

a Taylor Metal Company



MS-100TM MS-150TM

Flashing and Details Guide



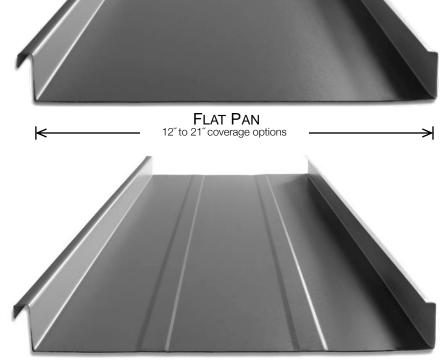
MS-100TM MECHANICALLY SEAMED



The MS-100[™] is a mechanically seamed roof that is perfect for high wind areas and snow country. The butyl injected seam prevents water from entering the system, giving you a worry free roof for a lifetime.

KEY FEATURES

- 12" to 21" coverage options
- 26, 24 & 22 gauge Tru-Gauge[™], .032 Aluminum and 24 gauge Bonderized (G-90)
- 16 & 20 oz. Copper
- Floating clip system: allows for expansion/contraction of panels in longer lengths
- 1" vertical rib
- · Factory injected Butyl sealant
- Concealed fasteners: fasteners cannot leak
- Code compliance UL Evaluation Report UL ER 25913-01
- UL580 Class 90: Dade impact: Dade 90 Dade 140 MPH: UL Class 4 hail
- ASTM E-2140: ASTM-1646: ASTM 1680: ASTM 283: ASTM 330: ASTM 331: ASTM E-1592
- · UL Class A fire rated
- UL Construction No. 554
- 1:12 minimum pitch recommended: For lower panels, please inquire
- Standard panel lengths 2' to 65': For longer panels, please inquire
- Onsite roll forming available
- Pan options: Flat pan, Accent ribs, Striations
- Retro-fit systems available

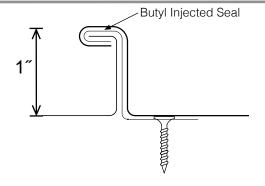


ACCENT RIBS

2 Accent ribs for 12" to 14% panel 3 Accent ribs for 16" & 21" panel



STRIATED





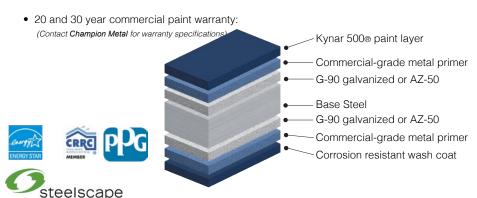
MATERIAL SPECIFICATIONS

- 26 gauge Kynar 500® Painted Steel .019" (thickness prior to painting)
 G-90 Galvanized or AZ-50
- 24 gauge Kynar 500® Painted Steel .0236" (thickness prior to painting)
 G-90 Galvanized or AZ-50
- 26, 24 & 22 gauge bare Zincalume® Plus with Clear Acrylic Coating-AZ-55
- \$\blue{\textbf{\textit{2}}} 22 \text{ gauge Kynar 500\text{ Painted Steel}}\$

 .029" (thickness prior to painting)
 G-90 Galvanized or AZ-50
- ★.032 Kynar 500® Painted Aluminum
- 24 gauge Bonderized (G-90)
- 16 and 20 ounce Copper *please inquire*
- Kynar and substrate testing data available (See website)

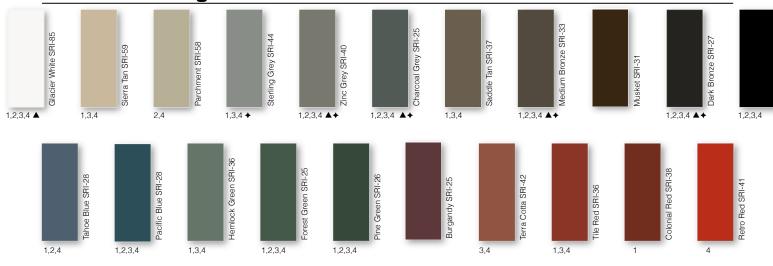
KEY FEATURES

- 21 Standard Colors, 5 Metallic Colors and 5 Specialized Colors
- Kynar 500® Paint System-the ultimate in exterior durability and color retention
- "Cool" color pigments are specially designed to reflect infrared light, reducing heat gain to dwelling, and conform with ENERGY STAR® criteria
- Superior quality, two-coat, 70% resin finish, applied at a 1 mil. thickness
- 40-year residential paint warranty

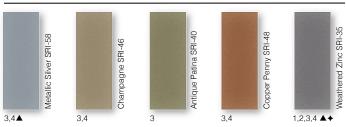


40-Year Residential/20 and 30 Year Commercial Manufacturer's Limited Warranty

STANDARD 24g Cool Kynar 5008 Colors



METALLIC COOL KYNAR 5008 COLORS

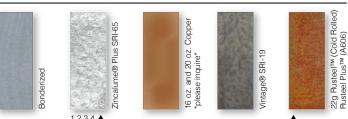


These printed chips provide a close representation of the colors. Metal samples are available upon request.

Coatings are low gloss 10-15% sheen

"Oil canning" is an inherent characteristic of Roof & Wall products, not a defect, and is not a cause for panel rejection. SRI = Solar Reflective Index. SRI values listed above are in accordance with ASTM E 1980 and are based on actual testing.

SPECIALIZED MATERIAL



| Standard MS100 Panels | | | | | | |
|-----------------------|-------|----------|----------|--------|--|--|
| Width | Gauge | Color | LBS SQFT | LBS LF | | |
| 14″ | 26 | 1 | .98 | 1.14 | | |
| 14″ | 24 | 2 | 1.15 | 1.34 | | |
| 17%″ | 24 | 3 | 1.11 | 1.65 | | |
| 211/4" | 24 | 4 | 1.09 | 1.93 | | |
| 13¼″ | 22 | A | 1.46 | 1.61 | | |
| 211/4" | 22 | A | 1.37 | 2.42 | | |
| 17%″ | .032 | + | .52 | .81 | | |

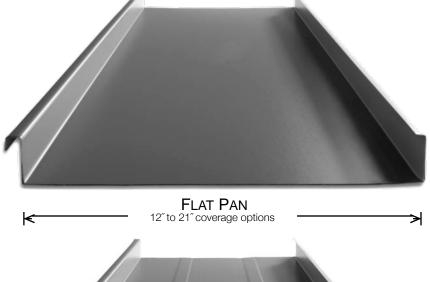


MS-150™ MECHANICALLY SEAMED



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- 12" to 21" coverage options
- 26, 24 & 22 gauge Tru-Gauge™, .032
 Aluminum and 24 gauge Bonderized (G-90)
- 16 & 20 oz. Copper *please inquire*
- Floating clip system: allows for expansion/contraction of panels in longer lengths
- 11/2" vertical rib
- Factory injected Butyl sealant
- Concealed fasteners: fasteners cannot leak
- Gode compliance UL Evaluation Report UL EB 25913-01
- UL580 Class 90: Dade impact: Dade 90 Dade 140 MPH: UL Class 4 hail
- ASTM E-2140: ASTM-1646: ASTM 1680: ASTM 283: ASTM 330: ASTM 331: ASTM E-1592
- UL Class A fire rated
- UL Construction No. 554
- Weather tightness warranties available-5 to 30 Year Prorated or NDL (Contact Champion Metal representative for details)
- 1:12 minimum pitch recommended: for lower pitches please inquire
- Standard panel lengths 2' to 65': for longer panels, please inquire
- Onsite roll forming available
- Pan options: Flat pan, Accent ribs, Striations
- Retro-fit systems available



