

Insulated Panel Systems
North America

Installation Guide

K-Roc™ HF Series Fire Rated Commercial & Industrial Wall Panels

Azteco™, Flat, Mini Micro-Rib, Micro-Rib, Shadowline



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Disclaimer

This installation guide is only to be used in conjunction with panel installation drawings and Kingspan recommended details. Details shown in project shop drawings take precedence over any similar information in this manual. Shop drawings may be prepared either by Kingspan or by the panel contractor. Kingspan Technical Service Department is available to assist the panel contractor in the review of shop drawings.

This guide is intended to provide the panel contractor with recommended methods, procedures and guidelines for the installation of the wall systems for commercial / industrial and architectural applications. Information presented is accurate but may not cover all situations, building conditions and / or details of your specific project. Consult Kingspan Technical Services where this guide does not cover your unique construction requirements. It is the sole responsibility of the project engineer and panel installer to ensure specified air and weather tightness of a building by good design and workmanship in accordance with approved drawings using only the appropriate type of sealants. It is the sole responsibility of the owner's representative and panel installer to maintain quality workmanship in accordance with approved shop drawings to ensure the best performance of the wall system. Kingspan recommends installers read this document fully before receiving the panels on the job site. Installation classes are available through Kingspan's Technical Services Department. Please call 1-877-638-3266 for more information.

Follow the architect's approved shop drawings and engineering calculations for your project specific fastening patterns. The engineer of record is responsible for verifying applicable design loads and panel fastening requirements.

All safety procedures, including adequate fall protection, are the responsibility of the panel contractor.

IMPORTANT!

Please read all information related to your project before receiving materials at the job site and before starting the installation.

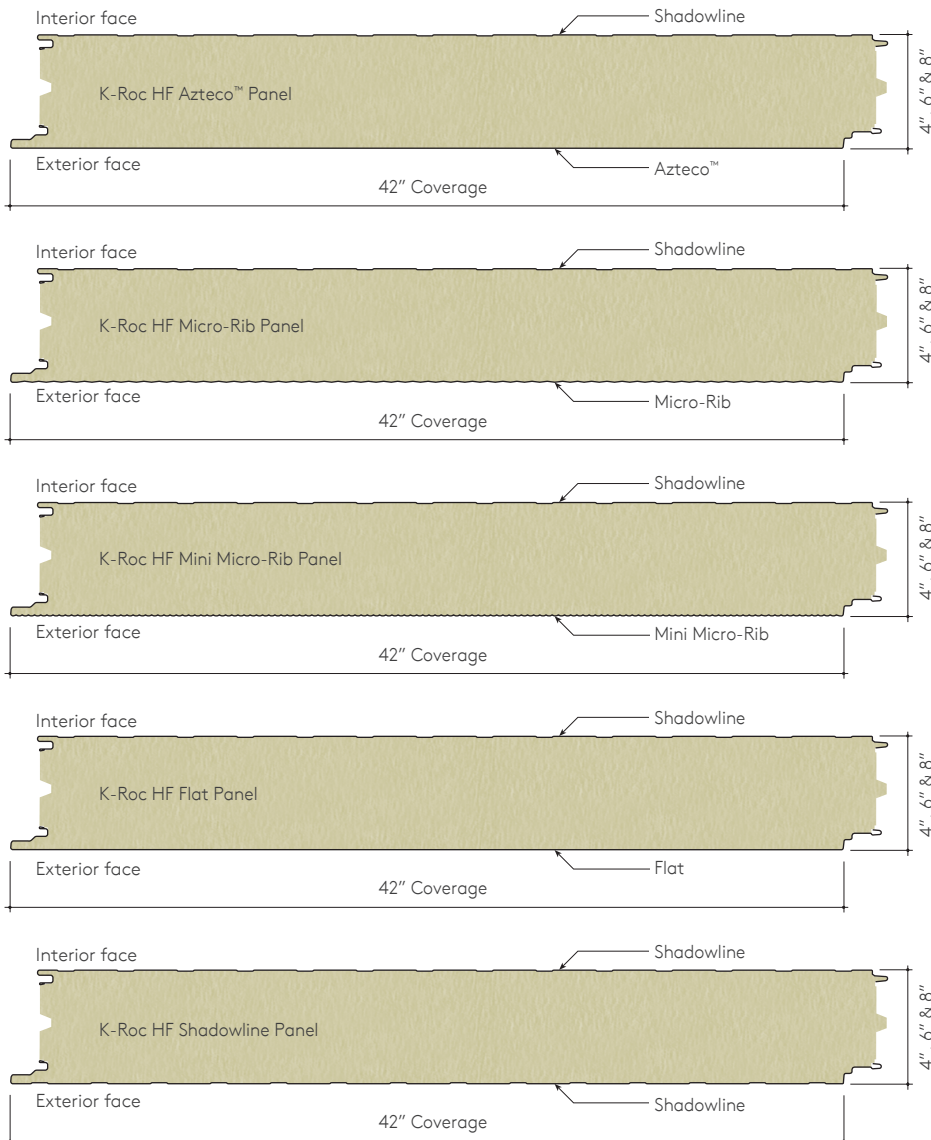
1 Introduction

1.1 Features

Welcome to Kingspan, global leaders in the design and manufacture of insulated metal panels. Insulated panels serve as energy efficient, state-of-the-art alternative to traditional construction. This document serves as installation guidelines for the K-Roc HF Series wall panel systems.

The K-Roc HF Series product range is suitable for large scale industrial and commercial applications where both vertical and horizontal panels are required.

1. Single component wall panels provide exterior weather barrier, insulating core and interior vapor barrier all-in-one.
2. Unique side joint clip system.
3. Wide variety of profiles and textures provide architecturally appealing solutions.
4. Panels are available in lengths of up to 48' to minimize the number of stack joints required.
5. Accessory items including metal flashings are also available (contact Kingspan for more information).



NOTE

K-Roc HF Series panels must be kept dry during and after installation. Do not leave mineral fiber exposed before and during installation. Add all flashings, trims and sealants as installation progresses. Protect exposed areas if wet weather is expected.

NOTE

K-Roc HF Series fire rated wall panels must be installed per Kingspan details to ensure the system will perform as tested and approved by 3rd party fire engineering firms. Do not deviate from details without prior approval / guidance from Kingspan.

1 Introduction

1.2 Insulation Values

K-Roc HF Series panels are available in the following configurations:

Thermal Performance at 75°F	
Thickness	R-Value
4"	15.2
6"	22.8
8"	30.4

K-Roc HF Series panels offer the building designer R values of approximately 3.8 per inch Nominal, as well as the ability to balance initial cost versus long-term energy savings.

To complete the wall system a full range of integrated accessories including attachment clips, metal trims are available.

1.3 Warranties - Standard Material Workmanship & Standard Finish Warranties

At Kingspan, we understand the unique challenges that design, and construction professionals face every day. To do our part in meeting these demands, Kingspan products are offered with our team's guidance and technical expertise, followed up after construction is completed with our product warranties:

- 2-year standard panel material workmanship warranty.
- Up to 20 years standard panel exterior finish warranty.

Contact our sales or customer service departments for information regarding our optional warranty programs.

1.4 Installer Qualifications

Kingspan recommends that our panels are installed under the direct supervision of an experienced installation contractor trained in the proper application of our products. Please contact Kingspan for information regarding our Certified Installer training programs.

2 Technical Information

K-Roc HF Series wall panels have been thoroughly evaluated and tested by independent third-party laboratories to determine all aspects of their performance.

The results of these tests, in combination with our comprehensive engineering analysis, enable us to provide design assistance for nearly every project. This includes complete panel analysis of wind, live, seismic and thermal loading as well as allowable spans, deflection and recommended fastening.

2.1 Deflection

Current International Building Codes specify wall cladding to be designed for a deflection of $L/180$. The project designer and /or engineer of record should always check the applicable code(s) for deflection limits. For deflection limits other than $L/180$, please contact Kingspan Technical Services for evaluation.

2.2 Panel Diaphragm

Insulated panels should NOT be relied upon to provide significant diaphragm strength. Instead, cross bracing (cables, rods, angle iron etc.) should be used to provide diaphragm. Insufficient bracing for the walls may result in damage to the panels, and will void the panel warranty.

2.3 Fire Ratings

K-Roc HF Series wall panels have been thoroughly evaluated by independent third-party testing laboratories and are covered under various product approval listings.

ASTM E84 Mineral Fiber Core

ASTM E119 /ULC-S101 Hour Ratings

ULC-S114 Non-combustible

2.4 Air and Water Infiltration

Air and Water Infiltration testing has been successfully conducted on the K-Roc HF Series wall panels in accordance with ASTM E283, ASTM E331.

For more information on any of the above items, please contact Kingspan Technical Services.

For installation assistance:
installation@kingspanpanels.com

For engineering assistance:
technical.NA@kingspanpanels.com

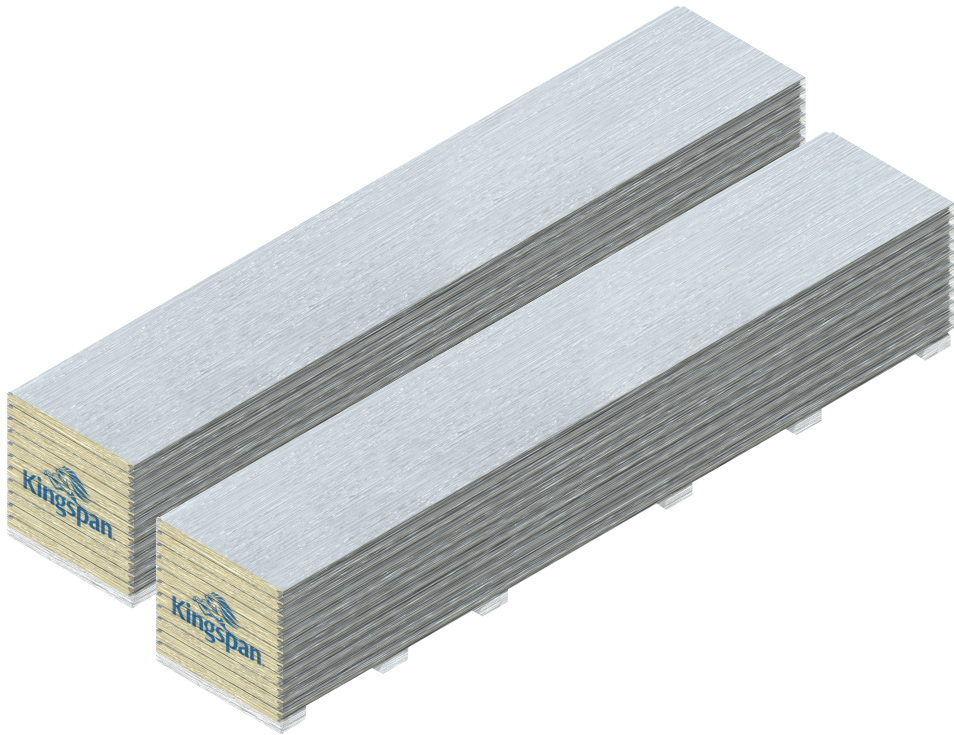
The information contained in this guide is thought to be reliable and correct, but is subject to change without notice.

For all the latest information on testing, certification and approvals, please visit www.kingspanpanels.com.

3 Inspection upon Delivery

Panels are carefully packaged in large shrink-wrapped bundles, then shipped on flat bed trailers to the construction site. When a shipment is received, check all items against the shipping document for quantities, dimensions, colors, transit damage, etc. Document any shortage of panels and accessories or panel damage on the bill of lading and have it signed by the driver. It is the receiver’s responsibility to make any damage claims immediately, and without report, it is implied that product was received in full and without damage.

Please note that although every effort is made to prevent shipping damage, Kingspan is not responsible for damage which may occur during transportation, delivery, storage or on-site handling. Photos taken of damaged panels while on the truck will help facilitate your claim with the shipping company.



Panel Thickness	26/26		24/26		24/24		22/26		22/24		22/22	
	#Sq Ft	#Lin Ft	#Sq Ft	#Lin Ft	#Sq Ft	#Lin Ft	#Sq Ft	#Lin Ft	#Sq Ft	#Lin Ft	#Sq Ft	#Lin Ft
4"	4.65	16	4.93	17	5.20	18	5.21	18	5.48	19	5.74	20
6"	6/07	21	6.35	22	6.61	23	6.63	23	6.89	24	7.16	25
8"	7.49	26	7.77	27	8.03	28	8.05	28	8.31	29	8.57	30

4 Panel Handling

4.1 Panels Handled by Forklift

4.1.1 The recommended loading / unloading method for bundles less than or equal to 30' is to use a single forklift with widely spaced forks placed under the center of the bundle as shown in Figure 4.1a. Panel bundles over 30' in length may be moved by using two forklifts spaced equally along the length of the bundle as shown in Figure 4.1b. Inspect travel route to assure a reasonable level and compacted surface free of ruts and excavations.

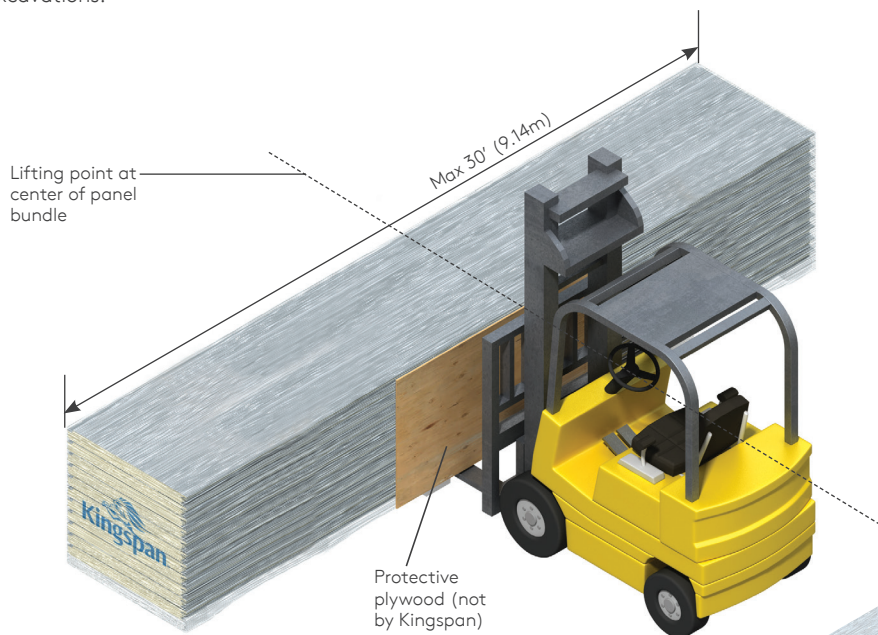


Fig. 4.1a

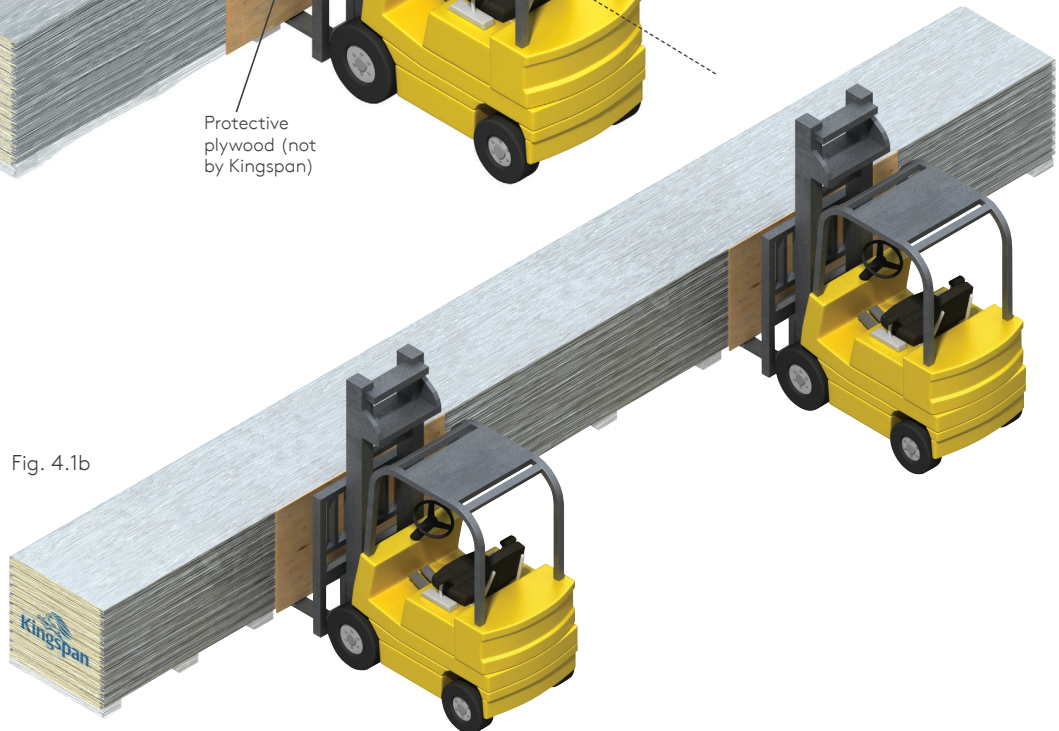


Fig. 4.1b

4 Panel Handling

4.2 Panels Handled by Crane

4.1.2 To prevent panels from damage while lifting, carefully pick up bundles one at a time.

4.2.1 The recommended crane lifting method is to use nylon straps positioned at a minimum of two points along the length of the bundle. Suitable wood spreaders should be used and located at the top and bottom of the bundles at the strap positions to protect the edges of the upper and lower panels. Extreme care should be taken to avoid bumping and snatching of the bundles when lifting.

4.2.2 Panel bundles with a total length of not more than 30'-0" (9.14m) can be handled with a crane by using nylon straps and wood spreaders as shown in Fig. 4.2. For suggested wood spreader dimensions, see Fig. 4.3.

Fig. 4.2

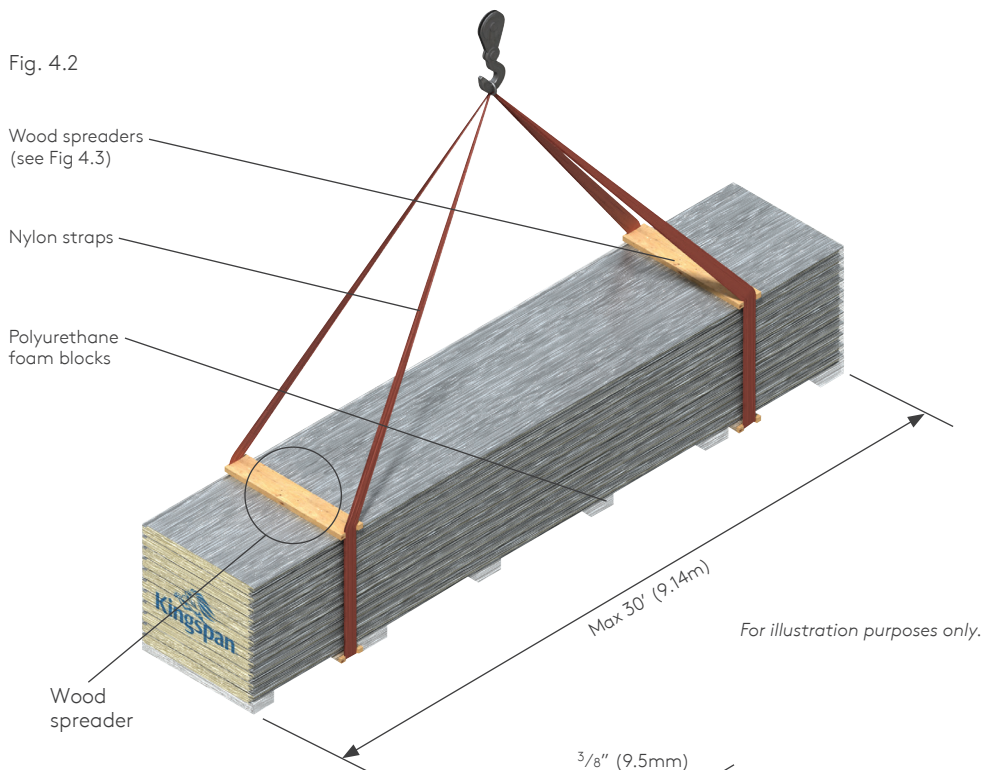
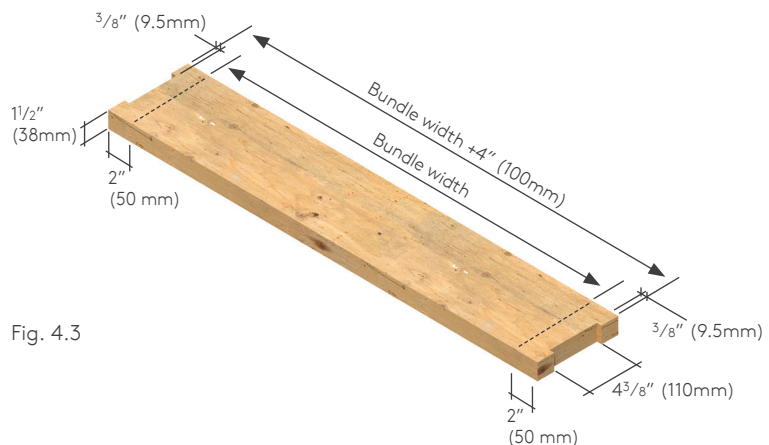


Fig. 4.3



4 Panel Handling

4.2.3 When lifting bundles with a crane longer than 30' (9.14m), three points of support are required from lifting beam to bundle, as shown in Fig. 4.4. To prevent damage from nylon straps, use wood spreaders at top and bottom at lifting locations as shown in Fig. 4.4 and Fig. 4.5.

Fig. 4.4

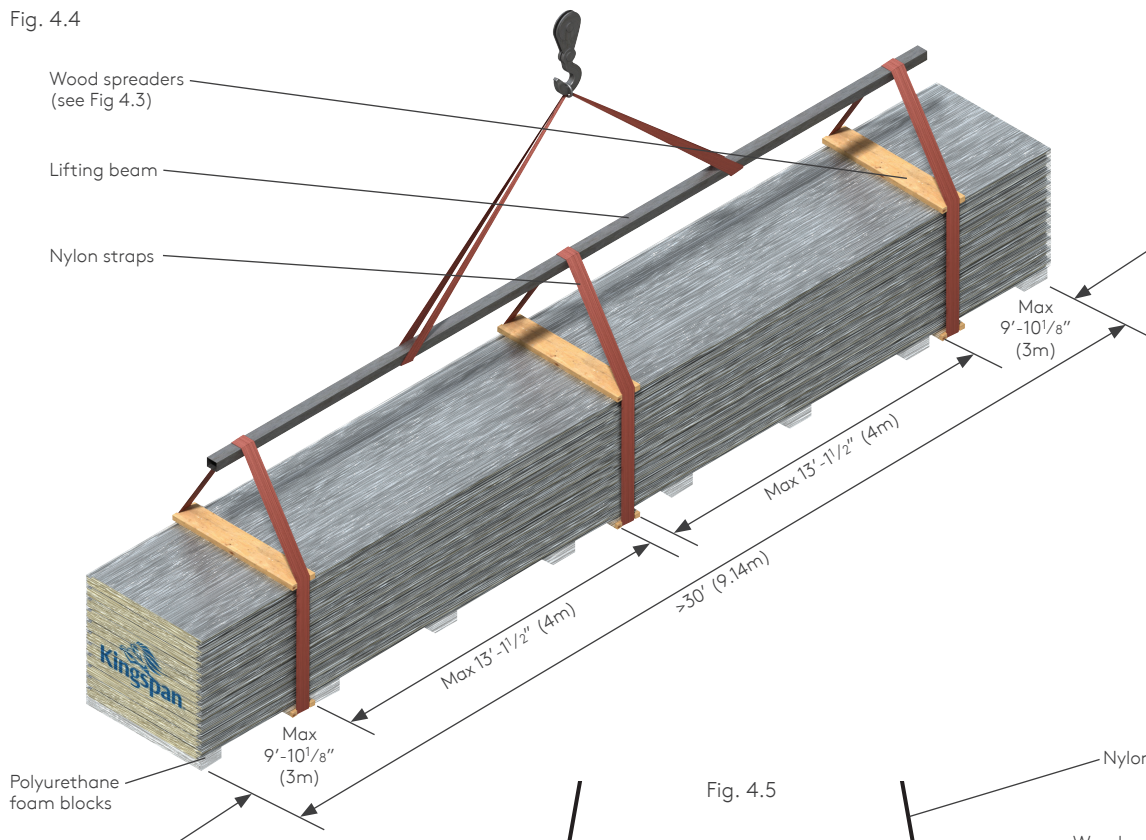
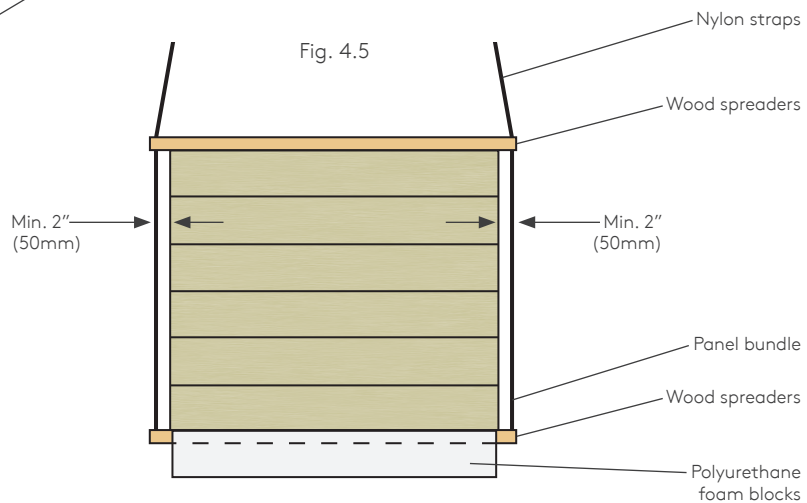


Fig. 4.5

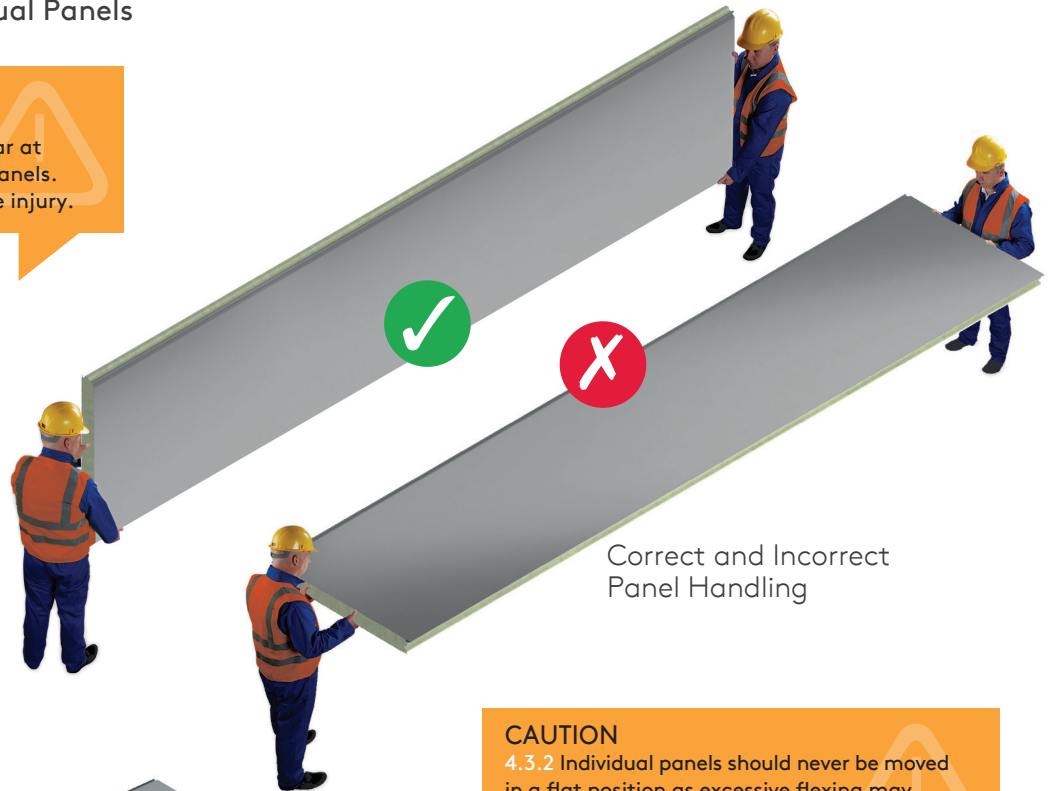


4 Panel Handling

4.3 Handling Individual Panels

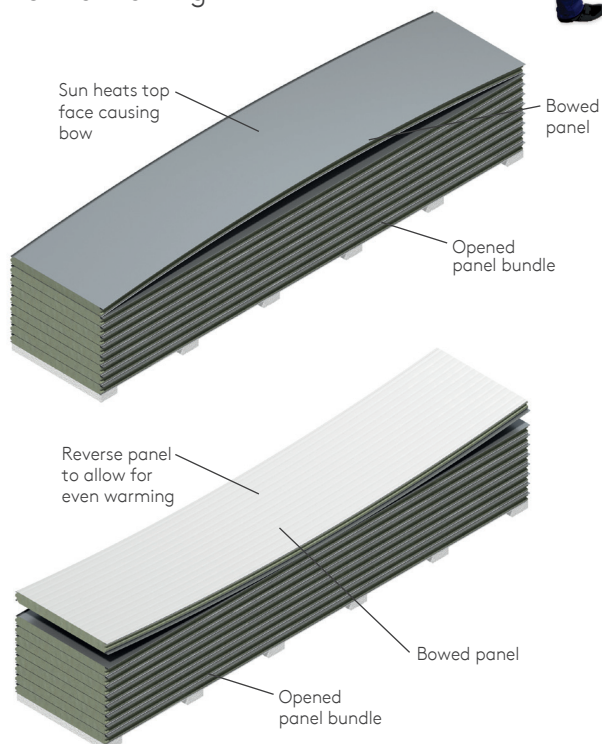
CAUTION

4.3.1 Workers must wear appropriate protective gear at all times when handling panels. Failure to do so may cause injury.



Correct and Incorrect Panel Handling

Thermal Bowing



CAUTION

4.3.2 Individual panels should never be moved in a flat position as excessive flexing may result. Excessive flexing ruptures a panel's core, permanently distorts the facings and may lead to thermal blistering. When moving a panel, it must be turned on its edge first, then supported at each end with as many men as necessary to safely handle.

NOTE

Panels exposed to direct sunlight may exhibit thermal bow, which can hinder panel engagement. This can be corrected by either placing the panels in a shaded area, or by flipping the panels over exposing the cool side of the panel to the sunlight for approximately 15 minutes.

Panels are to be fastened at every support unless otherwise indicated on the shop drawings. Fastener requirements at each clip are based on design loads. Refer to the shop drawings for the correct fastening, or contact Kingspan Technical Services for assistance.

4 Panel Handling

CAUTION

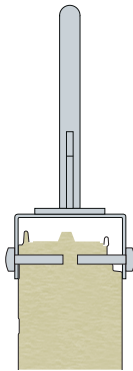
4.3.3 To prevent joint damage and possible delamination, never lift a panel from the top sheet only. Lift from underneath the entire panel.

CAUTION

4.3.4 Never drag a panel from a bundle or across other surfaces. It will scratch and damage the panel coating/finish. Always lift panels when removing from bundle.

Horizontal panels are installed from bottom to top. Vertical panels are installed from one end of the wall to the other end.

4.3.5 For horizontal application, place female side of bottom panel in base channel. Clip and fasten to structural supports per approved shop drawings. Longer panels may require the use of a rope or hoist. Subsequent panels are then stacked one at a time on previously installed panels. Follow approved shop drawings for proper sealant locations and placement of gaskets, extrusions and flashings.



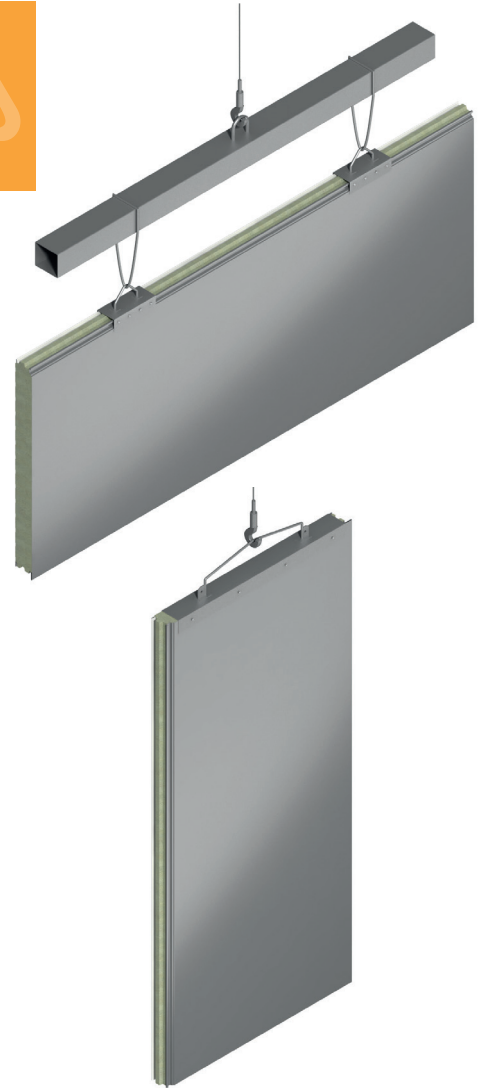
4.3.6 For vertical application, place the panel end in the base. Clip and fasten to structural supports per approved shop drawings. Longer panels may require the use of a rope or hoist. Subsequent panels are then placed one at a time from the female side to the previously installed panels' male side. Follow approved shop drawings for proper sealant locations and placement of gaskets, extrusions and flashings.

4.3.7 To prevent possible delamination, never use vacuum lifting equipment when installing Kingspan K-Roc HF Series panels. The independent suctions can cause delamination while picking up panels and is not recommended for use with K-Roc HF Series panels.

4.4 Panels Lifting using Vacuum Equipment

NOTE

Kingspan does not recommend the use of vacuum lifting equipment for K-Roc HF Series panels as cosmetic damage to panel face may occur.



5 Panel Storage on Site

5.1

Site must have adequate storage space to receive and store the panel bundles. This space must be level, firm, clean and free from standing water. Bundles should be stored in a dry condition, with one end slightly elevated to facilitate moisture drainage. Tarping is a common way of protecting panels and bundles from the elements. It is the installer's responsibility to protect panels and bundles from the elements and maintain any tarps or protection for the duration of the storage time.

5.2

Panels should be inspected upon delivery for presence of moisture. If moisture is present, bundles should be slit open immediately to allow ventilation and drainage, slits should be approx. 12" intermittently placed near the bottom of the wrapped bundle.

5.3

If panels are to be used immediately, bundles should be placed at pre-planned strategic locations around the building perimeter, as close as possible to the specific work areas. Review installation shop drawings to determine the best locations.

5.4

Panels in opened bundles should be covered by a plastic sheet or tarp at the end of the working day. The covering and bundles must be securely fastened to prevent wind damage (see Figure 5.1).

NOTE

When stacking bundles (maximum two high) limit storage time to 30 days to prevent panel damage.

NOTE

Tarping of bundles, whether they are opened or not, is always recommended for protection from the elements.

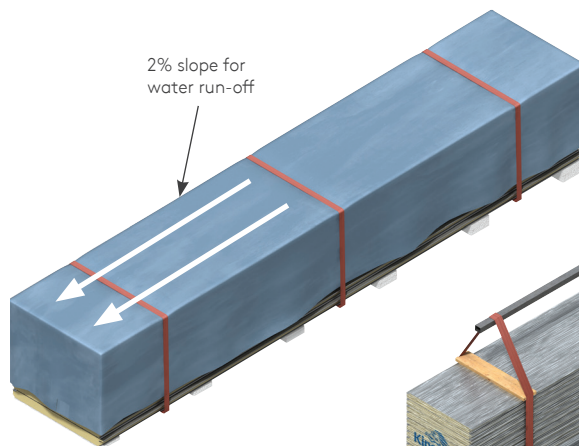


Fig. 5.1

5.5

When handling panels and / or panel bundles, ropes, steel cables or chains must not be used.

5.6

Avoid outdoor storing for longer than 60 days. Moisture between panels can cause corrosion, staining, or a condition called wet stack. Staining of any kind is not considered to be a cause for rejection. It is the installer's responsibility to protect panels against the elements prior to installation. Tarping is always recommended and providing ventilation to prevent condensation inside the bundle wrap is also recommended.

5.7

If panels are not to be used immediately, then they should be stored under a temporary shelter. Inspect protective wrapping on every bundle for damage and repair as necessary. Its critical to completely protect panels from the elements and keep mineral wool completely dry.

NOTE

K-Roc HF Series panels must be kept dry during storage and installation. Do not leave mineral fiber exposed before and during installation. Add all flashings, trims and sealants as installation progresses. Protect exposed areas if wet weather is expected.

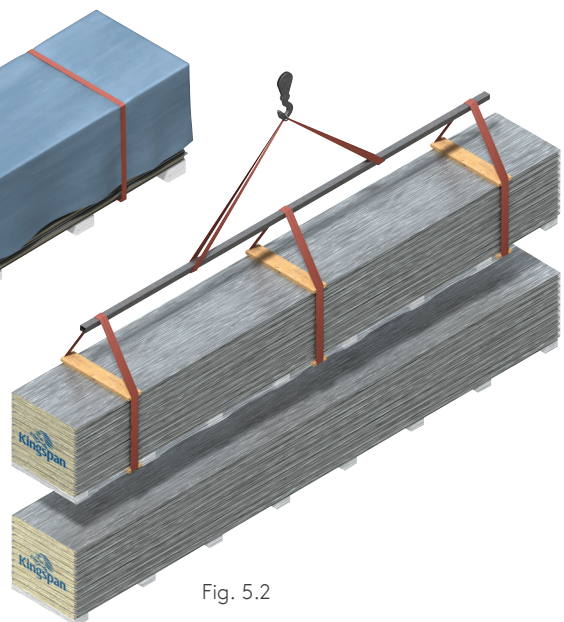


Fig. 5.2

6 Handling and Storage of Items and Accessories

6.1

Care should be taken during unloading and storage to prevent damage to small items, ie. trims fasteners, clips, sealants, etc.

6.2

Cover all pallet crates or boxes to protect materials from weather but allow for ventilation to prevent condensation. Temperature sensitive items such as butyl tapes and sealants should be stored under controlled conditions to maintain suitable application characteristics.

7 Removal of Protective Film

7.1

IMPORTANT!

If panels will not be installed within 60 days of production, the bundles should be unstacked and the protective film removed from each panel. Carefully re-stack the panels and protect from the elements. Failure to remove the film within this time period may result in excessive film adhesion and breakdown of the plastic, making removal extremely difficult. In addition, failure to remove the film as instructed may result in a transfer of adhesive residue.

Kingspan cannot be responsible for every condition encountered. When extremes are encountered, trials should be conducted to determine if any undesired side effect will result. Film removal and panel cleaning are the responsibility of the installation contractor when extreme conditions are encountered.

7.2

It is recommended to remove protective film as panels are installed. Film on installed panels should be removed by the end of each day.

7.3

Loosen film along male edge and peel it off and down at approximately 45° angle from both sides of panels (see Fig. 7.1).

7.4

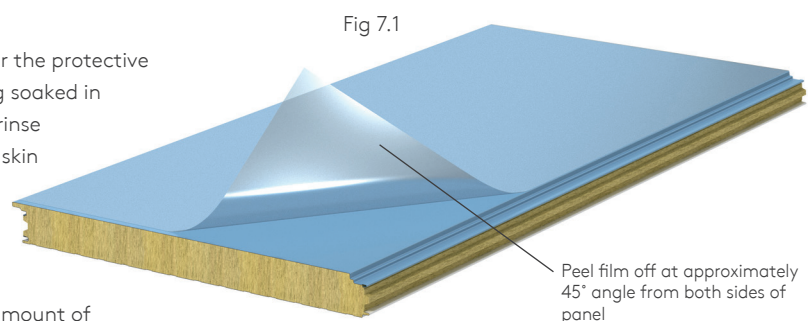
If adhesive residue remains on panel surfaces after the protective film is removed, panels may be cleaned with a rag soaked in Oil-flo 141 409, SFR or equivalent. After cleaning, rinse thoroughly. For safety, provide adequate eye and skin protection, ventilation and follow all other manufacturer's instructions.

7.5

Care should be taken when cleaning panels, the amount of force and time spent rubbing the surface can result in a polishing effect on the panel's surface. You should always trial methods and products in an inconspicuous area first.

7.6 IMPORTANT!

Removal of the film on the liner side of the panel before the panel is placed on the wall is required for proper sealing - an acceptable seal cannot be made if the film is left on the panel. The film can be removed entirely or peeled back from only the areas where it will be set in butyl.



8 Structural Steel Framing

8.1

Review shop drawings prior to installation to verify that structural members are in the correct location.

8.2

Installer must examine the alignment of the structural steel before installation of the wall panels.

The walls must be square, and support members to which panels are attached must be in the same plane, flat and free of obstructions such as weld marks, bolts or screw heads.

For vertically installed panels, support members shall be:

- a. Plus or minus $\frac{1}{8}$ " (3.17 mm) in 5 feet (1524 mm) in any direction along plane of framing
- b. Plus or minus $\frac{3}{8}$ " (9.525 mm) in 20 feet (6096 mm) cumulative in any direction along plane of framing
- c. Plus or minus $\frac{3}{4}$ " (19.05 mm) from framing plane on any elevation. Panel supports must extend to the outer extremities at all panel terminations.

8.3

For horizontally installed panels, support members shall be:

- a. Plus or minus $\frac{1}{8}$ " (3.17 mm) in 5 feet (1524 mm) in any direction along plane of framing
- b. Plus or minus $\frac{1}{4}$ " (6.35 mm) in 20 feet (6096 mm) cumulative in any direction along plane of framing
- c. Plus or minus $\frac{1}{2}$ " (12.7 mm) from framing plane on any elevation. Panel supports must extend to the outer extremities at all panel terminations.

Any variance from tolerances can affect both performance and aesthetics and must be reported to the architect and general contractor, and corrected by the responsible party before panel installation begins.

9 Panel Cutting Procedures

9.1

Personnel working with panel cutting equipment should wear respiratory and eye protection at all times.

9.2

Panel cutting should take place prior to panel installation whenever possible.

9.3

Use the appropriate cutting tools with extreme care to avoid panel delamination. Do not use a cutting disk, torch, and other high heat producing methods for cutting. Hot filings may damage the painted surface of the panel. Kingspan recommends use of a circular saw with a fine tooth carbide tip blade (40 tooth minimum). A band saw with a suitable metal cutting blade may also be used.

9.4

For small penetrations, a Dremel type router may be used to cut each face of the panel, and a serrated bread knife may be used to cut the mineral fiber core.

9.5

Power snips, nibblers or hand snips may be used to cut trims and flashings.

9 Panel Cutting Procedures

NOTE

Do not use an electric grinder, reciprocating saw, or any tool that may cause serious delamination which affects aesthetics, performance and panel warranty.



9.6

Step 1: Mark the cut line on the interior and exterior panel facings.

