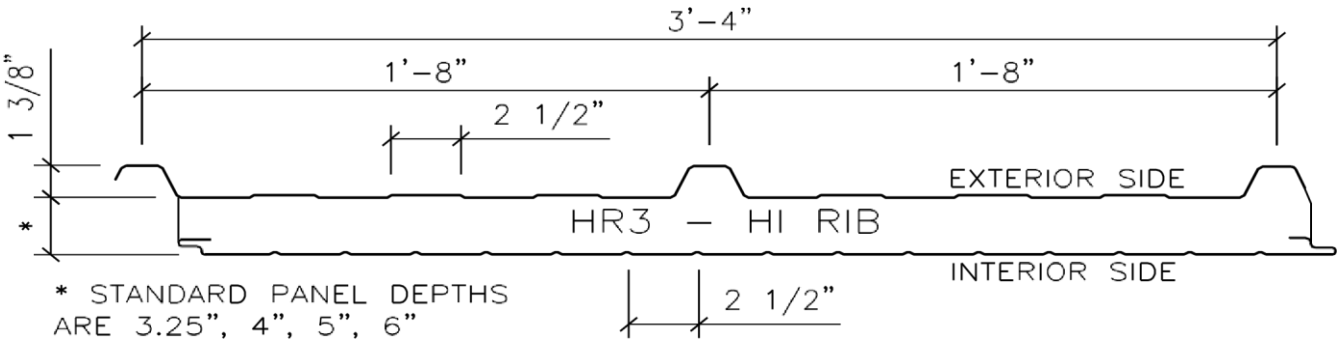
HR3 INSULATED ROOF PANEL TABLE OF CONTENTS

HR3 INSULATED ROOF SYSTEM

The HR3 insulated high rib roof system panel is available as a component of one of Valley Steel Building Systems' Standard Roof Systems.



Information about the available panel thickness options, R and U factors, exterior and interior colors and finishes, available panel lengths, performance and testing information, and much more is available at the Valley Steel Building Systems website at the below link.

HR3 Insulated High Rib Roof Panel

The following pages outline span capacities for a typical panel configuration as well as provide Valley Steel standard details for this roof system.

HR3 INSULATED ROOF SYSTEM SPAN TABLES

2-1 /2" PANEL THICKNESS – STANDARD (1) FASTENER

2-1/2" SR2 Insulated Standing Seam Roof Panel			**– 26 Gauge Exterior/Interior** **– 1 Fastener per Panel Rib**
2 Equal Spans			
Span			Uplift Capacity (psf) per Support Thickness

(ft.)	Gravity (psf)	Deflection L/240	0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	83	n/c	35	40	45	59	69	75	83
4.5	73	n/c	31	35	40	52	61	66	73
5	65	n/c	28	32	36	47	55	60	65
5.5	59	n/c	25	29	33	43	50	54	59
6	54	n/c	23	26	30	39	46	50	54
7	45	n/c	20	22	26	33	39	42	45
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	83	n/c	40	45	52	67	78	83	83
4.5	73	n/c	35	40	46	60	69	73	73
5	65	n/c	32	36	41	54	62	65	65
5.5	59	n/c	29	33	37	49	57	59	59
6	54	n/c	26	30	34	45	52	54	54
7	45	n/c	22	26	29	38	44	45	45

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

2-1 /2" PANEL THICKNESS – OPTIONAL (2) FASTENERS

2-1/2" SR2 Insulated Standing Seam Roof Panel – 26 Gauge
Exterior/Interior – 2 Fasteners per Panel Rib

2 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	83	n/c	70	80	83	83	83	83	83
4.5	73	n/c	62	71	73	73	73	73	73
5	65	n/c	56	64	65	65	65	65	65
5.5	59	n/c	51	58	59	59	59	59	59
6	54	n/c	46	53	54	54	54	54	54
7	45	n/c	40	45	45	45	45	45	45
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	83	n/c	80	83	83	83	83	83	83
4.5	73	n/c	71	73	73	73	73	73	73
5	65	n/c	64	65	65	65	65	65	65
5.5	59	n/c	58	59	59	59	59	59	59
6	54	n/c	53	54	54	54	54	54	54
7	45	n/c	45	45	45	45	45	45	45

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

4" PANEL THICKNESS – STANDARD (1) FASTENER

4" SR2 Insulated Standing Seam Roof Panel			**– 26 Gauge Exterior/Interior** **– 1 Fastener per Panel Rib**
2 Equal Spans			
Span			Uplift Capacity (psf) per Support Thickness