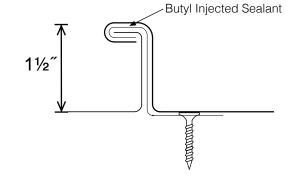


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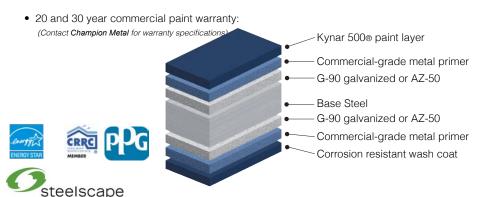
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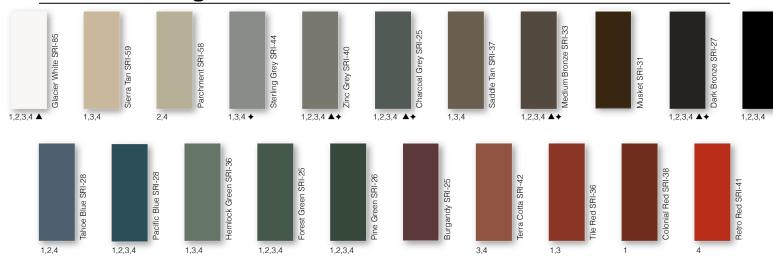
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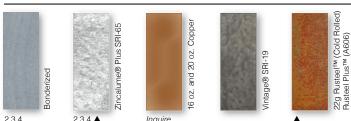


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SPECIALIZED MATERIAL



| Standard MS150 Panels | | | | | |
|-----------------------|-------|----------|----------|--------|--|
| Width | Gauge | Color | LBS SQFT | LBS LF | |
| 12¾″ | 26 | 1 | 1.05 | 1.14 | |
| 12¾″ | 24 | 2 | 1.24 | 1.34 | |
| 16%″ | 24 | 3 | 1.18 | 1.65 | |
| 20″ | 24 | 4 | 1.14 | 1.93 | |
| 12″ | 22 | A | 1.58 | 1.61 | |
| 20″ | 22 | A | 1.43 | 2.42 | |
| 16%″ | .032 | + | .55 | .81 | |

4-17



| NOTES TO DESIGNER/INSTALLER | .pg. | 4-5 |
|------------------------------|------|------|
| HANDLING/STORAGE & SAFETY | .pg. | 6 |
| HOOK EAVE DETAIL | . – | |
| HOOK EAVE WITH GUTTER DETAIL | .pg. | 8 |
| STANDARD RIDGE DETAIL | .pg. | 9 |
| VENTED RIDGE DETAIL | | |
| STANDARD VALLEY DETAIL | | |
| ALTERNATE VALLEY DETAIL | pg. | 12 |
| STANDARD GABLE DETAIL | . • | |
| ALTERNATE GABLE DETAIL | . • | |
| SIDE WALL DETAIL | | |
| RIDGE END CAP DETAIL | .pg. | 16 |
| VENTED RIDGE END CAP DETAIL | .pg. | 17 |
| PITCH CHANGE DETAIL | pg. | 18 |
| END WALL DETAIL | | |
| VENTED END WALL DETAIL | | |
| BACK PAN/CRICKET ISO DETAIL | | |
| CURB SIDE WALL DETAIL | .pg. | 22 |
| CURB HEAD DETAIL | | |
| CURB BACK PAN | | |
| PIPE PENATRATION DETAIL 1 | . • | |
| PIPE PENATRATION DETAIL 2 | | |
| PIPE PENETRATION MID PANEL | | |
| ROOF END DAM ASSEMBLY | .pg. | 28 |
| FLASHING SELECTION | nσ | 29-3 |



Ventilation/Insulation

It is the responsibility of the designer to determine the material types needed to control condensation and to insulate and ventilate the roof system. Applications over rigid insulation may require blocking for solid attachment and framing the perimeter for installation of perimeter flashings.

Oil Canning

Flat metal surfaces will display waviness commonly referred to as "oil canning." Oil canning is caused by a variety of conditions: Steel mill tolerances, variations in or uneven substrates and roofing underlayments. Oil canning is a characteristic of metal roofing, not a defect and is not a cause for rejection.

Champion Metal

offers MS150TM with striations or accent ribs to help minimize oil canning.

Thermal Movement

The Panels and the flashings must be allowed to expand and contract, especially with longer length panels. The panel may need to have a slight gap where the panel hooks the offset cleat to allow for thermal movement of the panels.

Snow Design

The following details do not address all conditions for snow environments. Consult with the designers, engineers, and others for acceptable details to accommodate your project and climate conditions. When possible, gutters, valleys, pitch changes or other penetrations should be minimized in snow areas.

All roof penetrations should be located as close to the ridge or top of roof. Snow country requires special designs for valleys to accommodate accumulation of snow and ice from uphill panels. Roof design should be considered in snow areas. Roof design should help resist the melting and freezing of snow and ice. A fit for purpose roof design has the greatest impact on maintaining a damage free roof system in snow areas. Pl ease contact a Champion Metal representative for assistance in detail designs and appropriate panel selection for specific climate and building conditions.



Handling / Storage & Safety

Handle materials with care when off-loading or moving materials to avoid damage to panels or flashings. Long panels may require two or more pick-up points, properly spaced to avoid damaging panels. Plan ahead; contact Champion Metal for recommendations on handling/hoisting long panels.

Store the panels, flashings and accessories in a dry, well ventilated area, off the ground. If covering, allow ventilation around panels. Elevate one end of bundle to allow drainage of wet materials.

Wear clean, soft-soled shoes when walking on roofing panels to avoid damage to the painted finish.

Take care that sand, gravel, dirt, etc. sticking to your shoes is not carried onto the roof, scratching or otherwise damaging the finish on the roofing material. Walking on asphalt impregnated felt paper, especially on a hot day, can cause the asphalt to stick to your shoes and be tracked on to the roofing material.

Take care when painting to avoid getting over spray on the roofing material. Remember that wind can carry paint particles some distance. Over spray can cause the finish of the roofing material to look dull and may void your warranty.

Secure materials, especially when leaving the site, on the ground or roof to prevent winds from moving the materials. Wind-blown materials may cause damage to the material, property or persons.

Always use proper safety equipment and attire to minimize risk of cuts or other injuries.

Do not walk on panels that have not been completely installed.

Do not walk on major ribs of panels.

Metal roofs that are wet or dusty can be extremely slippery. Wear soft soled shoes and a safety harness to minimize risk of falling.

Avoid installing metal panels in windy conditions.

Safety considerations are the responsibility of the installer and his crew. Be sure to and use common sense generally accepted safety practices when installing roofing materials.



Notes to Designer/Installer

Champion Metal is providing the following details as an aid in design. The details in this guide are not inclusive to all design situations. The designer/installer is responsible for modifications and should take into consideration all aspects of the project including climate conditions, such as, snow and wind, as well as, building code requirements, building design, building usage and maintenance requirements.

Installation should be performed only by qualified installers familiar with metal roofing systems and industry standards. For details not shown in this guide, refer to the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) architectural sheet metal manual for proper design.

The Standard gauge for all products in this guide is 24 gauge and the standard finish is Kynar 500®/Hylar 5000®. We recommend specifying all flashings be the same gauge, color, and finish as the panels to insure long-term durability and color match.

Substrates

Details in the manual are all shown over solid substrate. MS150 can be used over spaced purlins. For solid substrate, Champion Metal recommend 75/8" plywood or metal decking.

