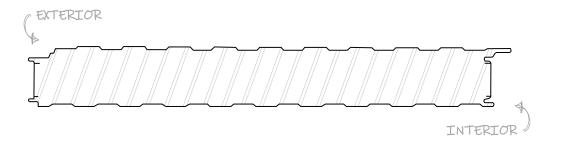


INSTALLATION **GUIDE**

HIDDEN FIXED WALL PANEL HFW - 40



EVERYTHING YOU NEED TO KNOW ABOUT

raw materials, production, transportation and storage, installation, finishing, accessories, maintenance, usage, recycling and warranty.





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NOTICE

THIS INSTALLATION GUIDE IS PROVIDED AS A REFERENCE TO THE DESIGN AND INSTALLATION COMMUNITY RELATIVE TO THE ACCEPTABLE TECHNIQUES PERMITTED BY FALK AS IT RELATES TO THE INSTALLATION OF **HFW-40 INSULATED METAL PANELS**. DETAILS PROVIDED WITHIN THIS DOCUMENT ARE MINIMAL ACCECTABLE GUIDELINES TO ENSURE APPROPIATE INSTALLATION. ENHANCEMENTS TO DETAILS CONTAINED WITHIN THE DOCUMENT ARE PERMITTED PROVIDING FALK IS NOTIFIED IN ADVANCE AND ACCECPTS ENHANCEMENTS IN WRITING.

IT IS THE RESPONSIBILITY OF THE INSTALLATION CONTRACTOR TO INSPECT ALL MATERIALS PRIOR TO INSTALLATION AND ANY DISCREPANCIES BETWEEN PROJECT ERECTION DRAWINGS, BILL OF MATERIALS, MATERIALS AND ACCESSORIES PROVIDED FOR A PROJECT MUST BE REPORTED TO FALK WITHIN 48 HOURS OF ACCEPTANCE OR DELIVERY. IF NON-CONFORMING PROJECT MATERIALS ARE PROVIDED TO A PROJECT, NEVER INSTALL THE MATERIALS WHILE ALSO REPORTING IT TO FALK.

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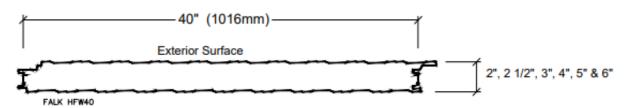
FALK's insulated metal panels are manufactured by FALK Production



PRODUCT DESCRIPTION

FALK HFW40

(VERTICLE & HORIZONTAL APPLICATIONS)



Coverage Width- 40"

Panel Attachment - Concealed Pressure Plate and Fasteners

Exterior Panel Finish - Embossed (Max Rib, Micro Rib, Box Profile and Flat Profile)

Exterior Panel Gauge - 26, 24 & 22- Other gauges available (Please inquire)

Interior Panel Finish - Embossed (Box Profile and Flat Profile)

Interior Panel Gauge - 26 & 24 - Other gauges available (Please inquire)

Coatings* - Exterior: HPS200 ULTRA, Sherwin-Williams Silicon- Modified Polyester (SMP)

Interior: Polyester (PE)

* Refer to FALK Color Cards for standard and special color offerings

Panel Thickness - 2", 2 1/2", 3", 4", 5" & 6" (VERTICAL & HORIZONTAL APPLICATION)

Lengths - Minimum: - 7'-0" to Maximum: 82'-0" **

^{**} Special Transportation Arrangements for Longer Lengths as Required



INTRODUCTION

BACKGROUND

Progress and ambition. This is what sets FALK apart from the rest. Established in the Netherlands in 2007 by an elite team of installation contractors, FALK has assembled a dedicated team of professionals working hard to always put the customer wishes first while implementing methodologies to install insulated metal panels in and efficient, environmentally conscious manner. FALK Panel (referred to as FALK in this installation guide) has developed this installation guide to provide answers to frequently asked questions. Following you will find guidelines for transportation, storage, treatments, installation tips and tricks, and warranty options available for your next project. We realize that each project is tailor-made and that not all your questions will be answered in this manual. In case you require additional information, please contact our technical support department by phone at 616.541.4500 or email your question to info@FALKpanel.com. In addition to this, more information about our products, technical drawings and details can also be found at our website www.falkpanel.com

WHAT IS A SANDWICH PANEL?

Sandwich panels (aka Insulated Metal Panels or IMP) are innovative building materials that bring design and functionality together. These panels provide an excellent solution to rapidly cover and insulate building projects. A sandwich panel consists of a profiled inner sheet and outer sheet, both made from high-quality steel and a core insulating material called polyisocyanurate foam (PIR). PIR is one of the most efficient insulation materials used in construction. PIR insulation provides acoustic and thermal properties, rigidity, durability, and excellent compressive strength. The adhesion between this insulation and sheets gives a sandwich panel (compared to a profiled sheet) additional firmness which permits larger spans to be reached. Sandwich panels are gaining in popularity in North America, since they are a high-quality, safe and easy to use product.

THERMAL VALUES

FALK HFW-40 Hidden Fixed Wall Panels are available in the following configurations:

Panel Thickness	Panel Thickness	R-Value	U-value	
[inch]	[mm]	[(h ft² °f)/Btu]	[W/(m²K)]	
1.5	38.1	11.39	0.087	
2	50.8	15.19	0.065	
2.5	63.5	18.99	0.053	
3	76.2	22.79	0.043	
4	101.6	30.38	0.032	
5	127.0	37.98	0.026	
6	152.0	45.46	0.021	
8	203.2	60.77	0.016	

Nominal 7.5 per inch with lambda (λ [W/mK) of 0.019.



FALK HFW-40 Hidden Fixed Wall Panels offer the building designer R values of approximately 7.18 per inch Nominal, as well as the ability to balance initial cost versus long-term energy savings. FALK also offers a full line of accessories to include attachment clips, metal trims, matching flat stock.

WARRANTIES

FALK can furnish various performance warranties as required for your project. The items covered by these warranties include weather tightness, corrosion, structural performance, and finish performance. Weather tight warranties require the use of FALK's Authorized Installers. In addition, these projects may require jobsite inspections throughout the installation process. Warranty charges vary, so please contact your FALK representative for more information. FALK requires that all specifications and shop drawings are reviewed prior to warranty issuance. Note: warranties are limited to materials supplied by FALK and are not issued until full payment for all services and material provided is received.

PRODUCT GUARANTEE

FALK offers a guarantee of two years from the date of delivery for each panel and parts affixed thereto (the "Panel") it produces and supplies to the above customer or original owner of the Panel if different than the customer. This guarantee covers the following functional features: Product insulation, dimensional stability, and material quality. FALK does not offer a guarantee or warranty on interior finishes or non-supplied attachments to the Panel. This certificate of guarantee is nontransferable and shall be for the sole benefit of the original customer or owner who purchases the Panel from FALK. This written guarantee represents the full, complete, and final agreement of the parties and supersedes all prior guarantees or agreements relating to guarantees, or related negotiations between the parties. This guarantee cannot be modified, altered, or extended without the express written consent, signed by a duly authorized officer or employee of FALK. Disclaimer of implied guarantees and warranties. EXCEPT FOR THE EXPRESS GUARANTEES SET FORTH HEREIN, FALK MAKES NO GUARANTEE OR WARRANTY WHATSOEVER REGARDING THE PANELS, INCLUDING ANY (1) WARRANTY OF MERCHANTABILITY; OR (2) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; WHETHER ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE.

Additional guarantees and warranties are available for paint and coating systems in addition to the guarantee provided for herein. Contact your sales representative for further information. The information in this document is effective when provided to the customer or owner of the panel. Because FALK products and policies may improve or change in the future, FALK reserves the right to make modifications to this guarantee without notice. Important note, the sales conditions as well as this certificate of guarantee have been drawn up in the English language.

GUARANTEE CONDITIIONS

- This certificate of guarantee applies to panels erected solely in the continental United States, Alaska, and Canada. This guarantee specifically excludes Hawaii and Mexico and any other Country not identified above.
- Handling, storage, technical details, and installation must be carried out in accordance with FALK LLC instructions. These instructions are available on request. The guarantee provided for herein does not apply to Panels installed improperly and not in compliance with the FALK instructions, Panels subjected to abuse, misuse, neglect, negligence, accident, improper installation, improper storage, improper handling, abnormal physical stress, abnormal environmental conditions or use contrary to the instructions issued FALK.
- It is the responsibility of the Panel owner to maintain the building and Panel affixed thereto in good order, and to prevent damage by equipment, intentional damage, negligence, or waste.



- Accumulated dirt and grim should be washed off the Panels at regular intervals. FALK recommends yearly.
 Continuous long-term ponding of water, continuous emersion or waterlogging damaging the Panel will void the guarantee provided for herein.
- Any defects must be reported to FALK in writing within 30 days of discovery.
- Dimensions, tolerances, and other relevant items for the Panels follow the ATSM standards.
- In case of a legitimate and justified claim, FALK, in its sole discretion shall determine whether the Panel is to be repaired or replaced. The choice of materials to be used or working methods to repair or replace the Panel is the sole responsibility of FALK.
- Repair or replacement costs shall not exceed the original invoiced amount per square foot of the original Panel purchased by the customer or owner.
- If Panels need to be replaced, <u>within</u> the original warranty period, the replacement panel will come with a two-year warranty.
- If Panels need to be replaced because of product defects or damage, <u>after</u> two years from date of purchase, the warranty recipient shall be fully responsible for the replacement cost of the panel.
- The guarantee provided for herein is only valid after all invoices related to the supplied Panels are paid in full. In the event the customer or owner fails to pay for the Panels in full at the time invoiced, the guarantee provided for herein is void.

EXCLUSIONS

- Damage to a panel due to mechanical or chemical exposure and elements, abnormal environmental conditions, hail, fire, war, riot, falling objects, vandalism, natural disaster, lightning, or any other unforeseen circumstances are excluded and void the guarantee provided for herein.
- Any damage to the Panels caused during storage, transport, or installation, is excluded.
- Damage to the Panels due to incorrect installation, handling, or treatment is excluded. Panels that are damaged or blistered by rain or water entering the uncovered cut ends are also excluded. Cut ends of all panels must be immediately protected from the elements by means of flashings or other waterproof barriers.
- Damage to the Panels caused by Panels being installed in improperly ventilated areas, or in areas deemed inappropriate for insulated metal panel use by FALK are excluded.
- Any defects in the Panels caused by exposure to continuous high temperatures, other than heat due to solar radiation, are excluded from this guarantee. Continuous surface temperature exceeding 180 degrees Fahrenheit are not covered by this guarantee.
- If Panels with known defects are installed, the guarantee herein is null and void.
- If damaged Panels need to be replaced or repaired, FALK will only be held responsible for replacement or the repair cost of those Panels.
- FALK will not be responsible for replacing building accessories like skylights, electrical installations, solar panels, etc. in a building, if a Panel requires repair or replacement.
- Any damage attributed to Panels being altered without prior authorization from FALK is not covered by this guarantee. This includes, but is not limited to add-ons, fixtures, or utilities placed against or attached to the Panels, installation of signage, vents or other breaches or cutting of the Panel, including, address numbers, mailboxes, skylights, solar panels, HVAC units, plumbing vents, electrical service, or ventilators.
- This guarantee does not cover damage that results from projectile damage from lawn or snow removal equipment, falling objects, recreational activities or contact of Panels from material storage of any kind.
- Damage to a Panel due to corrosion is not covered by this guarantee. This includes corrosion caused by drainage, leaking or overflowing gutters and downspouts, leaks from roof top units or equipment, salt (marine) or atmospheric contaminants, unusual or harsh contaminants that are generated within the building, including moisture due to in adequate or improper ventilation. Even if contaminants are identified or in existence at the time of installation of the Panels, FALK shall be under no obligation by the terms of this guarantee and warranty.



