

INSULATED METAL WALL PANEL
HORIZONTAL APPLICATION
TECHNICAL BULLETIN



PIONEERING INSULATED METAL PANEL TECHNOLOGY

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INTRODUCTION

The proven thermal and structural performance of the Metl-Span® Insulated Panel is available for horizontal wall panel applications.

Metl-Span's horizontal panels provide a wall covering of exceptional aesthetics. Each horizontal panel is precision manufactured with absolutely square and uniform end folds to provide the appearance of solid, monolithic panels.

The panels are joined together by positive fitting horizontal tongue-and-groove joints at the return edges of the exterior and interior panel faces. Optional exterior face reveals are available to provide the appearance of recessed horizontal joints.

The panels are connected to the support framing by concealed clips within the horizontal panel joints. At the base of the wall, concealed base clips are available for connecting the bottom panel edge to the foundation. The base clips interlock into the panel's tongue-and-groove edge profile.

Between the ends of the adjacent panels, a recessed vertical joint system is available to assure optimum weathertight performance and aesthetics complementary to the panels. The joint features a precision profiled, polymer gasket. The gasket is continuously and positively fitted between the panel ends, at a uniform reveal depth, by a specially designed gasket installation tool. A specially designed joint assembly gauge is also provided to set the spacing between the panel ends.

Within this technical bulletin are suggested architectural details and installation details and instructions to help the building designer and erector understand the application and erection of the horizontal panel.

This technical bulletin is intended to be used in conjunction with the Metl-Span Insulated Metal Wall Panel Installation Guide and the project's installation drawings to help plan and organize the erection of the horizontal wall panels for assured performance and erection efficiency.

The information in this guide is based on the horizontal application of standard panels for typical building conditions. Specific building design and construction conditions may require variations from the information in this guide. In case of conflict between this technical bulletin and the project's installation drawings, the installation drawings will govern.

CUSTOMER RESPONSIBILITIES

Clarification concerning the horizontal panel installation should be directed to Metl-Span's Technical Services Department. Contact the Metl-Span® office:

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Lewisville, Texas 75057

TEL: (972) 221-6656

FAX: (972) 436.7028

WEB: **metlspan.com**

Metl-Span does not guarantee and is not liable for the quality of building design and erection and is not responsible for panel defects that may be attributed to improper application, improper erection or any other negligence of other parties.

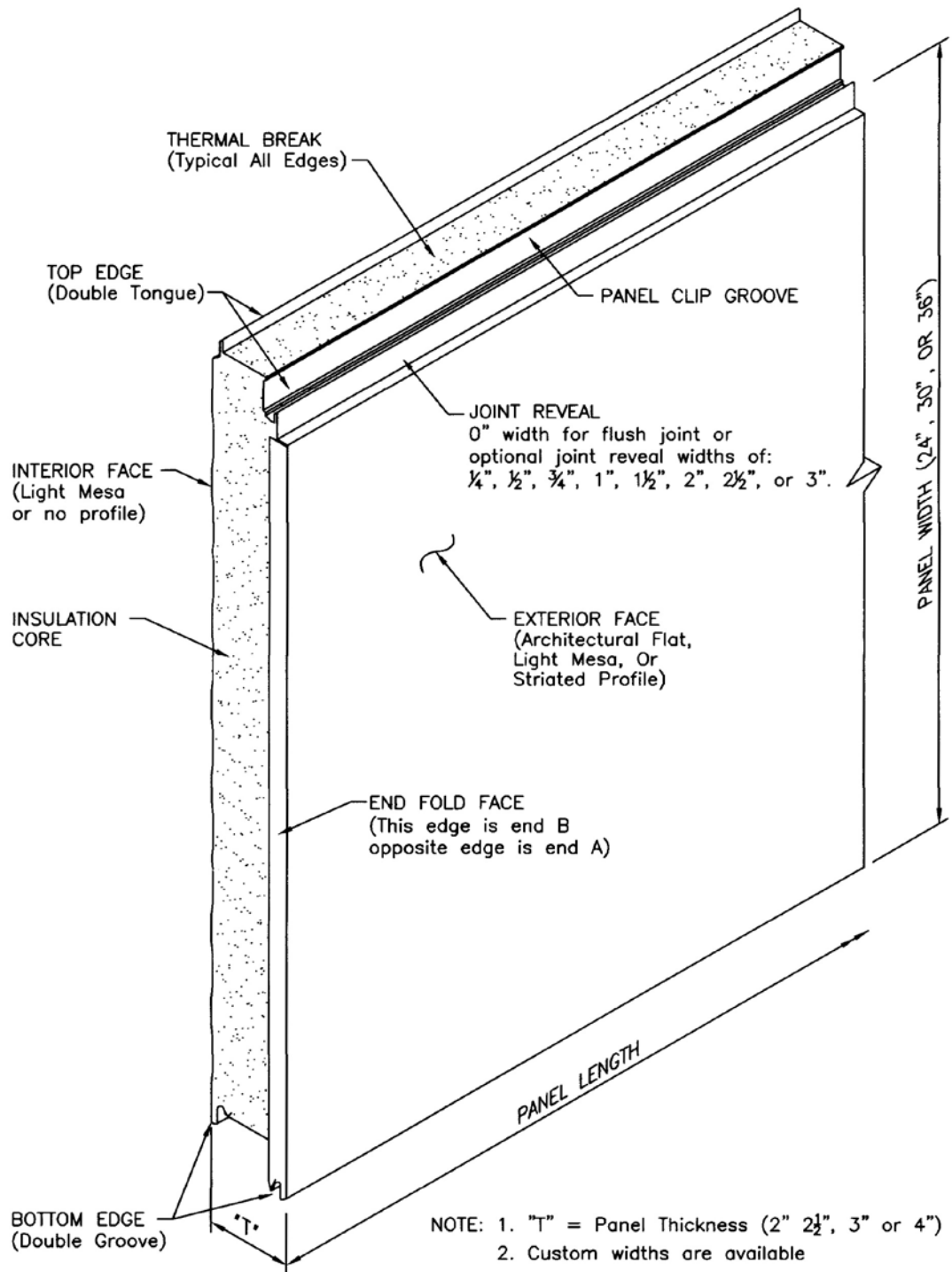
The customer is responsible for selecting competent building designers and erectors and must assure that the application of the panels is suitable for the specific building and in accordance with good engineering and construction practices and all applicable building codes and regulations.

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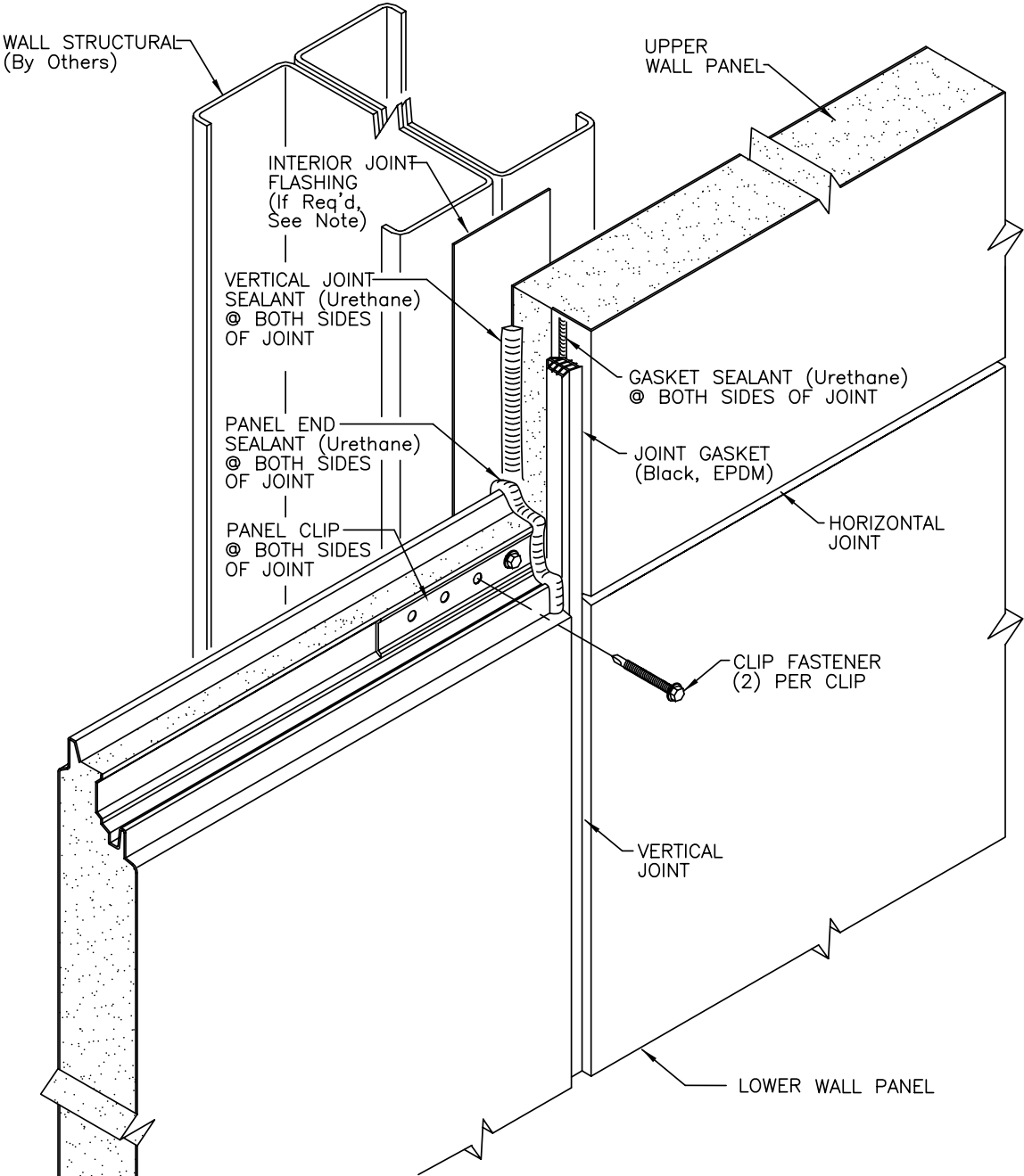
WALL PANEL DETAILS

C552.501.5



DETAIL @ WALL STRUCTURAL (@ VERTICAL JOINT)