(ft.)	Gravity (psf)	Deflection L/240	0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	116	n/c	35	40	45	59	69	75	94
4.5	102	n/c	31	35	40	52	61	66	84
5	90	n/c	28	32	36	47	55	60	75
5.5	81	n/c	25	29	33	43	50	54	68
6	73	n/c	23	26	30	39	46	50	63
7	61	n/c	20	22	26	33	39	42	54
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	116	n/c	40	45	52	67	78	85	107
4.5	102	n/c	35	40	46	60	69	75	95
5	90	n/c	32	36	41	54	62	68	85
5.5	81	n/c	29	33	37	49	57	62	78
6	73	n/c	26	30	34	45	52	56	71
7	61	n/c	22	26	29	38	44	48	61

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

4” PANEL THICKNESS – OPTIONAL (2) FASTENERS

4" SR2 Insulated Standing Seam Roof Panel – 26 Gauge
Exterior/Interior – 2 Fasteners per Panel Rib

2 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	116	n/c	70	80	91	116	116	116	116
4.5	102	n/c	62	71	81	102	102	102	102
5	90	n/c	56	64	73	90	90	90	90
5.5	81	n/c	51	58	66	81	81	81	81
6	73	n/c	46	53	61	73	73	73	73
7	61	n/c	40	45	52	61	61	61	61
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	116	n/c	80	91	104	116	116	116	116
4.5	102	n/c	71	81	92	102	102	102	102
5	90	n/c	64	72	83	90	90	90	90
5.5	81	n/c	58	66	75	81	81	81	81
6	73	n/c	53	60	69	73	73	73	73
7	61	n/c	45	52	59	61	61	61	61

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

5" PANEL THICKNESS – STANDARD (1) FASTENER

5" SR2 Insulated Standing Seam Roof Panel	**– 26 Gauge Exterior/Interior** **– 1 Fastener per Panel Rib**

2 Equal Spans			
Span			Uplift Capacity (psf) per Support Thickness

(ft.)	Gravity (psf)	Deflection L/240	0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	146	n/c	35	40	45	59	69	75	94
4.5	128	n/c	31	35	40	52	61	66	84
5	114	n/c	28	32	36	47	55	60	75
5.5	102	n/c	25	29	33	43	50	54	68
6	93	n/c	23	26	30	39	46	50	63
7	77	n/c	20	22	26	33	39	42	54
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	146	n/c	40	45	52	67	78	85	107
4.5	128	n/c	35	40	46	60	69	75	95
5	114	n/c	32	36	41	54	62	68	85
5.5	102	n/c	29	33	37	49	57	62	78
6	93	n/c	26	30	34	45	52	56	71
7	77	n/c	22	26	29	38	44	48	61

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

5” PANEL THICKNESS – OPTIONAL (2) FASTENERS

5" SR2 Insulated Standing Seam Roof Panel – 26 Gauge
Exterior/Interior – 2 Fasteners per Panel Rib

2 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	146	n/c	70	80	91	118	138	146	146
4.5	128	n/c	62	71	81	105	123	128	128
5	114	n/c	56	64	73	95	110	114	114
5.5	102	n/c	51	58	66	86	100	102	102
6	93	n/c	46	53	61	79	92	93	93
7	77	n/c	40	45	52	67	77	77	77
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	146	n/c	80	91	104	135	146	146	146
4.5	128	n/c	71	81	92	120	128	128	128
5	114	n/c	64	72	83	108	114	114	114
5.5	102	n/c	58	66	75	98	102	102	102
6	93	n/c	53	60	69	90	93	93	93
7	77	n/c	45	52	59	77	77	77	77

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

6" PANEL THICKNESS – STANDARD (1) FASTENER

6" SR2 Insulated Standing Seam Roof Panel	**– 26 Gauge Exterior/Interior** **– 1 Fastener per Panel Rib**

2 Equal Spans			
Span			Uplift Capacity (psf) per Support Thickness

(ft.)	Gravity (psf)	Deflection L/240	0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	175	n/c	35	40	45	59	69	75	94
4.5	155	n/c	31	35	40	52	61	66	84
5	138	n/c	28	32	36	47	55	60	75
5.5	124	n/c	25	29	33	43	50	54	68
6	112	n/c	23	26	30	39	46	50	63
7	94	n/c	20	22	26	33	39	42	54
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	175	n/c	40	45	52	67	78	85	107
4.5	155	n/c	35	40	46	60	69	75	95
5	138	n/c	32	36	41	54	62	68	85
5.5	124	n/c	29	33	37	49	57	62	78
6	112	n/c	26	30	34	45	52	56	71
7	94	n/c	22	26	29	38	44	48	61

