STANDARD DETAILS & TOTAL SYSTEMS

FOR METAL ROOFING AND SIDING



AGRICULTURAL | LIGHT COMMERCIAL | RESIDENTIAL



A FLACK GLOBAL METALS COMPANY

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Due to Product improvements, changes and other factors, Fabral reserves the right to change or delete information herein without prior notice or obligation to make changes in products previously purchased.

The details and written instructions described in this manual are suggested installation methods to ensure quality application of our products, and should be considered as a guideline only. FABRAL recognizes that installation techniques can vary based on builder and geographical preferences, and that there are other acceptable ways to install our products.

INSTALLATION INSTRUCTIONS

Fastening

FABRAL can supply either screws or nails for fastening into dimension lumber. Always use screws with solid sheathing. Screws for use with steel panels are galvanized and then coated with an organic polymer for optimum corrosion resistance. For best results with aluminum panels, use #300 series stainless







Wood screws with combination metal and neoprene washers should be installed in the flat area of the panel adjacent to the ribs, and tightened such that the washer is compressed as illustrated above. This will ensure a lasting, leak-proof seal. REMOVE ANY METAL FILINGS CREATED BY THE DRILLING ACTION OF THE SCREWS OR PRE-DRILLING OF THE HOLES TO AVOID RUST STAINING ON THE PANEL SURFACE. Stitch screws should be used in the panel side joints when butyl sealant is used. They may also be used any time the side joint is not pulled together tightly to improve the appearance. Refer to the fastening schedules in this booklet for the correct fastener locations.

Panels adhered with CondenStop

Full length panels from eave to ridge are recommended, eave overhangs, valleys and any other edges exposed to the weather should be painted to seal microfibers from absorbing moisture from the outside. The use of butyl sealant tape at these locations will also help to seal the microfibers and prevent moisture from passing beyond the butyl. Wet stack storage still applies to panels with condenstop applied. Please store properly by covering and tilting one end. It's always best if they can be stored inside if not being immediately installed.

Flashing and Trim

Always begin flashing installation from the bottom and work up, so that upper flashings are lapped on top of lower flashings. This will prevent moisture from leaking under the flashings and into the structure. Endlap flashings a minimum of 6" and seal the lap joints with sealant. Extend flashings 4-6" beyond the building, cut along the bend lines, apply sealant, and fold the side flaps in and the top flaps down to cap off the ends. Secure with pop-rivets or stitch screws.

Some roof conditions, such as valleys, may require a longer endlap and/or a larger flashing to properly drain moisture from the roof. Factors that influence flashing size, shape, and endlap requirements include roof pitch, roof geometry, slope length, and climatic factors (such as heavy snowfall or rainfall).

Whenever possible, begin trim installation at the downwind end of the roof, farthest away from the source of prevailing winds, to allow flashing laps to face away from wind-driven rain. Refer to the details in this book for the proper location of fasteners and sealants.

The flashings and trims shown in this book are standard parts. Custom trims are available to meet your specific design needs. Contact a Fabral dealer for information on custom trim.

Refer to the SMACNA Architectural Sheet Metal Manual for additional information about detailing and installing flashings.

Safety

Work safely when installing metal products and use extreme caution on the roof at all times. Wear gloves and safety glasses to reduce the risk of injury, and use hearing protection when operating power tools. Be sure that ladders are safely

special equipment may be required; Consult OSHA guidelines for compliance with all safety requirements.

Do Not walk on panels until all the fasteners are installed. Metal roofing panels are slippery when wet, dusty, frosty, or oily -- Do Not attempt to walk on a metal roof under these conditions. Wear soft-soled shoes to improve traction and to minimize damage to the paint finish. Always be aware of your position on the roof relative to any roof openings, roof edges, co-workers, and penetrations. Installing metal panels or flashings on a windy day can be dangerous and should be avoided if possible.

Cutting Aluminum Panels

To make a cut parallel to the ribs, score the panel deeply with a sharp utility knife and bend back-and-forth along the score, breaking the metal off cleanly. For cuts across the ribs, use straight-cut snips, electric or pneumatic shears, a portable profile shear, or an electric nibbler. Some installers prefer using a circular saw with a metal cutting blade (a fine-tooth hardwood blade, or a standard combination blade reversed in the saw works also). Light oil or soap on the blade will make cutting easier.

Cutting and Drilling Steel Panels

Steel panels may be cut with metal snips, electric or pneumatic shears, a portable profile shear, or an electric nibbler. Some installers prefer using a circular saw to cut metal panels. Do Not use selfconsuming abrasive blades because of the following: 1. Abrasive blades burn the paint and galvanizing at the cut edge, leaving edges that are jagged and unsightly and rust more quickly 2. Abrasive blades produce hot metal filings that embed in the paint and cause rust marks on the face of the panel. If saw cutting cannot be avoided, select a carbide-tipped blade specially designed for cutting light-gage ferrous metal panels. These blades are now available at many home centers and lumber yards. 1. All saw cut panels must be turned face down and cut in a location down-wind and well away from the building and other panels to avoid embedment of metal filings on other panels 2. All saw cut panels must be thoroughly wiped to ensure the removal of all metal filings. Pre-drilling wall panels gives uniform alignment of screw rows. BE SURE TO REMOVE ANY FILINGS ONCE PANELS ARE INSTALLED TO AVOID RUST MARKS FROM THE FILINGS.

Building Maintenance

A metal roof should be inspected annually and cleaned as necessary to maintain its beauty and performance. Any debris or residue, including leaves, twigs, and dust should be cleaned off promptly to prevent moisture entrapment against the metal, which may lead to finish deterioration or premature corrosion. Flashings may need to be re-sealed periodically in order to maintain optimum weathertightness.

Proper Storage

Store metal panels indoors when possible; if outdoors, cover and elevate. Elevate one side higher for water drainage. Never cover in plastic; us a tarp that can breath. Allow for air circulation. If a bundle gets wet, break bands and separate sheets; allow sheets to dry completely and only re-stack if completely dry. Product should be stored for a maximum of 2-4 weeks before being installed.

Spray Foam Insulation

When insulating metal with spray foam insulation, the first application layer should be getting the insulation behind all framing members. When completing the insulation, ensure the spray foam is installed in 2" thick layers (maximum) until desired thickness is achieved.

LOAD TABLES & TESTING

Spacing of Fastener Rows

Substrate	Fastener	9"	12"	15"	18"	21"	24"
3/4" Plywood	#14 Woodtite	317 mph	274 mph	245 mph	225 mph	207 mph	195 mph
5/8" Plywood	#14 Woodtite	245 mph	212 mph	189 mph	172 mph	159 mph	150 mph
1/2" Plywood	#14 Woodtite	269 mph	233 mph	209 mph	190 mph	176 mph	164 mph
19/32" OSB	#14 Woodtite	205 mph	177 mph	158 mph	144 mph	133 mph	125 mph
7/16" OSB	#14 Woodtite	171 mph	148 mph	133 mph	120 mph	112 mph	104 mph
SPF #2 (1.5" Pen.)	#14 Woodtite	388 mph	336 mph	300 mph	275 mph	242 mph	212 mph
SPF #2 (1" Pen.)	#10 Woodtite HLX	273 mph	236 mph	211 mph	193 mph	178 mph	167 mph
SPF #2 (1.5" Pen.)	#10 Woodtite HLX	359 mph	311 mph	278 mph	254 mph	234 mph	212 mph
	Screws Per Square	210	160	130	110	90	80

Table per ASCE 7-10: category II (residential), exposure B (neighborhood), 4:12 gable roof, mean roof height 18', roof zone 3

This table is provided as a courtesy to our customers to give approximate allowable wind speeds for typical residential buildings using the standard fastening schedule as shown in this book. Fasteners shall have an embedment depth listed above or fully penetrating plywood or OSB. Contact Fabral Engineering for detailed design values.

UL RATINGS

UL790 Class A Fire Rating applies to all Steel panels 29 ga and thicker and all Aluminum panels .032" and thicker.

UL2218 Class 4 Hail Impact Rating applies to all Steel panels 29 ga and thicker and all Aluminum panels .032" and thicker.

INSTALLATION INSTRUCTIONS

Building Design and Construction

In order to ensure the anticipated performance and longevity, protect metal panels from potentially corrosive situations and materials. When treated lumber will be in direct contact with metal panels or flashings please note the following: Galvanized steel is compatible with the CCA (Chromated Copper Arsenate) pressure-treated lumber that was predominantly used before 2004, but not with the older Penta treated lumber or the new ACQ (Alkaline Copper Quartenary), CA (Copper Azole), or CBA (Copper Boron Azole). Stainless steel or other special treated fasteners should be used into these non-compatible pressure treated lumbers. Aluminum must be separated from contact with all treated wood since the soluble copper in the preservative is corrosive to aluminum. Likewise, dissimilar metals also require a protective barrier between them to prevent galvanic corrosion. Request FABRAL Technical Bulletins #803, 106, and 107 for more information on treated lumber and dissimilar metals.

PLASTIC, BUILDERS' FELT, BITUMINOUS PAINT, CAULKING, OR GASKET MATERIAL MAY BE USED TO SEPARATE PANELS FROM TREATED WOOD AND DISSIMILAR METALS. When using aluminum panels in direct contact with steel, use a separator as described above and fasten with Stainless Steel screws.

Fertilizer, lime, acids, feeds, manure, soils, and many other compounds also cause corrosion in metal panels. Contact between metal panels and any potentially corrosive materials should be prevented.

Porous insulation materials may absorb and retain moisture, and should not be used in direct contact with metal panels. Use a vapor barrier such as polyethylene plastic or 30-lb felt to prevent moisture from contacting both the insulation and the metal panel.

FABRAL's translucent panels are intended for siding applications only. In all situations, foot traffic should be avoided on translucent panels. Translucent panels used in roofing applications will break down in a short time and cause staining and premature corrosion of the metal panels below. If used on roofs, apply butyl caulking to separate the fiberglass panels from the metal. Translucent panels should be cleaned and sealed regularly, as recommended by the translucent panel manufacturer.

Purlins, Girts and Roof Deck

The substructure to which the metal panels are fastened must be properly spaced and sufficiently thick to provide a roof or wall system able to meet required design loads.

A 2" nominal lumber thickness or 1" nominal thickness are both acceptable purlins. If snow guards are to be installed in the future, a 2 x 8 purlin can be installed in the area for snow guard installation. Call engineering for locations of 2 x 8 purlins. When using purlins, FABRAL recommends a maximum spacing of 24" on-center. Pullout values decrease if the fasteners protrude completely through the purlins. Kiln-dried softwood is recommended for purlins or decking (pine, fir, hemlock, and spruce). Hardwoods are difficult to fasten into without splitting and contain tannic acids that are corrosive to metal panels. Green (non-kiln-dried) lumber may warp, twist, and shrink as the wood seasons fully,causing waviness in the panels as well as loosening and leaking of the fasteners.

Solid decking is required for all residential applications. When using solid decking or sheathing, always use 30-lb felt or underlayment and plan on using closer fastener spacing and larger diameter #14 screws. (Refer to the tables on page 4).

On re-roofing projects where the condition of the old decking is in question, or where existing shingles will be left in place, new 2x4 or 1x4 purlins should be fastened through the decking and into the rafters. This will provide a solid framework for attaching the metal

panels. For more detailed information on re-roofing applications, consult FABRAL Technical Bulletin #721, Re-Roofing With Metal. Load tables are available for all FABRAL panels; contact FABRAL for additional information.

Roofing

Panel sidelaps should face away from wind driven rain. To accomplish this, begin by installing the first sheet square with the eave and gable at the down wind end of the roof, farthest away from the source of prevailing winds or away from the primary viewing location.

In applications requiring a panel endlap, please refer to the detailed instructions in this booklet. For best results, lap panels as shown and install in the indicated sequence.

ALL ENDLAPS REQUIRE SEALANT. WHEN WEATHER-TIGHTNESS IS CRITICAL, USE SEALANT TAPE IN ALL SIDELAPS.

To provide a drip edge, allow an overhang of 1 to 2 inches at the eave. At the gable edge, use a gable or sidewall flashing. This will keep weather out, prevent lifting in high winds, and provide a neat, finished appearance. The trim and roofing sheet should be fastened every 12 to 24 inches along the gable edge. Do not step on panel ribs or on trim pieces to prevent kinking.

Roof Pitch

The metal roofing panels shown in this manual require a minimum slope of 2½" per foot to ensure proper drainage. Refer to the rain-carrying table in this booklet for the maximum allowable panel length per slope that will provide adequate drainage. For longer slopes and lower roof pitches, contact FABRAL for other suitable profiles.

Bending and Bowing

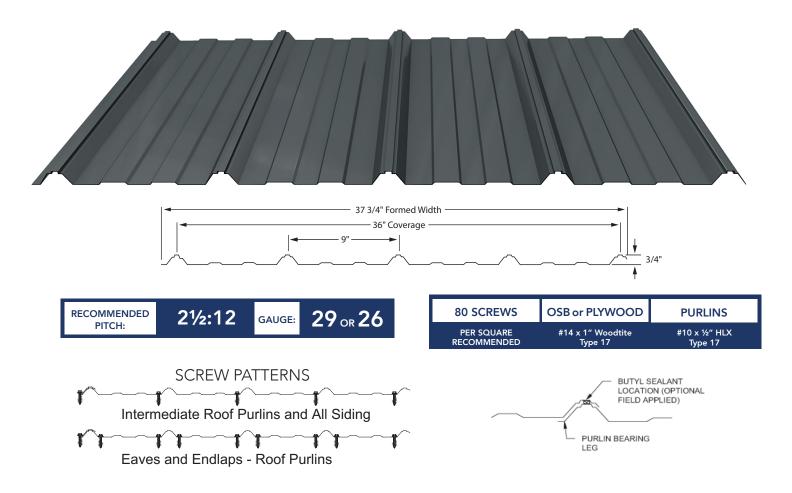
Aluminum and Steel roofing and siding sheets are rollformed from hardened, tempered metal for maximum strength. If a sheet must be bent, a gentle 90-degree bend is the maximum recommended. Metal should not be re-bent once it has been formed, nor should it be folded back on itself. When a metal roofing sheet must be installed on a curved roof, screws should be installed at every overlapping rib at the sheet ends to resist the natural tendency of the metal to spring back. The standard fastening pattern is permitted over the rest of the sheet. When installing the metal panels shown in this booklet over a curved arch, the minimum radius of the arch is 18' for aluminum panels and 24' for steel panels. Use sealant tape or butyl caulking at all sidelaps and endlaps. Additional care and fasteners must be provided when securing the top and bottom purlins on an arched rafter building to prevent the curved panels from pulling the purlins loose from the rafters. Ring-shank pole barn nails, heavy wood screws, lag screws, or bolts are often used for attaching these purlins.

