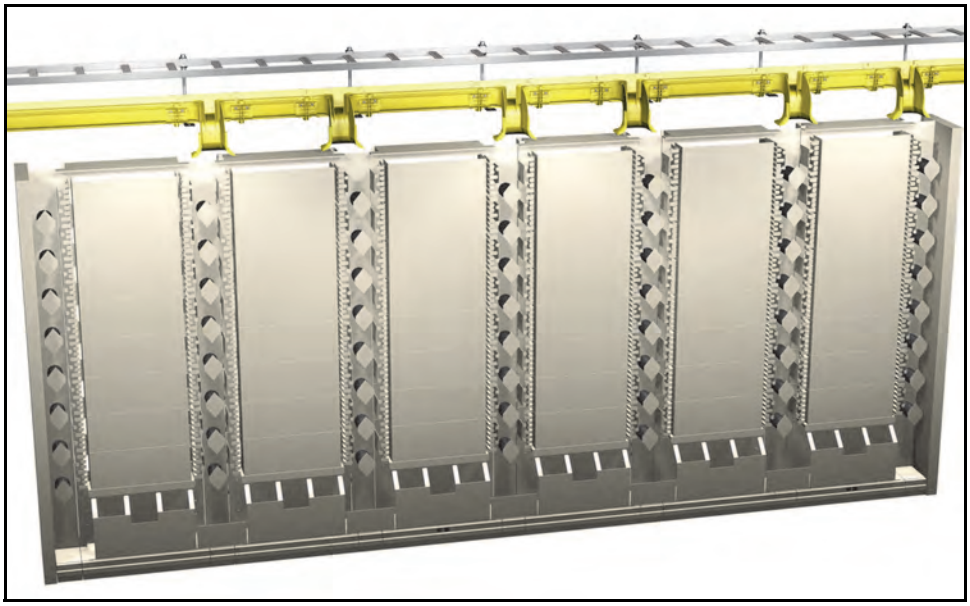

Figure 1-6. FDF Cross-Connect Lineup (Front View)

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3 TOOLS REQUIRED

The following tools may be required for installation:

1. 7/16-inch nut driver or 7/16-inch socket with ratchet handle and/or variable speed battery operated drill
2. 12-inch adjustable wrench
3. Plastic-pipe-cutting saw or regular cross-cut saw
4. CommScope miter box or cutting guide kit and saw (see Topic 4 on page 3-4)
5. File sufficient to remove burrs from plastic
6. Tape measure
7. Marker pen
8. Flat-blade screw driver
9. Phillips #2 screw driver
10. Long level (approximately 1 m or 1 yd. long)
11. Work table
12. Clean-up tools
13. Safety equipment; ear protection, safety glasses, gloves, etc.

4 PREPARATION

Complete the following steps before beginning installation:

1. Prepare an installation plan, if not already completed. For assistance, contact CommScope Customer Service using the contact information provided in Section 6.
2. Secure all required tools (listed in Topic 3 above).
3. Open all shipping cartons to verify that correct catalog numbers and quantities were received. Check off each part against the Summary Of Material included with the Installation Specification.
4. Unpack all items carefully and organize them into four groups corresponding to the main steps in installation:
   a. Supports
   b. Horizontal components
   c. Vertical components
   d. End caps and other accessories
5. Walk through the complete installation to verify routing of FiberGuide system against installation drawing. Make changes or adjustments to drawing as necessary.
6. Contact CommScope if additional parts are required because of damages, shortages, or adjustments to the installation plan. For more information, refer to Section 6.

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5 TOP-LEVEL PROCEDURE

Follow these main steps when installing the system.

Note: For safety and efficiency, installation requires a minimum of two people.

1. **Complete preparations per previous topic.**
2. **Install support kits (Section 2):**
   a. First install a sufficient number of supports to establish the location of all the horizontal segments of the system and to confirm the planned routing.

Note: If the system includes a combination of 2-inch, 4-inch, 6-inch, 12-inch, and/or 24-inch parts, install the support kits for the largest parts first.

   b. Proceed to install the remaining supports where needed.

Note: Observe the support spacing requirements given in Table 1-1.

Table 1-1. FiberGuide Size and Recommended Support Spacing

FIBERGUIDE SIZE	RECOMMENDED SUPPORT SPACING
2-inch	2 to 3 feet
2-inch track	5 to 6 feet
4- or 6-inch	5 to 6 feet*
12 and 24-inch	See topic 6.3 for 12 and 24-inch FiberGuide support recommendations
*- More supports may be needed if multiple fittings are placed near each other.	

   c. If the system includes 2-inch components, install aluminum extrusions in those segments of the system where track support kits are specified. Loosely secure aluminum extrusions to support kit brackets using the cap screws provided. Tighten the cap screws finger-tight only to permit adjustments in location of extrusions.

3. **Install horizontal components of system (Section 3):**
   a. Starting with the largest segments of the system, place several guideway components (fittings and straight sections) in position for mounting on the support kits. Determine the required location of various components by fitting them together on a trial basis.
   b. Working at floor level, assemble the system in segments by joining together a number of fittings and straight sections into assemblies of such length as can be handled by the available personnel. Cut whatever lengths of straight section are needed for assembly from the 6-foot (1.83-meter) sections.
   c. Secure the various assembled segments of the guideway system to the support kits, but tighten all fasteners finger-tight only. Adjust location of mounting brackets as needed.
   d. Level and square the complete system to insure that all runs are straight and adequately supported. Verify that each segment of system is mounted at the correct height.
   e. When the system is correctly adjusted, tighten all support kit fasteners. If aluminum extrusions were mounted, secure the extrusions to support brackets using the cap screws provided. Be careful not to over-tighten extrusion cap screws; overtightening could strip the aluminum threads.

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4. **Install vertical components of system (Section 4):**
   a. Connect the flexible tubing systems or vertical straight sections to downspouts.
   b. Route the flexible tubing or vertical straight section to its interface point with the vertical duct kit or specified termination point. Cut the tubing or straight section to required length.
   c. Install vertical duct kits on the fiber bay equipment racks. Cut straight sections of duct to required length. Adjust depth of 2-inch vertical ducts to facilitate routing of patch cords into equipment.
5. **Install covers and end caps (Section 5):**
   a. Install snap-on covers on all 2-inch fittings and straight sections.
   b. Install fixed covers on all 4-inch, 6-inch, and 12-inch “up” elbows.
   c. Install optional covers, hinged or snap-on onto all 4-inch or 6-inch fittings and straight sections. Install optional snap-on covers on all 12 and 24-inch fittings and straight sections.
   d. Install end caps.
6. **Complete and check system:**
   a. Apply warning labels (included with junction kits) at several points throughout the system.
   b. To prevent rust and corrosion, paint the ends of all threaded rods that were cut to length.
   c. Inspect the complete system for missing fasteners, straightness, interference problems, sagging, missing covers, and so on, and correct as needed.
   d. Clean up any waste materials and store all unused parts.

6 GUIDELINES

6.1 Placing Exits With Respect to Racks

In placing exits, consider rack type and configuration. Below are some guidelines.

6.1.1 Fiber Distribution Frame (FDF)

In an FDF cross-connect configuration, exits should be placed above Rear Fiber Storage Panels (RFSPs), facing to the rear as shown in Figure 1-7. In an FDF interconnect configuration, exits should be placed above Interbay Management Panels (IMPs), facing to the front as shown in Figure 1-8.

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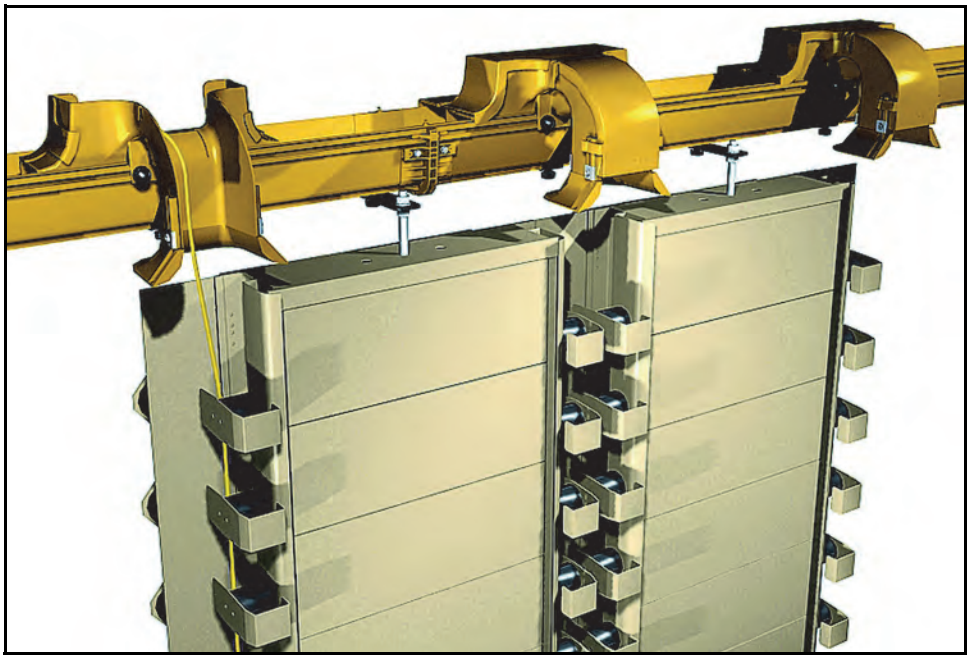

Figure 1-7. FDF Lineup With Rear-Facing Express Exits Above RFSPs

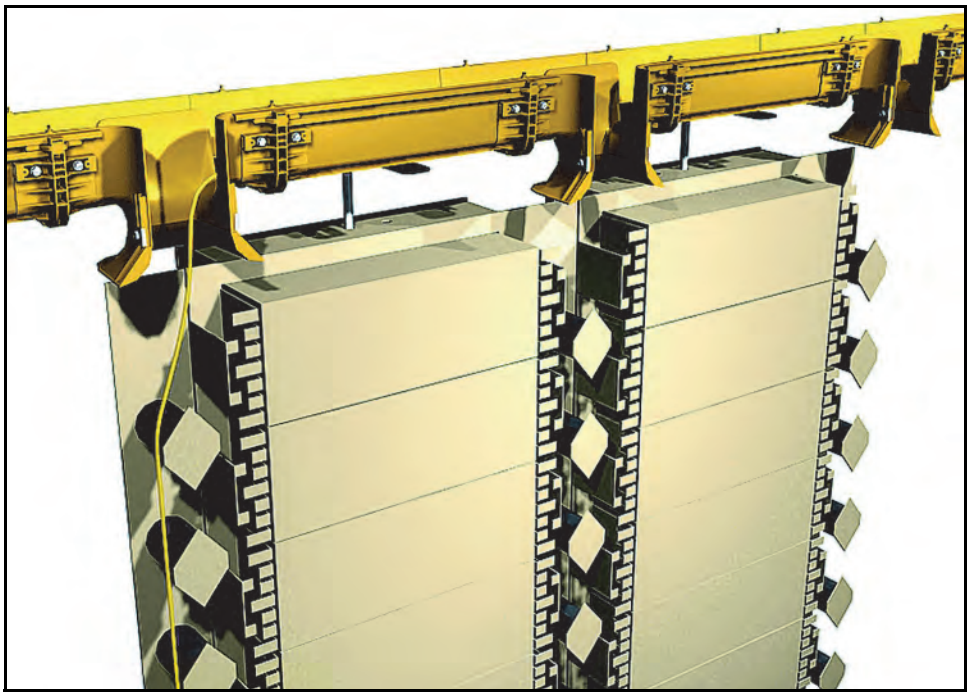

Figure 1-8. FDF LIneup With Front-Facing Trumpet Flare Exits

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6.1.2 Fiber Main Distribution Frame With FOT Storage Bays

Figure 1-9 shows recommended exit placement for a cross-connect FMDF lineup consisting of, from left to right, an FMDF, a FOT Storage Bay (FOTSB), and a second FMDF. An exit is placed above the FOTSB for use in dropping FOT patch cords to the FOTSB. Outside Plant (OSP) cables are terminated on the rear side.

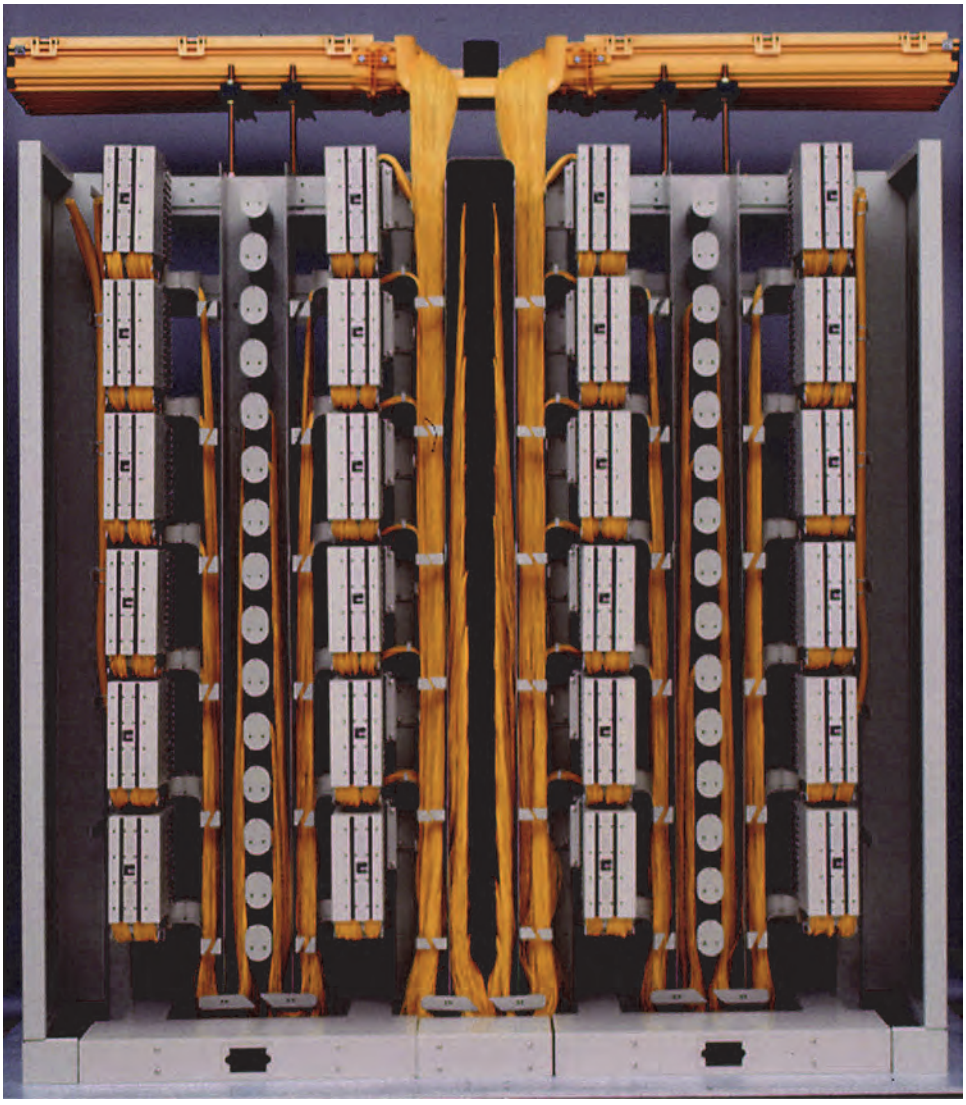

Figure 1-9. Exit Placement Above FOTSB

Figure 1-10 and Figure 1-11 provide another view of a FiberGuide system for an FMDF lineup. Note the use of Island T to segregate patch cords in a high density application.

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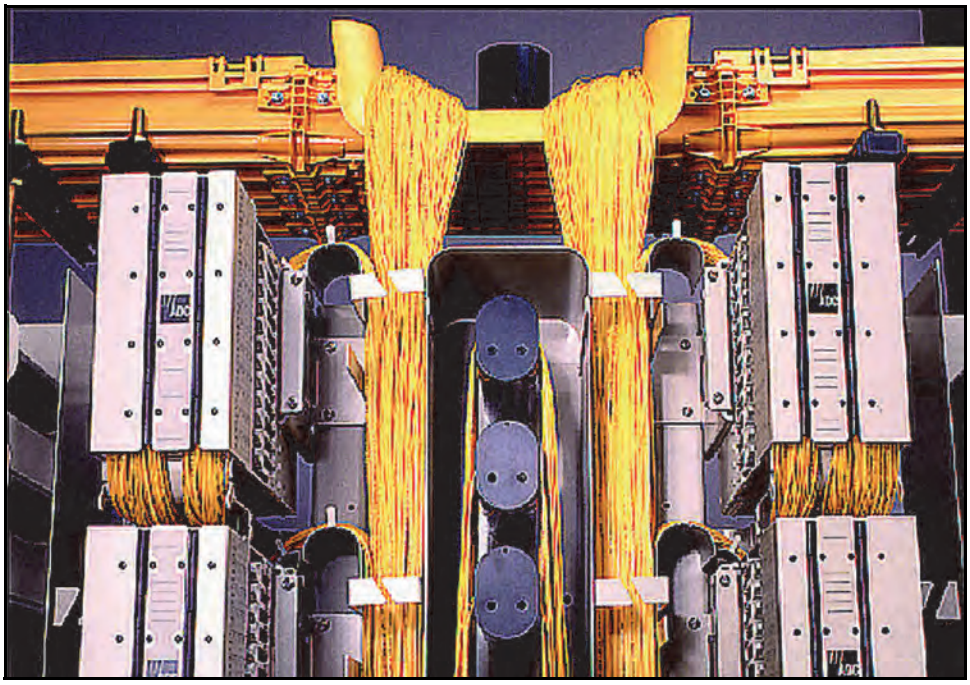

Figure 1-10. Front Views of Exit With Island T

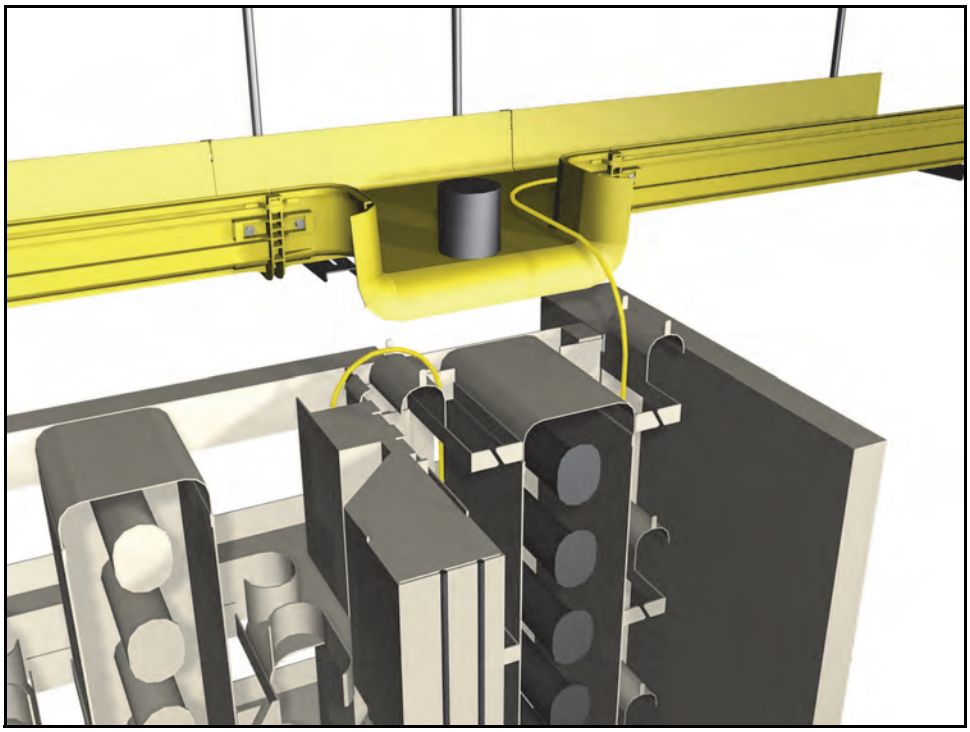

Figure 1-11. Another View of Exit With Island T

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6.1.3 FL2000

Figure 1-12 shows the recommended exit placement for an FL2000 lineup using 4-inch Express Exits. Figure 1-13 shows the same lineup with standard downspouts.

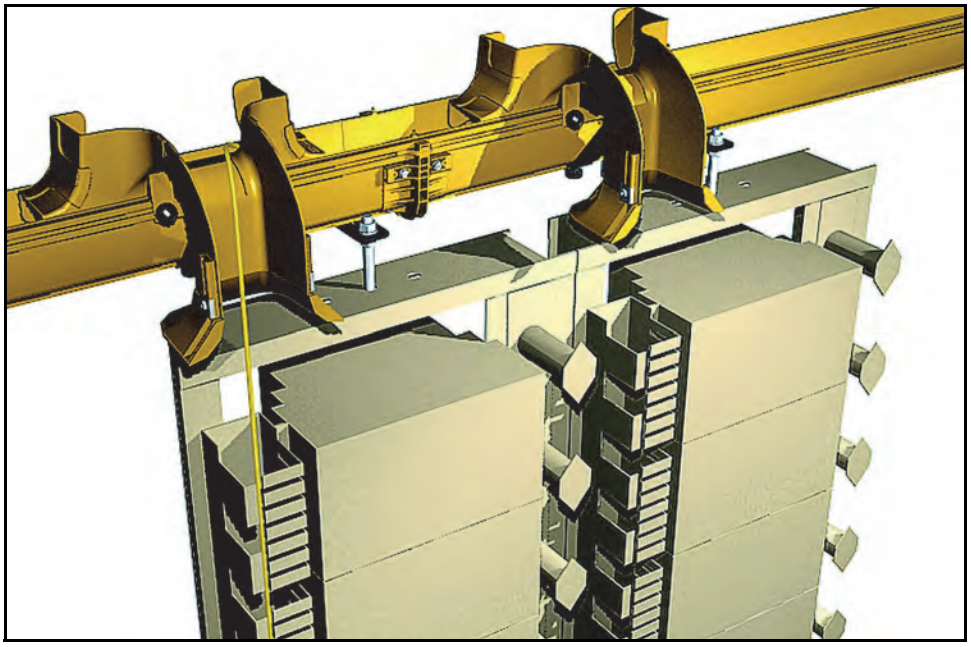

Figure 1-12. Recommended Exit Placement for FL2000 Lineup Using 4-Inch Express Exits

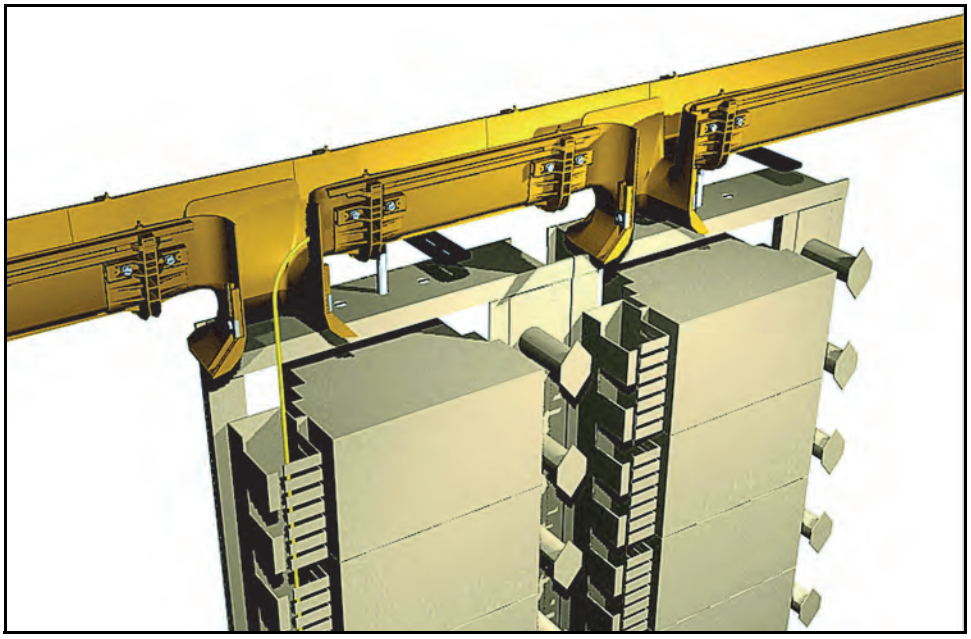

Figure 1-13. Same Lineup With Standard Downspouts

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6.2 Patch Cord Densities and Trough Pile Up

Tables below provide guidelines for patch cord densities and trough pile up in FiberGuide systems of various trough sizes. “Recommended” values in Table 1-2 and Table 1-3 take into consideration random placement of patch cords. “Maximum” values in Table 1-4 and Table 1-5 refer to how many perfectly arranged patch cords could be placed in a trough of the specified size. Table 1-6 provides guidelines for Tracerlight™ Patch Cords.

Table 1-2. CommScope Recommended Patch Cord DensitiesIssue 6

PATCH CORD DIAMETER	RECOMMENDED DENSITY
1.7 mm	120
2.0 mm	90
3.0 mm	40

Table 1-3. Recommended Trough Pile UpIssue 6

TROUGH PILE-UP	2X2 FIBERGUIDE SYSTEM			2X6 FIBERGUIDE SYSTEM			4X4 FIBERGUIDE SYSTEM		
	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM
2 inch	480	360	160	1440	1080	480	960	720	320
3 inch	– – –	– – –	– – –	– – –	– – –	– – –	1440	1080	480
4 inch	– – –	– – –	– – –	– – –	– – –	– – –	1920	1440	640

TROUGH PILE-UP	4X6 FIBERGUIDE SYSTEM			4X12 FIBERGUIDE SYSTEM			4X24 FIBERGUIDE SYSTEM		
	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM
2 inch	1440	1080	480	2880	2160	960	5760	4320	1920
3 inch	2160	1620	720	4320	3240	1440	8640	6480	2880
4 inch	2880	2160	960	5760	4320	1920	11520	8640	3840

Table 1-4. Maximum Patch Cord DensitiesIssue 6

PATCH CORD DIAMETER	RECOMMENDED DENSITY
1.7 mm	142
2.0 mm	102
3.0 mm	44

Table 1-5. Maximum Trough Pile UpIssue 6

TROUGH PILE-UP	2X2 FIBERGUIDE SYSTEM			2X6 FIBERGUIDE SYSTEM			4X4 FIBERGUIDE SYSTEM		
	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM
2 inch	568	408	176	1704	1224	538	1136	816	352
3 inch	– – –	– – –	– – –	– – –	– – –	– – –	1704	1224	528
4 inch	– – –	– – –	– – –	– – –	– – –	– – –	2272	1632	704

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TROUGH PILE-UP	4X6 FIBERGUIDE SYSTEM			4X12 FIBERGUIDE SYSTEM			4X24 FIBERGUIDE SYSTEM		
	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM	1.7 MM	2.0 MM	3.0 MM
2 inch	1704	1224	528	3408	2448	1056	6816	4869	2112
3 inch	2556	1836	792	5112	3672	1584	10224	7344	3168
4 inch	3408	2448	1056	6816	4896	2112	13632	9792	4224

Table 1-6. TracerLight™ Patch CordsIssue 6

TROUGH PILE-UP	2X2 FIBERGUIDE SYSTEM	2X6 FIBERGUIDE SYSTEM	4X4 FIBERGUIDE SYSTEM
	SIMPLEX TRACER LIGHT	SIMPLEX TRACER LIGHT	SIMPLEX TRACER LIGHT
2 inch	260	780	520
3 inch	– – –	– – –	780
4 inch	– – –	– – –	1040

TROUGH PILE-UP	4X6 FIBERGUIDE SYSTEM	4X12 FIBERGUIDE SYSTEM	4X24 FIBERGUIDE SYSTEM
	SIMPLEX TRACER LIGHT	SIMPLEX TRACER LIGHT	SIMPLEX TRACER LIGHT
2 inch	780	1560	3120
3 inch	1170	2340	4680
4 inch	1560	3120	6240

6.3 12 and 24-Inch FiberGuide System Guidelines

When installing a 12 or 24-inch FiberGuide System, observe these guidelines.

1. **Use support kits available from CommScope.**

   CommScope support kits allow you to attach FiberGuide system components to existing hardware, such as in-place cable racks, digital cable ways, existing threaded rods, and equipment racks.

2. **Place support brackets directly under FiberGuide fittings.**

   FiberGuide fittings include Ts, elbows, crosses, and downspouts. If it is not possible to install support brackets directly under the fittings, install support brackets under the FiberGuide straight sections as close to the fittings as possible.

3. **Avoid supporting 12 or 24-inch FiberGuide from Unistrut.**

⚠ **Caution:** *Unistrut may not be able to support the weight of high patch cord densities. Cantilever brackets should not be supported from Unistrut.*

4. **Provide additional support on long runs.**

   When combining several 12 or 24-inch straight sections, install support brackets on each side of the junctions, as shown in Figure 1-14. Maintain a maximum distance of five feet between support brackets.

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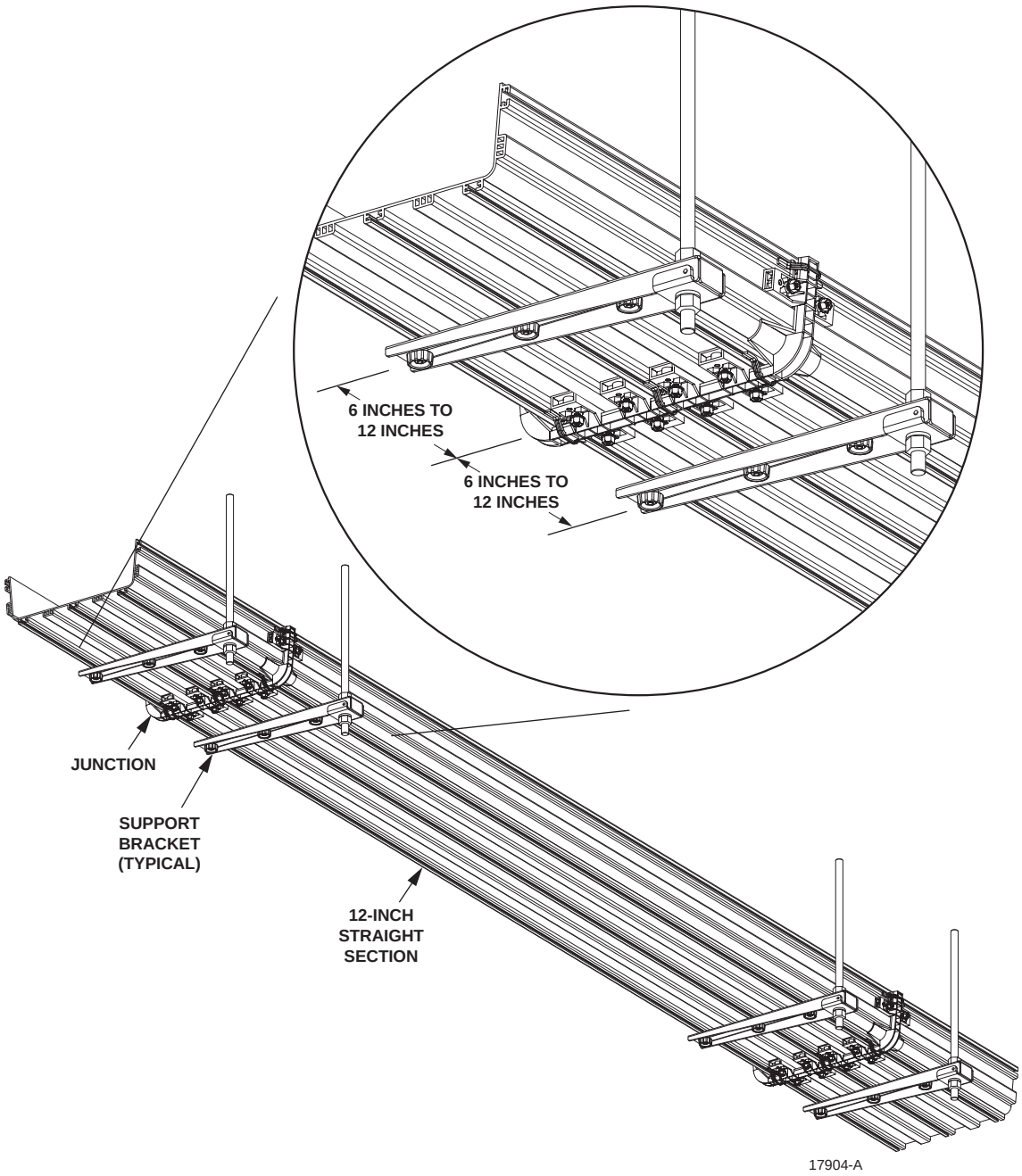

Figure 1-14. Support Brackets at Junction (12-inch shown)

5. Use 5/8-inch diameter size threaded rod.

1/2-inch or smaller threaded rods may not be adequate to support the weight of high patch cord density systems. Instead, use 5/8-inch rods.

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6. **When possible, attach fittings to support brackets using self-drilling screws.**

   Put the screws through the support bracket holes into the bosses on the bottom of the fittings, as shown in Figure 1-15. Take extra care in securing downspouts.

Figure 1-15. 12-Inch Support Brackets Mounted on 12-to-6-Inch Tee

7. **If support brackets cannot be directly attached to fitting bosses, use variable fitting support locators.**

   Variable fitting support locators permit support brackets to be attached anywhere along the bottom of the fitting. An example of using variable support locator brackets is shown in Figure 1-16. After attaching variable fitting support locators to the fittings, fasten variable support locator brackets to the support brackets using the T-bolts through the channels in the locator brackets and through the holes in the support brackets (see Figure 1-17).

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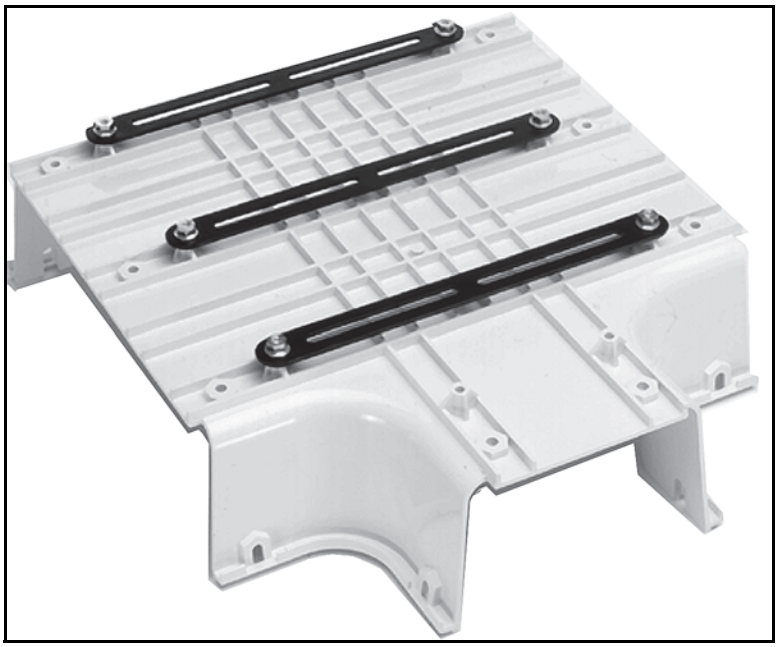

Figure 1-16. Variable Support Locator Brackets Mounted on 12-to-6-Inch Tee

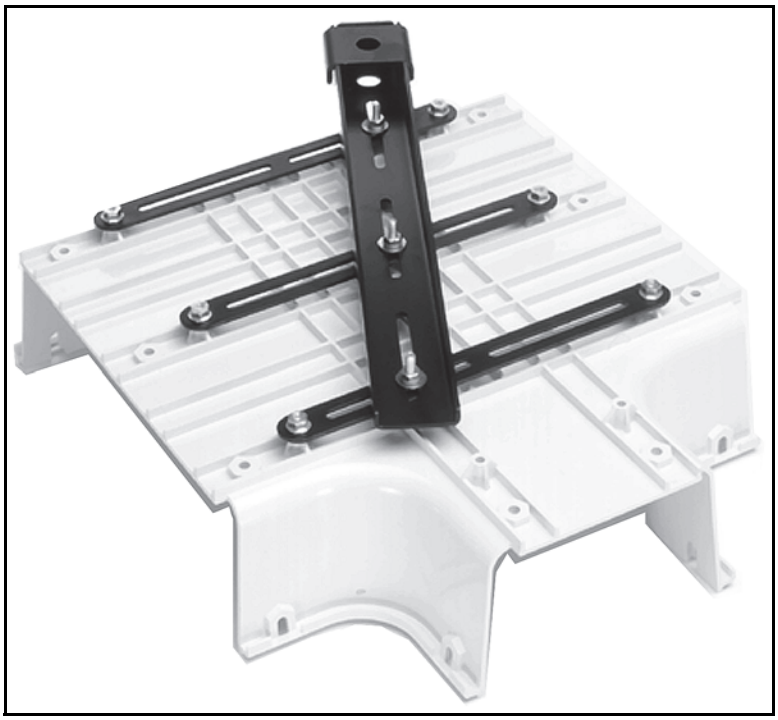

Figure 1-17. Variable Support Locator, Diagonal Arrangement on 12-to-6-Inch Tee

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SECTION 2: INSTALLING SUPPORTS

Content	Page
1 INTRODUCTION	2-2
2 SUPPORT EXAMPLES	2-2
3 INSTALLING NEW THREADED RODS	2-4
3.1 Ladder Rack Bracket Kit (FGS-HLDR-XX)	2-5
3.2 Unistrut Bracket Kit (FGS-HDGR)	2-6
3.3 Auxiliary Framing Kit (FGS-HFCK)	2-7
3.4 Adjustable Angle Support Brackets Kit (FGS-HASB-XX-XX)	2-8
3.5 Frame Mounting Hardware Kit (FGS-HKFM-XX)	2-9
4 INSTALLING 2-INCH SUPPORTS	2-10
4.1 2-Inch Direct Support	2-10
4.1.1 Ladder Rack Kit (FGS-HLR2-C)	2-10
4.1.2 Bay Top Kit (FGS-BTBS-C or FGS-BTBL-C)	2-11
4.1.3 Under Floor Kit (FGS-HUFB-C)	2-12
4.1.4 Digital Cableway Support Kit (FGS-HDCB-C)	2-13
4.2 2-Inch Track Support	2-14
4.2.1 Aluminum Track Kit (FGS-HASK-C)	2-14
4.2.2 New Threaded Rod Kit (FGS-HTR2-XX)	2-15
4.2.3 Existing Threaded Rod Kit	2-16
5 INSTALLING 4-INCH AND 6-INCH SUPPORTS	2-17
5.1 New Threaded Rod Kit (FGS-HNTR-XX)	2-17
5.2 Existing Threaded Rod Kit (FGS-HETR-XX)	2-18
5.3 L-Bracket Kit (FGS-HLBK)	2-19
5.4 Center Support Bracket Kit (FGS-HTUB-XX)	2-20
5.5 Top Support C-Bracket Kit (Low Profile) (FGS-HNTS-XX-LP)	2-21
5.6 Top Support C-Bracket Kit (FGS-HNTS-XX)	2-22
5.7 Digital Cable Way Bracket Kit (FGS-HCBL-XX)	2-23
5.8 Ladder Rack Cantilever Support Bracket Kit (FGS-HDLB-4)	2-24
5.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-AB)	2-25
5.10 OMX Frame Center Support Bracket Kit, 16 mm (FGS-HOMX-16MM)	2-26
5.11 Under Floor Support Kit (FGS-HUFB-A)	2-28
6 INSTALLING 12-INCH SUPPORTS	2-29
6.1 New Threaded Rod Bracket Kit (FGS-HNTR-F-XX)	2-30
6.2 Existing Threaded Rod Bracket Kit (FGS-HETR-F-XX)	2-31
6.3 Existing Threaded Rod Bracket Kit With Added Support Kit (FGS-F-XX-ACC)	2-32
6.4 Center Support New Threaded Rod Bracket Kit (FGS-HTUB-F-XX)	2-33
6.5 Top Support Threaded Rod C-Bracket Kit (FGS-HNTS-F-XX)	2-34
6.6 Top Support Threaded Rod C-Bracket Kit Low Profile (FGS-HNTS-F-XX-LP)	2-35
6.7 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-F-XX)	2-36
6.8 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-F-XX)	2-37
6.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-F)	2-38

(continued)

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Content Page

6.10 Variable Support Bracket Kits (FGS-MHRT-F-VS, FGS-MDSP-F-VS, FGS-MH9E-F-VS, FGS-MHRT-F/B-VS, FGS-MHXP-F-VS, FGS-MHXP-F/B-VS, FGS-MDSP-F-VS) 2-39
7 INSTALLING 24-INCH SUPPORTS 2-43
7.1 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-H-XX) 2-44
7.2 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-H-XX) 2-45
7.3 Variable Support Bracket Kits (FGS-MH4E-H-VS, FGS-MHRT-H/F-VS, FGS-MHXP-H-VS, FGS-MHXP-F/H-VS). 2-46

1 INTRODUCTION

"Supports" are used to provide a physical foundation for the horizontal components of FiberGuide along the ceiling or floor. This section contains exploded views and procedures for standard FiberGuide support kits. Contact CommScope Technical Assistance Center (TAC) for custom support brackets.

2 SUPPORT EXAMPLES

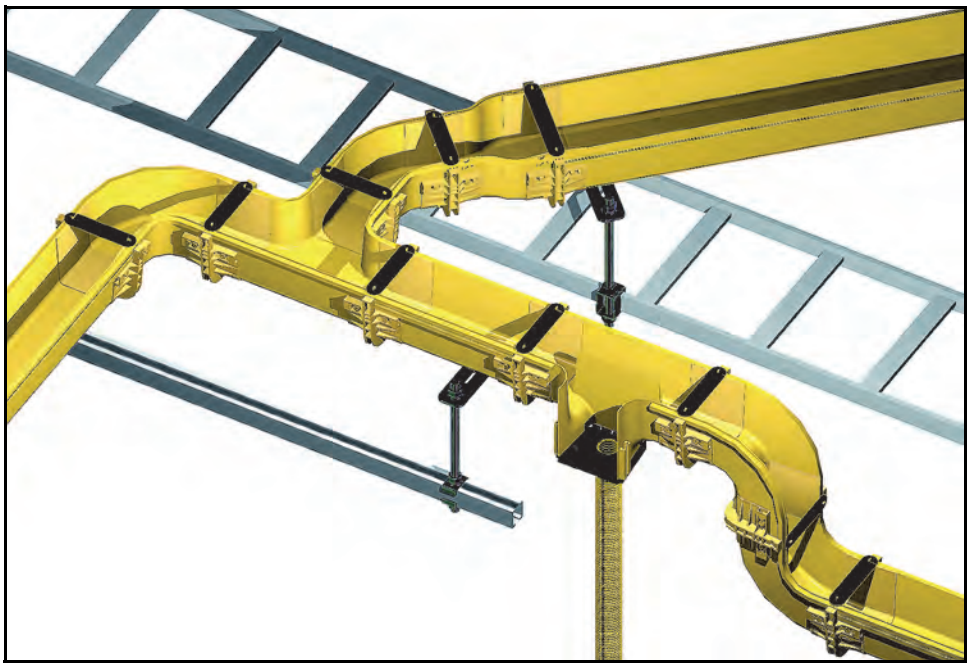

Figure 2-1. Threaded Rod Supports on Existing Support Structure

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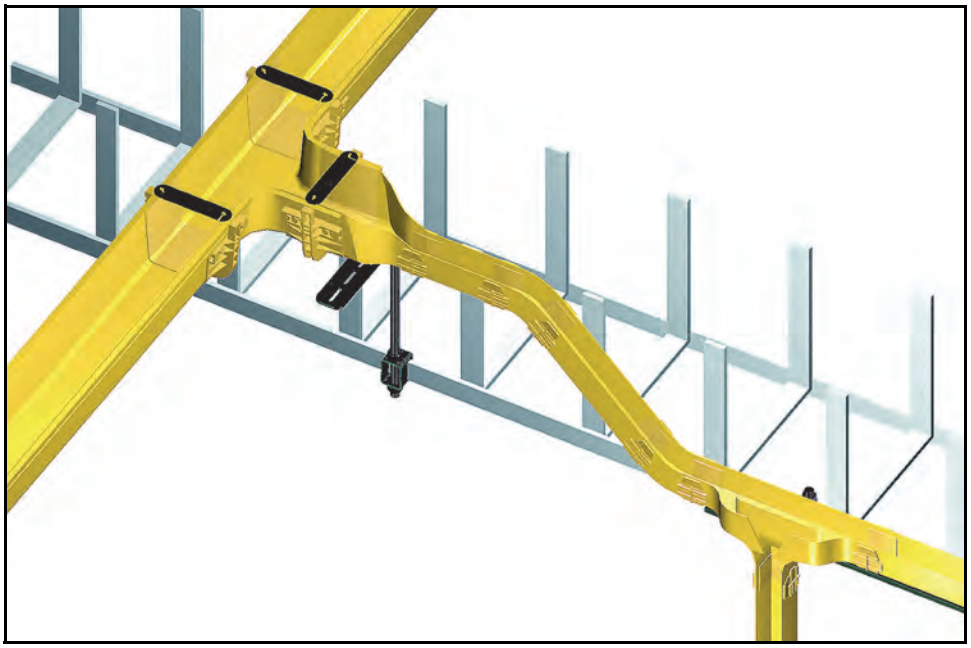

Figure 2-2. 4-Inch and 2-Inch FiberGuide on Ladder Rack

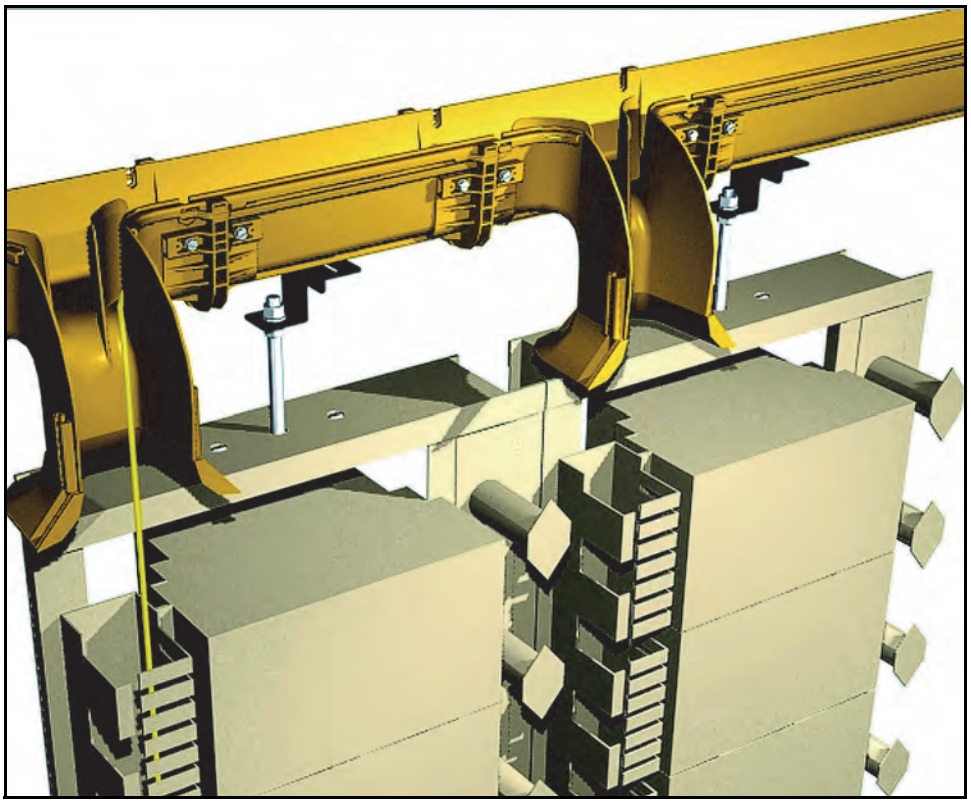

Figure 2-3. Rack-Top Support Example With Extended Downspouts

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3 INSTALLING NEW THREADED RODS

Many of the support kits used for FiberGuide are installed on a threaded rod. If threaded rods do not exist in the desired locations, you can attach threaded rods to the existing office infrastructure using the kits documented in this section.

Note: Threaded rods are shown for reference in the kit exploded views. Threaded rods are not included in the kit; they must be purchased separately.

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3.1 Ladder Rack Bracket Kit (FGS-HLDR-XX)

Install a ladder rack bracket kit in the following order, referring to Figure 2-4.

1. Place all kit components on the new threaded rod in the order shown.
2. Position ladder clamps on the ladder rack.
3. Tighten nuts on both ends to secure new threaded rod in the desired location.

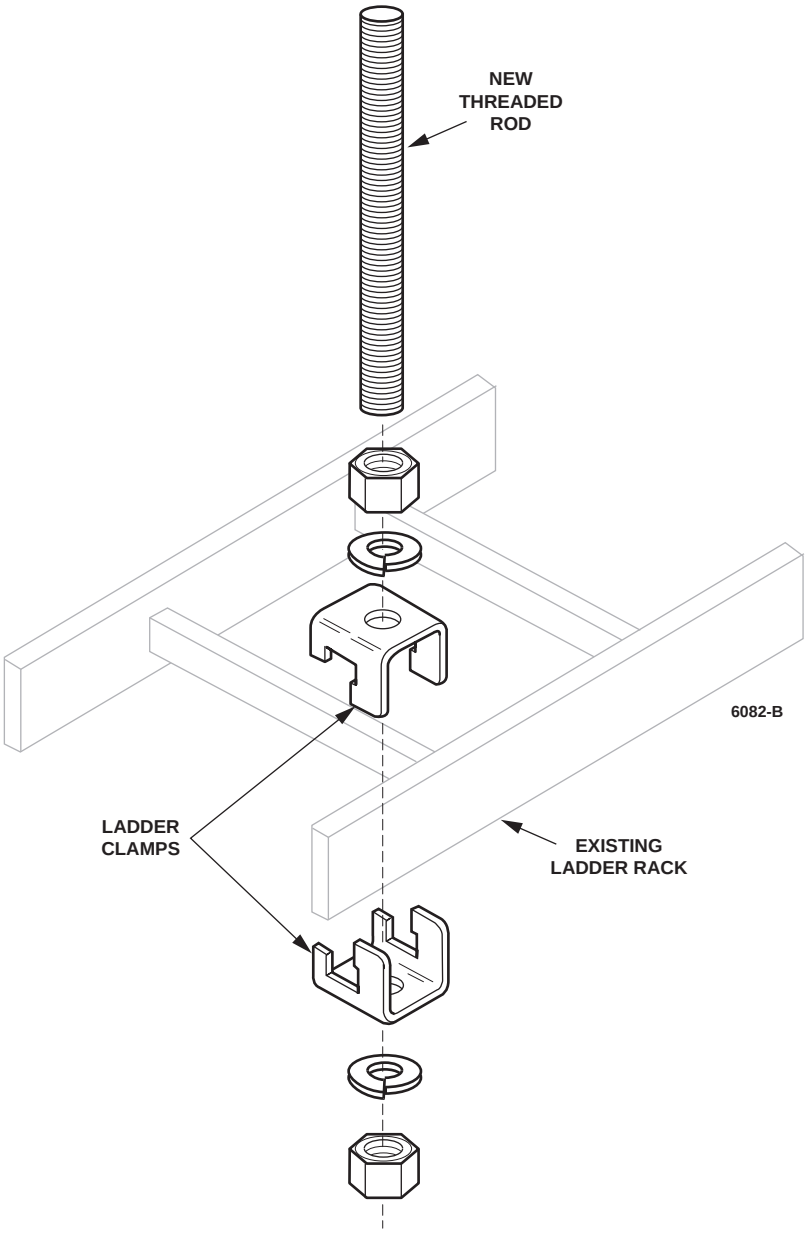

Figure 2-4. Installing Ladder Rack Bracket Kit

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3.2 Unistrut Bracket Kit (FGS-HDGR)

Install a unistrut bracket kit in the following order, referring to Figure 2-5.

1. Install two hex nuts and lock washers in the bracket in the location shown.
2. Fasten hex screws to the spring nuts and tighten just enough to secure the bracket.
3. Place spring nuts in the channel-type framing and slide the spring nuts and bracket within the framing to the desired location.
4. Place new threaded rod into bracket and secure it using a washer and hex nut on either end of the threaded rod as shown.
5. Tighten hex nuts on both ends to secure new threaded rod in the desired location.

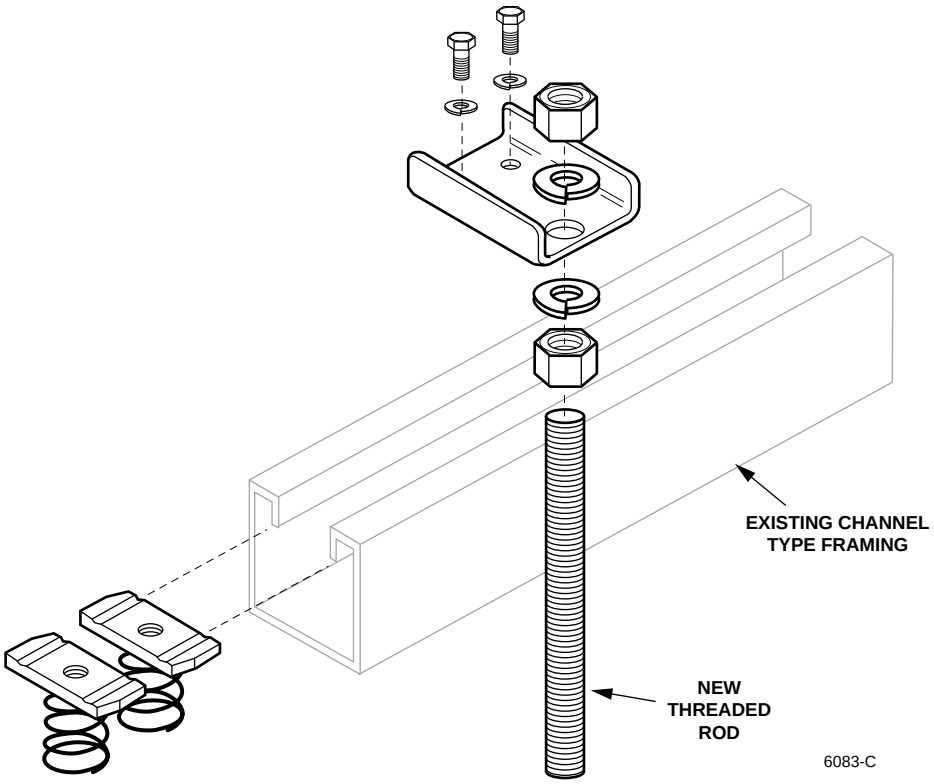

Figure 2-5. Installing Unistrut Bracket Kit

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3.3 Auxiliary Framing Kit (FGS-HFCK)

Install an auxiliary framing kit in the following order, referring to Figure 2-6.

1. Install hardware shown on the threaded rods.
2. Install the rods on the frame, adjust and tighten nuts.

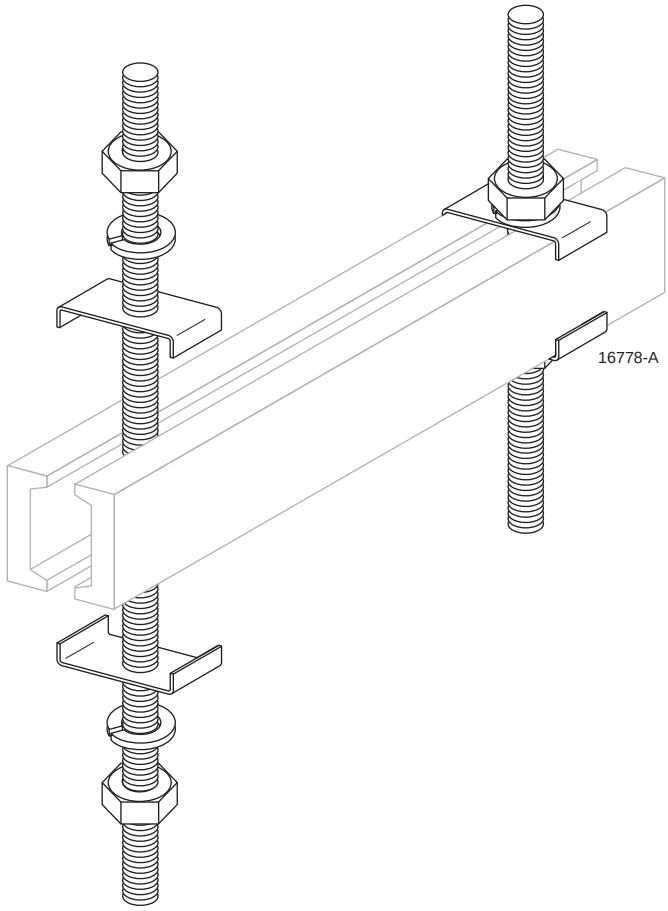

Figure 2-6. Installing Auxiliary Framing Kit

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3.4 Adjustable Angle Support Brackets Kit (FGS-HASB-XX-XX)

These kits may be used to reinforce a structure such as a ladder rack that is being used to anchor FiberGuide supports. Install a kit in the following order, referring to Figure 2-7.

1. Install an angle bracket on the structure that is being reinforced.
2. Install a second angle bracket on the structure being used to reinforce the first structure (for example, a steel pillar or cement wall); use a mounting bolt, anchor bolt, lag bolt, or whatever is required based on the nature of the support.
3. Insert a threaded rod between the two angle brackets and secure threaded rod on each end using the lock washer and nut provided in the kit.

