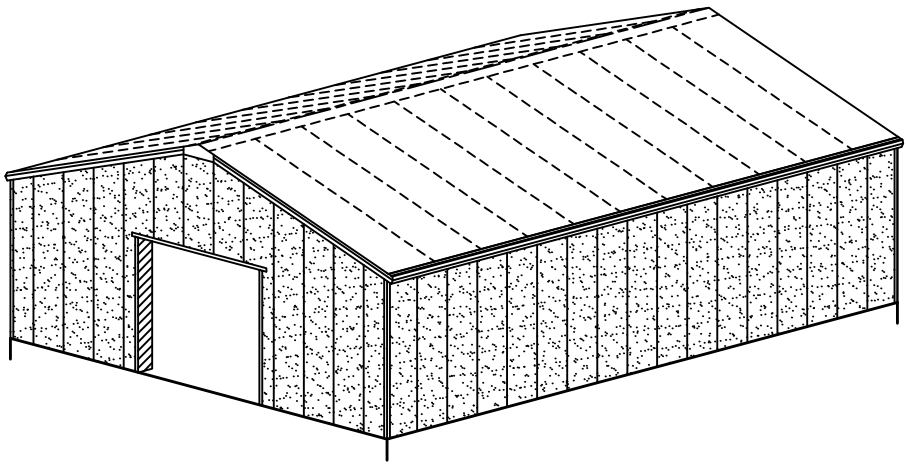
STUCCO CHOICE PANEL INSTALLATION GUIDE

TEXTURED METAL WALL SYSTEM



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ISSUED DATE 3-15-07

INTRODUCTION

THE INFORMATION CONTAINED IN THE FOLLOWING PAGES IS A GUIDELINE FOR THE BASIC INSTALLATION OF "STUCCO CHOICE" WALL PANELS. WE BELIEVE THAT THE INFORMATION CONTAINED IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING DESIGNS OR CODES. THE INFORMATION CONTAINED MAY REQUIRE CHANGES OR AMENDMENTS AS CONDITIONS FROM JOB TO JOB MAY VARY.

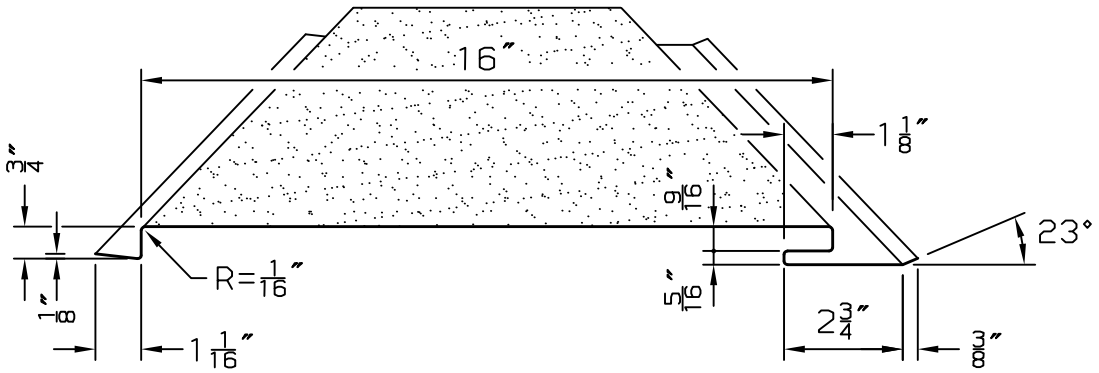
SPECIFIC DETAILS FOR BASE, EAVE, RAKE, CORNER, FRAMED OPENINGS, ETC. WILL BE SHOWN ON THE BUILDING ERECTION DRAWINGS. THE DETAILS ON THE ERECTION DRAWINGS ARE JOB SPECIFIC AND GOVERN IF DIFFERENT FROM THIS MANUAL. INFORMATION CONTAINED IN THE FOLLOWING PAGES IS GENERAL INFORMATION AND WILL APPLY TO ALL BUILDINGS UTILIZING "STUCCO CHOICE" WALL PANELS.

EVERY INSTALLER SHALL FAMILIARIZE HIMSELF WITH ALL OF THE ERECTION INSTRUCTIONS CONTAINED IN THE FOLLOWING PAGES AS WELL AS ANY AND ALL ERECTION DETAILS PERTAINING TO THE INSTALLATION OF THE "STUCCO CHOICE" PANELS THAT ARE CONTAINED IN THE BUILDING ERECTION DRAWINGS.

SOME FIELD CUTTING OF MATERIALS IS A PART OF NORMAL BUILDING ERECTION. WORKMANSHIP SHALL CONFORM TO THE HIGHEST INDUSTRY STANDARDS. A CERTAIN AMOUNT OF "WAVINESS" OR "OIL-CANNING" MAY EXIST IN THE PANELS. MINOR "OIL-CANNING" IS NOT SUFFICIENT CAUSE FOR REJECTION AND WILL NOT AFFECT THE STRUCTURAL INTEGRITY OF THE PANEL. MINIMIZING OR ELIMINATING THIS EFFECT CAN BE ACCOMPLISHED WITH SIMPLE PROCEDURES DURING BUILDING ERECTION. THE FOLLOWING PAGES WILL PROVIDE GUIDELINES TO INSTALL "STUCCO CHOICE" PANELS WITH MINIMAL "OIL-CANNING." (REFERENCE PAGE 5)

NOTE: KIRBY BUILDING SYSTEMS SHALL NOT BE HELD RESPONSIBLE FOR ANY AND ALL CLAIMS ARISING FROM IMPROPER PANEL INSTALLATION.

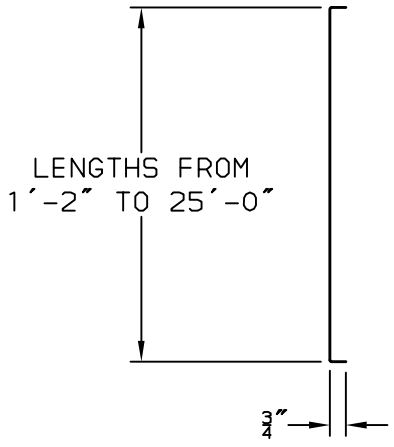
PANEL DESCRIPTION



"STUCCO CHOICE" PANELS ARE FABRICATED FROM 20 GA. GALVANIZED STEEL, PRIMED AND PAINTED WITH A BAKED ON BASE COAT ON BOTH SIDES THAT IS SPECIALLY FORMULATED TO ADHERE TO THE TEXTURED FINISH. THE STEEL PANELS ARE THEN ROLL FORMED INTO A 16" WIDE PANEL. THE TEXTURED FINISH IS THEN FACTORY APPLIED AND OVEN CURED. THE TEXTURED FINISH IS A FIBER REINFORCED POLYMER / AGGREGATE COMBINATION PRODUCING AN ATTRACTIVE STUCCO FINISH. THE PANELS ARE SPECIALLY PACKAGED TO ENSURE A QUALITY PRODUCT READY TO INSTALL.

EACH PANEL IS MANUFACTURED FOR YOUR APPLICATION. PANELS CAN BE MANUFACTURED IN LENGTHS RANGING FROM 1'-2" TO 25'-0". EACH PANEL HAS A 16" FACE COVERAGE WITH A 1 5/8" SCREW FLANGE ON ONE EDGE AND A 1" LOCK FLANGE ON THE OTHER EDGE FOR AN OVERALL WIDTH OF APPROXIMATELY 19 1/16".

THE TOP AND BOTTOM OF ALL PANELS HAVE A 90 DEGREE FLANGE. THESE FORMED ENDS ALLOW THE PANEL TO NEST (END TO END) FOR STACKING UP A VERTICAL WALL AND GIVES YOU THE ABILITY TO UTILIZE THE PANEL FOR TALLER APPLICATIONS.



REQUIRED TOOLS

"READ THIS BEFORE YOU START INSTALLING PANELS"
DUE TO THE SPECIAL TEXTURED FINISH, IT IS VERY IMPORTANT TO TAKE EXTRA CARE IN HANDLING THE PANELS OR TRIM DURING INSTALLATION. SLIDING PANELS TOGETHER WILL SCUFF, DISCOLOR OR DAMAGE THE STUCCO FINISH.

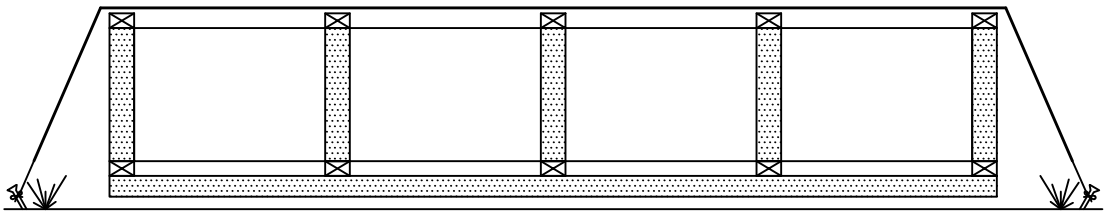
WEARING CLEAN GLOVES, HANDLING THE PANELS BY THE EDGES AND TAKING A LITTLE EXTRA CARE WILL PAY OFF, PRODUCING A GOOD, CLEAN FINISHED WALL.

