

OMEGA-FLEX™

SYSTEM GUIDE



LAMINATORS
Composite Panel Solutions

Effective March 2021

Tech Support: 800.523.2347 LaminatorsInc.com

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WARRANTY DISCLAIMER

Failure to follow **ANY** of the guidelines contained within this document or those referenced at LaminatorsInc.com will void your warranty. For Laminators Technical Support, call **800.523.2347**.

IMPORTANT NOTICE

This document is **NOT** comprehensive for installation, bidding, or design. Approved materials, CAD details, and technical bulletins are **REQUIRED** to be used in conjunction with this guide. Visit LaminatorsInc.com for the latest documents regarding this panel system.



LAMINATORS
Composite Panel Solutions

MATERIAL HANDLING & MAINTENANCE

Storage & Handling

Material Receiving

Upon receipt of Laminators products, perform a visual inspection and inventory to identify any damages that may have occurred during shipping or any materials that may be missing. Any damages or missing materials must be noted on the bill of lading at the time of receipt and must be immediately reported to the distributor from which the product was purchased.

Storage

Omega-Flex panels are to be stored horizontally on pallets in a dry, well-ventilated environment under the protection of a temporary or permanent roof structure. No more than 1500 pounds of panels are to be stacked on one pallet. If panels are to be stored in an exterior area, they must be placed under a well-ventilated, waterproof covering. Storage temperatures are not to exceed 120°F. Panels should be stored in an area protected from other construction activities and associated debris. Other materials shall not be stacked or placed in contact with panels to prevent staining, denting, or other damages.

Laminators' warranty does not cover damages related to improper storage. Storage conditions should be continuously monitored as any water infiltration, standing water, construction debris, or excessive temperatures will cause damage to the panels that will not be covered under warranty.

Handling

Omega-Flex panels are shipped with a protective masking to minimize scratching and staining during installation. Protective masking should be left on the field of the panel during installation to minimize potential damages from construction activities. Note that all masking must be removed within 2 weeks of panel installation, otherwise removal may become difficult and the masking adhesive may affect the appearance of the panel following removal.

Handle Omega-Flex panels and Laminators' aluminum moldings with clean work gloves to avoid hand injury from any sharp edges and to prevent staining of surfaces with contaminants. When moving individual panels from stacks, always lift one panel completely off the next to prevent surface scratches from construction debris. Do not slide one panel across another. Glazing suction cups are recommended to handle panels whenever possible.

Cutting

Omega-Flex panels and Laminators' aluminum moldings are shipped in standard sizes that can be cut to required installation size on the jobsite. To cut panels, use a circular saw or table saw with a carbide-tipped blade (60-tooth min.) suitable for cutting non-ferrous metals. To cut moldings, use a miter saw or chop saw with a blade rated for cutting non-ferrous metals. Do not remove the protective masking from the face of the Omega-Flex panels prior to cutting. After cutting, use a deburring tool (available from Laminators) to remove burrs or sharp edges from the panels.

Maintenance of Omega-Flex Panels

Cleaning

Omega-Flex panels should be cleaned at regular maintenance intervals following procedures documented in AAMA 609 & 610 "Cleaning and Maintenance Guide for Architecturally Finished Aluminum." During installation, mineral spirits or isopropyl alcohol can be used to remove uncured caulk and sealants. Never soak panels in solvents or allow solvents to be left in prolonged or continuous contact with panel surfaces as this can cause damages to panel finishes.

Scratches & Rub Marks

Touch-up paints are available from Laminators. Contact Laminators technical support for additional information.

Metallic Paint & Anodized Finishes

When installing panels with metallic and anodized finishes, it is very important that the directional arrows on the panel masking are oriented in the same direction. Color variation is a characteristic of composite panels with metallic paint and anodized finishes. Laminators **DOES NOT** warrant a color match for panels with metallic and anodized finishes.

To ensure good color uniformity in panels with metallic finishes, periodically check adjoining panels by partially removing masking as the installation progresses. The masking should be reapplied to the panel to protect it. Should any defects be found, stop work immediately and contact Laminators for assistance.