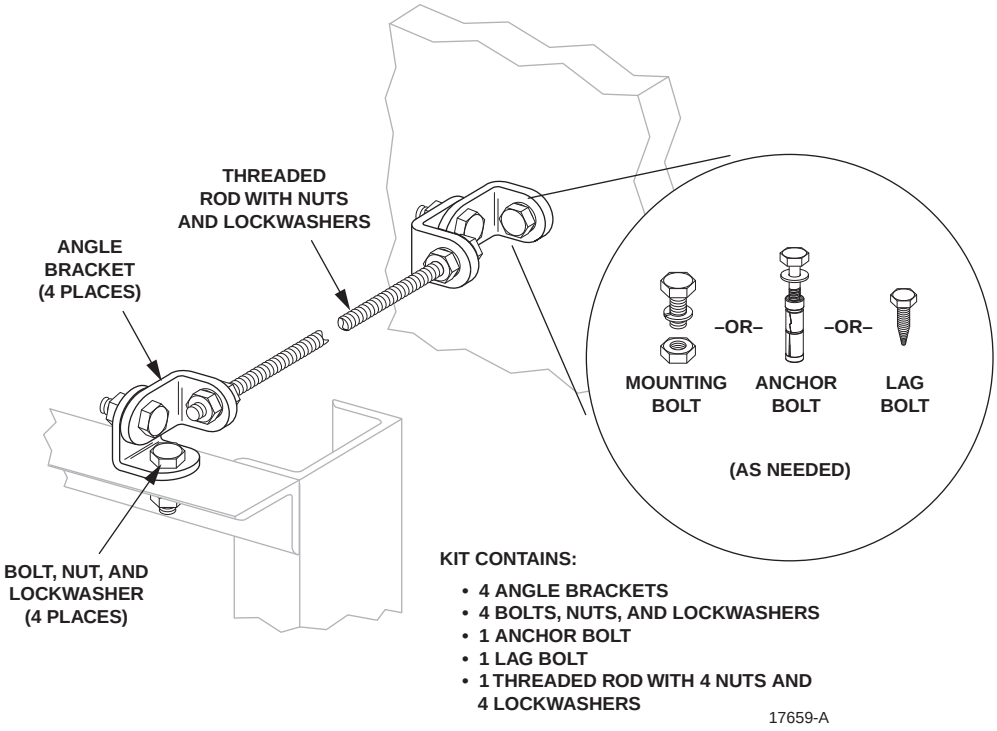

Figure 2-7. Installing Adjustable Angle Support Brackets Kit

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3.5 Frame Mounting Hardware Kit (FGS-HKFM-XX)

Install the kit in the following order, referring to Figure 2-8.

Note: This figure also shows several components that may be ordered as separate kits including lock washers (FGS-HKFM-XX), hex nuts (FGS-HKFM-XX), and threaded rod (FGS-HTHR-XX-XX).

1. Fasten a rod to the frame using the hardware shown on the bottom of the rod.
2. Use hardware shown on top of the rod to fasten rod to the desired FiberGuide kit.

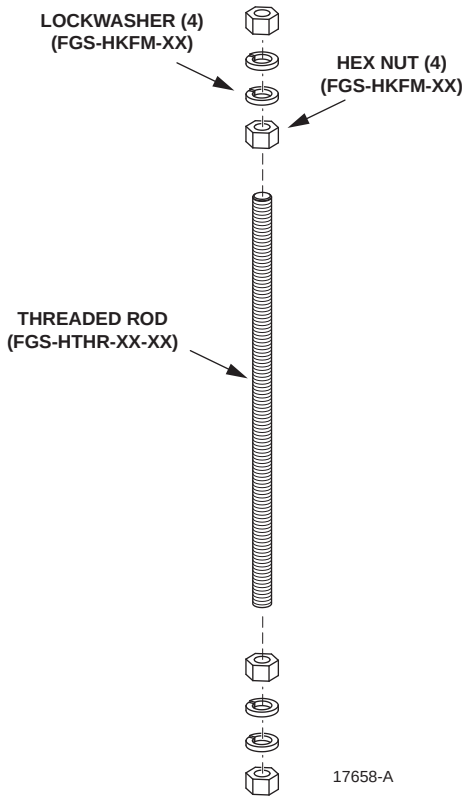

Figure 2-8. Installing Frame Mounting Hardware Kit

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4 INSTALLING 2-INCH SUPPORTS

4.1 2-Inch Direct Support

4.1.1 Ladder Rack Kit (FGS-HLR2-C)

Install a ladder rack kit in the following order, referring to Figure 2-9.

1. Place J-bolt and bracket on existing ladder rack and secure with a lock washer and nut.
2. Position straight section on the bracket.
3. Secure with screws, lock washers, and nuts.

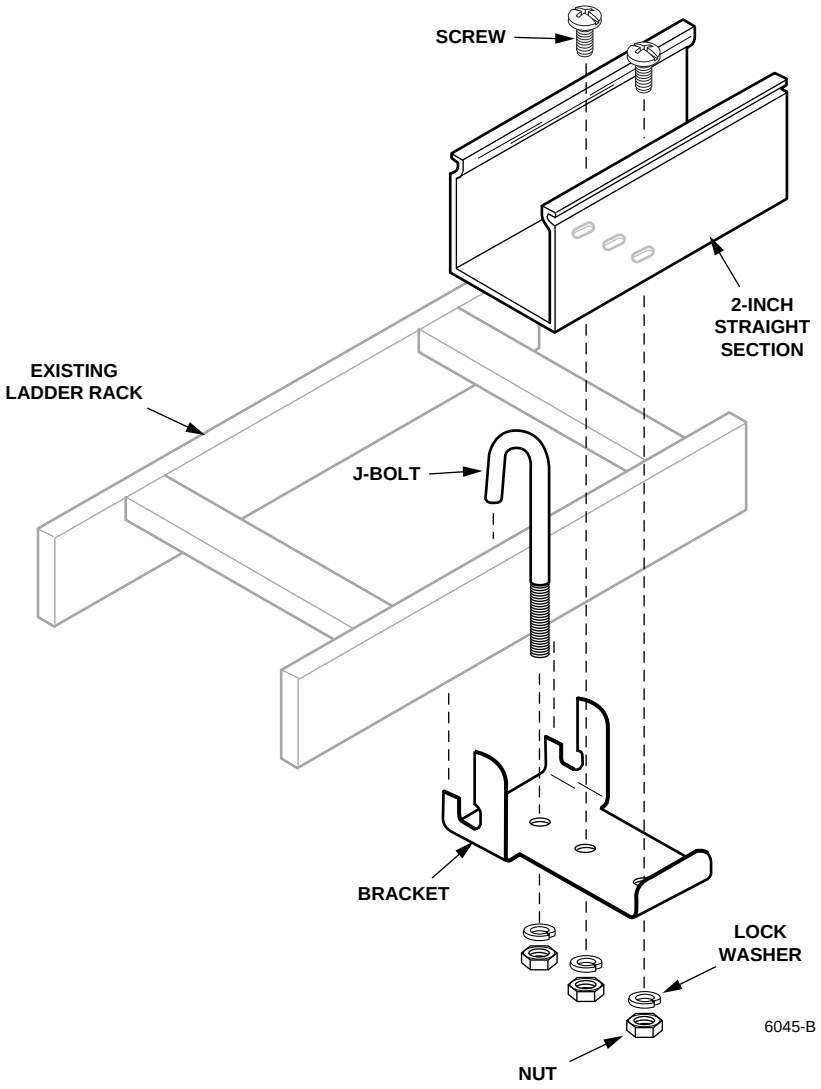

Figure 2-9. Installing 2-Inch Ladder Rack Kit

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4.1.2 Bay Top Kit (FGS-BTBS-C or FGS-BTBL-C)

Install a bay top kit in the following order, referring to Figure 2-10.

1. Install L-bracket on the equipment rack using two screws and lock washers.
2. Position straight section on the bracket.
3. Secure with screws, lock washers, and nuts, as shown.

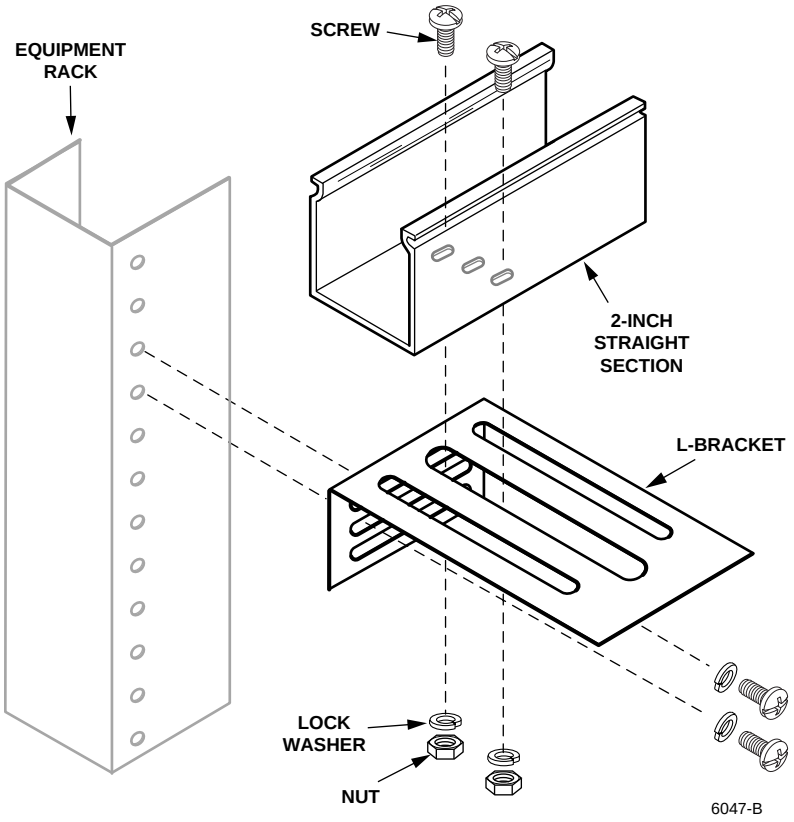

Figure 2-10. Installing 2-Inch Bay Top Kit

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4.1.3 Under Floor Kit (FGS-HUFB-C)

Install an under floor kit in the following order, referring to Figure 2-11.

1. Install U-bolt and bracket on post using lock washers and nuts.
2. Position straight section on the bracket.
3. Secure with screws, lock washers, and nuts, as shown.

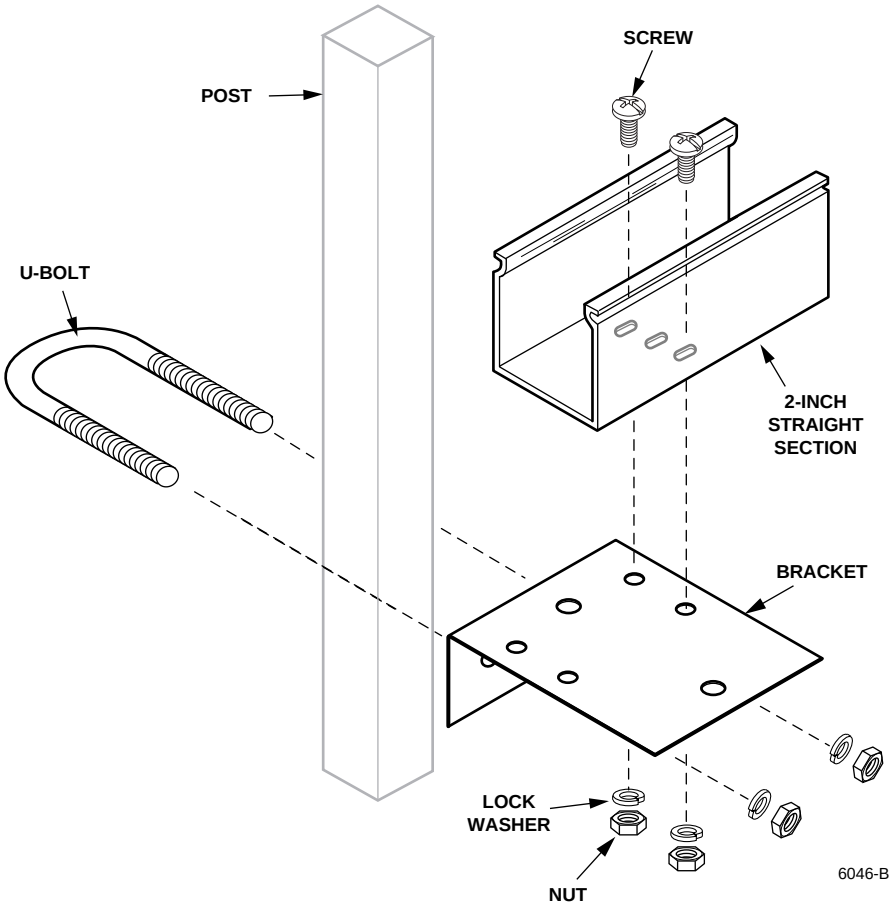

Figure 2-11. Installing 2-Inch Under Floor Kit

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4.1.4 Digital Cableway Support Kit (FGS-HDCB-C)

Install the kit in the following order, referring to Figure 2-12.

1. Loosely attach the two cableway brackets together as shown.
2. Fasten cableway bracket assembly to the cableway.
3. Fasten straight section to the cableway bracket assembly.
4. Adjust the cableway bracket assembly to the correct length and tighten screws.

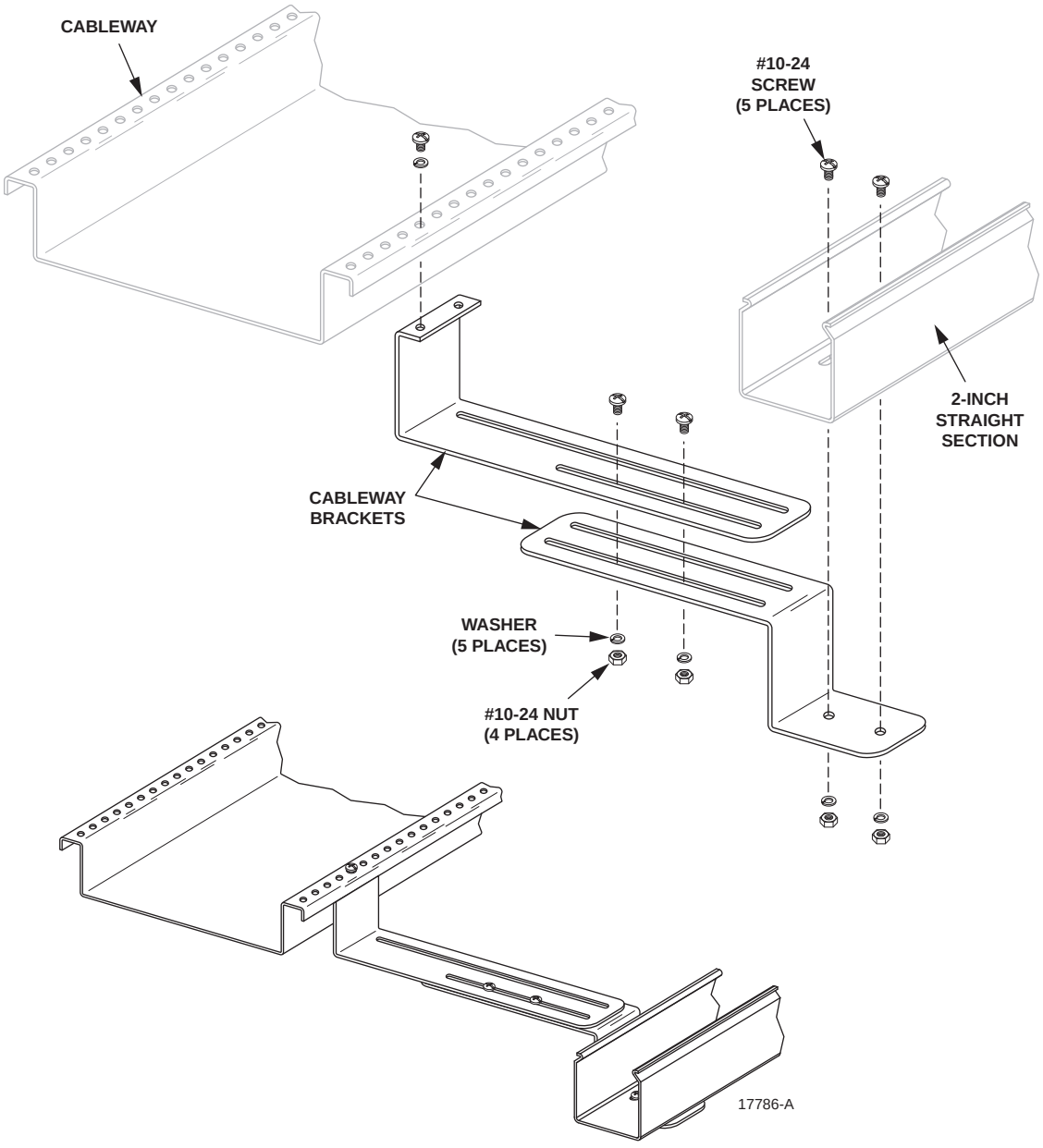

Figure 2-12. Installing 2-Inch Digital Cableway Support Kit

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4.2 2-Inch Track Support

4.2.1 Aluminum Track Kit (FGS-HASK-C)

Install an aluminum track kit in the following order, referring to Figure 2-13.

1. Position two aluminum extrusions in the desired order.
2. Position connector bars on aluminum extrusions as shown for T or end-to-end assembly.
3. Fasten connector bars to aluminum extrusions using lock washers and cap screws.
4. Continue until all aluminum extrusions are joined.

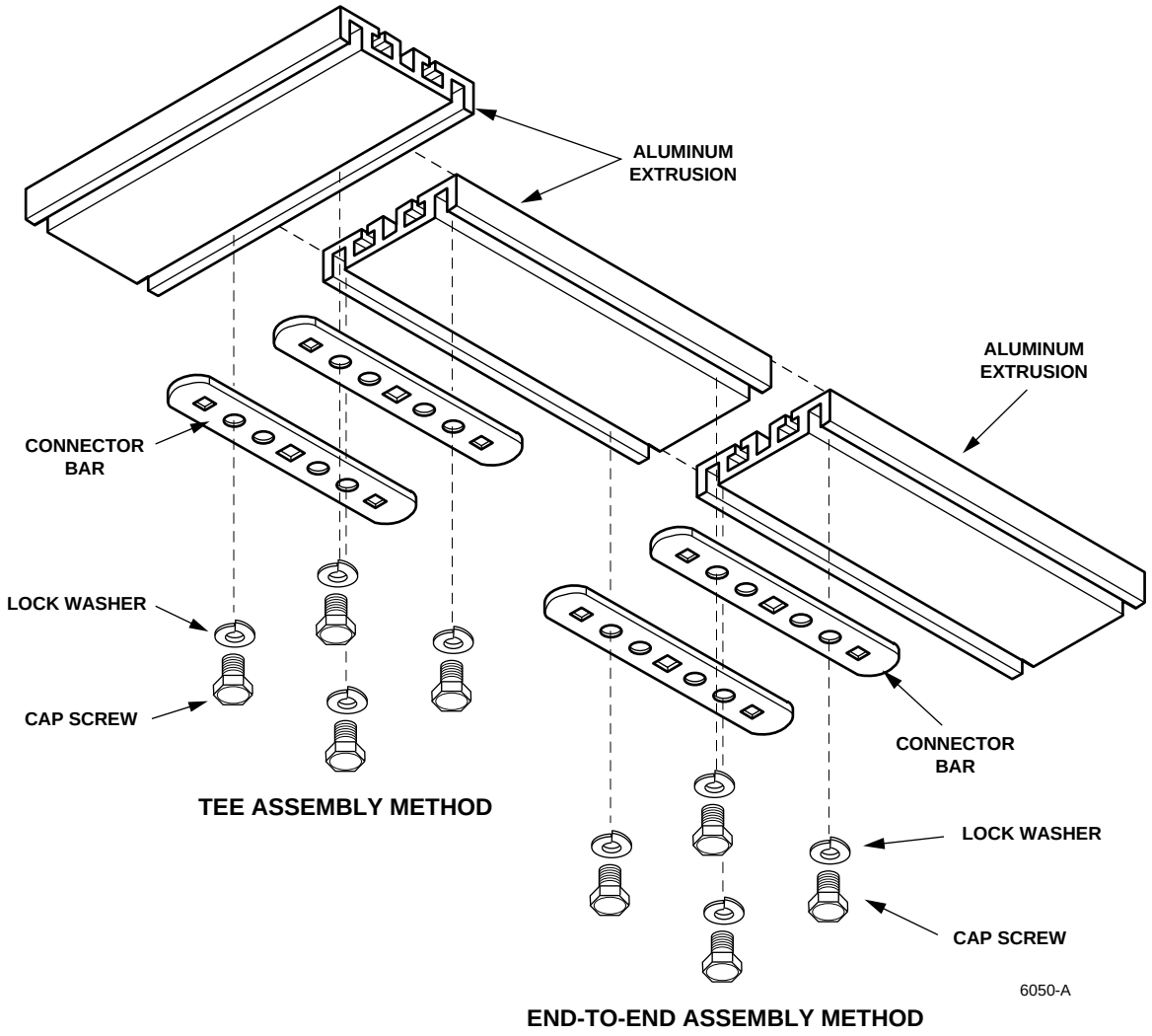

Figure 2-13. Installing 2-Inch Aluminum Track Kit

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4.2.2 New Threaded Rod Kit (FGS-HTR2-XX)

Install a new threaded rod kit in the following order, referring to Figure 2-14.

1. Install bracket, two lock washers, and two nuts on threaded rod.
2. Position aluminum extrusion on bracket.
3. Fasten aluminum extrusion to bracket using lock washers and hex nuts.
4. Fasten straight section to aluminum extrusion using screws provided.

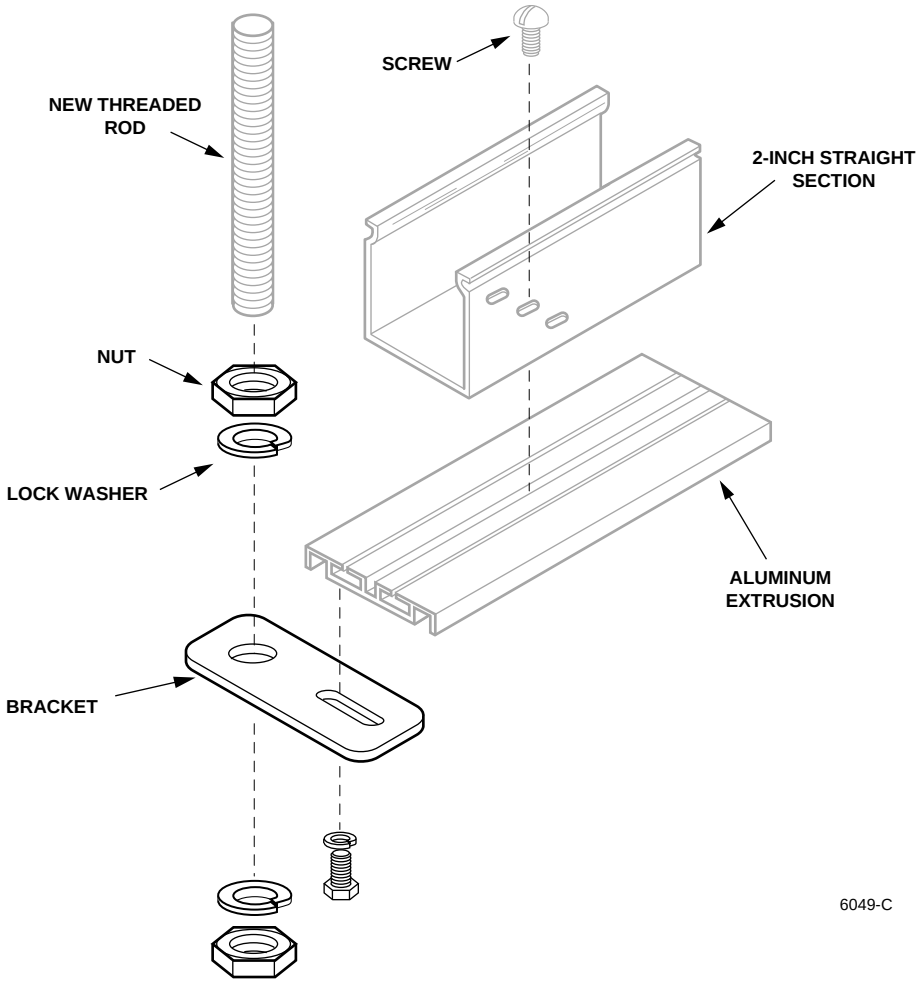

Figure 2-14. Installing 2-Inch New Threaded Rod Kit

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4.2.3 Existing Threaded Rod Kit

Install an existing threaded rod kit in the following order, referring to Figure 2-15.

1. Install the bottom split nut on the existing threaded rod in the desired position as follows:
   a. Rotate top and bottom sections of split nut until the cutouts are aligned.
   b. Place split nut on the threaded rod.
   c. Rotate top section of split nut 1/3 turn clockwise.

Note: Turn both sections of split nut together, like an ordinary nut, to raise or lower the nut. Do not tighten the upper section further into the lower section.

2. Stack bracket clip and bracket on the bottom split nut as shown in Figure 2-15.
3. Install upper split nut in the same manner as the lower split nut. Turn both sections of split nut together clockwise until the bracket is held firmly in place.
4. Place straight section on the bracket and secure with bolt, washer, and nut, as shown.

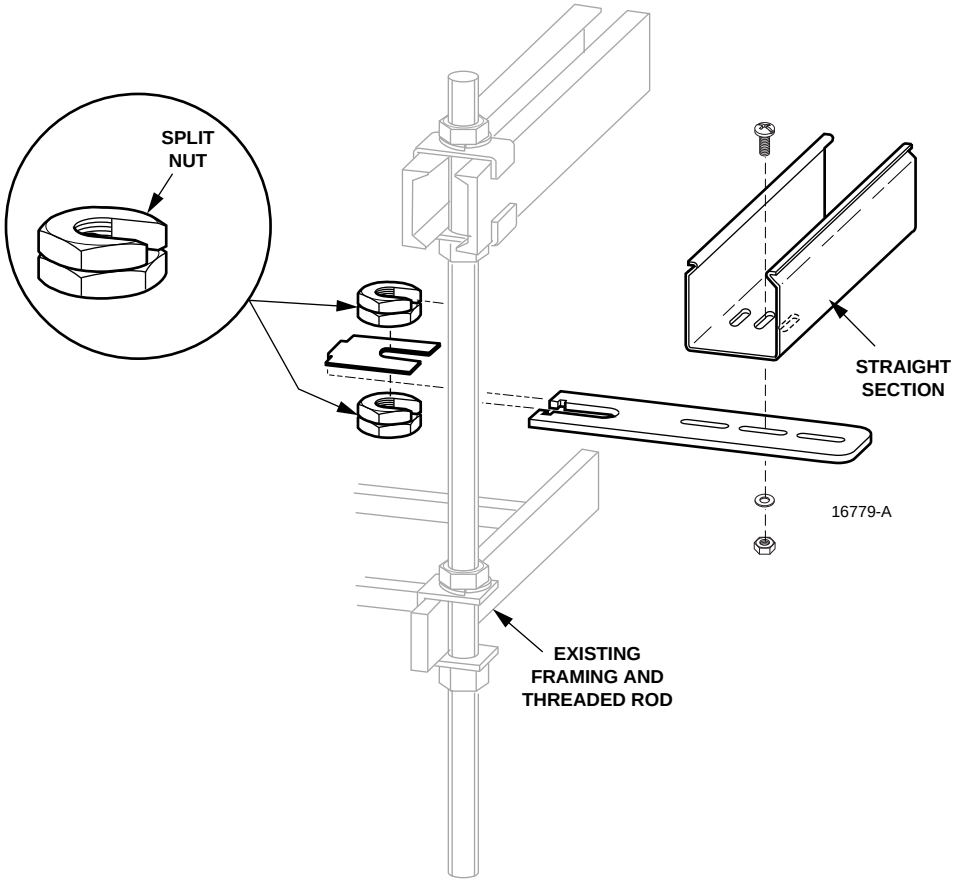

Figure 2-15. Installing 2-Inch Existing Threaded Rod Kit

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5 INSTALLING 4-INCH AND 6-INCH SUPPORTS

The following support brackets are used to provide anchoring points for 4-inch and 6-inch FiberGuide systems. These systems are supported by securing the brackets to 4-inch and 6-inch straight sections using quick knobs.

5.1 New Threaded Rod Kit (FGS-HNTR-XX)

Install the kit in the following order, referring to Figure 2-16.

1. Install bracket on the new threaded rod using the lock washers and hex nuts provided.
2. Position straight section on the bracket.
3. Secure with quick knobs.

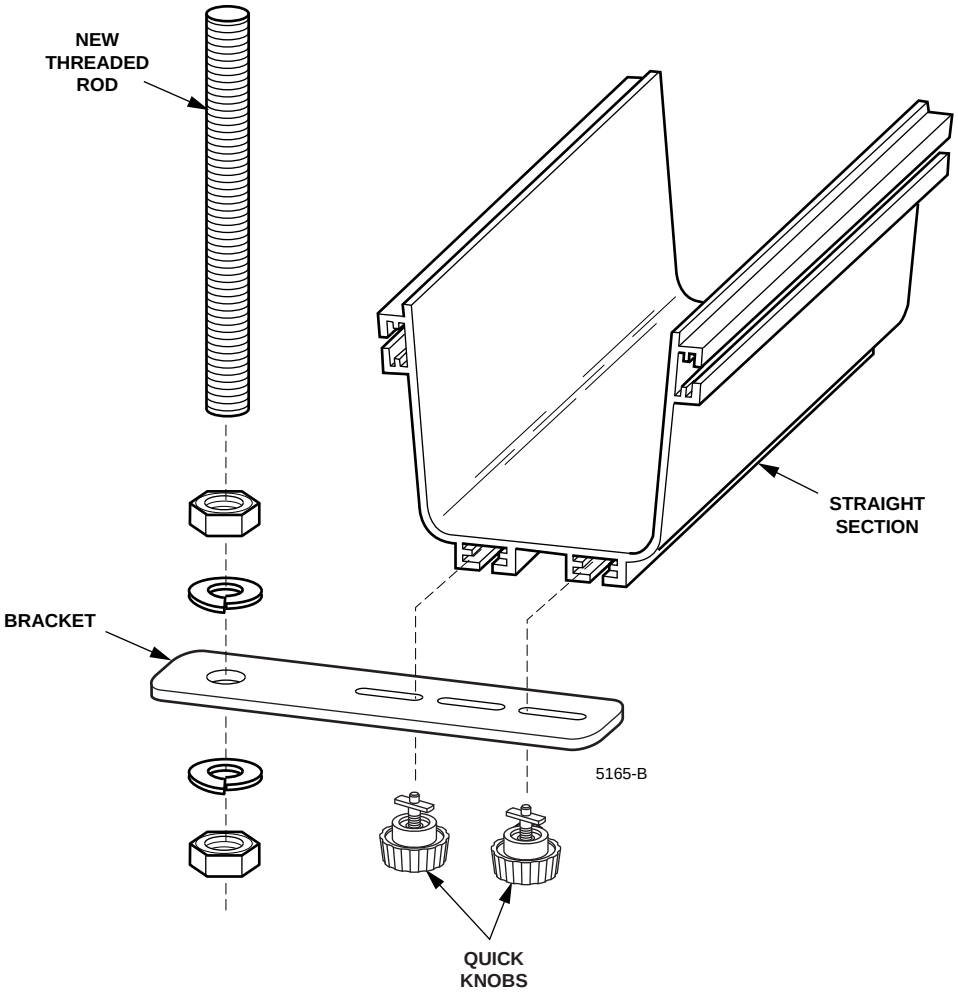

Figure 2-16. Installing 4- or 6-Inch New Threaded Rod Kit

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5.2 Existing Threaded Rod Kit (FGS-HETR-XX)

Install an existing threaded rod kit in the following order, referring to Figure 2-17.

1. Install bottom split nut on the existing threaded rod in the desired position as follows:
   a. Rotate top and bottom sections of split nut until the cutouts are aligned.
   b. Place split nut on the threaded rod.
   c. Rotate top section of split nut 1/3 turn clockwise.

Note: Turn both sections of split nut together, like an ordinary nut, to raise or lower the nut. Do not tighten the upper section further into the lower section.

2. Stack bracket clip and bracket on the bottom split nut as shown in Figure 2-17.
3. Install upper split nut in the same manner as the lower split nut. Turn both sections of split nut together clockwise until the bracket is held firmly in place.
4. Place straight section on the bracket and secure with quick knobs.

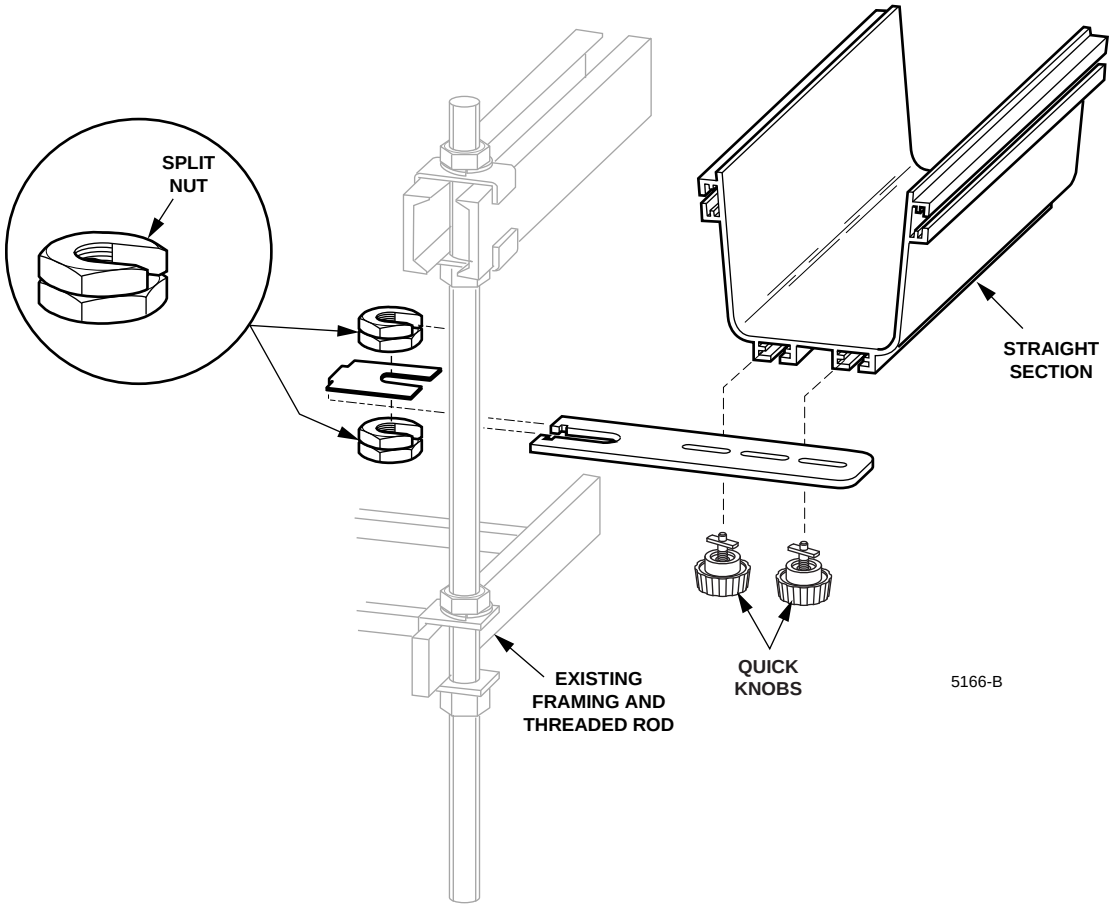

Figure 2-17. Installing 4- or 6-Inch Existing Threaded Rod Kit

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5.3 L-Bracket Kit (FGS-HLBK)

Install an L-bracket kit in the following order, referring to Figure 2-18.

1. Fasten L-bracket to equipment rack using hardware provided.
2. Position straight section on L-bracket.
3. Secure with quick knobs.

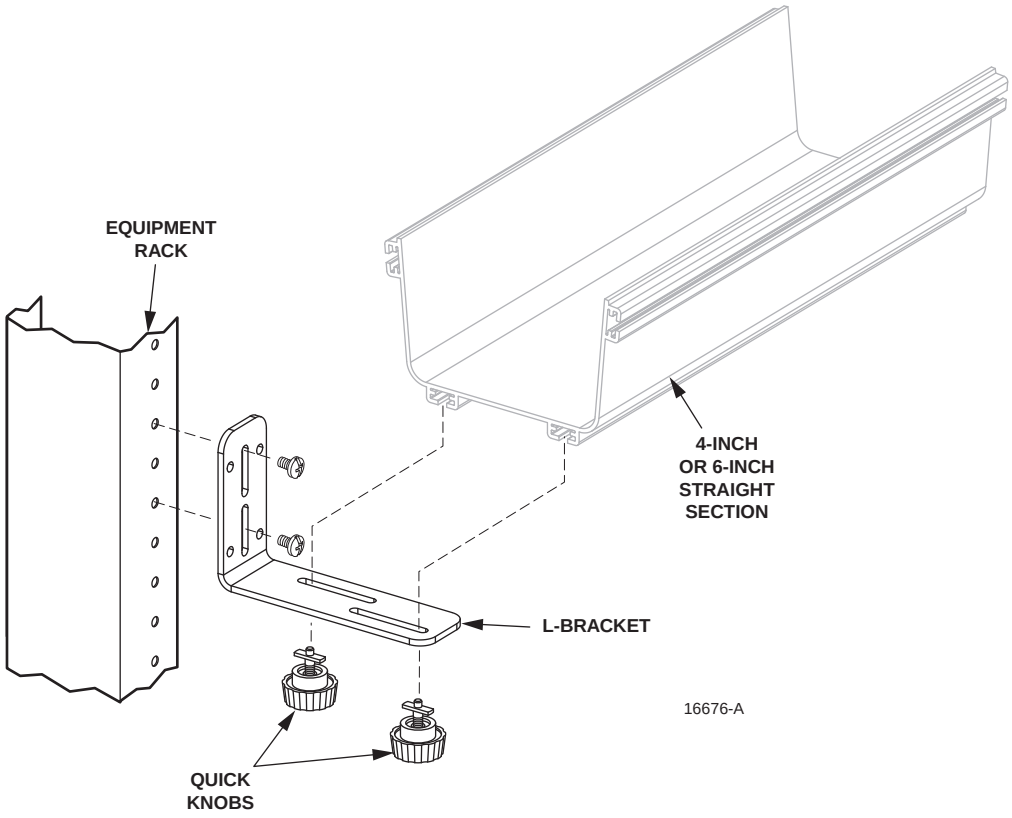

Figure 2-18. Installing 4- or 6-Inch L-Bracket Kit

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5.4 Center Support Bracket Kit (FGS-HTUB-XX)

Install a center support bracket kit in the following order, referring to Figure 2-19.

1. Mount center support bracket, lock washers, and hex nuts on new threaded rod.
2. Position straight section on the center bracket.
3. Secure with quick knobs.

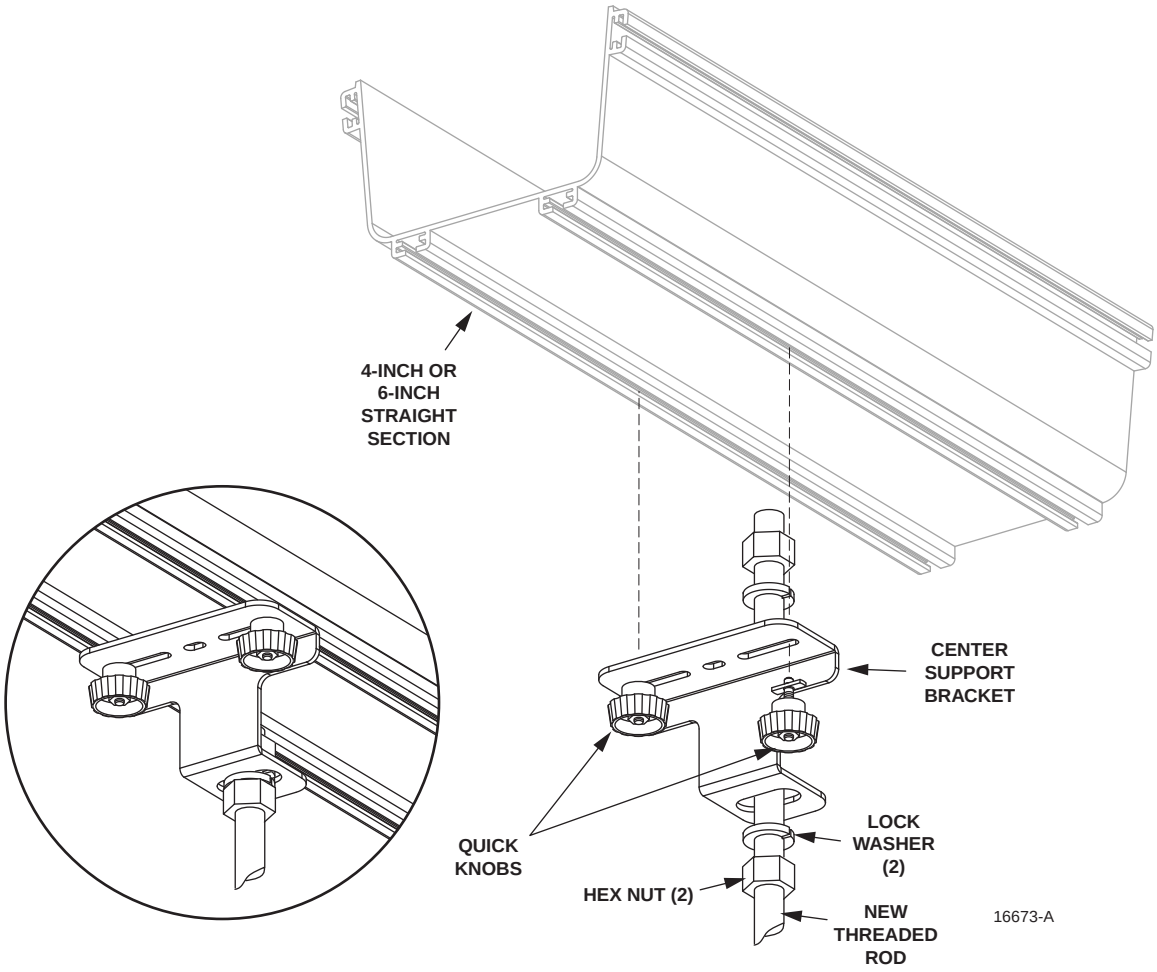

Figure 2-19. Installing 4- or 6-Inch Center Support Bracket Kit

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5.5 Top Support C-Bracket Kit (Low Profile) (FGS-HNTS-XX-LP)

Install a low profile top-support C-bracket kit in the following order, referring to Figure 2-20.

1. Assemble top support C-bracket, lock washers, and hex nuts on the new threaded rod.
2. Position straight section on the top support bracket.
3. Secure with quick knobs.

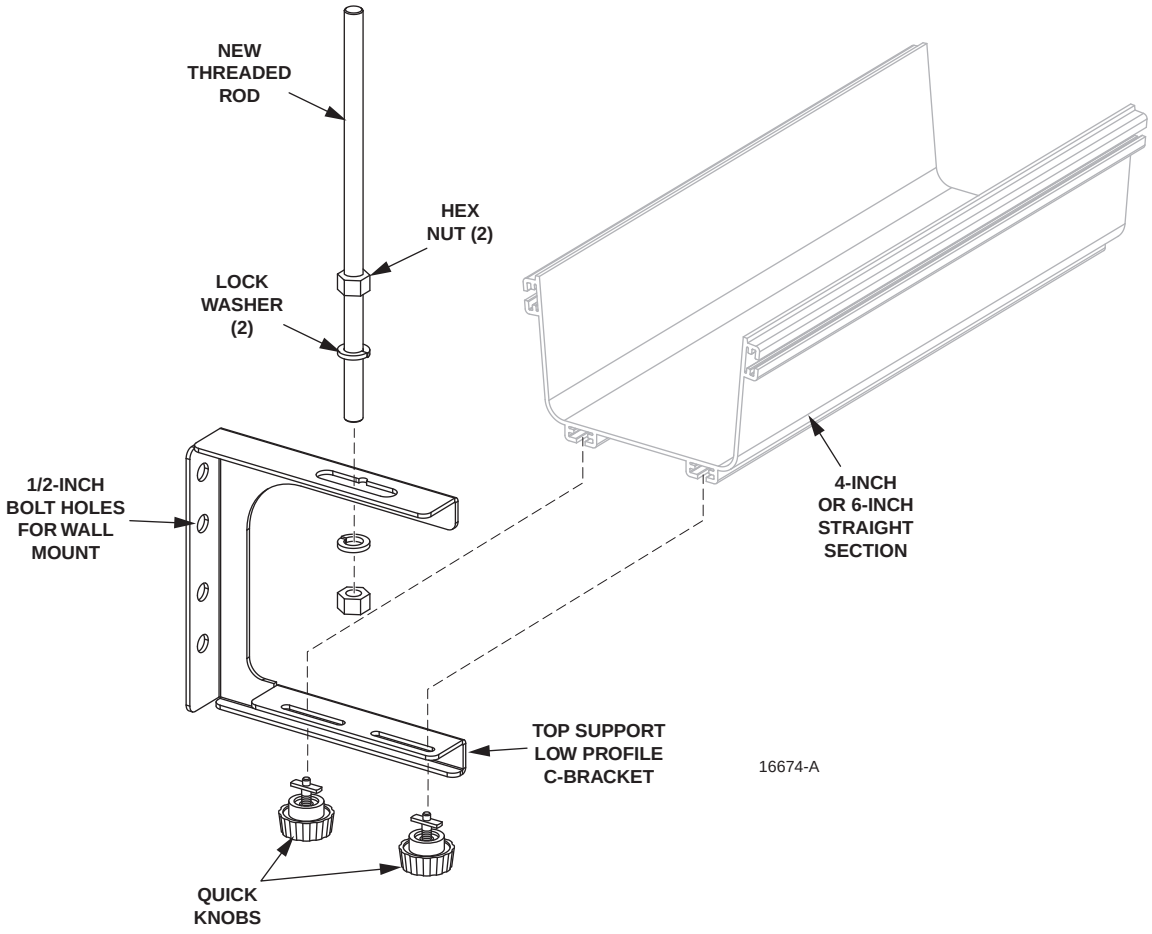

Figure 2-20. Installing 4- or 6-Inch Top Support C-Bracket Kit (Low Profile)

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5.6 Top Support C-Bracket Kit (FGS-HNTS-XX)

Install a top support C-bracket kit in the following order, referring to Figure 2-21.

1. Assemble top support C-bracket, lock washers, and hex nuts on the new threaded rod.
2. Position straight section on the top support bracket.
3. Secure with quick knobs.

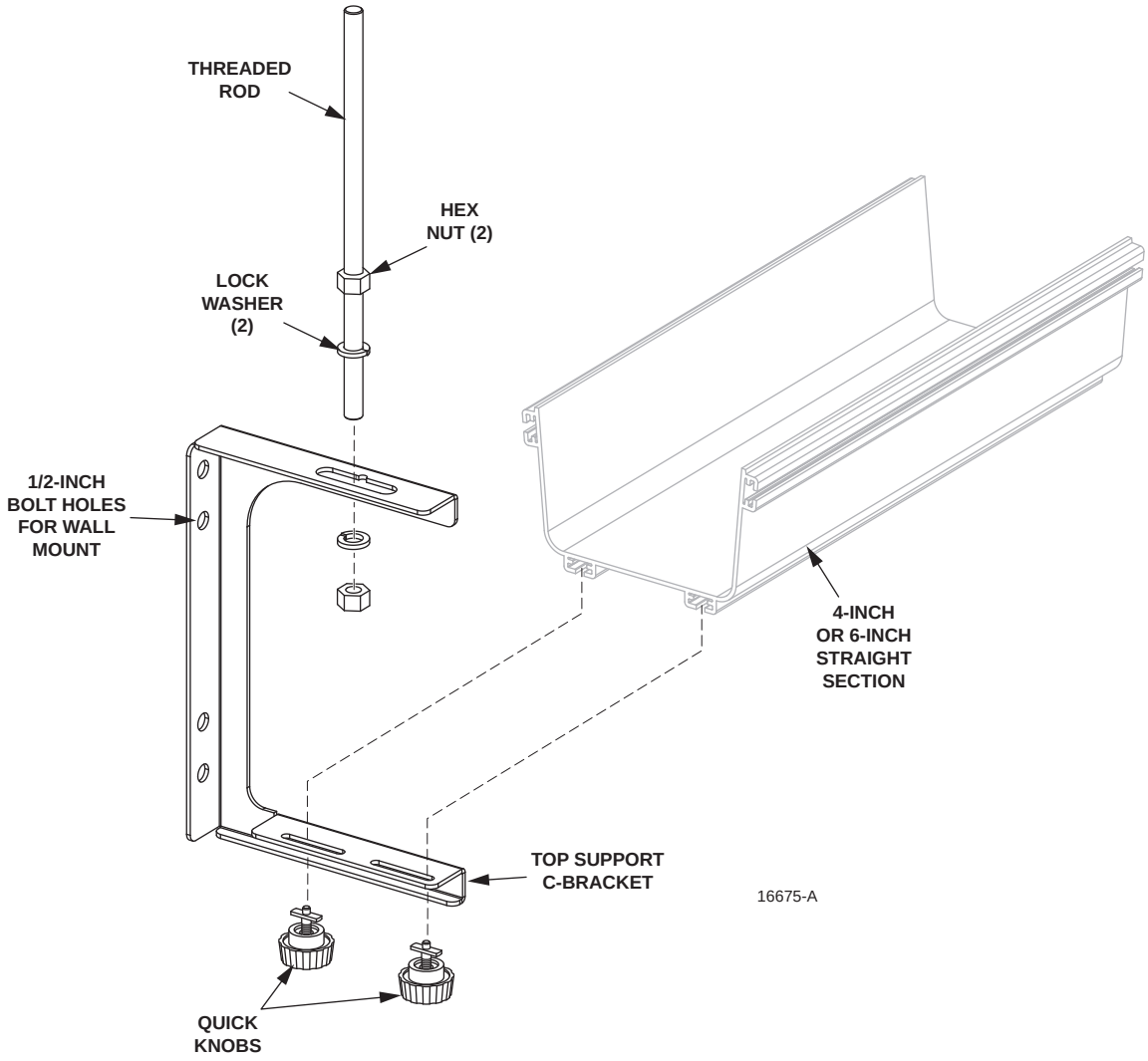

Figure 2-21. Installing 4- or 6-Inch Top Support C-Bracket

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5.7 Digital Cable Way Bracket Kit (FGS-HCBL-XX)

Install the kit in the following order, referring to Figure 2-22.

1. Fasten a 12-inch or 15-inch bracket to the cable way using the hardware shown.
2. Fasten a 4-inch or 6-inch straight section to cable way bracket, selecting the appropriate holes for the desired position on the bracket. Use the hardware shown.

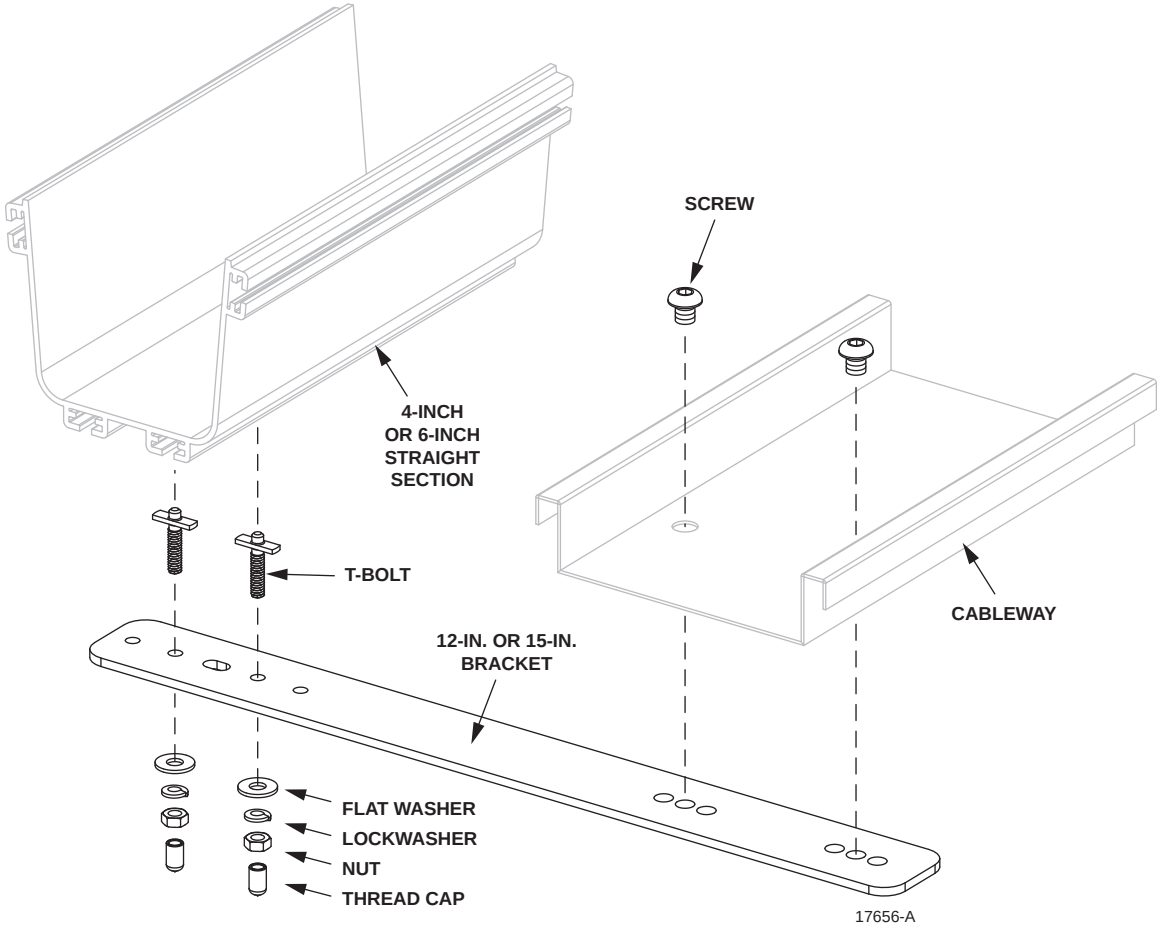

Figure 2-22. Installing Digital Cable Way Bracket Kit

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5.8 Ladder Rack Cantilever Support Bracket Kit (FGS-HDLB-4)

Install the kit in the following order, referring to Figure 2-23.

1. Fasten “L” bracket and mounting brackets together on ladder rack in the desired locations using hex screws and lock washers as shown.

Note: The “L” bracket can be oriented in either an “up” or “down” position with respect to the ladder rack.

2. Fasten a 4- or 6-inch straight section to the “L” brackets using quick knobs as shown.

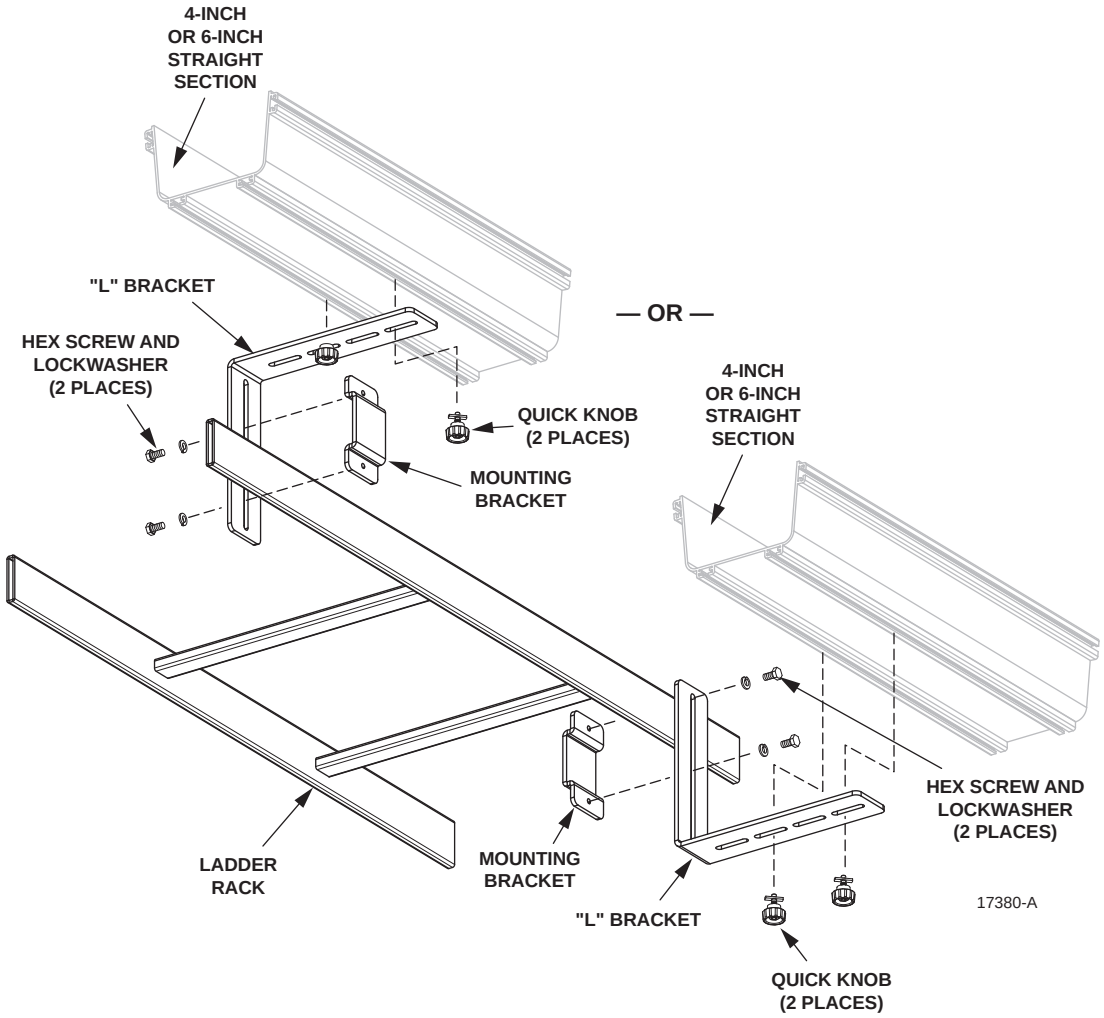

Figure 2-23. Installing Ladder Rack Cantilever Support Bracket Kit

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5.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-AB)

Install the kit in the following order, referring to Figure 2-24.

