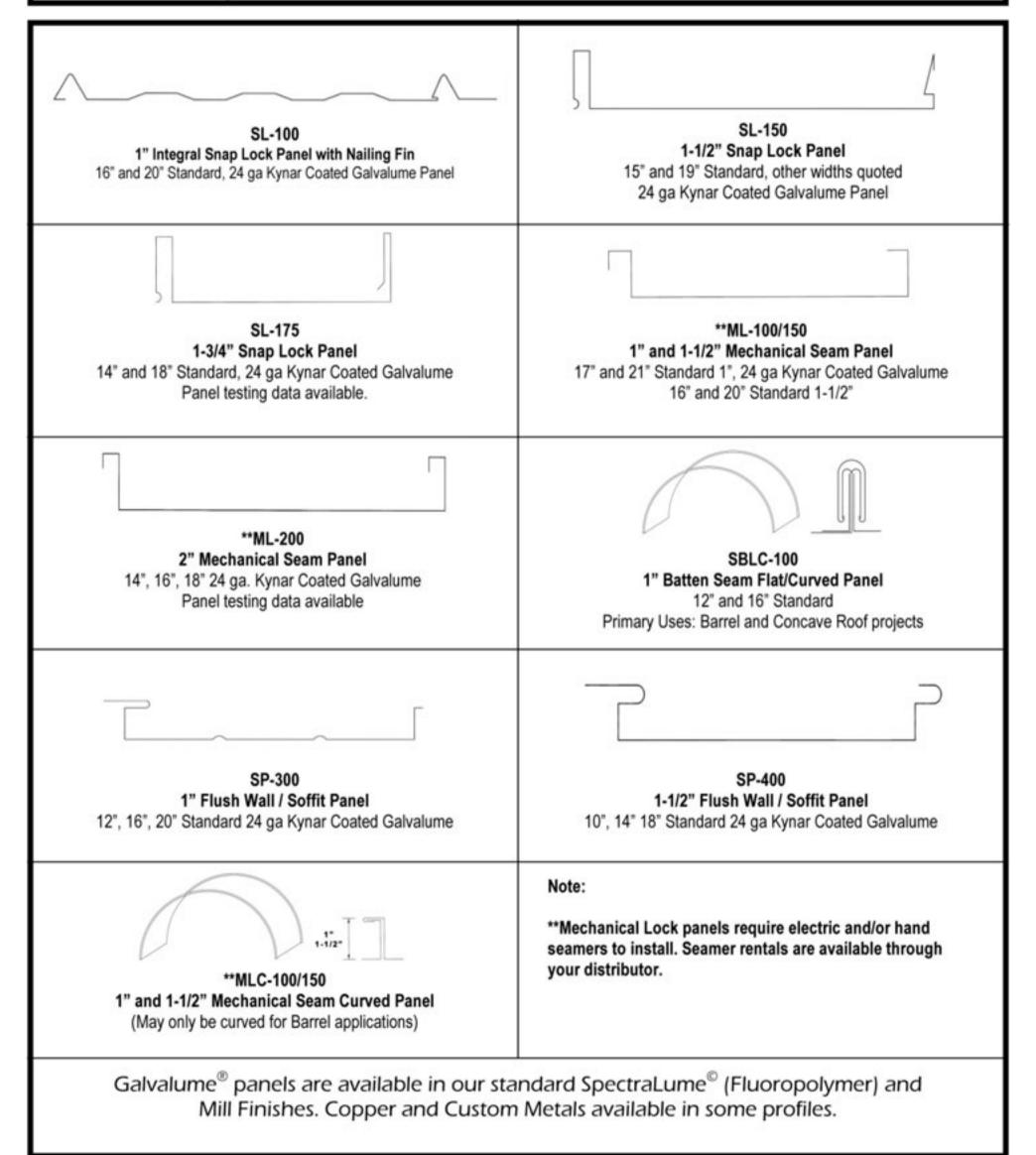


Metal Roofing Installation Guide Standard Details

Due to product changes and other factors, ASP, Inc. reserves the right to change or delete information herein without prior notice or obligation. The following pages are suggestions or guidelines on basic installation practices, and is not intended to cover all instances.



PANEL PROFILES



ARCHITECTURAL SHEETMETAL PRODUCTS, INC. GUIDELINES FOR INSTALLING PANELS

- Details shown on the following pages are suggestions or guidelines on basic panel installation practices. The information shown
 is accurate but is not intended to cover all instances, building requirements, designs or codes. The details may require changes or
 revisions due to individual project conditions. Note: These are only suggestions, and we at ASP, Inc. accept no responsibility or
 liability in erroneous installation techniques.
- The installation details shown are proven methods of construction. However it must be noted that weathertightness is a function
 of the installer. The installer should follow these recommended details, using proper workmanship procedures and properly sealing
 all seams and joints.
- 3. It is the responsibility of the designer/installer to ensure that the details meet particular building requirements and to assure adequate weathertightness. ASP, Inc. will be held harmless from any and all claims or liability arising from lack of weathertightness as a result of not following these suggested typical detail drawings. The designer/installer must be aware of and allow for expansion/contraction of roof panels.
- All flashings, closures and accessories shown can be provided by ASP, Inc. unless otherwise noted.
- 5. Sealant shall be field applied on clean, dry surfaces.
- Start with a plumb and level roof deck. To help prevent distortion and oil canning, panels should not be more than 1/16" out of plane. Deck should be corrected before installation.
- An underlayment, ie: Synthetic Felt and/or non-granular Ice & Water Shield must then be applied following manufacturer's instructions. (Do NOT use granular surface material).
- 8. Measure roof deck for panel layout. The first and last panels in each section should be relatively even in width. Snapping a chalk line in place of the panel seams will serve as a good guideline. A square should be used in this step to assure plumbness, and that your panel seams do not wander.
- 9. Install eave drip/rake edges. You need a minimum of 1" of overlap on seams.