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

6” PANEL THICKNESS – OPTIONAL (2) FASTENERS

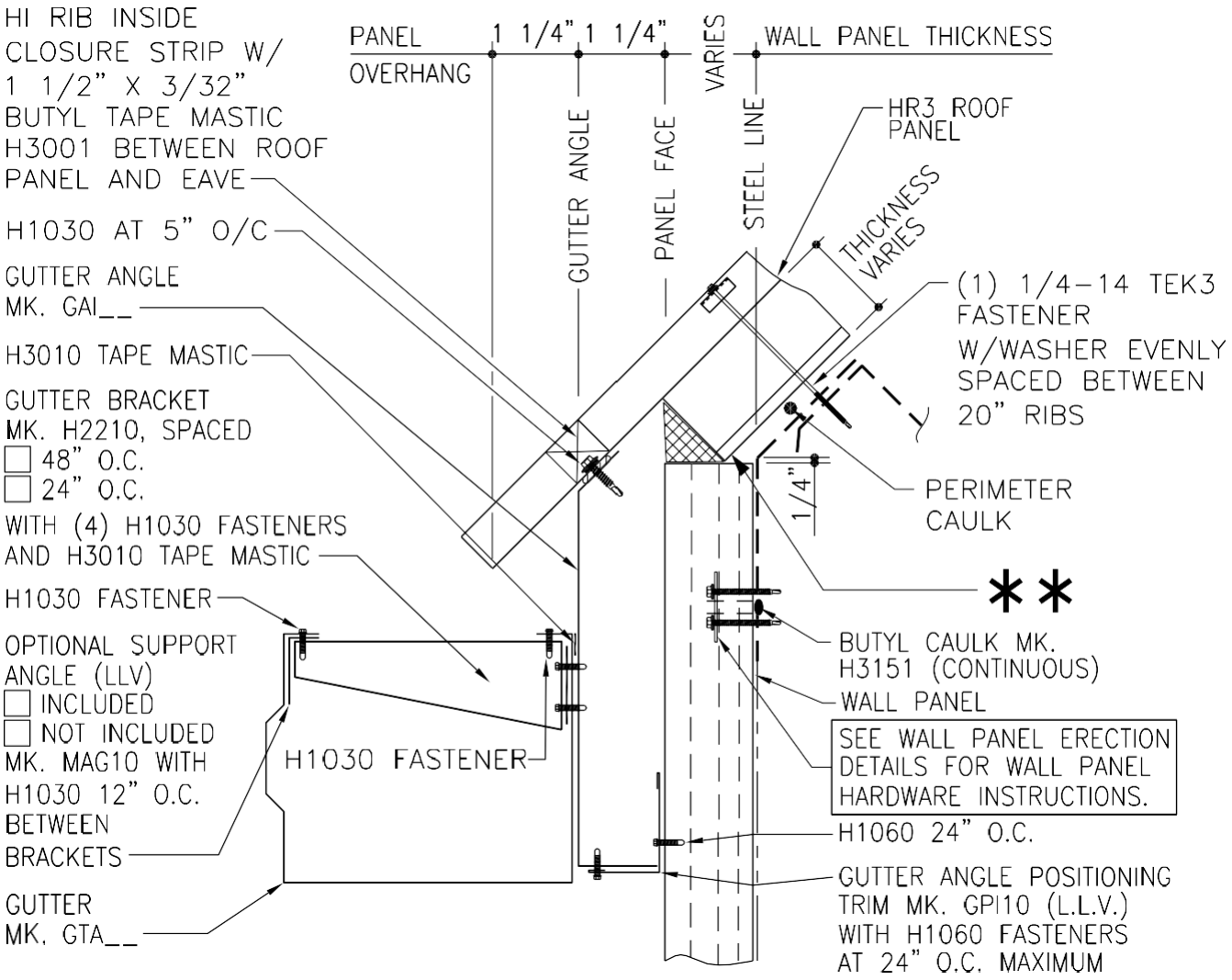
6" SR2 Insulated Standing Seam Roof Panel – 26 Gauge
Exterior/Interior – 2 Fasteners per Panel Rib