Panel Color Coordination & Planning

Coordinate with Laminators for large projects ordered in phases to ensure the most consistent color matches between project phases.

SYSTEM APPLICATIONS & LIMITATIONS

General Application

Laminators' Omega-Flex installation system is intended for use on curved substrates with a radius ranging from 17' down to 8'. The system must be installed over curved plywood or OSB substrates with an applied air and water barrier. The system can be installed on both concave and convex curves, but temporary shoring to hold panels in position may be required with concave curves.

 **NOTE:** Applications may be possible for curved substrates with radii less than 8'; however, Laminators has not vetted these applications. Designers and installers electing to proceed with installations below the 8' radius limit do so at risk. Laminators strongly recommends building mockups in these instances to determine if there will be any aesthetic or constructability issues.

Applications in Architectural Features

The Omega-Flex installation system is intended for use on curved substrates as part of architectural features (i.e., trim and embellishments), specifically fascia and soffit portions of projecting horizontal accent features (e.g., decorative banding, eyebrows, canopies, etc.).

Laminators defines an architectural feature as a portion of the building that is not part of the exterior wall envelope. Architectural features may not be required to maintain the same code-mandated air and thermal control layers necessary to sustain conditioned building space; however, water controls must be included. The explicit determination of what portions of a building are considered part of the exterior wall envelope and which are architectural features is the responsibility of the Design Professional of Record and will need to be handled on a project-specific basis.

Veneer Applications

If the Omega-Flex installation system is considered for use in a curved veneer application, please be aware of the following:

- The installation may not meet International Building Code (IBC) Chapter 14 requirements for drainage.
- The system has **NOT** been tested by Laminators to ASTM standards (e.g., ASTM E331).
- The system will function as an "untested barrier."

Limitations

Per IBC Chapter 14, the application of the Omega-Flex installation system is subject to the following limitations:

1. Installation height shall not exceed 40' above grade in Type I, II, III, and IV Construction.
2. The area of installation shall not exceed 10% of the exterior wall surface in Type I, II, III, and IV Construction when the fire separation distance between structures is less than 5'.

The Omega-Flex system has **NOT** been tested by Laminators to the NFPA 285 standard.

Omega-Flex is **NOT** permitted for top-side horizontal applications and is **NOT** for use with Laminators Back-Drained & Ventilated (BD&V) sub-framing.



PRE-INSTALLATION REQUIREMENTS

Substrate Compatibility & Tolerances

Imperfections in any substrate may transfer through to the installed panel system. Prior to installation, the installer must verify that the maximum out-of-plane offset of adjacent substrate faces is 1/8 inch or less.

All substrates must be structurally sound, within tolerances, clean of debris, and dry. If unsatisfactory conditions are encountered, do **NOT** proceed with panel system installation. Unsatisfactory conditions should be immediately reported to the General Contractor and/or Design Professional of Record and must be corrected prior to panel installation. Laminators **DOES NOT** warranty the final condition of the panel system following installation.



Water Controls

The system is primarily designed to deflect bulk water at the surface of the panel veneer and manage any incidental water infiltration through the presence of an air and water barrier and flashings.

Requirements will vary from project to project, and the details in this guide and its related documents are intended to represent minimum requirements for the Omega-Flex installation system. Further considerations for water controls will need to be established by the Design Professional of Record to meet project-specific needs.

Installer Responsibilities

The panel installer is responsible for confirming the following prior to proceeding with panel system installation:

1. Confirm that the Design Professional of Record has established water controls for the project in the form of a defined drainage plane with an air and water barrier and associated flashings to manage water out of the panel system.
2. Confirm that the product accessories specified for installation (caulks/sealants, adhesives) have been tested by Laminators for compatibility with the panel system and are listed as Laminators approved products.
3. Confirm that fasteners (type, size, and spacing) and adhesive layout meet project-specific wind load requirements as established by the Design Professional of Record.
4. Confirm that the panel system is to be installed over a compatible substrate within acceptable installation tolerances.
5. Provide temporary protections during construction to protect areas of panel installation and associated substrates from construction debris and water infiltration.
6. Ensure that no panel edges are left unsupported and all moldings are in place at the end of a work session.