Siding

Siding should be installed using the standard fastening and overlap patterns to ensure optimum performance. For strong, neat corners use hemmed corner flashings. DO NOT RUN SIDING SHEETS ALL THE WAY TO THE GROUND. INSTEAD, PROVIDE A PROTECTIVE BASE OF CONCRETE, MASONRY, TREATED WOOD, OR SIMILAR MATERIAL AND TERMINATE THE SIDING SHEETS 6" ABOVE GRADE.

If siding sheets are installed horizontally, use sealant tape or butyl caulking at the vertical laps to ensure weather-tight joints. Install panels from the bottom up so that water is directed away from, and not into, the lap joints.

EXPOSED FASTENER PANELS



See page 6 for a load table

GRANDRIB 3+

This enhanced version of the original Grandrib 3 panel has a G-90 coating for better weather performance and durability. Grandrib 3 Plus is a thicker metal panel, increasing strength and appearance while still providing the traditional benefits of a metal roof. Complete with a wide range of color selections, this panel is a superior choice.

GRANDRIB 3®

Grandrib 3 is the "benchmark of the industry" and can be used for walls and roofs. This unique and versatile panel is available in a variety of popular colors. The panels have clean traditional lines, and are manufactured from the best structural steel available. Also available in .015 aluminum, true white only by special order.

GRG

These panels are made of utility grade construction with zinc aluminum protective coating. The vertical lines and popular colors make this an economical and durable solution for a variety of structures.

GRANDRIB LINER PANEL

Available in Galvanized G30 or .015 Aluminum

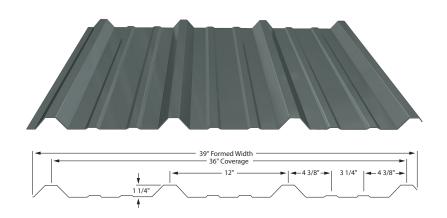
EXPOSED FASTENER PANELS

STITCH SCREWS REQUIRED IN CERTAIN APPLICATIONS.

MIGHTI-RIB®

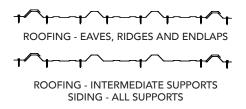
SCREW PATTERN



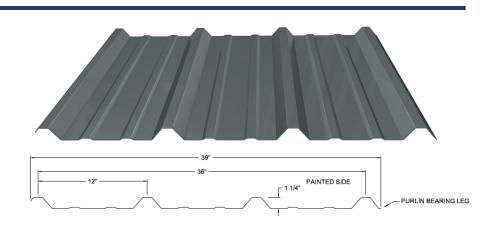


PBR

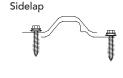
SCREW PATTERN



*Spokane and Fort Worth market only



PROCLAD



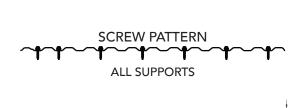


SCREW PATTERN

INTERMEDIATE ROOF PURLINS AND ALL SIDING

*St. Joseph, MN, Marshfield, WI, and Gridley, IL markets only

PRIME RIB®

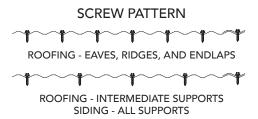




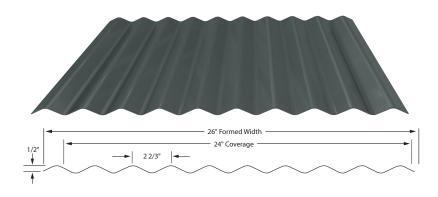
*St. Joseph, MN, Marshfield, WI, and Gridley, IL markets only

EXPOSED FASTENER PANELS

2 ½" CORRUGATED



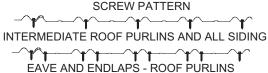
Note: Roofing panels require side laps cover two corrugations. *Available in plain galvanized only.

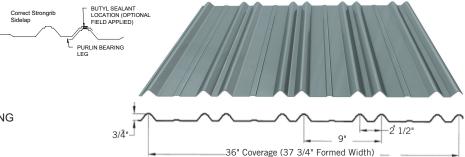


Wall application- 24" coverage with 1 rib overlap Roof application- 21 1/3" coverage with 2 rib overlap

STRONGRIB®

.018 Aluminum, Plain and Painted White





*Available in Lancaster, PA market only in .018 Diamond embossed

CONCEALED FASTENER PANELS

FOR CONCEALED FASTENER PANELS PLEASE REFERENCE THE HORIZON AND SSR INSTALLATION MANUALS FOR TRIM AND FASTENER DETAILS.



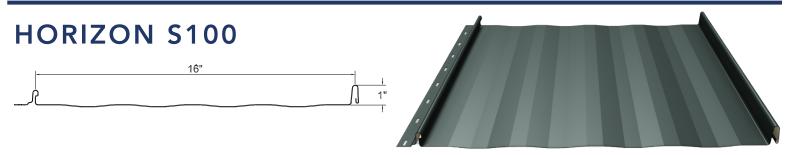
FEATURES STIFFENING PANELS TO ENHANCE THE APPEARANCE OF THIS PANEL.

*Available only in Spokane Region



FEATURES STANDARD SHADOW LINES TO ENHANCE THE APPEARANCE OF THIS PANEL

* Available only in Lancaster Region



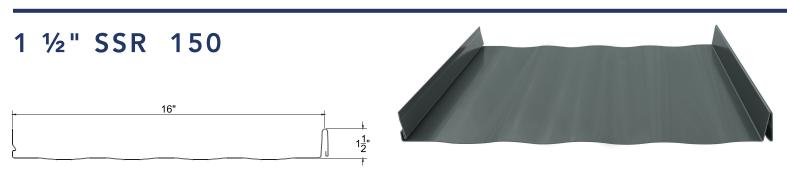
FEATURES STANDARD SHADOW LINES TO ENHANCE THE APPEARANCE OF THIS PANEL

*Available in Gridley, Marshfield, Salt Lake City, and St. Joseph Regions



FEATURES STANDARD SHADOW LINES TO ENHANCE THE APPEARANCE OF THIS PANEL.

* Available only in Lancaster Region



FEATURES STANDARD SHADOW LINES TO ENHANCE THE APPEARANCE OF THIS PANEL

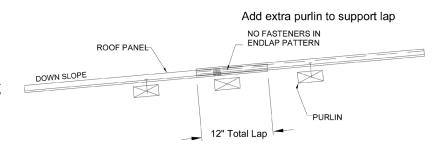
*Available in Gridley, Marshfield, Salt Lake City, and St. Joseph Regions

FLASHING DETAILS - POST FRAME

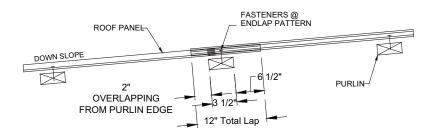
ENDLAP & LONG RUN ENDLAPPING INSTRUCTIONS

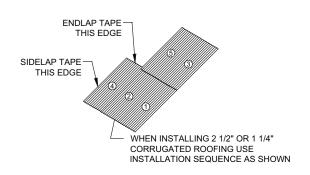
- 1. Apply 3/32" x 1/2" butyl endlap sealant on bottom panel just below centerline of purlin (see endlap diagram for location) on panel #1.
- 2. Apply sidelap sealant on panel #1 and connect to endlap sealant.
- 3. Place panel #2 so it overlaps panel #1, 12" as shown. Install screws per endlap fastening pattern.
- 4. Apply sidelap sealant on panel #2 to connect to sidelap sealant of panel #1.
- 5. Place panel #3 over sidelap of #1 and #2.
- 6. Apply endlap sealant on panel #3.
- 7. Apply sidelap sealant on panel #3 and connect with endlap sealant.
- 8. Place panel #4 over endlap of panel #3. Install screws per endlap pattern.
- 9. Repeat sequence for entire roof.

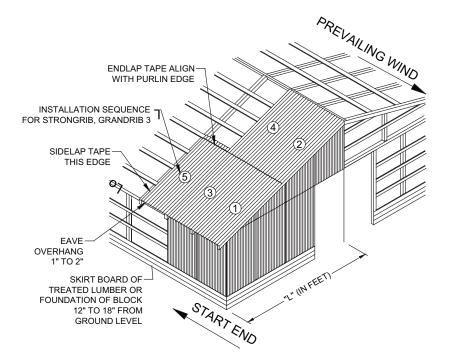
FLOATING LAP FOR ALUMINUM AND 3+ STEEL RUNS



FIXED LAP FOR 2 STEEL RUNS

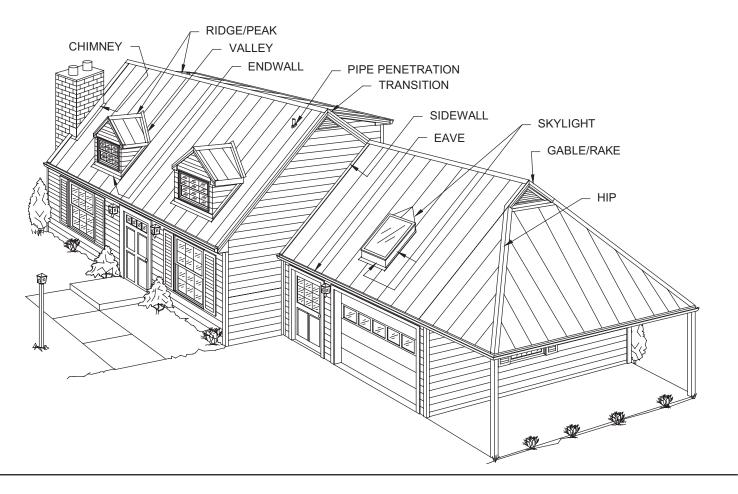






EXPOSED FASTENER PANEL - RESIDENTIAL

BUILDING DETAILS



- 1. Determine the thickness and type of substrate to be used to support the metal roofing. Solid decking is required for all residential applications (i.e., plywood, OSB).
- 2. Refer to the Load-Span tables to select the proper fastener and spacing to meet loads on your structure.
- 3. Consult local building codes and restrictions to determine acceptable methods of construction for residential applications in your area.
- 4. Solid decking with 30# felt or synthetic underlayment for residential applications is required. Ice & water shield or similar self-adhesive membrane is recommended at all valleys, dormers, chimneys, transitions, skylights and other critical areas.
- 5. When re-roofing over an existing shingle roof with metal panels, Fabral recommends to install a new underlayment with 2x4 or 1x4 furring strips and attach the panels to the furring strips. Panels may be attached directly over shingles with an underlayment however please see technical bulletin #721 for more information.
- 6. ZIP System® sheathing, which has a "built in" vapor barrier, is an acceptable substrate and vapor barrier.
- 7. Request Fabral's technical bulletins #720 and #721 for more details on residential roofing.

Outside Corner Sidewall **Inside Corner** Ridge/Peak Endwall Gable Doors/Windows J-Channel/ **Building Detail** Eave Zee

Sidewall

A sidewall is a junction between a wall and a sloped portion of a roof.

Inside Corner

Inside corner trim is used when two metal panels intersect at the inside corner of a wall.

Endwall

Endwall is where your metal roof panels run into a wall.

J-Channel/Doors/Windows

The J-channel flashing acts as a receiver for metal roof panels, ridge caps, and headwall flashing

Zee

Zee closure is used when metal trim needs to be attached to the top of a standing seam panel.

Gable

A gable is a roof design where two sloping sides come together at a ridge.

■ Ridge/Peak

The Ridge/Peak is the horizontal line running the length of the roof where the two roof planes meet.

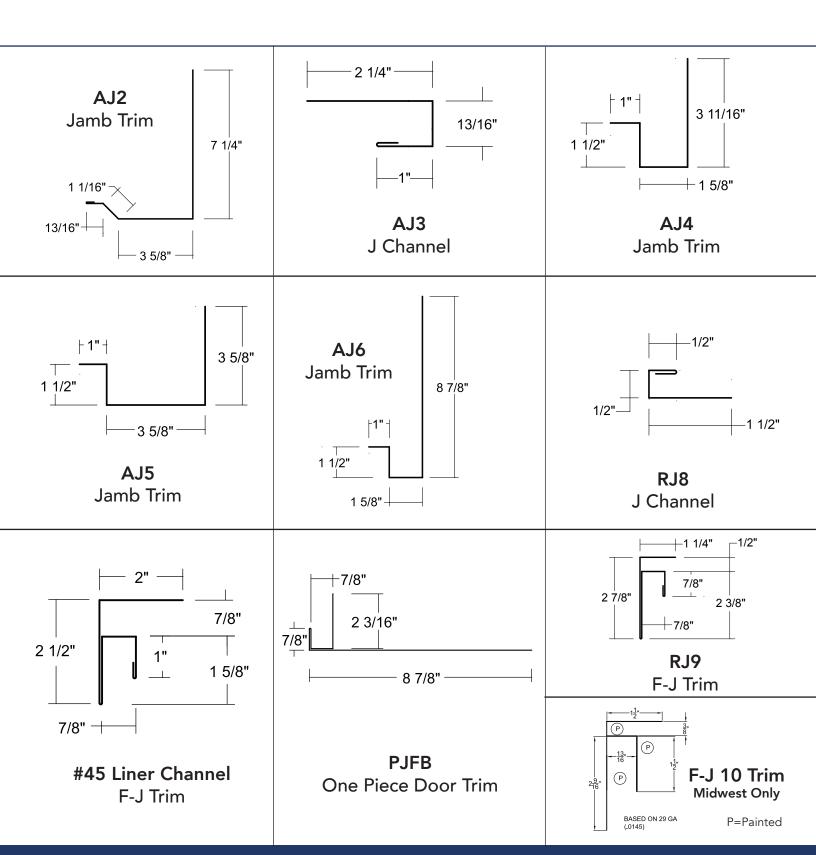
Eave

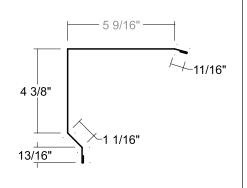
Eaves are the overhanging edges of the roof over the sidewall panels.