TOOLS REQUIRED

1. COTTON GLOVES OR CLEAN WORK GLOVES
2. SABRE SAW WITH METAL CUTTING BLADES
3. ELECTRIC METAL CUTTING SHEARS
4. HAND METAL CUTTING SHEARS
5. SCREW GUN
6. CARPENTER'S FRAMING SQUARE
7. RIVET GUN AND DRILL
8. LEVEL (4' OR 6')
9. CHALK LINE
10. TAPE MEASURE
11. CAULKING GUN

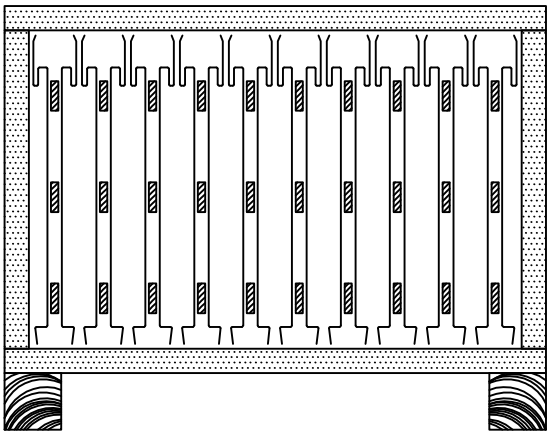
JOBSITE STORAGE

PANELS ARE SHIPPED IN WOODEN CRATES WITH A MAXIMUM OF 20 PANELS PER CRATE. PANELS ARE PLACED VERTICALLY IN THE CRATE AND SHOULD REMAIN IN THIS POSITION UNTIL INSTALLED. EACH CRATE IS WRAPPED IN A PROTECTIVE REINFORCED PLASTIC. STORAGE SHOULD BE ON LEVEL GROUND AND CRATES SHOULD BE COVERED WITH TARPS UNTIL READY FOR INSTALLATION.



PANELS AND TRIMS NEED TO BE STORED PROPERLY PRIOR TO ASSEMBLY. IF THEY CANNOT BE STORED INSIDE, THEY NEED TO BE PROTECTED FROM WEATHER AND CONTAMINANTS. THE TEXTURED FINISH WILL WITHSTAND YEARS OF WEAR, BUT MUD OR DIRT COULD STAIN THE FINISH CAUSING YOU ADDITIONAL CLEAN UP. (REFERENCE PAGE 10 FOR CLEANING SUGGESTIONS)

PANELS ARE STACKED ON EDGE WITH FOAM BLOCKS POSITIONED TO SPACE THE PANELS APART SO THAT THE TEXTURED FACE OF THE PANEL DOES NOT COME IN CONTACT WITH OTHER PANELS. WHEN STORING THESE PANELS, THIS POSITION MUST BE MAINTAINED.

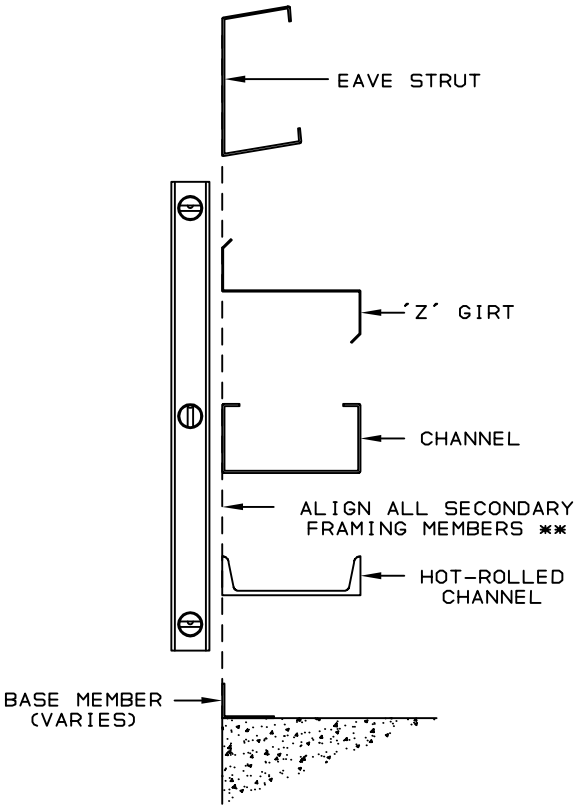


INSTALLATION TIPS

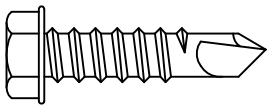
BEFORE INSTALLING ANY "STUCCO CHOICE" PANELS, IT IS CRITICAL THAT ALL THE SECONDARY FRAMING MEMBERS (BASE MEMBERS, GIRTS, EAVE STRUTS, RAKE SUPPORT MEMBERS, ETC.) BE PLUMB AND STRAIGHT. MISALIGNED WALL MEMBERS WILL CAUSE OIL CANNING AND DISTORTION OF THE WALL PANELS. THIS STEP IS MORE CRITICAL FOR "STUCCO CHOICE" PANELS THAN MOST OTHER COMMON METAL WALL PANELS BECAUSE "STUCCO CHOICE" PANELS DO NOT HAVE CORRUGATIONS OR MAJOR RIBS TO BREAK THE MONOLITHIC APPEARANCE.

NOTE: ALL PANELS FORMED FROM LIGHT GAGE METAL MAY EXHIBIT WAVINESS, ALSO KNOWN AS "OIL CANNING", COMMONLY OCCURRING, BUT NOT RESTRICTED TO, FLAT PORTIONS OF A PANEL. THIS INHERENT CHARACTERISTIC IS NOT A DEFECT OF MATERIAL OR MANUFACTURING AND IS NOT CAUSE FOR REJECTION.

NOTE: IN ORDER TO COMPLY WITH DESIGN SPECIFICATIONS, ADDITIONAL GIRT BRACING OR STRAPPING MAY BE EXPECTED DUE TO THE NATURE OF THE PANEL ATTACHMENT.

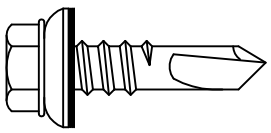


**IMPORTANT NOTE:
THE MAXIMUM DEVIATION FROM THE VERTICAL PLANE OF A WALL MEMBER TO THE NEXT WALL MEMBER SHOULD NOT EXCEED $\frac{1}{4}$".



#12X1$\frac{1}{4}$" SDS W/O WASHER
(CAD PLATED)

#14X$\frac{7}{8}$" SDS W/O WASHER
(CAD PLATED)

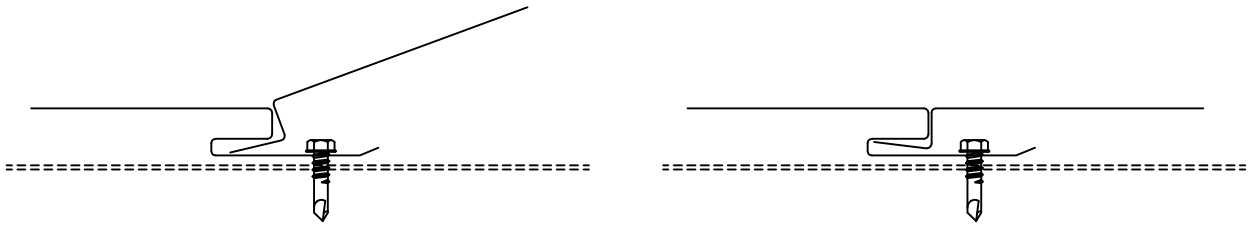


#12-24X1$\frac{1}{4}$" IMPAX-45
WITH WASHER
(CAD PLATED)

REFERENCE DETAILS ON PAGE 6 FOR ATTACHMENT OF "STUCCO CHOICE" PANELS TO WALL FRAMING MEMBERS.

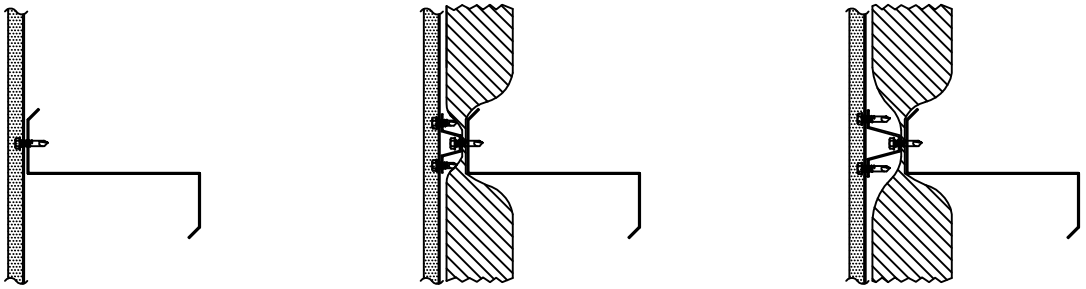
ATTACHMENT METHOD

STUCCO CHOICE PANELS ARE ATTACHED TO GIRTS OR HAT CHANNELS WITH SELF-DRILLING HEX HEAD FASTENERS. IT IS IMPORTANT THAT THE SPACING BETWEEN THE PANELS BE VISUALLY CONSISTENT.



INSTALLATION TECHNIQUES WILL VARY DEPENDING ON THE THICKNESS OF THE WALL INSULATION BEING USED. WHEN NO BLANKET INSULATION IS USED DIRECT ATTACHMENT OF THE PANEL TO THE GIRT IS STANDARD. USE $\frac{7}{8}$" HAT CHANNEL WITH INSULATION LESS THAN 4" THICK. USE $1\frac{1}{2}$" HAT CHANNEL WITH INSULATION 4" THICK AND GREATER.

IMPORTANT: GIRT SPACING SHOULD NOT EXCEED 5'-0" ON CENTER!!