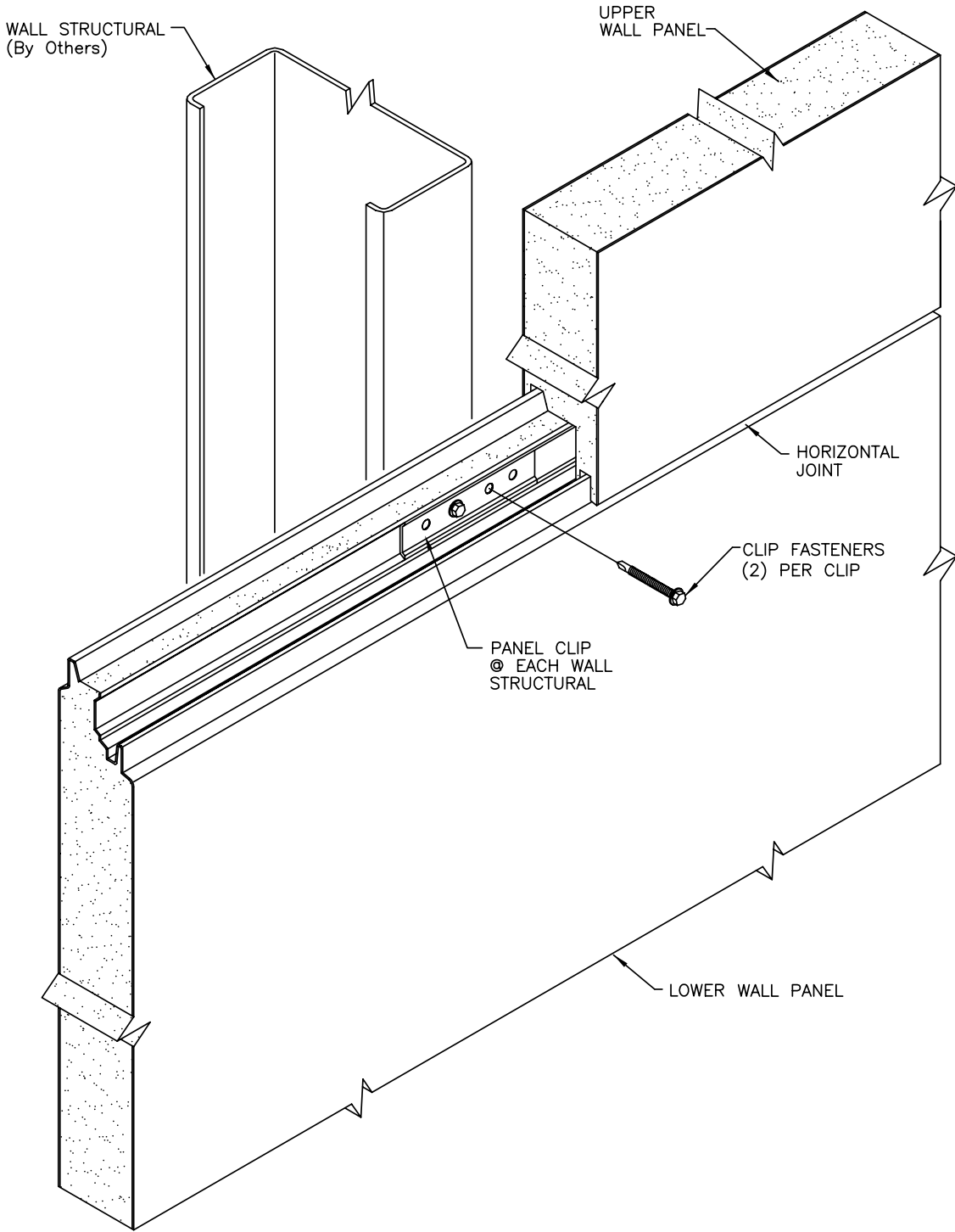
C552.502.3



NOTES: Interior joint flashing is only required when the wall structural has an unsealed joint, or its surface is not suitable for sealing.