<u>Underlayments</u>

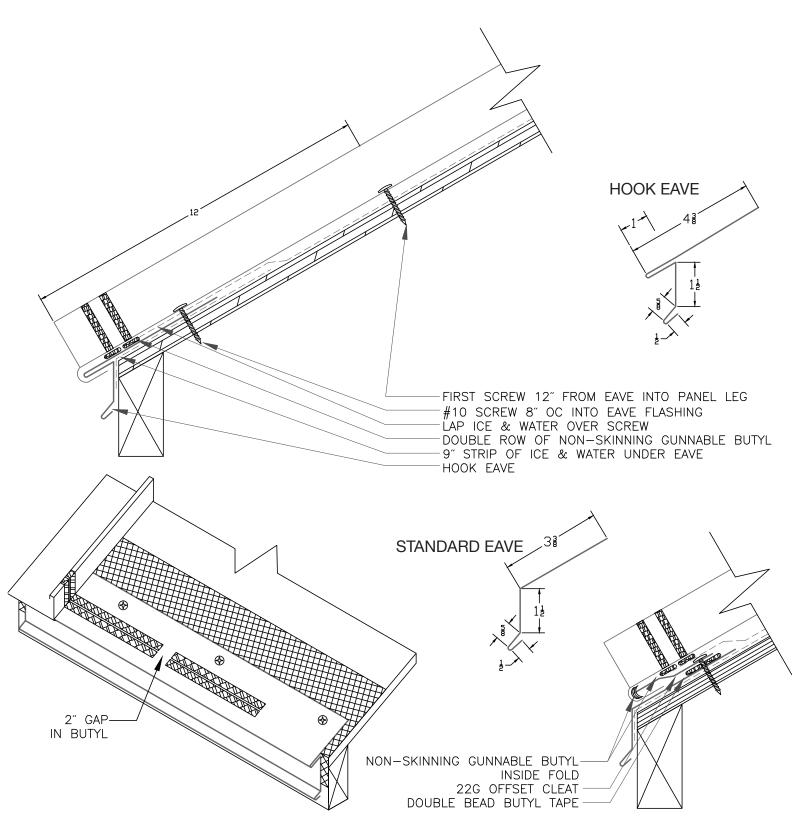
Minimum underlayment requirements are 30 lb. ASTM rated felt, a synthetic underlayment with Class A and ASTM UV protection technology or a high temperature self-adhering rubberized membrane. When choosing the underlayment, consider the roof slope, roof design, roof panel, and the climate.

Drag Load Requirements

All panels must be pinned at the top to resist the drag load caused by snow loads, live loads, and the weight of the panel. Drag load is a function of roof slope, actual load and length of panels. Contact Champion Metal for specific drag load requirements.