APPLICATION WITHOUT WALL INSULATION

- NO HAT CHANNEL
- (1) #12X1-1/4" SDS W/O WASHER (CAD PLATED) AT EA. WALL MEMBER

APPLICATION WITH LESS THAN 4" OF WALL INSULATION

- 7/8" HAT CHANNEL (300A)
- (1) #12X1-1/4" SDS W/O WASHER (CAD PLATED) AT EACH WALL MEMBER TO ATTACH HAT CHANNEL TO GIRT
- (2) #14X7/8" SDS W/O WASHER (CAD PLATED) TO ATTACH PANEL TO HAT CHANNEL

APPLICATION WITH 4" OR MORE OF WALL INSULATION

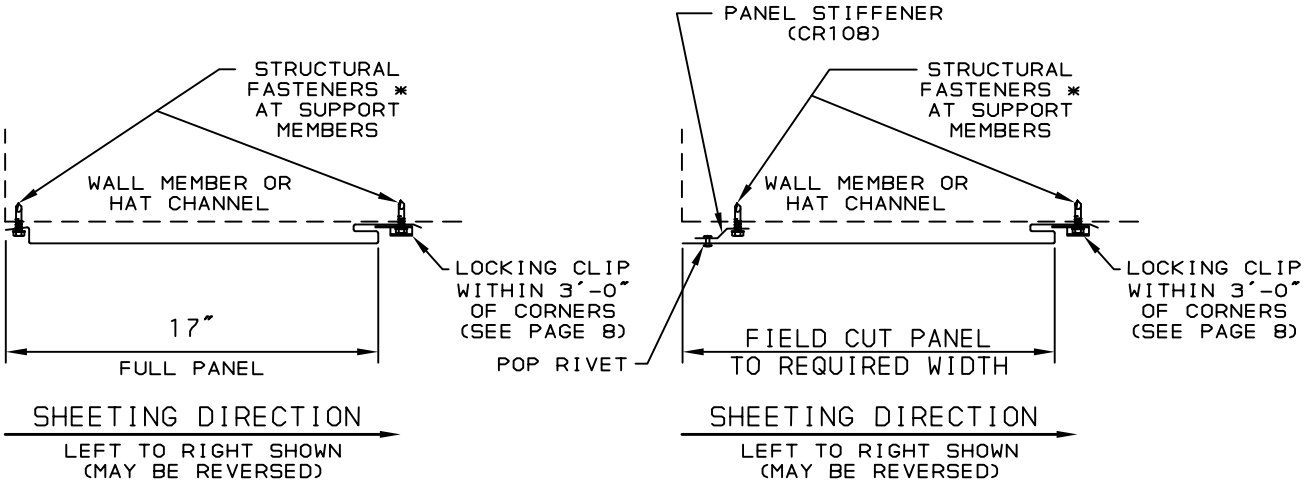
- 1-1/2" HAT CHANNEL (400A)
- (1) #12X1-1/4" SDS W/O WASHER (CAD PLATED) AT EACH WALL MEMBER TO ATTACH HAT CHANNEL TO GIRT
- (2) #14X7/8" SDS W/O WASHER (CAD PLATED) TO ATTACH PANEL TO HAT CHANNEL

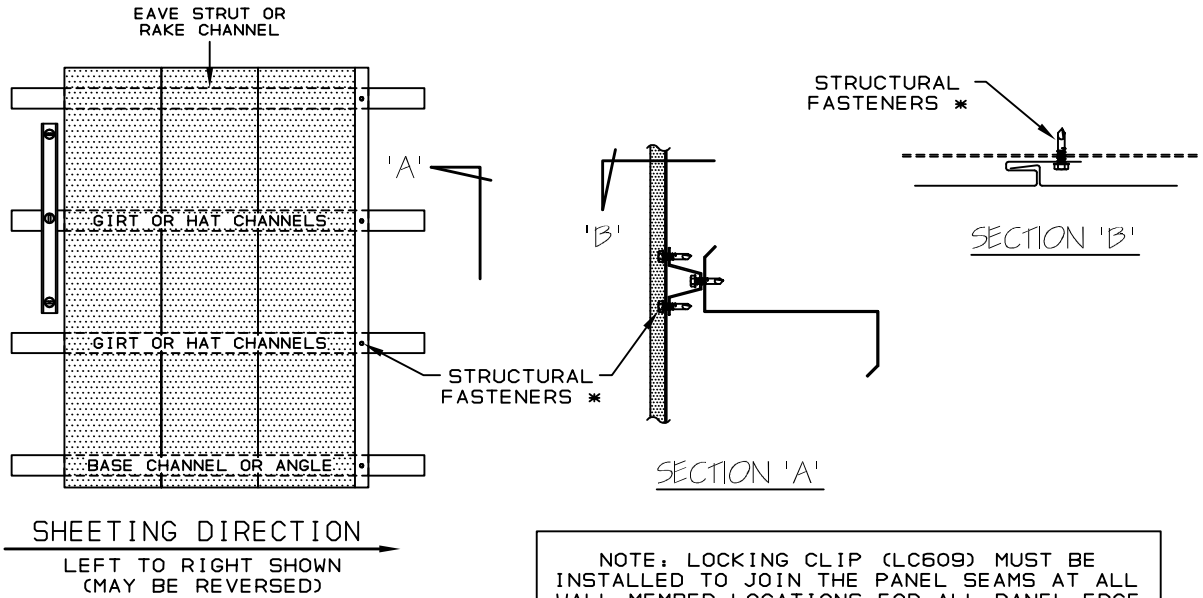
**NOTE: WHEN THE MEMBER THAT THE HAT CHANNEL OR "STUCCO CHOICE" PANEL IS ATTACHING TO IS A HOT ROLLED CHANNEL OR A BUILT-UP OR HOT ROLLED BEAM, THE HAT CHANNELS WILL BE ATTACHED TO THE MEMBER USING #12-24X1$\frac{1}{4}$" IMPAX 45 SCREWS.

STARTING PANEL INSTALLATION

DEPENDING ON THE PANEL PLACEMENT FOR EACH ELEVATION, YOU MAY BE REQUIRED TO FIELD CUT THE FIRST PANEL TO A SPECIAL WIDTH OR YOU MAY BE ABLE TO START WITH A FULL UNCUT PANEL.

THE DETAIL ON THE LEFT CAN BE USED WHENSTARTING WITH A FULL WIDTH PANEL. THE DETAIL ON THE RIGHT IS FOR ALL OTHER CONDITIONS. REFER TO ERECTION DRAWINGS FOR APPROPRATE START DETAILS. WHEN CUTTING IS REQUIRED, ELECTRIC SHEARS ARE RECOMMENDED. FOR CUTTING THROUGH THE SIDE PROFILE OF THE PANEL, USE THE CUTTING BLADE SUPPLIED WITH THE PANELS.



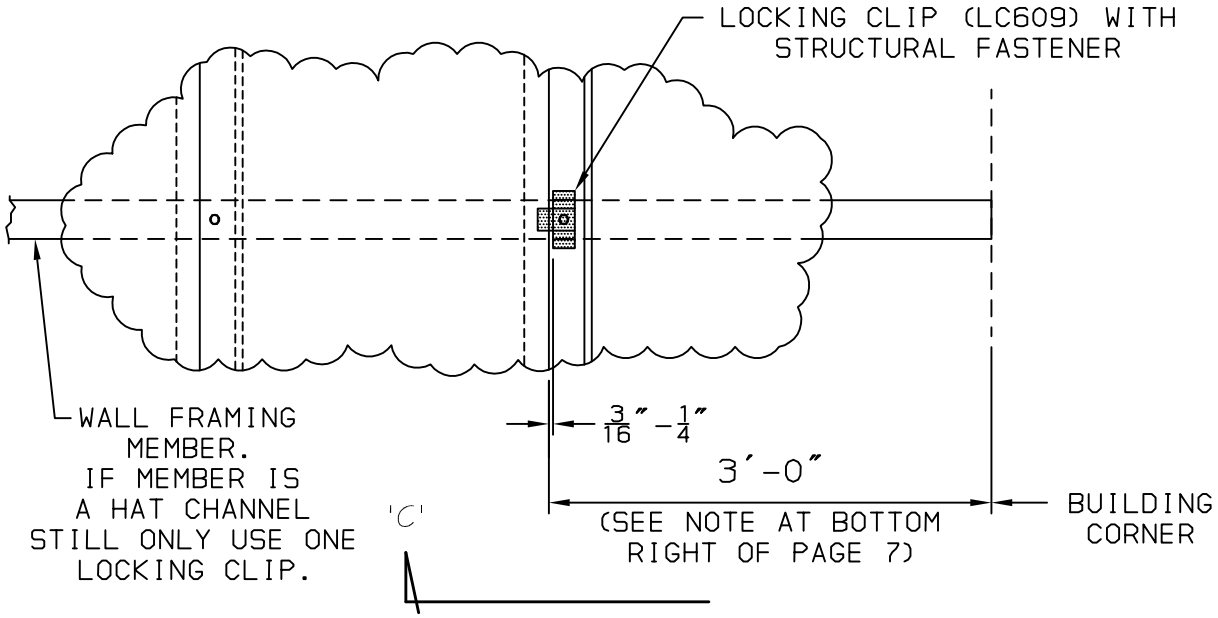


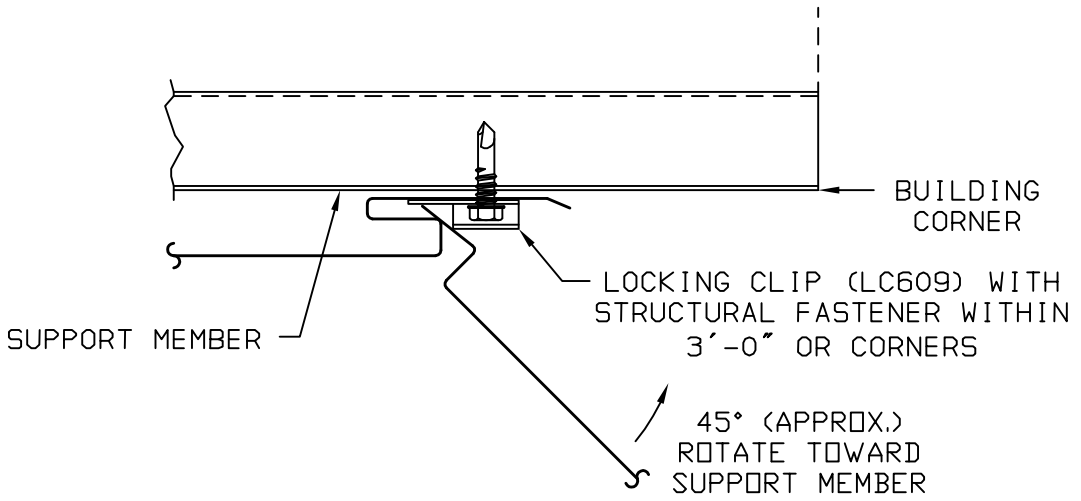
NOTE: LOCKING CLIP (LC609) MUST BE INSTALLED TO JOIN THE PANEL SEAMS AT ALL WALL MEMBER LOCATIONS FOR ALL PANEL EDGE LAPS WITHIN 3'-0" OF ANY BUILDING CORNER. (AS SPECIFIED IN NTA REPORT TAS111504-19) SEE PAGE 8 FOR LOCKING CLIP INSTALLATION.

