



BUILDINGS

# **Insulated Wall Panels**

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**Technical/Installation Information**

# IMPORTANT NOTICE

**READ THIS MANUAL COMPLETELY PRIOR TO BEGINNING THE INSTALLATION OF THE IPS INSULATED METAL PANEL SYSTEM. IPS DETAILS MUST BE FOLLOWED AS A MINIMUM TO ENSURE APPROPRIATE WARRANTIES WILL BE ISSUED.**

**IF THERE IS CONFLICT BETWEEN PROJECT ERECTION DRAWINGS PROVIDED OR APPROVED BY IPS AND DETAILS IN THIS MANUAL, PROJECT ERECTION DRAWINGS WILL TAKE PRECEDENCE.**

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Descriptions and specifications contained herein were in effect at the time this publication was approved for printing. In a continuing effort to refine and improve products, IPS reserves the right to discontinue products at any time or change specifications and/or designs without incurring obligation. **To ensure you have the latest information available, please inquire or visit our Web Site at [www.insulated-panels.com](http://www.insulated-panels.com).** Application details are for illustration purposes only and may not be appropriate for all environmental conditions, building designs or panel profiles. Projects should be engineered to conform to applicable building codes, regulations and accepted industry practices.

For complete performance specifications, product limitations and disclaimers, please consult IPS's Paint and Galvalume Plus® warranties. Upon receipt of payment in full, these warranties are available upon request for all painted or Galvalume Plus® prime products. Sample copies can be found at [www.insulated-panels.com](http://www.insulated-panels.com) or by contacting your local IPS Sales Representative.

# TABLE OF CONTENTS

## WALL SYSTEM

Architect/Engineer Information .....	IWP-2
Product Description/Engineering Information	
FWP Panel .....	IWP-3
IPP II Panel .....	IWP-4
ESP II Panel .....	IWP-5
EWP II Panel .....	IWP-6
Sonora™ Panel .....	IWP-7

## GENERAL INFORMATION

Product Checklist .....	IWP-8 - IWP-11
Unloading .....	IWP-12 - IWP-15
Storage .....	IWP-16 - IWP-17
Staging .....	IWP-18
Preparatory Requirements .....	IWP-19 - IWP-24
Wall Layout .....	IWP-25 - IWP-26
Handling Panels	
Manually .....	IWP-27
Mechanically .....	IWP-28 - IWP-30
Panel Sealant Requirements .....	IWP-31
Attaching Panels to Substructure	
Panel Joint Engagement .....	IWP-32
Base .....	IWP-33
Intermediate Supports .....	IWP-33
Eave/Rake .....	IWP-34
Corners .....	IWP-35 - IWP-36
Framed Openings .....	IWP-37
Offset Trim .....	IWP-38 - IWP-43
Flat Trim .....	IWP-44 - IWP-49
Door With Flat Jamb Trim .....	IWP-50 - IWP-53

## INSTALLATION

Panel Installation	
First Panel .....	IWP-54
Intermediate Panels .....	IWP-55
Quality Control .....	IWP-56 - IWP-57

## DESIGN

Details	
Base	
With Notch .....	IWP-58
Without Notch .....	IWP-59
Inside Corner	
Offset .....	IWP-60
Flat Opt .....	IWP-61
Flat .....	IWP-62
Outside Corner	
Offset .....	IWP-63
Flat Opt .....	IWP-64
Flat .....	IWP-65
Framed Opening – Head .....	IWP-66
Framed Opening – Jamb	
Offset .....	IWP-67
Flat Opt .....	IWP-68
Flat .....	IWP-69
Framed Opening – Sill	
Offset .....	IWP-70
Flat .....	IWP-71
Stack Joint .....	IWP-72

# WALL SYSTEM

# Insulated Wall Panels

## ARCHITECT/ENGINEER INFORMATION

IPS's Insulated Wall Panels are available in five distinct profiles, which in turn are available in a variety of panel thicknesses and widths. The wide array of panel thicknesses offers you unparalleled energy efficiency that can be custom tailored to your project's specific needs.

IPS Insulated Wall Panels are attached to the substructure with hidden clips, which are designed to eliminate thermal "short circuits" in the wall system and to provide an architectural appearance.

Please refer to IPS's technical information brochure for full test data on all IPS panels.

IPS Insulated Wall Panels, depending upon the profile, are available in custom lengths up to 32' or 40'. For panels over the recommended lengths, please inquire.

IPS Insulated Wall Panels are heavier and bulkier than single skin panels and may require different equipment to unload and install, as well as different handling techniques. Review this manual carefully to ensure you have a thorough understanding of these requirements before receiving material.

All material should be checked against the shipping list as it is being unloaded. Any shortages or damages must be noted on the Bill of Lading.

To provide consistent thermal values at cavities such as at corners, rake parapets or high eave parapets, filler insulation must be installed. Fiberglass insulation or field applied foam (not supplied by IPS) is typically used and installed within the cavities. Failure to install insulation within these cavities will result in decreased thermal efficiency and may result in condensation and ice formation both within the cavity and the building's interior surfaces.

Because of the thermal efficiency of IPS Insulated Wall Panels, the potential exists for a strong vapor drive between the interior and exterior of the walls. This requires greater attention to the design and application of weather and vapor seals to prevent condensation in the wall cavity or the interior surface of the walls. Depending upon a given project's environmental conditions and the use of the building, the vapor drive may be to the interior or exterior. Where vapor pressure differentials are caused by cold exterior temperatures and heated interiors, the vapor seal is typically specified at the interior, or warm, side of the panels. It is the designer's responsibility to understand the project's unique environmental and operating conditions and to specify the appropriate vapor control measures. Location of vapor barrier sealants must be addressed by a design professional.

Panels with wide flat surfaces are more subject to oil canning due to improper handling, substructure misalignment, overdriving clip fasteners and thermal issues related to panel color and orientation to sun exposure. If oil canning is a concern, some options to help reduce it include panel profiles with narrow flat surfaces, narrower panel widths, shorter lengths and heavier gauges. Since many uncontrollable factors are causes for oil canning, no manufacturer can realistically assure the total elimination of the phenomenon. With careful attention to material selection, panel design and installation, oil canning can be minimized. Oil canning is not a cause for rejection.

As with all insulated metal panels, careful attention should be given to the attachment of the panels to the building's structural framing. Because foam panels do not float but expand when heated, causing "thermal bow", long panel lengths, dark colors and attachment to members that may deflect under load, can cause excessive oil canning or stress buckling of the exterior panel skin. Please contact IPS for further information when designing structures that may incorporate these design elements.

For projects in which the panel's interior skin will be washed down frequently, such as food processing plants, consideration should be given to whether the metal skin should be embossed. Special prefinished unembossed material is available for this purpose. However, the possibility of metal waviness and oil canning must be addressed. Please contact IPS for more information and other available materials.

**For panel load tables and other technical data, please see IPS's Technical Design Information Manual.**

**The Engineer of Record must verify that the structure has been designed to accommodate the erection and design loads imposed by the IPS Insulated Wall Panels. For current information see [www.insulated-panels.com](http://www.insulated-panels.com).**

**THIS MANUAL IS NOT INTENDED TO BE USED AS AN INSTALLATION GUIDE FOR COOLER/FREEZER APPLICATIONS. FOR COOLER/FREEZER APPLICATIONS, CONTACT IPS.**

### Caution

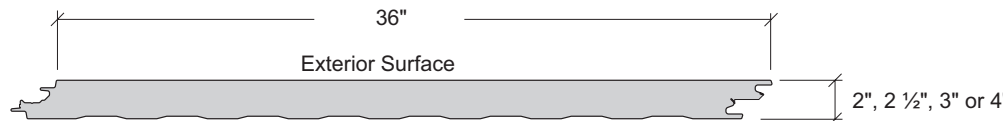
Diaphragm capabilities and girt stability are not provided by IPS's Insulated Wall Panels. Therefore, other bracing may be required to conform to A.I.S.C. or A.I.S.I specifications.



# Insulated Wall Panels

# WALL SYSTEM

## GENERAL DESCRIPTION FWP PANEL



Coverage Width – 36"

Panel Attachment – Concealed Clips

Panel Substrate – Galvalume® (Std.) – Other substrates available (Please inquire)

Exterior Panel Finish – Stucco Embossed

Interior Panel Finish – Stucco Embossed with Mesa profile

Exterior Panel Gauge – 22 – Only

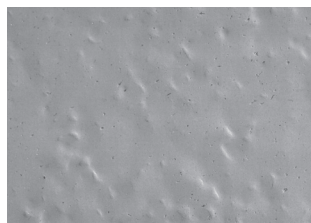
Interior Panel Gauge – 26 – Other gauges available (Please inquire)

Coatings – Exterior: Signature® 200\* & Signature® 300\*

Interior: USDA White (Std.)

Panel Thickness – 2", 2½", 3" & 4" – Other thicknesses are not available

R-Value – Approximately 7.69 per inch of thickness



Interior and Exterior  
**Stucco Embossed**

\*See IPS color chart for available colors. Minimum quantities may be required.

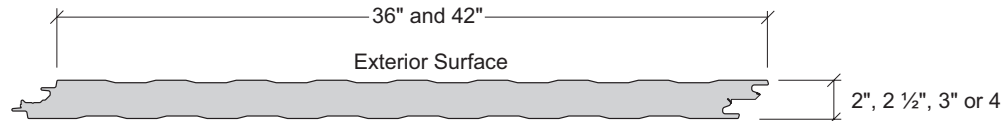
### NOTICE

See [www.insulated-panels.com](http://www.insulated-panels.com) for Positive and Negative Wind Load information.

# WALL SYSTEM

# Insulated Wall Panels

## GENERAL DESCRIPTION IPP II PANEL



Coverage Widths – 36" and 42"

Panel Attachment – Concealed Clips

Panel Substrate – Galvalume® (Std.) – Other substrates available (Please inquire)

Exterior Panel Finish – Stucco Embossed

Interior Panel Finish – Stucco Embossed with Mesa profile

Exterior Panel Gauge – 26 – Other gauges available (Please inquire)

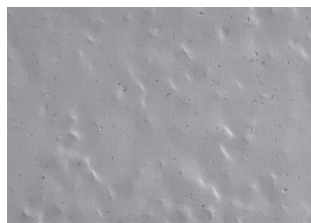
Interior Panel Gauge – 26 – Other gauges available (Please inquire)

Coatings – Exterior: Signature® 200\* & Signature® 300\*

Interior: USDA White (Std.)

Panel Thickness – 2", 2½", 3" & 4" – Other thicknesses available (Please inquire)

R-Value – Approximately 7.69 per inch of thickness



Interior and Exterior  
**Stucco Embossed**

\*See IPS color chart for available colors. Minimum quantities may be required.

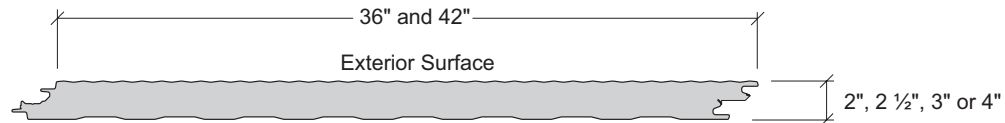
### NOTICE

See [www.insulated-panels.com](http://www.insulated-panels.com) for Positive and Negative Wind Load information.

# Insulated Wall Panels

# WALL SYSTEM

## GENERAL DESCRIPTION ESP II PANEL



Coverage Widths – 36" and 42"

Panel Attachment – Concealed Clips

Panel Substrate – Galvalume® (Std.) – Other substrates available (Please inquire)

Exterior Panel Finish – Stucco Embossed with striations

Interior Panel Finish – Stucco Embossed with Mesa profile

Exterior Panel Gauge – 24 – Other gauges available (Please inquire)

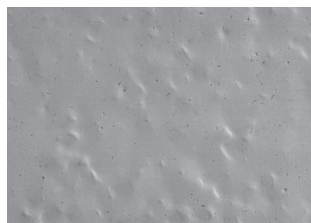
Interior Panel Gauge – 26 – Other gauges available (Please inquire)

Coatings – Exterior: Signature® 200\* & Signature® 300\*

Interior: USDA White (Std.)

Panel Thickness – 2", 2½", 3" & 4"

R-Value – Approximately 7.69 per inch of thickness



Interior and Exterior  
**Stucco Embossed**

\*See IPS color chart for available colors. Minimum quantities may be required.

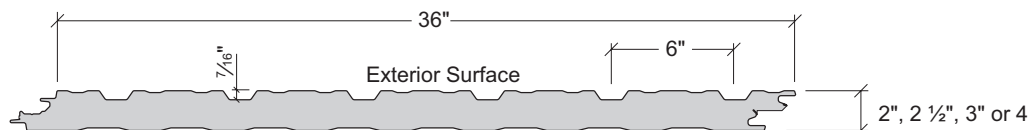
### NOTICE

See [www.insulated-panels.com](http://www.insulated-panels.com) for Positive and Negative Wind Load information.

# WALL SYSTEM

## Insulated Wall Panels

### GENERAL DESCRIPTION EWP II PANEL



Coverage Width – 36"

Panel Attachment – Concealed Clips

Panel Substrate – Galvalume® (Std.) – Other substrates available (Please inquire)

Exterior Panel Finish – Stucco Embossed with flutes

Interior Panel Finish – Stucco Embossed with Mesa profile

Exterior Panel Gauge – 26 – Other gauges available (Please inquire)

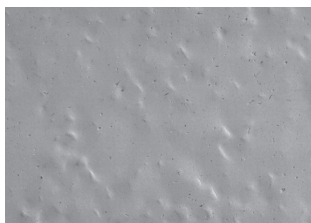
Interior Panel Gauge – 26 – Other gauges available (Please inquire)

Coatings – Exterior: Signature® 200\* & Signature® 300\*

Interior: USDA White (Std.)

Panel Thickness – 2", 2½", 3" & 4" – Other thicknesses available (Please inquire)

R-Value – Approximately 7.69 per inch of thickness



Interior and Exterior  
**Stucco Embossed**

\*See IPS color chart for available colors. Minimum quantities may be required.

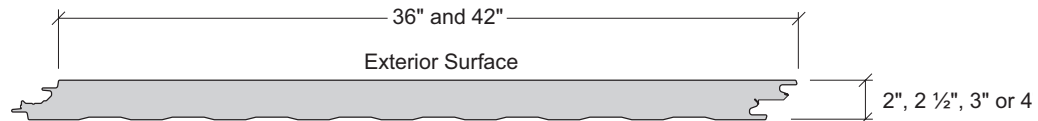
#### NOTICE

See [www.insulated-panels.com](http://www.insulated-panels.com) for Positive and Negative Wind Load information.

# Insulated Wall Panels

# WALL SYSTEM

## GENERAL DESCRIPTION SONORA™ PANEL



Coverage Width – 36" and 42"

Panel Attachment – Concealed Clips

Panel Substrate – Galvalume® (Std.) – Other substrates available (Please inquire)

Exterior Panel Finish – Aztec Embossed

Interior Panel Finish – Stucco Embossed with Mesa profile

Exterior Panel Gauge – 24 – Other gauges available (Please inquire)

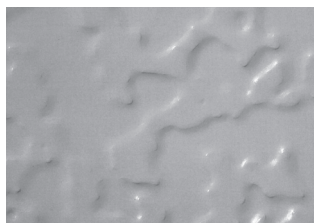
Interior Panel Gauge – 26 – Other gauges available (Please inquire)

Coatings – Exterior: Signature® 200\* & Signature® 300\*

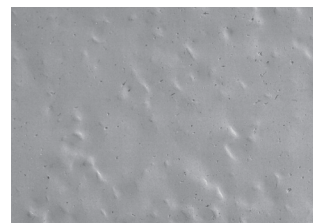
Interior: USDA White (Std.)

Panel Thickness – 2", 2½", 3" & 4"

R-Value – Approximately 7.69 per inch of thickness



Exterior  
**Aztec Embossed**



Interior  
**Stucco Embossed**

\*See IPS color chart for available colors. Minimum quantities may be required.

### NOTICE

See [www.insulated-panels.com](http://www.insulated-panels.com) for Positive and Negative Wind Load information.

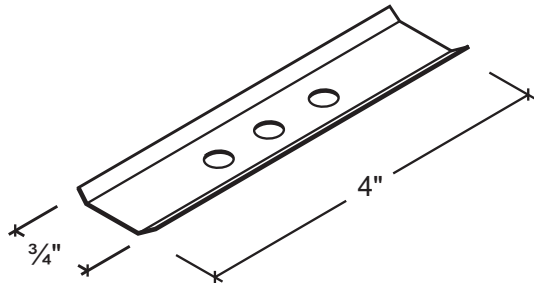
# GENERAL INFORMATION

## Insulated Wall Panels

### PRODUCT CHECKLIST

#### Wall Panel Clip

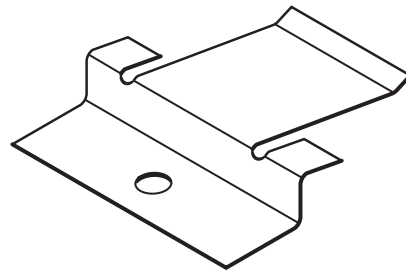
- 4" length
- 14 gauge Galvanized



HW-2320 ☐

#### Friction Clip

- 2 3/4" length
- 15 gauge Galvanized



HW-2321 ☐

#### Outside Closure

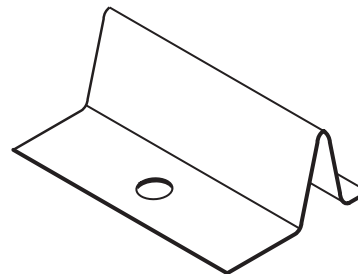
- 1 1/2" x 3'-0" length
- Classic Panel



HW-4024 ☐

#### Cee Clip

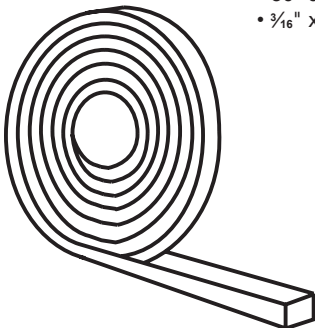
- 2 3/4" length
- 16 gauge Galvanized



HW-2322 ☐

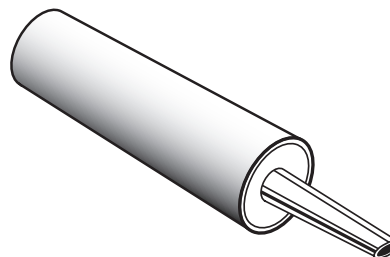
#### Foam Tape

- 50'-0" length
- 3/16" x 3/4" thickness



HW-5092 ☐

#### Tube Sealant



#### • Urethane

HW-540 - (White) ☐

HW-541 - (Gray) ☐

HW-542 - (Bronze) ☐

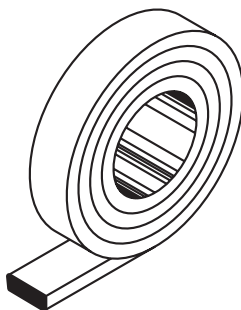
HW-544 - (Almond) ☐

#### • Non-Skinning Butyl

HW-549 - (White) ☐

#### Tape Sealer

- 40'-0" length
- 3/32" thickness
- 1" width
- flat



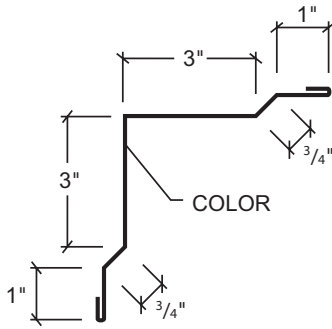
HW-506 ☐

# Insulated Wall Panels

# GENERAL INFORMATION

## PRODUCT CHECKLIST

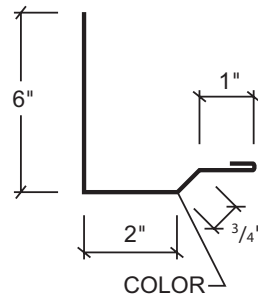
### Inside Corner Trim, Offset



- 10½" girth
- 2", 2½", 3" and 4" thick panels
- 26, 24 and 22 gauge

F-3215 ☐

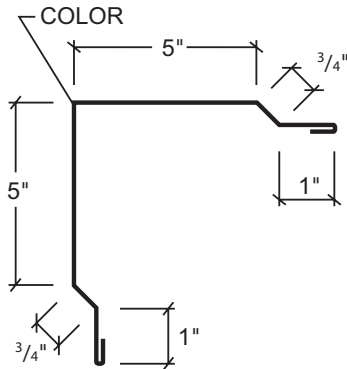
### Jamb/Sill Trim, Offset



- 10¼" girth
- 2", 2½", 3" and 4" thick panels
- 26, 24 and 22 gauge
- For panel thickness greater than 4", please inquire for special trim.

F-3250 ☐

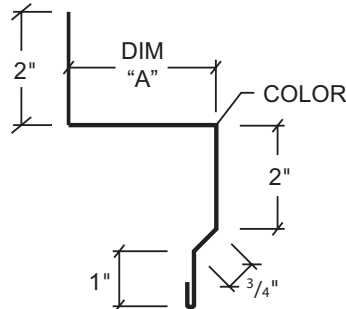
### Outside Corner Trim, Offset



- 14½" girth
- 2", 2½" and 3" thick panels
- 26, 24 and 22 gauge

F-3220 ☐

### Stack Joint Trim



- 26, 24 and 22 gauge
- For panel thickness greater than 4", please inquire for special trim.

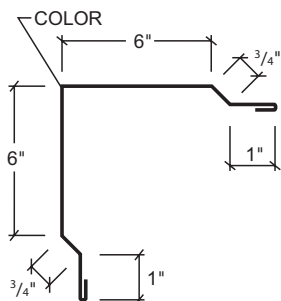
F-3280, 8¾" girth, 2" thick panels, DIM A = 2½" ☐

F-3281, 9¼" girth, 2½" thick panels, DIM A = 3" ☐

F-3282, 9¾" girth, 3" thick panels, DIM A = 3½" ☐

F-3283, 10¾" girth, 4" thick panels, DIM A = 4½" ☐

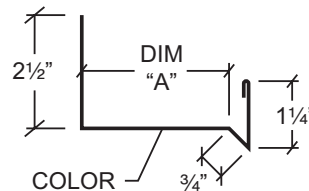
### Outside Corner Trim, Offset



- 16½" girth
- 4" thick panels
- 26, 24 and 22 gauge
- For panel thickness greater than 4", please inquire for special trim.

F-3225 ☐

### Head Trim



- 26, 24 and 22 gauge
- For panel thickness greater than 4", please inquire for special trim.

F-3240, 7½" girth, 2" thick panels, DIM A = 2½" ☐

F-3241, 8" girth, 2½" thick panels, DIM A = 3" ☐

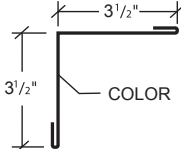
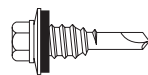
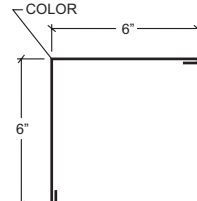

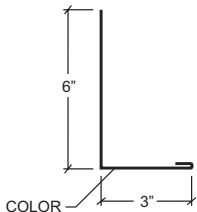
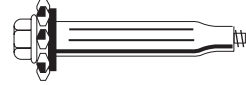
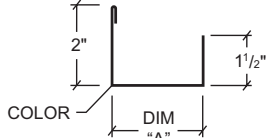
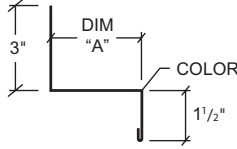
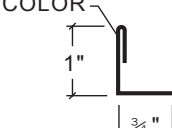
F-3242, 8½" girth, 3" thick panels, DIM A = 3½" ☐

F-3243, 9½" girth, 4" thick panels, DIM A = 4½" ☐

# GENERAL INFORMATION

# Insulated Wall Panels

## PRODUCT CHECKLIST








<p><b>Inside Corner Trim, Flat</b></p>  <ul style="list-style-type: none"> <li>• 8" girth</li> <li>• 2", 2½", 3" and 4" thick panels</li> <li>• 26, 24 and 22 gauge</li> </ul> <p>F-3210 <input type="checkbox"/></p>	 <p><b>Fastener #4A</b> <input type="checkbox"/> ¼"-14 x 7/8" Lap TEK 5/16" Hex Washer Head w/ 5/8" O.D. Washer</p>
<p><b>Outside Corner Trim, Flat</b></p>  <ul style="list-style-type: none"> <li>• 13" girth</li> <li>• 2", 2½", 3" and 4" thick panels</li> <li>• 26, 24 and 22 gauge</li> <li>• For panel thickness greater than 4", please inquire for special trim.</li> </ul> <p>F-3214 <input type="checkbox"/></p>	 <p><b>Fastener #14</b> <input type="checkbox"/> 1/8" x 0.337" Pop Rivet 3/16" Grip Range</p> <p><b>Fastener #14A</b> <input type="checkbox"/> 1/8" x 0.525" Pop Rivet 3/8" Grip Range</p>
<p><b>Jamb/Sill Trim, Flat</b></p>  <ul style="list-style-type: none"> <li>• 9½" girth</li> <li>• 2", 2½", 3" and 4" thick panels</li> <li>• 26, 24 and 22 gauge</li> <li>• For panel thickness greater than 4", please inquire for special trim.</li> </ul> <p>F-3249 <input type="checkbox"/></p>	 <p><b>Fastener #23</b> <input type="checkbox"/> Fab-Lok® Compression Fastener - 10-4 5/16" Hex Washer Head w/ 5/8" O.D. Washer 1/4" Grip Range</p>
<p><b>Door Jamb Trim, Flat</b></p>  <ul style="list-style-type: none"> <li>• 26, 24 and 22 gauge</li> <li>• For panel thickness greater than 4", please inquire for special trim.</li> </ul> <p>F-3256, 6½" girth, 2" thick panels, DIM A = 2½" <input type="checkbox"/> F-3257, 6½" girth, 2½" thick panels, DIM A = 2¾" <input type="checkbox"/> F-3258, 7½" girth, 3" thick panels, DIM A = 3½" <input type="checkbox"/> F-3259, 8½" girth, 4" thick panels, DIM A = 4½" <input type="checkbox"/></p>	<p><b>Fastener #131</b> <input type="checkbox"/> Fab-Lok® Compression Fastener - 10-8 5/16" Hex Washer Head w/ 5/8" O.D. Washer 1/4"-1/2" Grip Range</p>
<p><b>Base Trim</b></p>  <ul style="list-style-type: none"> <li>• 26, 24 and 22 gauge</li> <li>• For panel thickness greater than 4", please inquire for special trim.</li> </ul> <p>F-3260, 7½" girth, 2" thick panels, DIM A = 2½" <input type="checkbox"/> F-3261, 8" girth, 2½" thick panels, DIM A = 3" <input type="checkbox"/> F-3262, 8½" girth, 3" thick panels, DIM A = 3½" <input type="checkbox"/> F-3263, 9½" girth, 4" thick panels, DIM A = 4½" <input type="checkbox"/></p>	<p><b>Fastener #274</b> <input type="checkbox"/> Fab-Lok® Compression Fastener - 10-12 5/16" Hex Washer Head w/ 5/8" O.D. Washer 1/2"-3/4" Grip Range</p>
<p><b>Angle Trim</b></p>  <ul style="list-style-type: none"> <li>• Cover trim for cut edge on bottom of panel.</li> </ul> <p>T-3269 <input type="checkbox"/></p>	



# Insulated Wall Panels

# GENERAL INFORMATION

## PRODUCT CHECKLIST

<p><b>Thru-Fasten Panel Fasteners</b></p>  <p><b>16 GA.-12 GA. Steel</b></p> <p><b>Fastener #202</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" TEK3 – <math>\frac{5}{16}</math>" Hex Washer  Head w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 2"  Thick Panels</p> <p><b>Fastener #90</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" TEK3 – <math>\frac{3}{8}</math>" Hex Washer Head  w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 2½" or 3"  Thick Panels</p> <p><b>Fastener #292</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 5" TEK3 – <math>\frac{3}{8}</math>" Hex Washer  Head w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 4"  Thick Panels</p>	<p><b>Thru-Fasten Panel Fasteners</b></p>  <p><b><math>\frac{1}{8}</math>" - <math>\frac{1}{2}</math>" Thick Steel</b></p> <p><b>Fastener #290</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 4" TEK5 – <math>\frac{3}{8}</math>" Hex Washer  Head w/ <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 2"  Thick Panels</p> <p><b>Fastener #291</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 5" TEK5 – <math>\frac{5}{16}</math>" Hex Washer  Head w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/  2½" or 3" Thick Panels</p> <p><b>Fastener #275</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 6" TEK5 – <math>\frac{3}{8}</math>" Hex Washer  Head w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 4"  Thick Panels</p>	<p><b>Thru-Fasten Panel Fasteners</b></p>  <p><b>16 GA.-12 GA. Steel</b></p> <p><b>Fastener #161</b> <input type="checkbox"/>  12-24 x 3¾" TEK4  #3 Recessed Square Drive Flat Head  Use w/ 2" Thick Panels</p> <p><b>Fastener #162</b> <input type="checkbox"/>  12-24 x 4¾" TEK4  #3 Recessed Square Drive Flat Head  Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #163</b> <input type="checkbox"/>  12-24 x 5¾" TEK4 #3 Recessed #3  #3 Recessed Square Drive Flat Head  Use w/ 4" Thick Panels</p>
<p><b>Thru-Fasten Panel Fasteners</b></p>  <p><b><math>\frac{1}{2}</math>" or Greater Thick Steel (Pre-Drill)</b></p> <p><b>Fastener #198</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" Type B – <math>\frac{5}{16}</math>" Hex Washer  Head w/ – <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 2"  Thick Panels</p> <p><b>Fastener #276</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" Type B – <math>\frac{3}{8}</math>" Hex Washer  Head w/ <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 2½"  or 3" Thick Panels</p> <p><b>Fastener #277</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 5" Type B – <math>\frac{3}{8}</math>" Hex Washer  Head w/ <math>\frac{5}{8}</math>" O.D. Washer – Use w/ 4"  Thick Panels</p> <p><b>Fastener #278</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" Type B 304 Stainless – <math>\frac{3}{8}</math>"  Hex Washer Head w/ – <math>\frac{5}{8}</math>" O.D. Washer  – Use w/ 2" Thick Panels</p> <p><b>Fastener #279</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" Type B 304 Stainless – <math>\frac{3}{8}</math>"  Hex Washer Head w/ – <math>\frac{5}{8}</math>" O.D. Washer  – Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #280</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 5" Type B 304 Stainless – <math>\frac{5}{16}</math>"  Hex Washer Head w/ – <math>\frac{3}{8}</math>" O.D. Washer  – Use w/ 2" Thick Panels</p>	<p><b>Clip Fasteners</b></p>  <p><b>16 GA. - 12GA. Steel</b></p> <p><b>Fastener #115</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 2" TEK3 – <math>\frac{5}{16}</math>" Hex Washer  Head – Use w/ 2" Thick Panels</p> <p><b>Fastener #56</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" TEK3 – <math>\frac{5}{16}</math>" Hex Washer  Head – Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #91</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" TEK3 – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 4" Thick Panels</p> <p><b>Clip Fasteners</b></p>  <p><b><math>\frac{1}{8}</math>" - <math>\frac{1}{2}</math>" Thick Steel</b></p> <p><b>Fastener #281</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 3" TEK5 – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 2" Thick Panels</p> <p><b>Fastener #282</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 4" TEK5 – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #283</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-20 x 5" TEK5 – <math>\frac{3}{8}</math>" Hex  Washer Head – Use w/ 4" Thick Panels</p>	<p><b>Clip Fasteners</b></p>  <p><b><math>\frac{1}{2}</math>" or Greater Thick Steel (Pre-Drill)</b></p> <p><b>Fastener #284</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 2" Type B – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 2" Thick Panels</p> <p><b>Fastener #285</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" Type B – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #286</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" Type B – <math>\frac{3}{8}</math>" Hex Washer  Head – Use w/ 4" Thick Panels</p> <p><b>Fastener #287</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 2" Type B 304 Stainless  <math>\frac{3}{8}</math>" Hex Washer Head  Use w/ 2" Thick Panels</p> <p><b>Fastener #288</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 3" Type B 304 Stainless  <math>\frac{3}{8}</math>" Hex Washer Head  Use w/ 2½" or 3" Thick Panels</p> <p><b>Fastener #289</b> <input type="checkbox"/>  <math>\frac{1}{4}</math>"-14 x 4" Type B 304 Stainless  <math>\frac{3}{8}</math>" Hex Washer Head  Use w/ 4" Thick Panels</p>

# GENERAL INFORMATION

# Insulated Wall Panels

JOB #: 3422733  
 EXT COIL #: 51743141101  
 EXT COIL SIZE: 22 GA X 41.563 "  
 EXT COIL COLOR: CLEAR  
 INT COIL #: 51742941301  
 INT COIL SIZE: 26 GA X 39.625 "  
 INT COIL COLOR: USDA  
 BUNDLE NO: 5 OF --

SHIP TO: SEYFARSON CONSTRUCTION CO 625  
 KNOX WAREHOUSE  
 600 BLANKLY CIRCLE  
 GRINNELL, IA 50112  
 PH. 515-515-250-4387  
 CUST P.O. #: 100061300001  
 LINE: JACKSON  
 PRODUCED: 7-19-10

DESCRIPTION	QTY	SHEET LENGTH
GRV36--2.0"	6	27' 1 - 0"
--	8	24' 6 - 1/2"
--	6	15' 7 - 0"
--	7	7' 5 - 1/2"
--	3	3' 1 - 0"
--	--	--' -- - --"
--	--	--' -- - --"
--	--	--' -- - --"

PAGE 1 OF 1

## UNLOADING

Before materials arrive at the job site, the contractor should determine how the trucks are to be unloaded and where the material will be staged. The contractor must determine the proper equipment and number of personnel required to safely unload and move the material.

Upon receiving material, check shipment against packing list for shortages and/or damages. IPS will not be responsible for shortages or damages unless they are noted on the shipping list.

The maximum weight of any one bundle will not exceed 7,500 lbs. Do not attempt to lift stacked bundles. Lift only one bundle at a time. Each bundle should be lifted at its center point or at lift points evenly spaced along length of bundle. Bundles feature bearing pads with sufficient elevation to allow a forklift or insertion of nylon slings when using a crane for easy unloading from the truck.