OTHER

- This guarantee is voided if any repair work to a Panel is carried out by a third-party contractor, without the prior written consent of FALK.
- The product owner acknowledges FALK is responsible for the execution of this guarantee.
- FALK is not responsible for any incidental or consequential damage or losses arising from the use or damage of a Panel or any claims arising under this guarantee.
- The exclusive remedy to the customer or owner of the Panel is to have FALK repair or replace a damaged panel under this guarantee.
- Oil canning and minor imperfections are not a valid reason for rejection or a claim under this guarantee.
- This guarantee does not cover damages or events where Panels have been removed from their original location and re-installed in a secondary location.

COATINGS

Colorcoat HPS200 Ultra® Coatings

FALK is pleased to offer the following Limited Warranty on our Colorcoat HPS200 Ultra® coatings. This Warranty applies if any of the following Warranty Conditions occurs during the time specified in the attached Warranty Table in years: a. Colorcoat HPS200 Ultra® coating will provide resistance against perforation due to weathering for the period stated above from the date of erection. Tata Steel Colors will support the performance of Colorcoat HPS200 Ultra® pre-finished steel, profiled by FALK for the duration as outlined in the chart below. At the end of the period, for any single plane, i.e. one wall or one roof slope, note more than 5% or 100 square meters of paint surface, whichever is the lesser area, will be affected by corrosion.

Coating	Inland Beyond 1 mile from coastline		Coastal Within 1 mile of coastline	
	Walls	Roofs	Walls	Roofs
Signature Colors 47°N - 70°N	30	30	25	20
Signature Colors 37°N - 47°N	25	20	20	15
Signature Colors 37°S – 37°N	15	10	10	8
Classic & Matt Colors 47°N - 70°N	30	20	20	15
Classic & Matt Colors 37°N - 47°N	20	10	15	10

This Limited Warranty is valid for products used for roofing and sidewall coil applications only.



Sherwin-Williams Fluropon 70% PVDF Coatings

FALK is pleased to offer THE FOLLOWING Limited Warranty on our Fluropon® coil coatings. 1. This Warranty applies if any of the following Warranty Conditions occurs during the time specified in the attached Warranty Table: a. Fluropon® exhibits cracking, flaking or peeling (loss of adhesion) to an extent that is apparent on ordinary outdoor visual observation. Minute fracturing, which may occur in proper fabrication of the building parts, is not a covered Warranty Condition. Failure due to substrate corrosion is not a covered Warranty Condition. b. Fluropon® chalks more than ASTM D-4214 method A number 8 rating when properly maintained as described herein. c. Fluropon® changes color more than five (5.0) Hunter delta-E units as determined by ASTM method D-2244. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. Color changes may not be uniform on surfaces that are not equally exposed to the sun and elements and Sherwin-Williams does not warrant that color changes will be uniform.

	Product Film	Standard Colors	Chalking Warranty
	integrity	Color Change	(Section 1b) (Years
Product	Warranty	Warranty	From Date of
	(Section 1a)	(Section 1c)	Installation of
	(Years From Date	(Years From	Coated Panels)
	of Coating	Date of	
	Application)	Installation of	
		Coated Panels)	
Fluropon®	35	30	30
Fluropon® Extreme (Hardcoat)	35	30	30
Fluropon® Premiere (requires clear coat)	20	20	20
Fluropon® Classic (requires clear coat -	20	20	20
Metallic)			
Fluropon® Classic II (Mica)	20	20	20

This Limited Warranty is valid for products used for roofing and sidewall coil applications only

Sherwin-Williams WeatherXL Siliconized Polyester Coatings

FALK is pleased to offer the following Limited Warranty on our WeatherXL Siliconized Polyester coil coatings. 1. This Warranty applies if any of the following Warranty Conditions occurs: a. Within 40 years from the date of application of the paint, WeatherXL exhibits cracking, flaking, or peeling (loss of adhesion) to an extent that is apparent on ordinary outdoor visual observation. Minute fracturing, which may occur in proper fabrication of the building parts, is not a covered Warranty Condition. Failure due to substrate corrosion is not a covered Warranty Condition. b. Within 30 years from the date of installation of the panels, WeatherXL: i. Chalks more than ASTM D-4214 method A number six (6) rating on horizontally installed (roofing) panels and a number eight (8) rating on vertically installed (sidewall) panels, when properly maintained as described herein, and ii. Changes color more than seven (7.0) Hunter delta-E units on horizontally installed (roofing) panels and five (5.0) Hunter delta-E units on vertically installed (sidewall) panels as determined by ASTM method D-2244. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. Color changes may not be uniform on surfaces



that are not equally exposed to the sun and elements and Sherwin-Williams does not warrant that color changes will be uniform.

Sherwin-Williams Polyester Coating Guarantee

FALK is pleased to offer the following Limited Warranty on our Polyester coil coatings. 1. This Warranty applies if any of the following Warranty Conditions occurs: a. Within 20 years from the date of application of the paint, Polyester exhibits cracking, flaking, or peeling (loss of adhesion) to an extent that is apparent on ordinary outdoor visual observation. Minute fracturing, which may occur in proper fabrication of the building parts, is not a covered Warranty Condition. Failure due to substrate corrosion is not a covered Warranty Condition. b. From the date of installation of the panels, Polyester: i. Chalks more than ASTM D-4214 method A number six (6) rating on horizontally installed (roofing) panels within five (5) years and a number eight (8) rating on vertically installed (sidewall) panels within ten (10) years, when properly maintained as described herein, and ii. Changes color more than seven (7.0) Hunter delta-E units on horizontally installed (roofing) panels within five (5) years and five (5.0) Hunter delta-E units on vertically installed (sidewall) panels with ten (10) years as determined by ASTM method D-2244. Color change shall be measured on an exposed painted surface that has been cleaned of surface soils and chalk, and the corresponding values measured on the original or unexposed painted surface. Color changes may not be uniform on surfaces that are not equally exposed to the sun and elements and Sherwin-Williams does not warrant that color changes will be uniform.

Please contact FALK customer service or your area sales manager to request copies of the coating suppliers' warranty terms, conditions, limitations, and exclusions.



INSTALLATION RECOMMENDATIONS

Panel Inspection

It is critical that you inspect your panels for damage prior to unpacking. FALK IMP bundles will arrive at the project site with identifying placards summarizing your order and panel counts. If panels are missing or damaged while in the care of FALK's logistics team, please contact us immediately while also taking photos of the damaged panels while on the truck. While FALK makes every effort to mitigate and prevent shipping damages, we are not responsible for damages that occur following delivery, while in storage at the project site or when repositioned on-site. We recommend you open and inspect the delivered bundles while staging them appropriately across your construction site in order to facilitate easy installation.

FALK recommends that our panels are installed under the direct supervision of an experienced sheet metal craftsman trained in the proper application of our products. To learn more about our Authorized Installer programs please contact FALK at 616.541.4500.



Panel Handling & Safety

When hoisting sandwich panels be sure to

check the maximum working load limit of the forklift or crane. The package that needs to be lifted may never exceed this weight. The package should always be prevented from falling. That is why it is important to select the most suitable hoisting equipment first. We advise you to use a vacuum lift, pallet lifter or lifting slings combined with a wooden or metal support system for hoisting packages of sandwich panels.

Please take caution while handling the HFW40 Panel improper unloading and handling of panel material bundles may cause bodily injury or material damage. FALK is not responsible for bodily injuries or damage during unloading and staging.

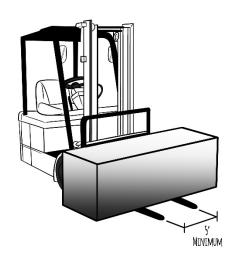
When using forklifts, make sure that forks are spread apart as far as possible. (5'-0" minimum)

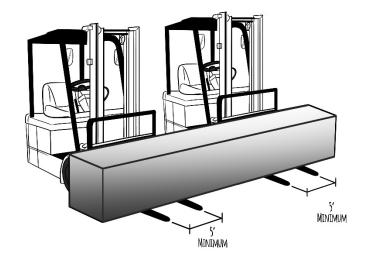
Handle with care and points of special attention.

- i. Be sure to avoid damaging panels on the opposite side of the struck when unloading.
- ii. Advance slowly and with caution once the bundle is on the forks.
- iii. Make sure to lift at the center of the bundle to avoid tipping.
- iv. Protective boards or foam should be placed on forklift load backrests to prevent damaging panel joints

If two forklifts are required, unloading must be coordinated. Operators must work in unison to prevent damage.





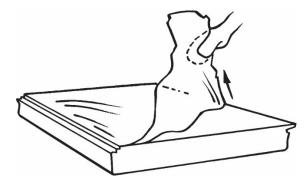


Protective Film

It is recommended to remove protective film as panels are installed. Film on installed panels should be removed by the end of each day. If panels are not installed within 60 days of receipt, the bundles should be unstacked, and the protective film removed from each panel. Carefully restack the panels while using foam slip sheets to protect the panels from damage. If adhesive residue remains on panel surfaces after the protective film is removed, panels may be cleaned with soapy water, WD-40, a cloth soaked in Oil-flo 141 or 409 cleaner.

Removal of Protection Film

The protective film on the panels needs to be removed within four weeks after production. If this is not removed within this time frame the film may be difficult to remove.





Covering

You can protect the panels from exposure to direct sunlight, rain, or any dirt by using a breathable tarp (for example a canvas tarp). Fasten this tarp with anchors so it will not blow away. However, please do not attach the tarp directly to the package. Plastic tarps should not be used since they may cause condensation below the surface. In addition to this, always remove stagnant water between panels. Please note packages should be placed at a 4°-degree angle at least, so any moisture can flow away. Any shallow space below the Styrofoam

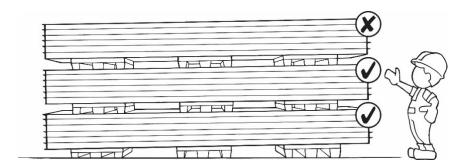
pallets should also be filled so all pressure points are

supported.

Storage Requirements

We recommend stacking two packages on top of each

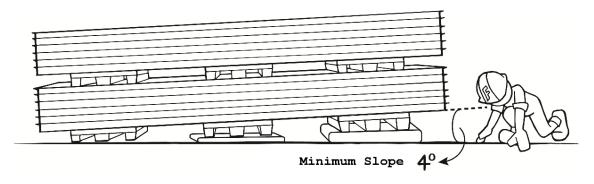
other at the most. The longest package should be placed at the bottom. Please note: While stacking, the blocking and bracing needs to be clean and free from any other objects. This will limit the chance of irreparable damage to the top elements of the bottom package.





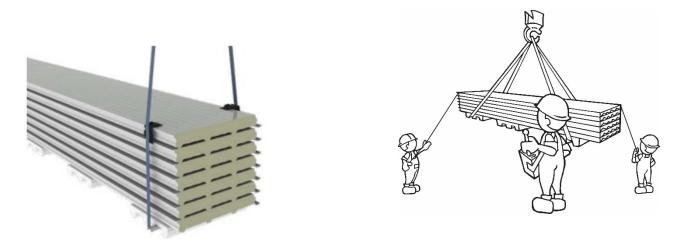
Unlimited Storage

It is possible to keep panels in storage for a longer period. However, it is still important to remove the protection film on time and to store the goods indoors. It's highly recommended that you have adequate storage space to receive and store the panel bundles on a paved surface. 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. Avoid outdoor storing for longer than 60 days. Moisture between panels can cause corrosion or staining. Staining of any kind is not considered to be a cause for rejection. If panels are not to be used immediately, then they should be stored under a temporary shelter with the plastic removed from the top and sides of the bundles.



