7.2 ULTRA BOX RIB 36" Coverage Anti-Siphon Groove www.FLATIRONsteel.com

FLATIRON STEEL 7.2 ULTRA BOX RIB

Table of Contents

General Notes

Claims	1
Returns	1
Storage	1
Handling	1
Foot Traffic	1
Safety	2
Field Cutting Panels	2
Condition of Substrate and Structure	2
Tools & Equipment	3
Warranty Information	3
Roof Maintenance	3
Installation	4
Fastener and Selection Guide	5-6
Material Specifications	7

Flashing Details

Trim Profiles	8-11
7.2 Ultra Box Rib	12
Hip / Ridge	12
Front Cap	13
Gable	13
Eave	14
Endwall	14
Sidewall	15
Snow Stop	15
Inside Corner	16
Outside Corner	16
Window Drip Cap	17
Upper Transition	17
Lower Transition	18
W-Valley	18
Z-Base	19
Z-Flashing	19
Square Base	20
7.2 Ultra Box Gutter	20
Prow Gable	21
Overall Dormer	22
Ridge Tie-In	23
Valley-Tie-In	23

*Please contact us for more information.



7.2 ULTRA BOX RIB

INFORMATION

This guide has been provided as a reference and helpful tool for installing Flatiron Steel's 7.2 Ultra Box Rib. The installation details shown may not apply to all building designs, codes, or product applications. It is the responsibility of the installer to ensure the details meet code in his/her area.

Flatiron Steel reserves the right to change any information in this guide, at any time, without notice. If you have any questions or concerns, please contact your Flatiron Steel representative.

CLAIMS

It is the responsibility of the customer to review the condition and quantities of an order upon pick up or delivery. Claims for any shortages or damages must be filed immediately for orders picked up, or within 48 hours for orders delivered. Flatiron Steel will not be held responsible for any claims filed after these time frames.

RETURNS

Flatiron Steel does not accept returns of any custom ordered materials, special ordered accessories, or fabricated metal products. Only stock accessories may be returned if they are deemed to be in resalable condition. Stock items being screws (full bag quantities), flashers, closures, clips, underlayment, etc. A restocking fee of 15% may be applied to all returned merchandise.

STORAGE

If the metal panels or trim are not used immediately, the metal should be stored in a well ventilated, cool, dry place. This will inhibit moisture build up on the panels and trim, which can lead to white rust.

If the product cannot be stored indoors, elevate one end of the bundle to allow any moisture to run off the panels. Also, a tarp should be loosely wrapped around the bundle, ensuring there is good air flow around the panels. Never store panels in direct contact with the ground.

Flatiron Steel assumes no responsibility for materials that are not stored properly.

HANDLING

Handle all panels and trim with care to avoid damage. When unbundling panels, do not drag one panel against another. This can cause scratches across the panels. When moving the panels, they should be carried vertically to the ground by grasping the edge of the panel carefully to ensure that no excessive bending occurs. Note, the edge of the panel is sharp, and gloves should always be worn when handling all metal.

When handling trim it is important to do so with care and ease. Many trim profiles are fragile and can be easily damaged if not handled appropriately. It is recommended that the installer or whomever is handling trim wear gloves and use two hands at all times.

FOOT TRAFFIC

Care of metal panels and trim must be exercised throughout installation. Foot Traffic can cause distortion of the panel and damage the finish. Foot traffic should be kept to an absolute minimum. Installers should wear soft soled shoes that will help with traction on the roof and prevent scratching.

When walking on the panels is unavoidable, walk in the flats only. Walking on the major ribs can damage the panel.



7.2 ULTRA BOX RIB

SAFETY

Safety should be the main concern when installing any metal project. Each job site presents different hazards, on the ground and the roof; therefore, it is the responsibility of the installer to determine the safest way to install the metal.

Personal protective equipment should be used at all times when handling or installing metal panels and trim (i.e. gloves, safety glasses, pants, long sleeved shirts and hard hats).

Always be aware of your surroundings and use fall protection. Never install metal roofing during windy or stormy days. Metal roofing can become slippery when wet or dusty and extra care needs to be taken if these conditions are present. Wind can create hazardous working situations by getting under the metal panel and pulling the installer off the roof. Metal roofing is very sharp and can cause serious bodily injury if handled inappropriately.

If a safety concern exists on a job site, stop work immediately. Always comply with OSHA safety regulations.

FIELD CUTTING PANELS

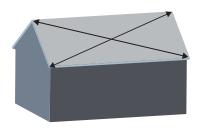
Tin Snips, a circular saw, or a nibbler is recommended for field cutting metal panels and trim. Always wear eye and ear protection when cutting metal. When cutting painted metal, ensure the metal particles and fragments do not end up on the painted surface. Metal particles on the painted surface will result in rusting and pitting in that area. Flatiron Steel recommends the panels to be turned upside down and all cutting be done looking at the backside of the material. Installers should immediately wipe away any debris from the material after cuts to prevent this problem. Panels should be cut in an area where metal particles do not end up on other panels or building materials.

Failure to remove the metal particles from the panel will void any warranty

CONDITION OF SUBSTRATE AND STRUCTURE

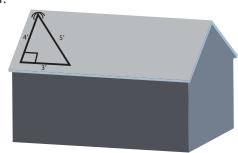
Before the installation process begins, it is critical that the framing and substrate are inspected to ensure that the structure is square and plumb. If it is not, it will have to be corrected. Make sure any structural fixes are done by someone with the proper experience and knowledge. Correct any objectionable warp, waves, or buckles in the substrate before proceeding with panel installation. The roof panels will follow the contour of the structure and may appear irregular if not corrected.