Step 2: Leave protective film in place during cutting. If film has already been removed, apply masking tape adjacent to the area to be cut.

Step 3: Recheck measurements and proceed with cutting operation. Cut the interior face of the panel and about $\frac{1}{4}$ of the mineral fiber thickness using a circular saw with a fine toothed carbide tipped blade. Then carefully turn panel over and cut the exterior face and the remainder of the mineral fiber.

Step 4: For panels located at framed opening locations where 50% or more of the panel width is removed, cut interior face and mineral fiber to a depth of approx. $\frac{1}{4}$ ". Flip panel over and cut exterior face and mineral fiber to a depth of approx. $\frac{1}{4}$ ". Then cut through the joints on the edge of the panel that is to be removed for the opening. Lift the panel into place, secure with fasteners as required, then use a serrated bread knife to fully cut through the mineral fiber and remove the cut section of panel.

Step 5: File or sand off any burrs or rough spots at the cut line. Sweep off all metal shavings etc. Best practices include use of touch up paint on any cut edge. The panel is now ready to be erected.

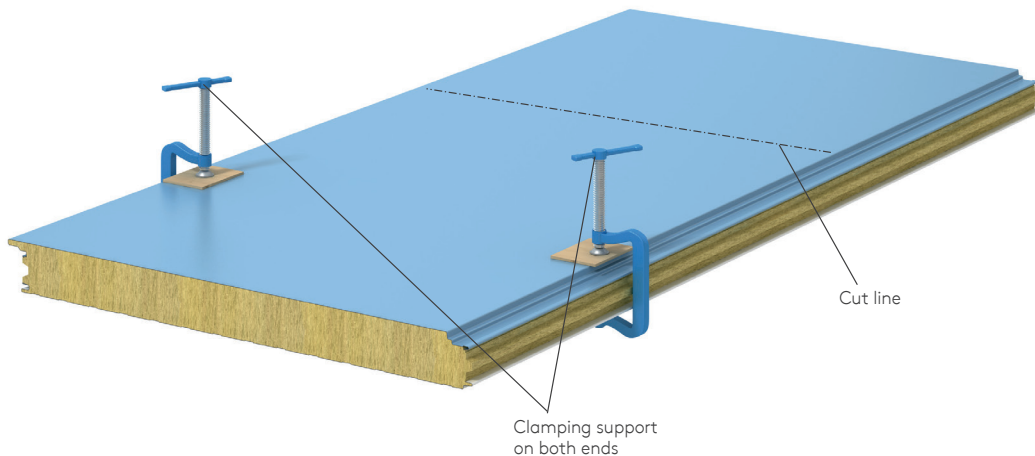


Fig. 9.1

10 Sealant Placement

10.1

Apply butyl sealant to two female joints on the trailing edge of the panel to ensure proper vapor barrier. Joint should be dry and clean before applying sealant. Fill female pocket approximately $\frac{1}{2}$ to $\frac{3}{4}$ full. Add / delete as necessary during panel installation to maintain proper panel seal. Applying sealant on site (Fig. 10.1).

NOTE

Pull (not push) caulk tube along length of side joint for more uniform sealant bead.

NOTE

Quantity and location of 20mm Safire Intumescent Mastic beads varies by panel thickness. Be sure to apply beads in the correct quantity and in correct locations per the panel thickness being installed.

IMPORTANT!

Butyl should be field applied to panel joinery when any of the following conditions may exist:- If panels have been stored for more than 60 days without installation, inspect factory applied sealants to ensure proper pliability and bonding adhesion. Replace if necessary. Cold temperatures of -20F for prolonged periods prior to / during installation.

- For Fire Rated Panels. Warming bins/huts should be used for the application of Safire sealants. The Application Temperature for the Safire should be limited to +41F to +86F.
- Dusty / dirty conditions that may contaminate butyl if packaging is open to the elements. Factory applied butyl exposed to these or other extreme conditions could result in butyl requiring replacement on-site prior to panel installation
- Kingspan shall not be responsible for material or expense to correct any such condition.
- Failure to correct any/all deficient butyl conditions may result in unacceptable seal quality between panels.- Installer is responsible for all required seal establishment, whether sealant is field or factory applied.

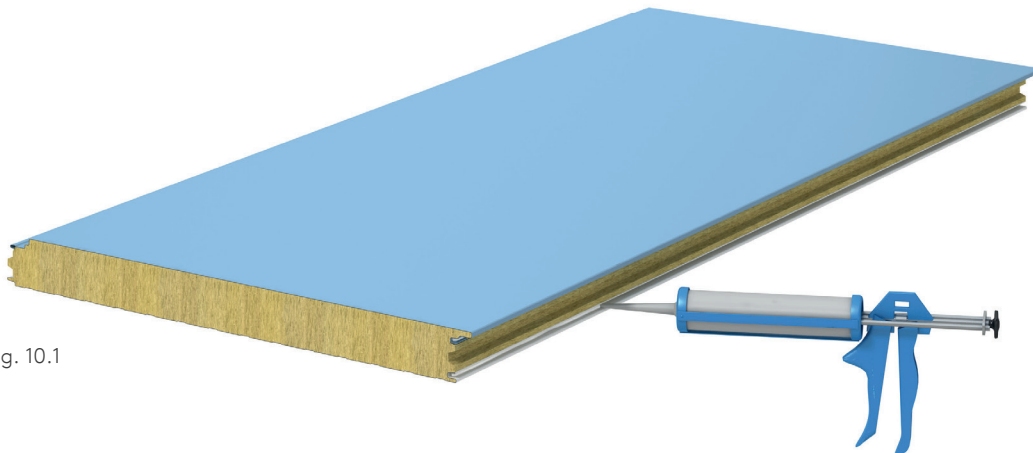


Fig. 10.1

10 Sealant Placement

10.2

Apply 20mm Beads of Safire Intumescent Mastic in Interlocking Joint as shown, continuously, full length, per specific panel thickness to ensure proper fire protection.

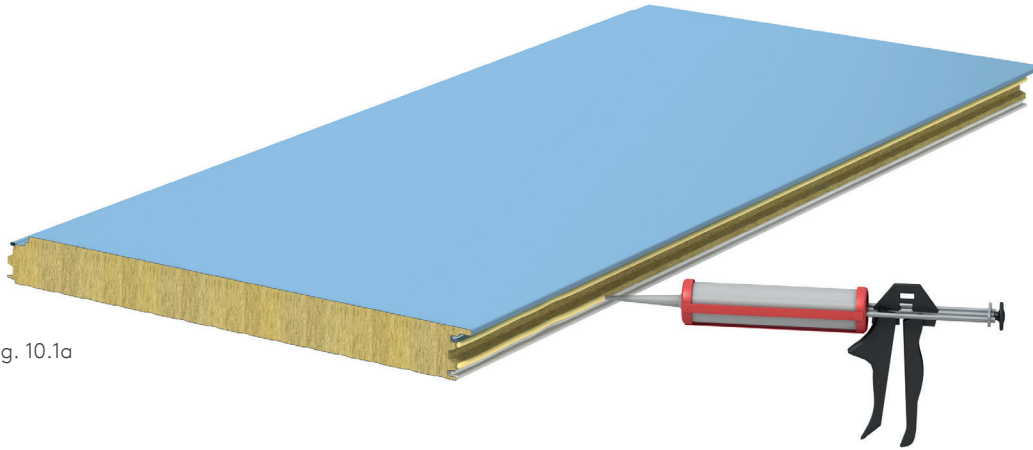


Fig. 10.1a

NOTE

In extreme cold weather locations, it is advisable to keep sealants in a warming bin until ready for use to ensure proper viscosity. For fire rated panels the application temperature for the Safire should be limited to +41F to +86F. Contact Kingspan Technical Services for more information.

IMPORTANT!

Sealants have a limited shelf life. Always check the expiration dates for all sealants prior to use. Do not use any expired sealants.

NOTE

Marriage Beads of Safire Intumescent Mastic will be installed after panel is secured in place.

NOTE

Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

11 Panel Touch-up Paint

11.1

The panel erector is to touch up all exposed field cut edges with touch up paint. Contact Kingspan Customer Service for information on appropriate touch up paint.

12 Panel Cleaning and Maintenance

12.1

Proper installation and maintenance are extremely important in obtaining the very best service and appearance from pre-painted metal insulated panels.

12.2

All dirt, oil, grease, fingerprints, metal filings or other contaminants should be removed to assure proper service life of the paint system. The installer should wipe-down the panels as they are erected.

12.3

Dirt pickup may cause apparent discoloration of the paint after prolonged exposure. Slight chalking from strong sunlight exposure may also cause a change in appearance. A thorough cleaning will usually restore the original appearance of the panels.

12.4

In many cases, a simple low pressure wash of the building with plain water will be adequate. In areas of heavy dirt deposits, a solution of water and detergent (1/3 cup liquid Tide per gallon of water) may be used. Use a rag, sponge, or soft bristle brush to clean. A clean water rinse should follow.

12.5

Mildew may occur in areas subjected to high humidity. To remove mildew, use the following solution followed with a clear water rinse: 1/3 cup of detergent (Tide), 2/3 cup of tri-sodium phosphate (Soilex), 1 quart sodium hypo chlorite 5% solution (Clorox), 3 quarts water.

12.6

Caulking compounds, oil, grease, tars, wax and similar substances can be removed by wiping with a cloth soaked with WD-40 lubricant or Oil-flo 141. Test on an inconspicuous area first. Do not rub excessively or damage to the finish may result. Wipe only contaminated areas and follow with detergent cleaning and thorough rinsing.

12.7

To remove oxidation and tough stains, use a household cleaner recommended for use on porcelain skins and bathtubs. This should be followed with a thorough rinsing. Wire brushing or any abrasive material may damage the painted surface and should not be used.

12.8

Special cleaning and maintenance procedures are necessary for Granitstone® panels. Please consult a Project Coordinator or Regional Sales Manager for instructions.

CAUTION
Strong solvents and
abrasive cleaners should
be avoided.



12.9

Contact Kingspan Customer Service to receive a copy of the complete Kingspan Panel Maintenance Manual.

13 Fastener Information

This chart is based on data from fastener manufacturers laboratory test results. Since actual job site conditions will vary, chart is a basic guideline. If in doubt, field drilling and pull tests are recommended.

If #14 type 'B' plated fasteners are to be used, pre-drilling is required. Use the drill bit sizes listed below.

NOTE

Proper tools are required to produce consistent drilling and minimize potential fastener or application failures due to over or under driven fasteners. A torque control or depth sensing nose piece for the screw gun is recommended for proper installation.

NOTE

Contact Kingspan's Technical Services Department for specific project fastening recommendations.

NOTE

Additional through fastening may be required at intermediate supports, depending on project specific wind loads. Contact Technical Services for more information.

Recommended TEK type for 1/4" diameter (self-drilling, self tapping) fasteners

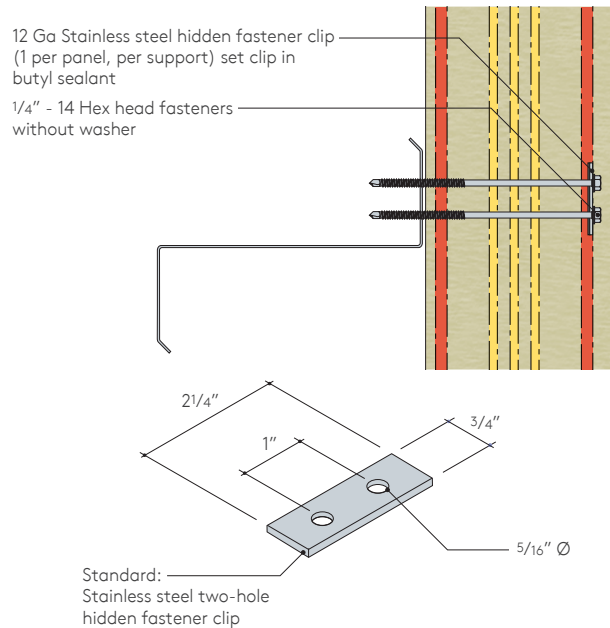
Steel Thickness	TEK	Threads / inch
16 GA (0.060)	#2, #3	14
14 GA (0.075)	#2, #3	14
12 GA (0.105)	#3	14
1/8" (0.125)	#3	14
10 GA (0.134)	#3	14
3/16" (0.187)	#3	14
1/4" (0.250)	#3, #5	14 (#3)/20 minimum (#5)
3/8" (0.375)	#5	20 minimum
1/2" (0.500)	#5	20 minimum

Suggested Fastener Driving Speeds

Quarter inch diameter self drilling, self tapping TEK type and B point self tapping type.

Carbon and 410 stainless	1,800 rpm
304 Stainless	1,000 rpm

To install type 'B' fastener, pre-drill using the correct drill size from chart below. Insert fastener through clip and tighten down until assembly is snug. Panels are to be fastened at every support. Fastener requirements are based on design loads. Consult Kingspan Technical Services for allowable panel and fastener design loads. Do not use impact tools. Do not over tighten. After drilling always remove metal chips that have fallen onto flashings or panels.



Pilot Hole Chart for 1/4" diameter B Point Fasteners (self tapping)

Steel Thickness	Drill Size
16 GA (0.060)	#8 (0.199)
14 GA (0.075)	#7 (0.201)
12 GA (0.105)	#7 (0.201)
1/8" (0.125)	#2 (0.221)
10 GA (0.134)	#2 (0.221)
3/16" (0.187)	#2 (0.221)
1/4" (0.250)	#2 (0.221)
3/8" (0.375)	#2 (0.221)
1/2" (0.500)	#1 (0.228)

K-Roc HF Series Vertical Installation

K-ROC HF SERIES FIRE RATED PANEL INSTALLATION OVERVIEW:

The entire wall, including all framed openings, base, corners and top of wall will be “picture framed” in 26 GA channels and angles which are set in double beads of butyl sealant. This picture frame must be continuous without any breaks.

A continuous bead of Safire Intumescent Mastic sealant will be applied continuously around the “picture frame”, this will create the fire seal at the rear face of the panels.

The trailing-edge of every panel must have the appropriate beads of both butyl and Safire sealants field applied before the panel is set.

Safire Marriage beads must be applied to the leading edge of every panel before the next panel is set – these beads must marry to the bead of Safire that is on the rear face of the panel. This marriage bead must also extend onto the face of the panel so it can marry to the front fire sealant bead.

A continuous bead of Safire Intumescent Mastic sealant must be applied continuously around the front perimeter of the elevation, including around all framed openings. This will create the fire seal on the front face of the panels. This bead must be continuous without any breaks AND it must join the marriage beads that extend out from the joinery at every panel.

Stack Joints and corners require use of compressed mineral fiber and Hilti Firestop to continue the fire rating across these conditions.

In summary, a properly installed, fire rated K-Roc HF Series wall will have a bead of Safire Intumescent Mastic sealant that is continuous all around the perimeter of front and rear panel faces on an elevation, there will be continuous, full length beads of Safire in the joinery between all panels AND there will be marriage beads that connect the front and rear faces to the fire seal in the joinery – there shall be no breaks or interruptions in what becomes a single, continuous bead of Safire sealant.

NOTE

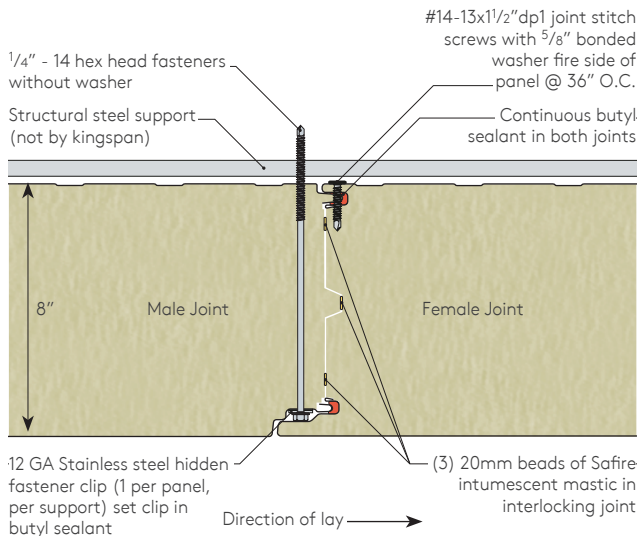
All beads of butyl are to be $\frac{3}{8}$ ” diameter and the double rows of beads shall be located and spaced apart so the fasteners can be driven between the beads - this is important to achieve a proper seal.

NOTE

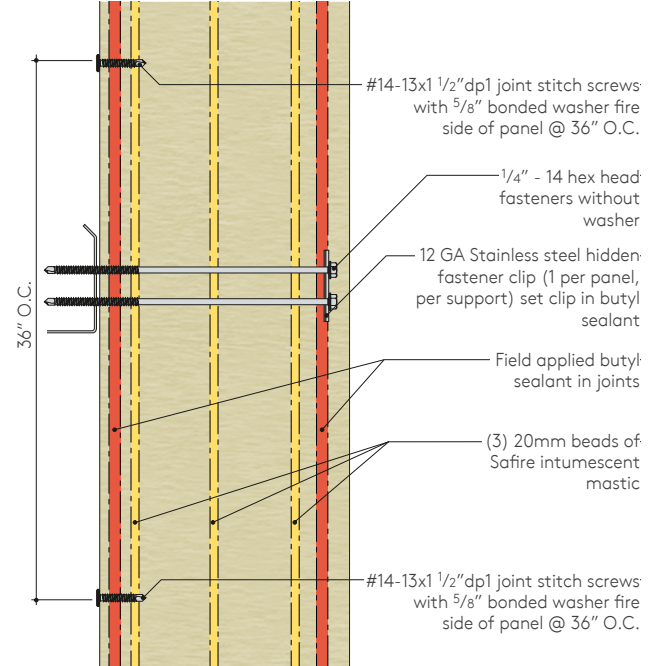
Safire begins to cure in 20 minutes, and should be limited to +41F to +86F. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Vertical Installation

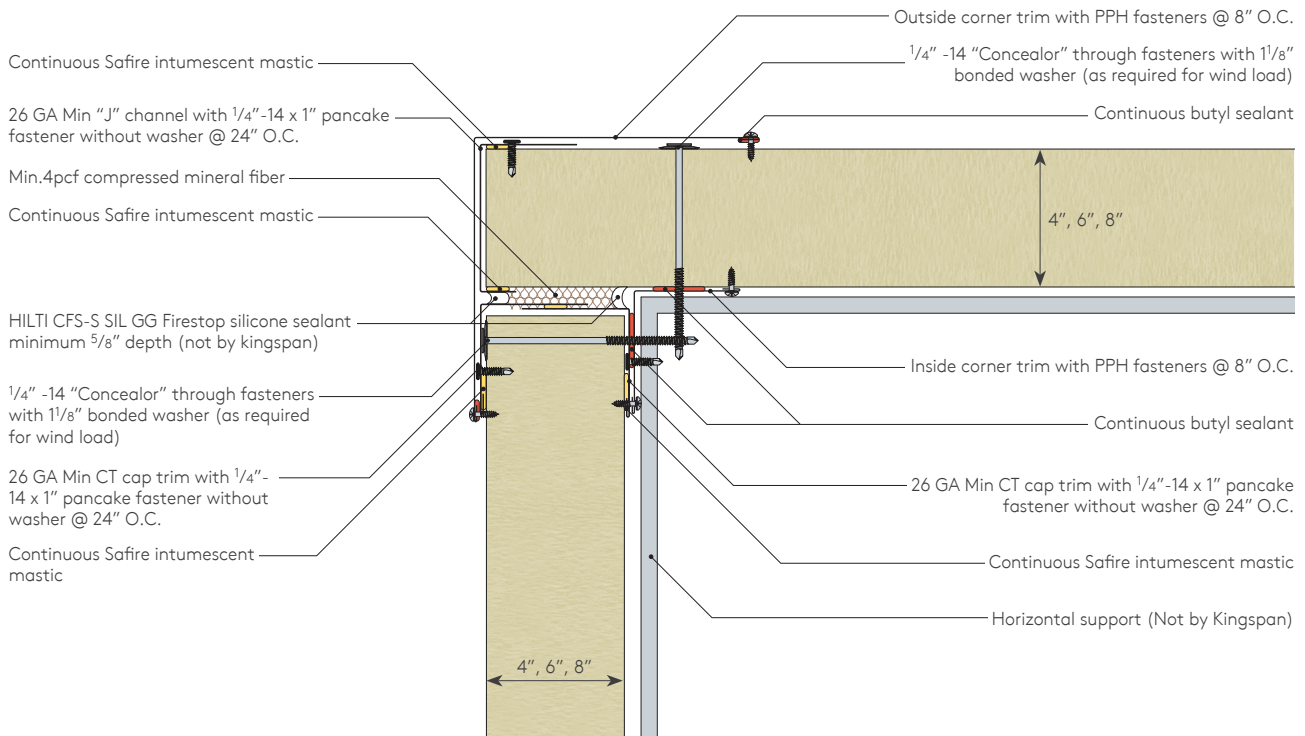
8" Panel Joint Detail



Sealants in Joint 8" Panel Detail



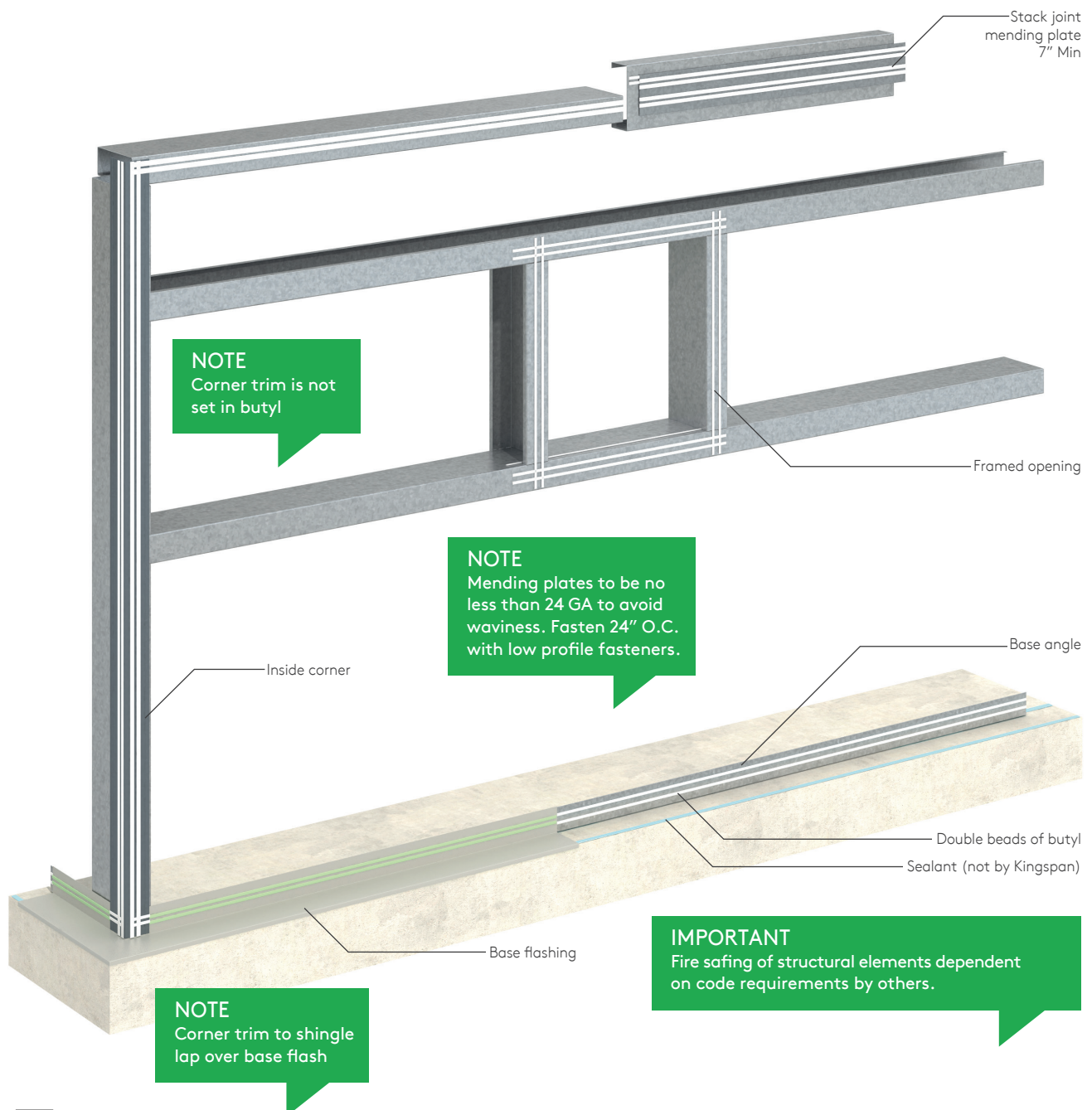
Outside Corner with Flat Trim Detail



K-Roc HF Series Vertical Installation

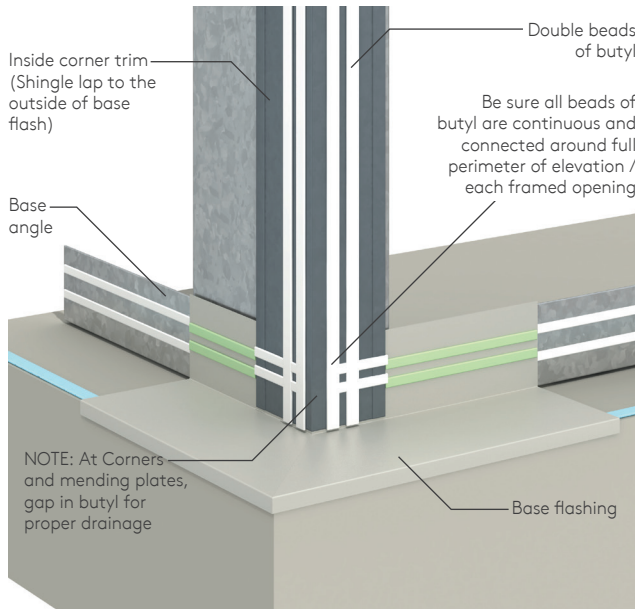
1 Preparing the wall structure:

- a. Verify that the structural supports and framed openings are properly located and aligned BEFORE installing panels (refer to Section 8 Structural Alignment - Vertical).
- b. Install:
 - i. Base angle, set in sealant (not by Kingspan)
 - ii. Inside / outside corner flashing
 - iii. Stack Joint Mending Plates
- c. Apply double beads of butyl sealant continuously around perimeter of wall including around all framed openings as well as on the base angle and corner trims.



K-Roc HF Series Vertical Installation

1 Preparing the wall structure:



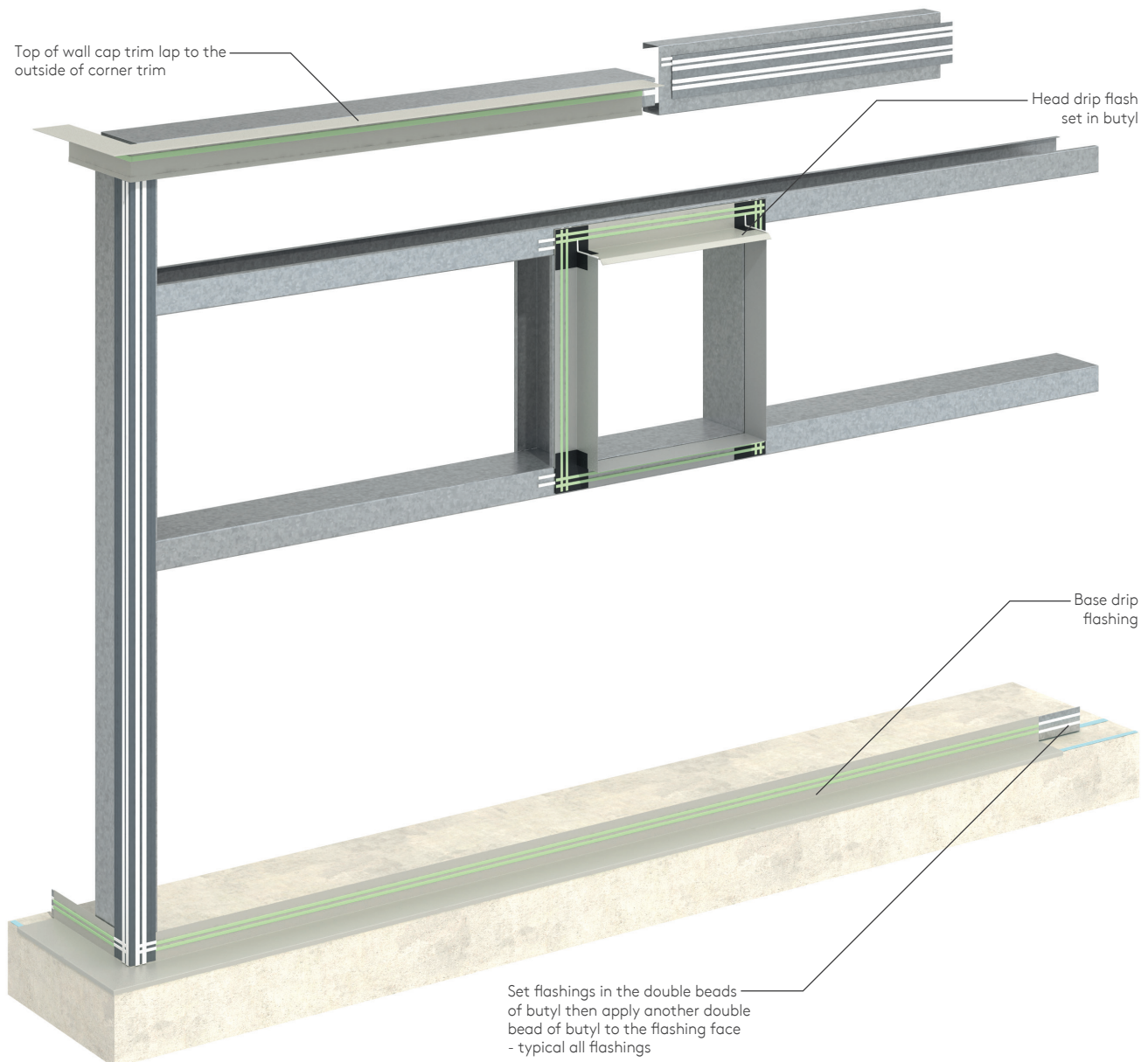
NOTE

Mending plates to be no less than
24 GA to avoid waviness. Fasten 24"
O.C. with low profile fasteners.

K-Roc HF Series Vertical Installation

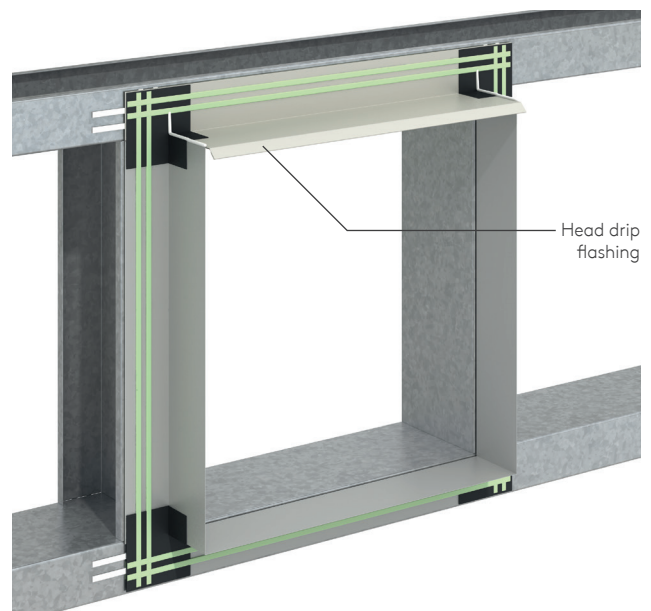
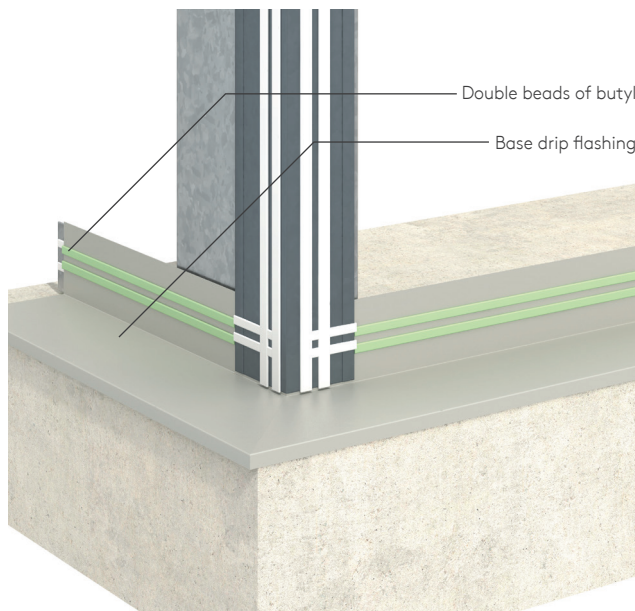
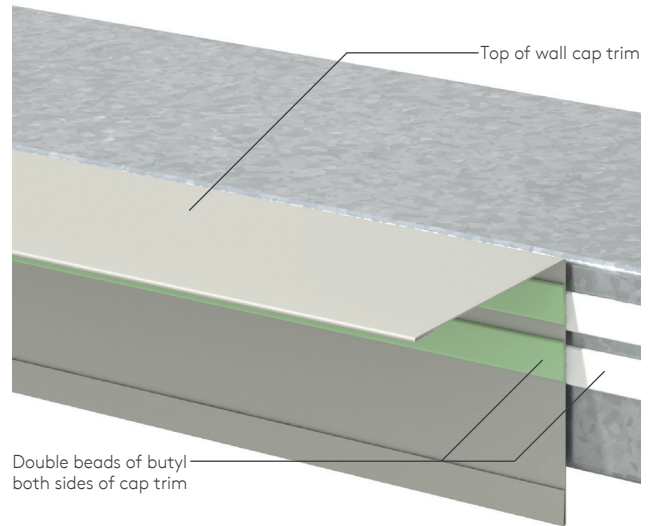
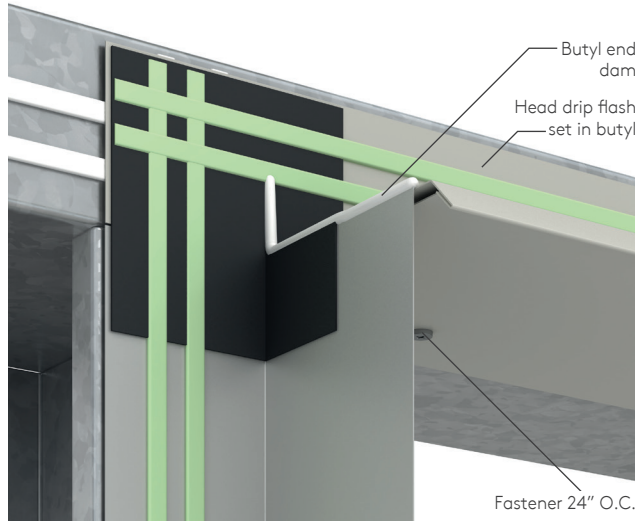
1 Preparing the wall structure:

- d. Install the following items, setting them in the beads of butyl applied in previous step (refer to End Lap details for proper application of butyl sealant at lap joints). Fasten all flashings 24" on center as shown in details:
- i. Base Drip flash
 - iv. Head Drip Flash (two-piece)
 - v. Top of Wall Cap Trim
 - vii. Any other conditions required per project specific details.
- e. Apply double beads of butyl sealant to face of all drip flash, cap trim, mending plates, etc. all around perimeter of wall and framed openings.



K-Roc HF Series Vertical Installation

1 Preparing the wall structure:



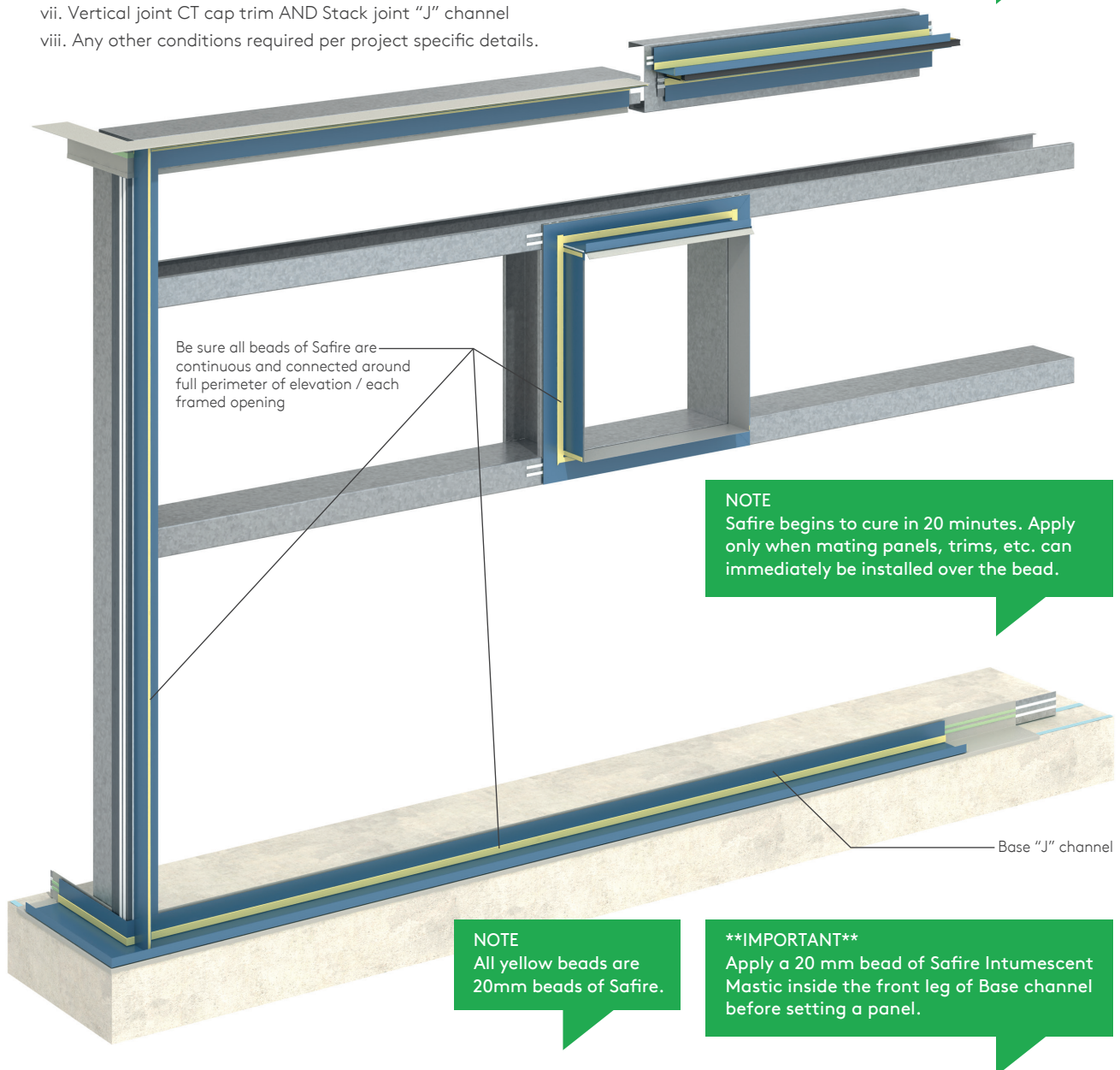
K-Roc HF Series Vertical Installation

1 Preparing the wall structure:

- f. Install 26 GA Min CT cap trim, setting them in the beads of butyl applied in previous step. Fasten all channels 24" on center as shown in details:
- i. Base J channel
 - ii. Sill CT cap trim
 - iii. Jamb CT cap trim
 - iv. Head J channel
 - v. Top of wall CT cap trim
 - vi. Outside corner rear channel
 - vii. Vertical joint CT cap trim AND Stack joint "J" channel
 - viii. Any other conditions required per project specific details.
- g. Apply 20mm beads of Safire Intumescent Mastic to face of components previously installed in steps 1d and 1f. Refer to details for exact location of beads.

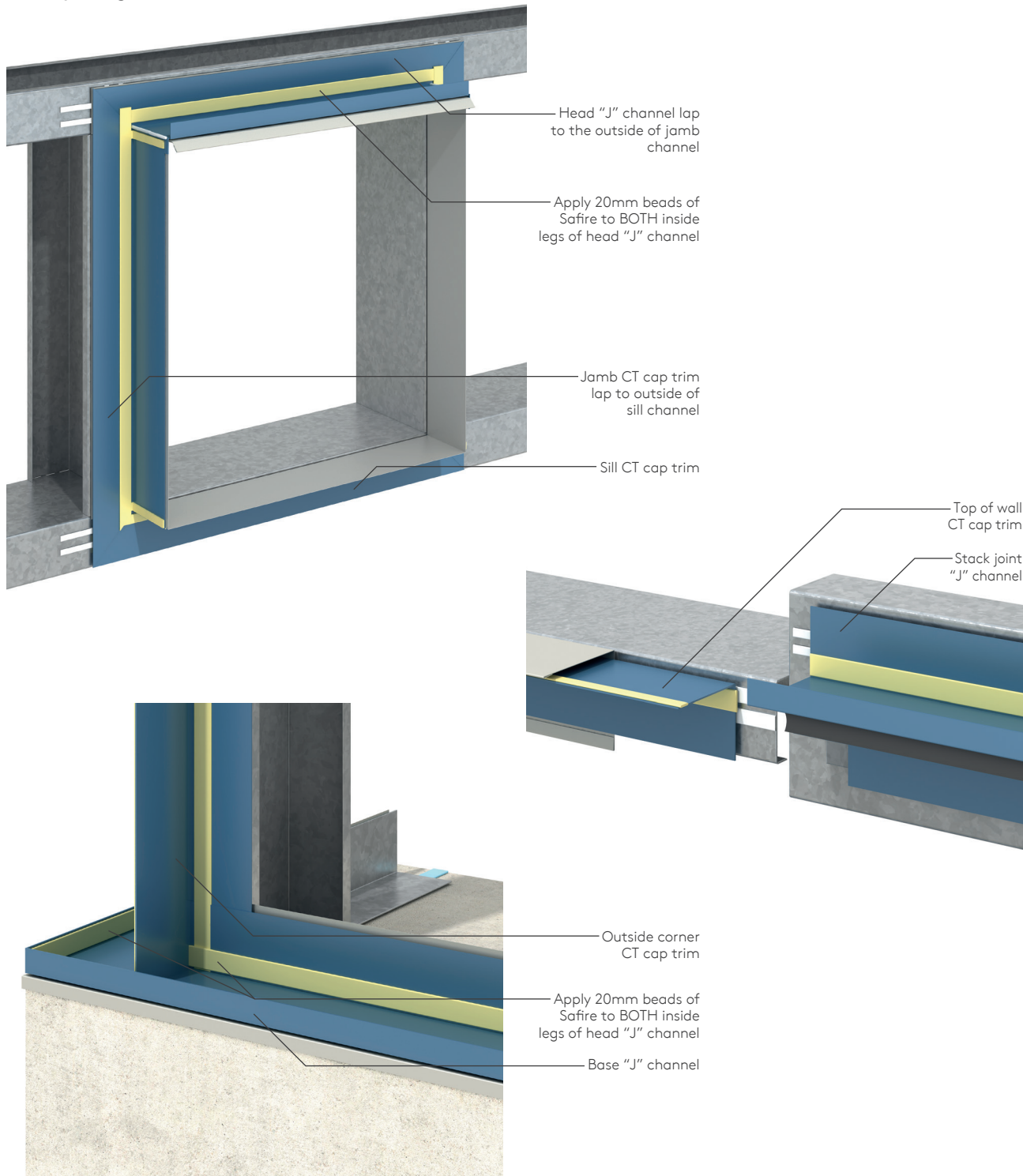
NOTE

The bead of Safire is to be continuous, without any gaps to provide complete seal on the rear face of the panels to be set.