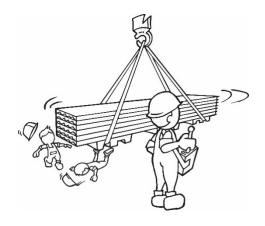
Lifting Slings

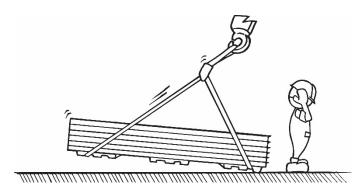
Lifting slings always need to be pulled through below the blocking and bracing. This can be easily prevented by using a wooden support or metal tube that is at least 4 inches longer than the width of the package. Place these below the blocking and bracing and place the lifting slings through them. If necessary, also use temporary side protection such as a protective plate or bumper cushion, on top of the load.



Do not move any loads above people. For obvious reasons, loads should never be lifted above people. There is always a chance of something going wrong. Notify people who may walk below a load on time and never lift a load overhead. If possible, it is better to place an obstruction or close off the area.



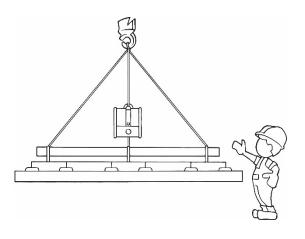


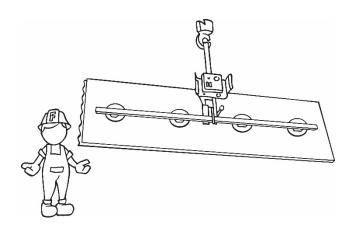


Pay attention to where you walk. While operating a crane, most focus is put on the load and the operating unit. However, please do not forget to also pay attention to the load while walking behind the crane. It is better to check for any obstacles beforehand. This will help avoid unnecessary risks. Also avoid walking backwards as much as possible.

Vacuum Lifter

Always lift the panels from the package in a perpendicular position. Due to possible burr formation at the end of the panels damage may occur to the coating of the lower panel when they are not lifted in a perpendicular position. FALK recommends using a suitable and approved vacuum lifter for hoisting the panels. When using a vacuum lifter as your hoisting device the shape and size needs to be adjusted to the panel that requires lifting. This needs to remain in a flat position as much as possible. This is necessary to ensure a balanced division and maximum suction on the element during vertical transportation. Long and thin elements are prone to unwanted dents inflicted during handling.



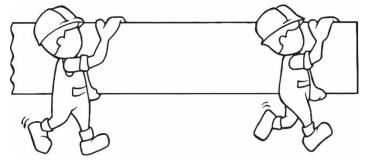




Manual Carrying

Panels should be manually carried on their sides(vertically) and not on the horizontal as this may cause for the sheet to detach (delaminate). Workers should wear appropriate protective gear when handling panels. Failure to do so may cause injury. Be careful not to damage the joint areas as panel engagement may be difficult in joints

are damaged.

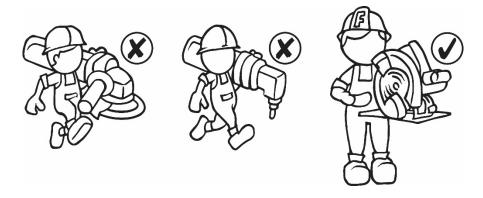


Job Site Safety & Sealant Applications

While working with FALK IMP's, please look out for sharp edges, burrs, and chips on the elements. Fine dust from the insulation core sometimes causes a skin rash or respiratory irritation. Some injuries may occur when processing and working with panels. Therefore, we advise you to always wear safety goggles or a face mask, gloves, dust mask and protective clothing. To avoid any hearing damage, please wear hearing protection as well.

Cutting a panel to size Use the right equipment to cut a panel to size. FALK suggests using a circular saw or panel cutter with a special saw blade suitable for steel sandwich panels, when making modifications to building elements.

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

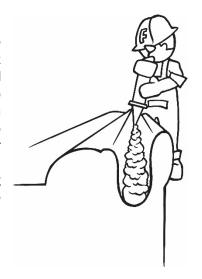


Caution: Modifying, substituting, cutting, or eliminating critical design component details will impact assemble performance and may nullify one's ability to receive a warranty. System assemblies' performance is tested based on all components working collectively at prescribed diameters and lengths. When modification and substitutions are made to these components, this directly impacts the assembly's performance. FALK cautions this practice and recommends interested parties contact the projects Engineer of Record to perform calculation prior to performing any modification and/or substitution.



Jobsite Sealant Applications

Some projects require higher levels of environmental protection from the elements, than the level that can be reached when using the standard joint containing a gasket. When this is the case, the side joint will need to be covered by butyl tape or sealant during the installation process. Apply butyl sealant to interior female joint to ensure proper vapor barrier. Joint should be dry and clean before applying sealant. Fill interior warm female pocket approximately 1/2 to 3/4 full. Add / delete as necessary during panel installation to maintain proper panel seal. In extreme cold weather locations, it may be advisable to caulk both interior and exterior joints. It is also advisable to keep sealants in a warming location until ready for use to ensure proper viscosity and flow rates are achieved.



Structural Alignment

Proper alignment of the structural members to which the panels are to be attached is critical. Before beginning installation of wall panels vertical or horizontal, verify that all structural framing is properly aligned. IMP's walls must be square and plum and free of obstructions such as weld marks, bolts, or screw heads.

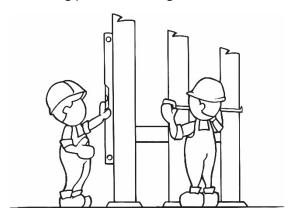
For vertically installed panels, support members shall be:

- a. Plus or minus 1/8" (3.17 mm) in 5 feet (1524 mm) in any direction along plane of framing
- b. Plus or minus 3/8" (9.525 mm) in 20 feet (6096 mm) cumulative in any direction along plane of framing
- c. Plus or minus 3/4" (19.05 mm) from framing plane on any elevation.

For horizontally installed panels, support members shall be:

- a. Plus or minus 1/8" (3.17 mm) in 5 feet (1524 mm) in any direction along plane of framing
- b. Plus or minus 1/4" (6.35 mm) in 20 feet (6096 mm) cumulative in any direction along plane of framing
- c. Plus or minus 1/2" (12.7 mm) from framing plane on any elevation.

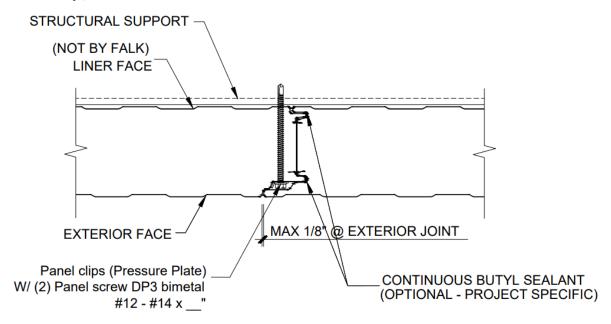
Any variance from tolerances can affect both performance and aesthetics and must be reported to the engineer of record, architect, and general contractor, and corrected by the responsible party before panel installation begins. The use of shims is permitted, however, the use of excessive over ½" is not advisable.





VERTICAL PANEL INSTALLATION

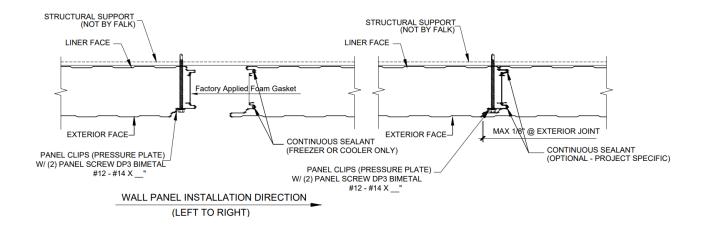
Common Details Assembled Side Lap Joint



- 1. Panels can be cut with a circular saw using a metal cutting blade
- 2. Abrasive blade will melt Galvalume coating causing rust problem. Please do not use an abrasive blade.
- 3. Properly support the panel during cutting.
- 4. Blade that is going to use for cutting panel should be cool and not melt coating or finish.
- 5. After cutting each panel for installation please inspect for damages
- 6. Damages panel should set aside and remove damage area and use for the small portion.
- 7. After installing panel, please check for coverage that may vary up to + 1/8" due to tolerance.
- 8. If no installation direction is specified, panels may be installed per installer preference as per job site condition.



Panel Joint for Installation



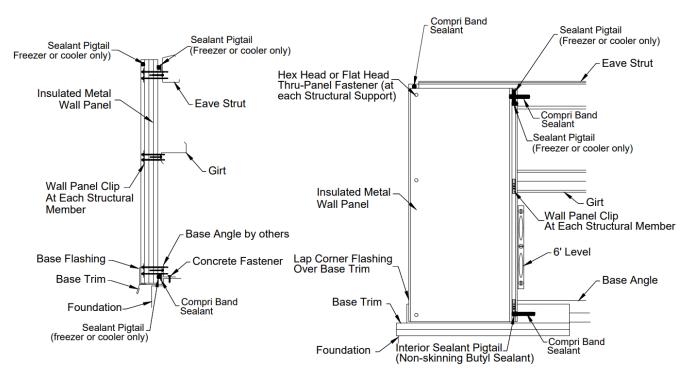
Joint Sealant Application

Assembled Side Joint

- 1. The edges of the panels have an offset side joint, which allows for a concealed clip that is attached within the side joint.
- 2. Clips are set onto the panels clip shelf at each structural location and attached through the panel and into the structural member.
- 3. Consult the project drawings for the proper type and number of fasteners to be used at each clip.
- 4. Vapor sealant locations must be determined by the appropriate engineer for proper application of panel system.
- 5. Proper panel engagement is critical to the performance and appearance of the wall panels



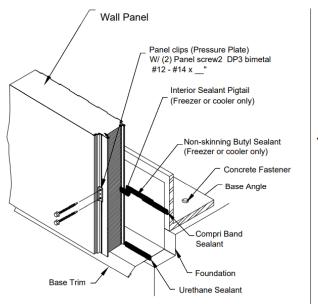
First Panel Attachment

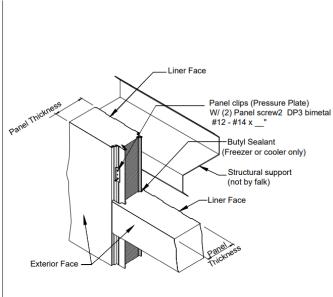


- 1. You may be required to cut the first panel to have a flat flush edge.
- 2. Make sure before installing the first panel, you are familiar with all requirements to ensure proper installation.
- 3. Please set the first panel on the base trim and confirm that it is properly aligned with the steel line of the building and is plumb.
- 4. After please check visually to see that the panel touches all structural members at the base, intermediate girts and the eave/rake. Attach the panel to the building structures with wall clips as previously outlined.
- 5. In the case of offset corner trim is to be used, face fasten the panel with hex head fasteners at the base, intermediate structures, and eave/ rake.
- 6. If flat corner trim is to be used, attach the panel at the corner to the interior skin of the panel with Fab-Lok fasteners or face fasten with flat head self-drilling fasteners.