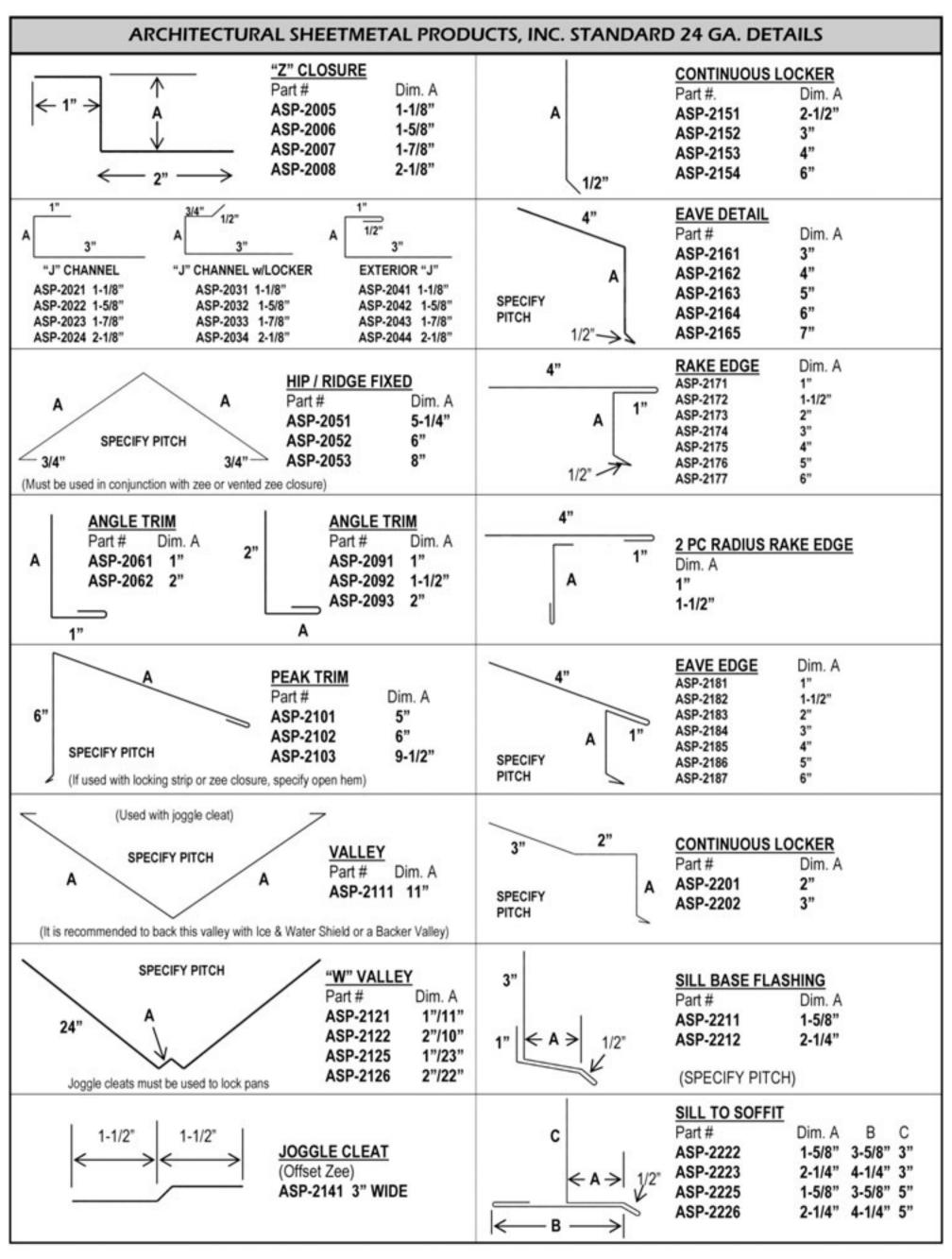
Nail Fin Panels: Quick Snap 16, SL-100, SP-300, SP-400: Screws should be placed in the center of the slots provided in the fin, approximately 16" to 18" on center. Screws should be driven so they are snug, but allow for thermal movement of panel. If screws are driven too tightly, oil canning may be severe as the screws can distort the panels. If the screws are undertightened, the panels may "rattle" in windy conditions. No slots are provided in the SP-300 and SP-400 panels.

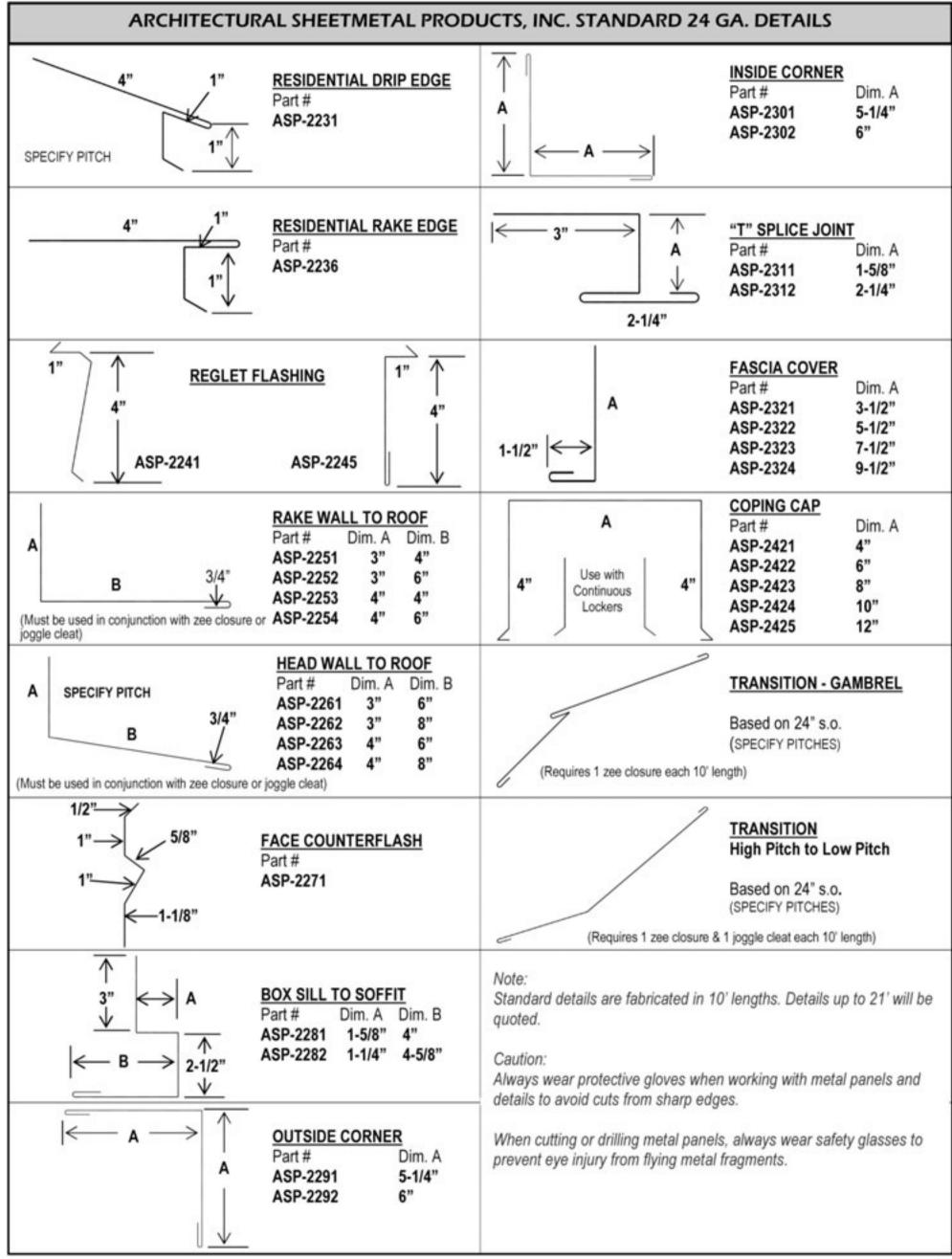
Panels Requiring Clips: ML-100, ML-150, ML-200, SBL, SBLC, SL-150, SL-175, MLC-100, MLC-150: As a rule, clips should be spaced approximately 24" on center along the male leg of the seam unless otherwise specified. (Exceptions may be the SL-175 or ML-200, dependant on roof structure and framing.) Each clip requires a minimum of 2 screws per clip.

Clips: There are several different styles of clips. Snap Lock panel clips are fabricated to withstand infinite expansion and contraction of panels by their design. The clip is "open" and allows the panel to expand through it. Mechanical Lock panels have Fixed Clips and/or Expansion Clips depending on the length of the panel, and thermal requirement. Correct clips should be discussed prior to installation.

- 10. You are now ready to start the panels. A 1" return should be folded on the eave end to accept the drip edge (see Eave Detail). This can be achieved by field cutting panel ends, and folding panels under using a bar-fold tool. The panel edge should be cut and folded in a similar fashion to accept the gable edge overhang, then crimped tight (see Rake Detail).
- 11. Apply panels to the deck using clips with pancake head screws (on male panel leg). Start 6" from eave, and secure (with screws) no less than 2' on center up to ridge (peak). Panels should be secured 6" down from peak. Also, secure with two fasteners on top of each panel below peak to prevent sliding. The female panel leg will snap over top of the male leg, concealing the fasteners. Continue this process across the roof deck. Panels should be caulked and folded where the seams come together at the eave to prevent insects and rodents entry.
- 12. At the ridge, cut and apply zee closures to fit between panel seams (see Ridge Detail). Closures should be applied with butyl tape between panel and trim then secured to the roof deck using low profile pancake head fasteners (as least two per strip).
- 13. Ridge cap will then be secured to the zee closures and crimped tight. All flashings should have at least 1" to 2" of overlap.
- 14. Same installation techniques should be used for all head wall, rake wall, skylight and chimney flashings (see Details).
 Difference being the wall portion of details should be tucked under siding or reglet and secured, concealing fasteners.
- 15. Some field working of panels and flashings is to be expected by the installer. Field corrections are a part of every installation.
- 16. Some things to keep in mind: Metal panels and Ice & Water Shield are very slippery. Extreme caution should be used when installing. Not to be installed when any precipitation has or is occurring. Should only be installed when dry. And should not be walked on after installation, if it can be avoided.
- 17. Panels are shipped with a strippable film. This film should be removed immediately following installation!
- 18. Touch-up any scratches and/or gouges with paint (not included, but can be ordered).
- Call: 1-888-901-6144 with questions.

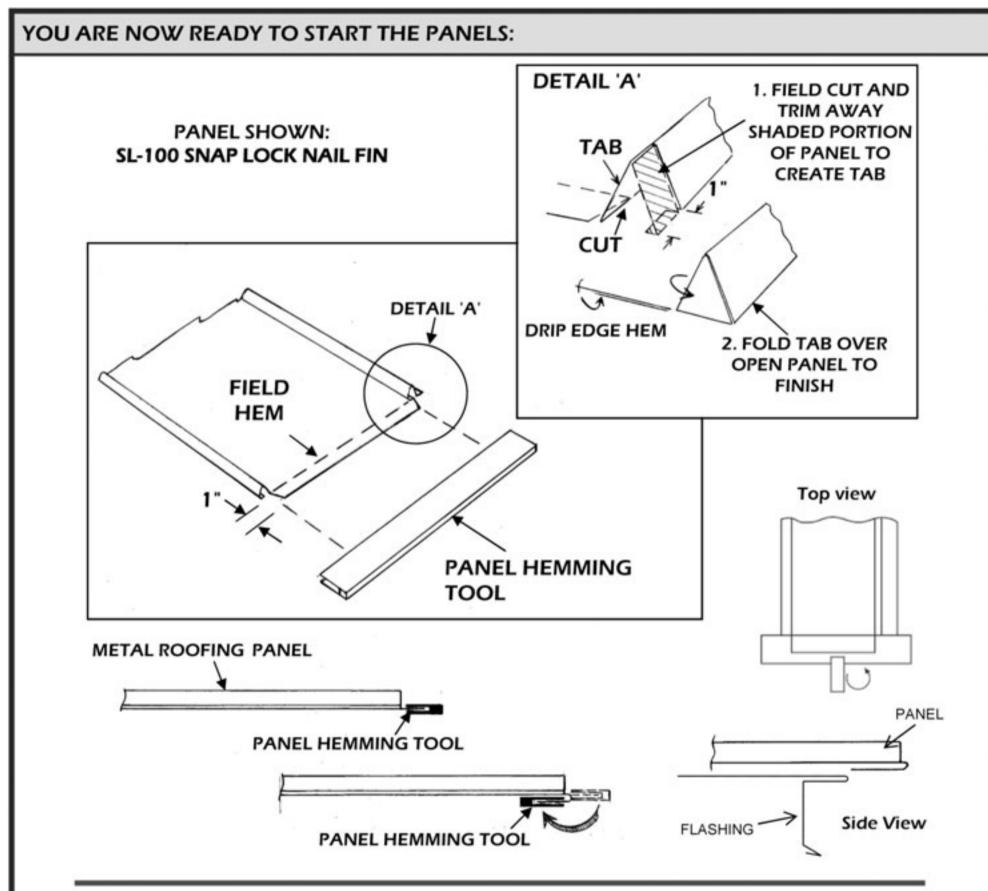








HEMMING PROCEDURE



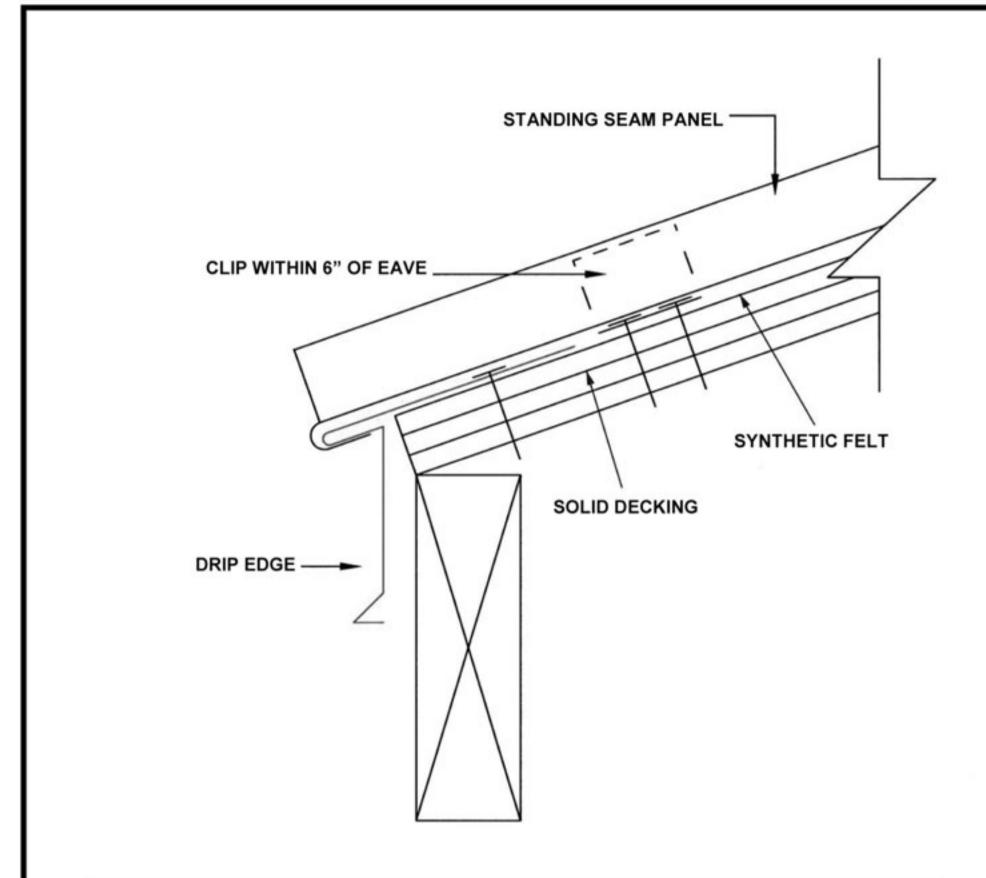
PANEL HEMMING PROCEDURE:

- 1. Measure 1" on both standing seams and across pan.
- Cut 1" of the male leg off, repeat on female leg leaving a tab that can be folded over to cover void.
- 3. Turn panel upside down and insert folding tool on remaining pan.
- 4. Fold to 180 degrees as shown in detail.

NOTE: Panel lengths need to be increased by 2"

EAVE DRIP PROCEDURE



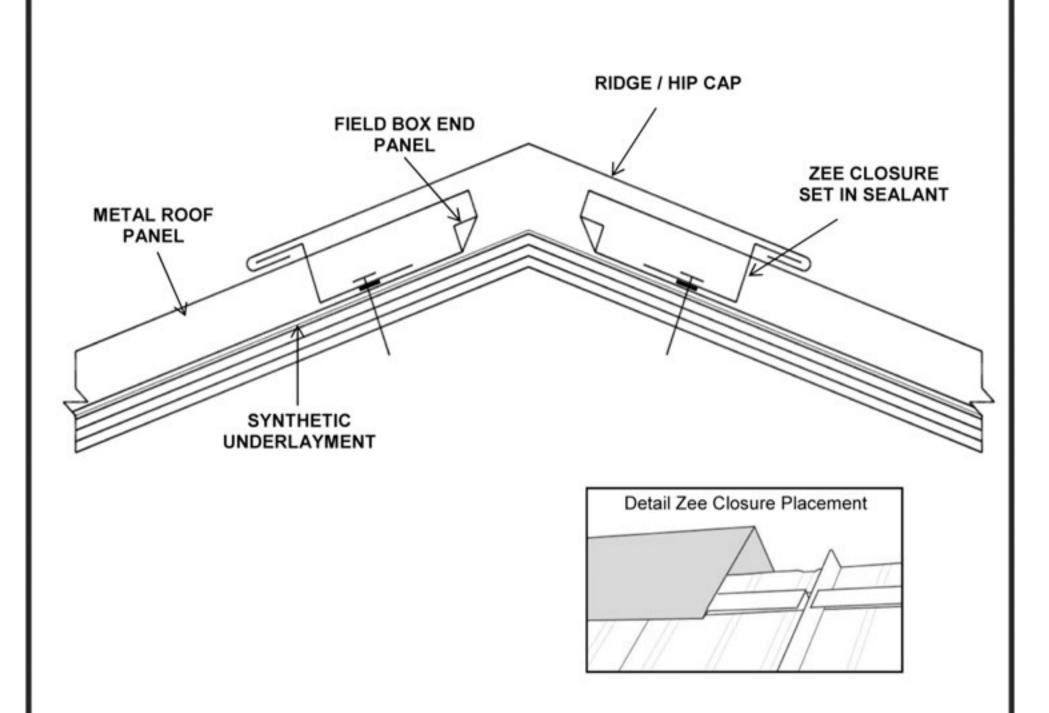


EAVE / DRIP EDGE PROCEDURE:

- 1. Complete hemming procedure as per detail.
- 2. Slide hemmed panel into drip edge and back off 1/8" from trim.
- 3. Locate first panel fastener 6" from eave.
- 4. Crimp hemmed panel on drip edge closed.



RIDGE / HIP PROCEDURE



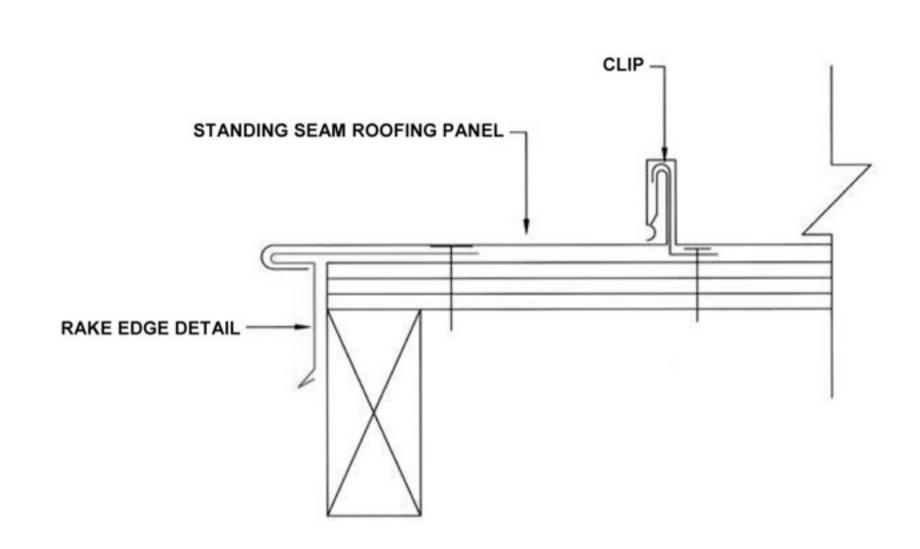
RIDGE/HIP PROCEDURE:

- Install panels with clips or fasteners approximately 1'0" downhill on each side of Ridge/Hip.
- Use ridge cap to determine zee placement by putting cap in place and marking top of ribs along the edge of the cap.
- Field cut zee trim to fit between standing seams. Attach with 3 low profile
 pan head fasteners with the leading edge of the zee 1/8" behind marks on
 top of the ribs towards the ridge. Fasten through closure, butyl tape, and
 panel into substructure. (See detail)
- 4. Caulk the back of the closure at standing seam areas.
- Snap ridge cap over zee closures and crimp open hem closed.
- 6. Lap ridge/hip trim at least 2" with a bead of caulk between trims.

NOTE: Larger trim profile (minimum 8"x8") is recommended when using a vented zee closure.





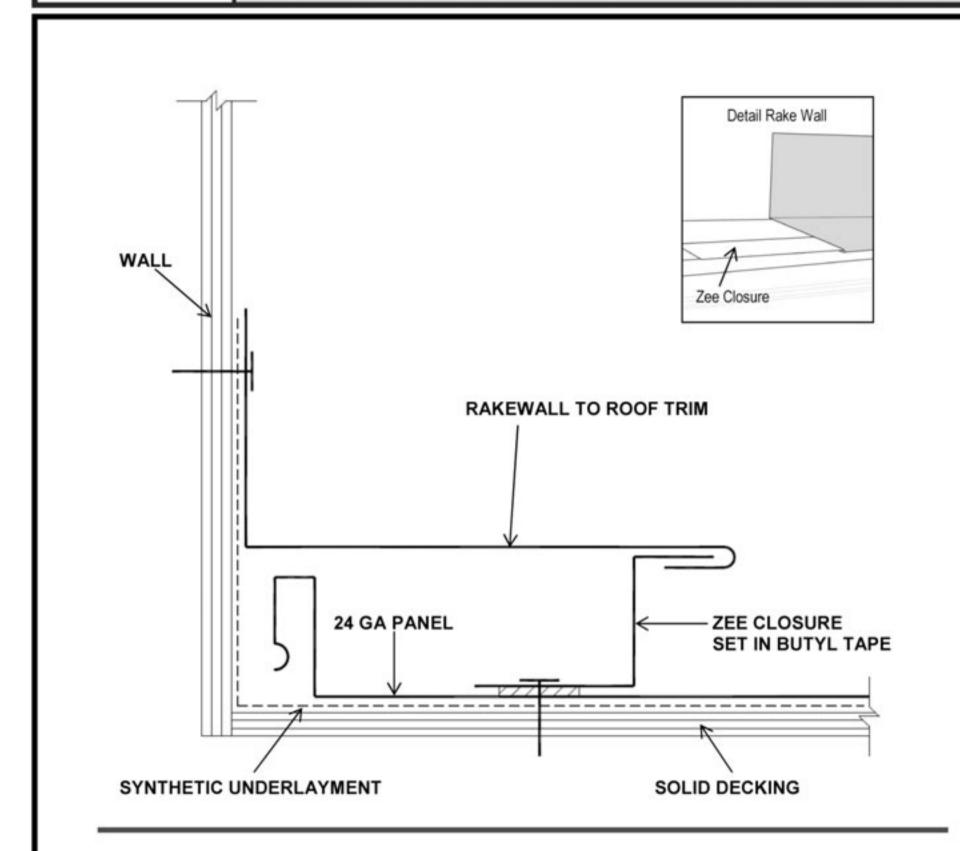


RAKE EDGE PROCEDURE:

- 1. Install rake trim on substructure with pancake head fasteners 6" on center.
- 2. Place panel at location and mark 1" past rake trim.
- 3. Cut panel lengthwise on 1" extension line.
- 4. Gradually hem panel back using folding tool and latch onto rake trim.
- Crimp edge closed.



RAKEWALL PROCEDURE

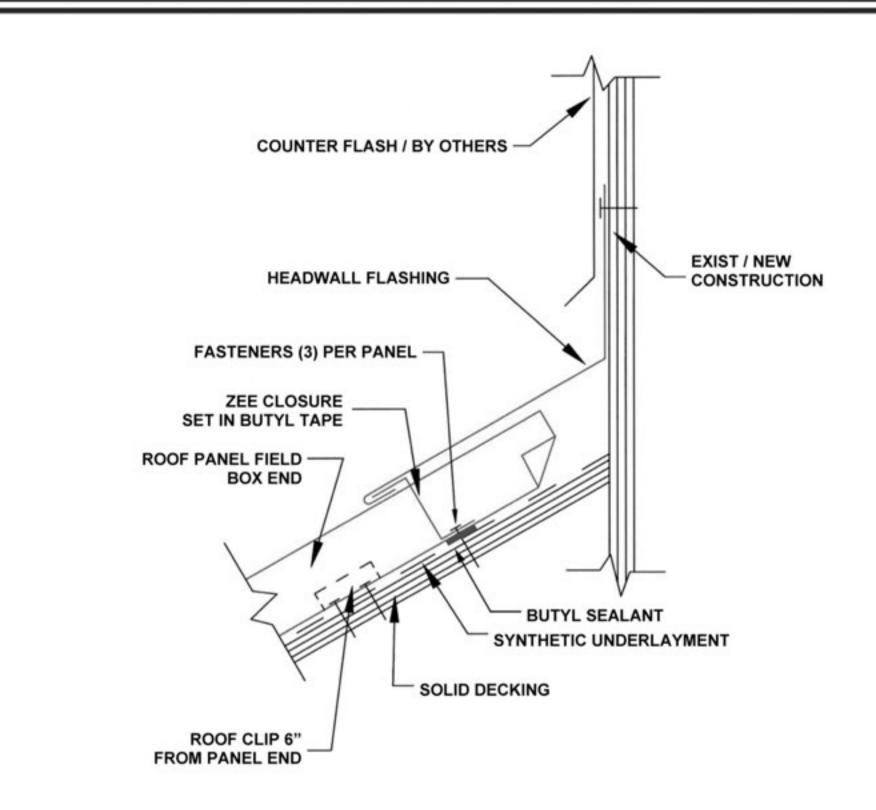


RAKEWALL PROCEDURE:

- Set full length zee closure in butyl tape, and fasten 6" on center through zee trim, butyl tape, panel and into substructure. Locate as shown.
- Place rakewall trim over zee closure, crimp closed then fasten trim to wall with fasteners 6" on center.





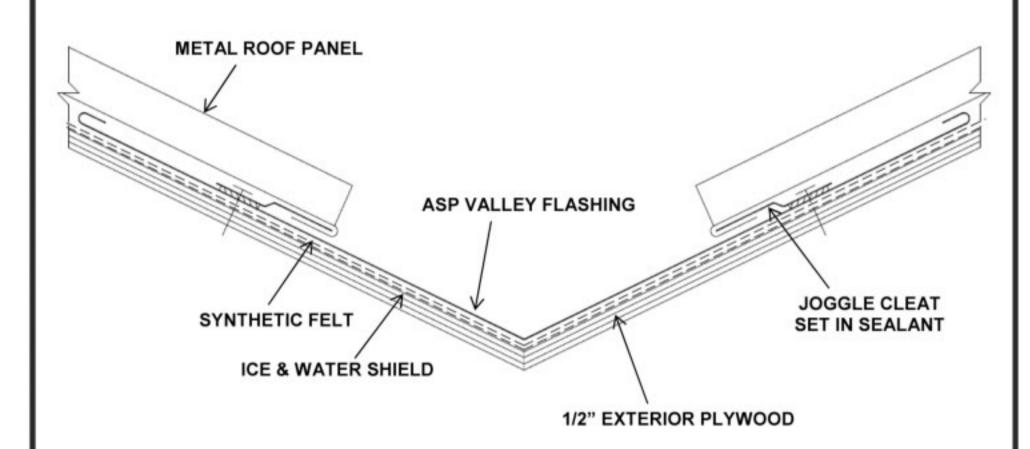


HEADWALL PROCEDURE:

- Field cut zee closure and install on top of the butyl tape with 2 fasteners through closure, butyl tape, panel and into substructure. Locate as shown in detail.
- 2. Apply bead of caulk to the back of the zee closure.
- Place headwall trim over zee closure, crimp closed then fasten trim to wall with fasteners 6" on center.



VALLEY PROCEDURE

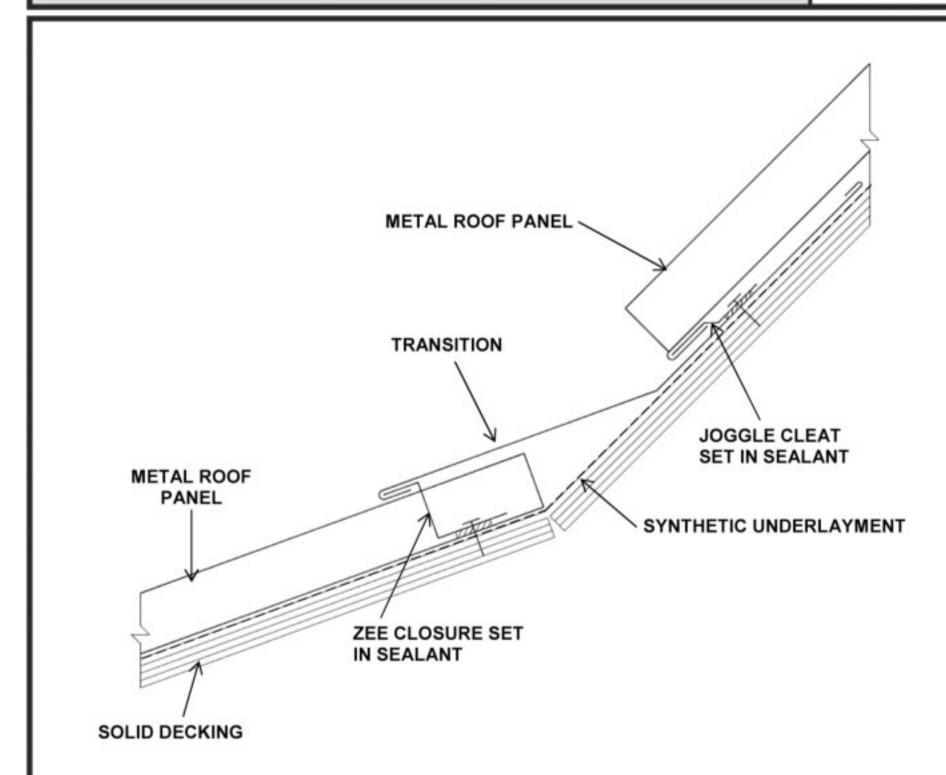


VALLEY PROCEDURE:

- 1. Layout valley trim over substructure.
- 2. Locate joggle cleat at least 4" from center of valley trim.
- Set joggle cleat in butyl tape and fasten through cleat, butyl tape, and valley trim into substructure.
- 4. Place first fastener at least 6" from end of panel.
- 5. Complete hemming procedure as per detail on page 4.





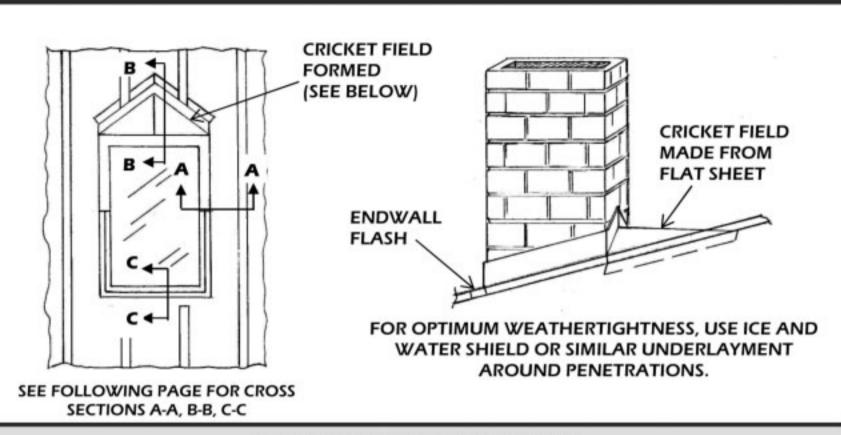


TRANSITION PROCEDURE:

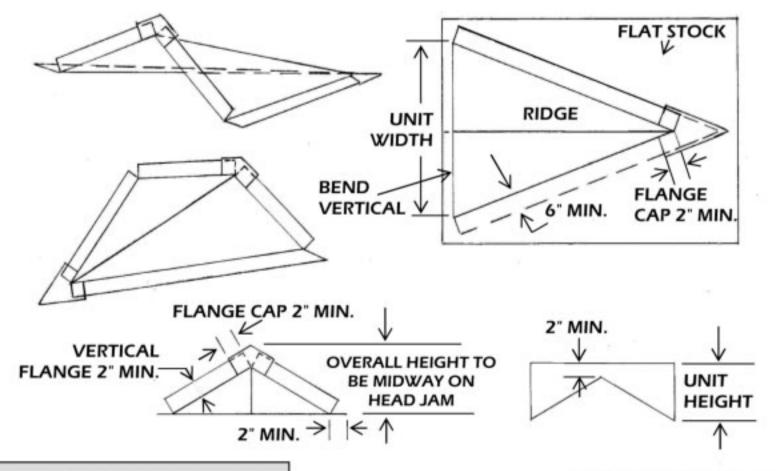
- Attach lower roof to substructure to start detail.
- At the top of the lower roof panels, install field cut zee closures to accept transition. Fasten through zee closure, butyl tape, and panel into substructure.
- Place transition trim open hem over zee closure and fasten into upper roof at the highest point of transition trim. Use hand seamers to finish closing hem.
- 4. Set joggle cleat into butyl tape approximately 4" above transition.
- Complete panel hemming procedure as per details on page 4. Then latch onto joggle cleat. Crimp.



SKYLIGHT or CHIMNEY DETAILS

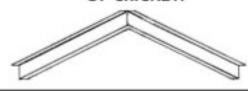


CRICKET FIELD FORMING



ALTERNATIVE CRICKET DETAIL

1-1/2" ASP HIP CLOSURE USE TO CREATE BASE/FRAME OF CRICKET.

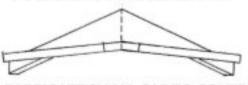


TOP OF CRICKET FIELD FORMED FROM FLAT SHEET



CUT TRIANGULAR CRICKET TOP FOLD UP WIDE END OF TRIANGLE. SLIT CENTER OF FOLD & BEND SLIGHTLY DOWN CENTER.

FASTEN TOP OF CRICKET TO BASE. CAULK ALL JOINTS AND SEAMS WITH ONE-PART POLYURETHANE SEALANT.

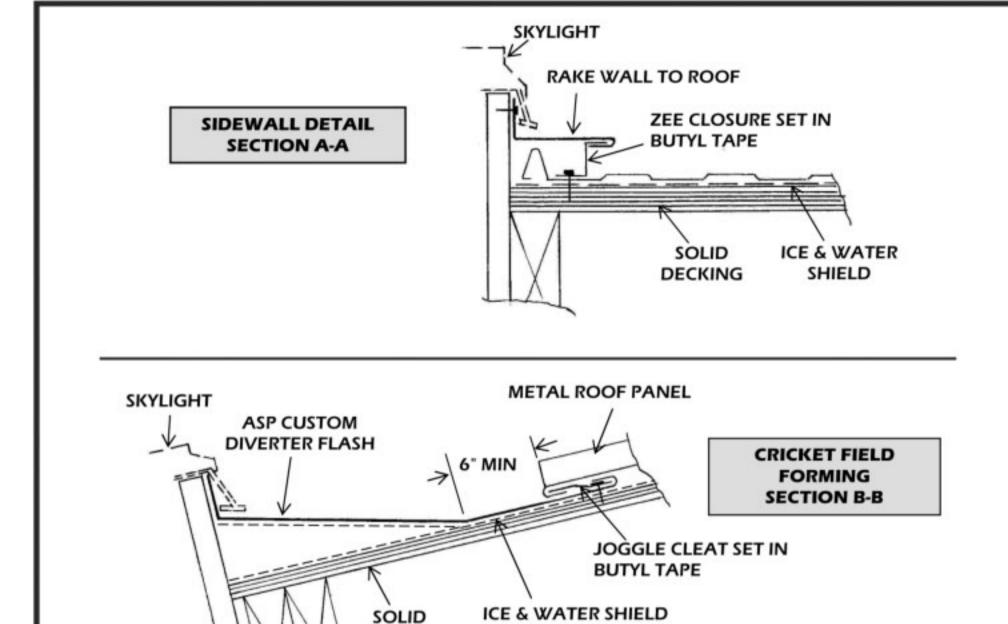


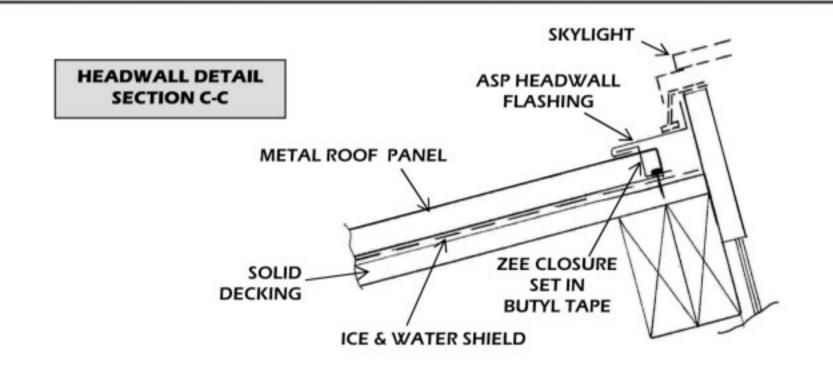
FABRICATE SMALL CAP TO COVER AREA THAT WAS SLIT.



DECKING

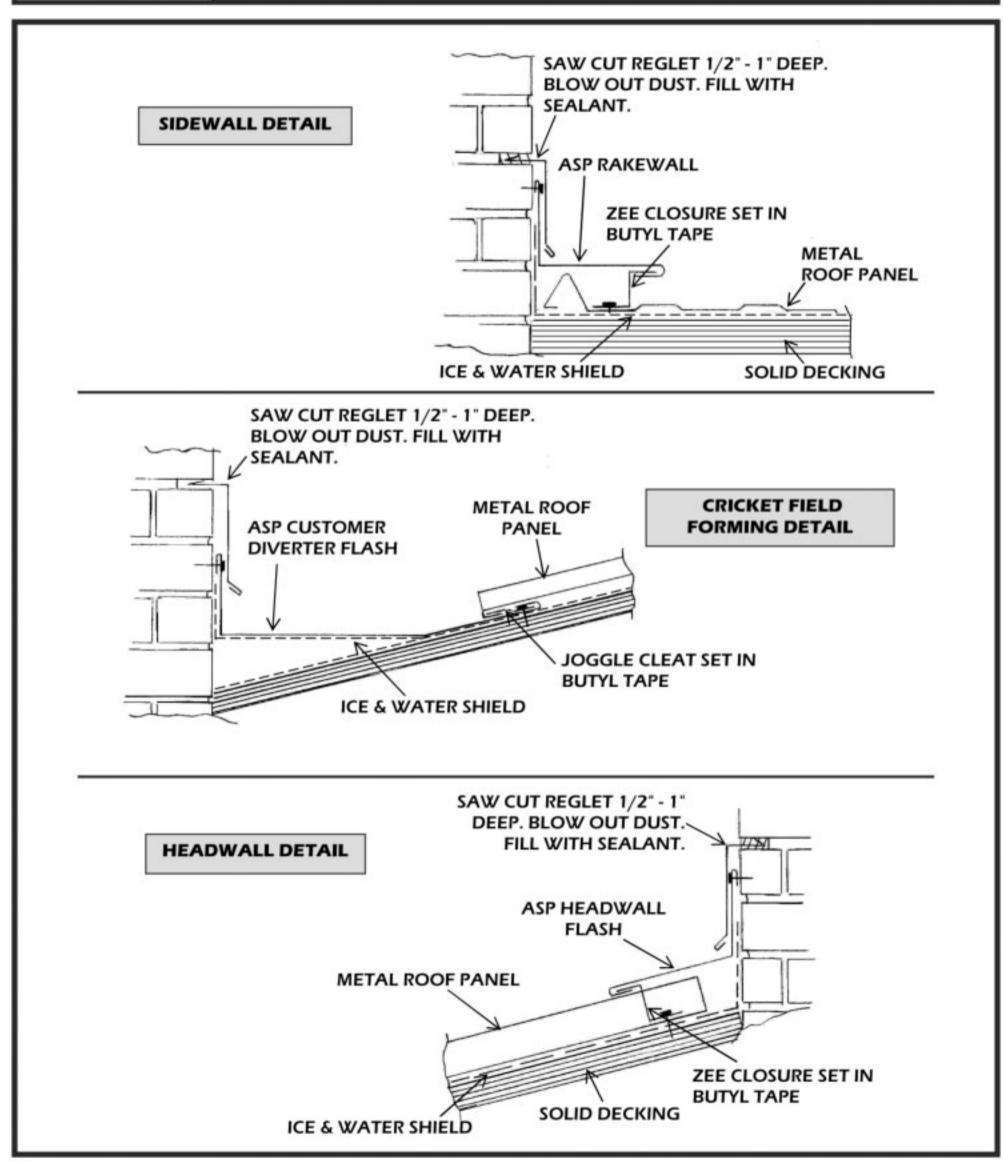






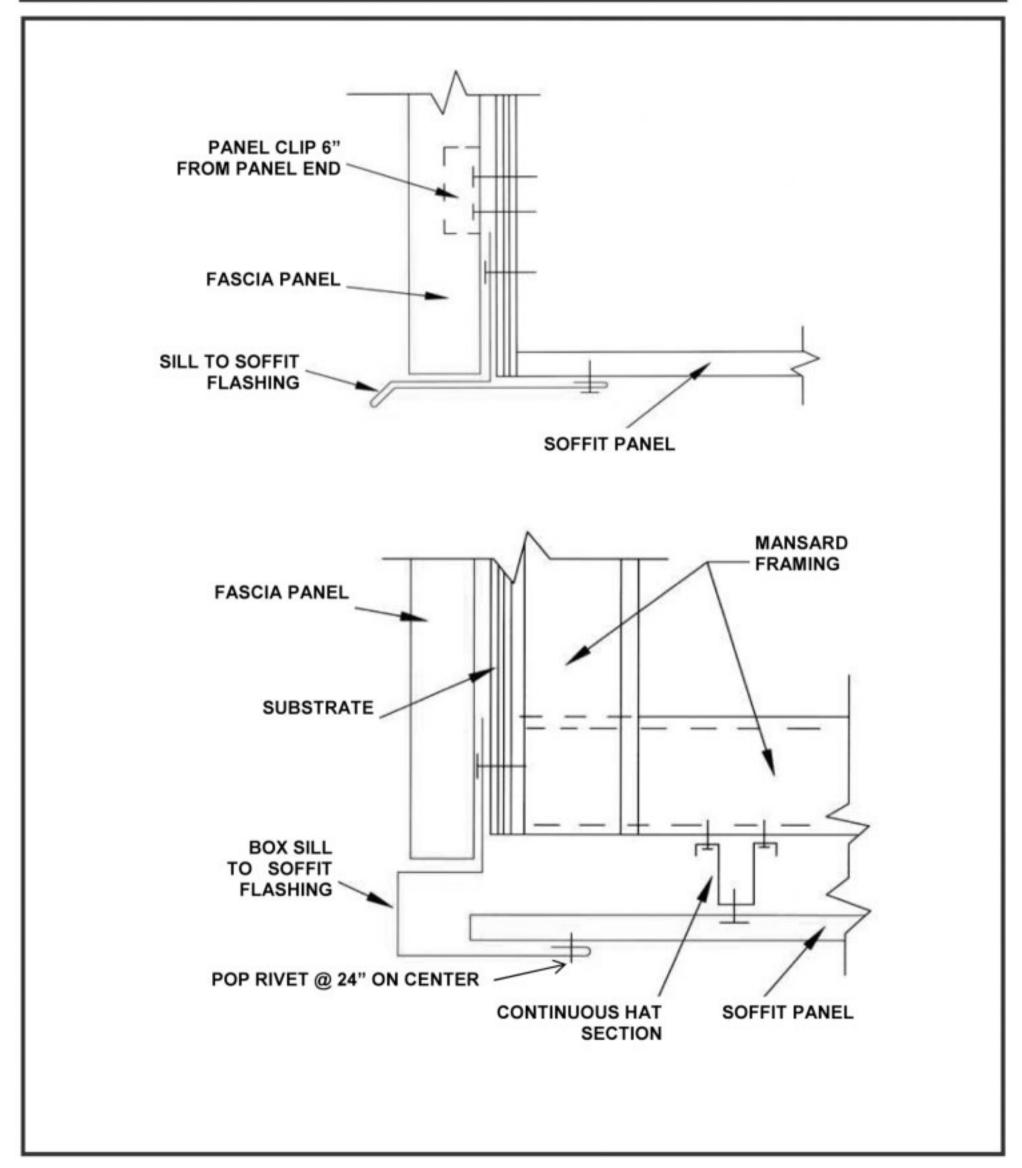


CHIMNEY DETAILS



SOFFIT/FASCIA DETAIL



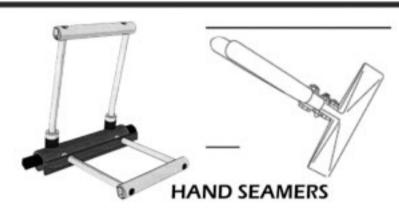


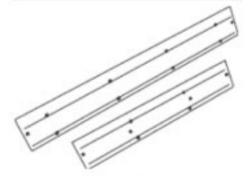


STANDARD ACCESSORIES & CLIPS

Available from ASP, Inc.







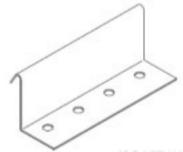
FOLDING TOOL 12", 18", 24"



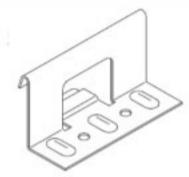
BUTYL TAPE 3/32" X 1" 50FT



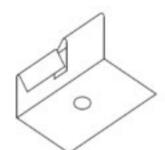
PIPE BOOTS



SL-150 CLIP



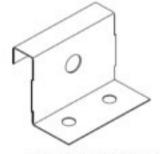
SL-175 CLIP



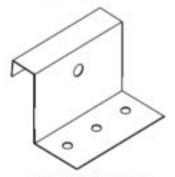
SBL-100 CLIP



ML-100 FIXED CLIP



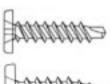
ML-150 FIXED CLIP



ML-200 FIXED



WOODGRIP SCREWS



1" METAL PANHEAD SCREW



KYNAR TOUCH-UP PENS



1" WOOD PANHEAD SCREW

THE INSTALLER/CONTRACTOR IS RESPONSIBLE FOR ALL FIELD MEASUREMENTS. THE INSTALLER/CONTRACTOR IS RESPONSIBLE FOR QUANTITIES OF MATERIAL ORDERED.



ARCHITECTURAL SHEETMETAL PRODUCTS, INC.

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