2 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	175	n/c	70	80	91	118	138	150	175
4.5	155	n/c	62	71	81	105	123	133	155
5	138	n/c	56	64	73	95	110	120	138
5.5	124	n/c	51	58	66	86	100	109	124
6	112	n/c	46	53	61	79	92	100	112
7	94	n/c	40	45	52	67	79	85	94
3 Equal Spans									
Span (ft.)	Gravity (psf)	Deflection L/240	Uplift Capacity (psf) per Support Thickness						
			0.060	0.067	0.075	0.089	0.099	0.105	0.120
4	175	n/c	80	91	104	135	157	170	175
4.5	155	n/c	71	81	92	120	139	151	155
5	138	n/c	64	72	83	108	125	136	138
5.5	124	n/c	58	66	75	98	114	124	124
6	112	n/c	53	60	69	90	104	112	112
7	94	n/c	45	52	59	77	89	94	94

Insulated roof panel deflections are held to L/240. Contact the engineering team for minimum panel lengths, span capacities with different exterior or interior panel thicknesses, or fastener configurations.

STANDARD DETAILS

ED4310PE - HORIZONTAL GUTTER



HR3 HORIZONTAL GUTTER

INSULATED METAL WALL PANEL AT SCULPTURED RAKE

ED4310

** = PANEL NOTCH WILL NOT LINE UP WITH EAVE LINE. THIS POINT WILL VARY DEPENDING ON THE ROOF SLOPE AND THICKNESS OF PANEL.

ED4310

- Horizontal gutter is provided as the standard.

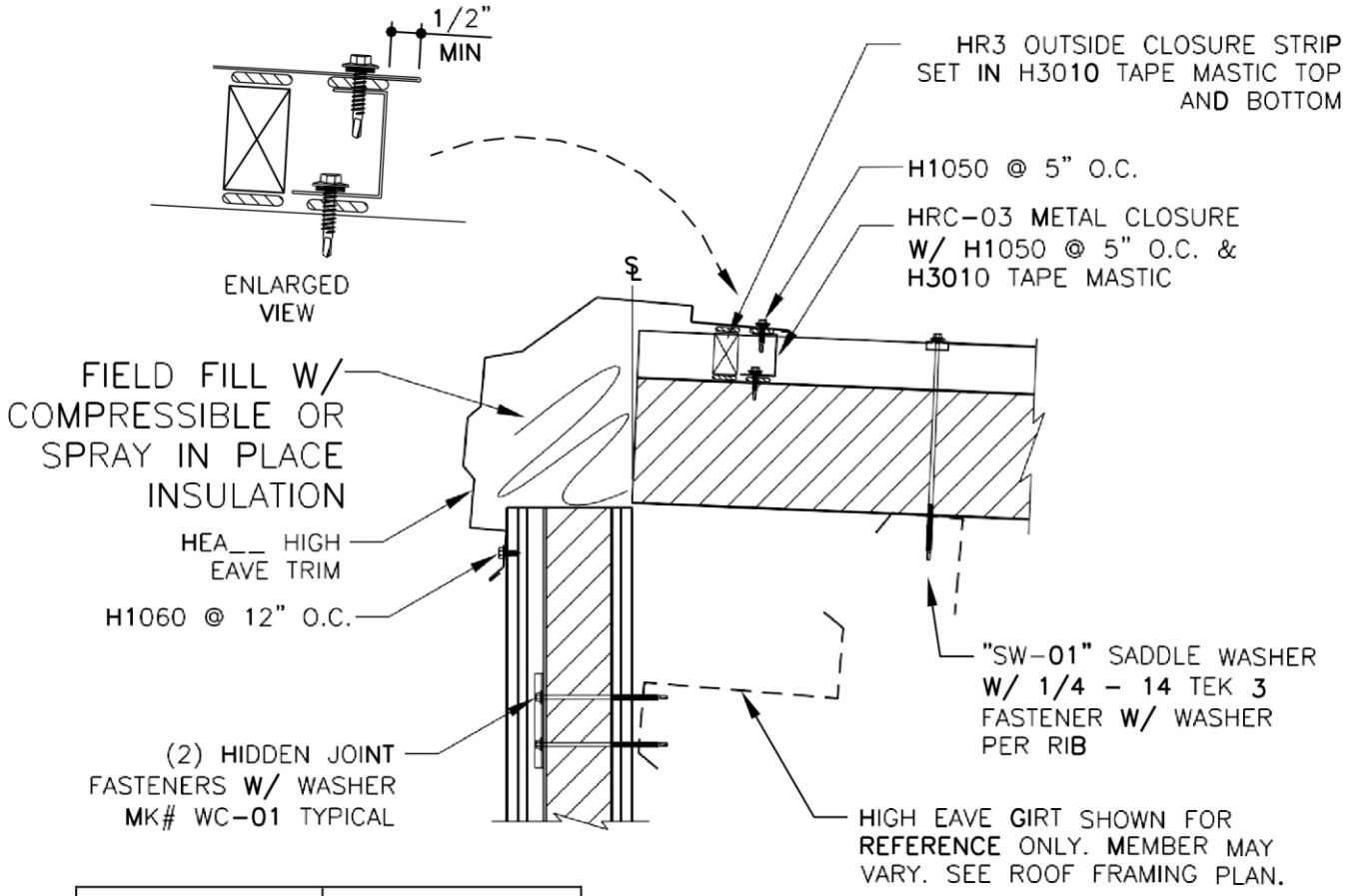
LAST REVISION DETAIL
DATE: 02/20/15
BY: AK CHK: EGB