Panel Attachment at Base and Girt





Hidden Clip Connection at Base

Hidden Clip Connection at Girt

Do not overtighten fasteners to a point that damages or deforms the clip or panel.

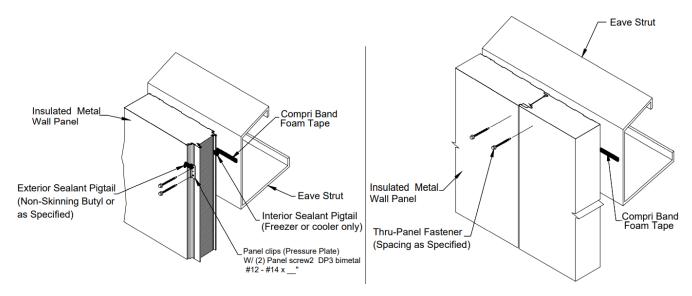
CONSIDERATIONS

- 1. Make sure the base trim has been installed and fully sealed to the concrete.
- 2. Perimeter sealant (non-skinning butyl sealant) has been installed along the vertical leg of the base trim at least 6" beyond the panel width to provide a seal between the panel and base trim.
- Once the panel is in place on the base and has been plumbed, install a panel clip at the clip shelf of the panel to allow the panel to be fastened to the base structural member.

- 1. The wall panel will be attached to the intermediate structural supports with panel clips.
- Install the proper number of self-drilling or selftapping fasteners through the factory punched holes in the clip and into the intermediate member. The joint engagement of the next panel will cover the clip and fasteners.



Panel Attachment at Eave



Hidden Clip Connection at Eave

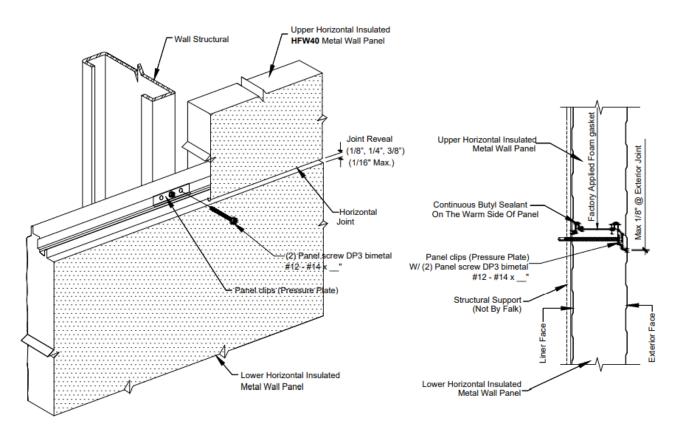
Thru Fastened Connection at Eave

- 1. The wall panel will be attached to the eave and rake with panel clips.
- 2. Install the proper number of self-drilling or self-tapping fasteners through the factory punched holes in the clip and into the intermediate member. The joint engagement of the next panel will cover the clip and fasteners.
- 3. If the foam at the top of the panel is to be exposed for 48 hours or to inclement weather, during the installation, it is recommended that the installation contractor place a panel cover trim plate over the exposed foam to prevent water infiltration.



HORIZONTAL PANEL INSTALLATION

Common Details Panel Engagement



CONSIDERATIONS

Proper panel engagement is critical to the performance and appearance of the wall panels. When the panels are fully engaged to one another, the actual panel width may vary by up to 1/8" due to manufacturing and field tolerances. The joint will typically be 1/8" to 3/8" when the panels are fully engaged. If the joint gap is greater than this, check the panels for the cause of engagement interference.

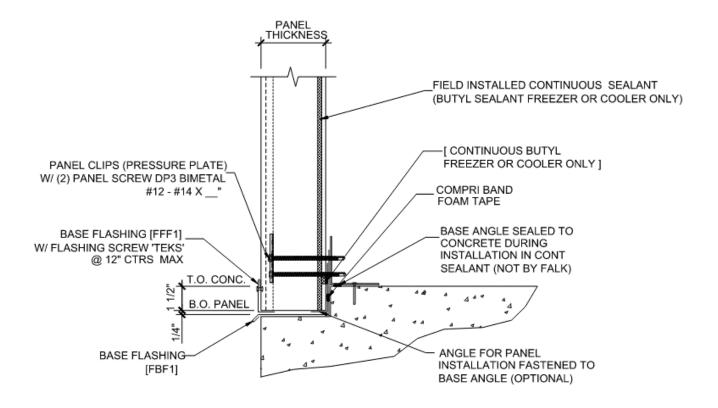
Do not overtighten fasteners to a point that damages or deforms the clip or panel.



PANEL DETAILS - Vertical Orientation

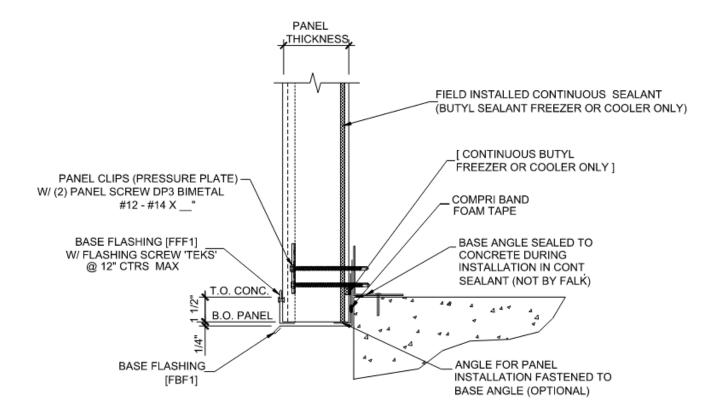


Base Detail - With Notch



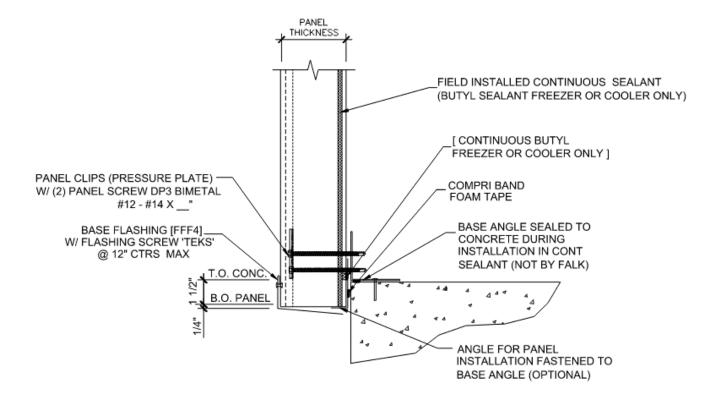


Base - Without Notch



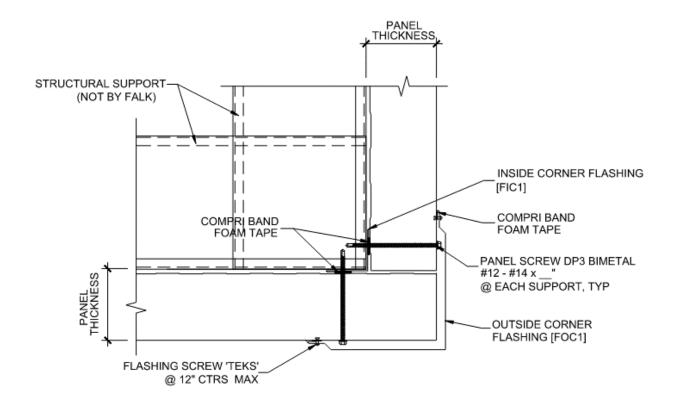


Base Without Notch (Freezer/Cooler)