## PACKING LIST

201 APACHE DRIVE  
 PO BOX 720100  
 JACKSON, MS 39272

SOLD TO: SEYFARSON  
 SEYFARSON CONSTRUCTION CO 625

JOB NAME:

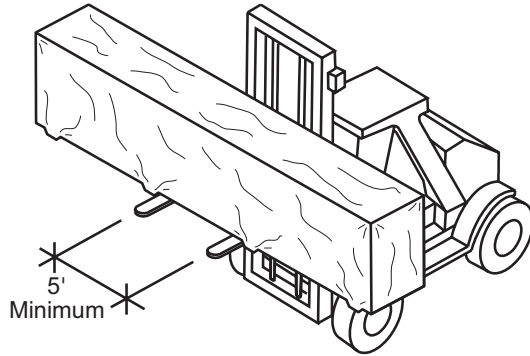
B I L L T O  
 SEYFARSON CONSTRUCTION CO 625  
 2000 W BATTERY DR  
 GRINNELL, IA 50111-0000  
 (515) 555-7212

S H I P T O  
 SEYFARSON CONSTRUCTION CO 625  
 KNOX WAREHOUSE  
 600 BLANKLY CIRCLE  
 GRINNELL, IA 50112

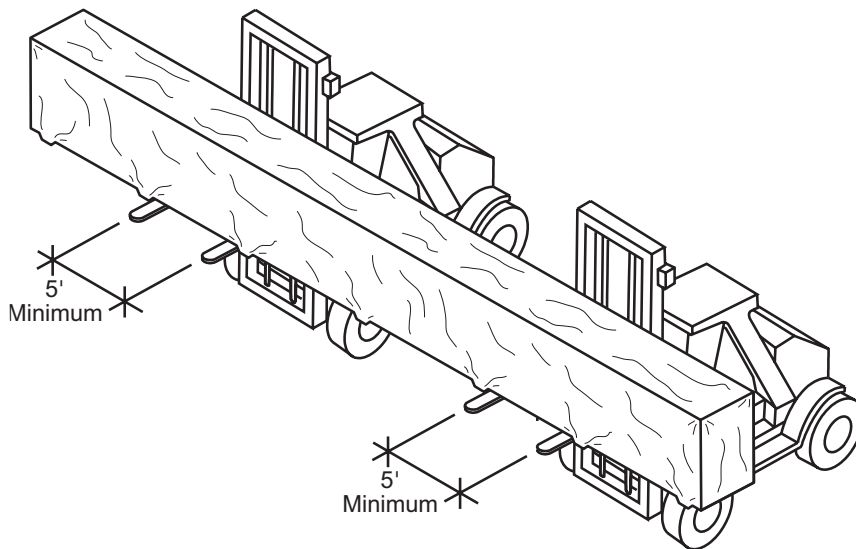
DATE OF ORDER	LOAD DATE	CUSTOMER P.O.	SHIP VIA			SALESPERSON	BOL NUMBER	ORDER NUMBER	
11-JUN-10	29-JUL-10	100061300001	R & R EXPRESS			R. Lloyd IPS	13555081	3422733	
ITEM	DESCRIPTION	PKG	AREA	Ga	COLOR	Sheet Length	Original Order Quantity	Shipped Quantity	Remaining Quantity
1000	EMB GRV36 2.0" EMES 26 S230 BMAS *10*		*10*	22	T-SNWHT	24'- 6-1/2"	4	4	0
2000	EMB GRV36 2.0" EMES 26 S230 BMAS *10*		*10*	22	T-SNWHT	15'- 7"	6	6	0
3000	EMB GRV36 2.0" EMES 26 S230 BMAS *10*		*10*	22	T-SNWHT	7'- 5-1/2"	2	2	0
4000	EMB GRV36 2.0" EMES 26 S230 BMAS *10*		*10*	22	T-SNWHT	3'-11"	8	8	0
5000	EMB GRV36 2.0" EMES 26 S230 BMAS *10*		*10*	22	T-SNWHT	3'- 1"	2	2	0
6000	PANEL LAYOUT AT COL. LN *10* EMB GRV36 2.0" EMES 26 S230 BMAS *2A*		*2A*	22	T-SNWHT	24'- 6-1/2"	2	2	0
7000	EMB GRV36 2.0" EMES 26 S230 BMAS *2A*		*2A*	22	T-SNWHT	3'-11-1/2"	1	1	0
8000	PANEL LAYOUT AT COL. LN *2A* EMB GRV36 2.0" EMES 26 S230		*3*	22	T-SNWHT	24'- 6-1/2"	2	2	0

## Insulated Wall Panels

# GENERAL INFORMATION



**Unloading with One Fork Lift**



**Unloading with Two Fork Lifts**

### UNLOADING (continued)

#### Unloading With A Forklift

Ensure that forks are spread apart as far as possible. Forks should be a minimum of 5' apart. Care should be taken to prevent fork damage to bundles on the opposite side of the truck. Avoid getting too far under the bundles and causing damage to the panel side laps with the mast of the forklift. Use care when moving panels. Drive slowly when traveling on rough terrain to prevent panel damage due to the bundles bouncing on the forks.

Shorter bundles can be moved with a single forklift. When two forklifts are required, this operation must be coordinated between the two forklift operators to ensure that each end of the bundle is raised and moved together.

Guidelines for bundles requiring two forklifts:

2" & 2½" thick panels – 32' and longer

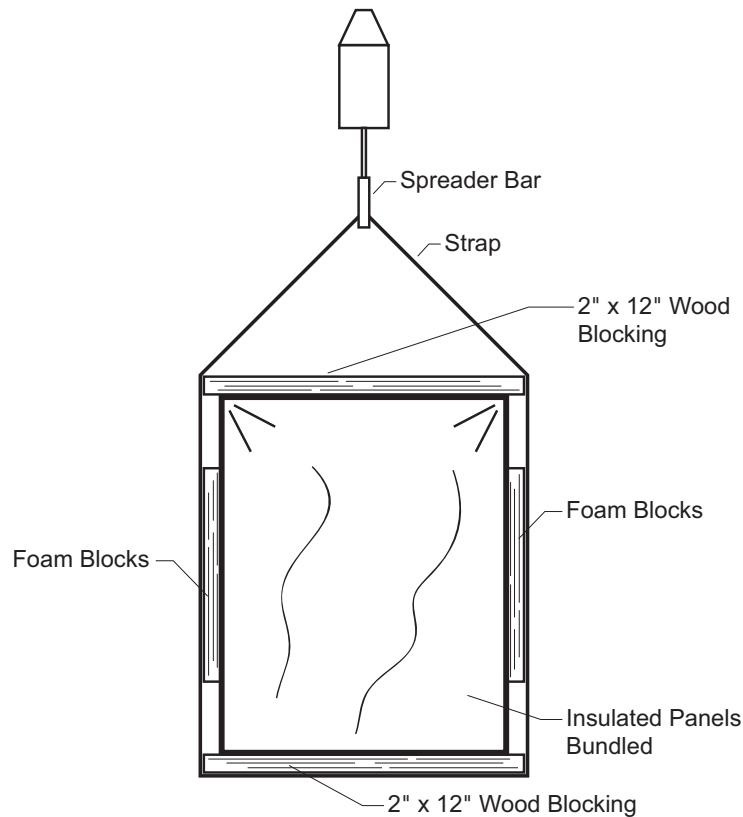
3" & 4" thick panels – 40' and longer

#### CAUTION

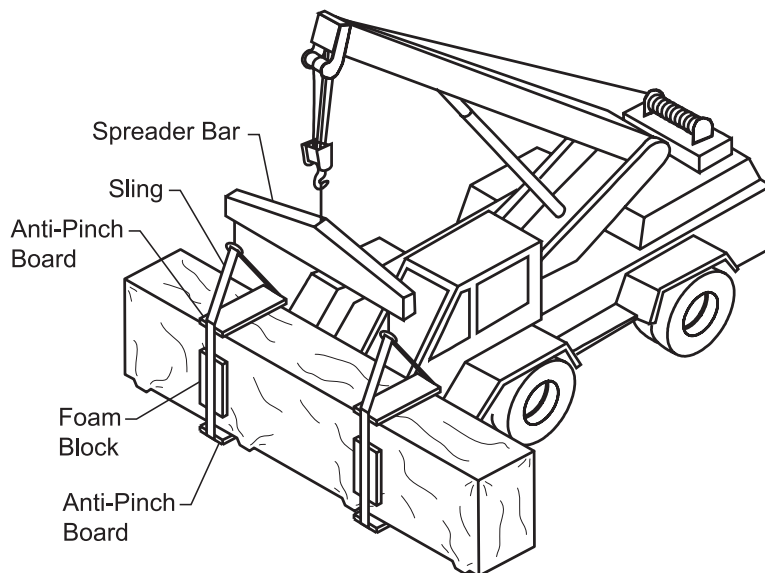
Improper unloading and handling of panel bundles may cause bodily injury or material damage. IPS is not responsible for bodily injuries or material damages during unloading and staging.

# GENERAL INFORMATION

## Insulated Wall Panels



### Unloading With A Crane



### Bundles Under 4000 lbs. and Under 44' in Length

## UNLOADING (continued)

### Unloading With A Crane

When lifting bundles with a crane, a spreader bar and slings should be used. Lifting slings must be minimum 6"-wide nylon straps. **NEVER USE WIRE ROPE OR CHAIN SLINGS. THEY WILL DAMAGE THE PANELS.** At each sling location, use boards at the top and bottom of the bundle to prevent the slings from crushing the edges of the panels. The boards should be 2"x12". Board length should equal the bundle width plus 4". At each side of the bundle, insert 2" thick foam blocks between the sling and the panel bundle. **LIFT ONLY ONE BUNDLE AT A TIME.**

The following is suggested rigging for various bundle lengths and weights. The final determination as to the best and safest rigging to use, based on equipment and job site conditions, is up to the contractor and crane operator.

### Bundles under 4000 lbs. and under 44' in length

A single spreader bar with two slings may be used. Position slings at quarter points from each end of the bundle.

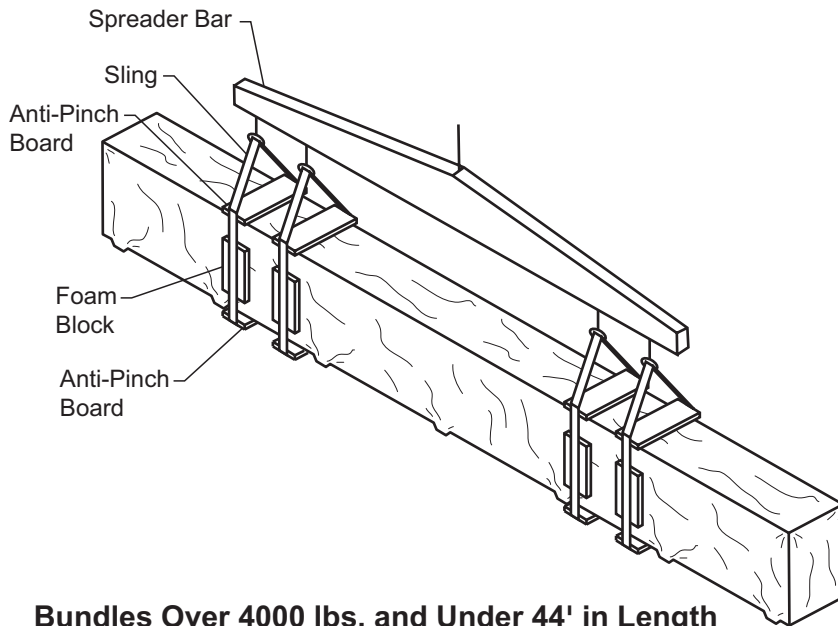
## Insulated Wall Panels

## GENERAL INFORMATION

### UNLOADING (continued)

#### Bundles over 4000 lbs. and under 44' in length

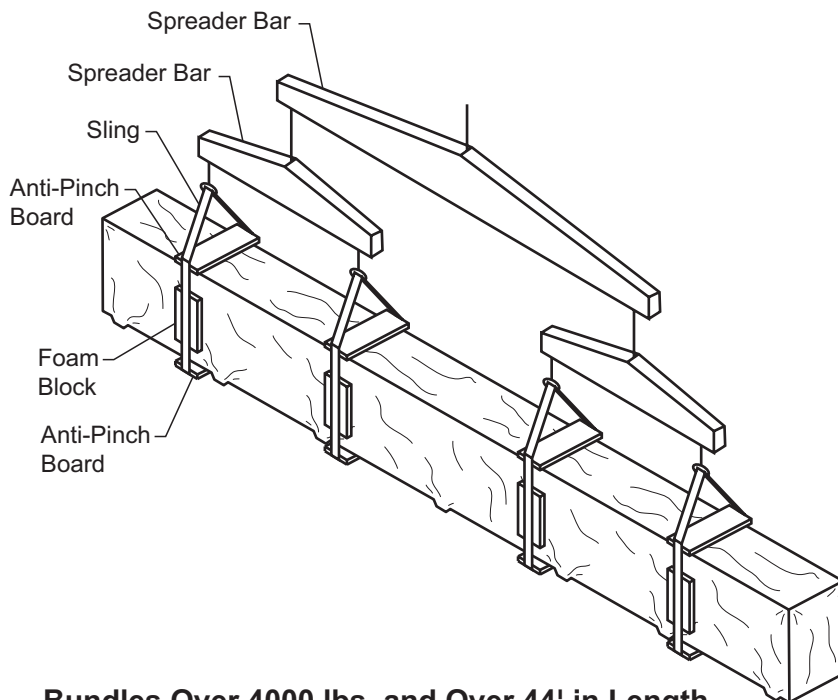
A single spreader bar with four slings should be used. Position two sets of slings at each end of the spreader bar at quarter points from each end of the bundle.



**Bundles Over 4000 lbs. and Under 44' in Length**

#### Bundles over 4000 lbs. and over 44' in length

Ganged spreader bars with four slings should be used. The slings should be placed at even spaces along the length of the bundle.



**Bundles Over 4000 lbs. and Over 44' in Length**

#### CAUTION

Too few or too many lift points can cause damage to the panels. Improper unloading and handling of panel bundles may cause bodily injury or material damage. IPS is not responsible for bodily injuries or material damages during unloading and staging.

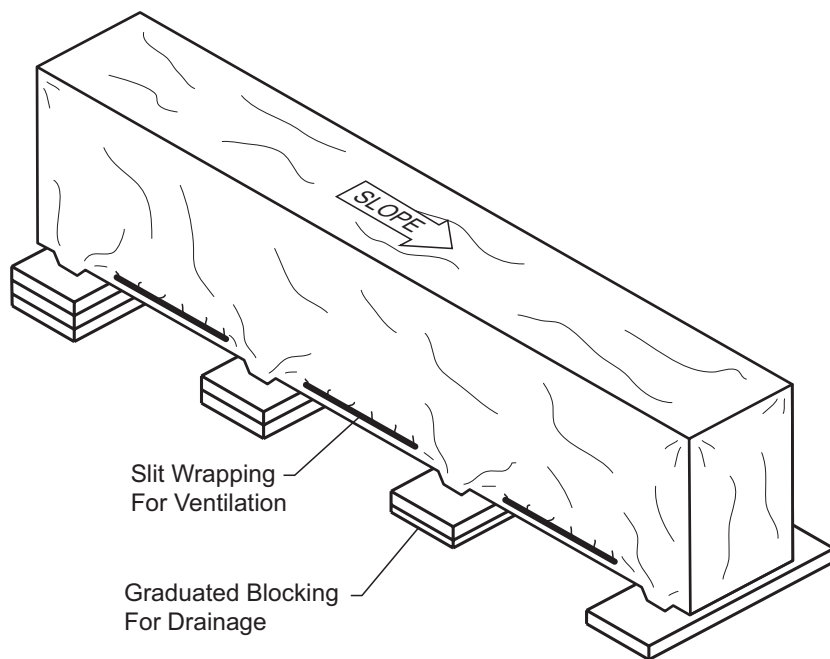
# GENERAL INFORMATION

## Insulated Wall Panels

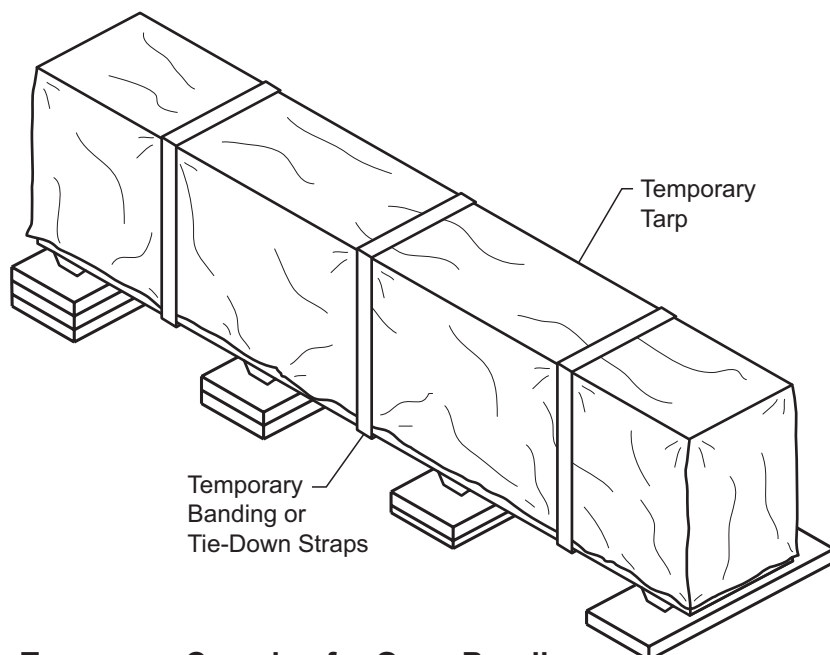
### STORAGE

The panels are shipped in stretch-wrapped bundles consisting of a single stack of panels in the flat position. The bundles must be protected against impact damage, water exposure and chemical contamination.

Store bundles off the ground sufficiently high enough to allow for air circulation beneath the bundle and to prevent water, mud or snow from entering. Slightly elevate one end of the bundle. Slit the stretch wrap at intervals along each side at the bottom of the bundles to allow for ventilation and evaporation of any moisture within the bundles.



**Blocking and Venting the Bundles**



**Temporary Covering for Open Bundles**

Bundles that are opened but still have panels that have not been installed should be protected with a tarp or other waterproof cover to prevent exposure to water or contamination from construction residue. Opened bundles should be secured with banding or some other method to prevent damage by sudden high winds. Be sure not to over tighten and damage the panels. **MOVING BUNDLES AFTER THEY ARE OPENED MAY RESULT IN PANEL DAMAGE.**

### CAUTION

Improper and/or prolonged storage of panels may cause damage to the panel finish. IPS is not responsible for panel damage caused by improper or prolonged storage of panels.



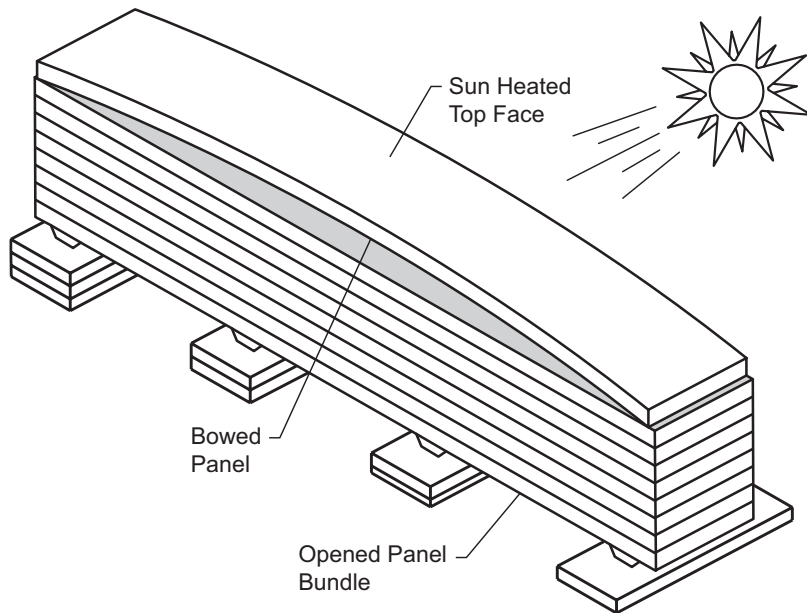
## Insulated Wall Panels

# GENERAL INFORMATION

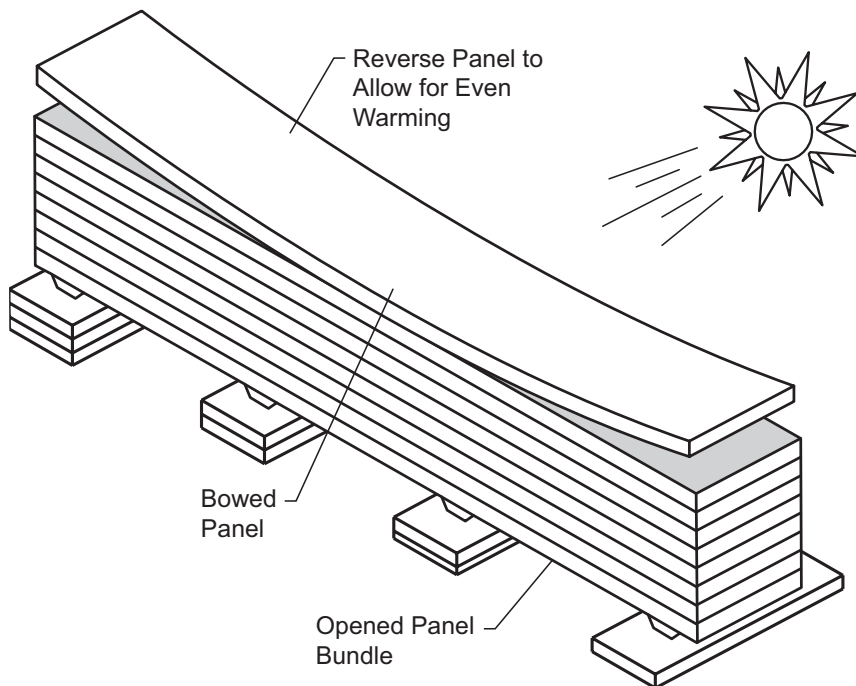
### STORAGE (continued)

#### Thermal Bow

When the top panel in a bundle is exposed to the hot sun, it may bow up, causing difficulty in engaging it to the previous panel during installation.



**Thermal Bowing**



**Thermal Bowing**

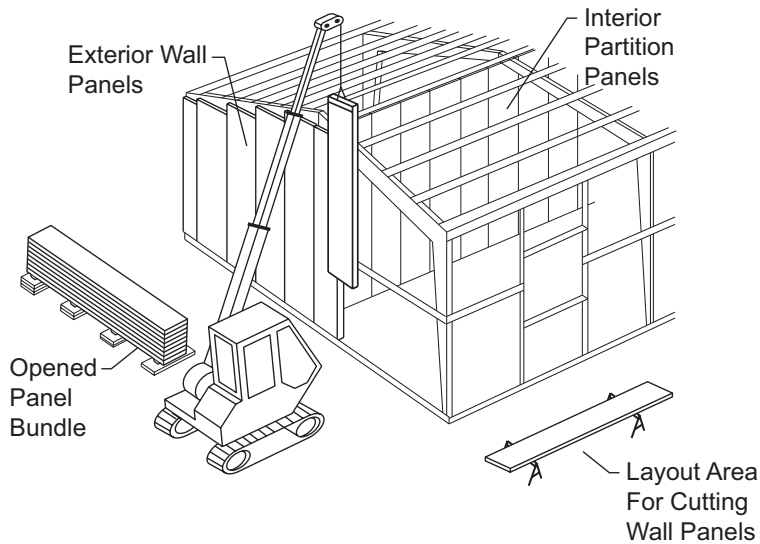
If this occurs, turn the panel over to allow the backside to warm equally, which will relieve the bow and allow for proper panel sidelap engagement during installation.

#### CAUTION

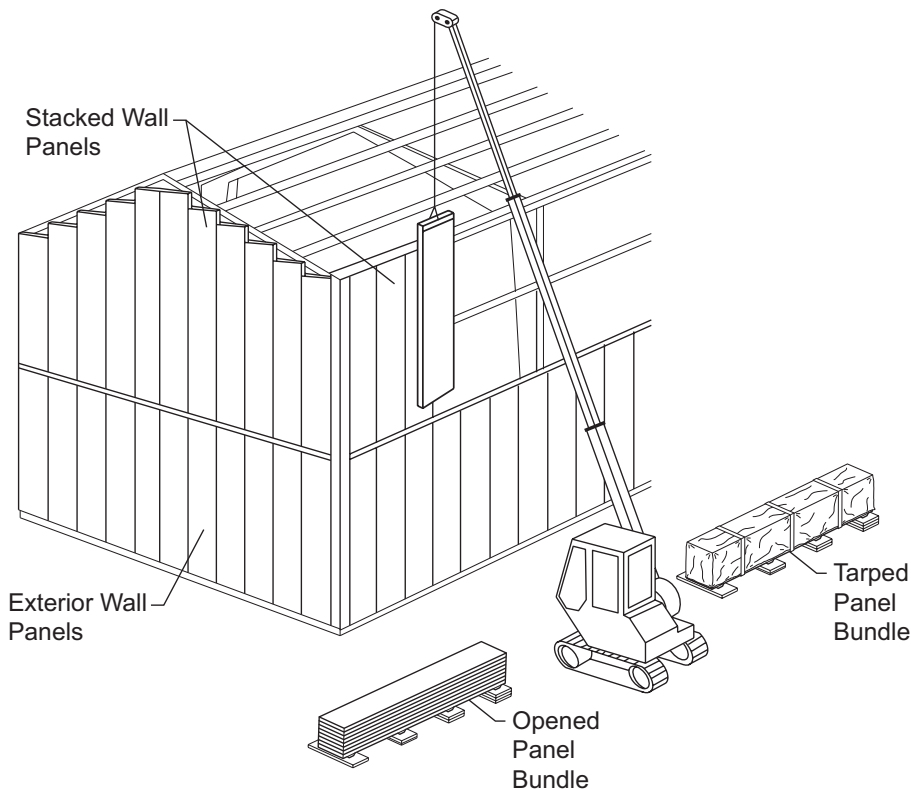
Improper and/or prolonged storage of panels may cause damage to the panel finish. IPS is not responsible for panel damage caused by improper or prolonged storage of panels.

# GENERAL INFORMATION

## Insulated Wall Panels



**Exterior Wall Panels and Interior Partition Panels**



**Stacked Wall Panels**

## STAGING

Each bundle of panels is shrink wrapped and marked with a bundle number at the factory. A bundle report and shipping list are included with each panel shipment. These documents provide the quantity and length of the panels within each bundle. They also provide a description of the panels such as color and gauge of the interior and exterior skins, as well as panel thickness.

These reports, in conjunction with the installation drawings, will allow the contractor to determine where each bundle of panels should be pre-positioned around the building to minimize additional bundle movement and maximize efficiencies during panel installation.

Bundles should be close to the area of the building that they will be installed on, but still allow clearance for lifting equipment and workmen during the installation process. Be sure to allow adequate space for layout and cutting of panels at corners and wall openings.

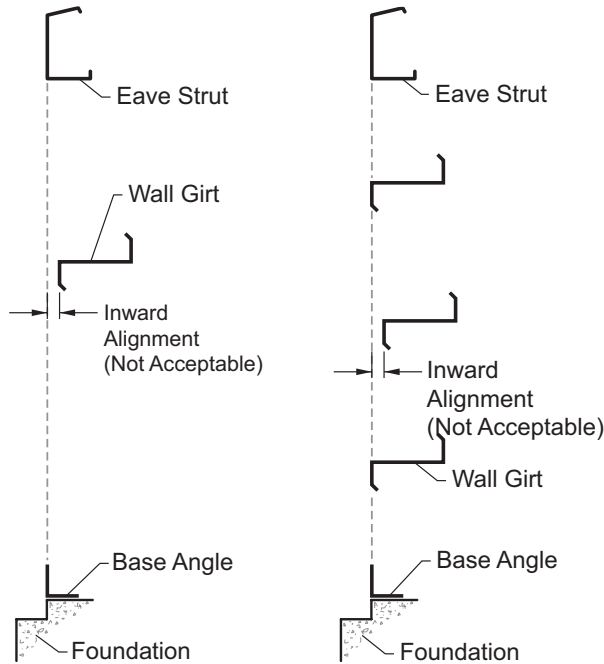
For tall walls that require stacked panels, special considerations should be made when staging panel bundles to allow room for the bottom run of panels to be completely installed before beginning installation of the next course of panels.

When present, interior partition walls may need to be installed first to allow for lifting equipment access to the interior of the building. Other options may include leaving an exterior wall partially open until the interior partition is sheeted.

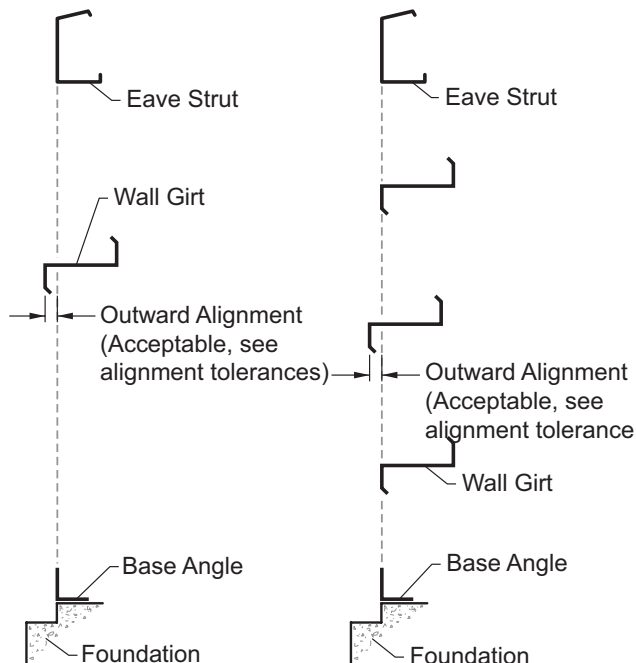


# Insulated Wall Panels

# GENERAL INFORMATION



**Unacceptable Alignment**



**Acceptable Alignment**

## PREPARATORY REQUIREMENTS

Before beginning installation of wall panels, verify that all structural framing and bracing has been installed and that all connection bolts have been installed and tightened.

Check each wall to ensure that the steel framing is plumb and that it is "in plane" from top to bottom. Check substructure at each column location and at mid-span of each bay. An out-of-plane substructure will force the panels to bend when the panel clips are installed causing oil canning and difficulty engaging the next panel. Tolerances for substructure alignment are as follows:

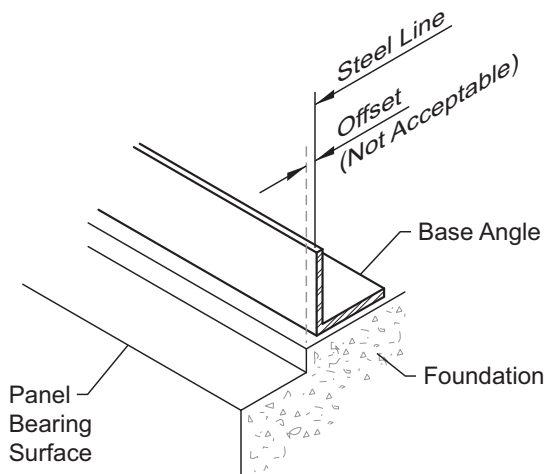
- General tolerance is  $L/300$ , though the substructure must not allow installed panels to bow inward of the steel line.
- 10' girt spacing –  $\frac{1}{4}$ " out-of-plane tolerance (**Outward Only**)
- 10' or less girt spacing –  $\frac{1}{8}$ " out-of-plane tolerance (**Outward Only**)

## CAUTION

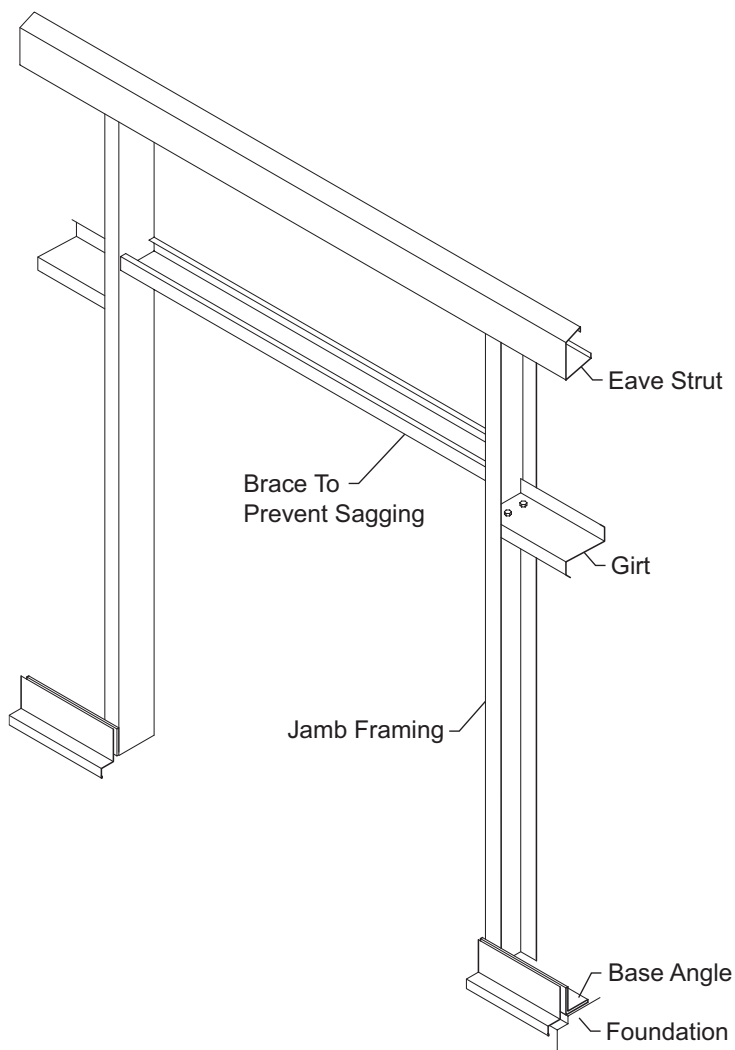
Diaphragm capabilities and girt stability are not provided by IPS's Insulated Wall Panels. Therefore, other bracing may be required to conform to A.I.S.C. or A.I.S.I. specifications.

# GENERAL INFORMATION

## Insulated Wall Panels



**Unacceptable Alignment at Foundation**



### PREPARATORY REQUIREMENTS (continued)

When installing the base angle, do not allow it to be inset from the concrete edge. Where the concrete sheeting is notched incorrectly, it is better to allow the base angle to overlap the concrete edge than to have the concrete finished floor extend outward of the base angle. Allowing this condition will cause the panels to bow inward at these locations, which could result in oil canning.