K-Roc HF Series Vertical Installation

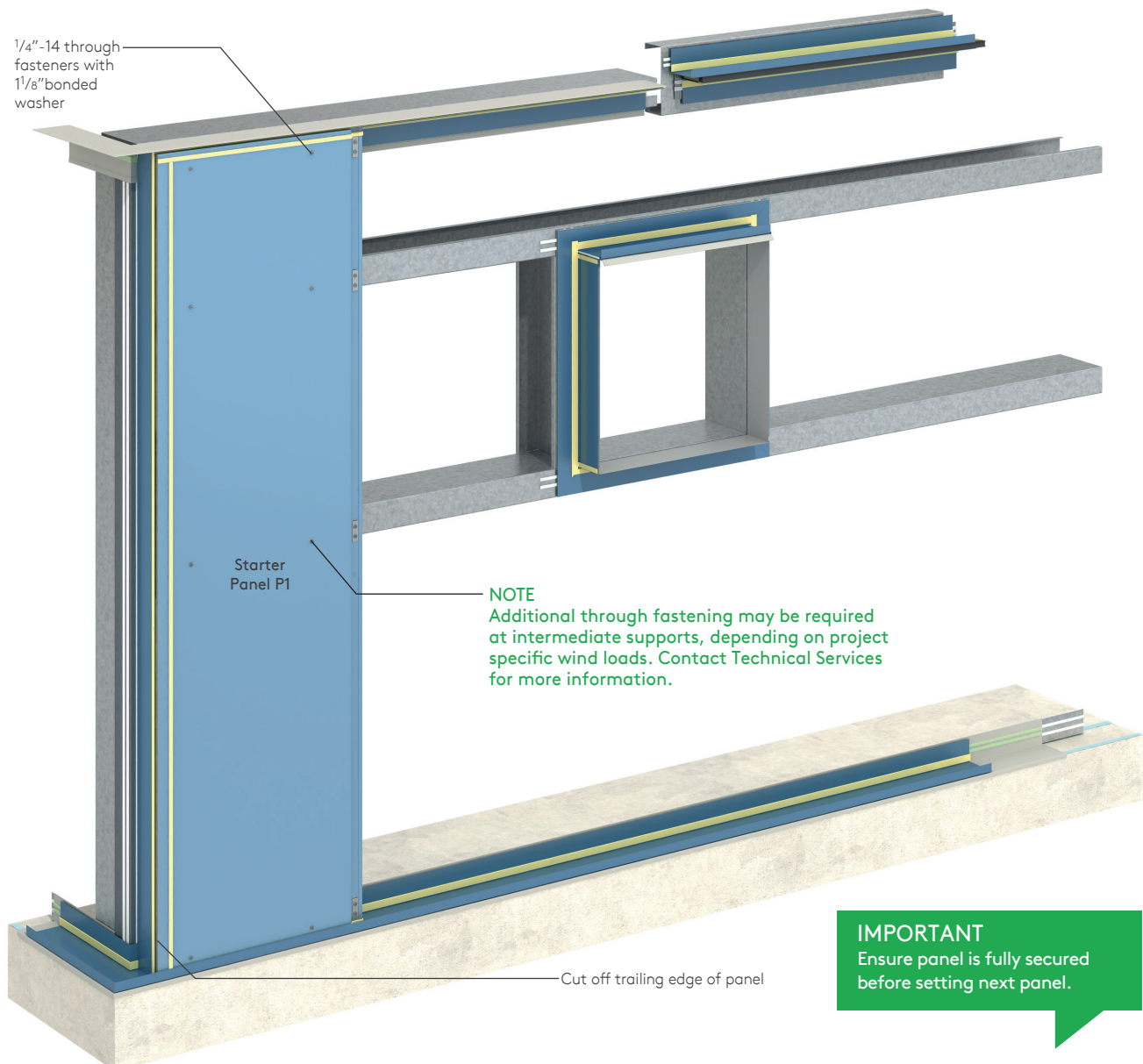
1 Preparing the wall structure:



K-Roc HF Series Vertical Installation

2 Installing the starter panel, P1:

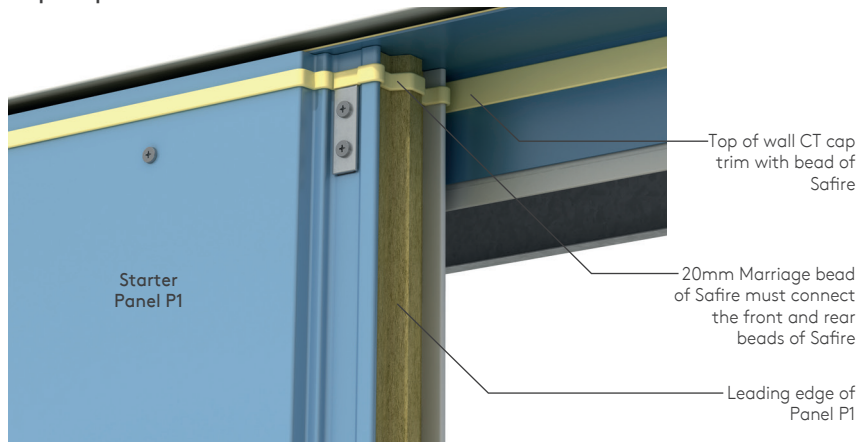
- Cut the joints off TRAILING edge of the starter panel. Be sure to cut the first panels to proper width so that panel joints at framed openings are properly aligned.
- Lift starter panel and set in place in the base channel. Press panel firmly into structure to seat it into Safire Intumescent Mastic.
- Verify panel is vertical using a level placed on leading (non-cut) edge.
- Install hidden clips with 2 fasteners at EVERY structural support per shop drawings. Do not over tighten fasteners as panel damage will result. Also attach trailing (cut edge) of panel to corner structure with fasteners as required per project details.



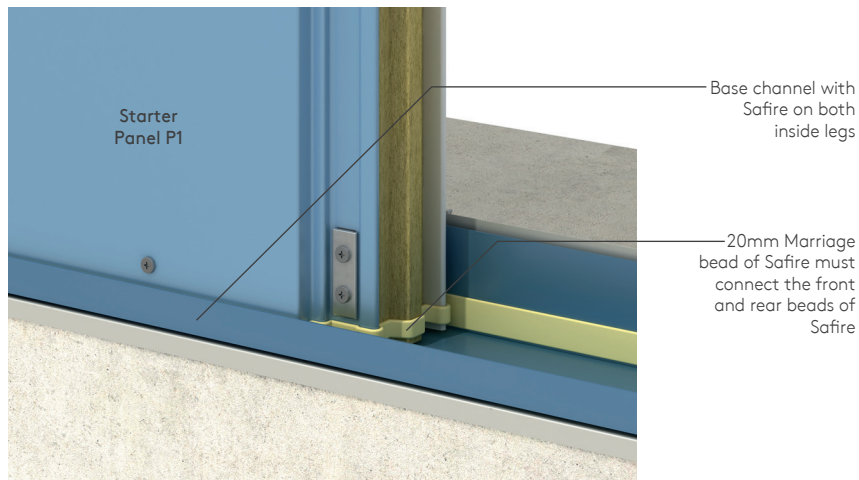
K-Roc HF Series Vertical Installation

Marriage bead top of panel

Top of panel

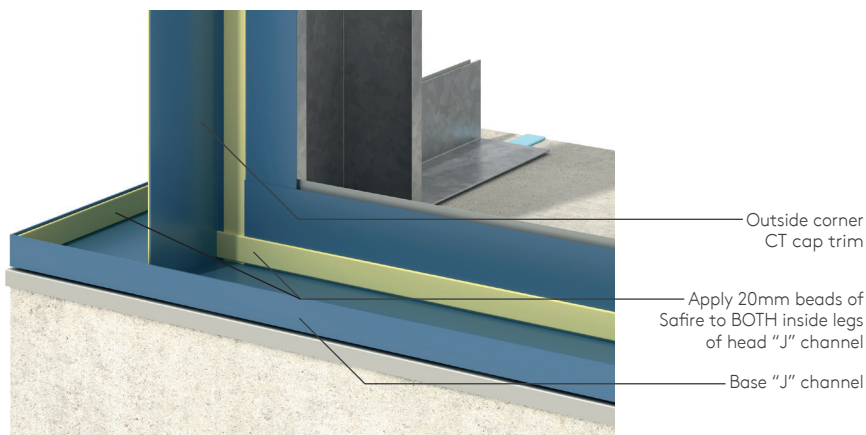


Bottom of panel



NOTE
See Step 3c for more information about application of marriage beads.

NOTE
See Step 4b for more information about application of Safire beads for sealing face of panel.



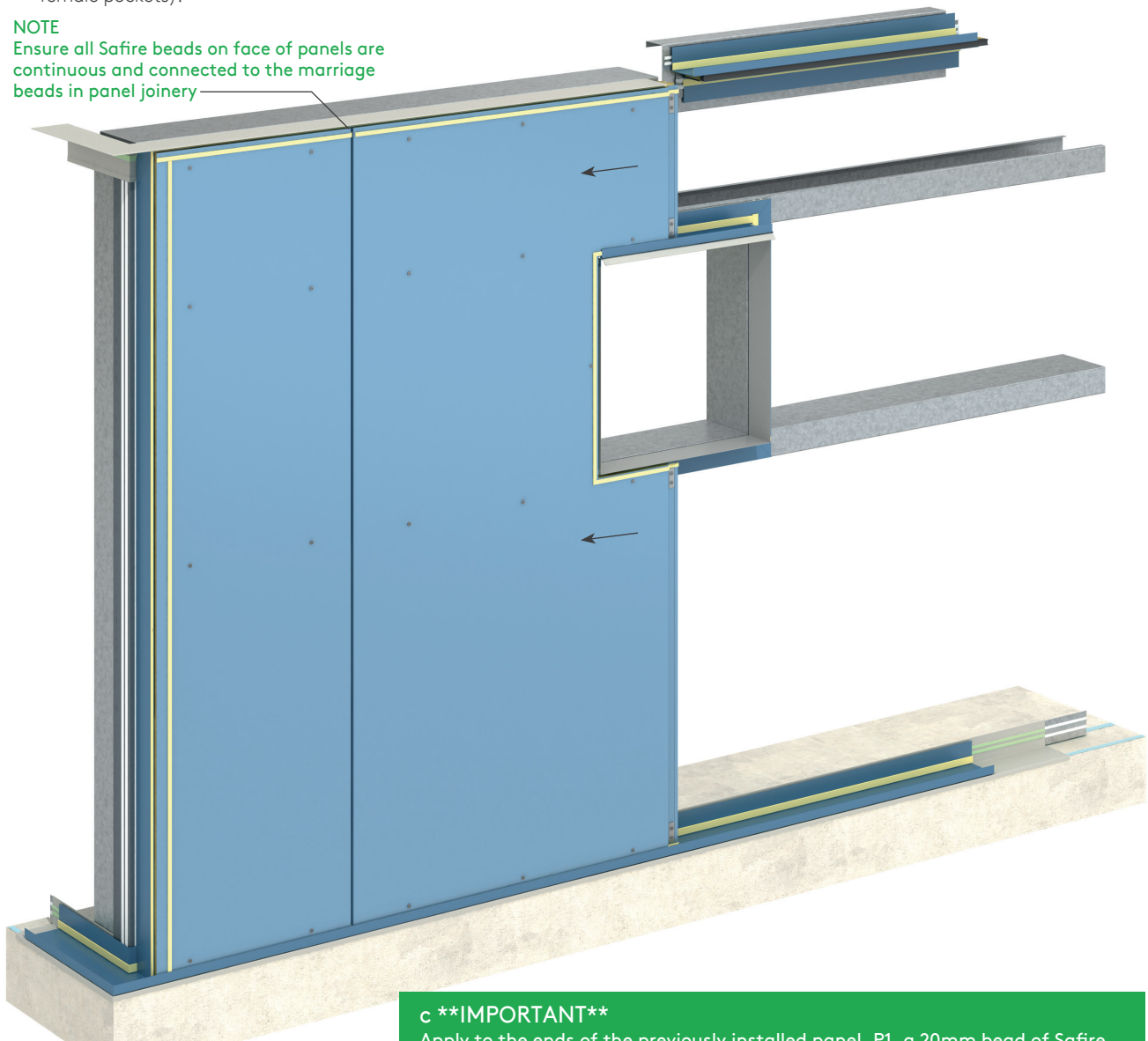
K-Roc HF Series Vertical Installation

3 Installing second panel, P2 and subsequent panels:

- a. Apply butyl joint sealant to the trailing edge of the second panel, P2, per Section 10. Sealant volume should be adequate to properly seal male and female joints (approx. 50% fill in female pockets).
- b. Apply 20mm Safire Intumescent Mastic beads to the trailing edge of P2, continuous, full length, in the correct quantities and locations according to the panel thickness per Section 10.

NOTE

Ensure all Safire beads on face of panels are continuous and connected to the marriage beads in panel joinery



NOTE

Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

c ****IMPORTANT****

Apply to the ends of the previously installed panel, P1, a 20mm bead of Safire Intumescent Mastic marriage bead connecting the rear bead of Safire, across panel joint beads AND continue onto the front face of panel so that it can marry to a Safire bead that will later be applied to the face of the panels – this is essential to ensure proper fire protection. Marriage beads are to be applied at the left and right ends of every panel and each side of every panel cutout.

K-Roc HF Series Vertical Installation

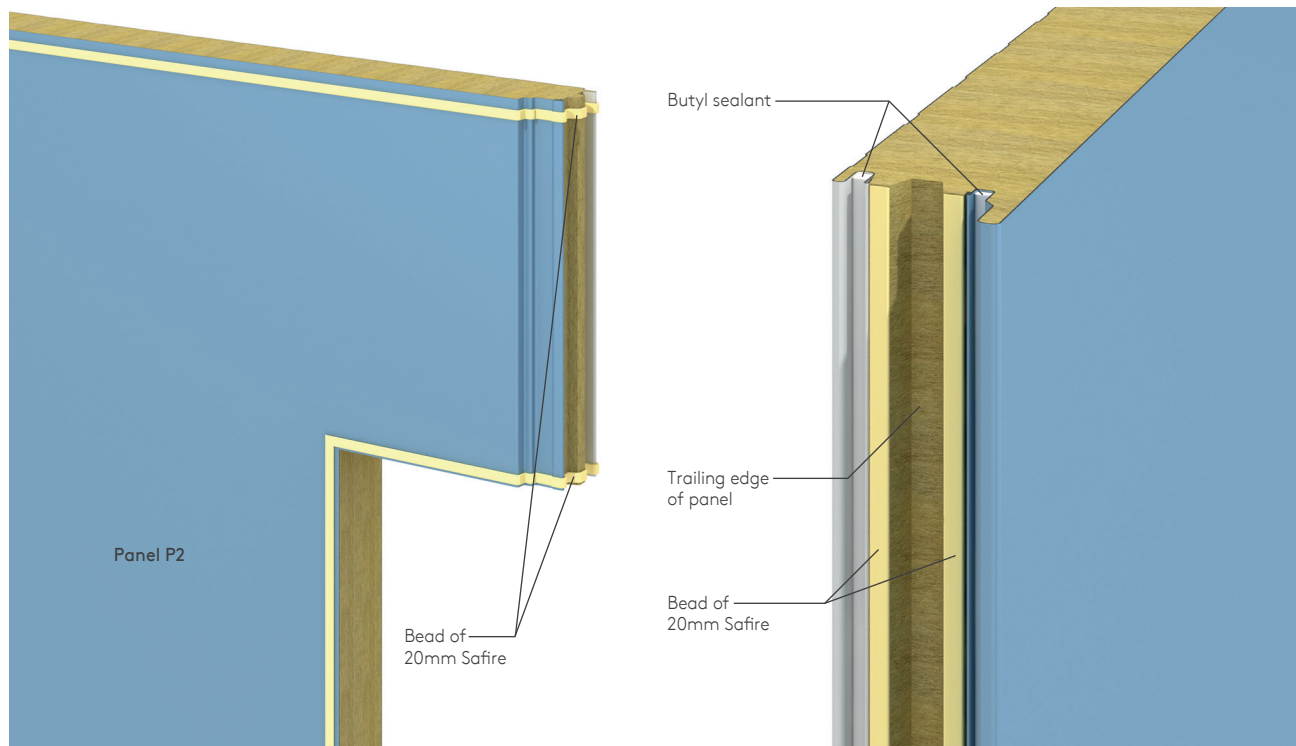
3 Installing second panel, P2 and subsequent panels:

d ****IMPORTANT****

Apply Safire Intumescent Mastic bead inside the front leg of every Base, Head and Stack Joint "J" channel before setting a panel.

- c. Lift panel **P2** into position and fully engage with previously installed panel. Verify panel is vertical using a level placed on the leading edge and install hidden clips and fasteners per project details.

- d. Install hidden clips with 2 fasteners at EVERY structural support per shop drawings. Do not over tighten fasteners as panel damage will result.
- e. Through fasten panel across panel face at every support if / as required per project specific details. Do not over tighten fasteners.



K-Roc HF Series Vertical Installation

4 Completing the panel installation:

- a. Repeat previous steps 3.a through 3.e until all panels are secured across and elevation.
- b. Apply 20mm bead of Safire Intumescent Mastic to the face of the K-Roc HF Series panels all around the perimeter of the wall in preparation for the 26 GA Min CT cap trim installation.

****IMPORTANT****

This bead of Safire must connect to the marriage beads of Safire installed per Step 3.

Safire beads on face of panels must connect to the marriage bead within panel joinery and be continuous all around the perimeter of an elevation

Cap trim

See Step 5 for fire proofing at corners and stack joints

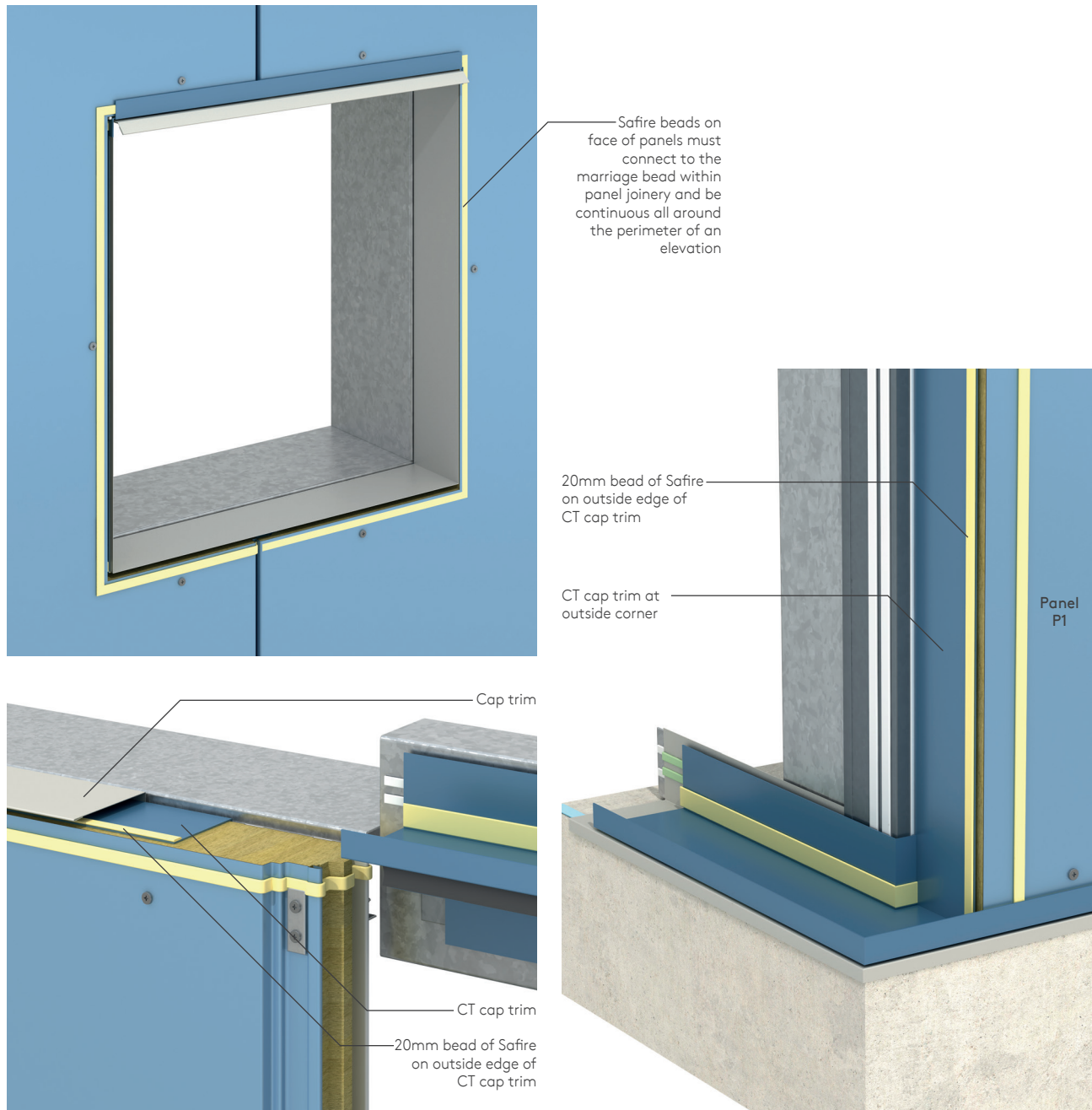
NOTE

Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Vertical Installation

4 Completing the panel installation:

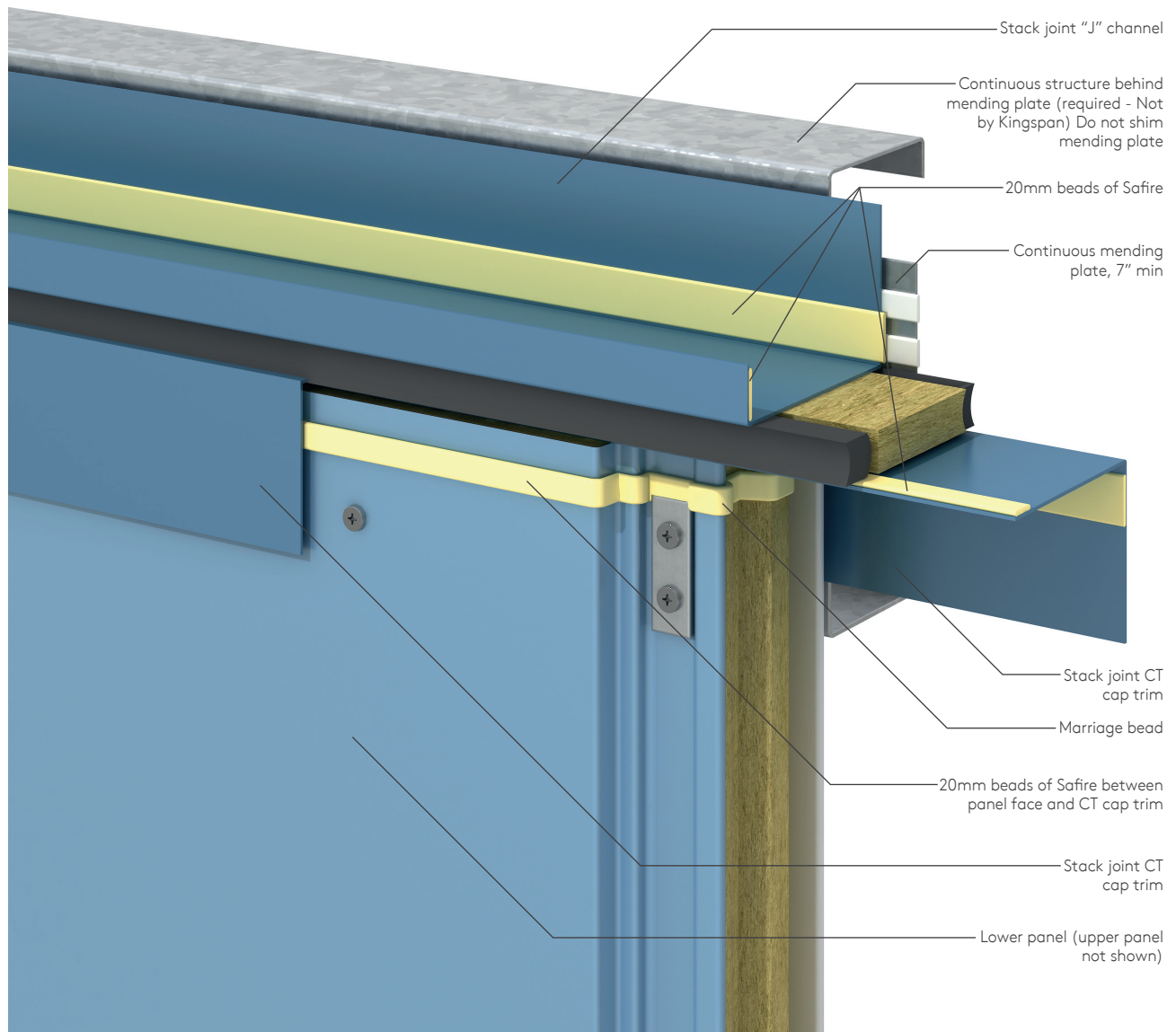
- c. Apply a continuous 20mm bead of Safire to the outside edge of the previously installed 26 GA Min CT cap trim, angles, etc. – this must be in place to create a seal between front and rear pieces of 26 GA CT cap trim.



K-Roc HF Series Vertical Construction Details

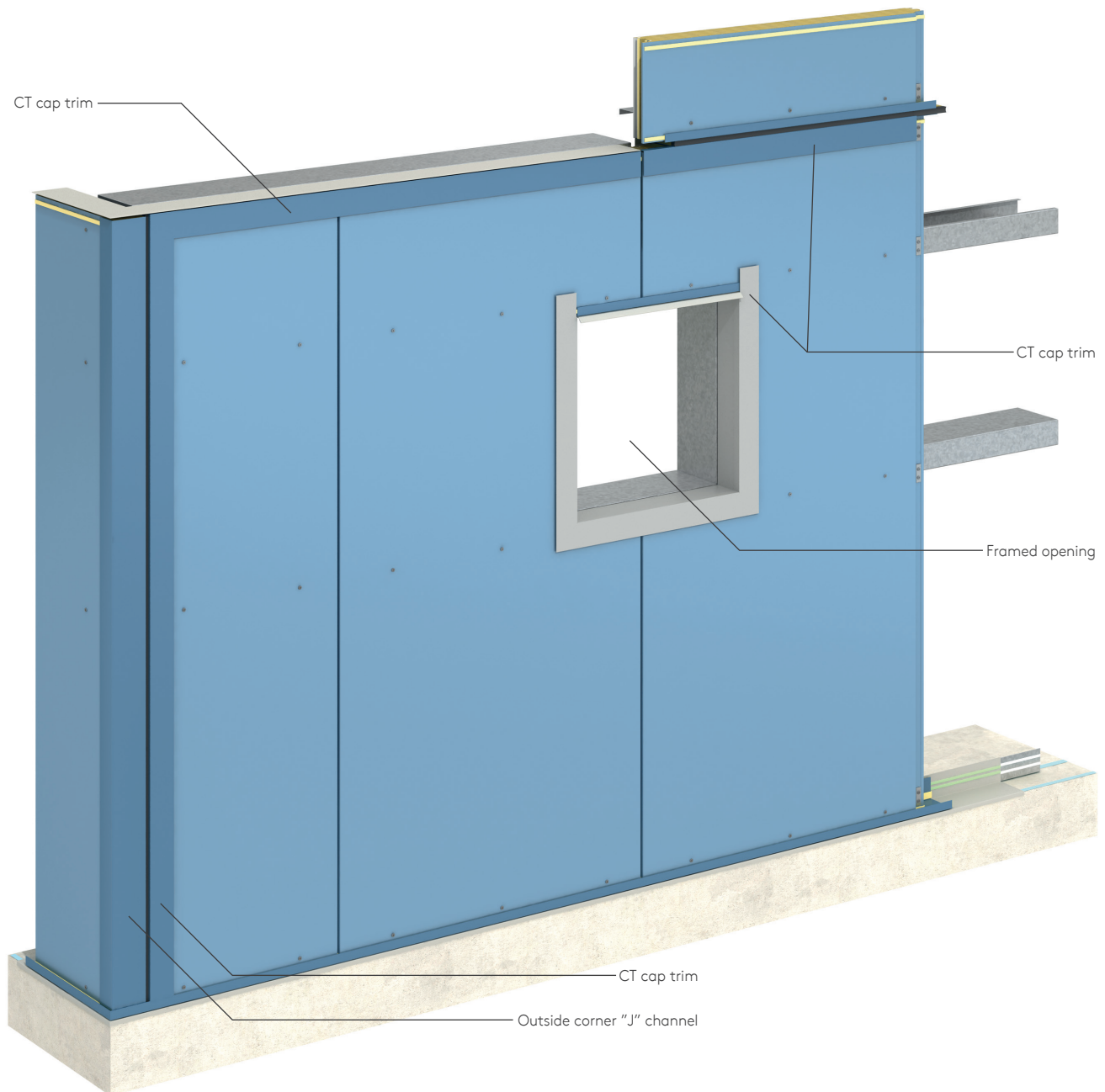
5 Stack Joint:

- a. Install 26 GA Stack joint CT cap trim to the lower panel at the stack joint:
 - i. At the lower panel, ensure the bead of Safire has been applied to the 26 GA Min cap trim AND also on the face of the lower panel.
 - ii. Install the 26 GA Stack Joint "J" channel.



K-Roc HF Series Vertical Construction Details

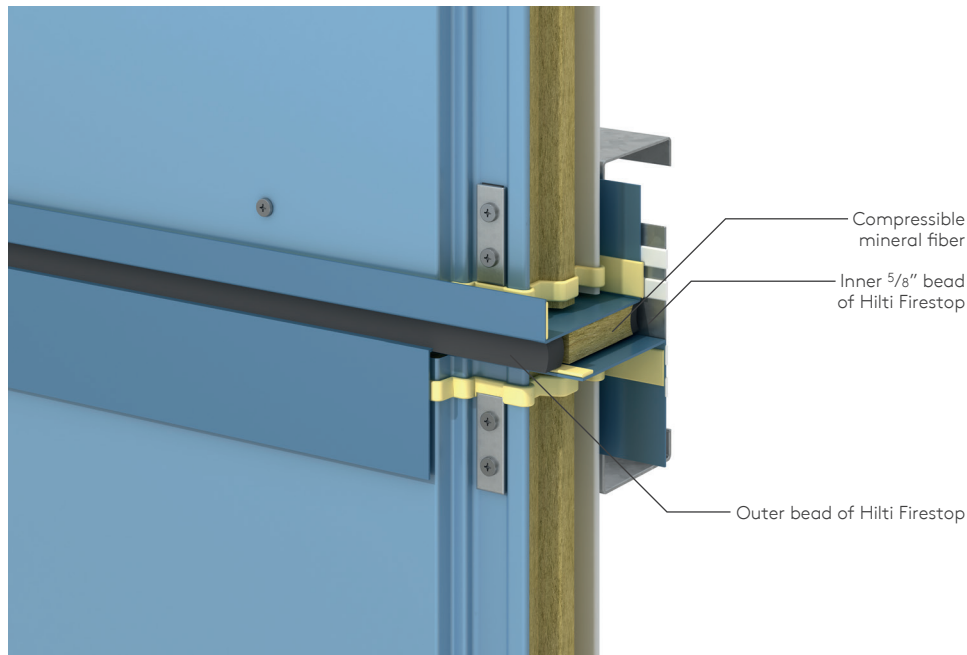
6 Stack Joint:



K-Roc HF Series Vertical Construction Details

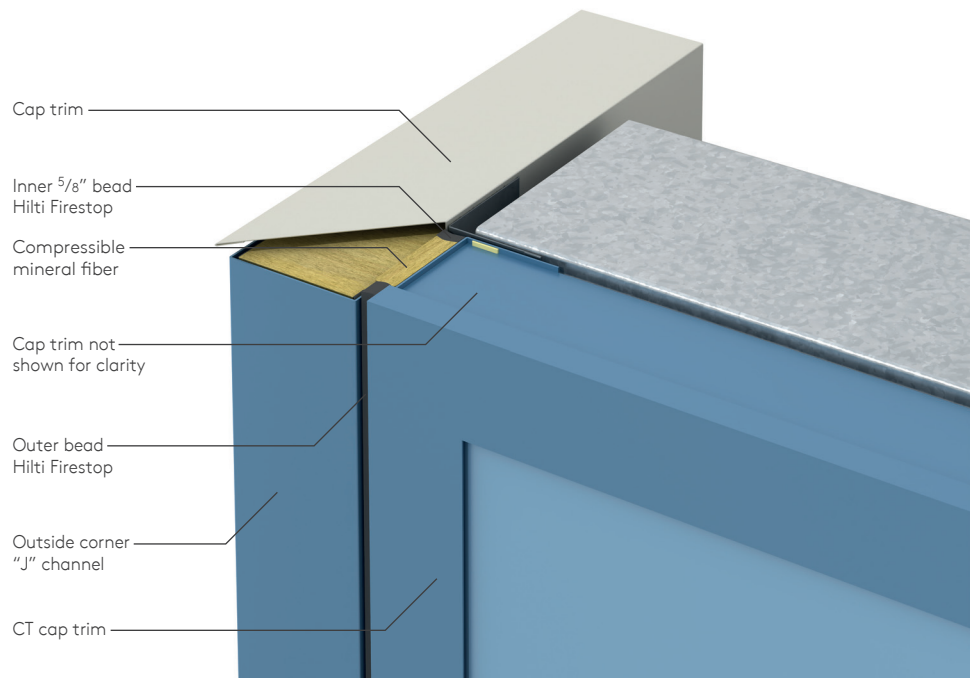
7 Fireproofing at corners and Stack Joints:

- Apply inner $\frac{5}{8}$ " deep bead seal of Hilti Firestop inside of joint.
- Install compressible Mineral fiber inside of joint.
- Apply outer $\frac{5}{8}$ " deep bead seal of Hilti Firestop in joint.



NOTE

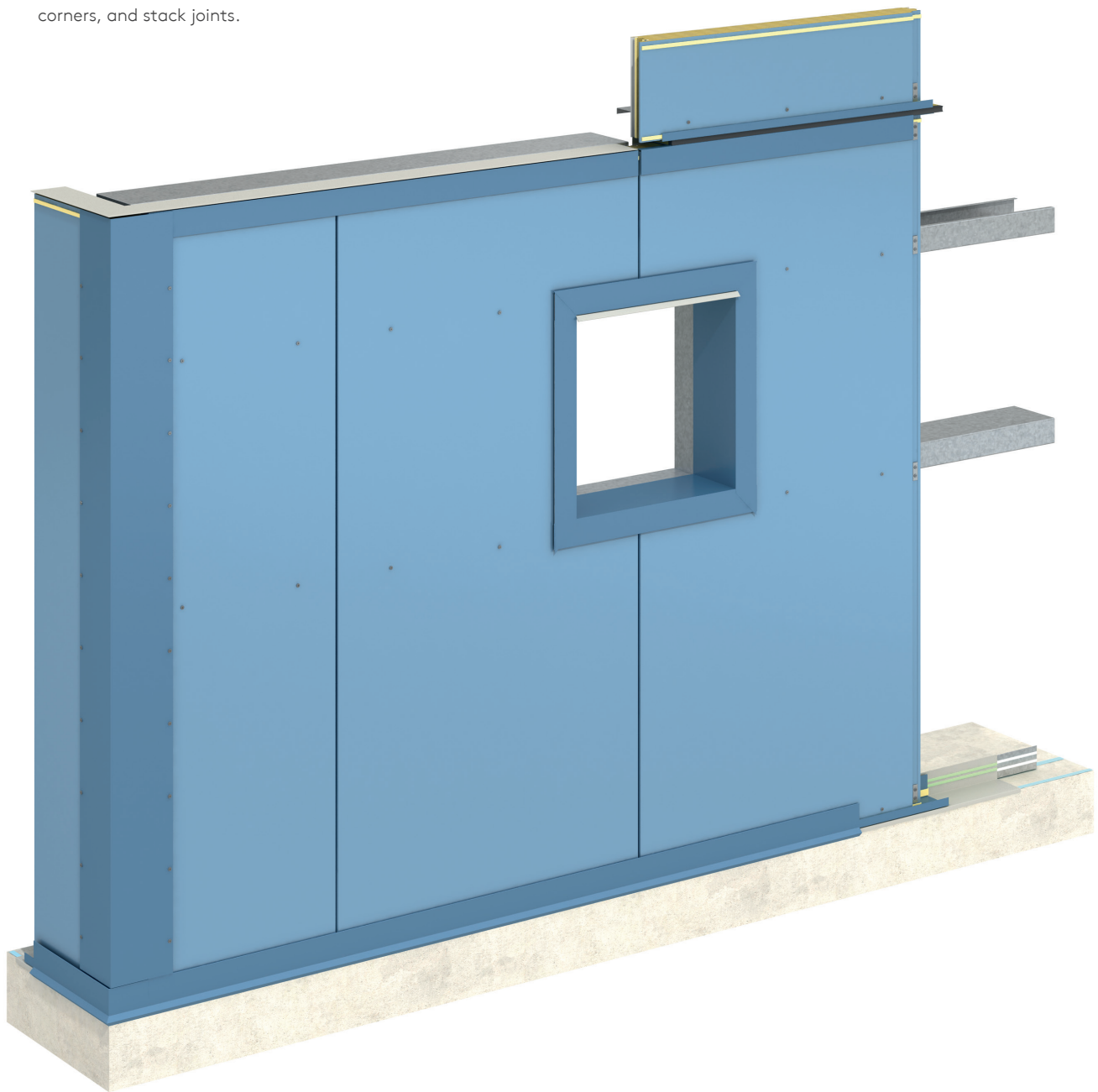
Top of wall conditions may require Firestop and compressible Mineral Fiber also - refer to project specific details.



K-Roc HF Series Vertical Construction Details

8 Final Trim Installation:

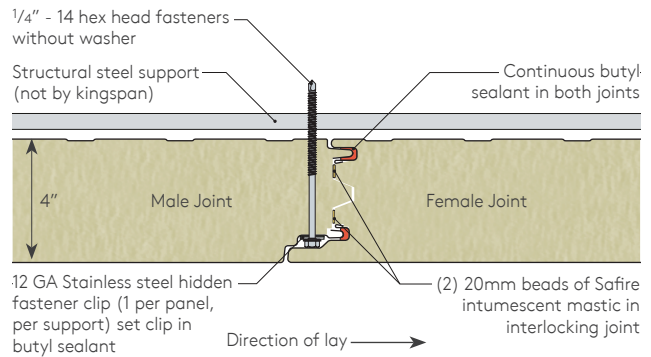
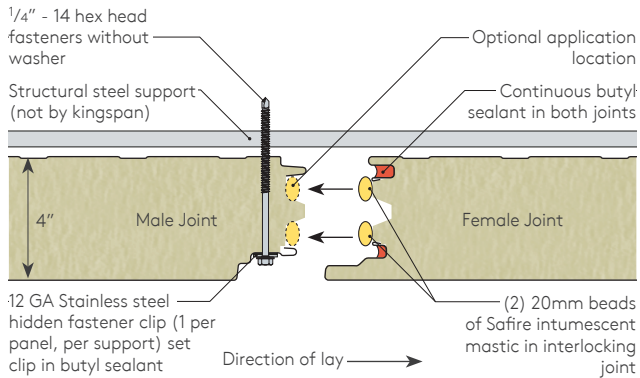
- a. Install all trims around perimeter of wall, framed openings, corners, and stack joints.



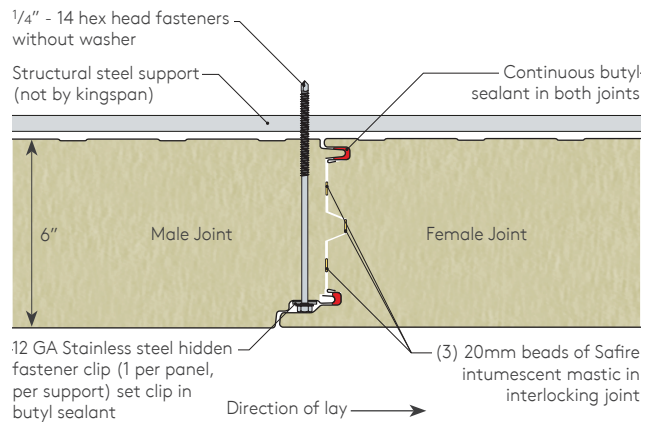
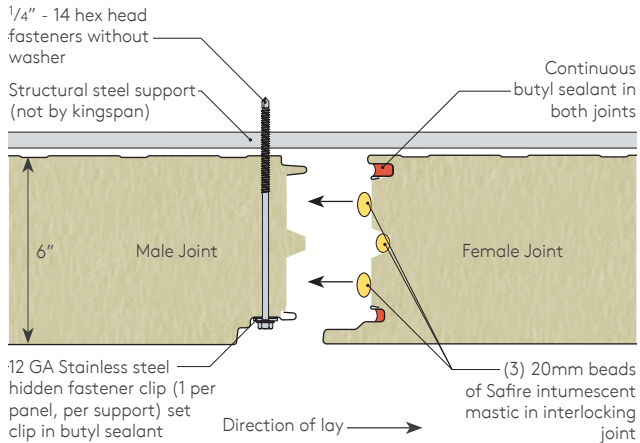
- 9 Repeat process for other wall elevations.

