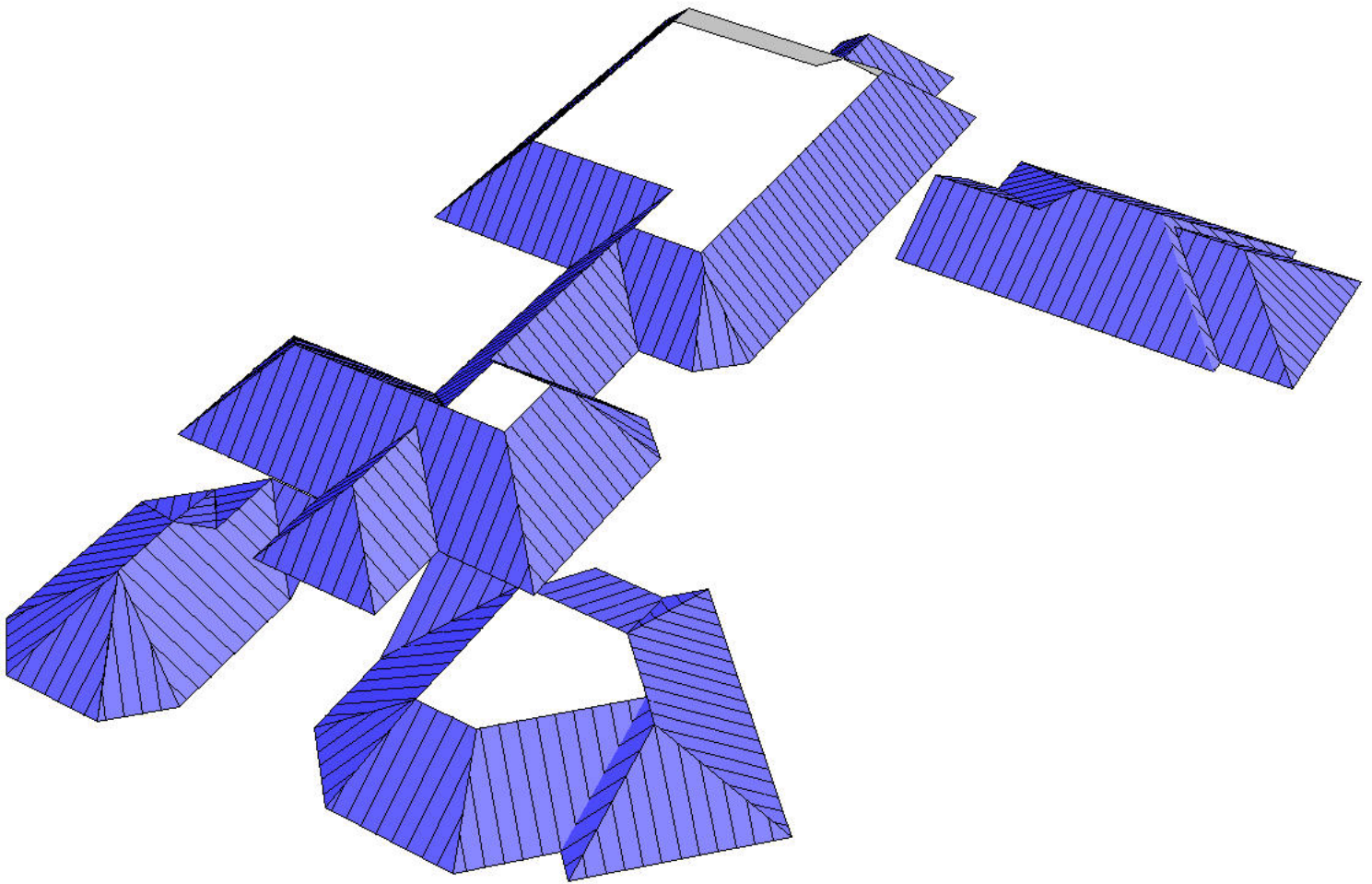


INSTALLATION GUIDE

ENGLERT SERIES 2000 OVER WOOD DECKS



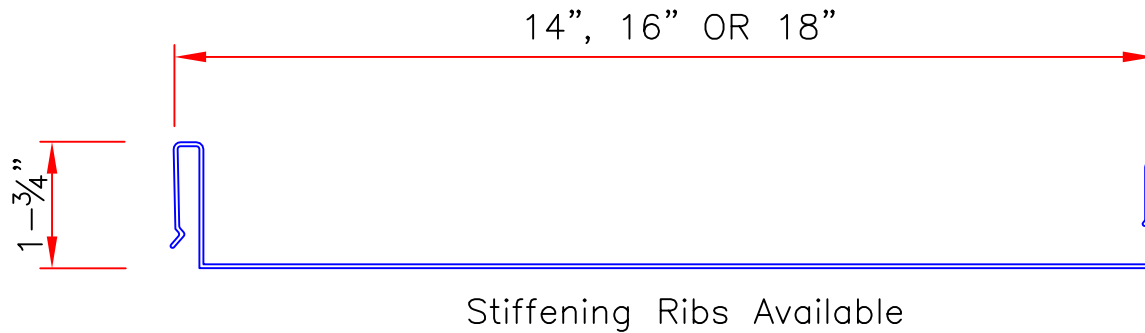
SERIES 2000 PRODUCT INFORMATION – PLYWOOD DECK

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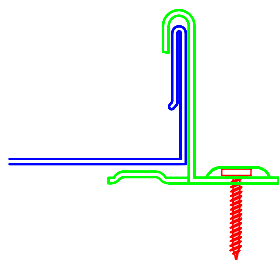
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INTRODUCTION

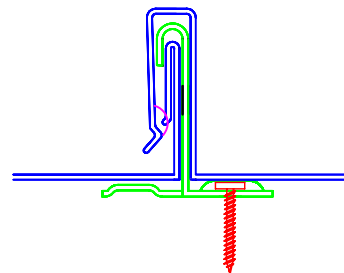
The Series 2000 System consists of 1-3/4" High Structural/Architectural Panels which are available in: 22 & 24 GA. Steel and 0.032" & 0.040" Aluminum in a variety of finishes.



The two drawings below illustrate the seaming process. Starting with *Step 1*, clips are installed over the male leg and fastened to the substrate. *Step 2* involves the panels to be "*snap-locked*" together. Simply push the female leg of the panel onto the male/clip assembly and lock the panels together.



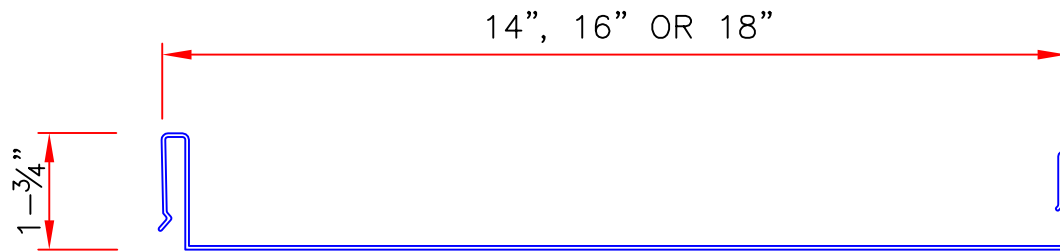
Step 1



Step 2

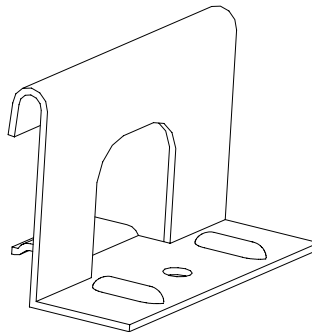
TESTS

- 1) ASTM E 1680-95 Air Filtration Test
- 2) ASTM E 1646-95 Water Penetration Test
- 3) UL-580 Classification Report
- 4) ASTM E 1592 Structural Test Report



Stiffening Ribs Available

SERIES 2000 PANEL Panel Profile



SERIES 2000 PANEL Fixed Panel Clip

AVAILABILITY

	GALVALUME PLUS	GALVALUME PC3500	G-90 PC3500	ALUMINUM PC3500
22 GA.	●	●	●	
24 GA.	●	●	●	
.032"				●
.040"				●

SAFETY PRECAUTIONS

Follow all OSHA safety practices and regulations.

Extreme care should be taken when unloading, handling and installing metal roofs. Material may be heavy and bulky; metal edges may be sharp; and working at heights is dangerous.

The installer should wear heavy duty gloves and a long sleeve shirt when handling metal items as they may be sharp and can cause severe cuts. Safety goggles should be worn when cutting and drilling metal items or installing fasteners.

Proper fall protection should be used when working on the roof. The installer should be extra careful when on the roof as panels can be slippery when wet or oily.

FIELD CUTTING METAL

It is recommended that only snips, nibblers or electric powered shears be used. Cut panels with the bottom side up in order to avoid cuttings from contacting the finished surface of the panel. Panels should be immediately brushed clean after cutting to remove any shavings. Follow the safety recommendations of the tool manufacturer.

Goggles, heavy duty gloves and long sleeves must be worn for protection while cutting metal.

DELIVERY & STORAGE

Unload and inspect the delivered materials for damage. Store the panels and accessories under waterproof covers and above ground on skidded platforms. Provide proper ventilation to prevent condensation.

PRE-INSTALLATION

All projects should conform to applicable building codes.

The minimum recommended roof pitch is 3" per foot.

The building must be squared according to acceptable building practices. Check the roof for square by measuring diagonally across one slope of the roof from similar points at the eave and ridge and confirming the same dimension. The substructure (eave to ridge) must be on plane within a 1/4" tolerance.

PRE-INSTALLATION CONTINUED

Provide a written report of discrepancies to the architect. ***Do not begin the installation until unsatisfactory conditions have been corrected*** as starting installation usually indicates acceptance of the substrate.

Wait until adjoining areas scheduled for stuccoing have been completed and washed down. Do not wash down acid residues from stucco directly over the metal.

ROOF INSTALLATION

The panels must be installed over a complete moisture-proofed substrate. Install #30 Asphalt Saturated Felt over the entire solid substrate. Under all flashing areas including eaves, apply a layer of Englert HT Underlayment, then overlay and install a layer of #30 Felt. All of these moisture barriers must be installed in a smooth continuous manner.

The panels should be installed square (perpendicular) to the eave. Panel seams should face away from the direction of the prevailing wind.

The seams shall be parallel and they shall be aligned for hips, ridges and valleys when possible.

No surface penetrations shall be made in panels without specific architect approval. All panels shall be continuous from eave to ridge without any horizontal end laps.

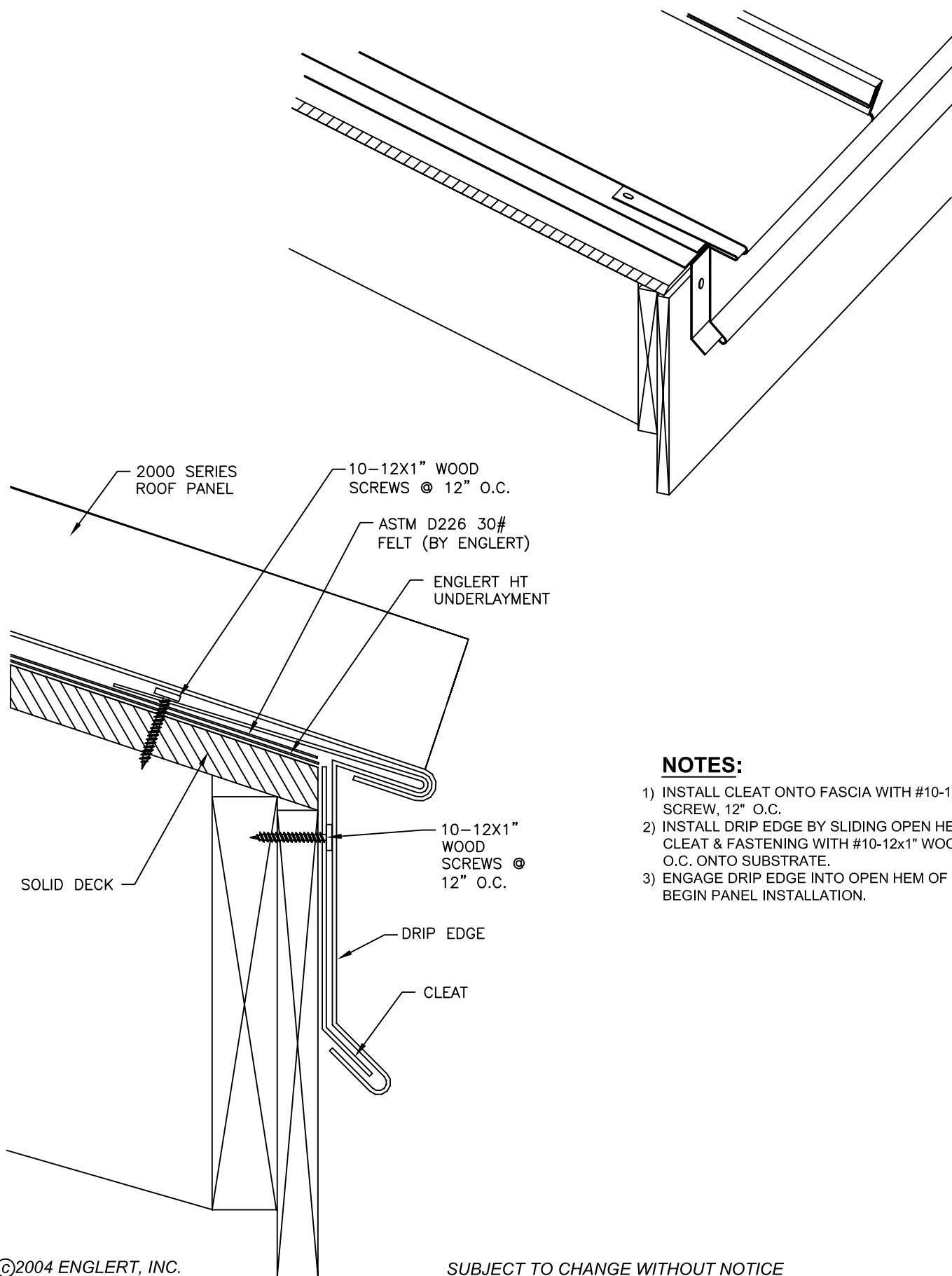
Do not overdrive fasteners as this can cause panel distortion.

End lap all flashing and trim at least 3". All gutters must be mitered, caulked and have a lining of HT Underlayment applied at the laps to make it watertight. All butt joints must be caulked.

CLEANUP

Peel off any strippable film on flashing as they are installed. Complete all items on punch list. Touchup minor scratches. Remove all debris associated with the roof installation.

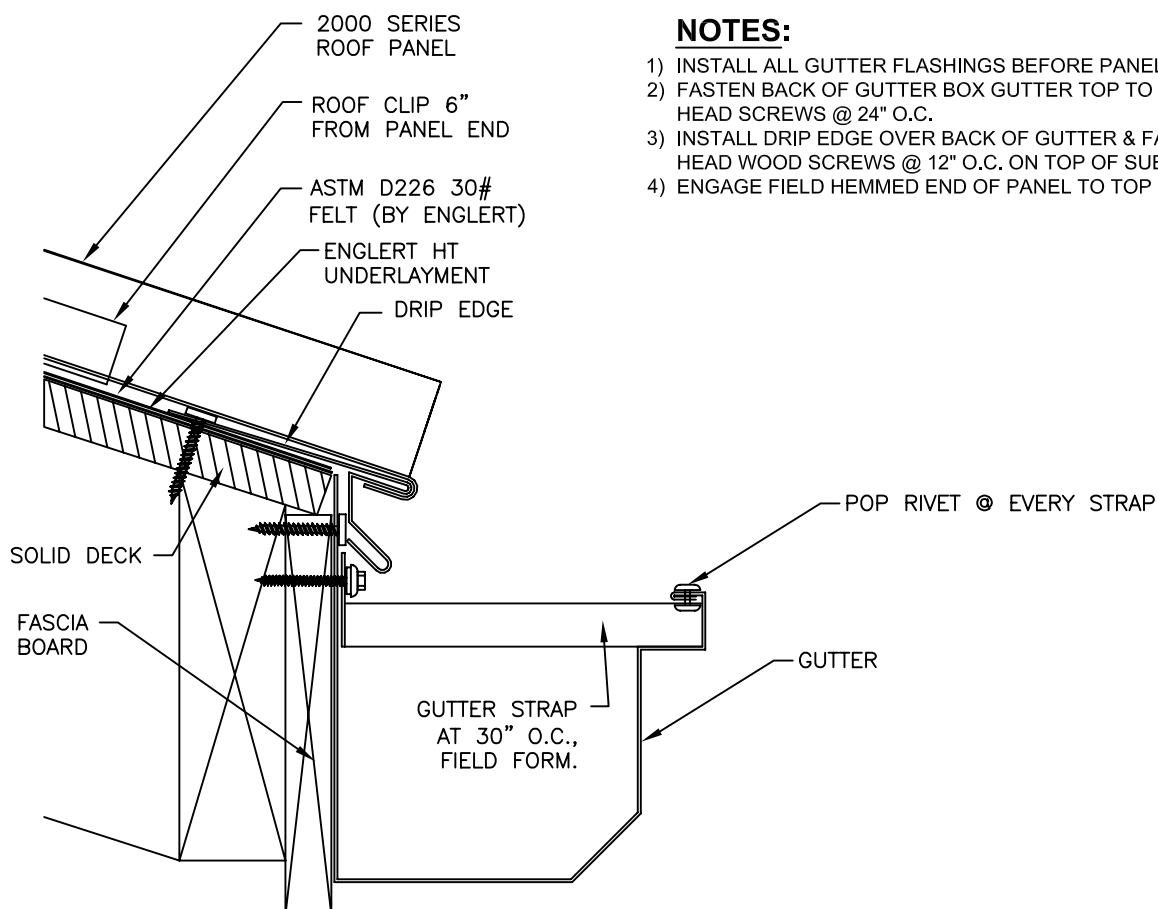
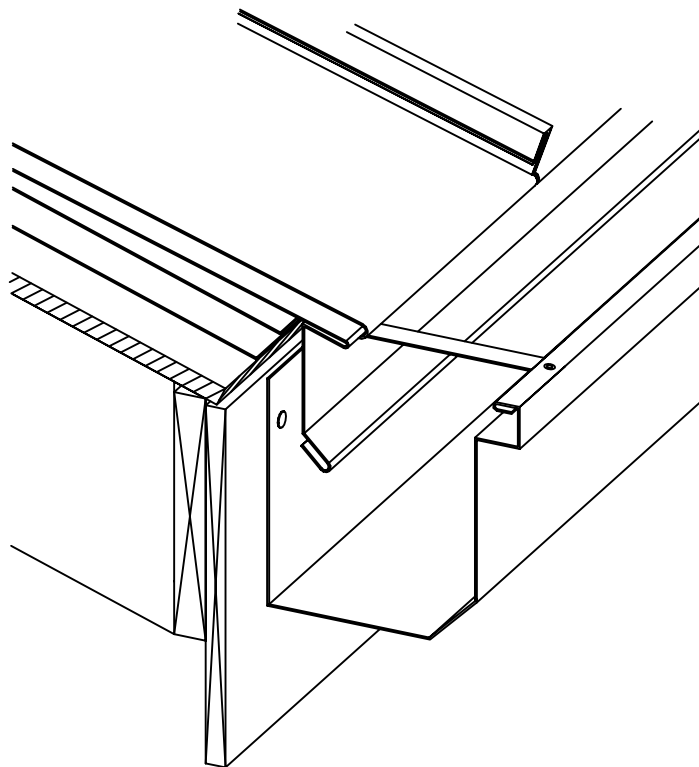
TYPICAL EAVE TRIM DETAIL



NOTES:

- 1) INSTALL CLEAT ONTO FASCIA WITH #10-12x1" WOOD SCREW, 12" O.C.
- 2) INSTALL DRIP EDGE BY SLIDING OPEN HEM ONTO CLEAT & FASTENING WITH #10-12x1" WOOD SCREW, 12" O.C. ONTO SUBSTRATE.
- 3) ENGAGE DRIP EDGE INTO OPEN HEM OF PANEL TO BEGIN PANEL INSTALLATION.

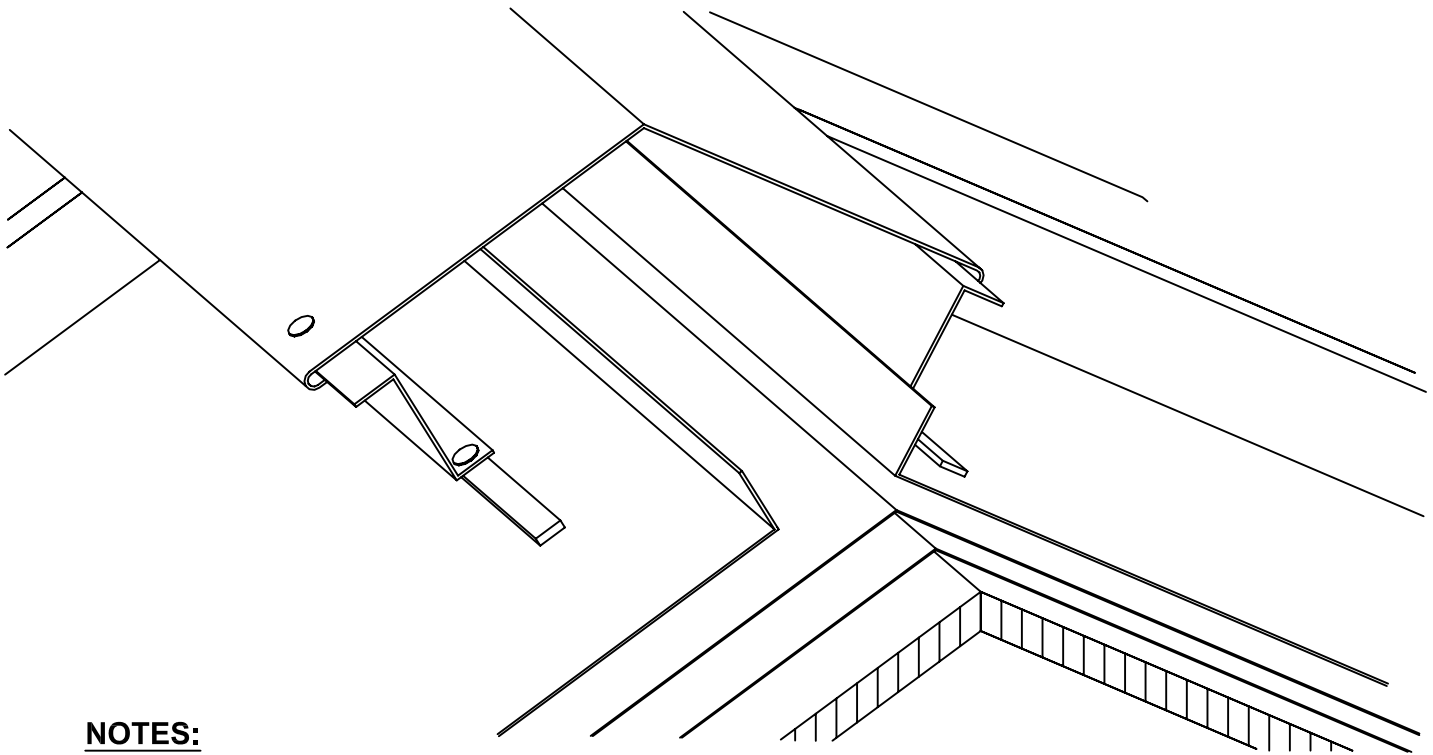
TYPICAL GUTTER DETAIL



NOTES:

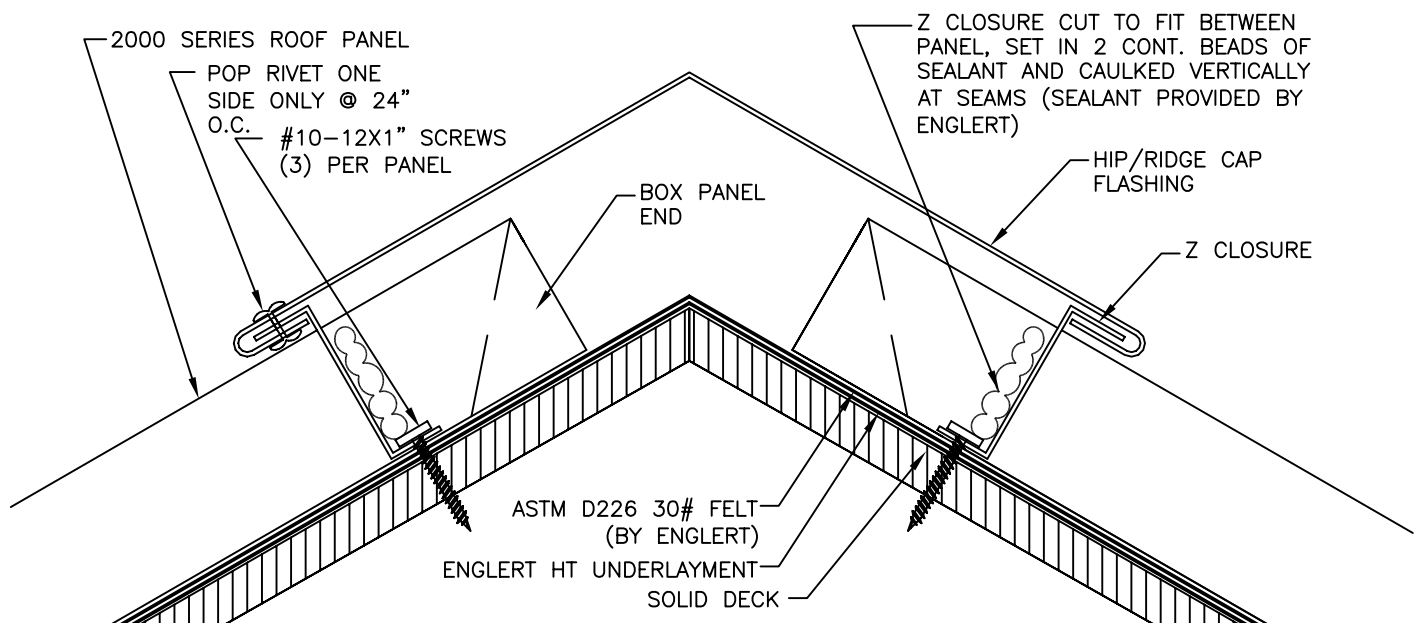
- 1) INSTALL ALL GUTTER FLASHINGS BEFORE PANEL INSTALLATION
- 2) FASTEN BACK OF GUTTER BOX GUTTER TOP TO FASCIA W/ #10-12X1" PANCAKE HEAD SCREWS @ 24" O.C.
- 3) INSTALL DRIP EDGE OVER BACK OF GUTTER & FASTEN #10-12X1" PANCAKE HEAD WOOD SCREWS @ 12" O.C. ON TOP OF SUBSTRATE
- 4) ENGAGE FIELD HEMMED END OF PANEL TO TOP HEM OF DRIP EDGE

TYPICAL HIP / RIDGE DETAIL

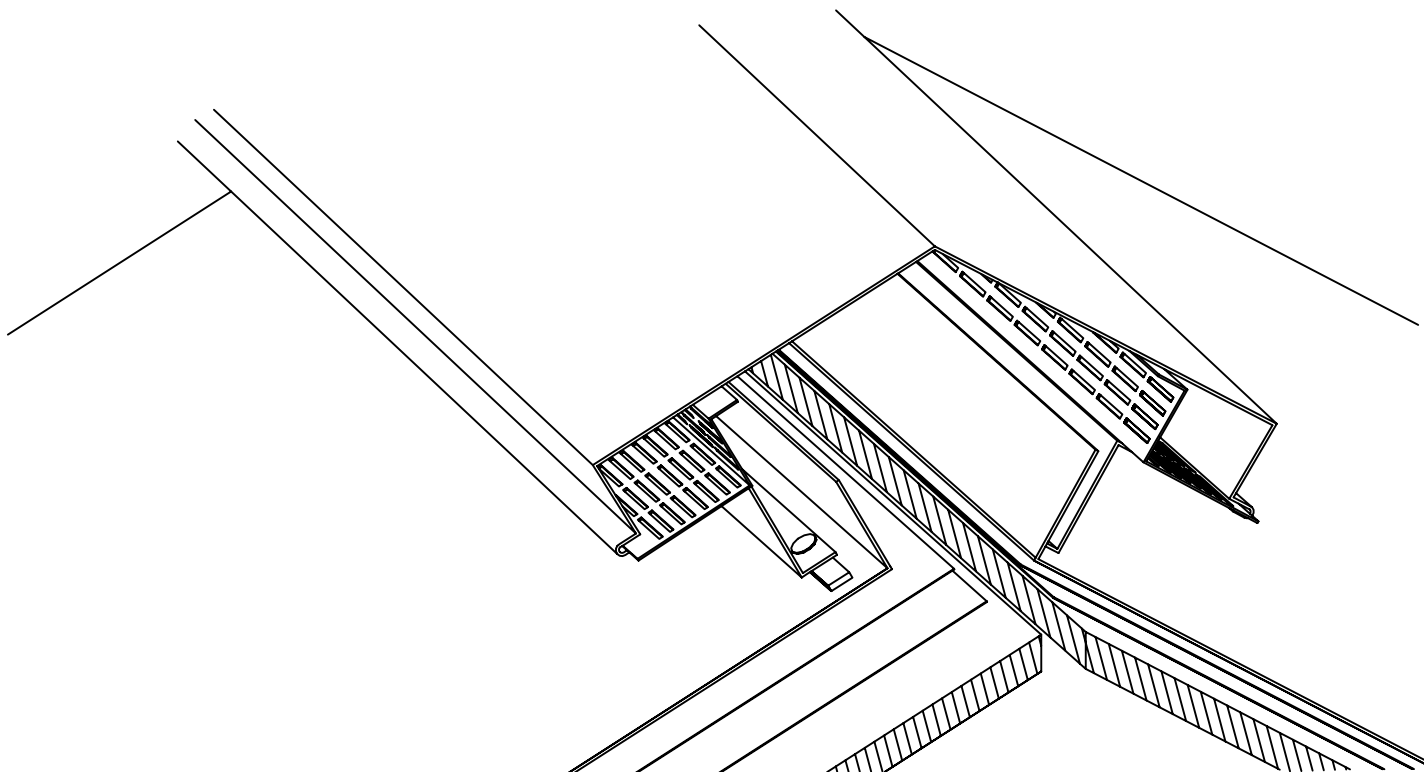


NOTES:

- 1) BOX END OF PANELS.
- 2) FIELD CUT "Z" CLOSURES TO FIT BETWEEN PANEL RIBS.
- 3) SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 4) APPLY SEALANT ON SIDE LEGS OF "Z" CLOSURE, FILLING ANY GAPS AROUND PANEL RIBS.
- 5) ATTACH RIDGE/HIP FLASHING TO "Z" CLOSURES WITH A POP RIVET ON ONE SIDE AT 24" O.C.
- 6) IF ADDITIONAL FLASHING LENGTHS ARE REQUIRED, APPLY SEALANT AND LAP THE FLASHING OVER THE INSTALLED FLASHING BY A MINIMUM OF 3" SECURING THE CONNECTION WITH POP RIVETS.

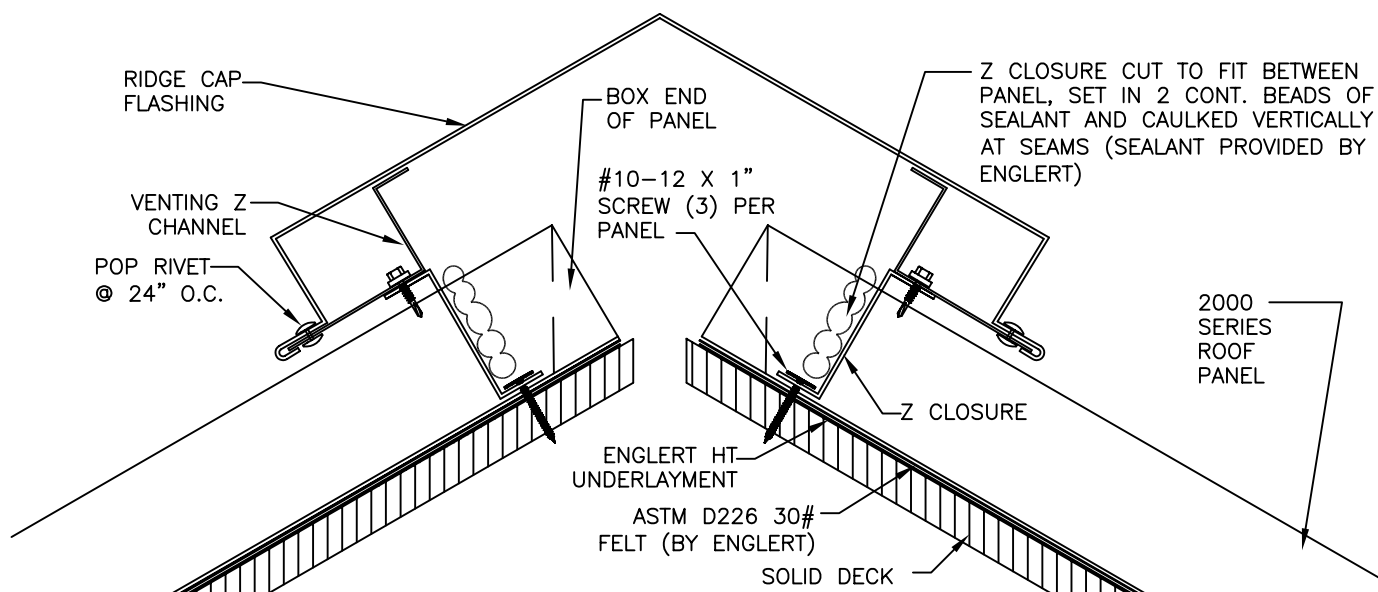


METAL VENTED RIDGE DETAIL

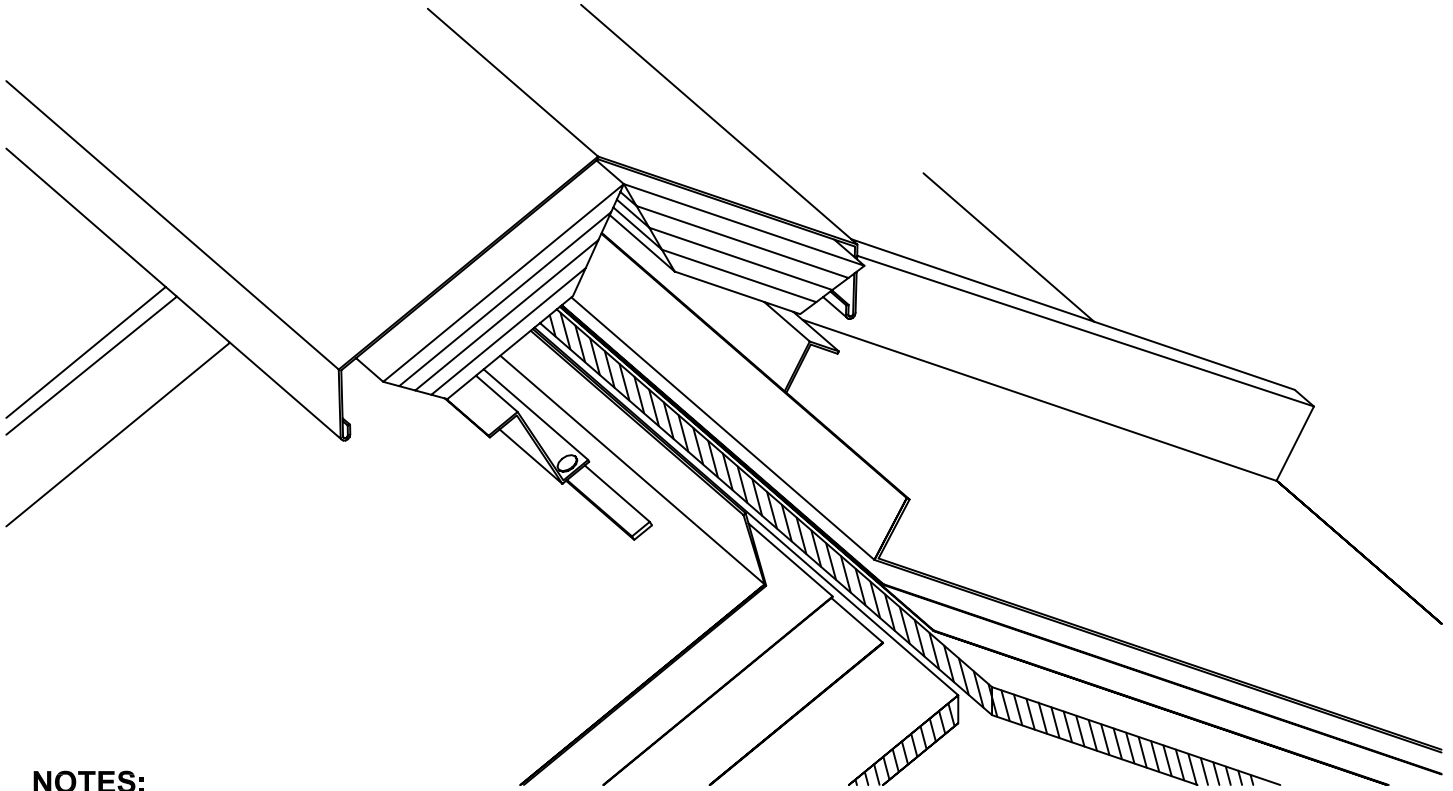


NOTES:

- 1) BOX END OF PANELS.
- 2) SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 3) ATTACH BOTTOM OF VENTED "Z" CLOSURE TO TOP OF "Z CLOSURE" WITH STITCH SCREWS @ 24" O.C.
- 4) HOOK OTHER HEM SIDE OF RIDGE CAP ONTO THE LONG END OF THE OTHER VENTED "Z" CLOSURE AND POP RIVET BOTH SIDES @ 24" O.C.
- 5) INSERT LONG END OF VENTED "Z" CLOSURE INTO AN OPEN HEM SIDE OF RIDGE CAP.

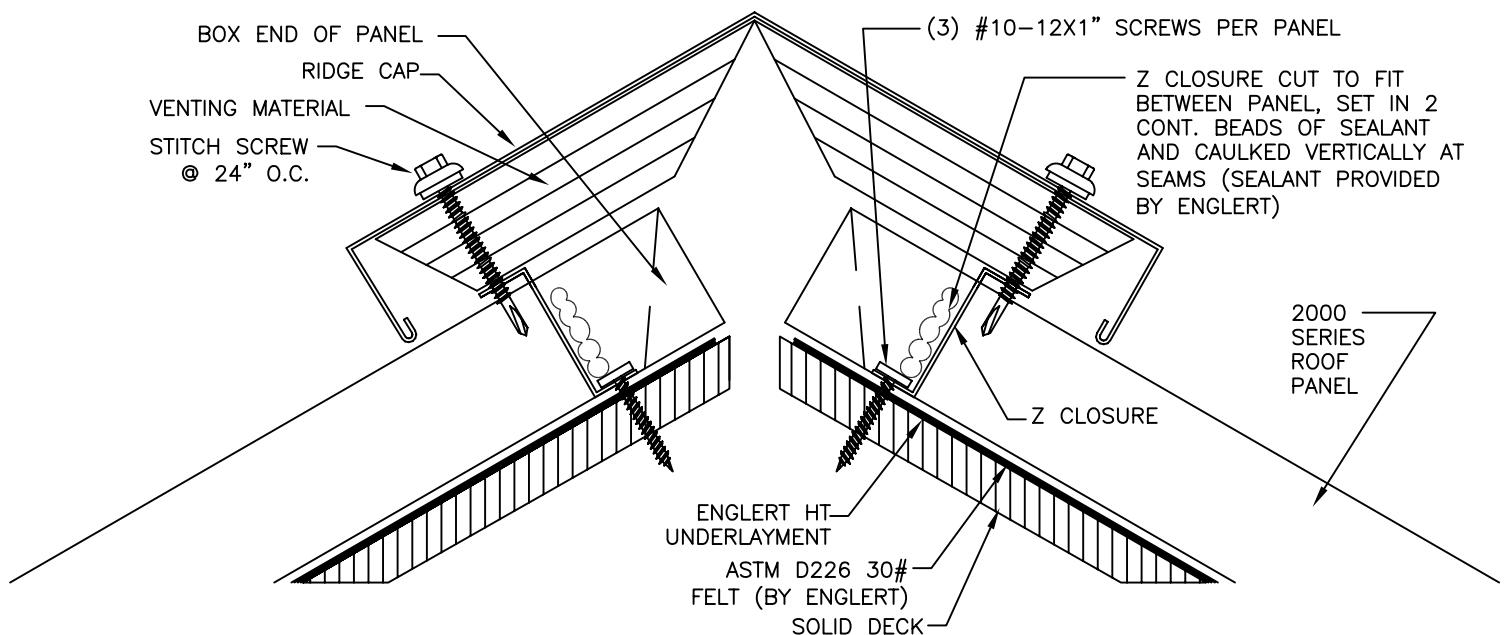


VENTED RIDGE DETAIL

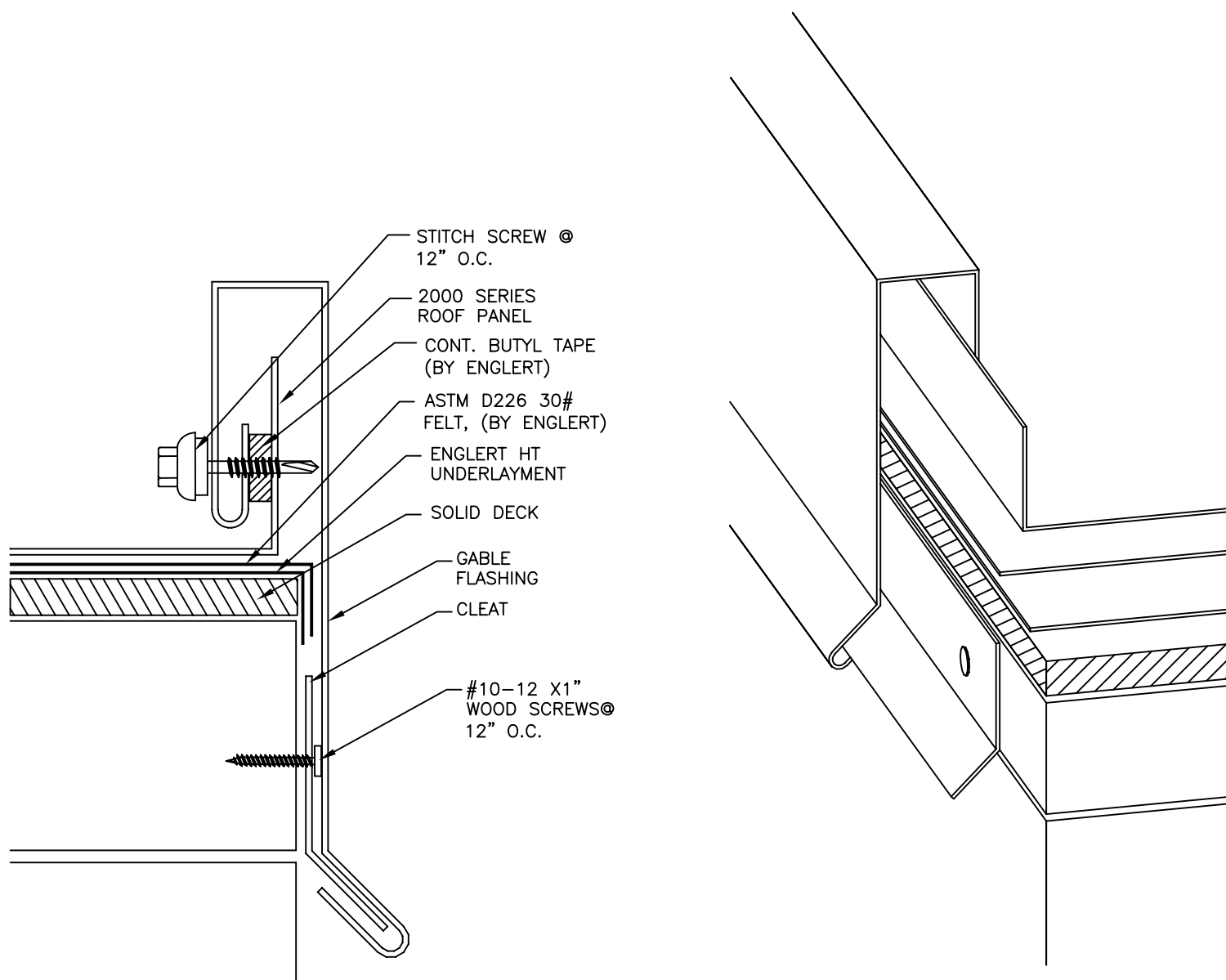


NOTES:

- 1) BOX END OF PANELS.
- 2) FIELD CUT "Z CLOSURES" TO FIT BETWEEN PANEL RIBS.
SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT
AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 3) APPLY SEALANT ON SIDE LEGS OF "Z" CLOSURE, FILLING ANY GAPS
AROUND PANEL RIBS.
- 4) ATTACH RIDGE FLASHING TO "Z" CLOSURES THROUGH VENTING
MATERIAL WITH A STICH SCREW AT 24" O.C.
- 5) IF ADDITIONAL FLASHING LENGTHS ARE REQUIRED, APPLY SEALANT
AND LAP THE FLASHING OVER THE INSTALLED FLASHING BY A
MINIMUM OF 3" SECURING THE CONNECTION WITH POP RIVETS.



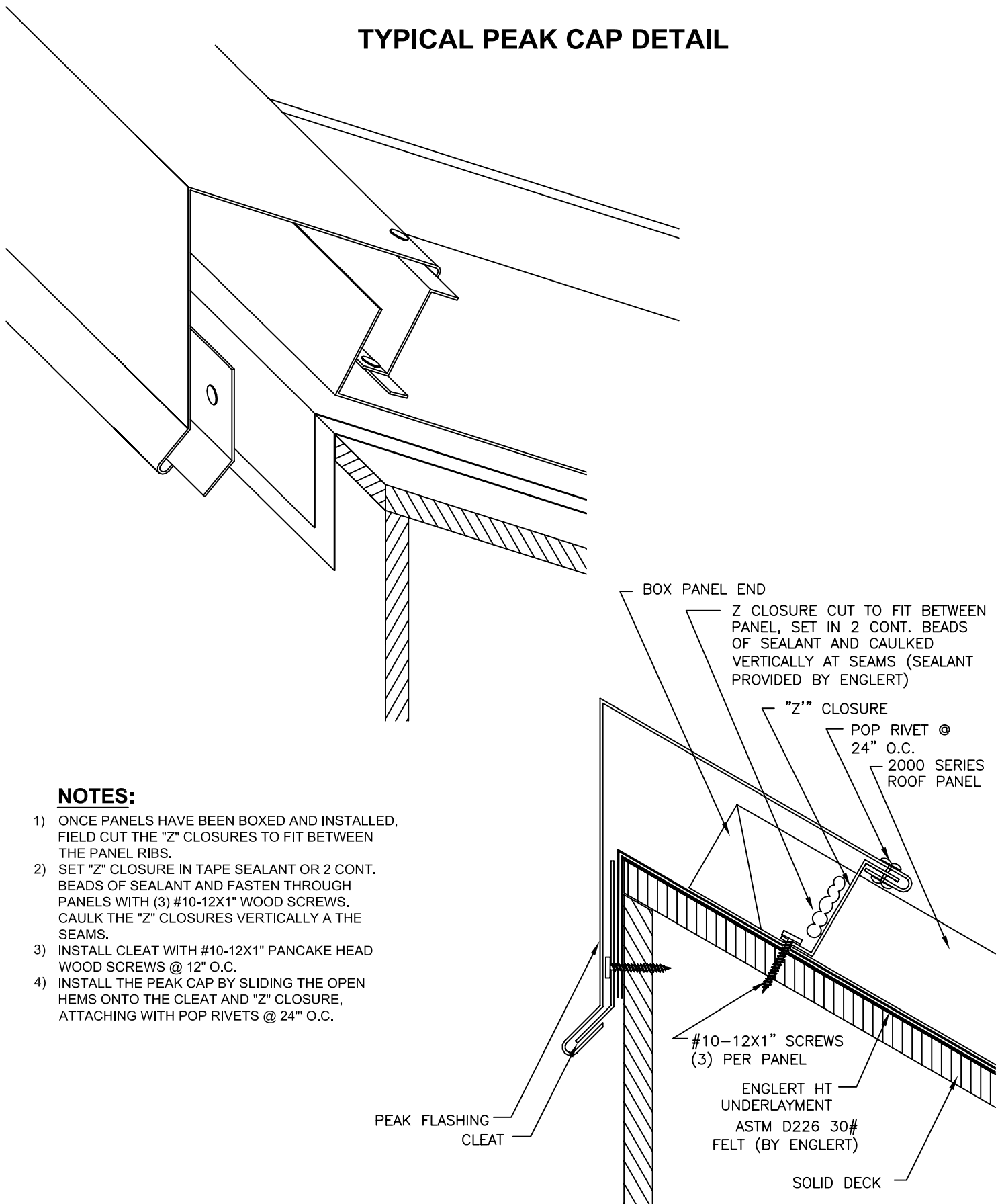
TYPICAL GABLE DETAIL



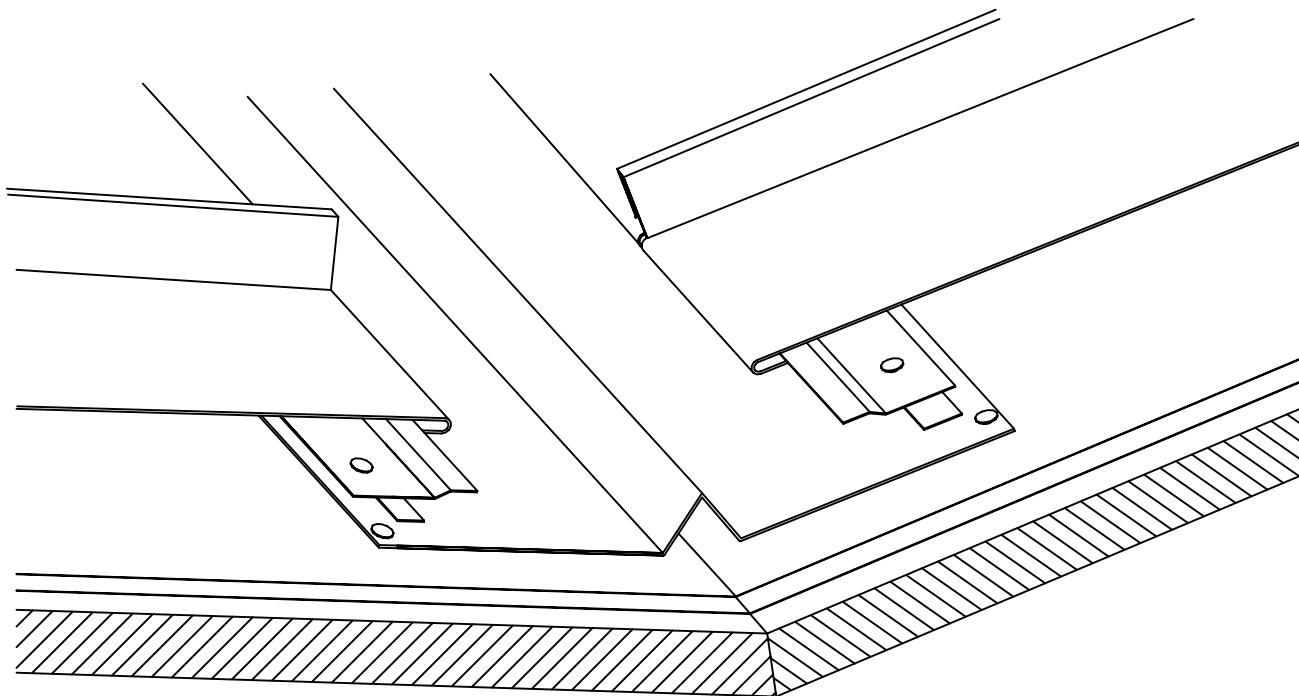
NOTES:

- 1) INSTALL CLEAT ON TO FASCIA WITH #10-12X1" PANCAKE HEAD WOOD SCREWS @ 12" O.C.
- 2) FIELD BEND PANEL AT 90 DEGREES, 1- $\frac{1}{2}$ " MINIMUM.
- 3) ADHERE A CONTINUOUS LENGTH OF BUTYL TAPE (BY ENGLERT) ONTO THE TOP INSIDE OF THE PANEL LEG.
- 4) SLIDE GABLE FLASHING ONTO CLEAT AND ALIGN WITH PANEL.
- 5) CONNECT GABLE FLASHING WITH A STITCH SCREW AT 12" O.C.

TYPICAL PEAK CAP DETAIL

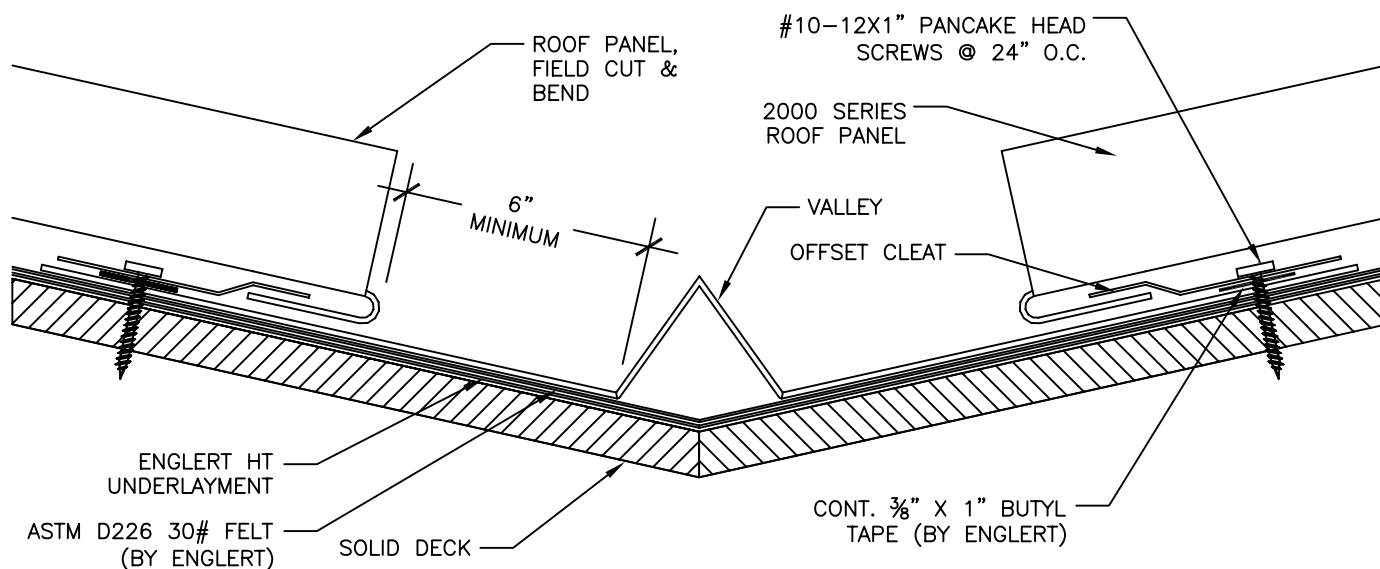


TYPICAL VALLEY DETAIL

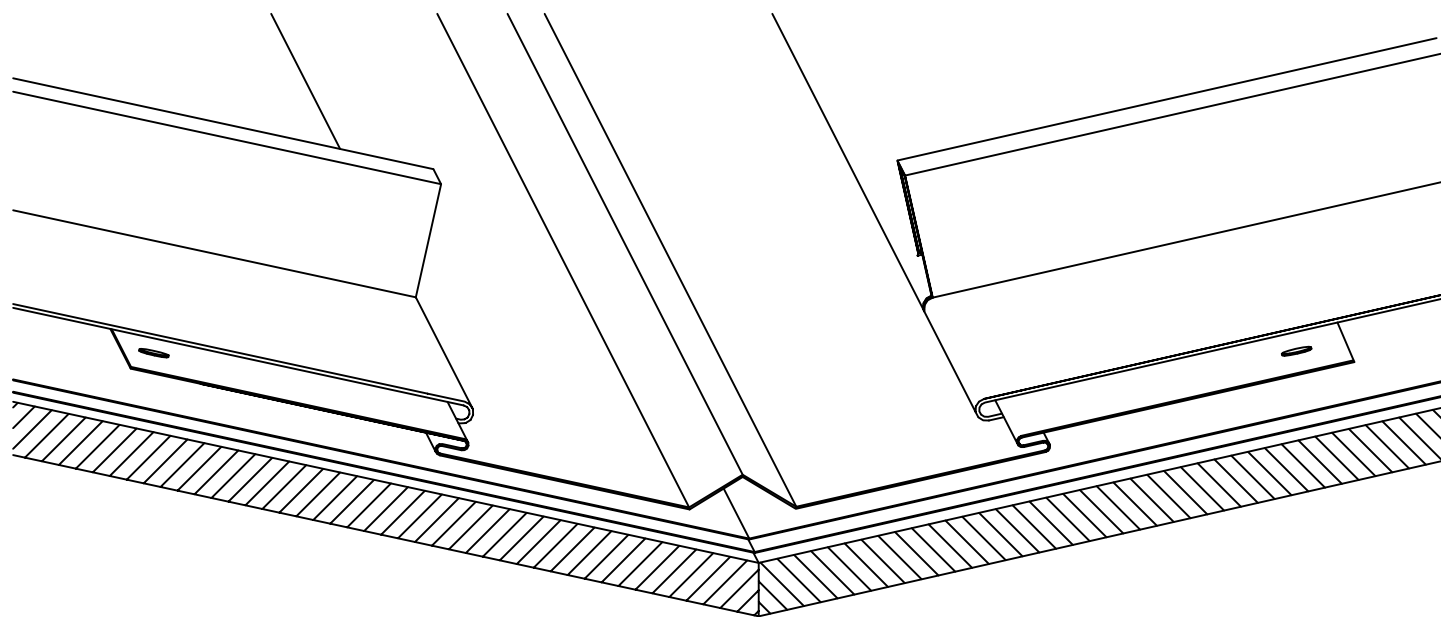


NOTES:

- 1) INSTALL ALL VALLEY FLASHINGS BEFORE PANEL INSTALLATION
- 2) FASTEN VALLEY FLASHING TO SUBSTRATE WITH #10-12X1" PANCAKE HEAD WOOD SCREWS 24" O.C.
- 3) ALIGN AND INSTALL OFFSET CLEAT WITH TAPE SEALANT ON BOTH SIDES OF VALLEY FLASHING AT LEAST 6" BACK FROM CENTER OF VALLEY FLASHING.
- 5) FASTEN OFFSET CLEAT THROUGH VALLEY FLASHING AND TAPE SEALANT TO SUBSTRATE WITH #10-12X1" PANCAKE HEAD WOOD SCREWS 24" O.C.
- 6) FIELD HEM PANEL.
- 7) ENGAGE FIELD HEMMED END OF PANEL TO OFFSET CLEAT AND ATTACH PANEL AS USUAL.

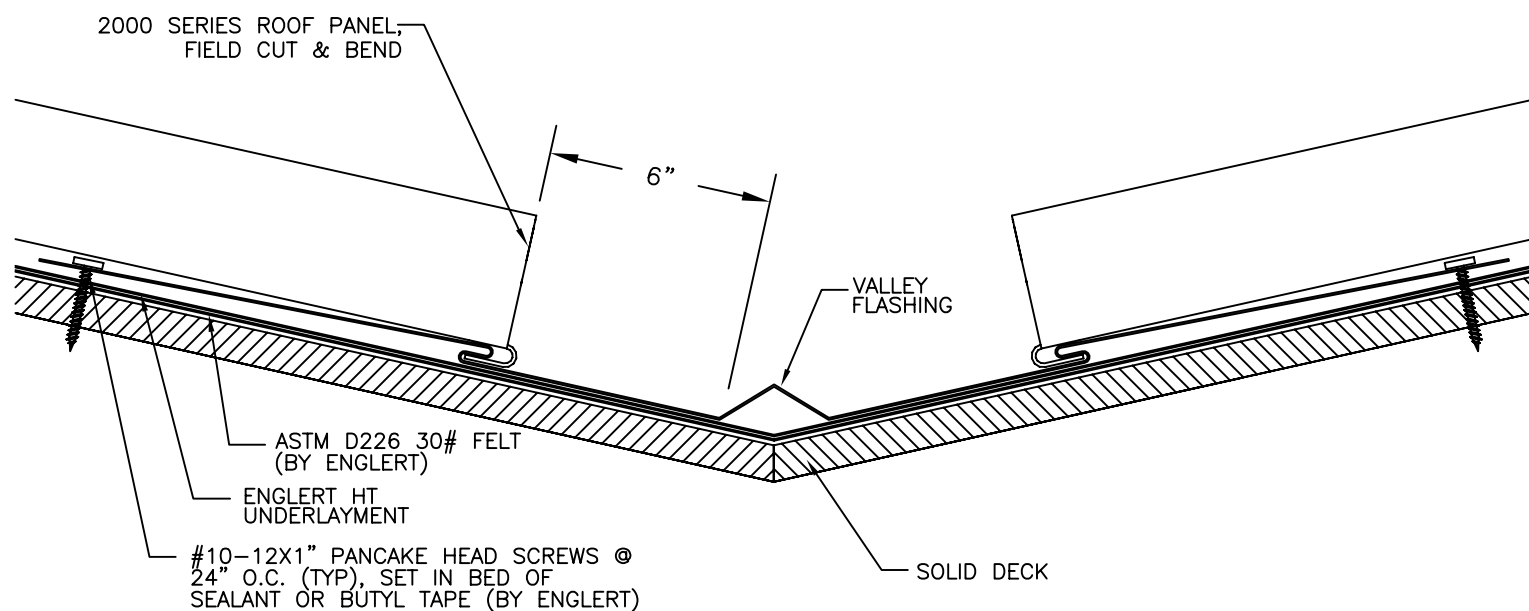


TYPICAL VALLEY DETAIL

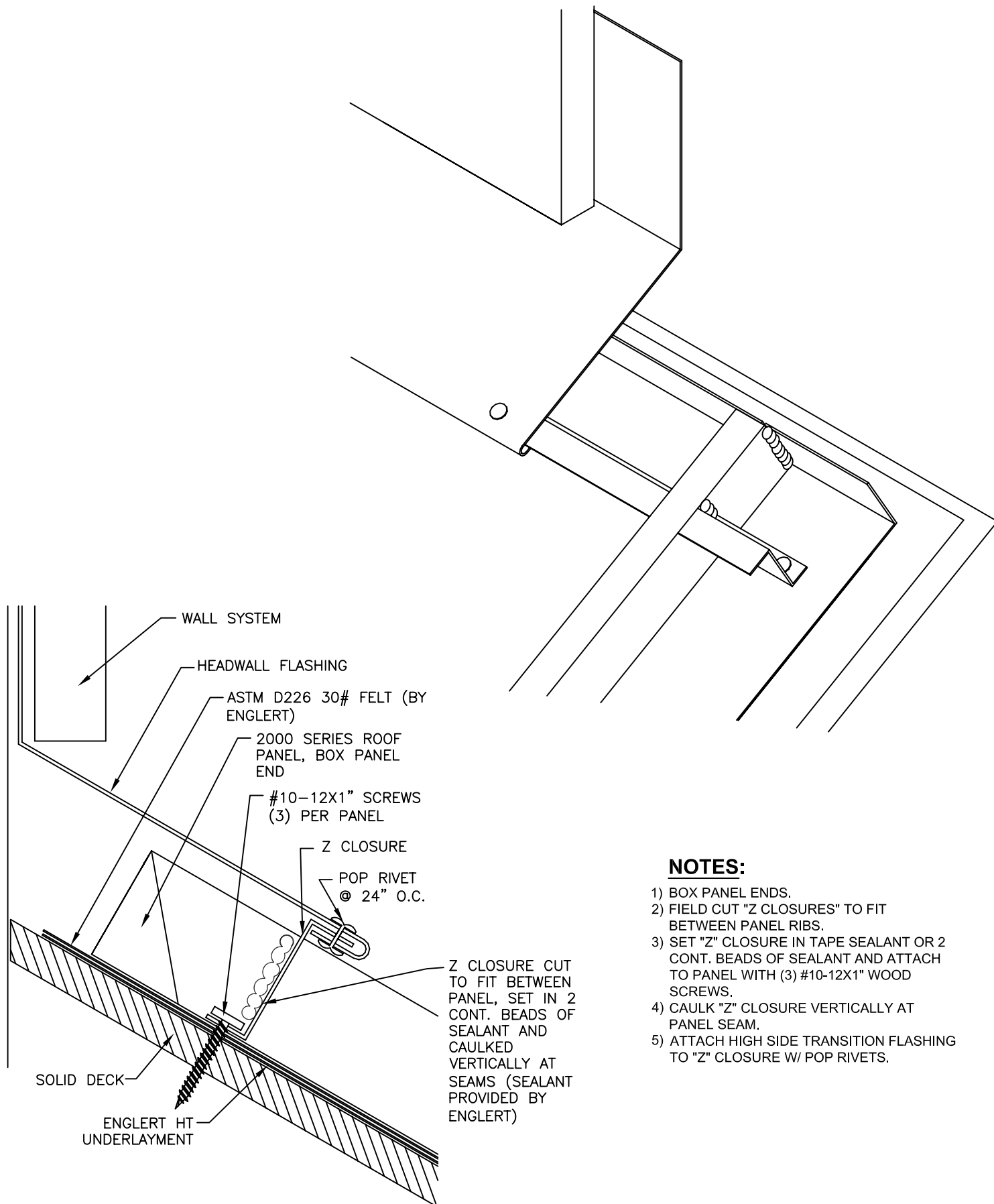


NOTES:

- 1) INSTALL ALL VALLEY FLASHINGS BEFORE PANEL INSTALLATION.
- 2) FASTEN VALLEY FLASHING TO SUBSTRATE W/ #10-12X1" PANCAKE HEAD WOOD SCREWS 24" O.C.
- 3) FIELD HEM PANEL.
- 4) ENGAGE FIELD HEMMED END OF PANEL TO INTEGRATED VALLEY CLEAT.



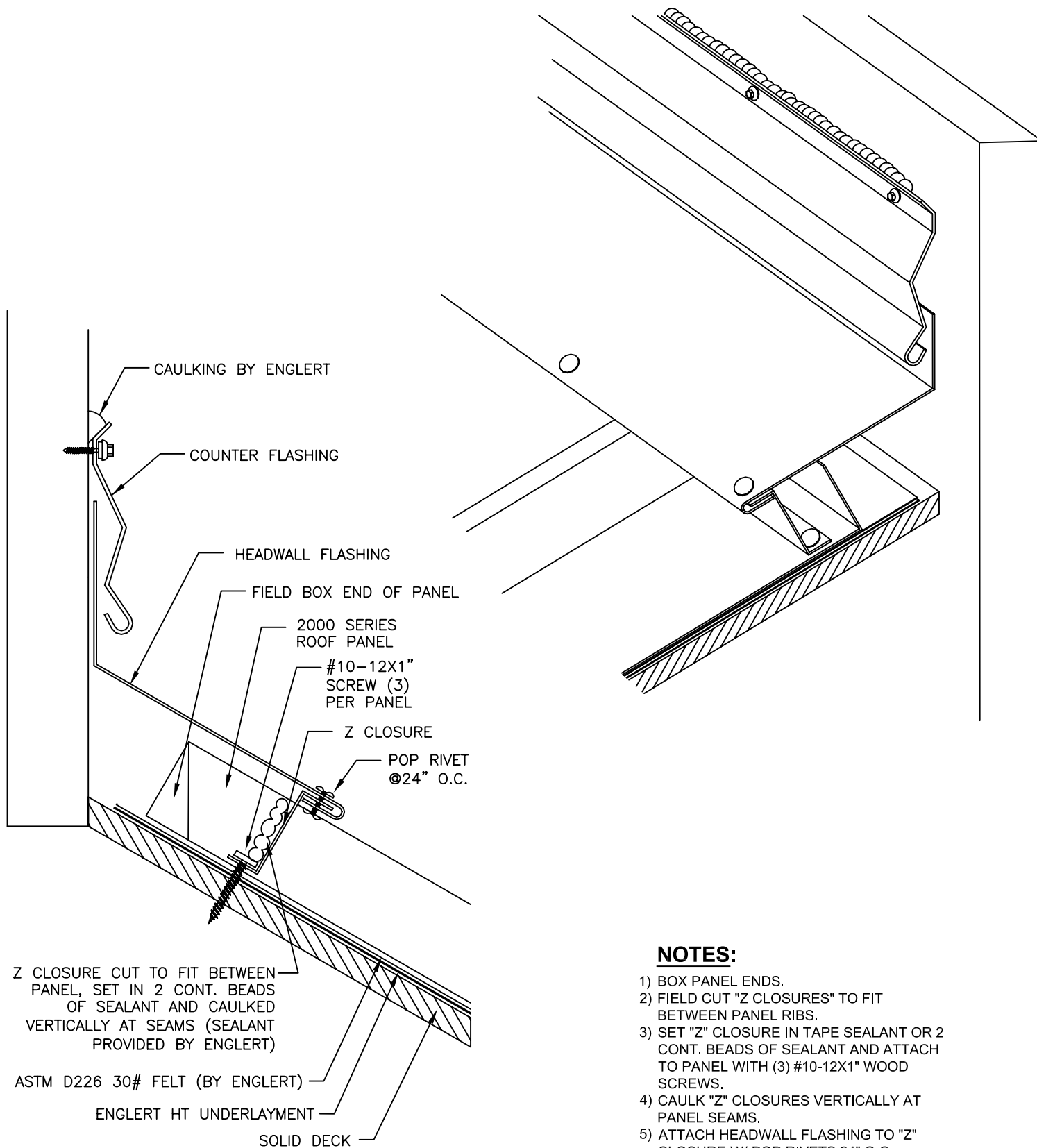
TYPICAL HEADWALL DETAIL



NOTES:

- 1) BOX PANEL ENDS.
- 2) FIELD CUT "Z CLOSURES" TO FIT BETWEEN PANEL RIBS.
- 3) SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 4) CAULK "Z" CLOSURE VERTICALLY AT PANEL SEAM.
- 5) ATTACH HIGH SIDE TRANSITION FLASHING TO "Z" CLOSURE W/ POP RIVETS.

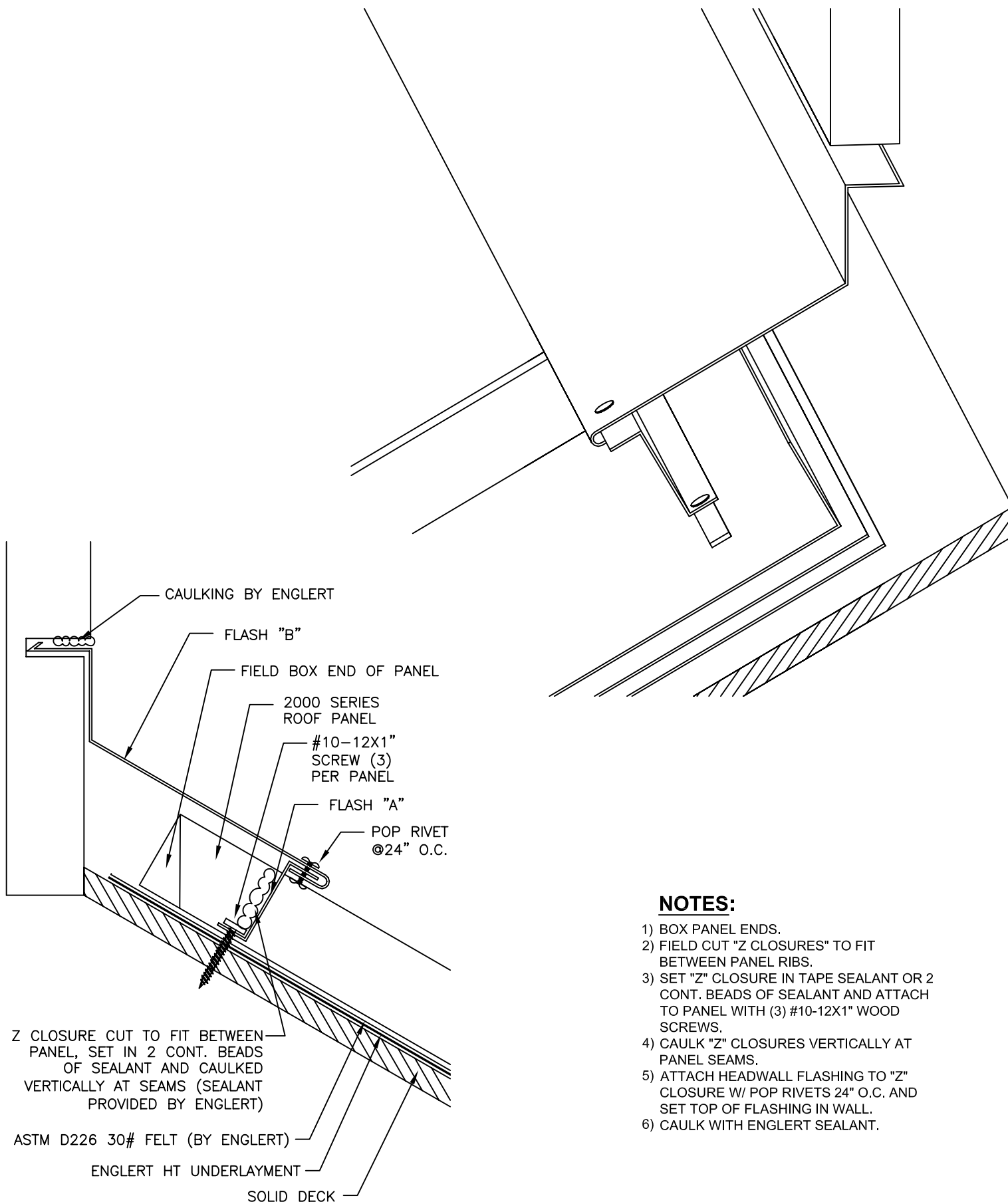
TYPICAL HEADWALL DETAIL



NOTES:

- 1) BOX PANEL ENDS.
- 2) FIELD CUT "Z CLOSURES" TO FIT BETWEEN PANEL RIBS.
- 3) SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 4) CAULK "Z" CLOSURES VERTICALLY AT PANEL SEAMS.
- 5) ATTACH HEADWALL FLASHING TO "Z" CLOSURE W/ POP RIVETS 24" O.C.
- 6) INSTALL COUNTER FLASHING AND CAULK TOP WITH ENGLERT SEALANT.

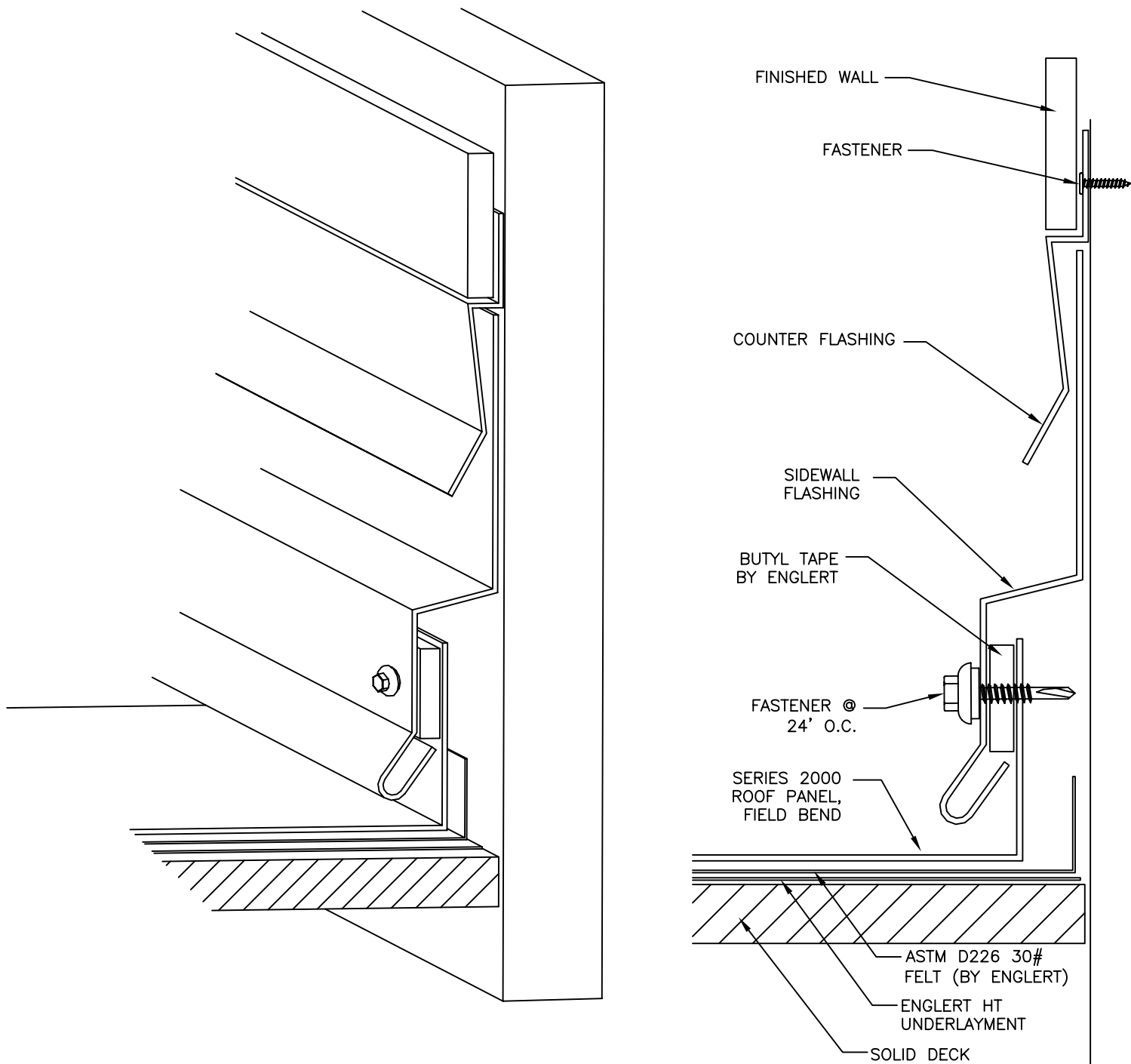
TYPICAL HEADWALL DETAIL



NOTES:

- 1) BOX PANEL ENDS.
- 2) FIELD CUT "Z CLOSURES" TO FIT BETWEEN PANEL RIBS.
- 3) SET "Z" CLOSURE IN TAPE SEALANT OR 2 CONT. BEADS OF SEALANT AND ATTACH TO PANEL WITH (3) #10-12X1" WOOD SCREWS.
- 4) CAULK "Z" CLOSURES VERTICALLY AT PANEL SEAMS.
- 5) ATTACH HEADWALL FLASHING TO "Z" CLOSURE W/ POP RIVETS 24" O.C. AND SET TOP OF FLASHING IN WALL.
- 6) CAULK WITH ENGLERT SEALANT.

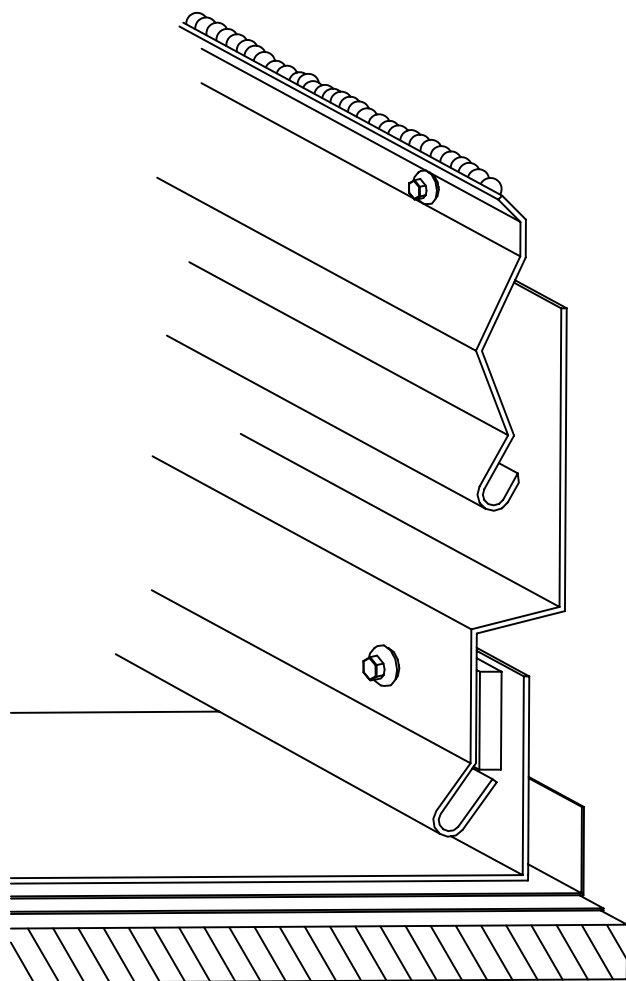
TYPICAL SIDEWALL DETAIL



NOTES:

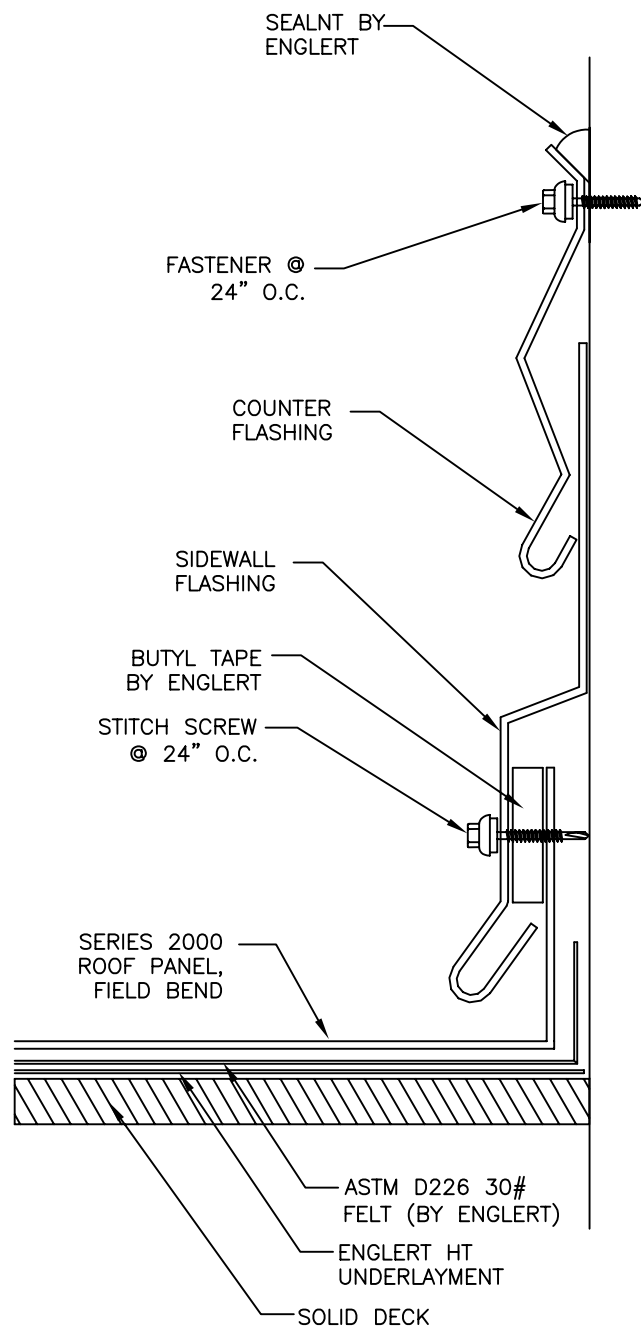
- 1) APPLY SEALANT TAPE TO INSIDE OF PANEL LEG
- 2) ATTACH SIDEWALL FLASHING BY INSTALLING FASTENER @ 24" O.C. THROUGH SEALANT TAPE AND INTO PANEL
- 3) INSTALL COUNTER FLASHING

TYPICAL SIDEWALL DETAIL

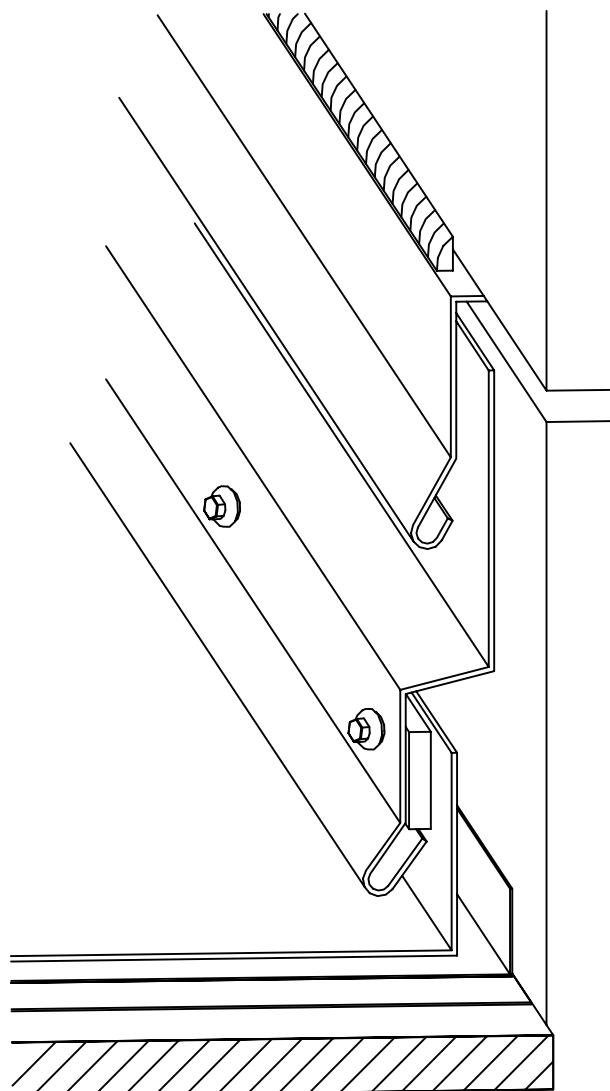


NOTES:

- 1) APPLY SEALANT TAPE TO INSIDE OF PANEL LEG.
- 2) ATTACH SIDEWALL FLASHING BY INSTALLING FASTENER @ 24" O.C. THROUGH SEALANT TAPE AND INTO PANEL.
- 3) INSTALL COUNTER FLASHING AND CAULK WITH ENGLERT SEALANT.

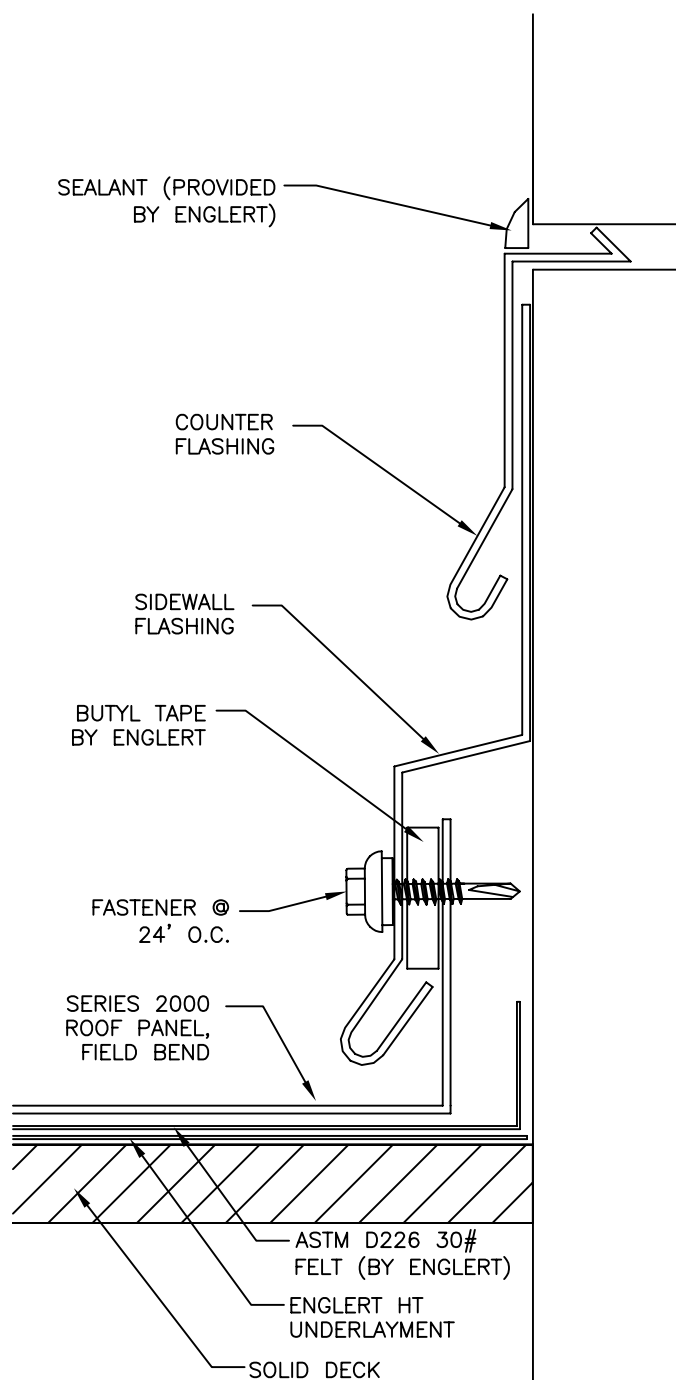


TYPICAL SIDEWALL DETAIL

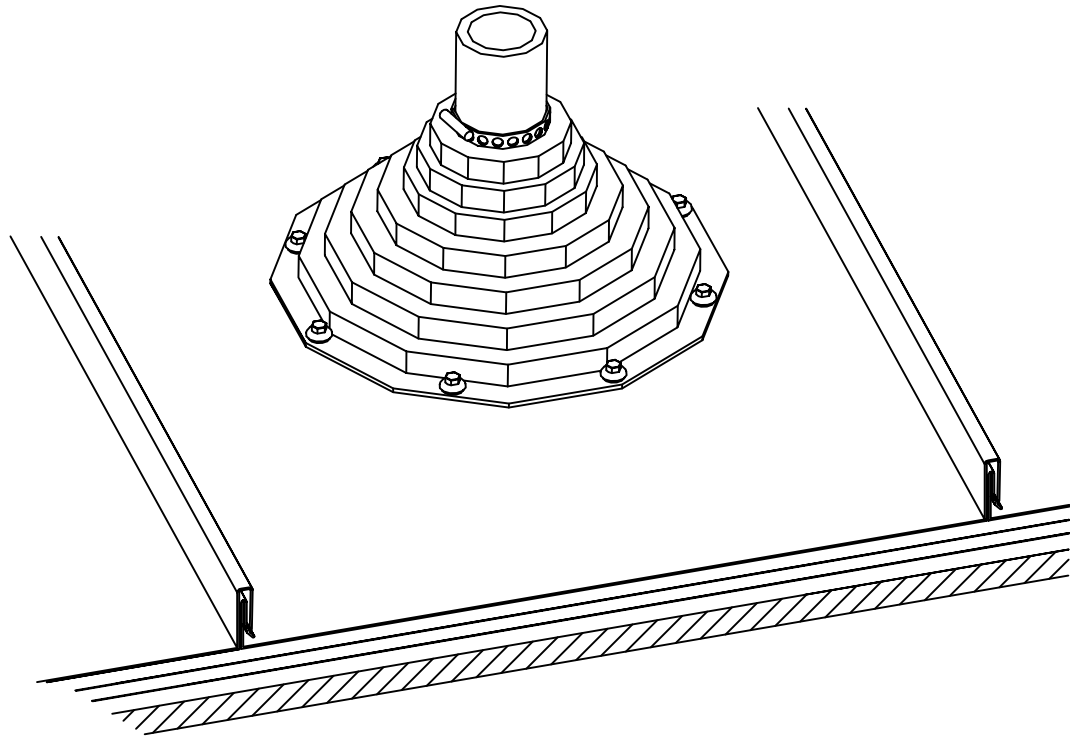


NOTES:

- 1) APPLY SEALANT TAPE TO INSIDE OF PANEL LEG.
- 2) ATTACH SIDEWALL FLASHING BY INSTALLING FASTENER @ 24" O.C. THROUGH SEALANT TAPE AND INTO PANEL.
- 3) INSTALL COUNTER FLASHING AND CAULK WITH ENGLERT SEALANT.



TYPICAL PENETRATION DETAIL



NOTES:

- 1) THE VENT PIPE MUST BE EXTENDED THROUGH THE FLAT OF THE PANEL.
- 2) CUT THE PANEL TO FIT THE PIPE PROPERLY.
- 3) TRIM THE ROOF JACK SO THAT THE PIPE WILL FIT SNUGLY AND INSTALL OVER THE PIPE.
- 4) APPLY SEALANT BETWEEN THE PANEL AND THE BASE FASTENING RING OF THE ROOF JACK.
- 5) ATTACH THE BASE OF THE ROOF JACK TO THE PANEL USING #1/4-14X7/8" STITCH XL FASTENERS @ 1" O.C.
- 6) APPLY SEALANT BETWEEN THE PIPE AND THE TOP OF THE ROOF JACK.
- 7) INSTALL A STAINLESS STEEL CLAMPING RING SNUGLY AROUND THE TOP OF THE ROOF JACK.