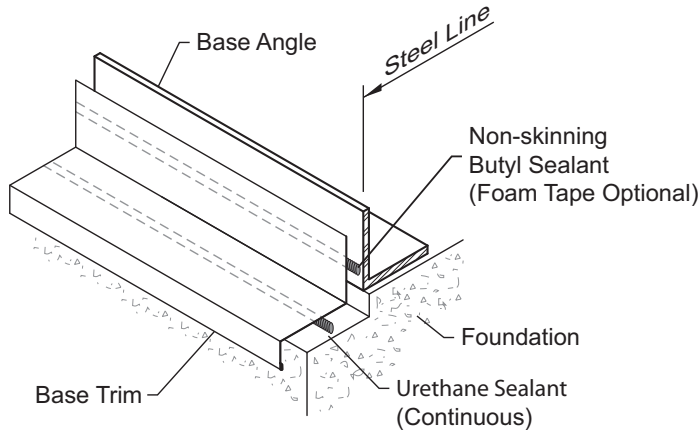
When panels are not supported by the foundation, such as at large door or window openings, the girts above these openings must be temporarily braced to prevent sagging while panels are being attached to the structure.

# Insulated Wall Panels

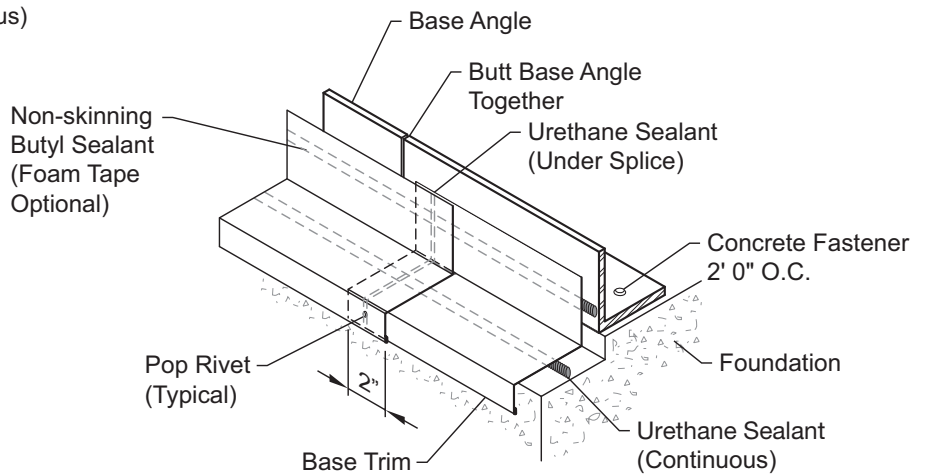
# GENERAL INFORMATION

## PREPARATORY REQUIREMENTS (continued)

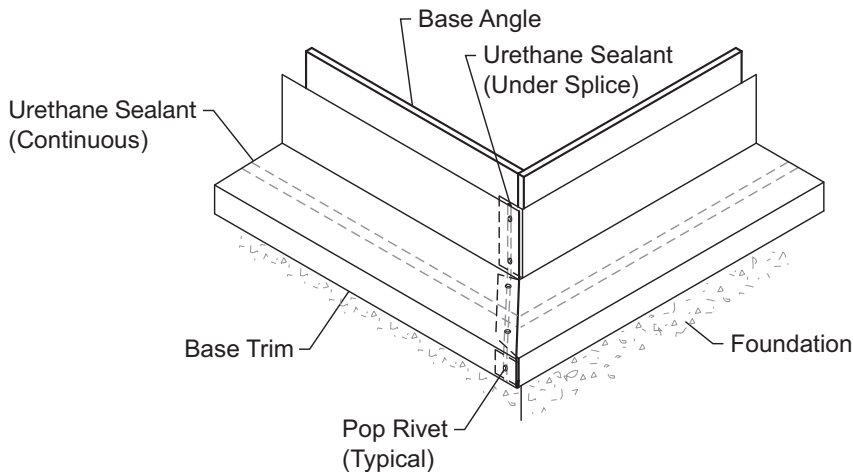
Seal base flashing to sheeting notch and attach to the foundation at the specified spacing.



**Base Assembly With Sheeting Notch**



**Base Assembly Trim Splice**

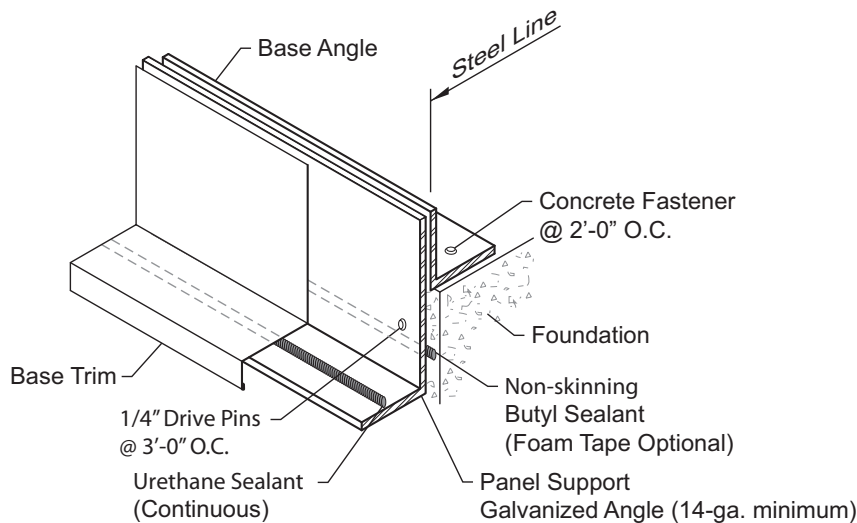


**Base Corner Miter Assembly**

Seal base flashing joints with urethane sealant. At corners, miter the base flashing, seal with urethane sealant and rivet together.

# GENERAL INFORMATION

## Insulated Wall Panels



**Base Assembly Without Sheeting Notch**

### PREPARATORY REQUIREMENTS (continued)

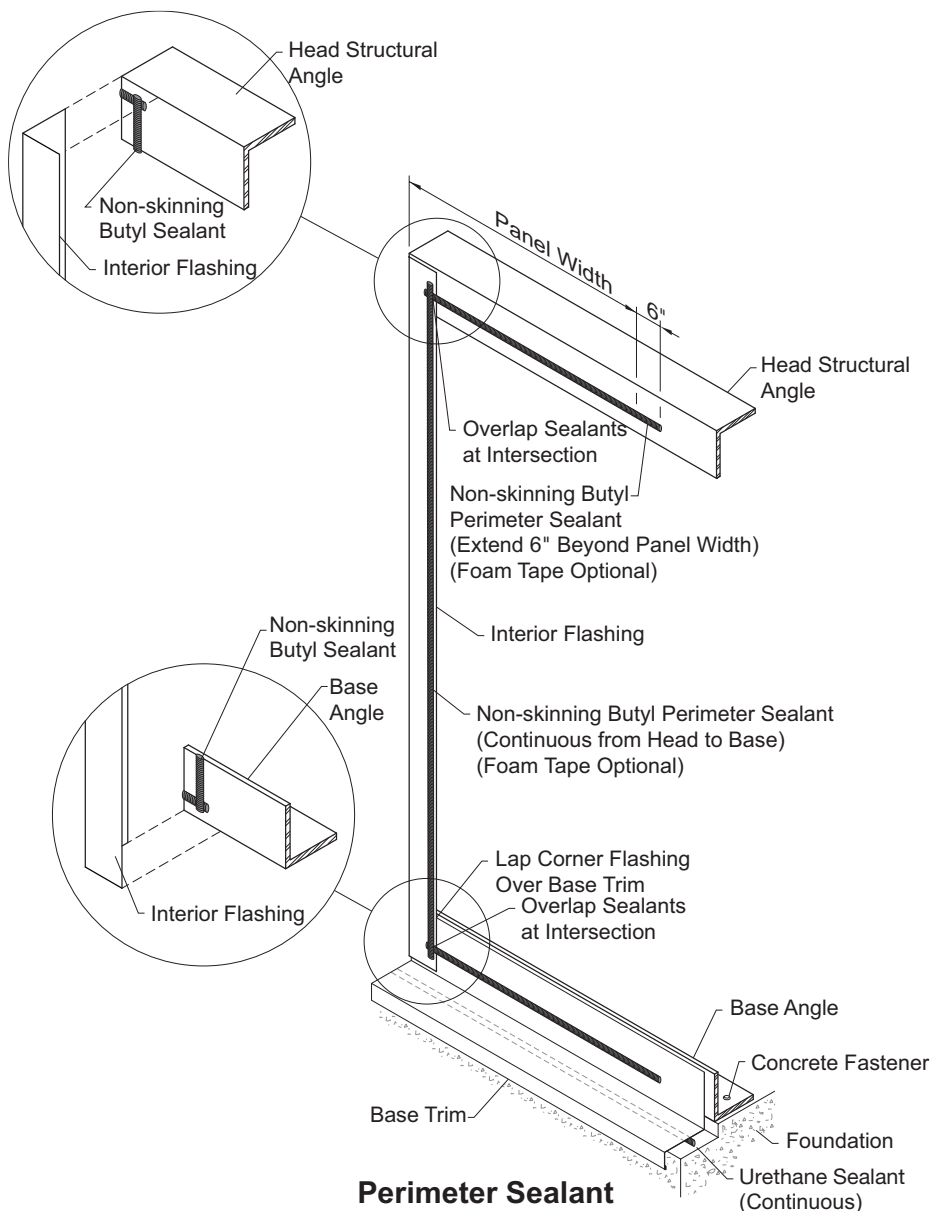
When there is no sheeting notch, a galvanized angle will be required to support the panels in addition to the base angle installed to the finished floor. Attach the support angle to the base angle with the specified fasteners at the specified spacing.

Seal the support angle to the concrete with a continuous run of non-skinning butyl sealant. (Foam tape optional.)

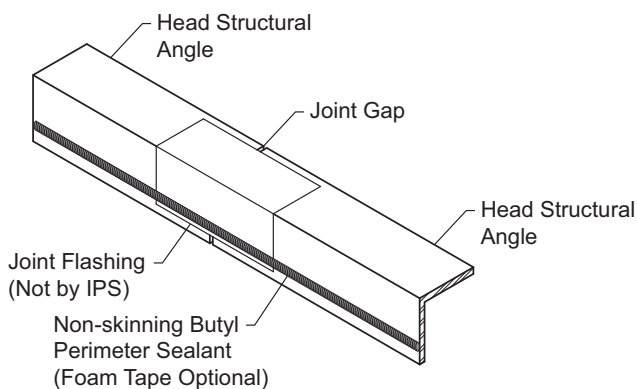
Install a continuous run of urethane sealant between the horizontal leg of the support angle and the base trim. (Foam tape optional.)

# Insulated Wall Panels

# GENERAL INFORMATION



## Perimeter Sealant



## Sealing Structural Joints

## PREPARATORY REQUIREMENTS (continued)

Before wall panels are installed, ensure that all applicable interior trim that may be required at corners or door and window openings, is installed as shown on the project drawings.

Install non-skinning butyl sealant where corner trim overlaps base trim or head structural.

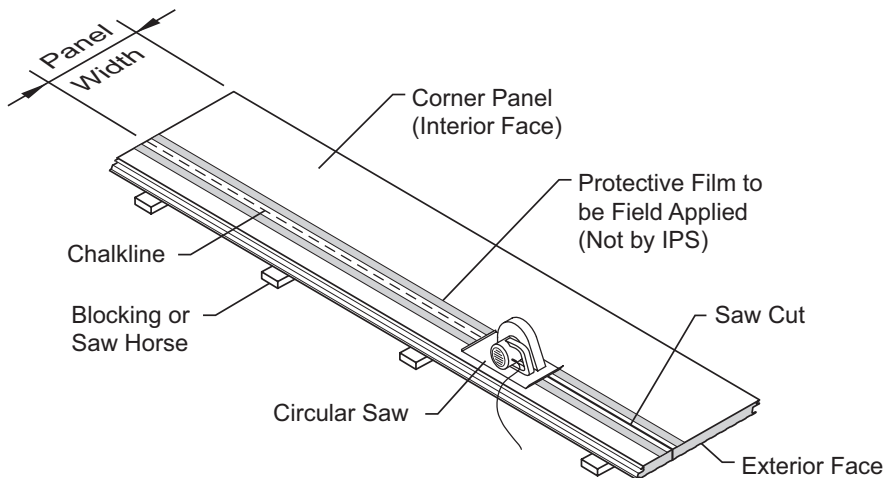
Any areas that require a sealant bead for a vapor seal must be continuous. If the seal is made to the structure and not to trim, make sure there are no gaps in the structural framing. Cover any gaps with a piece of joint flashing.

## OPTIONAL

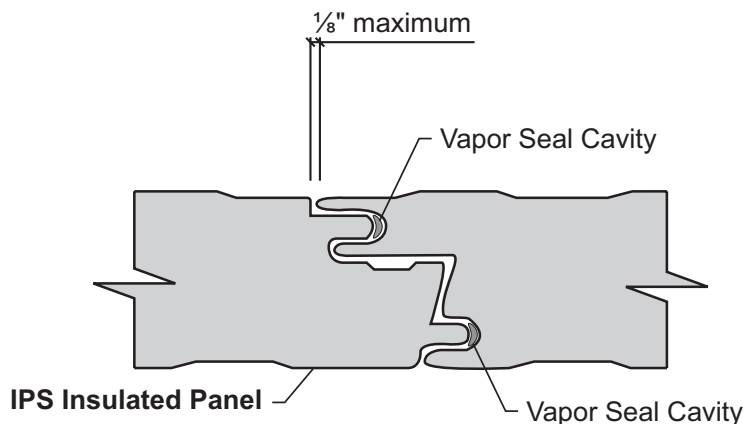
$\frac{3}{16}$ " x  $\frac{3}{4}$ " Foam tape (HW-5092) may be substituted for non-skinning butyl perimeter sealant at panel connections only.

# GENERAL INFORMATION

## Insulated Wall Panels



**Cutting Panels**



**Assembled Side Joint**

### PREPARATORY REQUIREMENTS (continued)

Panels can be cut with a circular saw using a metal cutting blade. Do not use an abrasive blade. An abrasive blade will melt the Galvalume® coating causing rust problems. It may be necessary to cut thicker panels on both sides. Properly support the panel during cutting. Protect against scuffing the panel finish from the shoe of the saw or from sliding the panel on the supports. **Blade must cut cool and not melt coating or finish.**

Inspect each panel for damage before installing. Replacement of installed damaged panels is difficult and costly. Damaged panels should be set aside for possible use at a location that allows for the damaged area to be cut out of the panel, such as at a door or a corner. **Refer to quality control section (IWP-49 - IWP-50) for additional information before installation.**

When panel joints are fully engaged, the coverage may vary up to  $\pm \frac{1}{8}$ " due to panel tolerances. Refer to installation drawings for the specified direction of panel installation. If no installation direction is specified, panels may be installed per installer preference or as required by job site conditions.

# Insulated Wall Panels

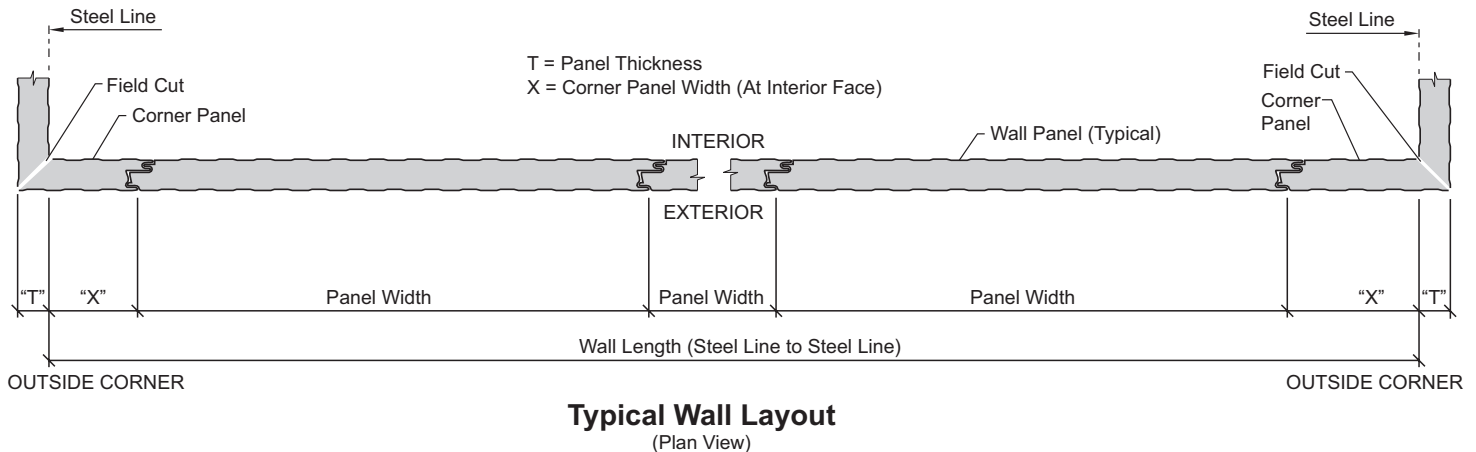
# GENERAL INFORMATION

## WALL LAYOUT

It is recommended that the wall panels be installed so panels at each corner are the same dimension. This will provide a symmetrical wall and result in a more aesthetically pleasing appearance.

Measure the actual wall to account for any field tolerances. Divide the length of the wall by the panel width. Then divide the remainder by 2. If this dimension is less than half of the panel width, add one panel width to the remainder and then divide by

2. For example, if a wall is 100'-3" long, convert to inches (1203) and divide by the panel width, 42" for example (1203/42), which equals 28 full width panels with 27" left. Divide 27" by 2, which equals 13½". Since 13½" is less than ½ of the panel width (42"), add 42" to 27" and divide by 2, which equals 34½". In this example, the corner panels would be cut to 34½" wide, which results in the use of 27 full width panels. If beveled corner is to be used, add the panel thickness for the final cut width.

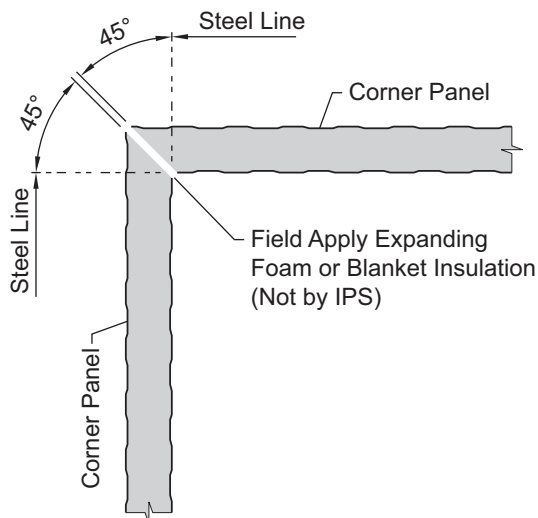


## CAUTION

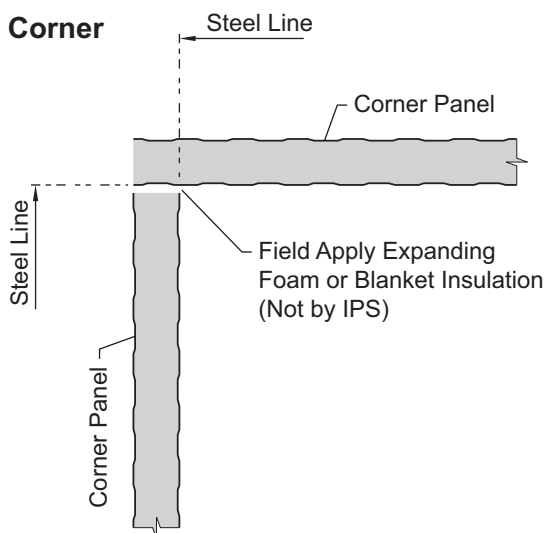
TO ALLOW FOR FIELD INSTALLATION TOLERANCES, DO NOT CUT THE ENDING CORNER PANEL UNTIL THE REST OF THE WALL PANELS HAVE BEEN INSTALLED. AT THAT TIME, MAKE A FINAL MEASUREMENT TO ENSURE THAT THE ENDING PANEL IS CUT TO THE RIGHT WIDTH.

# GENERAL INFORMATION

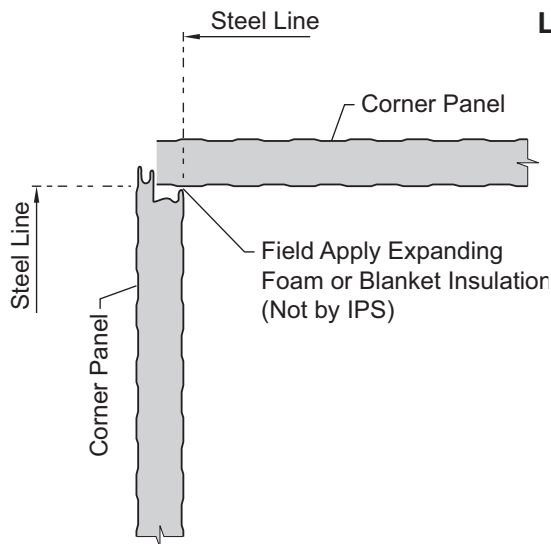
## Insulated Wall Panels



**Beveled Corner**



**Lapped Corner**



**Interlocking Corner**

### WALL LAYOUT (continued)

There are several ways in which the panels at the corners can be cut:

#### Beveled Corners

The edges of the corner panels are cut on a 45-degree angle and are butted together at the corner.

#### Lapped Corners

The edges of the corner panels are square cut with the panel on one wall extending past the end of the other panel, forming the lap joint.

#### Interlocking Corners

One panel at the corner is full width and stops at the steel line. The other panel is cut to extend past the full width panel to complete lap joint.

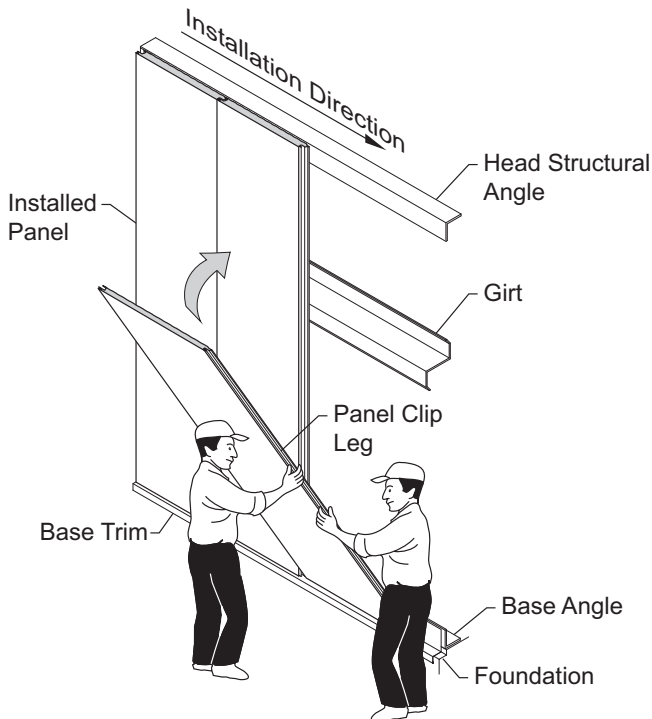
#### NOTE

Install expanding foam or blanket insulation in all voids.

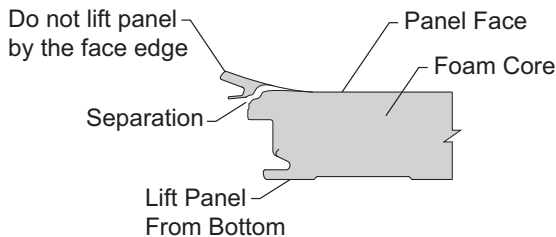


# Insulated Wall Panels

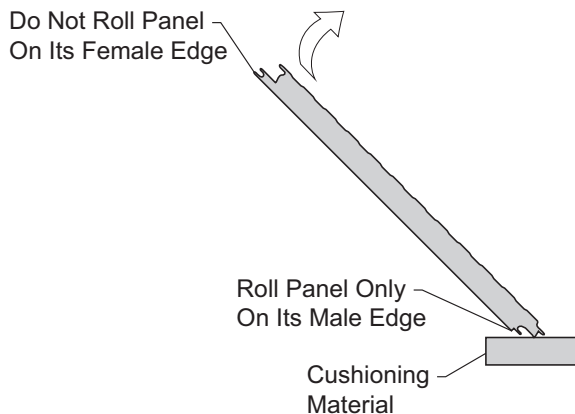
# GENERAL INFORMATION



**Manual Panel Setting**



**Panel Face Separation**



**Panel Rotating**

## HANDLING PANELS DURING INSTALLATION

Always protect exposed panel surfaces from damage caused by temporary supports, lifting slings or clamps. Do not slide panels across rough or abrasive surfaces. Resting it on a sharp or irregular surface can dent the panel face.

### Manual Panel Installation

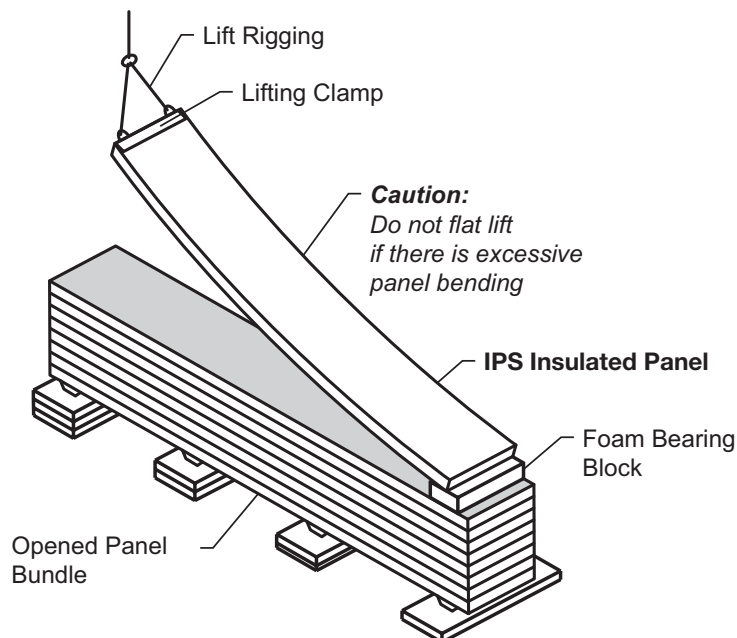
Improper handling of the panels can be hazardous to the workers and can cause damage to the panels and adjacent materials. It is the contractor's responsibility to provide an adequate work force to safely carry and raise panels into place.

Lift panels from the bottom face only. **DO NOT lift panels by the edge of the top metal face; this will cause the metal face to separate from the foam core.** When panels are to be turned over or tilted up on edge, place a cushioning material under the panel edge to prevent crushing or damage to the panel finish. Roll onto male leg of panel only.

Before raising a panel into place, make sure the interior face is turned upward and the clip leg is on the side of the panel coinciding with the installation direction. Move the panel to the building and set the bottom end of the panel at the base. Raise the panel into place and secure to the building as shown on pages **IWP-33 - IWP-34**.

# GENERAL INFORMATION

## Insulated Wall Panels



**Flat Lifting Panels**

### HANDLING PANELS DURING INSTALLATION (continued)

It is important to protect the panels during the installation process. Because of their weight, the panels have considerable inertia, which makes them susceptible to impact damage while moving them.

#### Handling Panels With A Crane

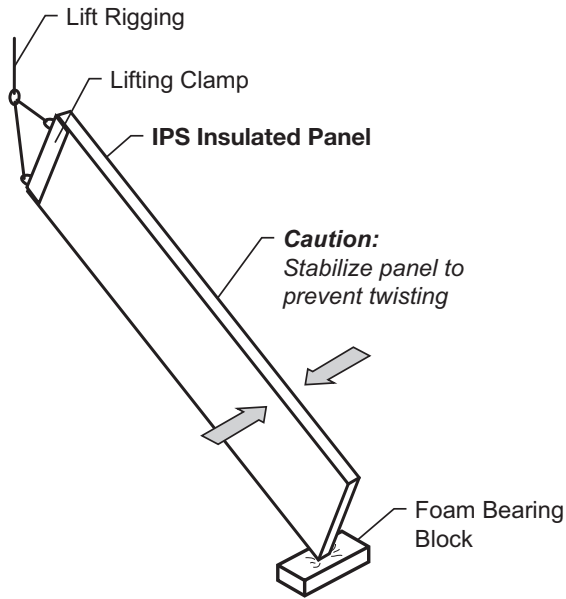
It is the contractor's responsibility to ensure that the lifting equipment is sufficient for the job and that safe methods are employed. This includes ensuring that the clamp referred to below is of suitable design and condition to safely lift the panels without a failure of the lifting connection or damage to the panel.

When flat lifting panels with a crane, a clamp or hook is attached to the top end of the panel. The panel is then lifted to the vertical position and moved into place at the wall. The clamp or hook is removed and the panel secured to the structure. To prevent damage to other panels in the bundle, place a bearing pad (rigid foam works well) between the bottom end of the panel being lifted and the next panel in the bundle.

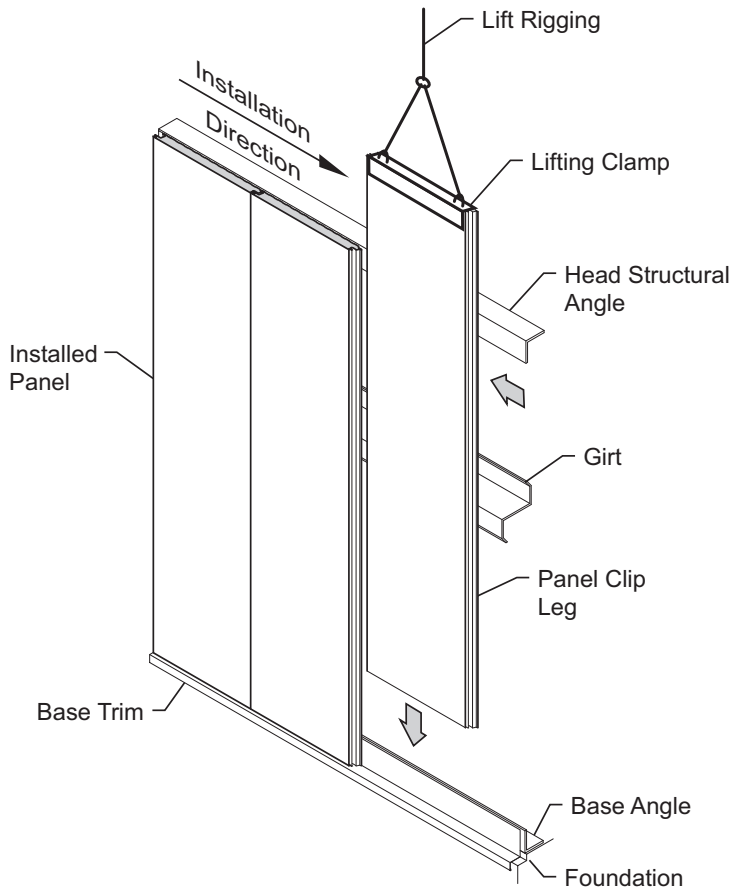
Before attempting to flat lift panels, make sure the panels can be lifted without causing excessive bending or buckling. Longer panels may require edge lifting.

## Insulated Wall Panels

# GENERAL INFORMATION



**Edge Lifting Panels**



**Setting Panels With a Crane**

### HANDLING PANELS DURING INSTALLATION (continued)

#### Setting Panels With A Crane

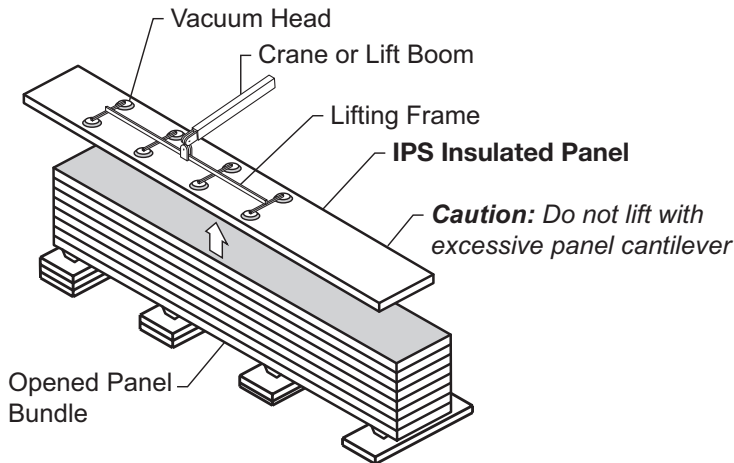
Edge lifting involves clamping or hooking the panels as before, but requires that the panel be rolled up on its edge before being lifted into the vertical position. This technique will require a bearing pad to protect the panel edge as it is rolled onto the male edge. It will also require that a sufficient number of workers stabilize the panel as it is being lifted into the vertical position to prevent it from twisting. The panel is then raised vertically and set into place as before.

#### CAUTION

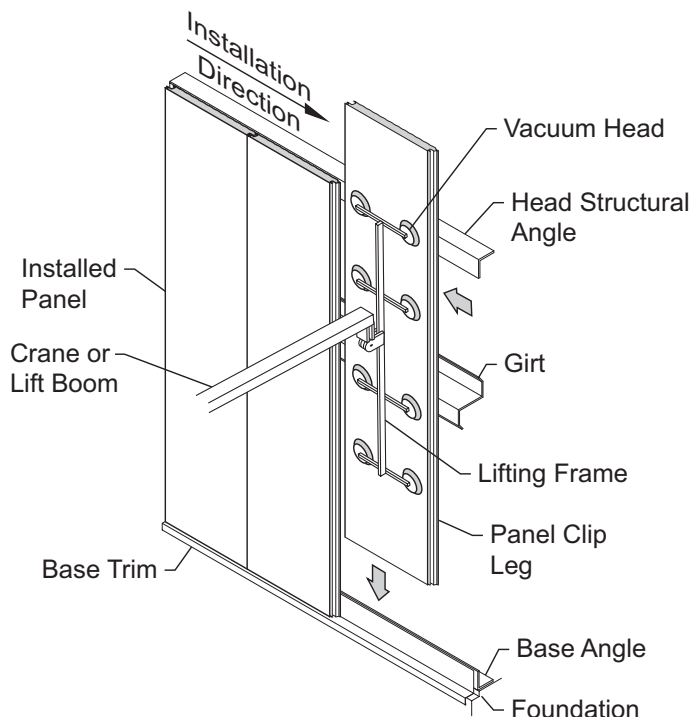
While lifting equipment and lifting clamps may safely lift a panel under static conditions, wind forces and inertia forces caused by jerky boom operation or transit across rough terrain may exceed the equipment's and/or clamp's capacity, causing injury to workers and/or material damage.