SYSTEM INSTALLATION


System Overview

Omega-Flex is a composite panel that consists of a thermoplastic core bonded to a finished sheet of aluminum on one face and a flexible sheet of homopolymer on the other.

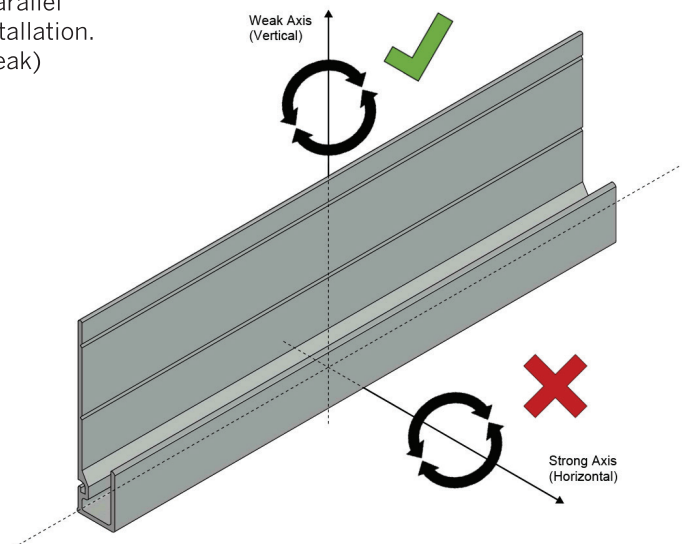
The Omega-Flex installation system is a progressive-build system that combines Omega-Flex panels with Laminators' aluminum moldings. Edges of panels are seated into moldings that are fastened to the substrate. Panel adhesive is located within the field of each panel on the face of continuous cold-formed steel strapping to transfer wind loads back to structure.

Moldings

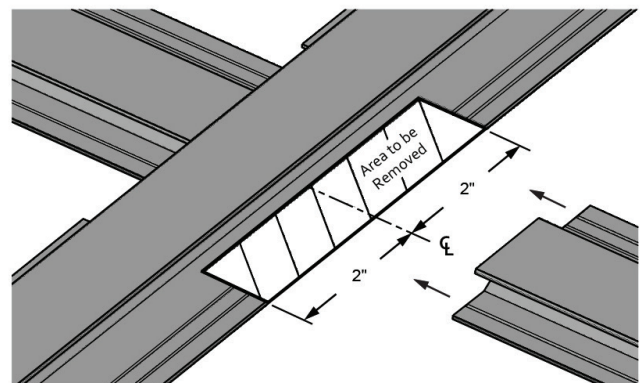
Joint moldings are available in two styles: H-Moldings (Part No. 4505X) and Reveal H-Moldings (Part No. 4595X). The panel system is captured along edges using J-Moldings (Part No. 4515X) and Termination J-Moldings (Part No. 4565X).

 **NOTE:** For additional information on Molding Intersection Options, refer to page 16 of the 1-Piece, Tight-Fit Molding System Guide.

Depending on the substrate radius, joint and edge moldings parallel to the curve of the radius may require roll-forming prior to installation. Curving or roll-forming is only permitted about the vertical (weak) axis as shown.