1. Fasten two bracket components to the desired ladder rung in the orientation shown using two hex screws and two lock washers
2. Fasten a 4- or 6-inch straight section to the bracket using quick knobs.

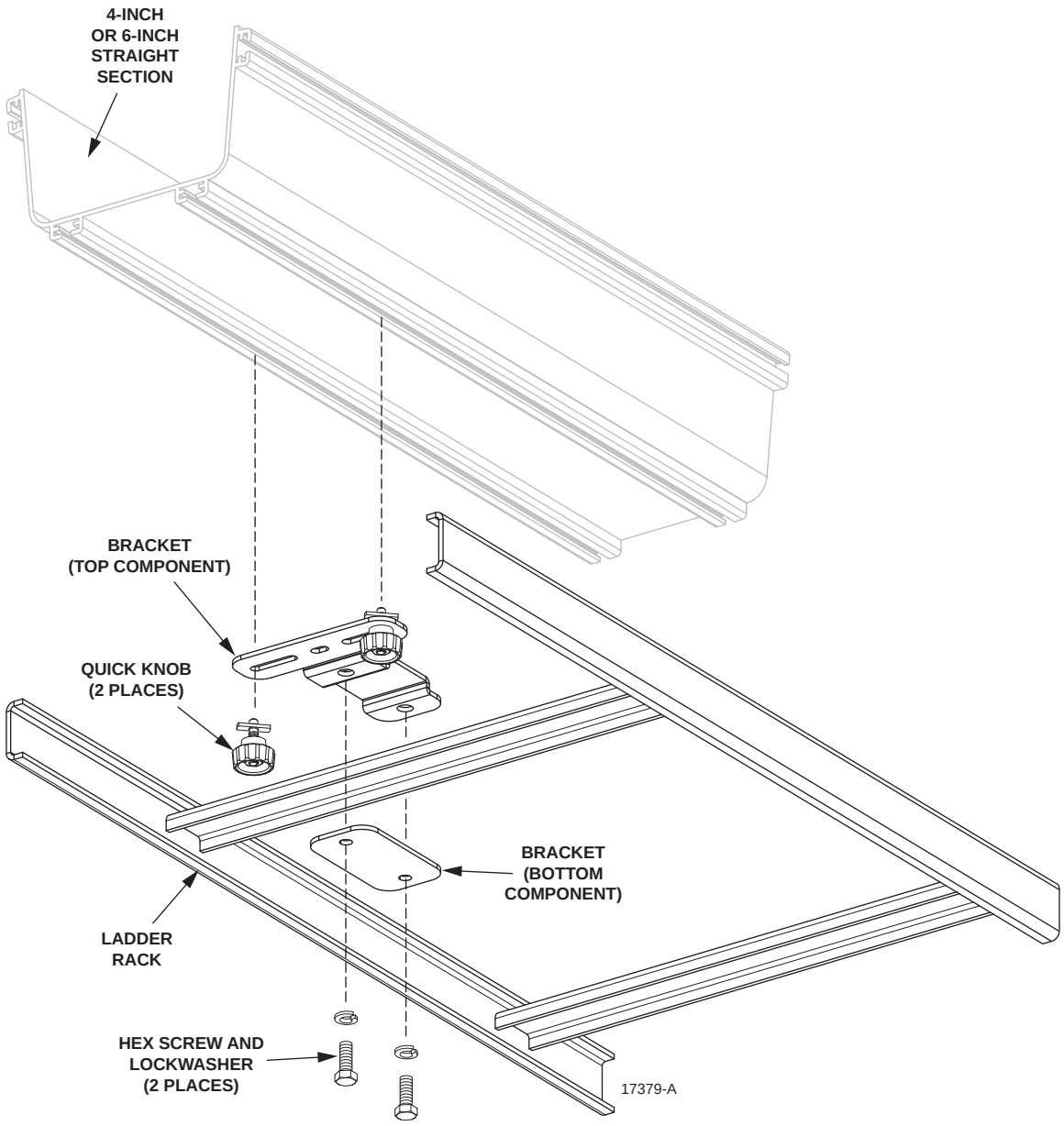

Figure 2-24. Installing Ladder Rack Center Support Bracket Kit

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5.10 OMX Frame Center Support Bracket Kit, 16 mm (FGS-HOMX-16MM)

Install the kit in the following order, referring to Figure 2-25 and Figure 2-26.

Note: For other mounting options, refer to the installation drawing provided with the kit.

1. Fasten S-bracket to the cantilever bracket or threaded rod.
2. Fasten a FiberGuide section to the S-bracket using quick knobs.

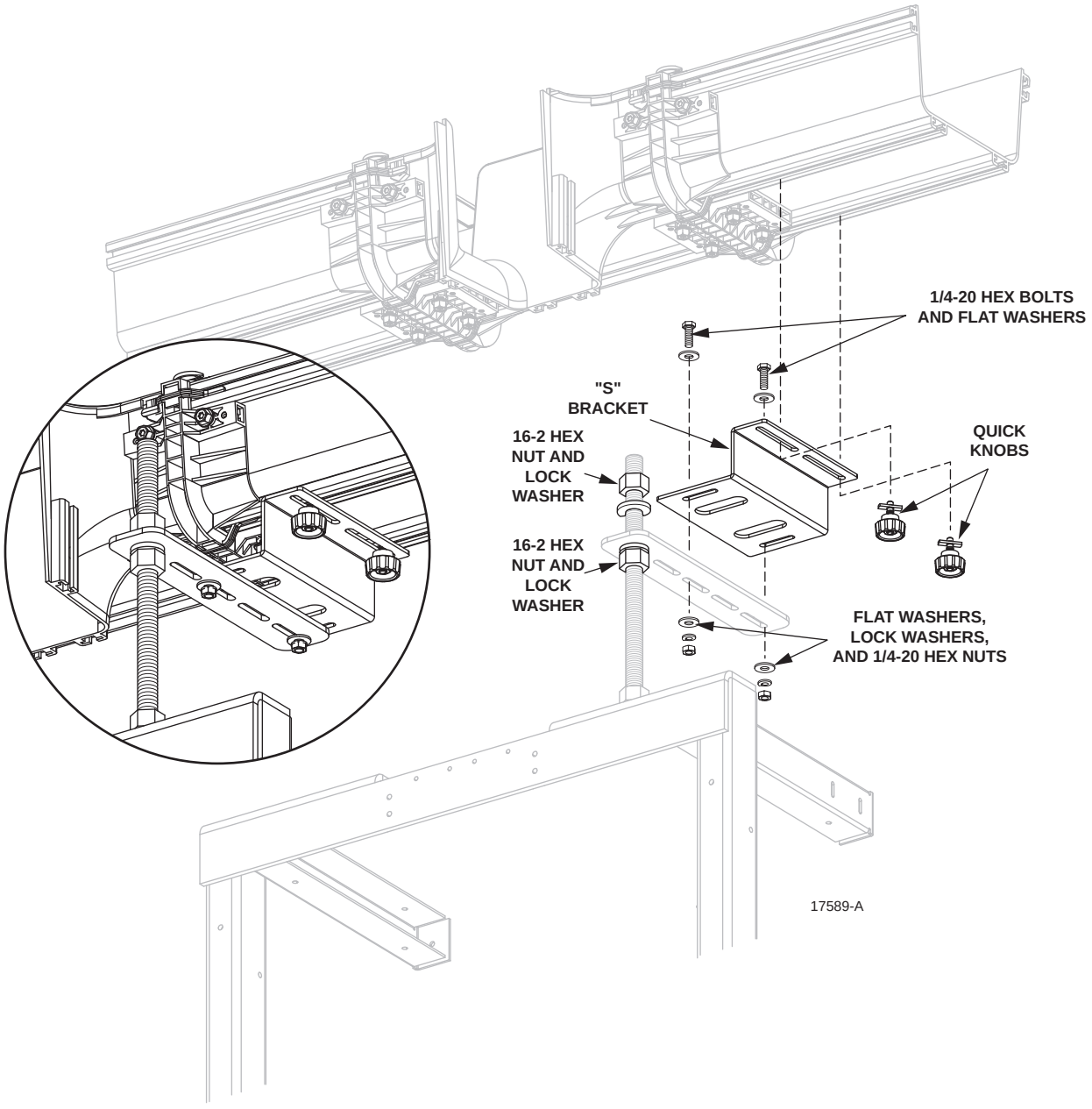

Figure 2-25. Installing OMX Frame Center Support Bracket Kit (on Cantilever Bracket)

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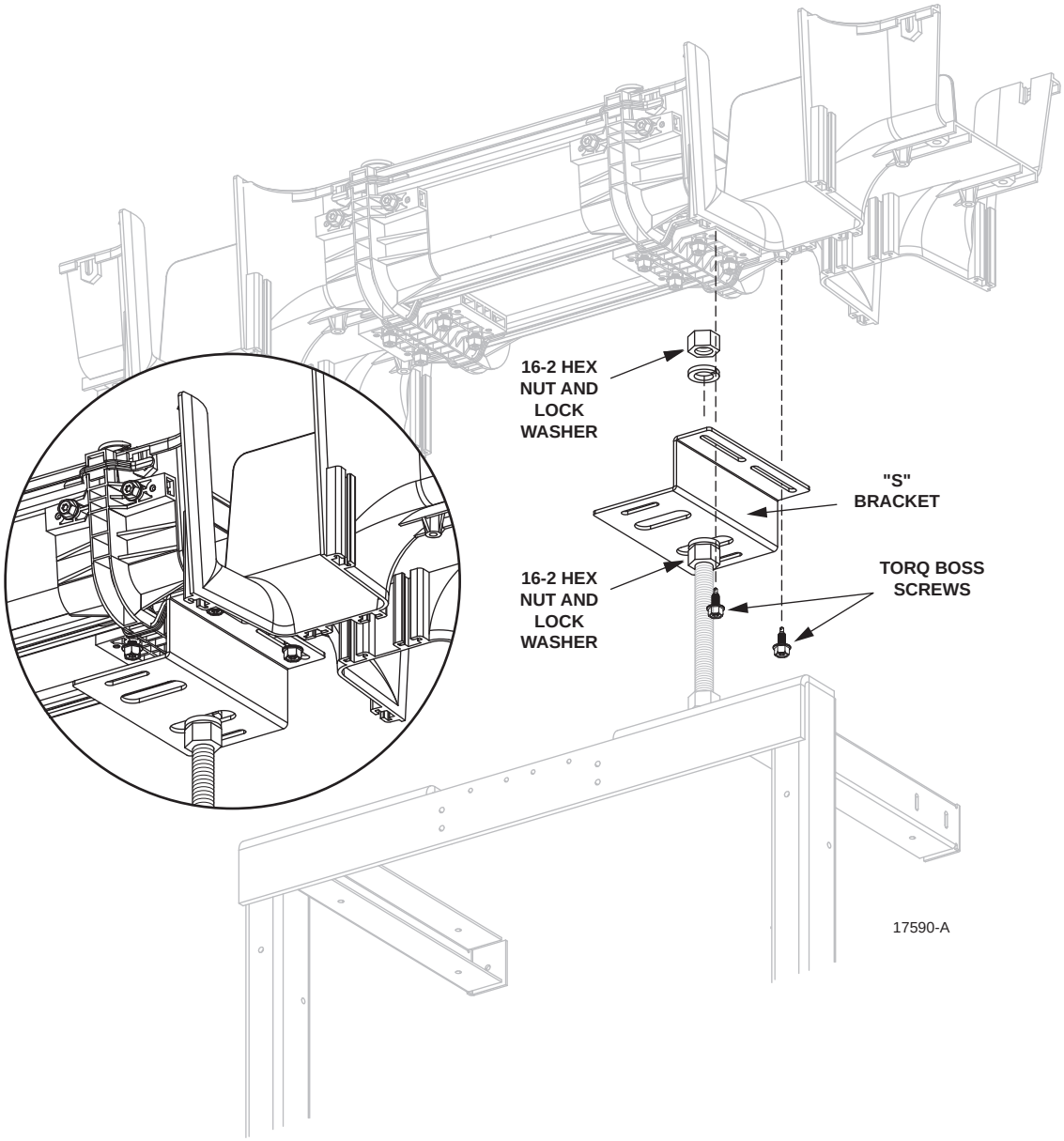

Figure 2-26. Installing OMX Frame Center Support Bracket Kit (on Existing Threaded Rod)

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5.11 Under Floor Support Kit (FGS-HUFB-A)

Install the kit in the following order, referring to Figure 2-27.

1. Fasten underfloor bracket to support pedestal using the U-bolts and hardware provided.
2. Fasten straight section to underfloor bracket using the retainers and hardware provided.

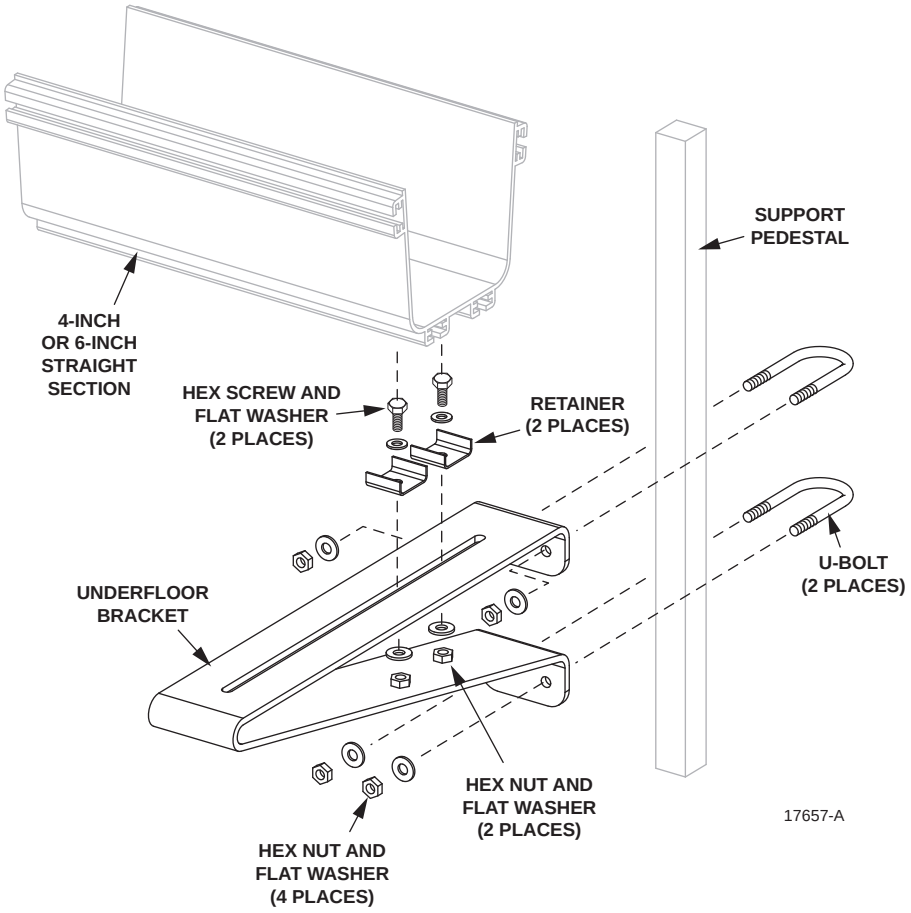

Figure 2-27. Installing Under Floor Support Kit

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6 INSTALLING 12-INCH SUPPORTS

12-inch supports are used to provide anchoring points for 12-inch horizontal components such as straight sections and fittings. To install the supports, refer to the following procedures.

Note: Threaded rods (shown for reference in exploded views) are not included in the kits. Threaded rods must be purchased separately.

Note: All exploded views for 12-inch kits show the support brackets attached directly to the FiberGuide straight sections. When possible, support all 12-inch fittings directly. If the support brackets cannot be directly attached to the fittings, CommScope recommends use of variable fitting support locators, which allow the support brackets to be attached anywhere along the bottom of the fittings. For more information, refer to Topic 6.3 on page 1-13.

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6.1 New Threaded Rod Bracket Kit (FGS-HNTR-F-XX)

Install a new threaded rod bracket kit in the following order, referring to Figure 2-28.

1. Place a new threaded rod (not included in kit) into the cantilever bracket and bottom bracket and secure the assembly with lock washers and nuts provided.
2. Position straight section on the cantilever bracket.
3. Secure with quick knobs.

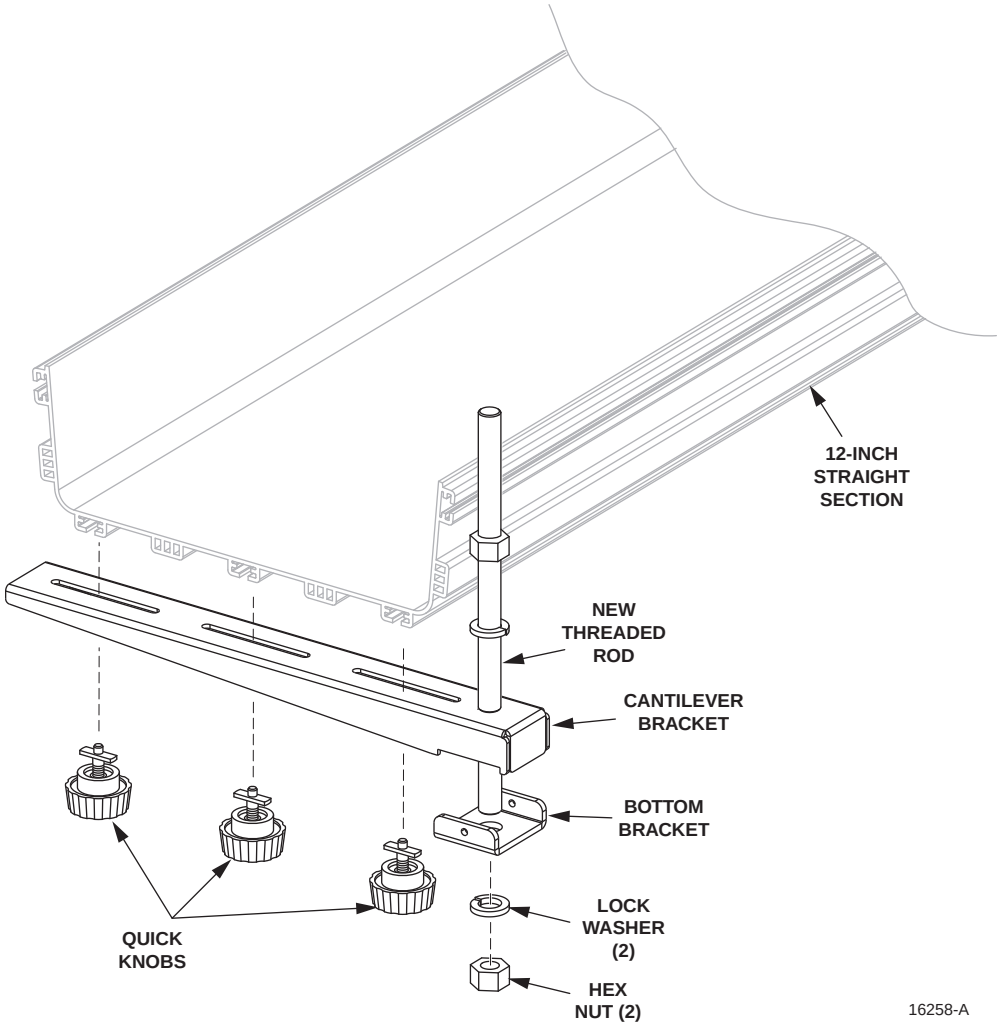

Figure 2-28. Installing 12-Inch New Threaded Rod Bracket Kit

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6.2 Existing Threaded Rod Bracket Kit (FGS-HETR-F-XX)

Install an existing threaded rod bracket kit in the following order, referring to Figure 2-29.

1. Install bottom split nut on the existing threaded rod in the desired position as follows:
   a. Rotate top and bottom sections of split nut until the cutouts are aligned.
   b. Place split nut on the threaded rod.
   c. Rotate top section of the nut 1/3 turn clockwise.

Note: Turn both sections of split nut together, like an ordinary nut, to raise or lower the nut. Do not tighten the upper section further into the lower section.

2. Starting at the bottom split nut and working upward, stack the other components of the kit (except for quick knobs) on split nut in the order, shown in Figure 2-29.
3. Install upper split nut in the same manner as lower split nut. Turn both sections of split nut together clockwise until cantilever bracket is held firmly in place.
4. Place straight section on the cantilever bracket and secure with quick knobs.

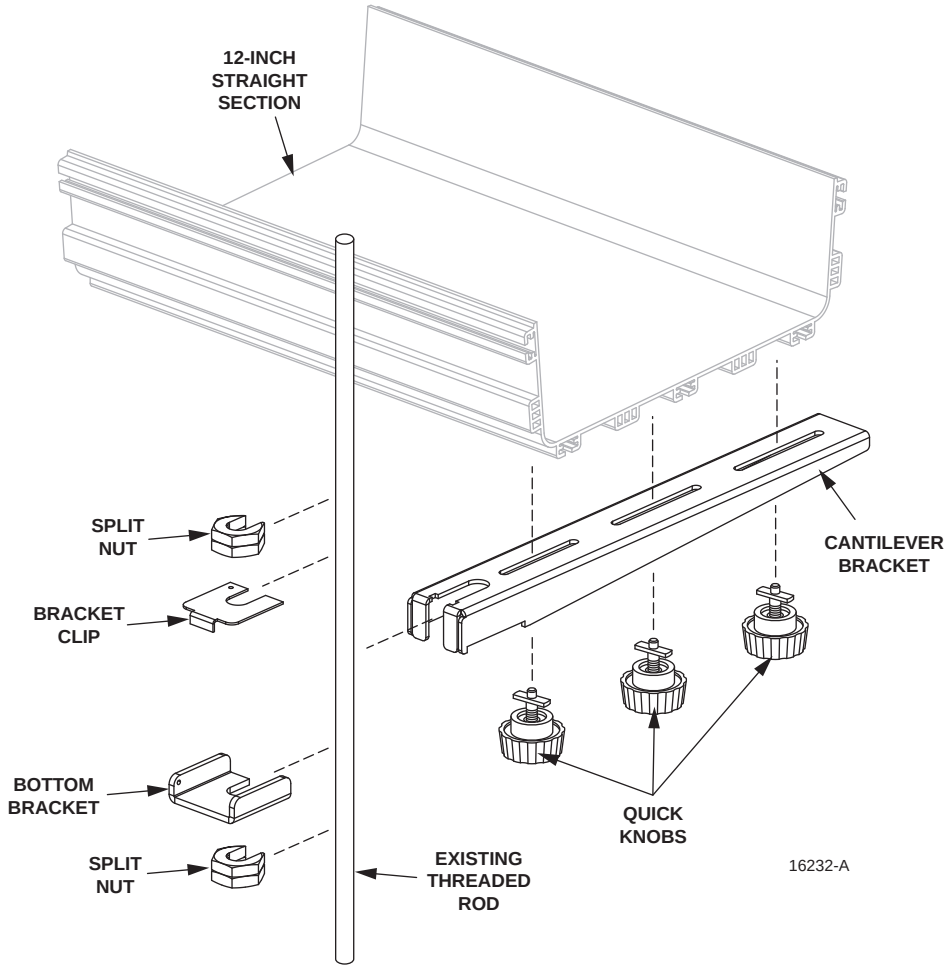

Figure 2-29. Installing 12-Inch Existing Threaded Rod Kit

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6.3 Existing Threaded Rod Bracket Kit With Added Support Kit (FGS-F-XX-ACC)

When using an added support kit (FGS-F-XX-ACC) with an existing threaded rod bracket kit (FGS-HNTR-F-XX), install the kits in the following order, referring to Figure 2-30.

1. Stack hardware shown on an existing threaded rod (from top to bottom: hex nut, lock washer, cantilever bracket, bottom bracket, lock washer, hex nut).
2. Position cantilever bracket where desired and finger tighten hex nuts to hold bracket in place.
3. Position a straight section on the cantilever bracket.
4. Position support bracket and secure with split nuts and one quick knob as shown.
5. Install remaining two quick knobs to secure straight section to the cantilever bracket.

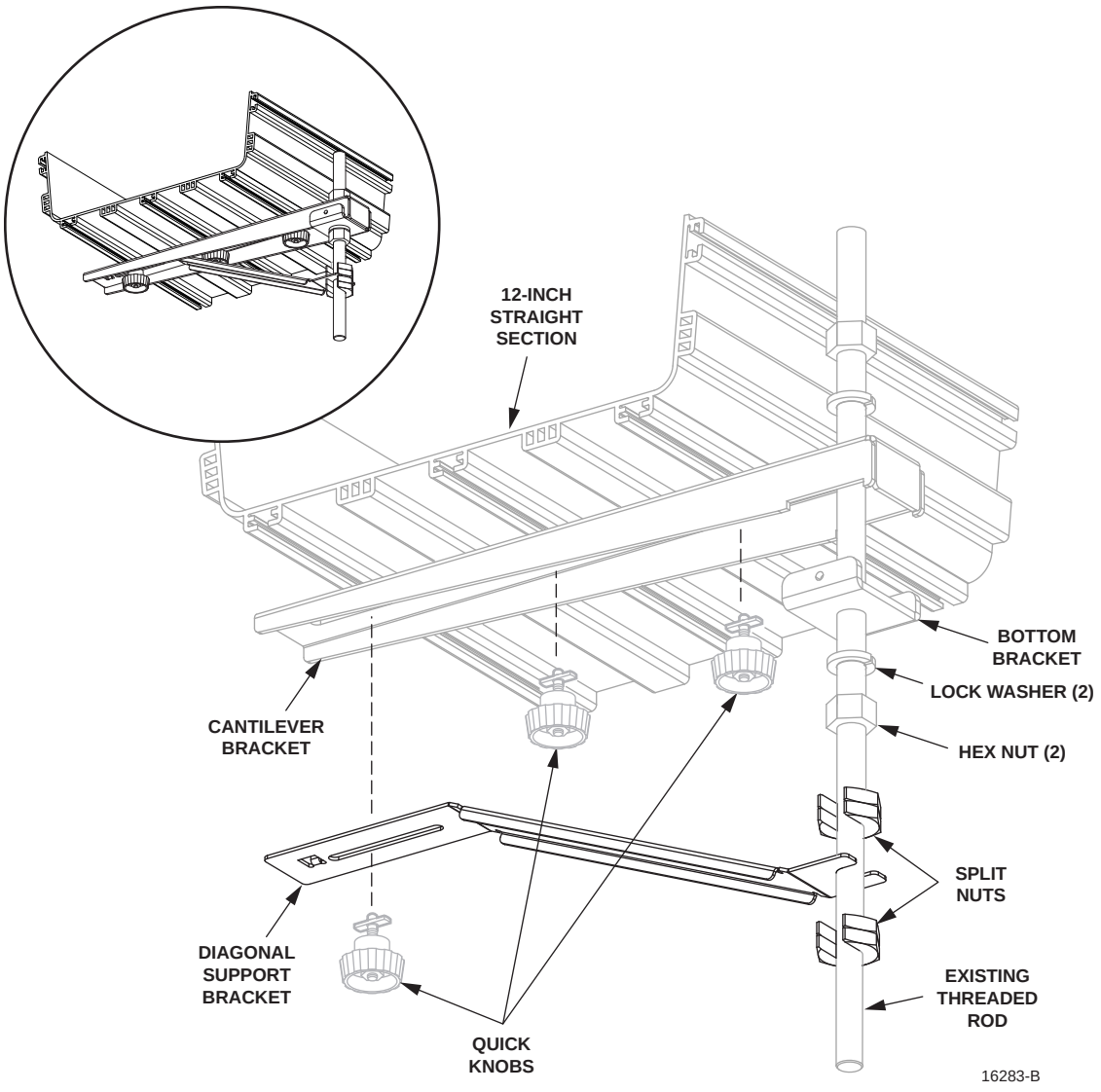

Figure 2-30. Installing12-Inch Existing Threaded Rod Bracket Kit (With Added Support)

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6.4 Center Support New Threaded Rod Bracket Kit (FGS-HTUB-F-XX)

Install the kit in the following order, referring to Figure 2-31.

1. Mount center support bracket on threaded rod using lock washers and hex nuts as shown.
2. Position a fitting or straight section on the threaded rod.
3. Secure with quick knobs.

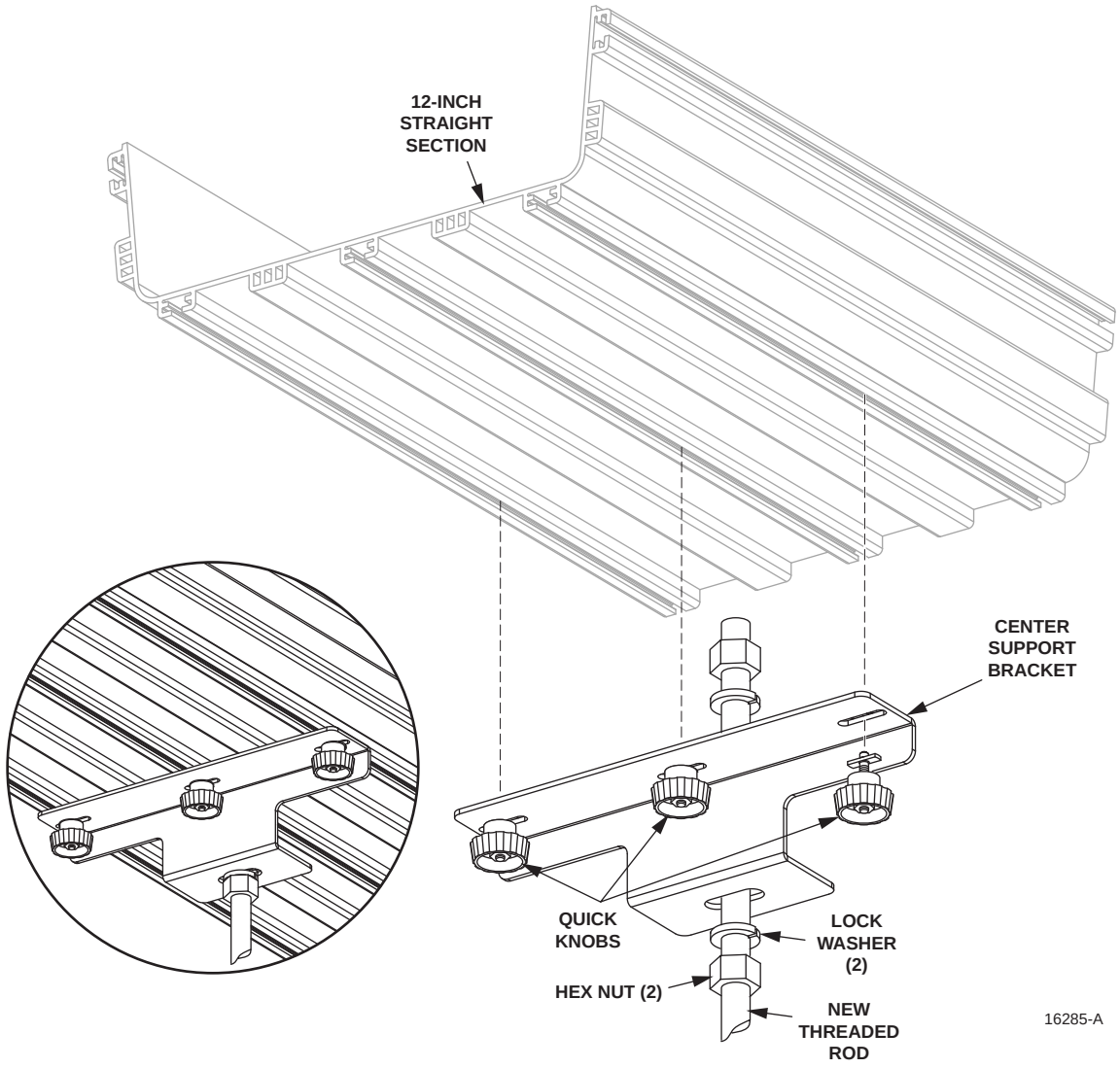

Figure 2-31. Installing 12-Inch Center Support New Threaded Rod Bracket Kit

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6.5 Top Support Threaded Rod C-Bracket Kit (FGS-HNTS-F-XX)

Install a top support C-bracket kit in the following order, referring to Figure 2-32.

1. Mount top support C-bracket either on a wall or on the new threaded rod as shown.
2. Position a straight section on the top-support C-bracket.
3. Secure with quick knobs.

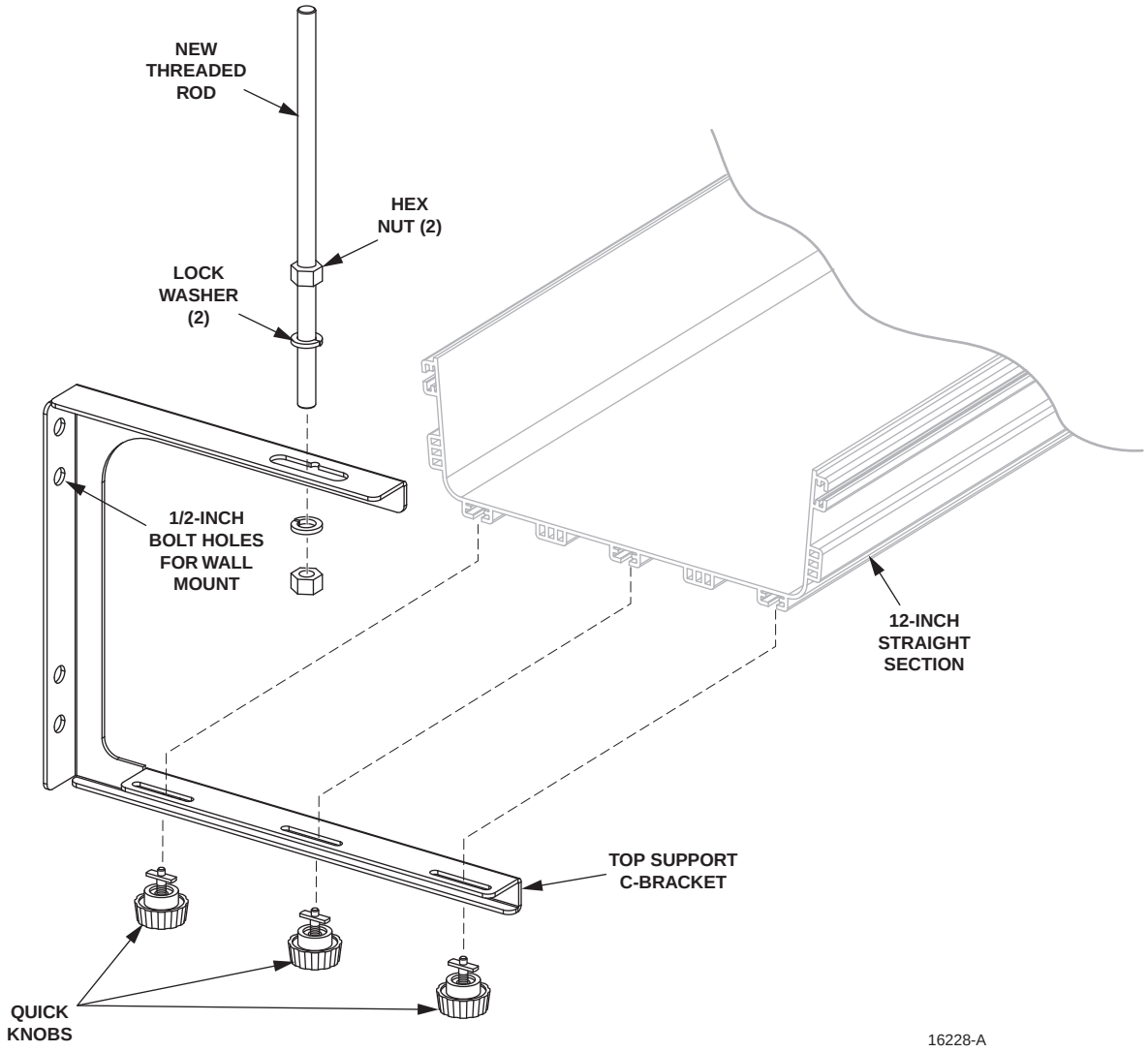

Figure 2-32. Installing 12-Inch Top Support Threaded Rod C-Bracket Kit

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6.6 Top Support Threaded Rod C-Bracket Kit Low Profile (FGS-HNTS-F-XX-LP)

Install a low profile top support C-bracket kit in the following order, referring to Figure 2-33.

1. Mount top support C-bracket either on a wall or on the new threaded rod as shown.
2. Position a straight section on the top-support C-bracket.
3. Secure with quick knobs.

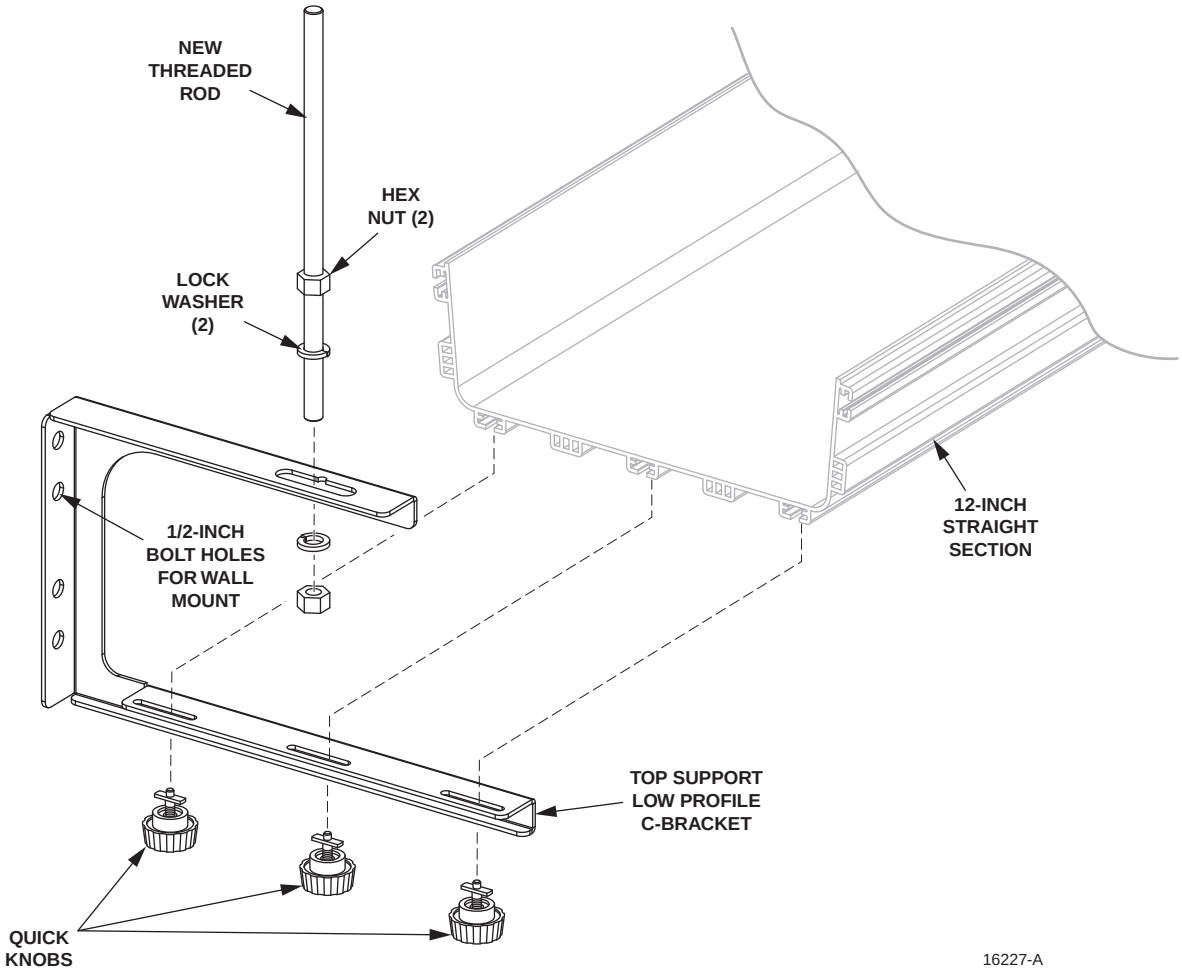

Figure 2-33. Installing Top-Support Threaded Rod C-Bracket Kit (Low Profile)

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6.7 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-F-XX)

Install a trapeze support existing threaded rod bracket kit in the following order, referring to Figure 2-34.

1. In the approximate desired position, install the two bottom split nuts shown in Figure 2-34. Install each nut as follows:
   a. Rotate top and bottom sections of split nut until the cutouts are aligned.
   b. Place split nut on the threaded rod.
   c. Rotate top section of split nut 1/3 turn clockwise.

Note: Turn both sections of split nut together, like an ordinary nut, to raise or lower the nut. Do not tighten upper section further into lower section.

2. Place a trapeze bracket on the bottom split nuts.
3. Install a bracket clip and second split nut on each threaded rod (above the trapeze bracket, as shown in Figure 2-34).

Note: Install upper split nut in the same manner as the lower split nut. Turn both sections of split nut together clockwise until the trapeze bracket is held firmly in place.

4. Place a straight section on the trapeze bracket.
5. Secure with quick knobs.

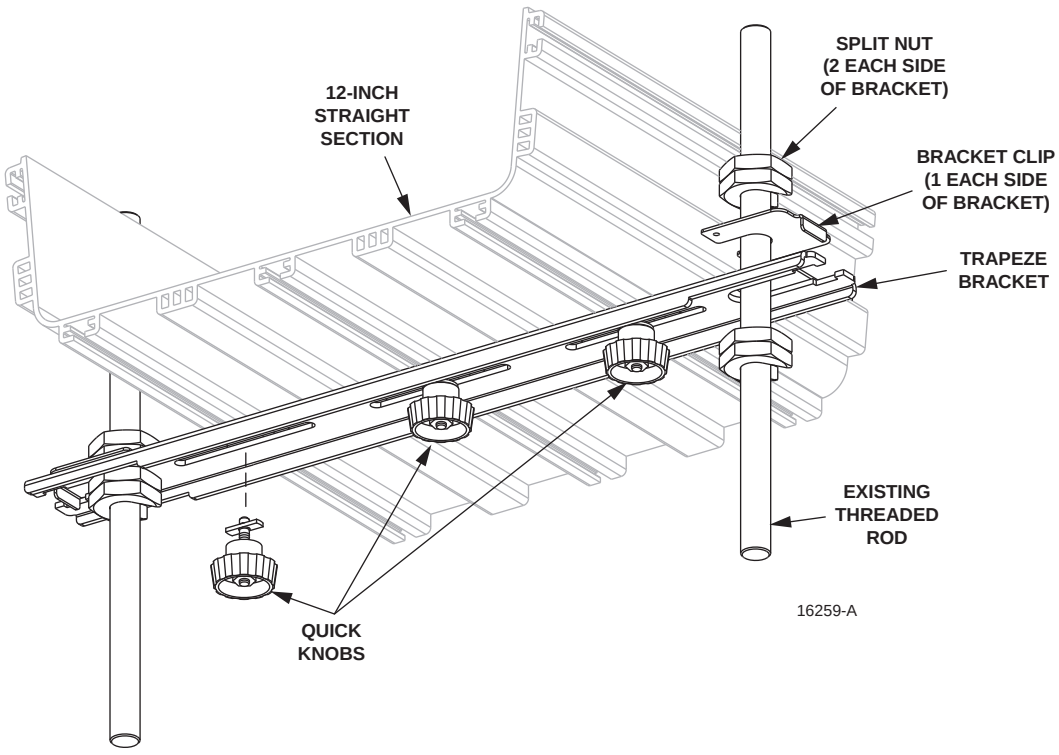

Figure 2-34. Installing 12-Inch Trapeze Support Existing Threaded Rod Bracket Kit

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6.8 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-F-XX)

Install a trapeze support new threaded rod bracket kit in the following order, referring to Figure 2-35.

1. Mount a trapeze bracket on two new threaded rods as shown using lock washers and hex nuts provided.
2. Position a straight section on the trapeze bracket.
3. Secure with quick knobs.

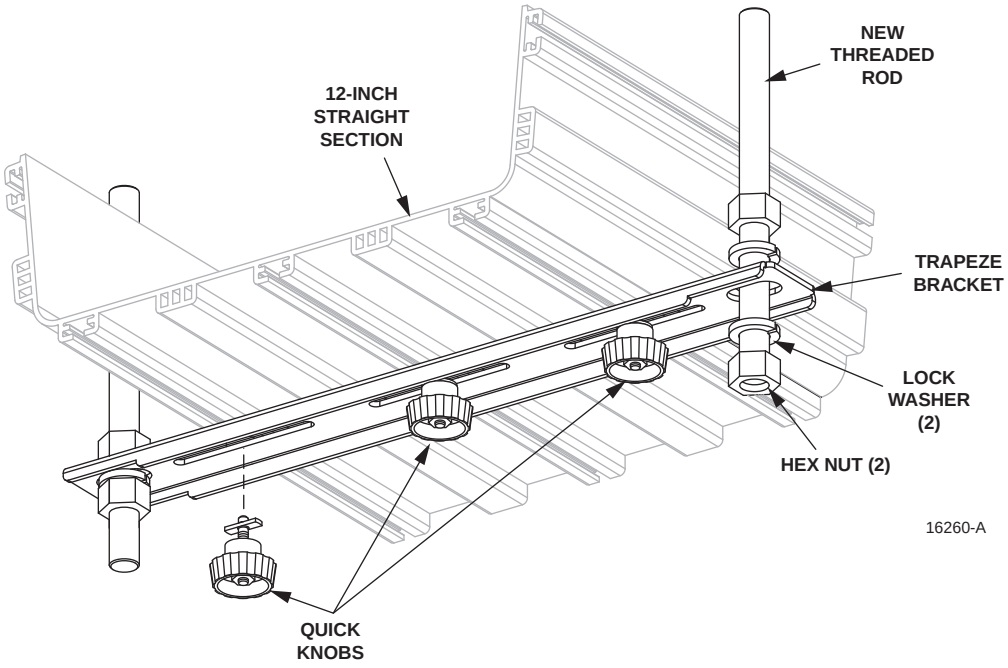

Figure 2-35. Installing 12-Inch Trapeze Support New Threaded Rock Bracket Kit

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6.9 Ladder Rack Center Support Bracket Kit (FGS-HNLR-F)

Install the kit in the following order, referring to Figure 2-36.

1. Fasten two bracket components to the desired ladder rung in the orientation shown using four hex screws and four lock washers
2. Fasten 12-inch straight section to the bracket using quick knobs.

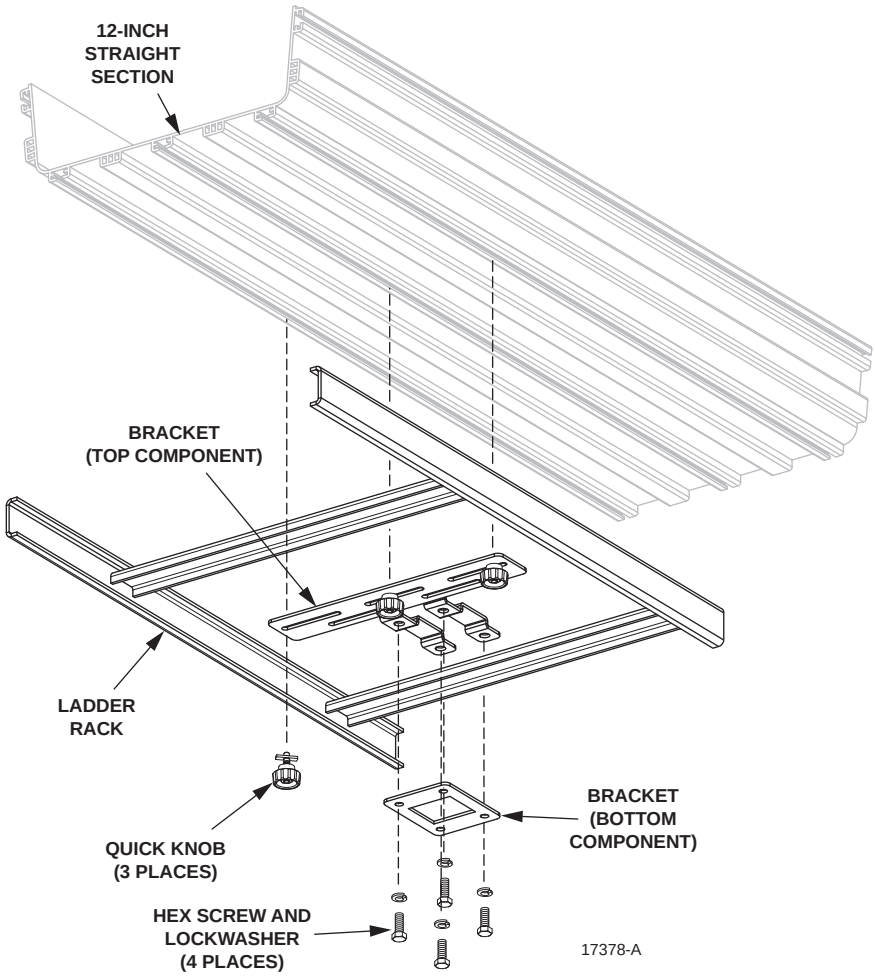

Figure 2-36. Installing 12-Inch Ladder Rack Center Support Bracket Kit

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6.10 Variable Support Bracket Kits (FGS-MHRT-F-VS, FGS-MDSP-F-VS, FGS-MH9E-F-VS, FGS-MHRT-F/B-VS, FGS-MHXP-F-VS, FGS-MHXP-F/B-VS, FGS-MDSP-F-VS)

Fasten variable support locator brackets onto FiberGuide fitting using the hardware provided. Refer to Figure 2-37 and Figure 2-39 (FGS-MHRT-F-VS), Figure 2-38 (FGS-MH9E-F-VS), Figure 2-40 (FGS-MHRT-F/B-VS), Figure 2-41 (FGS-MHXP-F-VS), Figure 2-42 (FGS-MHXP-F/B-VS), and Figure 2-43 (FGS-MDSP-F-VS).

Note: If the kit being installed is not included here, install the kit following the principles illustrated in the figures provided.