# GENERAL INFORMATION

## Insulated Wall Panels



**Lifting Panels With Vacuum Lift**



**Setting Panels With Vacuum Lift**

### HANDLING PANELS DURING INSTALLATION (continued)

#### Setting Panels With A Vacuum Lift

Improper handling of the panels can be hazardous to the workers and can cause damage to the panels and adjacent materials. It is the contractor's responsibility to ensure a safe and secure method of lifting and setting the panels.

When using vacuum lift equipment, there will be no holes or clamps to damage the panels. There is also no equipment on the inside surface of the panel to foul on the structural framing during panel installation, allowing panels to be secured to the structure while the vacuum lift is holding them in place.

With a properly sized vacuum unit, the multiple vacuum heads provide uniformly spaced pick-up points to minimize potential bending or buckling of panels as they are lifted from the bundle and set into place.

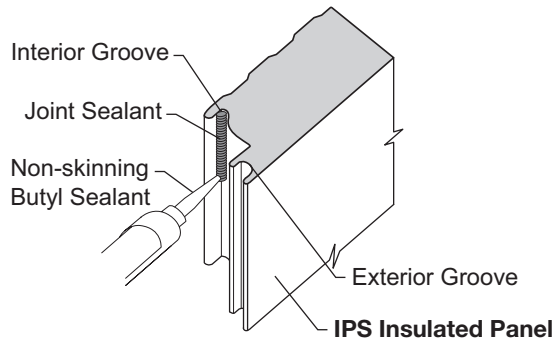
The contractor must verify that the lifting equipment is of sufficient capacity for the panel weight and length and is of sufficient mobility and reach for site conditions. The contractor must also verify that the vacuum heads are of suitable design and condition to safely lift the profiled and embossed surfaces of the panels. Special vacuum heads will be required for the flutes in the IPS Insulated wall panel.

#### CAUTION

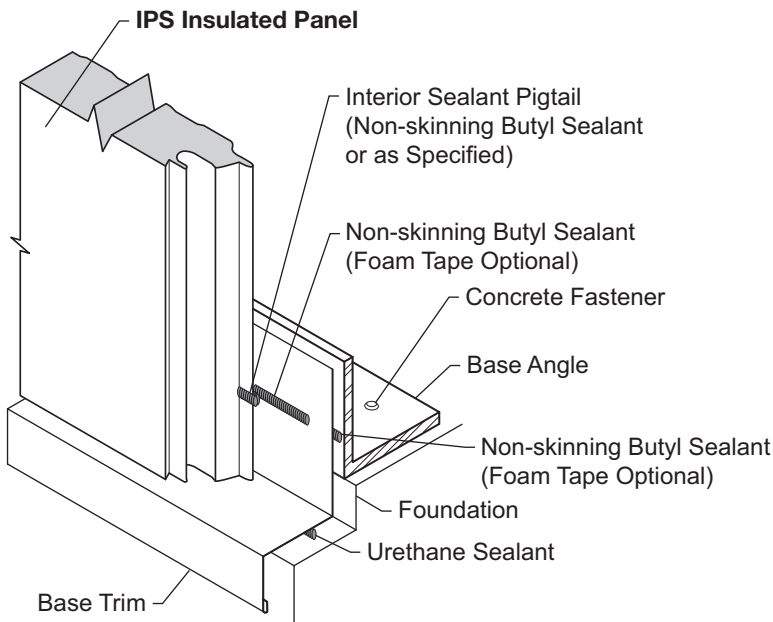
While the vacuum heads may safely lift a panel under static conditions, wind forces and inertia forces caused by jerky boom operation or transit across rough terrain, may exceed the equipment's capacity, causing injury to workers and/or material damage.

# Insulated Wall Panels

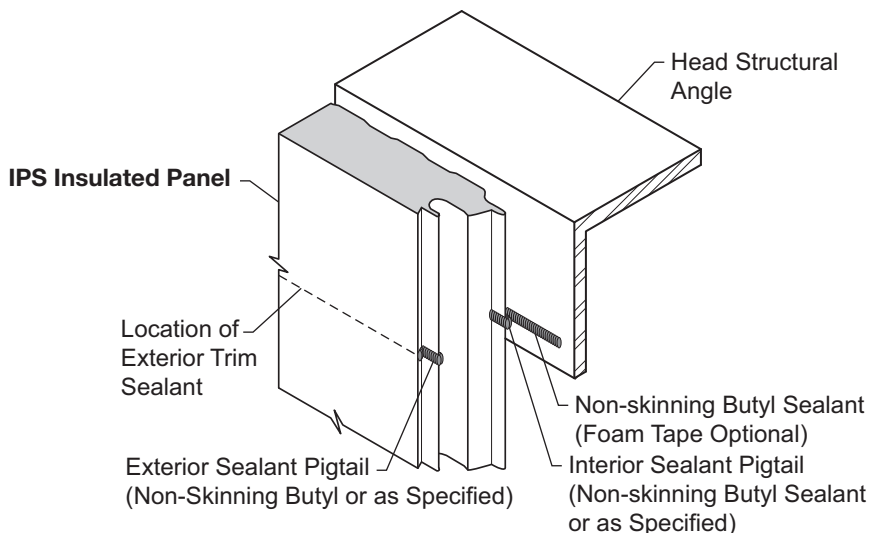
# GENERAL INFORMATION



## Field Applied Joint Sealant



## Sealant Pigtail at Base



## Sealant Pigtail at Head Joint

## PANEL SEALANT REQUIREMENTS

Depending upon project requirements and how the panels were ordered, field-applied sealant may be required in one or both of the grooves in the panel side joints. If the panels were ordered with factory mastic, then field-applied side joint sealant will not be required. However, factory-applied mastic must be inspected to ensure it is undamaged and continuous. Repair with field-applied sealant as necessary. If the panels were ordered without factory mastic, a non-skinning butyl sealant must be field applied. Consult the project drawings to determine if the interior groove, exterior groove or both are to receive the sealant. On some projects, different walls may have different requirements.

When required, the field-applied sealant must be applied continuously into the bottom of the specified groove(s). The bead size should be approximately  $\frac{3}{16}$ " to  $\frac{1}{4}$ ". However, adjust the bead size to provide full contact with the tongue of the next panel without extruding sealant onto the panel face.

It is critical to ensure continuity of the sealant line at intersections between panel side joints and exterior and interior perimeter flashing assemblies. As each panel is installed, apply sealant pigtails around the panel's interior tongue to provide a continuous seal between the interior side joint groove and the perimeter sealant.

At the exterior face of the panel, determine where the exterior flashing sealants will be located. Apply a sealant pigtail around the panel's exterior tongue to provide a continuous seal between the exterior side joint groove and the exterior flashing.

### OPTIONAL

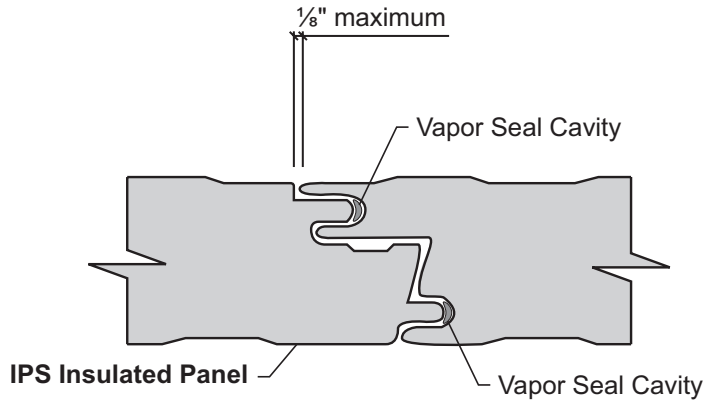
$\frac{3}{16}$ " x  $\frac{3}{4}$ " foam tape (HW-5092) may be substituted for non-skinning butyl perimeter sealant.

### CAUTION

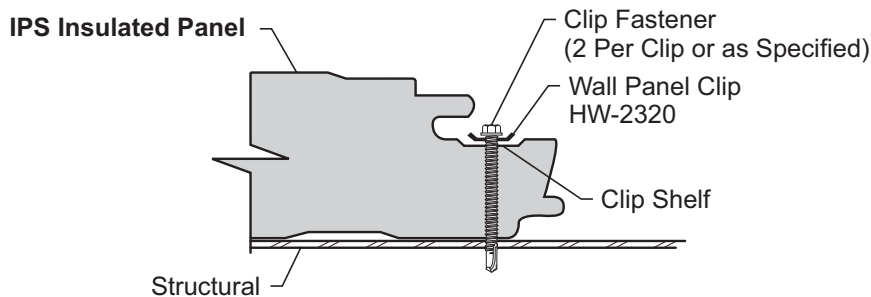
Failure to provide a continuous seal at all panel side joints and all perimeter trim conditions may lead to condensation inside the building and/or inside the panel joints.

# GENERAL INFORMATION

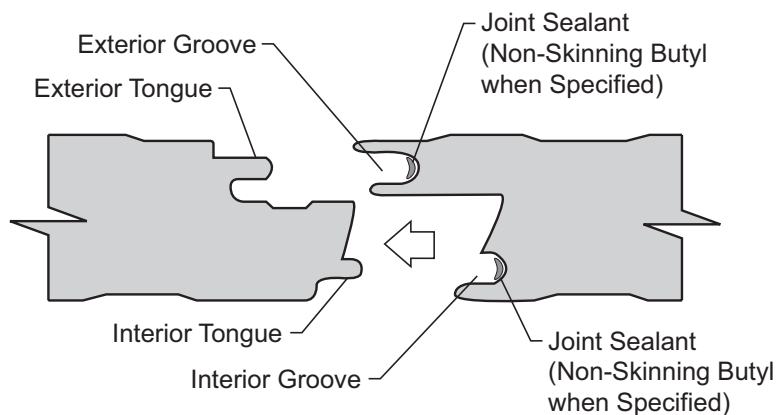
## Insulated Wall Panels



**Assembled Side Joint**



**Clip and Fastener Assembly**



**Joint Sealant Application**

### PANEL JOINT ENGAGEMENT

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  $\frac{1}{8}$ " due to manufacturing and field tolerances. The joint gap at the exterior of the panel should be  $\frac{1}{8}$ " maximum when the panels are fully engaged. If the joint gap is greater than this, check the panels for the cause of engagement interference.

The edges of the panels have an offset side joint, which allows for a concealed clip that is attached within the side joint. Clips are set onto the panel's clip shelf at each structural location and attached through the panel and into the structural member. Consult the project drawings for the proper type and number of fasteners to be used at each clip.

#### CAUTION

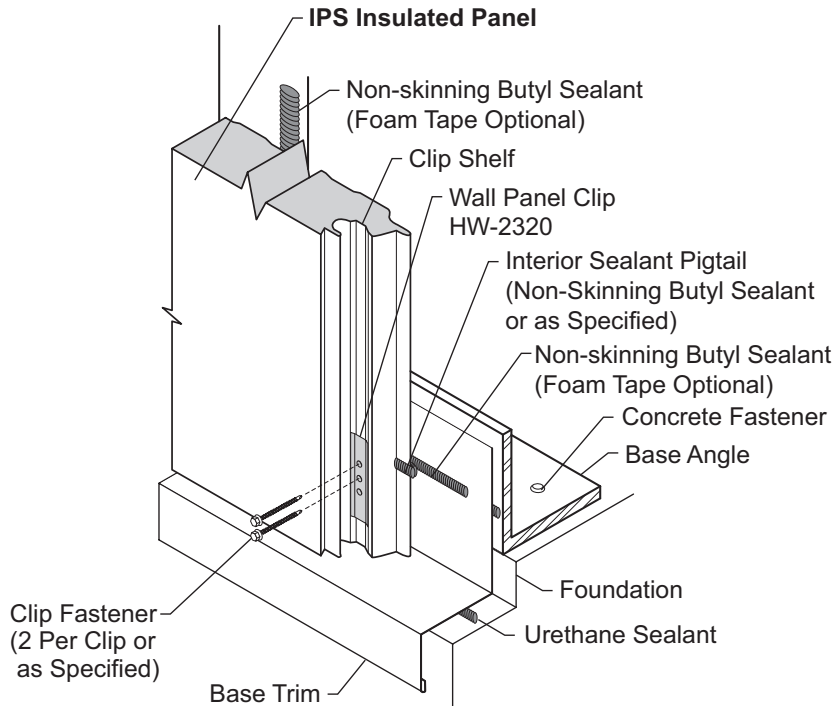
Do not overtighten fasteners to a point that damages or deforms the clip or panel.

If panels were not ordered with factory applied mastic, ensure that field applied mastic is installed into the proper sealant joint before installing the next panel. Refer to the project drawings to determine whether the interior, exterior or both sealant grooves require sealant.

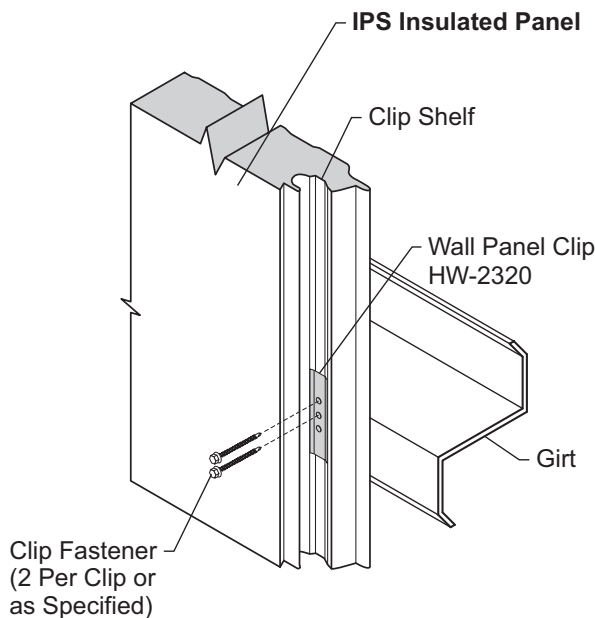
**Vapor sealant locations must be determined by the appropriate engineer for proper application of panel system.**

# Insulated Wall Panels

# GENERAL INFORMATION



**Panel Clip Connection at Base**



**Panel Clip Connection**

## BASE

At the base, make sure the base trim has been installed and fully sealed to the concrete. Also, confirm that the 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. As specified in the construction drawings, install the proper number of self-drilling or self-tapping fasteners through the factory punched holes in the clip and into the base member. The joint engagement of the next panel will cover the clip and fasteners.

## INTERMEDIATE SUPPORTS

The wall panel will be attached to the intermediate structural supports with panel clips. As specified in the construction drawings, 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.

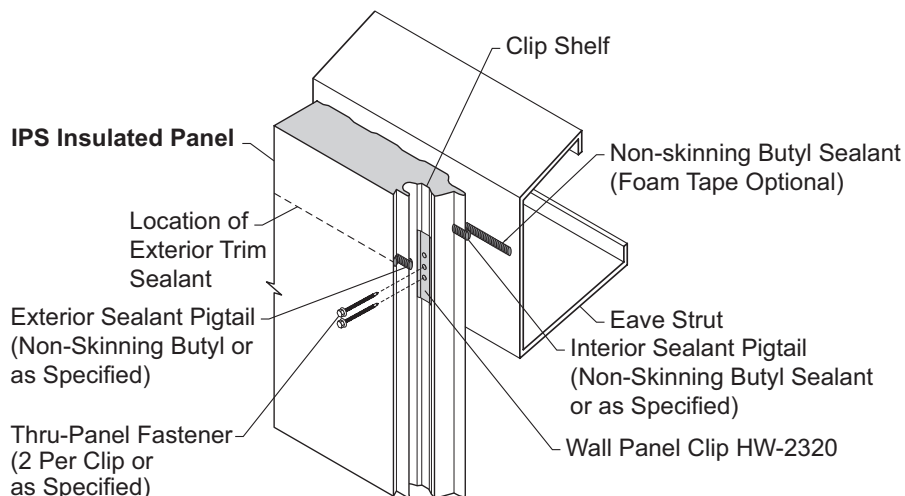
### CAUTION

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

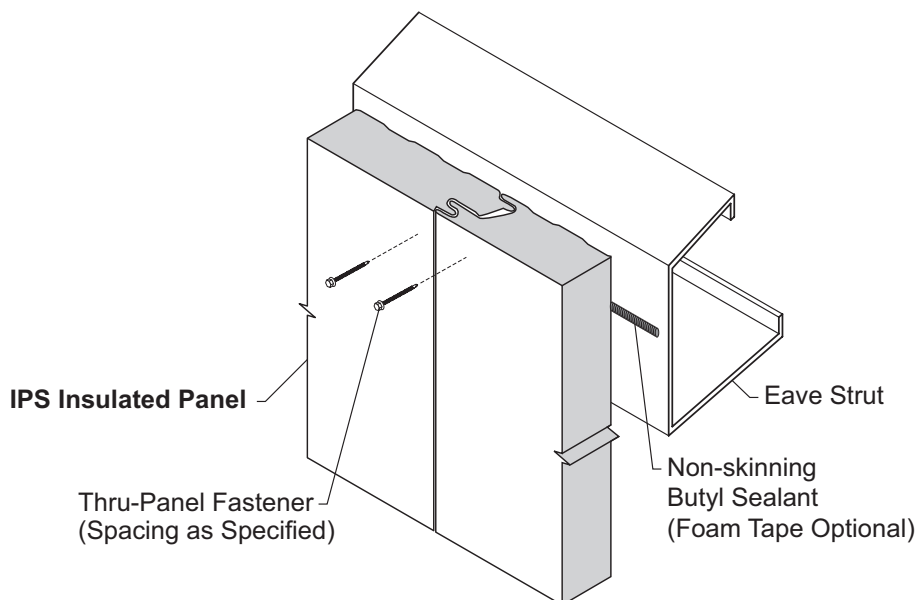


# GENERAL INFORMATION

## Insulated Wall Panels



**Panel Clip Connection at Eave**



**Face Fastened Connection at Eave**

### EAVE/RAKE

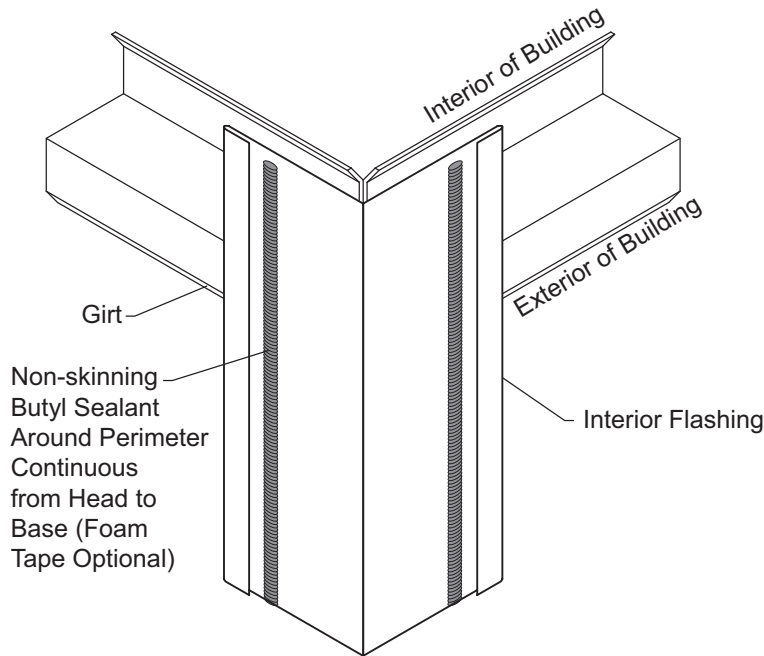
The wall panel will be attached to the structural supports at the eave and rake with panel clips. As specified in the construction drawings, install one or two self-drilling or self-tapping fasteners through the factory punched holes in the clip and into the structural supports at the eave and rake. The joint engagement of the next panel will cover the clip and fasteners.

For some applications, panels may be faced fastened. The fasteners may be either self-drilling or self-tapping, as specified in the construction drawings. Install the fasteners through the panel and into the structural support member at the spacing specified in the construction drawings.

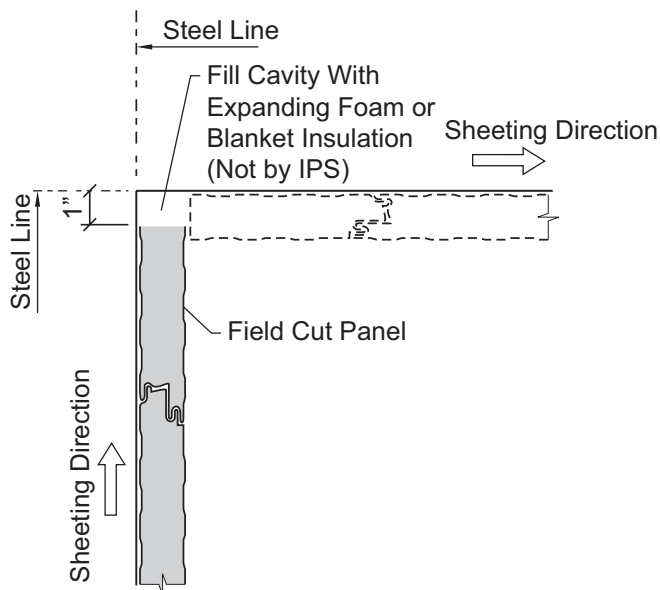


# Insulated Wall Panels

# GENERAL INFORMATION



## Corner Framing and Sealant At Interior Corner Trim



## Sheeting Into Inside Corner

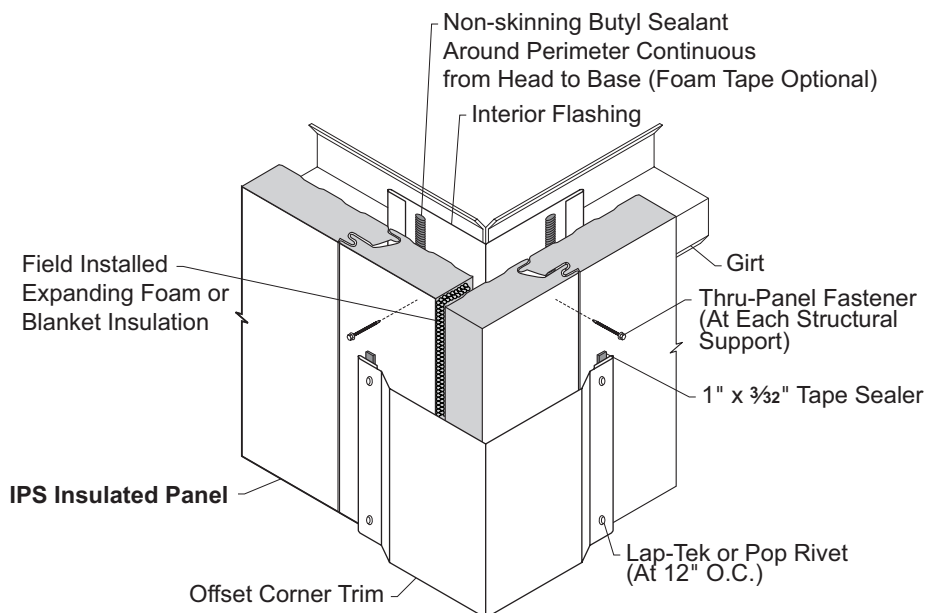
## CORNERS

The wall panels at both outside and inside corners will typically be field cut to provide a visually symmetrical wall as outlined on the "Wall Layout" page **IWP-25**. Before installing a corner panel, make sure the interior corner flashing has been installed and the perimeter sealant has been applied to the trim.

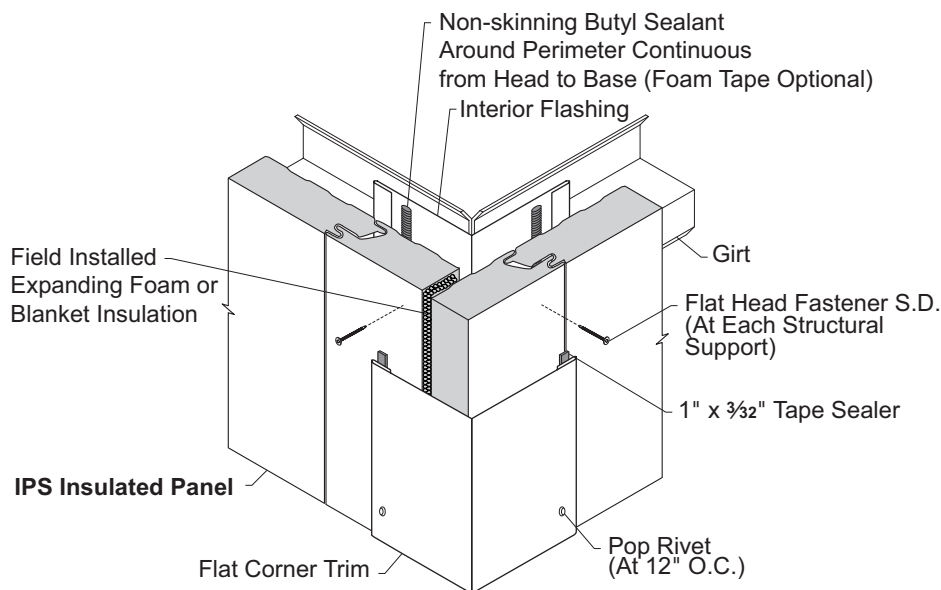
It is best to sheet away from an inside corner on both walls. When necessary to sheet into an inside corner, the panel must be cut 1" short of the steel line (if the other panel at the inside corner has not been installed) or 1" short of the opposite panel face. Fill any cavity at the inside corner with expanding foam or blanket insulation.

# GENERAL INFORMATION

## Insulated Wall Panels



**Corner Panel Attachment  
(Offset Corner Trim)**



**Corner Panel Attachment  
(Flat Corner Trim)**

### CORNERS (continued)

The cut edge of the panel can be face fastened at the base, intermediate and eave/rake structural supports with either self-drilling or self-tapping fasteners. This method will require the use of offset corner trim to hide these fasteners. Apply 1" x 3/32" tape sealer to the back side of the outside closure at each hem. The corner trim may be installed with lap teks or pop rivets at 12" on center.

The cut edge of the panel can also be secured to the building structure from the back side with Fab-Lok® fasteners or friction clips. This allows the use of a flat corner trim. The panels on either side of the corner can also be fastened to the building structurals with a self-drilling flat head fastener. Apply 1" x 3/32" tape sealer to the back side of the corner trim at each hem and fasten to the panels with pop rivets at 12" on center.

#### NOTE

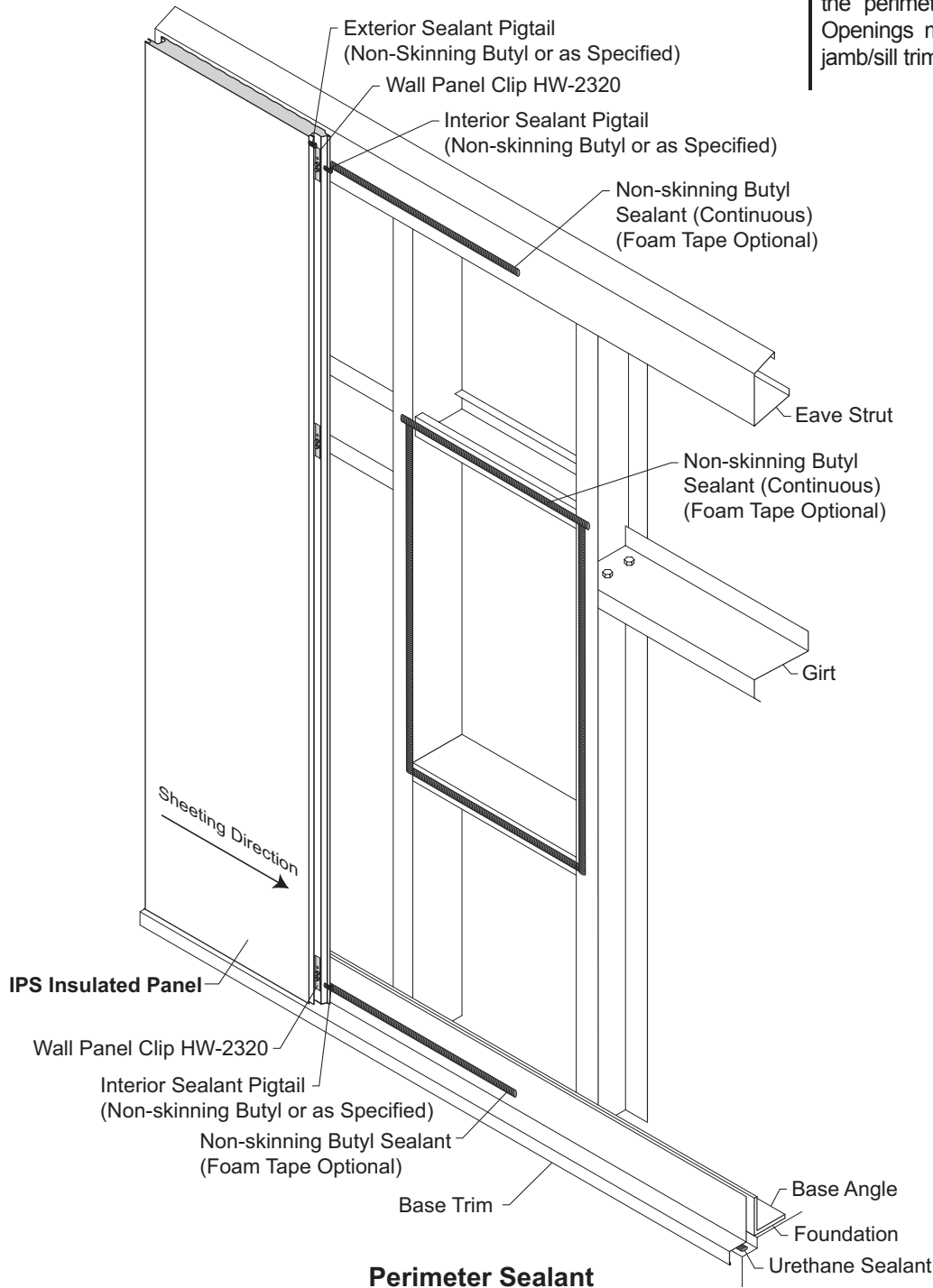
Install expanding foam or blanket insulation in all voids.

# Insulated Wall Panels

# GENERAL INFORMATION

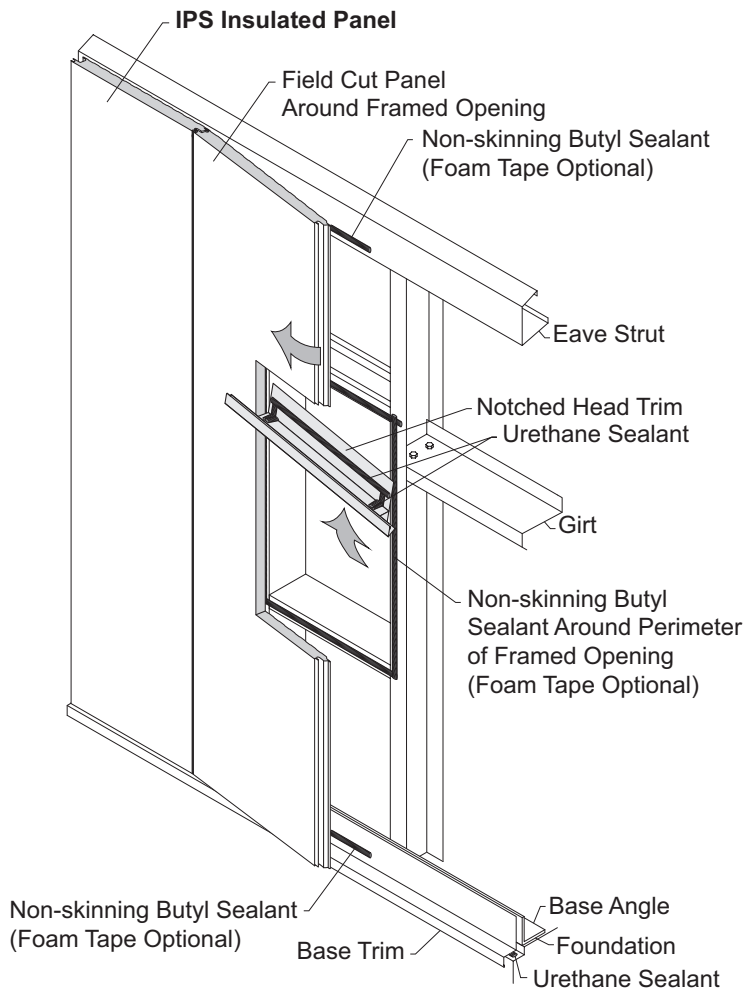
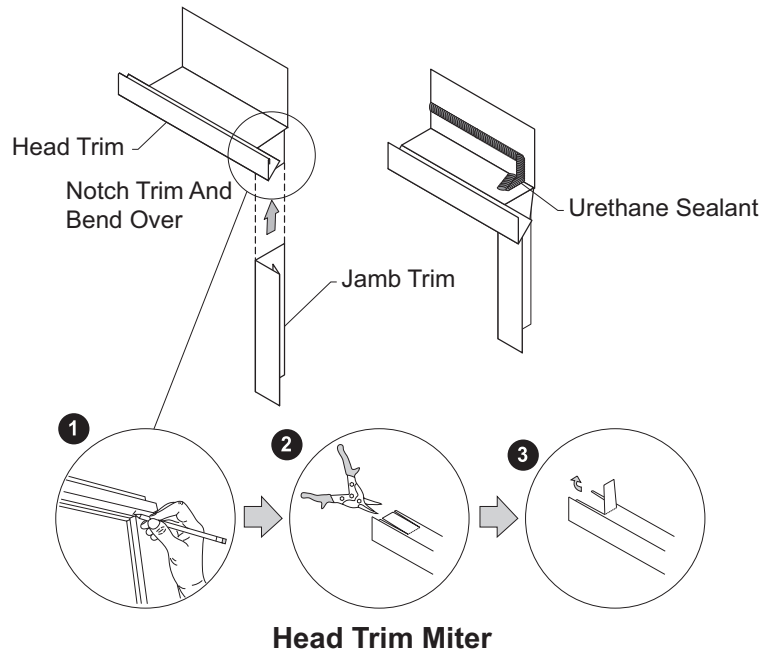
## FRAMED OPENINGS

All openings, including walk doors, will require a structural framed opening. Before attaching wall panels at framed openings, make sure that the perimeter sealants have been installed. Openings may be trimmed with either offset jamb/sill trim or flat jamb/sill trim.