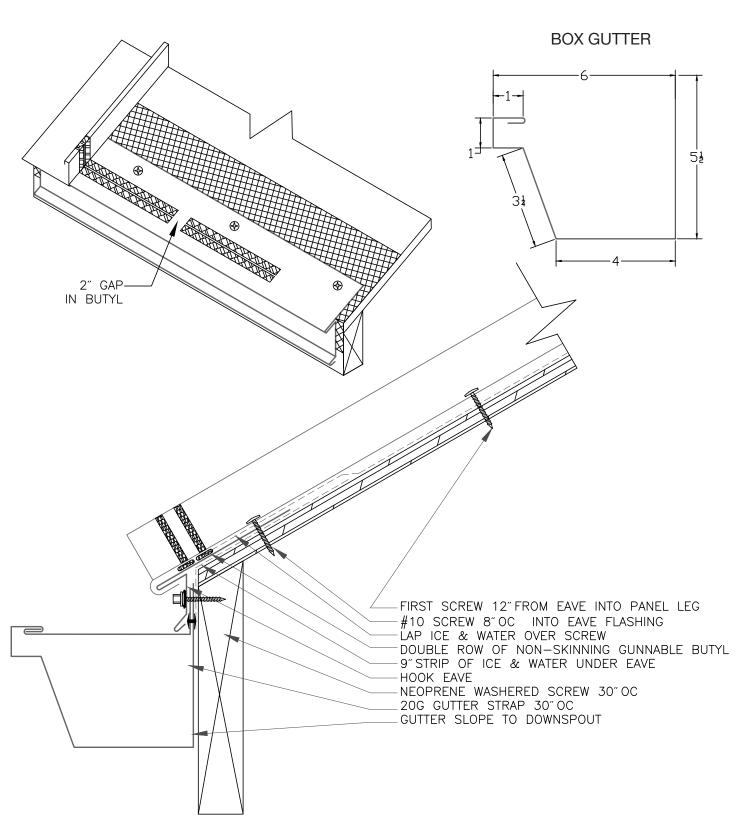


HOOK EAVE



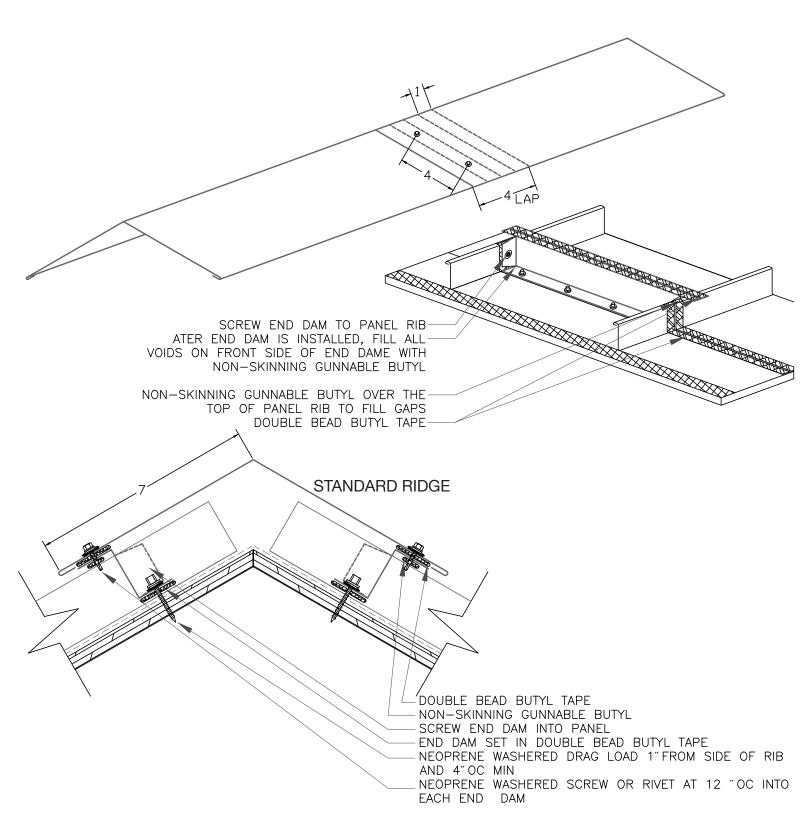


BOX GUTTER



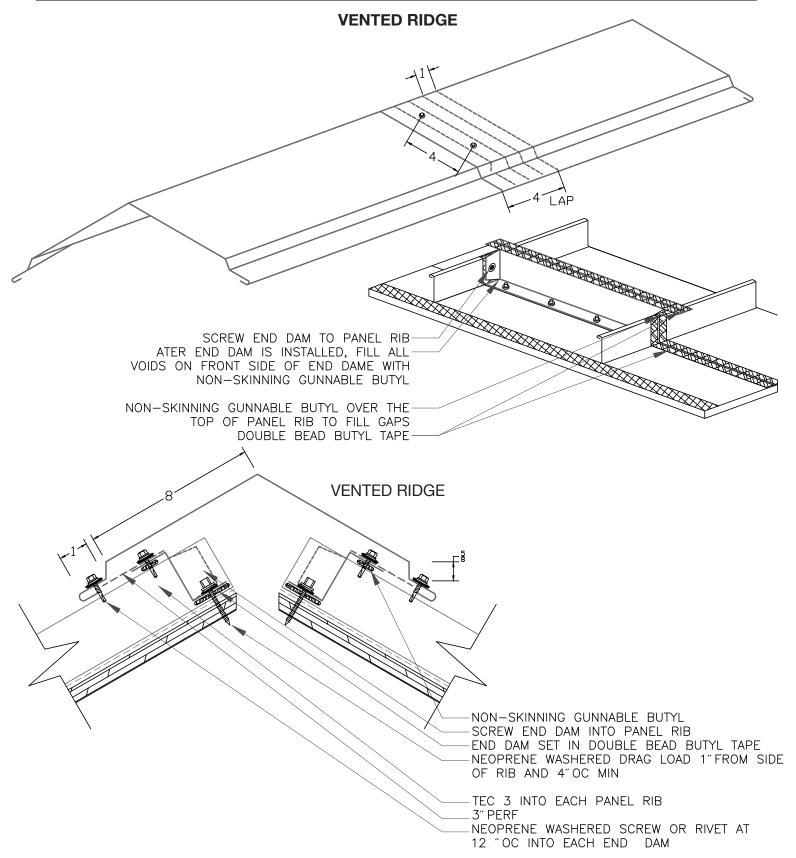


STANDARD RIDGE



MS SERIES

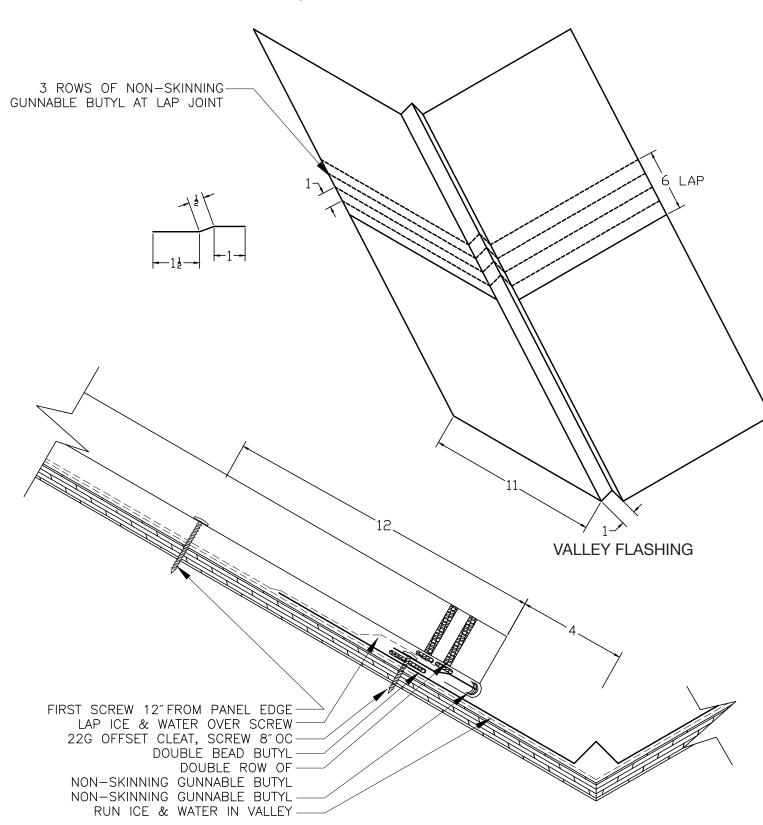
Flashing and Details Guide



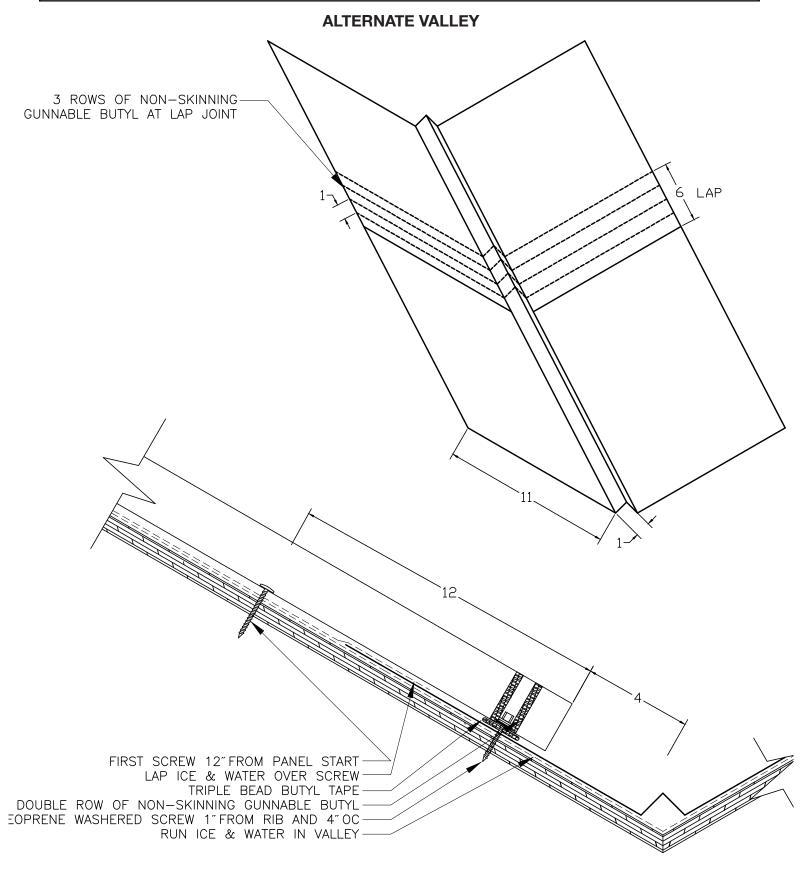
1



STANDARD VALLEY



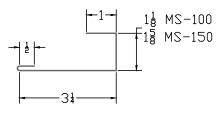




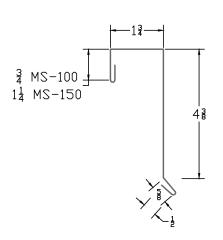


STANDARD GABLE

SUPPORT FLASHING



STANDARD GABLE



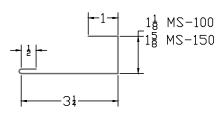
NEOPRENE WASHERED SCREW OR RIVET 12" OC DOUBLE BEAD BUTYL TAPE

SUPPORT FLASHING WITH BACK HEM

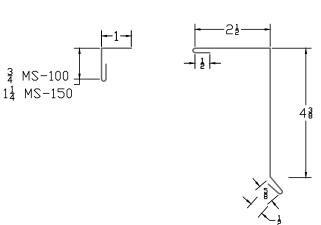
SCREW 8" OC WITH SEALANT OVER THE TOP
ICE & WATER WRAP DOWN FACE 3" MIN NEOPRENE WASHERED SCREW 12" OC



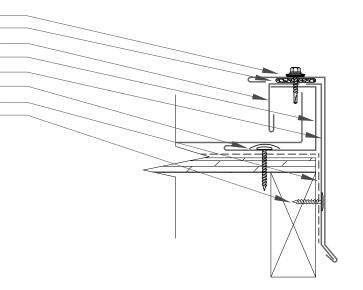
ALTERNATE GABLE



SUPPORT FLASHING ALTERNATE GABLE L ALTERNATE GABLE



NEOPRENE WASHERED SCREW 12" OC OR RIVET DOUBLE BEAD BUTYL TAPE CLOSURE TRIM SUPPORT FLASHING WITH BACK HEM CONTINUOUS CLEAT SCREW 8" OC WITH SEALANT OVER THE TOP ICE AND WATER WRAP DOWN FACE 3" MIN CLEAT SCREW 8" OC