K-Roc HF Series Vertical Construction Details

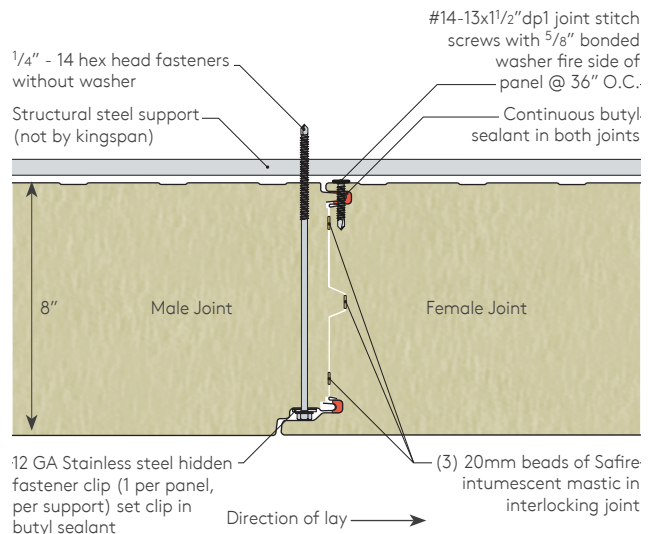
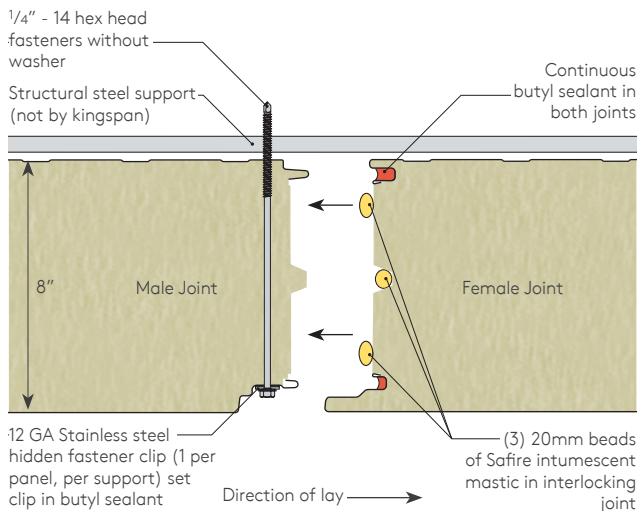
4" K-Roc HF Series Panel Joint Detail



6" K-Roc HF Series Panel Joint Detail



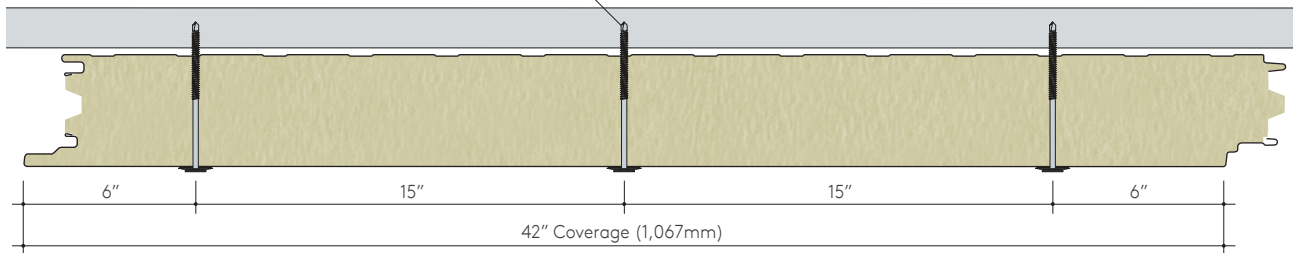
8" K-Roc HF Series Panel Joint Detail



K-Roc HF Series Vertical Construction Details

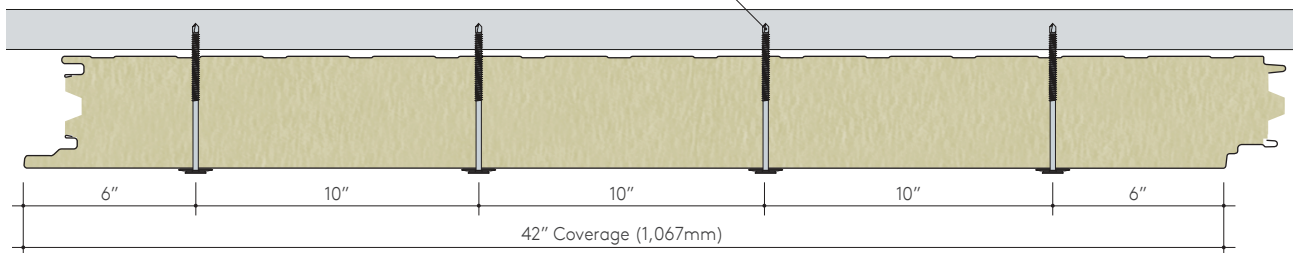
Through Fastening Requirements (3 - through fastener pattern example)

1/4" - 14 through fasteners with 1 1/8" bonded washer



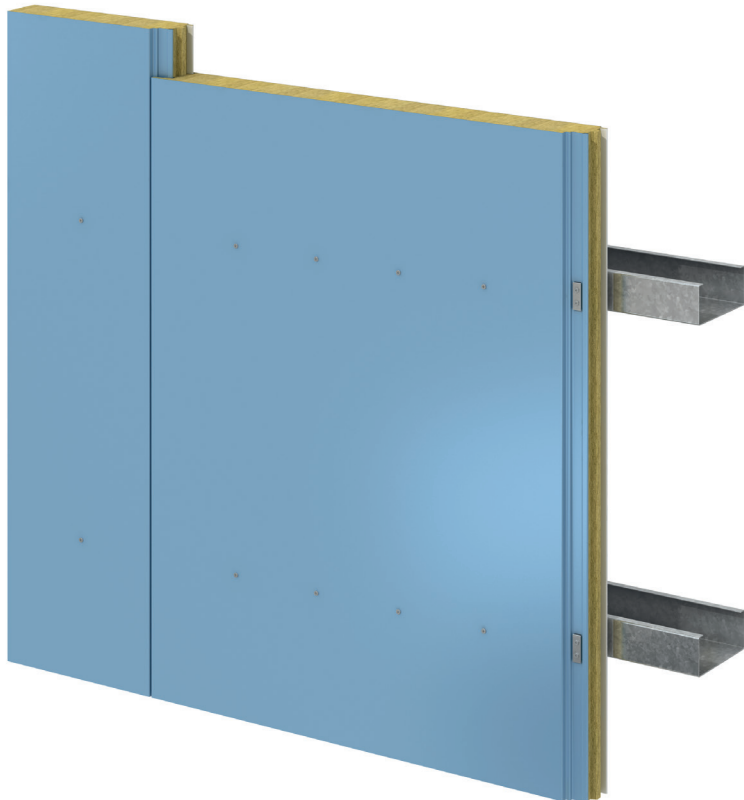
Through Fastening Requirements (4 - through fastener pattern example)

1/4" - 14 through fasteners with 1 1/8" bonded washer



NOTE

Quantity and location of 20mm Safire Intumescent Mastic beads varies by panel thickness. Be sure to apply correctly per the panel thickness being installed.

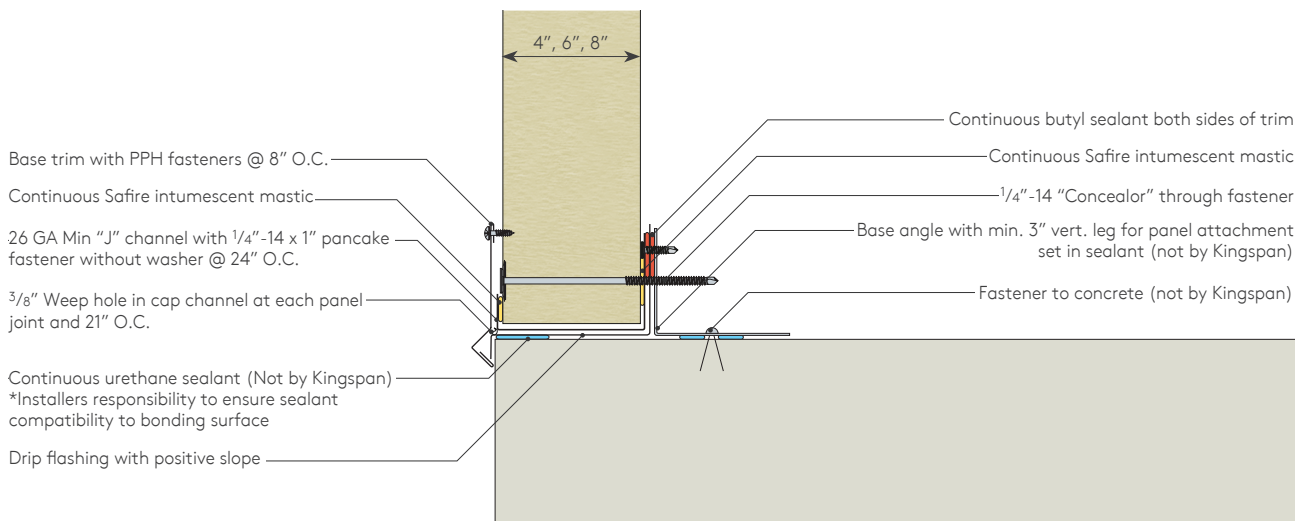


K-Roc HF Series Vertical Construction Details

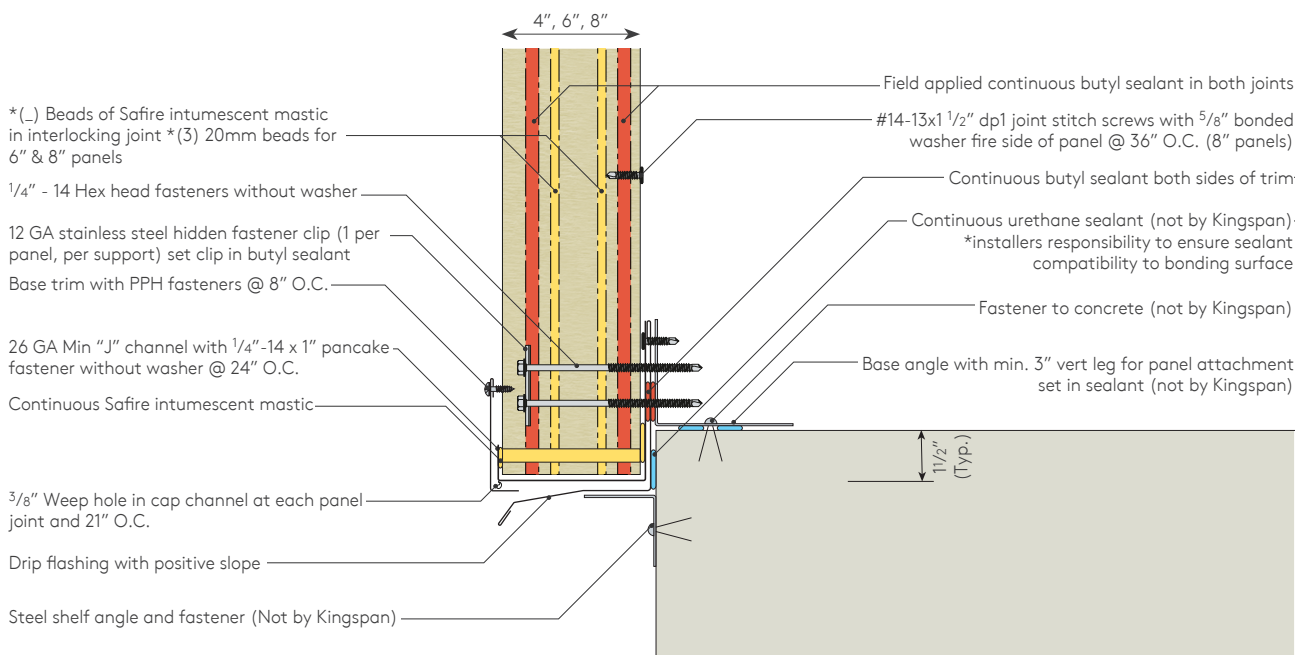
NOTE

See details on page 48 for typical trim lap instructions.

Flush Base Mid Panel Flat Trim Detail



Overhang with Base Support at Joint Flat Trim Detail

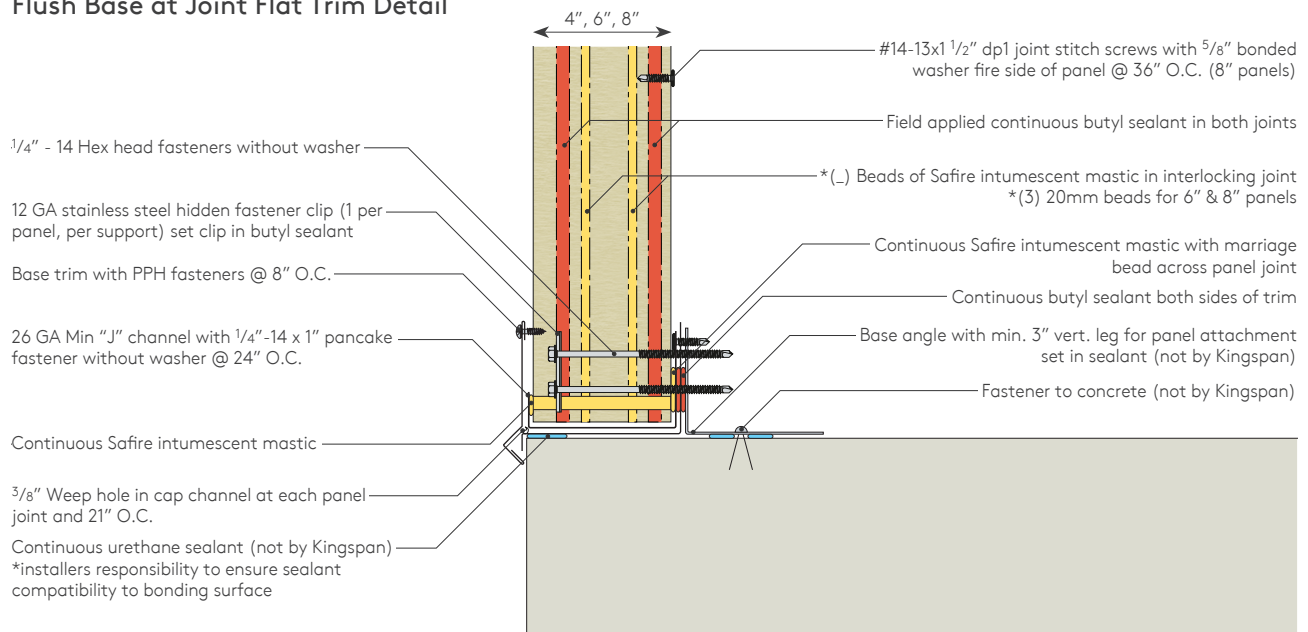


K-Roc HF Series Vertical Construction Details

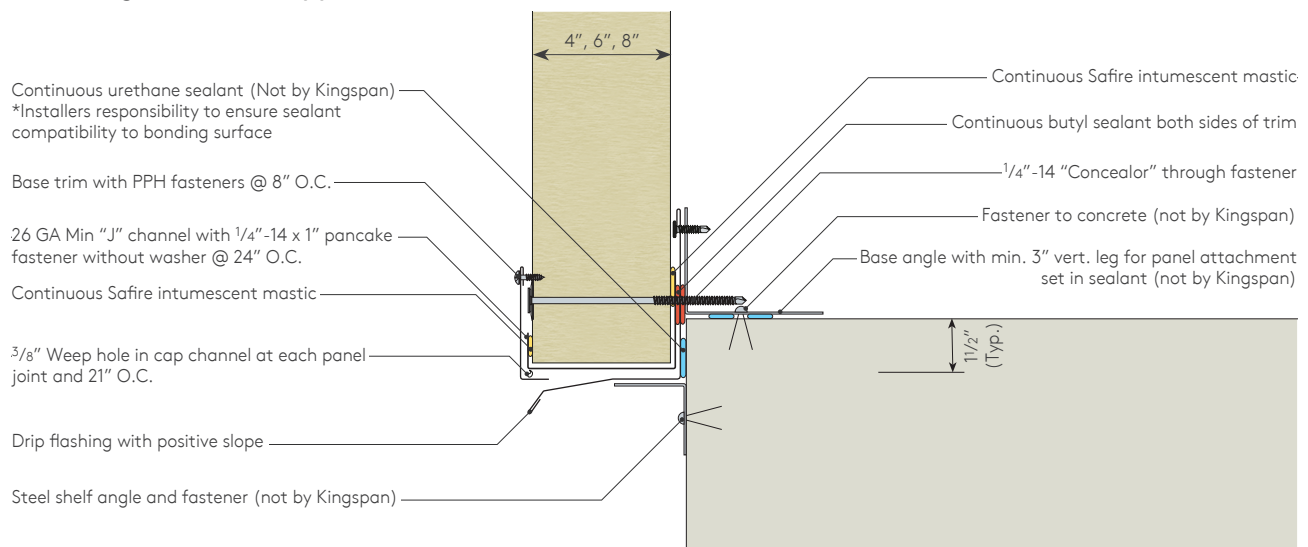
NOTE

See details on page 48 for typical trim lap instructions.

Flush Base at Joint Flat Trim Detail

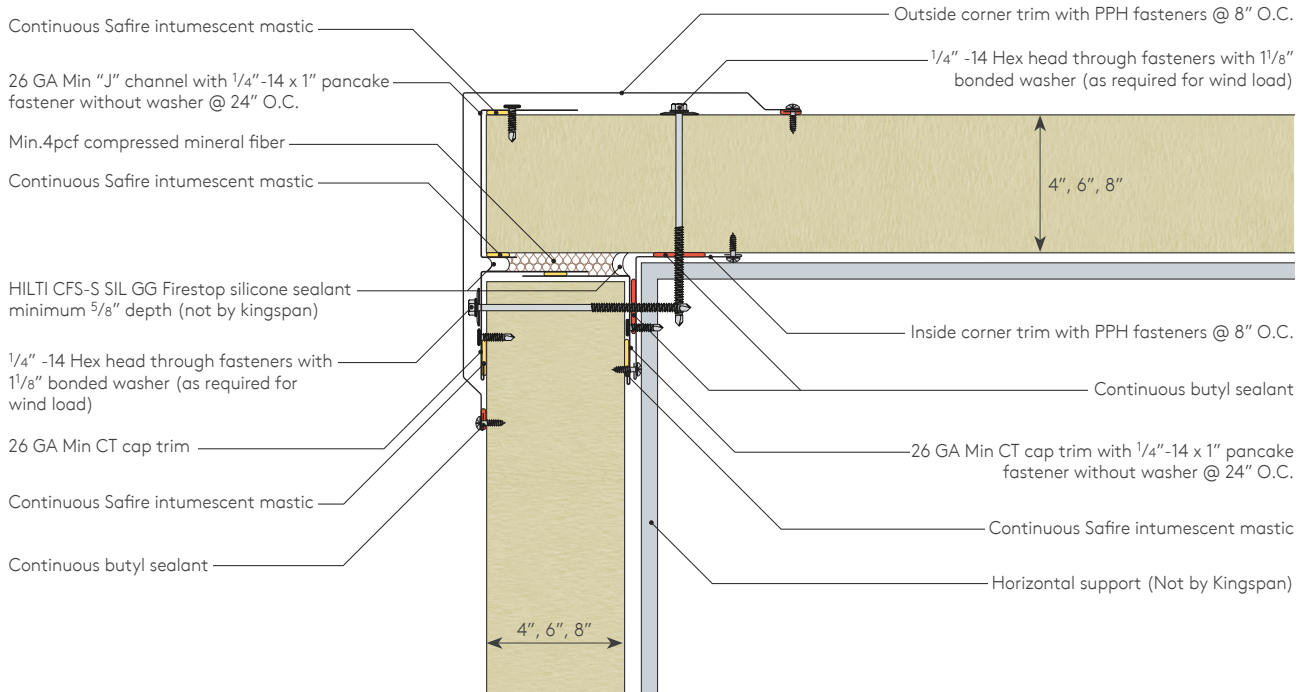


Overhang with Base Support at Mid Panel Flat Trim Detail

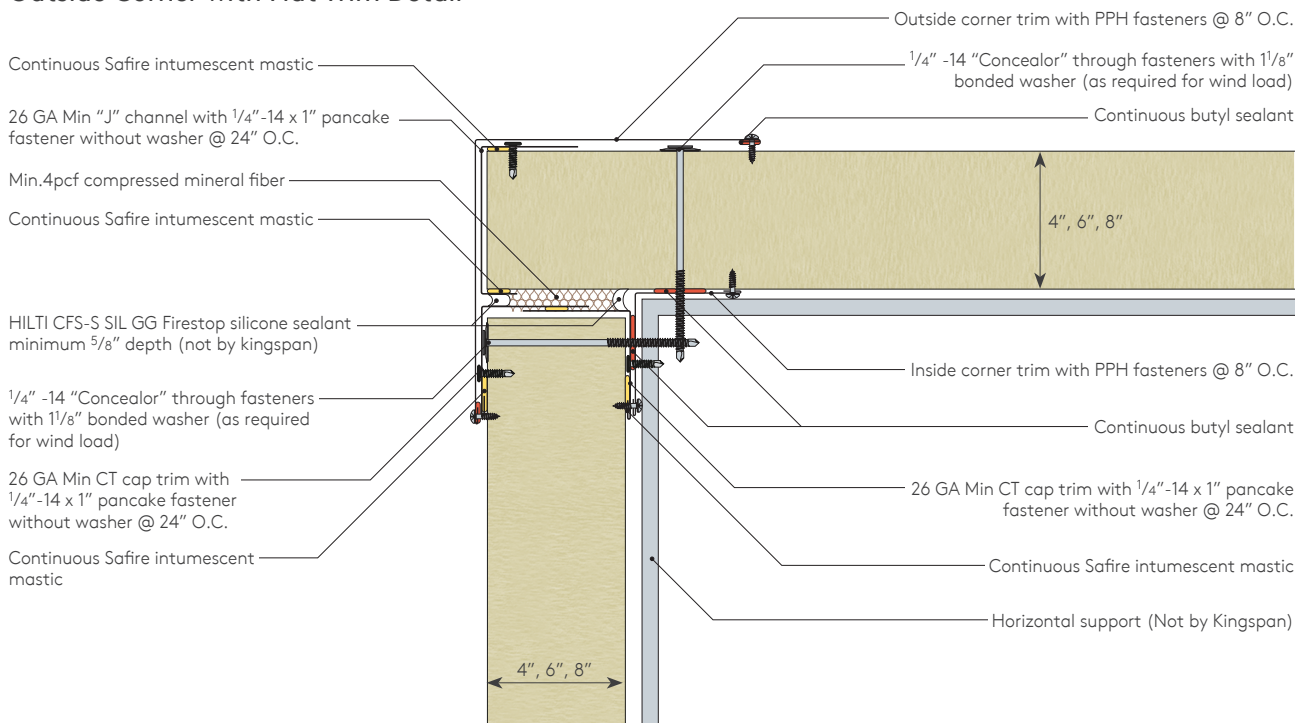


K-Roc HF Series Vertical Construction Details

Outside Corner with Profiled Trim Detail

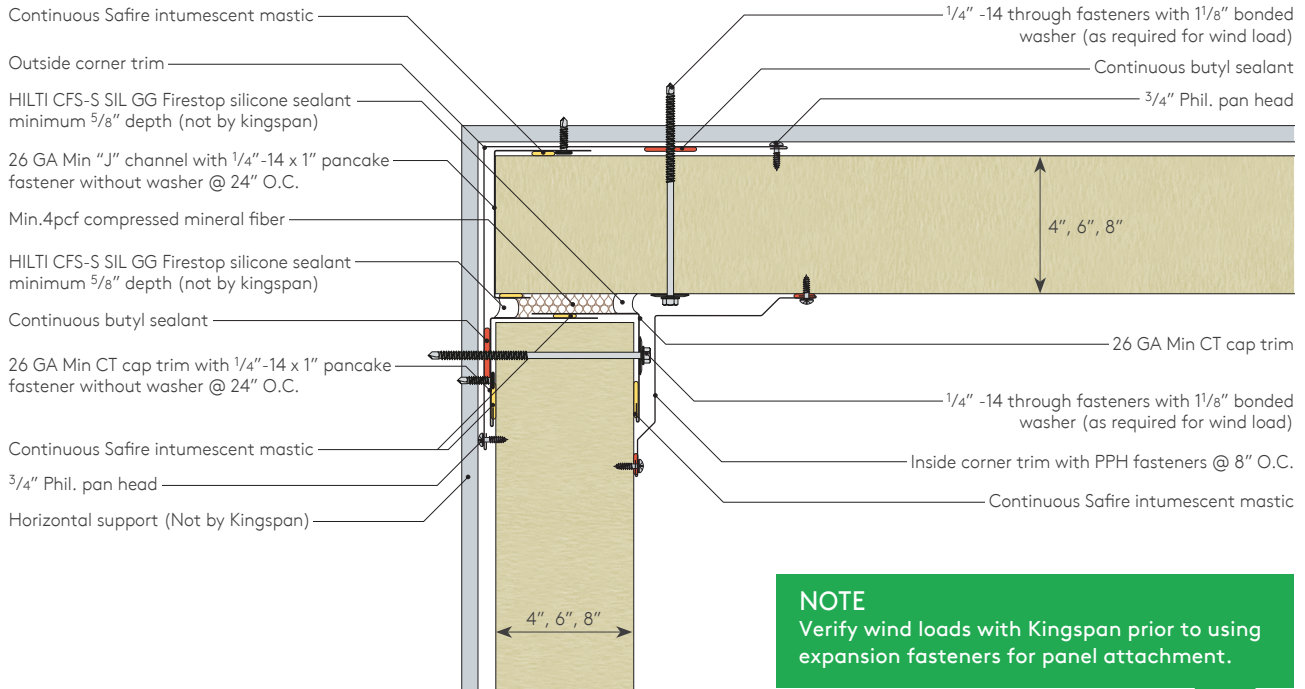


Outside Corner with Flat Trim Detail

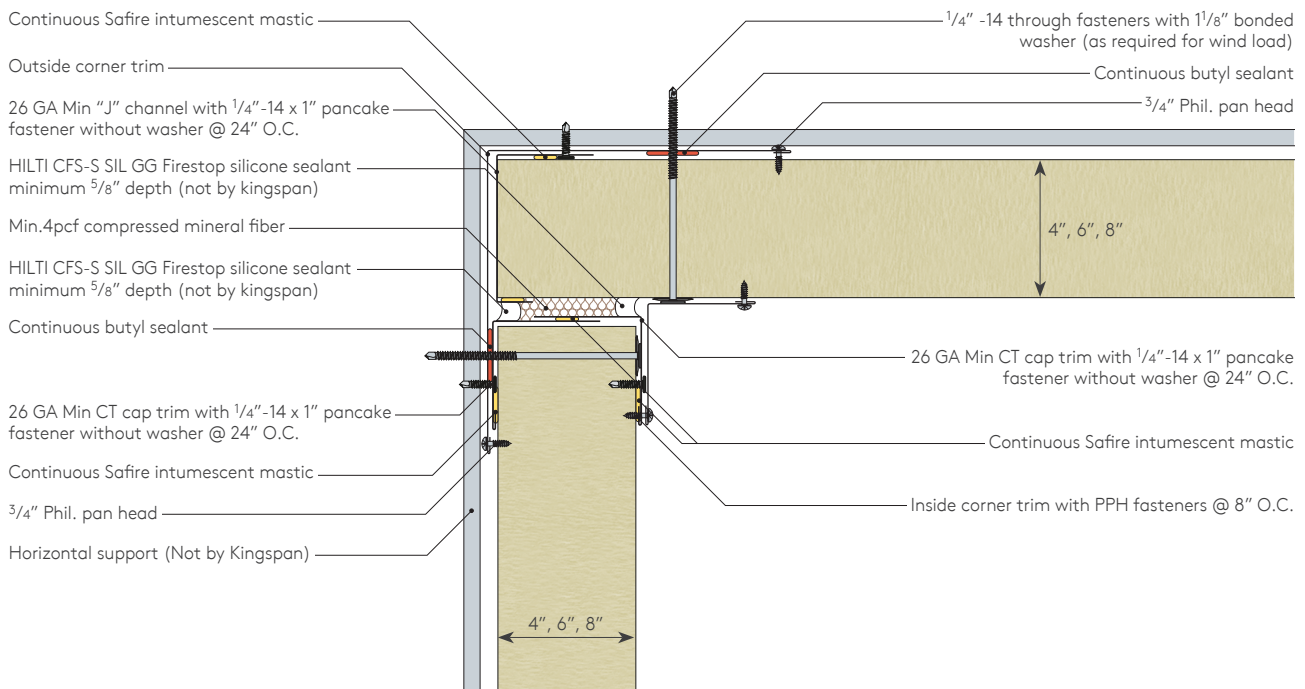


K-Roc HF Series Vertical Construction Details

Inside Corner with Profiled Trim Detail



Inside Corner with Flat Trim Detail

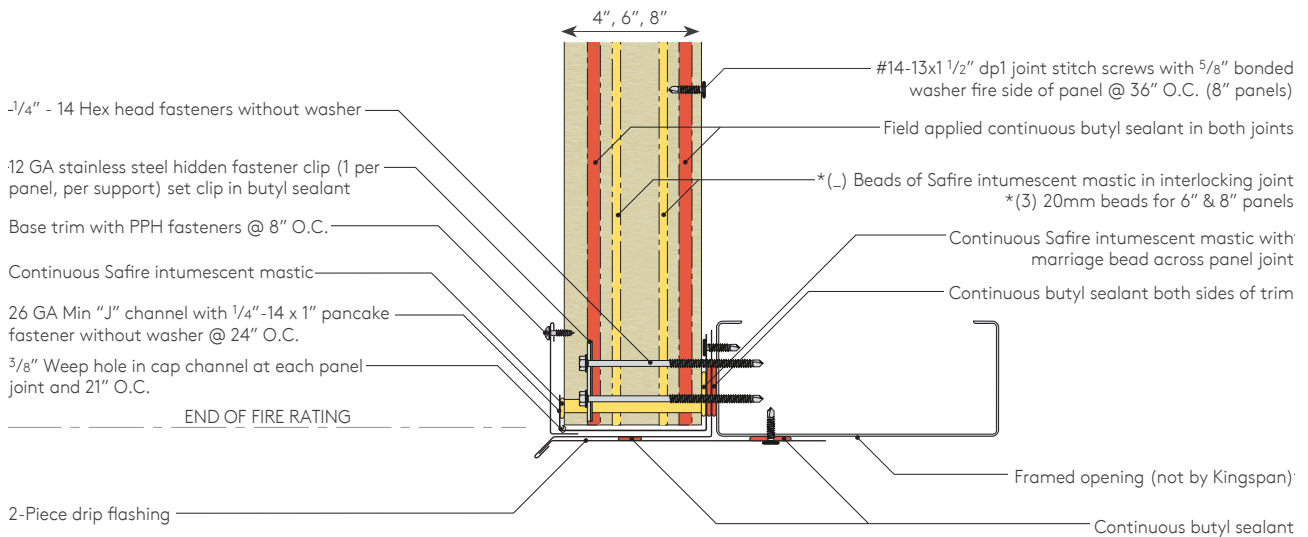


K-Roc HF Series Vertical Construction Details

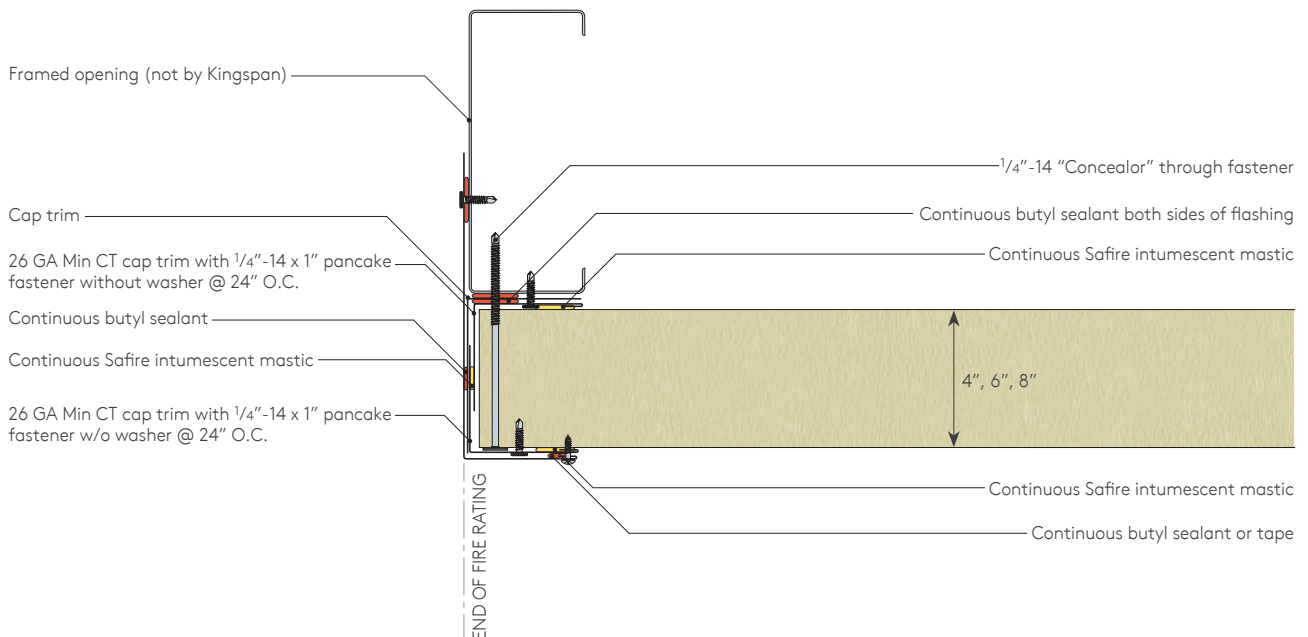
NOTE

See details on page 48 for typical trim lap instructions.

Framed Opening Head Flat Trim with Drip Edge at Joint Detail



Framed Opening One Piece Flat Jamb Detail

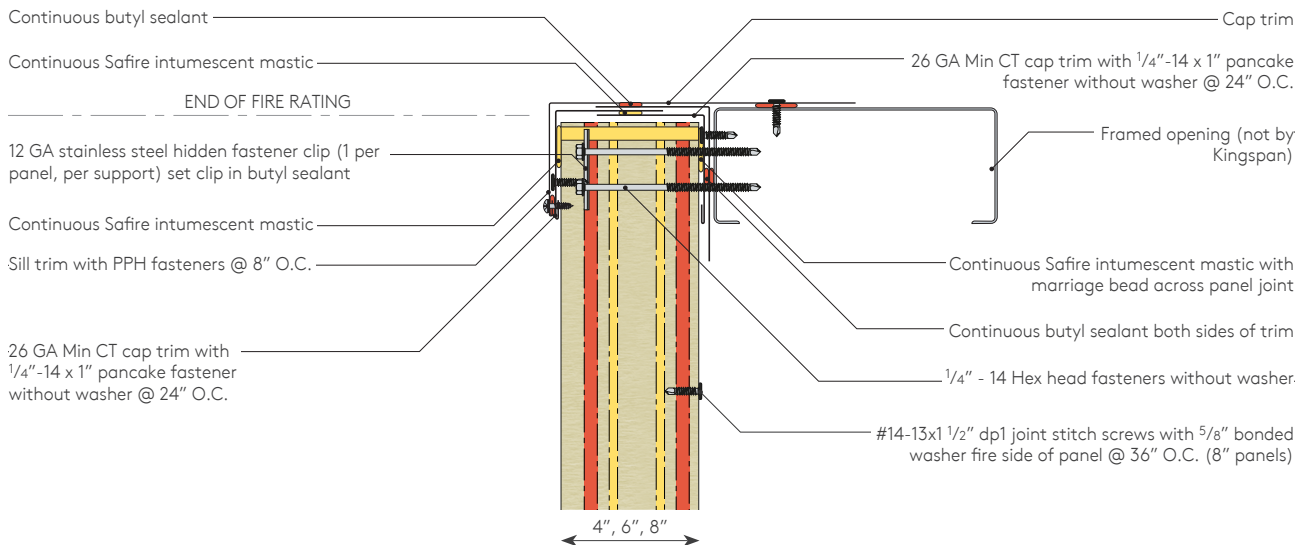


K-Roc HF Series Vertical Construction Details

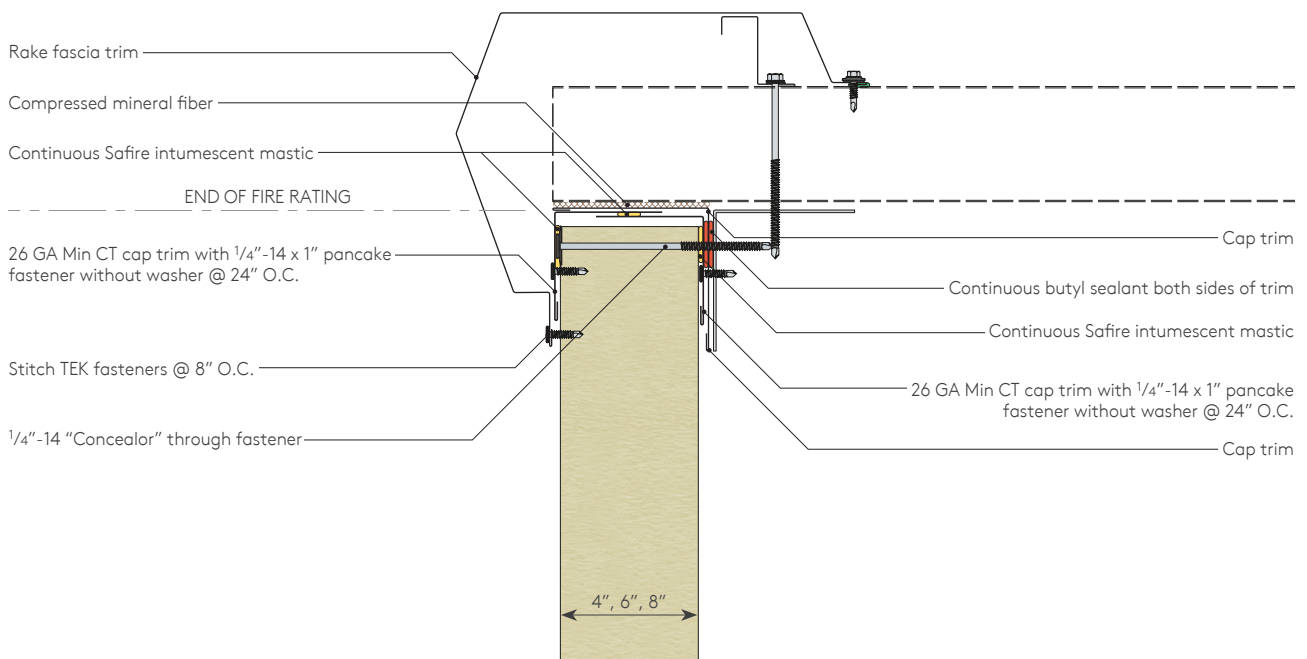
NOTE

See details on page 48 for typical trim lap instructions.

Framed Opening One Piece Flat Trim at Joint Detail

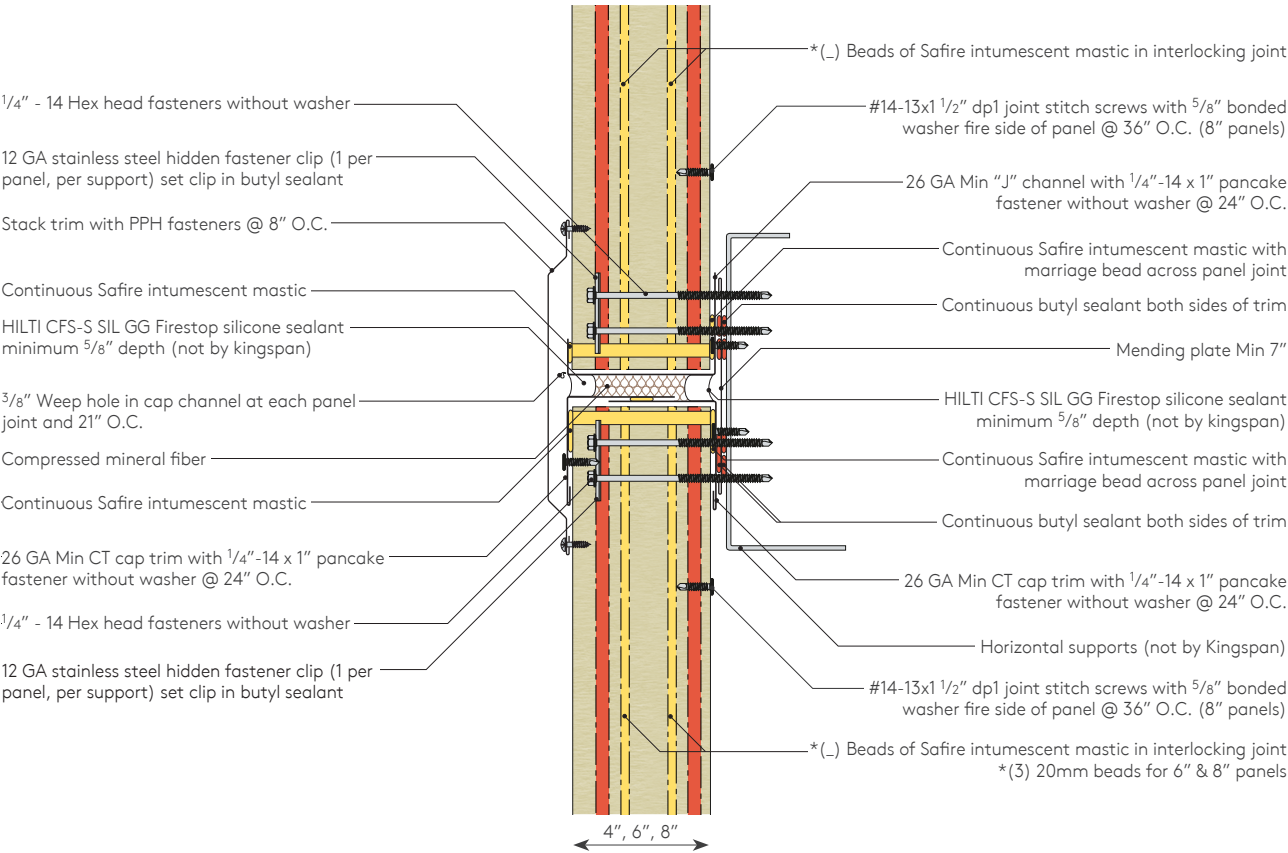


Wall to Roof at Mid-Panel Detail



K-Roc HF Series Vertical Construction Details

Stack Joint Detail



Installation sequence :

Panel 6	Panel 7	Panel 8	Panel 9	Panel 10
Panel 1	Panel 2	Panel 3	Panel 4	Panel 5

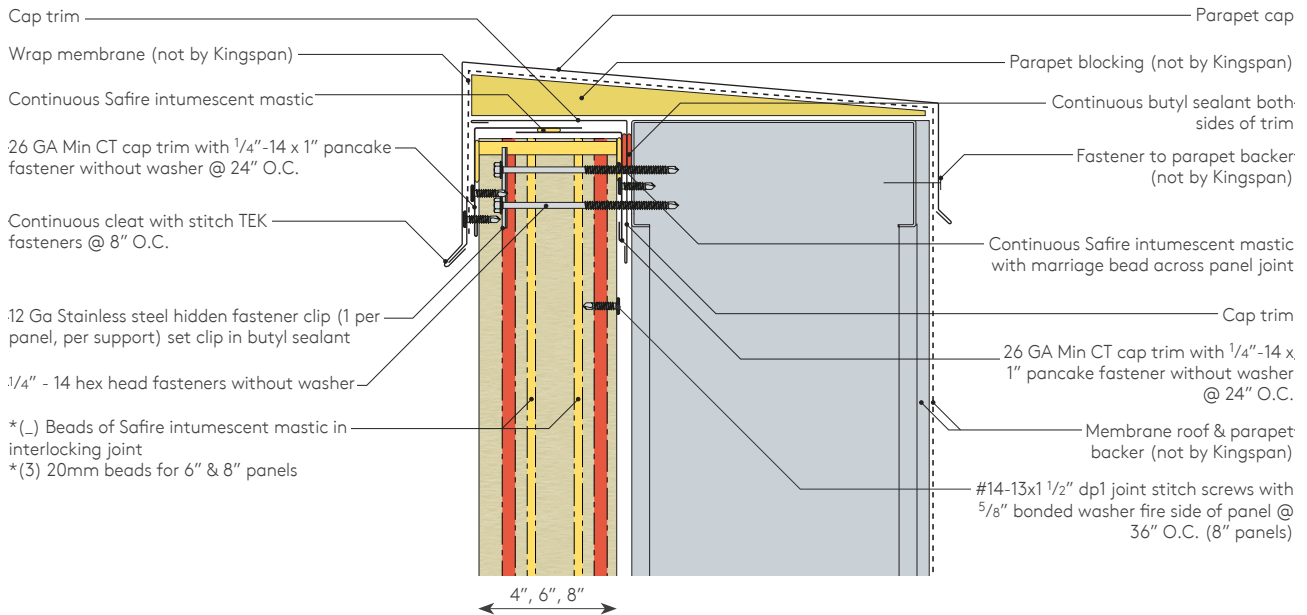
Install bottom row of panels working, within standard lengths of base trim, then install row above - Working up the building as you move across the building allows you to incrementally manage side joint alignment against uncontrolled growth.