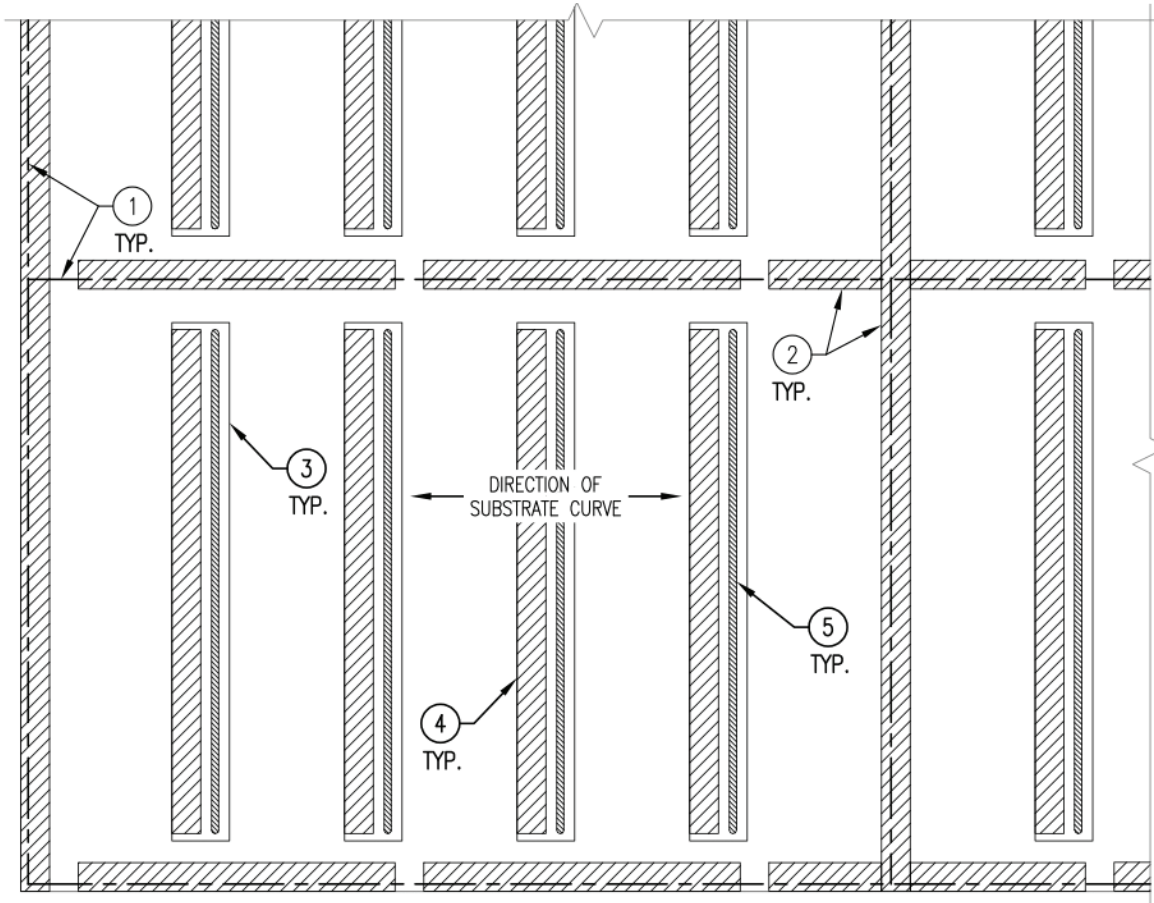


Intersecting moldings must be notched along their back leg(s) so that the finish faces align correctly following panel installation. Mark 2" to either side of the intersecting centerline on the molding to be notched as shown.



SYSTEM INSTALLATION

Strapping, Foam Tape & Adhesive Layout



1. Lay out panel joint centerlines and edge locations.
2. Apply foam tape along panel joint centerlines and edge locations.
 - a. Offset foam tape as required to align with molding type.
 - b. Maintain drainage gaps as required along horizontal foam tape.
3. Install cold-formed strapping in vertical orientation at required spacing.
4. Apply foam tape along strapping, aligning with strapping edge to allow room for adhesive application.
5. Apply Laminators approved panel adhesive in continuous lines along strapping adjacent to foam tape.




NOTE: Refer to CAD Drawings at LaminatorsInc.com for additional information on the following:

- Foam tape placement at panel joint and edge locations relative to position of joint and edge moldings
- Flashing interfaces at system terminations
- Spacing between vertical strapping/adhesive (spacing will vary based on project wind load requirements)
- Fastening requirements for attachment of strapping to structural substrate