* REFERENCE PAGE 6 FOR FASTENER REQUIREMENTS

LOCKING CLIP INSTALLATION

THE "LOCKING CLIP" (LC609) IS PLACED INTO THE GROOVE ON THE FEMALE LEG OF EACH PANEL AT ALL SUPPORT MEMBER (GIRT, EAVE STRUTS, BASE MEMBERS OR HAT CHANNELS) CONNECTION LOCATIONS WITHIN 3'-0" OF A BUILDING CORNER. MAINTAIN A 3/16" TO 1/4" SPACE BETWEEN THE EDGE OF THE PANEL AND LOCKING CLIP (SHOWN BELOW). THE ADJACENT PANEL IS INSTALLED AT A 45 DEGREE ANGLE AND ROTATED TOWARD THE SUPPORT MEMBER COMPRESSING THE LOCKING CLIP RESULTING IN THE MALE PANEL EDGE LOCKING INTO PLACE.

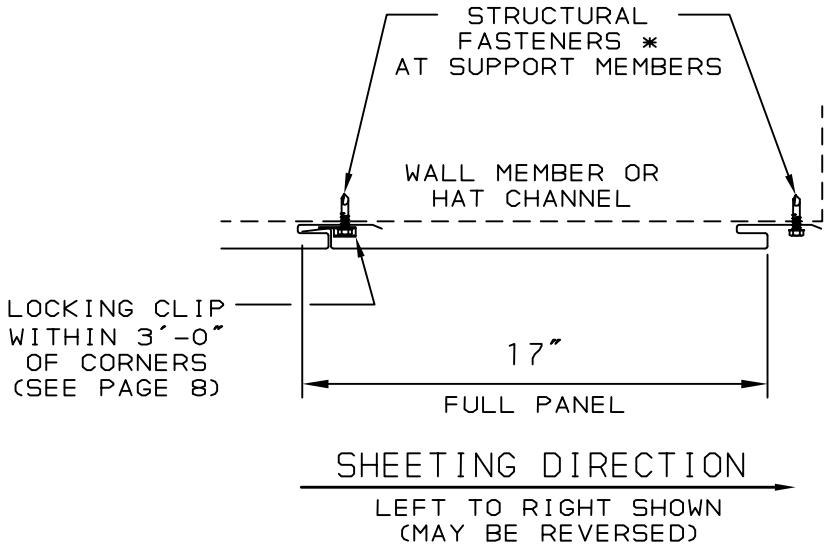




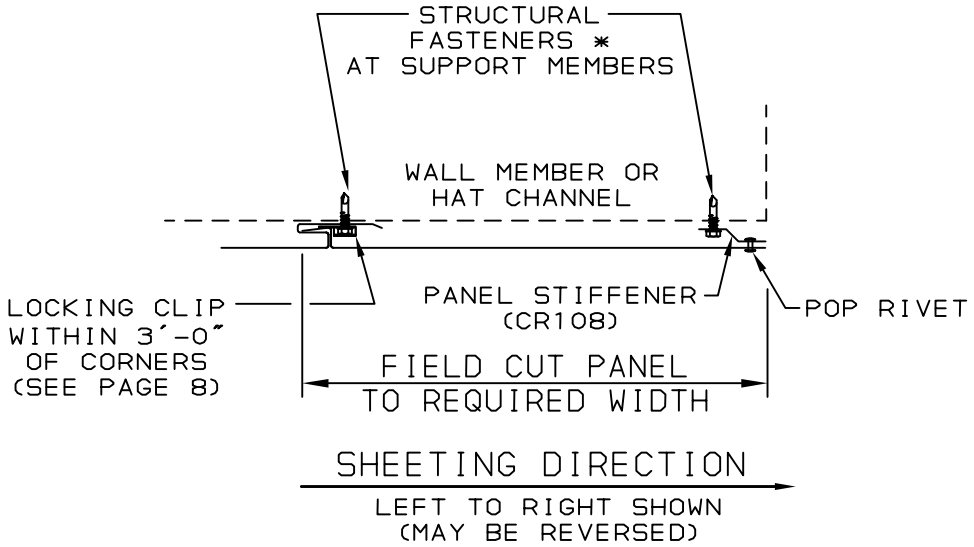
SECTION 'C'

ENDING PANEL INSTALLATION

SIMILAR TO THE STARTER PANELS, YOU MAY OR MAY NOT END THE PANEL RUN WITH A FULL PANEL. THE NECESSARY PARTS AND CUTTING DETAILS ARE SIMILAR.



ENDING WITH FULL PANEL

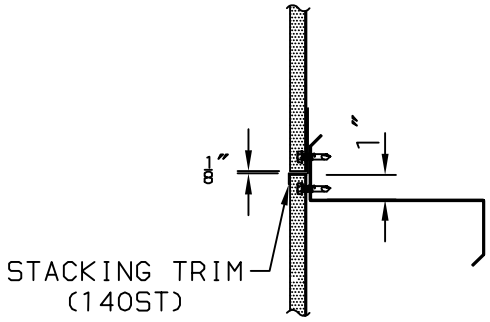


ENDING WITH FIELD CUT PANEL

* REFERENCE PAGE 6 FOR FASTENER REQUIREMENTS

HORIZONTALLY SPICED PANELS

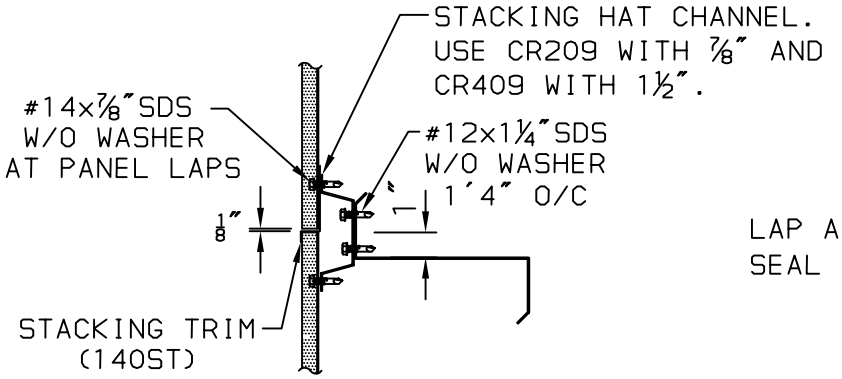
WHEN STUCCO CHOICE PANEL LENGTHS EXCEED THE MAXIMUM 25' PRODUCTION CAPABILITY, A HORIZONTAL SPLICE WILL BE REQUIRED. THIS SPLICE NEEDS TO BE PLACED AT A HORTIZONTAL SUPPORT LOCATION IN ORDER TO SECURE THE TOP OF THE LOWER PANEL AND THE BOTTOM OF THE UPPER PANEL. GENERALLY, A SHEETING ANGLE ATTACHED TO THE GIRT WILL BE REQUIRED AS SHOWN BELOW.



STANDARD DETAIL W/O INSULATION

MAINTAIN A 1/8" GAP BETWEEN THE UPPER AND LOWER PANELS FOR ADJUSTMENTS. SEALANTS ARE NOT REQUIRED AT HORIZONTAL LAPS AND ARE NOT SUPPLIED UNLESS SPECIFICALLY ORDERED.

STACKING TRIM REQUIRED FOR THE HORIZONTAL SPLICE IS FURNISHED IN THE TEXTURED FINISH.

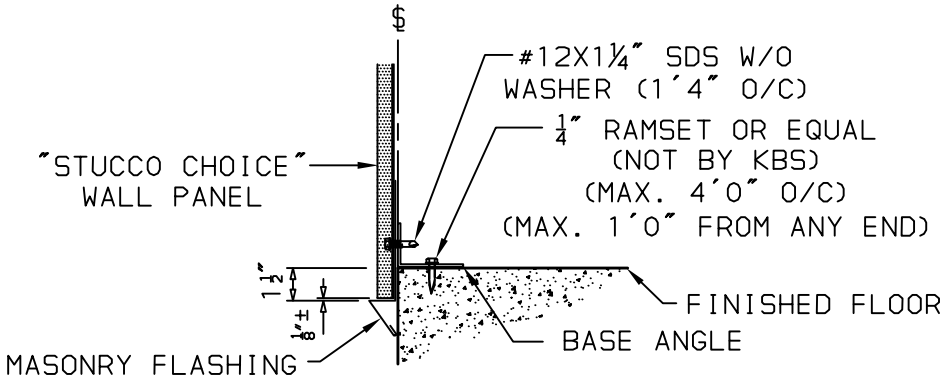


STANDARD DETAIL W/ INSULATION

LAP ALL TRIM JOINTS 2" AND SEAL W/ ¼" BEAD OF SEALANT.

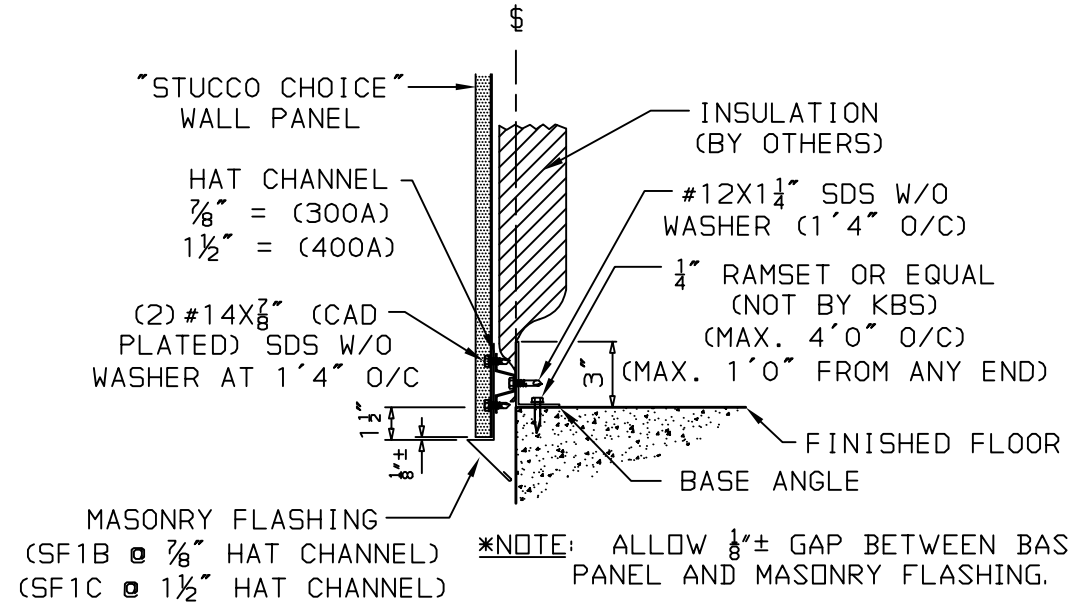
BASE OPTIONS

WHEN USING STUCCO CHOICE PANELS WITHOUT BLANKET INSULATION THE BASE TRIM AND PANEL WILL SIT FLUSH WITH THE BUILDING STEEL LINE OR EDGE OF SLAB.



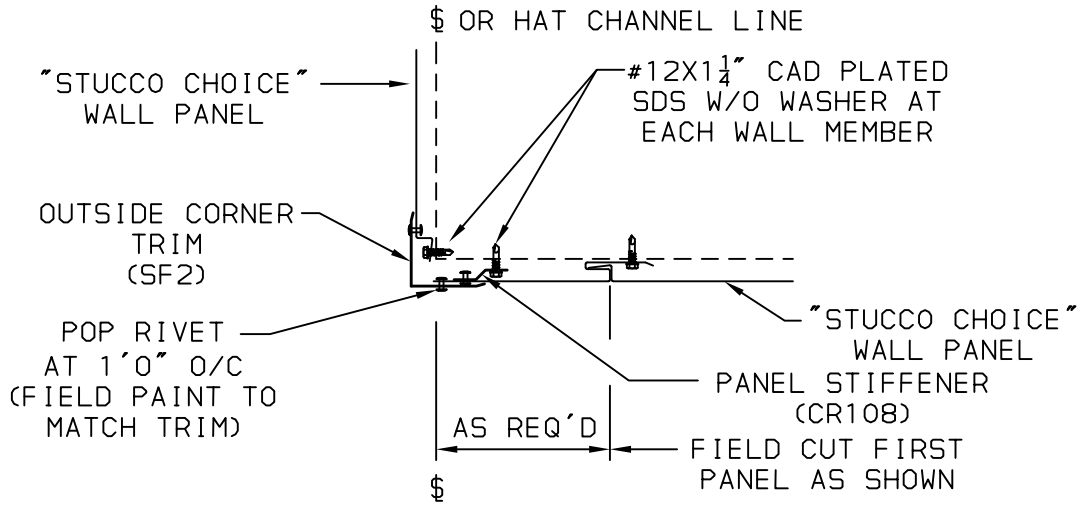
TYPICAL BASE TRIM DETAIL AT WALL WITH NO INSULATION (BASE ANGLE / MASONRY FLASHING)

WHEN USING BLANKET INSULATION WITH HAT CHANNELS THE BASE TRIM AND PANEL WILL SIT OUT FROM BUILDING STEEL LINE BY THE DEPTH OF THE HAT CHANNEL.

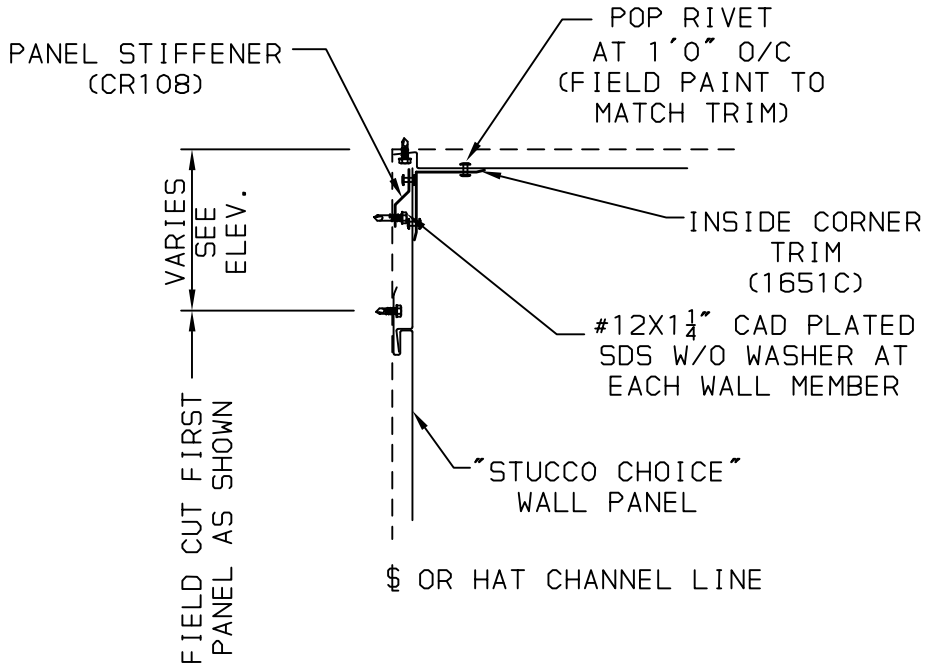


TYPICAL BASE TRIM DETAIL AT WALL WITH INSULATION (BASE ANGLE / MASONRY FLASHING)

OUTSIDE AND INSIDE CORNER OPTIONS

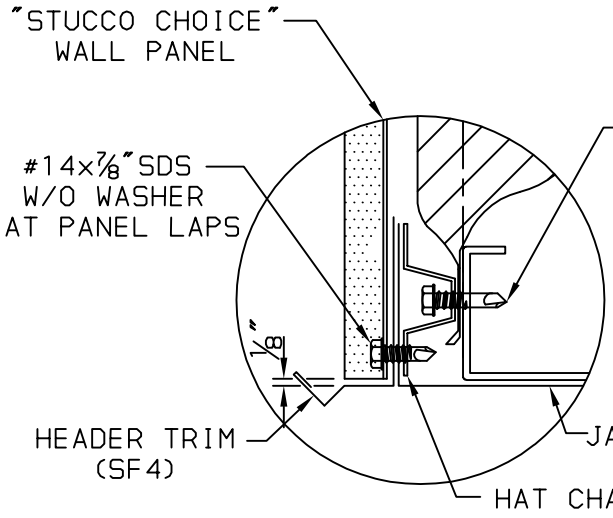


OUTSIDE CORNER TRIM DETAIL

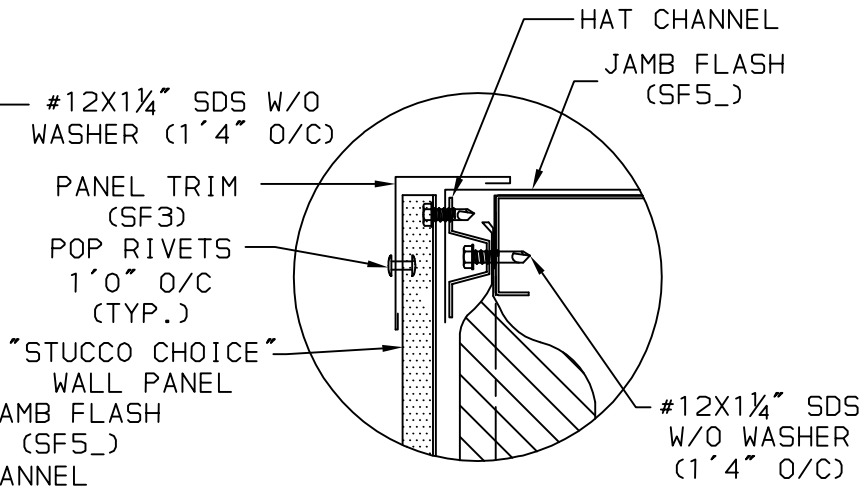


INSIDE CORNER TRIM DETAIL

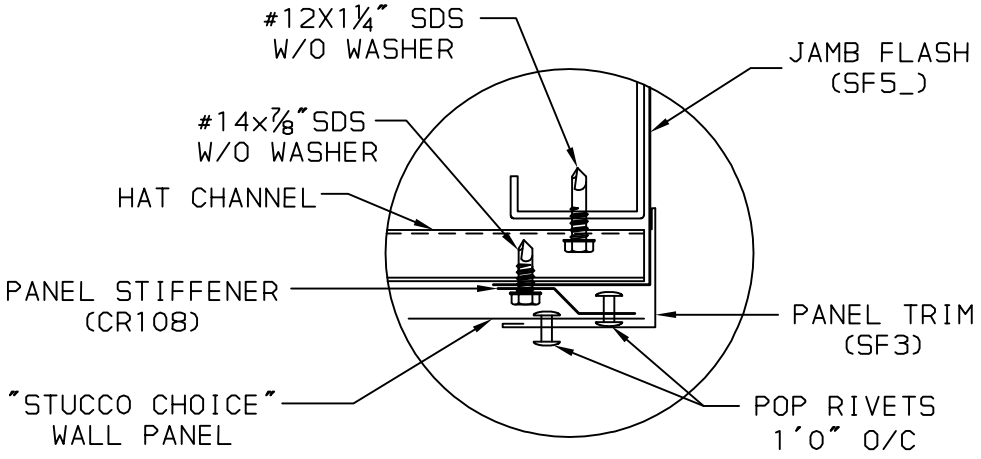
FRAMED OPENINGS



BASIC HEADER DETAIL

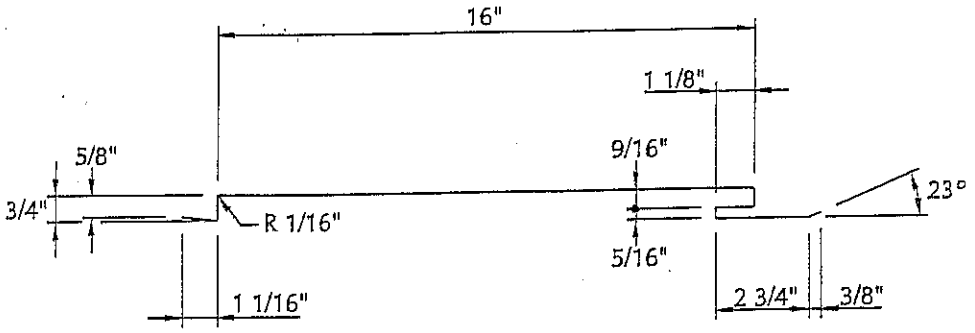


BASIC SILL DETAIL



BASIC JAMB DETAIL

DESIGN INFORMATION AND LOAD TABLE



Design Notes:

1) The StuccoChoice panel does not meet the requirements of Section C3.1.3 of the 2001 NASPEC, therefore, their attachment to the girts cannot be considered to provide any stability or bracing to the inside compression flange of the girts. The inside flange of the girts should be designed as unbraced or discrete bracing should be added.
2) The maximum allowable StuccoChoice span is 5'-0.

Engineering Properties of StuccoChoice

Designated Gage of Steel	Steel Yield KSI	Base Metal Thick. (in.)	Total Thick. (in.)	Panel Weight (lbs. / ft.^{2})	Top in Compression			Bottom in Compression			Fb KSI
					Ix (in.^{4} / ft.)	Sx (in.^{3} / ft.)	Ma K-IN.	Ix (in.^{4} / ft.)	Sx (in.^{3} / ft.)	Ma K-IN.	
20 Ga.	40	0.0359	0.0396	3.51	0.024	0.044	1.06	0.034	0.044	1.06	24

1. Structural properties have been calculated in accordance with the 2001 *North American Specification for the Design of Cold-Formed Steel Structural Members* (NASPEC).
2. Base Metal Thickness shown was used in determining section properties.
3. Moment of inertia (I_x) is computed at allowable moment (F_b = 24 ksi).
4. Panel Weight includes crushed marble coating.

Gage of Panel	No. of Spans	Load Type	Maximum Allowable Uniform Load in PSF					
			Span Lengths, Ft.					
			2.00	3.00	3.50	4.00	4.50	5.00
20 Ga.	1	POS	60	60	55	43	34	25
		NEG	-60	-60	-55	-43	-34	-28
	2	POS	60	60	54	42	34	27
		NEG	-60	-60	-54	-42	-34	-27
	3	POS	60	60	60	52	41	34
		NEG	-60	-60	-60	-52	-41	-34
	4	POS	60	60	60	49	39	32
		NEG	-60	-60	-60	-49	-39	-32

1. Tabulated pressures are taken as the lesser value determined based on bending, shear, combined bending and shear deflection, and web crippling in accordance with the 2001 NASPEC. Furthermore, the maximum calculated pressure was limited to the allowable test pressures obtained using ASTM E330-02, as outlined in NTA Report TAS111504-19.
2. Deflection limit L/120 is not exceeded under the pressures above.
3. Panels must be secured to each support member or Hat Channel using minimum #12-14 structural fasteners. The tabulated pressures above do not consider a check of this connection.
4. Two seam (stitch) fasteners or panel seam clips must also be installed to join the panel seams on each side of each support member for panels within 3 feet of any corner, as specified in NTA Report TAS111504-19.
5. The wind load is permitted to be taken as 0.7 times "component and cladding" loads for the purpose of determining deflection limits (Ref. IBC Table 1604.3, note f).

SURFACE CLEANING PROCEDURES

IN THE EVENT THAT DIRT, MUD OR OTHER CONTAMINATION OCCURS ON THE SURFACE OF THE PANELS, FOLLOW STEPS OUTLINED BELOW.

1) A STANDARD GARDEN HOSE WITH PRESSURE NOZZLE IS USUALLY SUFFICIENT TO REMOVE MOST JOB SITE CONTAMINATION.

2) IF A PRESSURE SPRAYER IS READILY AVAILABLE, CAUTION SHOULD BE EXERCISED WITH IT'S USE. PRESSURE SPRAYERS CAPABLE OF OVER 2000 psi SHOULD NOT BE HELD CLOSER THAN 3' AWAY FROM THE SURFACE OF THE PANELS AND SHOULD NOT BE HELD IN THE SAME PLACE ON THE PANEL FOR MORE THAN 30 SECONDS.

3) STAINS THAT OCCUR AS A RESULT FROM SOIL WITH HIGH IRON CONTENT CAN BE PARTICULARLY DIFFICULT TO REMOVE. IT IS NOT UNCOMMON TO HAVE "SPLASH-UP" ONTO THE LOWER WALL AS A RESULT OF EAVE CONDITIONS AND UNCOMPLETED LANDSCAPING. IF CONTAMINATION IS ALLOWED TO REMAIN ON THE SURFACE OF THE PANELS FOR A PROLONGED PERIOD OF TIME (SEVERAL DAYS) A STAIN MAY OCCUR. IT IS RECOMMENDED THAT REMOVAL OF DIRT BE A PART OF DAILY CLEANUP WHICH WILL ENSURE PERMANENT STAINING DOES NOT OCCUR.

PANEL REPLACEMENT PROCEDURE

1) CUT THE CENTER OF THE DAMAGED PANEL FROM TOP TO BOTTOM.

2) REMOVE TAB (LEFT) SIDE OF THE PANEL AND DISCARD.

3) PULL THE REMAINING PANEL SECTION AWAY FROM THE WALL ENOUGH TO ALLOW A RECIPROCATING SAW WITH A METAL CUTTING BLADE TO CUT THE FASTENERS.

4) REMOVE THE REMAINING DAMAGED SECTION AND DISCARD.

5) CUT THE LEADING EDGE OF (RIGHT SIDE) OF THE REPLACEMENT PANEL WITH $\frac{1}{2}$" OF PANEL SIDE.

6) SLIDE THE RIGHT SIDE OF THE NEW PANEL INTO POSITION WITH ADJACENT PANEL WHILE PULLING IN THE LEFT SIDE UNTIL THE TAB IS ABLE TO ENGAGE INTO THE ADJOINING PANEL.

7) DRILL AND PLACE 1" BLIND RIVETS AT 2'-0" O/C THROUGH THE LEFT EDGE OF THE ADJOINING PANEL WHICH WILL SECURE THE REPLACEMENT PANEL TO THE SUBSTRATE.

8) USE TEXTURED TOUCH-UP PAINT TO COVER THE INSTALLED RIVETS.

NOTE: MAKE SURE THAT THE BLIND RIVET IS PLACED AT THE VERY EDGE OF THE PANEL TO AVOID CUPPING EFFECT.

Premium Finishes

Kirby BUILDING SYSTEMS

Regal White*

Reflective White*†

Warm White

Pearl Gray*

Light Stone*

Slate Gray

Taupe Sand*

Blue Gray

Surrey Beige*

Regal Blue†

Light Bronze

Evergreen†

Dark Bronze†

Hemlock Green*

Terra Cotta†

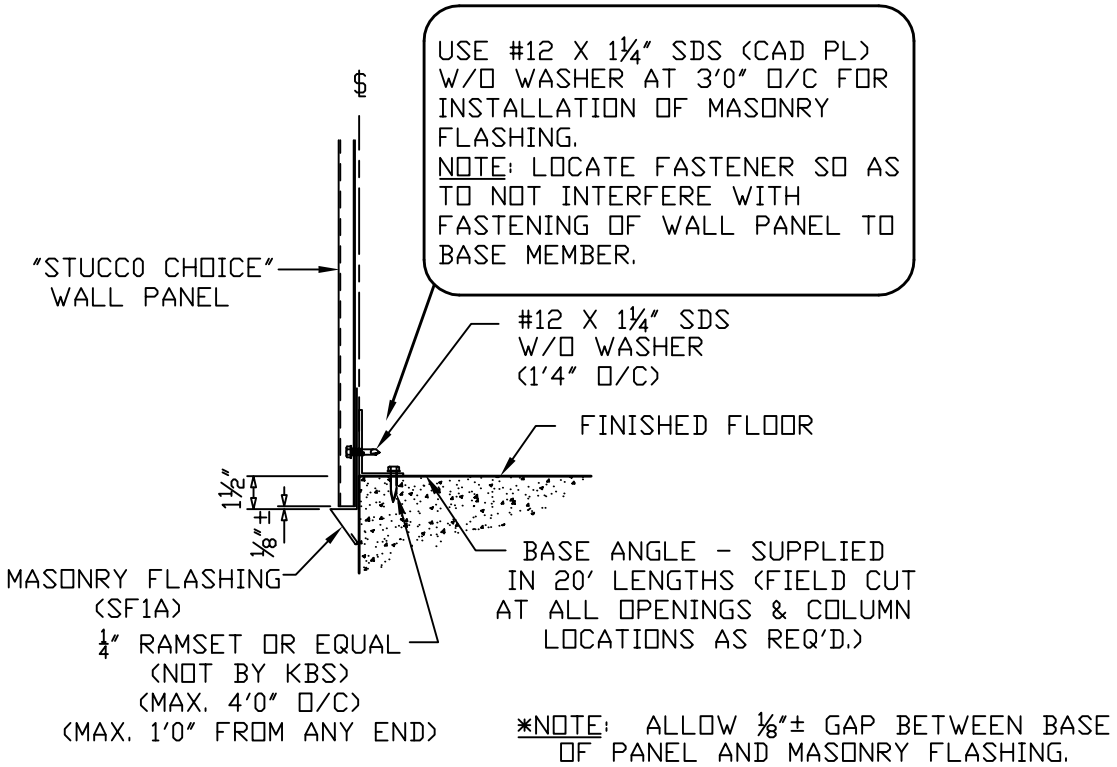
Sage

These premium coatings are manufactured by BASF Industrial Coatings.
Colors shown closely approximate actual coating colors.
*These colors are compliant with the Energy Star specification of 25% minimum reflectance.

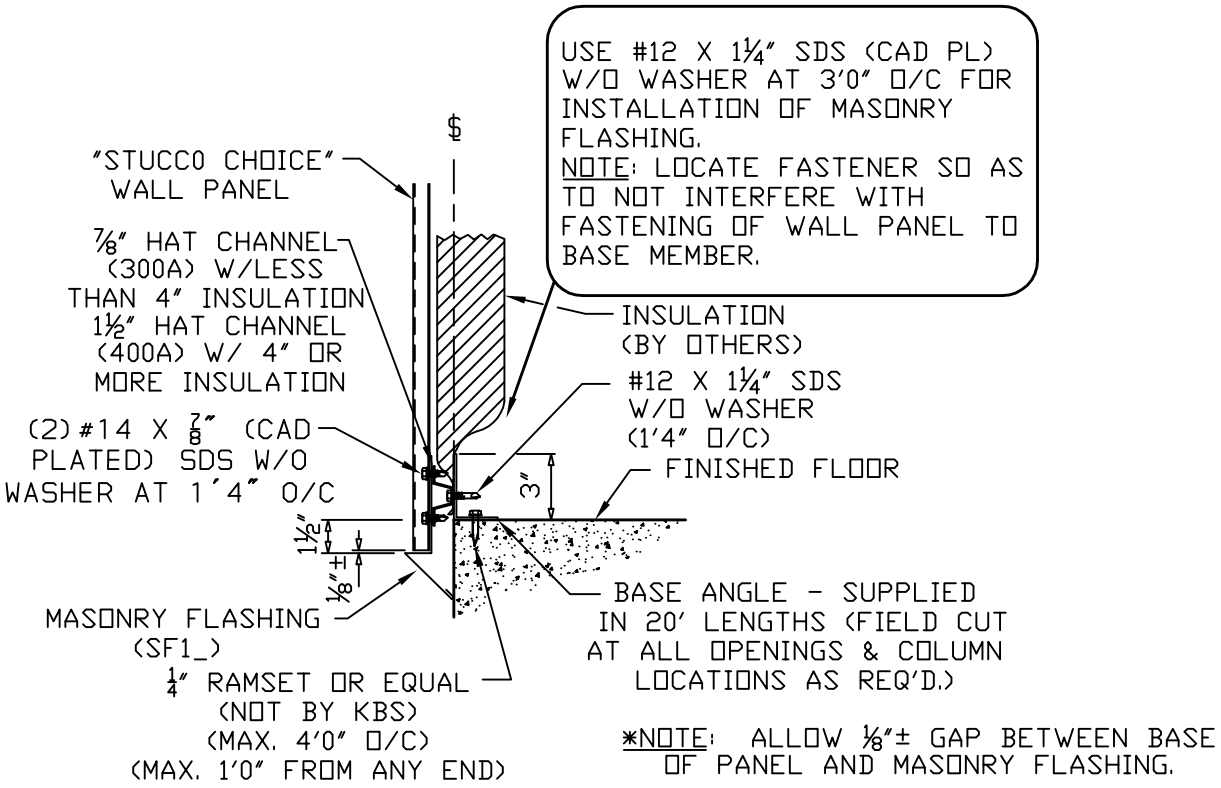
† Colors available for KBS Standing Seam Roof Systems, KTS, KTM and ROOF-LOK.

Kirby Building Systems
P.O. Box 390, 124 Kirby Drive • Portland, TN 37148 • (615) 325-4165

SECTIONS



BASE DETAIL
STUCCO CHOICE



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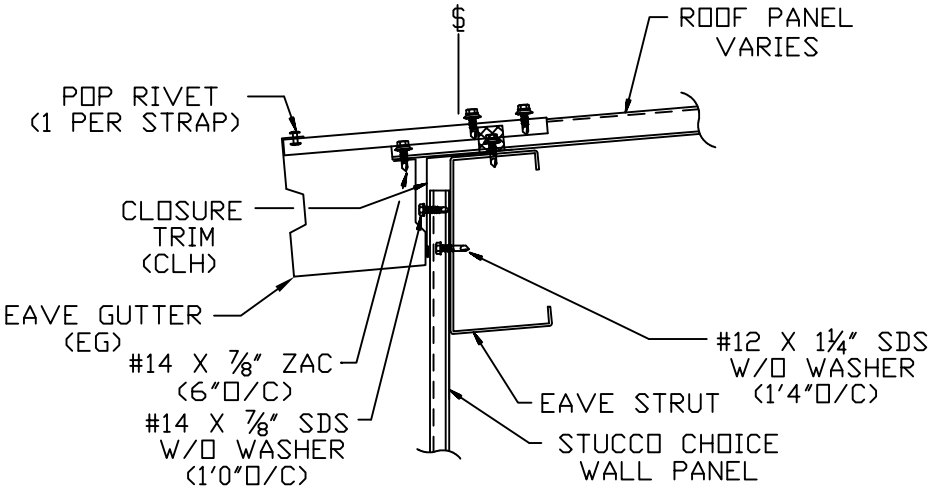
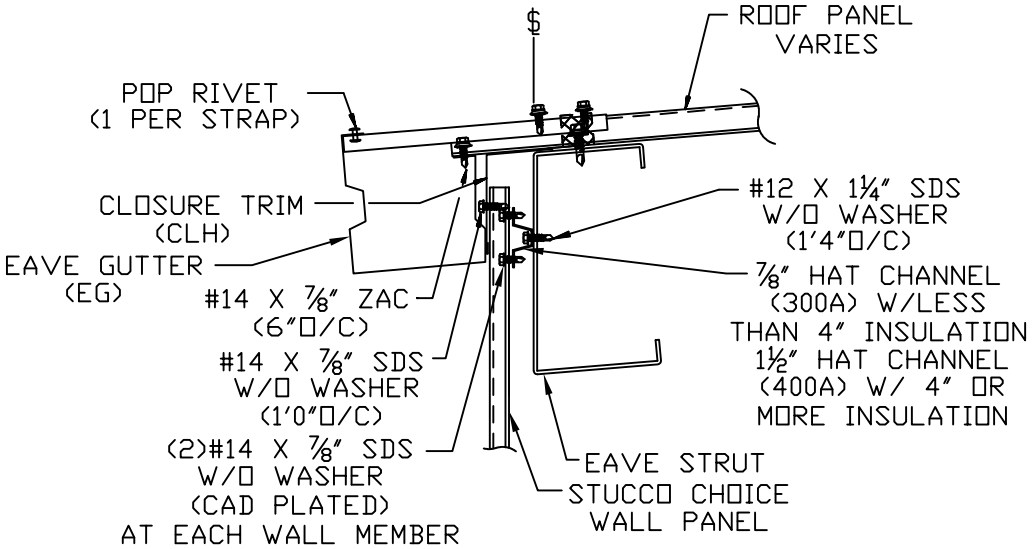


GUTTER DETAILW/O INSULATION

STUCCO CHOICE



GUTTER DETAIL W/ INSULATION

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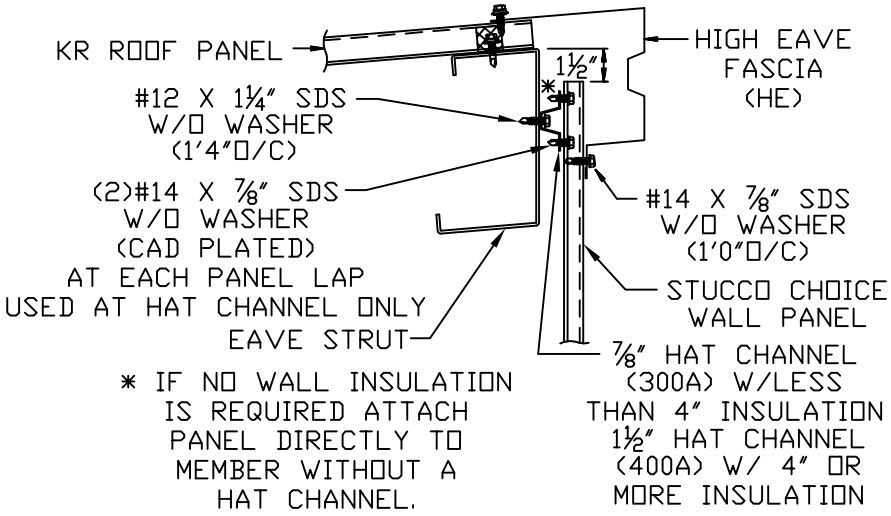
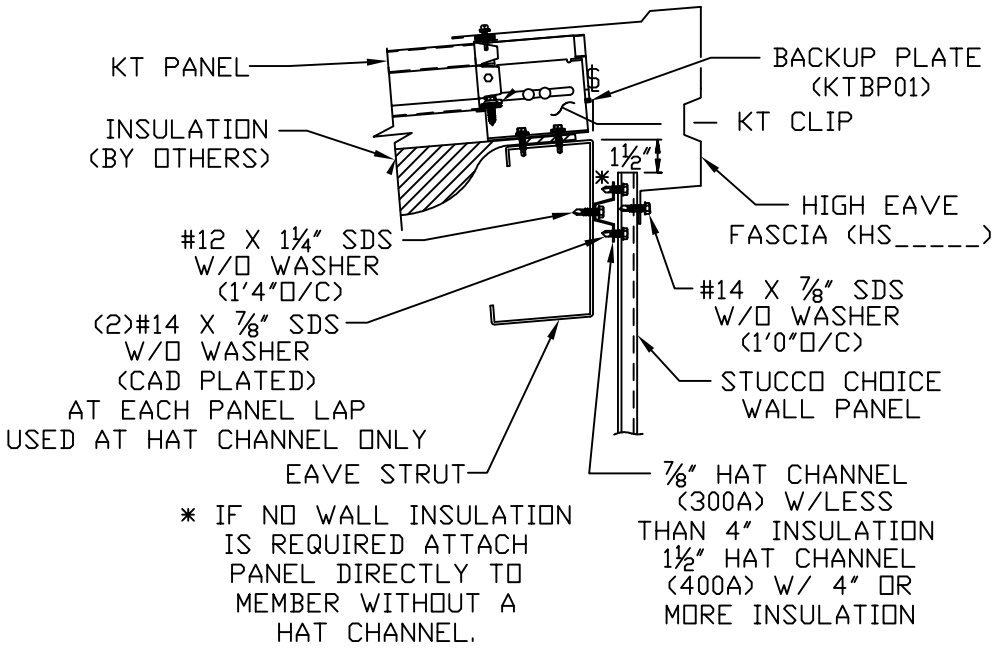


HIGHSIDE DETAILW/ KR ROOF PANEL



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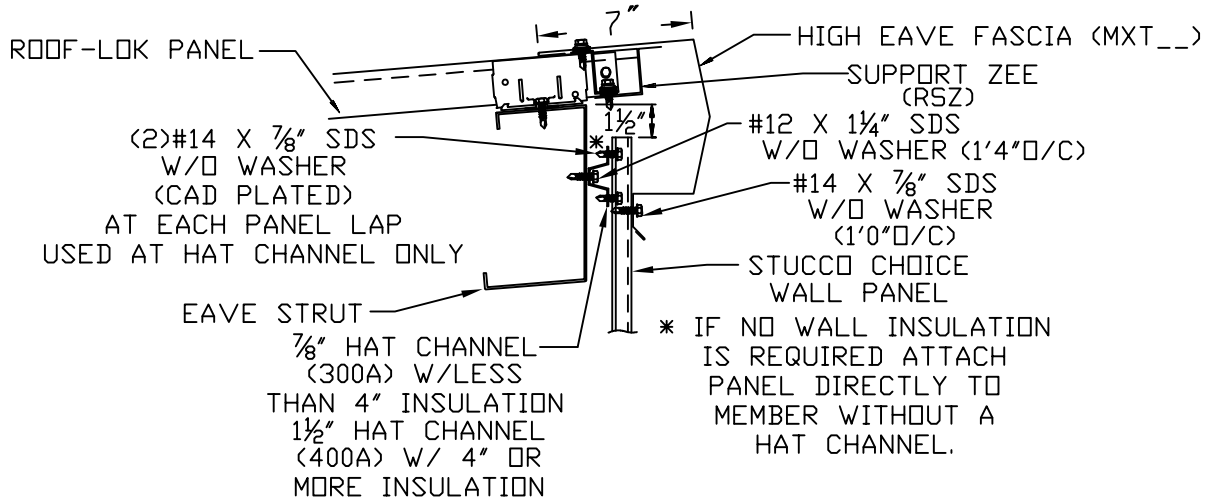
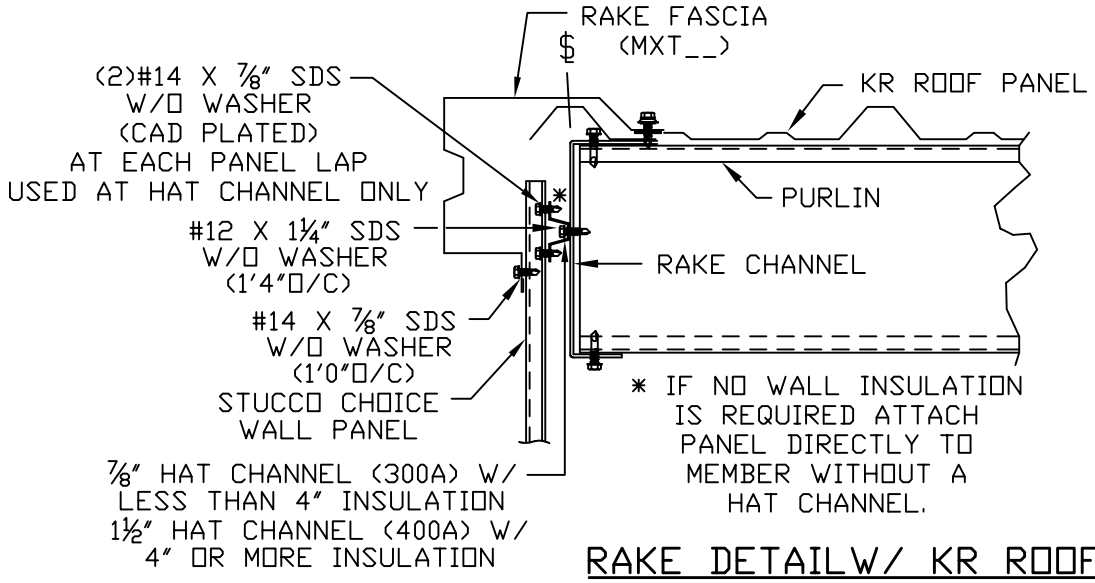
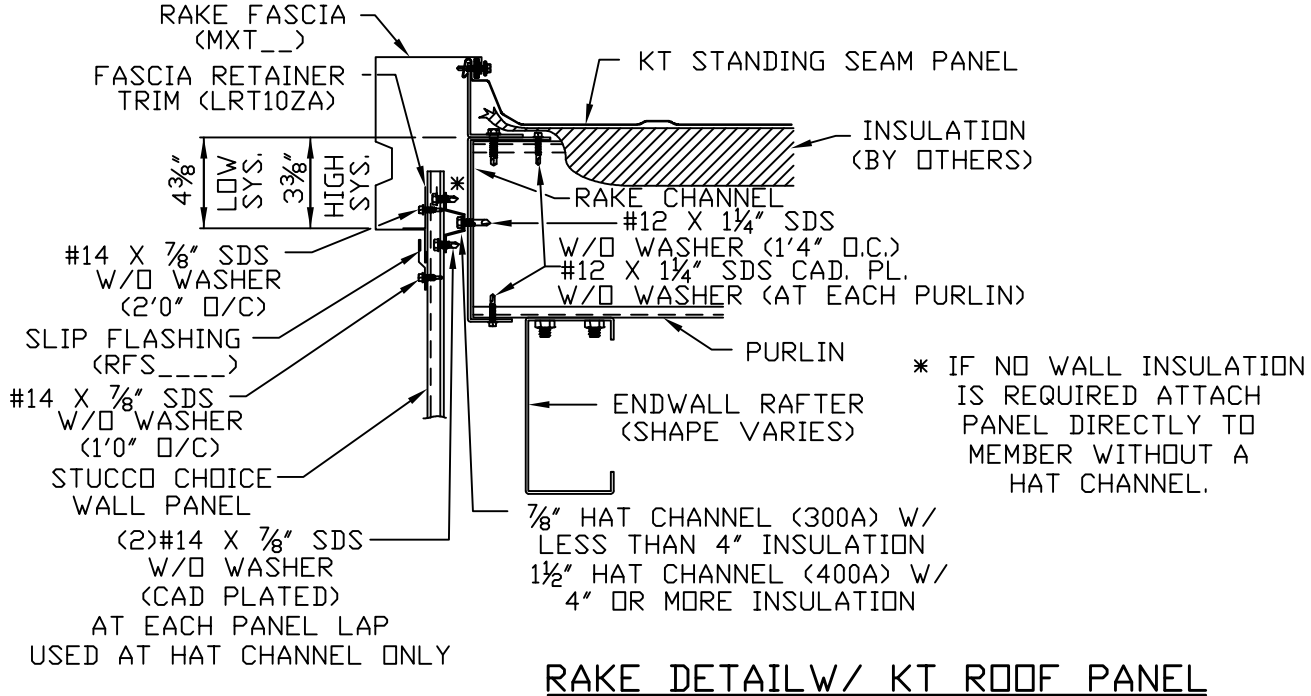


HIGHSIDE DETAILW/ RL ROOF PANEL



RAKE DETAILW/ KR ROOF PANEL



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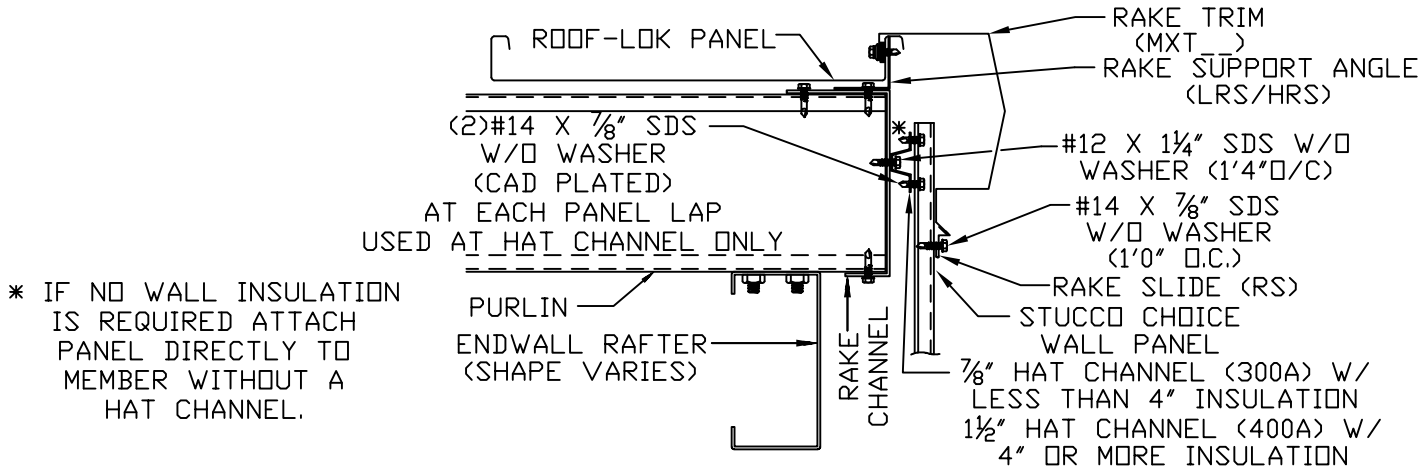

RAKE DETAILW/ RL ROOF PANEL