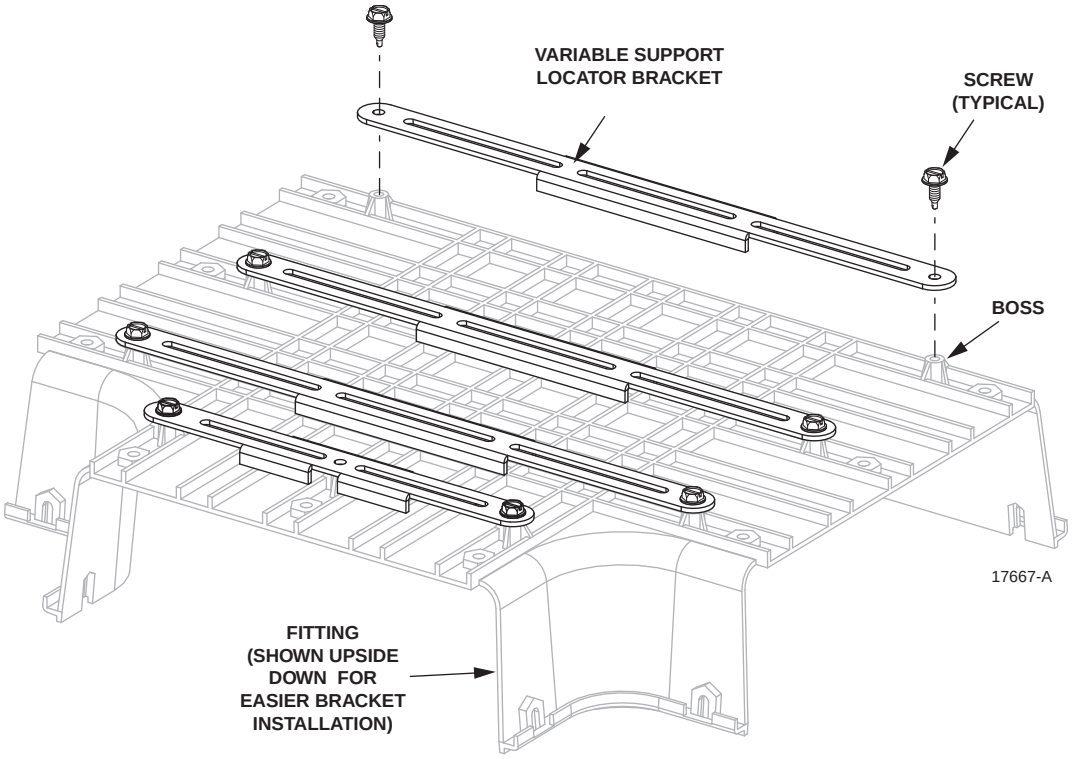

Figure 2-37. FGS-MHRT-F-VS Variable Support Bracket

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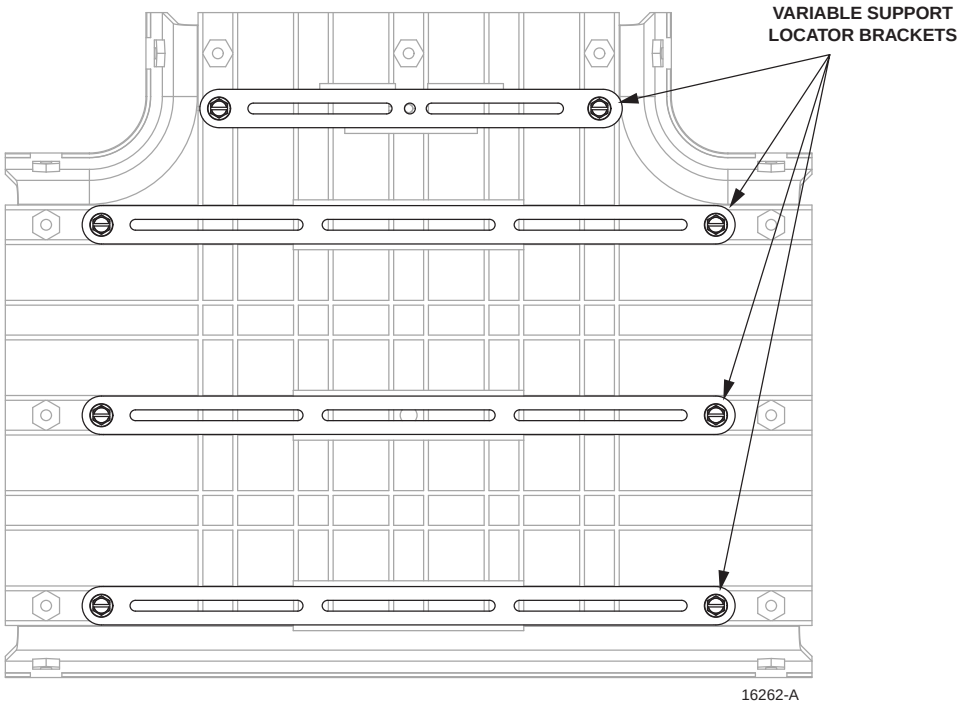

Figure 2-38. FGS-MHRT-F-VS Variable Support Bracket

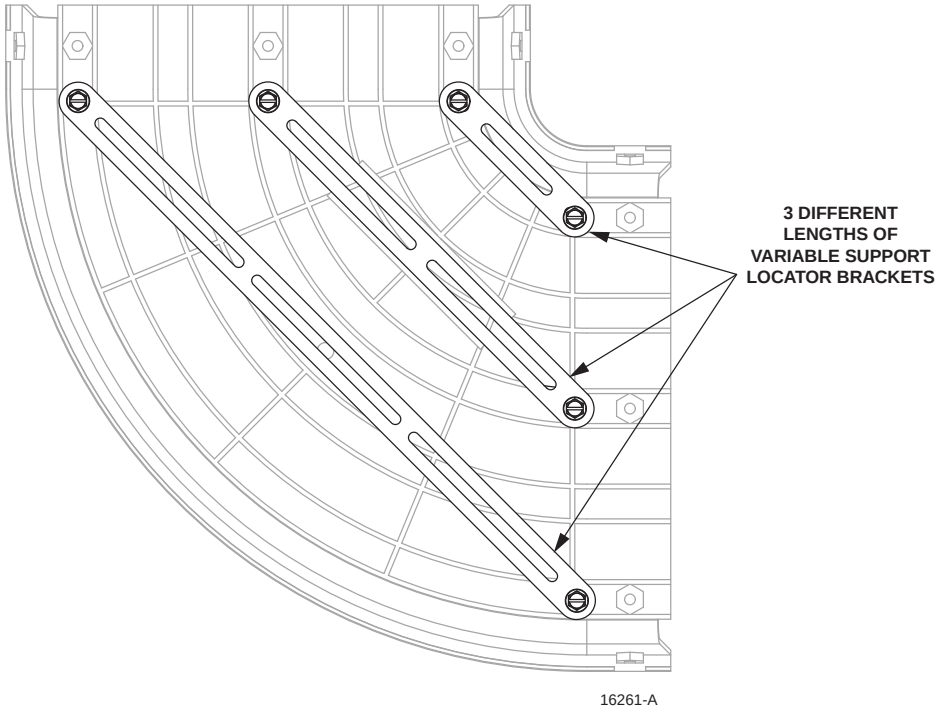

Figure 2-39. FGS-MH9E-F-VS Variable Support Bracket

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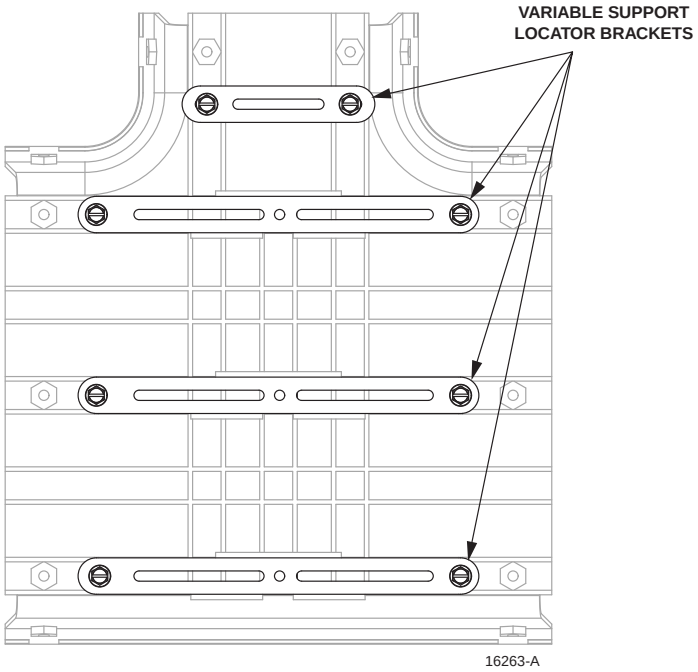

Figure 2-40. FGS-MHRT-F/B-VS Variable Support Bracket

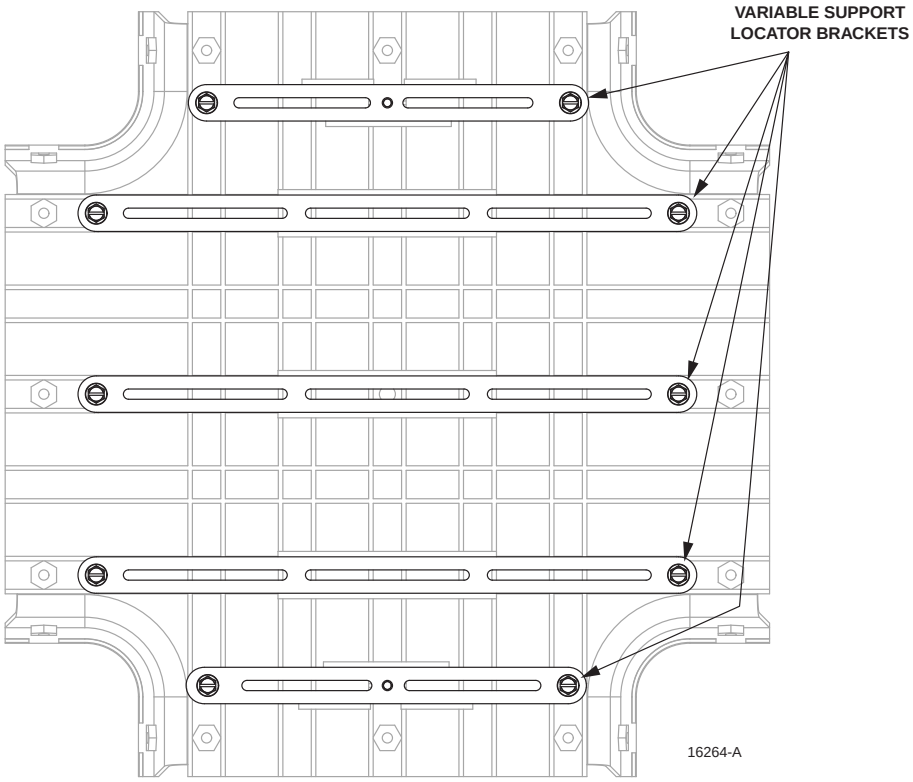

Figure 2-41. FGS-MHXP-F-VS Variable Support Bracket

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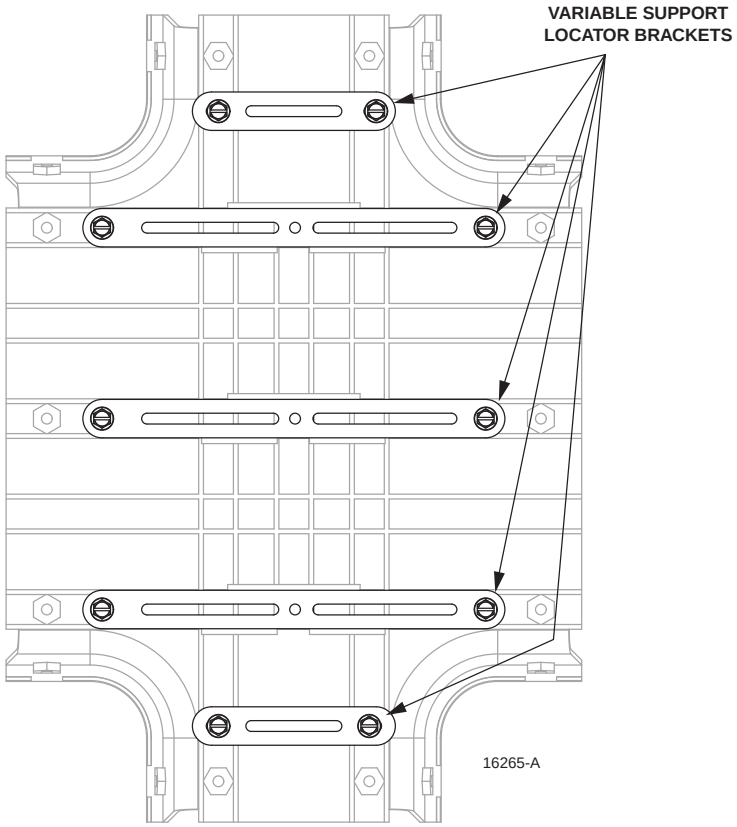

Figure 2-42. FGS-MHXB-F/B-VS Variable Support Bracket

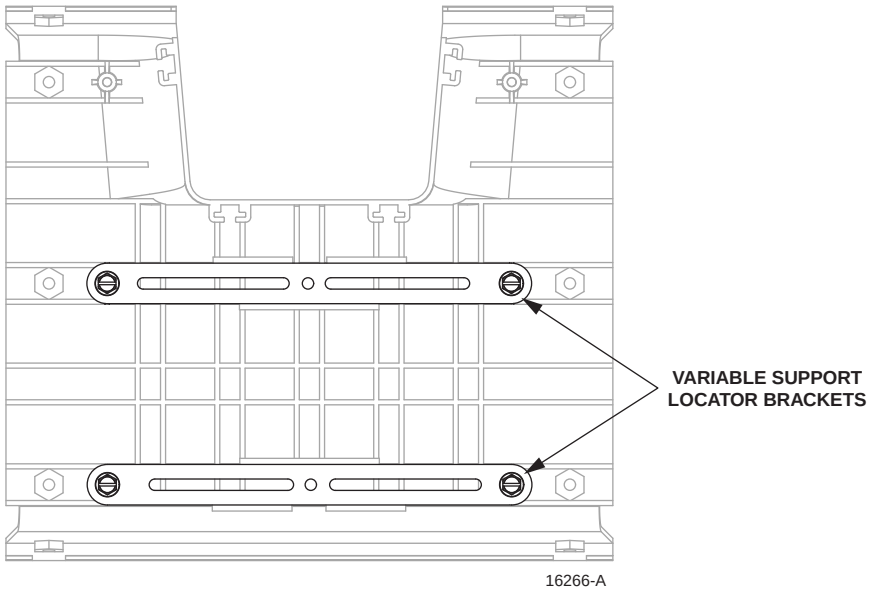

Figure 2-43. FGS-MDSP-F-VS Variable Support Bracket

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7 INSTALLING 24-INCH SUPPORTS

24-inch supports are used to provide anchoring points for 24-inch horizontal components such as straight sections and fittings. To install the supports, refer to the following procedures.

Note: Threaded rods (shown for reference in exploded views) are not included in the kits. Threaded rods must be purchased separately.

Note: All exploded views for 24-inch kits show the support brackets attached directly to the FiberGuide straight sections. When possible, support all 24-inch fittings directly. If the support brackets cannot be directly attached to the fittings, CommScope recommends use of variable fitting support locators, which allow the support brackets to be attached anywhere along the bottom of the fittings. For more information, refer to Topic 6.3 on page 1-13.

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7.1 Trapeze Support Existing Threaded Rod Bracket Kit (FGS-HETP-H-XX)

Install a trapeze support existing threaded rod bracket kit in the following order, referring to Figure 2-44.

1. In the approximate desired position, install two bottom split nuts shown in Figure 2-44. Install each nut as follows:
   a. Rotate top and bottom sections of split nut until the cutouts are aligned.
   b. Place split nut on the threaded rod.
   c. Rotate top section of split nut 1/3 turn clockwise.

Note: Turn both sections of split nut together, like an ordinary nut, to raise or lower the nut. Do not tighten the upper section further into the lower section.

2. Place a trapeze bracket on the bottom split nuts.
3. Install a bracket clip and second split nut on each threaded rod (above the trapeze bracket, as shown in Figure 2-44).

Note: Install upper split nut in the same manner as the lower split nut. Turn both sections of the nut together clockwise until the trapeze bracket is held firmly in place.

4. Place a straight section on the trapeze bracket.
5. Secure with quick knobs.

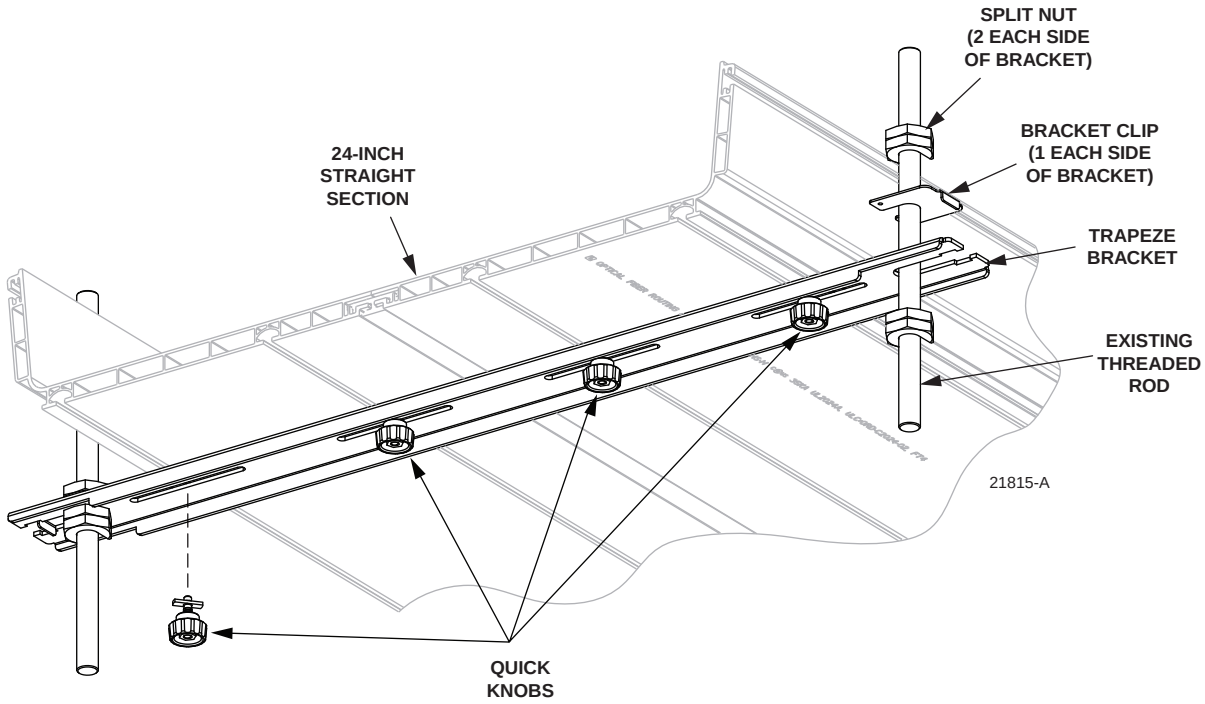

Figure 2-44. Installing 24-Inch Trapeze Support Existing Threaded Rod Bracket Kit

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7.2 Trapeze Support New Threaded Rod Bracket Kit (FGS-HNTP-H-XX)

Install a trapeze support new threaded rod bracket kit in the following order, referring to Figure 2-45.

1. Mount a trapeze bracket on two new threaded rods as shown using lock washers and hex nuts provided.
2. Position a straight section on the trapeze bracket.
3. Secure with quick knobs.

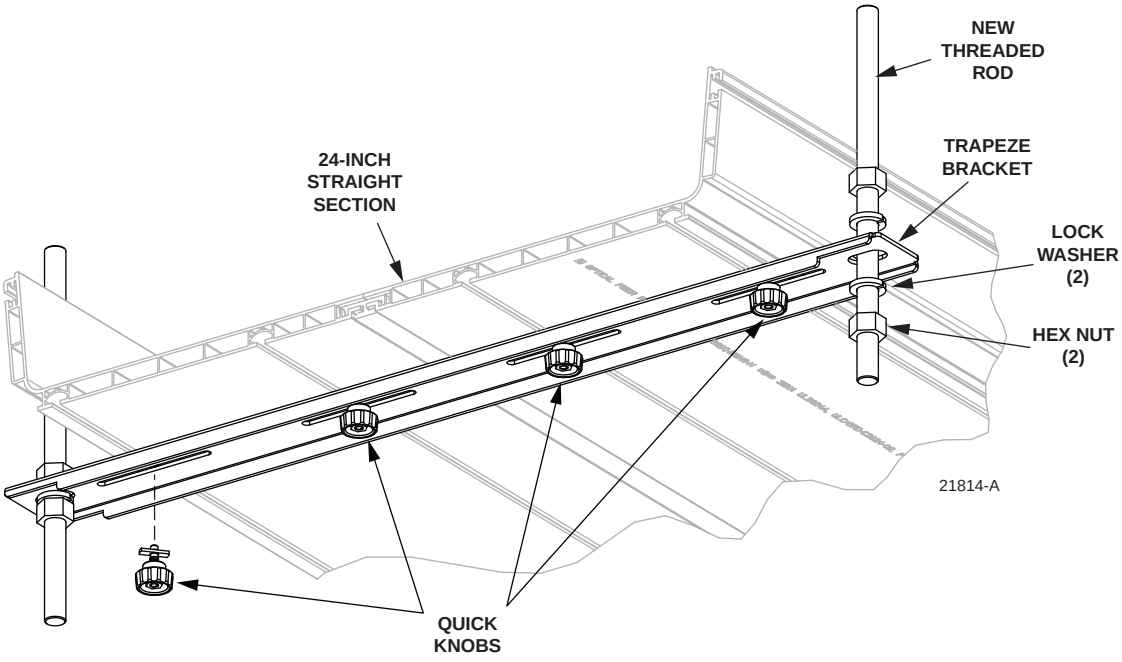

Figure 2-45. Installing 24-Inch Trapeze Support New Threaded Rock Bracket Kit

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7.3 Variable Support Bracket Kits (FGS-MH4E-H-VS, FGS-MHRT-H/F-VS, FGS-MHXP-H-VS, FGS-MHXP-F/H-VS)

Fasten variable support locator brackets onto FiberGuide fitting using the hardware provided. Refer to Figure 2-46 (FGS-MH4E-H-VS), Figure 2-47 (FGS-MHRT-H/F-VS), Figure 2-48 (FGS-MHXP-H-VS), and Figure 2-49 (FGS-MHXP-F/H-VS).

Note: If the kit being installed is not included here, install the kit following the principles illustrated in the figures provided.

Note: If a 24-inch 90º horizontal elbow is required it is assembled from two 45º horizontal elbows and a 24-inch junction.

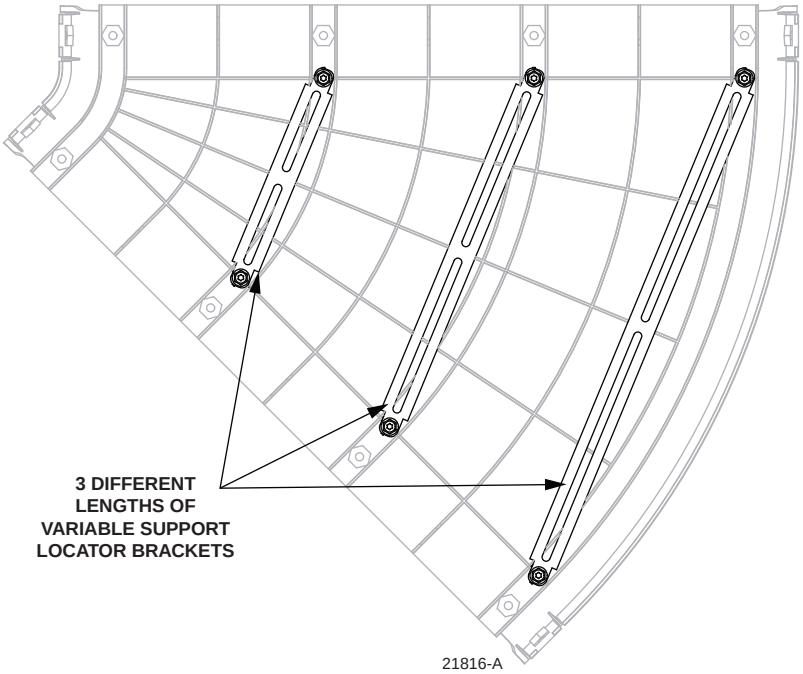

Figure 2-46. FGS-MH4E-H-VS Variable Support Bracket

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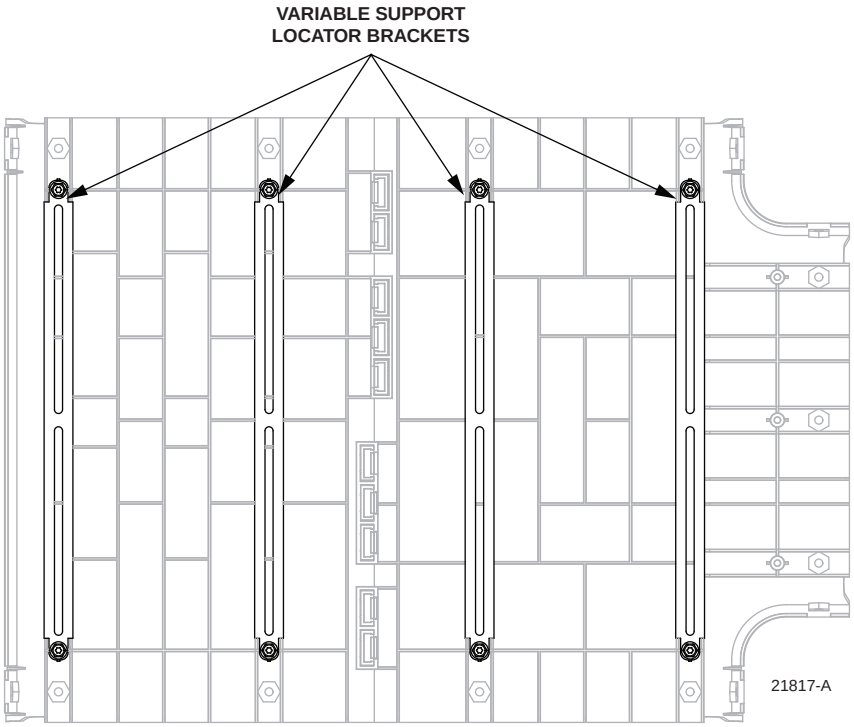

Figure 2-47. FGS-MHRT-H/F-VS Variable Support Bracket

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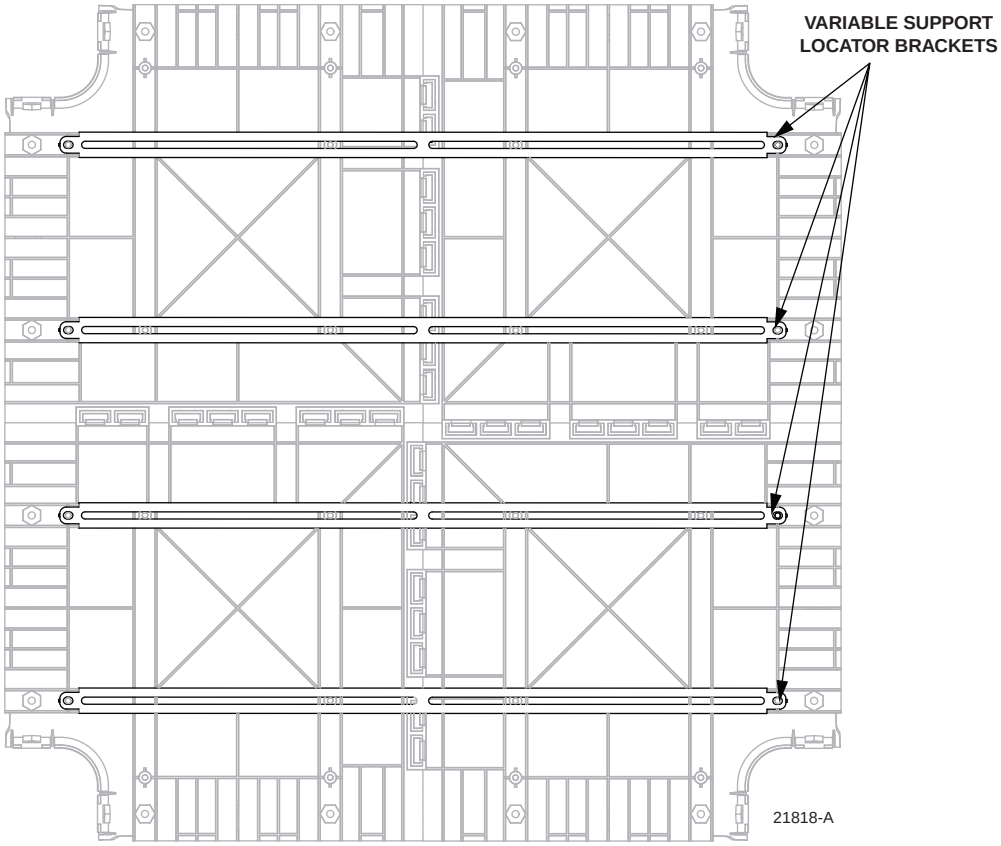

Figure 2-48. FGS-MHXP-H-VS Variable Support Bracket

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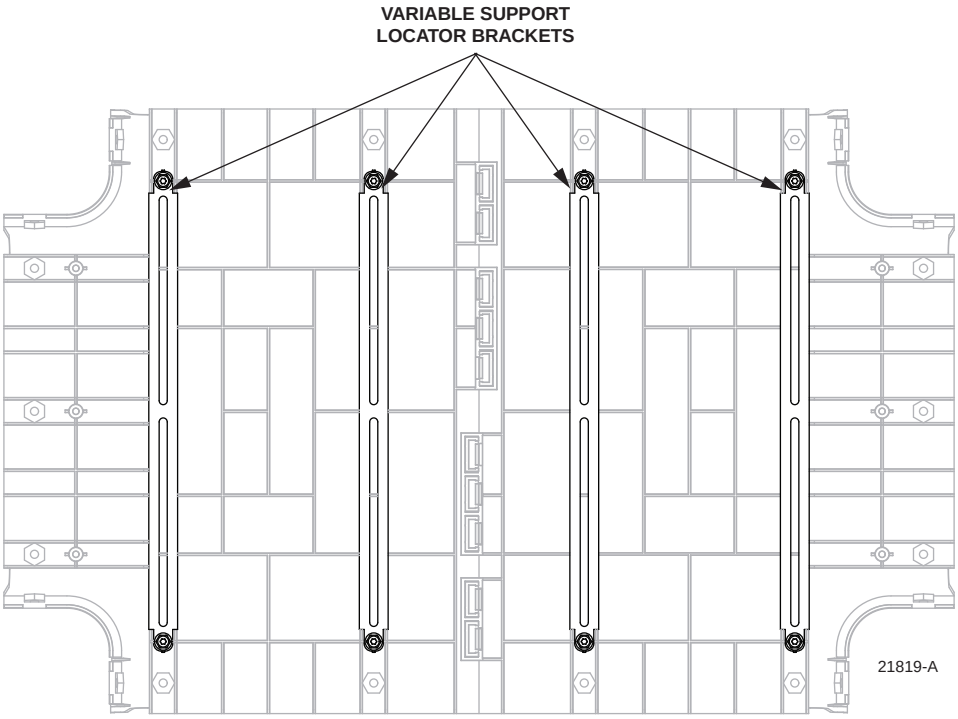

Figure 2-49. FGS-MHXP-F/H-VS Variable Support Bracket

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SECTION 3: INSTALLING HORIZONTAL COMPONENTS

Content			Page
1	INTRODUCTION		3-1
2	EXPANDABLE STRAIGHT SECTIONS (FGS-MVAR-X)		3-2
3	SLACK STORAGE STRAIGHT SECTION KIT (FGS-MSHS-STOR-X)		3-3
4	CUTTING STRAIGHT SECTIONS		3-4
	4.1	Cutting 4, 6, or 12-inch Straight Sections	3-4
	4.2	Cutting 24-inch Straight Sections	3-5
5	CUT-IN TEE KIT (FGS-MHIS-X)		3-5
6	INSTALLING A JUNCTION KIT		3-8
	6.1	2x2 Junction Kit (FGS-MJWR-C)	3-8
	6.2	2x6 Junction Kit (FGS-JUNC-G)	3-9
	6.3	4x4, 4x6, 4x12 Junction Kits (FGS-JUNC-A/B/F)	3-10
	6.4	Snap-Fit Junction Kits (FGS-MFAW-A/B/F/H)	3-11
7	INSTALLING ADAPTER KITS		3-13
	7.1	4x4, 4x6, 4x12 Reverse Junction Adapter Kits (FGS-HRJA-A/B/F)	3-13
	7.2	4x6 to 4x12 Side In Line Adapter Kits (FGS-MDSA-FB-R or FGS-MDSA-FB-L)	3-15
8	INSTALLING TRANSITION KITS		3-16
	8.1	2-to-4-Inch Transition Kit (FGS-MDSA-AC)	3-16
	8.2	4-to-6-Inch Transition Kit (FGS-MSDA-AB)	3-17
	8.3	6-to-12-Inch Transition Kit (FGS-MSDA-FB)	3-18
	8.4	12-to-Dual-6-Inch Transition Kit (FGS-MDSA-F2B)	3-19
	8.5	12-to-24-Inch Transition Kit (FGS-MSDA-HF)	3-20

1 INTRODUCTION

Installing horizontal components involves two types of procedures:

1. Using junction kits to join horizontal sections of the same size.
2. Using transition kits to join sections of different sizes.

Since using junction kits is similar for all sizes, a single procedure is provided for all sizes. Separate procedures are provided for the following different sizes of transition kits:

- 2-to-4-inch transition
- 4-to-6-inch transition
- 6-to-12-inch transition
- 12-to-dual-6-inch transition
- 12-to 24-inch transition

Note: CommScope offers expandable straight sections, which simplifies measurement tasks for long spans (see Topic 2 on page 3-2).

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2 EXPANDABLE STRAIGHT SECTIONS (FGS-MVAR-X)

Expandable straight sections are available for 4-inch, 6-inch, and 12-inch cable ways. Install an expandable straight section kit as follows referring to Figure 3-1.

Note: Opening side must be between 14 inches and 22 inches maximum.

1. Slide junctions onto the expandable straight section.
2. Move expandable straight section into position and expand it until all components are tight against each other.
3. Refer to junction installation drawing to complete assembly.

Note: Support bracket should be installed directly under outer section, using support bosses, or immediately adjacent to outer section.

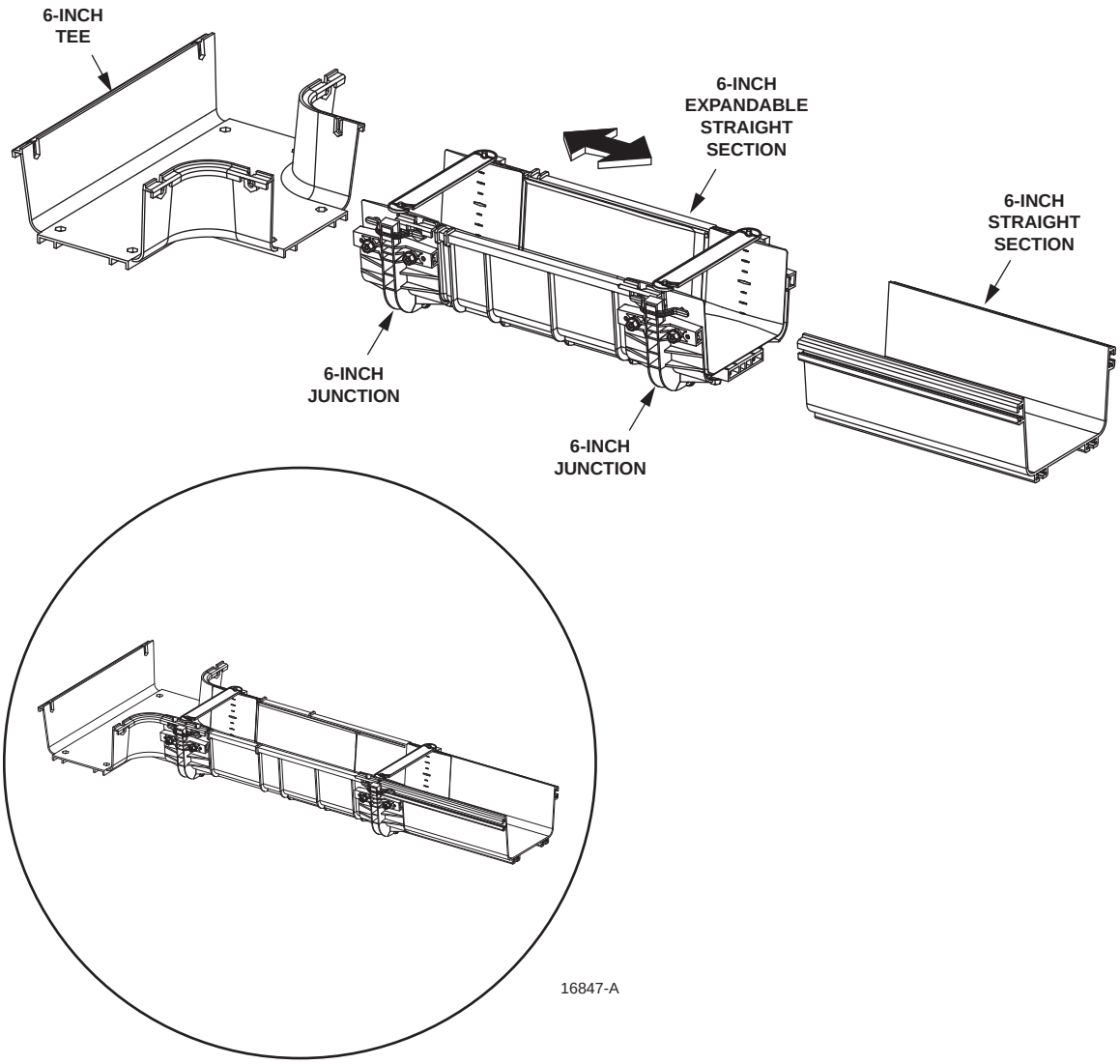

Figure 3-1. Installing Expandable Straight Section (6-Inch)

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3 SLACK STORAGE STRAIGHT SECTION KIT (FGS-MSHS-STOR-X)

Install the kit referring to Figure 3-2.

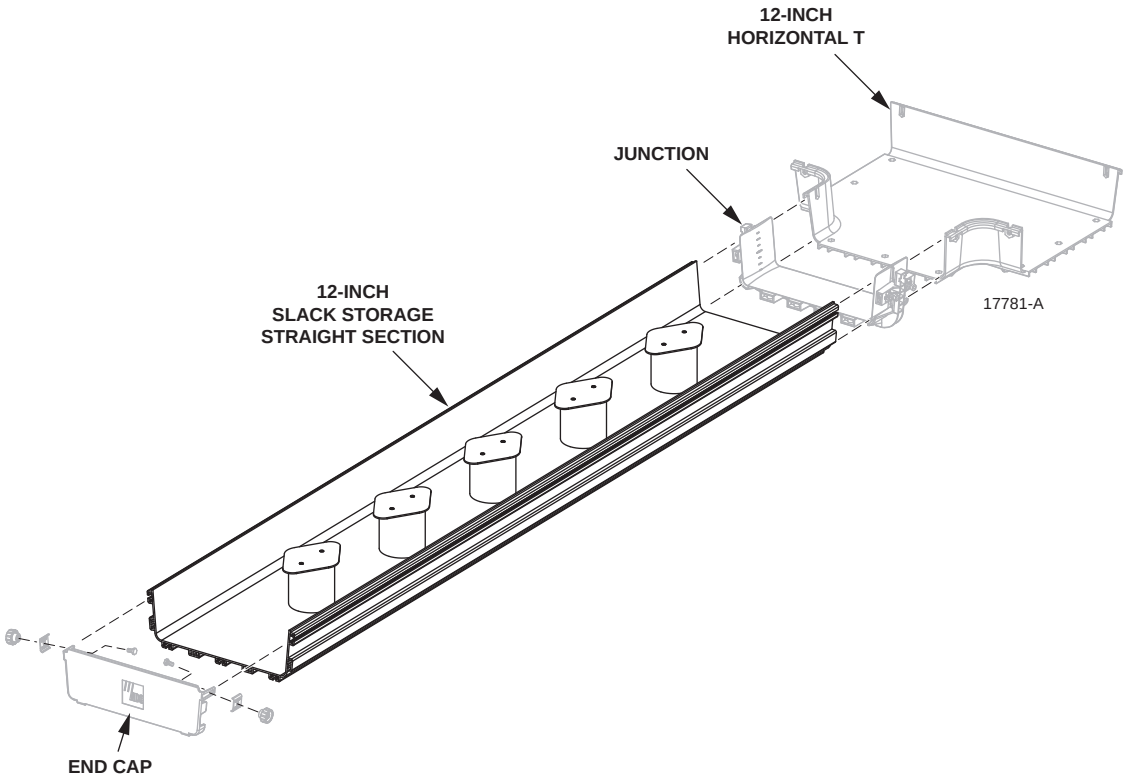

Figure 3-2. Installing Slack Storage Straight Section

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4 CUTTING STRAIGHT SECTIONS

When working with horizontal FiberGuide components, you will sometimes be required to cut straight sections.

4.1 Cutting 4, 6, or 12-inch Straight Sections

A miter box kit (FGS-MKIT) is available from CommScope to be used for cutting straight sections. Using the miter box and a cross-cut saw, cut the straight section as shown in Figure 3-3.

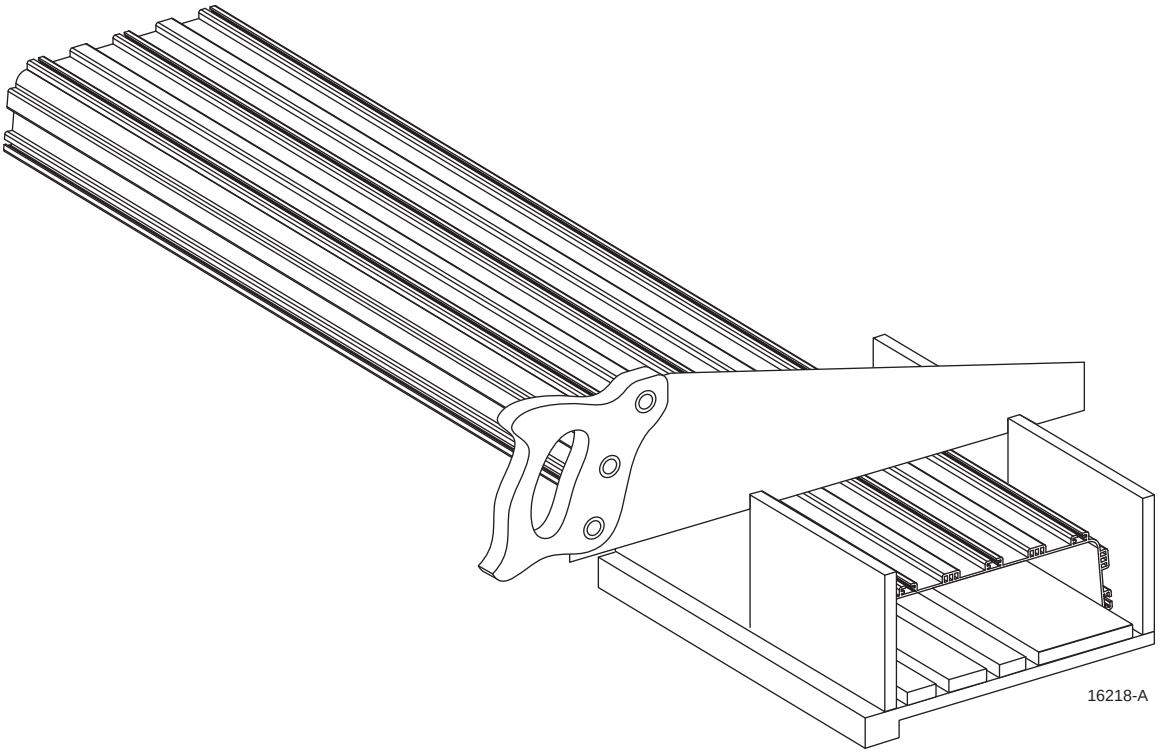

Figure 3-3. Cutting a Straight 4, 6, or 12-inch Section

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4.2 Cutting 24-inch Straight Sections

A cutting guide (FGS-MKIT-H) is available from CommScope to aid in cutting 24-inch straight sections. Assemble cutting guide using the hardware provided. Determine length of the straight section to be cut and mark. Determine the set back for the saw being used to cut the section. Turn the straight section upside down and push cutting guide on so the cutting guide snaps into the T-slots on the top sides, see Figure 3-4. Once you have the cutting guide in place, based on the setback use two quick knobs with T-bolts to secure guide to the bottom of the straight section to prevent bowing of the straight section. (To install a quick knob, insert the quick knob T-bolt through guide into the straight section T-slot and rotate the T-bolt one quarter turn, then hand-tighten quick knob.) Using the guide and a saw cut straight section.

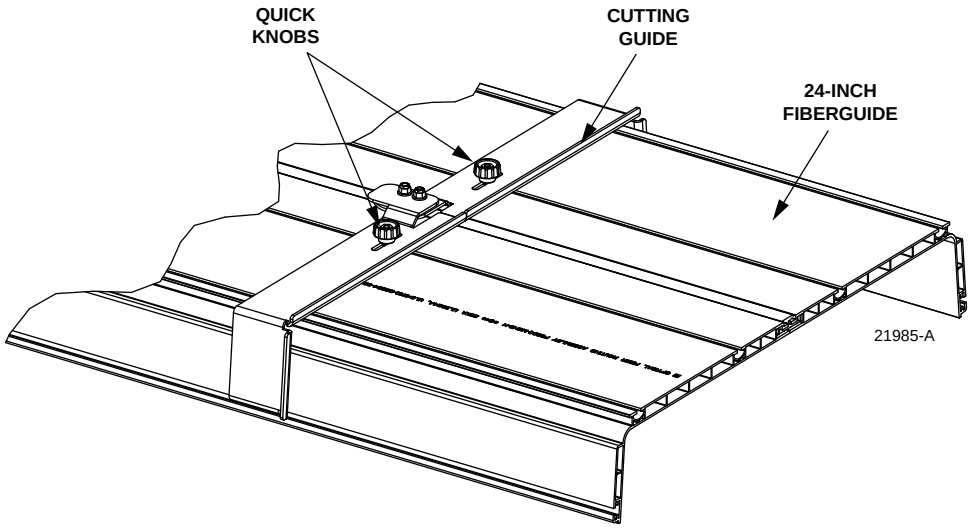

Figure 3-4. Preparing to Cut a Straight 24-inch Section

5 CUT-IN TEE KIT (FGS-MHIS-X)

Install a cut-in tee kit in the following order referring to Figure 3-5 or Figure 3-6.

Note: An CommScope jig kit (FGS-MHIS-JIG-X, shown in Figure 3-5) is recommended for this procedure. The procedure is illustrated with and without the jig kit.

1. If an CommScope jig kit is available, position the jigs and mark the cut lines with pencil, as shown in Figure 3-5. If the jig is not available, hold the cut-in tee against the straight section and mark the cut lines with pencil a shown in Figure 3-6.
2. Cut out the area of the straight section with a handsaw as shown.
3. Align the cut-in tee and straight section. Tighten bolts and quick knobs.

Note: A 4-inch straight section is shown. The same procedure applies to all section widths.

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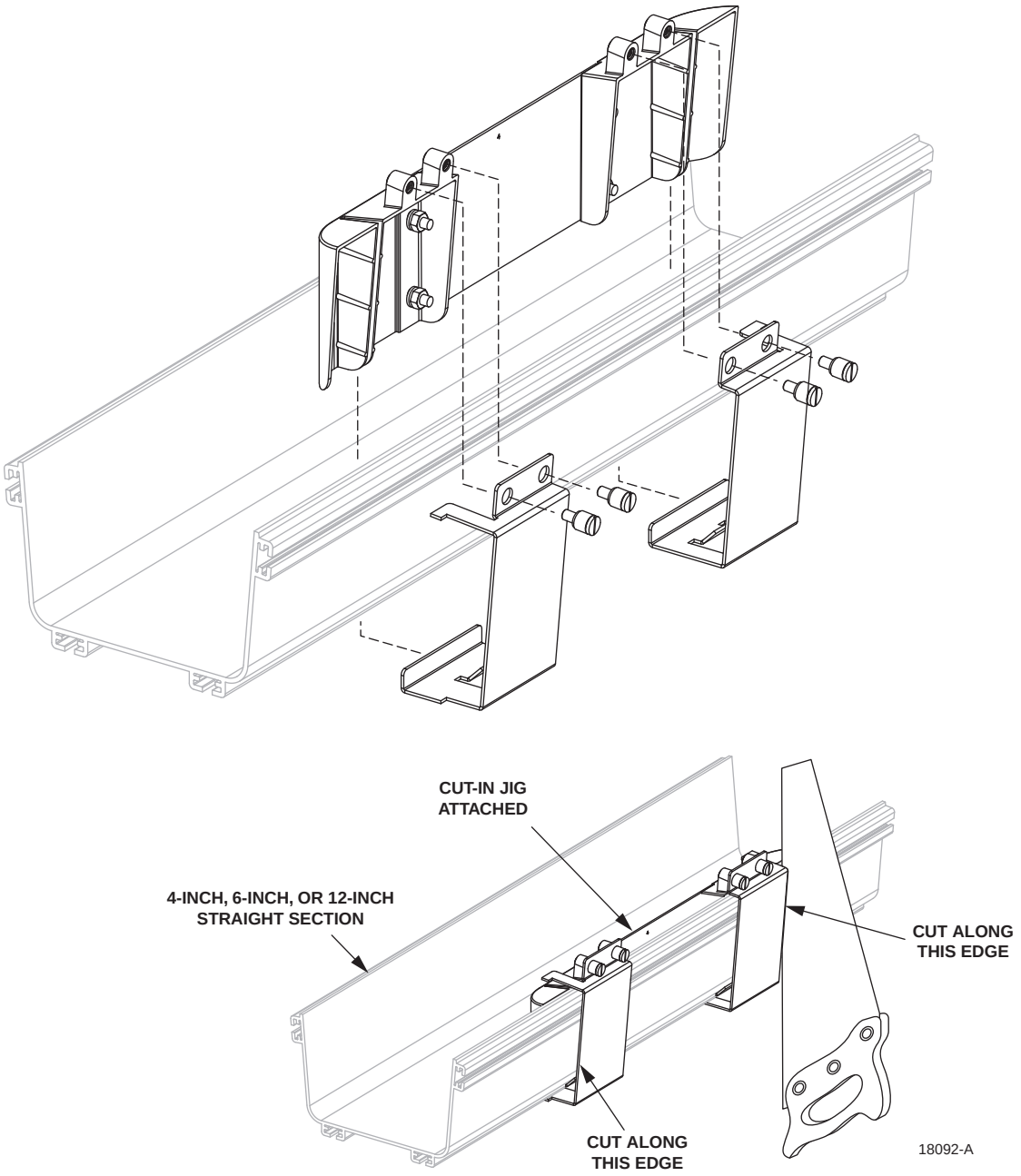

Figure 3-5. Installing Cut-In Tee Kit Using Jig Kit

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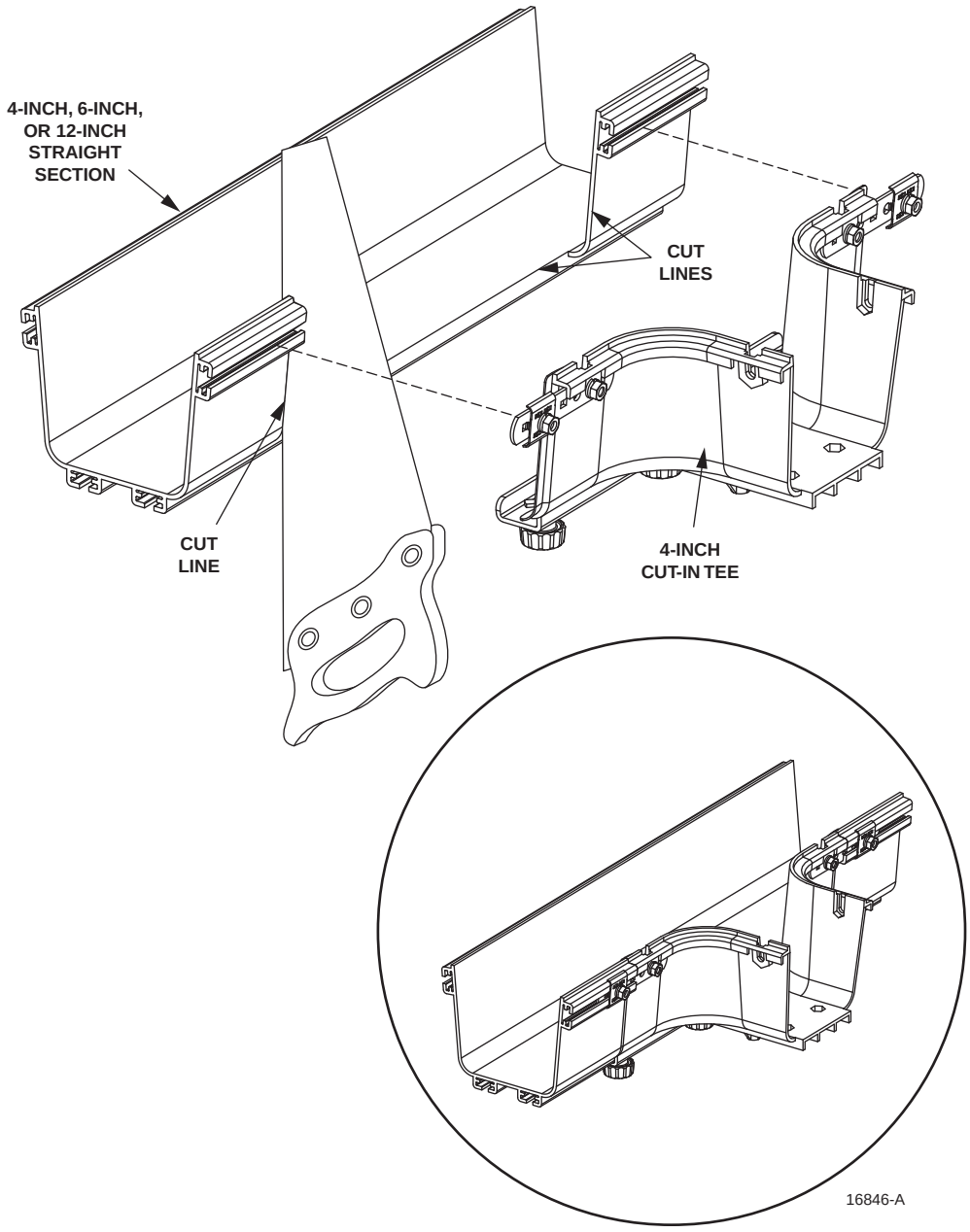

Figure 3-6. Installing Cut-In Tee Kit Using Tee as Template

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6 INSTALLING A JUNCTION KIT

6.1 2x2 Junction Kit (FGS-MJWR-C)

To install the kit, slide both FGS components into the junction until firmly seated against the center rib, as shown in Figure 3-7.

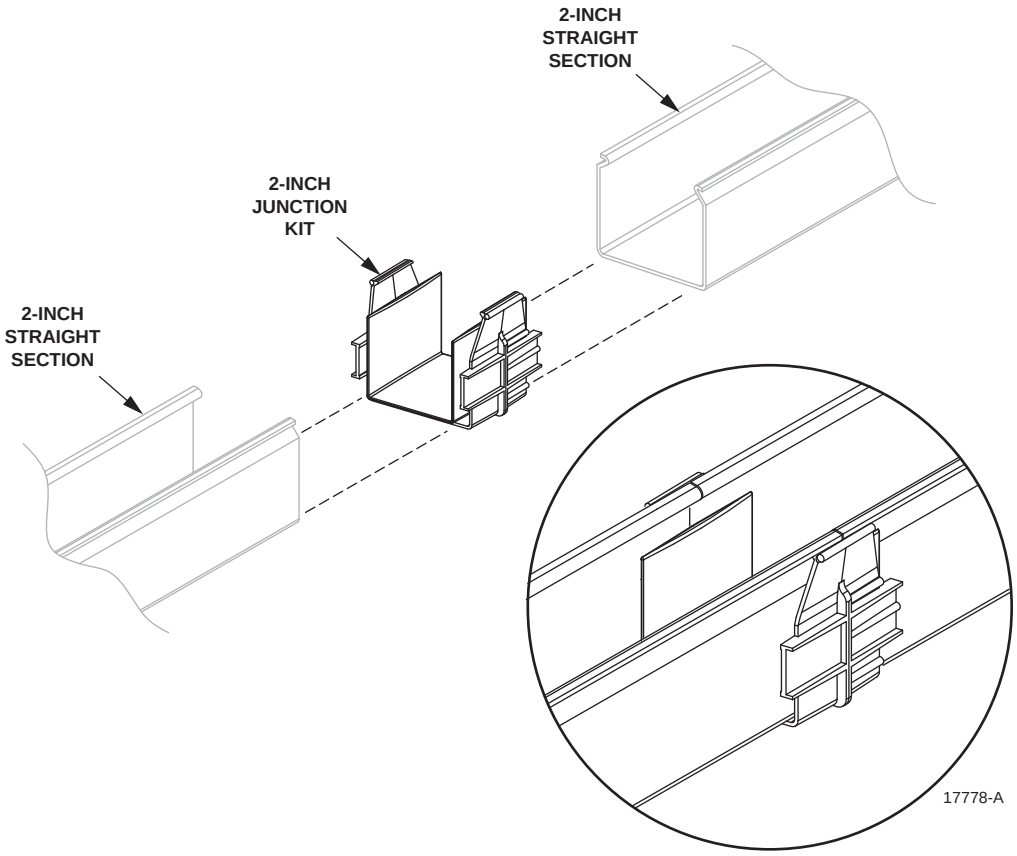

Figure 3-7. Installing a 2x2 Junction Kit

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6.2 2x6 Junction Kit (FGS-JUNC-G)

Install a kit in the following order, referring to Figure 3-8.

1. Slide both FGS components into the junction until firmly seated against the center rib.
2. Tighten all screws until washer heads are approximately 1/16-inch from the junction.
3. After all screws have been tightened to the 1/16-inch dimension, go back and tighten each screw until washer head bottoms out on the junction.

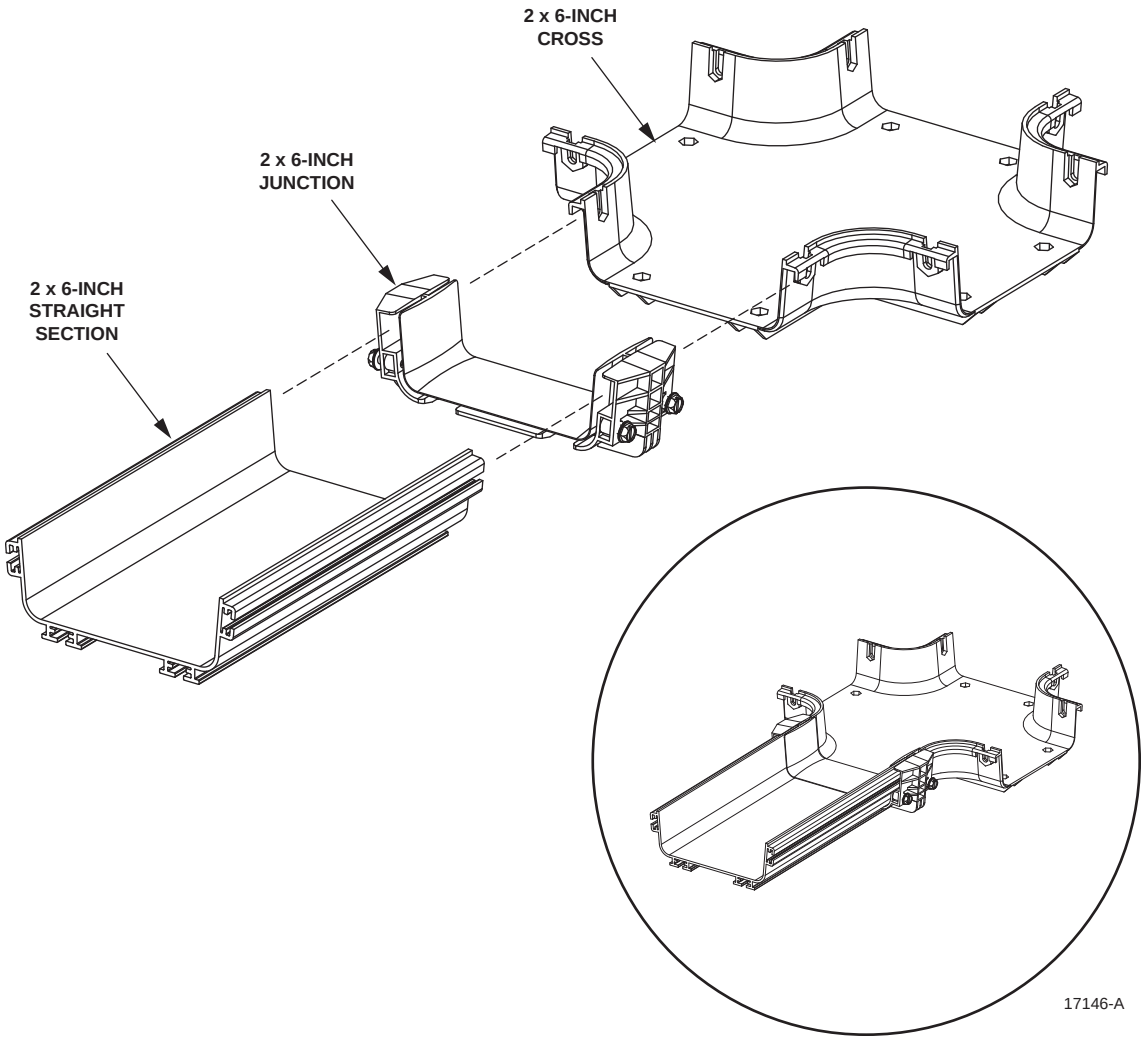

Figure 3-8. Installing 2x6 Junction Kit

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6.3 4x4, 4x6, 4x12 Junction Kits (FGS-JUNC-A/B/F)

Install a kit in the following order, referring to Figure 3-9.

1. Slide both FGS components into the junction until firmly seated against the center rib. If the component is a molded fitting, make sure the locking pins on the connector are engaged in the holes on the molded fitting.
2. Tighten all screws until washer heads are approximately 1/16-inch from the junction.
3. After all screws have been tightened to the 1/16-inch dimension, go back and tighten each screw until washer head bottoms out on the junction.