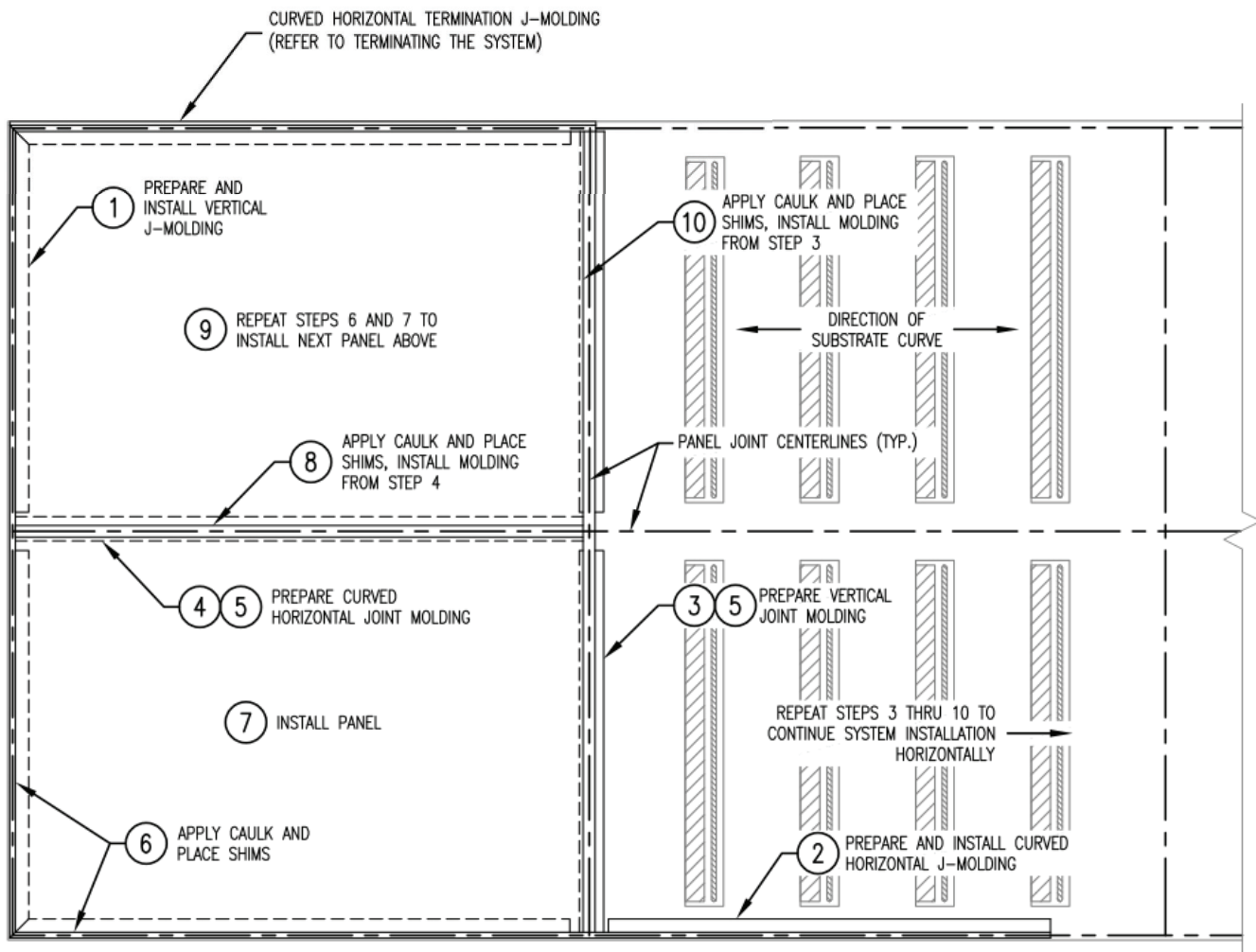
SYSTEM INSTALLATION

Panel Installation


Panels may be cut to desired size in advance of installations or as installation progresses (refer to “Material Handling & Maintenance” on page 1 for additional information on equipment requirements for cutting operations). Laminators recommends cutting panels to size as installation progresses to allow for flexibility to accommodate field conditions.

 **NOTE:** Refer to CAD Drawings at LaminatorsInc.com for panel sizing guidelines.

For the purposes of this guide, a 2-panel tall installation on a continuous architectural feature will be presented.