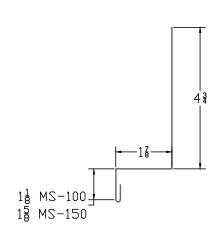


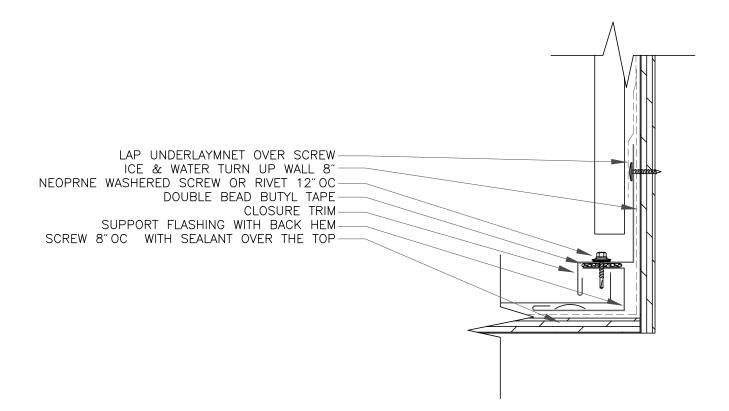
SIDE WALL

SUPPORT FLASHING

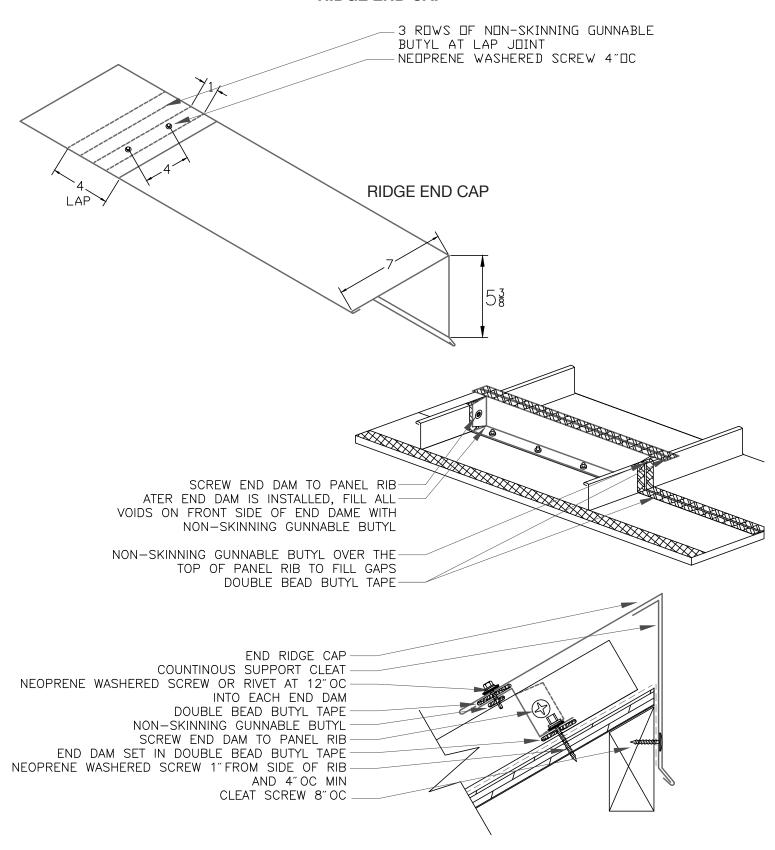
$1\frac{1}{8}$ MS-100 F15 MS-150

SIDE WALL



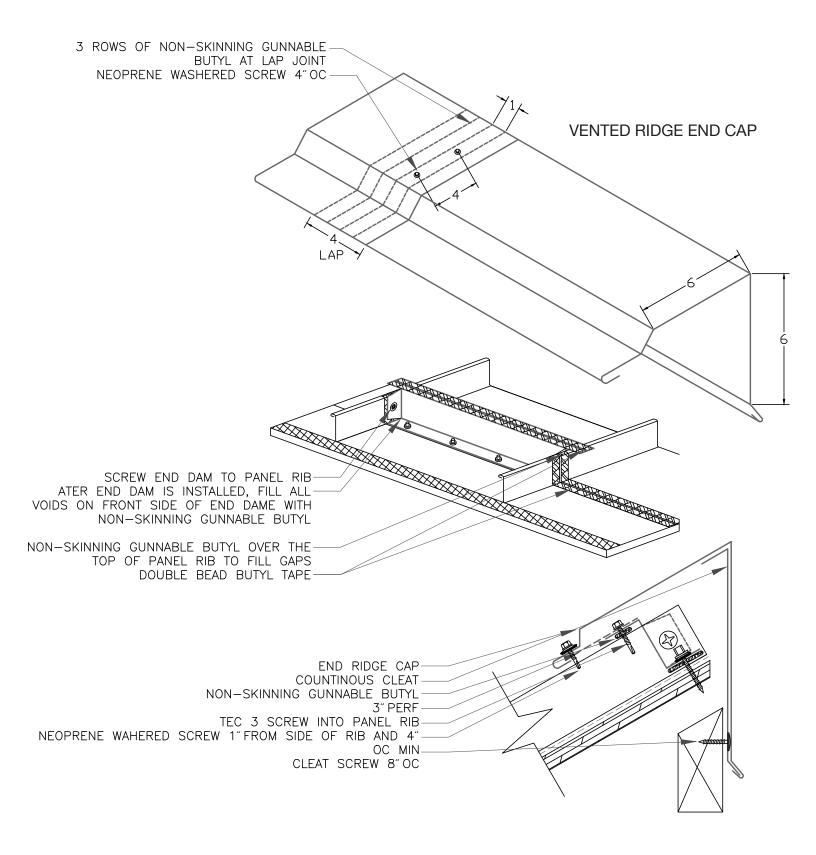


RIDGE END CAP



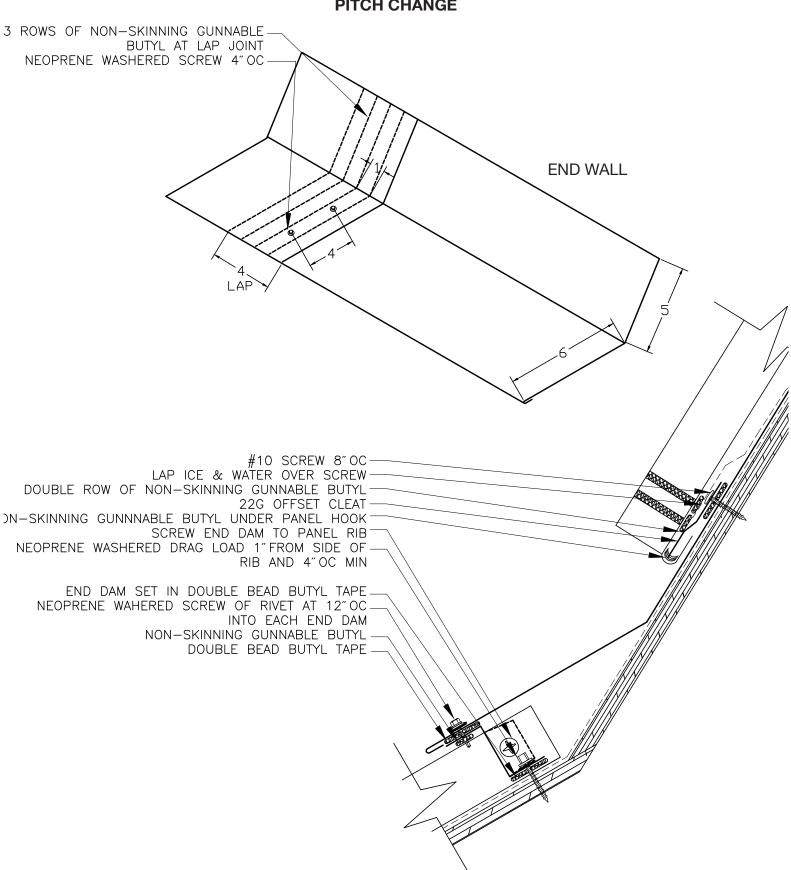


VENTED RIDGE END CAP



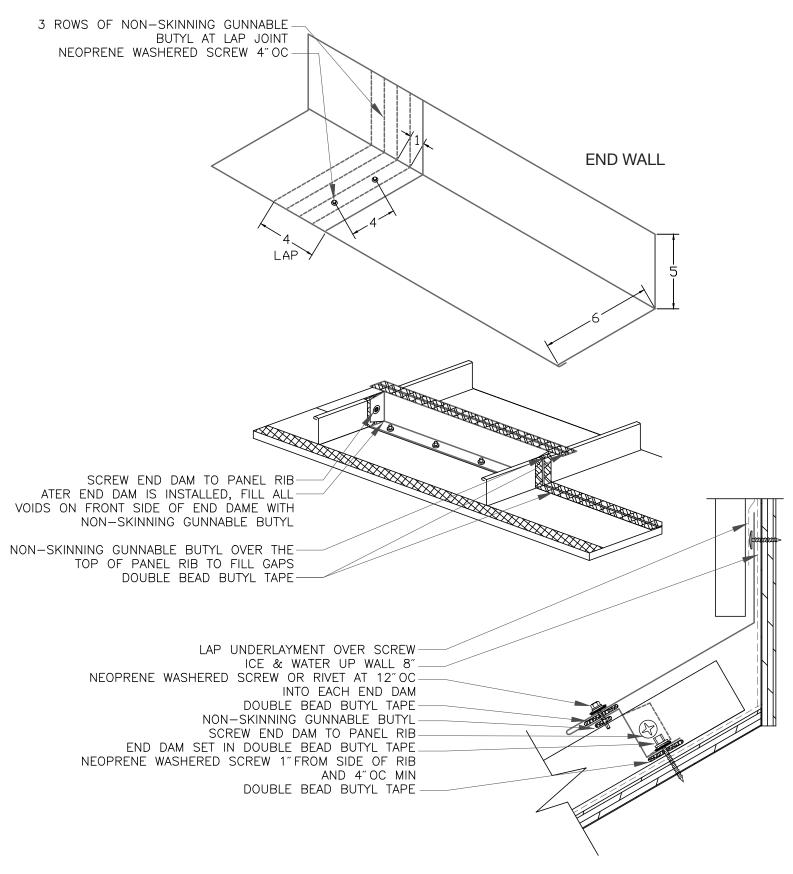


PITCH CHANGE





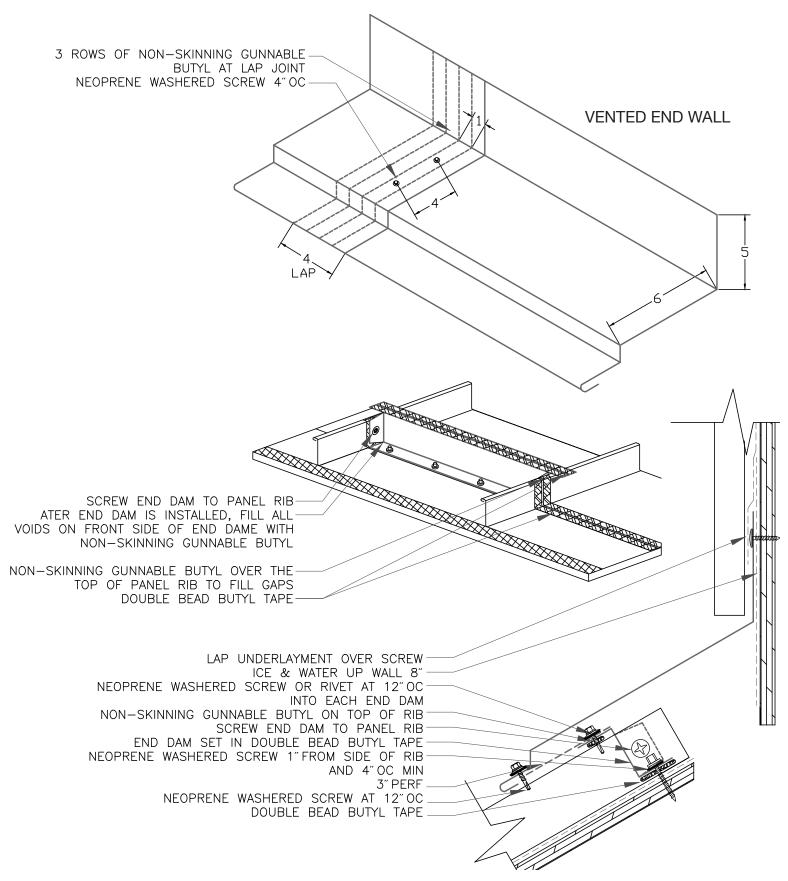
END WALL





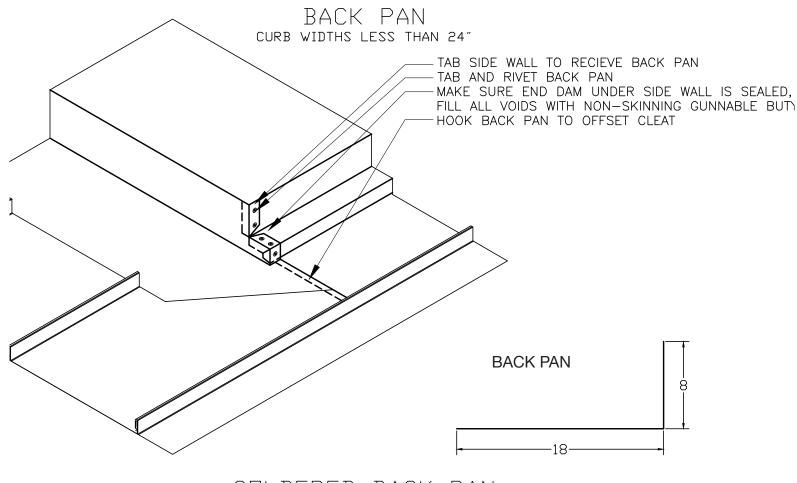
CHAMPION METAL a Taylor Metal Company

VENTED END WALL

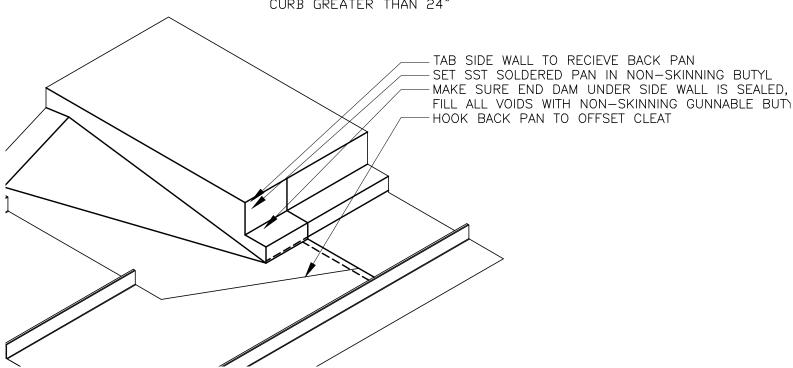




BACK PAN



SOLDERED BACK PAN CURB GREATER THAN 24"

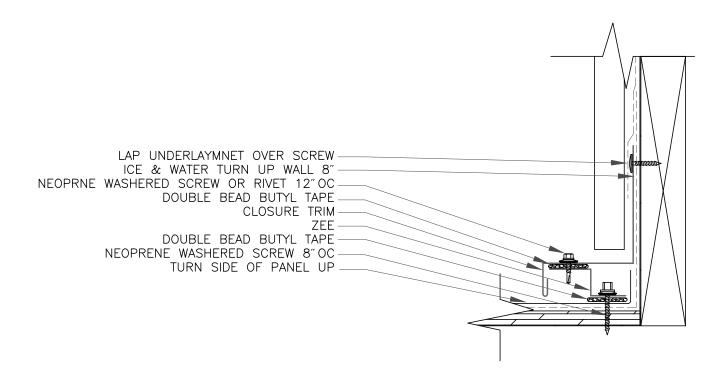




CURB SIDE WALL

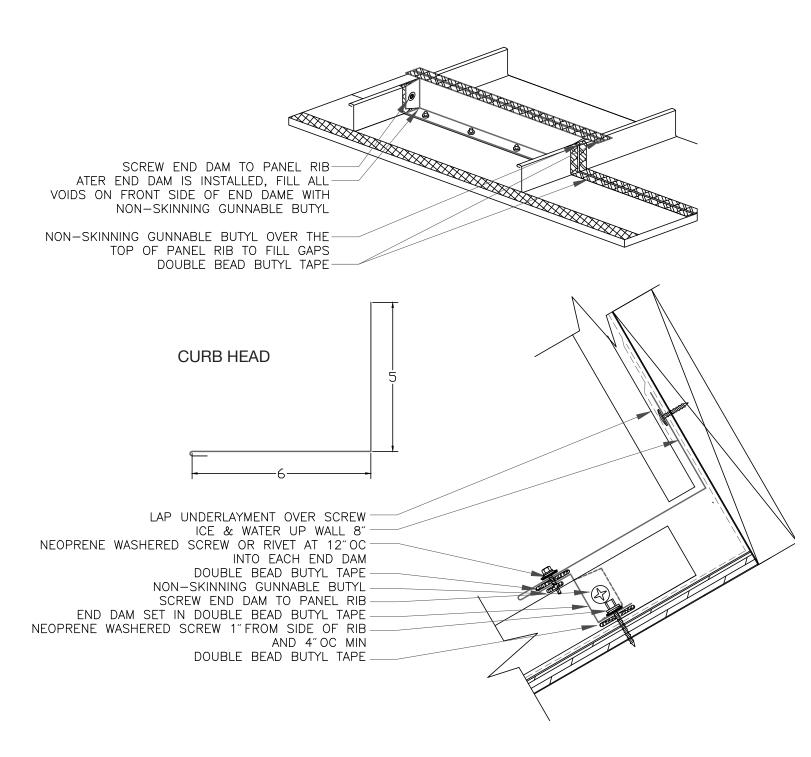
CLOSURE ZEE CURB SIDE WALL 1 MS-100 F12 MS-150