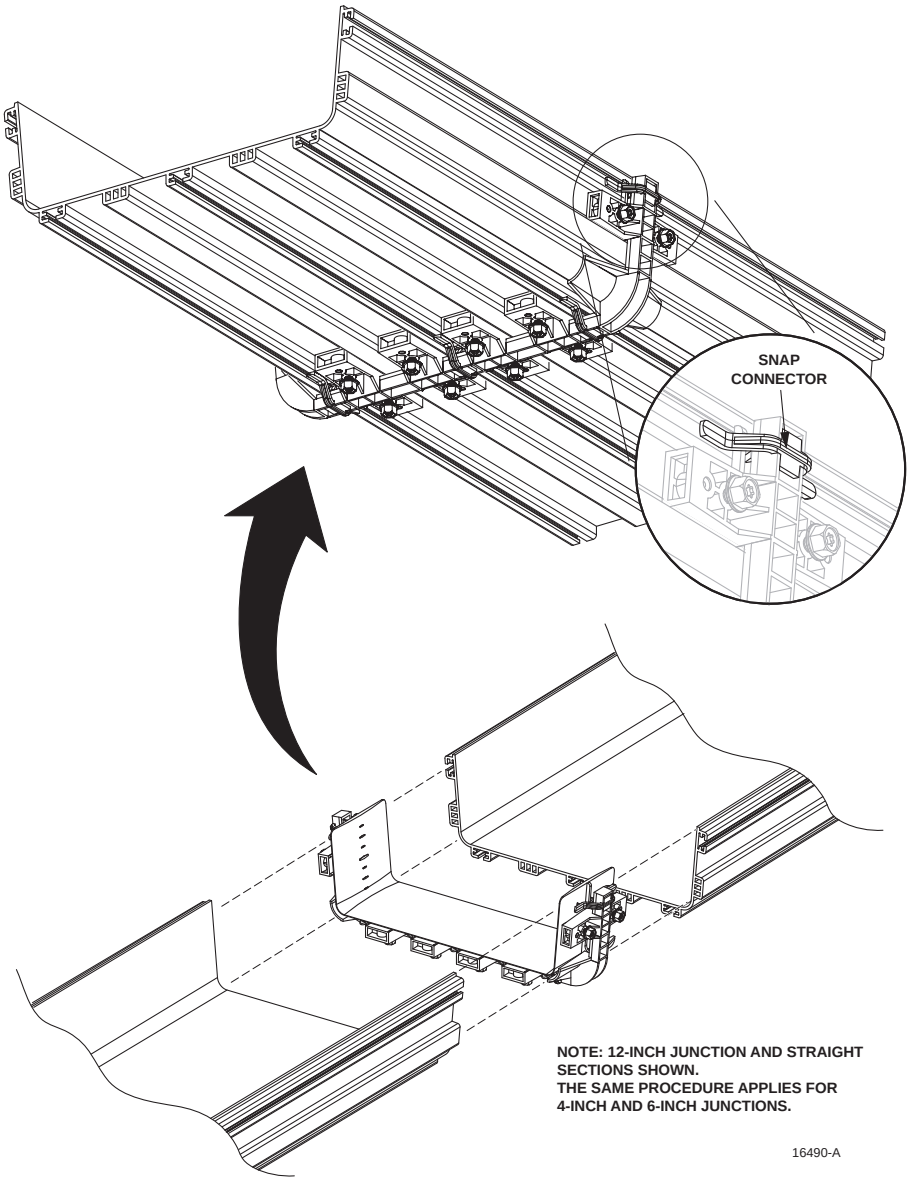

Figure 3-9. Installing 4x4, 4x6, or 4x12 Junction Kit

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6.4 Snap-Fit Junction Kits (FGS-MFAW-A/B/F/H)

Install the kit as follows referring to Figure 3-10.

1. Verify that the slides on the junction are in the locked, ready to assemble position shown in Figure 3-10.

Note: Junction is shipped with the slides in the locked, ready to assemble position. If for some reason the slides are not in the locked, ready to assemble position, push the buttons on the slides to reset the slides to the locked, ready to assemble position.

2. Position junction between the items it is being attached to with the slides lined up for insertion into the receptor slots on the items.
3. Slide snaps into place.

Note: To detach a junction, if necessary, from the items it is attached to, push the slides toward the center to unlock the assembly, then pull the items out from the junction.

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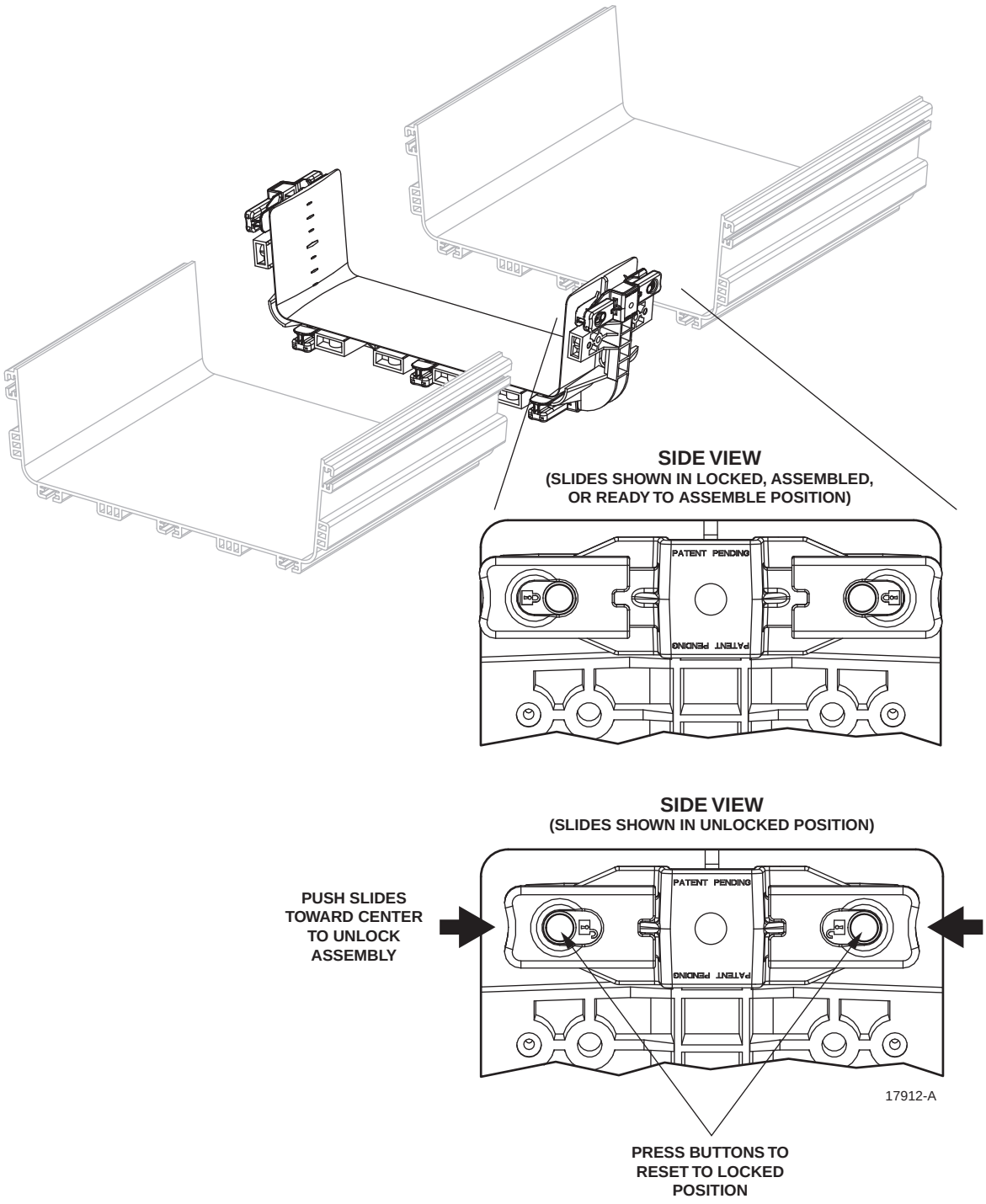

Figure 3-10. Installing Snap-Fit Junction Kit

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7 INSTALLING ADAPTER KITS

7.1 4x4, 4x6, 4x12 Reverse Junction Adapter Kits (FGS-HRJA-A/B/F)

If installing the kit on a straight section, install it as follows, referring to Figure 3-11.

1. Insert hex head cap screw into hole in each of the tabs that are to be inserted into the straight section. Ensure that screw heads are on the side of the tabs.
2. Insert tabs with screws into the outer T-channel on the straight section. Ensure straight section is fully inserted into adapter.
3. Assemble quick knobs onto hex cap screws inserted in the tabs. Tighten completely.

If installing the kit on a fitting, install it as follows:

1. Align the molded holes on the fitting with holes on adapter.
2. Insert hex head screw into molded holes (from inside of fitting) and through hole in adapter tab.
3. Assemble quick knobs onto hex head screws. Tighten completely.

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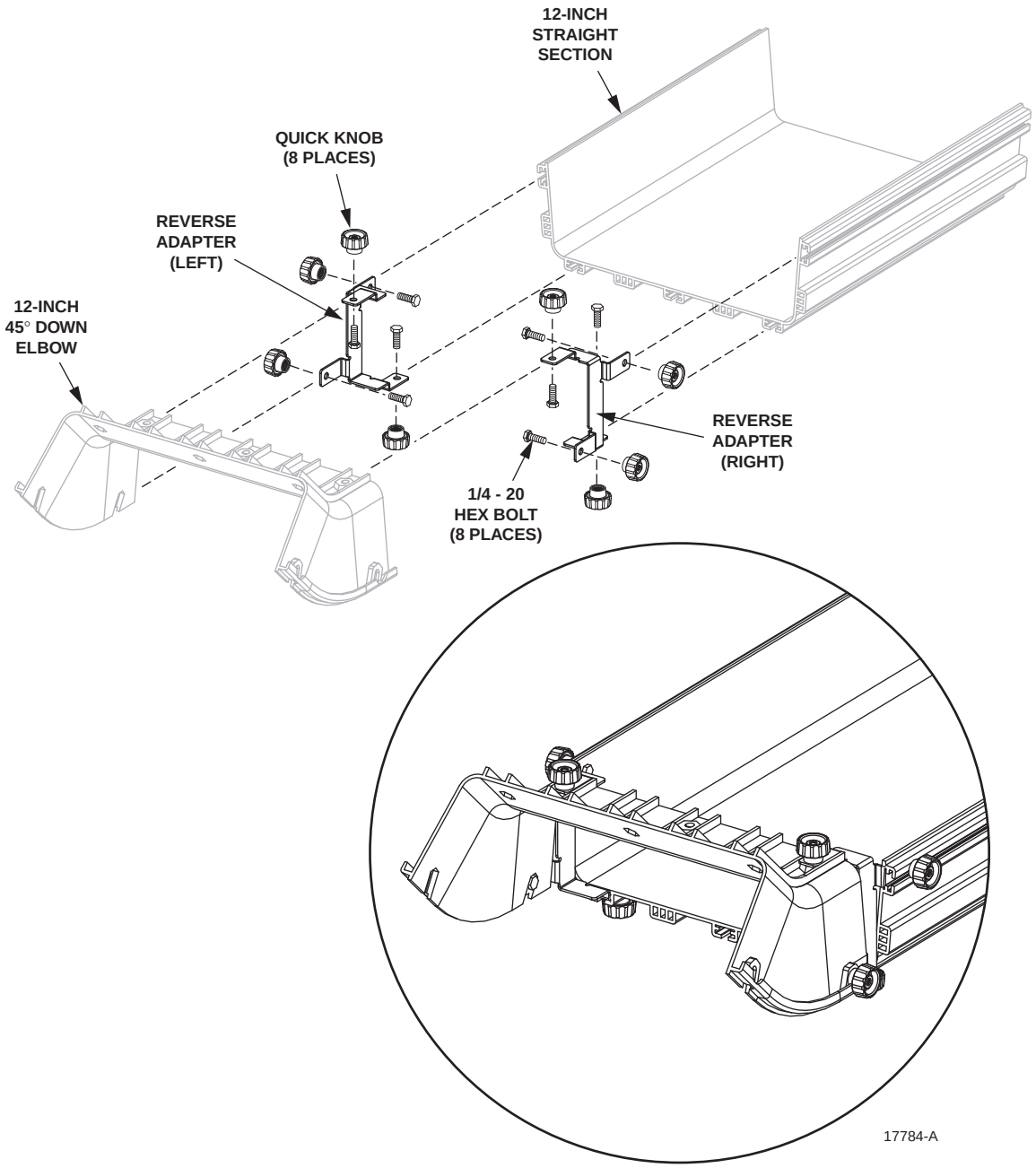

Figure 3-11. Installing Reverse Junction Adapter Kit

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7.2 4x6 to 4x12 Side In Line Adapter Kits (FGS-MDSA-FB-R or FGS-MDSA-FB-L)

This kit comes in “left” and “right” versions. Install the kit as follows, referring to Figure 3-12.

1. Insert nine 1/4-20 screws into tab holes on the adapter, one screw per tab, with the screws heads on the inside of the adapter, as shown.
2. Slide tabs with the just installed screws completely into the T-channels on the 12-inch and 6-inch FiberGuide sections.
3. Place the nine retaining washers and then the nine 1/4-20 nuts over the nine screws and tighten nuts completely.
4. If cover was ordered separately (FGS-VDSA-FB-R or -L), snap cover onto assembled kit.

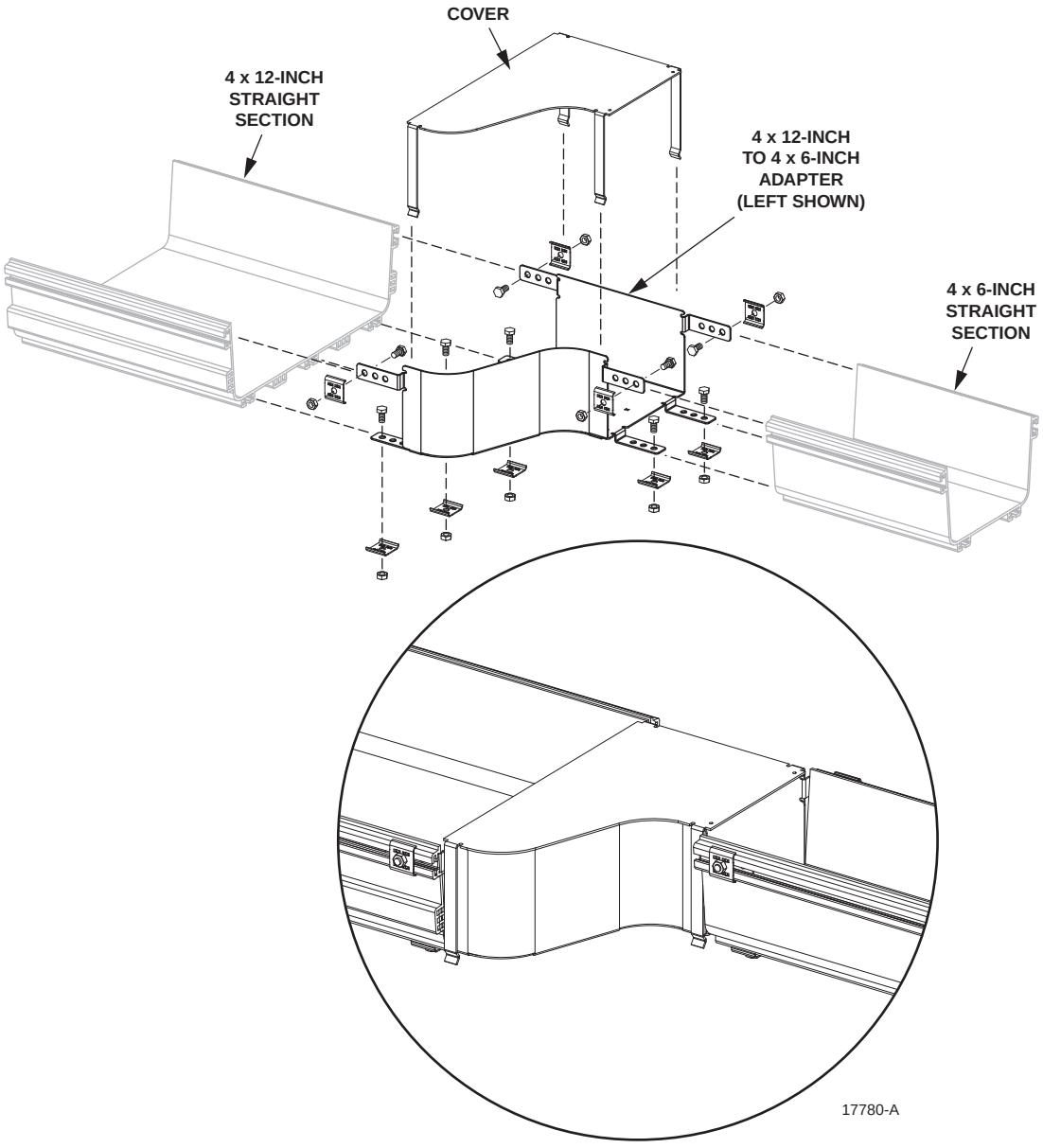

Figure 3-12. Installing 4x12 to 4x6 Adapter Kit (Left Shown)

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8 INSTALLING TRANSITION KITS

8.1 2-to-4-Inch Transition Kit (FGS-MDSA-AC)

Install the kit referring to Figure 3-13.

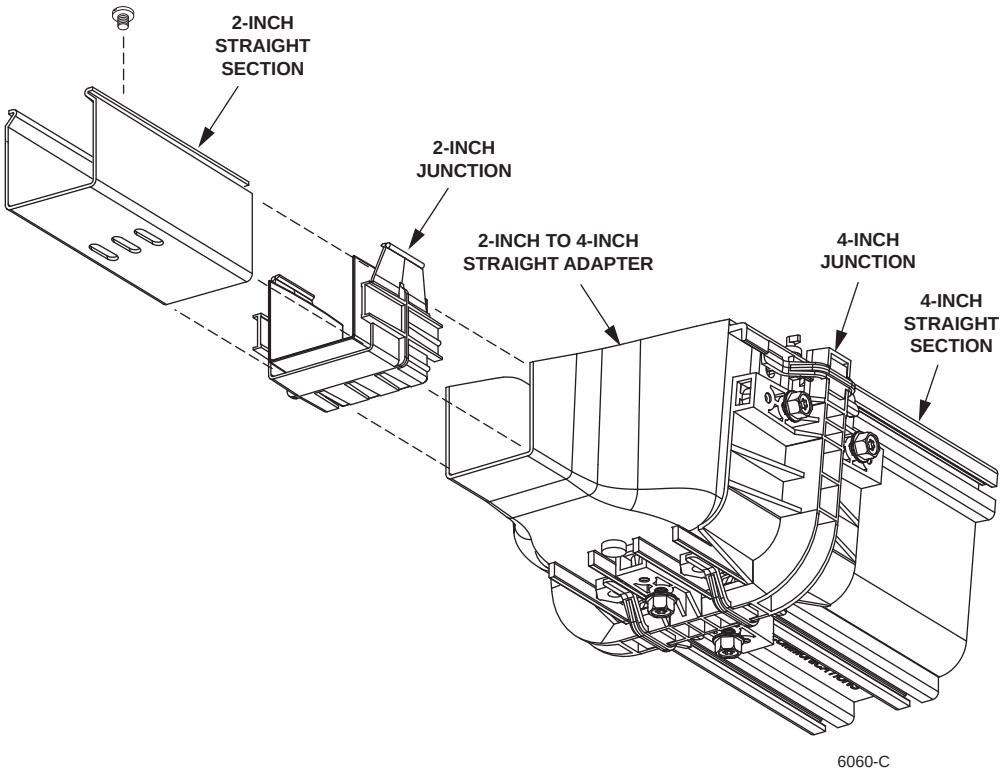

Figure 3-13. Installing 2-to-4-Inch Transition Kit

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8.2 4-to-6-Inch Transition Kit (FGS-MSDA-AB)

Install a 4-to-6-inch transition kit in the following order, referring to Figure 3-14.

1. Slide junctions and 4-to-6-inch adapter together until snap connectors engage.
2. Slide the other FGS components into the junction until firmly seated against the center rib (as shown for straight sections below). If the component is a molded fitting, make sure the locking pins on snap connector are engaged in the holes on the molded fitting.
3. Tighten screws so the washer head on the screw is approximately 1/16-inch from the support arm. After all screws have been tightened to the 1/16-inch dimension, go back and tighten each screw until washer head bottoms out on the support arm.

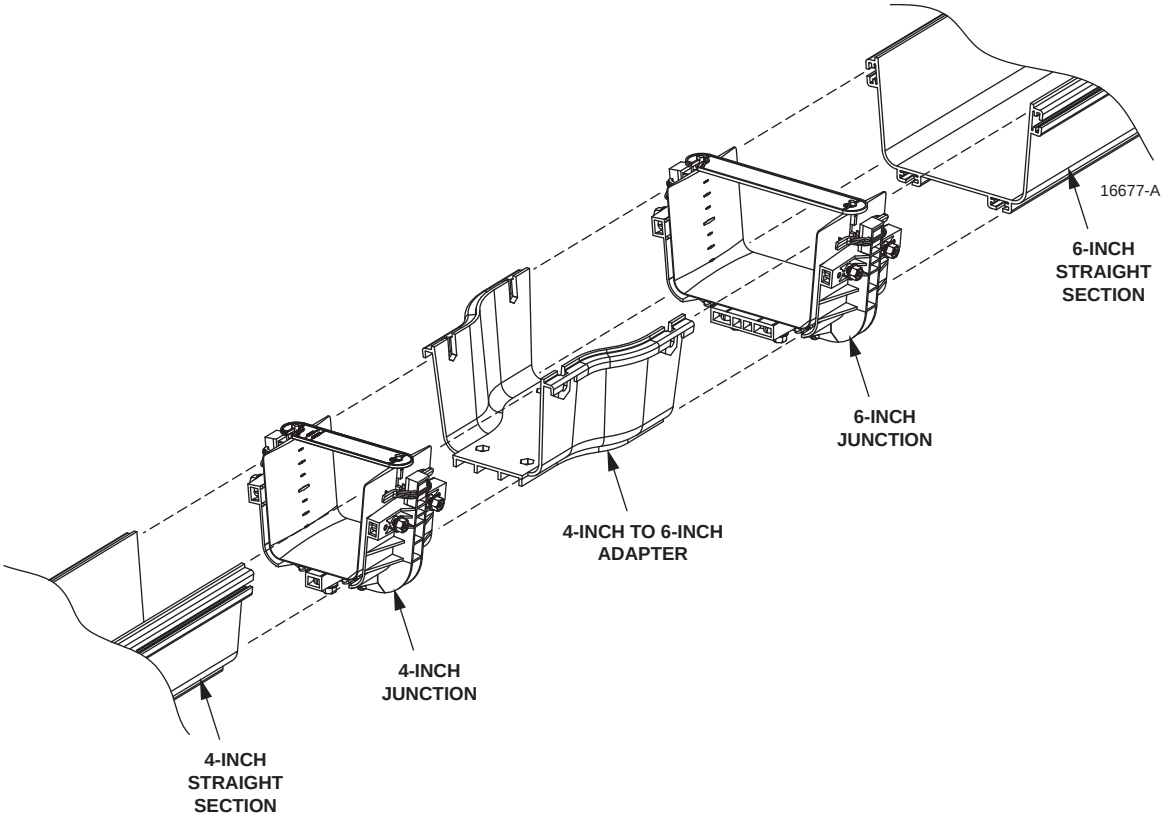

Figure 3-14. Installing 4-to-6-Inch Transition Kit

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8.3 6-to-12-Inch Transition Kit (FGS-MSDA-FB)

Install a 6-to-12-inch transition kit in the following order, referring to Figure 3-15.

1. Slide junction and 6-to-12-inch adapter together until snap connectors engage.
2. Slide the other FGS components into the junction until firmly seated against the center rib (as shown for straight section below). If the component is a molded fitting, make sure the locking pins on the snap connector are engaged in the holes on the molded fitting.
3. Tighten screws so the washer head on the screw is approximately 1/16-inch from the support arm. After all screws have been tightened to the 1/16-inch dimension, go back and tighten each screw until washer head bottoms out on the support arm.

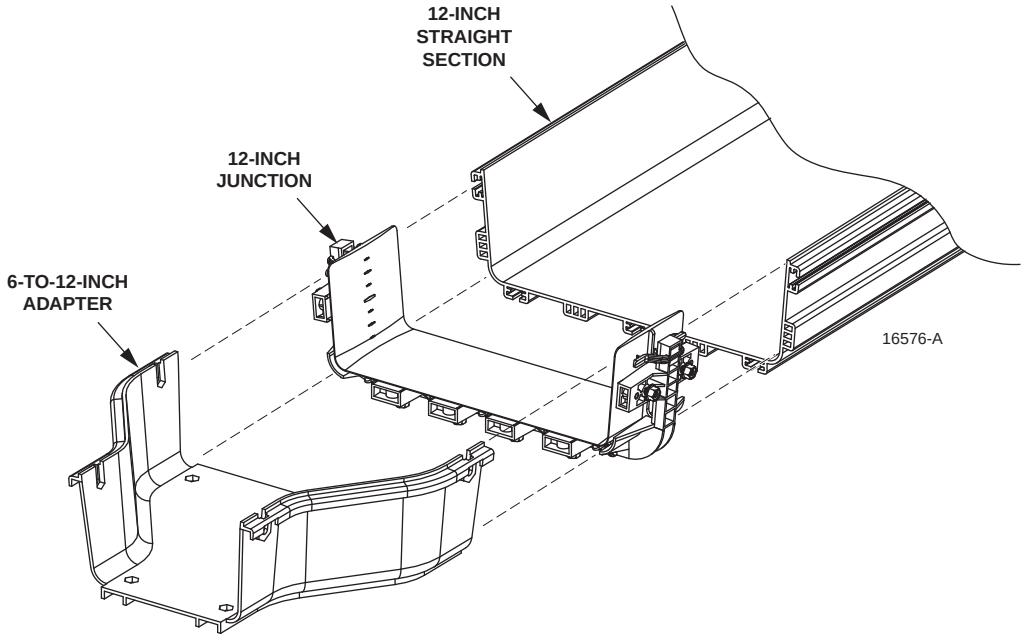

Figure 3-15. Installing 6-to-12-Inch Transition Kit

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8.4 12-to-Dual-6-Inch Transition Kit (FGS-MDSA-F2B)

Install a 12-to-dual-6-inch transition kit in the following order, referring to Figure 3-16.

1. Slide straight sections, junctions, and adapter together until snap connectors engage.
2. Tighten all bolts.

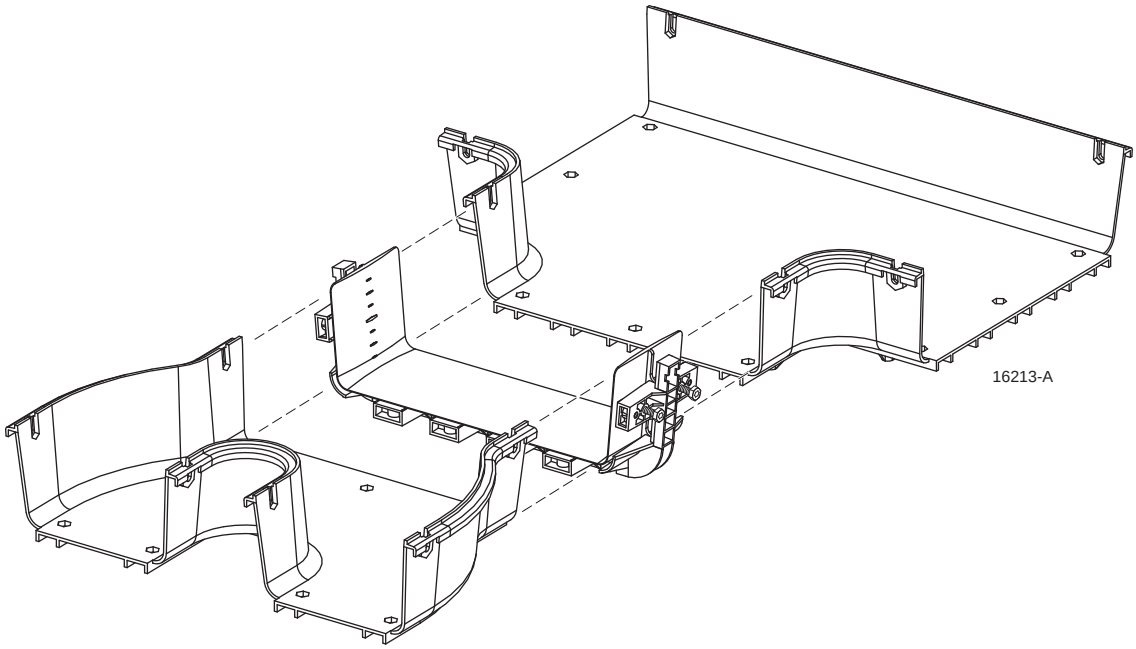

Figure 3-16. Installing 12-to-Dual-6-Inch Transition Kit

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8.5 12-to-24-Inch Transition Kit (FGS-MSDA-HF)

Install a 12-to-24-inch transition kit in the following order, referring to Figure 3-17.

1. Slide junction and 12-to-24-inch adapter together until snap connectors engage.
2. Slide the other FGS components into the junction until firmly seated against the center rib (as shown for straight section below). If the component is a molded fitting, make sure the locking pins on the snap connector are engaged in the holes on the molded fitting.
3. If desired junction screws may be installed for additional strength. Install screws and tighten until washer heads are approximately 1/16-inch (1.6MM) from the junction support arm. After all screws have been tightened to the 1/16-inch (1.6MM) dimension, go back and tighten each screw until washer head bottoms out on the junction support arm.

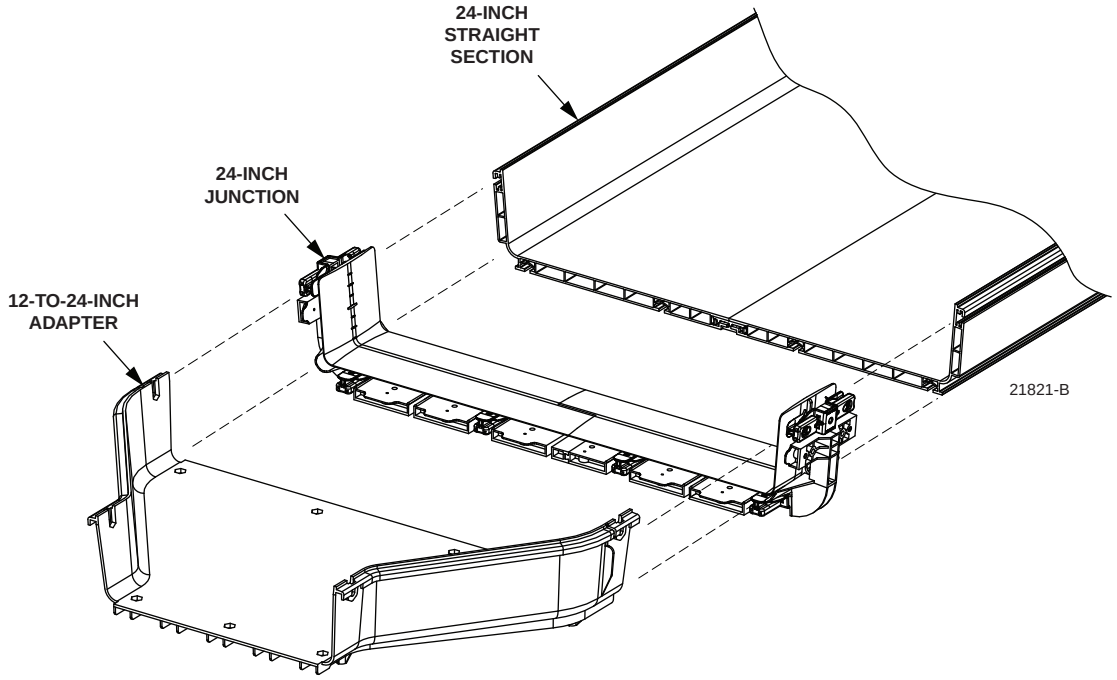

Figure 3-17. Installing 12-to-24-Inch Transition Kit

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SECTION 4: INSTALLING VERTICAL COMPONENTS

Content	Page
1 INTRODUCTION	4-2
2 EXPRESS EXITS	4-4
2.1 2-Inch Express Exit Kit (FGS-MEXP-A/B/F)	4-4
2.2 4-Inch Express Exit Kit (FGS-MEXP-E-A/B/F)	4-6
2.3 2x6 Low Profile Express Exit Kit (FGS-MEXP-LP-G)	4-8
2.4 4x4, 4x6, 4x12 Low Profile Express Exit Kit (FGS-MEXP-LP-A/B/F)	4-10
3 DOWNSPOUTS	4-12
3.1 2-Inch Standard Downspout Kit (FGS-MSDS-C)	4-12
3.2 4-Inch Standard Downspout Kit (FGS-MSDP-X)	4-13
3.3 4x4, 4x6, 4x12 Insertable Downspout Kits (FGS-MDSP-X/I)	4-14
4 EXIT ATTACHMENTS	4-16
4.1 2x2 Exit Attachments	4-16
4.1.1 2x2 Trumpet Flare Exit Kit (FGS-MTRM-C)	4-16
4.1.2 2x2 Flexible Tubing Exit Kit (FGS-KDH2-C)	4-16
4.1.3 2x2 Rigid Exit	4-18
4.2 4x4, 2x6, 4x6 Exit Attachments	4-20
4.2.1 4x4, 4x6 Trumpet Flare Exit Kit (FGS-MTRM-X)	4-20
4.2.2 2x6 Trumpet Flare Exit Kit (FGS-MTRM-G)	4-21
4.2.3 2x6 Dual 2-Inch Flex Tube Attachment Kit (FGS-KT03-G-5F)	4-23
4.2.4 4x4, 4x6 Flexible Tubing Exit Kit (FGS-KT03-X)	4-24
4.2.5 4x4, 4x6 Rigid Exit Using 4-Inch Junction Kit (FGS-MJWR-X)	4-25
4.2.6 4x4 to 2-Inch Flex Tube Adapter Kit (FGS-ASRI)	4-26
4.2.7 4x4 Quad 7/8-Inch Flex Tube Attachment Kit (FGS-KT07-A4-XF)	4-27
4.2.8 4x4 Vertical Slotted Adapter Junction Kit (FGS-MJWR-D)	4-28
4.2.9 4x4, 4x6 Downspout Insert Kit (FGS-HDSI-AB)	4-28
4.3 4x12 Trumpet Flare Kit (FGS-MTRM-X)	4-30
4.4 4x24 Trumpet Flare Kit (FGS-MTRM-X)	4-31
4.5 4x24 Island T with Single 12-inch Exit (FGS-ISLAND-H/F)	4-32
4.6 Installing 12-inch Junction on 4x24 Island T (FGS-ISLAND-H/F)	4-33
4.7 4x24 45º Up Elbow (FGS-MU4E-H)	4-34
4.8 4x24 45º Down Elbow (FGS-MD4E-H)	4-35
5 VERTICAL DUCTS	4-36
5.1 2x2 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW1-X)	4-36
5.2 4x4 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW2-D)	4-37
5.3 2x4 Vertical Slotted, 1.5 Inch Slot Spacing, Duct Kit (FGS-KTW2-E)	4-38

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1 INTRODUCTION

There are three parts of a typical FiberGuide vertical assembly. These three parts are illustrated in Figure 4-1 on the next page. Install the three parts in order, from top to bottom, selecting from the procedures within this section. Figure 4-2 shows an example of a vertical assembly.

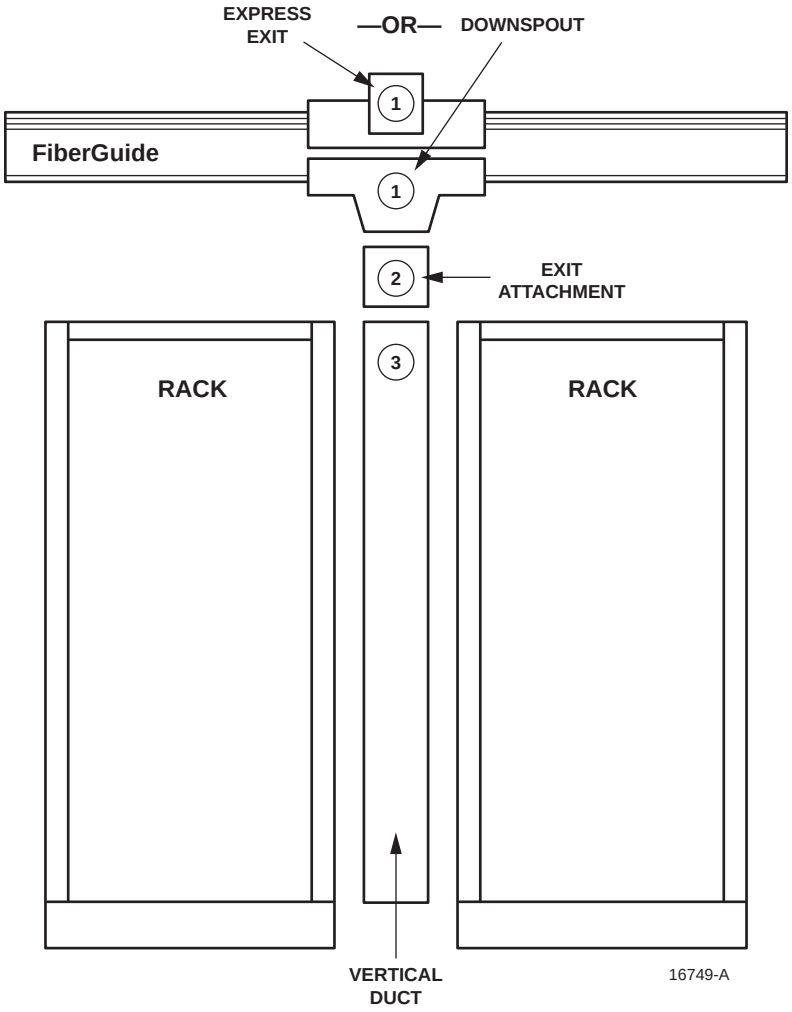

Figure 4-1. Three Parts of FiberGuide Vertical Assembly

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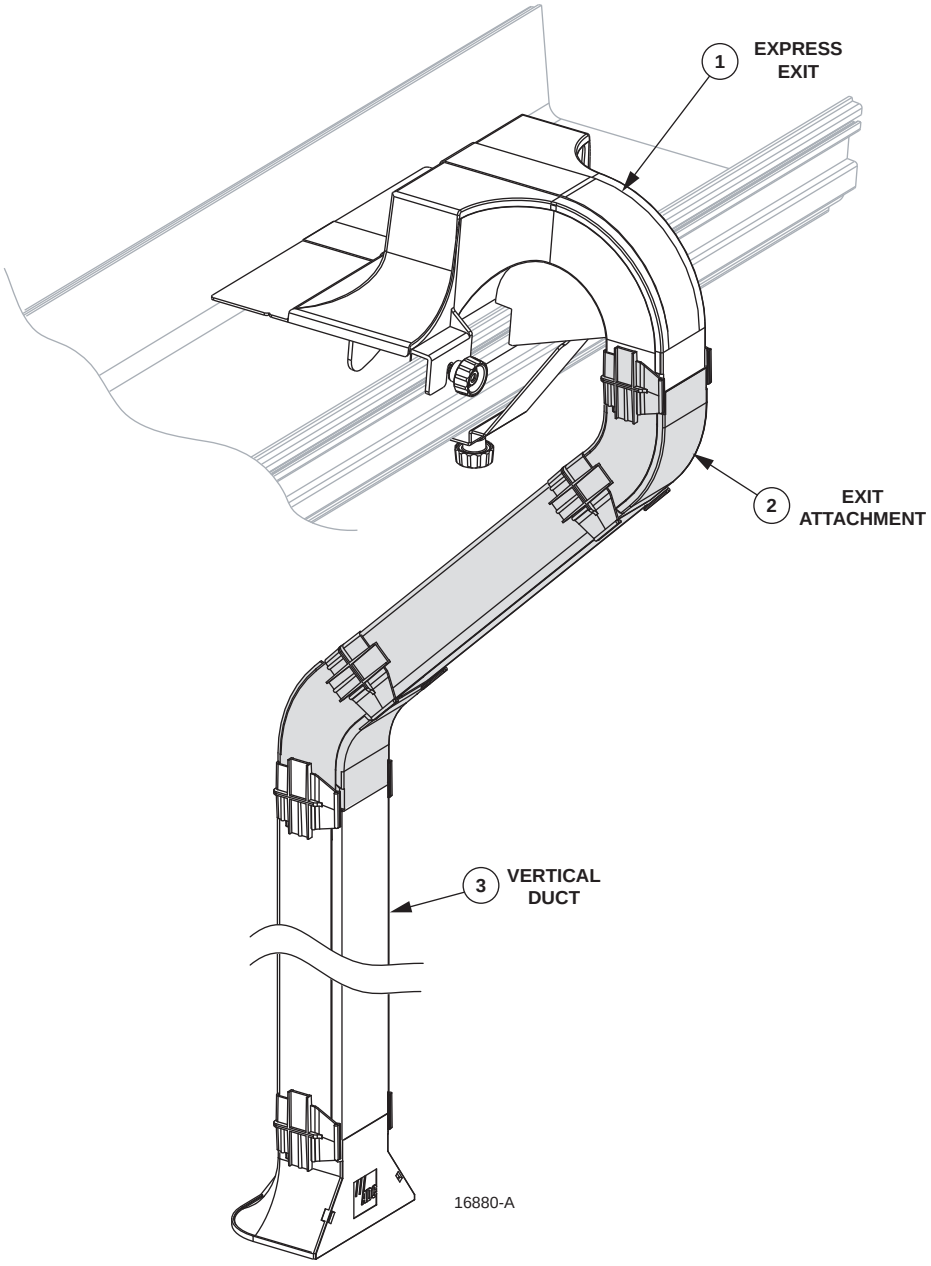

Figure 4-2. Three Parts Example (2-Inch Express Exit)

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2 EXPRESS EXITS

2.1 2-Inch Express Exit Kit (FGS-MEXP-A/B/F)

Install a 2-inch Express Exit kit in the following order, referring to Figure 4-3.

1. Place the Express Exit on the straight section as shown.
2. Using two quick knobs, secure the Express Exit on both sides of the downspout as shown. (To install a quick knob, insert the quick knob T-bolt into the straight section T-slot and rotate the T-bolt one quarter turn, then hand-tighten the knob end of the quick knob.)
3. If the Express Exit is being attached to either a 6-inch or 12-inch straight section, install an extension bracket on the Express Exit bracket, securing it with two 6-32 x 0.25 screws as shown. Note that the extension bracket has four holes for this purpose; select which two holes to use based on the desired width of the extension bracket.
4. Fasten Express Exit bracket onto the Express Exit using the 1/4-20 hex head screw provided in the kit.
5. Secure Express Exit bracket to the bottom of the straight section using two quick knobs as shown. Install quick knobs as described above.
6. When done, check all quick knobs; tighten securely.
7. Install Express Exit cover at notched positions, referring to detail bubble in Figure 4-3. As shown, the cover extends back to a 4-inch width. If desired for 12-inch cable way, cut out a piece of a 12-inch straight section cover to fit around the Express Exit cover.

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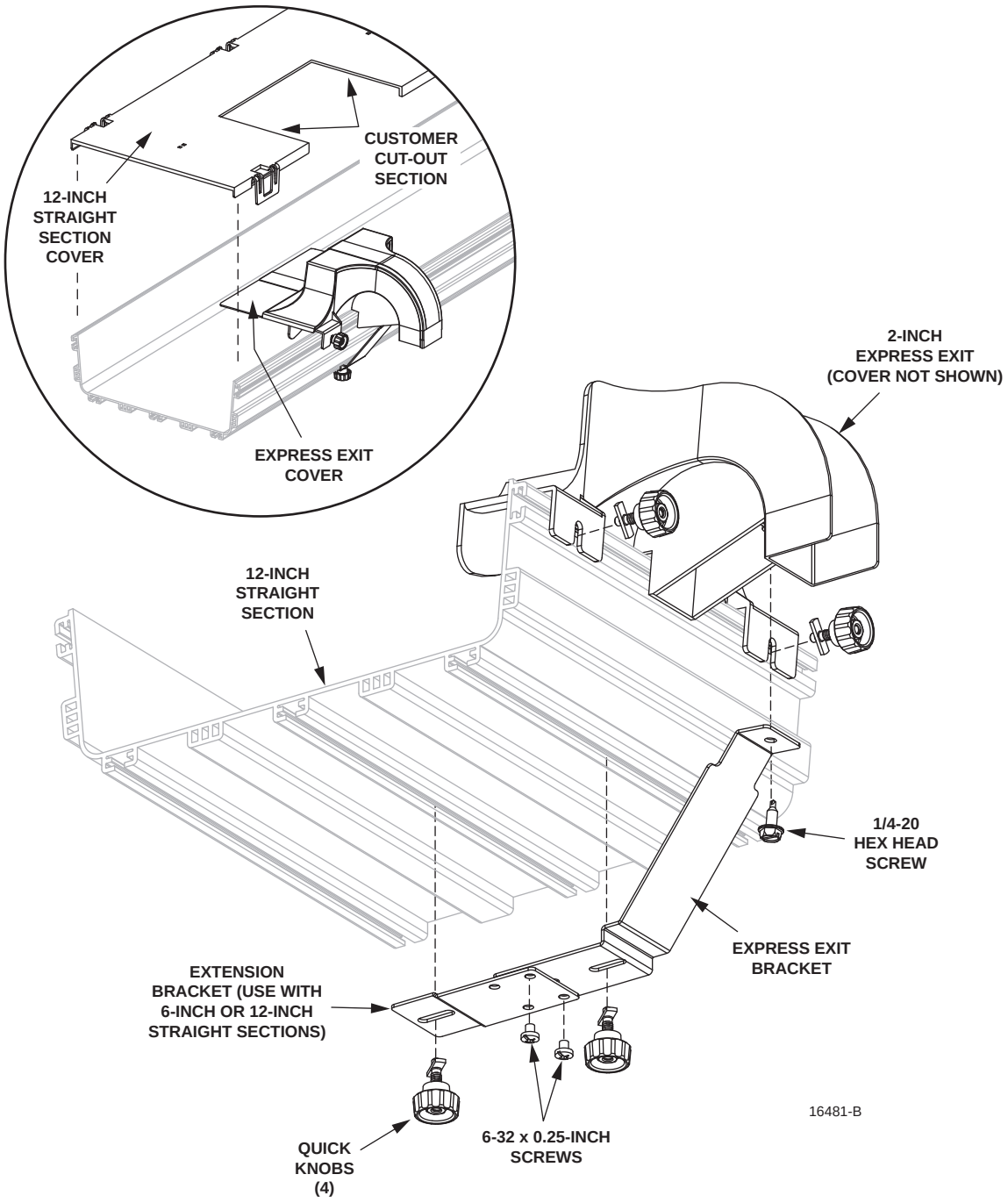

Figure 4-3. Installing 2-Inch Express Exit Kit

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2.2 4-Inch Express Exit Kit (FGS-MEXP-E-A/B/F)

Install a 4-inch Express Exit kit in the following order, referring to Figure 4-4.

1. Place Express Exit on the straight section as shown.
2. Using two quick knobs, secure Express Exit on both sides of the downspout as shown. (To install a quick knob, insert the quick knob T-bolt into the straight section T-slot and rotate the T-bolt one quarter turn, then hand-tighten the knob end of the quick knob.)
3. If Express Exit is being attached to either a 6-inch or 12-inch straight section, install an extension bracket on the Express Exit bracket, securing it with two 6-32 x 0.25 inch screws as shown. Note that the extension bracket has four holes for this purpose; select which two holes to use based on the desired width of the extension bracket.
4. Snap Express Exit bracket onto the Express Exit in the orientation shown.
5. Secure Express Exit bracket to the bottom of the straight section using two quick knobs as shown. Install quick knobs as described above.
6. When done, check all quick knobs; tighten securely.
7. Install the Express Exit cover, if require, referring to the detail bubble in Figure 4-4.

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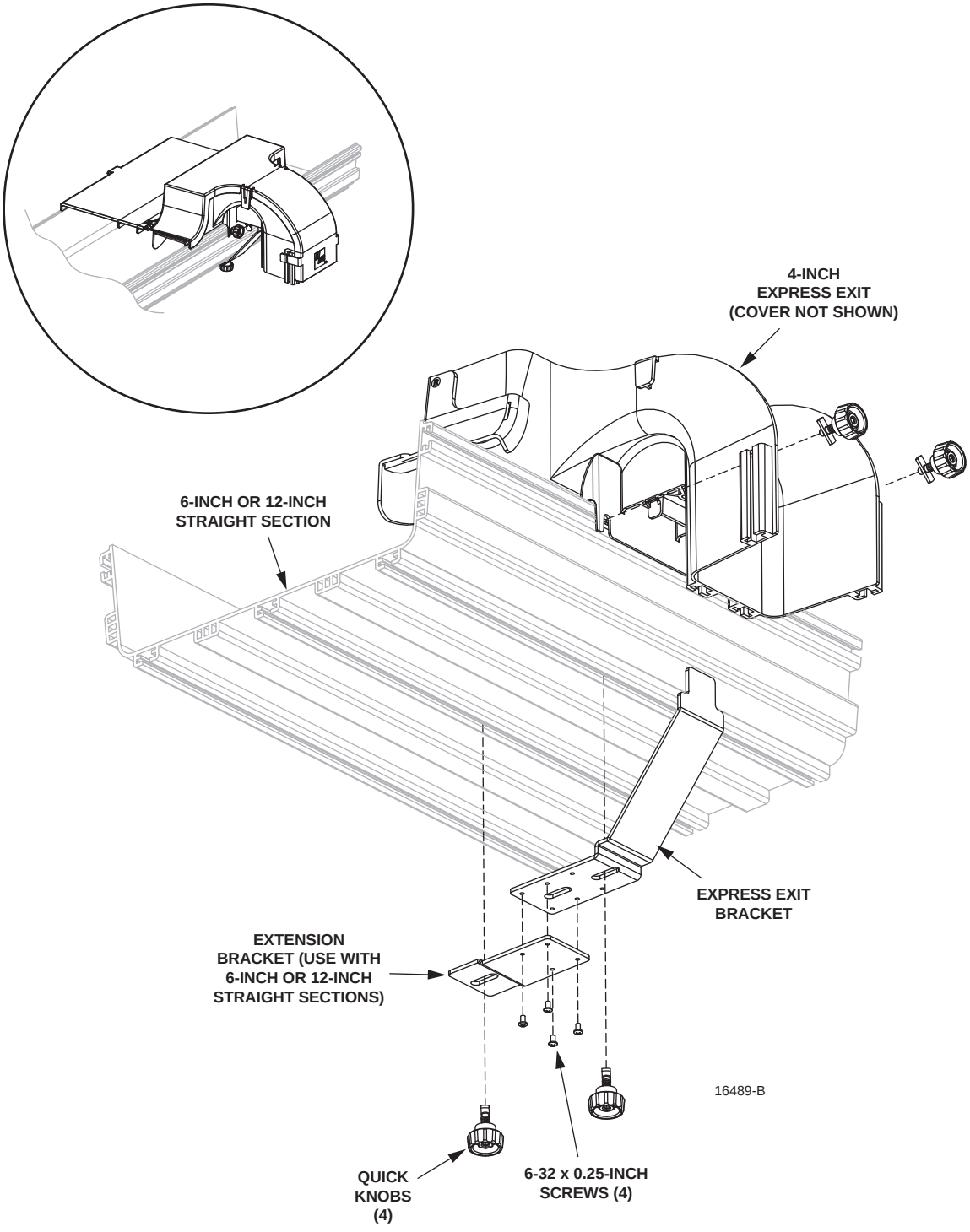

Figure 4-4. Installing 4-Inch Express Exit Kit

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2.3 2x6 Low Profile Express Exit Kit (FGS-MEXP-LP-G)

Install the kit in the following order, referring to Figure 4-5.

1. Place Express Exit on the straight section as shown.
2. Using two quick knobs, secure the Express Exit on both sides of the downspout as shown. (To install a quick knob, insert the quick knob T-bolt into the straight section T-slot and rotate the T-bolt one quarter turn, then hand-tighten the knob end of the quick knob.

Caution: *If the Express Exit is removed from the straight section without first removing the quick knobs, the quick knobs will fall out.*

3. Snap Express Exit bracket onto the Express Exit in the orientation shown.
4. Secure Express Exit bracket to the bottom of the straight section using two quick knobs as shown. Install quick knobs as described above.
5. When done, check all quick knobs; tighten securely.
6. Install the Express Exit cover, if required, at notched positions. The cover extends back to a 2-inch width. If desired for 12-inch cableway, cut out a piece of a 12-inch straight section cover to fit around the Express Exit cover (refer to Figure 4-3 for a similar example).

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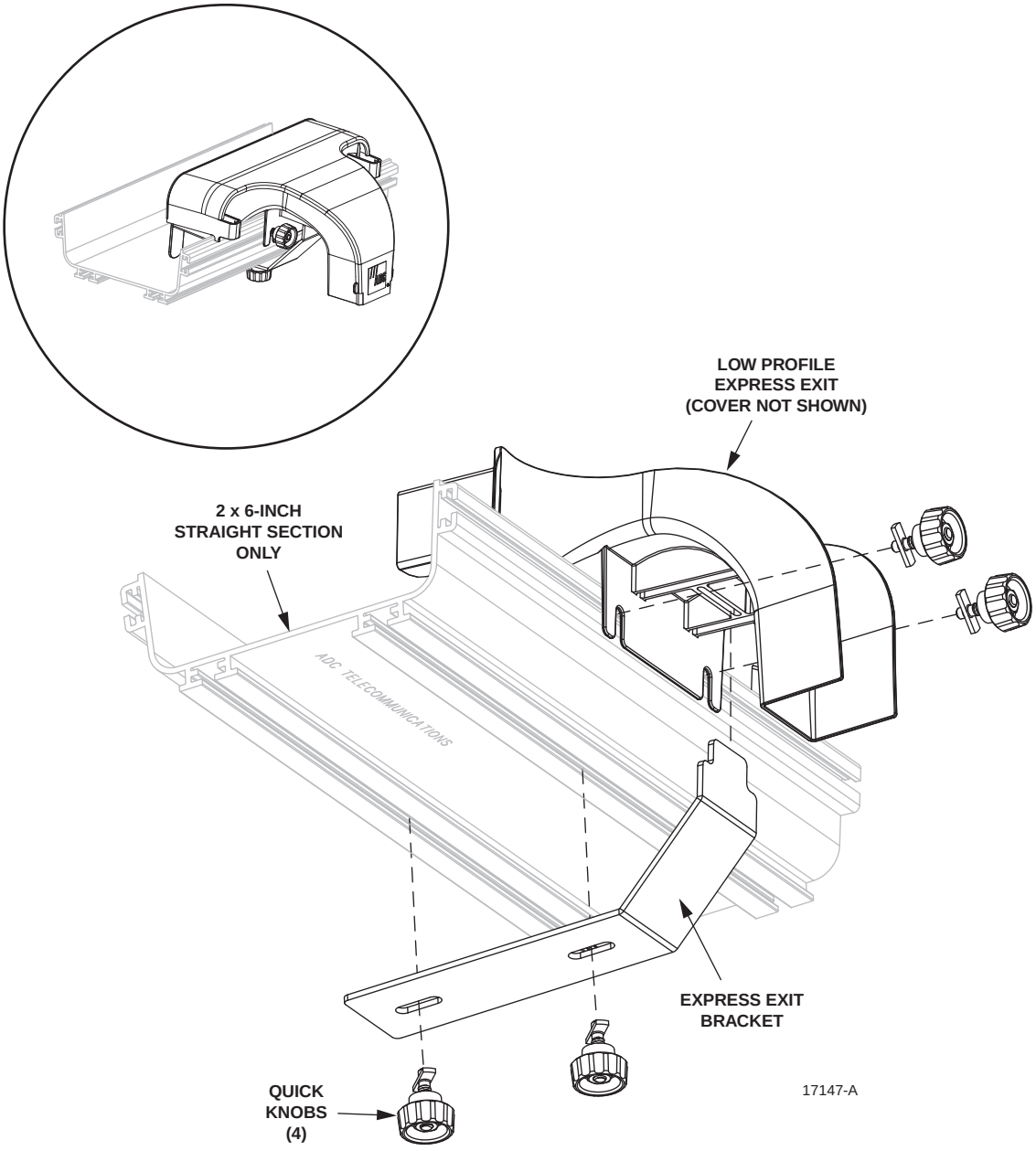

Figure 4-5. Installing 2x6 Low Profile Express Exit

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2.4 4x4, 4x6, 4x12 Low Profile Express Exit Kit (FGS-MEXP-LP-A/B/F)

Install the kit in the following order, referring to Figure 4-6.

1. Place Express Exit on the straight section as shown.
2. Using two quick knobs, secure the Express Exit on both sides of the downspout as shown. (To install a quick knob, insert the quick knob T-bolt into the straight section T-slot and rotate the T-bolt one quarter turn, then hand-tighten the knob end of the quick knob.

Caution: *If the Express Exit is removed from the straight section without first removing the quick knobs, the quick knobs will fall out.*

3. If the Express Exit is being attached to either a 6-inch or 12-inch straight section, install an extension bracket on the Express Exit bracket, securing it with two 6-32 x 0.25 inch screws as shown. Note that the extension bracket has four holes for this purpose; select which two holes to use based on the desired width of the extension bracket.
4. Snap Express Exit bracket onto the Express Exit in the orientation shown.
5. Secure Express Exit bracket to the bottom of the straight section using two quick knobs as shown. Install the quick knobs as described above.
6. When done, check all quick knobs; tighten securely.
7. Install the Express Exit cover, if required, at notched positions. The cover extends back to a 2-inch width. If desired for 12-inch cableway, cut out a piece of a 12-inch straight section cover to fit around the Express Exit cover (refer to Figure 4-3 for a similar example).

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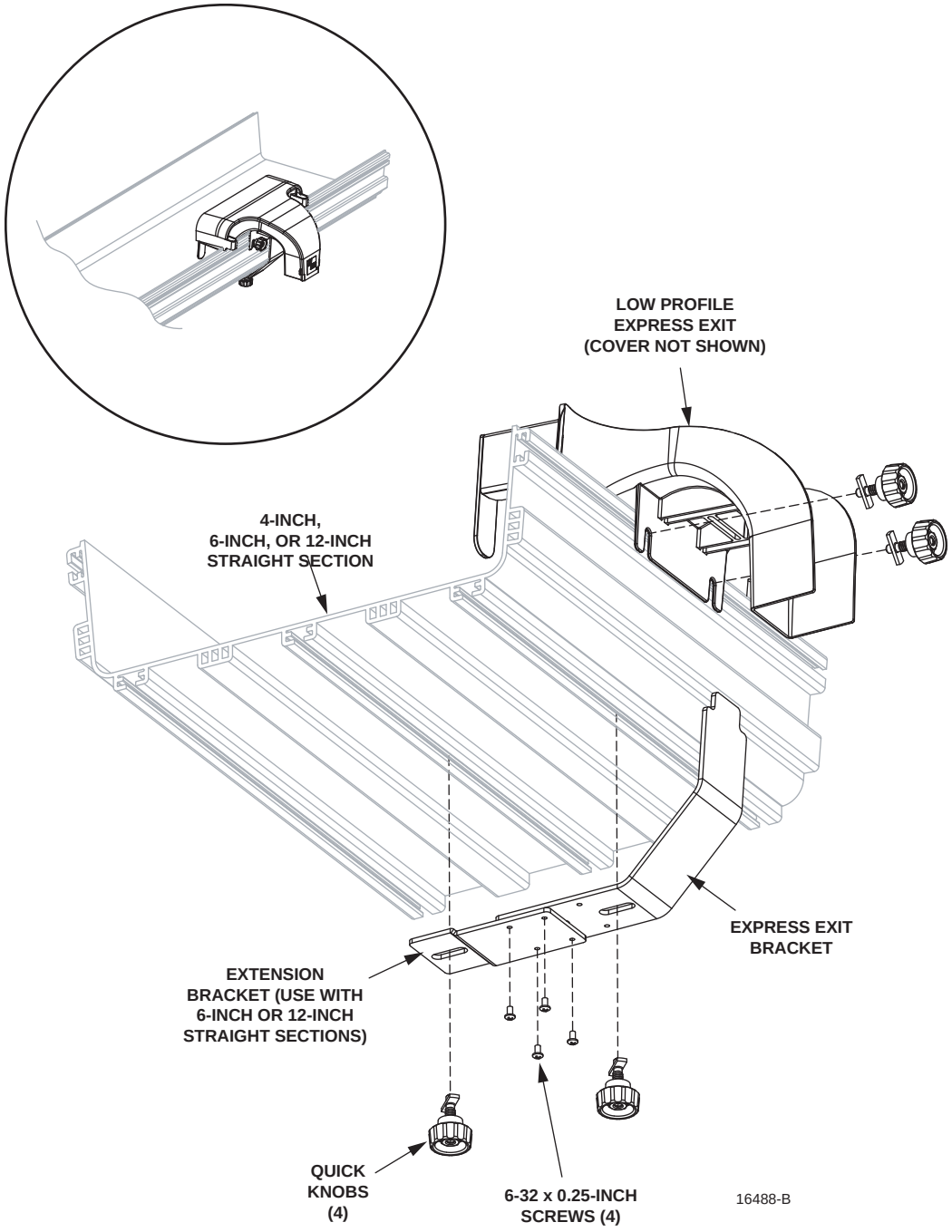

Figure 4-6. Installing Low Profile Express Exit

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3 DOWNSPOUTS

Downspouts are connected in the same manner as other horizontal fittings using standard junctions. This section shows two examples: the 2-inch standard downspout and the 4-inch standard downspout. Install other downspout kits in the same manner shown.

3.1 2-Inch Standard Downspout Kit (FGS-MSDS-C)

Install a 2-inch standard downspout kit referring to Figure 4-7. Slide straight sections and downspouts fully onto junctions.

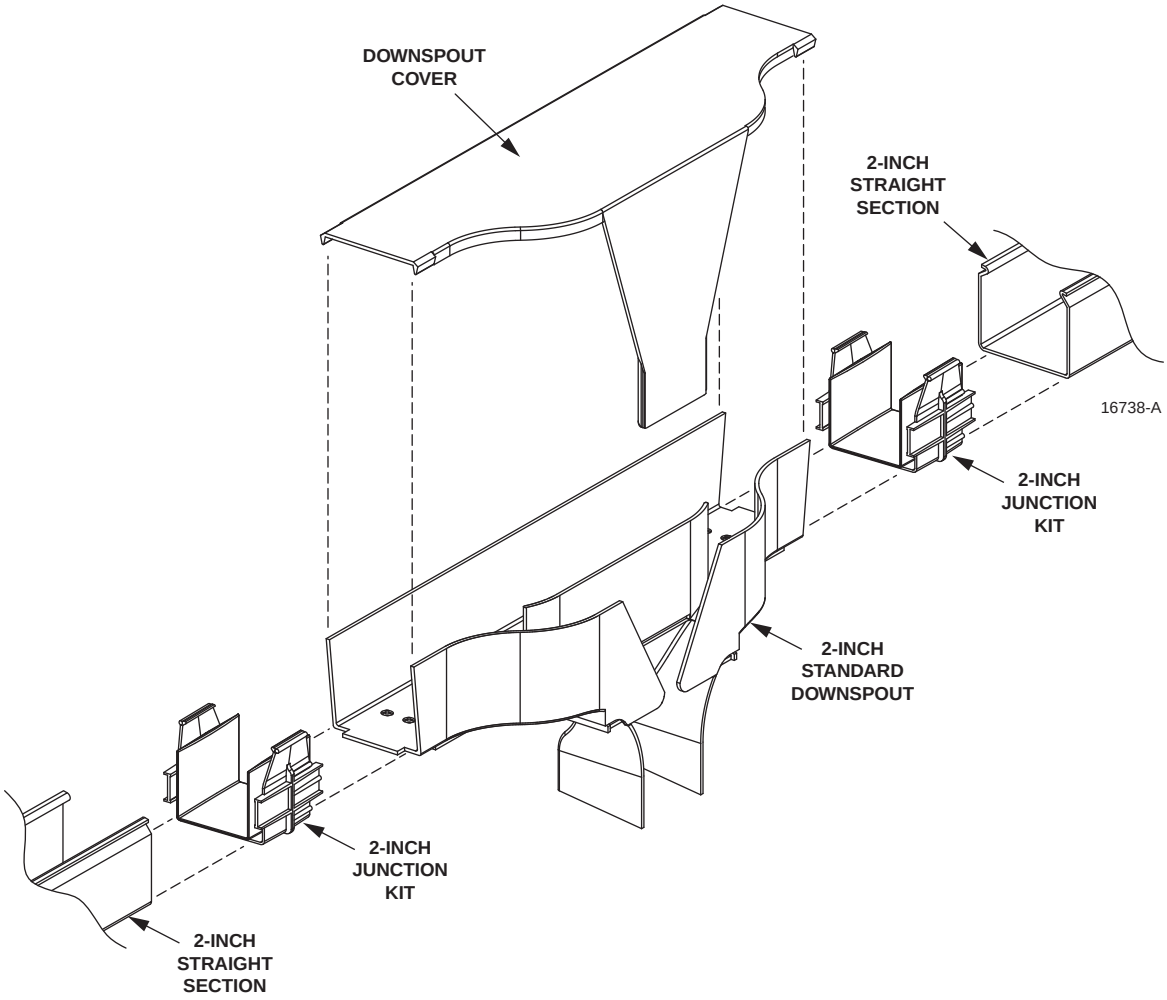

Figure 4-7. Installing 2-Inch Standard Downspout Kit

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3.2 4-Inch Standard Downspout Kit (FGS-MSDP-X)

Install a 4-inch standard downspout kit in the following order, referring to Figure 4-8.

1. Slide junctions and downspout together until snap connectors engage.
2. Slide the straight sections (or other FGS components) into the junctions until firmly seated against the center rib (as shown for straight section below). (If the component is a molded fitting, make sure the locking pins on the snap connector are engaged in the holes on the molded fitting.)
3. Tighten screws so the washer head on screw is approximately 1/16-inch from the support arm. After all screws have been tightened to the 1/16-inch dimension, go back and tighten each screw until washer head bottoms out on the support arm.

Note: 4-inch downspout, junctions, and straight sections are shown. The same procedure applies for 6-inch or 12-inch downspouts.

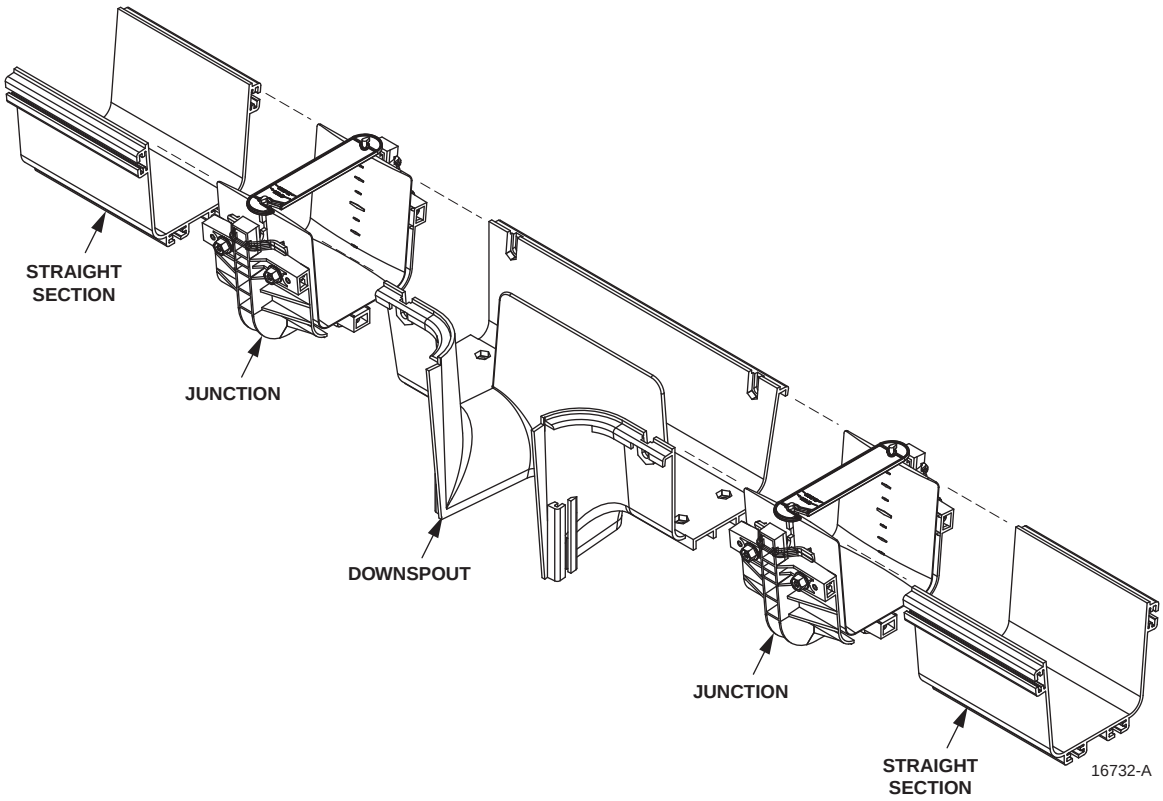

Figure 4-8. Installing 4-Inch Standard Downspout Kit

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3.3 4x4, 4x6, 4x12 Insertable Downspout Kits (FGS-MDSP-X/I)

Install the kit as follows, referring to Figure 4-9.

Note: 4x4 components are shown. Same configuration is used in 4x6 and 4x12 kits.

1. Cut a 14.0 +/- 0.1 inch section out of the FiberGuide span where the downspout will be inserted.
2. Insert eight 1/4-20 screws into the eight connecting bars. Slide eight connecting bars into the slots on the side of the FiberGuide span. Forked ends of the bars should face the opening as shown in the figure.
3. Insert downspout into the cutout section.
4. Slide connecting bars around the screws pre-assembled into the downspout. Fasten with eight washers and eight 1/4-20 nuts as shown.
5. Attach eight square retaining washers and eight nuts onto the screws in the FiberGuide span as shown.

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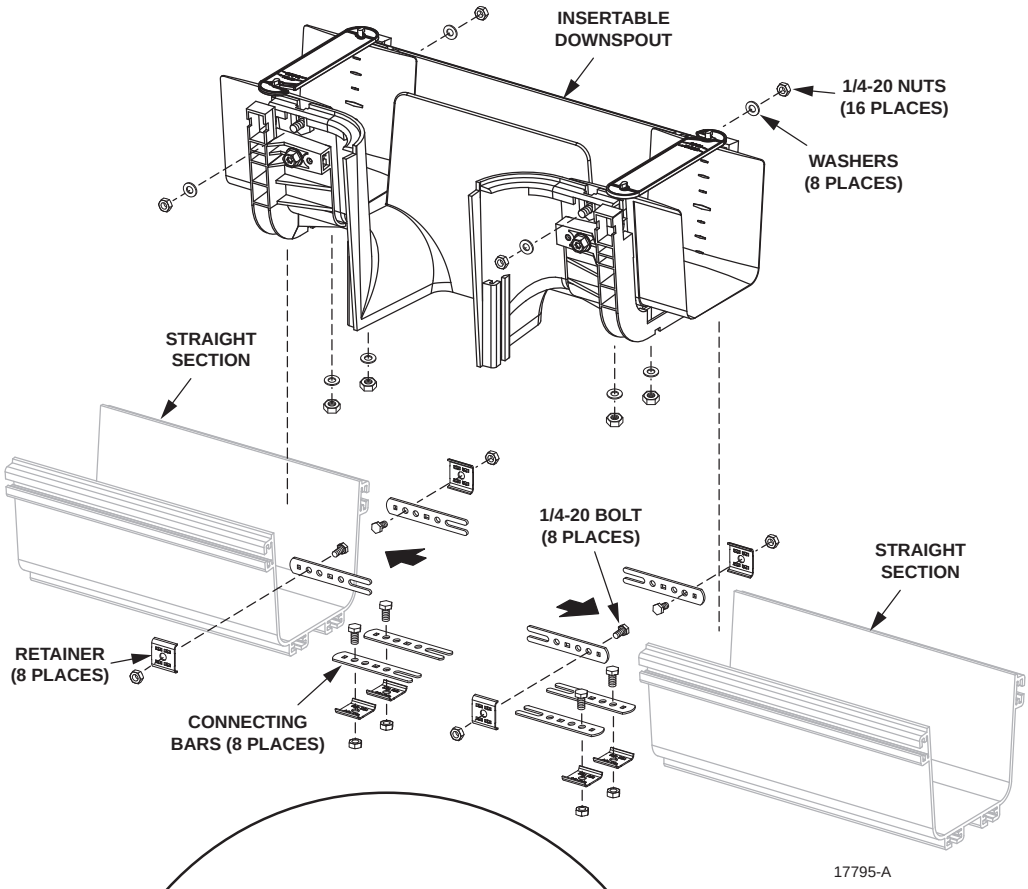

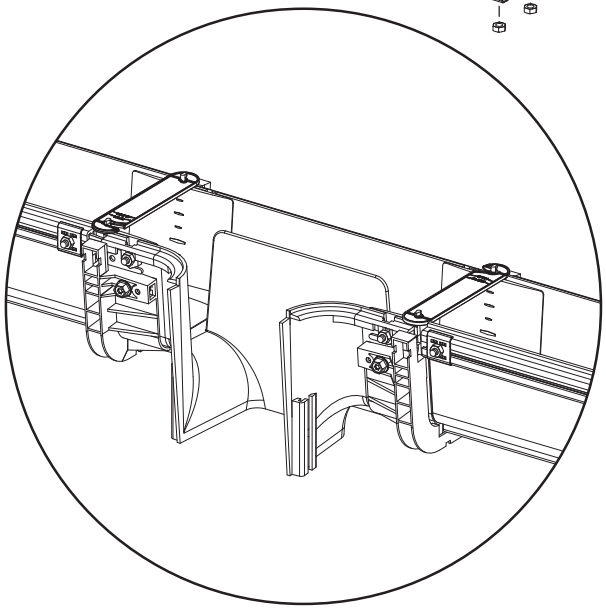

Figure 4-9. Installing Insertable Downspout Kit

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4 EXIT ATTACHMENTS

4.1 2x2 Exit Attachments

4.1.1 2x2 Trumpet Flare Exit Kit (FGS-MTRM-C)

Install a 2-inch trumpet flare kit referring to Figure 4-10.

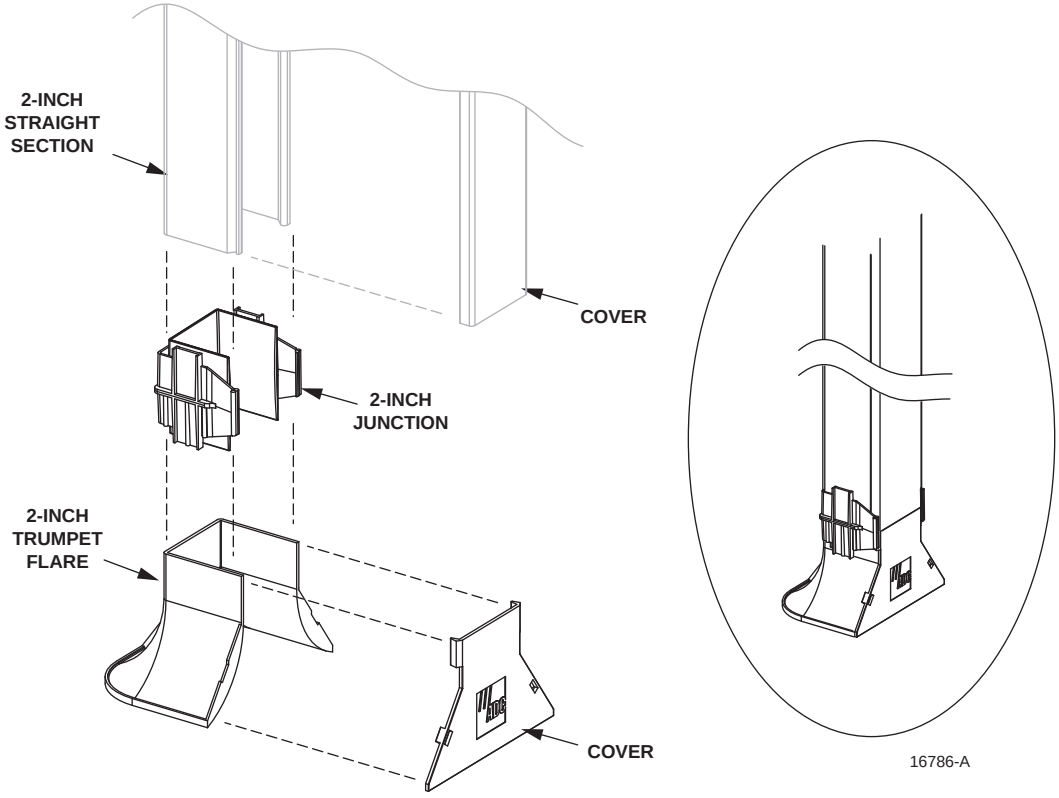

Figure 4-10. Installing a 2x2 Trumpet Flare Exit Kit

4.1.2 2x2 Flexible Tubing Exit Kit (FGS-KDH2-C)

2-inch flex tubing exit kits may have either a single tubing or dual tubing. Install the kits referring to the figures. Figure 4-11 shows a single 2-inch flexible tubing exit kit using a 2x2 junction (FGS-KDH2-C). Figure 4-12 shows a dual 7/8-flexible tubing exit kit (FGS-KT03-C).

Note: This figure shows several kits that can be ordered separately including: extended downspout alone (FGS-MDSP-C); other components without downspout (FGS-MEXI-C); fiber retaining rings (FGS-HFRR-X); and flexible tubing clamp (FGS-HHEC-X).

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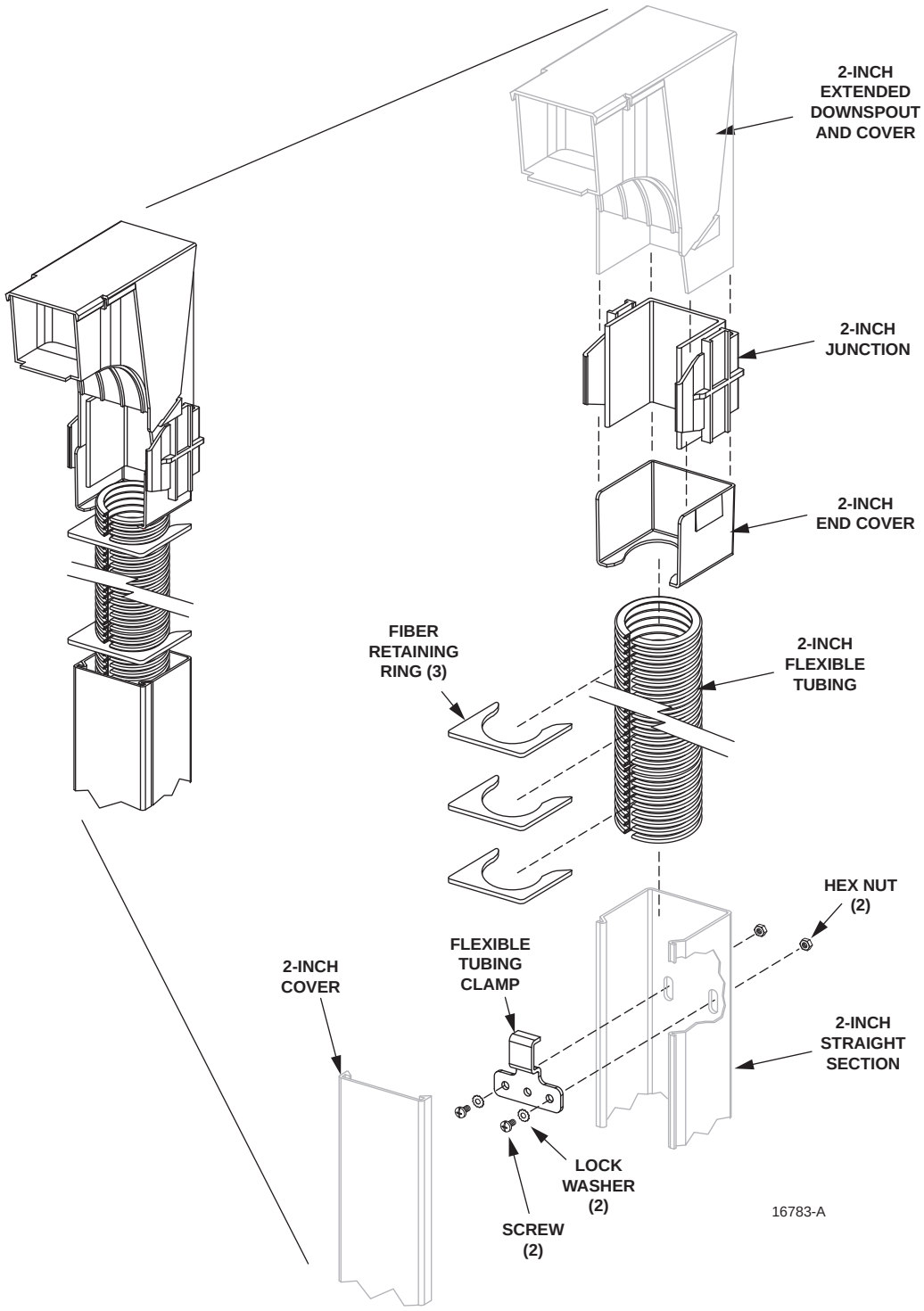

Figure 4-11. Installing 2-Inch Single Flexible Tubing Exit Kit

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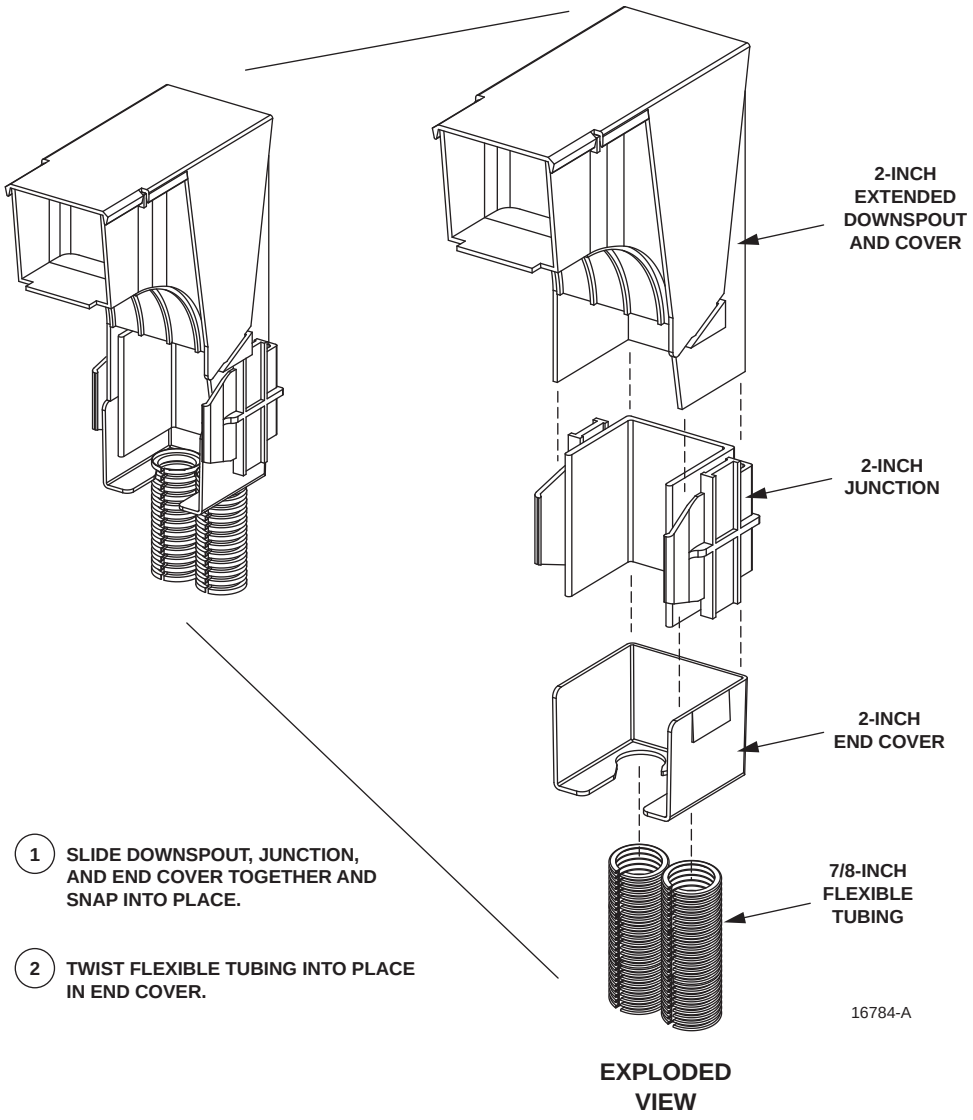

Figure 4-12. Installing Dual 7/8-Inch Flexible Tubing Exit Kit

4.1.3 2x2 Rigid Exit

A 2-inch rigid exit consists of some combination of rigid fittings or straight sections. Construct a 2-inch rigid exit referring to the example shown in Figure 4-13.

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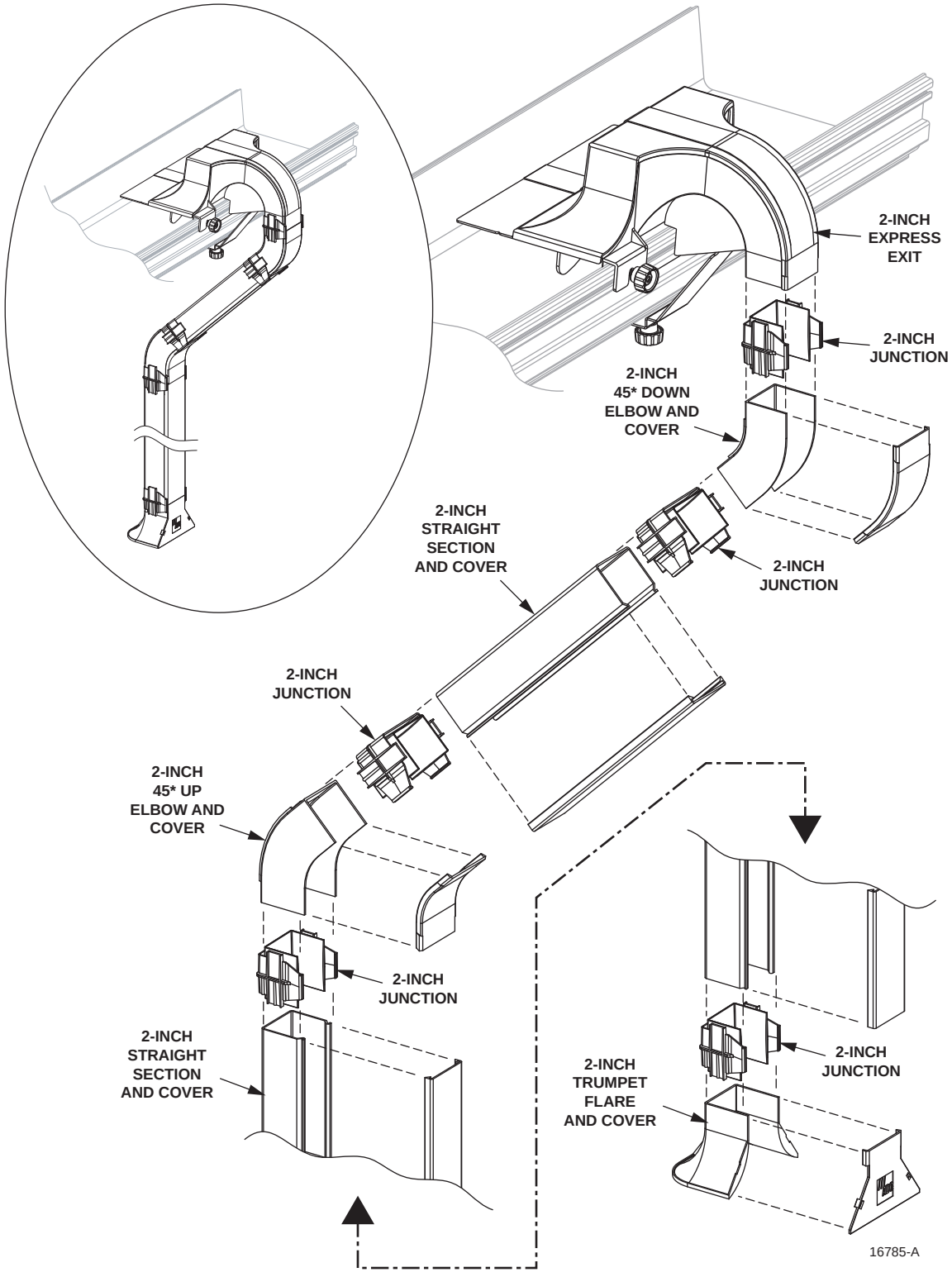

Figure 4-13. Installing 2-Inch Rigid Exit Kit

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4.2 4x4, 2x6, 4x6 Exit Attachments

4.2.1 4x4, 4x6 Trumpet Flare Exit Kit (FGS-MTRM-X)

Install a 4- or 6-inch trumpet flare exit kit in the following order, referring to Figure 4-14.

1. Slide mounting tabs into the slots.
2. Fasten using retainer, bolt, and quick knob in four locations as shown.

Note: 4-inch components are shown below. The same procedure applies to 6-inch components.

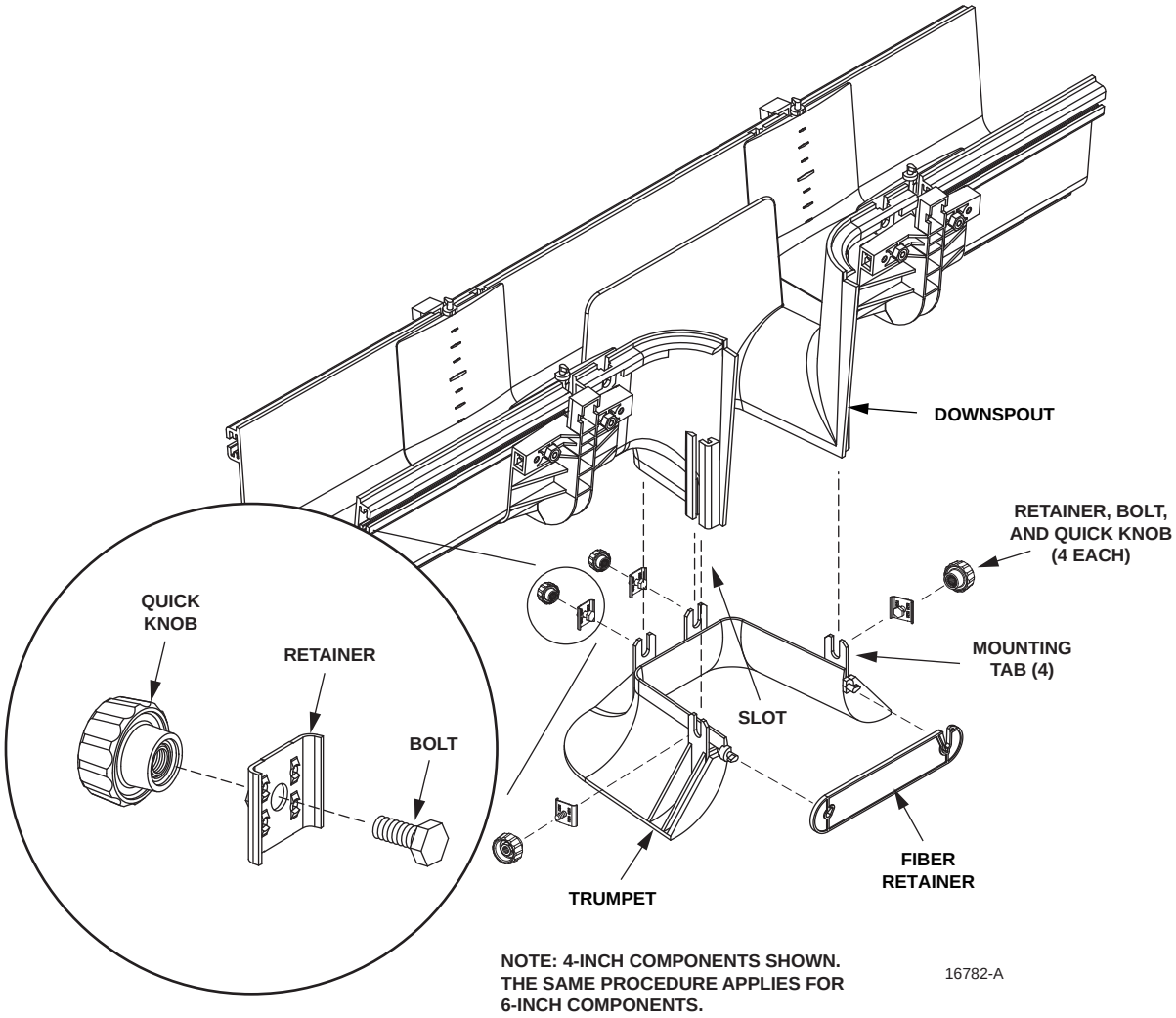

Figure 4-14. Installing 4-Inch or 6-Inch Trumpet Flare Exit Kit

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4.2.2 2x6 Trumpet Flare Exit Kit (FGS-MTRM-G)

If installing the kit on a straight section, install it as follows referring to Figure 4-15.

1. Insert screws in straight section from inside as shown.
2. Slide trumpet flare into guides until C-shaped opening on end is around shaft of screws.
3. Place quick knobs on screws and tighten knobs to secure trumpet flare.

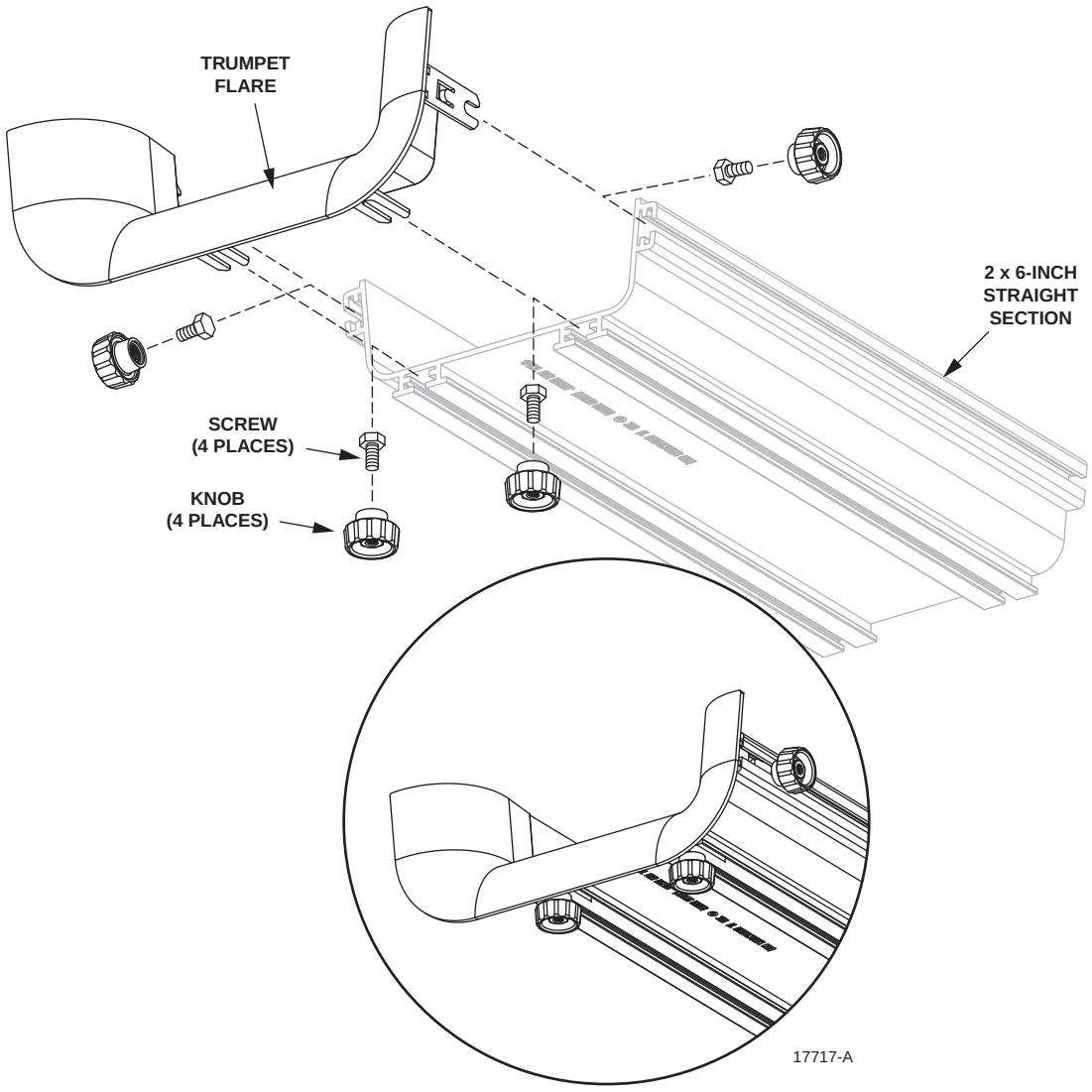

Figure 4-15. Installing 2x6 Trumpet Flare Exit Kit

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If installing the kit on a fitting, install it as follows referring to Figure 4-16.

1. Insert screws into fitting from inside bottom of fitting as shown.
2. Slide trumpet flare into guides until it snaps into place.
3. Place quick knobs on screws and tighten knobs to secure trumpet flare.

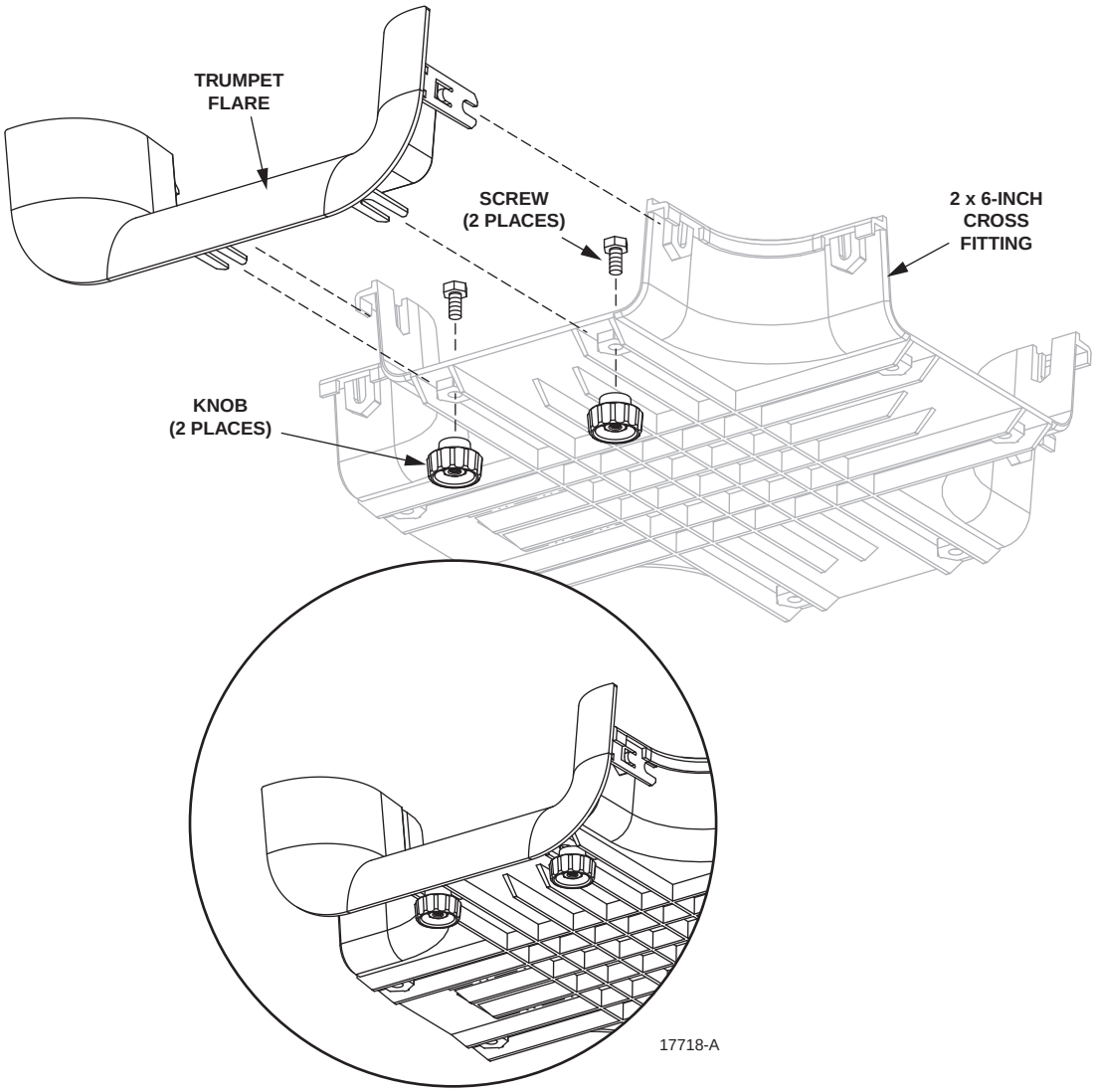

Figure 4-16. Installing 2x6 Trumpet Flare Exit Kit

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4.2.3 2x6 Dual 2-Inch Flex Tube Attachment Kit (FGS-KT03-G-5F)

Install the kit referring to Figure 4-17.

Note: End cover without flex tube holes can be ordered as a separate kit (FGS-HMEC-G).

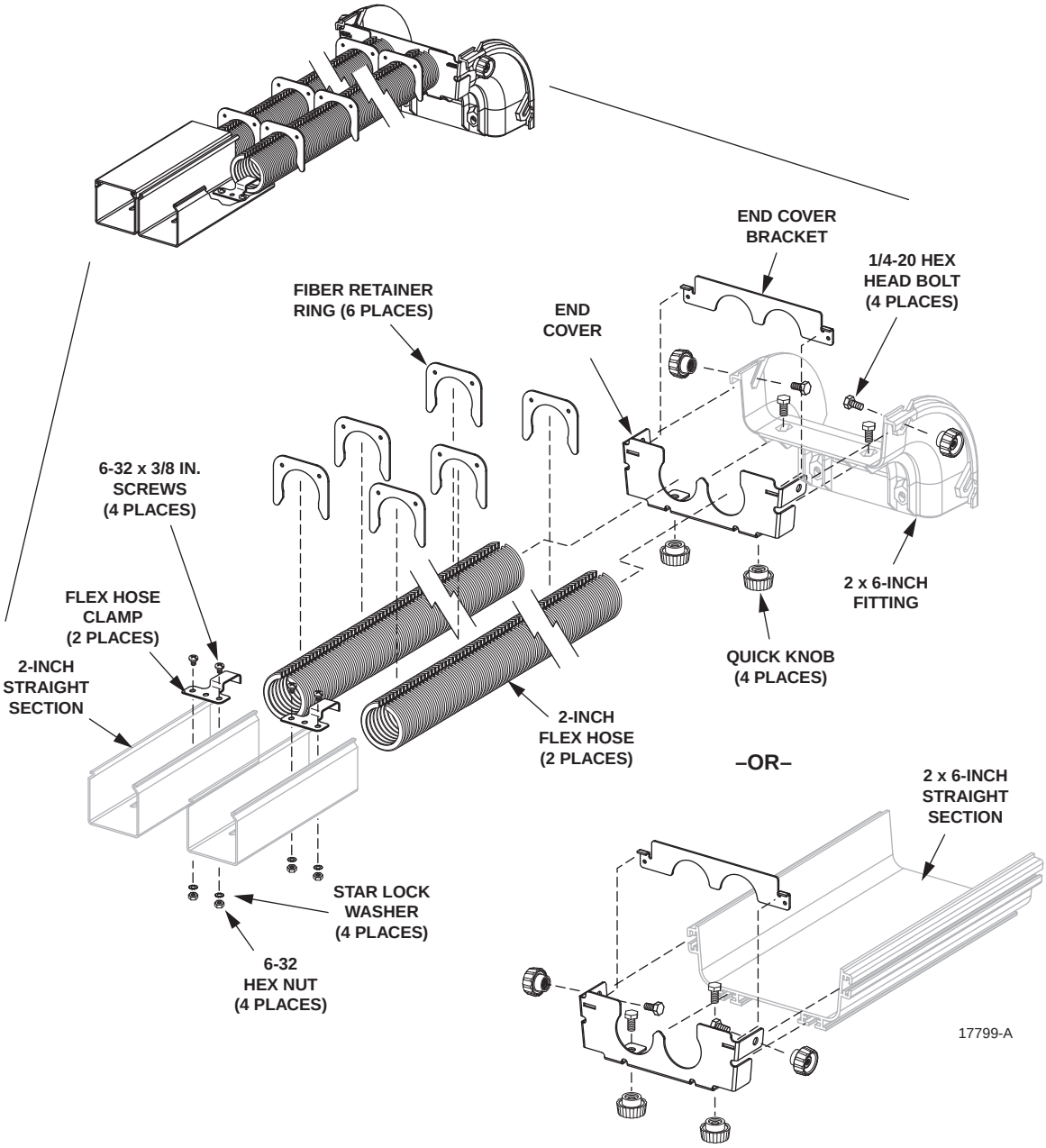

Figure 4-17. Installing 4-Inch or 6-Inch Flex Tube Attachment Kit

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4.2.4 4x4, 4x6 Flexible Tubing Exit Kit (FGS-KT03-X)

Install a 4-inch or 6-inch flexible tubing exit kit referring to Figure 4-18.

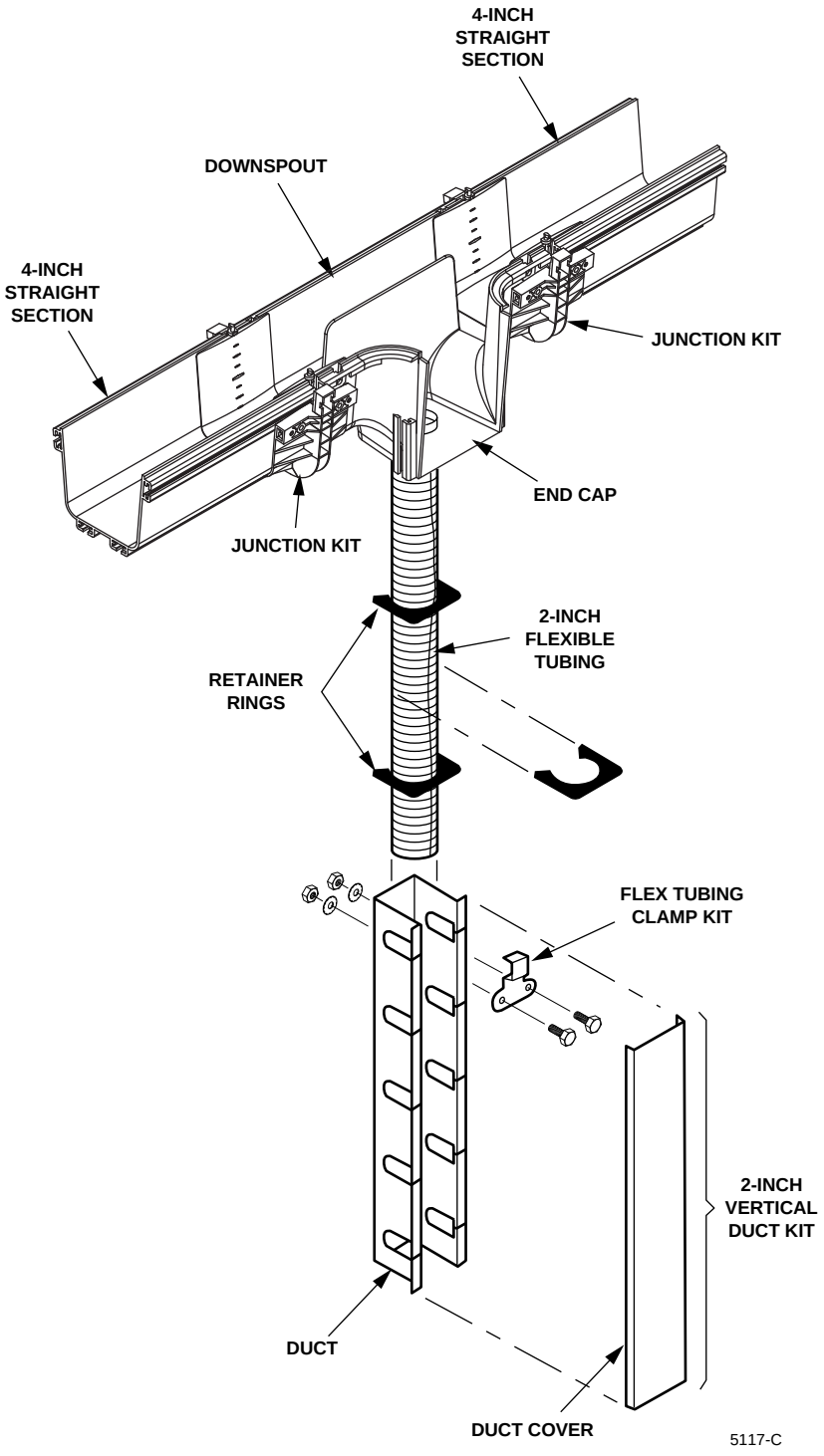

Figure 4-18. Installing 4-Inch or 6-Inch Flexible Tubing Exit Kit

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4.2.5 4x4, 4x6 Rigid Exit Using 4-Inch Junction Kit (FGS-MJWR-X)

To construct a 4x4 or 4x6 rigid exit, use a 4x4 or 4x6 rigid exit kit. Install the kit referring to Figure 4-19.

Note: For downspout assembly, see Topic 3.2 on page 4-13.

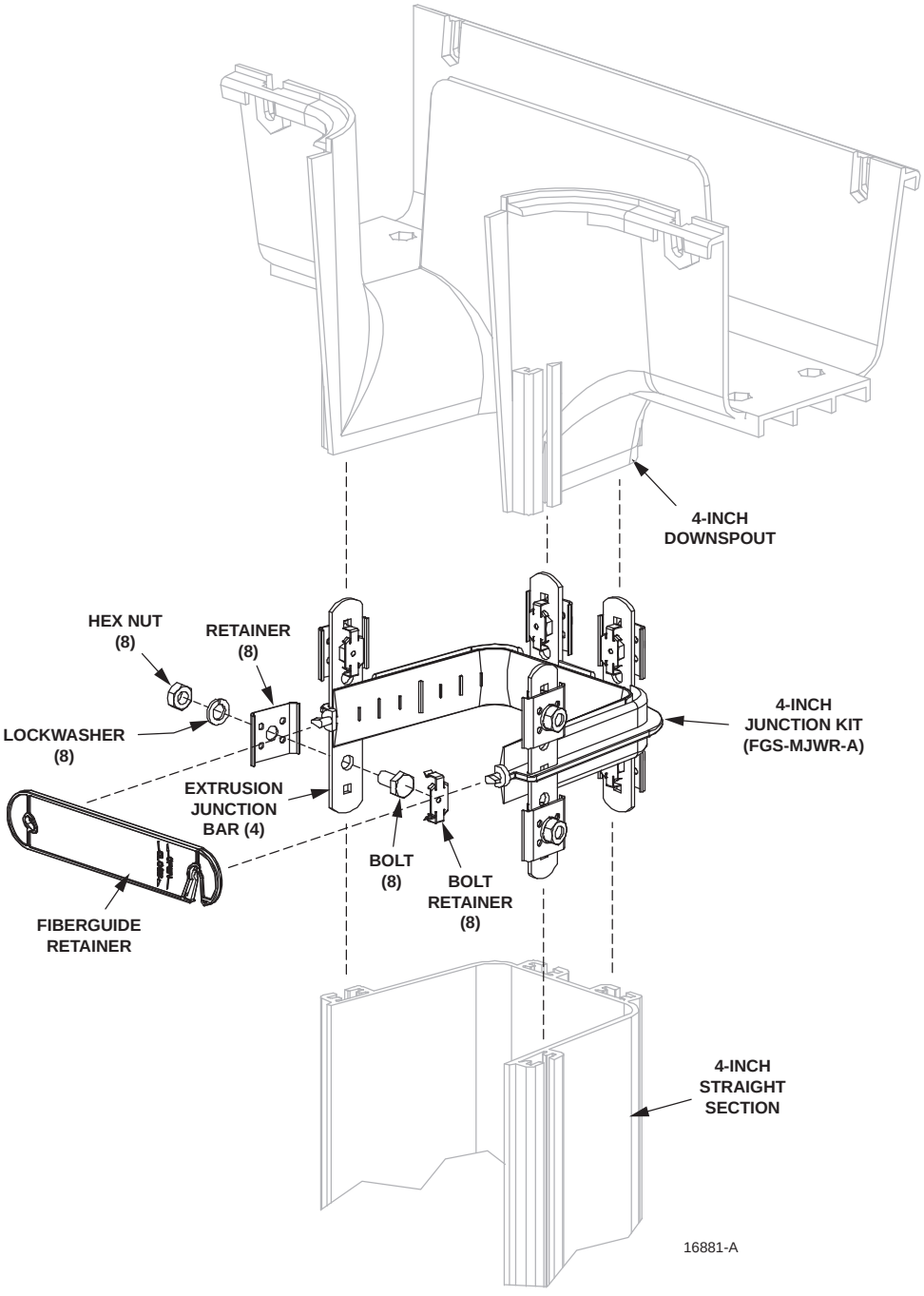

Figure 4-19. Installing 4x4 or 4x6 Rigid Exit Kit

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4.2.6 4x4 to 2-Inch Flex Tube Adapter Kit (FGS-ASRI)

Install the kit referring to Figure 4-20.

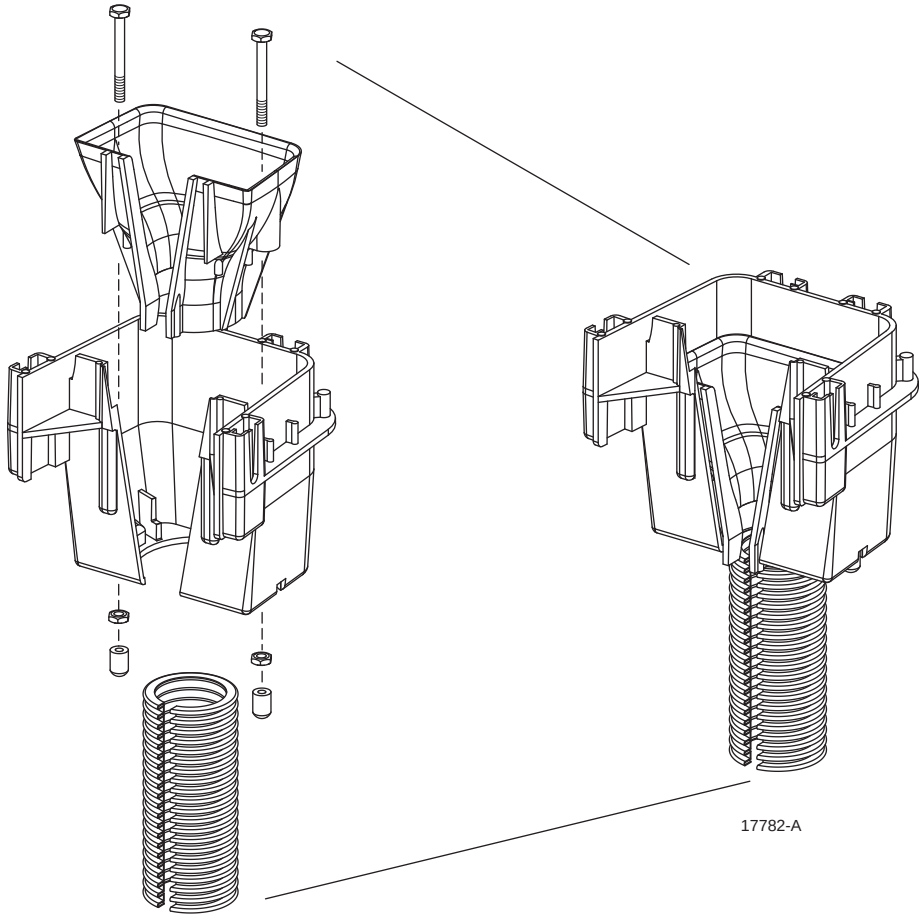

Figure 4-20. Installing 4x4 to 2-Inch Flex Tube Adapter Kit

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4.2.7 4x4 Quad 7/8-Inch Flex Tube Attachment Kit (FGS-KT07-A4-XF)

This kit may be used on a straight section or fitting. Install the kit referring to Figure 4-21.

Note: Once installed, end cover cannot be removed.

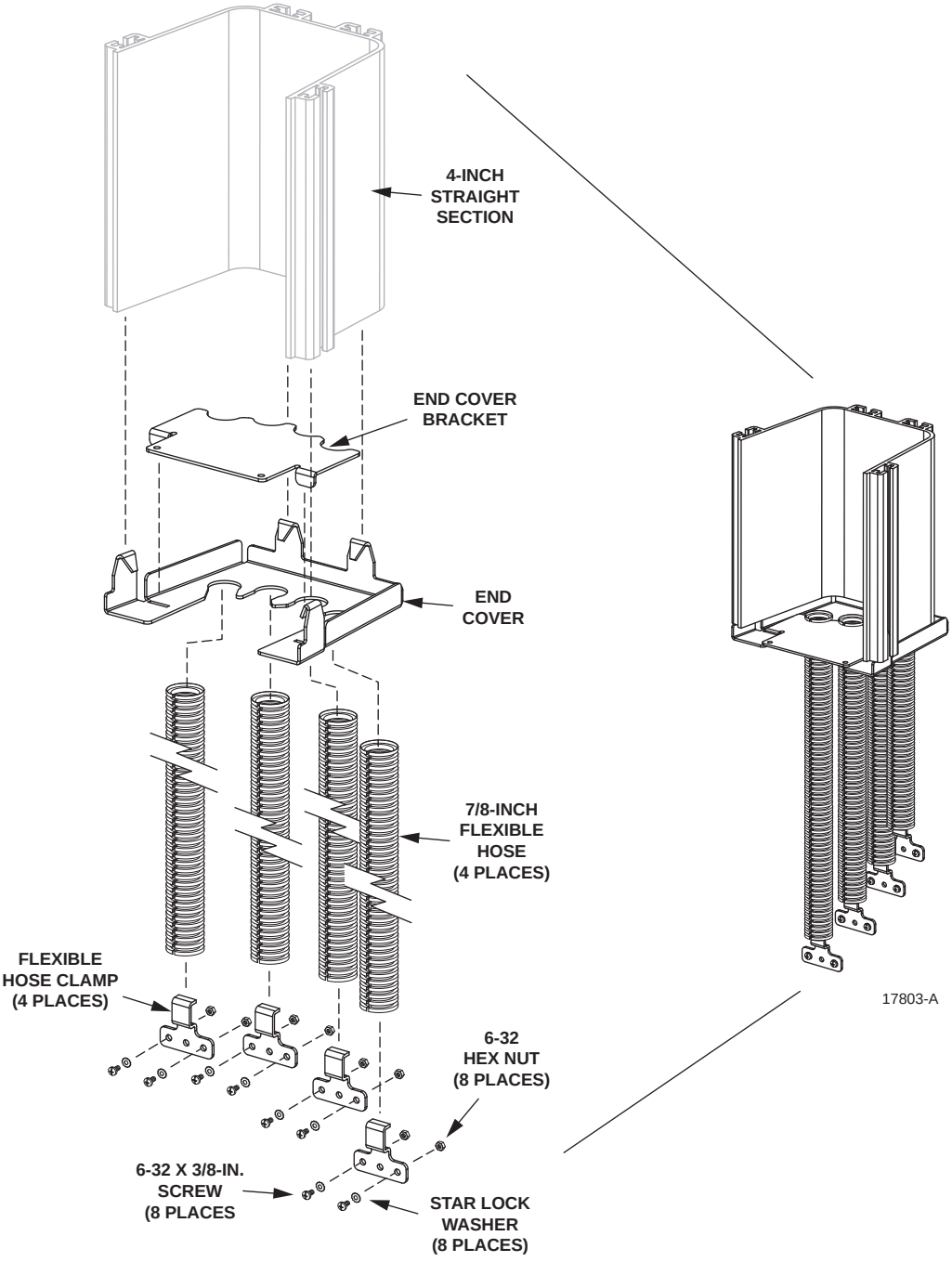

Figure 4-21. Installing 4x4 Quad 7/8-Inch Flex Tube Attachment Kit

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4.2.8 4x4 Vertical Slotted Adapter Junction Kit (FGS-MJWR-D)

Install the kit referring to Figure 4-22.

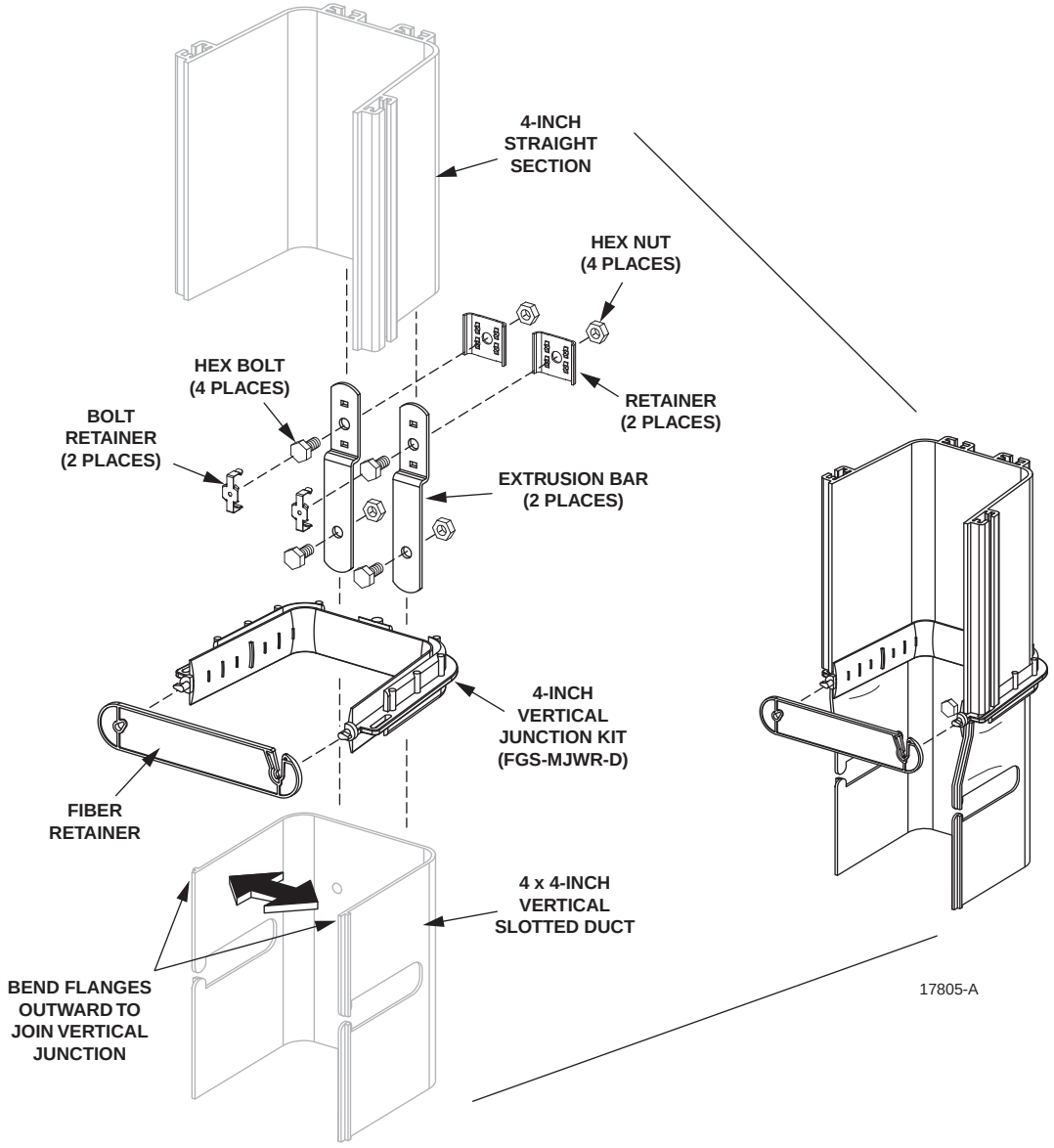

Figure 4-22. Installing 4x4 Vertical Slotted Adapter Junction Kit

4.2.9 4x4, 4x6 Downspout Insert Kit (FGS-HDSI-AB)

Install the kit as follows referring to Figure 4-23.

1. Fully insert the four tabs on the adapter bottom into the four T-channels on the downspout exit.

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2. Insert adapter top, from the top of the downspout, as shown, into the exit of the downspout. Ensure flat wall of the adapter top is oriented towards the back wall of the exit of the downspout.
3. Apply slight pressure to the side walls of the adapter top to ensure the part fits inside the adapter bottom.
4. Snap rectangular tab on the side of the adapter bottom into the rectangular holes on the adapter top.

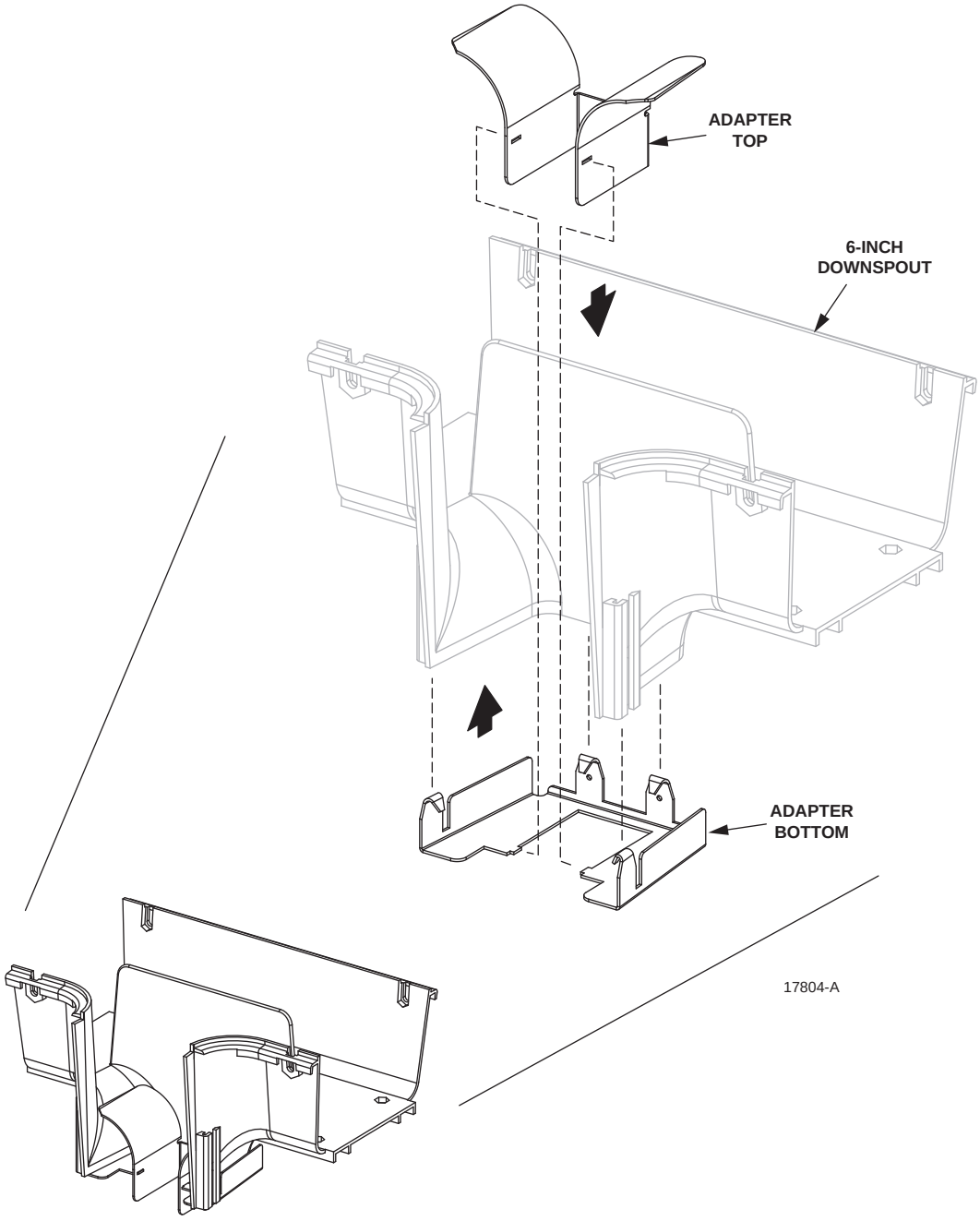

Figure 4-23. Installing 4x4 or 4x6 Downspout Insert Kit

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4.3 4x12 Trumpet Flare Kit (FGS-MTRM-X)

Install a 4x12 trumpet flare kit in the following order, referring to Figure 4-24.

Note: The 12-inch island3 T has no integral trumpet flare and is therefore used for build-out applications of the kind shown. The spool on the island3 T is recessed three inches to provide room for the junction.

1. Slide mounting tabs into the slots.
2. Fasten using retainer, bolt, and quick knob in five locations as shown.

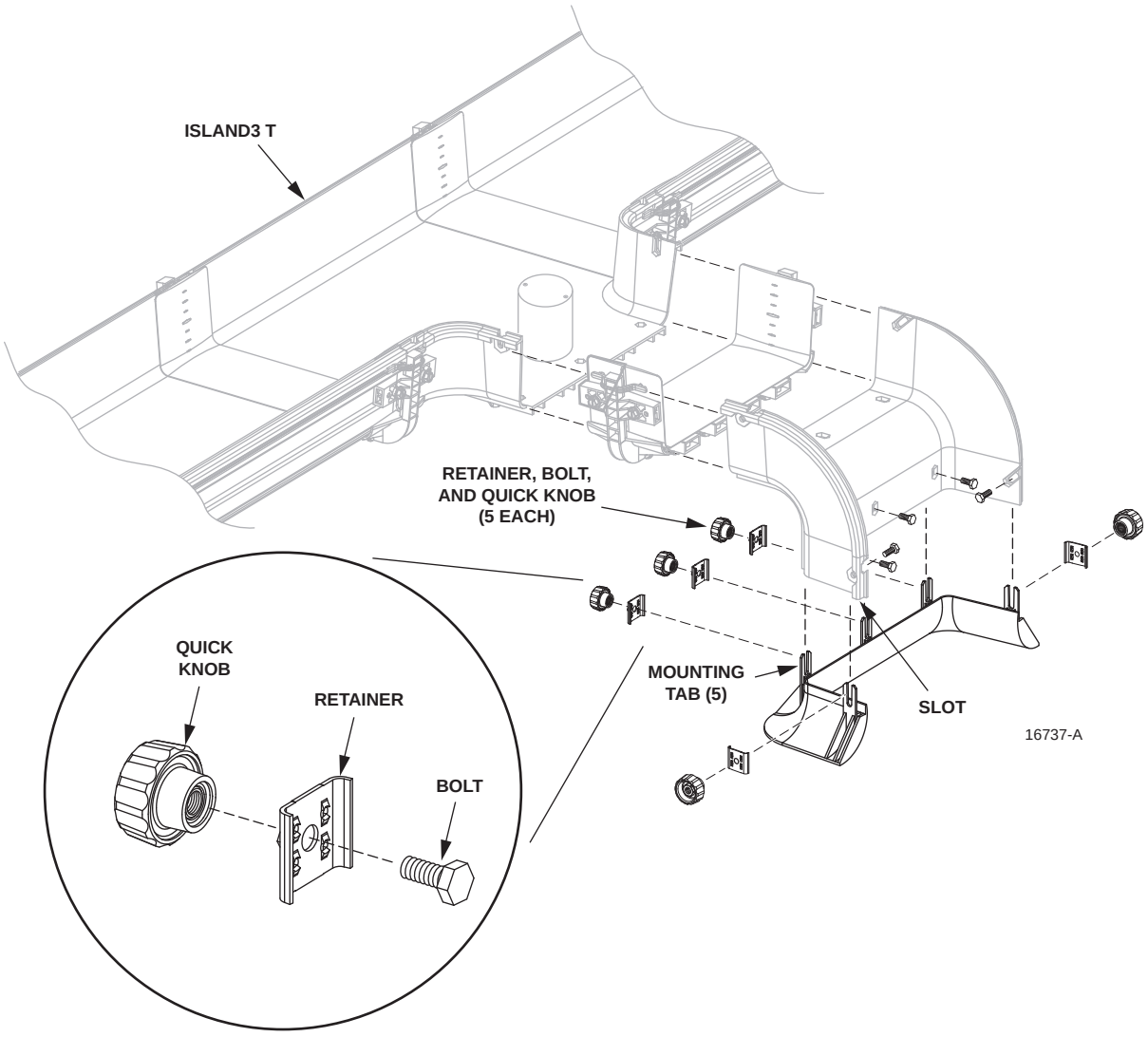

Figure 4-24. Installing 4x12 Trumpet Flare Kit

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4.4 4x24 Trumpet Flare Kit (FGS-MTRM-X)

Install a 4x24 trumpet flare kit in the following order, referring to Figure 4-25.

1. Slide screws into slots.
2. Slide mounting tabs over the screws installed in the slots.
3. Install quick knobs on screws, tighten to secure trumpet flare in place.

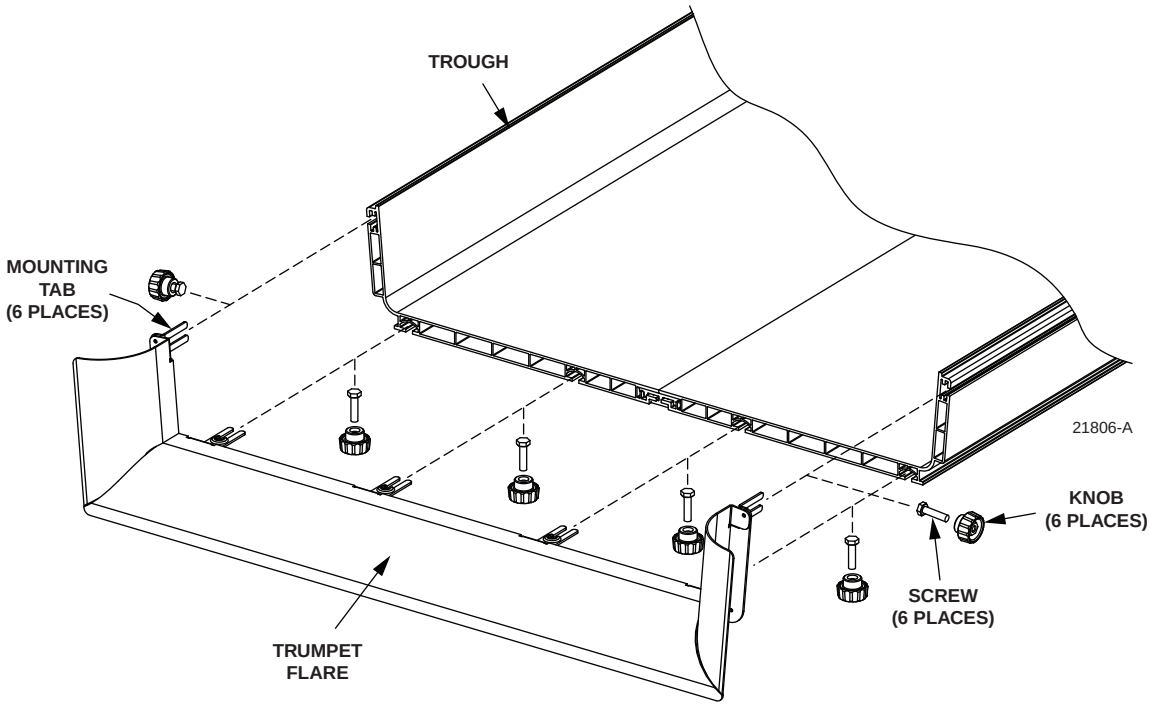

Figure 4-25. Installing 4x24 Trumpet Flare Kit

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4.5 4x24 Island T with Single 12-inch Exit (FGS-ISLAND-H/F)

Install a 4x24 Island T in the following order, referring to Figure 4-26.

1. Slide a Snap-Fit junction onto one exit of the Island T. Refer to Topic 6.4 on page 3-11 for detailed installation procedure.
2. Slide a 24-inch FiberGuide straight section into the junction until it is firmly seated against the center rib.
3. Repeat Steps 1 and 2 for the other Island T exit.

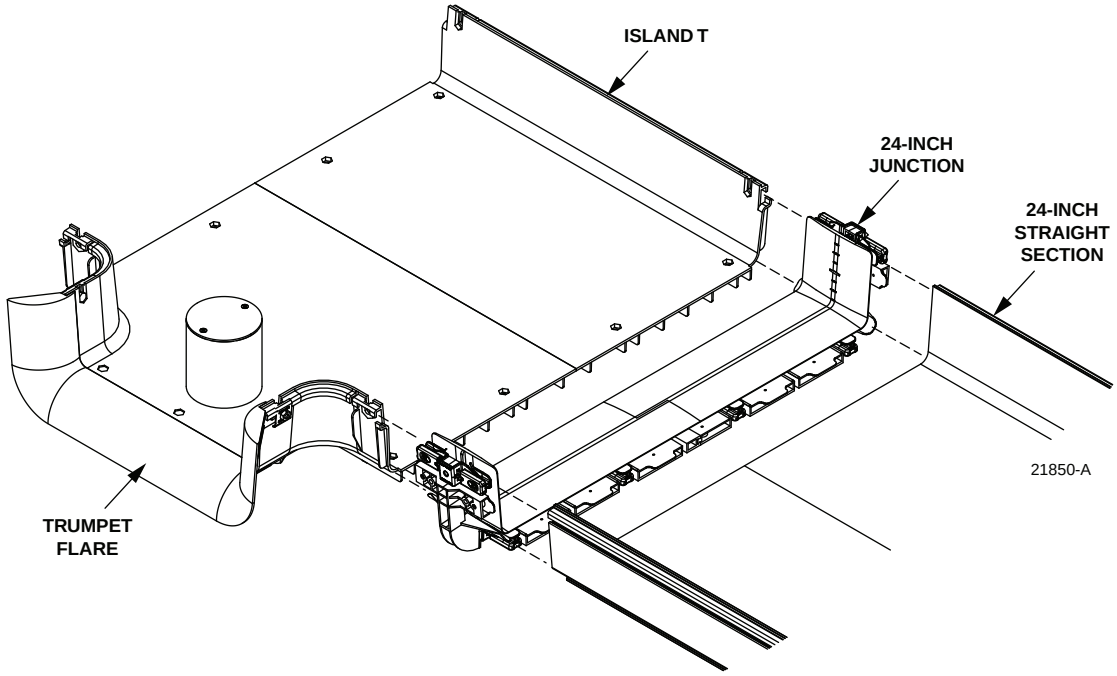

Figure 4-26. 4x24 Island T Installation

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4.6 Installing 12-inch Junction on 4x24 Island T (FGS-ISLAND-H/F)

Install a 12-inch junction on a 4x24 Island T in the following order, referring to Figure 4-27.

1. Remove hex nuts, retaining washers, and hex bolts that secure trumpet flare to the Island T.
2. Remove trumpet flare.
3. Loosen hex nuts that secure island to the tee fitting.
4. Slide a FGS junction (FGS-JUNC-F) onto exit of the Island T and under island assembly, until firmly seated against center rib.
5. Make certain locking pins on snap connector are engaged in holes in the tee.
6. If desired junction screws may be installed for additional strength. Install screws and tighten until washer heads are approximately 1/16-inch (1.6MM) from the junction support arm. After all screws have been tightened to the 1/16-inch (1.6MM) dimension, go back and tighten each screw until washer head bottoms out on the junction support arm.

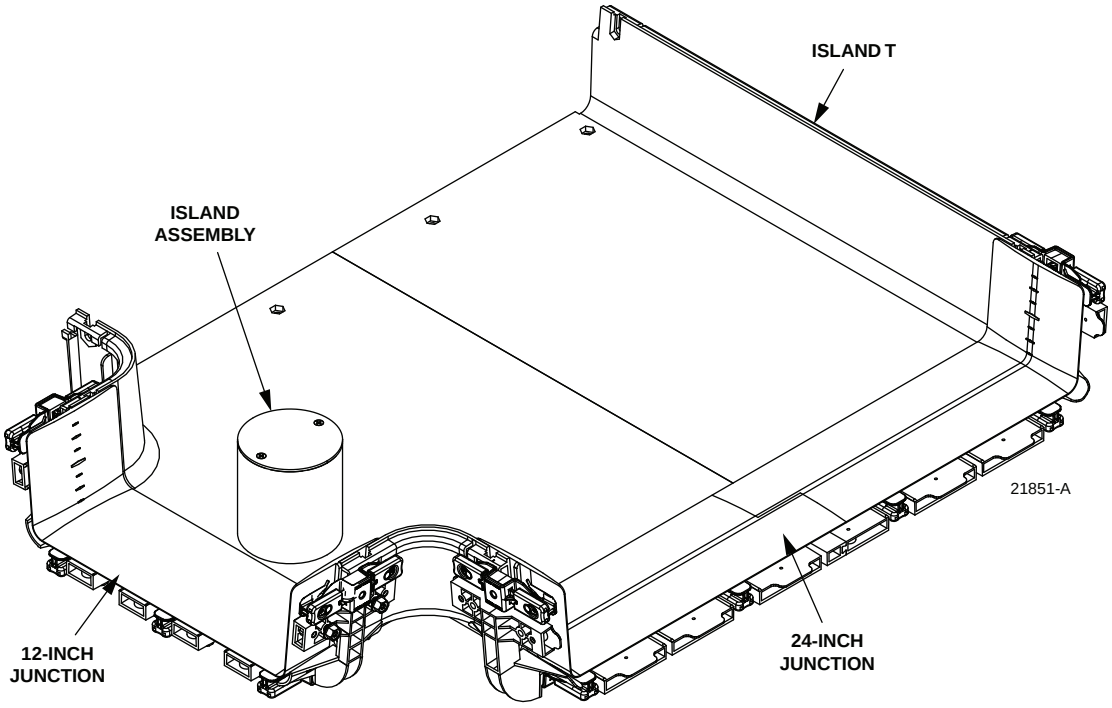

Figure 4-27. 12-Inch Junction on 4x24 Island T

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4.7 4x24 45º Up Elbow (FGS-MU4E-H)

Assemble a 4x24 45º up elbow in the following order, referring to Figure 4-28.

1. Slide a Snap-Fit junction onto one exit of the elbow.
2. Slide elbow into the junction until it is firmly seated against the center rib.
3. If desired junction screws may be installed for additional strength. Install screws and tighten until washer heads are approximately 1/16-inch (1.6MM) from the junction support arm. After all screws have been tightened to the 1/16-inch (1.6MM) dimension, go back and tighten each screw until washer head bottoms out on the junction support arm.
4. Slide a fiber retainer bracket into each mounting slot on the up elbow.
5. Repeat Steps 1 through 3 for the other elbow exit.

To create a 90º up elbow add another 45º up elbow to the top (upper end) of the first elbow by repeating the assembly procedure noted above.

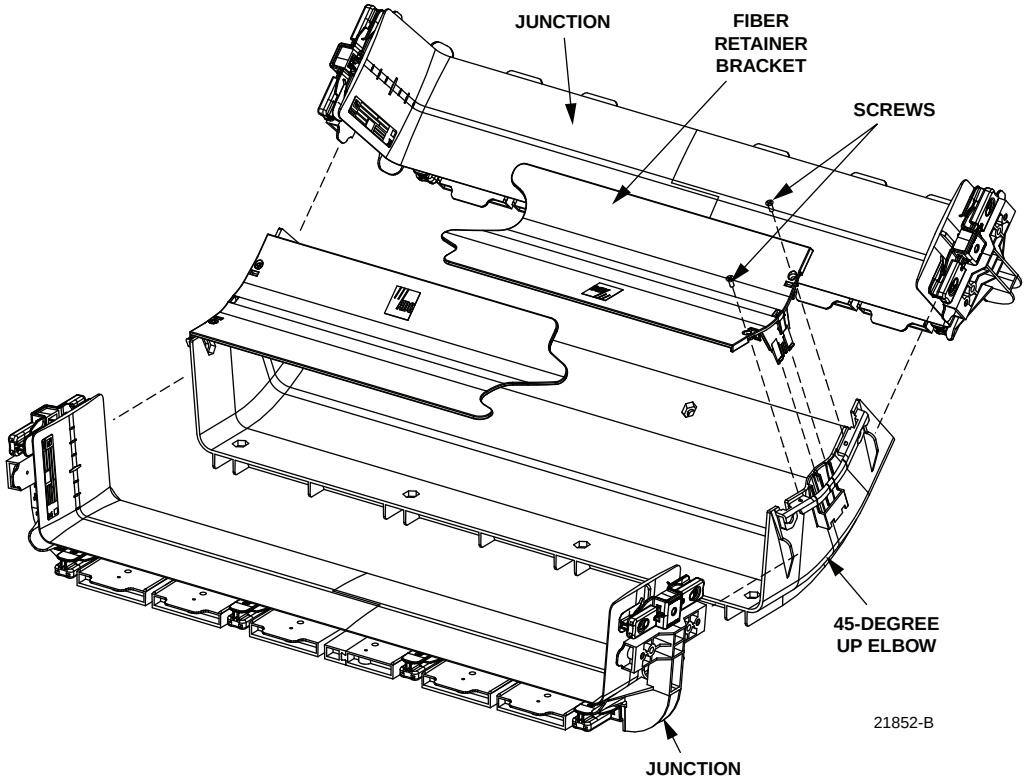

Figure 4-28. 4x24 45º Up Elbow Installation

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4.8 4x24 45º Down Elbow (FGS-MD4E-H)

Assemble a 4x24 45º down elbow in the following order, referring to Figure 4-28.

1. Slide a Snap-Fit junction onto one exit of the elbow.
2. Slide elbow into the junction until it is firmly seated against the center rib.
3. If desired junction screws may be installed for additional strength. Install screws and tighten until washer heads are approximately 1/16-inch (1.6MM) from the junction support arm. After all screws have been tightened to the 1/16-inch (1.6MM) dimension, go back and tighten each screw until washer head bottoms out on the junction support arm.
4. Repeat Steps 1 through 3 for the other elbow exit.

To create a 90º down elbow add another 45º down elbow to the bottom (lower end) of the first elbow by repeating the assembly procedure noted above.

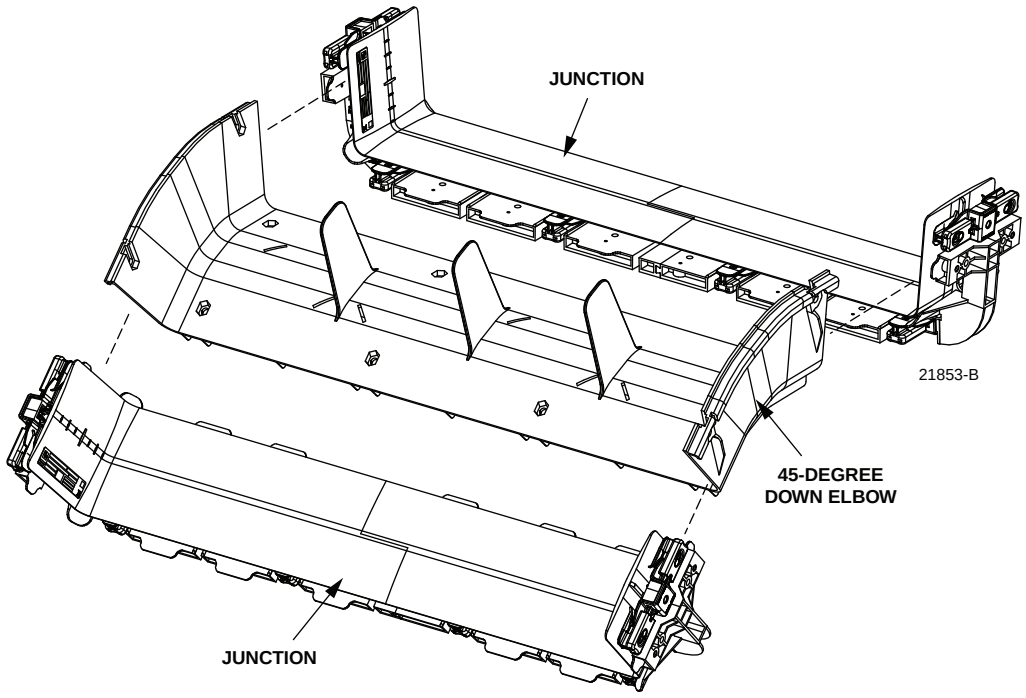

Figure 4-29. 4x24 45º Down Elbow Installation

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5 VERTICAL DUCTS

5.1 2x2 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW1-X)

Install a 2x2 vertical slotted duct kit referring to Figure 4-30.

Note: This figure shows several components that can be bought as separate kits including 2x2 vertical slotted duct with 4-inch slot spacing (FGS-MSHS-C), mounting brackets (FGS-HWMB-C), and 2-inch cover (FGS-MSHC-C).

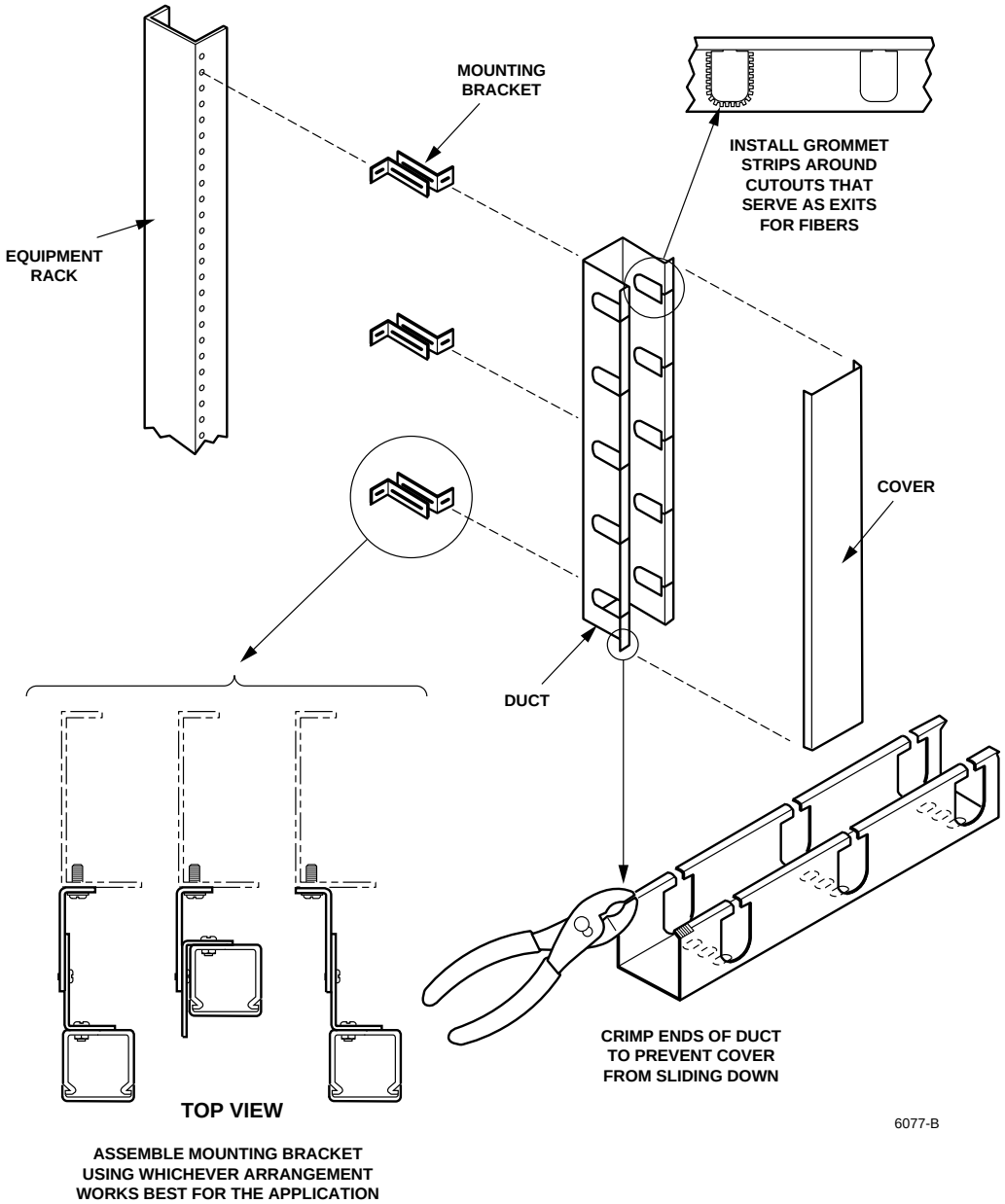

Figure 4-30. Installing 2x2 Vertical Slotted Duct Kit

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5.2 4x4 Vertical Slotted, 4-Inch Slot Spacing, Duct Kit (FGS-KTW2-D)

Install a 4-inch vertical slotted duct referring to Figure 4-31.

Note: This figure shows several components that can be bought as separate kits including including 6-foot 4x4 vertical slotted duct (FGS-MSHS-D) and 4x4 vertical slotted duct mounting bracket (FGS-HWMB-D).

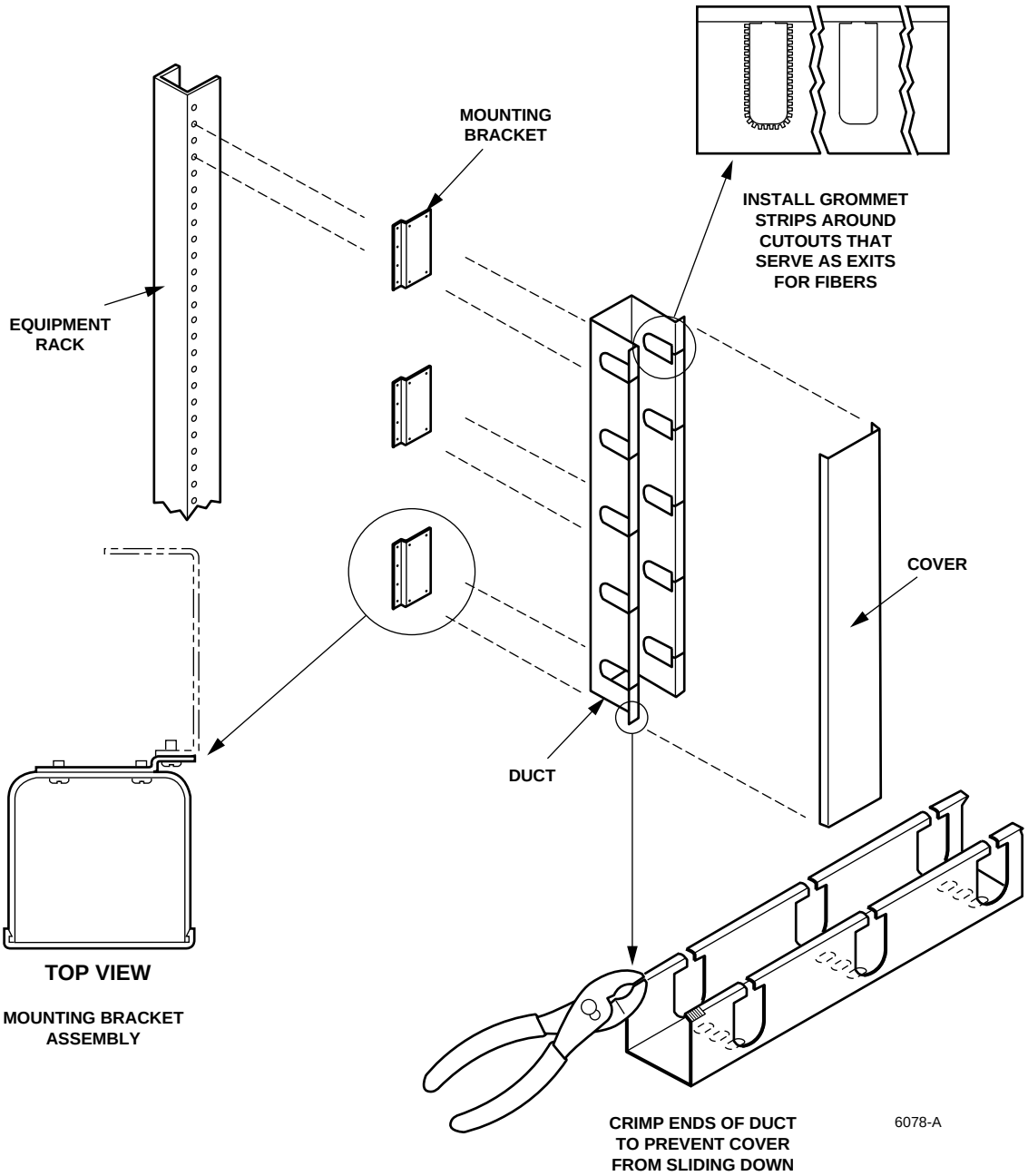

Figure 4-31. Installing 4x4 Vertical Slotted Duct Kit

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5.3 2x4 Vertical Slotted, 1.5 Inch Slot Spacing, Duct Kit (FGS-KTW2-E)

Install a 2x4 vertical slotted duct as follows, referring to Figure 4-32, as follows:

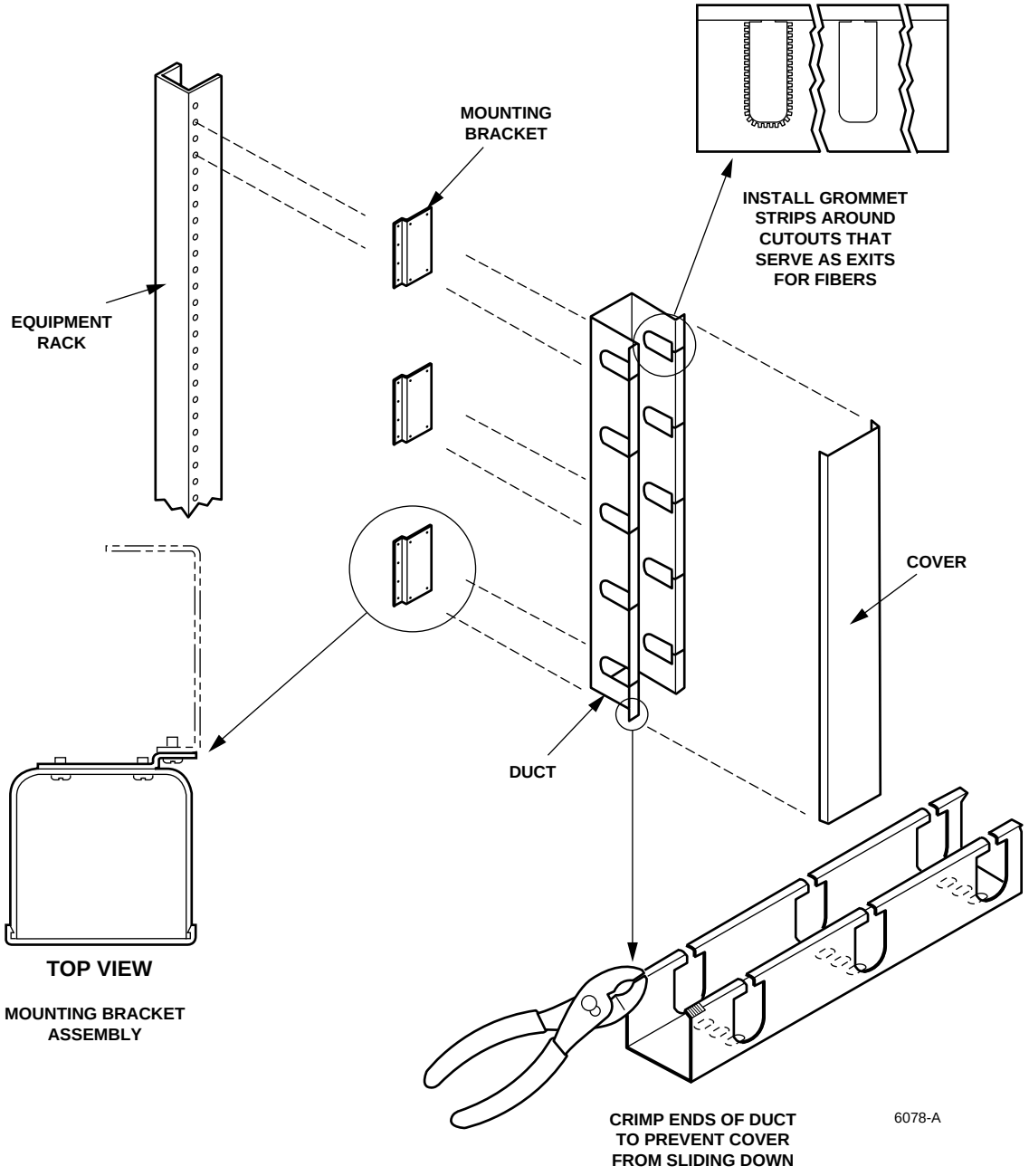

Figure 4-32. Installing 2x4 Vertical Slotted Duct Kit

Note: This figure shows several components that can be bought as separate kits including cover for 4-inch vertical slotted duct (FGS-MSHC-D) and 4-inch cover retainer (FGS-CLIP-D/E).

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Note: The cover retainer can also be inserted in the last slot of the straight section. Installation is the same after sliding the cover up to midway between the last and second to last slots on the straight section.

1. Slide the cover down to midway between the first and second slots on the straight section.
2. Insert cover retainer into the straight section, positioning the two curled tabs around the edges of the FiberGuide straight section.
3. Snap cover retainer curled tabs (2) around the edges of the FiberGuide straight section, as shown.
4. Slide cover up, through the curled tabs on the cover retainer, back to the original position.

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SECTION 5: INSTALLING COVERS, END CAPS, AND ACCESSORIES

Content Page

1 INTRODUCTION 5-2
2 STRAIGHT SECTION COVERS 5-3
2.1 4- or 6-Inch Hinged Cover (FGS-MSHC-X) 5-3
2.2 6-Inch Snap-On Cover (FGS-MSSC-B/G) 5-4
2.3 12-Inch Snap-On Cover (FGS-MSSC-F) 5-6
3 FITTING COVERS 5-8
3.1 4-, 6-, or 12-Inch Plastic Fitting Covers (FGS-SXXX) 5-8
3.2 4- or 6-Inch Metallic Fitting Split Covers (FGS-CXXX) 5-9
3.3 24-Inch Fittings Fabric Covers (FGS-FXXX) 5-10
3.4 24-Inch Straight Section Fabric Covers (FGS-FSFC-H) 5-13
4 END CAPS 5-16
4.1 2x6 End Cap (FGS-HMEC-G) 5-16
4.2 4x4, 4x6, 4x12, 4x24 End Caps (FGS-HMEC-A/B/F/H) 5-18
5 ACCESSORIES 5-19
5.1 IFC Tie Down Kits (FGS-HIFC-A/B/F) 5-19
5.2 4x4, 4x6, 4x12 Slack Storage Spool Kit (FGS-STOR-A/B/F) 5-20
5.3 4x4, 4x6, 4x12 Inline Fin Kit (FGS-MFIN-X) 5-21

1 INTRODUCTION

Covers and end caps provide additional protection for patch cords and are easy to install. Accessories provide cable management for high density systems. This section contains procedures and exploded views for installing covers, end caps, and accessories.

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2 STRAIGHT SECTION COVERS

2.1 4- or 6-Inch Hinged Cover (FGS-MSHC-X)

Install a 4-inch or 6-inch hinged cover referring to Figure 5-1.

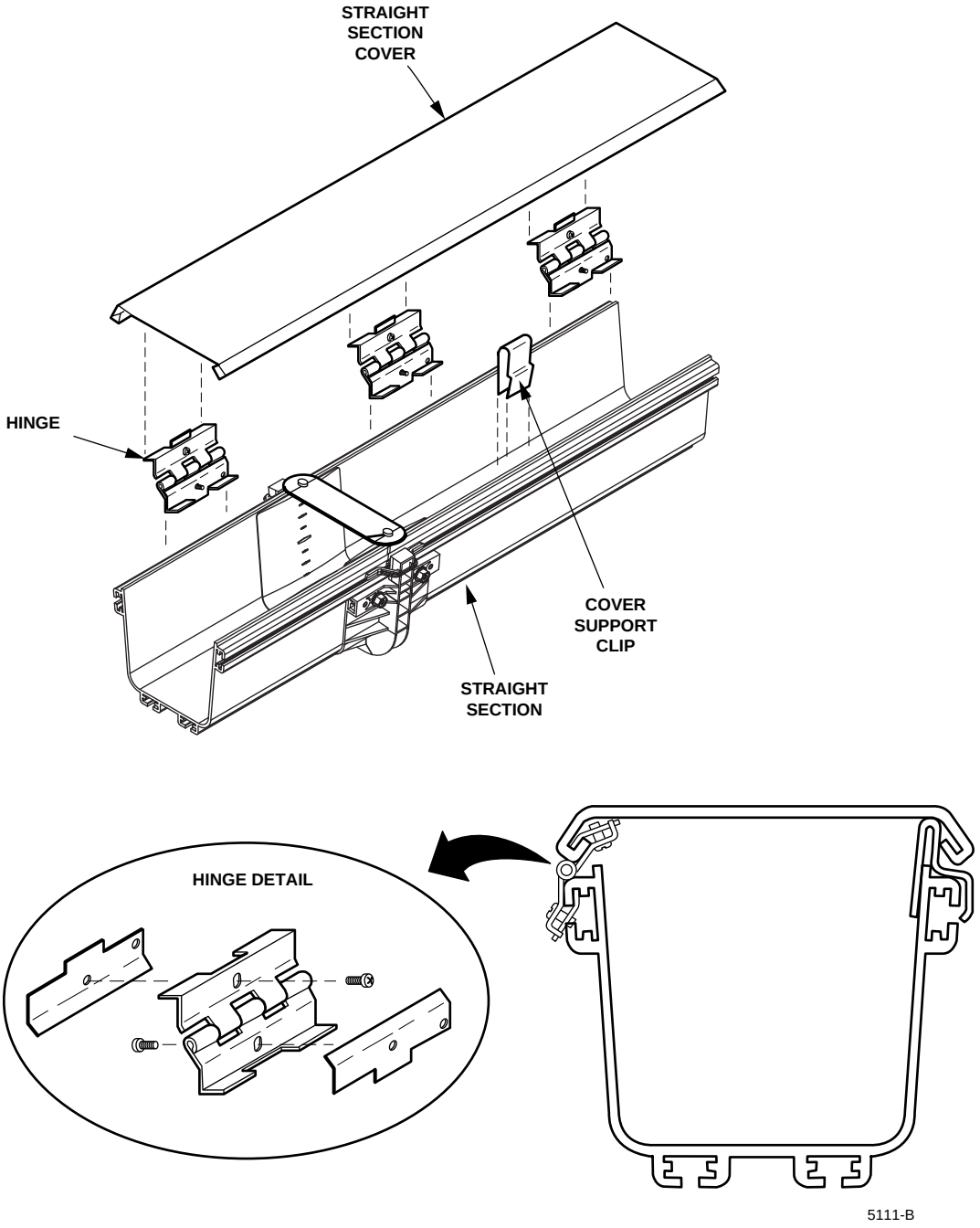

Figure 5-1. Installing a 4-Inch Hinged Cover

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2.2 6-Inch Snap-On Cover (FGS-MSSC-B/G)

Installation for this kit is slightly different depending on whether it is being installed on a 2x6 or 4x6 straight section.

If installing the kit on 2x6 straight section, install it referring to Figure 5-2, as follows.

1. Install quick knobs with mounting brackets as shown.
2. Snap cover under mounting brackets.

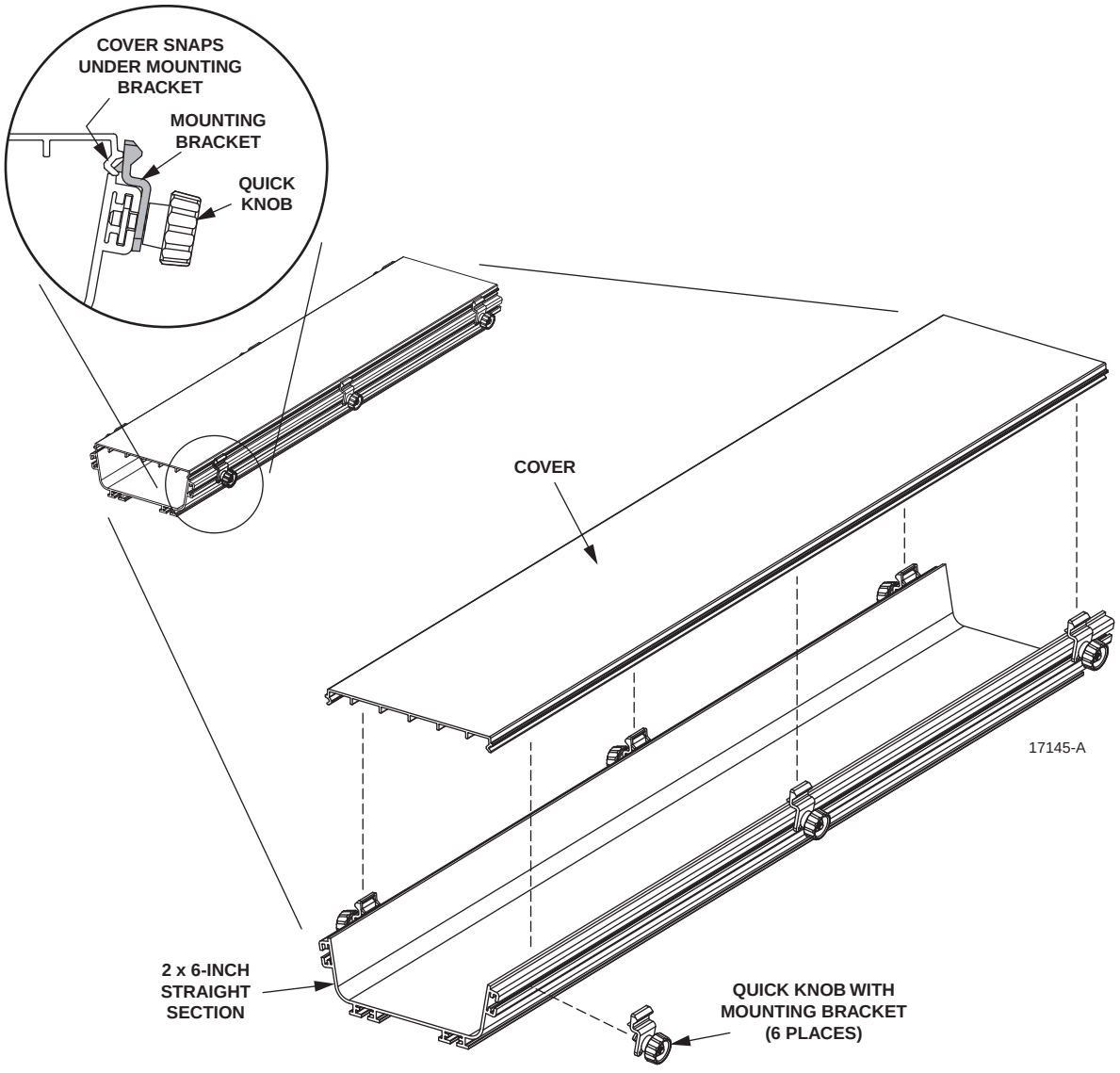

Figure 5-2. Installing Snap-On Cover on 2x6 Straight Section

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If installing the kit on a 4x6 straight section, install it referring to Figure 5-3, as follows.

1. Install quick knobs with mounting brackets as shown.
2. Snap cover over quick knob brackets.

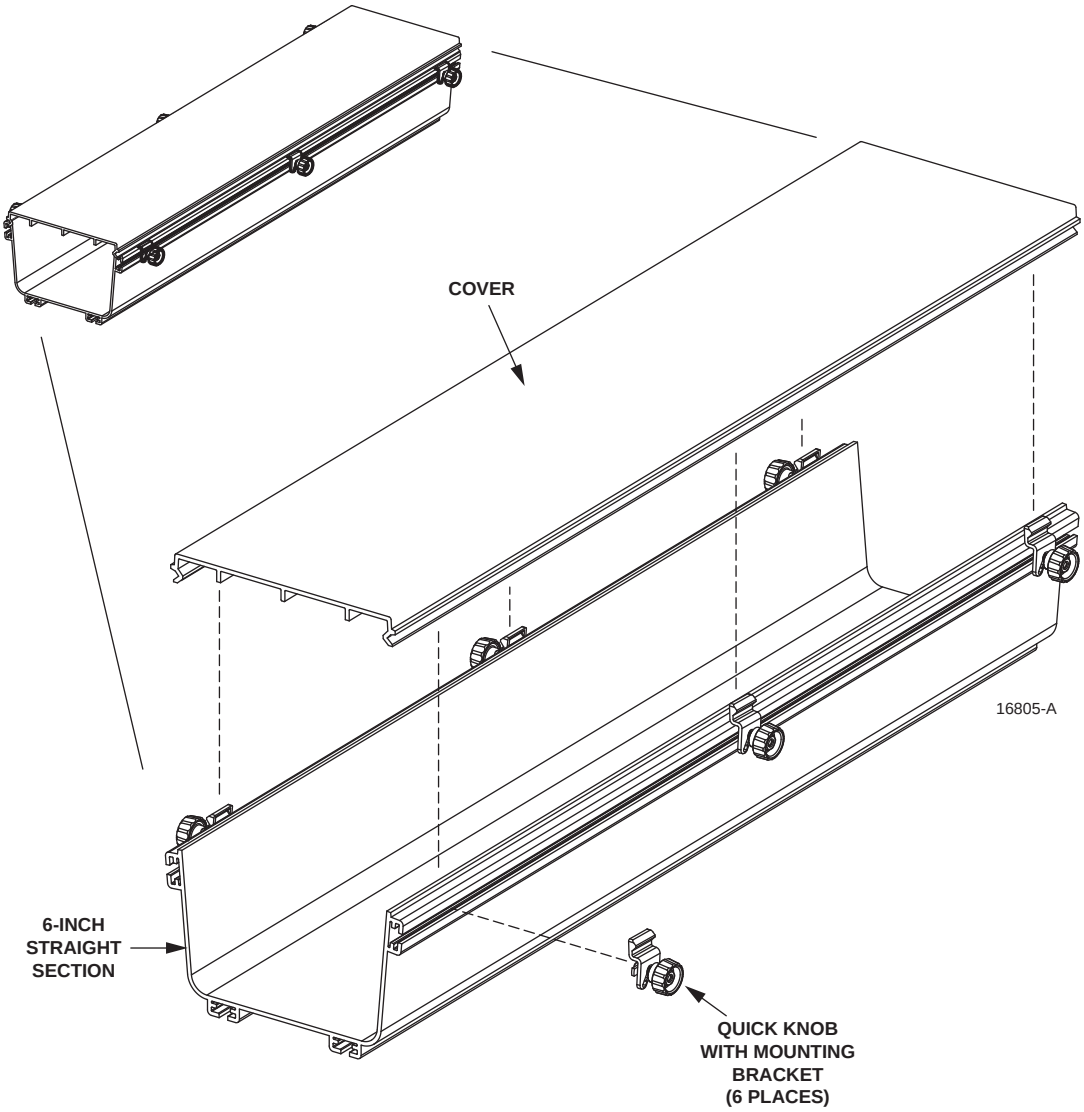

Figure 5-3. Installing a 6-Inch Snap-On Cover

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2.3 12-Inch Snap-On Cover (FGS-MSSC-F)

Install a 12-inch snap-on cover referring to Figure 5-4 and Figure 5-5.