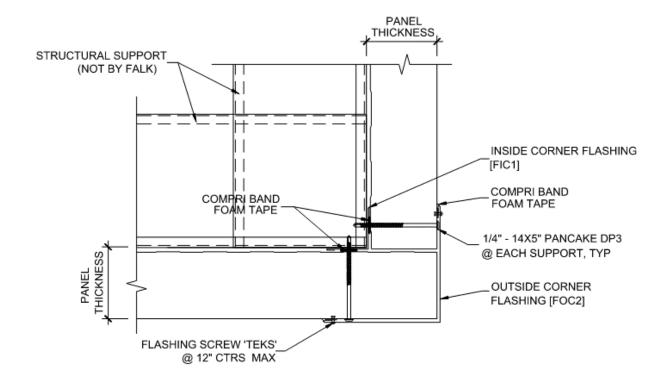


Outside Corner - Box Trim



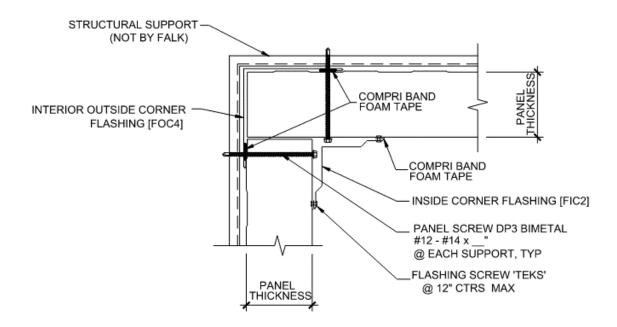


Outside Corner - Flat Trim



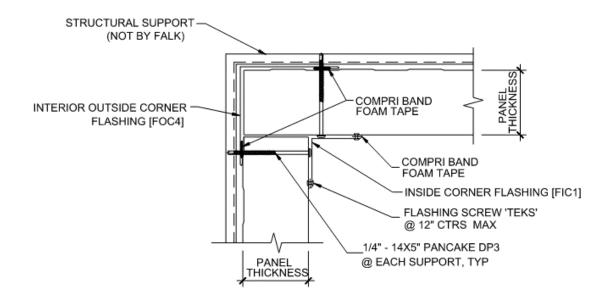


Inside Corner - Box Trim



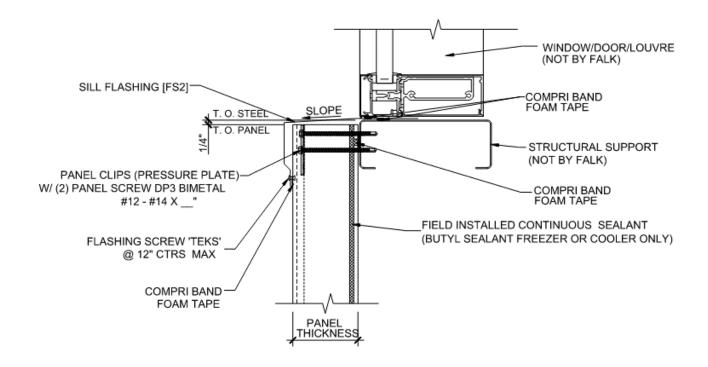


Inside Corner - Flat Trim



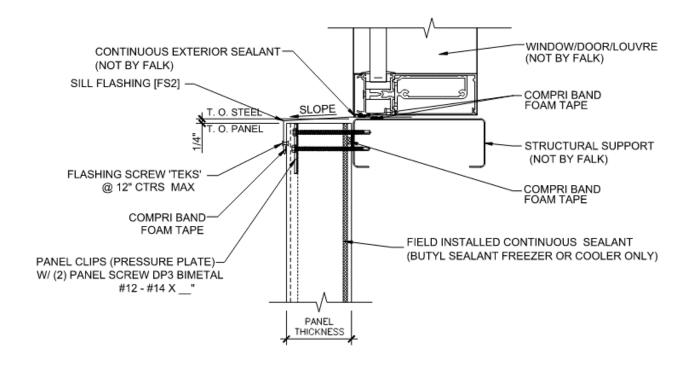


Opening Sill - Box Trim



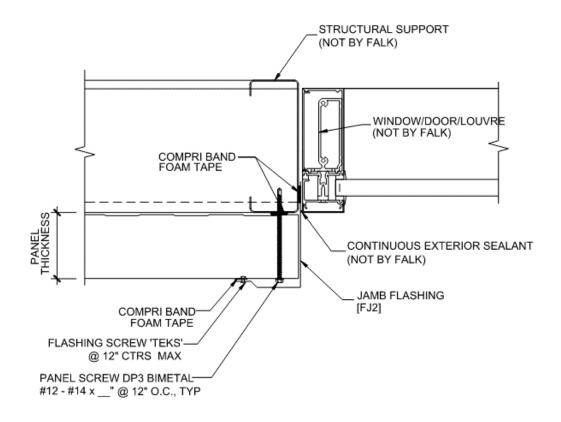


Opening Sill - Flat Trim



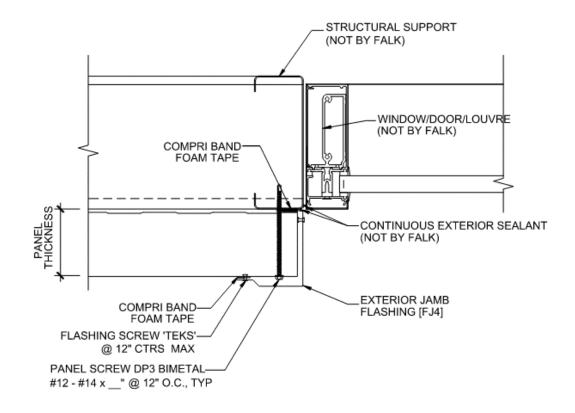


Opening Jamb - Box Trim



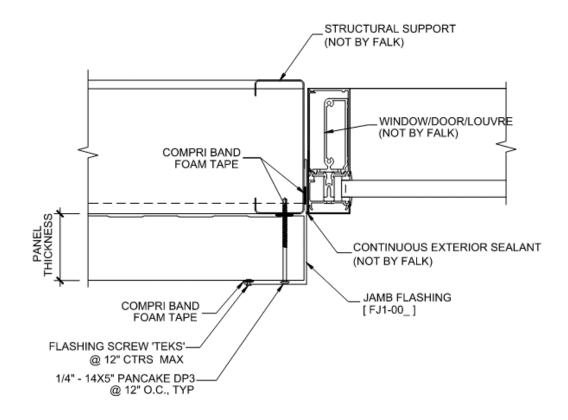


Opening Jamb - Box Trim (Panel Wrap)



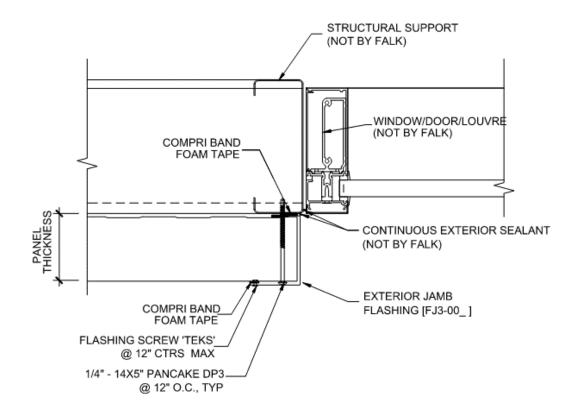


Opening Jamb - Flat Trim



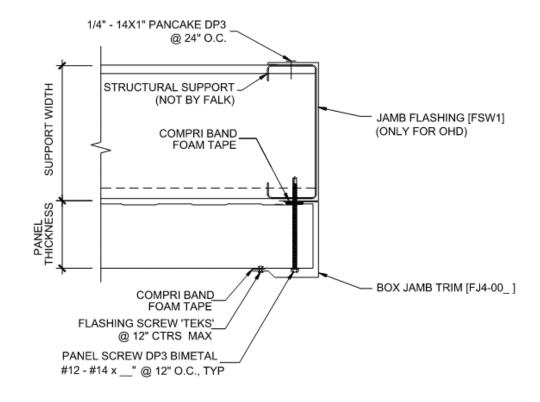


Opening Jamb - Flat Trim (Panel Wrap)



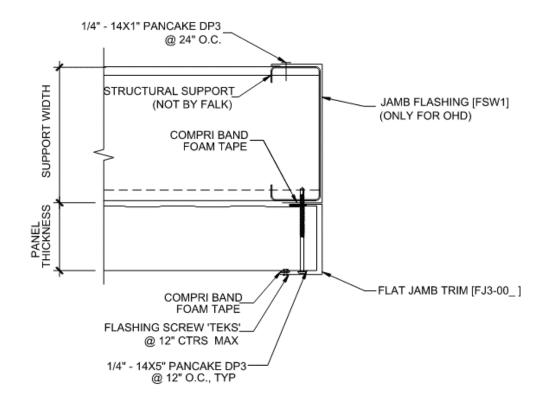


Overhead Door Jamb - Box Full Wrap Trim (2 Piece)



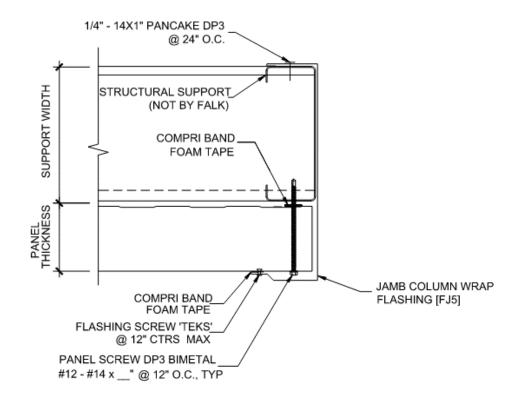


Overhead Door Jamb - Flat Full Wrap Trim (2 Piece)



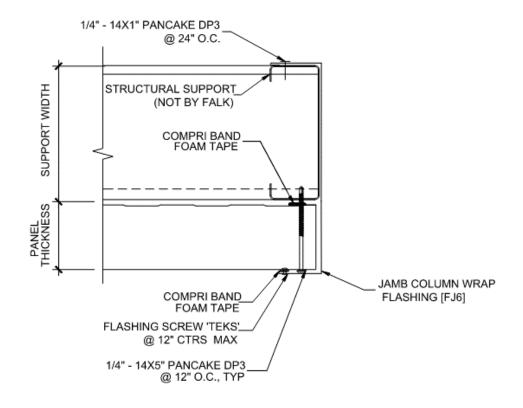


Overhead Door Jamb - Box Trim Full Wrap (1 Piece)





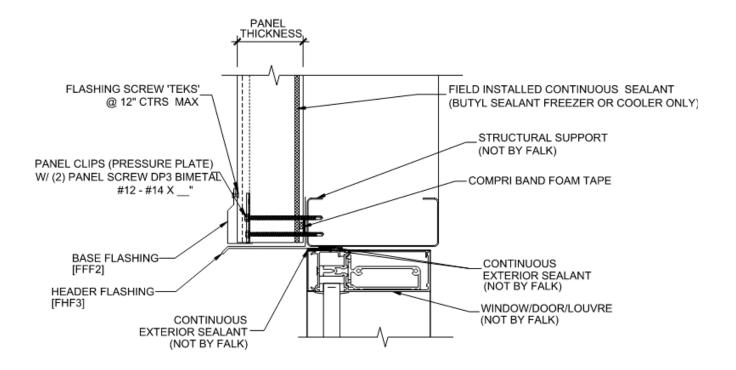
Overhead Door Jamb - Flat Trim Full Wrap (1 Piece)





Opening Headers - Box Trim

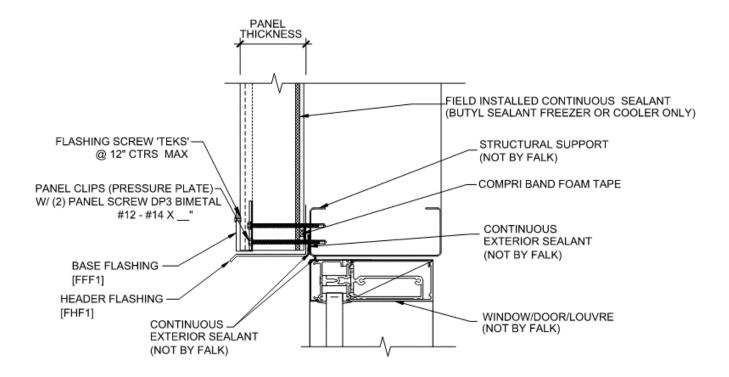
*Windows, Lovers, & Man Doors





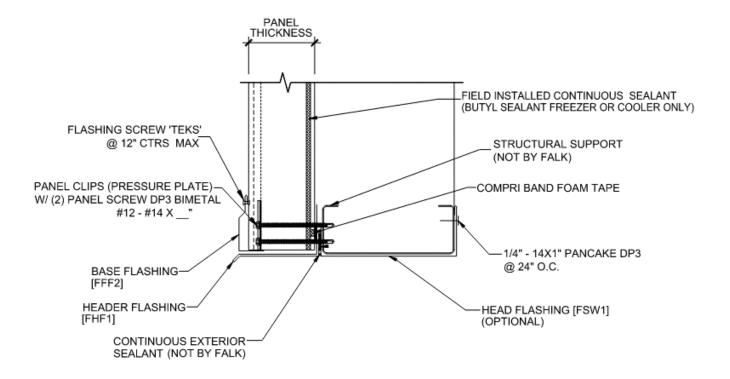
Opening Headers - Flat Trim

*Windows, Lovers, & Man Doors



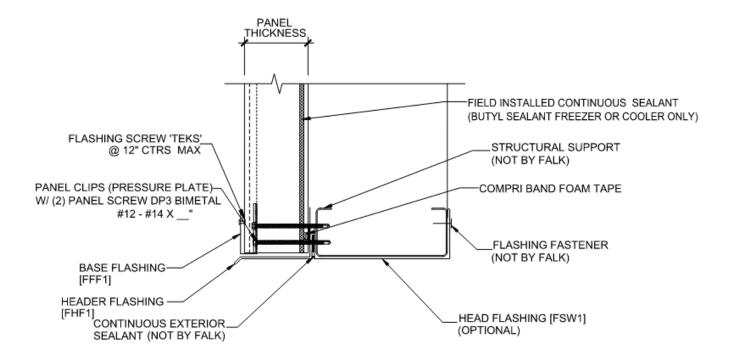


Overhead Door Header - Box Trim Full Wrap (2 Piece)



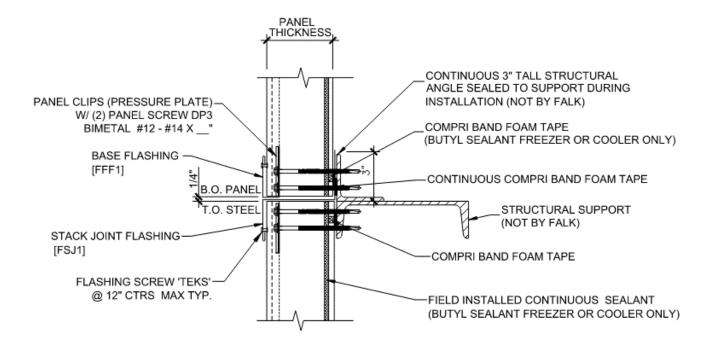


Overhead Door Header - Flat Trim Full Wrap (2 Piece)





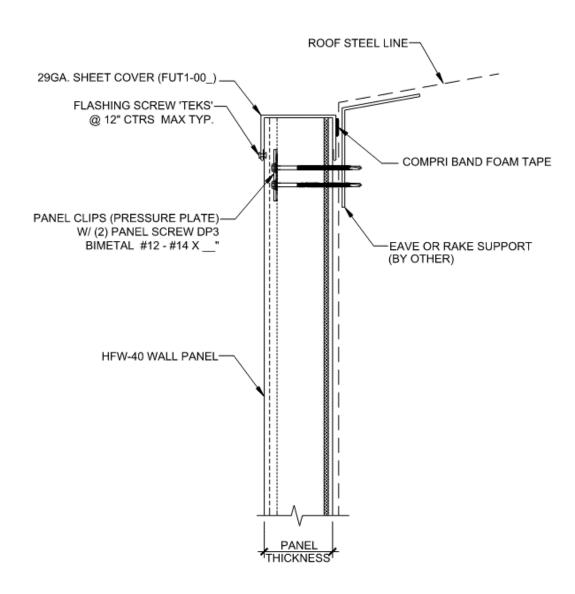
Stack Joint





Panel Cover

U-TRIM TO COVER THE TOP OF THE PANEL FOR PREVENT WATER FROM ENTERING THE PANEL DURING THE INSTALLATION PROCESS.