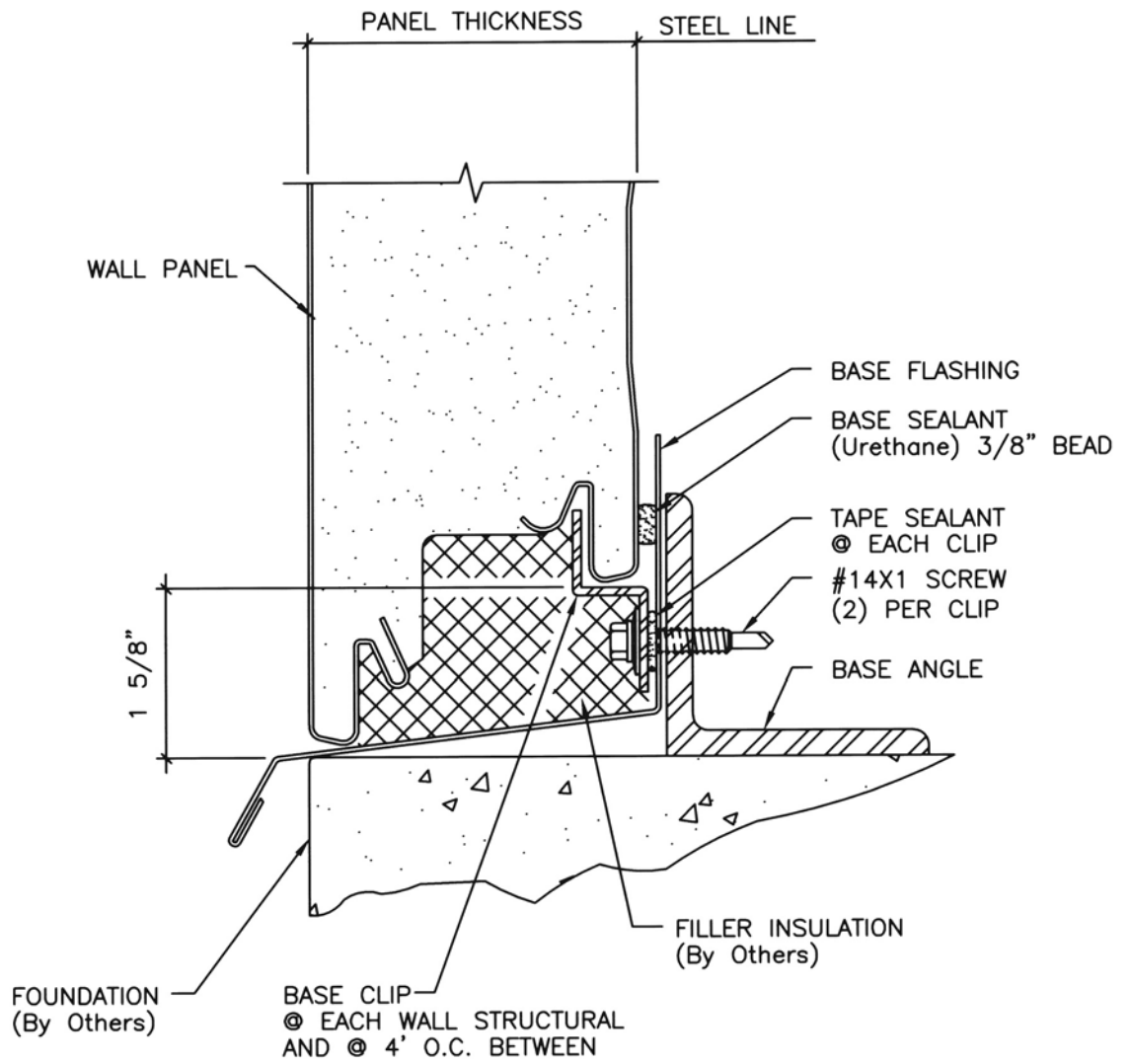
DETAIL @ WALL STRUCTURAL

C552.503.5



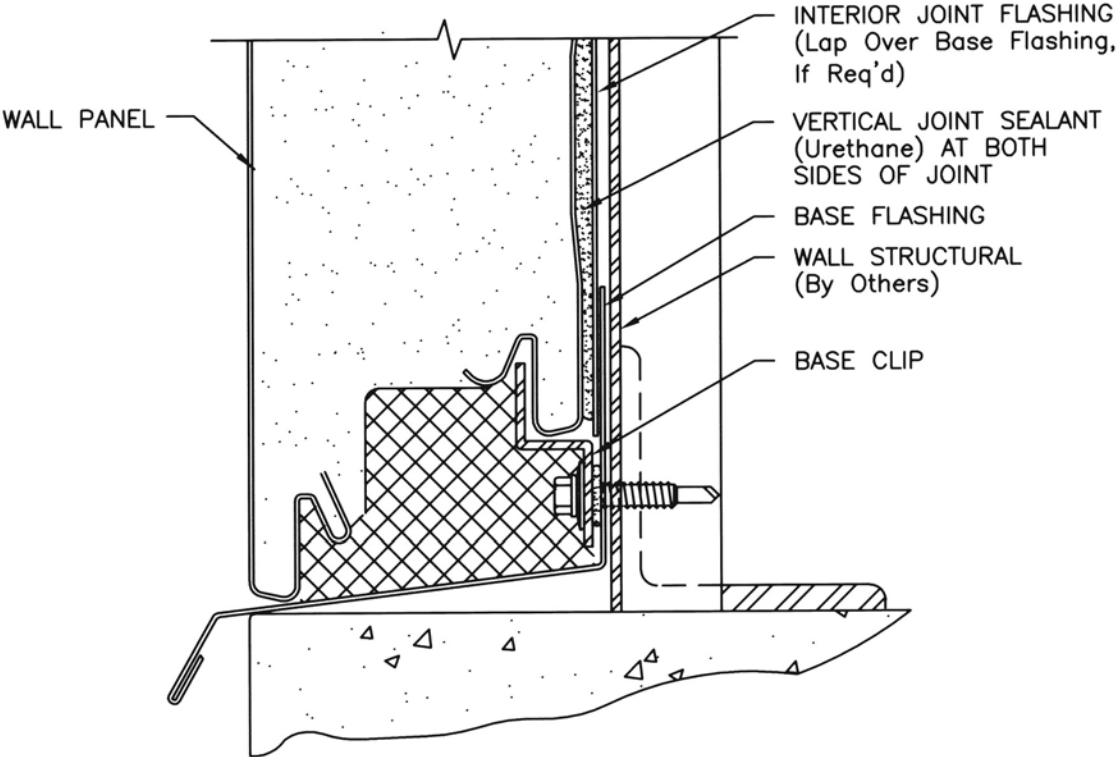
BASE SECTION

C552.504.5



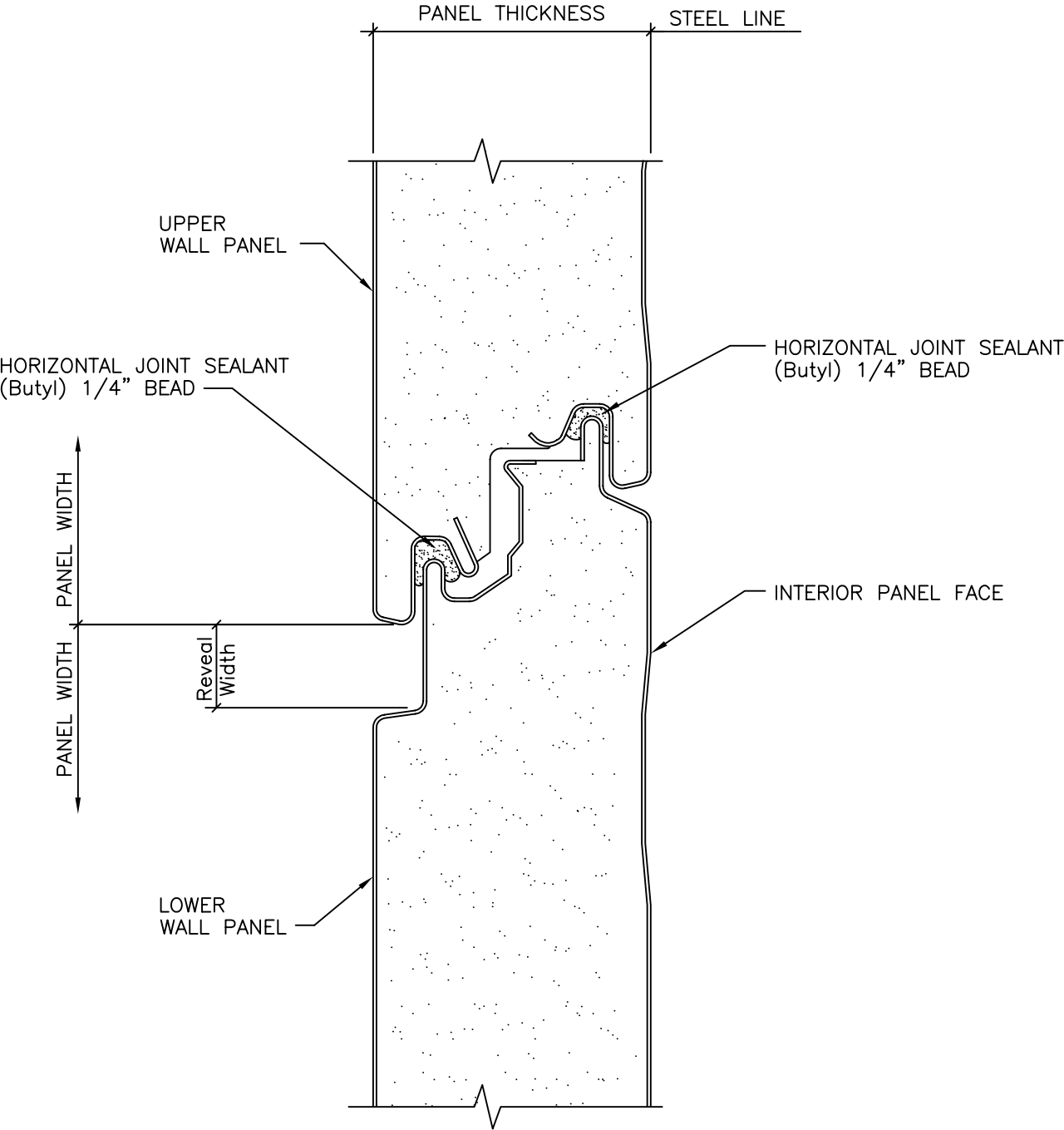
BASE SECTION (@ VERTICAL JOINT)

C552.505.1



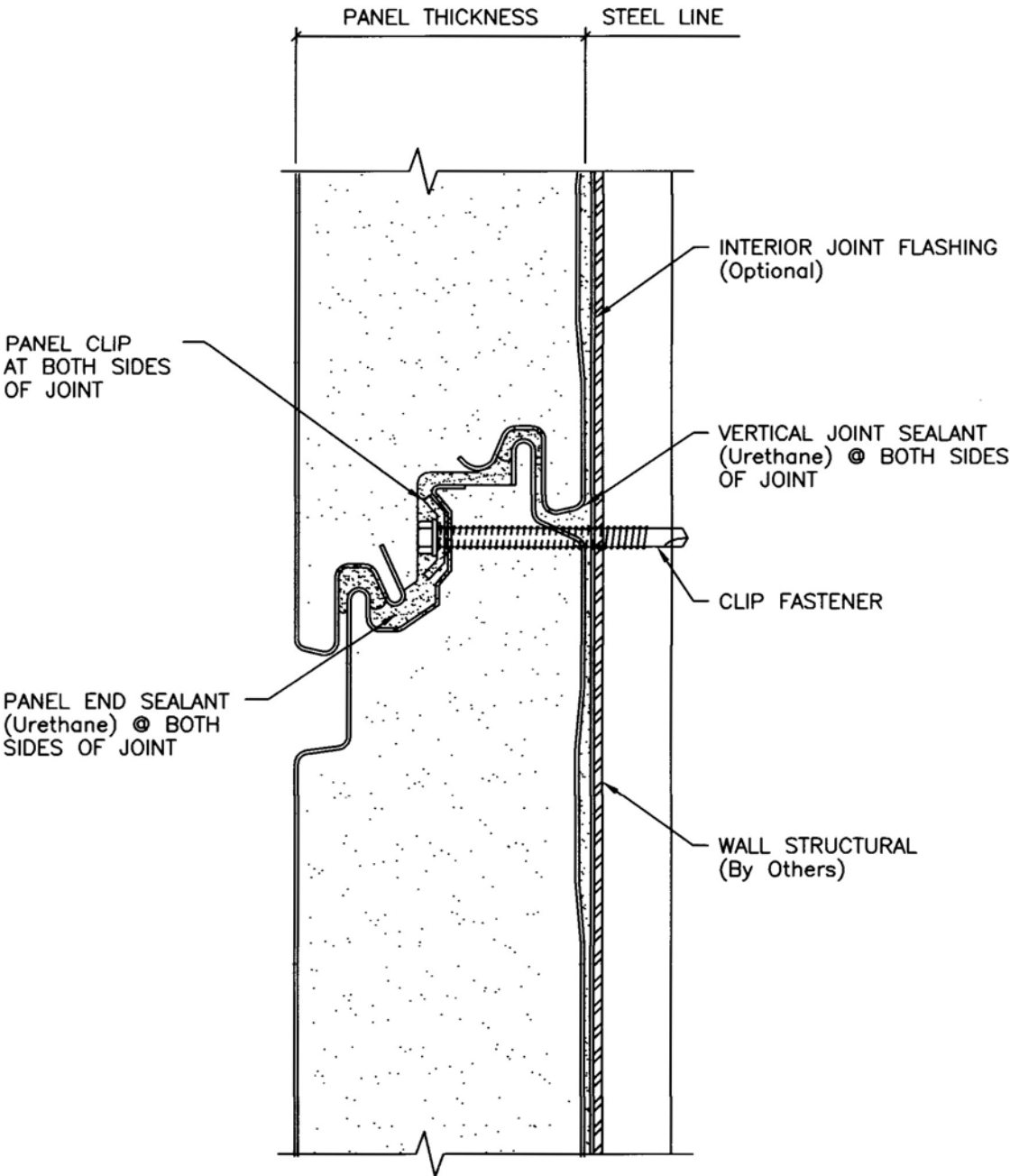
HORIZONTAL JOINT SECTION

C552.506.6



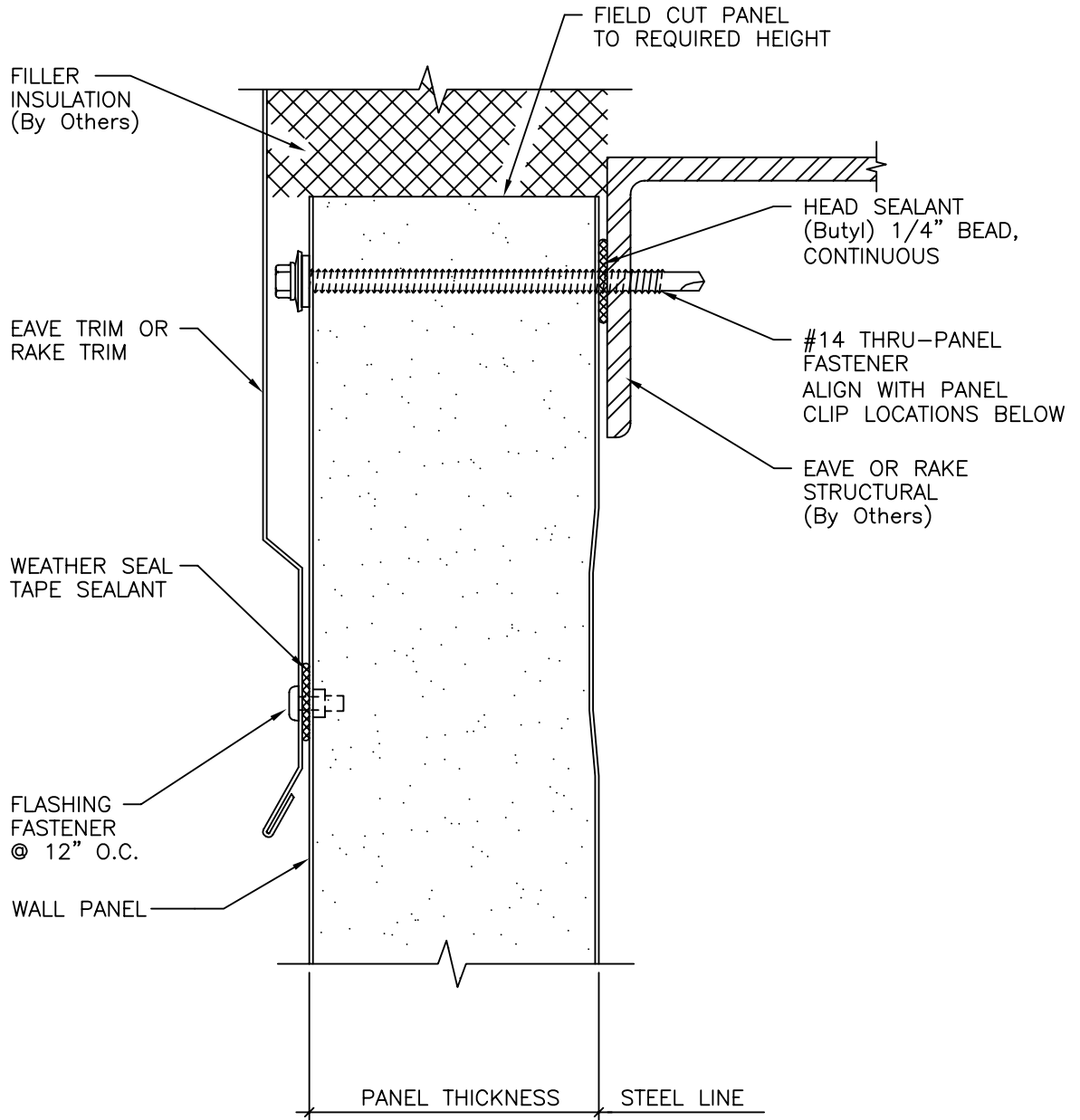
**HORIZONTAL JOINT SECTION
(@ VERTICAL JOINT)**

C552.507.3



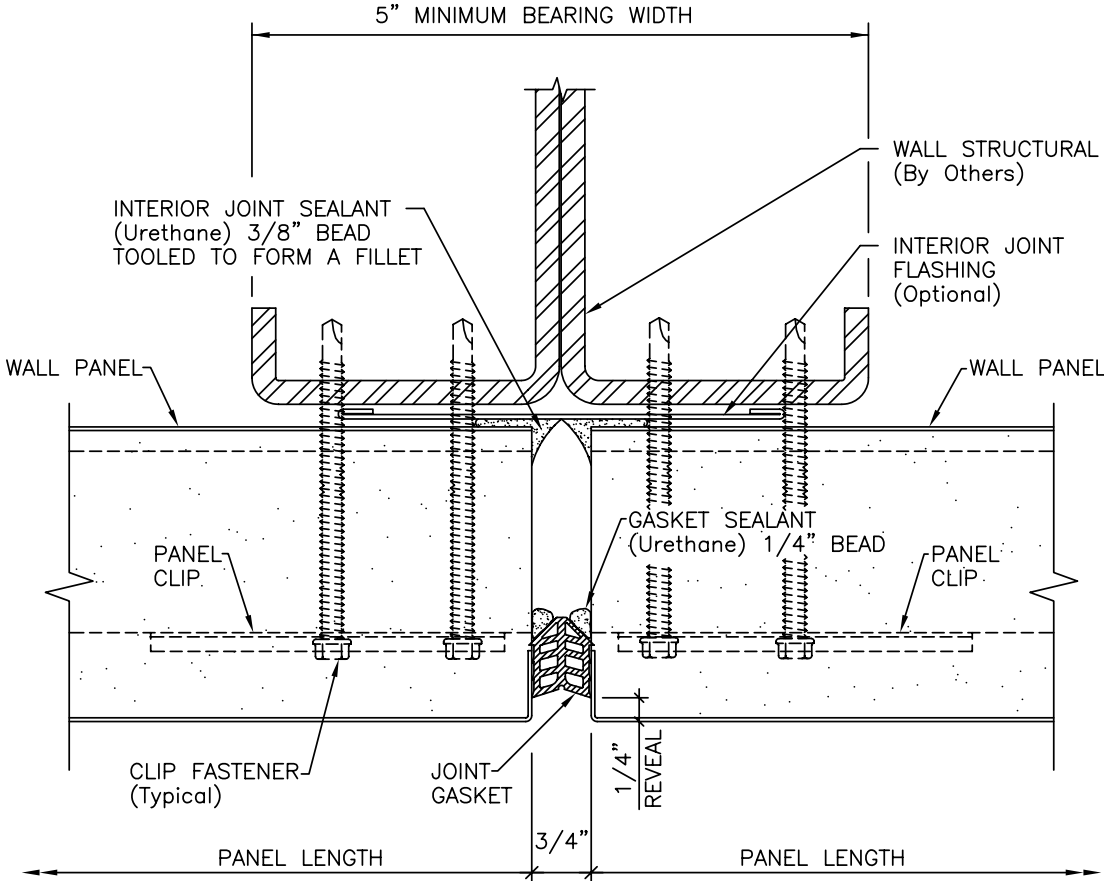
EAVE/RAKE SECTION

C552.508.2



VERTICAL JOINT SECTION

C552.509.3



HORIZONTAL INSTALLATION CONSIDERATIONS

STRUCTURAL ALIGNMENT

The proper alignment of the supporting structural members is most critical for the successful application of horizontal panels.

Joint Support Spacing - to provide for uniform alignment of the panel ends and proper fitting of the vertical joint assemblies, the vertical support members at the panel ends (joint supports) must be positioned and plumbed to within +/- 1/8" of the specified spacing.

Intermediate Support Alignment - to minimize excessive panel stress and the resulting rippling or buckling of the panel faces, the intermediate support members must be aligned so that the panels are not forced into conditions of concave bowing (inward deflection between the panel ends).

Within any wall section, the nominal wall plane is determined by the position of the vertical supports at the panel ends (joint supports). To prevent concave bowing of the panels, the intermediate supports must **not** be set inside of this nominal wall plane.

The allowable deviation of the intermediate supports from the nominal wall plane varies in accordance to the support spacing. Closer support spacing requires a more critical alignment tolerance.

For support spacing of 8' or greater, the suggested support alignment tolerance is 0" to 1/4" outside of the nominal wall plane.

For support spacing less than 8' and greater than 4', the suggested support alignment tolerance is 0" to 1/8" outside of the nominal wall plane.

For support spacing of 4' or less, the suggested support alignment tolerance is 0" to 1/16" outside of the nominal wall plane.

To ensure the proper alignment of the panel supports, it is recommended that the supports at the panel ends (joint supports) are first set to the specified positions. Then use a string line between the joint supports to set and check the alignment of the intermediate supports. The alignment of supports is measured at the panel bearing surfaces of the respective support members.

HORIZONTAL INSTALLATION CONSIDERATIONS (cont.)

Panel Alignment - to ensure the proper function and aesthetics of the vertical joints, the panels must be accurately positioned so joints are at the specified spacing and joint width (space between the panel ends) is to be set at $\frac{3}{4}$ ".

The tolerance for the panel end positioning is $\pm \frac{1}{16}$ ".

The tolerance for the joint width is $\pm \frac{1}{16}$ ".

Use the joint gauge (set between the panel ends) to provide a positive setting of the joint width. The opposite end of the gauge serves as a "Go/No-Go" gauge for checking the joint width.

Joint Sealant - the proper application of the sealants is most critical for assuring the wall's weathertightness and vapor control performance.

At the vertical joints, careful attention is required to assure that the sealant is correctly applied within the cavity between the panel ends. Depending upon the panel thickness, an adapter nozzle on the caulking gun may be required to apply the sealant within the depth of the cavity. When the joint cavity is shaded, auxiliary lighting may be required to observe that the sealant is being correctly applied.

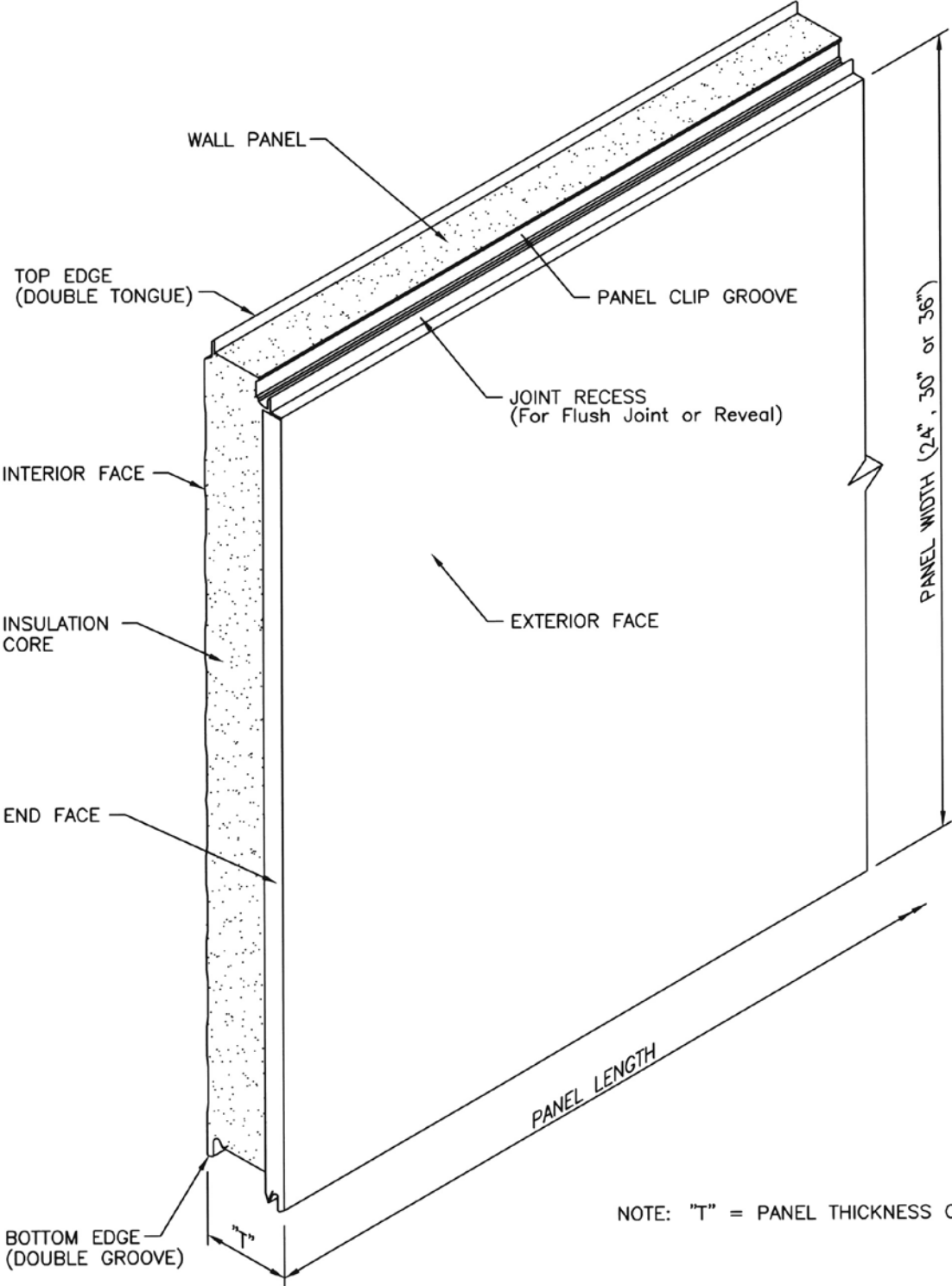
The required application of sealants at the panel joints and perimeter assemblies is determined by the building's operating conditions and climatic conditions. For some controlled temperature conditions, the sealants may be omitted at the interior surface of the horizontal joint and perimeter assemblies. In all cases, reference the project's installation drawings and/or specifications for the specified sealant applications.

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TYPICAL WALL PANEL

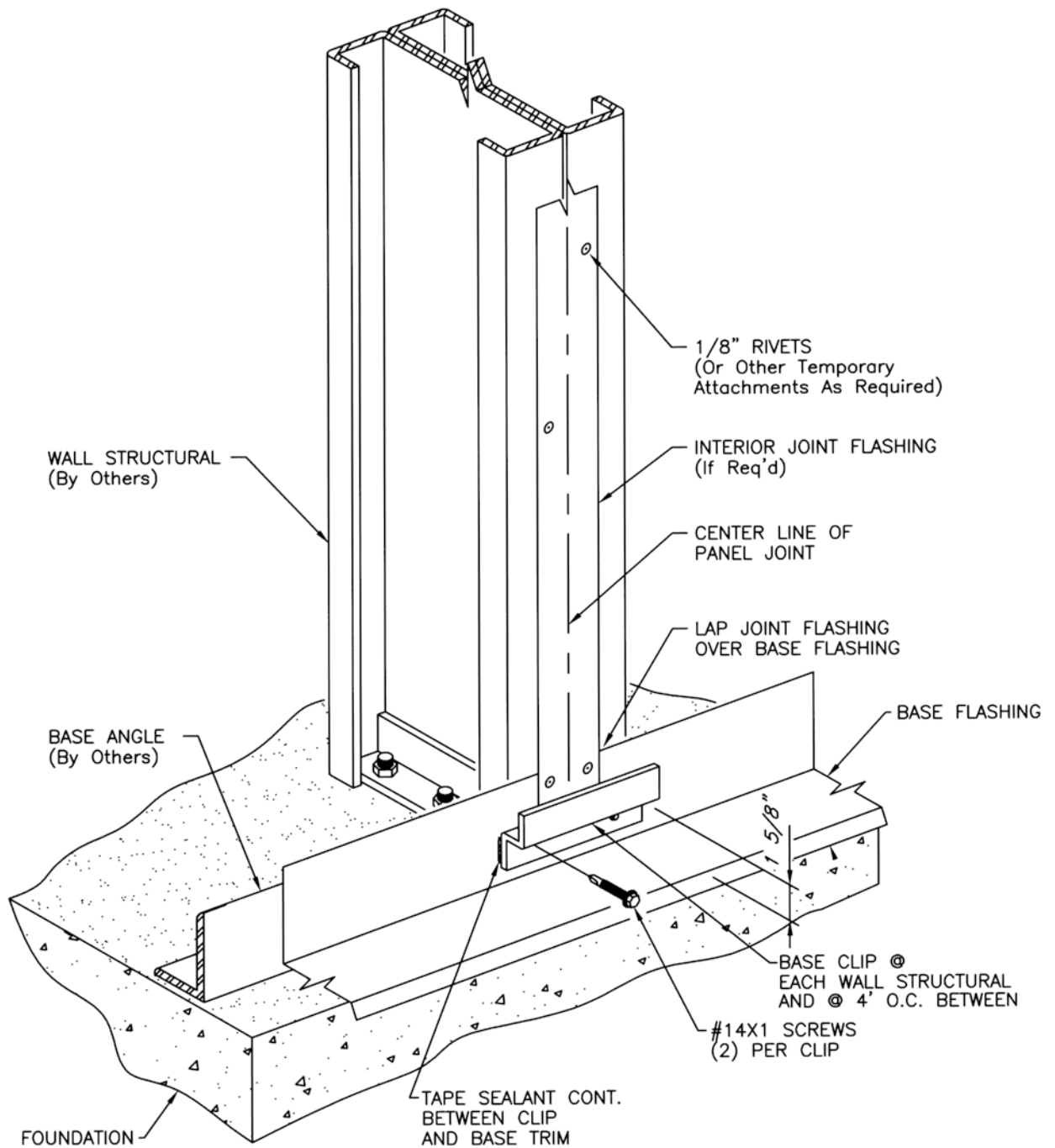
C552.601.3



NOTE: "T" = PANEL THICKNESS OF

BASE ASSEMBLY

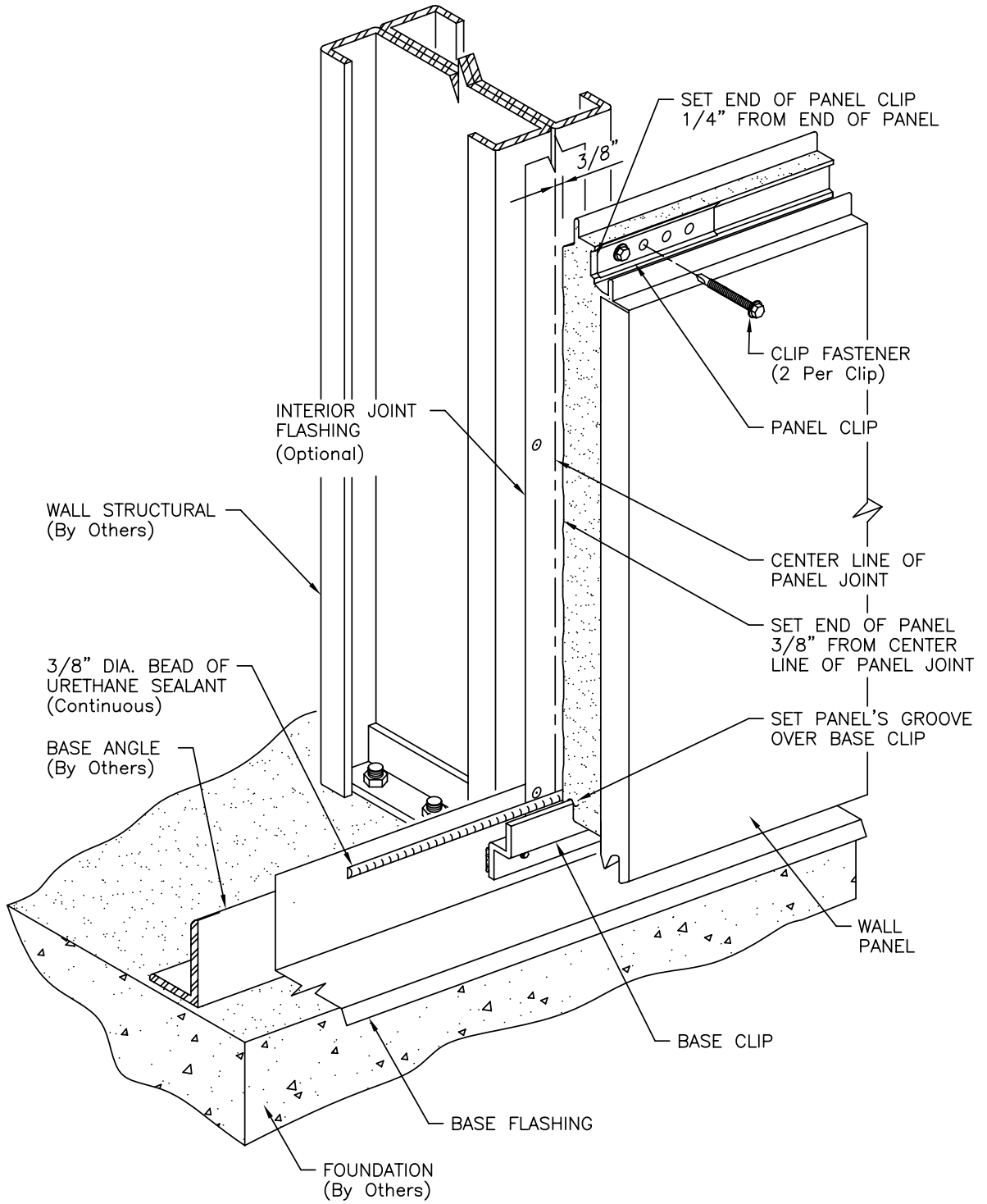
C552.602.2



- NOTES: 1. It is most important that the base flashing and alignment of the base clips are straight and level. Use a string line or laser to align the base clips at $\pm 1/16"$.
2. At the base flashing splices, lap the flashing 2" with sealant in the lap and secure the splice with rivets as required.

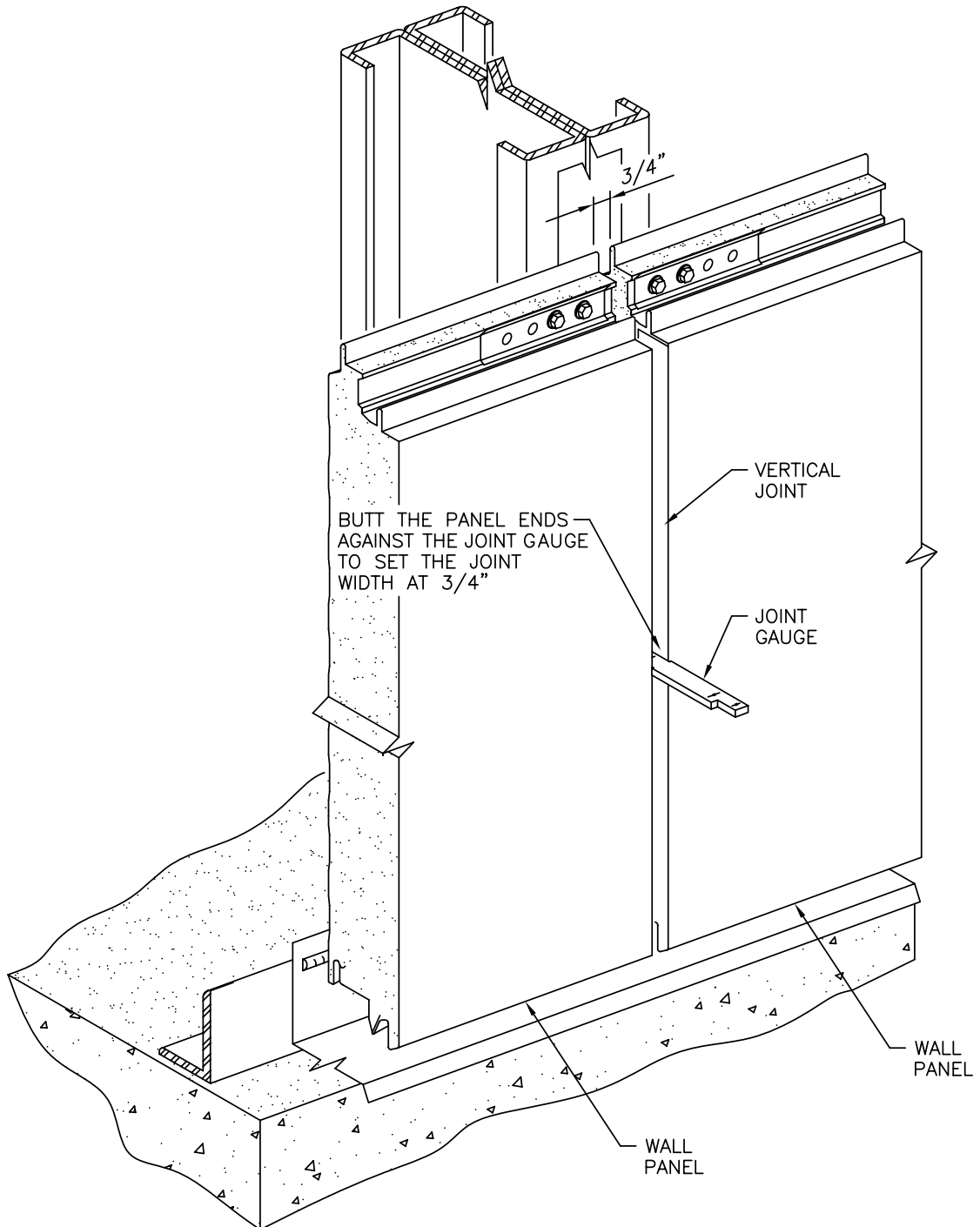
BOTTOM PANEL INSTALLATION

C552.603.3



SETTING THE VERTICAL JOINT WIDTH

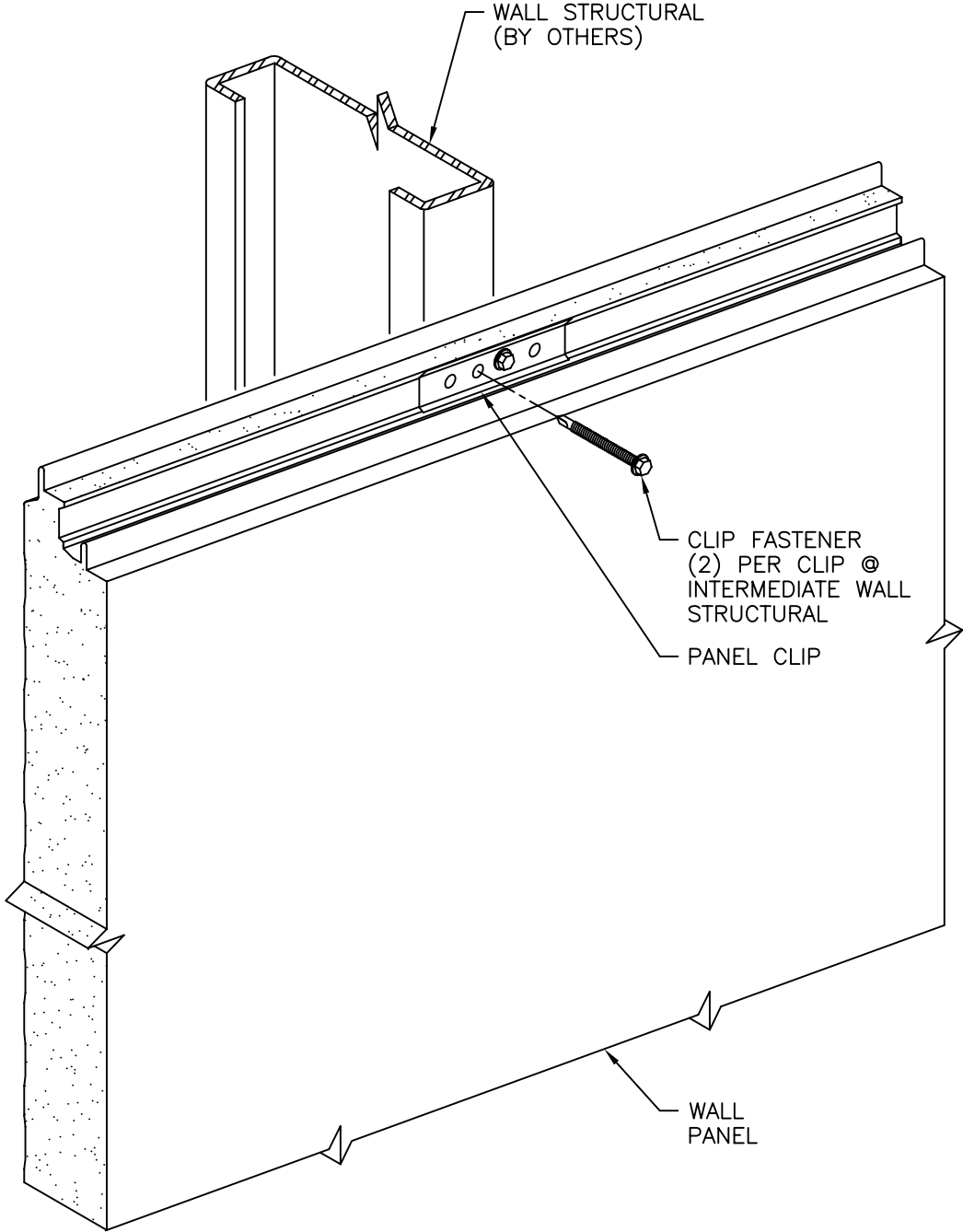
C552.604.4



- NOTES: 1. Use the 3/4" wide end of the gauge to set the joint width. Set the gauge at mid-point between the horizontal panel joints.
2. Before setting the next panel, use stepped end of joint gauge as a "go-no go" gauge to check that the joint width is still within tolerance ($3/4" \pm 1/16"$)

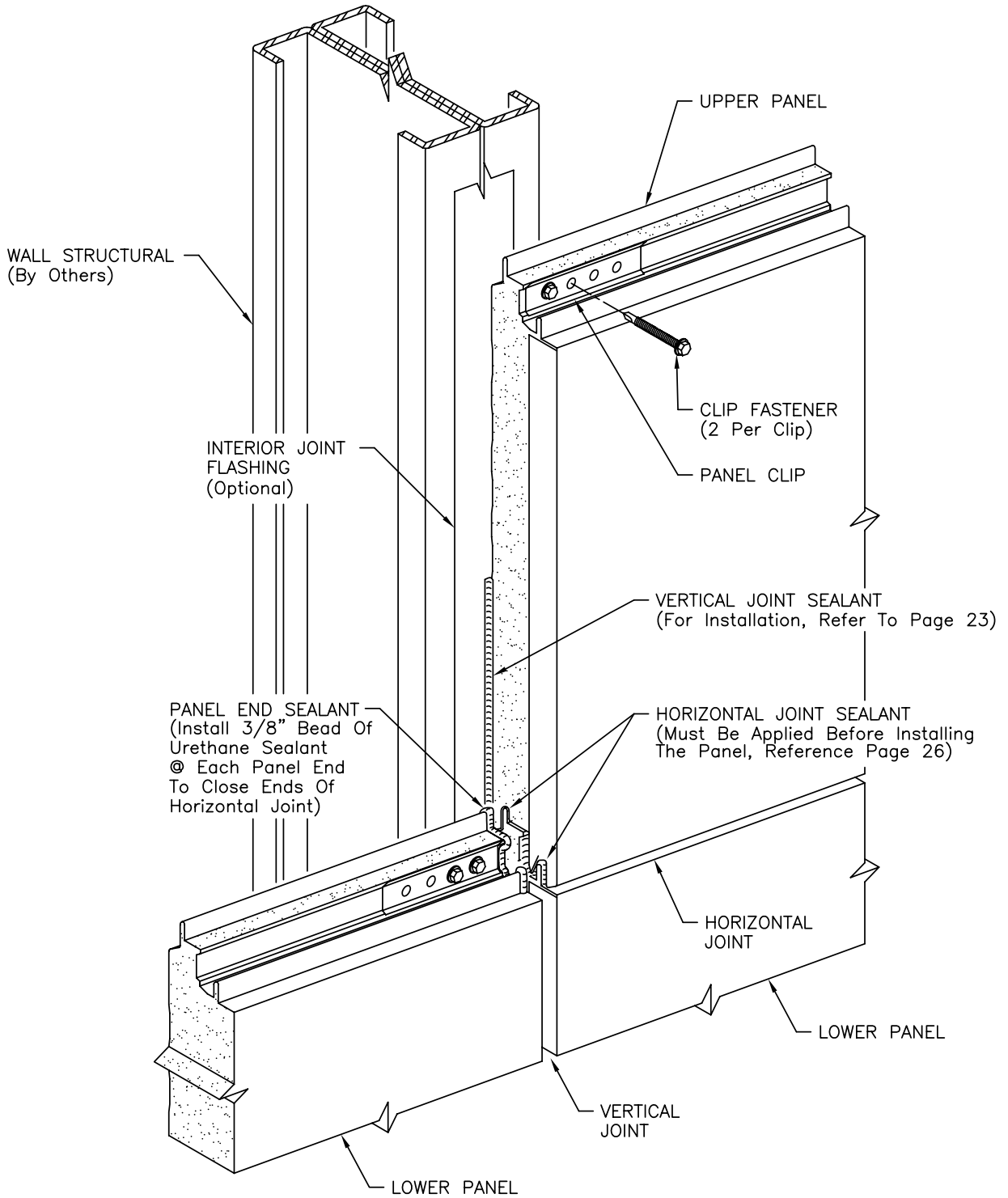
ATTACHMENT (@ INTERMEDIATE WALL STRUCTURAL)

C552.605.2



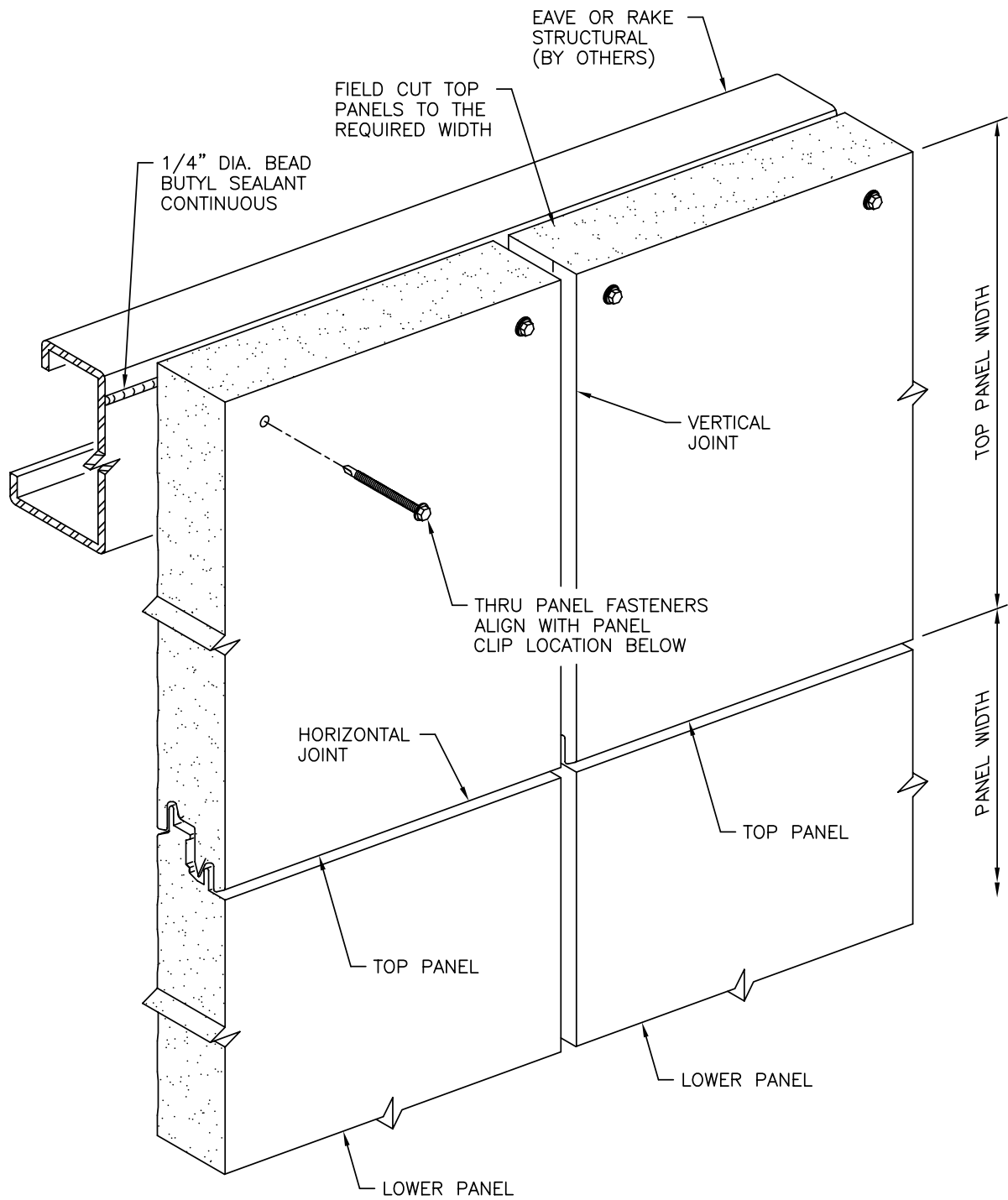
UPPER PANEL INSTALLATION

C552.606.4



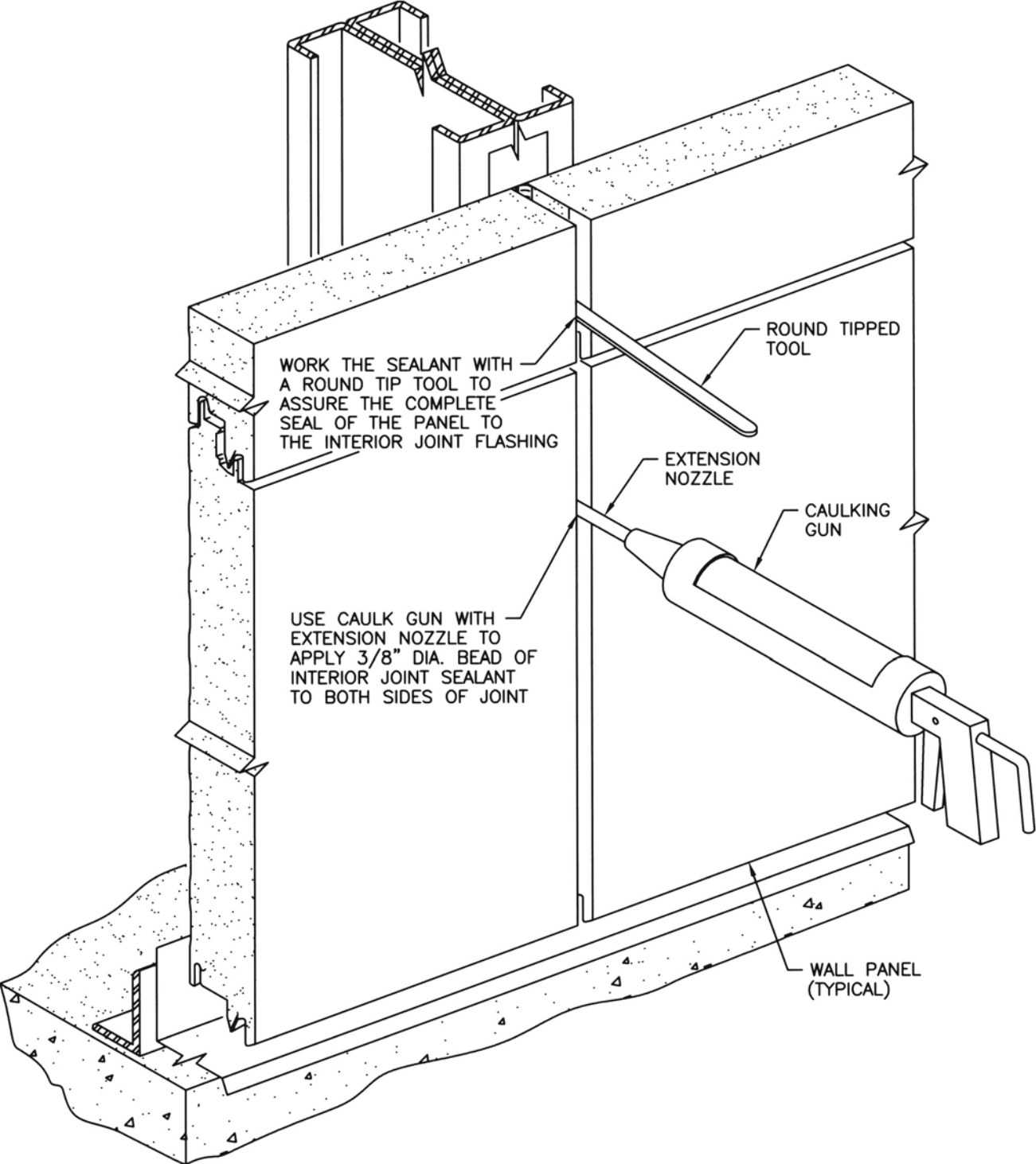
TOP PANEL INSTALLATION

C552.607.1



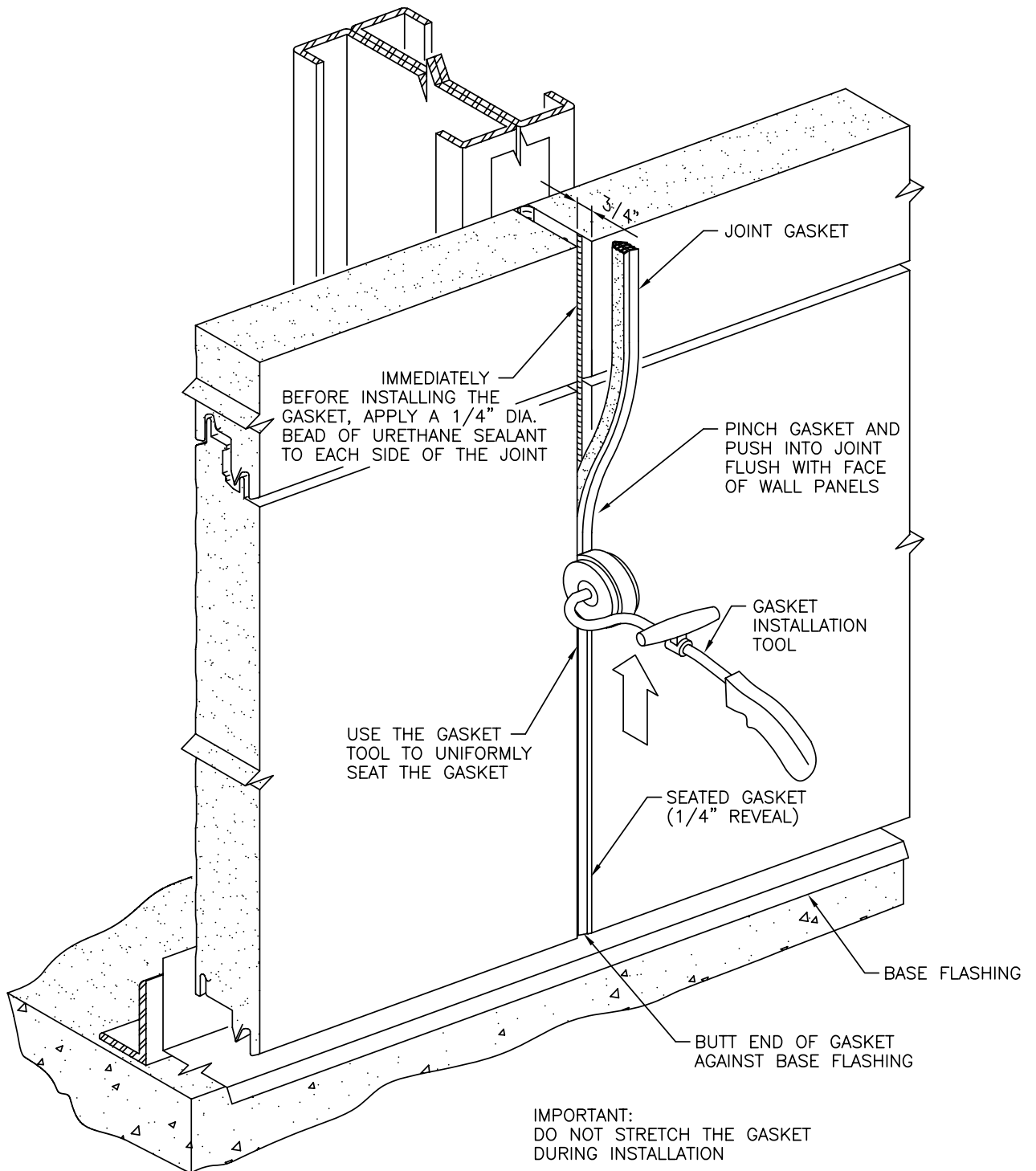
INTERIOR JOINT SEALANT APPLICATION

C552.610



STARTING THE GASKET INSTALLATION

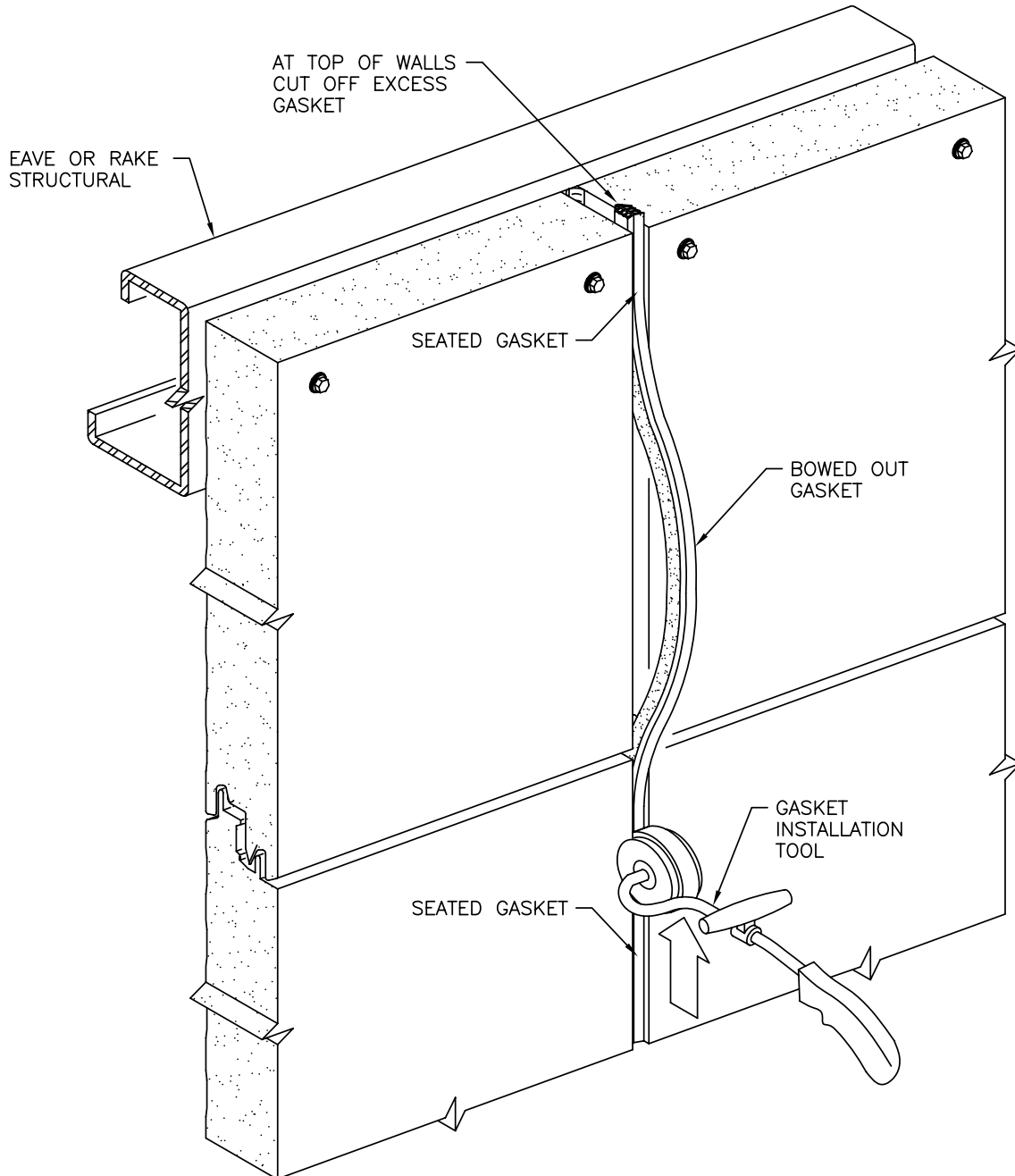
C552.611.1



FINISHING THE GASKET INSTALLATION

C552.612.1