Outside Corner

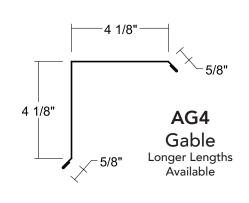
Outside corner trim is used when two metal panels intersect at the outside corner of a wall.

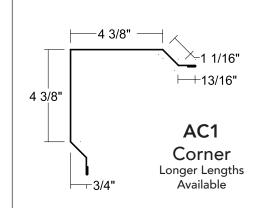
All flashing is 10' 6" in length and available in steel and aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.

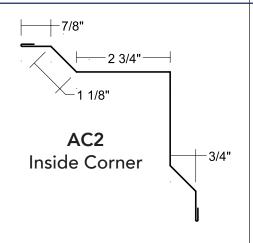


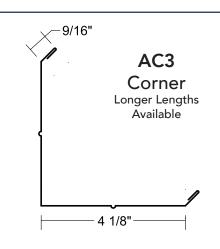


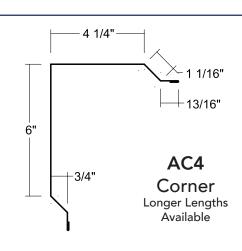
AG1 Gable/Rake

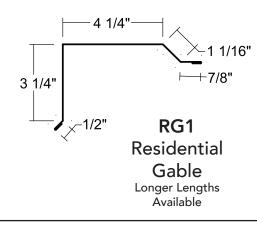


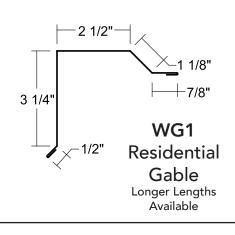


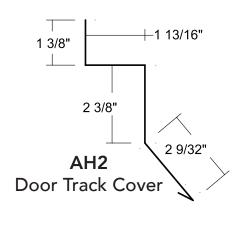


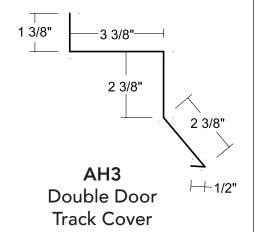


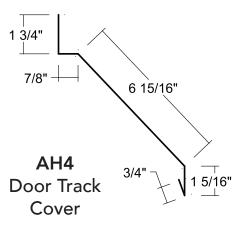


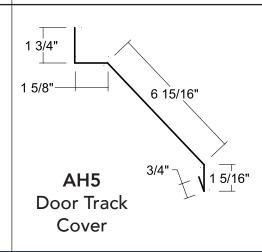


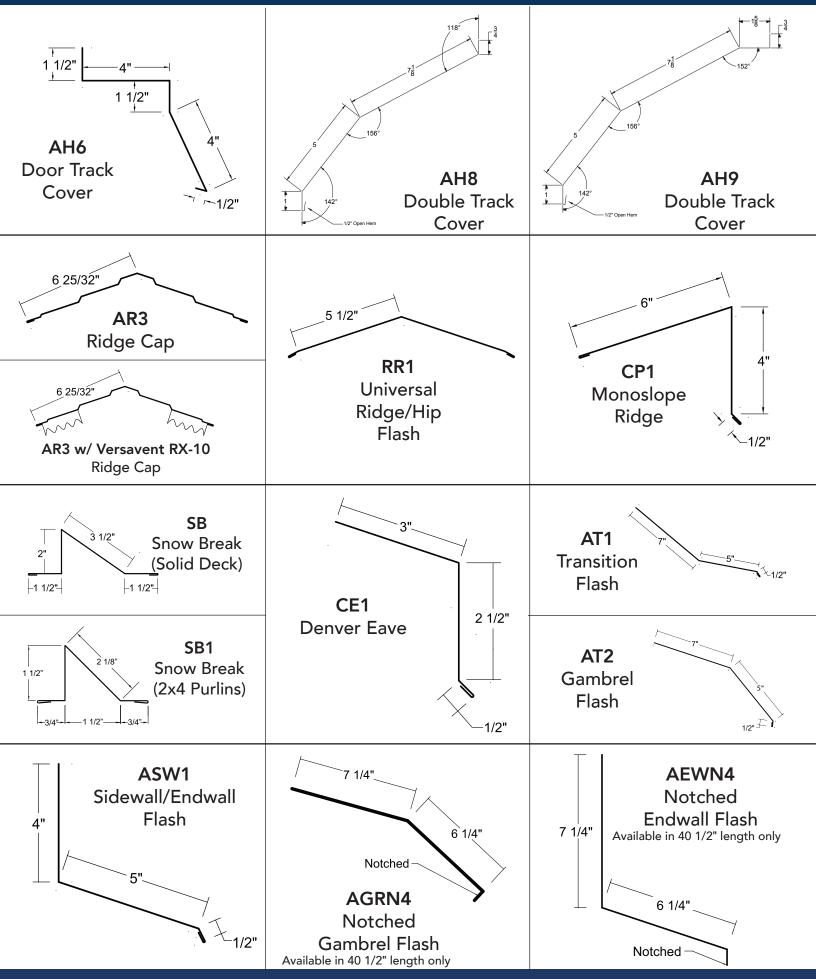


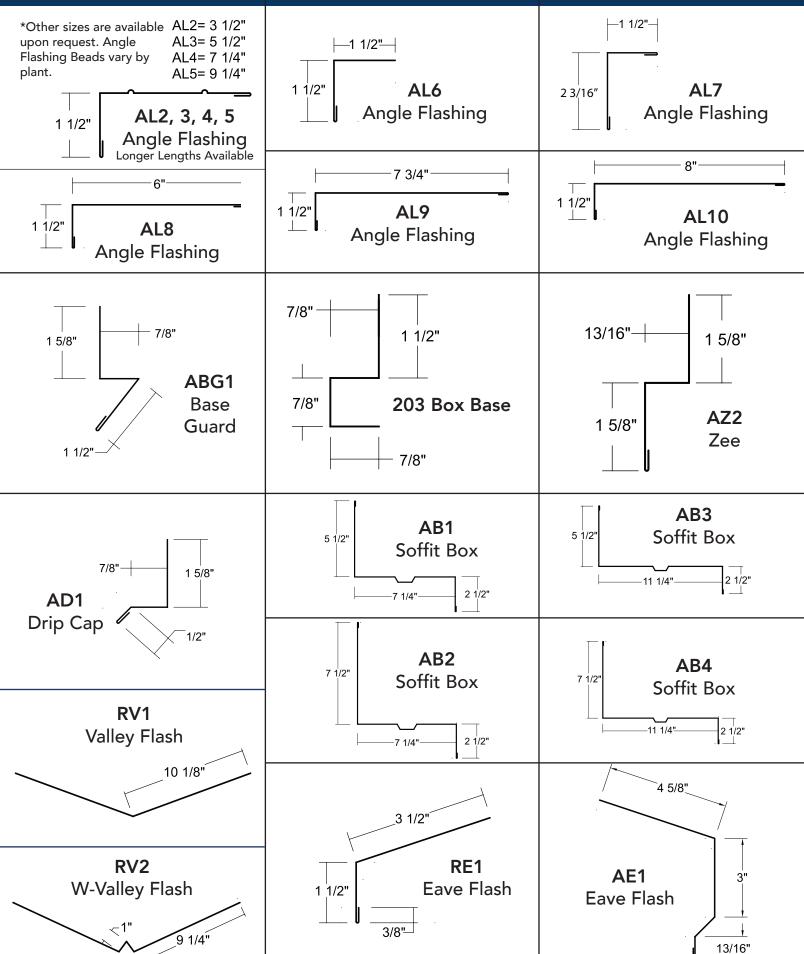






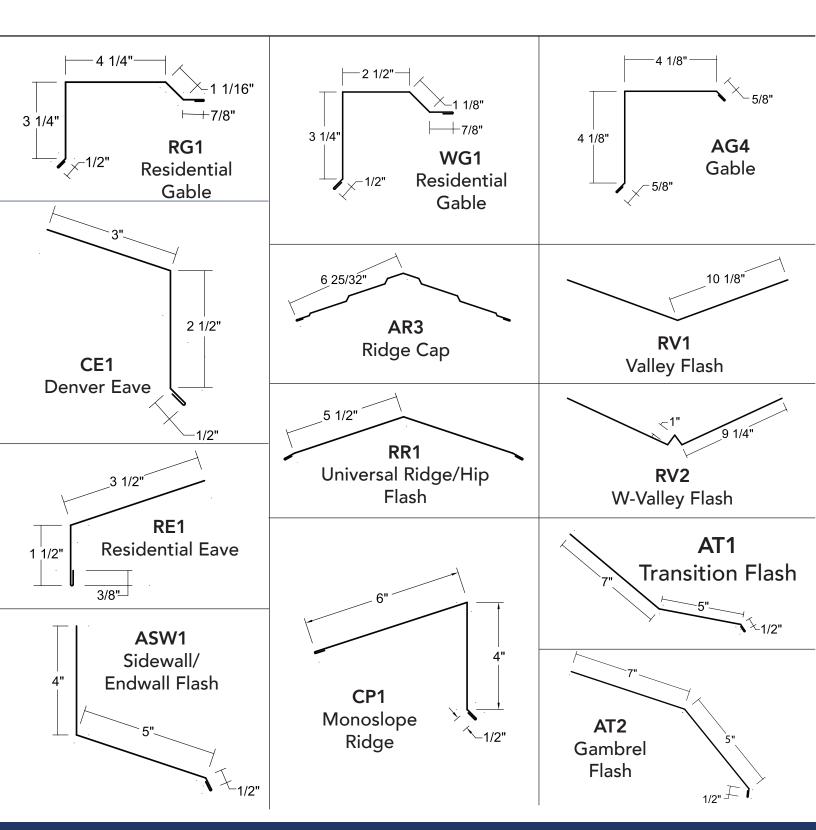






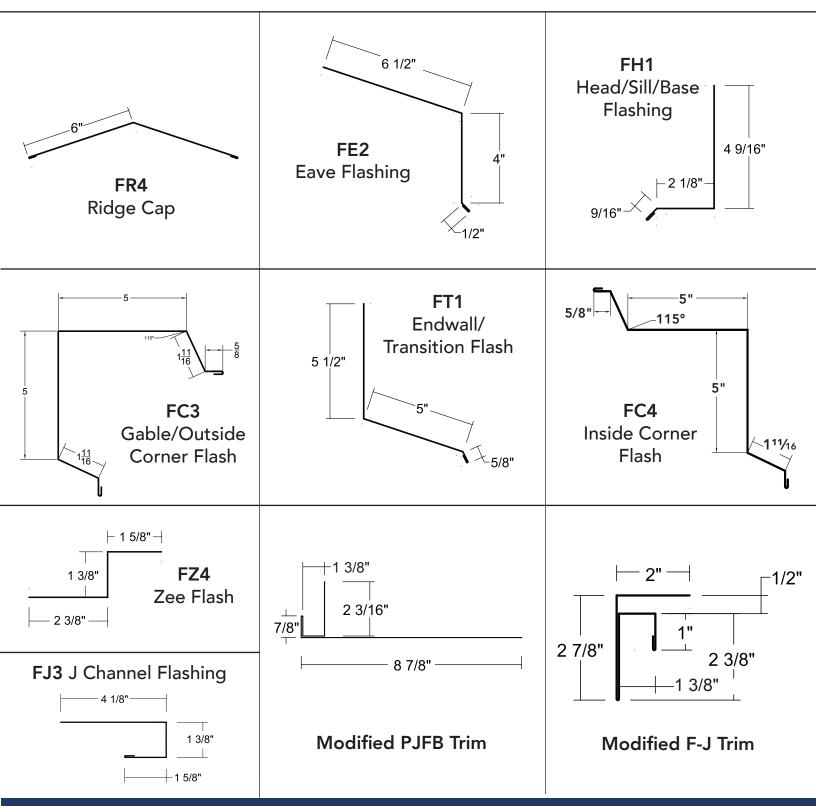
FLASHING & TRIM - EXPOSED-FASTENER PANEL

All flashing is 10' 6" in length and available in steel and aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.