NOTE
For wall elevations requiring stack joints, it is necessary that each column of panels is installed at the same time to maintain proper vertical reveal alignment.

NOTE
Numbers indicate order of panel installation.

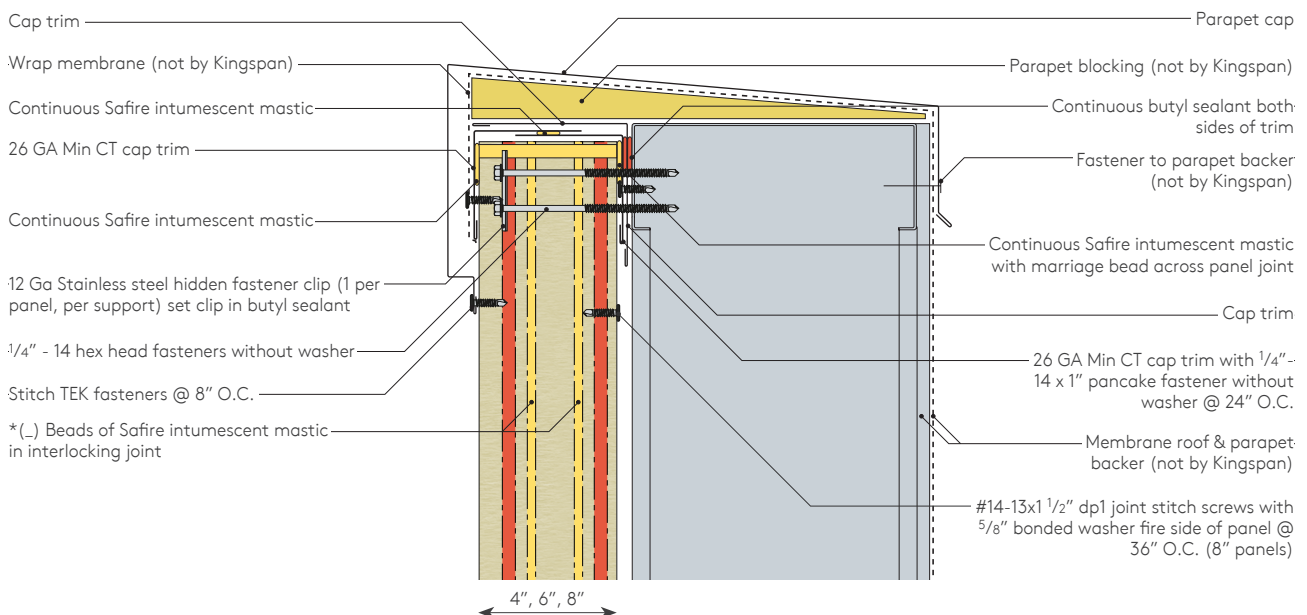
K-Roc HF Series Vertical Construction Details

Parapet with Flat Trim at Joint Detail



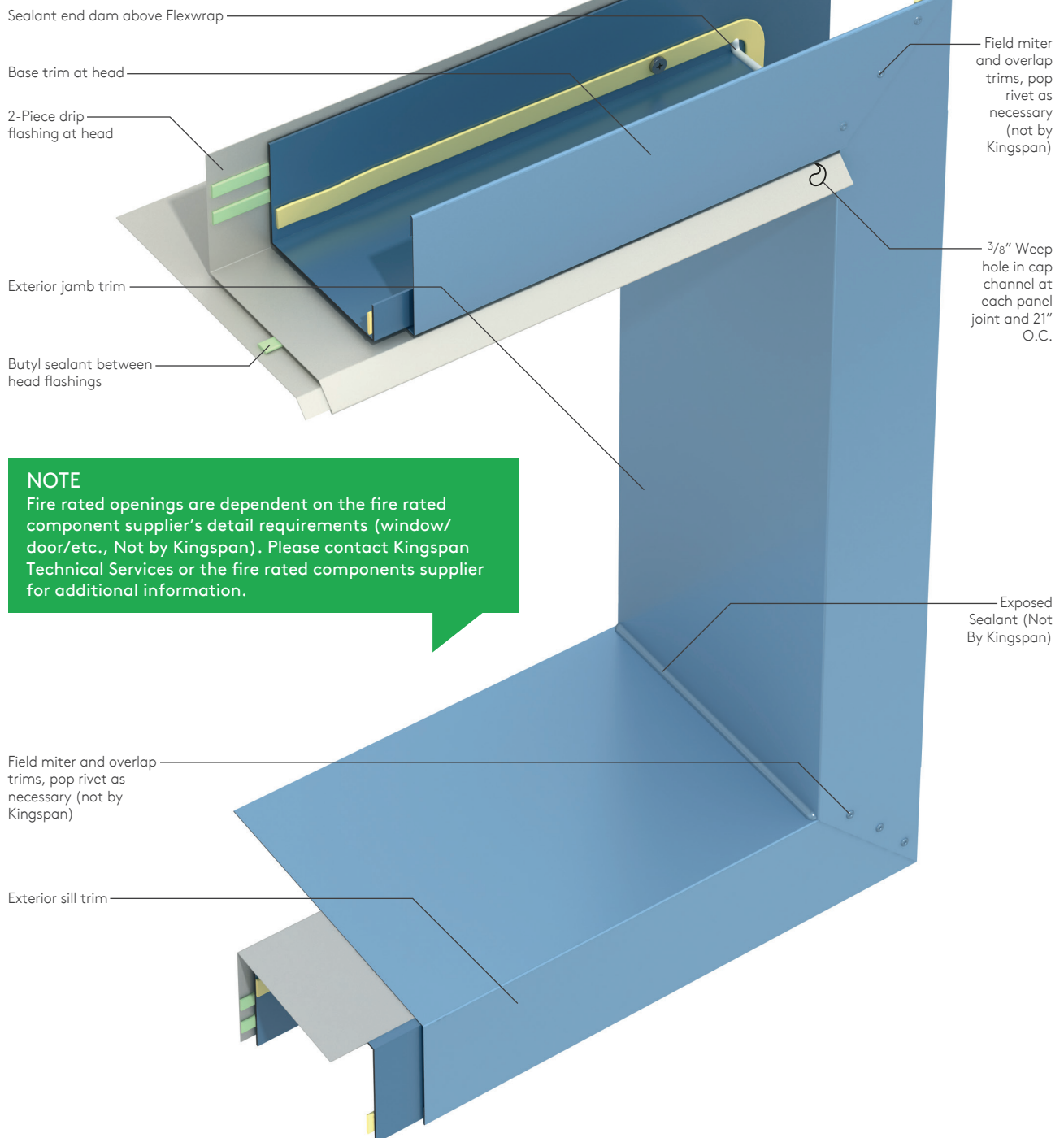
NOTE
See details on page 48 for typical trim lap instructions.

Parapet with Profile Trim at Joint Detail



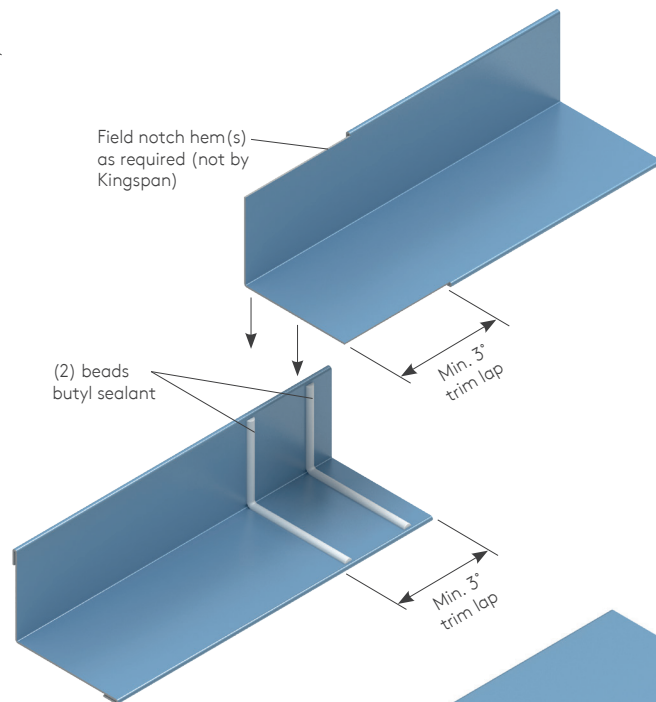
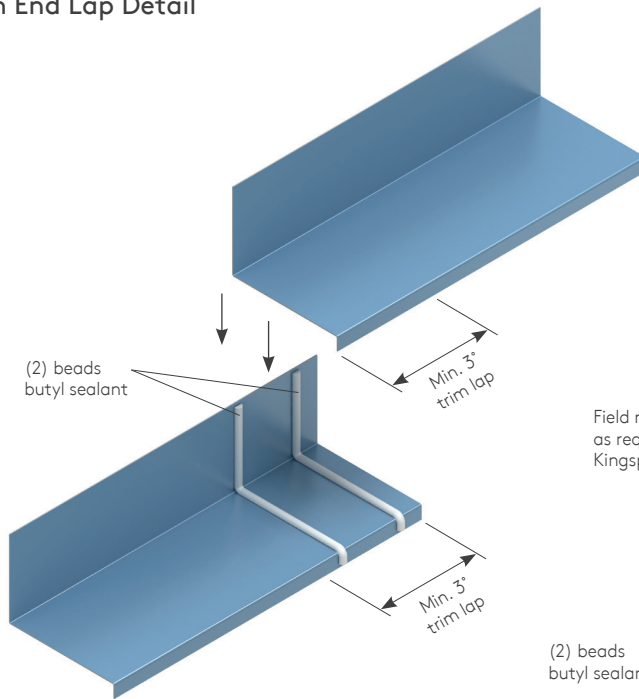
K-Roc HF Series Vertical Construction Details

Trim Lap at Framed Opening Detail

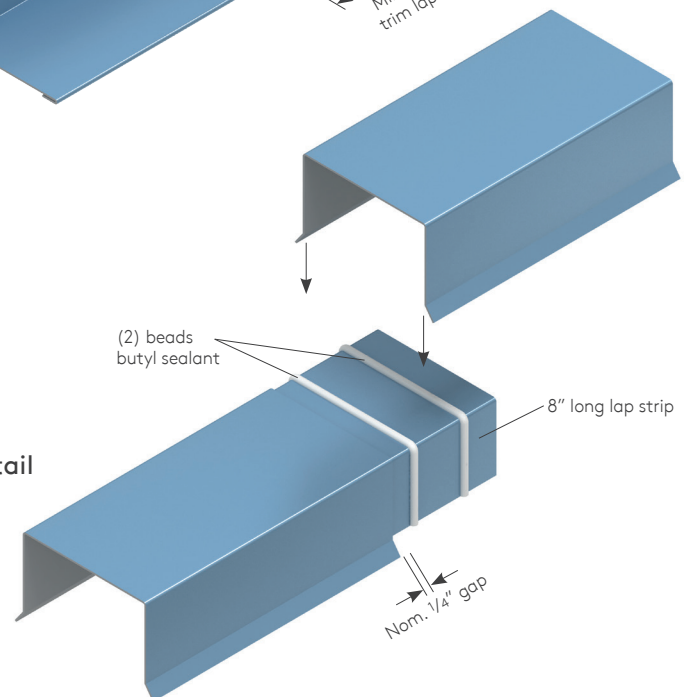


K-Roc HF Series Vertical Construction Details

Trim End Lap Detail



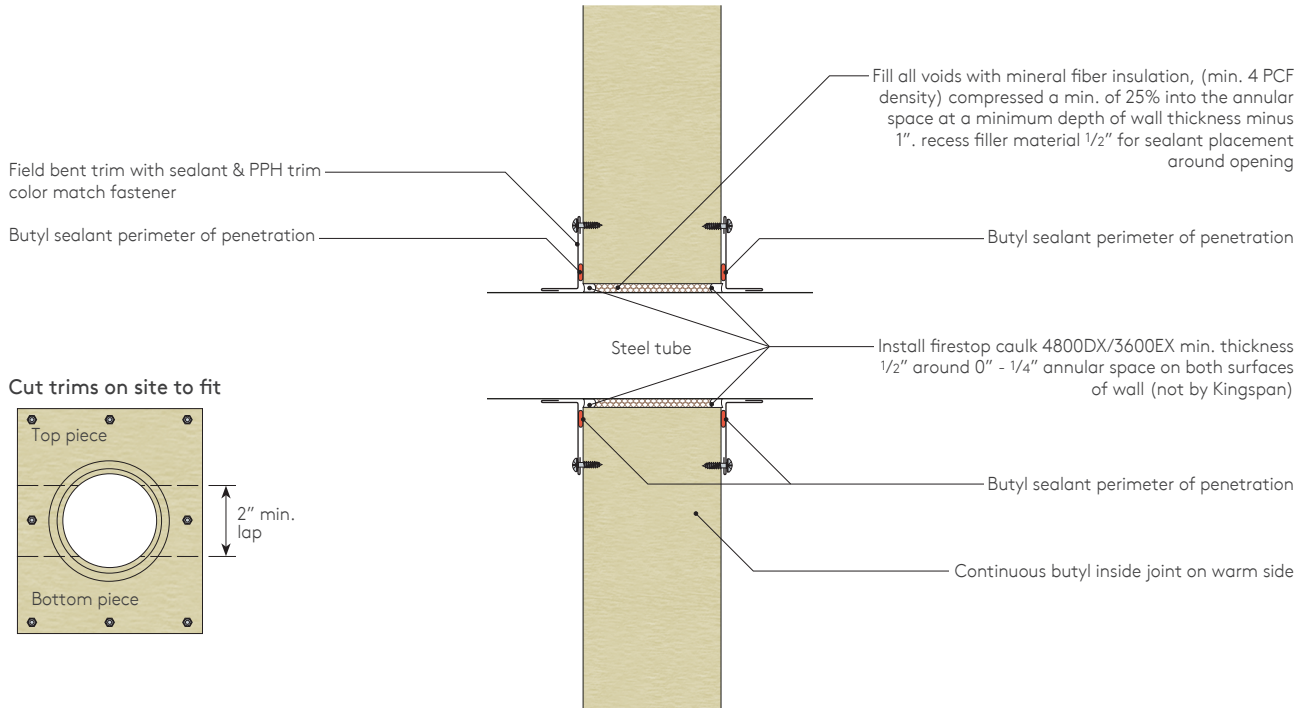
Trim Lap with Hem Detail



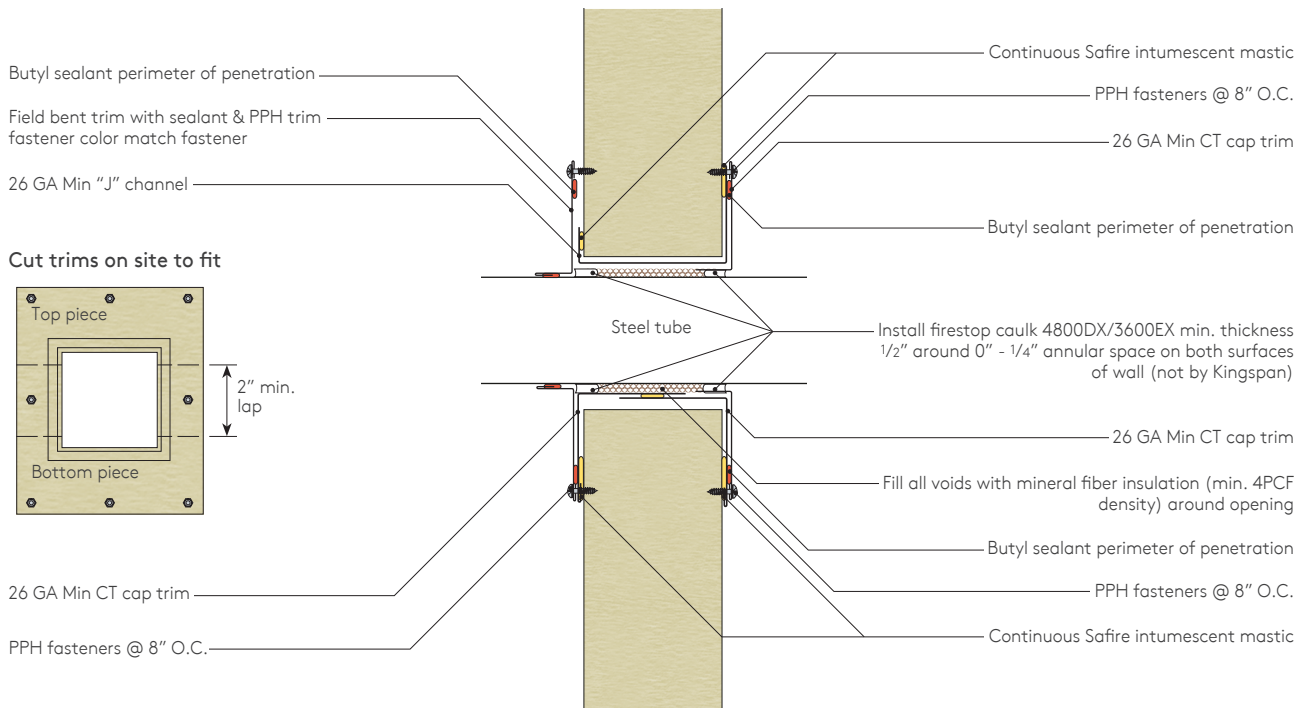
Trim End Lap with Lap Strip Detail

K-Roc HF Series Vertical Construction Details

Wall Penetration Detail

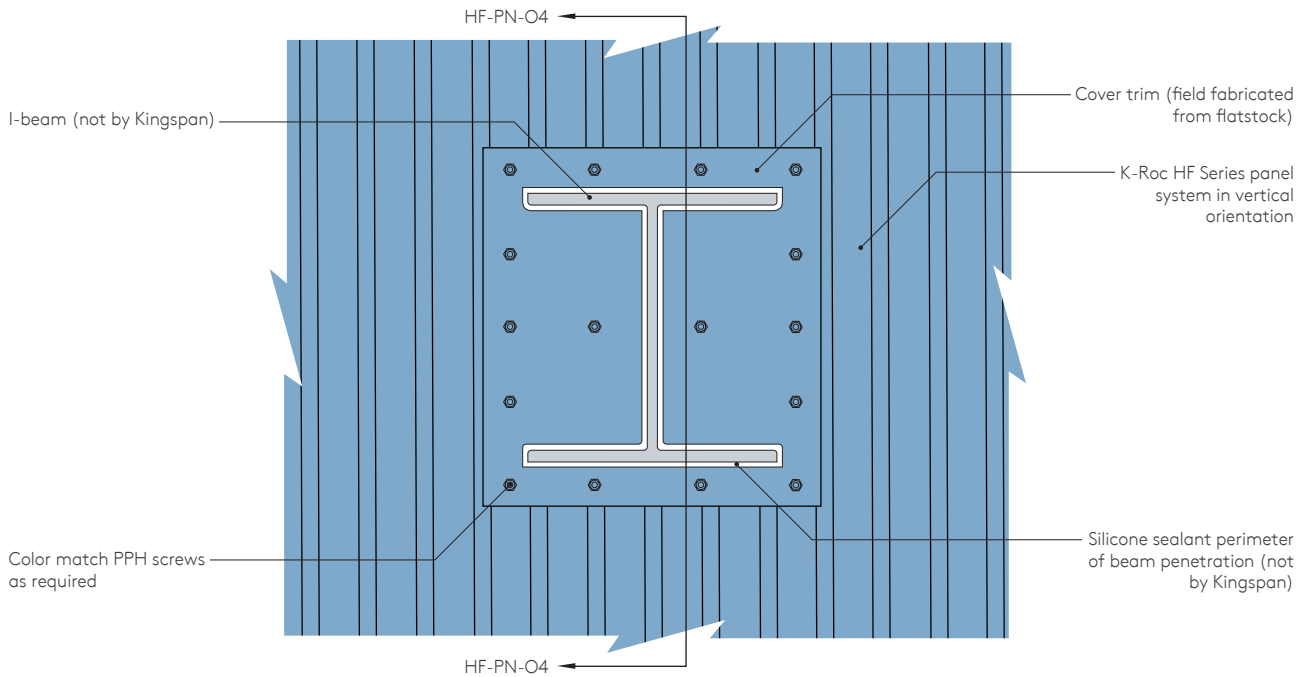


Structural Member Penetration Detail

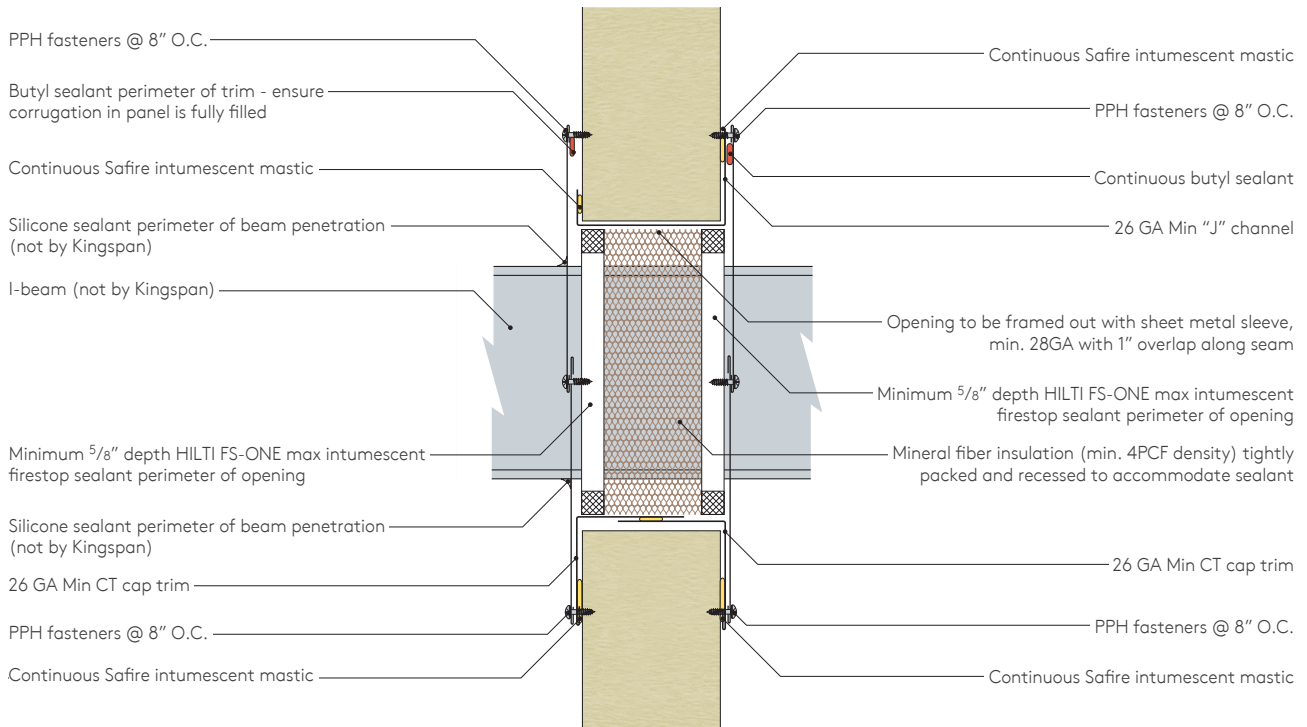


K-Roc HF Series Vertical Construction Details

I-Beam Penetration Detail



I-Beam Penetration Section Detail



K-Roc HF Series Horizontal Installation

K-ROC HF SERIES FIRE RATED PANEL INSTALLATION OVERVIEW:

The entire wall, including all framed openings, base, corners and top of wall will be “picture framed” in 26 GA channels and angles which are set in double beads of butyl sealant. This picture frame must be continuous without any breaks.

A continuous bead of Safire Intumescent Mastic sealant will be applied continuously around the “picture frame”, this will create the fire seal at the rear face of the panels.

The trailing-edge of every panel must have the appropriate beads of both butyl and Safire sealants field applied before the panel is set.

Safire Marriage beads must be applied to the leading edge of every panel before the next panel is set – these beads must marry to the bead of Safire that is on the rear face of the panel. This marriage bead must also extend onto the face of the panel so it can marry to the front fire sealant bead.

A continuous bead of Safire Intumescent Mastic sealant must be applied continuously around the front perimeter of the elevation, including around all framed openings. This will create the fire seal on the front face of the panels. This bead must be continuous without any breaks AND it must join the marriage beads that extend out from the joinery at every panel.

Vertical Joints and corners require use of compressed mineral fiber and Hilti Firestop to continue the fire rating across these conditions.

In summary, a properly installed, fire rated K-Roc HF Series wall will have a bead of Safire Intumescent Mastic sealant that is continuous all around the perimeter of front and rear panel faces on an elevation, there will be continuous, full length beads of Safire in the horizontal joinery between all panels AND there will be marriage beads that connect the front and rear faces to the fire seal in the joinery – there shall be no breaks or interruptions in what becomes a single, continuous bead of Safire sealant.

NOTE

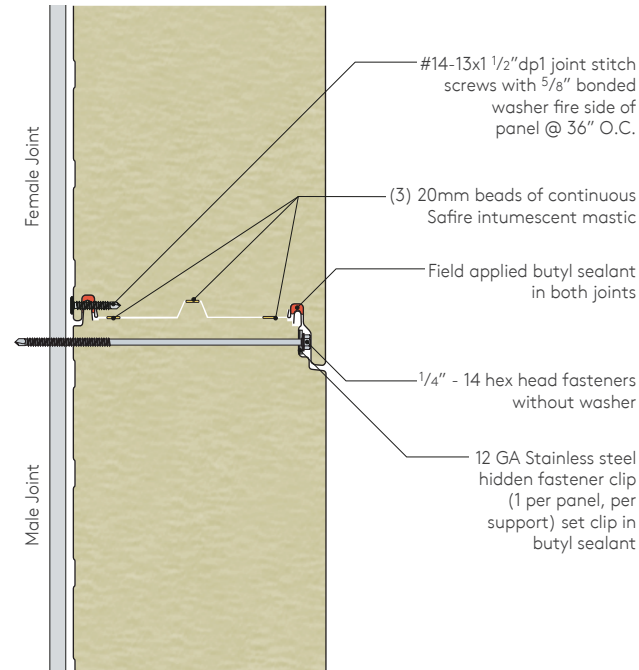
All beads of butyl are to be $\frac{3}{8}$ ” diameter and the double rows of beads shall be located and spaced apart so the fasteners can be driven between the beads - this is important to achieve a proper seal.

NOTE

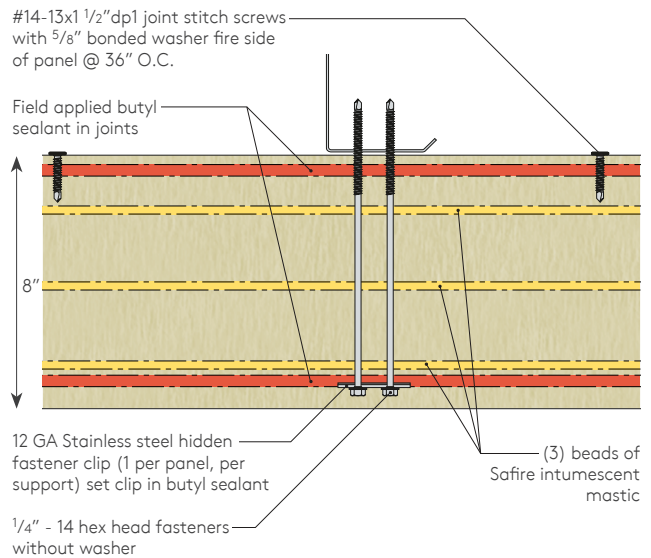
Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Horizontal Installation

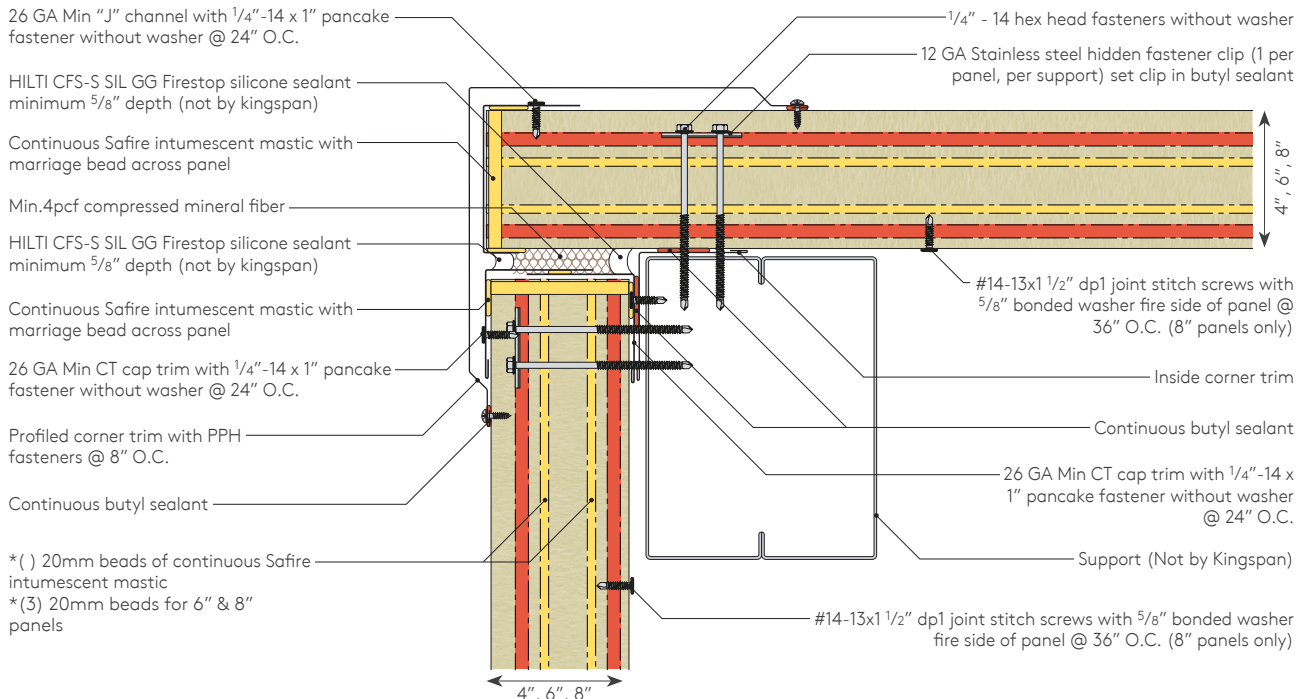
8" Panel Joint Detail



Sealants in Joint 8" Panel Detail



Outside Corner Profiled Trim at Panel Joint Detail



K-Roc HF Series Horizontal Installation

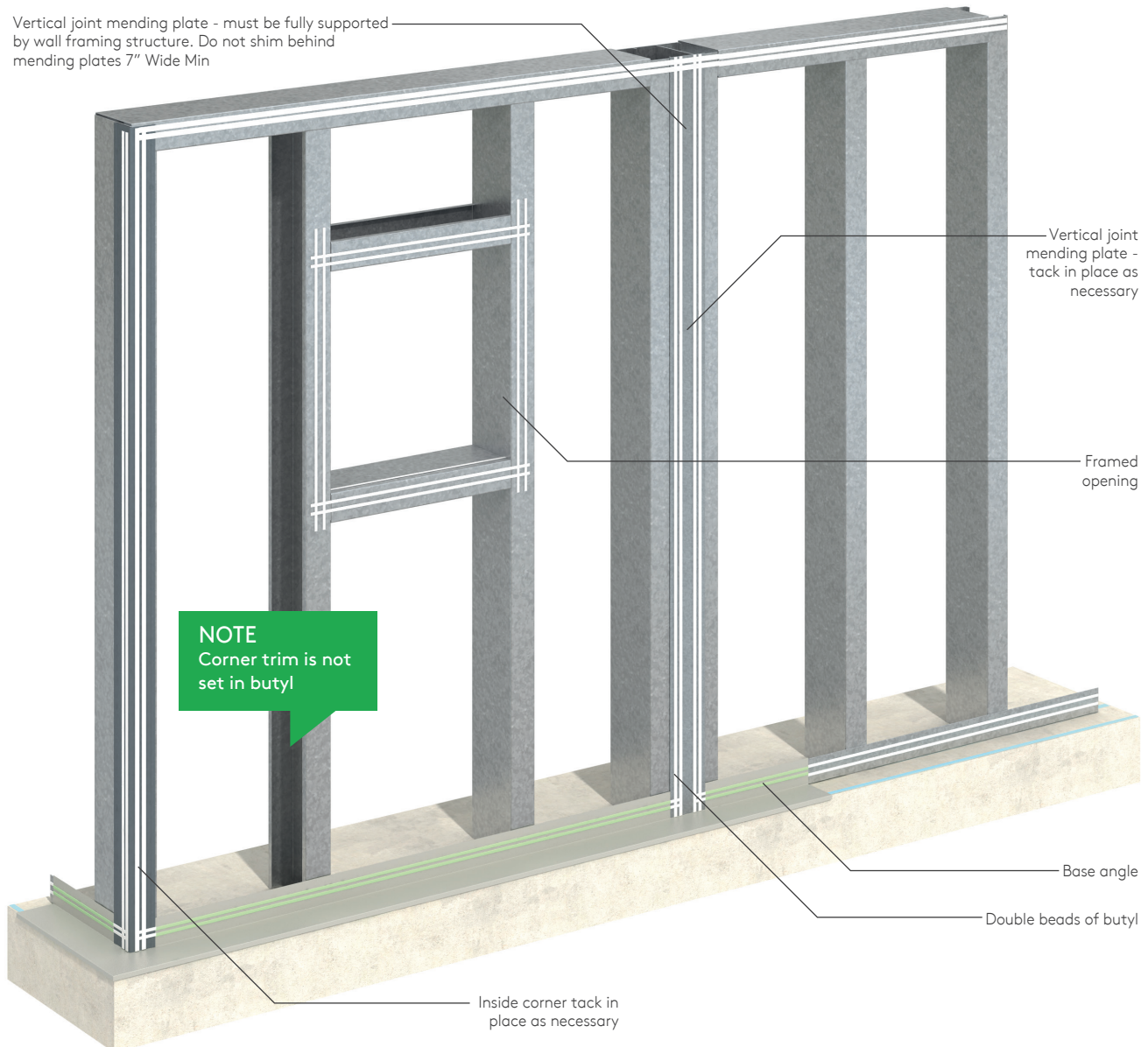
1 Preparing the wall structure:

- a. Verify that the structural supports and framed openings are properly located and aligned BEFORE installing panels (refer to Section 8 Structural Alignment - Horizontal).
- b. Install:
 - i. Base angle, set in sealant (not by Kingspan)
 - ii. Inside / outside corner flashing
 - iii. Stack Joint Mending Plates
- c. Apply double beads of butyl sealant continuously around perimeter of wall including around all framed openings as well as on the base angle and corner trims.

IMPORTANT

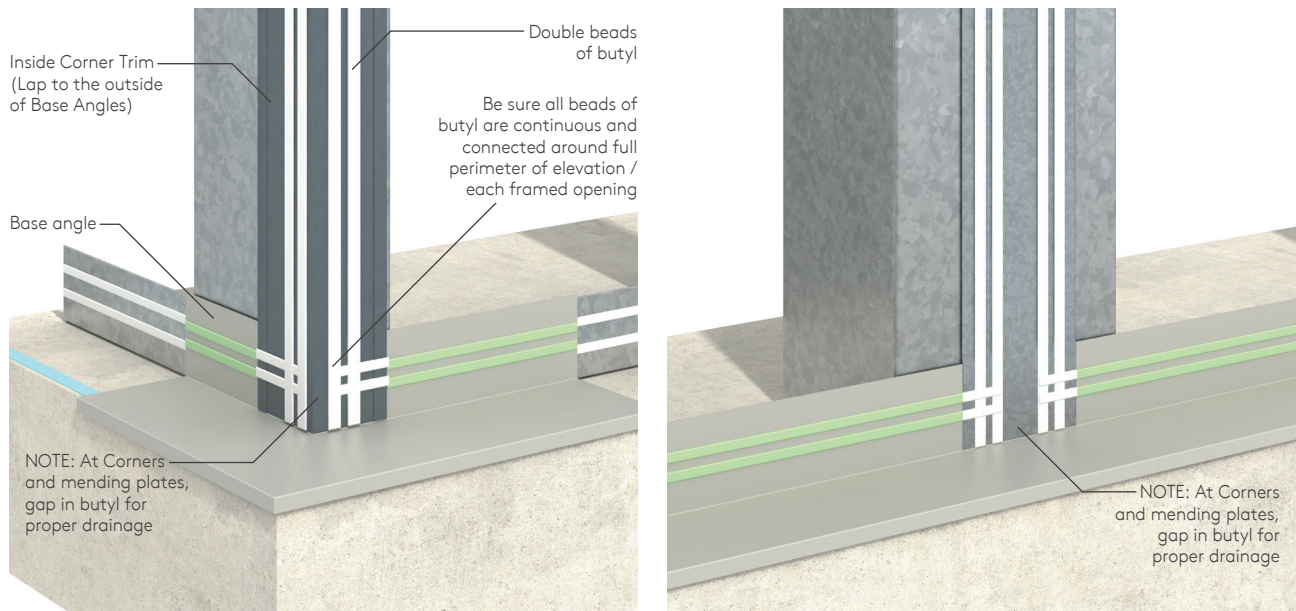
Fire safing of structural elements dependent on code requirements by others.

Vertical joint mending plate - must be fully supported by wall framing structure. Do not shim behind mending plates 7" Wide Min



K-Roc HF Series Horizontal Installation

1 Preparing the wall structure:



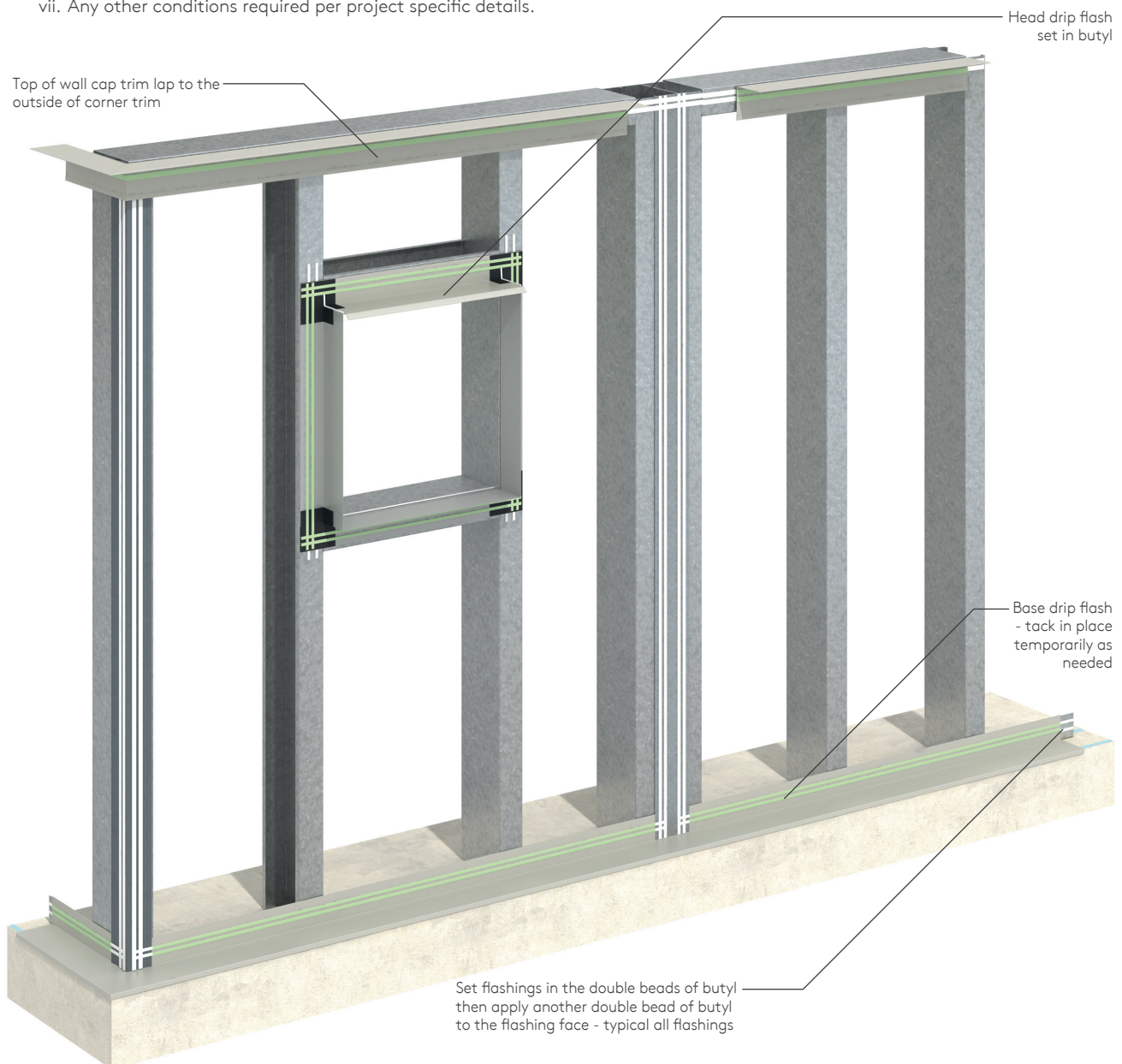
NOTE

Mending plates to be no less than 24 GA to avoid waviness. Fasten 24" O.C. with low profile fasteners.