# GENERAL INFORMATION

## Insulated Wall Panels



### Head Trim Installation

### FRAMED OPENINGS WITH OFFSET TRIM

Cut the head trim to length to fit the framed opening width plus the width of the jamb trim on each side of the opening. Notch and bend tabs at each end of the head trim to allow the panels at each end of the framed opening to slide into it.

Offset trim allows the panels to be face fastened at the jamb locations. Attach the panels at the jamb with self-drilling or self-tapping fasteners installed approximately 1" from the cut edge at a maximum spacing of 24" on center. Attach panels at the head or sill with panel clips as at a normal intermediate structural location.

Cut the first panel to fit the framed opening and slide into place. Apply urethane sealant to front side of the vertical leg and ends of the base of the head trim as shown. This will seal the head trim to the back of the wall panel. Slightly pull panel out, rotate and slide head trim into place.

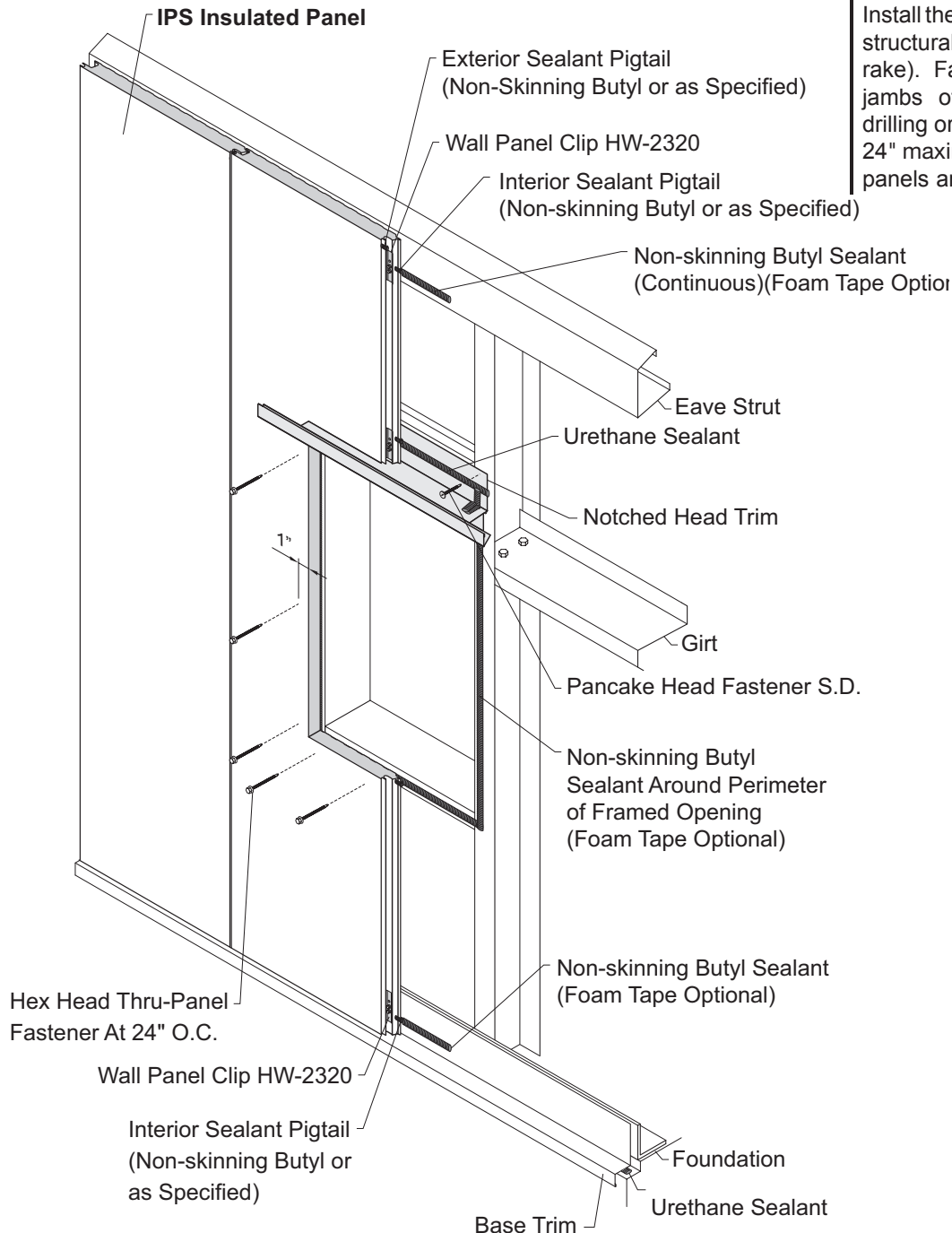
Push wall panel with head trim back into place and secure opposite end of head trim with pancake head fastener.

# Insulated Wall Panels

# GENERAL INFORMATION

## FRAMED OPENINGS WITH OFFSET TRIM (continued)

Install the wall panel with clips at all horizontal structurals (base, girts, head, sill and eave/ rake). Face fasten the wall panel to the jambs of the framed opening with self-drilling or self-tapping hex head fasteners at 24" maximum on center. Install all remaining panels around the framed opening.

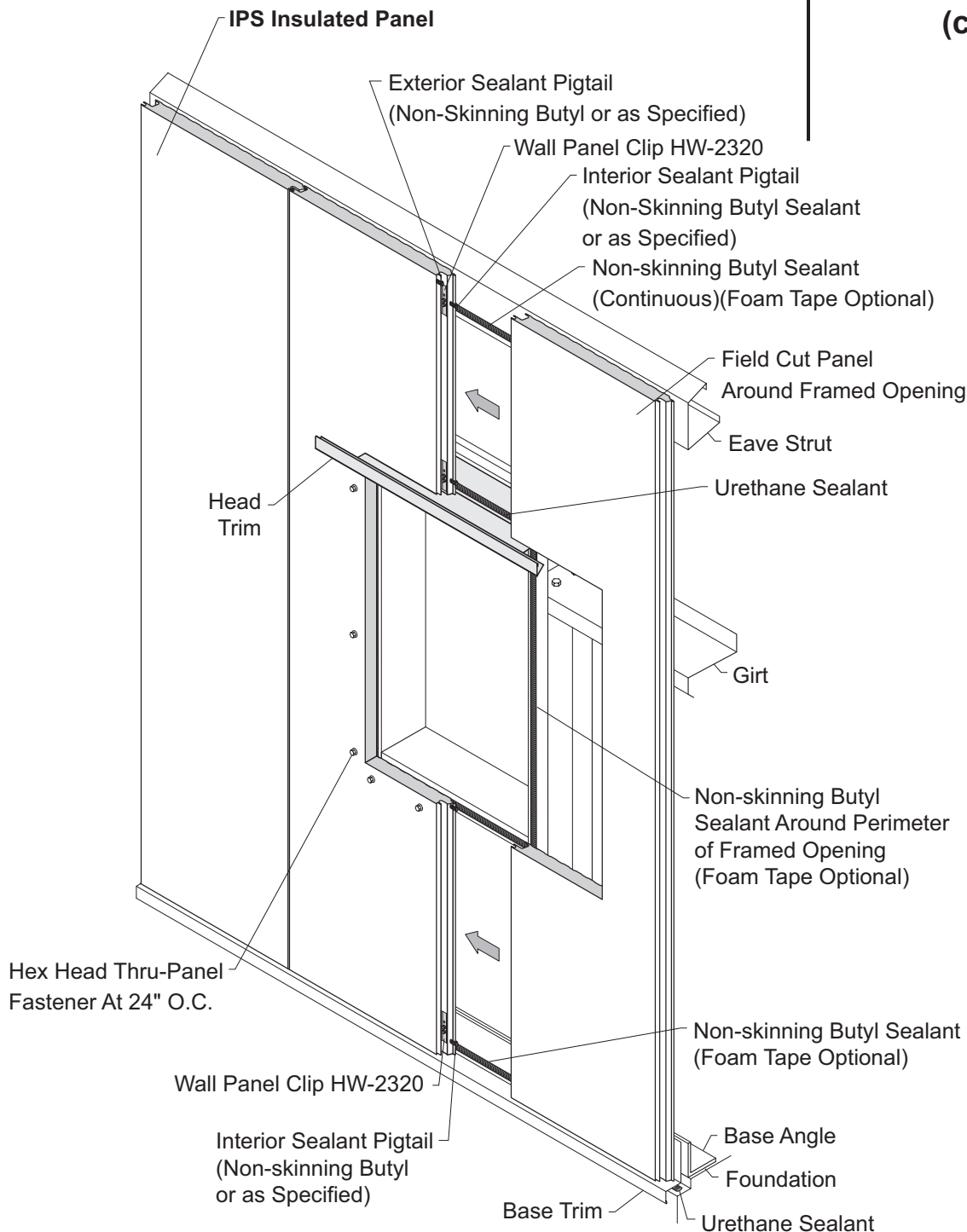


## Head Trim Installation (Continued)

# GENERAL INFORMATION

## Insulated Wall Panels

### FRAMED OPENINGS WITH OFFSET TRIM (continued)

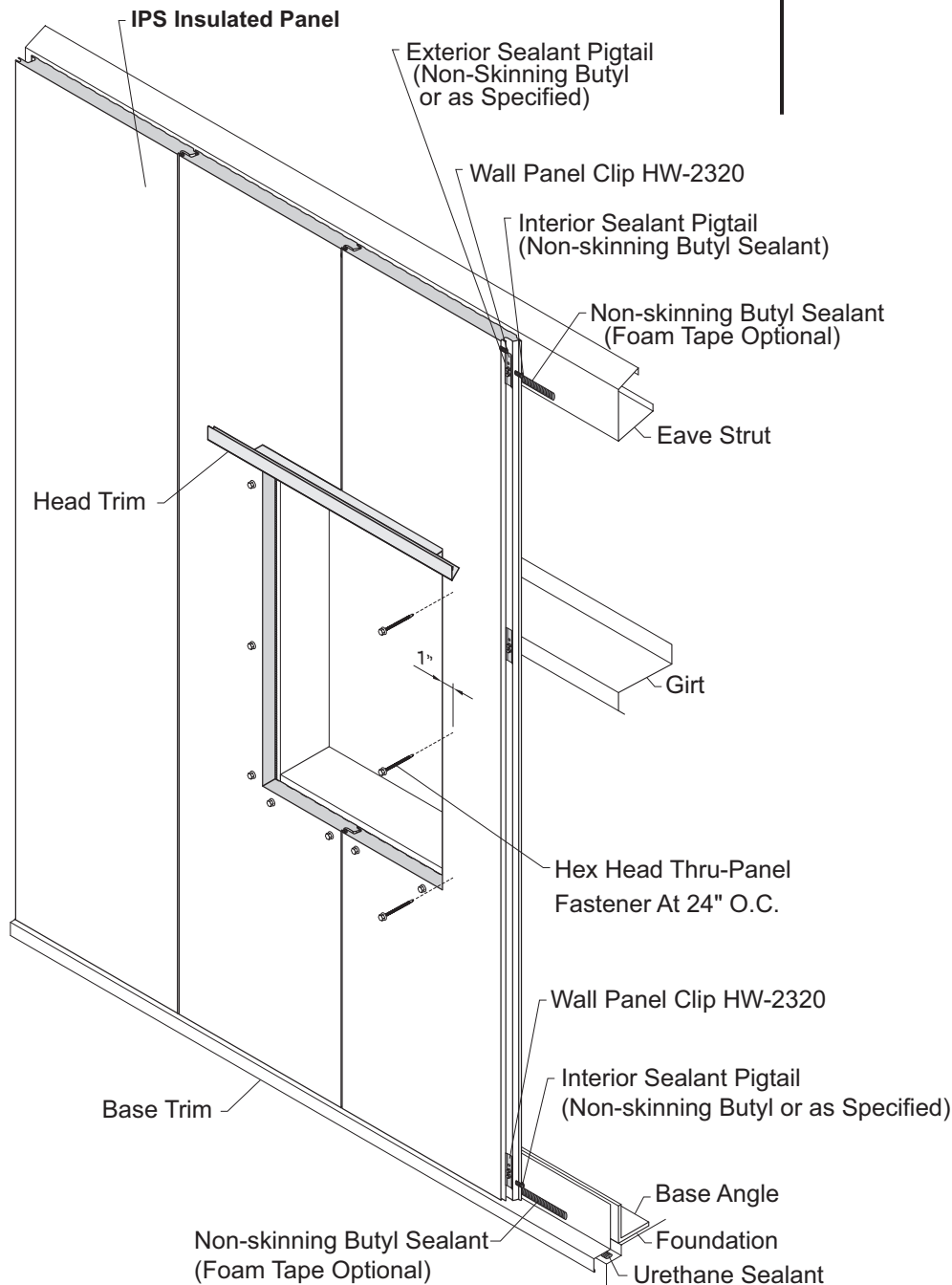


### Head Trim Installation (Continued)

# Insulated Wall Panels

# GENERAL INFORMATION

## FRAMED OPENINGS WITH OFFSET TRIM (continued)



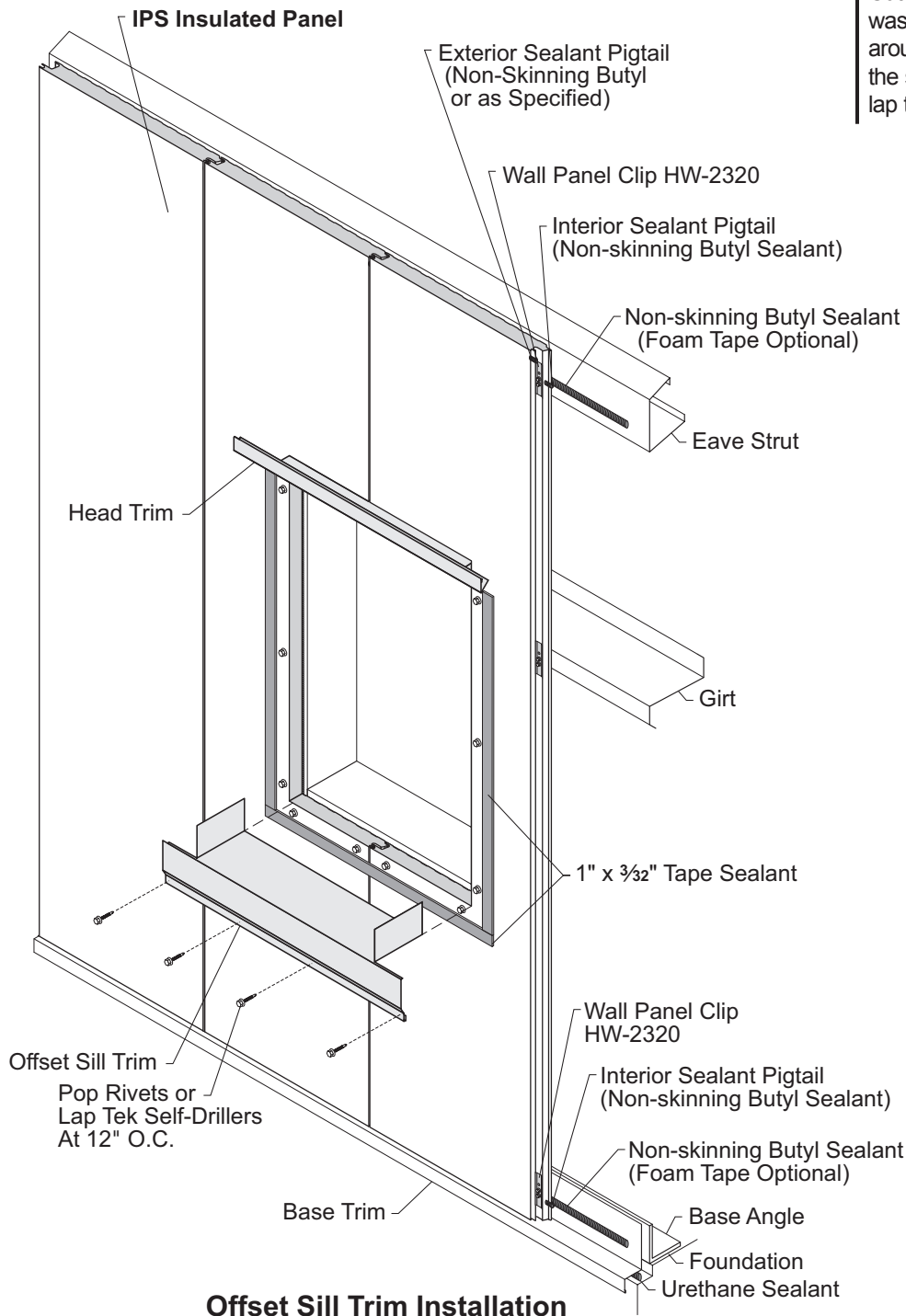
### Panel Attachment to Jamb and Sill

# GENERAL INFORMATION

## Insulated Wall Panels

### FRAMED OPENINGS WITH OFFSET TRIM (continued)

Cut sill trim to length; notch and bend tabs as was done with the head trim. Apply tape sealant around perimeter of framed opening and fasten the sill trim to the wall panels with pop rivets or lap teks at 12" on center.



**Offset Sill Trim Installation**

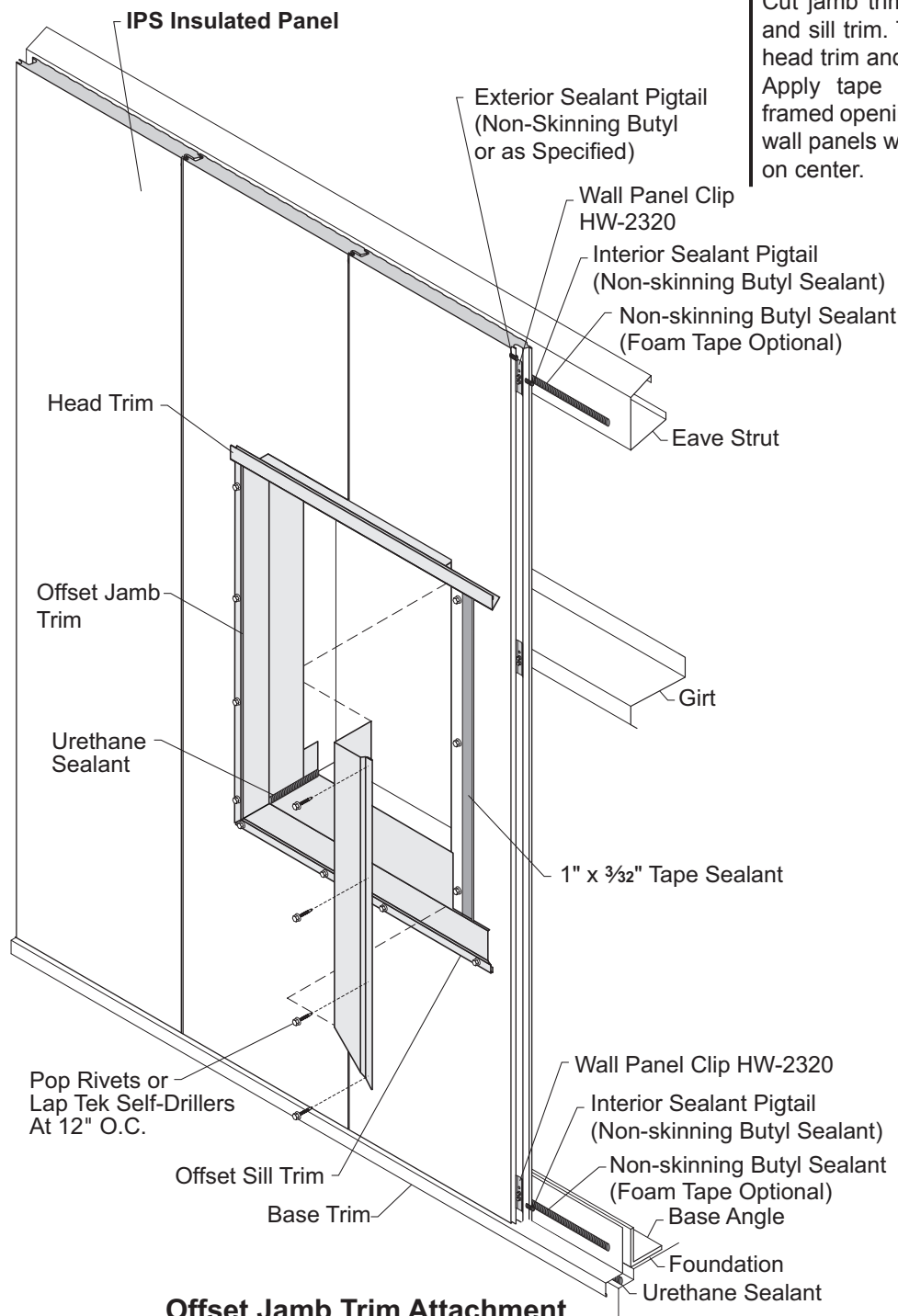


# Insulated Wall Panels

# GENERAL INFORMATION

## FRAMED OPENINGS WITH OFFSET TRIM (continued)

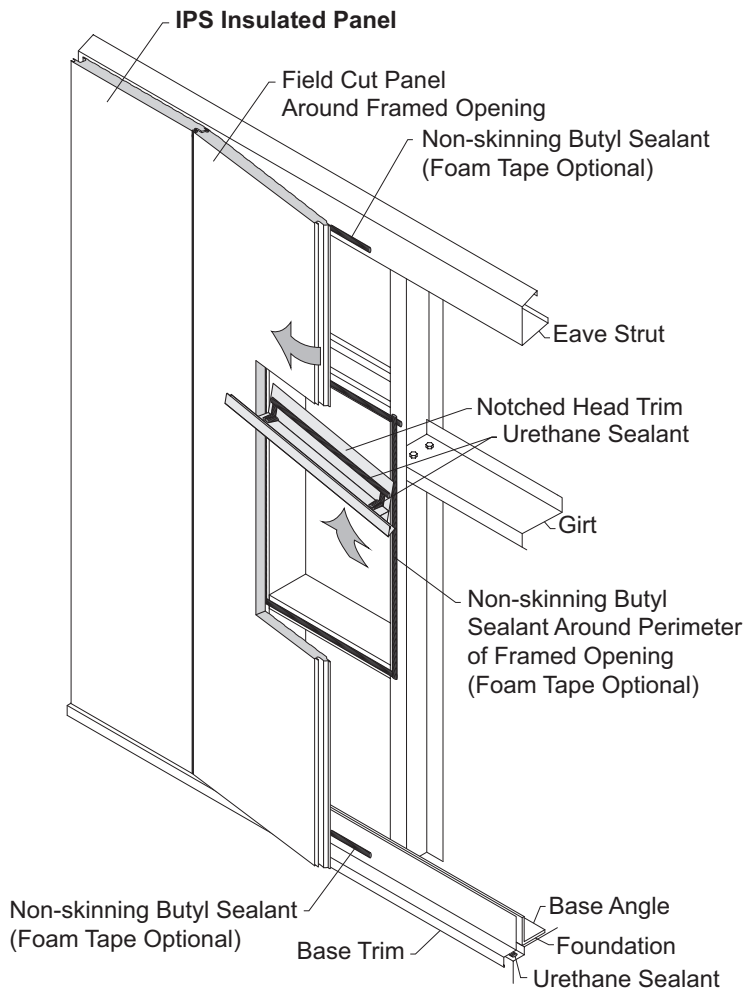
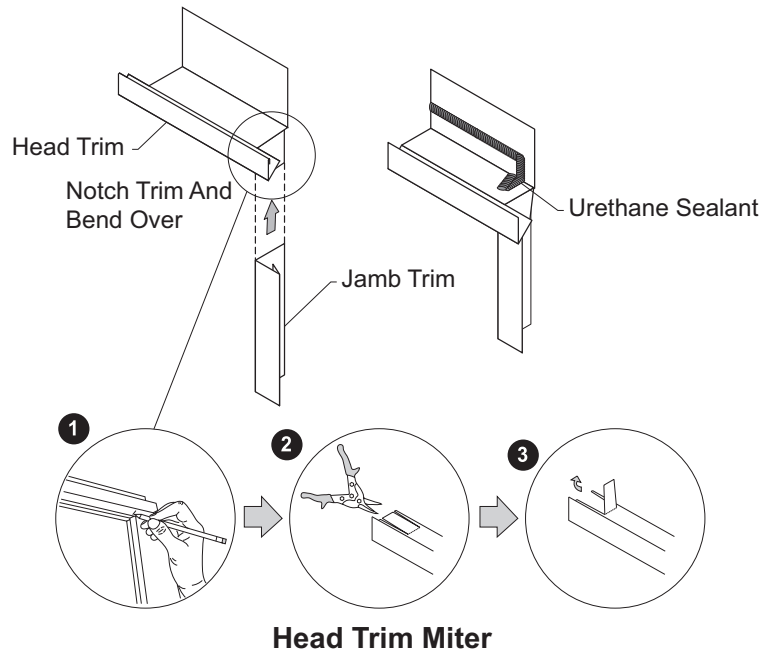
Cut jamb trim to fit between the head trim and sill trim. The jamb trim will fit under the head trim and will be mitered to the sill trim. Apply tape sealant around perimeter of framed opening and fasten the sill trim to the wall panels with pop rivets or lap teks at 12" on center.



### Offset Jamb Trim Attachment

# GENERAL INFORMATION

## Insulated Wall Panels



### Head Trim Installation

### FRAMED OPENINGS WITH FLAT TRIM

Cut the head trim to length to fit the framed opening width plus the width of the jamb trim on each side of the opening. Notch and bend tabs at each end of the head trim to allow the panels at each end of the framed opening to slide into it.

Attach the panels at the jamb with self-drilling or self-tapping flat head thru-panel fasteners installed approximately 1" from the cut edge at a maximum spacing of 24" on center. Attach panels at the head or sill with panel clips as at a normal intermediate structural location.

Cut the first panel to fit the framed opening and slide into place. Apply urethane sealant to front side of the vertical leg and ends of the base of the head trim as shown. This will seal the head trim to the back of the wall panel. Slightly pull panel out, rotate and slide head trim into place.

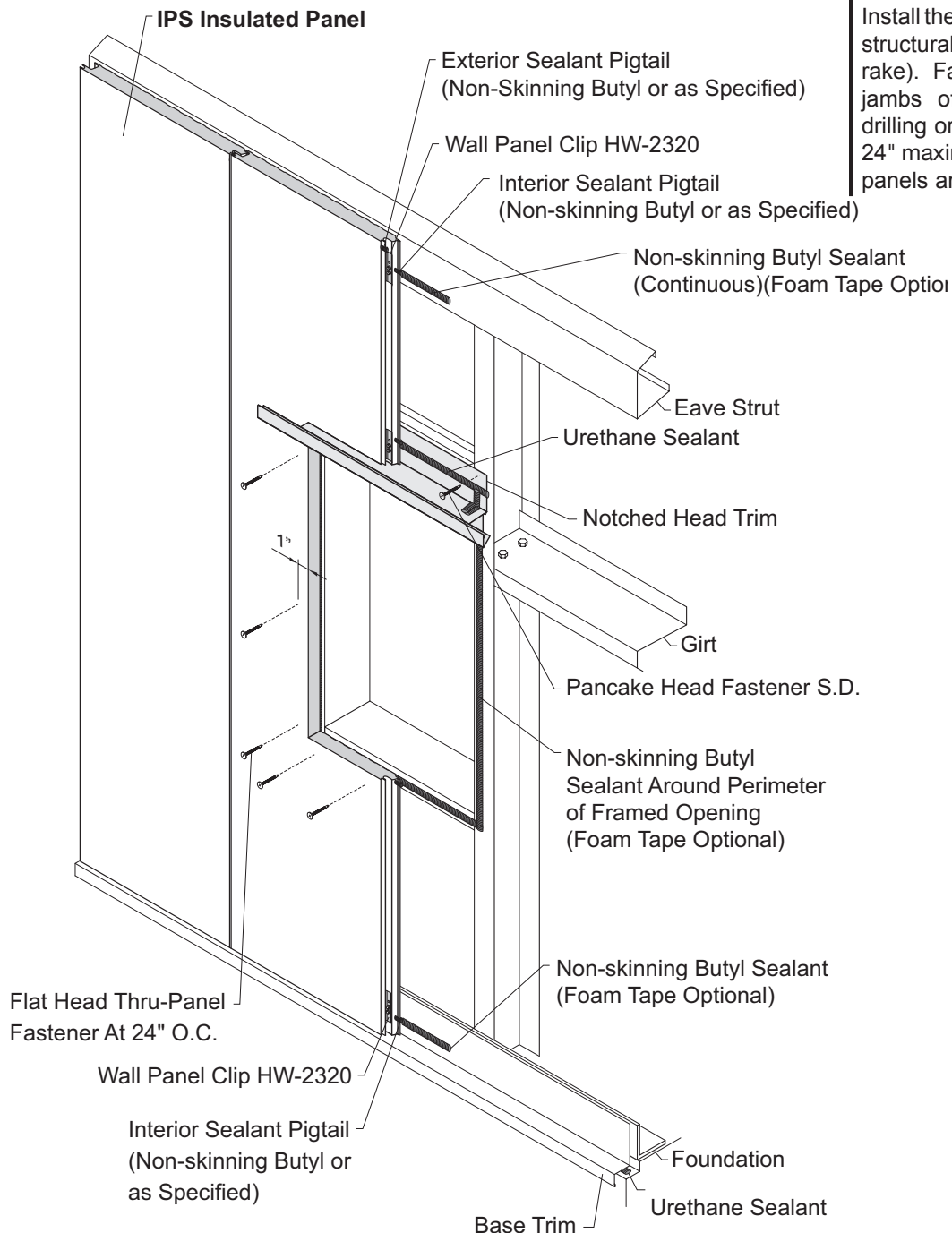
Push wall panel with head trim back into place and secure opposite end of head trim with pancake head fastener.

# Insulated Wall Panels

# GENERAL INFORMATION

## FRAMED OPENINGS WITH FLAT TRIM (continued)

Install the wall panel with clips at all horizontal structurals (base, girts, head, sill and eave/ rake). Face fasten the wall panel to the jambs of the framed opening with self-drilling or self-tapping flat head fasteners at 24" maximum on center. Install all remaining panels around the framed opening.