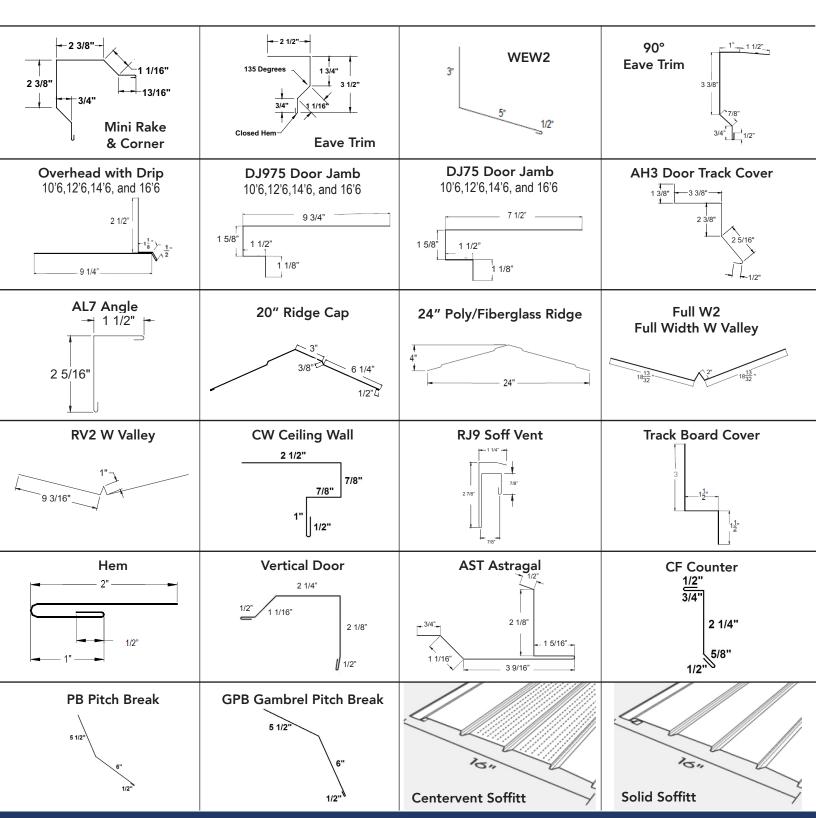
FLASHING & TRIM - MIGHTI-RIB®

All Mighti-Rib[®] specific flashing is 10' 6" in length and available in steel, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.



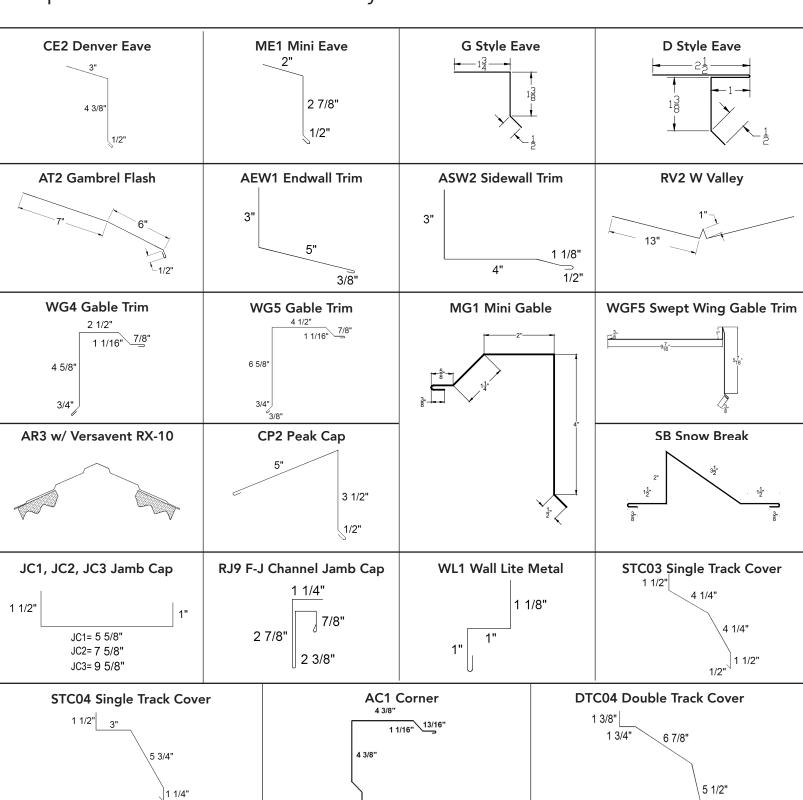
FLASHING & TRIM - ST. JOSEPH, MN

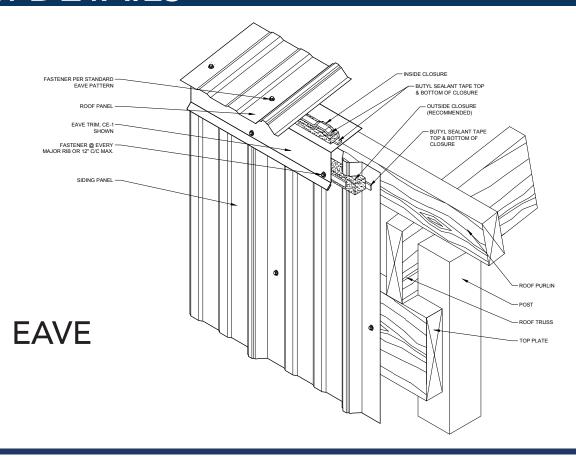
Regionally specific flashings and trims offered in addition to the standard offering. All flashing is 10′ 6″ in length and available in steel and aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.

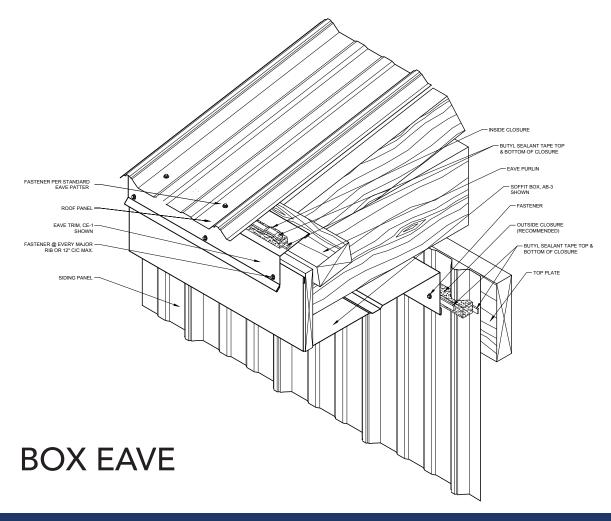


FLASHING & TRIM - SPOKANE, WA SALT LAKE CITY, UT

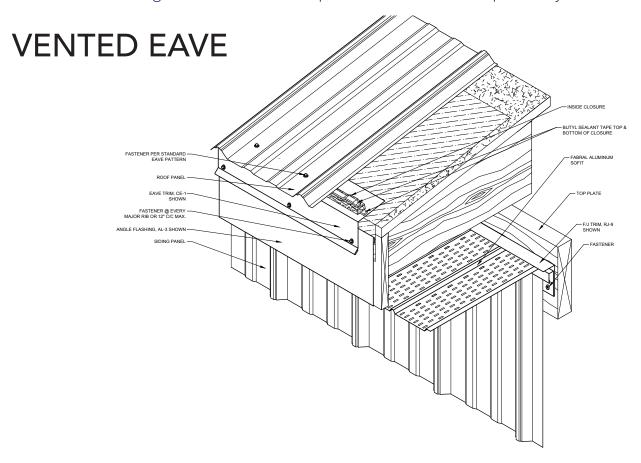
Regionally specific flashings and trims offered in addition to the standard offering. All flashing is 10′ 6″ in length and available in steel & aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.

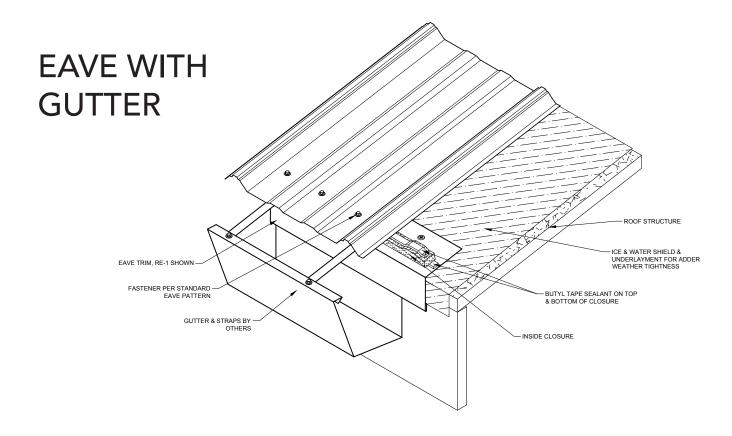


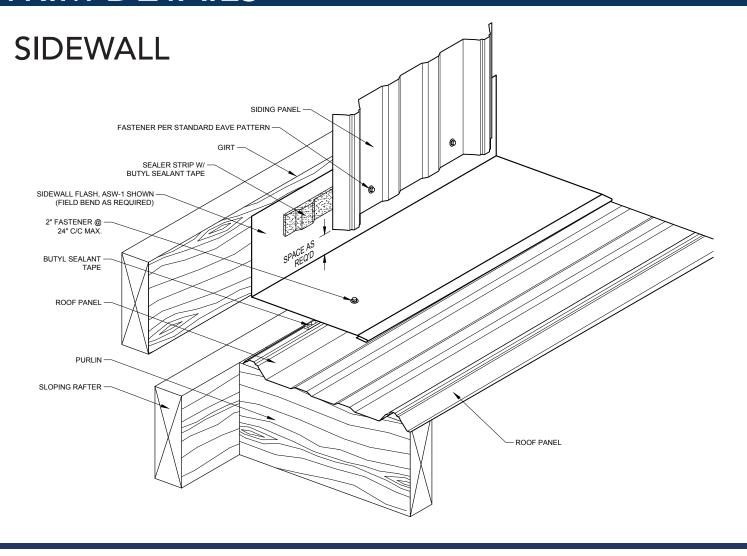


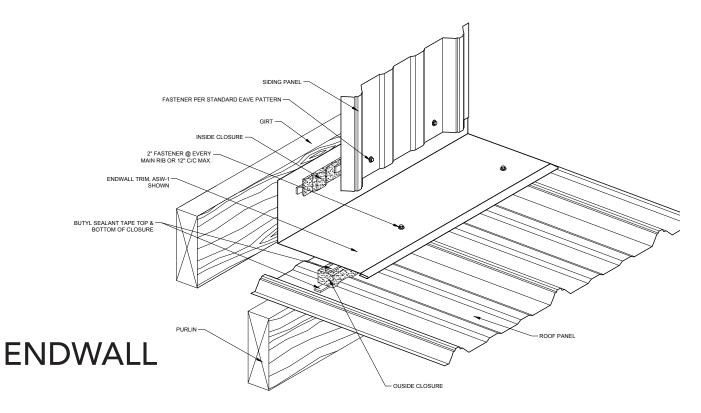


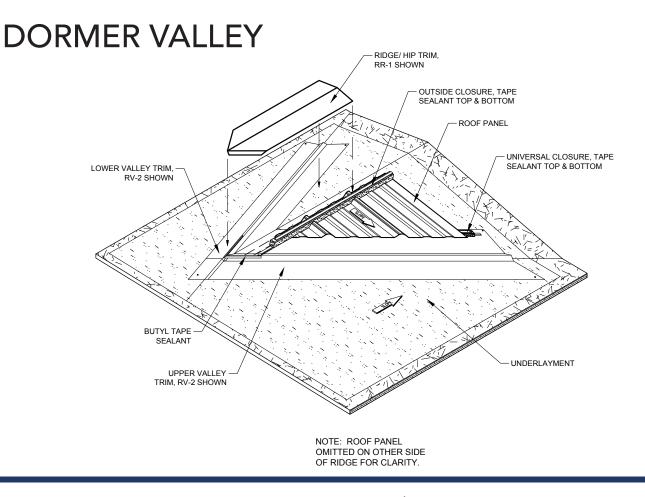
All residential flashings are formed for a 4/12 pitch unless otherwise requested by the customer.