K-Roc HF Series Horizontal Installation

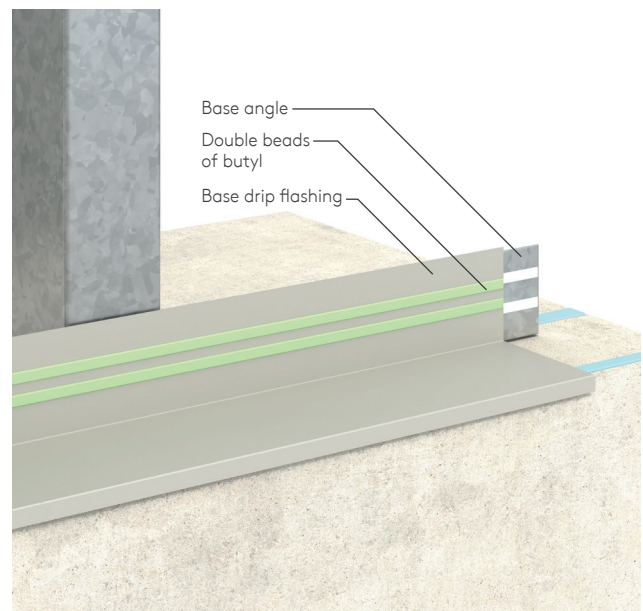
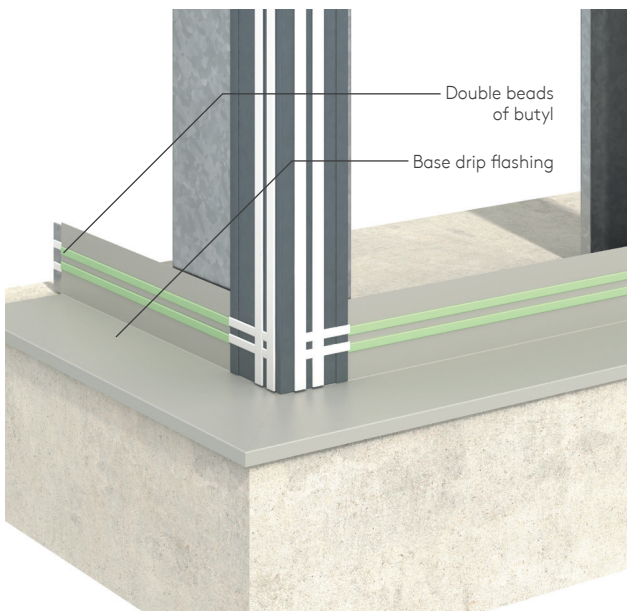
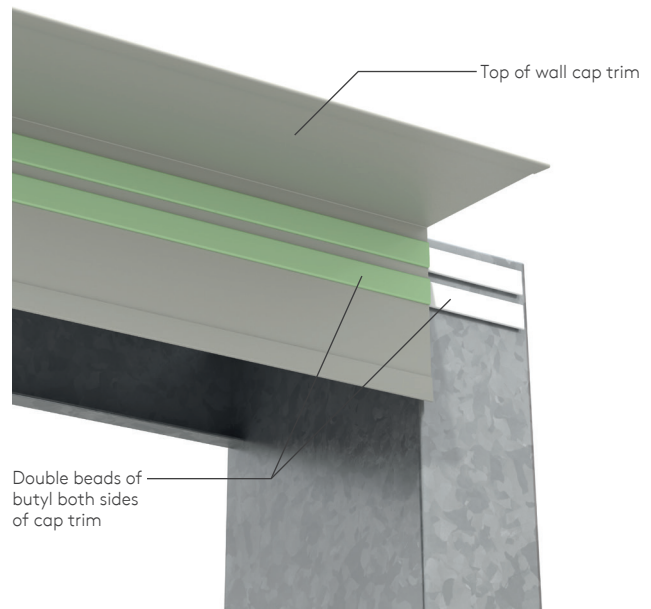
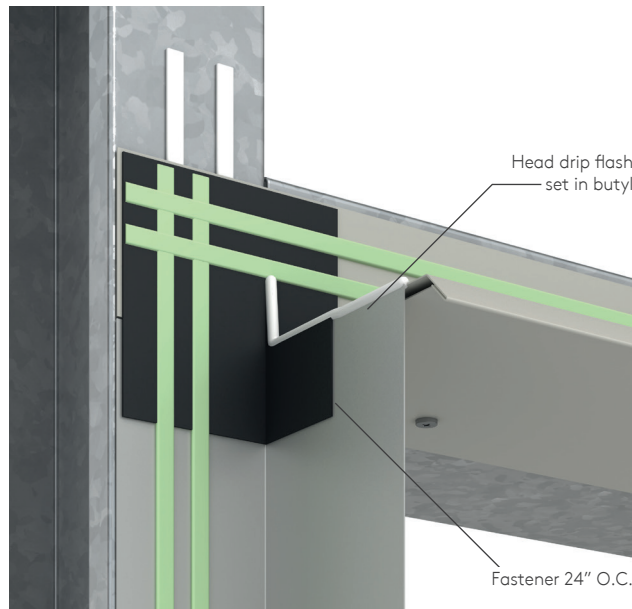
1 Preparing the wall structure:

- d. Install the following items, setting them in the beads of butyl applied in previous step (refer to End Lap details for proper application of butyl sealant at lap joints). Fasten all flashings 24" on center as shown in details:
- i. Base Drip flash
 - iv. Head Drip Flash (two-piece)
 - v. Top of Wall Cap Trim
 - vii. Any other conditions required per project specific details.
- e. Apply double beads of butyl sealant to face of all drip flash, CT cap trims, mending plates, etc. all around perimeter of wall and framed openings.



K-Roc HF Series Horizontal Installation

1 Preparing the wall structure:



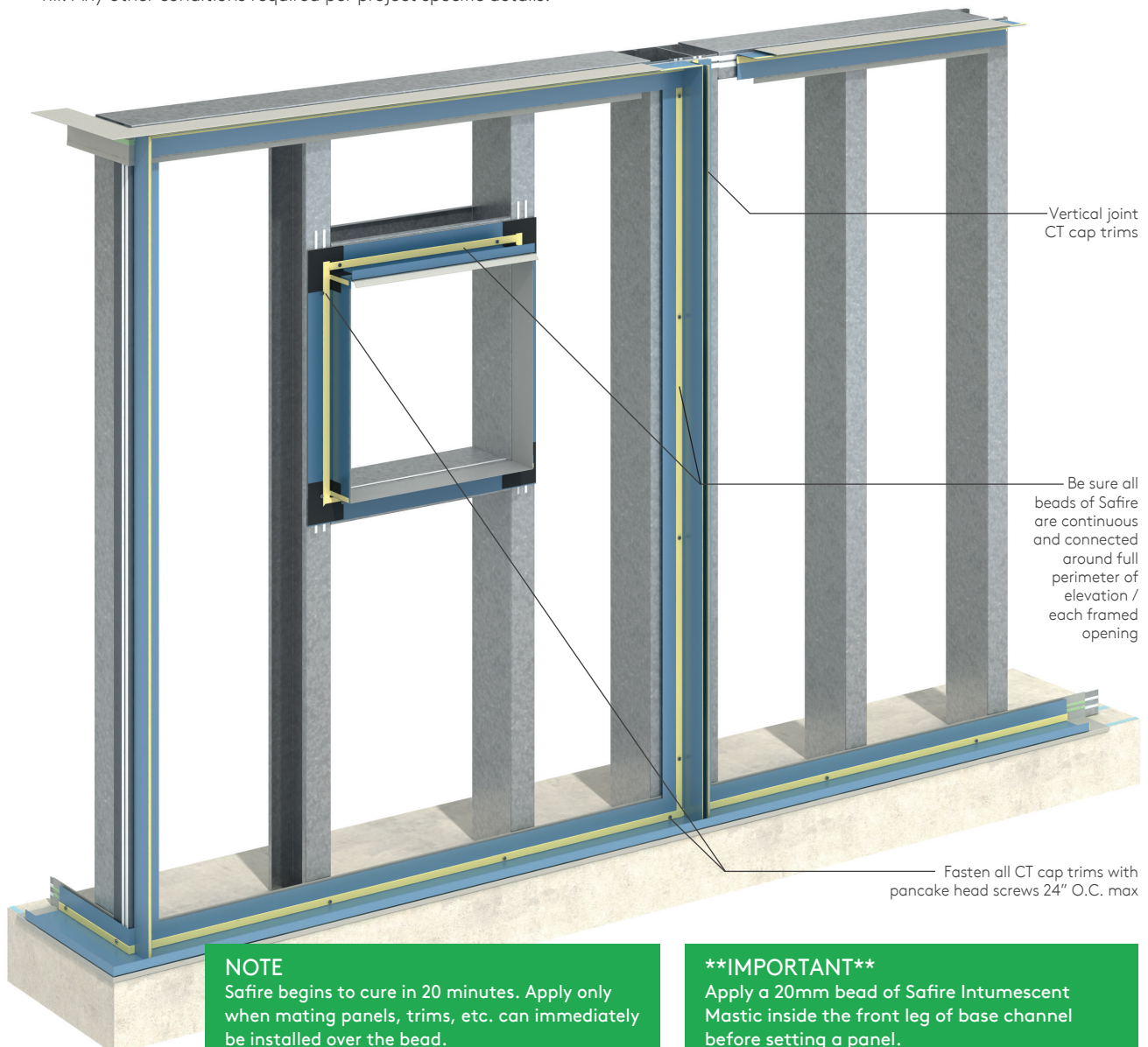
K-Roc HF Series Horizontal Installation

1 Preparing the wall structure:

- f. Install 26 GA CT cap trims, setting them in the beads of butyl applied in previous step. Fasten all channels 24" on center as shown in details:
- i. Base J channel
 - ii. Sill CT cap trim
 - iii. Jamb CT cap trims
 - iv. Head J channel
 - v. Top of Wall CT cap trims
 - vi. Outside Corner CT cap trims
 - vii. Vertical Joint CT cap trims
 - viii. Any other conditions required per project specific details.

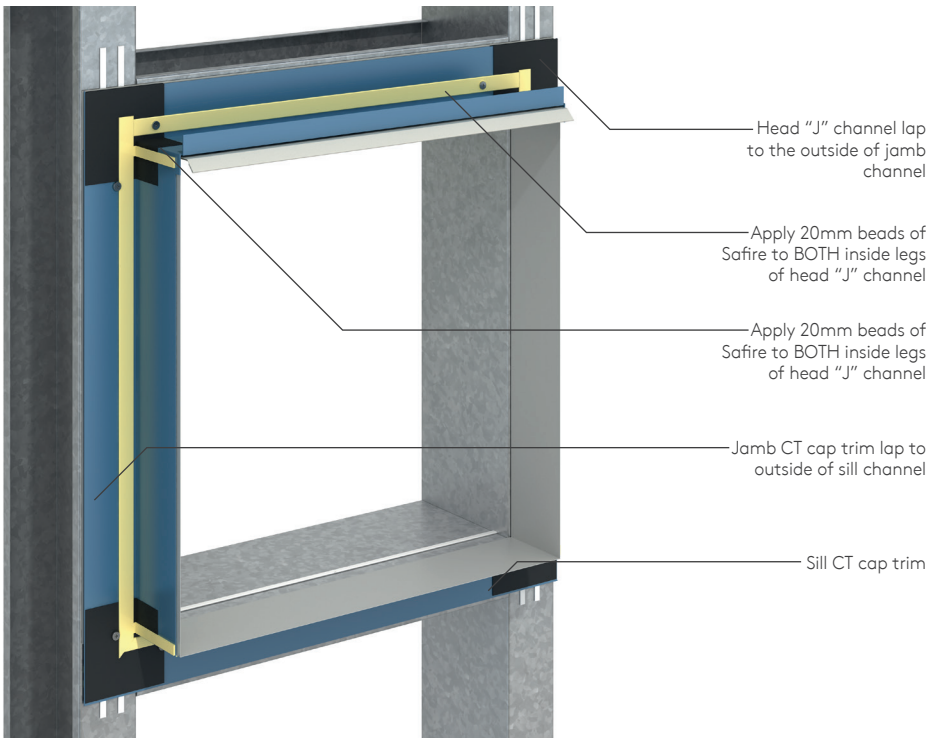
NOTE

Apply 20mm beads of Safire Intumescent Mastic to face of components previously installed in steps 1.d and 1.f. Refer to details for exact location of beads. The bead of Safire is to be continuous, without any gaps to provide complete seal on the rear face of the panels to be set.



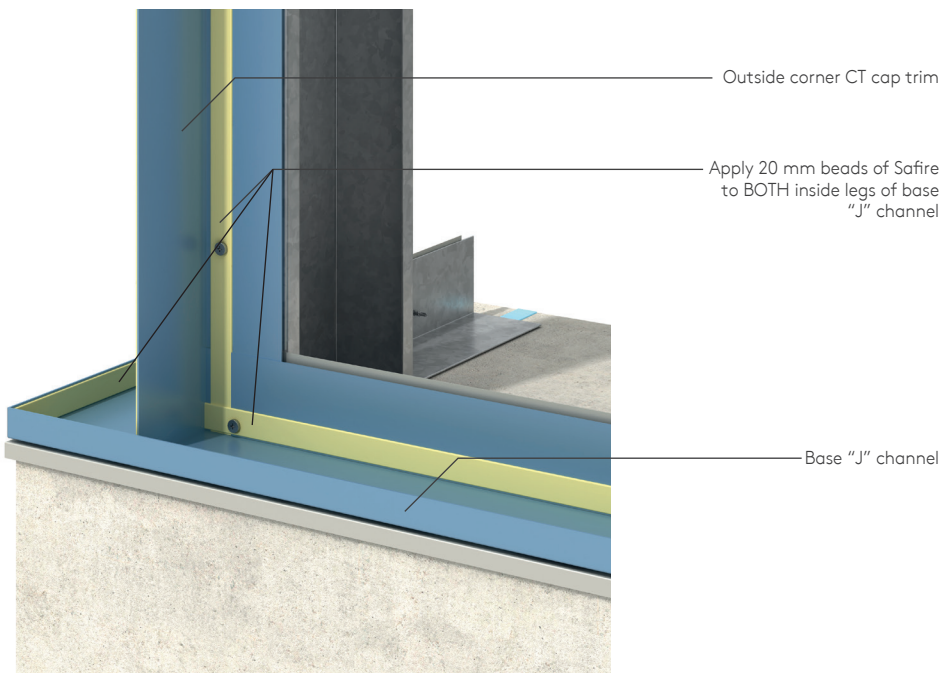
K-Roc HF Series Horizontal Installation

1 Preparing the wall structure:



NOTE
Notch and form ends of head and sill.

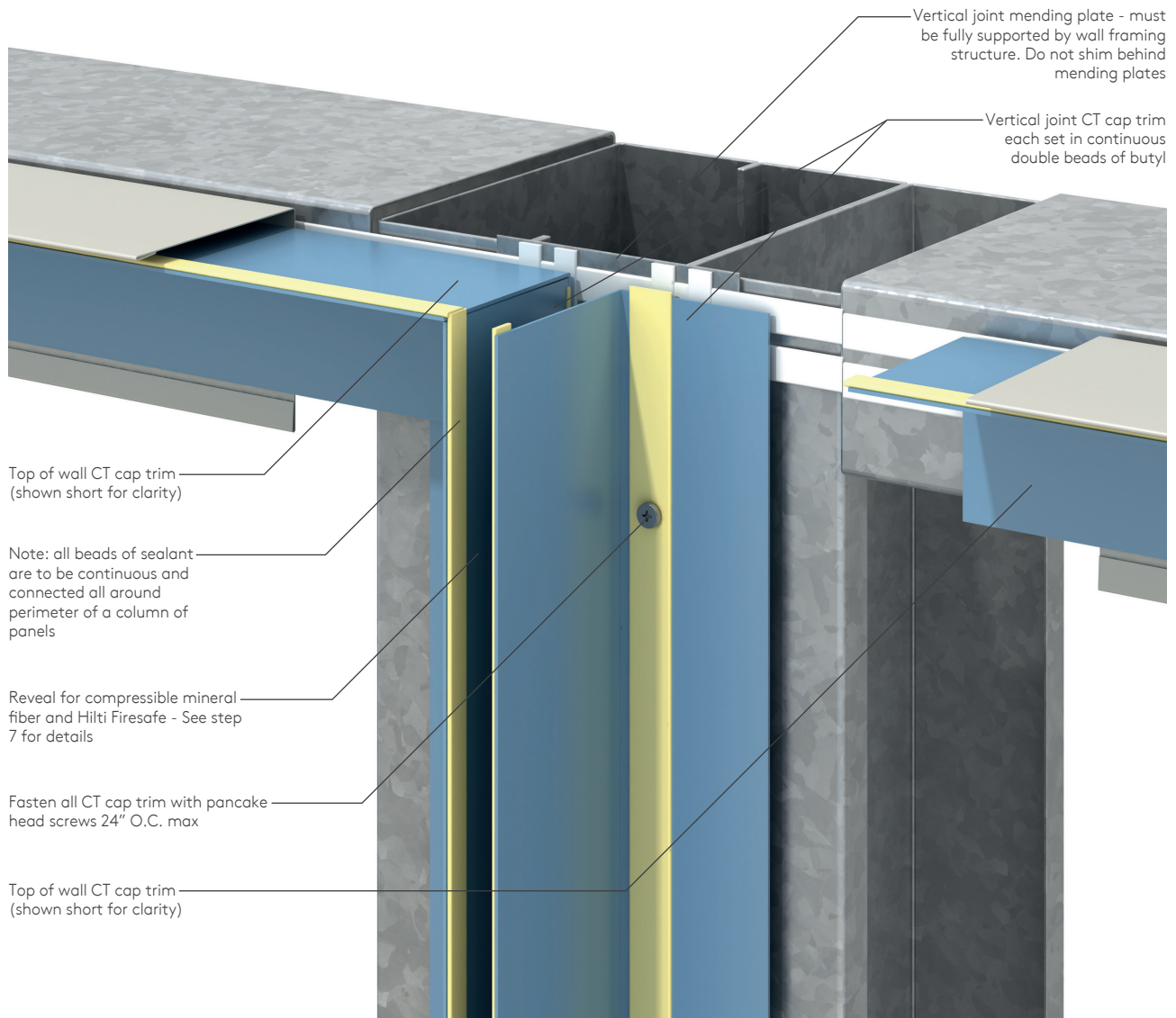
NOTE
Screw heads shown for clarity, cover heads with Safire.



NOTE
Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Horizontal Installation

Vertical Joint CT Cap Trim Detail



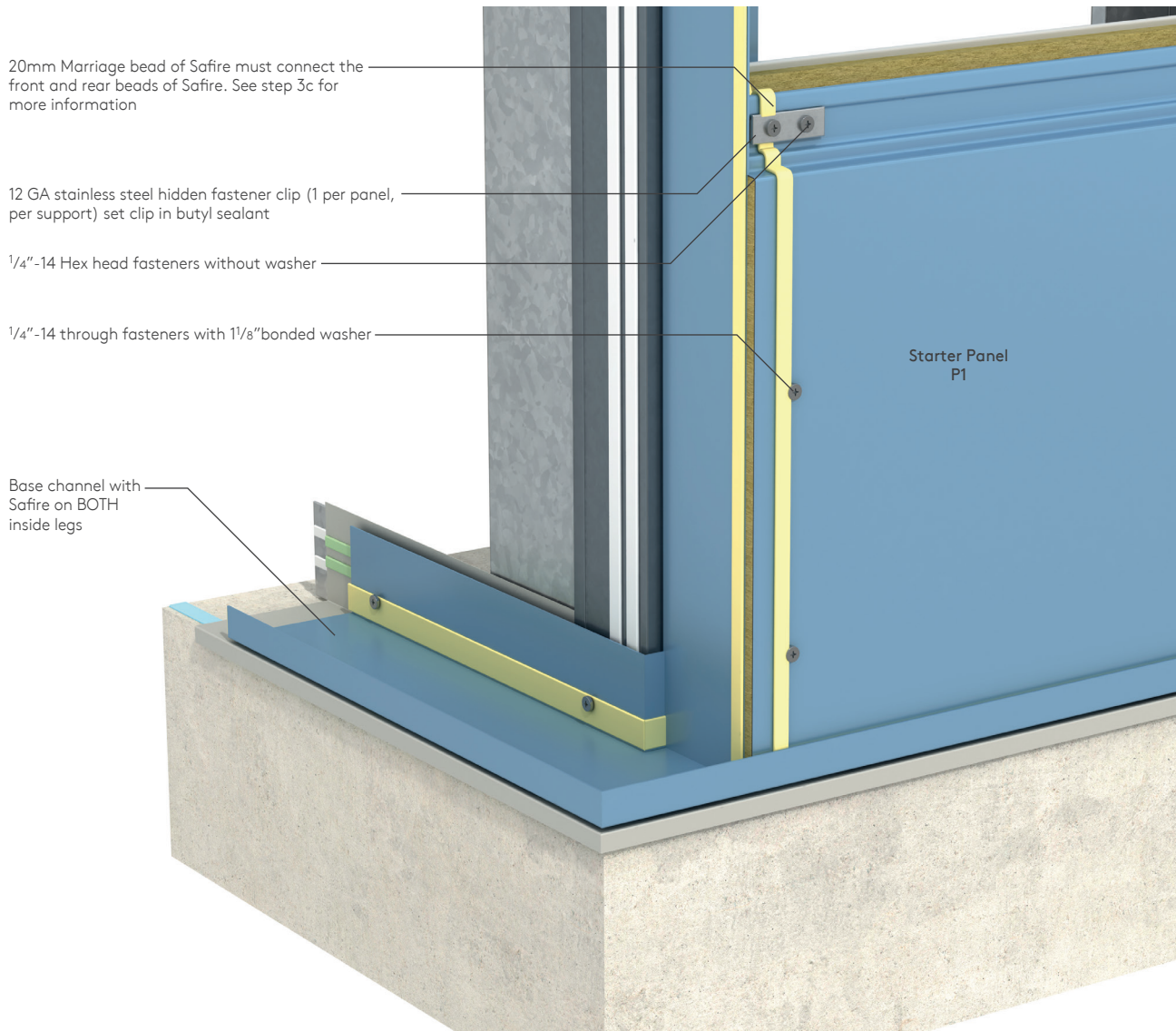
NOTE
Screw heads shown for clarity, cover heads with Safire.

K-Roc HF Series Horizontal Installation

2 Installing the starter panel, P1:

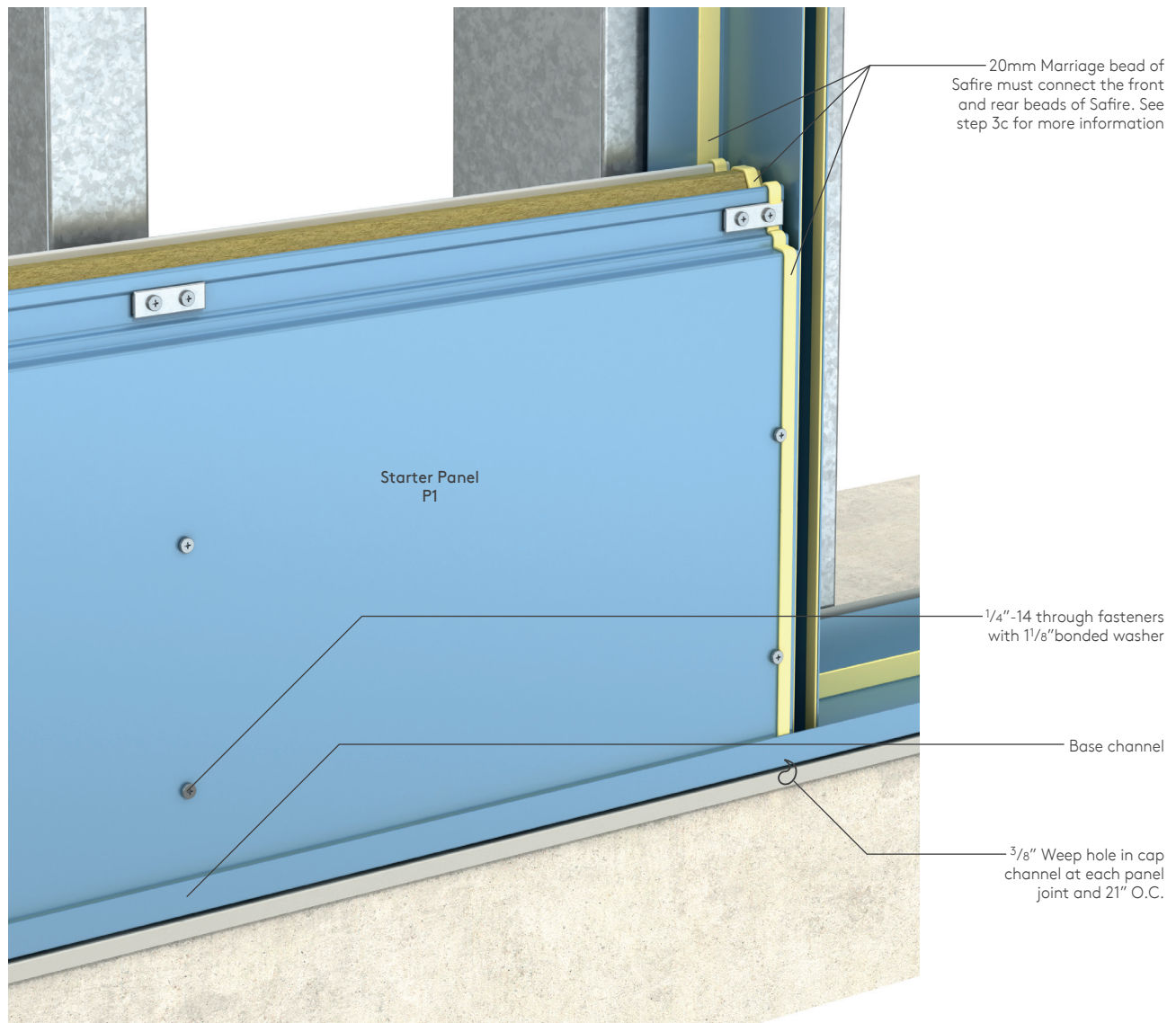
- Cut the joints off TRAILING edge of the starter panel. Be sure to cut the first panels to proper width so that panel joints at framed openings are properly aligned.
- Lift starter panel and set in place in the base channel. Press panel firmly into structure to seat it into Safire Intumescent Mastic.
- Verify panel is horizontal using a level placed on leading (non-cut) edge.
- Install hidden clips with 2 fasteners at EVERY structural support per shop drawings. Do not over tighten fasteners as panel damage will result. Also attach trailing (cut edge) of panel to structure with fasteners as required per project details.

IMPORTANT
Ensure panel is fully secured
before setting next panel.



K-Roc HF Series Horizontal Installation

2 Installing the starter panel, P1:



NOTE

Screw heads shown for clarity, cover heads with Safire.

NOTE

Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Horizontal Installation

3 Completing the panel installation:

- a. Apply butyl joint sealant to the trailing edge of the second panel, **P2**, per section 10. Sealant volume should be adequate to properly seal male and female joints (approx. 50% fill in female pockets).
- b. Apply 20mm Safire Intumescent Mastic beads to the trailing edge of **P2**, continuous, full length, in the correct quantities and locations according to the panel thickness per Section 10.

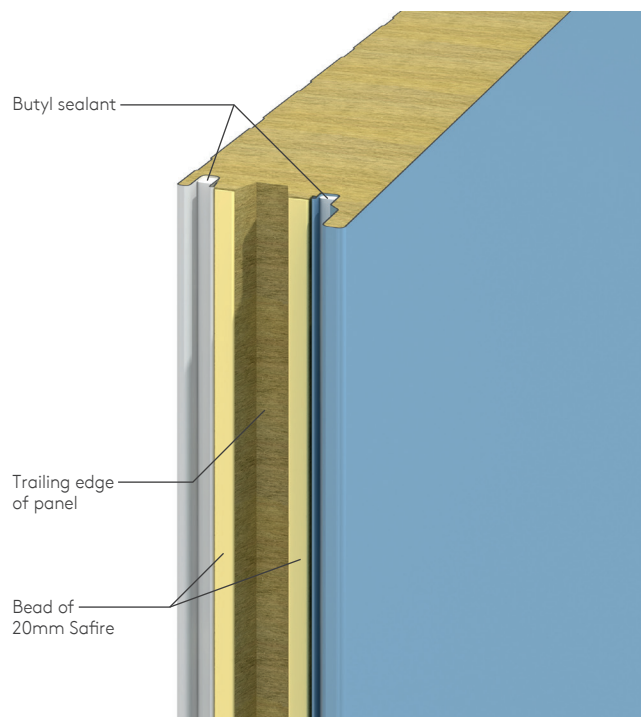
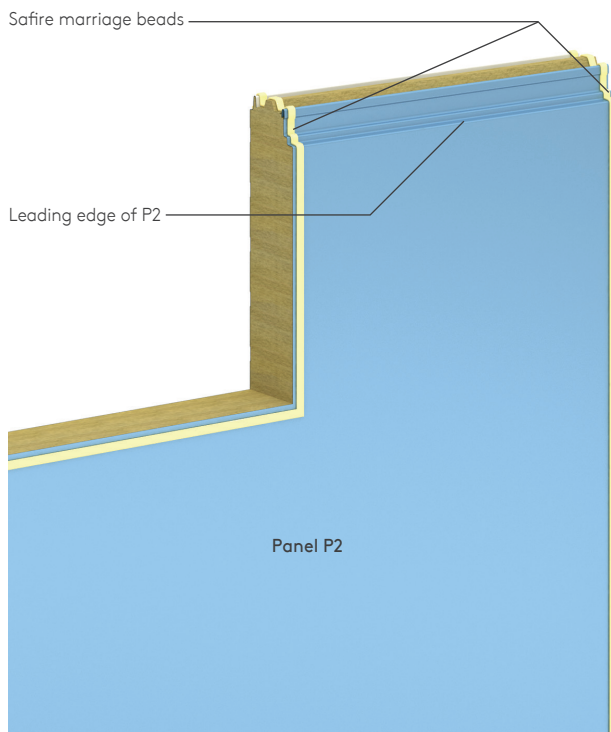
c ****IMPORTANT****

Apply to the ends of the previously installed panel, **P1**, a 20mm bead of Safire Intumescent Mastic marriage bead connecting the rear bead of Safire, across panel joint beads **AND** continue onto the front face of panel so that it can marry to a Safire bead that will later be applied to the face of the panels – this is essential to ensure proper fire protection. Marriage beads are to be applied at the left and right ends of every panel and each side of every panel cutout.

d ****IMPORTANT****

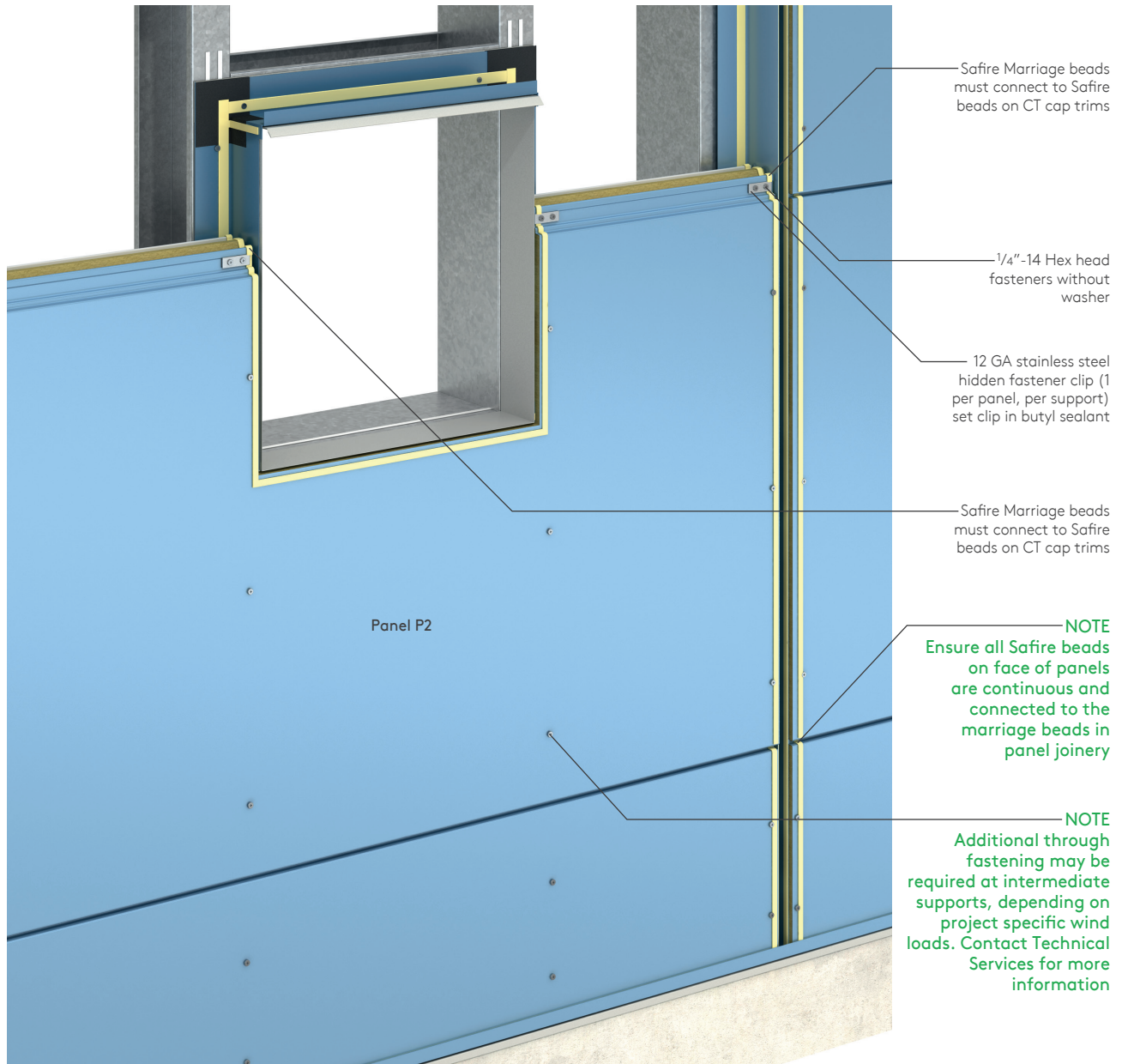
Apply Safire Intumescent Mastic bead inside the front leg of every Base and Head "J" channel before setting a panel.

- e. Lift panel **P2** into position and fully engage with previously installed panel. Verify panel is horizontal using a level placed on the leading edge and install hidden clips and fasteners per project details.
- f. Install hidden clips with 2 fasteners at EVERY structural support per shop drawings. Do not over tighten fasteners as panel damage will result.
- g. Through fasten panel across panel face at every support if / as required per project specific details. Do not over tighten fasteners.



K-Roc HF Series Horizontal Installation

3 Completing the panel installation:



IMPORTANT

Ensure panel is fully secured before setting next panel.

NOTES

Safire begins to cure in 20 minutes. Apply only when mating panels, trims, etc. can immediately be installed over the bead.

K-Roc HF Series Horizontal Installation

4 Completing the panel installation:

- a. Repeat previous steps 3.a through 3.g until all panels are secured in a column.

****IMPORTANT****

Apply 20mm bead of Safire Intumescent Mastic to the face of the K-Roc HF Series panels all around the perimeter of the wall in preparation for the 26 GA front cap installation. This bead of Safire must connect to the marriage beads of Safire installed per step 3.c and 3.d.

NOTE

Both ends of every bead of Safire that is applied shall be married to another bead of Safire and it shall be continuous with no open ends or gaps.

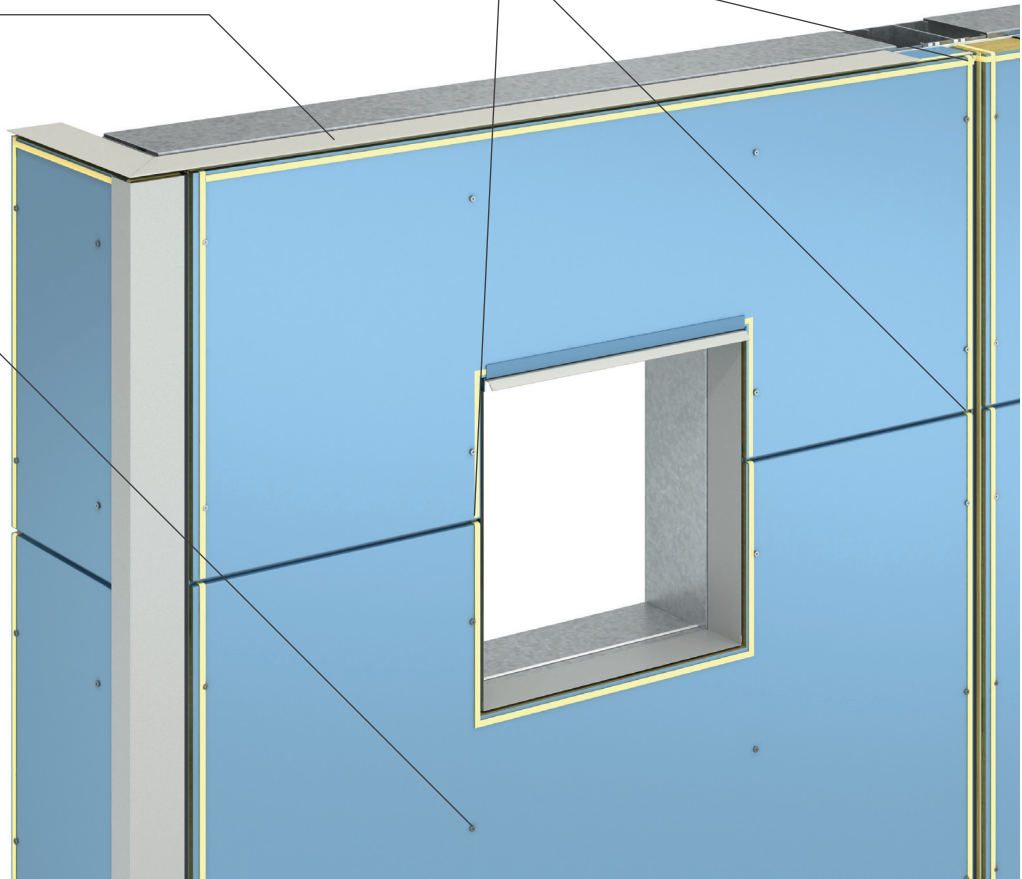
NOTE

Field cutting panels is required at any rake condition.

Safire beads on face of panels must connect to the marriage bead within panel joinery and be continuous all around perimeter of an elevation

Cap trim

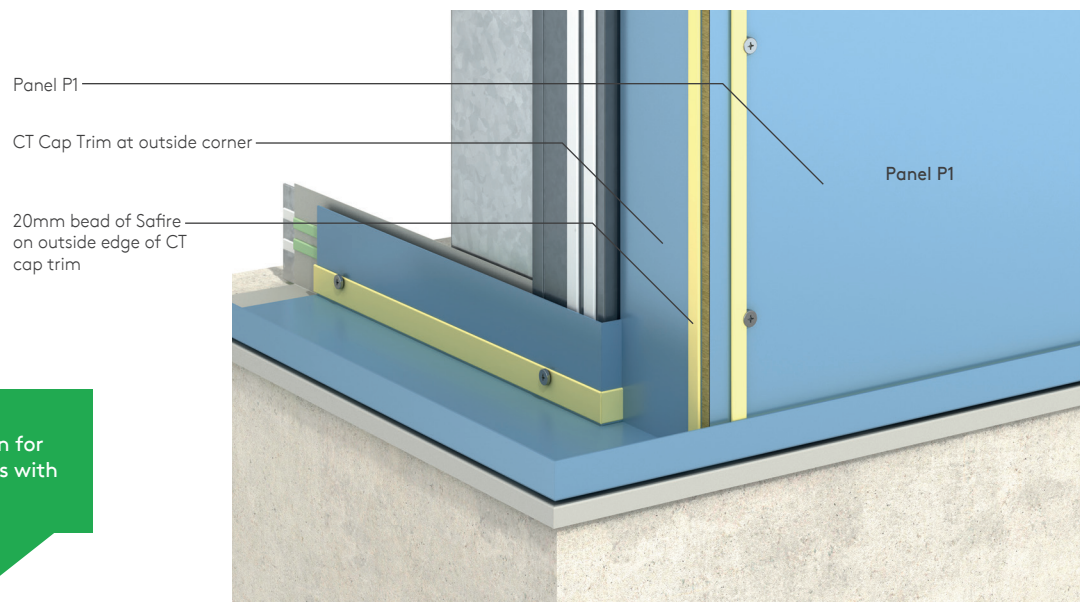
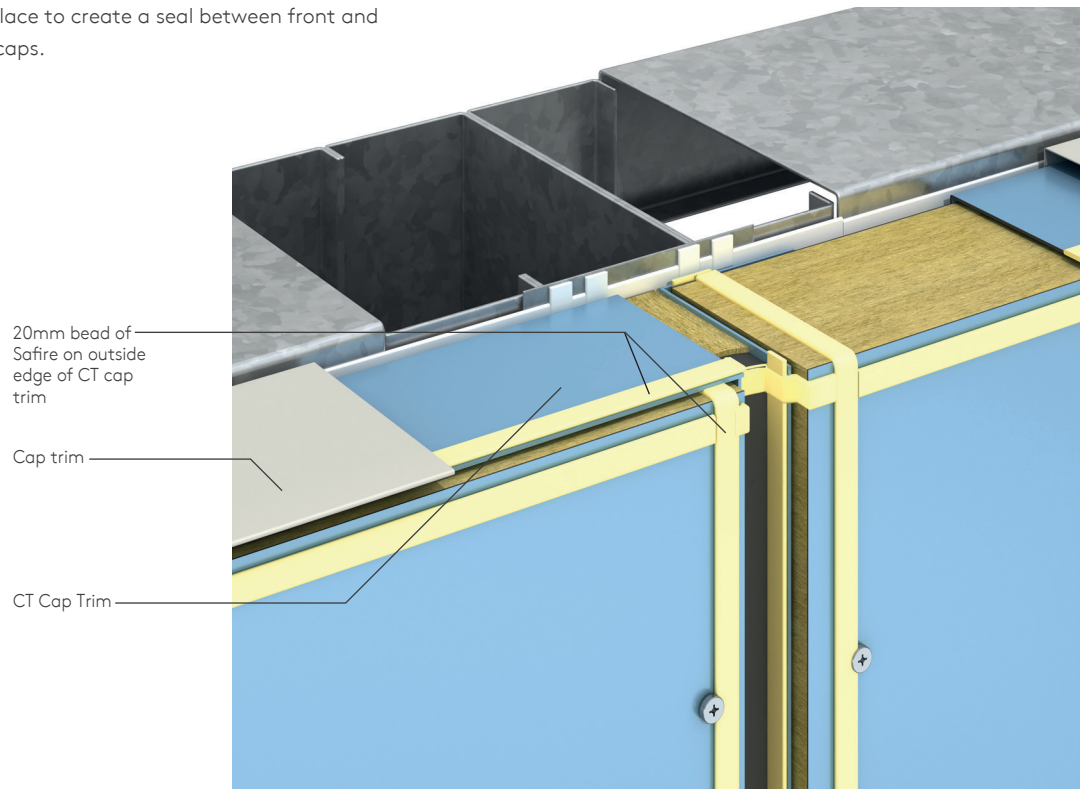
1/4" -14 through fasteners with 1 1/8" bonded washer



K-Roc HF Series Horizontal Installation

4 Completing the panel installation:

- c. Apply a continuous 20mm bead of Safire to the outside edge of the previously installed 26 GA Min CT Cap Trim, angles, etc.
– this must be in place to create a seal between front and rear pieces of GA caps.