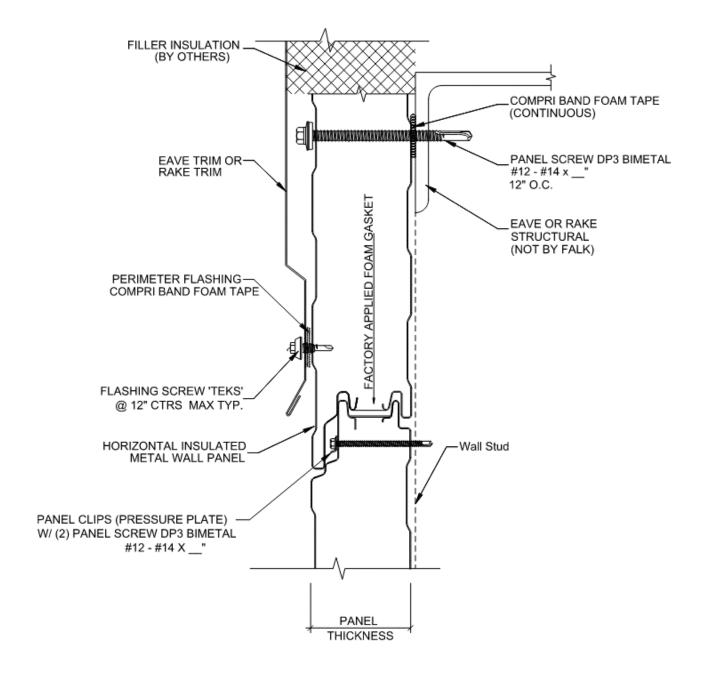




PANEL DETAILS - Horizontal Orientation

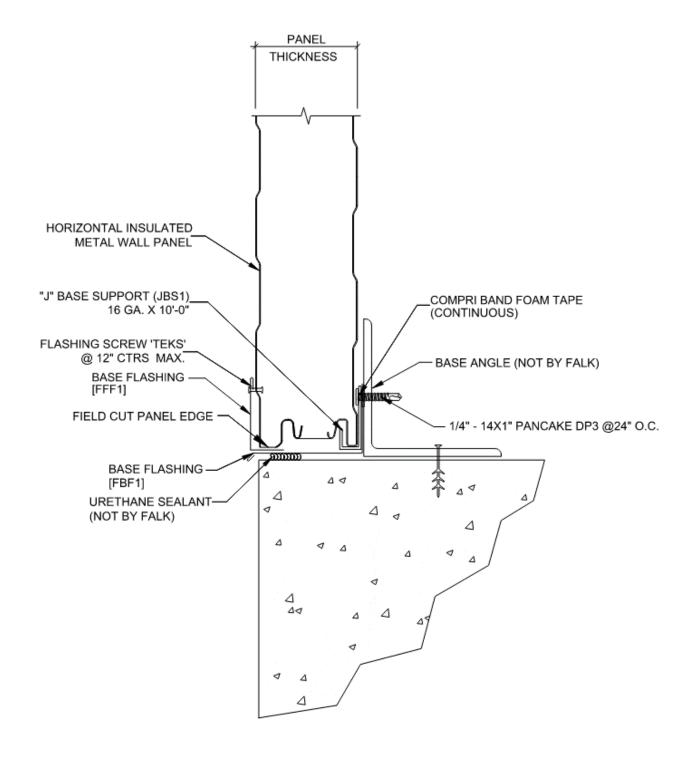


Eave / Rake Termination



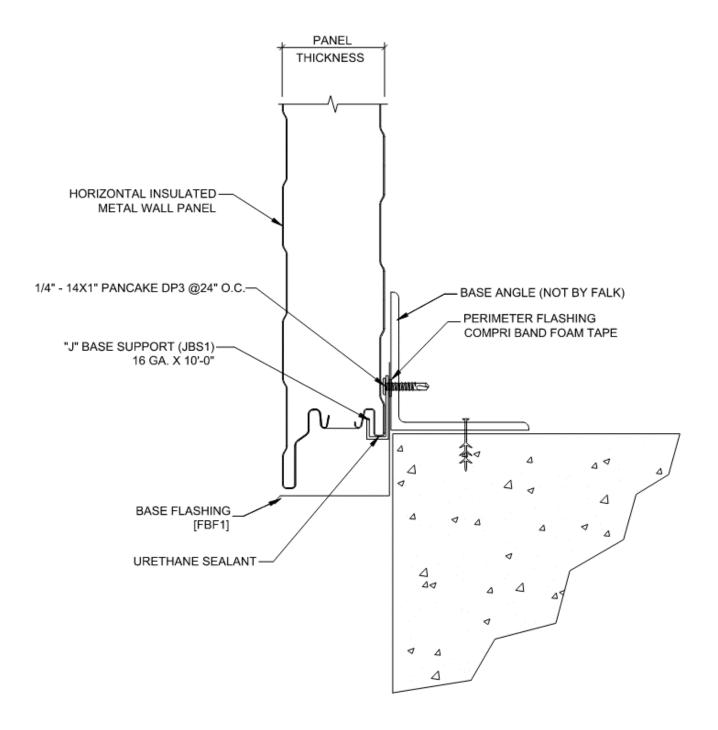


Base with J-Clip



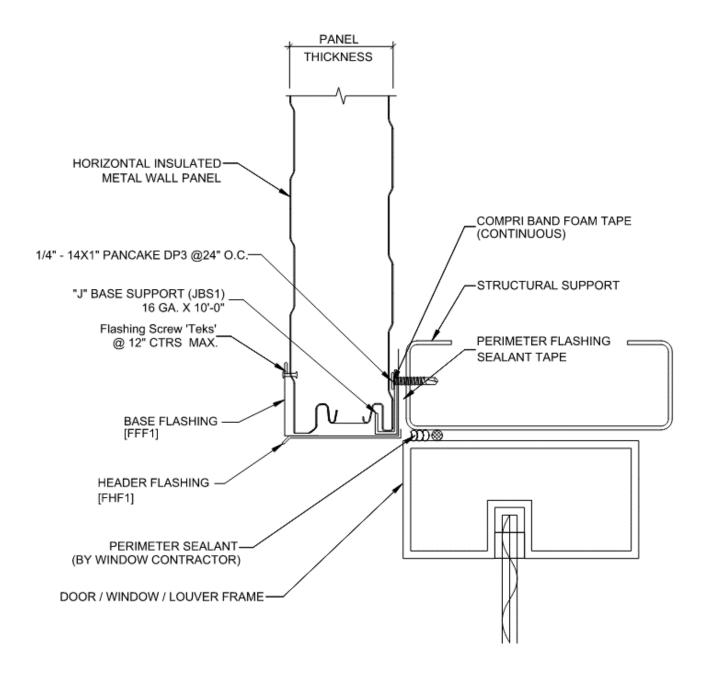


Base with J-Clip 2.