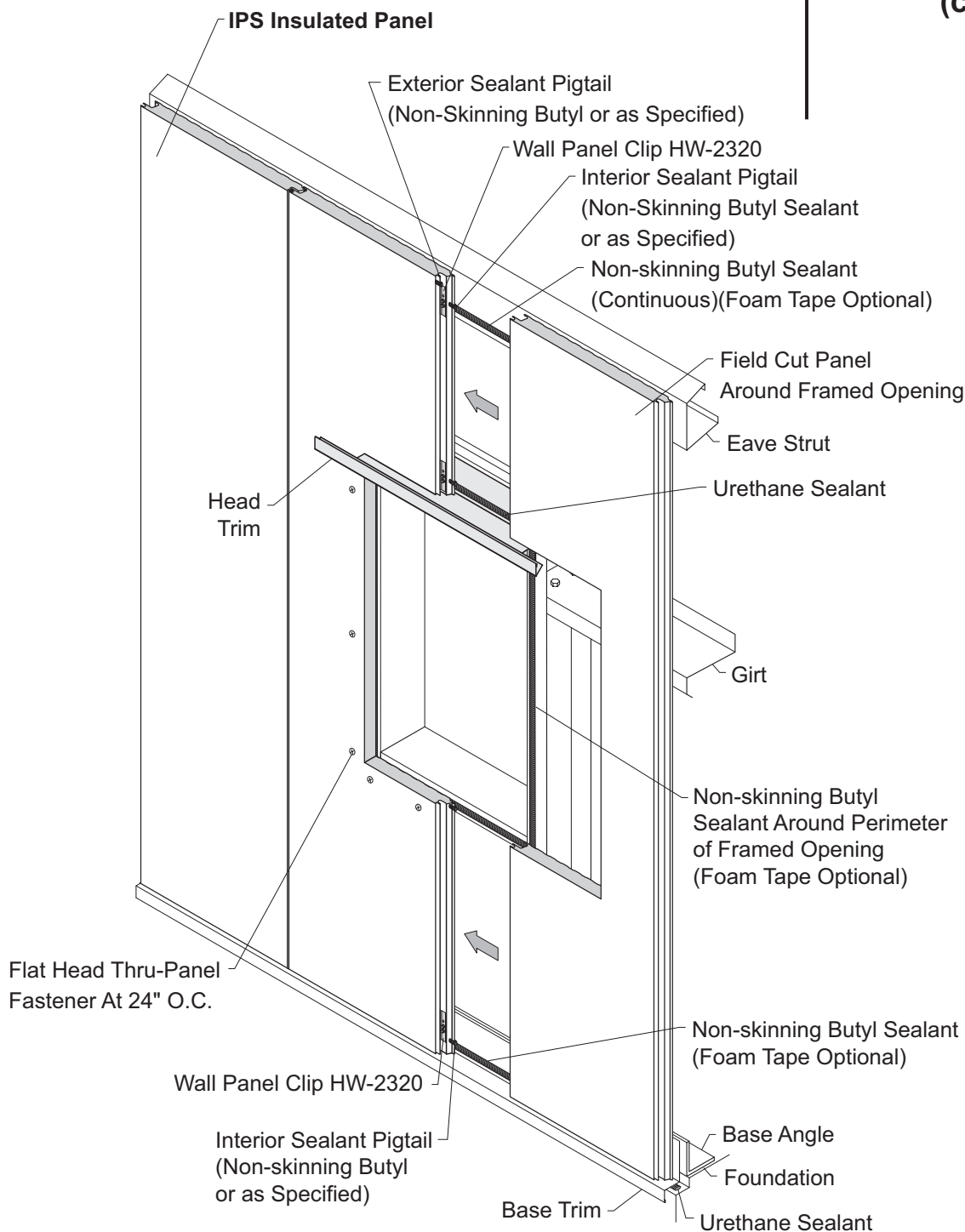


## Head Trim Installation (Continued)

# GENERAL INFORMATION

## Insulated Wall Panels

### FRAMED OPENINGS WITH FLAT TRIM (continued)

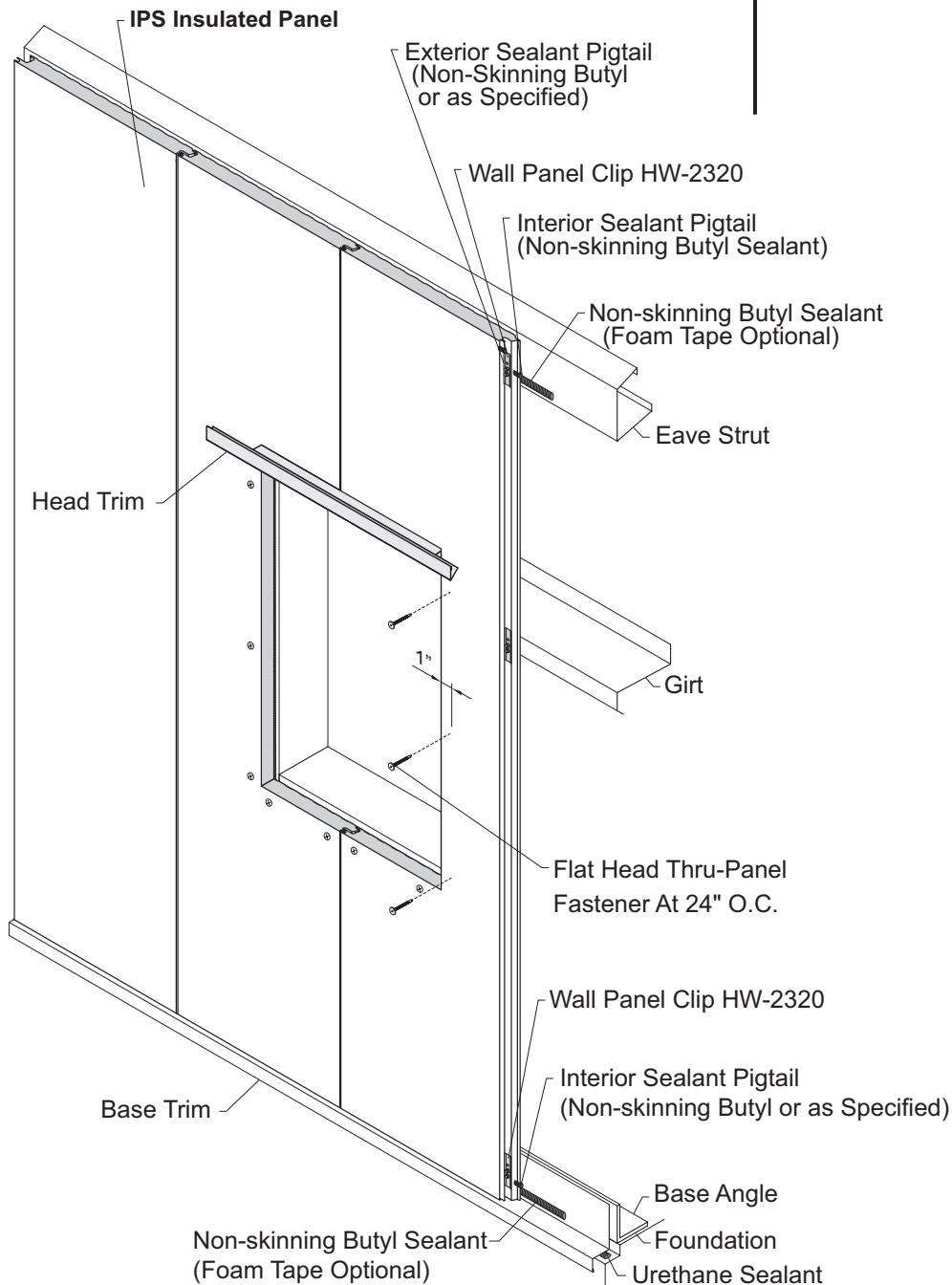


### Head Trim Installation (Continued)

## Insulated Wall Panels

## GENERAL INFORMATION

### FRAMED OPENINGS WITH FLAT TRIM (continued)



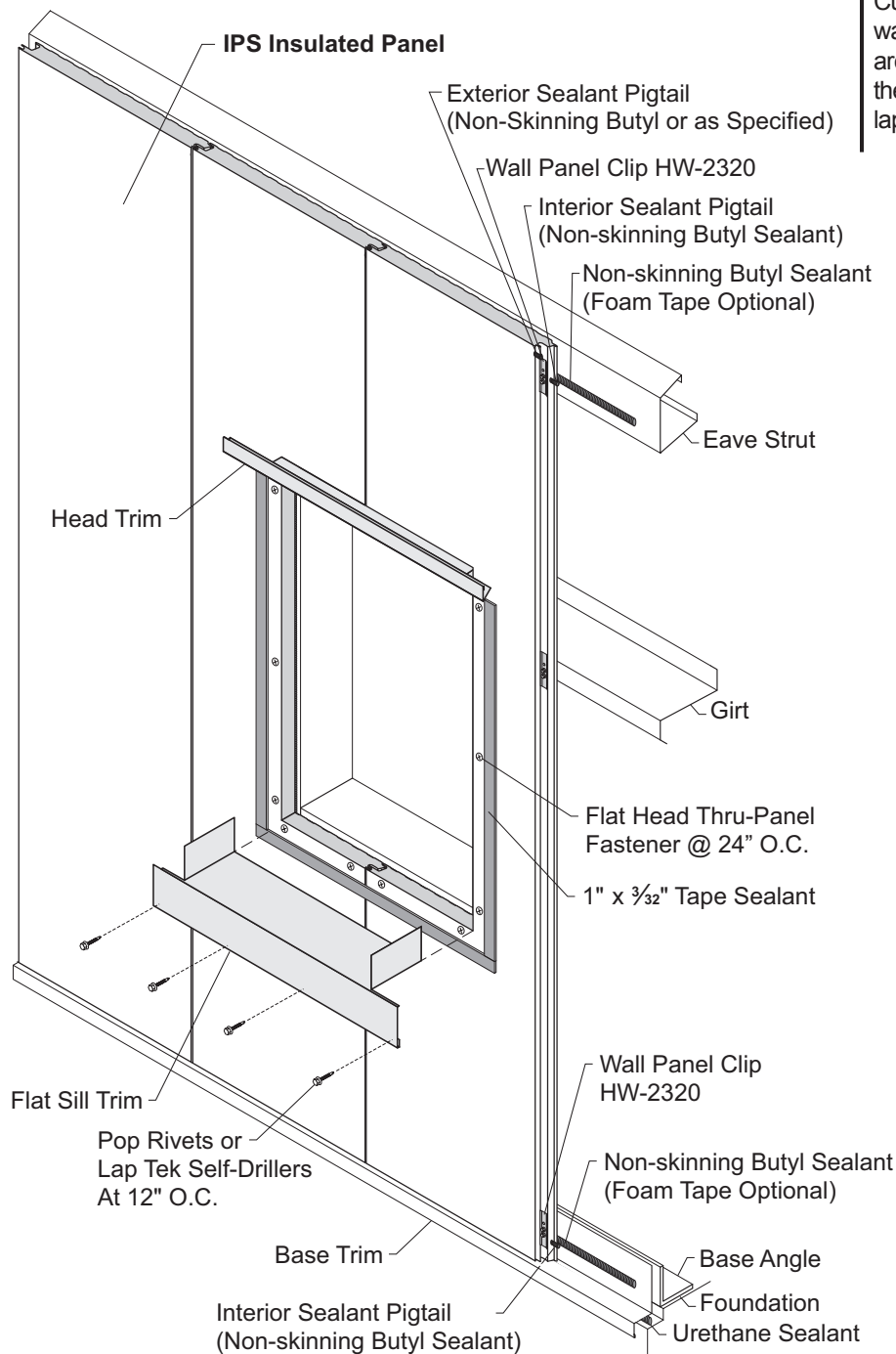
### Panel Attachment to Jamb and Sill

# GENERAL INFORMATION

## Insulated Wall Panels

### FRAMED OPENINGS WITH FLAT TRIM (continued)

Cut sill trim to length, notch and bend tabs as was done with the head trim. Apply tape sealant around perimeter of framed opening and fasten the sill trim to the wall panels with pop rivets or lap teks at 12" on center.



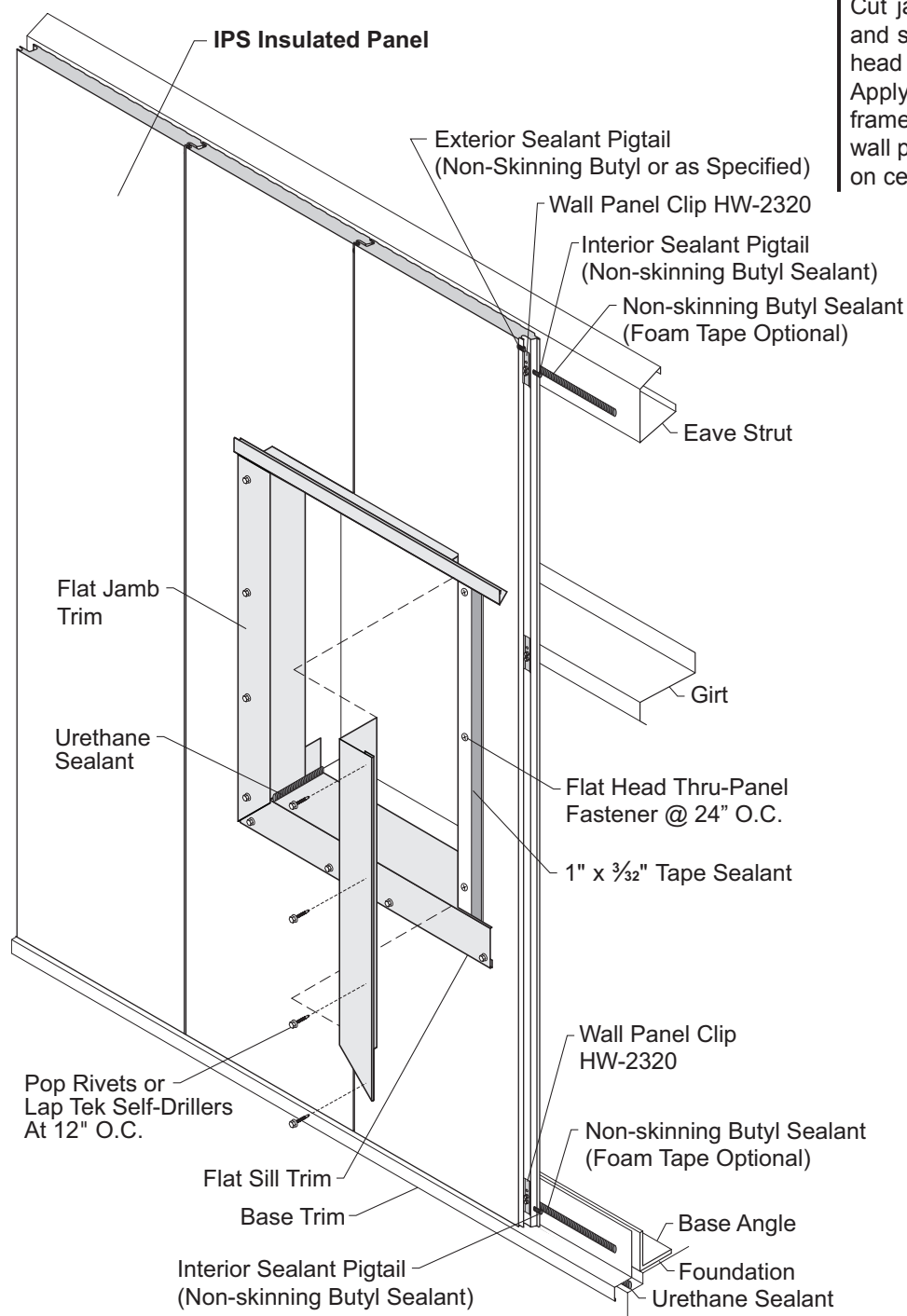
### Flat Sill Trim Installation

# Insulated Wall Panels

# GENERAL INFORMATION

## FRAMED OPENINGS WITH FLAT TRIM (continued)

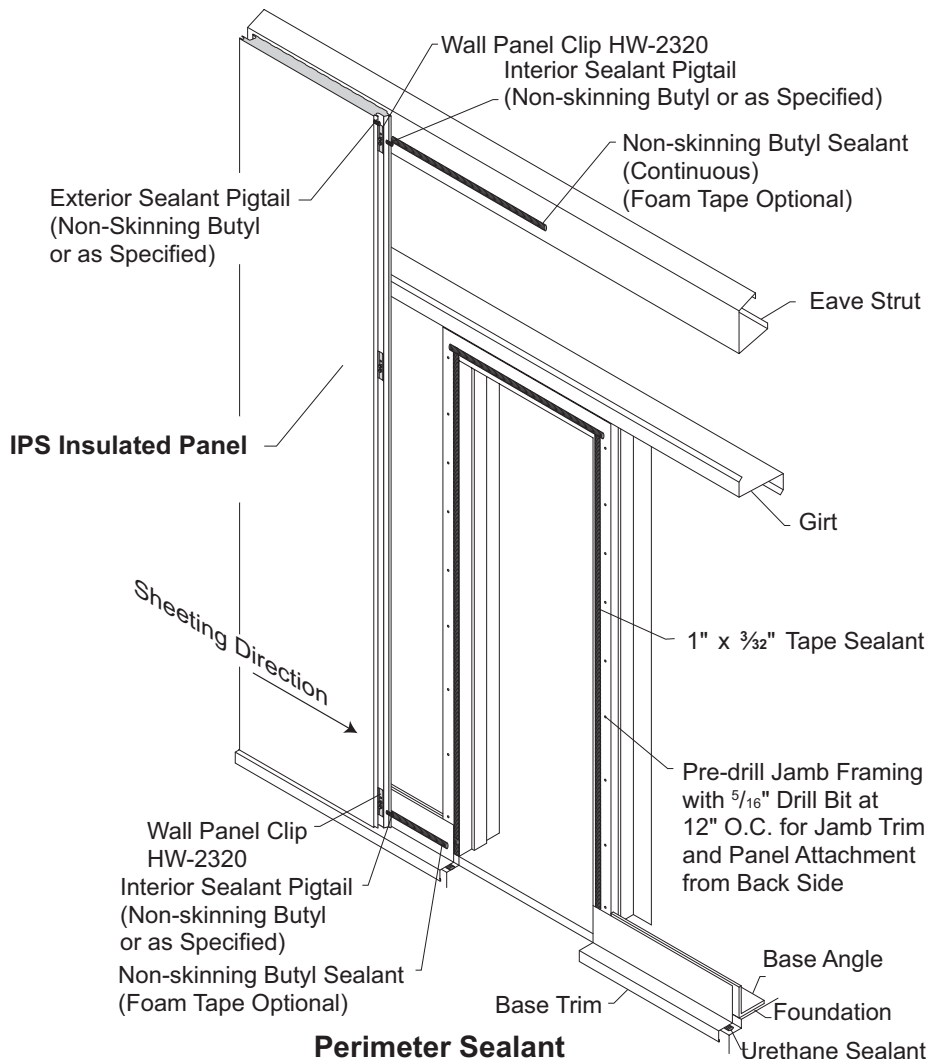
Cut jamb trim to fit between the head trim and sill trim. The jamb trim will fit under the head trim and will be mitered to the sill trim. Apply tape sealant around perimeter of framed opening and fasten the sill trim to the wall panels with pop rivets or lap teks at 12" on center.



### Flat Jamb Trim Attachment

# GENERAL INFORMATION

## Insulated Wall Panels



### DOOR OPENINGS WITH FLAT JAMB TRIM

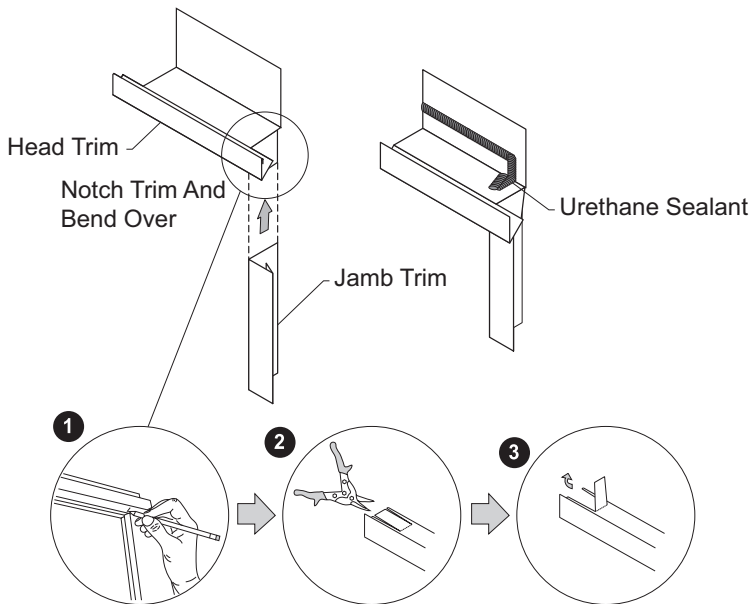
Use of flat jamb trim at door openings requires the panels to be attached from the back side. At the door head, Cee clips with Fab-Lok® fasteners are used to attach the panel to the wall girt. The door jambs will be predrilled to allow for fastening the panel from the back side with lap tek self drilling fasteners.

Pre-drill 5/16" holes at 12" O.C. along jambs of framed opening. Apply perimeter sealants around framed openings.

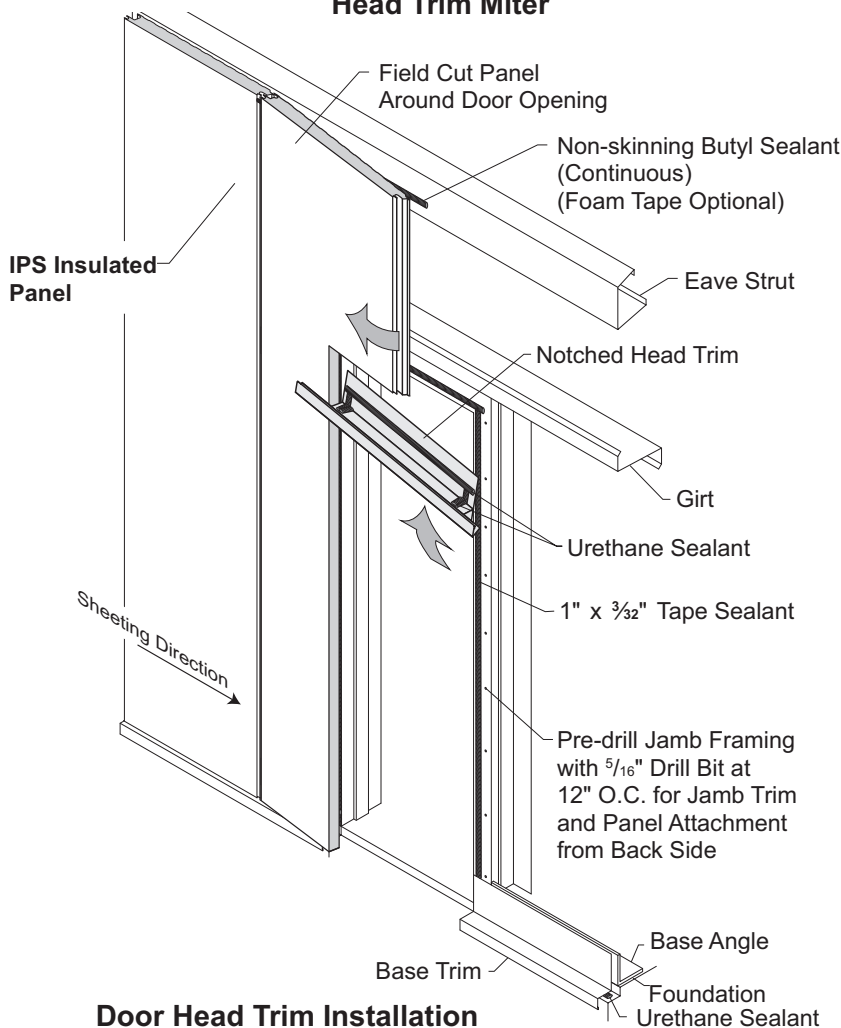


# Insulated Wall Panels

# GENERAL INFORMATION



**Head Trim Miter**



**Door Head Trim Installation**

## DOOR OPENINGS WITH FLAT JAMB TRIM (continued)

Cut the head trim to length to fit the framed opening width plus the width of the jamb trim on each side of the opening. Notch and bend tabs at each end of the head trim to allow the panels at each end of the framed opening to slide into it.

Cut the first panel to fit the door opening and slide into place. Apply urethane sealant to front side of the vertical leg and ends of the base of the head trim as shown. This will seal the head trim to the back of the wall panel. Slightly pull panel out, rotate and slide head trim into place.

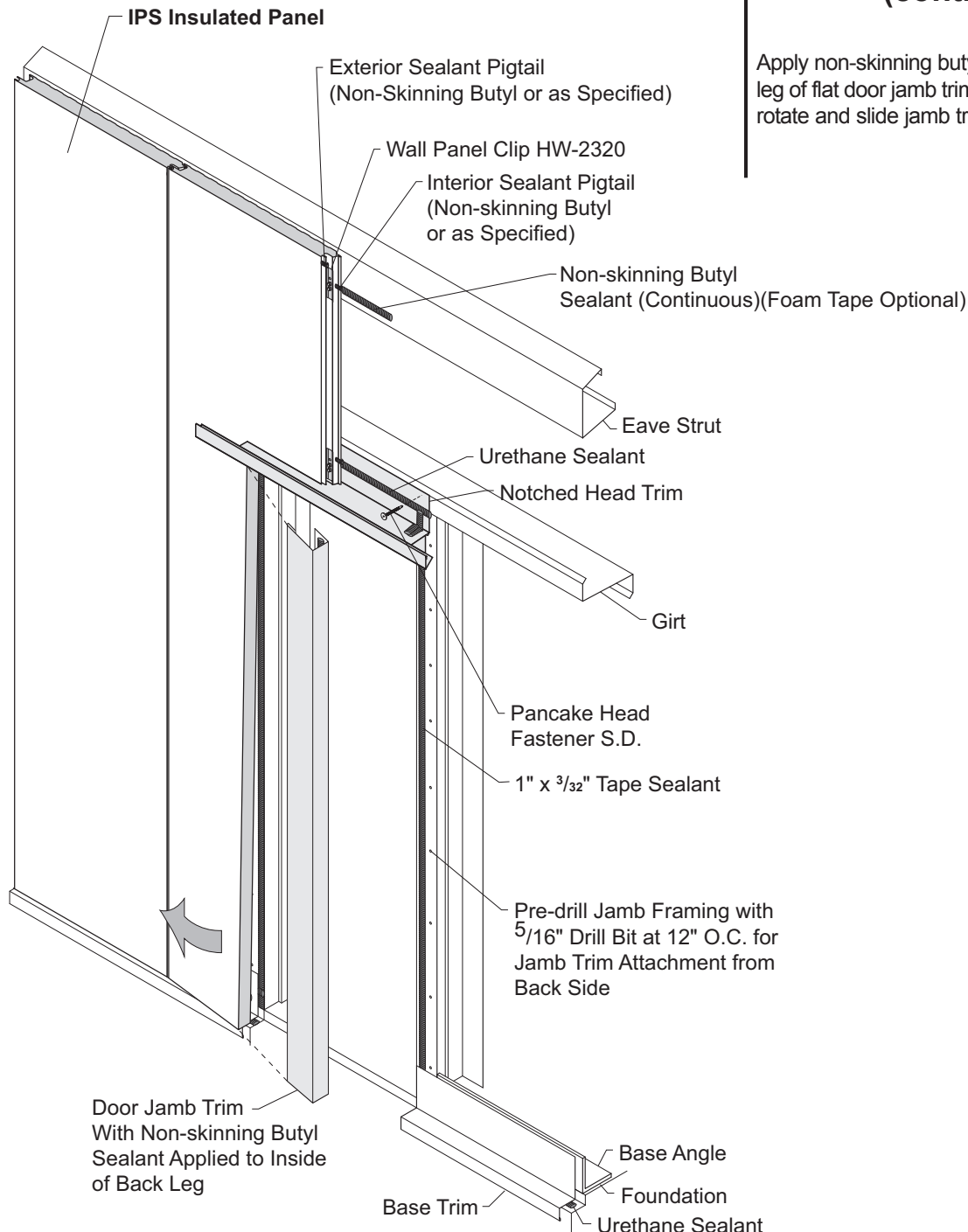
Push wall panel with head trim back into place and secure opposite end of head trim with pancake head fastener.

# GENERAL INFORMATION

## Insulated Wall Panels

### DOOR OPENINGS WITH FLAT JAMB TRIM (continued)

Apply non-skinning butyl sealant to inside back leg of flat door jamb trim. Slightly pull panel out, rotate and slide jamb trim into place.



### Door Jamb Trim Installation

## Insulated Wall Panels

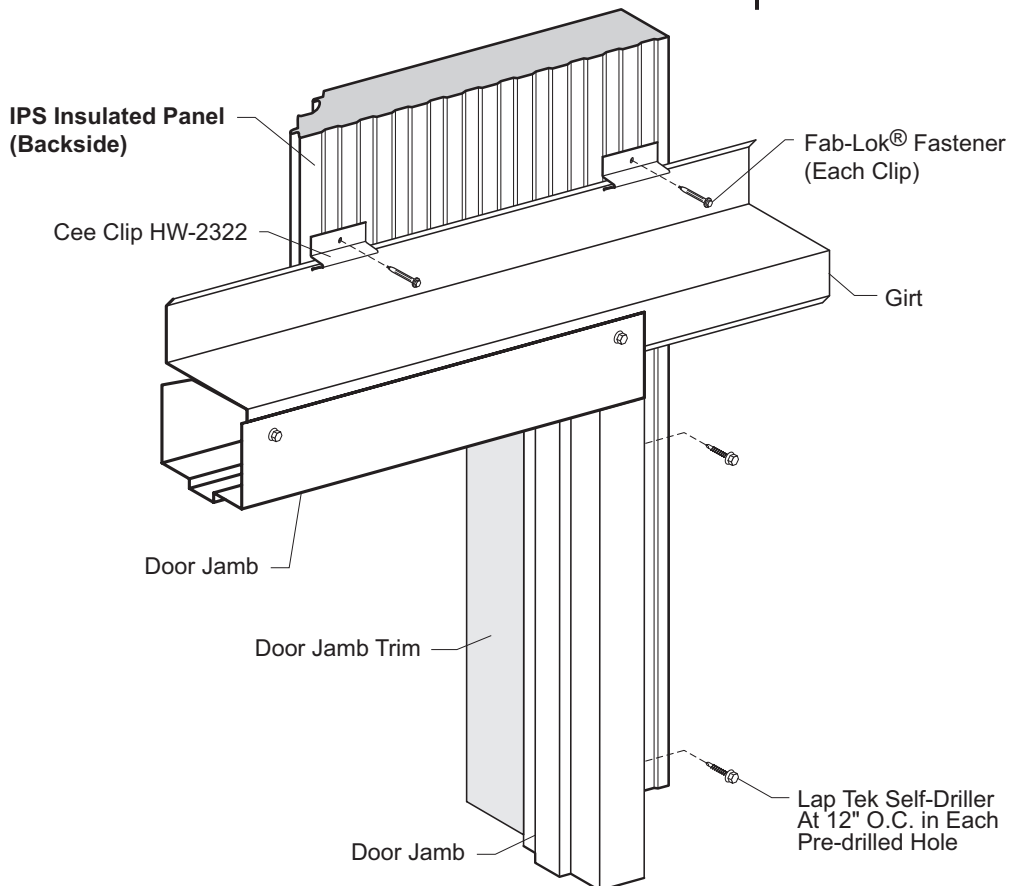
# GENERAL INFORMATION

### DOOR OPENINGS WITH FLAT JAMB TRIM (continued)

Push wall panel tightly to the structure and hold in place.

Fasten the panel to the door jamb with lap tek self-drilling fasteners at 12" on center. Fasteners will be installed through the  $\frac{5}{16}$ " predrilled holes in the door jamb, into the interior skin of the panel.

Attach the panel to the door header with Cee clips at 12" on center. Fasten Cee clips to the interior skin of the panel with Fab-Lok<sup>®</sup> fasteners.



### Backside Panel Attachment (For Door Frame)

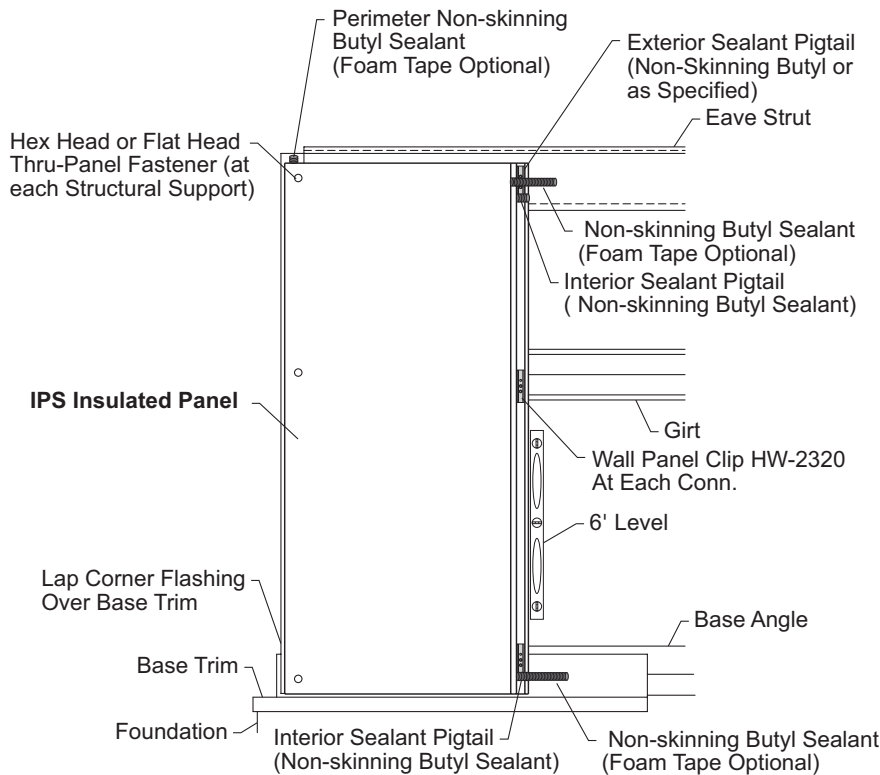
# INSTALLATION

## Insulated Wall Panels

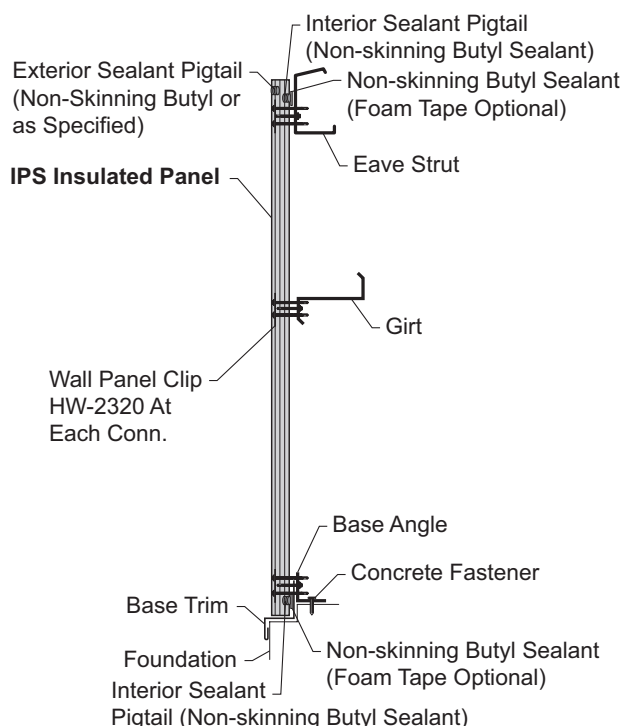
### FIRST PANEL

Before installing the first panel, make sure you have thoroughly reviewed the previous pages of this manual and are familiar with all requirements to ensure proper installation.

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. Use a 6' level and set it against the uncut edge of the panel to check plumb.



### Setting First Panel



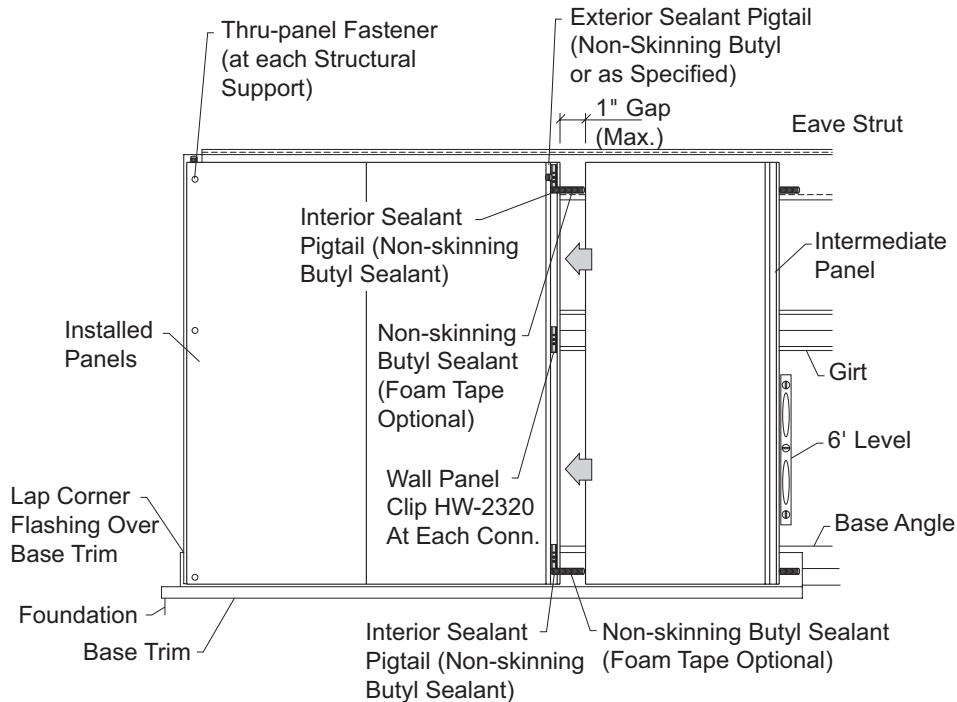
### Setting First Panel (Clip Attachment)

Visually check to see that the panel touches all structural members at the base, intermediate girts and the eave/rake. Forcing the panel to conform to out-of-plane structurals will cause the panel to oil can. Attach the panel to the building structurals with wall clips as previously outlined.