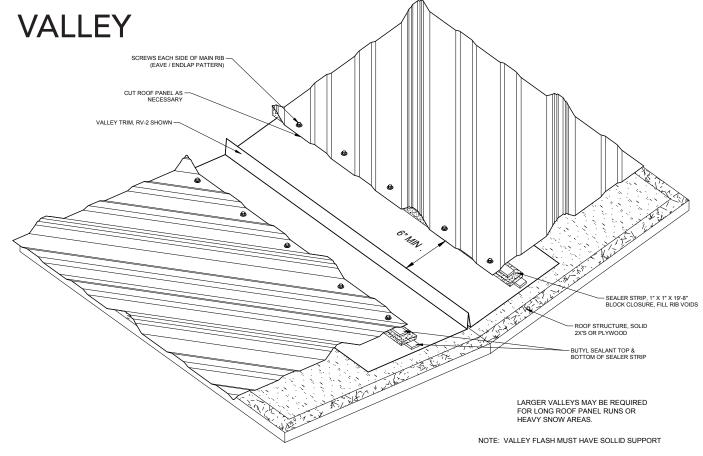


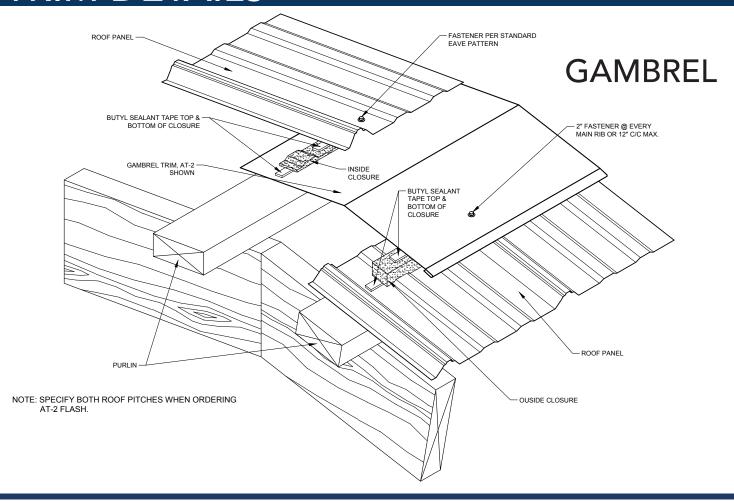


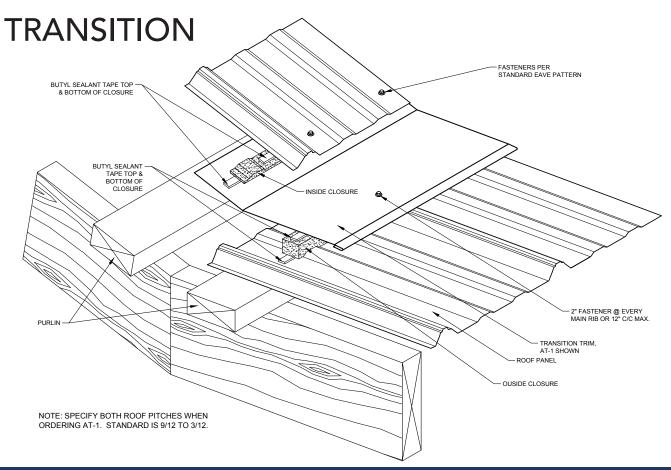


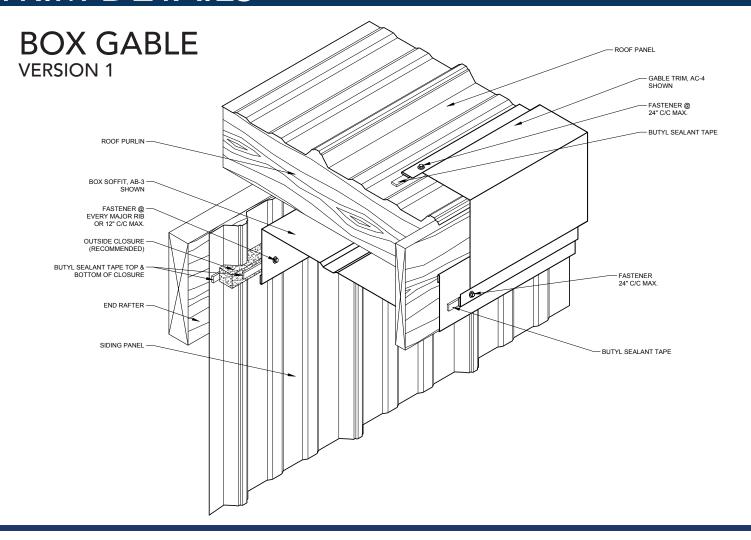


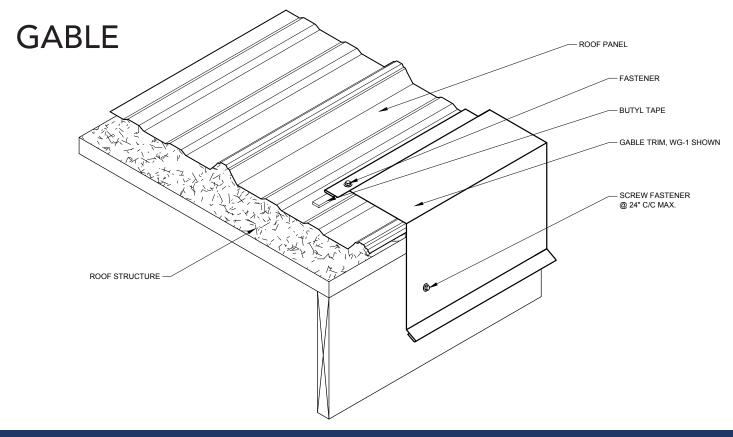


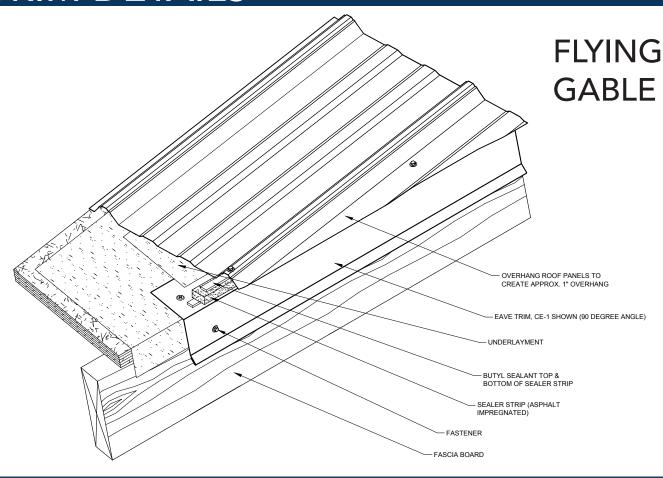


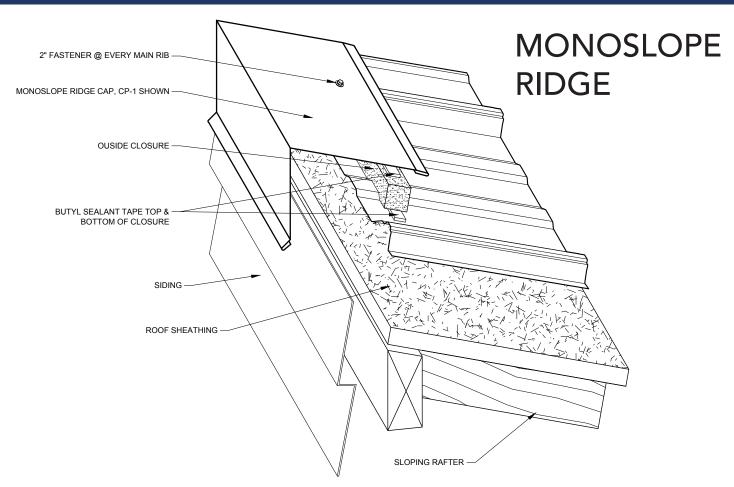




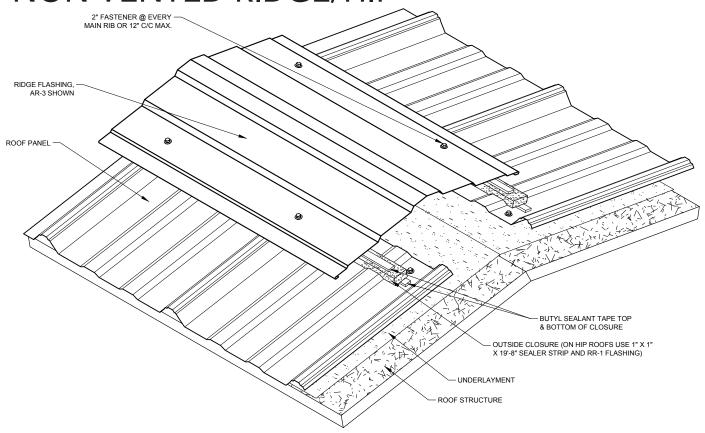


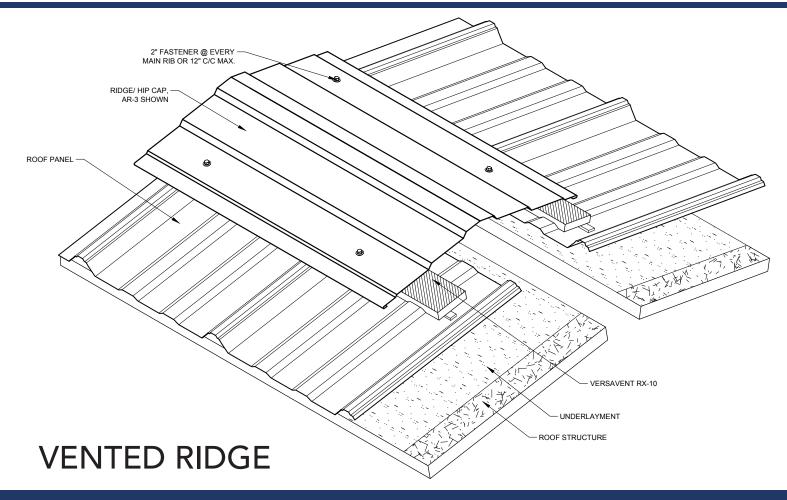


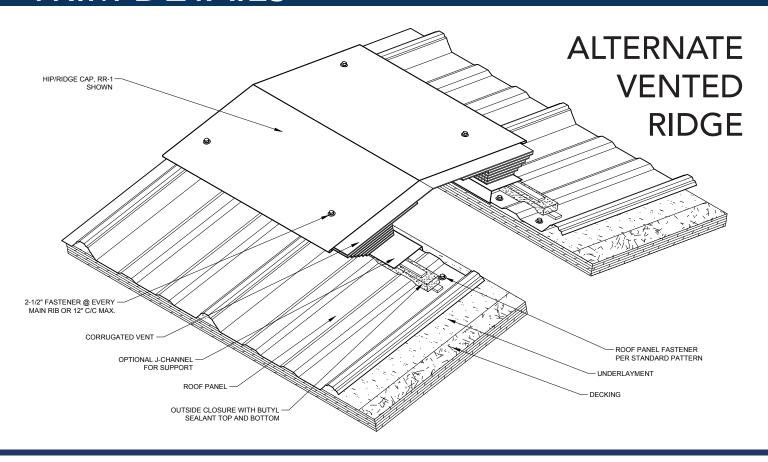


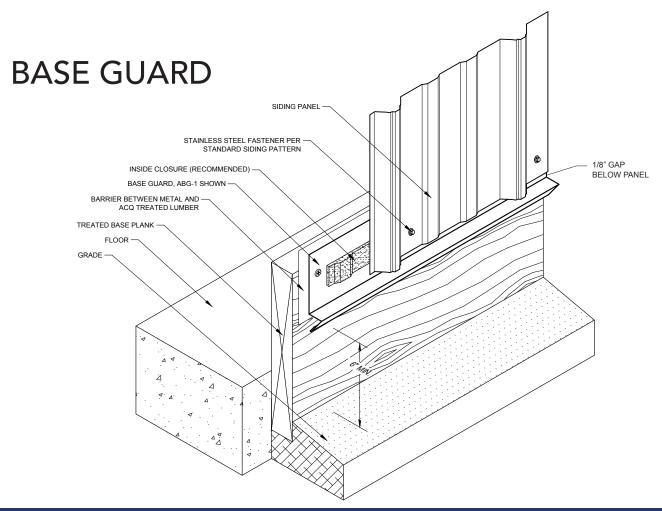


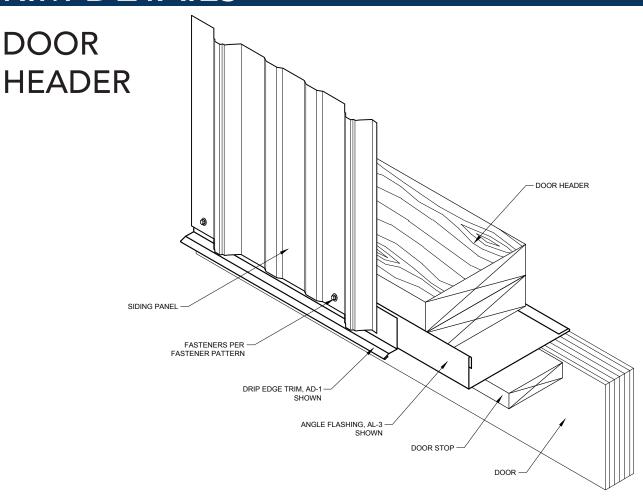
NON VENTED RIDGE/HIP





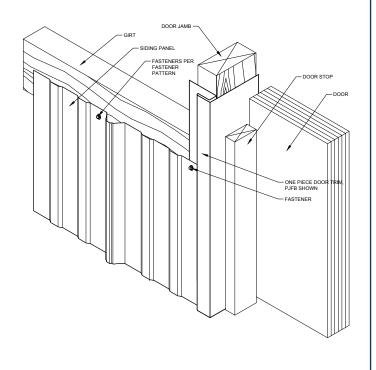




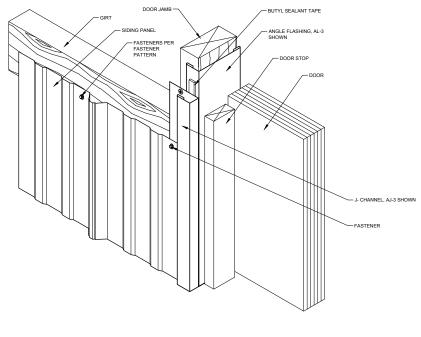


DOOR JAMB

VERSION 1

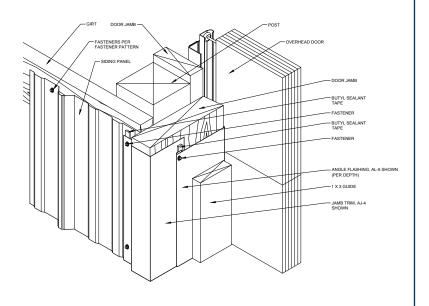


VERSION 2

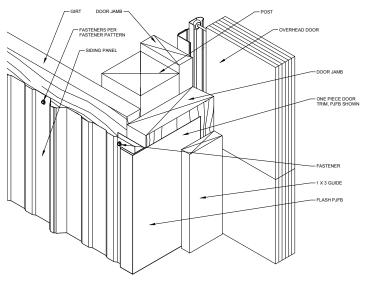


OVERHEAD DOOR JAMBS

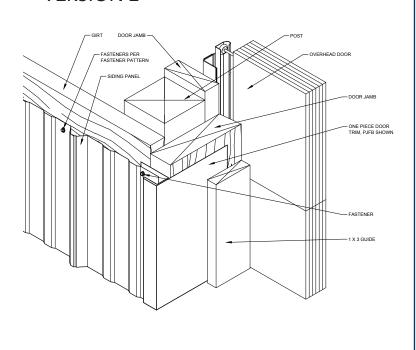
VERSION 1



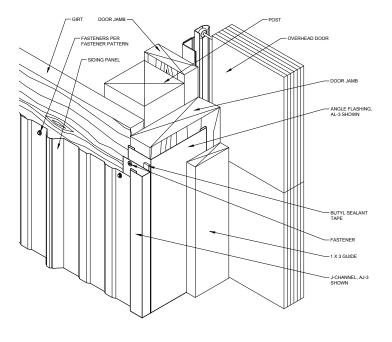
VERSION 3

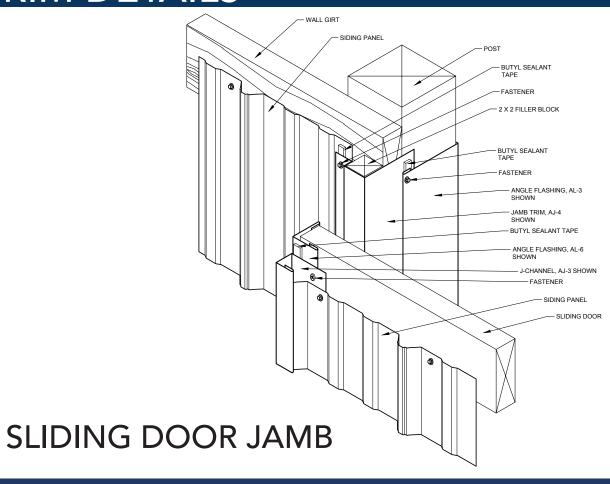


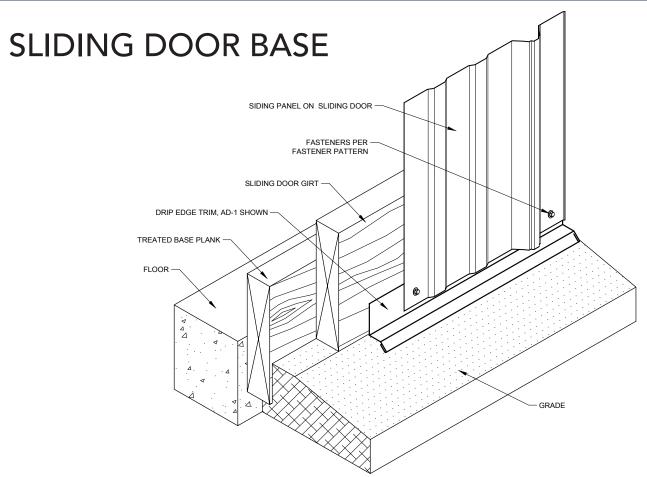
VERSION 2



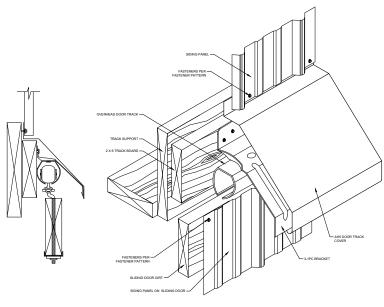