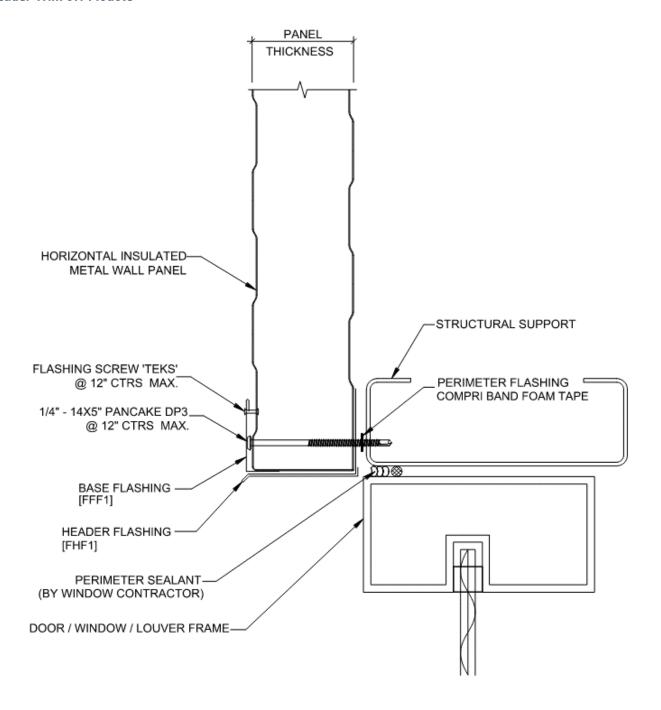


Header Trim on Module



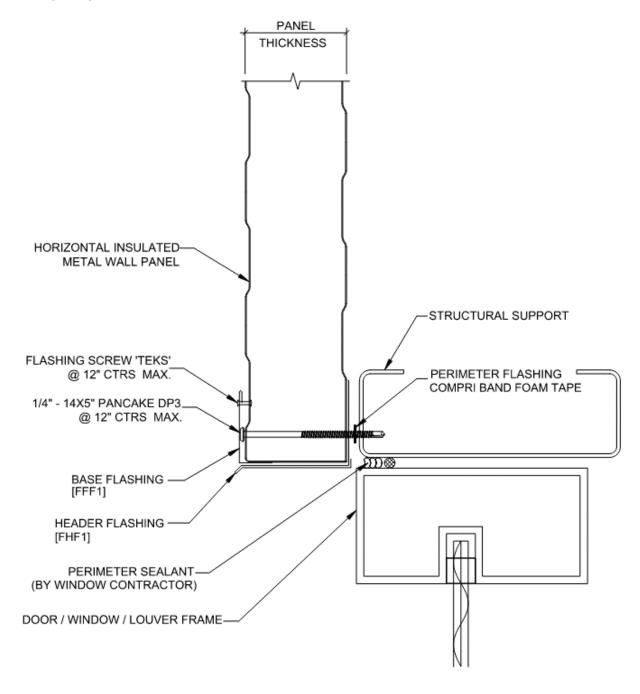


Header Trim off Module



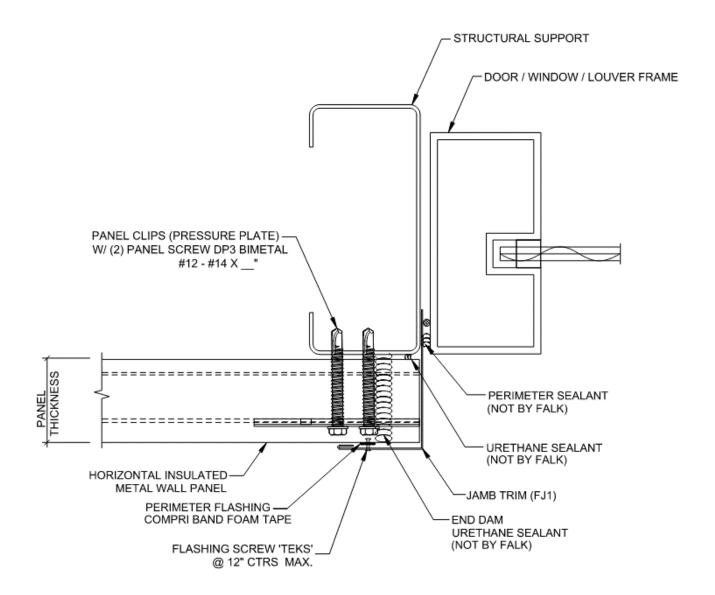


Windowsill / Door/ Louver



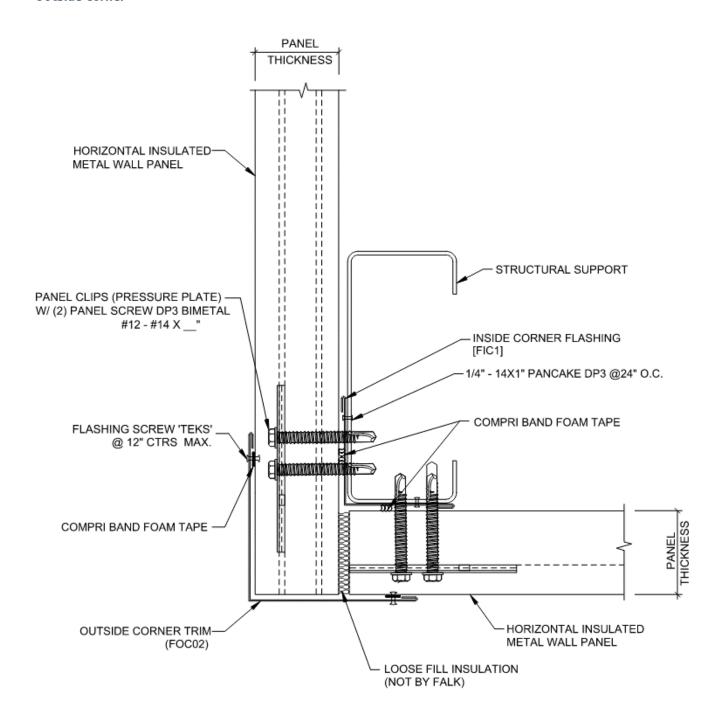


Jamb Trim



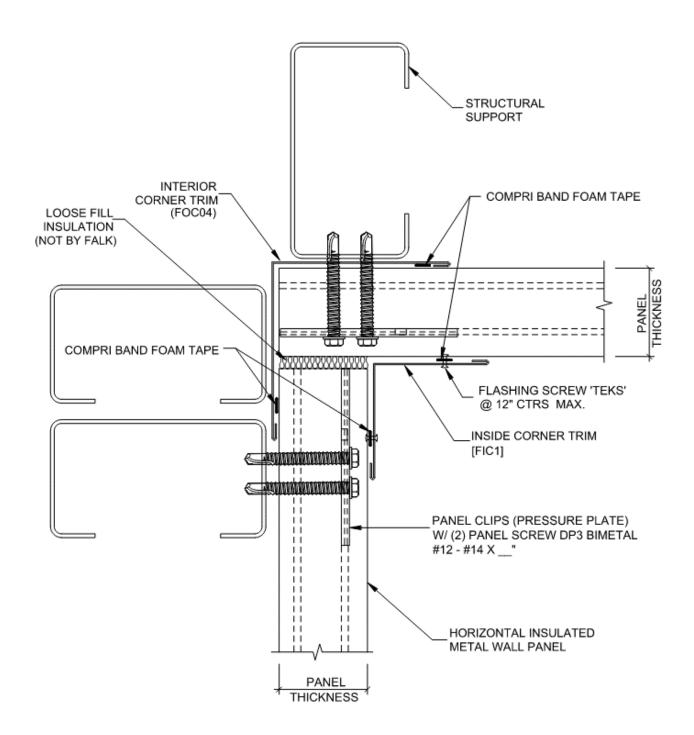


Outside Corner



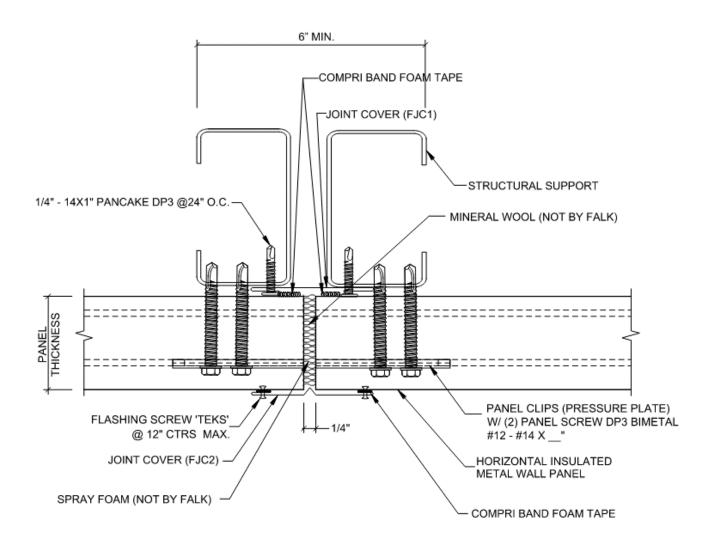


Inside Corner





Butt Joint

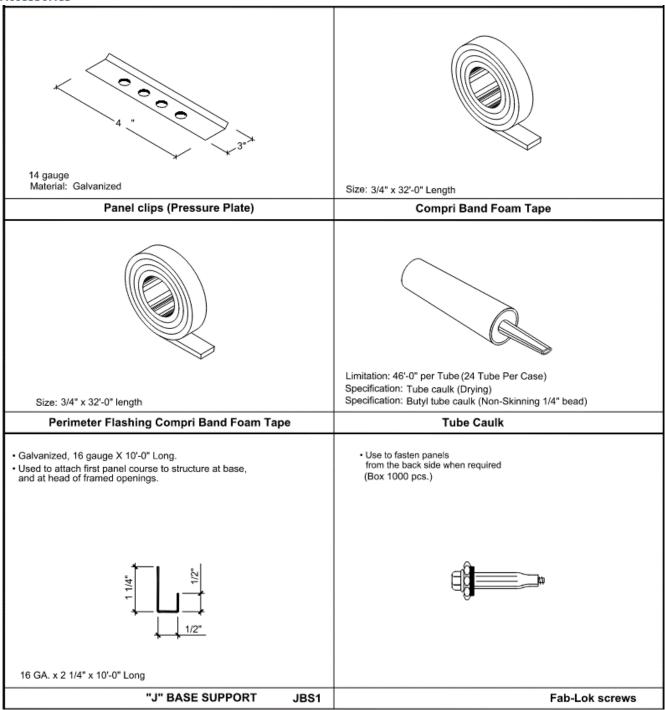




Accessories & Fasteners



Accessories



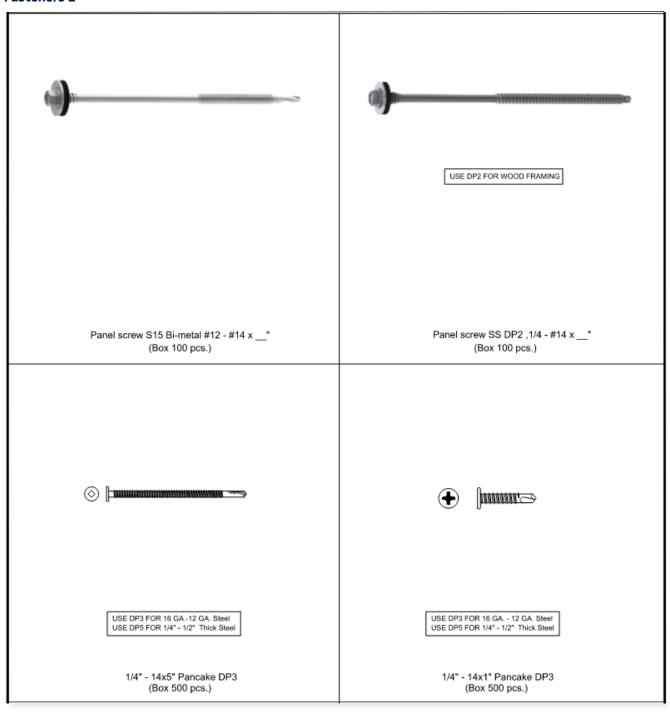