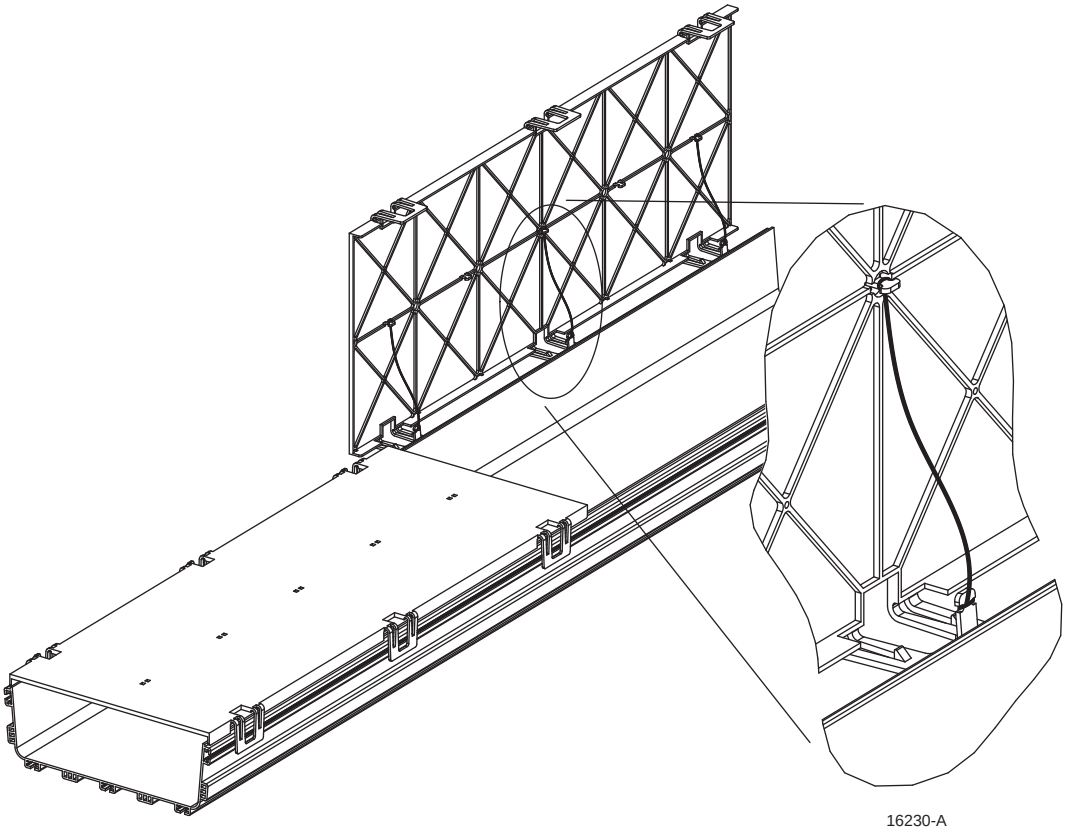

Figure 5-4. Installing 12-Inch Snap-On Cover

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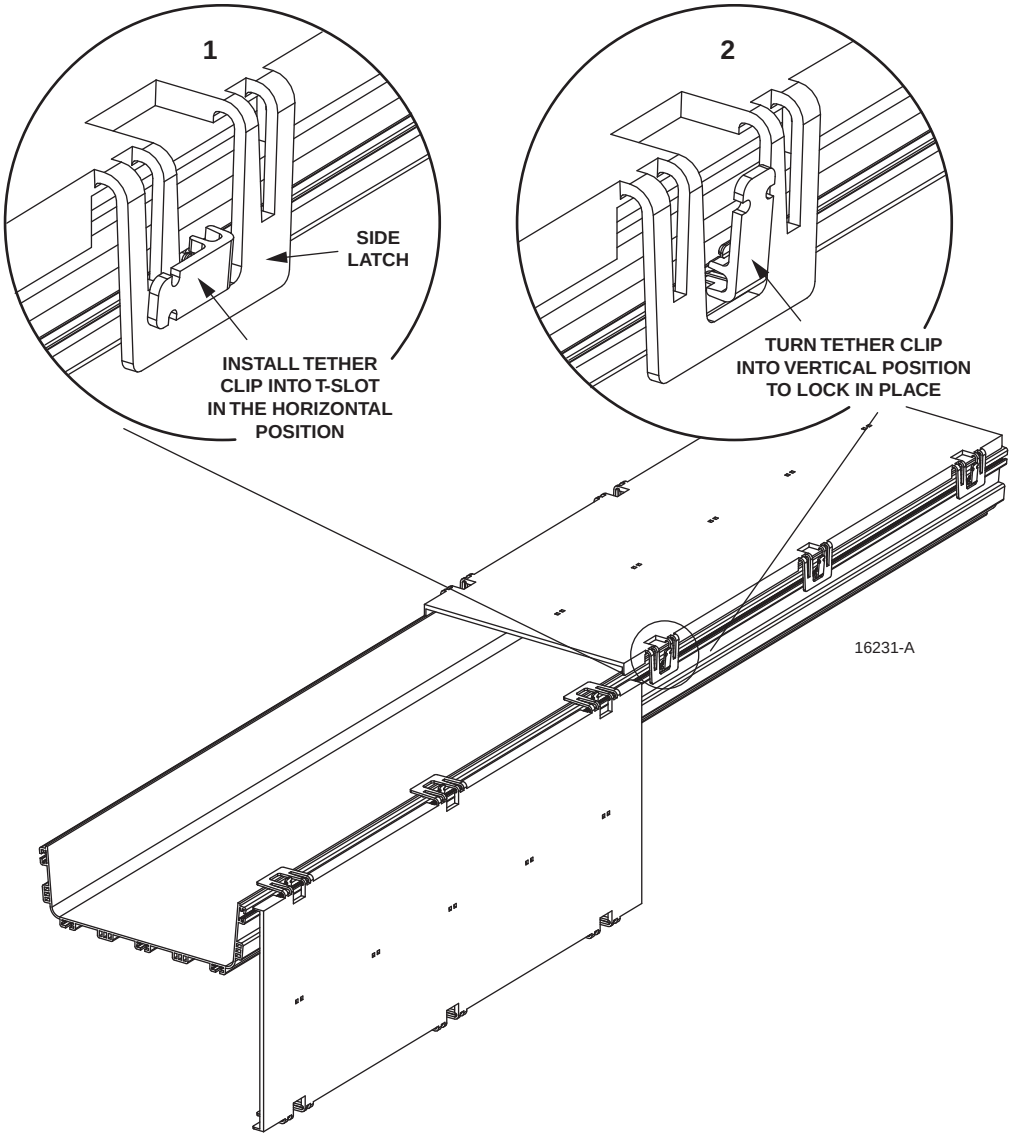

Figure 5-5. Installing a 12-Inch Snap-On Cover

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3 FITTING COVERS

3.1 4-, 6-, or 12-Inch Plastic Fitting Covers (FGS-SXXX)

Install a plastic fitting cover referring to Figure 5-6.

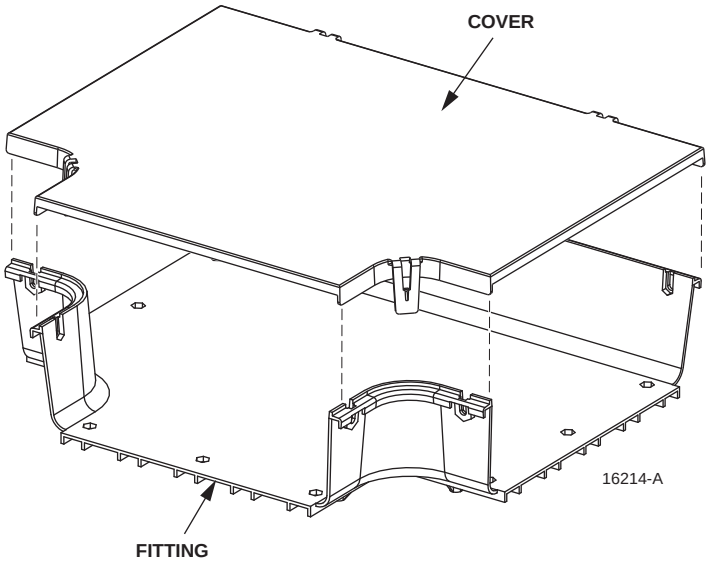

Figure 5-6. Installing Plastic Fitting Cover

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3.2 4- or 6-Inch Metallic Fitting Split Covers (FGS-CXXX)

Install a 4- or 6-inch metallic fitting split cover referring to Figure 5-7.

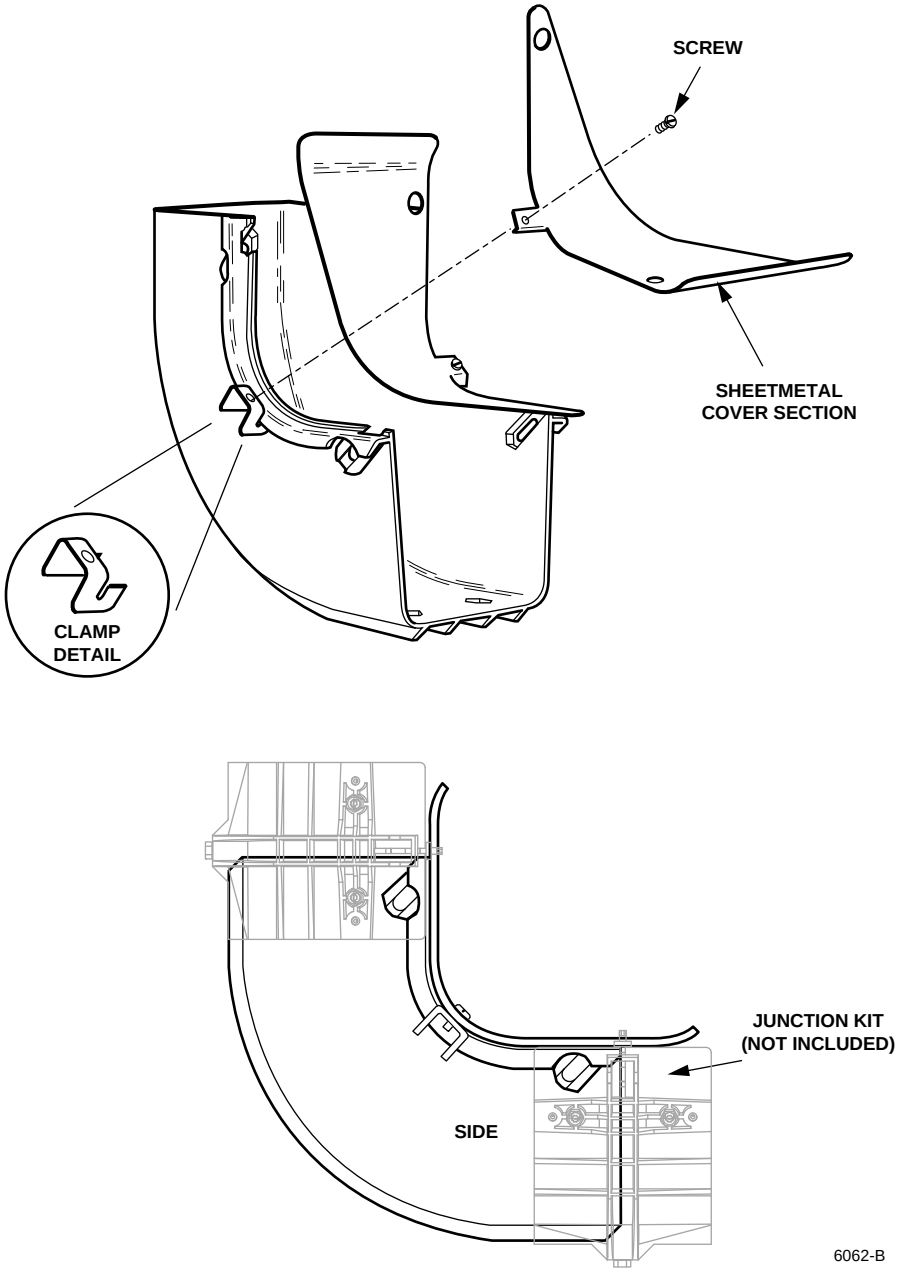

Figure 5-7. Installing Metallic Fitting Cover

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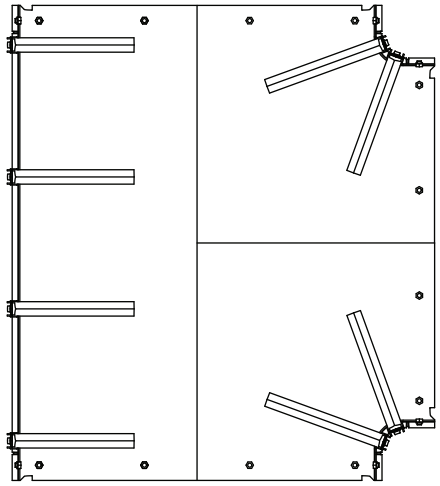
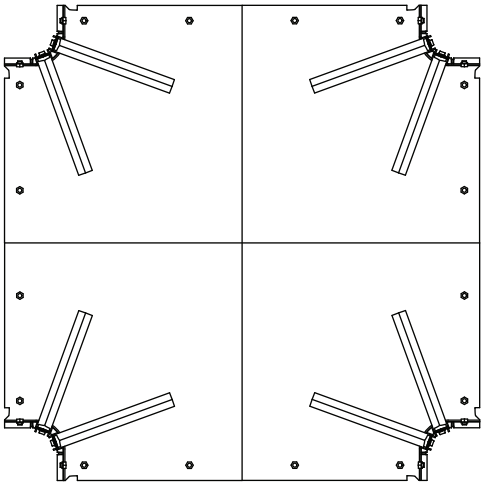
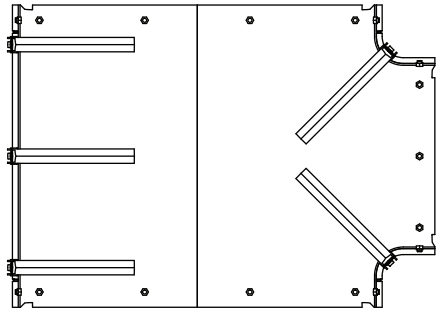
3.3 24-Inch Fittings Fabric Covers (FGS-FXXX)



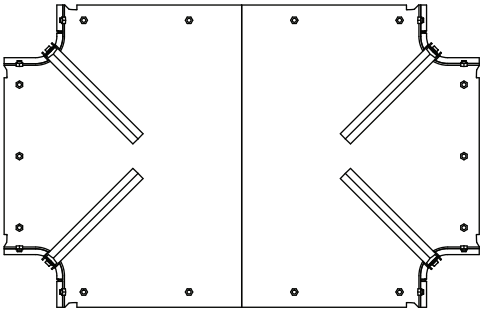
24 IN. TO 24 IN. TEE
FGS-FHRT-H



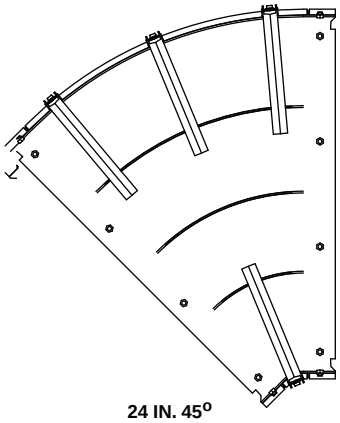
24 IN. TO 24 IN. CROSS
FGS-FHXP-H



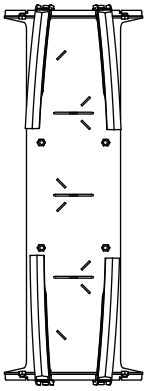
24 IN. TO 12 IN. TEE
FGS-FHRT-H/F



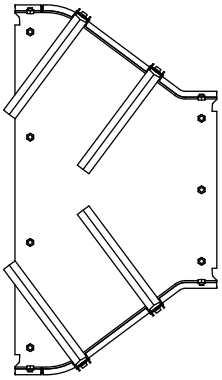
24 IN. TO 12 IN. CROSS
FGS-FHXP-F/H



24 IN. 45° HORIZONTAL ELBOW
FGS-FH4E-H



24 IN. 45° DOWN ELBOW
FGS-FH4E-H



24 IN. TO 12 IN. REDUCER
FGS-FSA-H/F

23766-A

TOP VIEWS OF FITTINGS SHOWN WITH APPROXIMATE RIB LOCATIONS.
SOME RIB ADJUSTMENT MAY BE REQUIRED TO GET COVER SNAPPED INTO POSITION

Figure 5-8. Rib Positions

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Determine which fitting you are covering. Ribs should be placed on fitting loose, until correct positioned is determined by placing fabric cover over the fitting.

1. Position ribs on fitting as shown in Figure 5-8.
2. Insert base of rib into slot on the side of the fitting, see Figure 5-9.

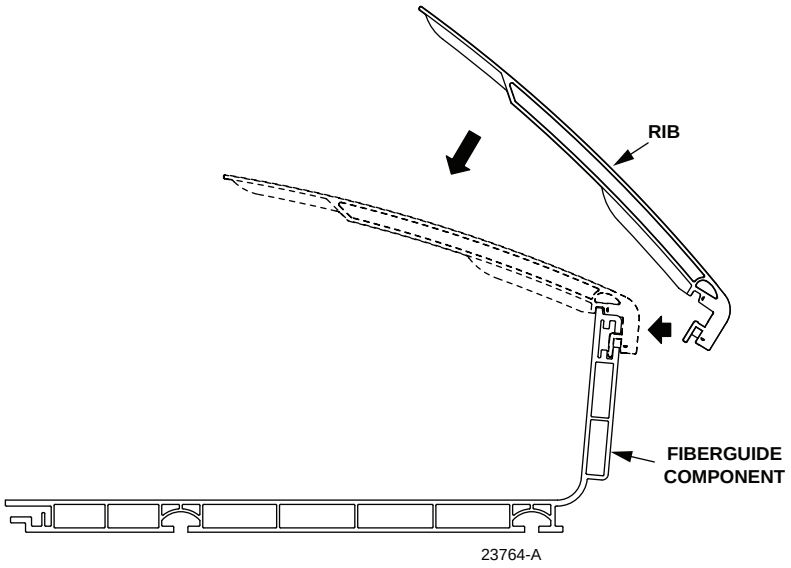

Figure 5-9. Rib Installation

3. Pivot rib down and snap in place.
4. Insert snap-head screw into hole in rib as shown in Figure 5-10. Do not tighten screw at this time.

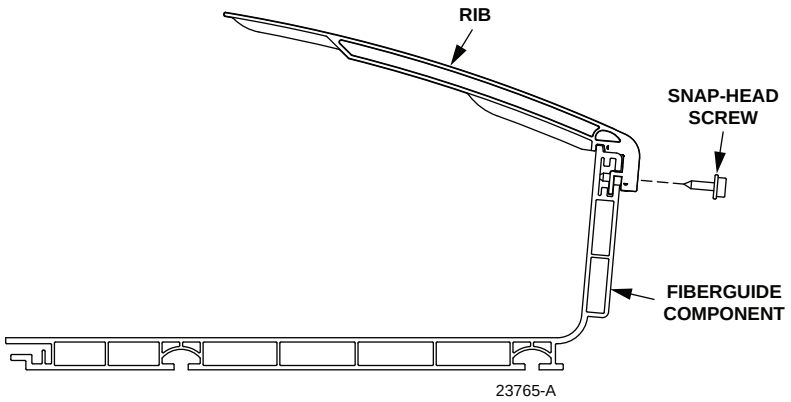

Figure 5-10. Snap-Head Screw Installation

5. Repeat Step 3 and Step 4 for each rib.
6. Place fabric cover over fitting and move ribs as necessary to align snaps.

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7. Once rib is in the correct position tighten the snap-head screw. Snap fabric cover to the rib snap.
8. Repeat Step 7 for each rib on the fitting, stretching cover as necessary.

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3.4 24-Inch Straight Section Fabric Covers (FGS-FSFC-H)

Fabric covers for the 24-inch straight sections are made to cover standard six-foot lengths. When a shorter straight section is used the fabric cover should be modified by cutting it to the correct length. Cut cover to length as shown in Figure 5-11. Leave an additional six-inches in length for proper overlap of the cover.

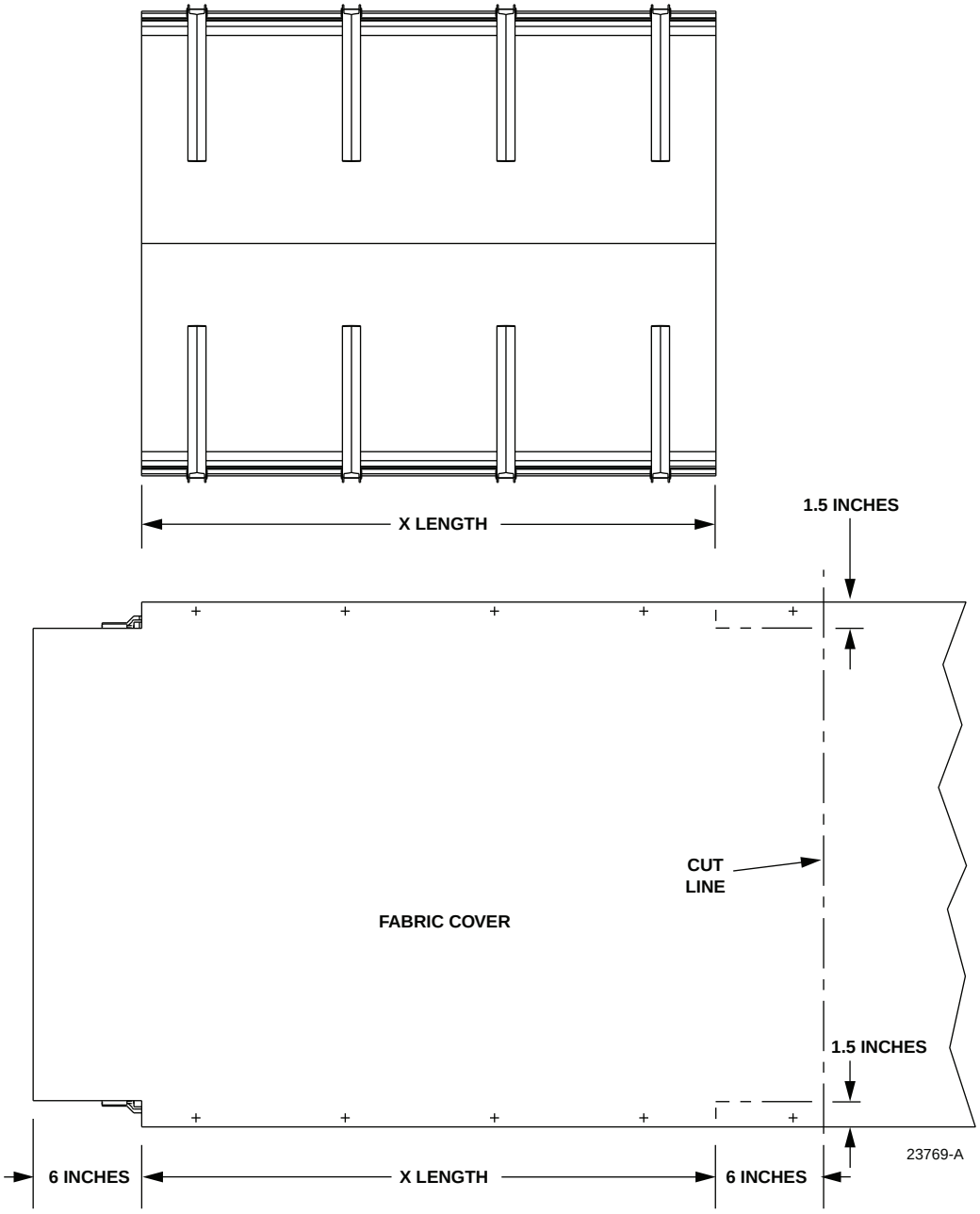

Figure 5-11. Cutting 24-Inch Cover

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Install fabric covers as follows:

1. Insert base of rib into slot on the side of the trough, see Figure 5-9.
2. Pivot rib down and snap in place.
3. Insert snap-head screw into hole in rib as shown in Figure 5-10. Do not tighten screw at this time.
4. At one end of the trough insert a T-bolt into the slot on the outside of the trough. Place end of the spacer tool tether over T-bolt and secure with quick knob. This will keep spacer tool from falling if dropped.
5. Align the long edge of the spacer tool with the end of the trough section. See Figure 5-12.

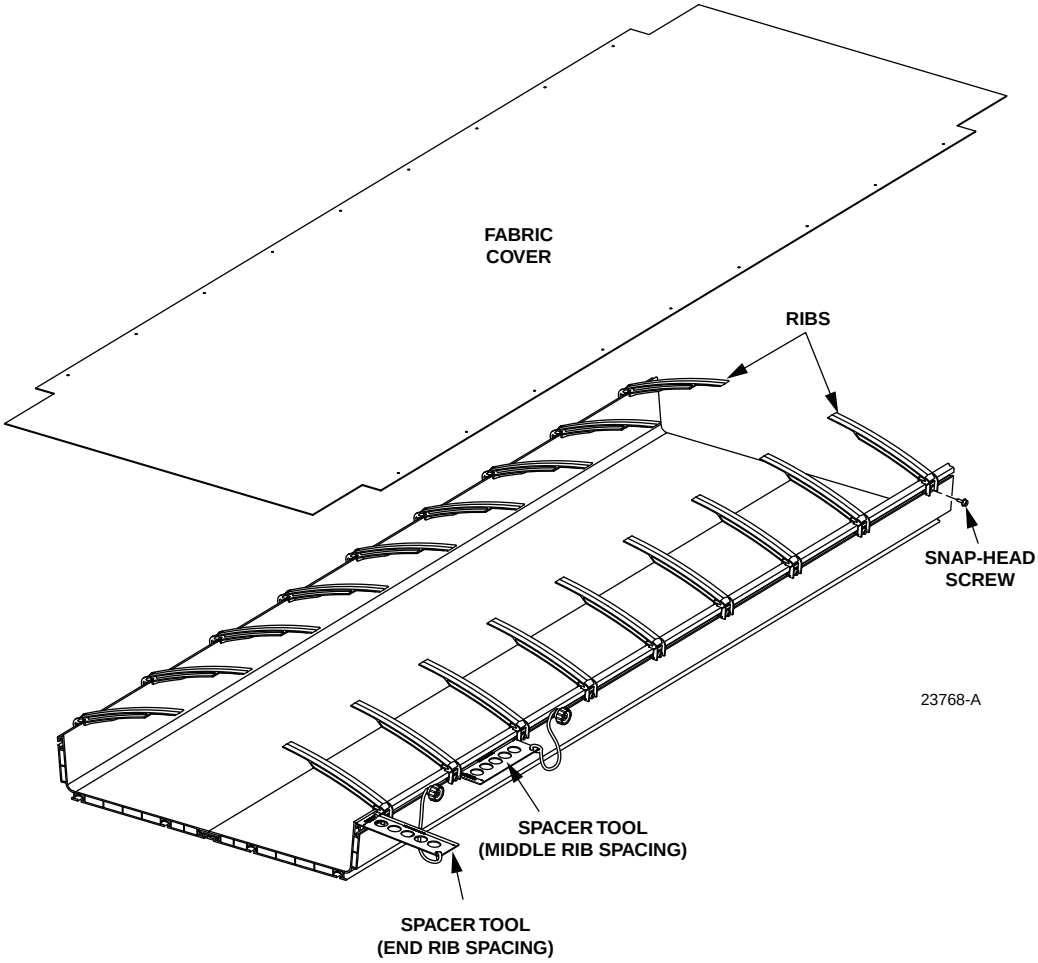

Figure 5-12. 6-Foot Straight Section Cover Installation

6. Position first rib against the spacer tool and tighten snap-head screw to hold rib in place.
7. Continuing along the length of the trough slide T-bolt beyond the location of the next rib. Use long side of spacer tool to determine proper space between ribs.

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8. Insert and position next rib, then secure with snap-head screw. Repeat for all ribs along that edge.
9. Repeat Steps 1 through 8 for the other side.
10. Lay fabric cover over piece with all ribs installed. Position correctly and snap all snaps on one side. Move to the other side and snap all snaps while stretching cover slightly.
11. Overlap on fabric should lay over ribs of adjacent troughs or fittings.

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4 END CAPS

4.1 2x6 End Cap (FGS-HMEC-G)

If installing the end cap into a fitting, simply snap it into place as shown in Figure 5-13.

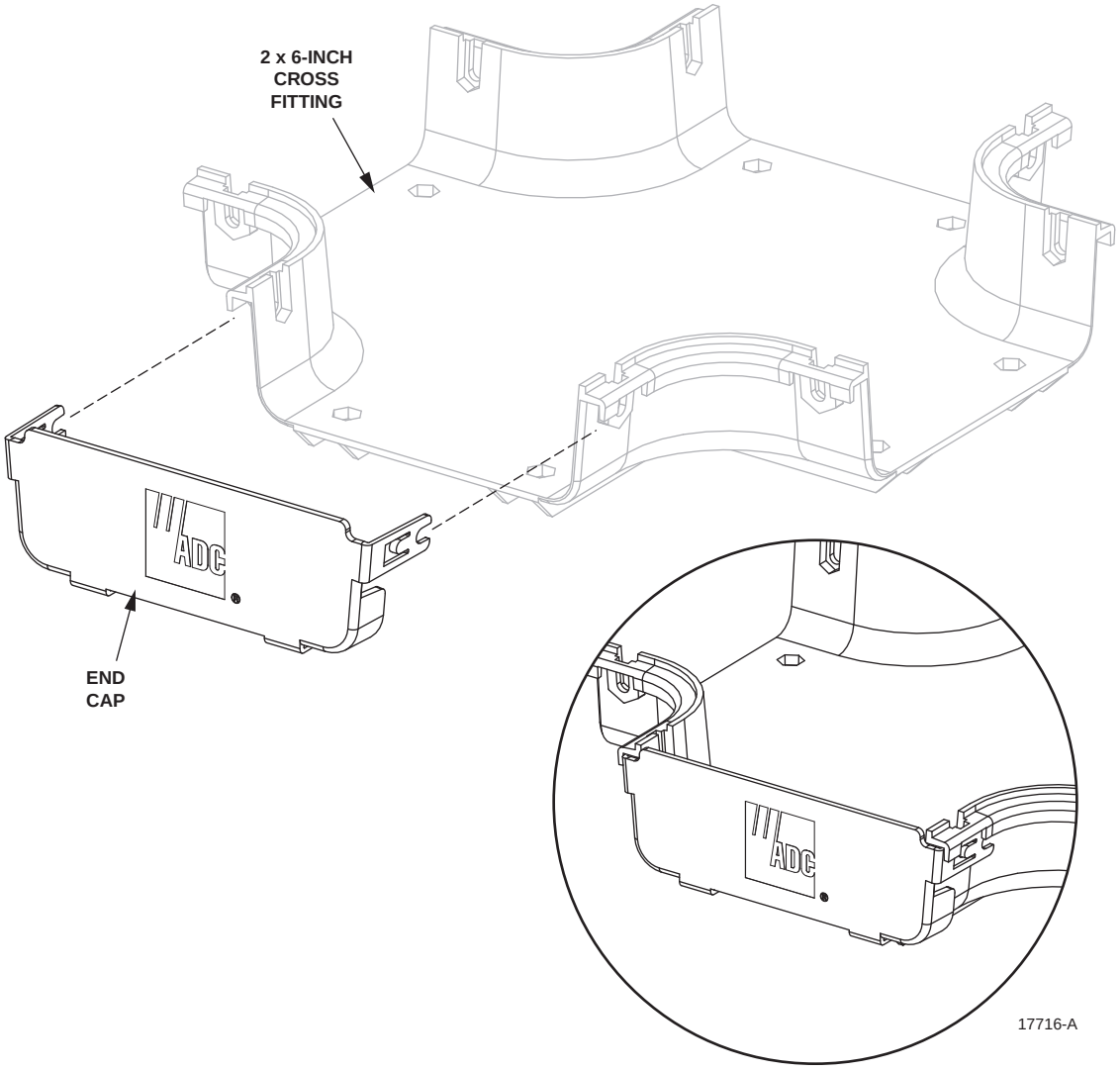

Figure 5-13. Installing 2x6 End Cap on Fitting

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If installing the end cap into a straight section, install it as follows referring to Figure 5-14.

1. Insert two screws into the straight section T-slots as shown.
2. Slide the end cap into guides and onto screws.
3. Install quick knobs on screws; tighten to secure end cap in place.

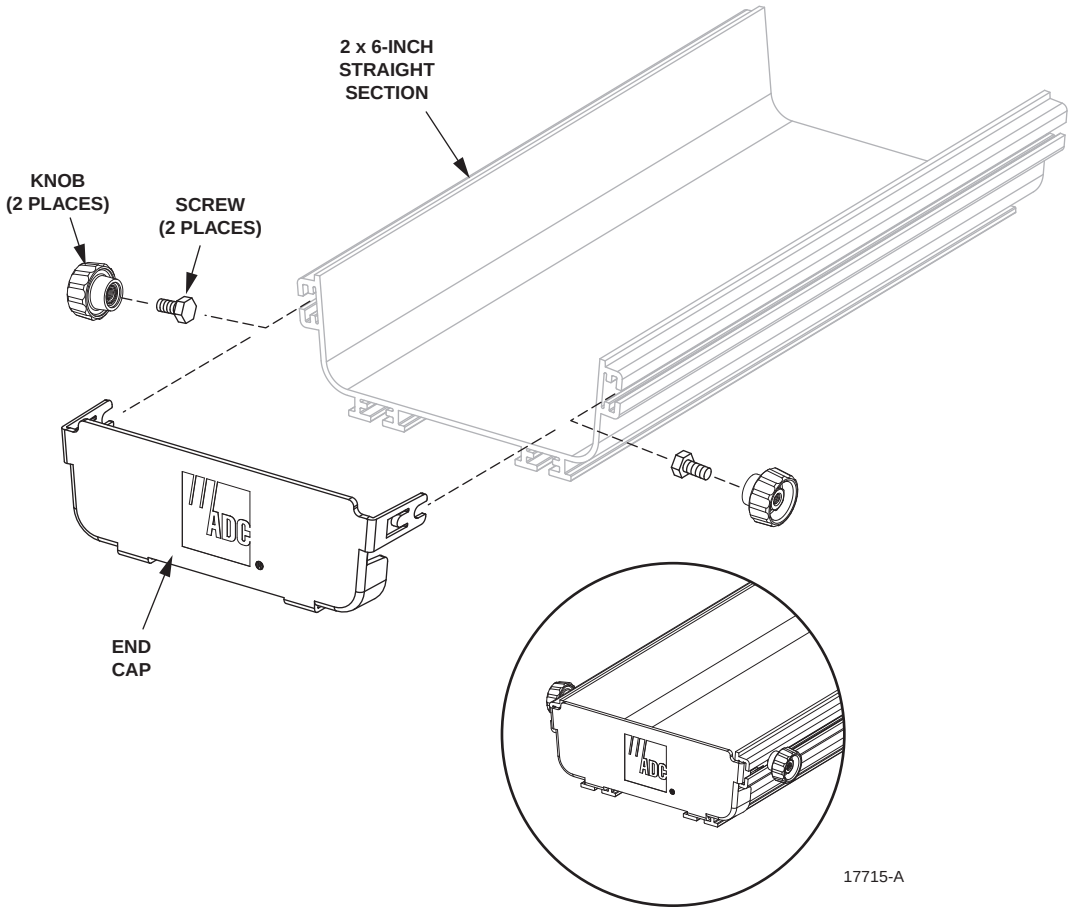

Figure 5-14. Installing 2x6 End Cap on Straight Section

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4.2 4x4, 4x6, 4x12, 4x24 End Caps (FGS-HMEC-A/B/F/H)

Install the kit in the following order, referring to Figure 5-15.

Note: 12-inch wide cap is shown. Installation is similar for other cap sizes.

1. Insert screws into mounting tabs.
2. Slide end cap and screws into slots on straight section.
3. Install quick knobs on screws; tighten to secure end cap in place.

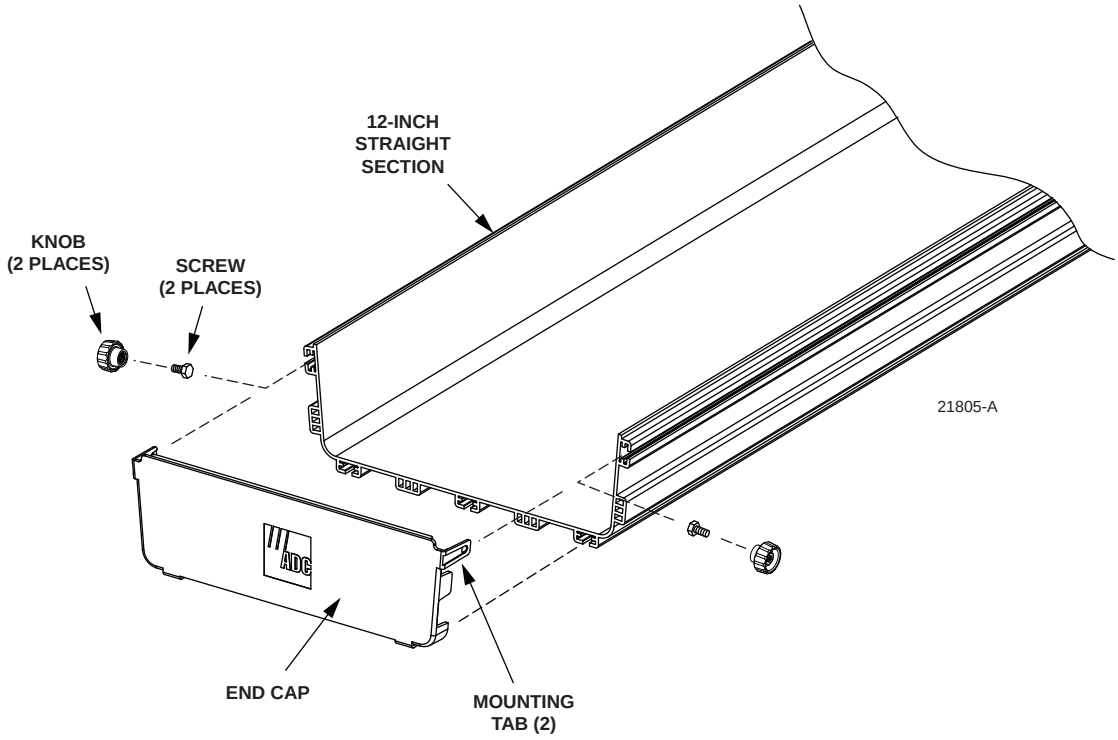

Figure 5-15. Installing End Cap

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5 ACCESSORIES

5.1 IFC Tie Down Kits (FGS-HIFC-A/B/F)

Install the kit in the following order, referring to Figure 5-16.

Note: 12-inch kit is shown. Installation is similar for 4-inch and 6-inch kits.

1. Locate tie down bracket at the desired location in the straight section, ensuring that the bracket is aligned straight across the straight section.
2. Push down the bracket completely into the straight section.
3. Insert quick knobs into the slots on the side tabs of the tie down bracket. Tighten the quick knobs clockwise until securely in place.
4. For additional tie down capacity, add stacking plates from bottom up in order of length (shortest at bottom). Press the stacking plates firmly into place.

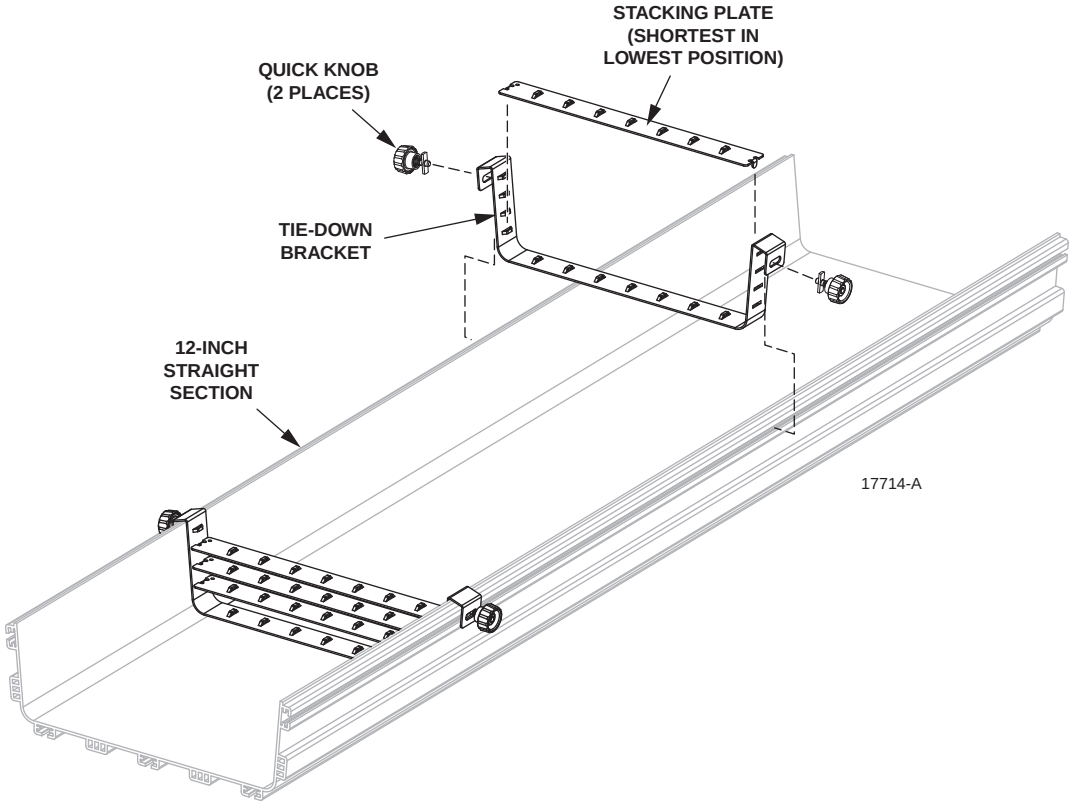

Figure 5-16. Installing an End Cap

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5.2 4x4, 4x6, 4x12 Slack Storage Spool Kit (FGS-STOR-A/B/F)

Install the kit referring to Figure 5-17.

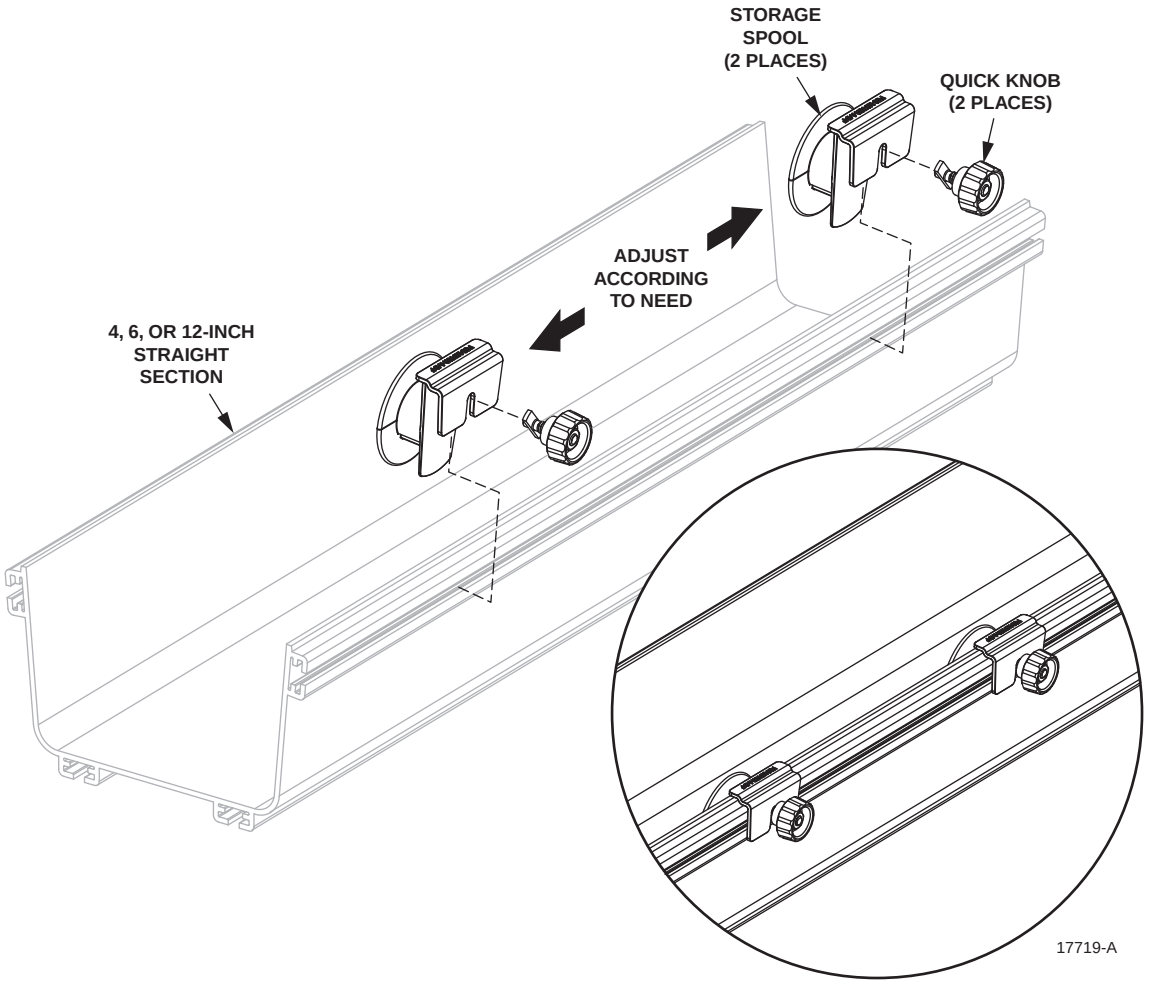

Figure 5-17. Installing Slack Storage Spool Kit

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5.3 4x4, 4x6, 4x12 Inline Fin Kit (FGS-MFIN-X)

Install the kit as follows referring to Figure 5-18.

Note: Predetermine location of fin in trough before removing adhesive liner. Once fin is bonded in place, it cannot be removed.

1. Remove adhesive liner and position fin in trough.
2. Apply firm pressure over entire fin base to ensure a full bond.

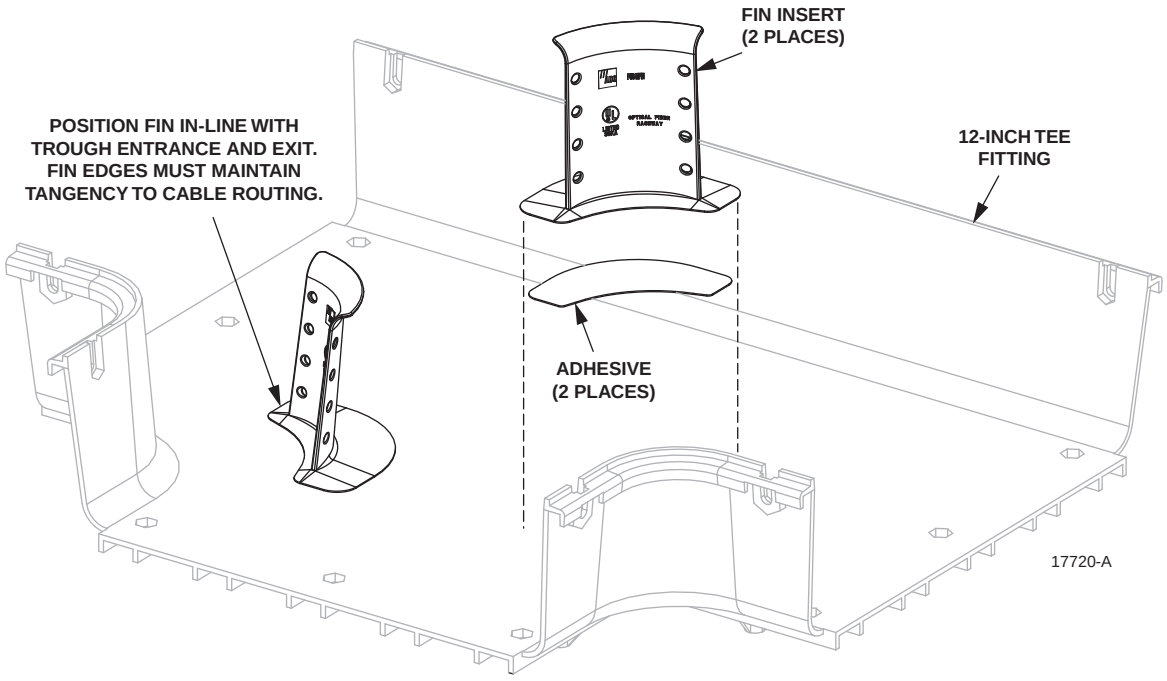

Figure 5-18. Installing Inline Fin Kit

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SECTION 6: GENERAL INFORMATION

Content Page

1 WARRANTY/SOFTWARE 6-1
2 SOFTWARE SERVICE AGREEMENT 6-1
3 REPAIR/EXCHANGE POLICY 6-1
4 REPAIR CHARGES 6-2
5 REPLACEMENT/SPARE PRODUCTS 6-2
6 RETURNED MATERIAL 6-2

1 WARRANTY/SOFTWARE

The Product and Software warranty policy and warranty period for all CommScope Products is published in ADD's Warranty/Software Handbook. Contact the Technical Assistance Center at 1-800-830-5056 (outside U.S.A. and Canada) for warranty or software information or for a copy of the Warranty/Software Handbook.

2 SOFTWARE SERVICE AGREEMENT

CommScope software service agreements for some CommScope Products are available at a nominal fee. Contact the Technical Assistance Center at 1-800-830-5056.

3 REPAIR/EXCHANGE POLICY

All repairs of CommScope Products must be done by CommScope or an authorized representative. Any attempt to repair or modify CommScope Products without written authorization from CommScope voids the warranty.

If a malfunction cannot be resolved by the normal troubleshooting procedures, call the Technical Assistance Center at 1-800-830-5056. A telephone consultation can sometimes resolve a problem without the need to repair or replace the CommScope Product.

If, during a telephone consultation, CommScope determines the CommScope Product needs repair, CommScope will authorize the return of the affected Product for repair and provide a Return Material Authorization number and complete return shipping instructions. If time is critical, CommScope can arrange to ship replacement Product immediately. In all cases, the defective Product must be carefully packaged and returned to CommScope.

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4 REPAIR CHARGES

If the defect and the necessary repairs are covered by the warranty, and the applicable warranty period has not expired, the Buyer's only payment obligation is to pay the shipping cost to return the defective Product. CommScope will repair or replace the Product at no charge and pay the return shipping charges.

Otherwise, CommScope will charge a percentage of the current Customer Product price for the repair or NTF (No Trouble Found). If an advance replacement is requested, the full price of a new unit will be charged initially. Upon receipt of the defective Product, CommScope will credit Buyer with 20 percent of full price charged for any Product to be Out-of-Warranty. Products must be returned within thirty (30) days to be eligible for any advance replacement credit. If repairs necessitate a visit by an CommScope representative, CommScope will charge the current price of a field visit plus round trip transportation charges from Minneapolis to the Buyer's site.

5 REPLACEMENT/SPARE PRODUCTS

Replacement parts, including, but not limited to, button caps and lenses, lamps, fuses, and patch cords, are available from CommScope on a special order basis. Contact the Technical Assistance Center at 1-800-830-5056.

Spare Products and accessories can be purchased from CommScope. Contact the Technical Assistance Center at 1-800-830-5056.

6 RETURNED MATERIAL

Contact the the Technical Assistance Center at 1-800-830-5056 to obtain a Return Material Authorization number prior to returning an CommScope Product.

All returned Products must have a Return Material Authorization (RMA) number clearly marked on the outside of the package. The Return Material Authorization number is valid for 90 days from authorization.

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Cross-Reference by Catalog Number

F
FGS-ASRI 4-26
FGS-BTBL-C) 2-11
FGS-BTBS-C 2-11
FGS-CLIP-D/E 4-38
FGS-CXXX 5-9
FGS-FSFC-H 5-13
FGS-F-XX-ACC 2-32
FGS-FXXX 5-10
FGS-HASB-XX-XX 2-8
FGS-HASK-C 2-14
FGS-HCBL-XX 2-23
FGS-HDCB-C 2-13
FGS-HDGR 2-6
FGS-HDLB-4 2-24
FGS-HDSI-AB 4-28
FGS-HETP-F-XX 2-36
FGS-HETP-H-XX 2-44
FGS-HETR-F-XX 2-31
FGS-HETR-XX 2-18
FGS-HFCK 2-7
FGS-HFKM-XX 2-9
FGS-HFRR-X 4-16
FGS-HHEC-X 4-16
FGS-HIFC-A/B/F 5-19, 5-20, 5-21
FGS-HKFM-XX 2-9
FGS-HLBK 2-19
FGS-HLDR-XX 2-5
FGS-HLR2-C 2-10
FGS-HMEC-A/B/F 5-18
FGS-HMEC-G 4-23, 5-16
FGS-HNLR-AB 2-25
FGS-HNLR-F 2-38
FGS-HNTP-F-XX 2-37
FGS-HNTP-H-XX 2-45
FGS-HNTR-F-XX 2-30
FGS-HNTR-XX 2-17
FGS-HNTS-F-XX 2-34
FGS-HNTS-F-XX-LP 2-35
FGS-HNTS-XX 2-22
FGS-HNTS-XX-LP 2-21
FGS-HOMX-16MM 2-26
FGS-HRJA-A/B/F 3-13
FGS-HTHR-XX-XX 2-9
FGS-HTR2-XX 2-15
FGS-HTUB-F-XX 2-33
FGS-HTUB-XX 2-20
FGS-HUFB-A 2-28
FGS-HUFB-C 2-12
FGS-HWMB-C 4-36
FGS-HWMB-D 4-37
FGS-ISLAND-H/F 4-32, 4-33
FGS-JUNC-X 3-9, 3-10, 3-11
FGS-KDHZ-C 4-16
FGS-KT03-G-XF 4-23
FGS-KT03-X 4-24
FGS-KT07-A4-XF 4-27
FGS-KTW1-X 4-36
FGS-KTW2-D 4-37
FGS-KTW2-E 4-38
FGS-MD4E-H 4-35
FGS-MDSA-AC 3-16
FGS-MDSA-F2B 3-19
FGS-MDSA-FB-L 3-15
FGS-MDSA-FB-R 3-15
FGS-MDSP-C 4-16
FGS-MDSP-F-VS 2-39
FGS-MEXI-C 4-16
FGS-MEXP-A/B/F 4-4
FGS-MEXP-E-A/B/F 4-6
FGS-MEXP-LP-A/B/F 4-10
FGS-MEXP-LP-G 4-8
FGS-MH4E-H-VS 2-46
FGS-MH9E-F-VS 2-39, 2-40, 2-46
FGS-MHIS-JIG-X 3-5
FGS-MHIS-X 3-5
FGS-MHRT-F/B-VS 2-39, 2-41, 2-47
FGS-MHRT-F-VS 2-39, 2-40
FGS-MHRT-H/F-VS 2-46
FGS-MHXP-F/B-VS 2-39
FGS-MHXP-F/H-VS 2-46
FGS-MHXP-F-VS 2-39, 2-41, 2-48
FGS-MHXP-H-VS 2-46
FGS-MJWR-C 3-8, 3-9, 3-10, 3-11, 3-13
FGS-MJWR-D 4-28
FGS-MJWR-X 4-25
FGS-MKIT 3-4
FGS-MSDA-AB 3-17
FGS-MSDA-FB 3-18
FGS-MSDA-HF 3-20
FGS-MSDP-X 4-13
FGS-MSDP-X/I 4-14
FGS-MSDS-C 4-12
FGS-MSHC-C 4-36

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FGS-MSHC-D 4-38
FGS-MSHC-X 5-3
FGS-MSHS-C 4-36
FGS-MSHS-D 4-37
FGS-MSHS-STOR-X 3-3
FGS-MSSC-F 5-6
FGS-MSSC-X 5-4
FGS-MTRM 4-30, 4-31
FGS-MTRM-C 4-16
FGS-MTRM-G 4-21
FGS-MTRM-X 4-20
FGS-MU4E-H 4-34
FGS-MVAR-X 3-2
FGS-SXXX 5-8
FGS-VDSA-FB-L 3-15
FGS-VDSA-FB-R 3-15

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