SYSTEM INSTALLATION

1. Prepare and install vertical J-Molding along leftmost vertical edge of installation area.
 - a. Cut notches for intersection with horizontal moldings (refer to "Moldings" on page 4).
 - b. Verify molding is plumb and fasten to substrate as required.
2. Prepare and install curved horizontal J-Molding along base of installation area.
 - a. Curve molding to desired radius (refer to "Moldings" on page 4).
 - b. Cut notches for intersection with vertical moldings.
 - c. Verify molding is level and fasten as required.
 - d. Repeat as necessary to maintain continuous moldings along base of installation area.
3. Prepare vertical H- or Reveal H-Molding for installation at vertical panel joint.
 - a. Cut notches for horizontal H- or Reveal H-Molding intersections.
 - b. Temporarily install molding plumb with one fastener at each end.
4. Prepare curved horizontal H- or Reveal H-Molding for installation along horizontal joint.
 - c. Curve molding to desired radius.
 - d. Measure length of horizontal moldings along the substrate curve between finish faces of vertical moldings and cut to size.
5. Remove temporarily installed moldings from step 3 and set aside along with curved molding from step 4.
6. Apply Laminators approved silicone caulk within the recessed channel of the previously installed moldings.
 - a. Only apply caulk within moldings to extent of where the next panel is to be installed.
 - b. Place 1/8" shims within the recessed channel of the moldings to control panel placement and silicone caulk squeeze-out.
7. Install panel into left-side vertical and bottom-side curved horizontal moldings.
 - a. Peel masking back approximately 2" to 3" from all panel edges.
 - b. Apply panel adhesive and foam tape to substrate as required (refer to "Strapping, Foam Tape & Adhesive Layout" on page 5).
- c. Taking care not to contact panel adhesive, lift panel and insert edge into vertical molding at one end.
- d. While keeping the vertical edge of the panel seated within vertical molding, slide panel downward and bend along length to seat into curved bottom molding. Verify that shims maintain approx. 1/8" gap between base of recessed channel and edge of panel.
- e. Verify panel is level when fully seated.
8. Install the curved H- or Reveal H-Molding from step 4 along the horizontal joint.
 - a. Apply Laminators approved silicone caulk and place shims within the recessed channel along the short side of the molding and slide molding onto the top of the installed panel.
-  **NOTE:** *The long side of the H- or Reveal H-Molding should be facing away from the installed panel so that the molding can be fastened to the substrate.*
- b. Verify molding is level and fasten as required to substrate.
9. Repeat steps 6 and 7 to install the next panel moving upward.
10. Install vertical H- or Reveal H-Molding previously prepared in step 3.
 - a. Apply Laminators approved silicone caulk and place shims within the recessed channel along the short side of the molding and slide molding onto the side of the installed panel.
 - b. Verify molding is plumb and fasten as required to substrate.

Repeat steps 3 through 10 to progress system installation to the right.

- Refer to "Terminating the System" on page 8 for instructions on finishing the panels along the top and right edge of the installation area.