VERSION 4



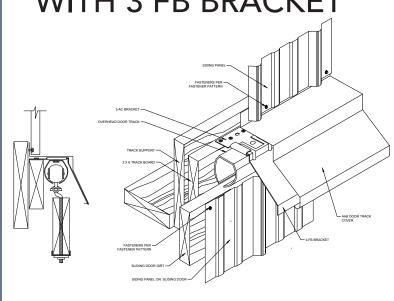




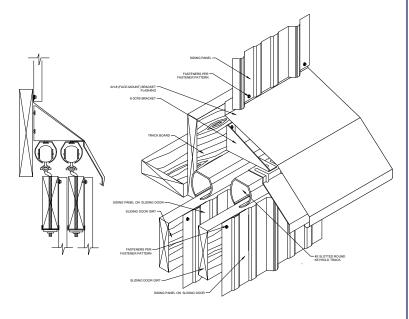
SLIDING DOOR FACE MOUNT HEADER WITH 3-1 PC BRACKET



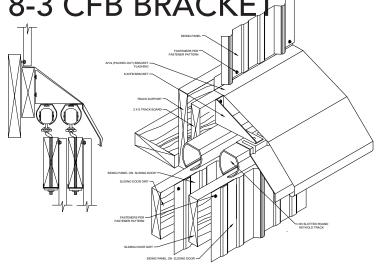
SLIDING DOOR TOP MOUNT HEADER WITH 3 FB BRACKET



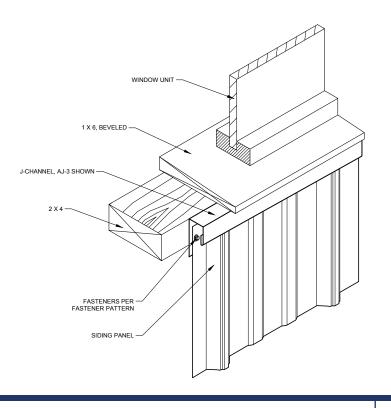
SLIDING DOUBLE DOOR HEADER WITH 8-3 CFB BRACKET



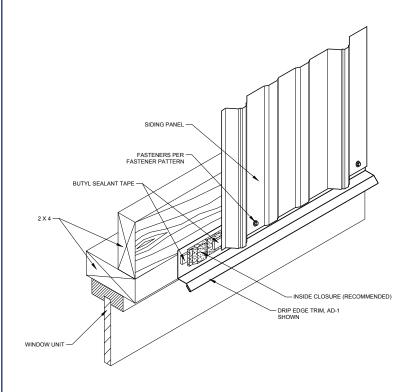
SLIDING DOUBLE PACKED-OUT DOOR HEADER WITH 8-3 CFB BRACKET



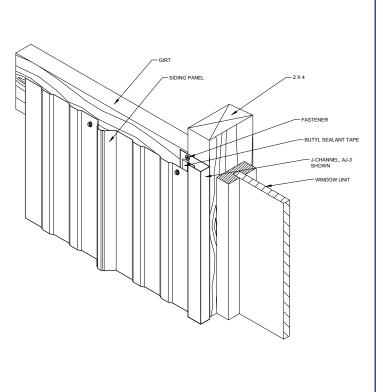
WINDOW SILL



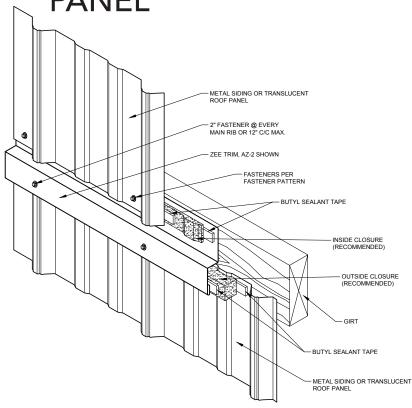
WINDOW HEADER

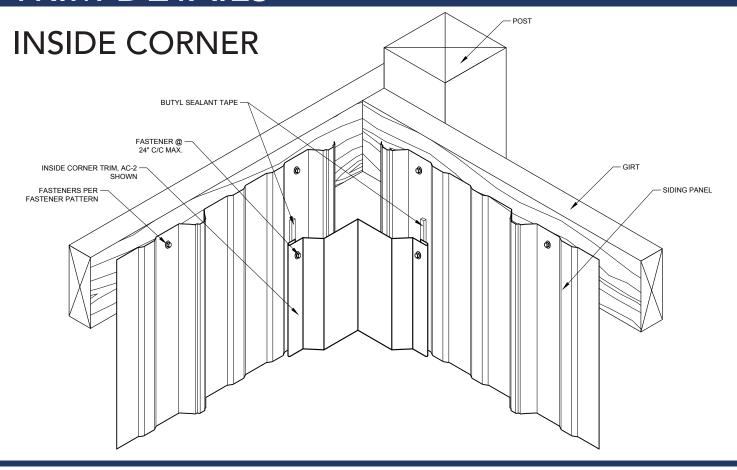


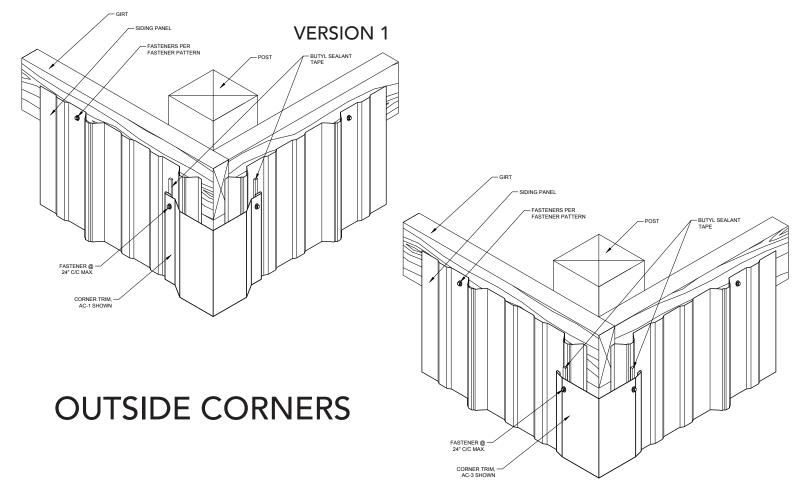
WINDOW JAMB

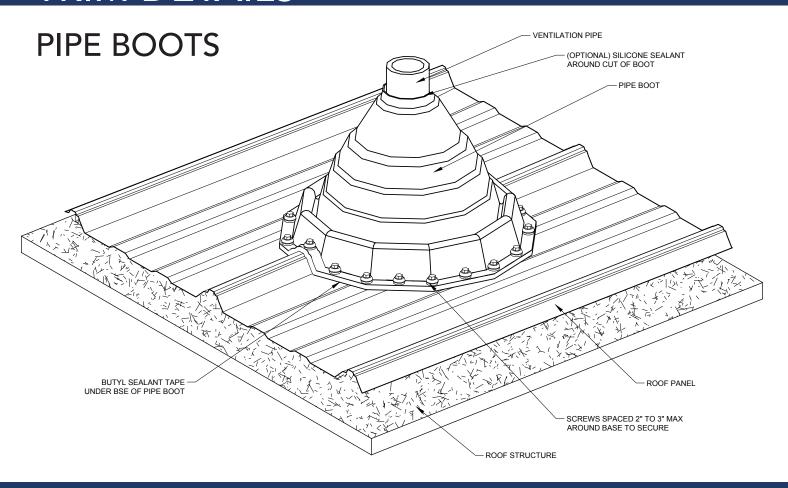


POLYCARBONATE PANEL

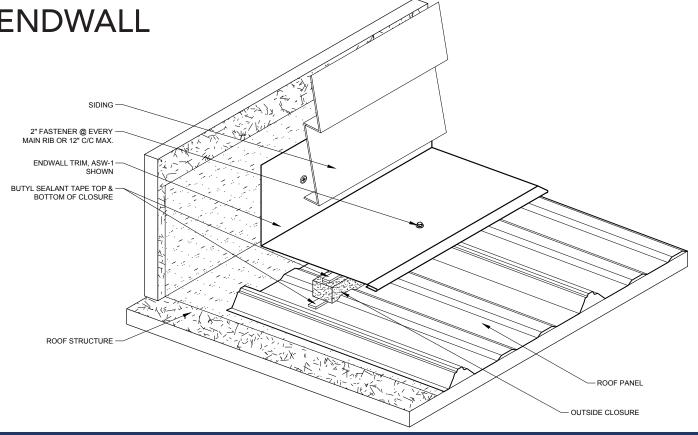


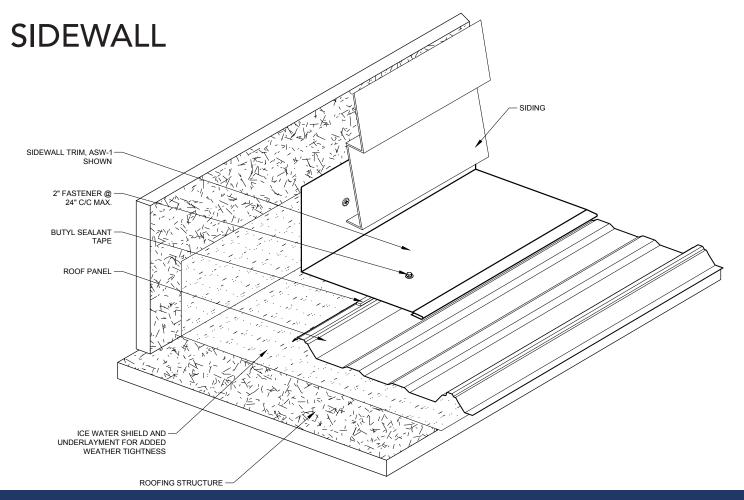


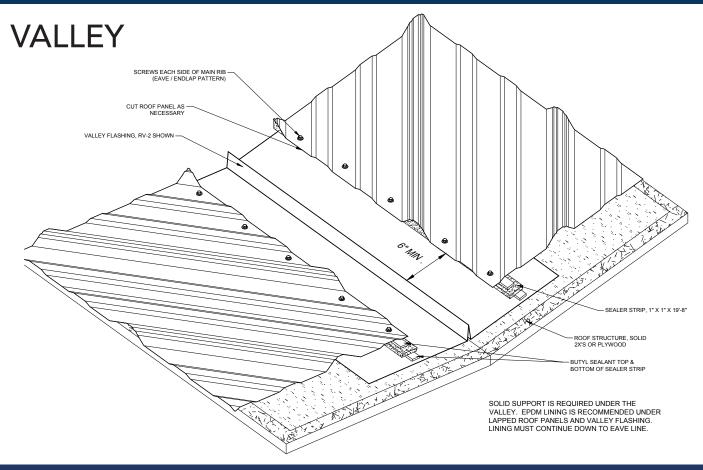


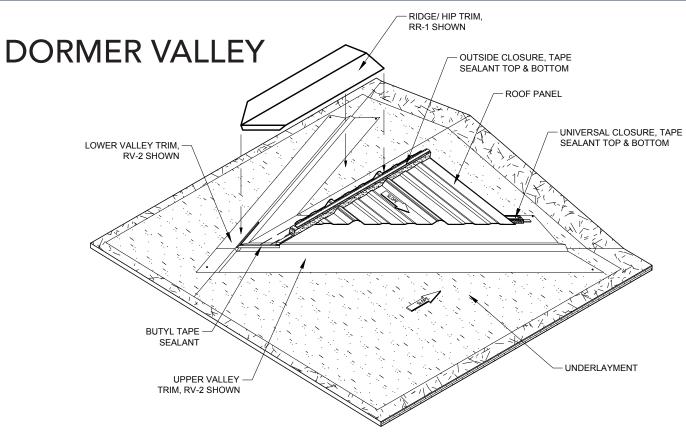


All residential flashings are formed for a 4/12 pitch unless otherwise requested by the customer. **ENDWALL**

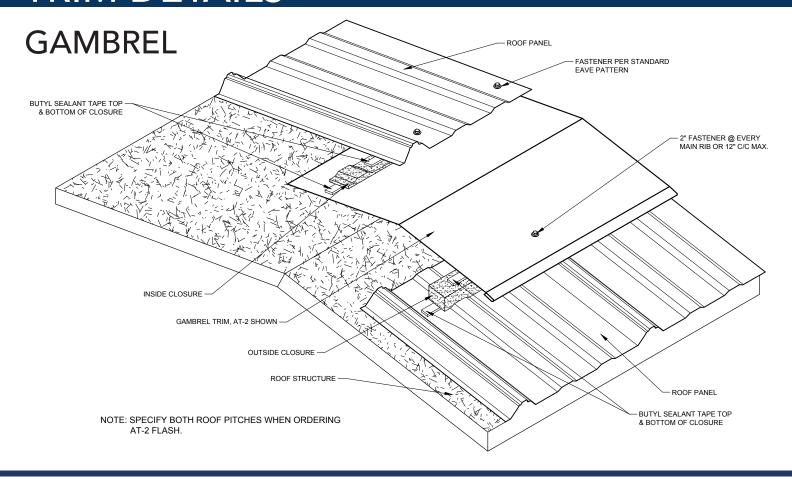


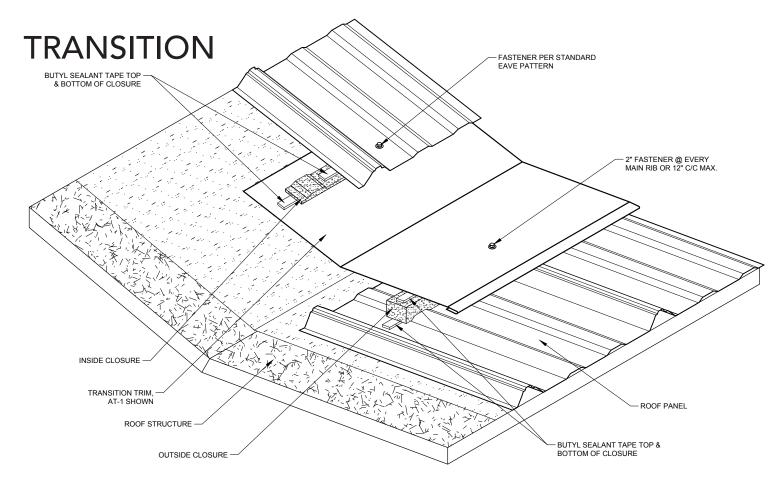


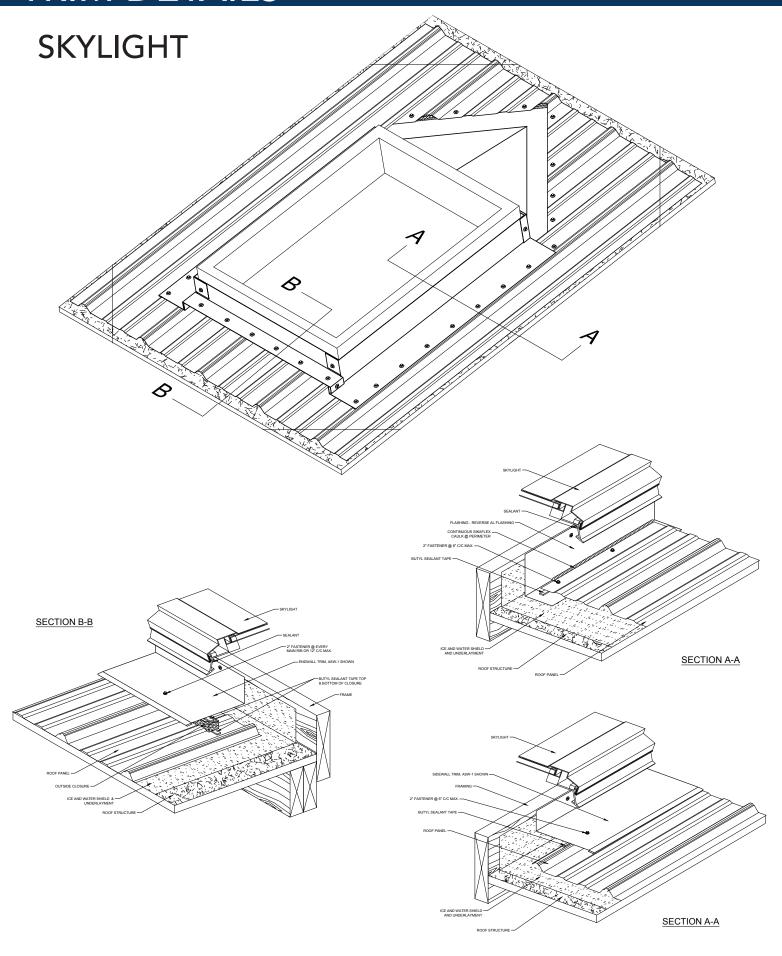


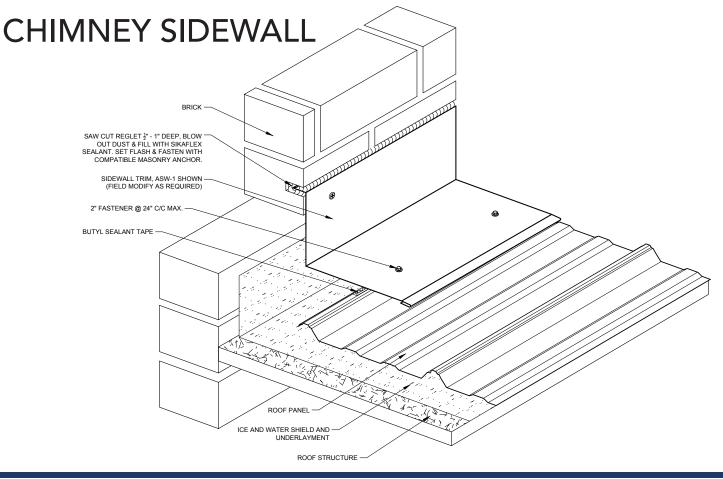


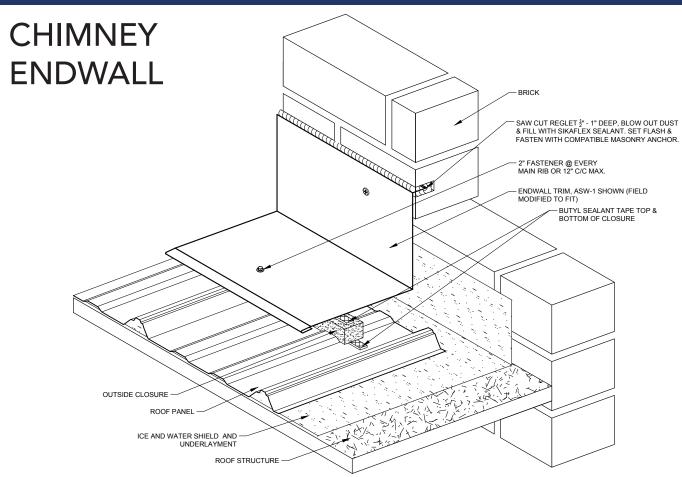
NOTE: ROOF PANEL OMITTED ON OTHER SIDE OF RIDGE FOR CLARITY.

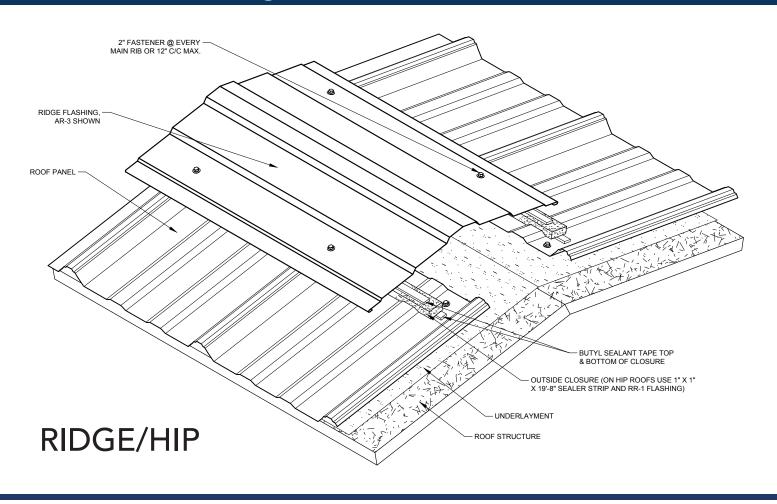


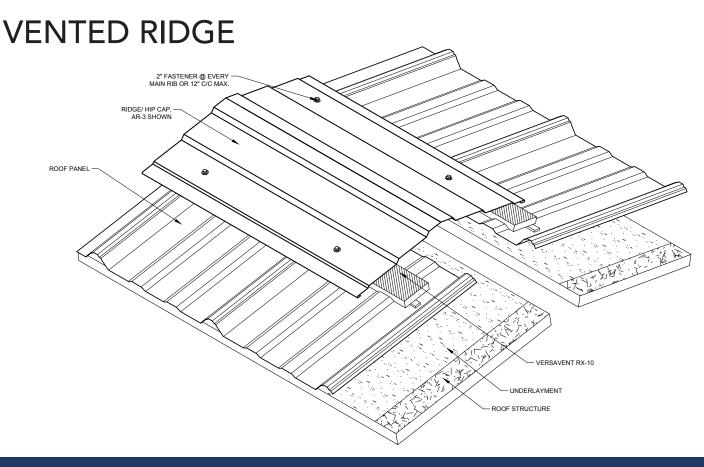


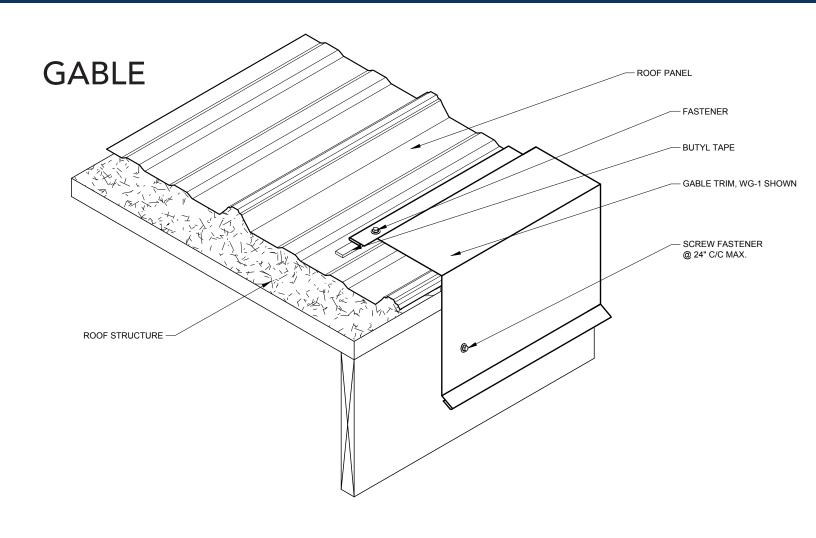












SYSTEM COMPONENTS

FLASHING AND TRIM

Fabral offers a standard package of flashing and trim for a variety of applications. Flashing is factory-formed at 10' 6" lengths and available in steel and aluminum with coordinating WeatherXL finishes and colors. Flat metal sheets are also available when installer





fabrication is preferred. Flashing details and assistance with flashing details are available from your Fabral Customer Care representative. Standard details are illustrated in the Fabral Blue Book on pages 20-42.

SOFFITS

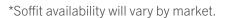
Soffit panels keep buildings ventilated allowing them to "breathe" and helping to prevent damaging moisture from being trapped in attics and eaves. Various ventilation patterns can be accomplished by alternating solid and vented or perforated panels.

SOFFIT DETAILS

- Full, Center, and Non-Vented Soffit Panels
- Aluminum recyclable and sustainable
- Pre-cut 16" coverage
- Quad 4 vented 12.96 sq.in./lineal ft free airspace
- Available in standard 12' or precut lengths

Fabral Soffits are available in three pre-formed engineered profiles - two ventilated (center and full) for increased air flow and one solid.









ROOFSEAL

Fabral offers the total system solution with RoofSeal underlayment. By combining



superior performance and protection with skidresistant traction, RoofSeal helps youget the job done right.

ROOFSEAL FEATURES

- Durability: stronger than traditional felt
- Quality: skid-resistant traction
- Performance: UV exposure up to 180 days
- Peace of mind: 50 year warranty against leaking

SPECS

• Width: 4'

• Length: 250'

• Weight: 32 lbs

• Thickness: 13.25 mils

• UV exposure up to 180 days

• Water Vapor Permeance: .06 perms

QAI & ICC-ES building code compliant

Contributes to LEED and NGBP ratings

• 100% inorganic, will not rot or mold

• 10 squares per roll

• 36 rolls per pallet

• Thickness: 13.25 mils

HIGH TEMPERATURE UNDERLAYMENT PEEL AND STICK

FEATURES:

- UV protected surface 90-day exposure
- High-temperature stability 260° F
- 50 mil thickness
- Soft-surfaced polyester face
- Self-adhering and cold applied
- No special adhesives necessary
- Direct-to-deck metal application
- 2 squares per roll

Fabral High-Temperature Underlayment is a durable, self-adhering, modified composite underlayment, specifically designed to withstand the rigors of most roofing applications. It is available to use as flashing tape to provide a secondary water barrier.