To check the structure for squareness, take two diagonal measurements from the corner to corner. The roof is square if the two measurements are equal.



If the roof is not square, follow the 3-4-5 method to ensure that the panel is being installed square. If the first panel is not installed square, all remaining panels will also be out of square when attached to the structure.

- 1.) To do this, pick a starting point at the bottom corner of the roof, about a foot away. Set a nail there.
- 2.) From the nail, measure exactly 3 feet in the opposite direction along the bottom edge of the roof. Insert another nail in that spot.
- 3.) From the first nail, measure exactly 4 feet up the slope of the roof and draw a small arc.
- 4.) Measure from the second nail up to the arc measuring exactly 5 feet, drawing another arc.
- 5.) Attach a chalk line to the first nail and extend it up the slope until it passes through the intersection of the two
- 6.) Snap the chalk line. This line is now square with the bottom edge of the roof.
- 7.) Use this line to properly install the first panel square on the roof.1



¹For larger roofs, this method can be done with multiples of 3,4,5 Example 6', 8', 10'



7.2 ULTRA BOX RIB

TOOLS & EQUIPMENT

- Hard Hat
- Gloves
- Safety Glasses
- Ear Plugs
- Fall Protection

- Screw Gun
- Tin Snips
- Tape Measure
- Chalk Line
- Electric Nibbler

- Circular Saw
- Angle Grinder
- Rivet Gun

ROOF MAINTENANCE

Roof maintenance should be done, at the minimum, annually. These steps will ensure that your roof will have a longer lifespan with less maintenance and help prevent costly repairs. It is best to perform roof maintenance when the weather permits safe working conditions.

- Clear all debris off the roof (dirt, rocks, branches, leaves, etc.)
- Clean out all drains and gutters to ensure proper drainage, to prevent water standing.
- Remove any overhanging branches or anything else that could penetrate the roof surface.
- Inspect all areas for leaks and deterioration pay attention to stains and discoloration of the roof edges and surrounding walls as they are possible indications of a leak.
- Check roof penetrations for possible leaks and cracks in caulking.
- If exposed fasteners have been used to install the roof, it is crucial they are inspected annually
 - 1. Check if they are installed correctly.
 - 2. Ensure that they are not fastened too tight or not tight enough.
 - 3. Inspect the integrity of the neoprene washer.

²Refer to Fastener selection guide on the following pages 5-6.

WARRANTY

Paint warrant documents are available upon written request.

Please provide the following information to your local Flatiron Steel branch.

Product purchased - Including: panel type, width, color and gauge.

Where the product was purchased: Lumber yard, roofing wholesaler, contractor or direct.

When the product was purchased: Date of purchase (must be within 90 days of purchase date)

Owners Name:

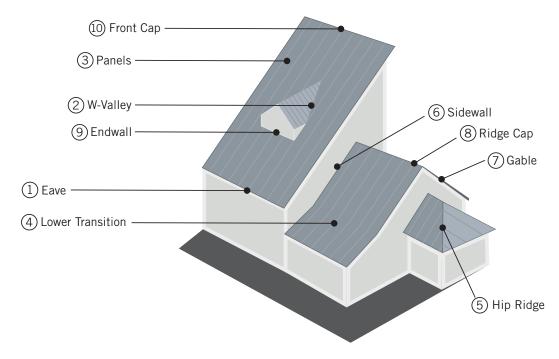
Project Location: Physical address

Job Completion Date:

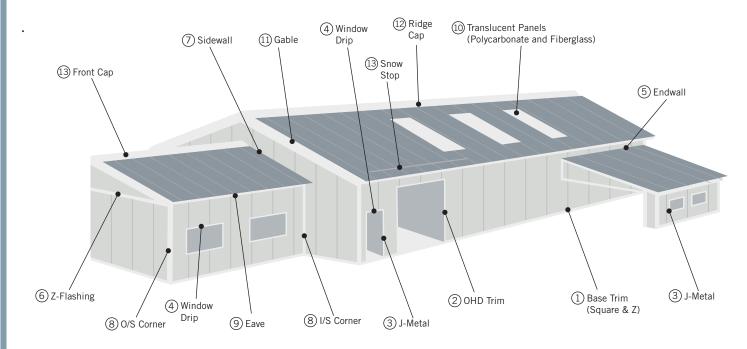


7.2 ULTRA BOX RIB

INSTALLATION



Installation over shingles is possible but is not recommended. It is best to remove shingles and install a new, synthetic underlayment to act as a vapor barrier between the substrate and the metal. If shingles will not be removed, furring strips need to be installed on the roof at 2'-0" centers. The metal panels will then be fastened to the furring strips.



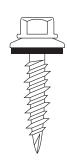
*Components are listed in the order that they are installed.

*Please contact us for more information.



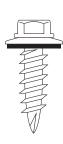
FLATIRON STEEL FASTENER SELECTION GUIDE

WOODFAST SCREW



- No. 10 x 15, Type 17
- Available sizes: 1", 1 ½", 2", 2 ½", 3"
- 1/4" Hex Head
- Use: Panel to dimensional lumber and trim attachment.

WAFER SCREW



- No. 14 x 10, Type 17
- Available sizes: 1", 1 ½ ", 2"
- 5/16" Hex Head
- Use: Panel to plywood/OSB substrate and trim attachment.

STITCH SCREW



- No. 12 x 14
- Available size: 3/4"
- 1/4" Hex Head
- Use: Trim attachment and stitching lap seams together (29 gauge).
- *Compatible with No. 10 & No. 14 Wood Screws

TEK SCREW



- No. 12 x 14
- Available sizes: 1", 1 1/2", 2"
- 5/16" Hex Head
- Use: Panel to Purlin (up to 3/16" steel).

PROPER INSTALLATION OF GASKETED FASTENERS







- This table shows the fasteners available from FLATiRON Steel. Refer to the panel installation and flashing details of this manual for specific screw usage and spacing.
- Panel attachment screws must be long enough to fully penetrate through the wood roof decking, steel purlins or penetrate solid lumber at least one inch.
- All screws must be coated to provide protection against corrosion.
- Exposed fasteners must have sealing washers and should be the same color as the parts they attach.
- Screws must be properly driven to ensure proper seal and holding strength. Do not underdrive or overdrive the screws.
- · Stainless steel rivets are not watertight.

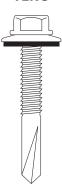
FLATIRON STEEL **FASTENER SELECTION GUIDE**

LAP TEK



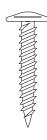
- No. 14 x 7/8"
- Available size: 7/8"
- 5/16" Hex Head
- Use: Trim attachment and stitching lap Seams together.
- *Compatible with No. 12 Tek Screw and No. 14 Wafer Screw

TEK 5



- No. 14 x 24
- Available size: 1 1/4"
- 5/16" Hex Head
- · Use: Panel to purlin (Heavy Gauge Steel 3/16" and greater).
- *Only Available in white and galvanized, remaining colors available by special order.

PANHEAD



- 10 x 12
- Available sizes: 1", (1 1/2" and 2" available by special order)
- Phillips Head / Square Drive
- Use: To fasten standing seam panels and trim to wood deck (unexposed).

STAINLESS STEEL RIVET POP RIVET



- Available sizes: 1/8" x 3/16"
- Use: Trim attachment

PROPER INSTALLATION OF GASKETED FASTENERS





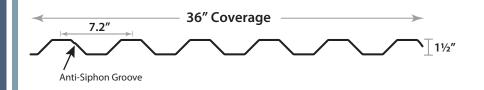


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- · Stainless steel rivets are not watertight.



7.2 ULTRA BOX PANEL

MATERIAL SPECIFICATIONS



LOAD TABLES

Refer to Trim Pamphlet for Material Availability

26 Gauge (0.0181"), Fy = 60 ksi, Fu = 61.5 ksi								
SPAN	LOAD TYPE				SPAN IN FEET	Г		
TYPE	LOAD TIPE	3.0	4.0	5.0	6.0	7.0	8.0	9.0
1-span	NEGATIVE WIND LOAD	237.61	133.66	85.54	59.40	43.64	33.41	26.40
1-spail	LIVE LOAD/DEFLECTION	162.95	103.02	52.75	30.53	19.22	12.88	9.04
2 onen	NEGATIVE WIND LOAD	222.59	136.44	91.38	65.16	48.68	37.69	30.01
2-span	LIVE LOAD/DEFLECTION	143.95	107.96	79.83	56.57	42.08	32.49	25.82
3-span	NEGATIVE WIND LOAD	258.47	162.17	110.20	79.32	59.63	46.36	37.03
3-spail	LIVE LOAD/DEFLECTION	163.58	122.69	97.08	64.84	40.83	27.35	19.21
4	NEGATIVE WIND LOAD	247.30	153.99	104.13	74.72	56.05	43.52	34.72
4-span	LIVE LOAD/DEFLECTION	157.45	118.09	91.48	65.14	44.07	29.52	20.74

24 Gauge (0	0.0223"), Fy = 50 ksi, Fu = 60 ksi								
SPAN	LOAD TYPE		SPAN IN FEET						
TYPE	LOAD TIFE	3.0	4.0	5.0	6.0	7.0	8.0	9.0	
1-span	NEGATIVE WIND LOAD	251.48	141.46	90.53	62.87	46.19	35.36	27.94	
1-Spail	LIVE LOAD/DEFLECTION	202.14	135.78	69.52	40.23	25.33	16.97	11.92	
2-span	NEGATIVE WIND LOAD	253.79	147.73	96.14	67.39	49.79	38.27	30.31	
2-Span	LIVE LOAD/DEFLECTION	156.28	117.21	88.20	61.73	45.57	35.00	27.71	
3-span	NEGATIVE WIND LOAD	307.17	181.07	118.61	83.46	61.81	47.58	37.73	
3-Spail	LIVE LOAD/DEFLECTION	177.59	133.19	106.55	76.57	53.77	36.02	25.30	
4-span	NEGATIVE WIND LOAD	289.91	170.16	111.21	78.15	57.83	44.49	35.27	
4-span	LIVE LOAD/DEFLECTION	170.93	128.19	102.17	71.66	52.97	38.84	27.28	

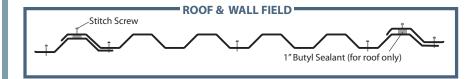
22 Gauge (0.0286"), Fy = 50 ksi, Fu = 60 ksi								
SPAN	LOAD TYPE				SPAN IN FEET	Γ		
TYPE	LOAD TIPE	3.0	4.0	5.0	6.0	7.0	8.0	9.0
1-span	NEGATIVE WIND LOAD	346.31	194.80	124.67	86.58	63.61	48.70	38.48
1-spail	LIVE LOAD/DEFLECTION	322.96	181.52	92.94	53.78	33.87	22.69	15.94
2-span	NEGATIVE WIND LOAD	357.18	205.97	133.40	93.26	68.79	52.81	41.80
2-Span	LIVE LOAD/DEFLECTION	199.38	149.54	119.63	85.47	63.01	48.35	38.26
3-span	NEGATIVE WIND LOAD	435.96	253.83	165.20	115.80	85.57	65.76	52.09
3-span	LIVE LOAD/DEFLECTION	226.57	169.93	135.94	106.25	71.31	47.77	33.55
4	NEGATIVE WIND LOAD	410.29	238.09	154.70	108.33	80.00	61.46	48.67
4-span	LIVE LOAD/DEFLECTION	218.07	163.56	130.84	99.36	73.31	51.25	35.99

gth Calculations based on the 2012 AlSI Standard "North American Specification for the Design of Cold-formed Steel Structural

ommended that the design professional have a copy of the most current version of the North American Spesign of Cold-Formed Steel Structural Members published by the American for and Steel Institute to facilitatic inclination contains the design criteria for cold formed steel components. Along with the Specification, the design criteria for cold formed steel components along with the Specification, the design criteria for cold formed steel components. Along with the Specification, the design criteria for cold formed steel components.

Screw Patterns:





Available Gauges: 22, 24 & 26

Weight: 5.00lbs/LnFt (22), 4.00lbs/LnFt (24),

3.00lbs/LnFt (26)

Substrate: AZ-50, Grade D, 50,000ksi Available Materials: Painted, Galvalume, Bonderized®, Core Ten™, Cold Roll, 16 & 20 oz

Copper

Paint Systems: Kynar500[®]/Hynar5000[®]

Valspar™

Warranties: Durapon70[™] PVDF – 35 year

ULTRA-CLAD™ - 35 year Zincalume® AZ50 – 20 year Valspar™ PVDF - 35 year

Minimum Slope: 1:12

1" Butyl Sealant and stitch screws required

Testing:

- UL 580 Wind Uplift (Class 90)
- UL 2218 Class 4 Hail Impact
- UL 790 Class A Fire Rating



- ASTM 1680
- ASTM 1646
- ASTM E283
- ASTM E331
- ASTM E330 / E330M
- ASTM 1592

APPLICATION DETAILS

Fastener Guide:

#10 Woodfast screws are designed for use with dimensional lumber

#14 Wafer screws are designed for use with plywood sheeting, OSB, and wafer wood (7/16" minimum thickness)

#12 Tek Screws are designed to be used with structural steel up to 3/16" in thickness

Fastener Application:

Screws are to be applied in the middle of every other trough and then on both sides of the rib at each overlap of the panels, installed not more than 5'0" up the panel. At eaves and panel end laps, use a double screw pattern, and fasten into the middle of every trough. On all roofing applications, 1" Butyl Sealant must be applied between every panel at the side lap with Stitch Screws installed every 1'0" up the panel.

Please Note: It is the responsibility of the builder to ensure that purlins are adequately spaced to meet specific engineering requirements.

Flatiron Steel is neither partially or soley responsible for improper installation or defects as a result of installation

7.2 ULTRA BOX RIB

TRIM PROFILES

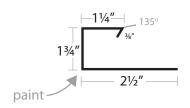
7.2 Ultra Box Inside Corner

Item #	Girth	Length	Weight
FS226	17"	10'0"	14.11 lbs.



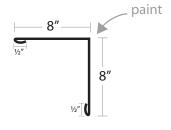
7.2 Ultra Box Jamb Trim

Item #	Girth	Length	Weight
FS230	47/8"	10′0″	4.98 lbs.



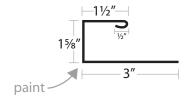
7.2 Ultra Box Outside Corner

ltem #	Girth	Length	Weight
FS225	17"	10'0"	14.11 lbs.



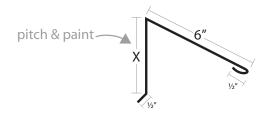
7.2 Ultra Box J-Metal

ltem #	Girth	Length	Weight
FS229	65/8′	10′0″	5.50 lbs.



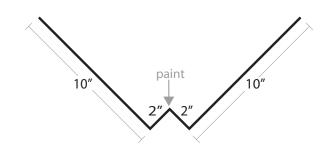
7.2 Ultra Box Front Cap

Item #	X	Girth	Length	Weight
FS224A	5" (2x4)	12"	10'0"	9.96 lbs.
FS224B	7" (2x6)	14"	10'0"	11.62 lbs.
FS224C	9" (2x8)	16"	10'0"	13.28 lbs.



7.2 Ultra Box W-Valley

Item #		Girth	Le	ngth		Weight
FS237	in	24"	1	10'0"	1	19.92 lbs.

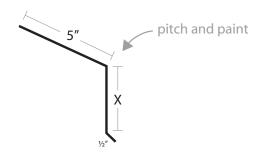


FLATIRON STEEL 7.2 ULTRA BOX RIB

TRIM PROFILES

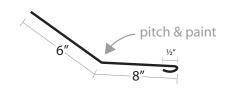
7.2 Ultra Box Eave

ltem#	Χ	Girth	Length	Weight
FS223A	3½" (2x4)	9″	10′0″	7.47 lbs.
FS223B	5½" (2x6)	11"	10'0"	9.13 lbs.
FS223C	7½" (2x8)	13"	10'0"	10.4 lbs.



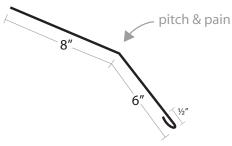
Lower Transition

ltem #	Girth	Length	Weight
FS109A	141/2"	10′0″	10.38 lbs.



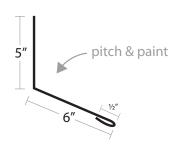
Upper Transition

ltem #	Girth	Length	
FS108A / FS108B	141/2"	10'2" / 12'	6.25 / 7.50 lbs.



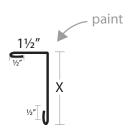
7.2 Ultra Box Endwall

Item #	Girth	Length	Weight
FS222	111/2"	10'0"	9.55 lbs.



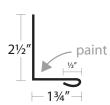
Door Post Trim

ltem #	Х	Girth	Length	Weight
FS110A	3½" (2x4)	6"	10'0"	4.9 lbs.
FS110C	5½" (2x6)	8"	10'0"	6.7 lbs.
FS110E	7½" (2x8)	10"	10'0"	8.3 lbs.



7.2 Ultra Box Base Trim

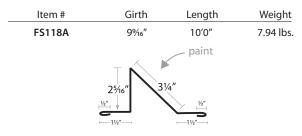
ltem #	Girth	Length	Weight
FS235	4¾"	10'0"	3.94 lbs.



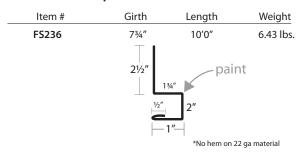
7.2 ULTRA BOX RIB

TRIM PROFILES

Snow Stop

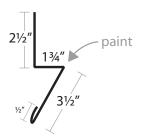


7.2 Ultra Box Square Base



7.2 Ultra Box Z-Base

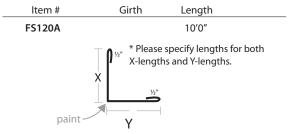
Item #	Girth	Length	Weight
FS234	81⁄4″	10'0"	6.85 lbs.



7.2 Ultra Box Z-Flashing

Item #	Girth	Length	Weight
FS233	65/8"	10′0″	5.50 lbs.
	21/2"	paint	

L-Angle (Channel)

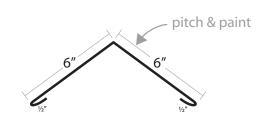


7.2 Ultra Box Window Drip Cap

Item #	Girth	Length	
FS232	47/8"	10′0″	
	2"	paint -15/8" 3/4"	

Hip / Ridge

Item #	Girth	Length	Weight	
FS115A	13"	13′0″	12.45 lbs.	



7.2 Ultra Box Prow Gable

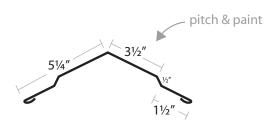
Item #	Χ	Girth	
FS238A	51/4" (2x4)	21½"	
FS238B	71/4" (2x6)	231/2"	
FS238C	91/4" (2x8)	251/2"	
paint X	13/4"	12"	

FLATIRON STEEL 7.2 ULTRA BOX RIB

TRIM PROFILES

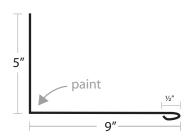
7.2 Ultra Box Ridge Cap

ltem #	Girth	Length	Weight
FS136	12"	10′0″	10.2 lbs.



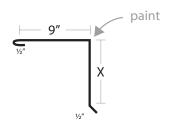
7.2 Ultra Box Sidewall

Item #	Girth	Length	Weight
FS219	141/2"	10′0″	12.04 lbs.



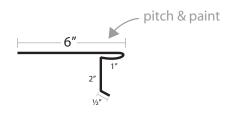
7.2 Ultra Box Gable / Rake

Item #	Χ	Girth	Length	Weight
FS220A	5" (2x4)	15"	10'0"	12.45 lbs.
FS220B	7" (2x6)	17"	10'0"	14.11 lbs.
FS220C	9" (2x8)	19"	10'0"	15.77 lbs.



7.2 Ultra Box Style D Eave

Item #	Girth	Length	Weight
FS228	9½"	10'0"	7.89 lbs.

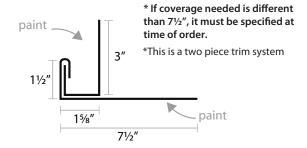


7.2 Ultra Box Gutter

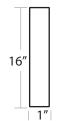
Item #	Girth	Length	
FS231	22¾"	10'0"	
5"	pito	th "open 1" 4" paint	

Overhead Door Trim

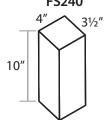
Item #	Girth	Length	Weight
FS242	13"	10'0"	6.50 / 7.75 lbs.



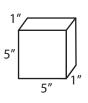
Gutter Strap FS239



Down Spout FS240

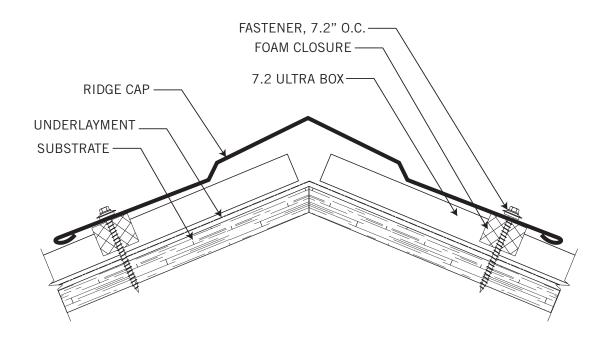


Gutter End Cap FS241

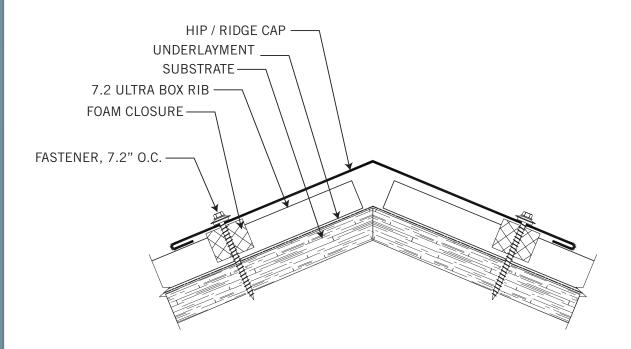


7.2 ULTRA BOX RIB

7.2 ULTRA BOX RIB



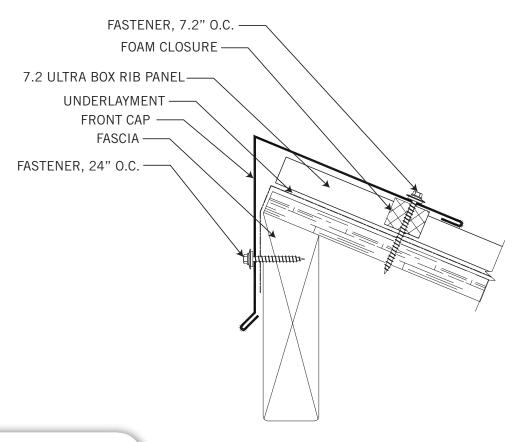
HIP / RIDGE



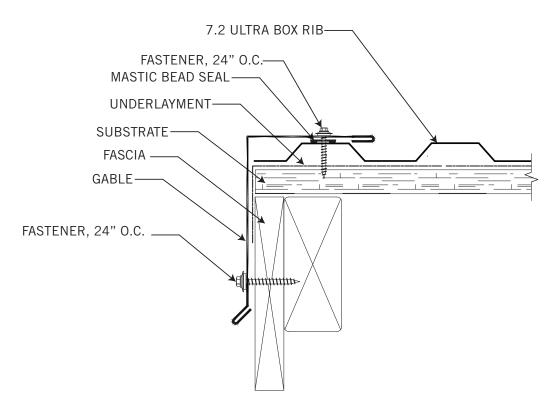


7.2 ULTRA BOX RIB

FRONT CAP



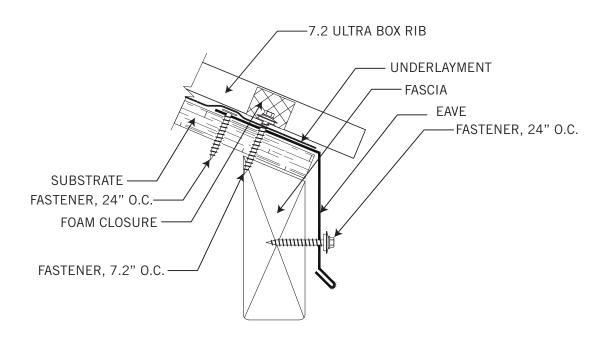
GABLE



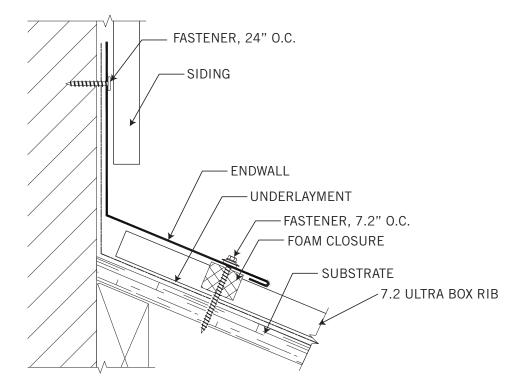


7.2 ULTRA BOX RIB

EAVE



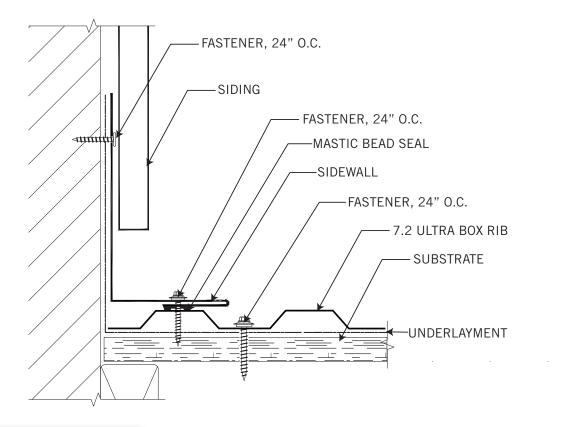
ENDWALL



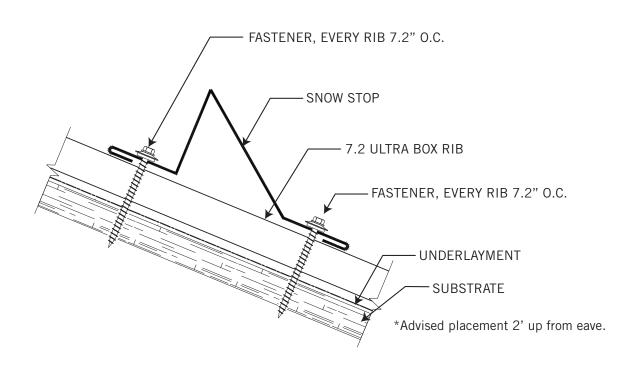


7.2 ULTRA BOX RIB

SIDEWALL



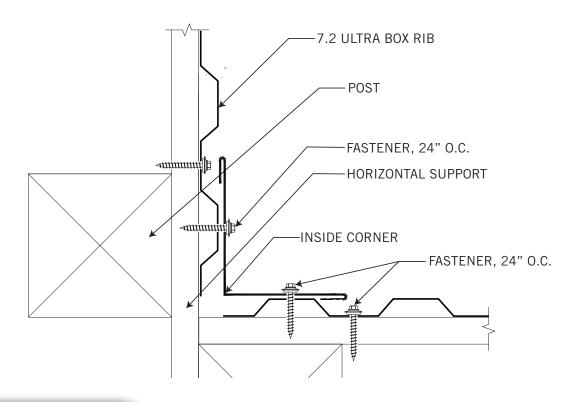
SNOW STOP



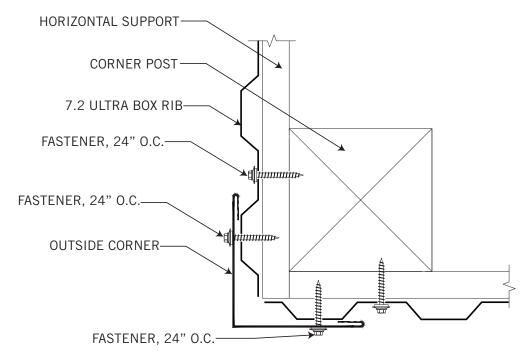


7.2 ULTRA BOX RIB

INSIDE CORNER



OUTSIDE CORNER

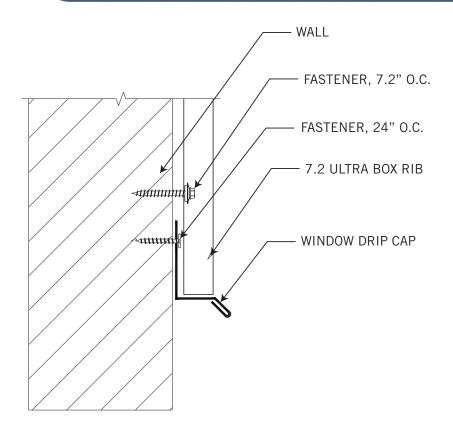


*Details are subject to change without notice.

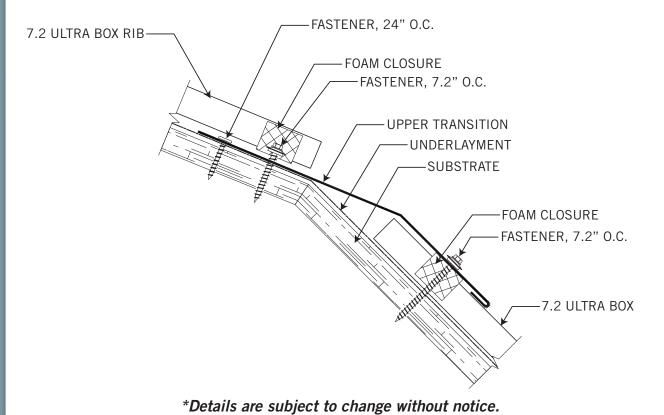


7.2 ULTRA BOX RIB

WINDOW DRIP CAP



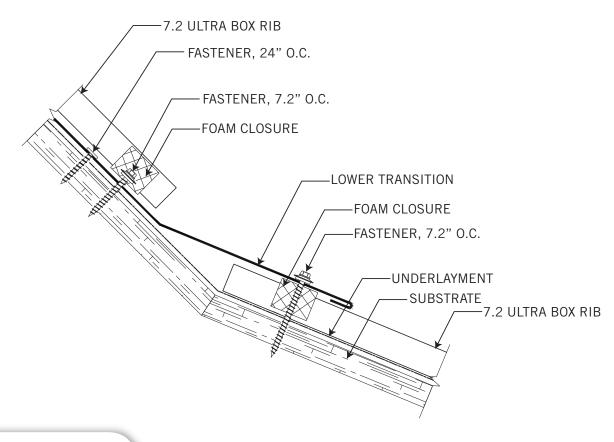
UPPER TRANSITION



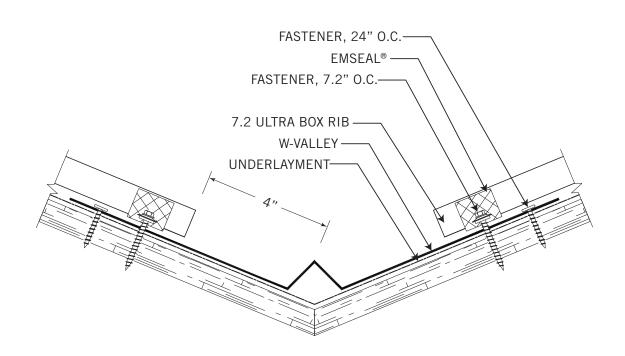


7.2 ULTRA BOX RIB

LOWER TRANSITION



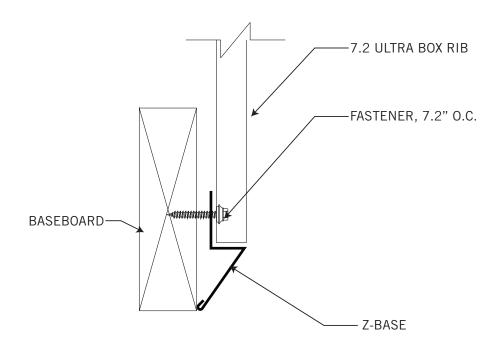
W- VALLEY



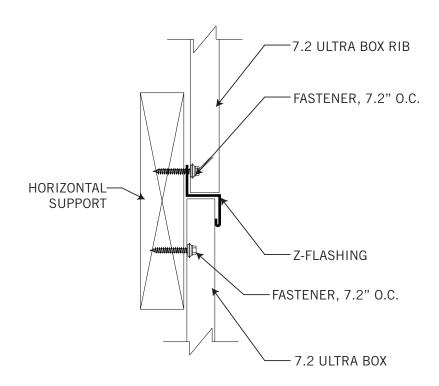


FLATIRON STEEL 7.2 ULTRA BOX RIB

Z-BASE



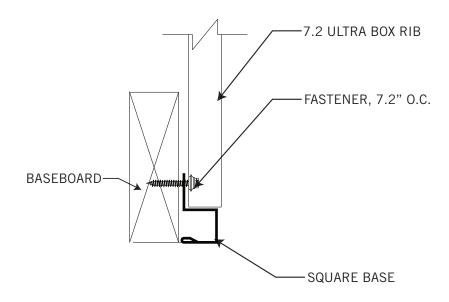