Fasteners 1





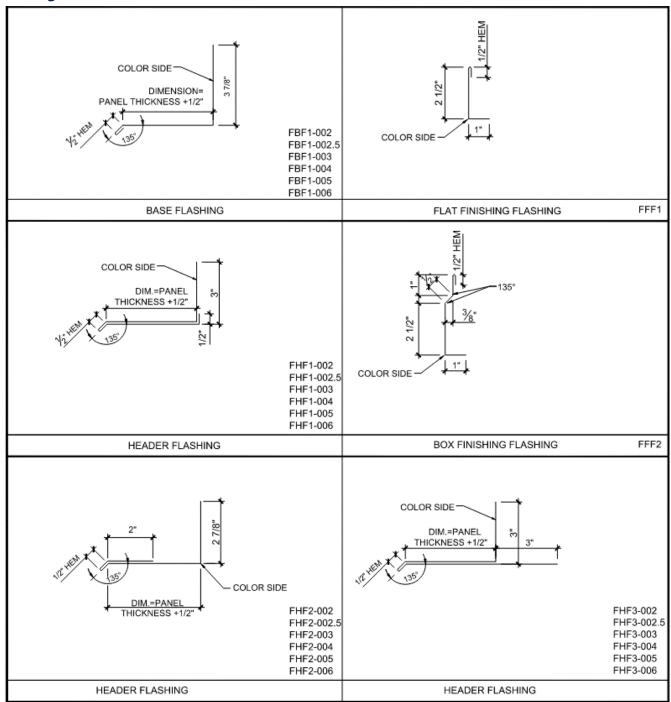
Fasteners 2



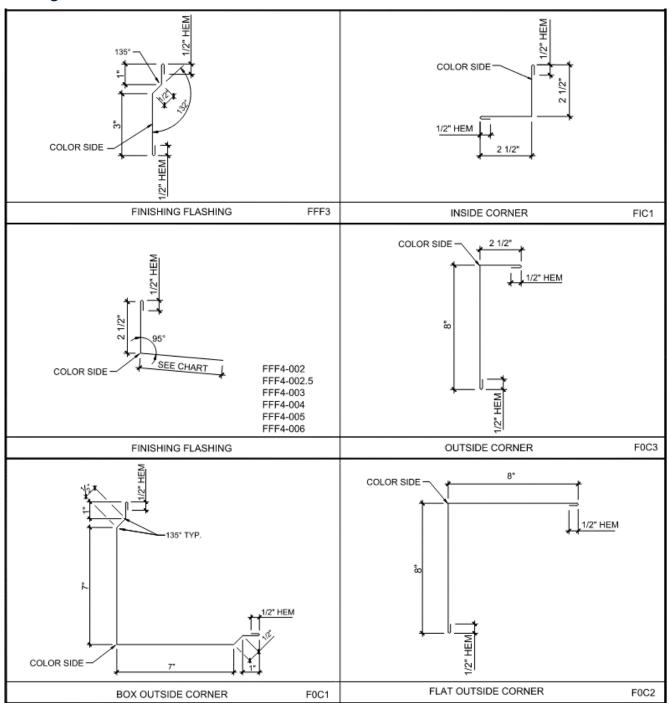


Flashing Profiles

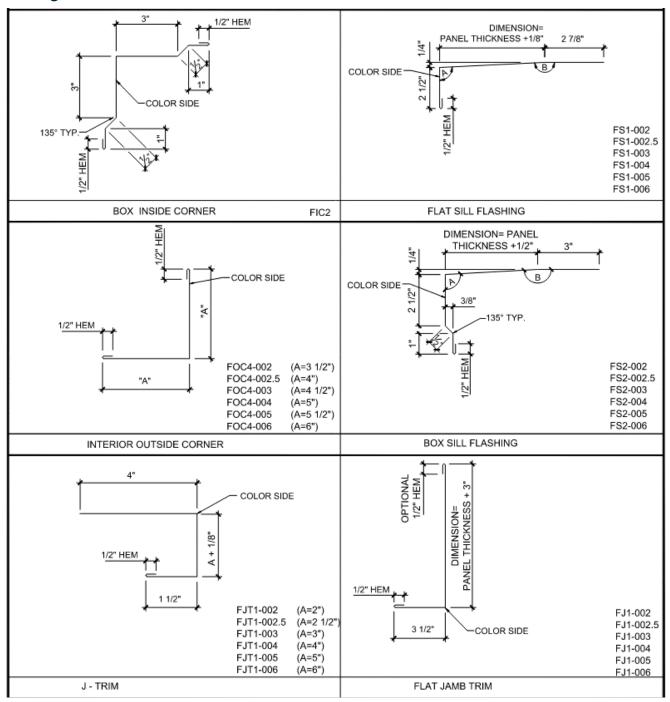




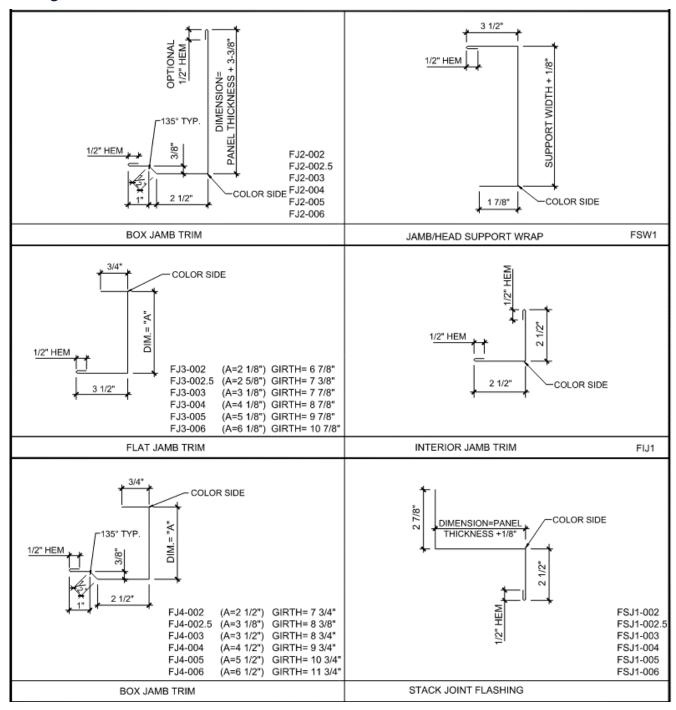




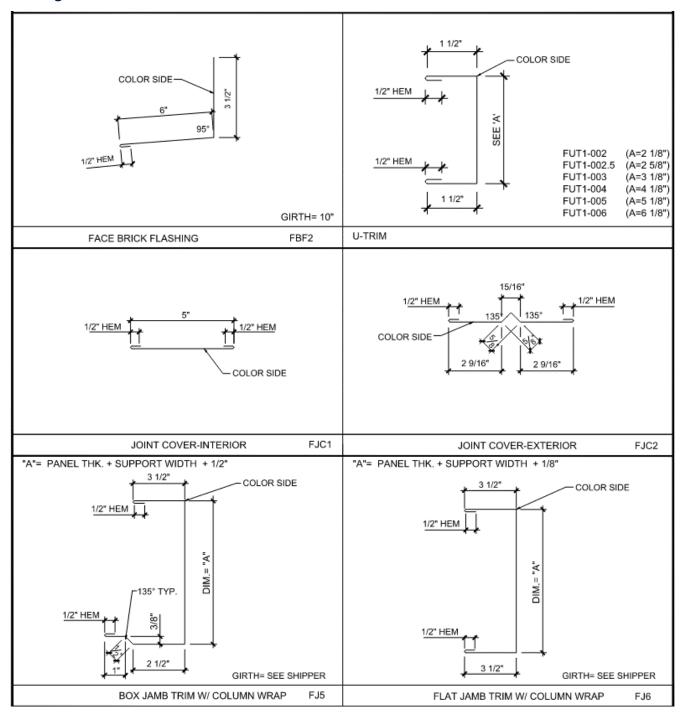




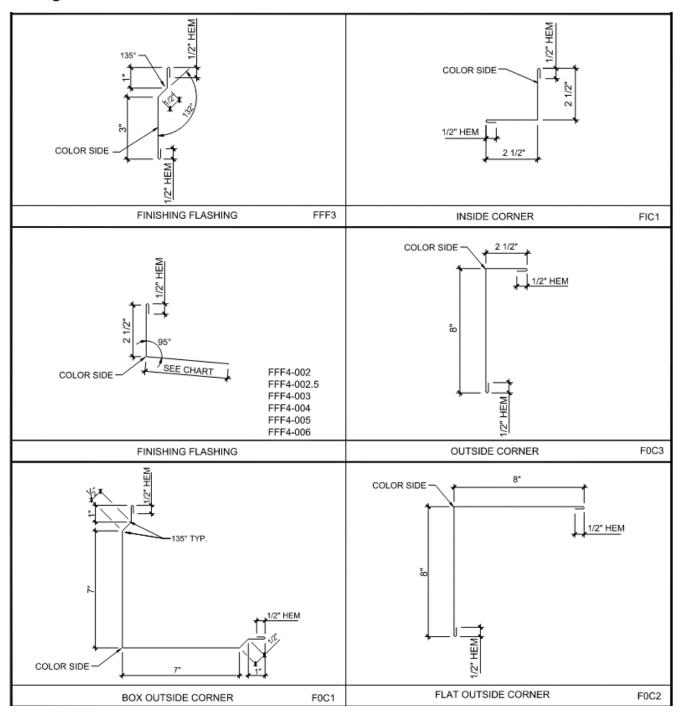




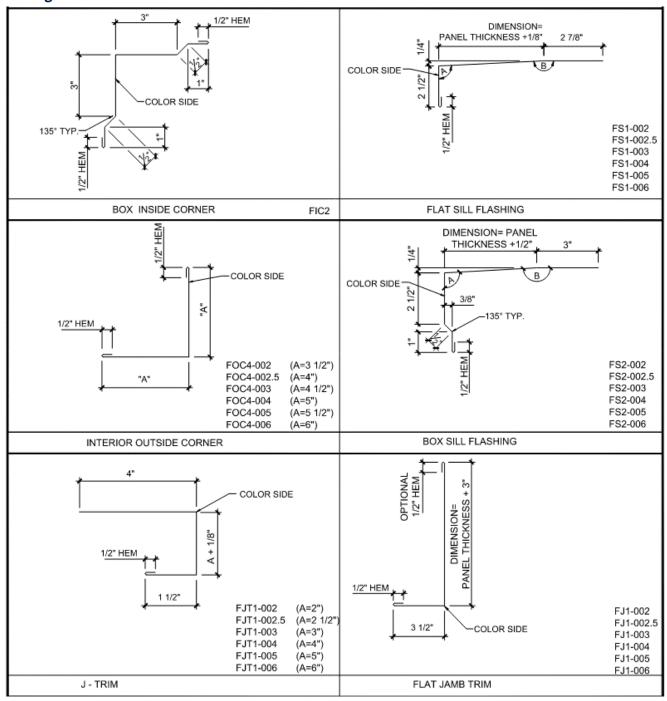






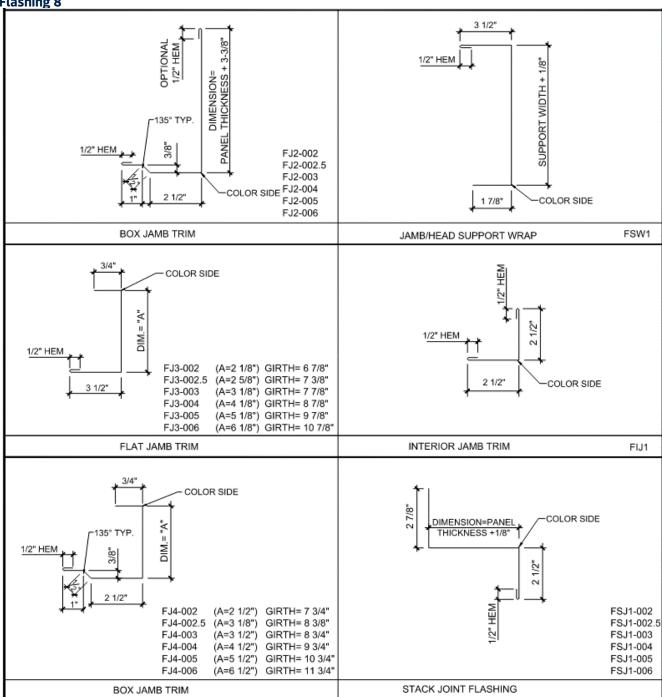




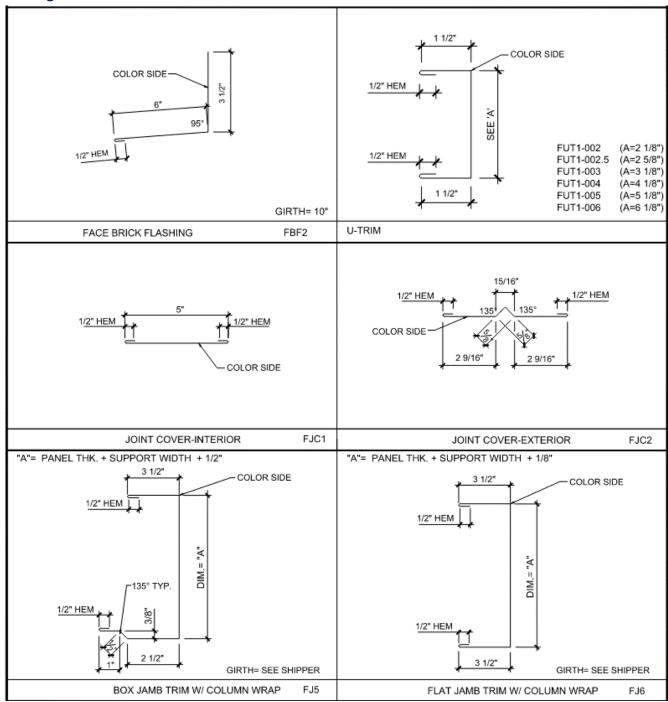














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