APPLICABLE
6.6.11

NAME IF

ED4310PE.dwg

EH4006 - HIGH EAVE SCULPTURED



PANEL THICKNESS	HIDDEN FASTENER
2"	#14 X 2 SDHH
2 1/2"	#14 X 3 SDHH
3"	#14 X 3 SDHH
4"	#14 X 4 SDHH

HIGH SIDE EAVE

HR3 INSULATED ROOF PANEL

SEE INSULATED WALL PANEL ERECTION NOTES FOR ASSEMBLY METHOD

EH4006

LAST REVISION DETAIL

DATE: 02/20/15

BY: AK CHK: EGB

APPLICABLE

6.6.12

- The profile of the high eave sculptured trim matches the profile of the sculptured rake trim so that they can be mitered together.

NAME IF

EH4006.dwg

ROOF PANEL THICKNESS	DIM.
2 1/2"	0'-8"
4"	9

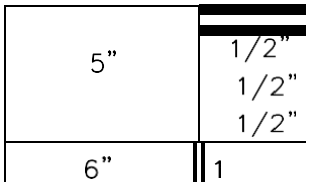
LAST REVISION

DATE: 02/20/15

BY: AK CHK: EGB

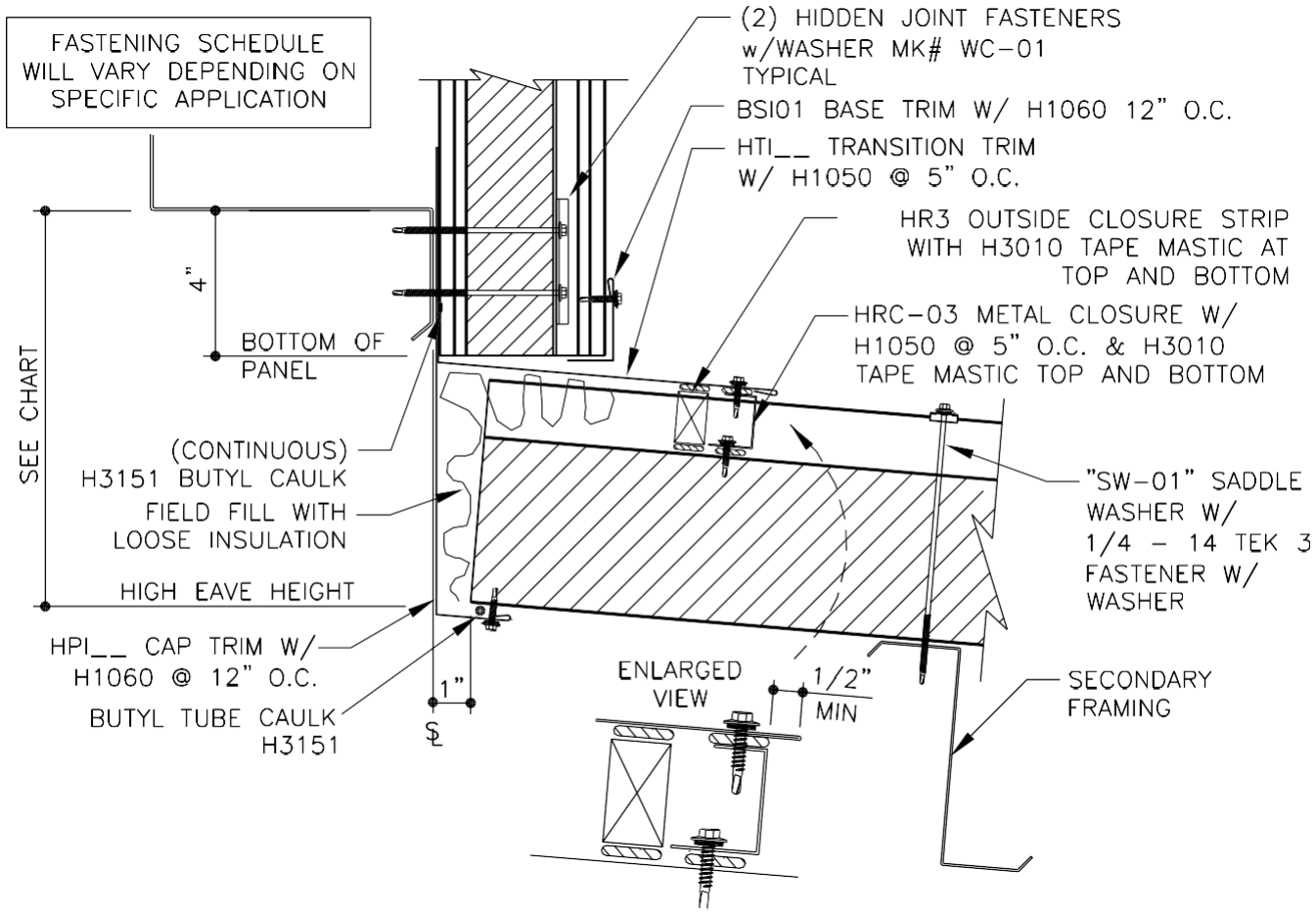
DETAIL APPLICABLE

6.6.13



PANEL THICKNESS	HIDDEN FASTENER
2"	X 2
2	X 3
1/2" 3"	#14 #14 #14 X 3 #14
4"	4 SDHH

EI4010 - HIGH EAVE PARAPET



LAST REVISION

DATE: 02/20/15

BY: AK CHK: EGB

DETAIL APPLICABLE

6.6.15

HIGH EAVE PARAPET DETAIL

HR3 INSULATED PANEL

EI4010

NAME IF

EI4010.dwg

LAST REVISION DETAIL

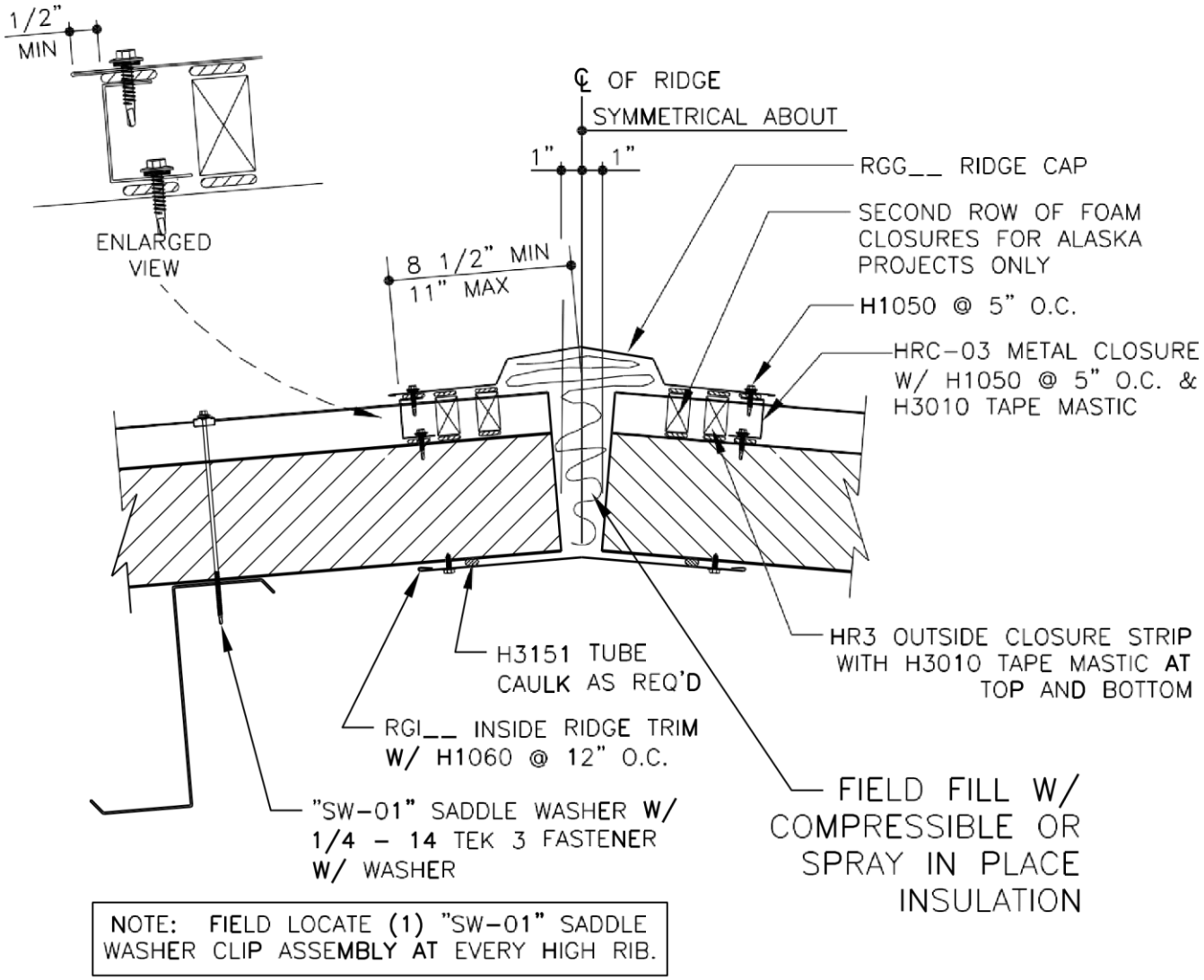
DATE: 02/20/15

BY: AK CHK: EGB

APPLICABLE

6.6.16

EG4010 - STANDARD RIDGE



NOTE: FIELD LOCATE (1) "SW-01" SADDLE WASHER CLIP ASSEMBLY AT EVERY HIGH RIB.