Z-FLASHING



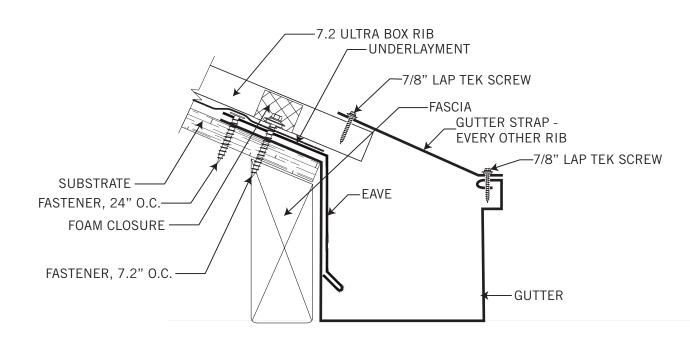


7.2 ULTRA BOX RIB

SQUARE BASE



7.2 ULTRA BOX GUTTER

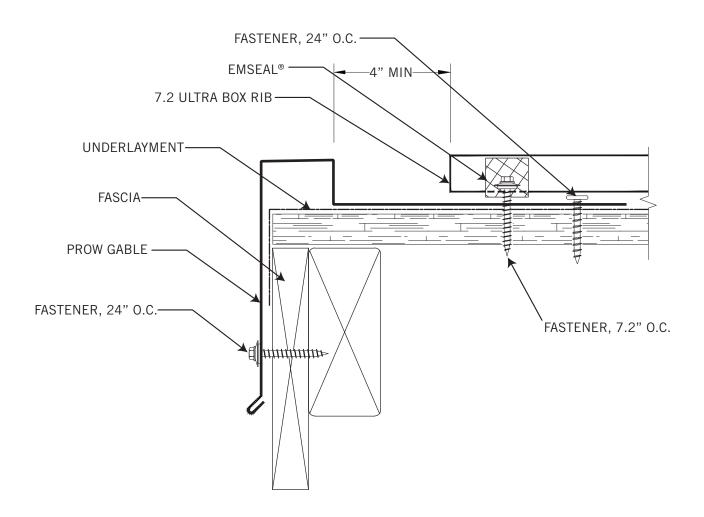


*Details are subject to change without notice.



7.2 ULTRA BOX RIB

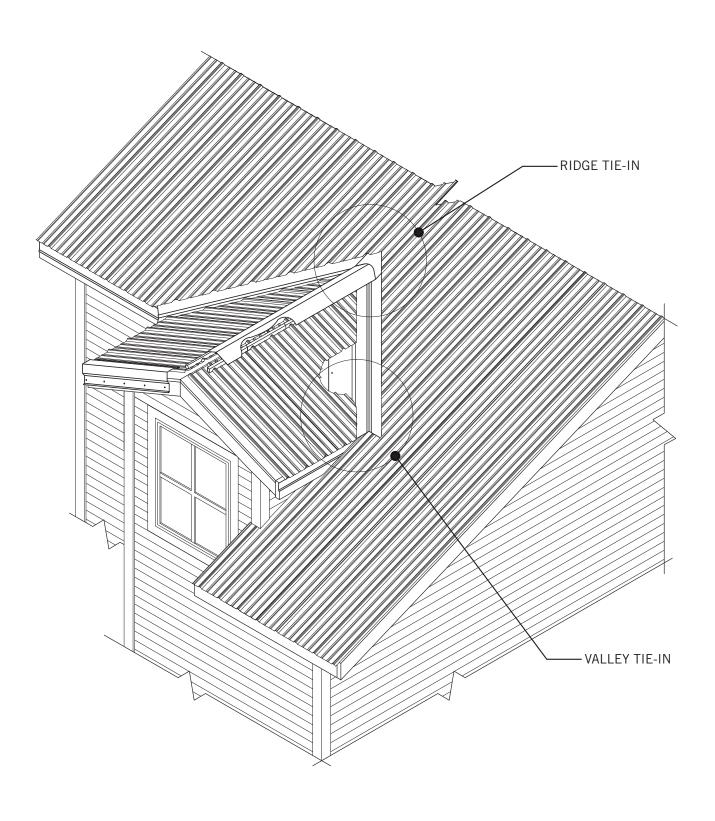
PROW GABLE





7.2 ULTRA BOX RIB

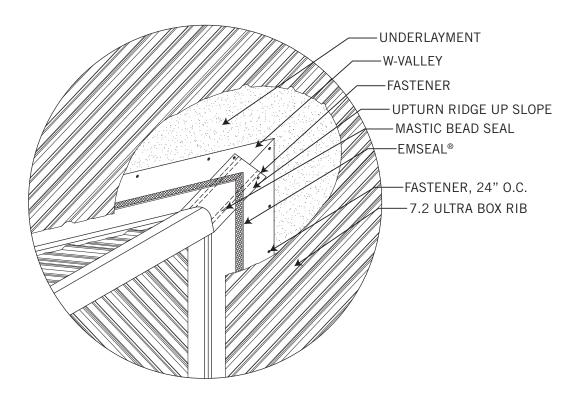
OVERALL DORMER





7.2 ULTRA BOX RIB

RIDGE TIE-IN



VALLEY TIE-IN