- 30 year warranty out of the box
- Adds to the complete system for Fabral roofing
- Width: 3'
- Length: 66'

CODES & COMPLIANCES:

- Underwriters Laboratories Class A and Class C Fire Rating — Based on roof covering
- ASTM D1970, Standard Ice Dam Underlayment
- Florida Building Code Approved FL 17322
- Miami-Dade County Product Control Approved, MiamiDade County, Florida

POLYCARBONATE PANELS

Translucent panels transmit natural light affording for better work conditions and potentially reducing energy costs. These wall siding panels are ideal for use in agricultural, light commercial, warehouse, and industrial facilities. Available in lengths: 8', 10' and 12'.

POLYCARBONATE

- Virtually unbreakable
- Will not yellow
- Easily and safely installed on sidewalls
- Colors: Clear and White (Grandrib 3, Mighti-Rib, Ridge Caps)

D (:)		Standard Lengths (ft)				Colors				
Profile Name	Basic Profile Dimensions [†]	8'	10'	10½' *	12'	16' *	Clear	Soft White	White	Solar Gray*
GrandRib 3 GRG	3/8" 23/4 3/89 9"	•	•		•		•	•		•
Mighti-Rib	1-1 ₄ 12" 12" 14"+1				•		•	•		
Ridge Caps	Bend as required 1625-40 23" Width Ridge Capa Ridge Capa						•	•		

^{*}Visit Fabral.com for additional non-stocked specialty profiles.

LINER PANELS

Fabral liner panels are perfect for interior projects requiring additional insulation, strength or acoustical control. Additionally these panels are an economical light gauge panel solution for projects requiring partitions.



- Custom cut lengths up to 40'
- Easy to clean
- Polyester paint finish
- Acoustical panels perforated across entire panel
- 36" coverage

SYSTEM COMPONENTS

SNOW RETENTION SYSTEMS

Any project in a freeze/thaw zone should employ a snow retention system. Metal roofs are naturally slippery so snow and ice move quickly over the smooth surface, potentially damaging plumbing stacks and lower roof planes and possibly endangering people and property.

S-5 SNOW RETENTION - STANDING SEAM

- Documented holding strength
- Compatible with all standing seam metal roof profiles



PC240 & BUSTER - EXPOSED FASTENER







- UV stable, very strong
- Polycarbonate Lexan 103-112 (3/16" thick for BUSTER)
- Mounted with screws or adhesives
- Patented, Made in the USA

CL SNOW GUARD - EXPOSED FASTENER

- Premium polycarbonate plastic with UV stabilizers
- Unique vent rib systems allows for adhesive out gassing
- Three-to-one base-to-blade ratio adds significantly to strength





- Premium polycarbonate plastic with UV stabilizers
- Maximum protection, moderatly priced
- Two-to-one base-to-blade ratio
- 4.5 sq.in. and gusseted blade snow pocket
- Typically installed by adhering to and mechanically fastened to the roofing panel

Please see page 17 (SB & SB1) for snow break details.

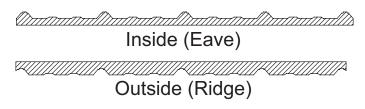
* Not all locations stock

VENTING AND CLOSURES

Roof ventilation and uniform airflow are key to keeping metal clad buildings "healthy." Correctly engineered vent and closure systems "manage" weather limiting wind-driven rain from entering the ridge area and facilitating "moisture release."

CLOSURE SPECS

 Available in Grandrib 3, Strongrib, 1¼" Corrugated, 2½" Corrugated and ProClad



*Available attached to ridge cap as RX-10 version and as X-10 version for field installation; not pre-applied to ridge cap

**Midwest Only

RX-10 RIDGE CAP VENT*

- Factory applied to the ridge cap
- Save up to half of your installation time
- Non-profile specific material
- Clean, dust free installation
- Virtually NO WASTED material
- 1½" x 3" material provides 17 sq. inches/lineal foot free area at the ridge

LP2 WEATHER-TITE RIDGE VENT

- Available in Horizon S, Grandrib 3 and Mighti-Rib profiles
- Lower, custom-fit profile
- Moisture and pest barrier
- Non-obtrusive appearance
- Reduces utility costs
- One-person installation

RV35 AND RV100**

- 10' metal ridge vent
- Variety of colors available

PROFILE FIT VENT-ROLL

- Available in Grandrib 3, 5V and SSR
- 10.66 sq. in. per lineal ft. of ridge (5.33 / side)

FASTENERS

Understanding and installing which fasteners are best for which application is critical to any project. Be sure to match the correct screw or fastener option with the appropriate roof or wall system. For more information check with your FabralCore representative.



#14-10 WOODTITE

- Use to fasten metal to plywood, OSB, or ZIP
- Use for trim attachment
- Available in 1", 1½", and 2"
- 5/16" hex head, EPDM/metal washer
- Oxyseal Long-Life Coating



#10 HLX High Low

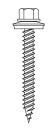
- Use with dimensional lumber
- Available in 1", 1½", 2", 2½" and 3"
- 1/4" hex head, EPDM/metal washer
- Oxyseal Long-Life Coating



#10-14 410 STAINLESS STEEL

- Use with 26 gauge or thinner to avoid pre-drilling
- Available in 1", 11/2", and 2"
- 1/4" hex head, EPDM/metal washer
- Use with steel panels installed on treated lumber





#10-16 300 SERIES STAINLESS STEEL

- Use for high corrosive environments
- Use with ALUMINUM panels
- Available in 1", 11/2", and 2"
- 1/4" hex head, EPDM/metal washer
- Use with treated lumber



#12-14 FLATTOP

- Use to fasten into light gauge metal framing
- Available in 1" and 11/2"
- 5/16" hex head with EPDM washer
- Type 3 point can drill through .21" steel



#12x3/4" STITCH**

- Use to stitch sidelap for exposed fastener panels
- 1/4" hex head, EPDM/metal washer

* Painted ** Plain All fasteners 250/bag

SEALANTS

Fabral sealants provide a weather-tight seal against water, wind, dust, and dirt. Excellent for use on a variety of metal roof, trim siding, gutters, flashing and downspouts.

TREMCO SEALANT

- Waterproof sealant to fill gaps
- Permanent flexibility won't crack
- Standard color: Gray (stocked)
- UV-resistant

SEALANT TAPE

- 3/16" x 1/4" x 40' (sidelap)
- 3/32" x 1/2" x 50' (endlap)

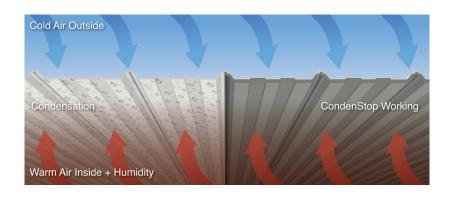
SEALER STRIP

- Use at valleys and hips
- 1" x 1" x 19' 6.8" long

SYSTEM COMPONENTS

CONDENSTOP™

Stop condensation with Fabral factory applied CondenStop™. CondenStop saves time and money by reducing labor costs and installation time versus other condensation barriers. Easily and effectively prevent condensation and the problems caused by condensation by installing Fabral panels featuring CondenStop.



- Protects assets and investments from moisture
- Adds to interior corrosion protection
- Light gray color enhances the indoor look of an open framing structure roof
- Must be used on open purlin systems. Do not use CondenStop over solid decking
- Available for the Grandrib 3 painted panel offerings

ACCESSORIES

FLAT SHEETS

Fabral Flat Metal Sheets may be ordered for on-the-job fabrication. A wide variety of substrates are available including aluminum, galvanized steel, galvalume, copper and stainless steel. Flat sheets may be coated with our premium WeatherXL paint system offered in a full range of colors.

Contact your local sales rep for Flat Sheet & Slit Coil details.

PRODUCT SPECIFICATIONS

- Used for field forming crickets around the chimney, skylights, penetrations, and special flashing as necessary.
- 29 gauge painted and plain galvanized
- Full width (40 13/16" 10'6")
- Slit width available

CUPOLAS

Cupolas are an excellent way to bring architectural detail to any structure. Fabral cupolas are built to order and are offered in a variety of sizes (up to 66" x 66"), shapes and colors. Flashings can be built to any roof pitch and optional windows may be built into the side panels. Base sizes include 24" x 24", 36" x 36", and 48" x 48". Custom cupolas available





ACCESSORIES

PIPE BOOTS

Sealing small pipes is made easier with pipe boots from Fabral. The metal base with a dome-shaped boot serves as a covering for vent pipes.

SILICON SPECIFICATIONS

- Colors: Orange
- Up to 450° F
- Ranging for pipe sizes from 1" to 13"
- Larger sizes available upon request

EPDM SPECIFICATIONS

- Colors: Gray and Black
- Up to 250° F

PIPE SIZES

Base Diameter	Item No.	Min	Max
7 3⁄4"	3	1/4"	5"
10 ¾"	5	4 1/4"	7 ½"
16 ½"	8	7"	13"

^{*}Retrofit boots available. Sizes vary.

DOOR AND DOOR TRACKS

Fabral Door Systems include four door types and the complete corresponding track systems. For information on product availability, contact your Fabral representative.

3100 SERIES DOOR

- Pre-hung 4-way universal swing
- 1-3/4" galvanized steel door
- Pressure injected with polyurethane foam
- Pre-painted with two coats of polyester paint

5100 SERIES DOOR

- Light commercial post frame entry door
- Rolled edge door panel
- 24-gauge polyester painted galvanized steel
- Heavy internal aluminum stiles and rails
- Heavy-duty 16-gauge 3-½" wide painted steel jambs
- 12-gauge stainless steel 4-1/2" x 4" fixed pin

PARTNER DOOR

- Pre-finished/pre-hung 6-bend steel or extruded aluminum
- Pre-hung 4-way universal swing
- 29-gauge steel exterior

RESPONDER DOOR

- Pre-finished/pre-hung 6-bend steel or extruded aluminum
- Pre-hung 2-way universal swing
- 29-gauge steel exterior

DOOR TRACK SYSTEM

- Doors tracks, frames, bottom guide systems
- Trolleys, brackets, latches
- Rollers
- Sliding door accessories

*AJ doors available special order

**Doors are not available in all markets and non-stock.

TOUCH-UP PAINT

Fabral offers touch up paints in a full range of WeatherXL colors. Contact your Fabral representative to order the color you require.

WARRANTY

WARRANTY COVERAGE

Fabral offers some of the most competitive, enduring warranties in the industry.

	FILM INTEGRITY	CHALK & FADE	PERFORATION WALLS	PERFORATION ROOFS	
GRANDRIB 3+	LIFETIME	30 YEARS	25 YEARS	20YEARS	
GRANDRIB 3	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
GRG	40 YEARS	30 YEARS (PRORATED)	N/A	N/A	
LINER PANEL	N/A	N/A	N/A	N/A	
MIGHTI-RIB	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
PBR	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
PROCLAD	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
PRIME RIB	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
2 ½" CORRUGATED	N/A	N/A	N/A	N/A	
STRONGRIB	N/A	N/A	N/A	N/A	
HORIZON 16	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
HORIZON S/S100	LIFETIME	30 YEARS	20 YEARS	20 YEARS	
1 ½" SSR/1 ½" SSR 150	LIFETIME	30 YEARS	20 YEARS	20 YEARS	

The WeatherXL PLUS Warranty

- Lifetime film integrity for walls & roofs
- 30-year against fade & chalk for walls and roofs
- 25-year non-perforation against acid rain for walls;
 20-years for roof

For profiles: Grandrib 3 PLUS

GRG™ Warranty

- 40-year film integrity
- 30-year prorated fade and chalk

The Weather XL Warranty for Galvalume® Panels

- Lifetime film integrity for walls & roofs
- 30-year against fade & chalk for walls and roofs
- 20 year non-perforation warranty

For profiles: Grandrib 3, 1 1/2" SSR, Mighti-Rib, Horizon S, Horizon 16

OTHER WARRANTIES

Aluminum Product Guarantee

30-year corrosion guarantee

Galvalume® Perforation Warranty

• 20-year non-perforation warranty for Grandrib 3, Mighti-Rib , Horizon S and 1 ½" SSR

Galvalume is a registered trademark of BIEC International.

CONTACT INFORMATION

Contact by Phone - Nationwide Plant Locations

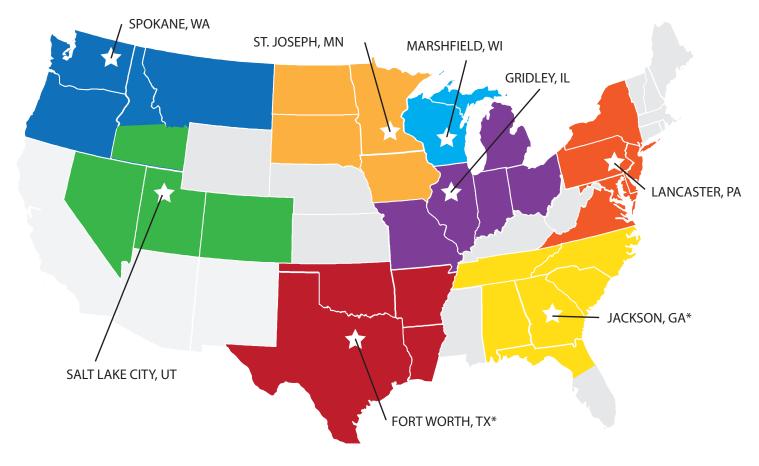
Fort Worth, TX	(817) 286-5100	Marshfield, WI	(715) 800-6006
Gridley, IL	(309) 280-6205	Salt Lake City, UT	(385) 243-6333
Jackson, GA	(770) 230-8093	Spokane, WA	(509) 204-8013
Lancaster, PA	(717) 638-2809	St. Joseph, MN	(816)-205-8111

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FABRAL LOCATIONS & SERVICE AREAS



^{*} Architectural Production Facility



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