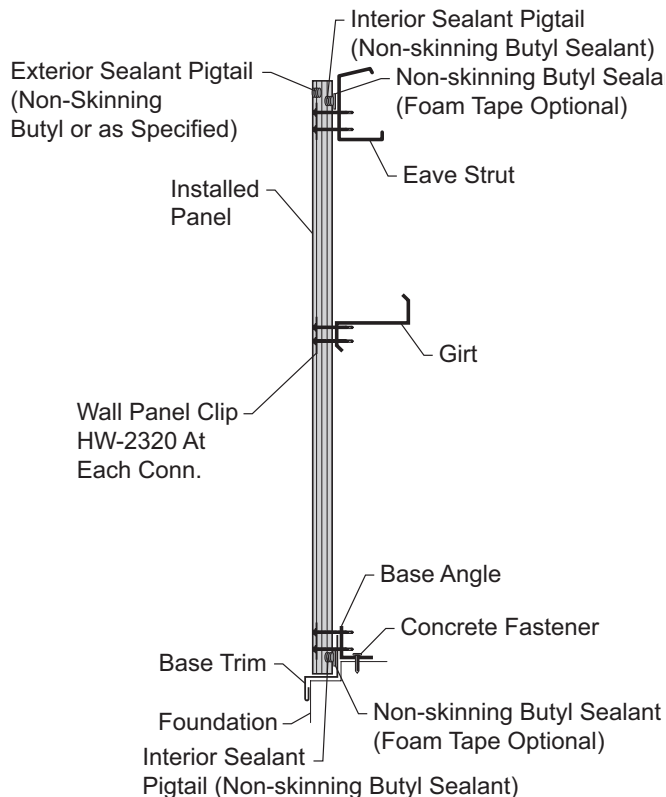
If offset corner trim is to be used, face fasten the panel with hex head fasteners at the base, intermediate structurals and eave/rake. If flat corner trim is to be used, attach the panel at the corner to the interior skin of the panel with Fab-Lok® fasteners or face fasten with flat head self-drilling fasteners.

# Insulated Wall Panels

# INSTALLATION



## Setting Intermediate Panels



## Setting Intermediate Panel (Clip Attachment)

## INTERMEDIATE PANELS

If panels were not ordered with factory installed side joint sealant, field apply sealant as shown on the construction drawings. Apply pigtail sealant to previous panel as outlined on Panel Sealant Requirements pages **IWP-31**.

Position the panel on the base assembly so that its edge will just clear the side lap of the previously installed panel and raise it into place. To prevent sealant displacement during panel engagement, a 1" gap must be maintained when installing intermediate panels.

Push the panel toward the previously installed panel to engage the tongue-and-groove side lap. Make sure the panel joint is fully engaged and uniform along the entire length of the panel. If difficulty in fully engaging the panel is encountered, there may be damage to the side lap of one of the panels. If the panel is disengaged for any reason, make sure that any dislodged mastic in the panel side lap or at the base and/or head is reapplied.

Once the panel is fully engaged to the previously installed panel, check for plumb and install clips at all structural locations.

# INSTALLATION

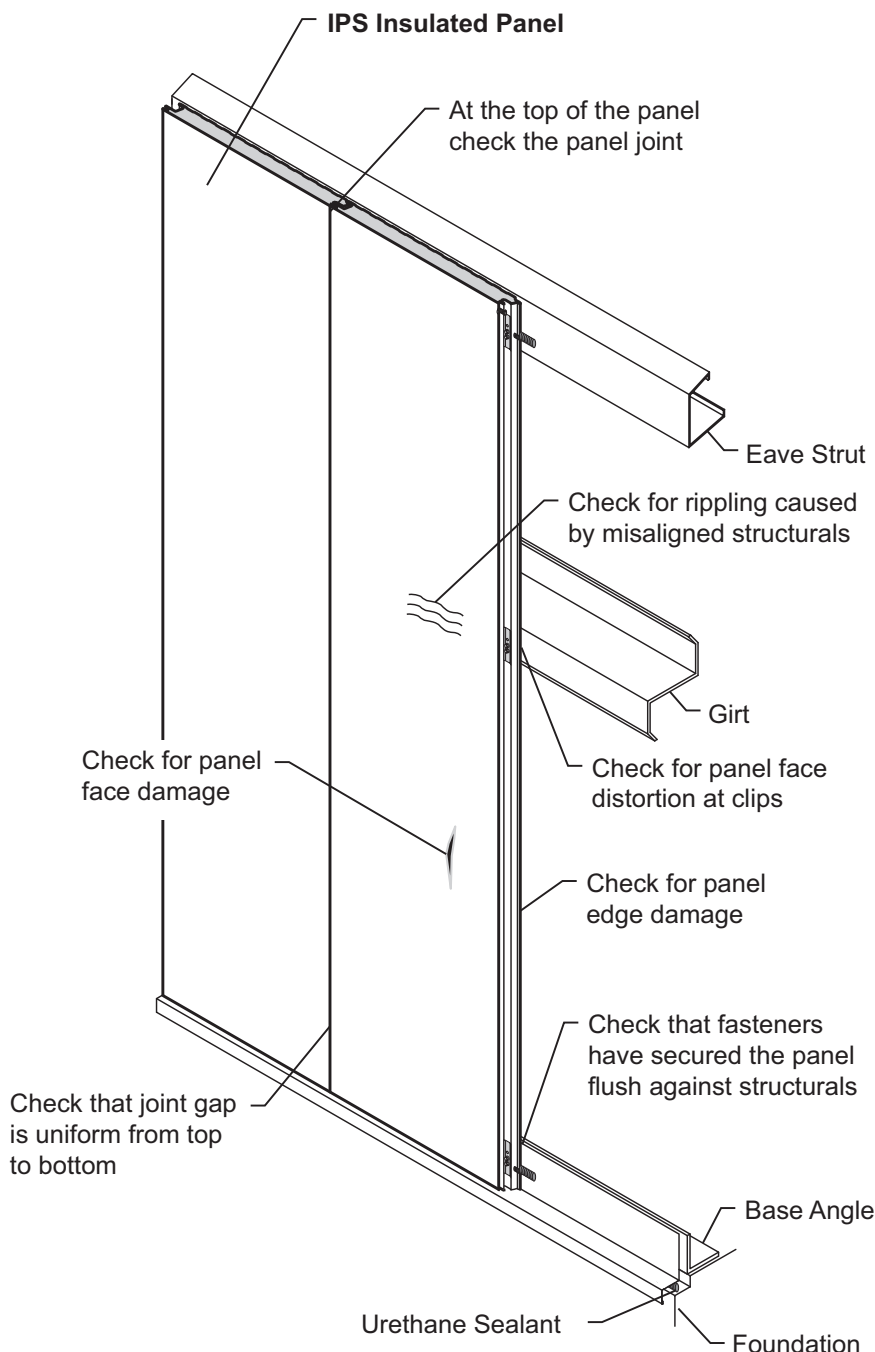
## Insulated Wall Panels

### QUALITY CONTROL

It is critical to check each panel before installation to ensure that it is not damaged. After each panel has been installed, check for the following:

#### Panels

- Check for ripples in the panels caused by misaligned structural framing members or overtightened clips.
- Check for dents and scratches.
- Check the full length of the exposed tongue-and-groove side lap for damage and proper clip placement before trying to engage the next panel.



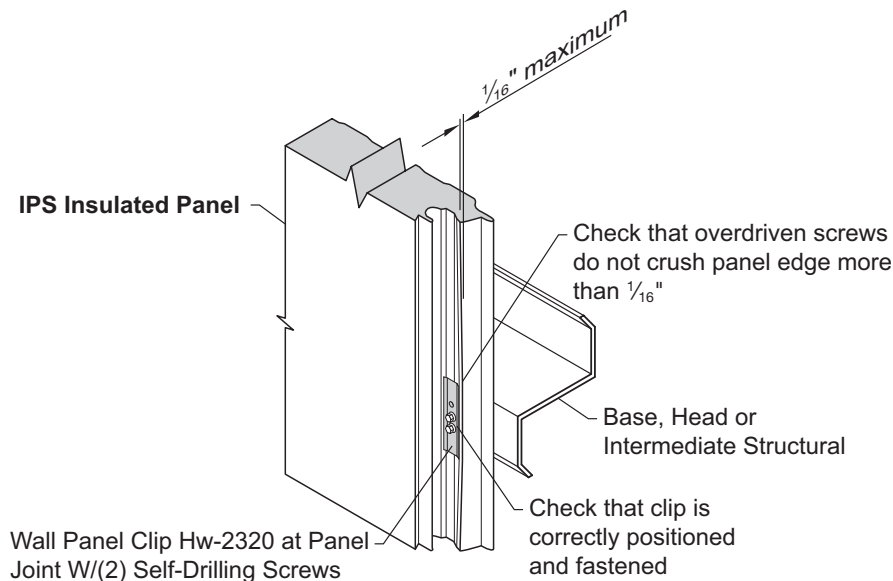
# Insulated Wall Panels

# INSTALLATION

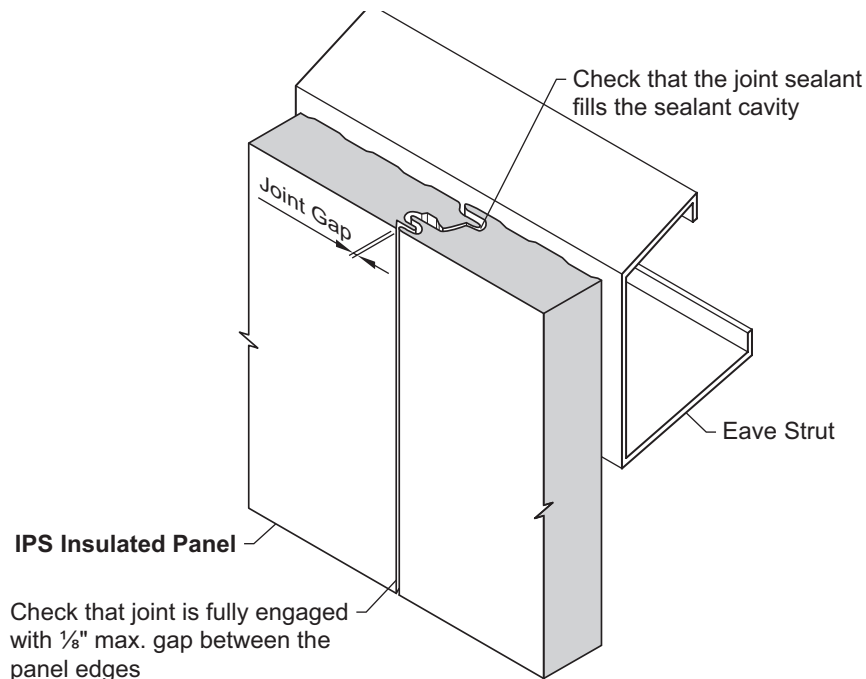
## QUALITY CONTROL (continued)

### Panel Connections

- Ensure that the proper clip fasteners are being used.
- Check for gaps between the panel and the building structurals caused by obstructions or loose clip fasteners.
- Check for overdriven (more than  $\frac{1}{16}$ " ) clip fasteners at the clip locations.



### Checking The Panel Clip



### Checking The Panel Joint

### Panel Joint

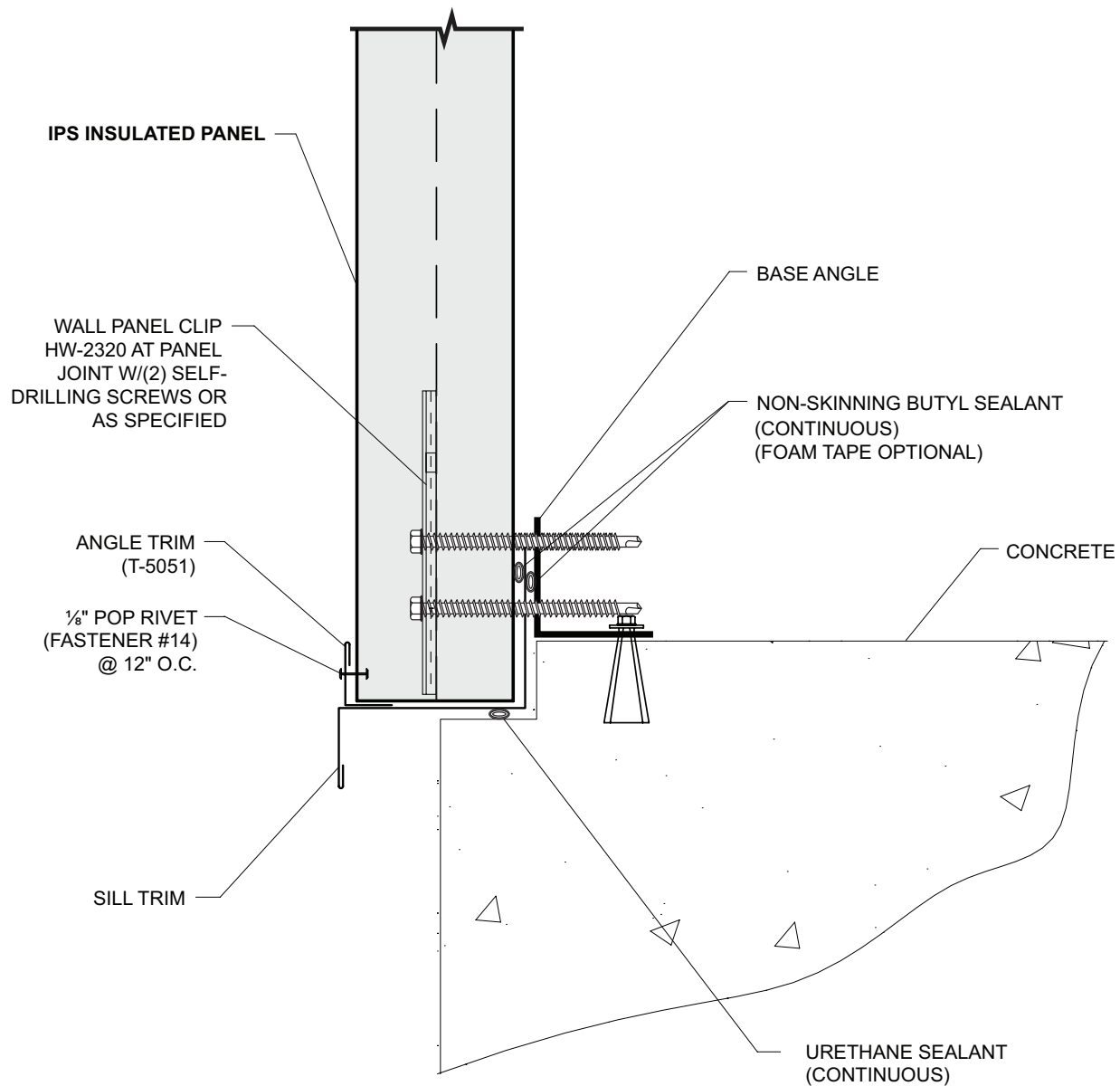
- Check side laps for complete engagement.
- Check that the tongue is fully embedded in the sealant within the tongue-and-groove side lap.
- Check that the full length of the side lap joint has a uniform gap width up to  $\frac{1}{8}$ ".

The above inspections are aided by having the installer attaching the top of the panels to the structure look down the length of the panels as they are installed.