1 MS-100 1½ MS-150



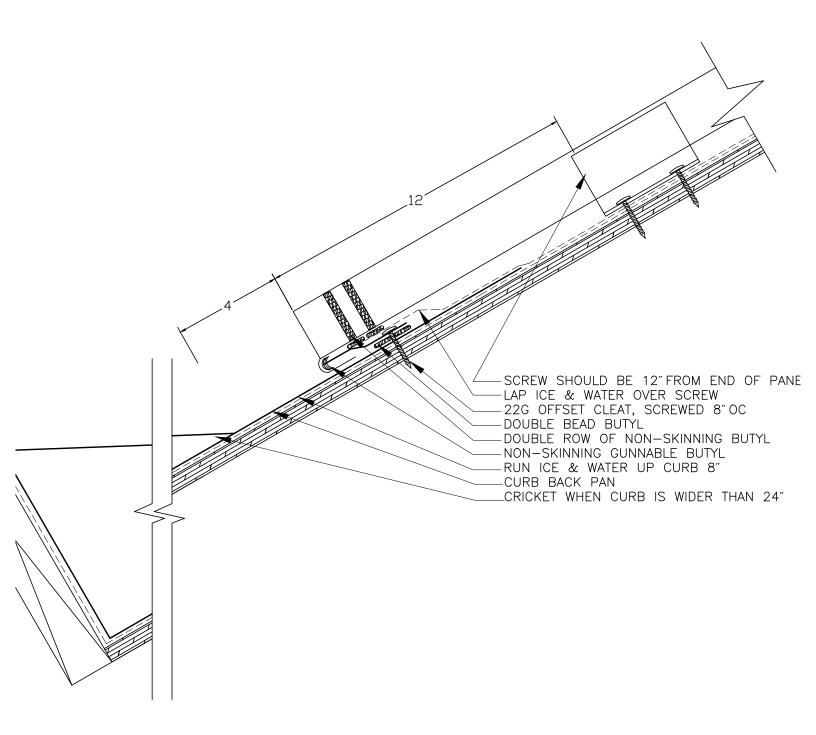


CURB HEAD



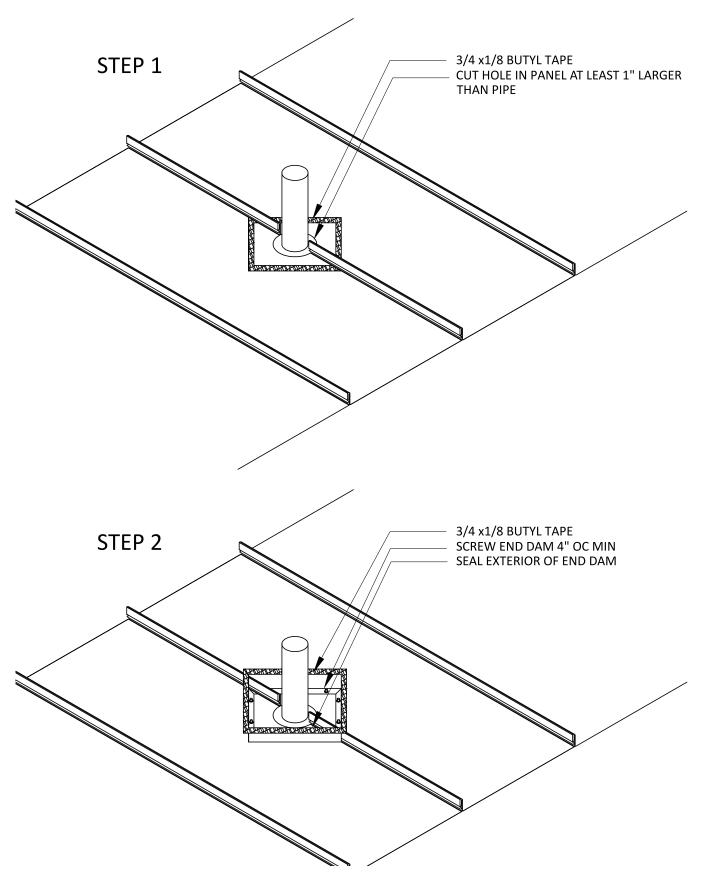


CURB BACK PAN



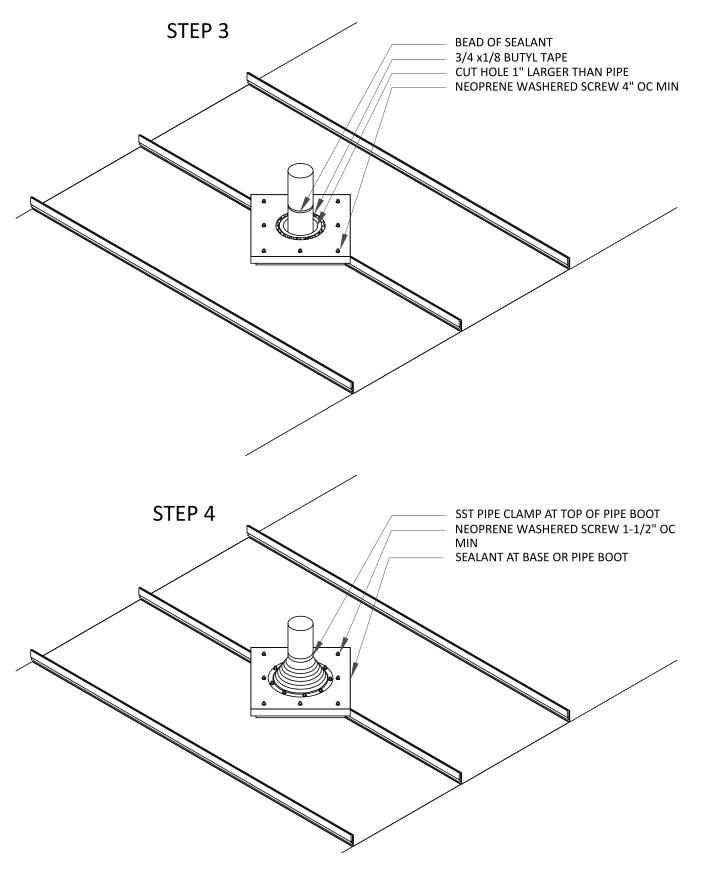


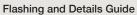
PIPE PENETRATION





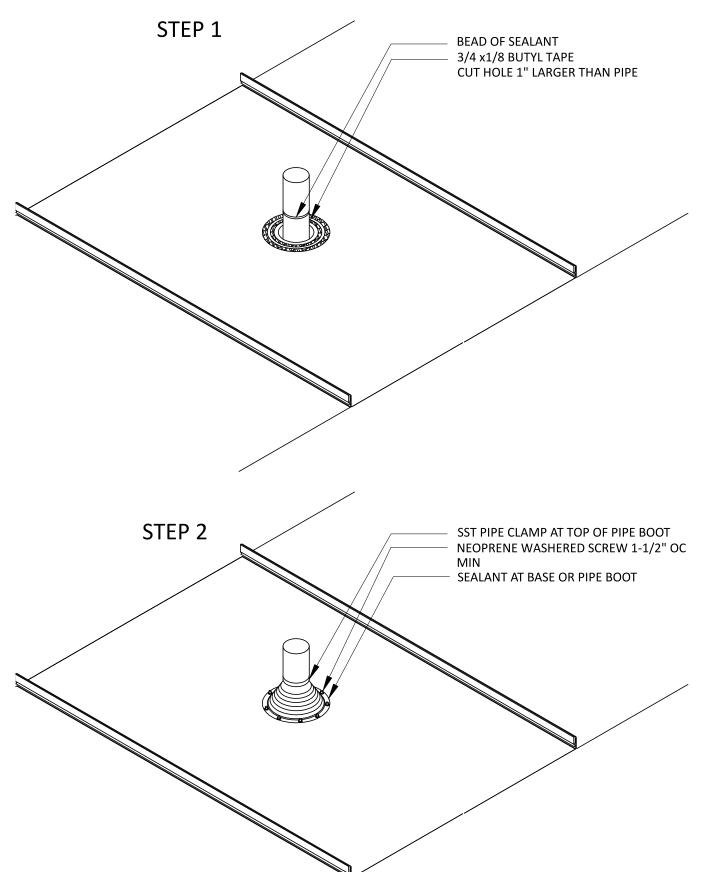
PIPE PENETRATION





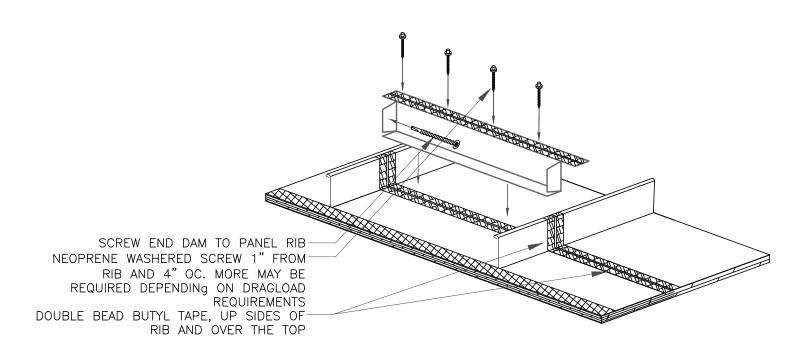


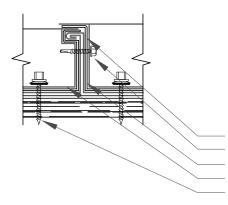
PIPE PENETRATION





END DAM





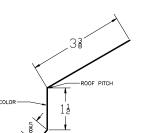
DOUBLE BEAD BUTYL TAPE SCREW END DAM TO PANEL RIB NON-SKINNING GUNNABLE BUTLE TO FILL ALL GAPS END DAM SET IN DOUBLE BEAD BUTYL TAPE NEOPRENE WASHERED DRAG LOAD 1" FROM SIDE OF RIB AND 4" OC MIN, DRAG LOAD CALCS MAY REQUIRE MORE

MS SERIES™

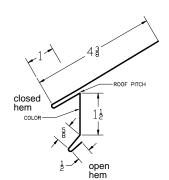
Flashing and Details Guide

MS Series flashing are 10' Long

EAVE STANDARD



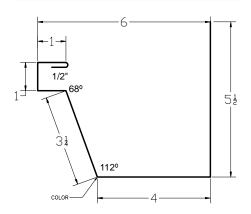




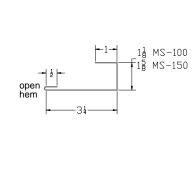
OFFSET CLEAT



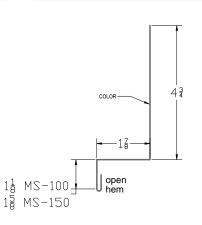
BOX GUTTER



SUPPORT FLASHING



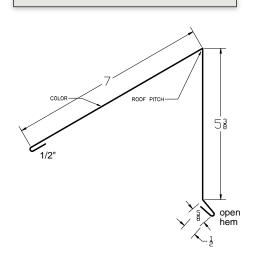
SIDE WALL

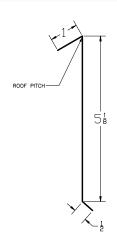


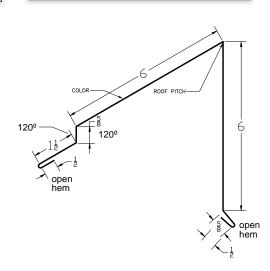
RIDGE END CAP

RIDGE END CAP CLEAT

VENTED RIDGE END



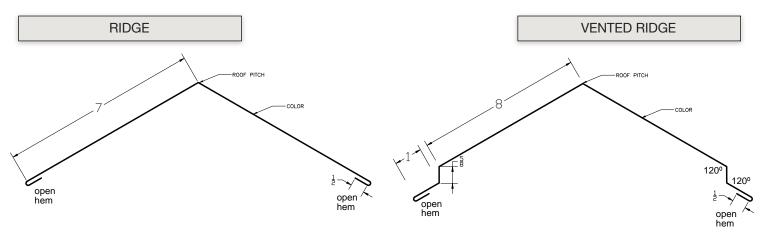