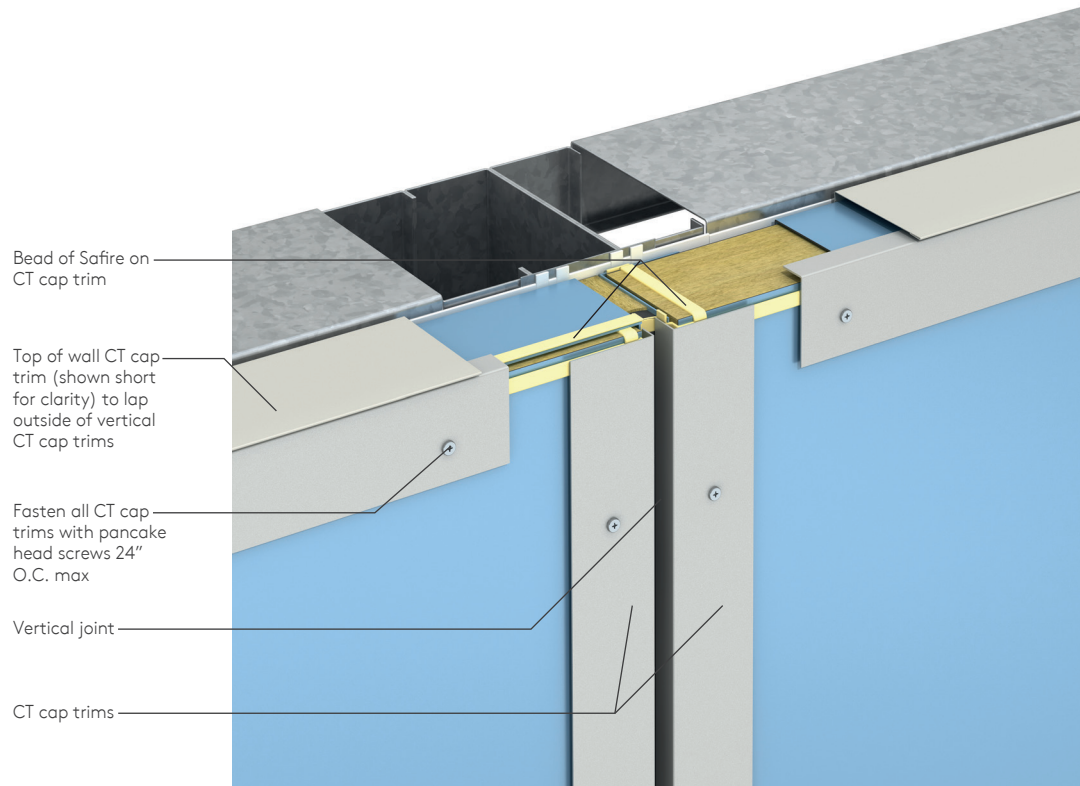
NOTE

Screw heads shown for clarity, cover heads with Safire.

K-Roc HF Series Horizontal Installation

5 Vertical Joint:

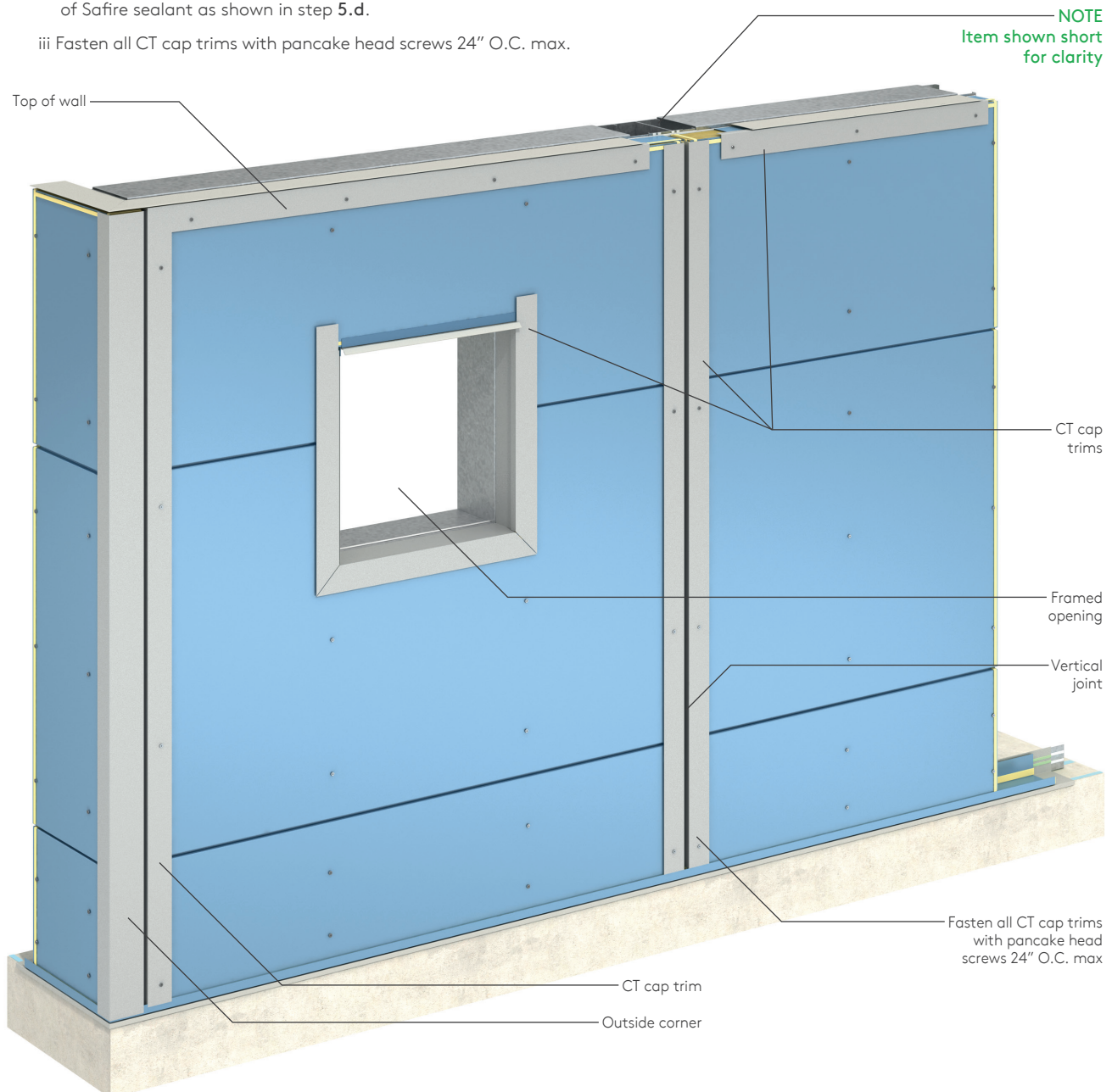
- d. Install 26 GA CT cap trims to the panel edges at the vertical joint:
 - ii. Ensure the bead of Safire has been applied to the 26 GA CT cap trims AND also on the face of the panels.



K-Roc HF Series Horizontal Installation

6 CT Cap Trims:

- f. Install all remaining 26 GA CT cap trims all around perimeter of the wall and framed openings:
 - i. Apply 20mm marriage beads of Safire inside both ends of 26 GA CT cap trims per previous step.
 - ii. Ensure both legs of every 26 GA component is set in the beads of Safire sealant as shown in step 5.d.
 - iii Fasten all CT cap trims with pancake head screws 24" O.C. max.



ITEMS SHOWN SHORT FOR CLARITY

K-Roc HF Series Horizontal Installation

7 Fireproofing at corners and Vertical Joints:

- v. Apply inner $\frac{5}{8}$ " deep bead seal of Hilti Firestop inside joint at corner.
- vi. Install compressible Mineral fiber inside of corner and vertical joints.
- vii. Apply outer bead seal of Hilti Firestop in corner and vertical joints.

NOTE
Item shown short
for clarity

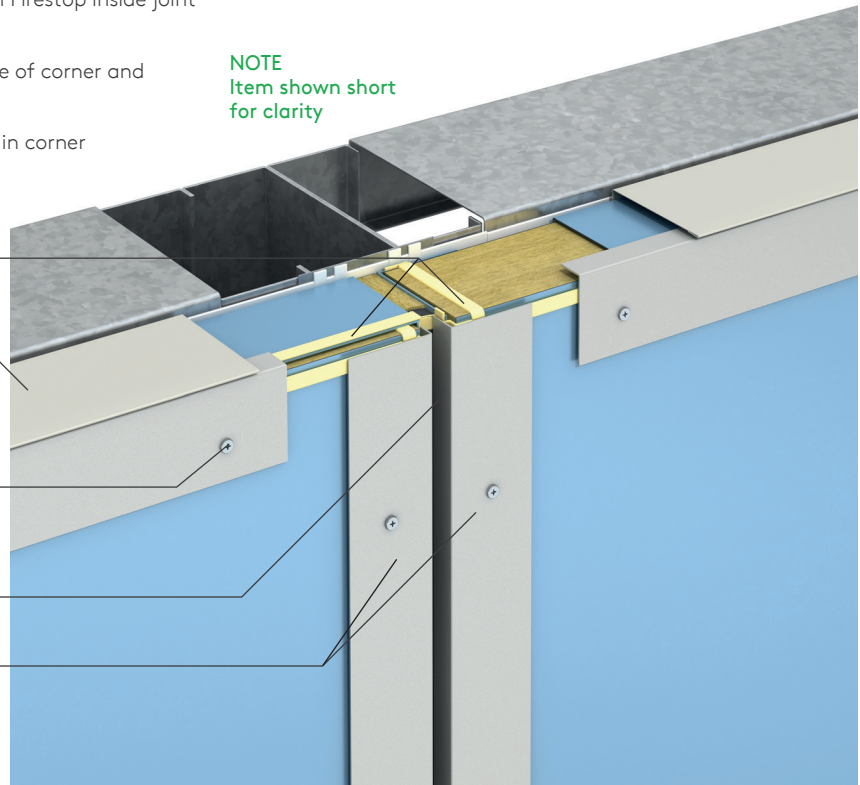
Bead of Safire on
CT cap trim

Top of wall CT cap
trim (shown short
for clarity) to lap
outside of vertical
CT cap trims

Fasten all CT cap
trims with pancake
head screws 24"
O.C. max

Vertical joint

CT cap trims



ITEMS SHOWN SHORT FOR CLARITY

NOTE

Top of wall conditions
may require Firestop and
compressible Mineral Fiber
also - refer to project
specific details.

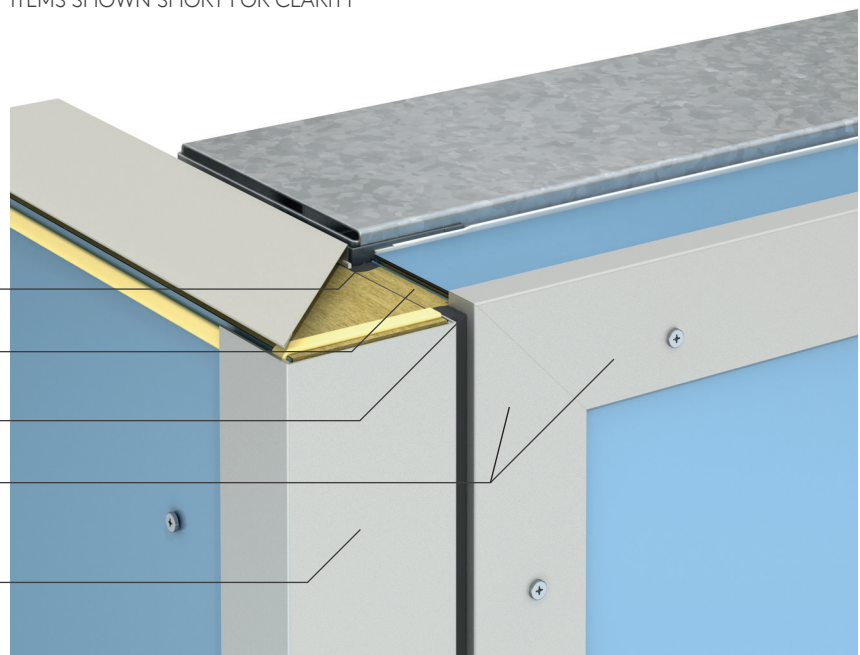
Inner $\frac{5}{8}$ " bead
Hilti Firestop

Compressible
mineral fibre

Outer bead
Hilti Firestop

CT cap trim

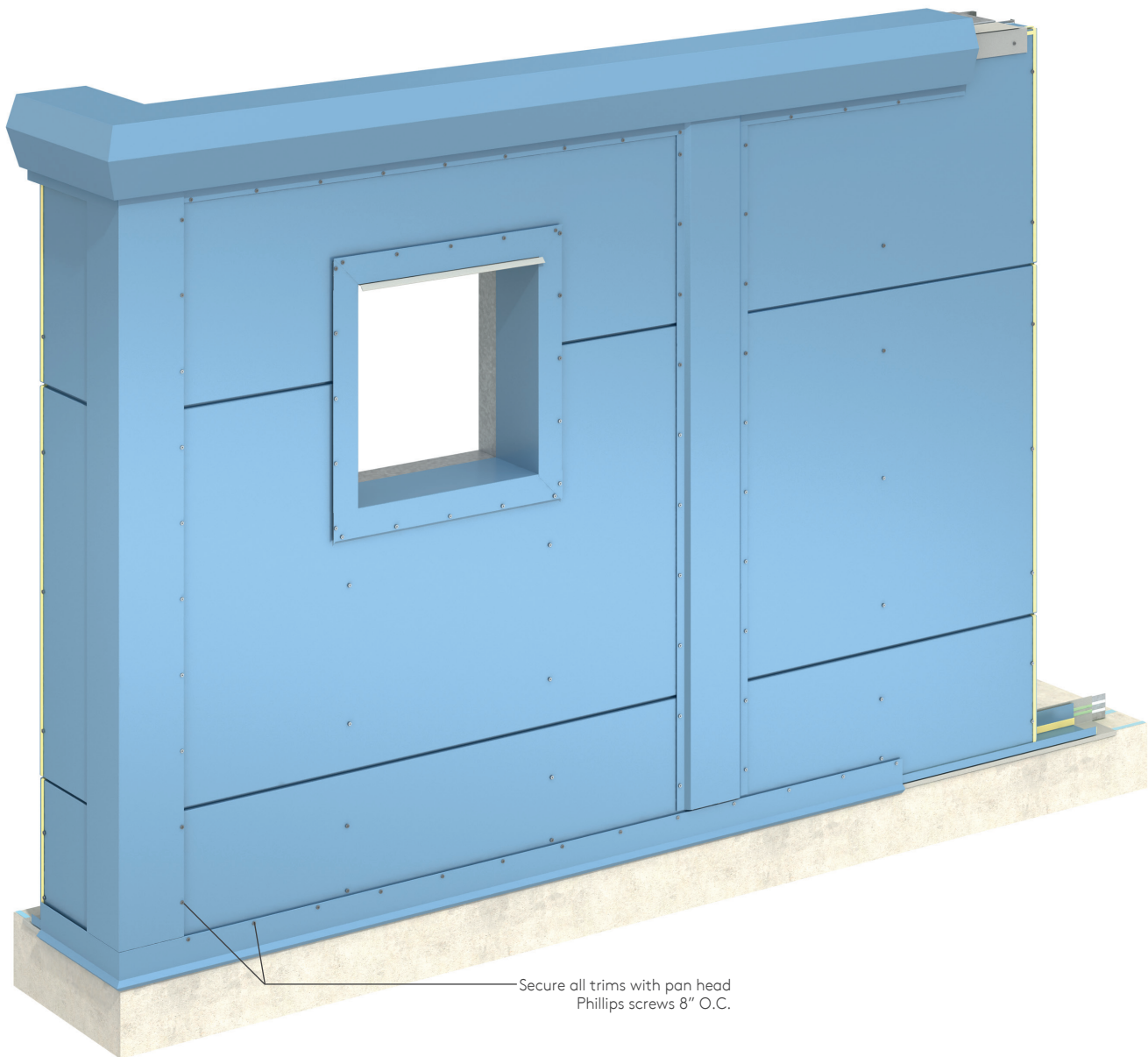
Outside corner
channel



K-Roc HF Series Horizontal Installation

8 Final Trim Installation:

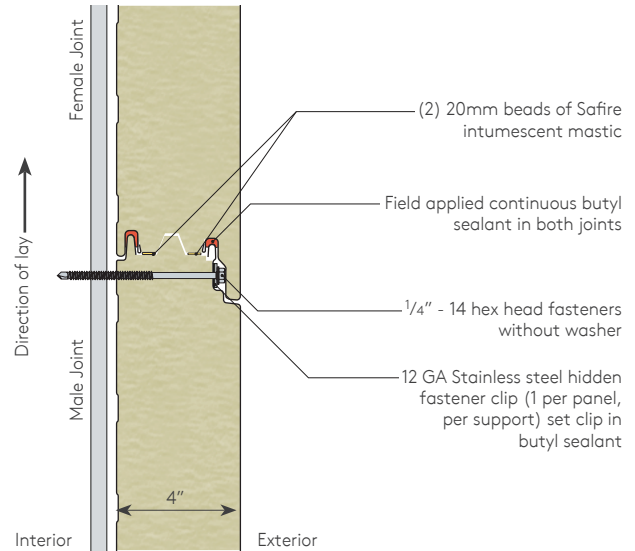
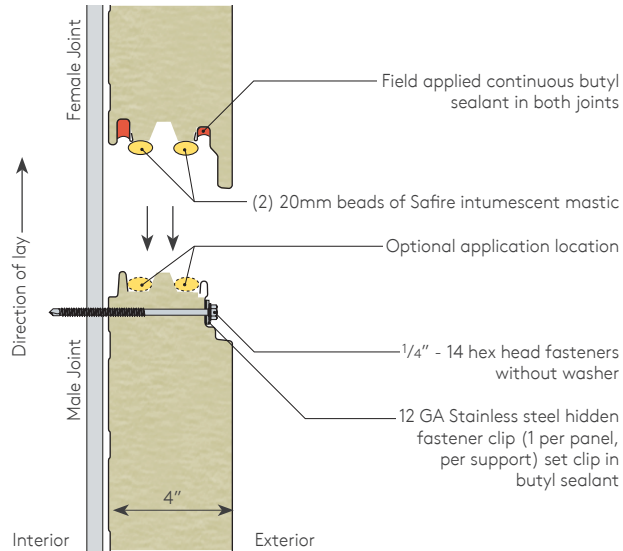
- g. Install all trims around perimeter of wall, framed openings, corners, and vertical joints.



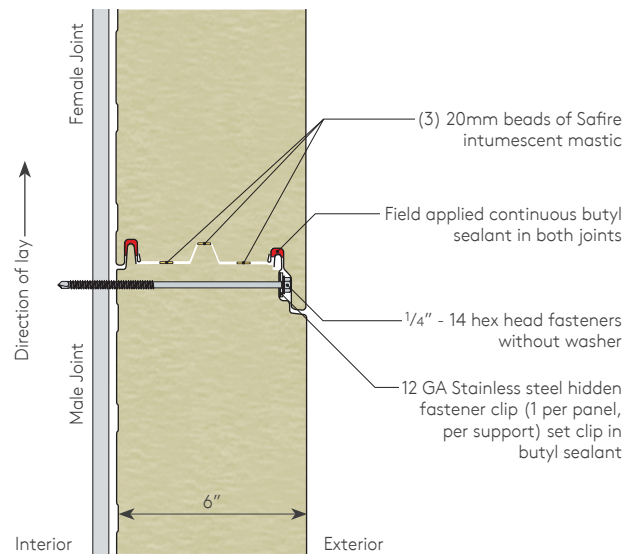
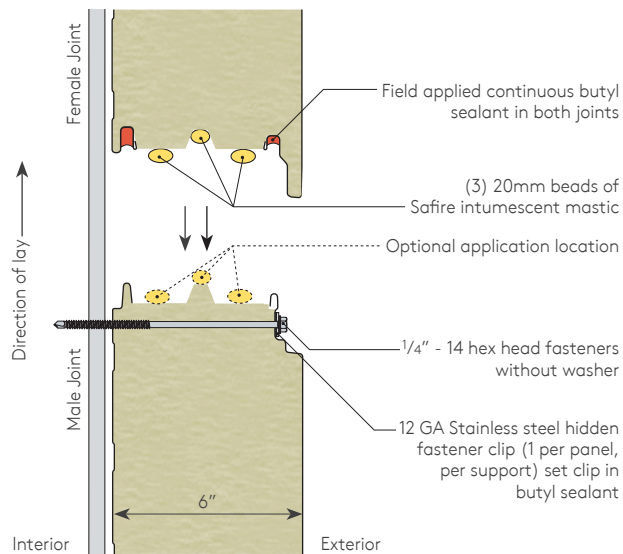
9 Repeat process for other wall elevations.

K-Roc HF Series Horizontal Construction Details

4" K-Roc HF Series Panel Joint Detail

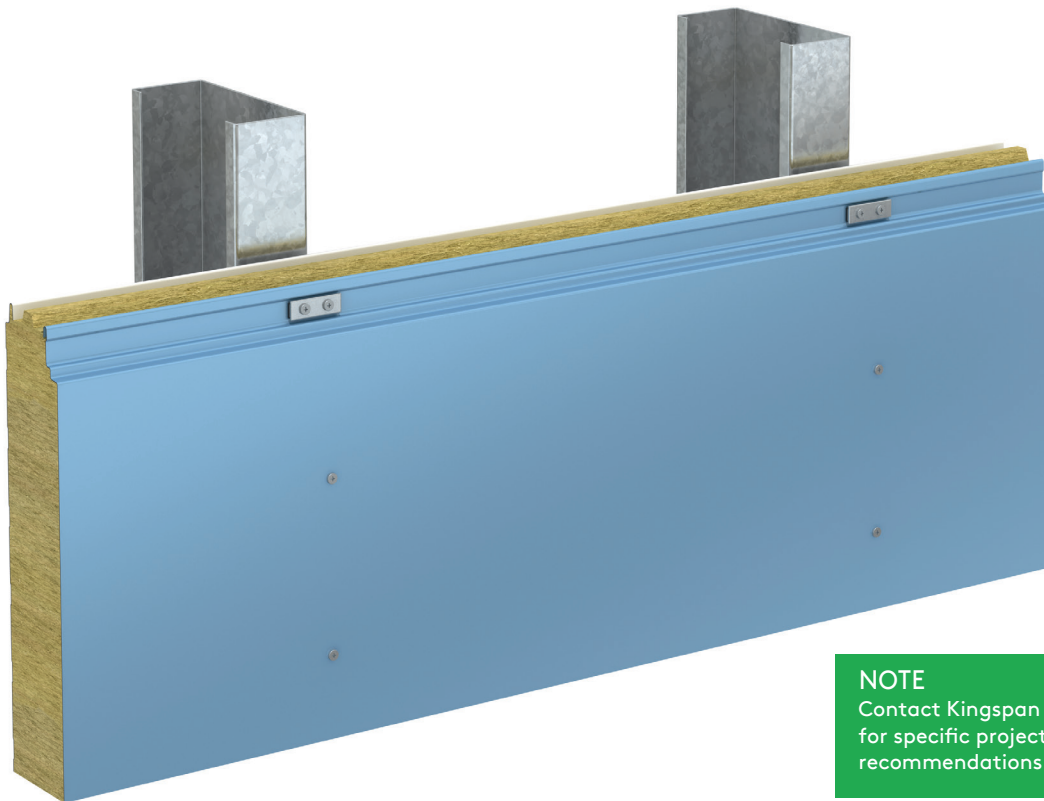
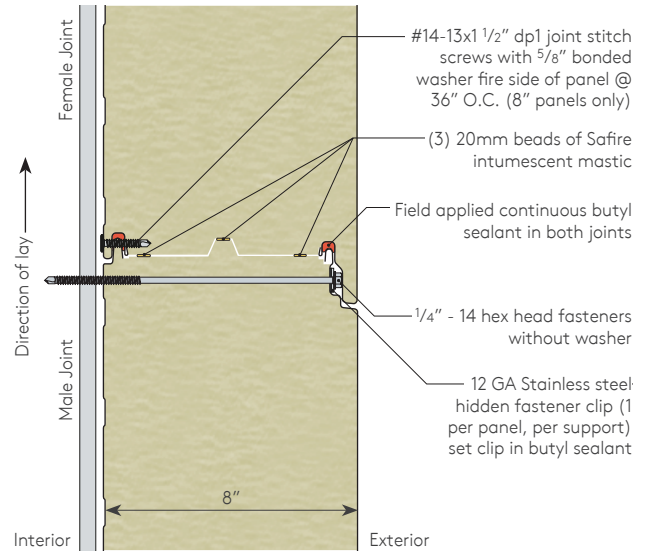
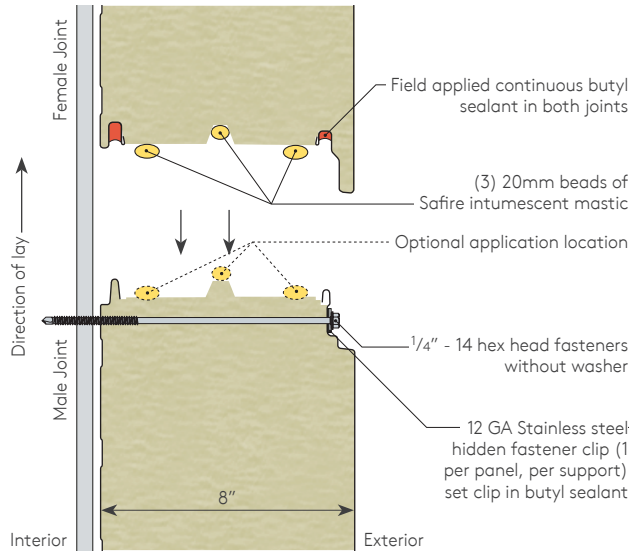


6" K-Roc HF Series Panel Joint Detail



K-Roc HF Series Horizontal Construction Details

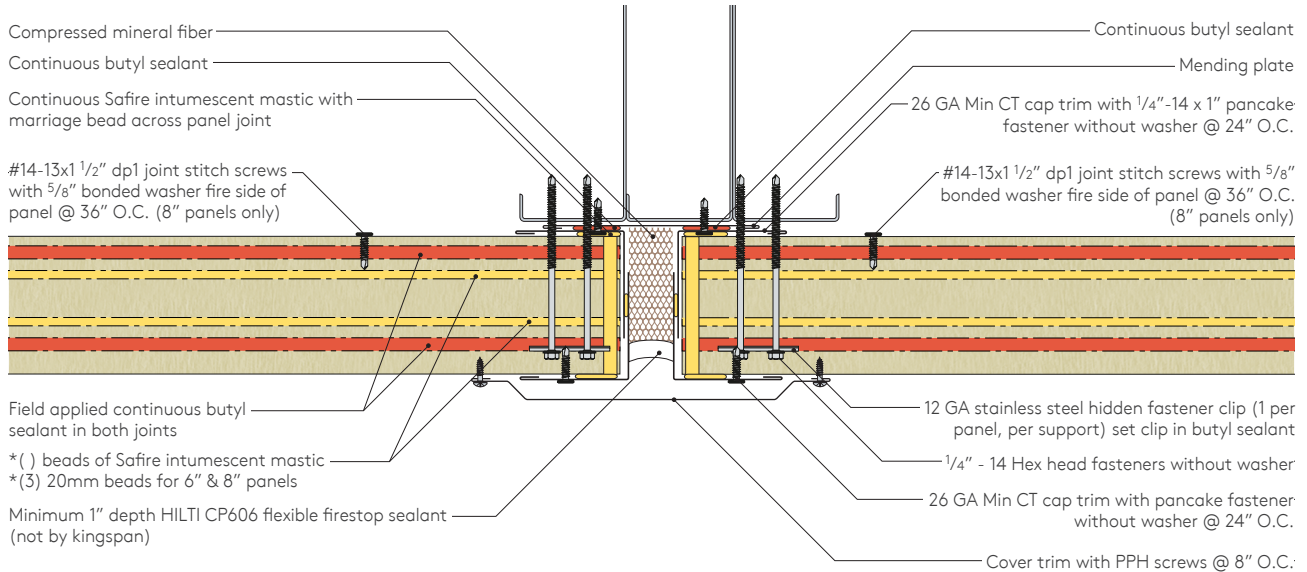
8" K-Roc HF Series Panel Joint Detail



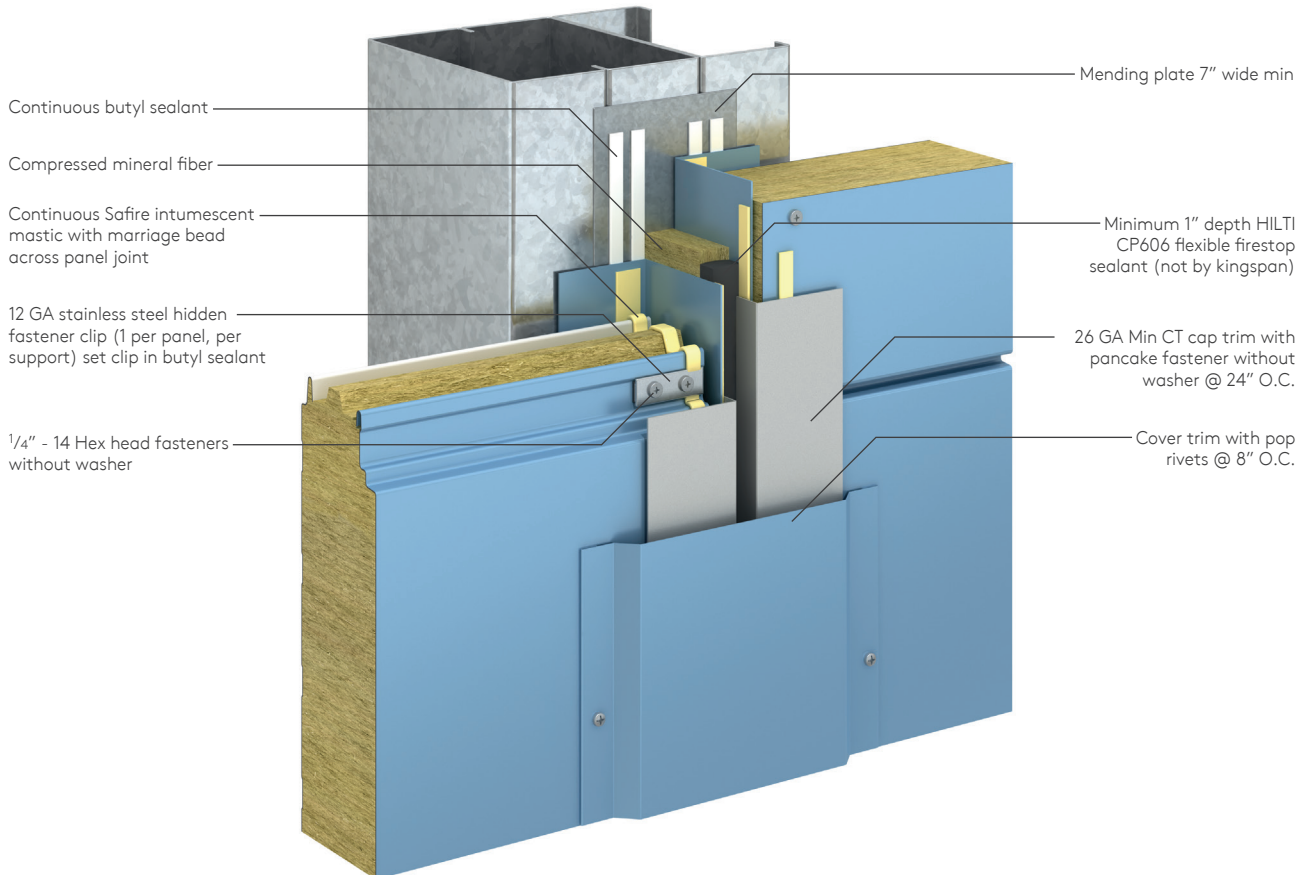
NOTE
Contact Kingspan Technical Services
for specific project fastening
recommendations.

K-Roc HF Series Horizontal Construction Details

Fire Rated Assembly at Joint Detail

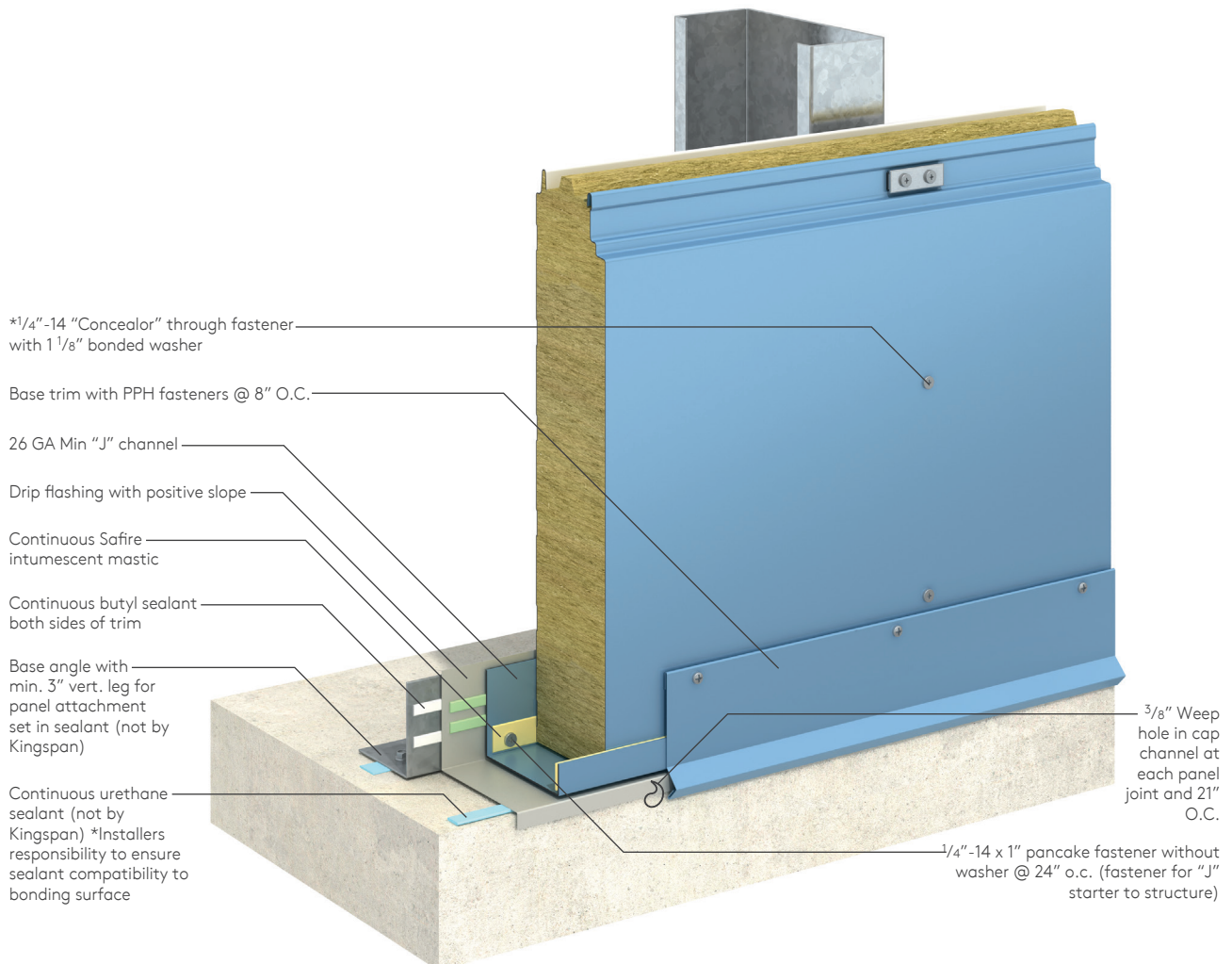
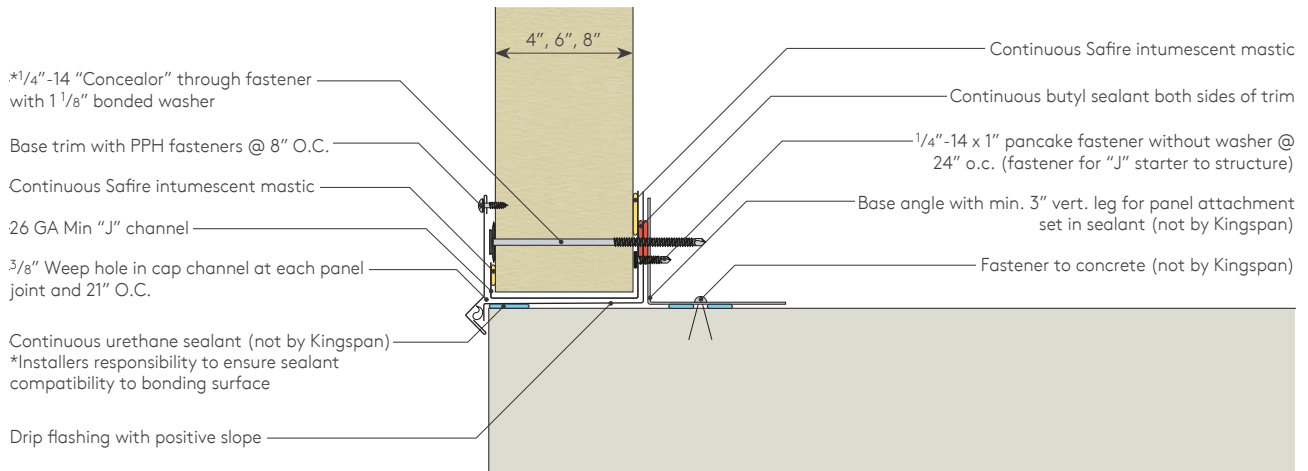


Vertical Joint with Trim Detail



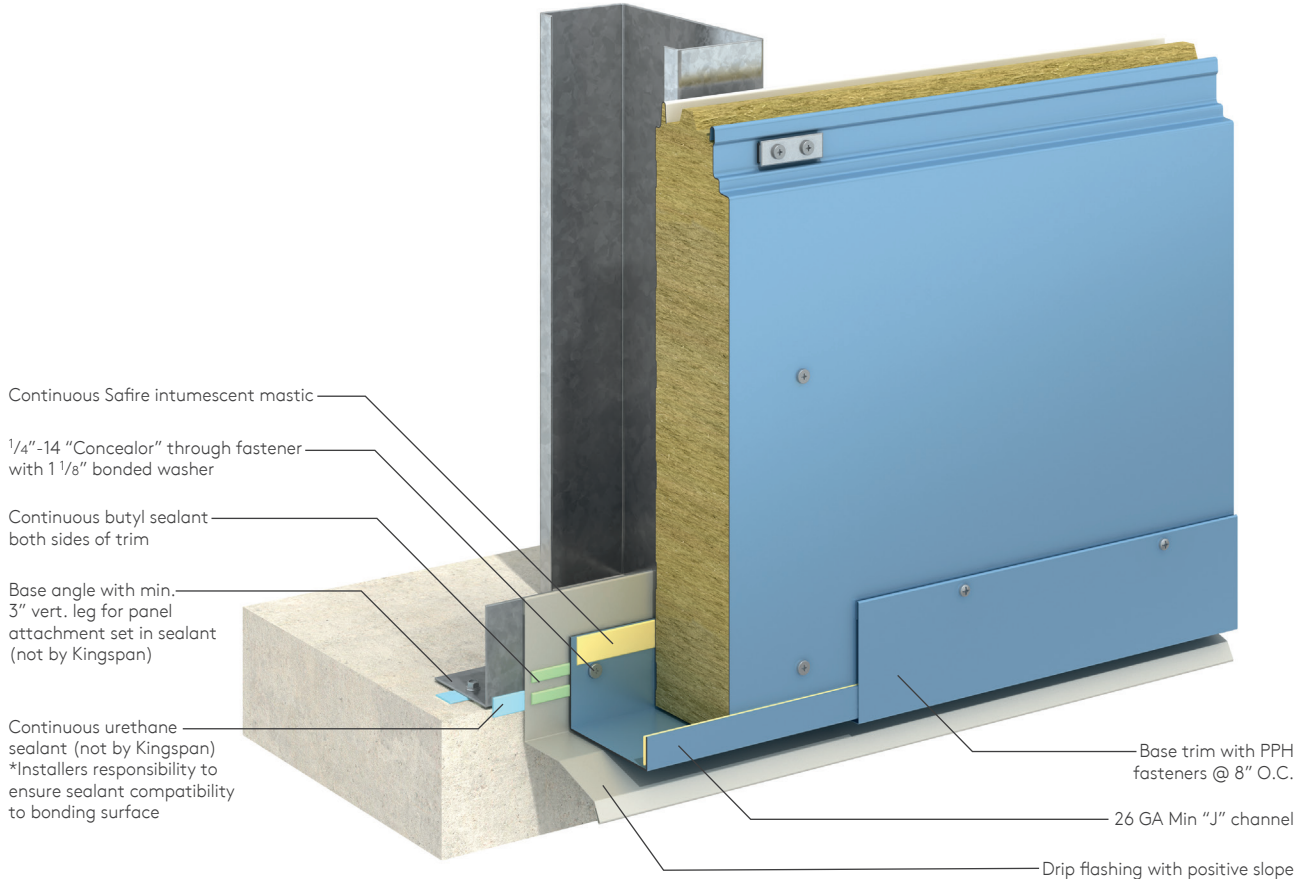
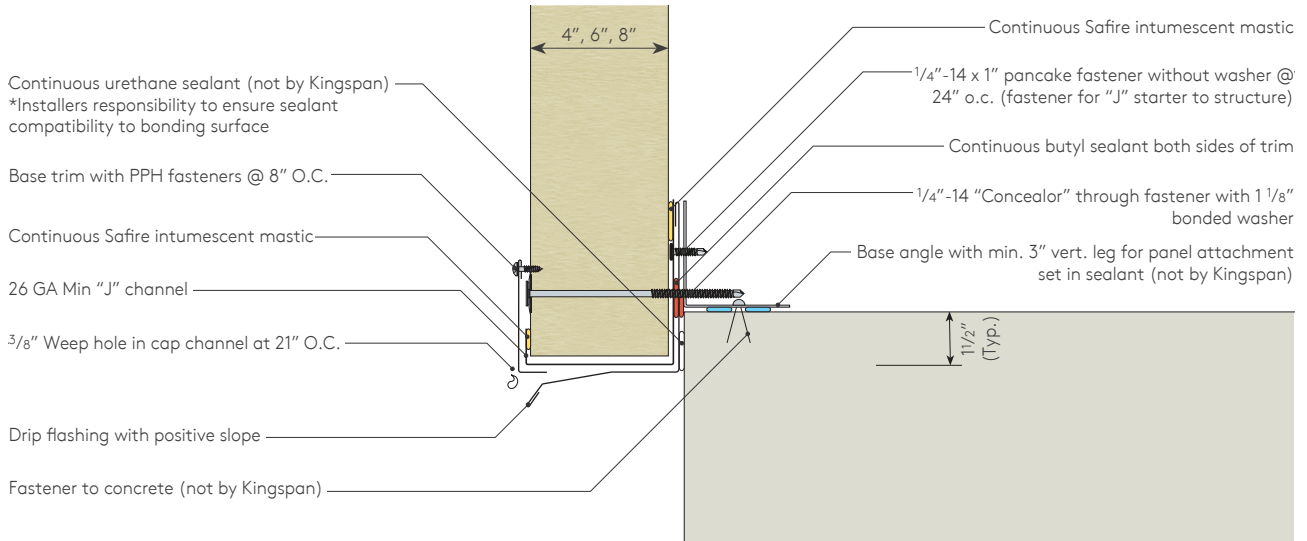
K-Roc HF Series Horizontal Construction Details