 **NOTE:** *Only apply panel adhesive for one panel at a time.*

SYSTEM INSTALLATION

Terminating the System

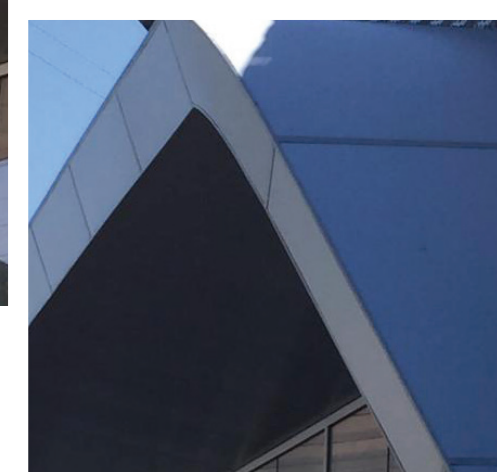
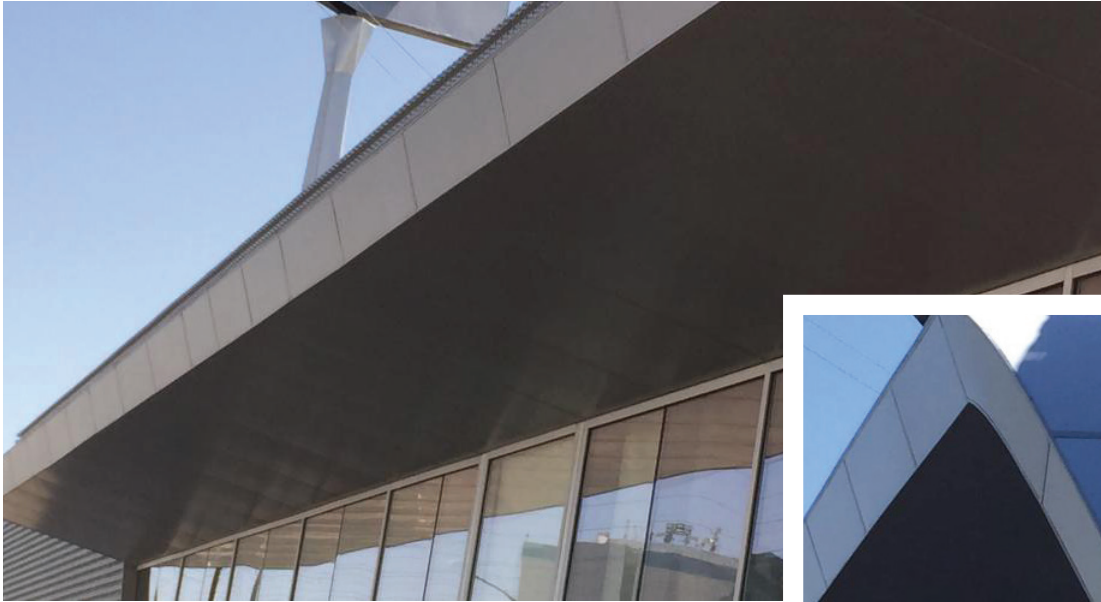
The last panels along the top and right edge of any installation area are finished using Termination J-Moldings. The use of Termination Z-Moldings is **NOT** permitted with the Omega-Flex installation system.

1. Curve horizontal Termination J-Molding(s) for installation along the top of the installation area.
2. Cut notches for intersection with horizontal and vertical moldings.
3. Apply Laminators approved silicone caulk and place shims within the recessed channel of each molding.
4. Slide each molding onto the top or side edges of the installed panels to be terminated.
5. Verify each molding is plumb/level and fasten as required to substrate.

 **NOTE:** Installation of Termination J-Molding will leave exposed fasteners. Exposed fasteners are intended to be concealed within sealant joints or behind copings. Refer to CAD Drawings at LaminatorsInc.com for additional information.



ESSENTIAL EQUIPMENT & MATERIALS



Essential Equipment

- Aluminum brake capable of bending 0.060" aluminum
- Miter saw or chop saw with a blade rated for cutting non-ferrous metals
- Circular saw or table saw with carbide-tipped blade (60-tooth min.) rated for cutting non-ferrous metals
- Caulking gun (automatic gun recommended for consistent application)
- Screw gun/drill
- Deburring tool (Part No. DEBURRING TOOL)
- Aviation snips or heavy-duty scissors
- Plastic putty knife to remove excess caulk and adhesive from panels
- Protective gear (safety glasses, gloves to handle panels, etc.)

Jobsite safety is the responsibility of the panel installer.

Essential Materials

- Omega-Flex panels
- Laminators' aluminum moldings
 - H-Molding (Part No. 4505X)
 - Reveal H-Molding (Part No. 4595X)
 - J-Molding (Part No. 4515X)
 - Termination J-Molding (Part No. 4565X)
- Cold-formed strapping (**not supplied by Laminators**)
 - 4" wide, 18 gauge (min.)
- Tapes
 - Closed-cell, 7-lb. density PVC foam tape, 3/16" thick x 2" wide (Part No. 12847)
- Color-matched flat stock aluminum for fabrication of flashings and copings
- Mineral spirits and rags
- Touch-up paint
- Fasteners (**not supplied by Laminators, refer to Laminators CAD Drawings for fastener size and spacing requirements**)
- Silicone caulk*
- Panel adhesive*

****For the most current list of approved silicone caulks, fabrication sealants, and adhesives, visit LaminatorsInc.com.***



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