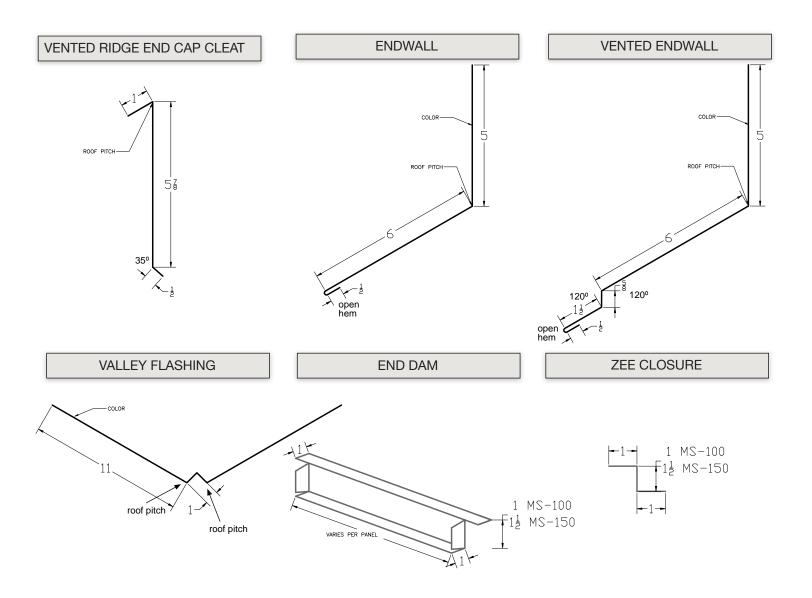


MS SERIES

Flashing and Details Guide

MS Series flashing are 10' Long



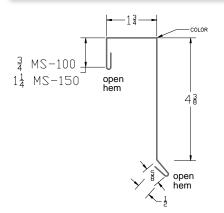


MS SERIES

Flashing and Details Guide

MS-Series flashing are 10' Long

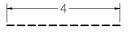
STANDARD GABLE



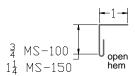
GABLE CLEAT



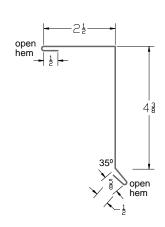
PERF



GABLE ALTERNATE L



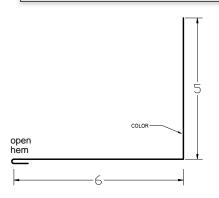
GABLE ALTERNATE



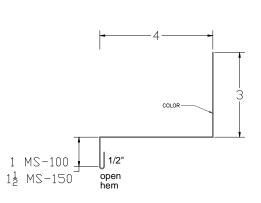
CURB HEAD

BACK PAN

-18-



CURB SIDE WALL



8



Custom Trim Order

| Customer Name: | Job Name: | | |
|---------------------------------------|---------------------------------------|--|--|
| | | | |
| | | | |
| Drawing #: Pitch: # of Pieces: | Drawing #: Pitch: # of Pieces: | | |
| Description: | Description: | | |
| Hems: ☐ Open ☐ Closed ☐ Slightly Open | Hems: ☐ Open ☐ Closed ☐ Slightly Open | | |
| | | | |
| Drawing #: | Drawing #: # of Pieces: | | |
| Description: | Description: | | |
| Hems: ☐ Open ☐ Closed ☐ Slightly Open | Hems: ☐ Open ☐ Closed ☐ Slightly Open | | |

Please provide a drawing for each flashing with precise measurements and angles Fax to: 425-485-2710

Phone: 425-485-3003

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