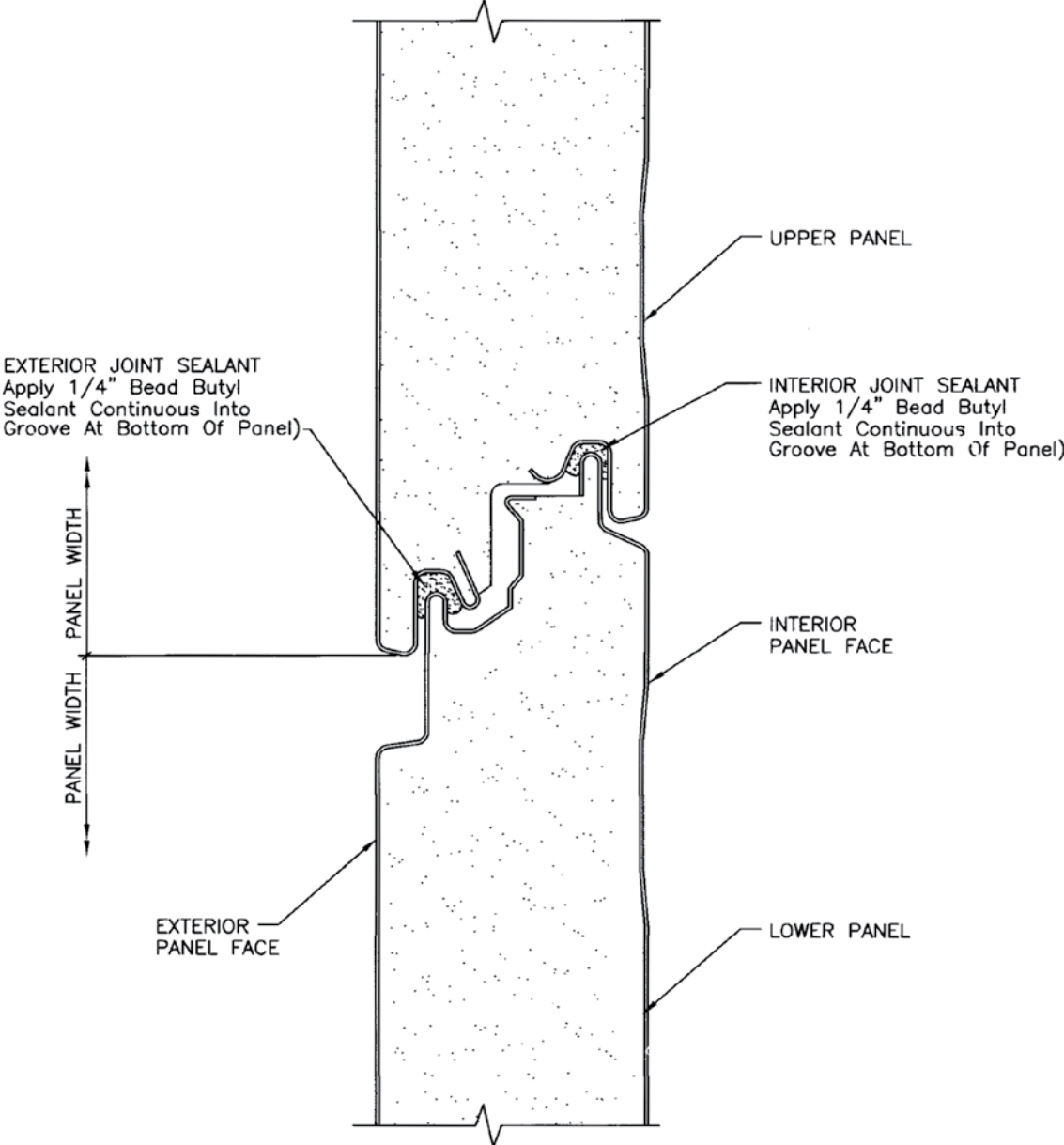
PRELIMINARY



IMPORTANT: TO MINIMIZE GASKET SHRINKAGE, THE GASKET SHOULD BE COMPRESSED DURING INSTALLATION. LEAVE PORTIONS OF THE GASKET BOWED OUT, THEN PUSH INTO PLACE TO COMPRESS THE GASKET.

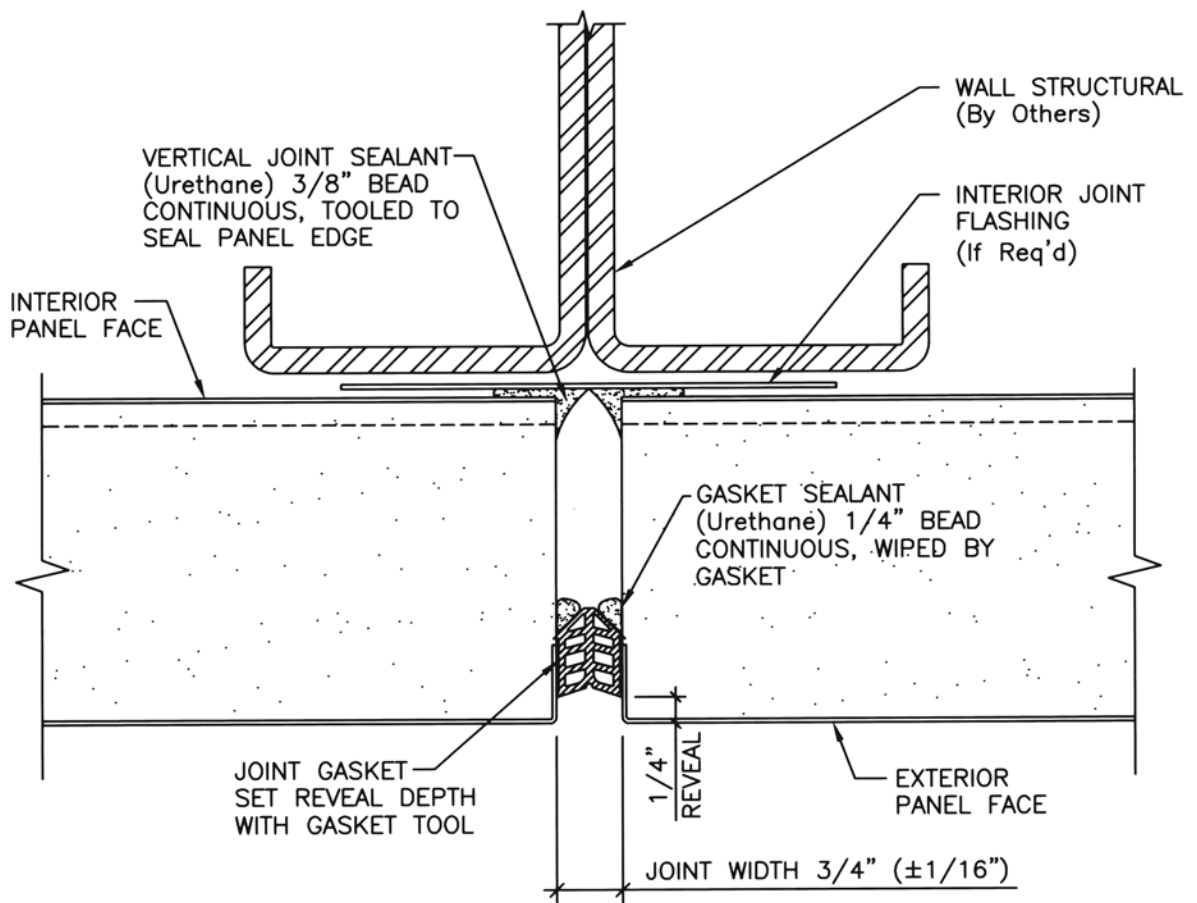
HORIZONTAL JOINT SECTION

C552.608.4



VERTICAL JOINT SECTION

C552.609.1



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