Flush Base Flat Trim Detail



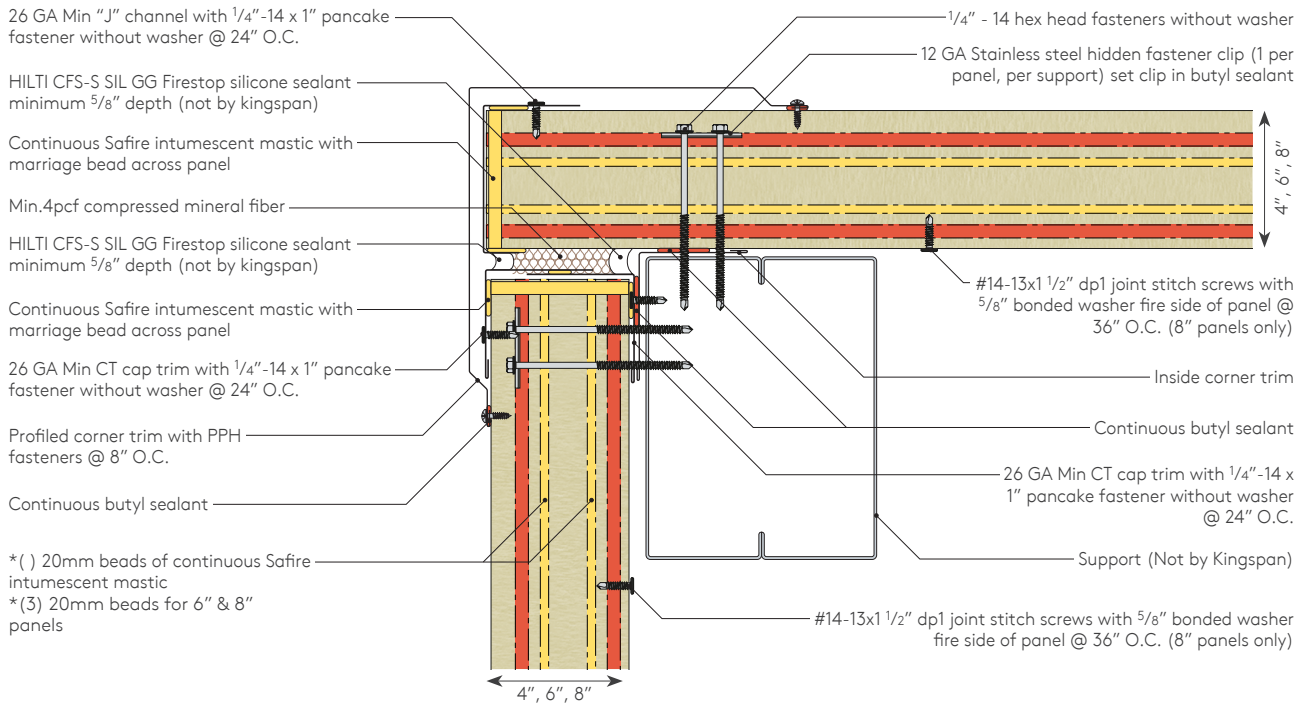
K-Roc HF Series Horizontal Construction Details

Overhang with Base Support Flat Trim Detail

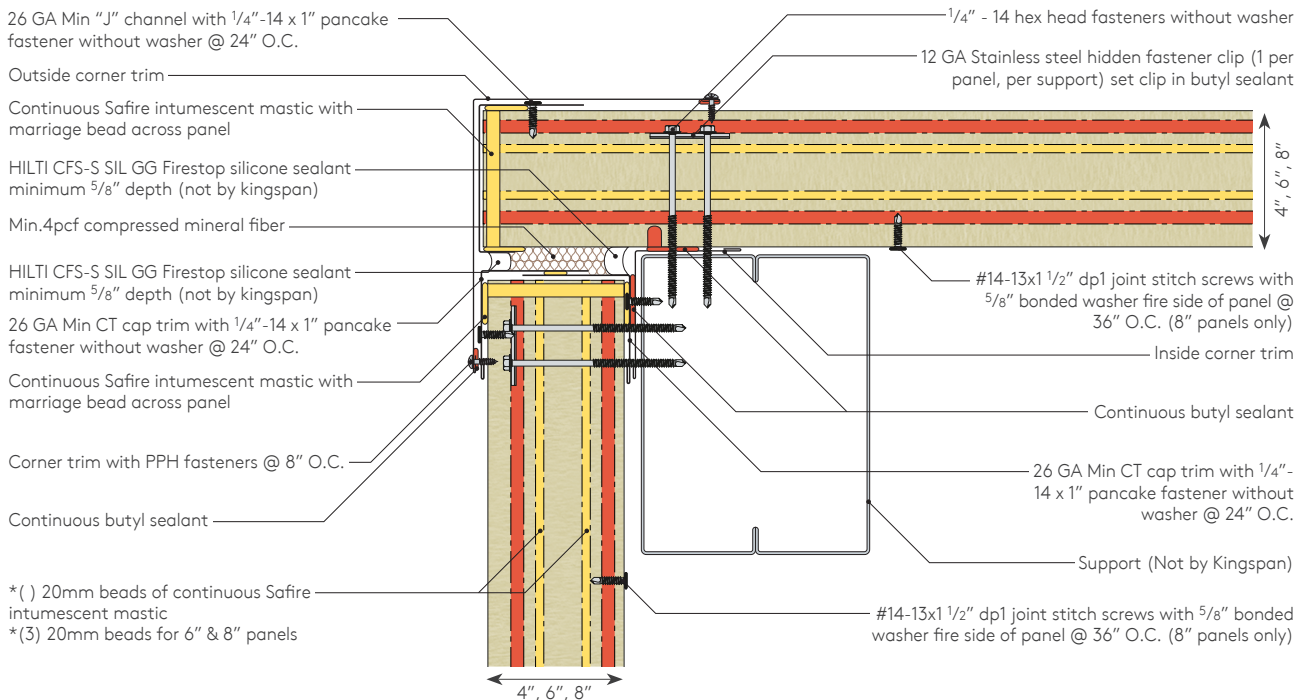


K-Roc HF Series Horizontal Construction Details

Outside Corner Profiled Trim at Panel Joint Detail

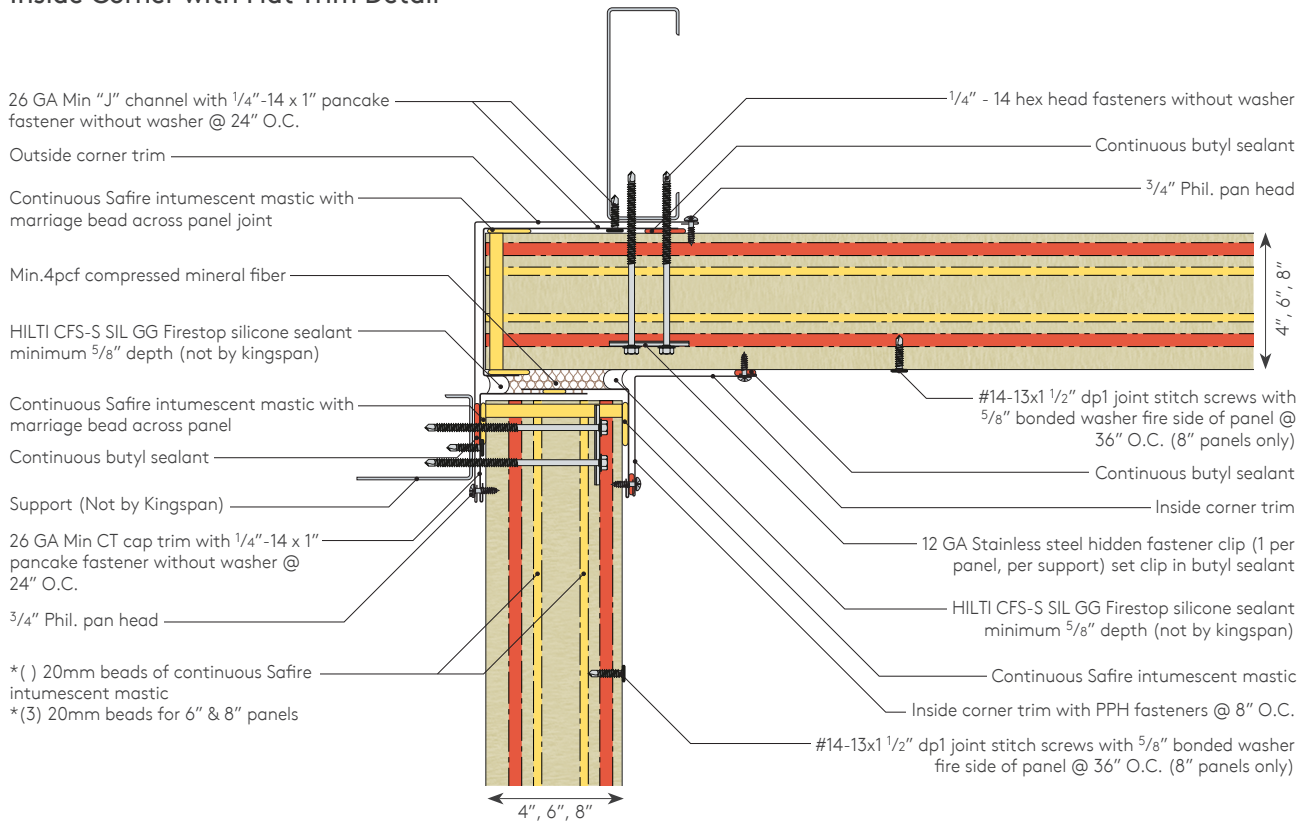


Outside Corner Profiled Trim at Panel Joint Detail

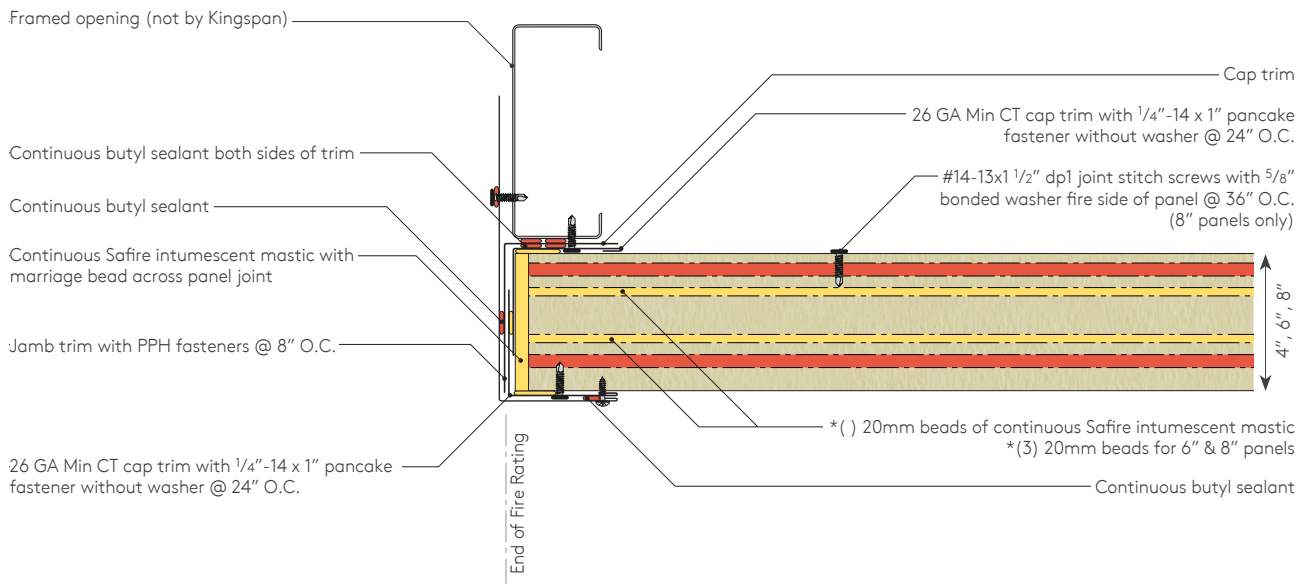


K-Roc HF Series Horizontal Construction Details

Inside Corner with Flat Trim Detail

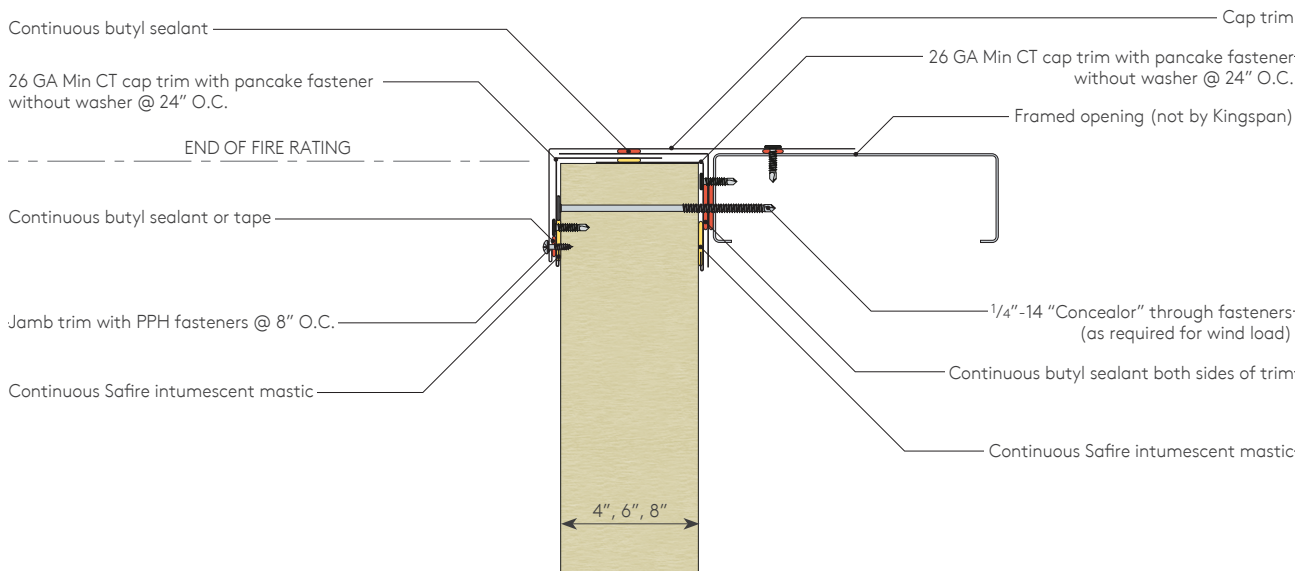


Framed Opening Flat Jamb Trim at Panel Joint Detail

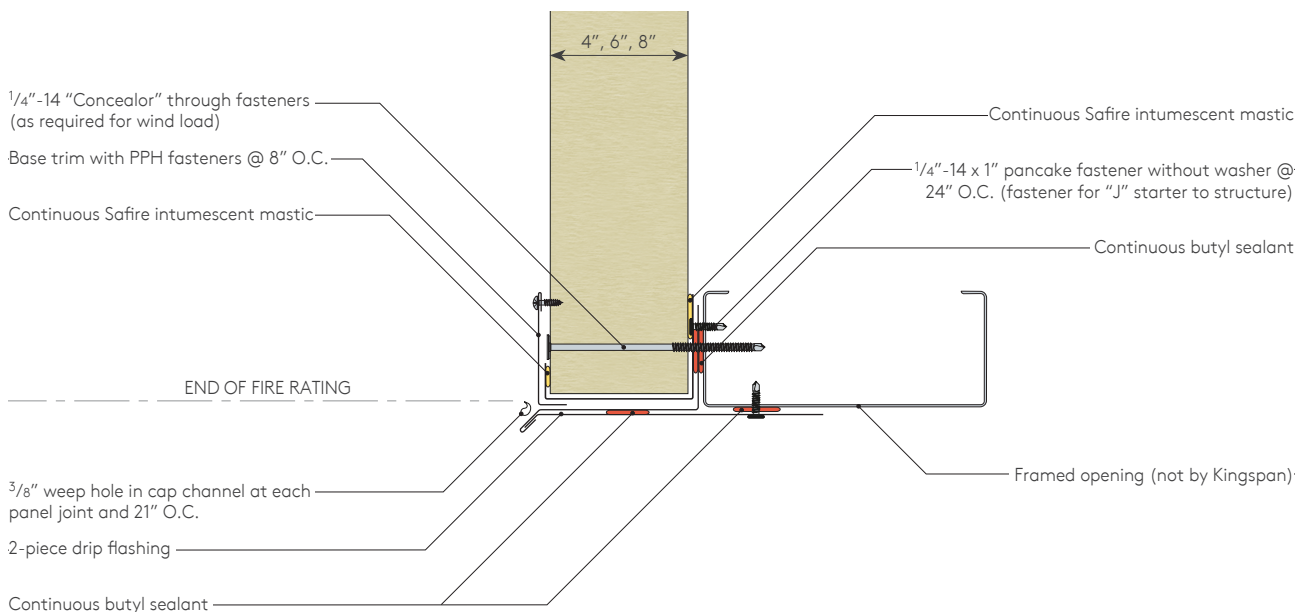


K-Roc HF Series Horizontal Construction Details

Framed Opening Sill Detail

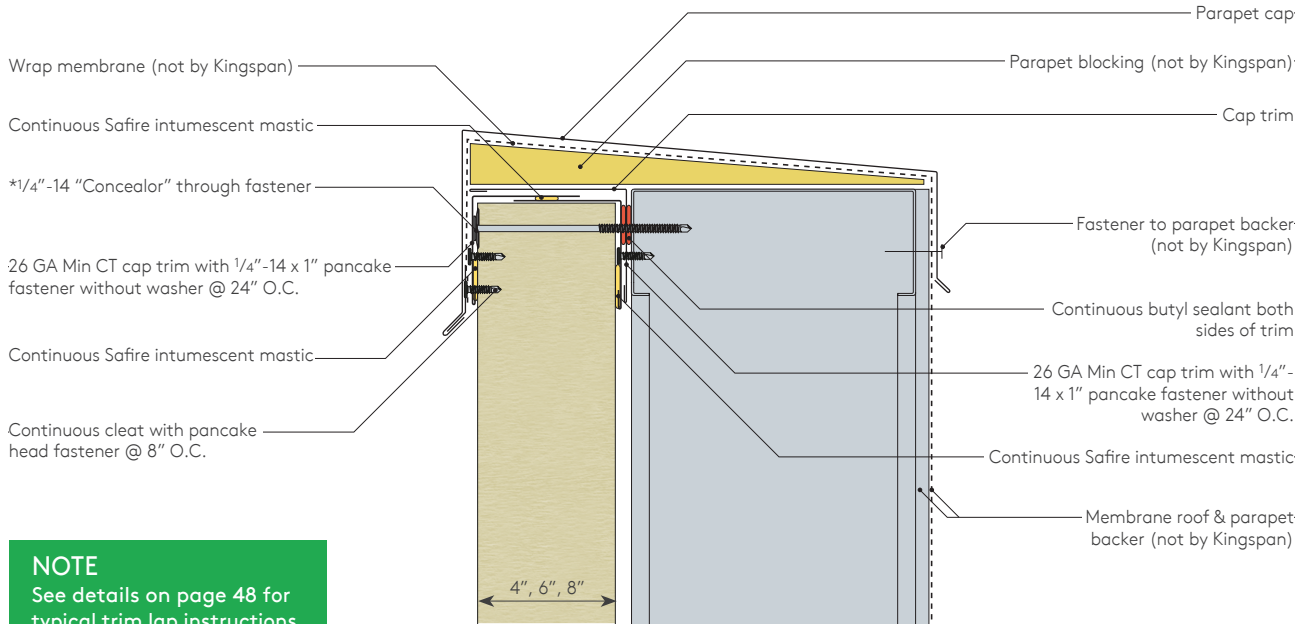


Framed Opening Head with Flat Trim and Drip Edge Detail



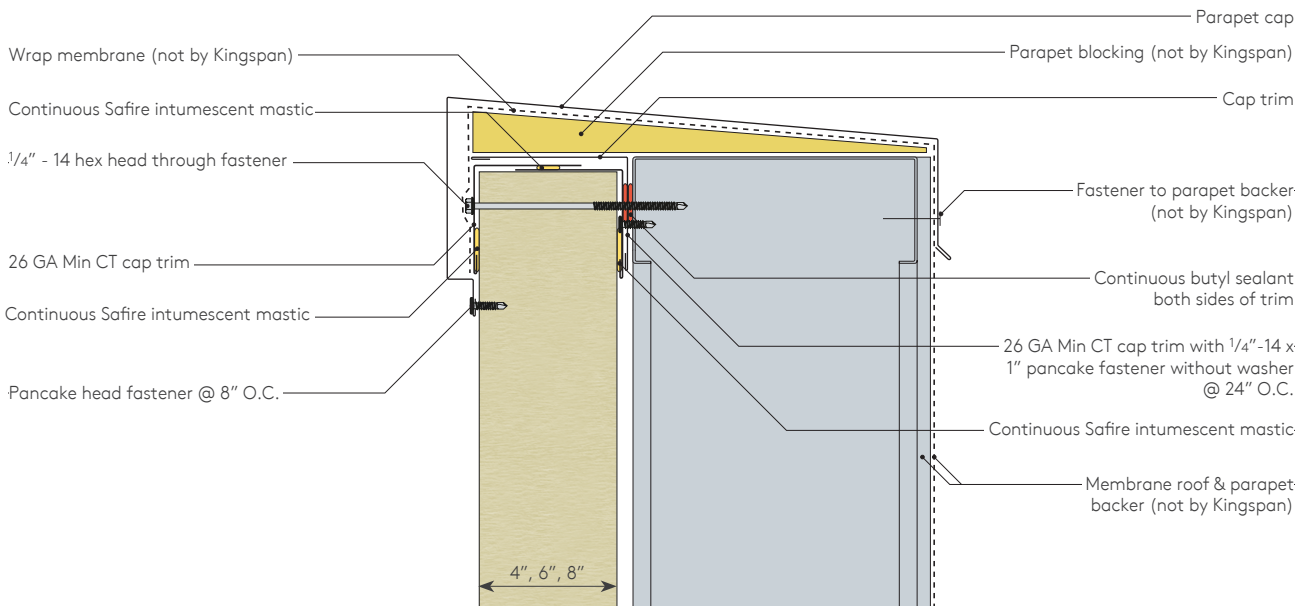
K-Roc HF Series Horizontal Construction Details

Parapet with Flush Trim Detail



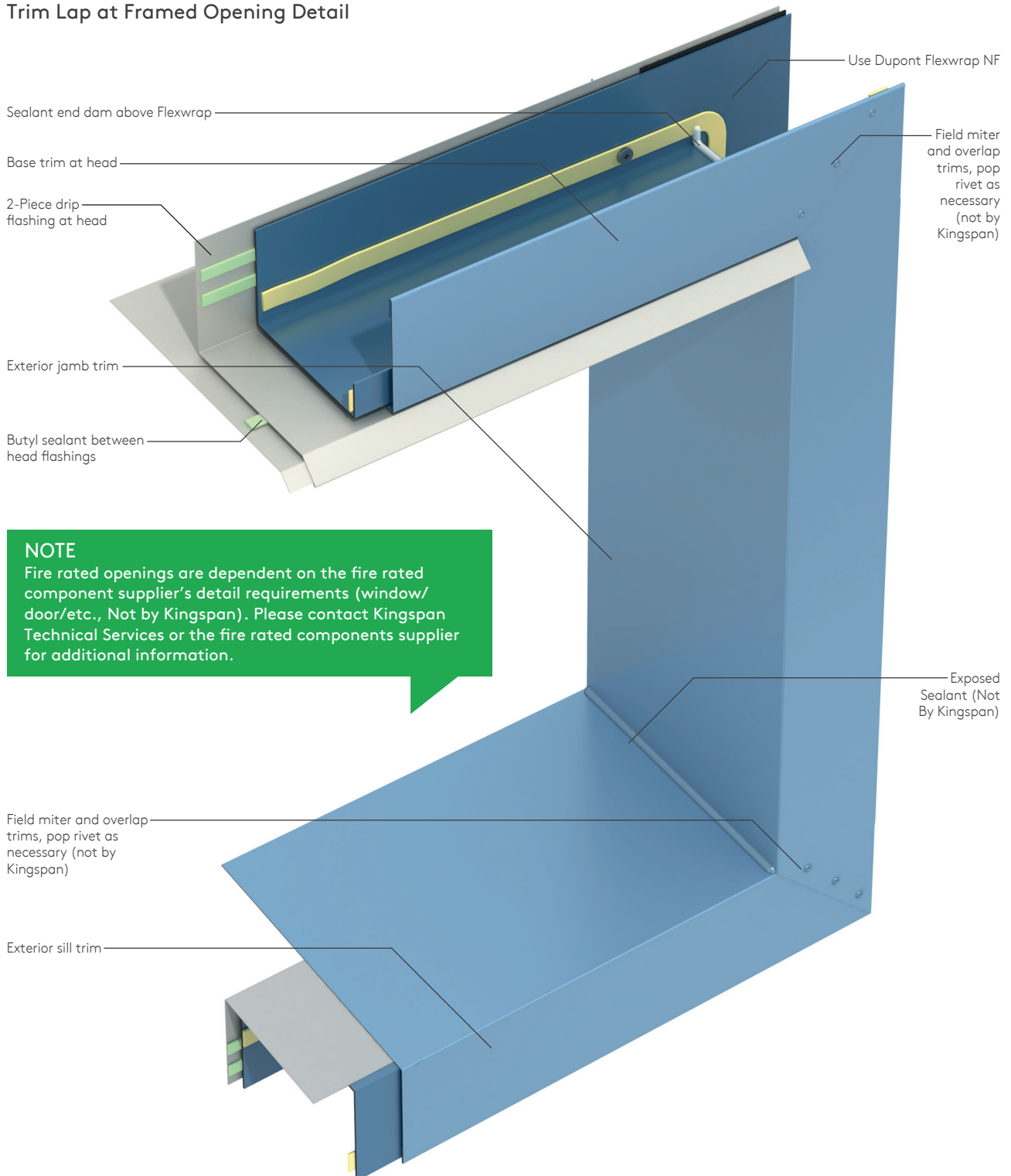
NOTE
See details on page 48 for
typical trim lap instructions.

Parapet with Profiled Trim Detail



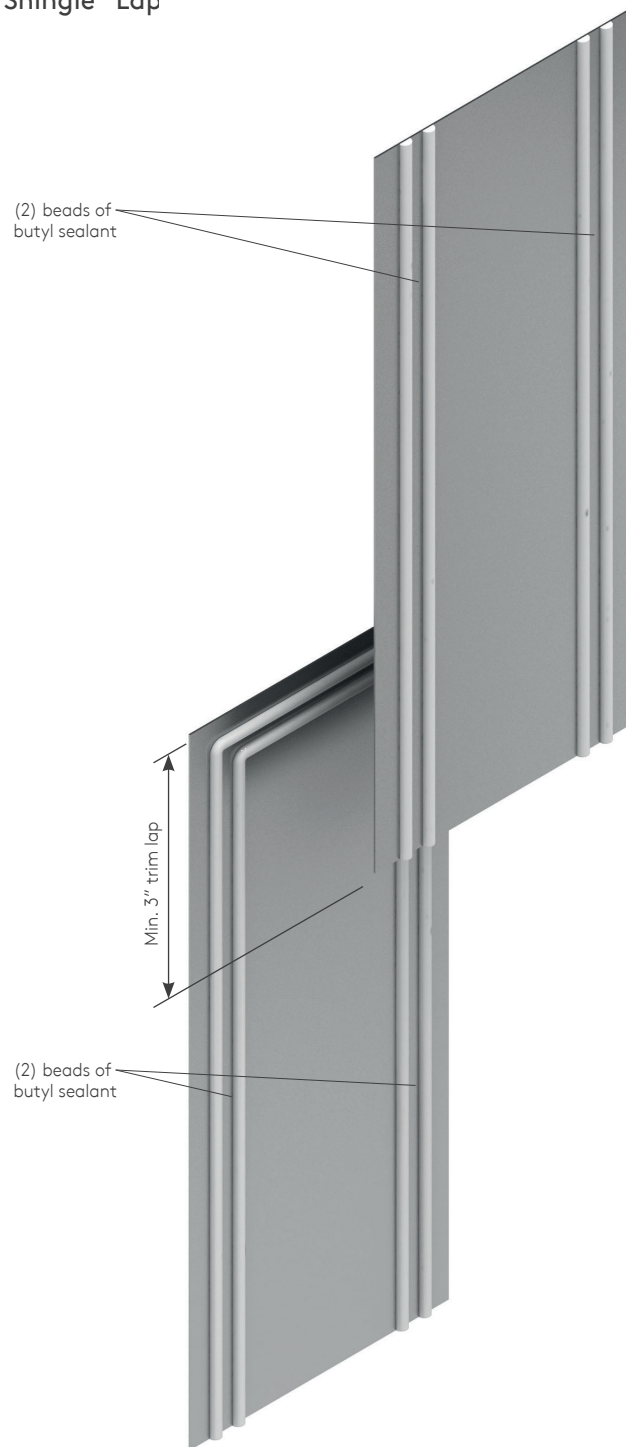
K-Roc HF Series Horizontal Construction Details

Trim Lap at Framed Opening Detail



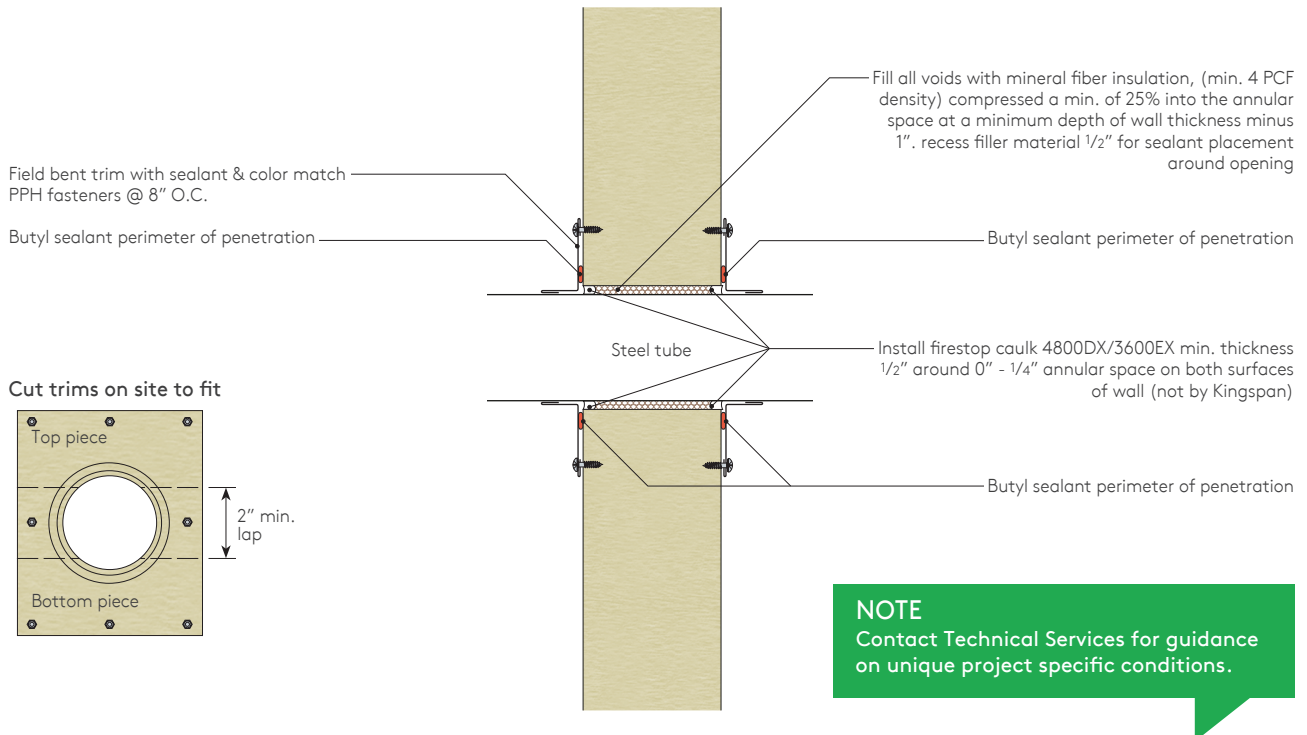
K-Roc HF Series Horizontal Construction Details

Mending Plate "Shingle" Lap

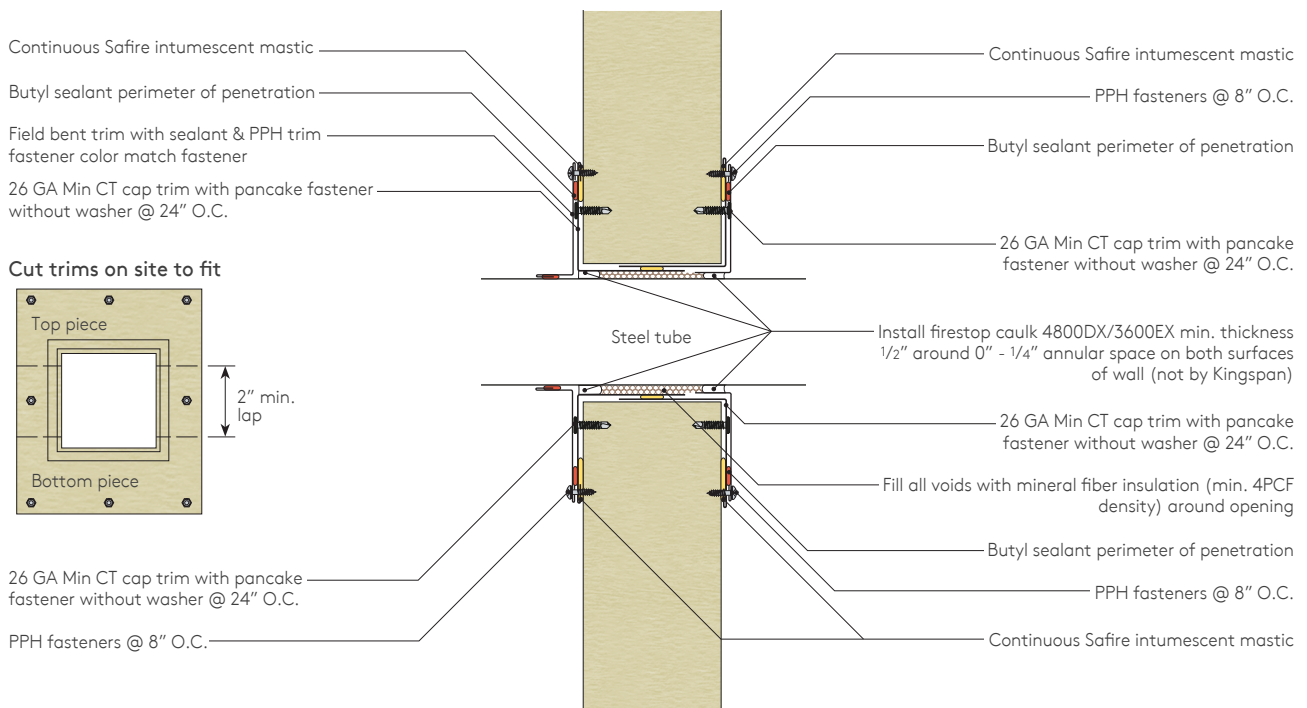


K-Roc HF Series Horizontal Construction Details

Wall Penetration Detail

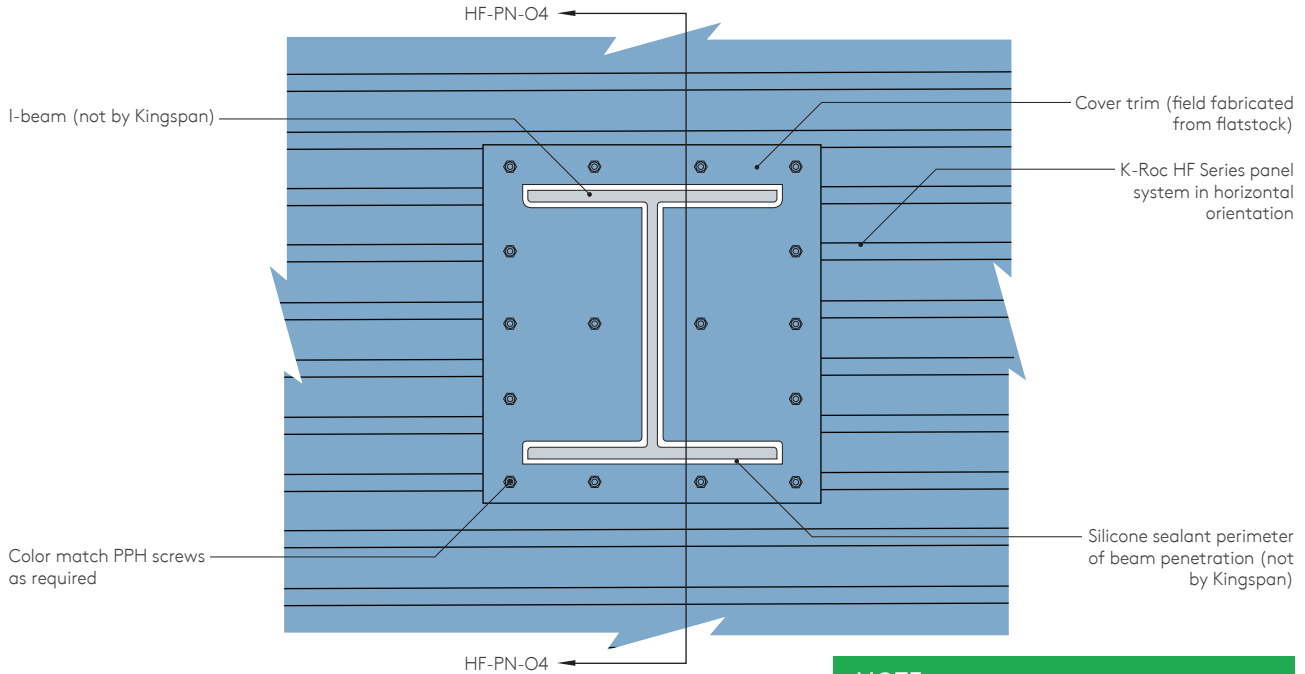


Structural Member Penetration Detail



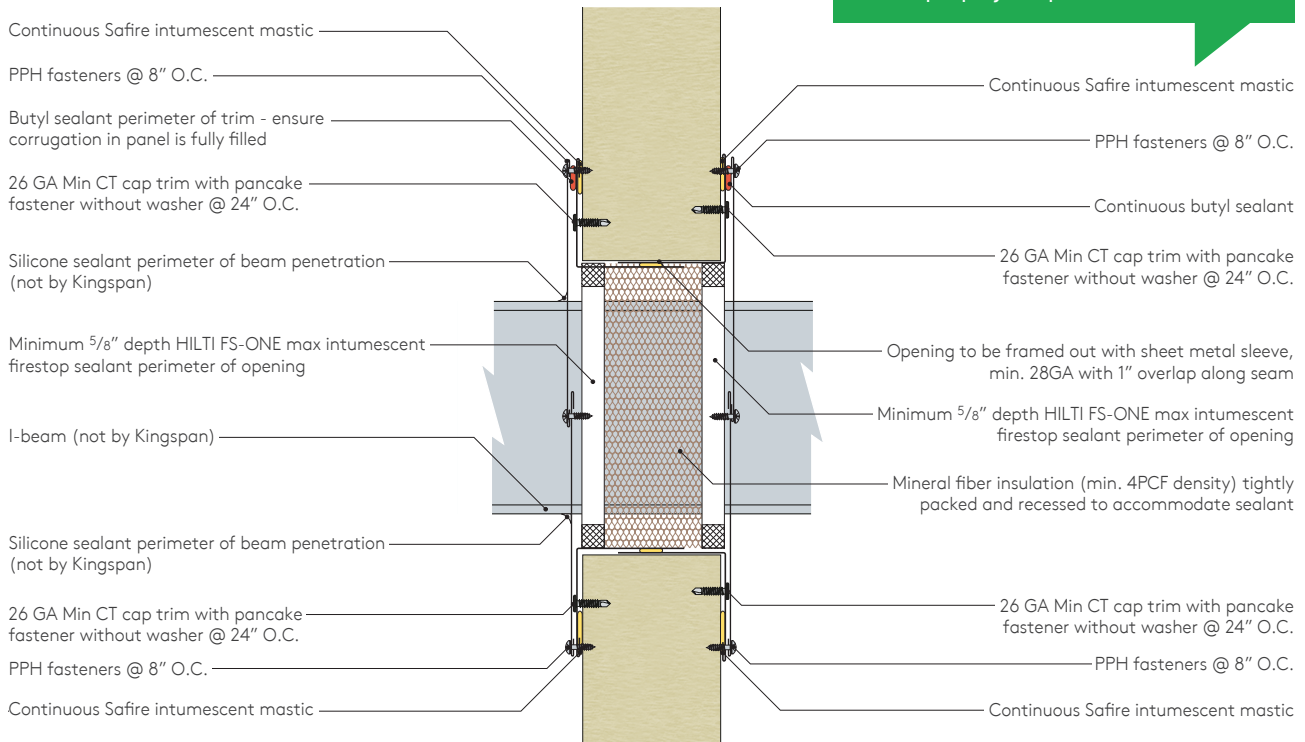
K-Roc HF Series Horizontal Construction Details

I-Beam Penetration Detail



NOTE
Contact Technical Services for guidance on unique project specific conditions.

I-Beam Penetration Section Detail



Materials, Tools and Hardware

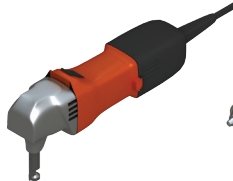
Tools and Sealants



Electric snips



Circular saw with
fine tooth carbide
blade



Power nibbler



Power drill



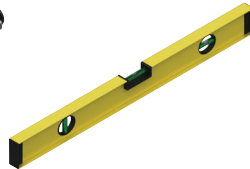
Drive bits and sockets



Caulking gun



Hilti Firestop
Sealant



Laser or gravity
levellers



Grip clamp



Dupont Flexwrap NF

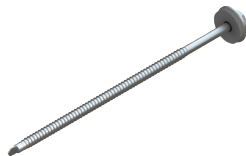


Compressible
Mineral Fiber

Fastening Hardware



Primary fastener



Through fastener
(primary fastener
extended by 1")



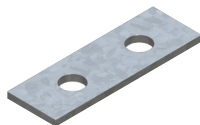
Low profile fastener



Secondary fastener



Rivet fastener



Hidden fastener
wall panel clip



Knife and
Scraper

Notes

Miscellaneous

Notes

Notes

Miscellaneous

Contact Details

USA

DeLand, FL: 877-638-3266
Modesto, CA: 800-377-5110

info.NA@kingspanpanels.com
www.kingspanpanels.us



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Canada

Caledon, ON: 866-442-3594
Langley, BC: 877-937-6562

info.NA@kingspanpanels.com
www.kingspanpanels.ca



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