# DESIGN

# Insulated Wall Panels

## DETAILS BASE-With Notch

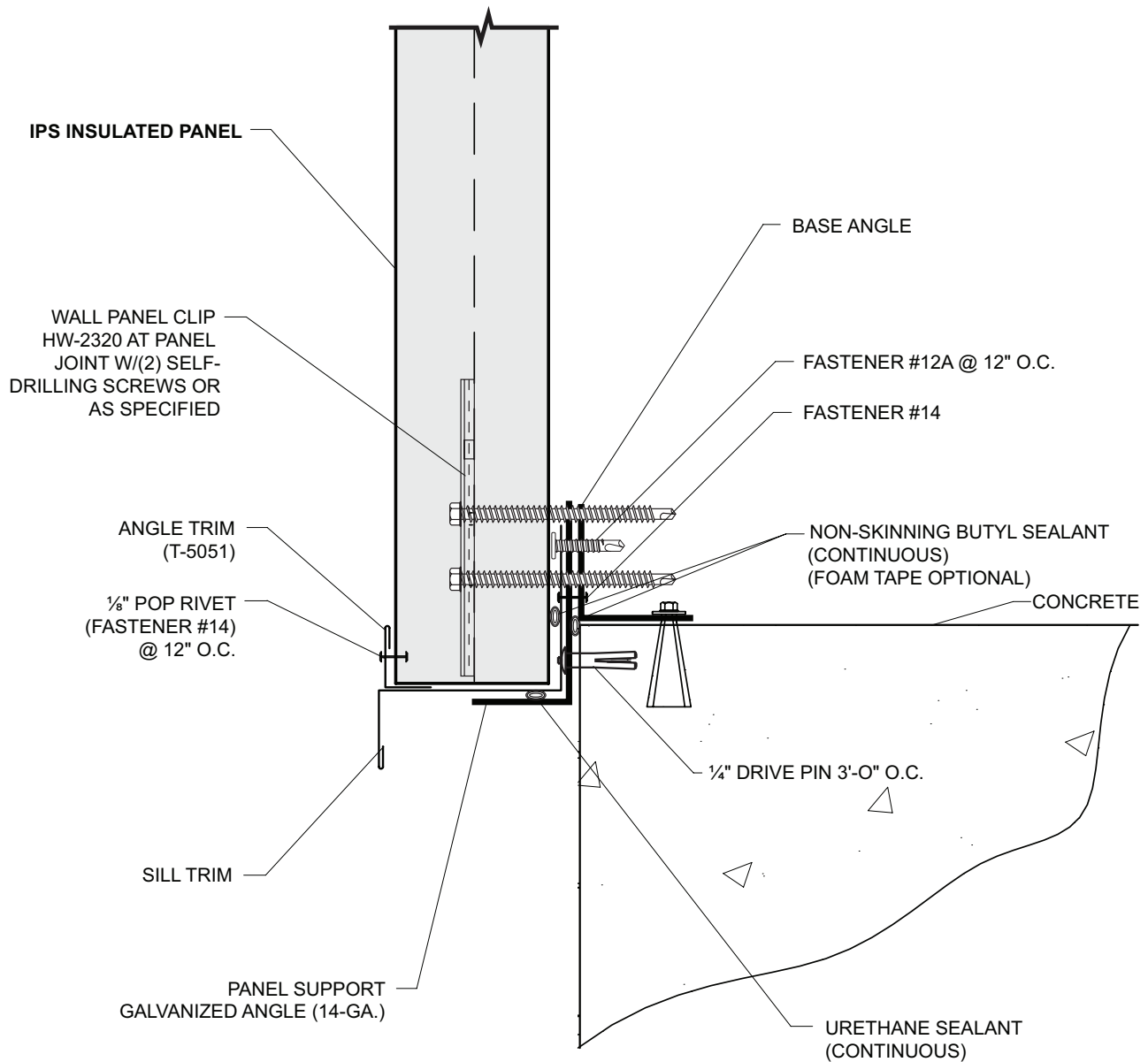




# Insulated Wall Panels

# DESIGN

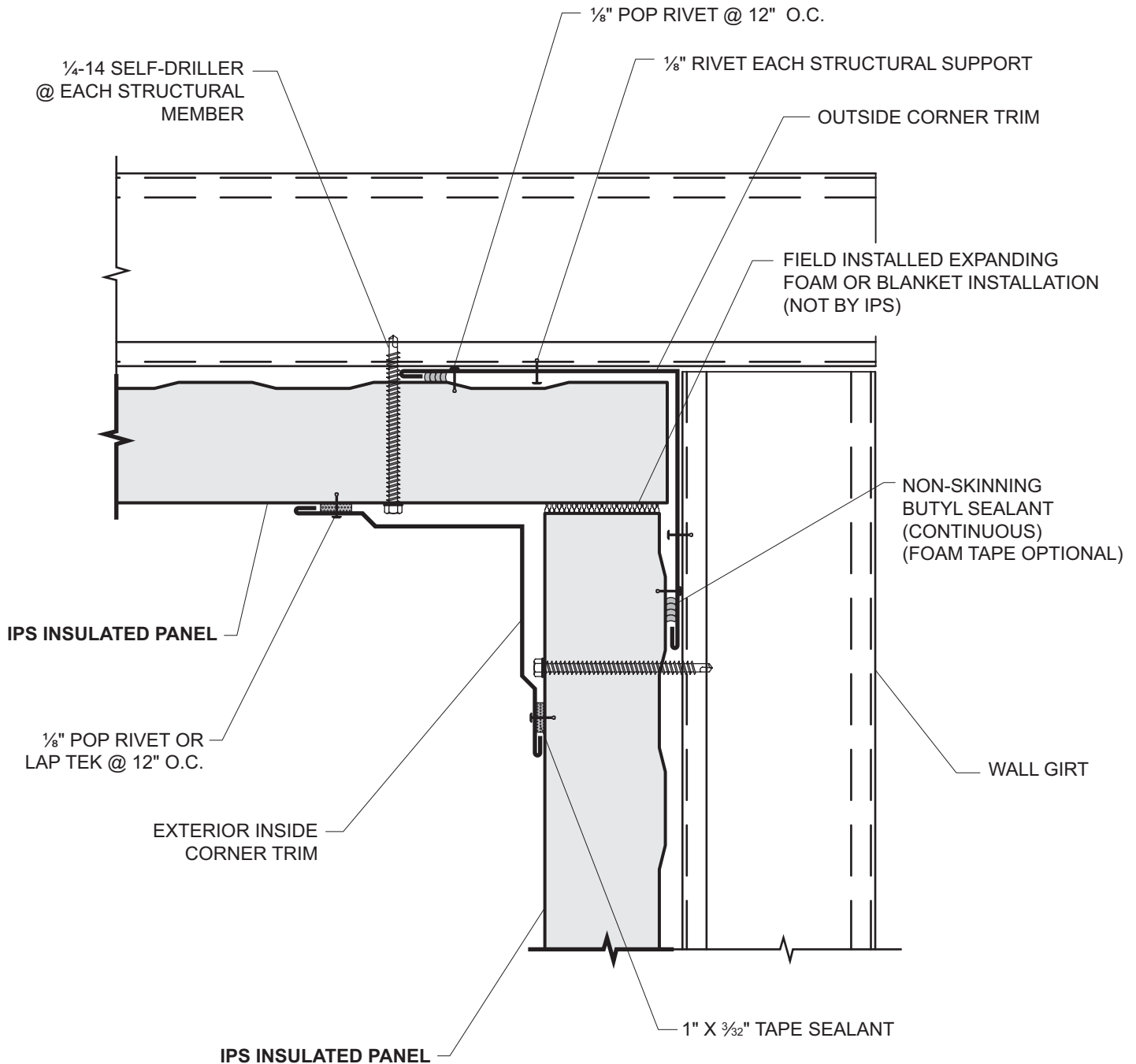
## DETAILS BASE-Without Notch



# DESIGN

# Insulated Wall Panels

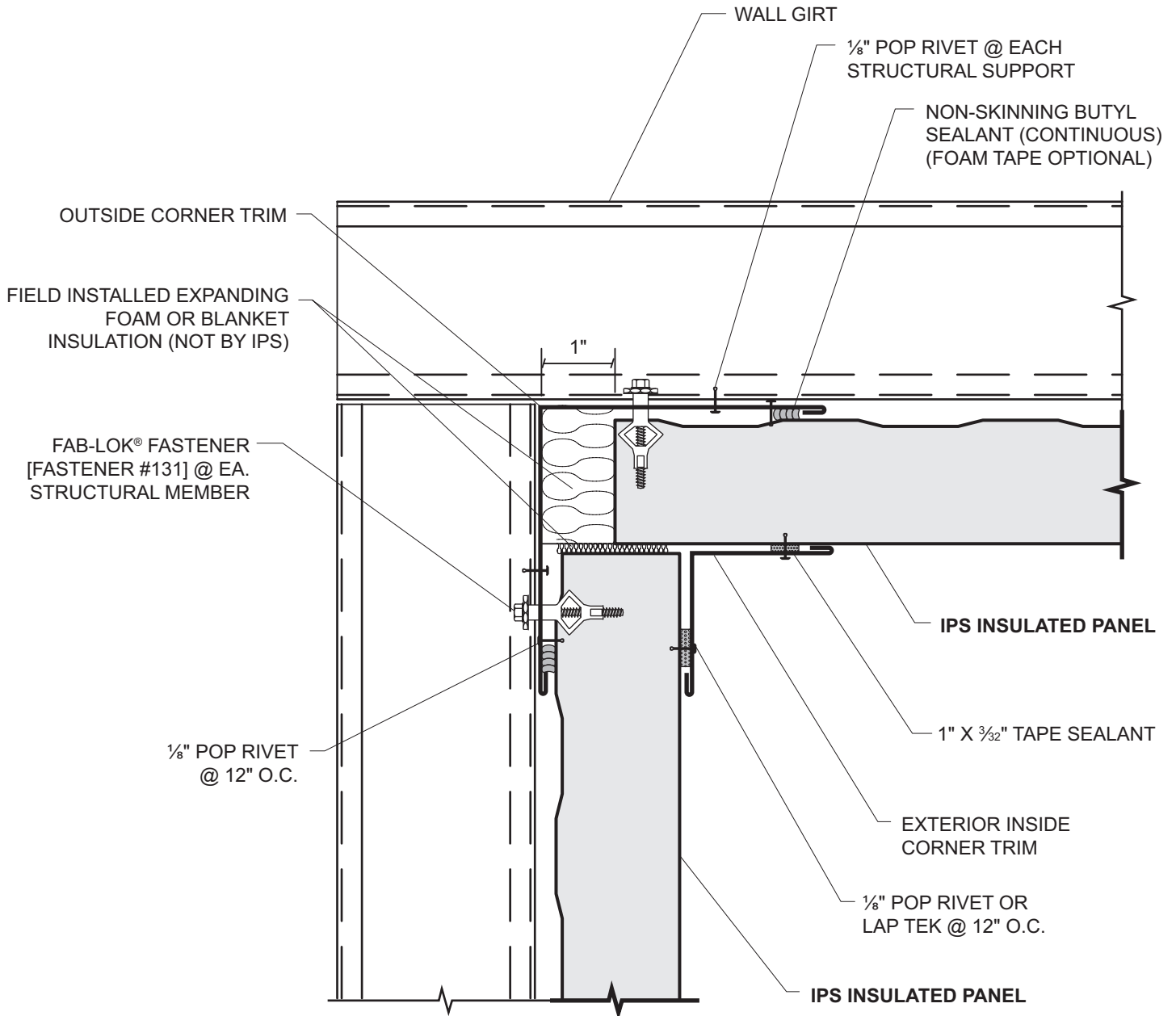
## DETAILS INSIDE CORNER-Offset



# Insulated Wall Panels

# DESIGN

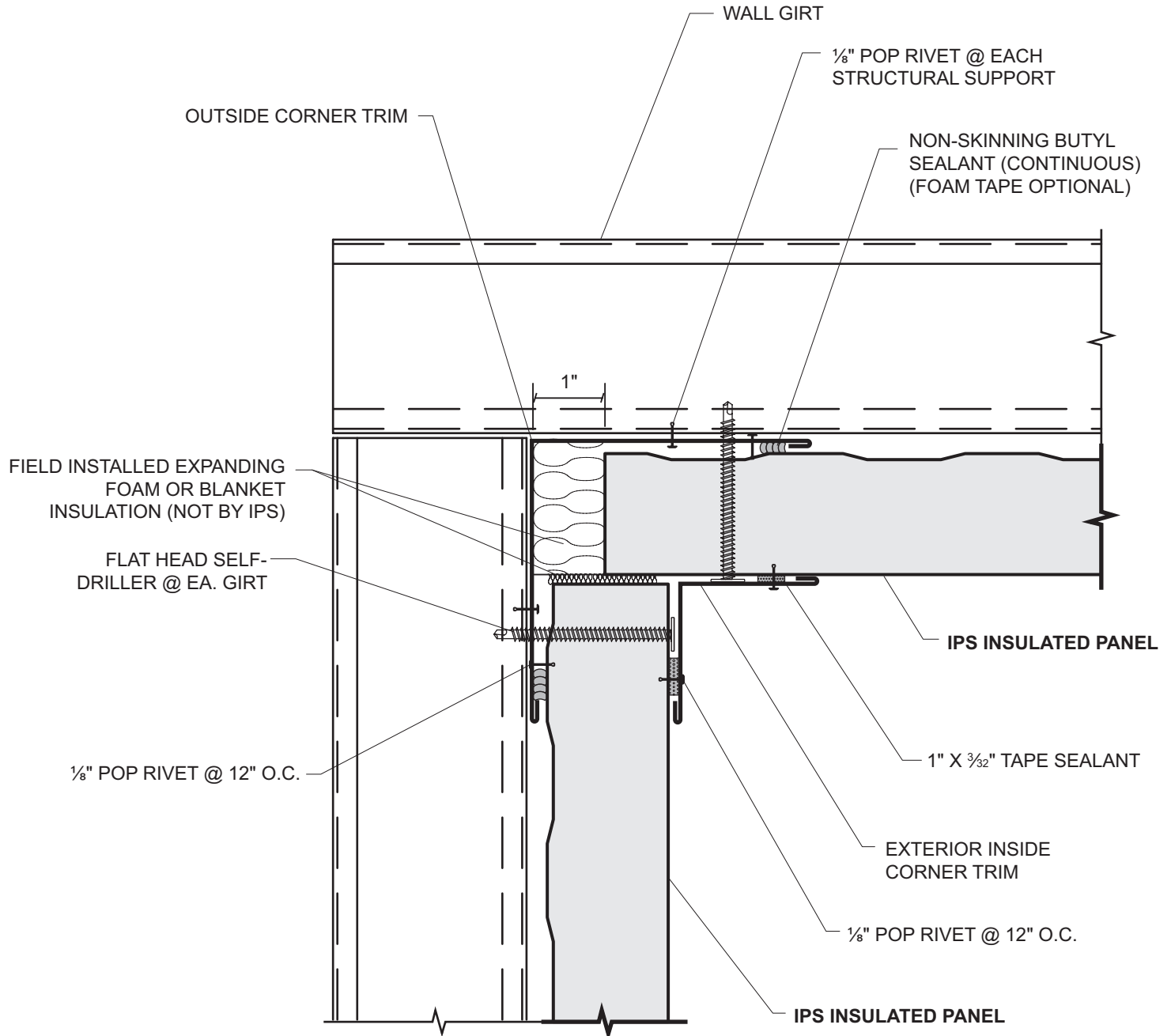
## DETAILS INSIDE CORNER-Flat Optional



# DESIGN

## Insulated Wall Panels

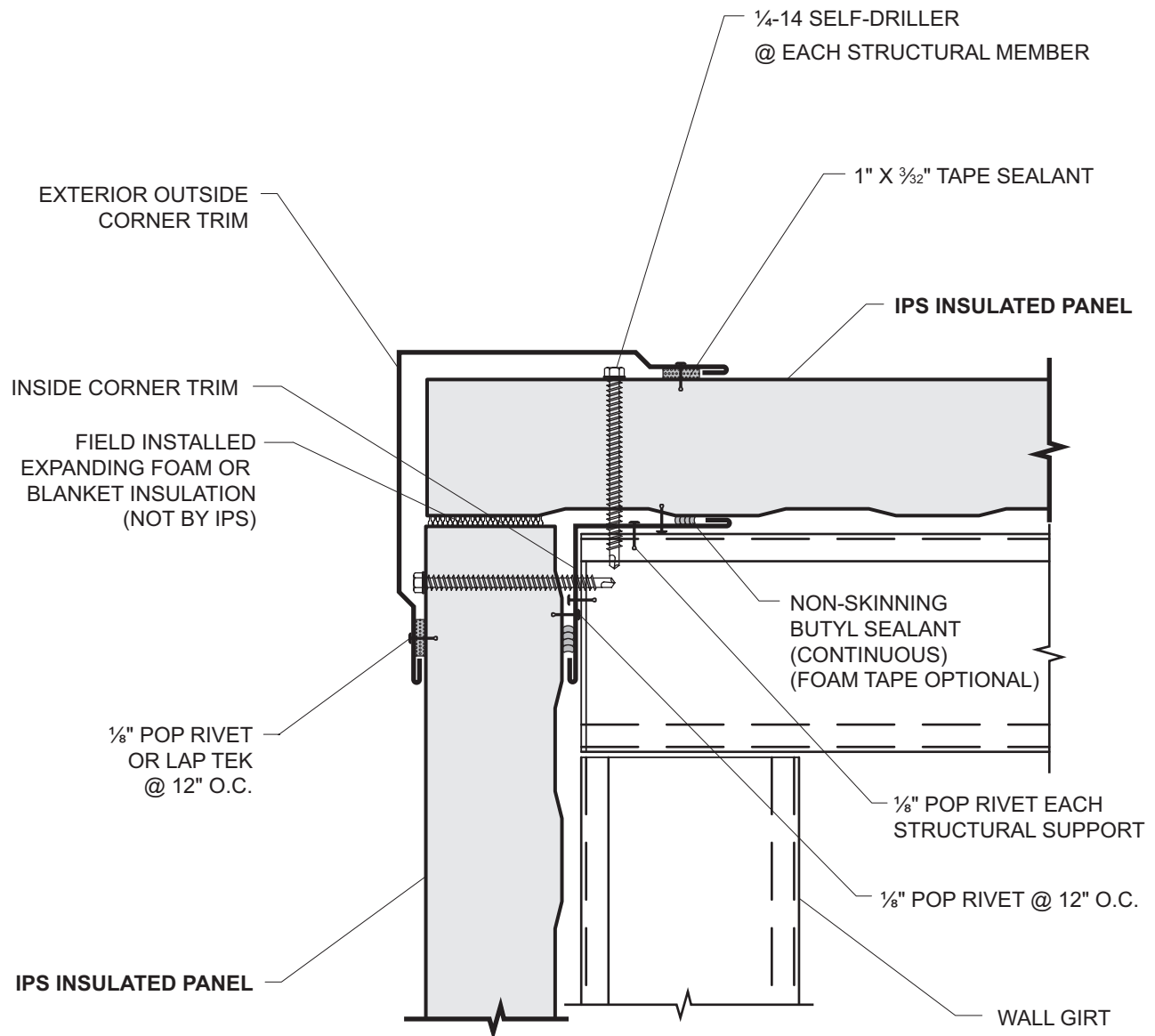
### DETAILS INSIDE CORNER-Flat



# Insulated Wall Panels

# DESIGN

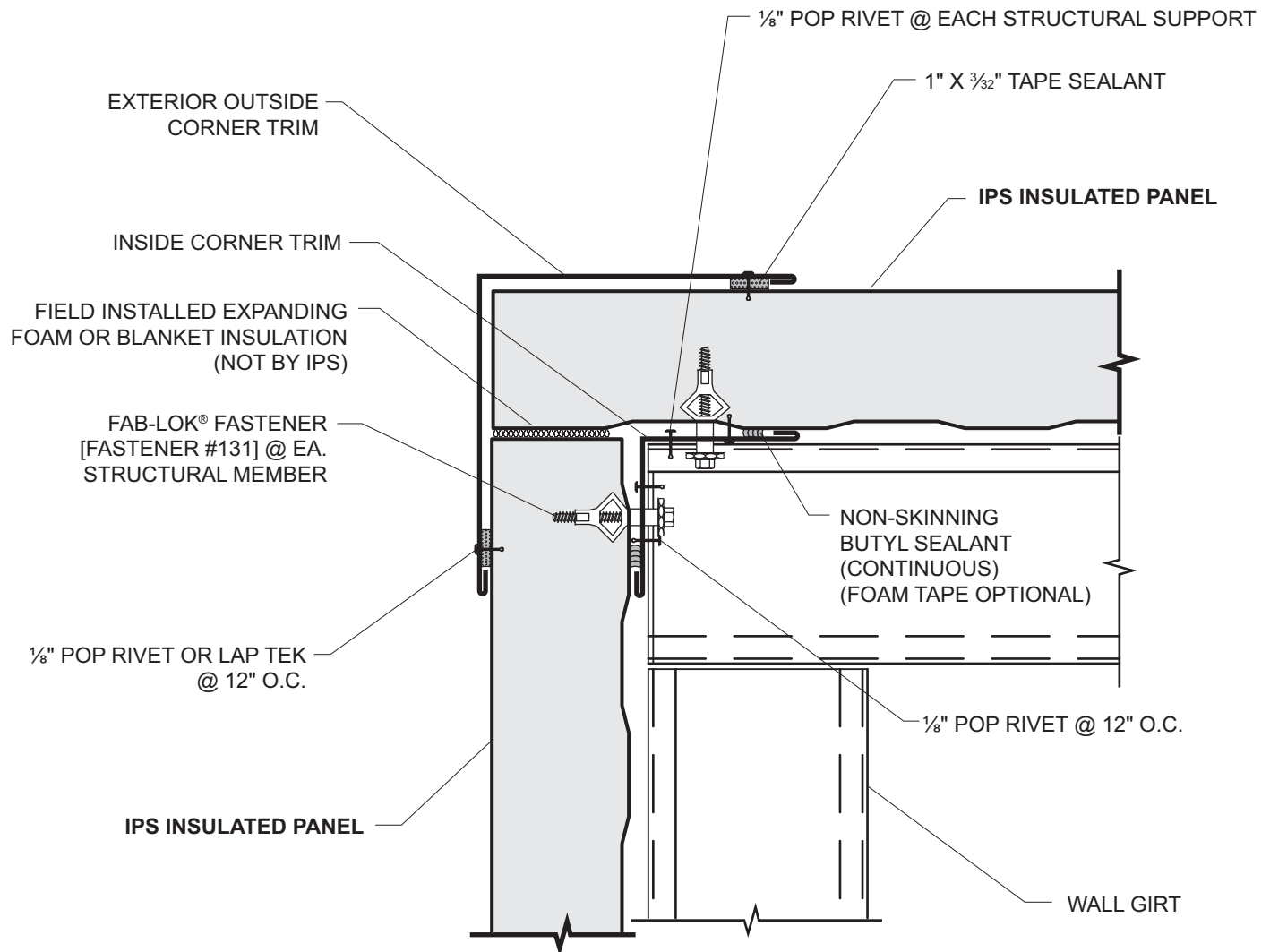
## DETAILS OUTSIDE CORNER-Offset



# DESIGN

## Insulated Wall Panels

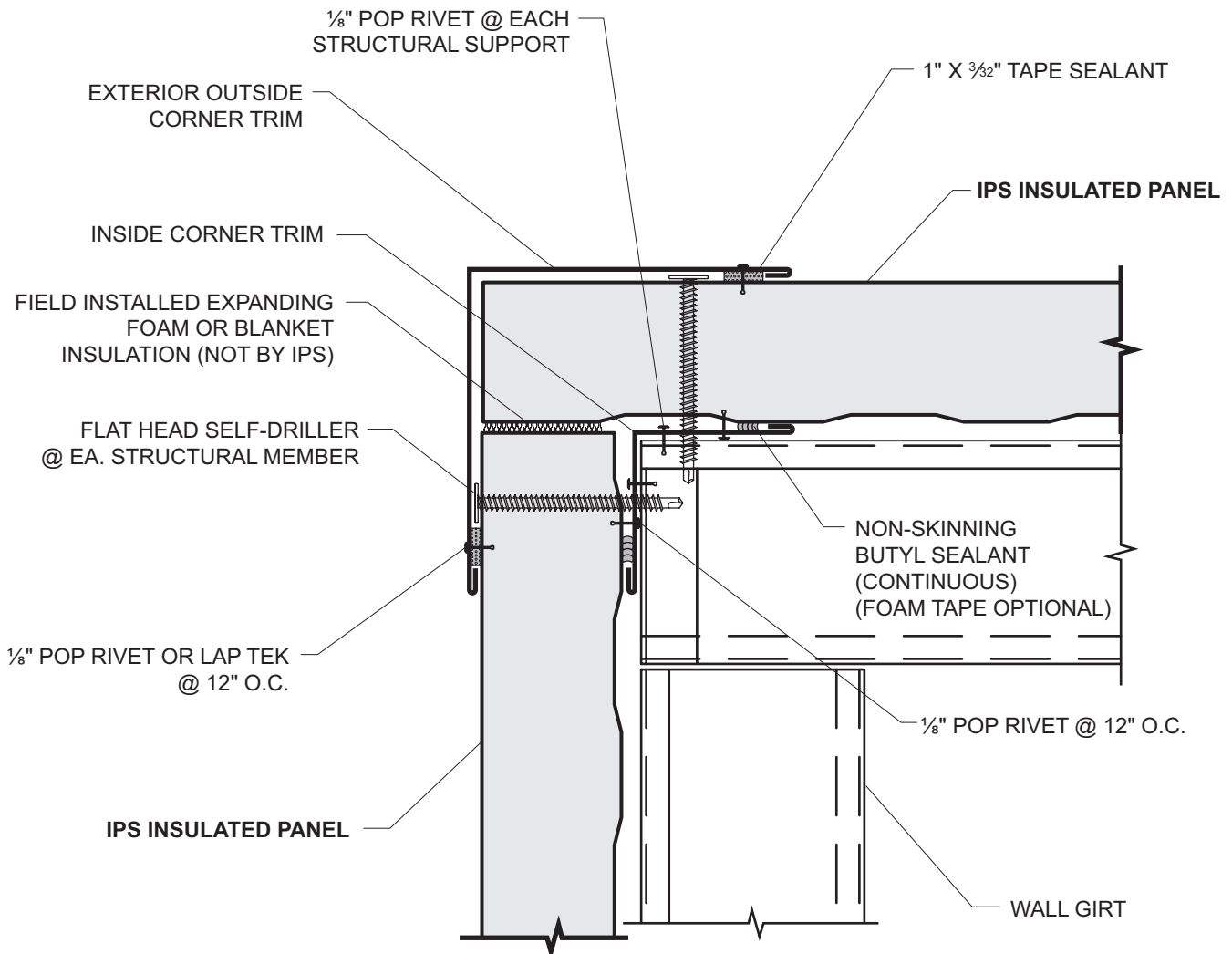
### DETAILS OUTSIDE CORNER-Flat Optional



# Insulated Wall Panels

# DESIGN

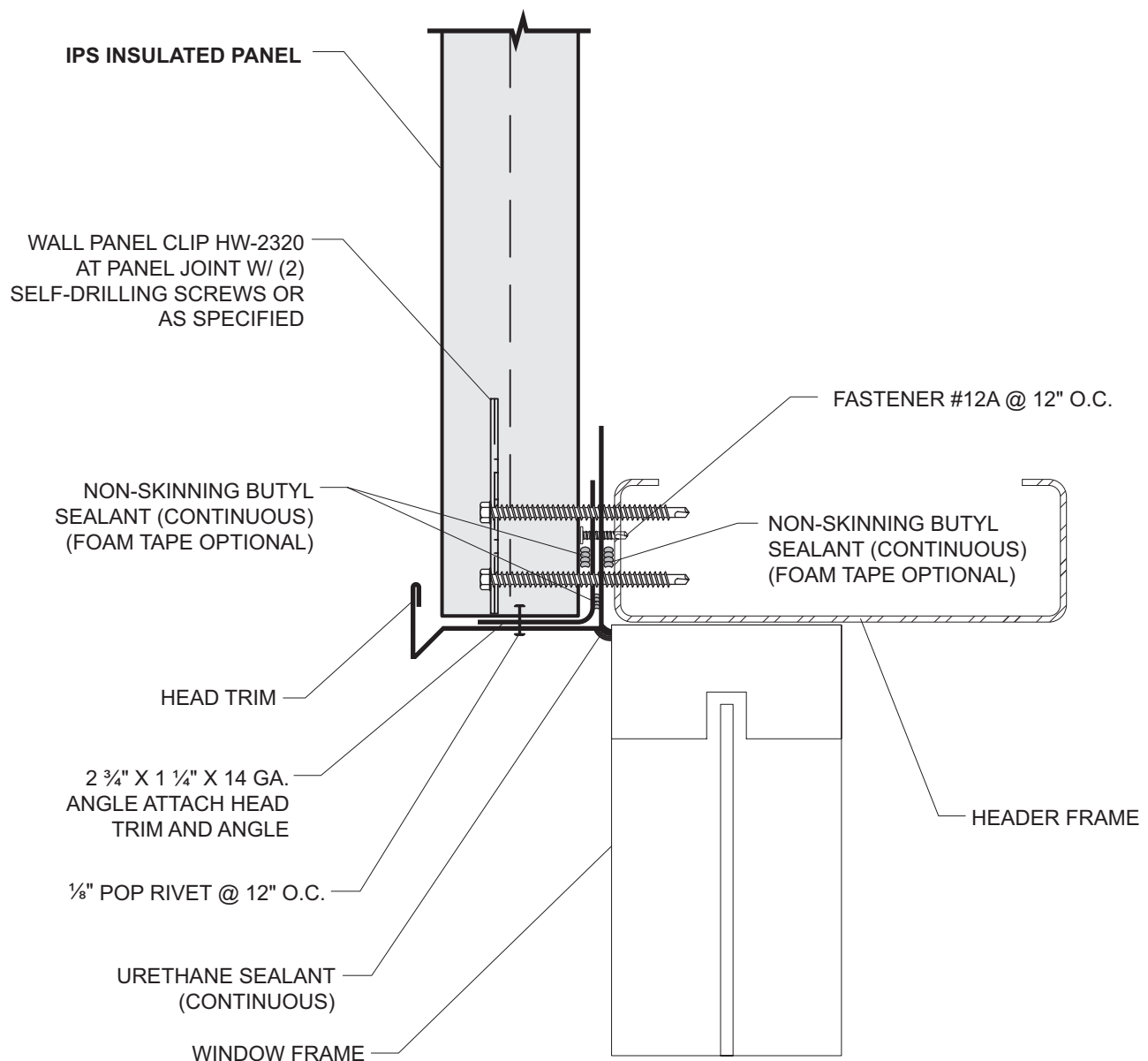
## DETAILS OUTSIDE CORNER-Flat



# DESIGN

## Insulated Wall Panels

### DETAILS FRAMED OPENING HEAD

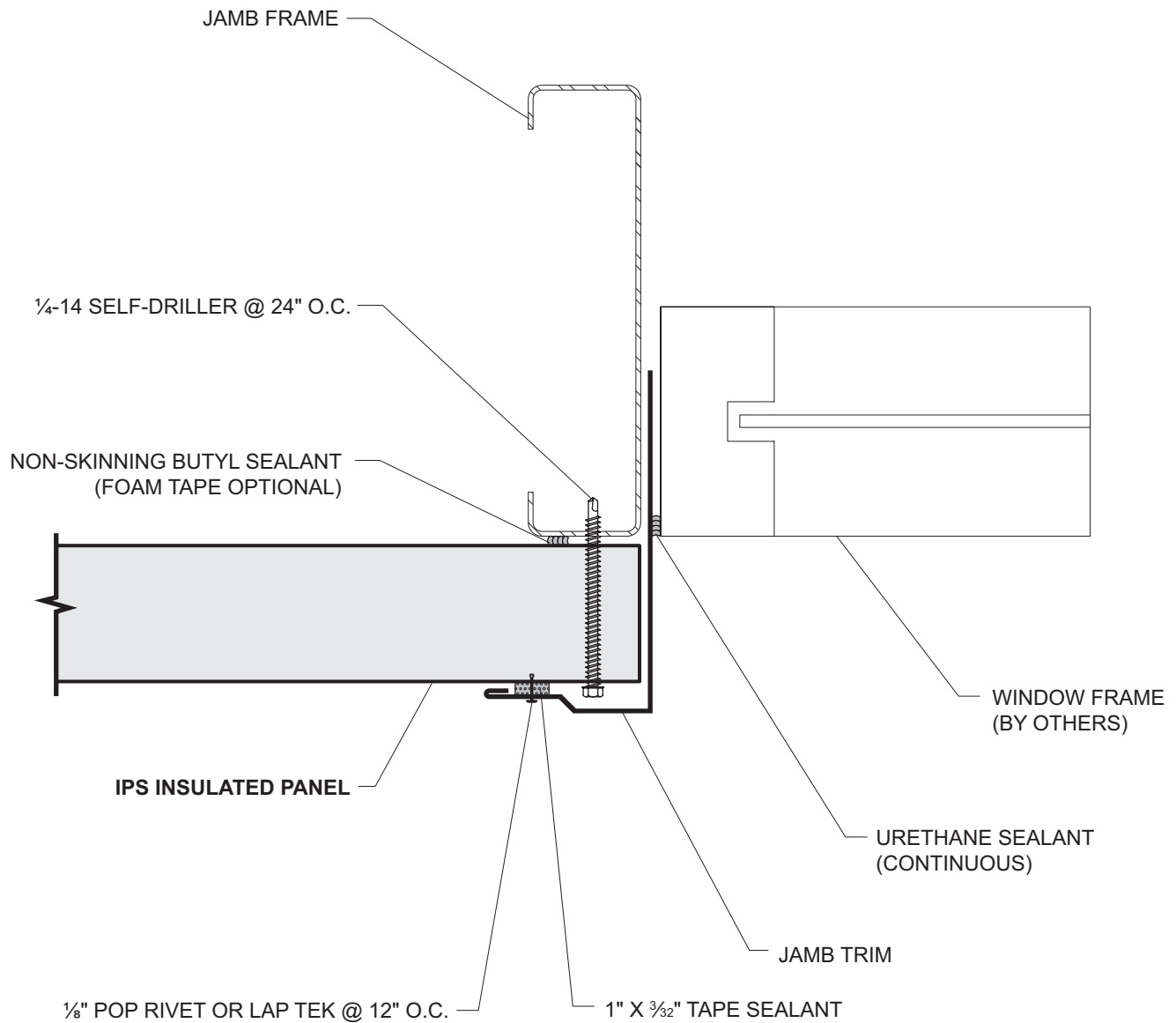




# Insulated Wall Panels

# DESIGN

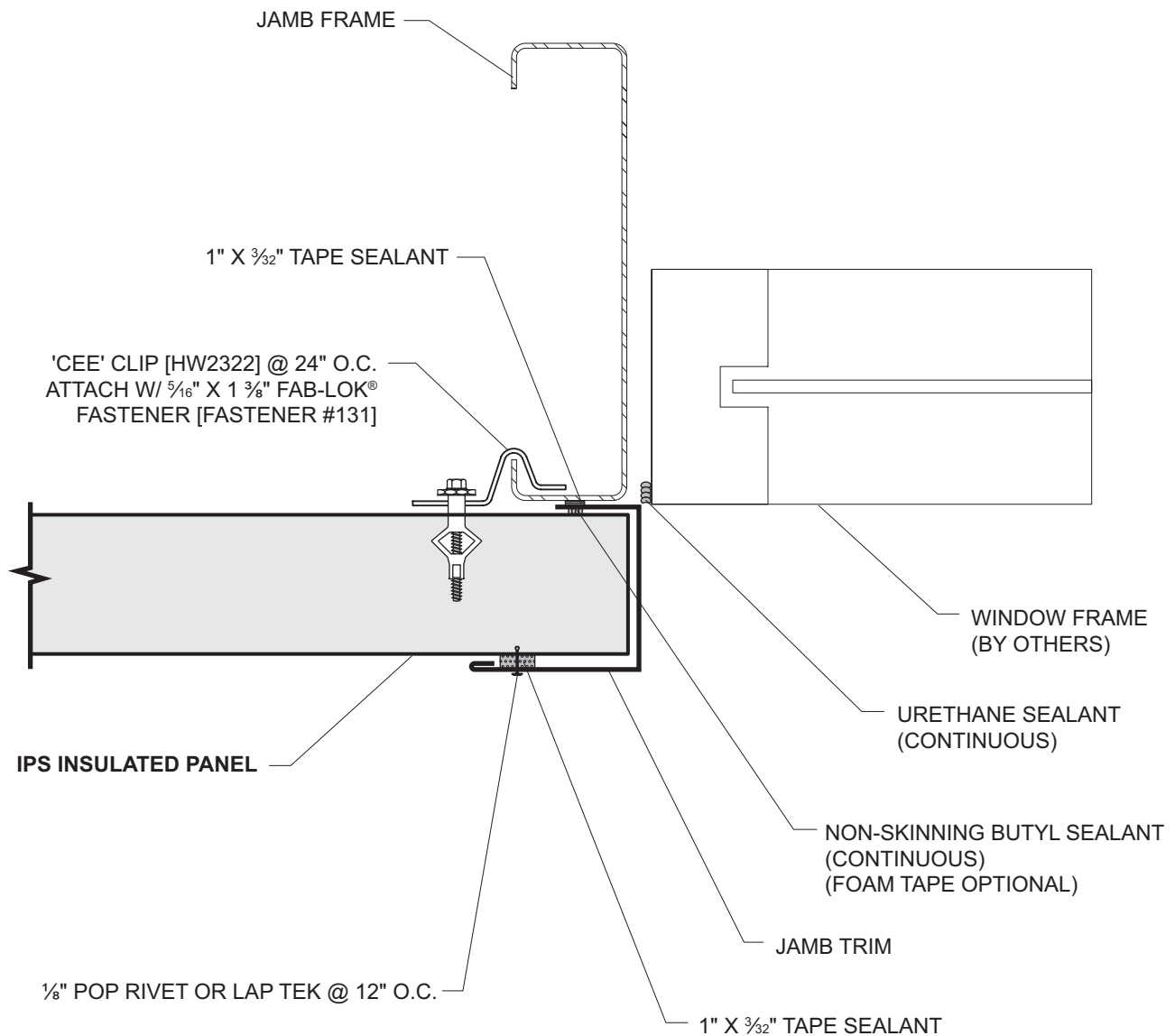
## DETAILS FRAMED OPENING JAMB-Offset



# DESIGN

## Insulated Wall Panels

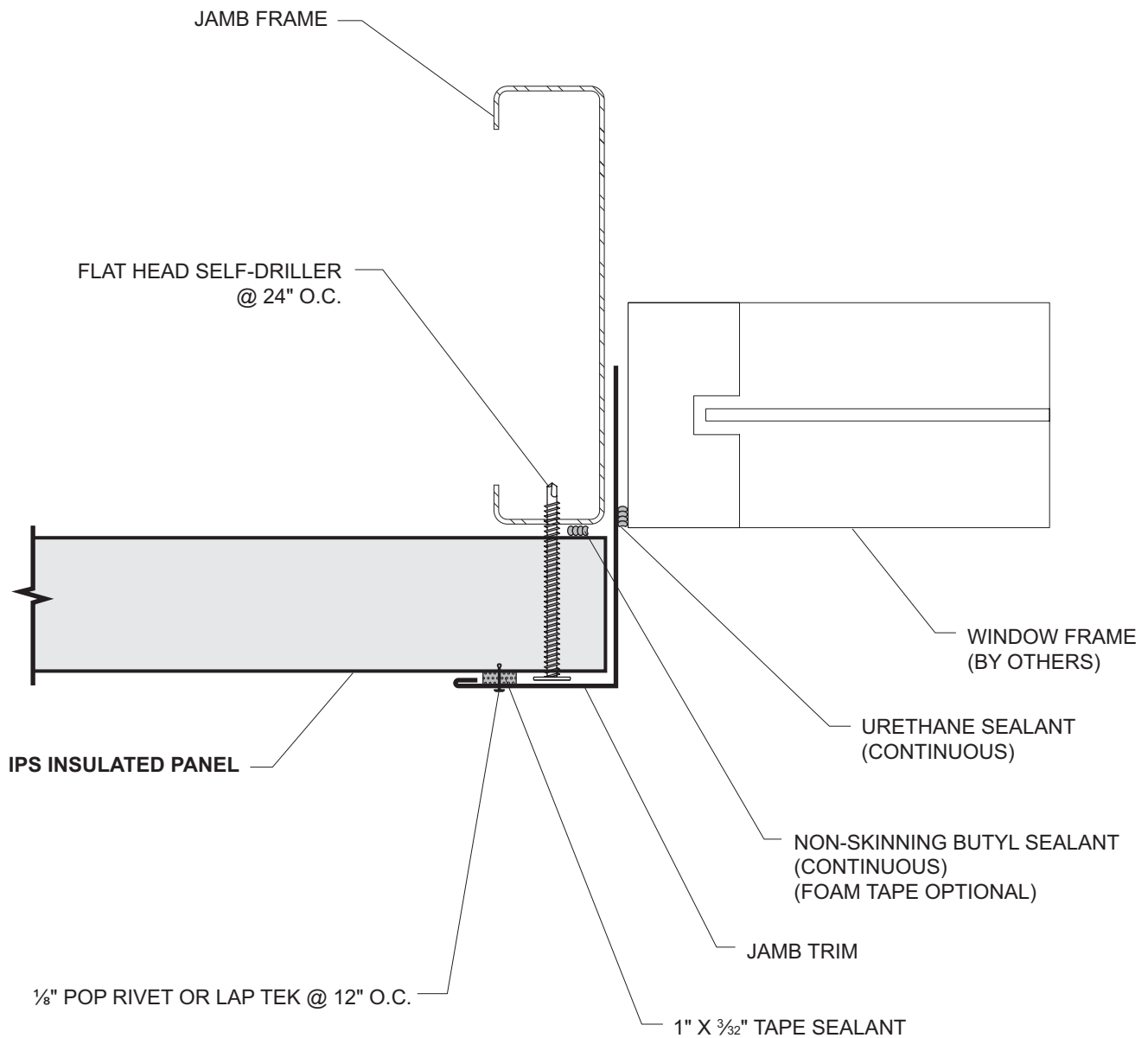
### DETAILS FRAMED OPENING JAMB-Flat Optional



# Insulated Wall Panels

# DESIGN

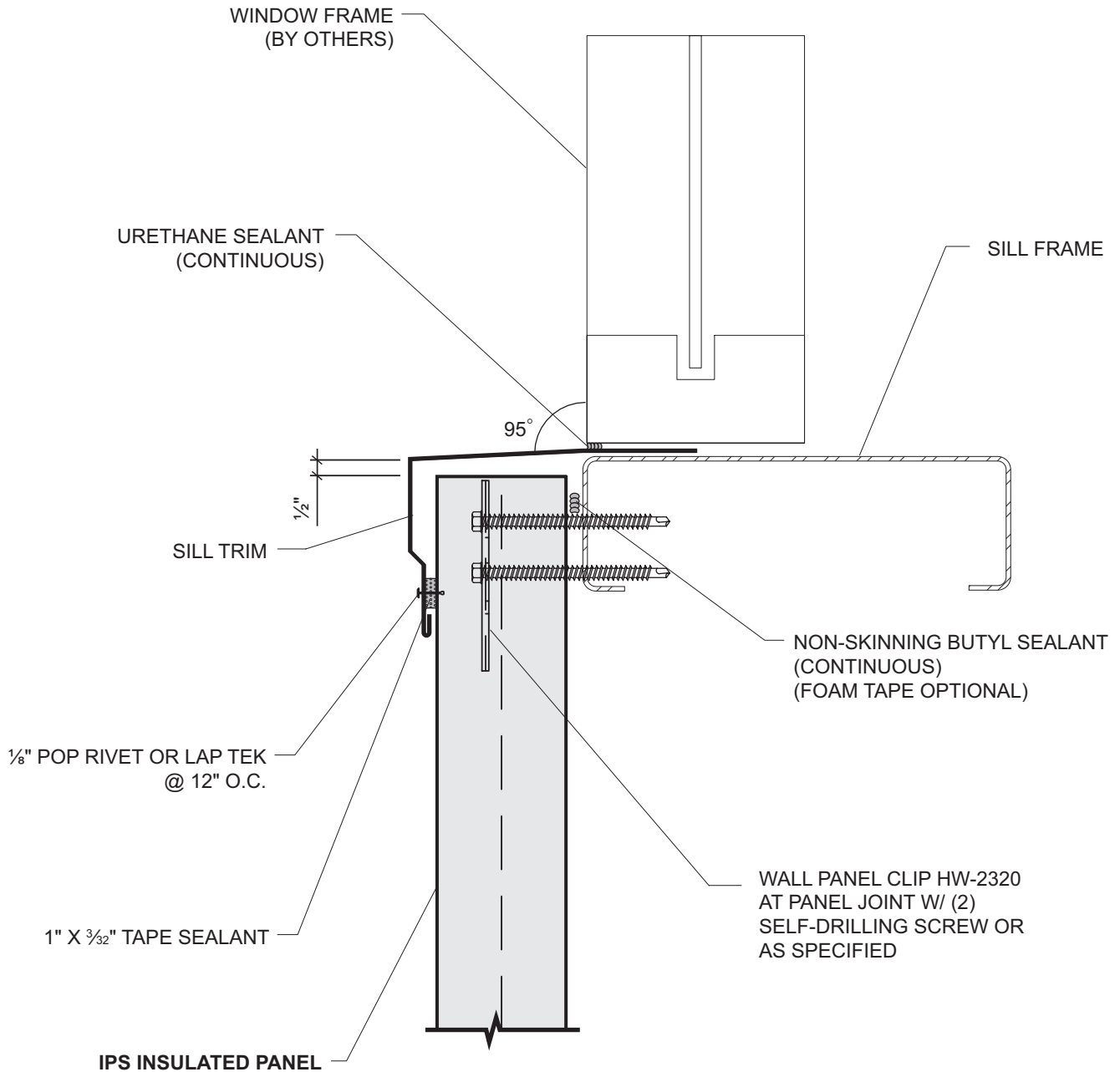
## DETAILS FRAMED OPENING JAMB-Flat



# DESIGN

# Insulated Wall Panels

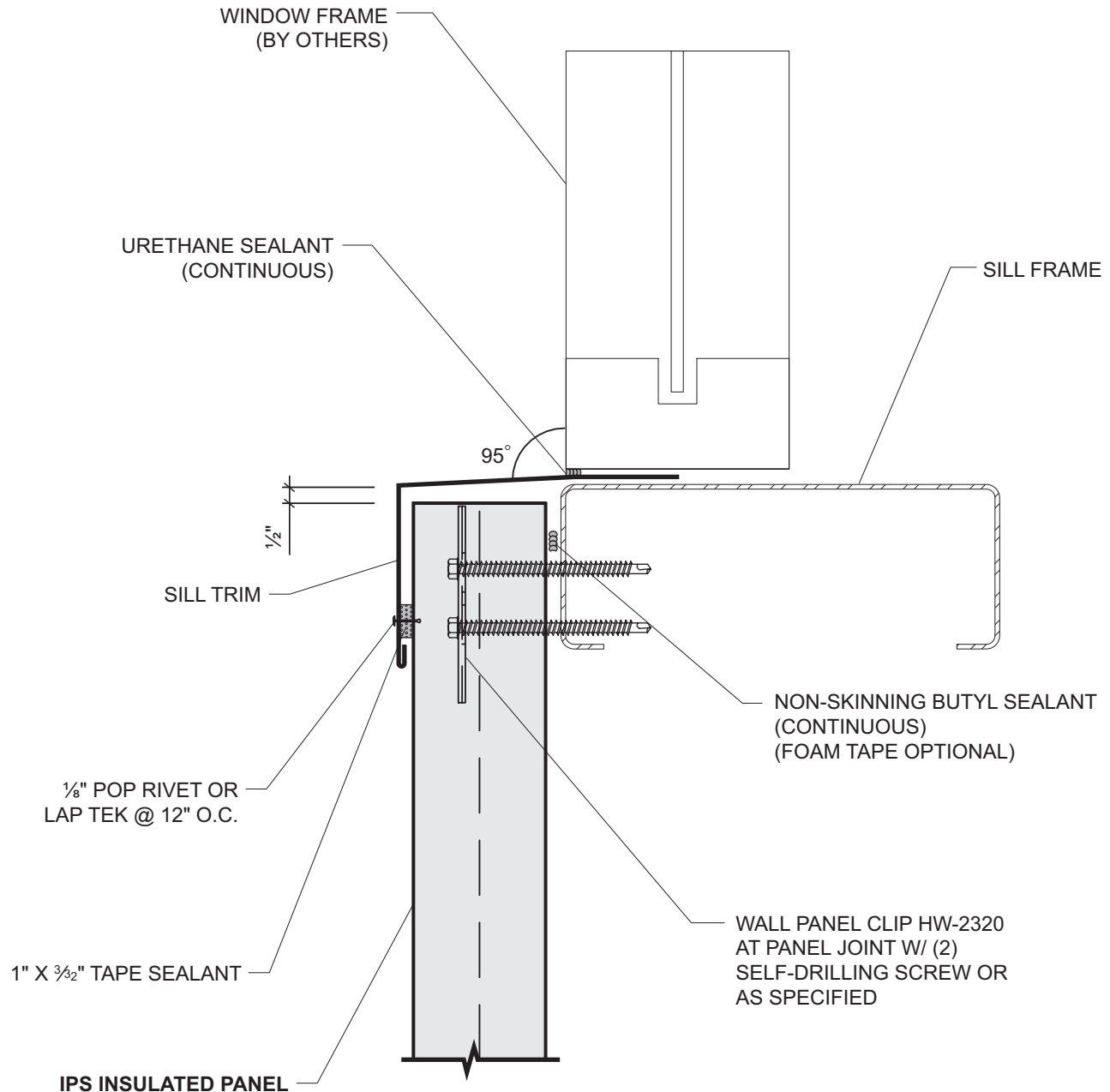
## DETAILS FRAMED OPENING SILL-Offset



# Insulated Wall Panels

# DESIGN

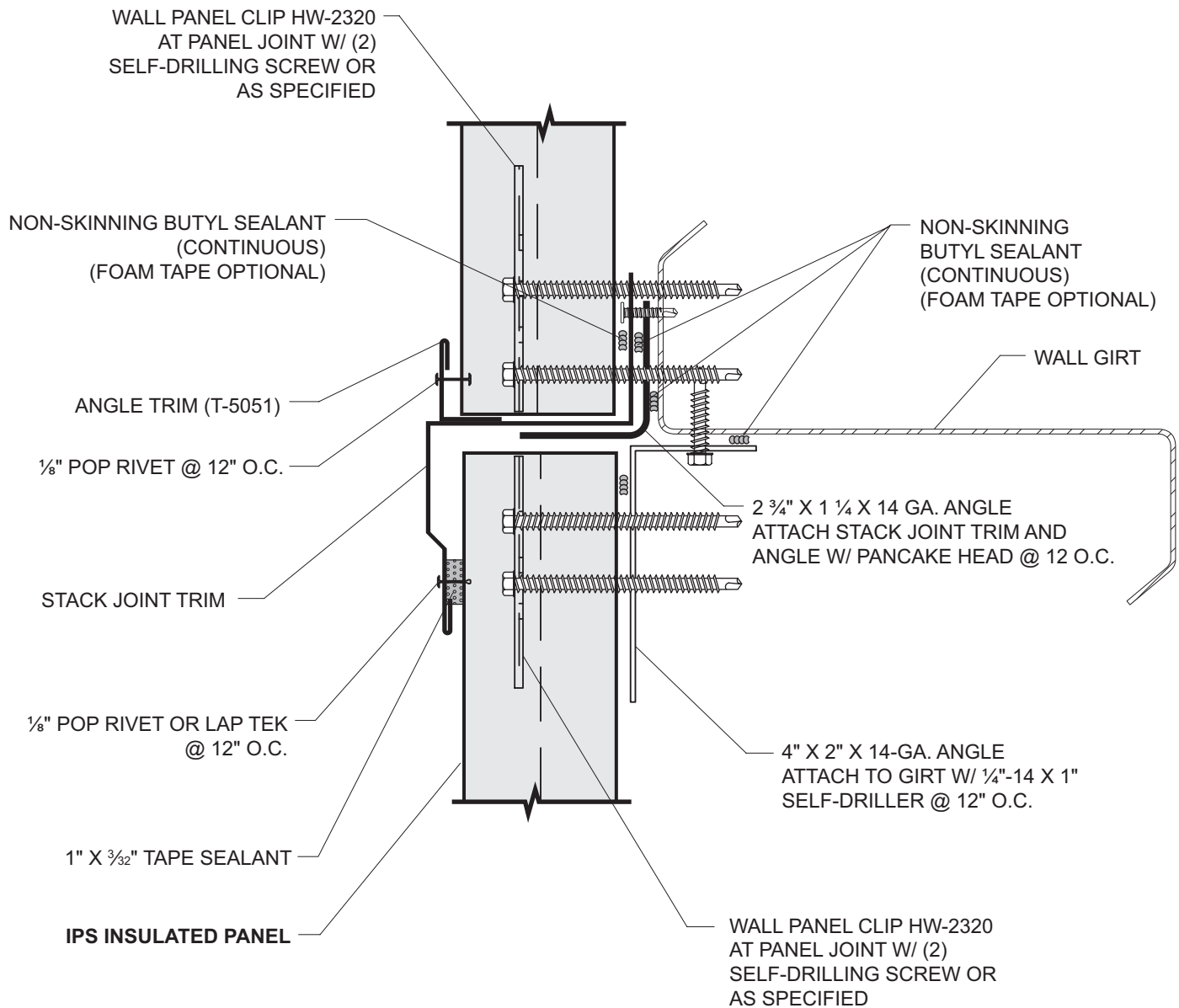
## DETAILS FRAMED OPENING SILL-Flat



# DESIGN

# Insulated Wall Panels

## DETAILS STACK JOINT



# NOTES



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