RIDGE DETAIL

HR3 INSULATED PANEL

EG4010

- The ridge cap is the same as the CFR low profile ridge cap.

LAST REVISION
DATE: 02/20/15
BY: AK CHK: EGB

DETAIL APPLICABLE

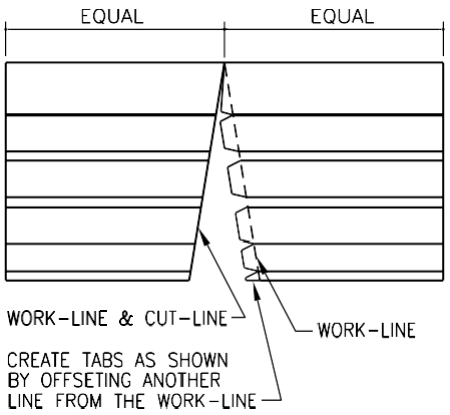
6.6.17

VALLEY STEEL CONSTRUCTION INC.

NAME IF

EG4010.dwg

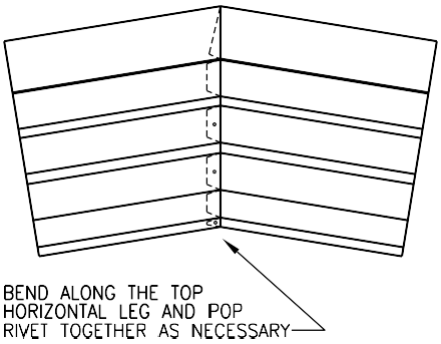
EG2100PE - FIELD **FABRICATED METAL PEAK BOX**



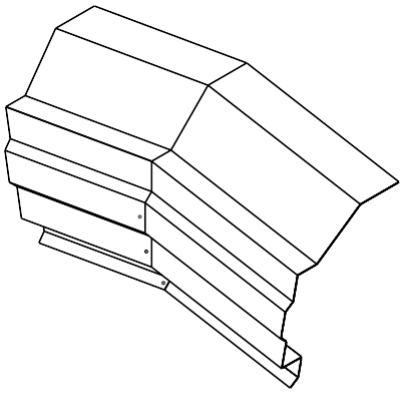
IMPORTANT NOTE

DO NOT ATTACH THE PEAK BOX TO THE RAKE TRIM OR THE ROOF PANEL. THE RAKE TRIM MUST BE ALLOWED TO FLOAT WITH THERMAL EXPANSION AND CONTRACTION, SEPARATE FROM THE PEAK BOX.

SEE THE ROOF SHEETING ERECTION MANUAL FOR ADDITIONAL PARTS REQUIRED AT THIS LOCATION.



FRONT VIEWS OF ASSEMBLY PROCESS



ISOMETRIC VIEWS OF FINISHED ASSEMBLY

FIELD-FABRICATED PEAK BOX INSTRUCTIONS

- The customer has the option of purchasing the metal peak boxes or field fabricating a metal peak box out of a piece of standard rake trim.
- The standard metal peak boxes work up through 6:12 roof slope, and only available in white.
- The standard CAD detail for the field fabricated metal peak box shows a lot more information on how to fabricate this.
- The metal peak box, as shown in the detail, allows the rake trim to slide as it is designed to. Field mitering the rake trim together at the peak with sliding clips is not recommended.
- It takes anywhere from 30-60 minutes to field fabricate one of these metal beak boxes.

LAST DETAIL APPLICABLE

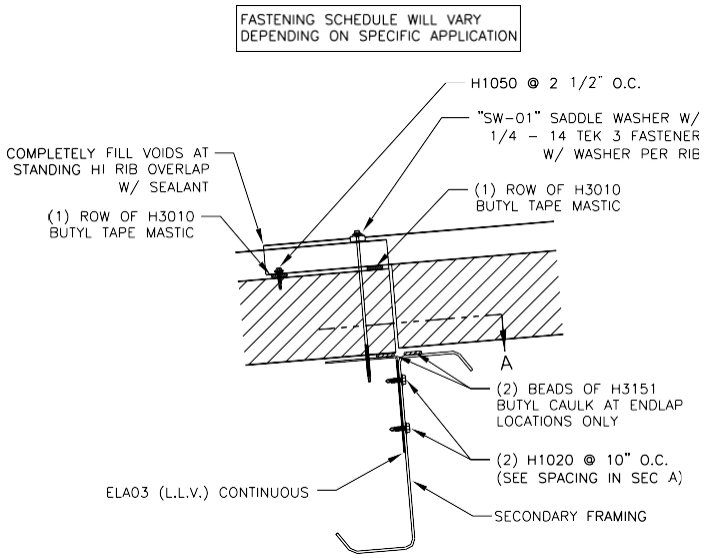
DATE: **6.6.18**

BY: CHK:

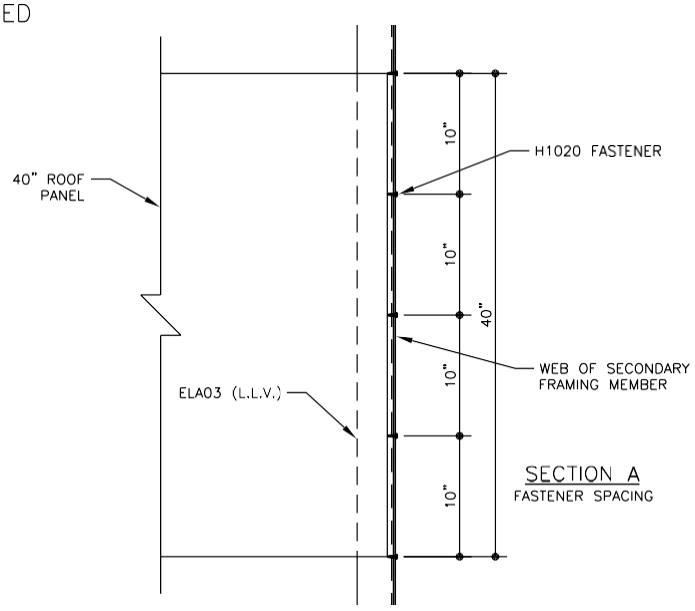
REVISION	NAME IF
04/19/11	
TBS AES	EG2100PE.dwg

PRODUCT & ENGINEERING MANUAL

EA4021 - END LAP



ERECTOR NOTE: FIELD DRILL/NOTCH LAP ANGLE AT PURLIN LAP BOLTS AND PURLIN BRACING AS REQUIRED



LAST DETAIL APPLICABLE

DATE: **6.6.19**

BY: CHK:

VALLEY STEEL CONSTRUCTION INC.

HR3 INSULATED PANEL ENDLAP

HR3 INSULATED PANEL

EA4021

- Insulation and interior metal skin is removed from portion of exterior skin that will be lapped onto the lower panel.

REVISION		NAME IF
02/16/15		
AK	EGB	EA4021.dwg

LAST DETAIL APPLICABLE

DATE: 6.6.20

BY: CHK: