



**Product** **MasterRib**



<b>FL No.</b>	<b>9555.3</b>
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<b>Material</b>	<b>Finish</b>
	Galvalume Painted

<b>Gauge (minimum)</b>	<b>29</b>
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<b>Support Description</b>	<b>Steel</b>
	<b>Gauge (minimum)</b> 18 Must be designed by others

<b>Roof Slope Ranges</b>	<b>Sealant</b>
	<b>Slope: 1/2 /12 to less than 3/12</b> Side Lap <b>Slope: 3/12 and greater</b> None

<b>Panel Fasteners</b>	<b>Spacing</b>
	<b>SDS Screws: #12-14 x 1" long</b> See Tables <b>Side Lap SDS Screws: 1/4 x 7/8" long</b> 24" o.c.

**Support Spacing (in) (Min 3 spans)**

Wind Z Speed mph	one No. Roof Hip Location	Roof Slope			
		Gable Roof			Roof
		.5 to <1.5/12	1.5 to <6/12	6 to 12/12	1.5 to 5.5/12
100	1 Field	48	48	48	48
	2 Edge	36	42	42	42
	3 Corner	24	30	42	42
110	1 Field	42	42	42	42
	2 Edge	36	36	36	42
	3 Corner	24	24	36	42
120	1 Field	42	42	42	42
	2 Edge	30	30	30	36
	3 Corner	18	18	30	36
130	1 Field	36	42	42	36
	2 Edge	24	24	24	36
	3 Corner	N/A	18	24	36
140	1 Field	36	36	36	36
	2 Edge	18	18	18	30
	3 Corner	N/A	N/A	18	30

**Fastener Spacing\* (across panel width)**

<b>Panel Ends (eave, valley, hip and ridge):</b>	<b>Location</b> Ribs and Flat
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<b>Between Panel Ends (Intermediates):</b>	<b>Location</b> Ribs and Flat
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\*Fastener spacing based on testing and rational analysis

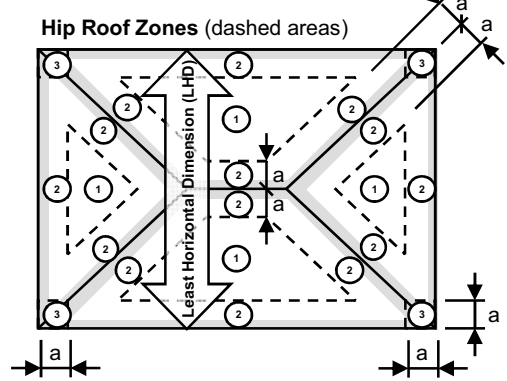
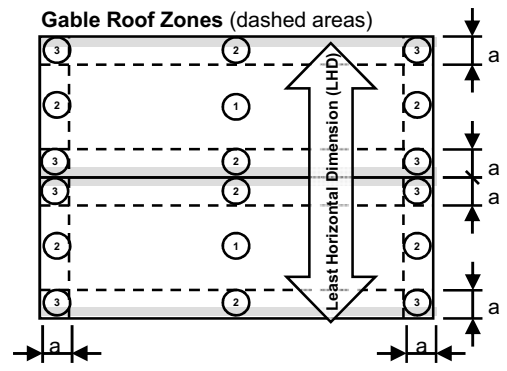
**Notes:**

1. Read all Notes before purchasing material and check compliance of the product with local building code requirements.
2. The Support Spacing Table below is based on a mean roof height of up to 25' for Exposure C. For roof eave heights over 25' and other exposures contact Union Corrugating Company.
3. Installation must be in complete compliance with the materials and related specifications listed on this page, MasterRib Installation drawings, and the Florida Building Code RAS No. 133.
4. See MasterRib installation drawings for additional approved trim details and applications.
5. Refer to Florida Building Code RAS No. 133 "Standard Procedures for Installation of Metal Roof Systems".
6. For applications not in compliance with this product approval as listed contact Union Corrugating Company for other options.
7. This application and installation method is not for use in HVHZ areas governed by Miami Dade Product Approval. See the Union Corrugating Miami Dade Approved Product use guide for these areas.
8. If the roof has both Gables and Hips use the Gable Roof Fastener Spacing Table.
9. For Hip Roof slopes greater than 5.5/12 use Gable Roof Table, 6 to 12/12 column.
10. Guide is subject to change without notice.

**Calculate Zone width (dimension "a"):**

$a = LHD \times 10\%$

Note: "a" must be a minimum of 3'.



Gray highlighted lines indicate the location of panel end fastening at the eave, hip, valley (not shown), and ridge.

**EVALUATION REPORT OF  
UNION CORRUGATING COMPANY  
'29 GA. MASTERRIB ROOF PANEL'  
OVER STEEL SUPPORTS**

**FLORIDA PRODUCT APPROVAL  
FL 9555.3-R1  
STRUCTURAL COMPONENTS  
ROOF DECK**

**Prepared For:  
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**This report consists of  
Evaluation Report (2 Pages including cover)  
Installation Details (1 Page)  
Load Span Table (1 Page)  
Sample Calculation (2 Pages)**

**Report No. C1605-5  
Date: 8.17.08**



Manufacturer: Union Corrugating Company

Product Name: MasterRib Panel

Panel Description: 36" wide coverage with 3/4" high ribs at 9" o.c.

Materials: Min 29 ga. with galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755) in Grade E ( $F_y = 80$  ksi).

Support Description: Min 18 ga., min 50 ksi steel supports (Must be designed by others)

Slope: 1/2:12 or greater in accordance with FBC 2007 Section 1507.4.2

Design Pressure:  
(Based on testing) +45.35 and -37.7 psf @ support spacing of 48" o.c.  
(@ 3 span condition with FS = 2.0)

Panel Attachment:  
At panel ends #12-14 x 1" long self drilling screws with washers @ 3"-6"-3" o.c. across panel width  
At intermediate #12-14 x 1" long self drilling screws with washers @ 9" o.c. across panel width

Sidelap Attachment: 1/4"-14 x 7/8" long SDS @ 24" o.c.

Test Standards: Panel assembly tested in accordance with ASTM E1592-01 'Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference' and FM 4470 Section 5.5 'Resistance to Foot Traffic'.

Code Compliance: The product described herein has demonstrated compliance with FBC 2007 Section 1507.4.

Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2007 Section 1609. The maximum support spacing listed herein shall not be exceeded. The design pressure for reduced support spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Union Corrugating load span table. This product is not approved for use in the High Velocity Hurricane Zone.

Supporting Documents: ASTM E1592 Test Report  
ENCON Technology Inc.  
C1514-1 (Test #1 & 3), Reporting Date 9/8/07

FM 4470 Test Report  
ENCON Technology Inc  
C1583-2, Reporting Date 7/24/08

**UNION CORRUGATING COMPANY**

**MasterRib Roof Panel**

36" wide, 29 ga. (min) Steel Panel over Steel Supports

Span Condition	Loading Type	Allowable Load (psf)								
		Support Spacing (ft)								
		1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.50	4.00
Two Span	Positive	106.4	91.2	79.8	70.9	63.9	58.0	53.2	45.6	34.7
	Negative	88.5	75.8	66.4	59.0	53.1	48.3	44.2	37.9	30.2
Three Span	Positive	120.9	103.7	90.7	80.6	72.6	66.0	60.5	40.5	27.1
	Negative	100.5	86.2	75.4	67.0	60.3	54.8	50.3	40.1	26.8
Four or More Spans	Positive	116.4	99.8	87.3	77.6	69.8	63.5	58.2	43.0	28.8
	Negative	96.8	82.9	72.6	64.5	58.1	52.8	48.4	41.5	28.5

**Notes:**

1. Allowable load for each condition is the smallest load calculated based on fastener capacity, panel strength and deflection limit of L/180. Allowable loads are calculated for minimum 29 ga. panel.
2. The panel allowable properties are determined from full scale ASTM E1592-01 test at 4' 0" span
3. The panel fasteners are #12-14 x 1" long self drilling screws with washers. Fastener spacing across panel width is 9.0" O.C. in the interior supports and 3"-6"-3" O.C. at panel ends.
4. Sidelap fasteners are #1/4-14 x 7/8" long self drilling screws at 24" O.C.
5. Steel supports are minimum 18 ga. All supports must be designed to resist all loads imposed on the panel.
6. Minimum bearing width of support is 1.5".
7. The panels may span from eave to ridge or rake to rake.

  
8.17.08

CHECKED BY:	
B.S.:	
DATE:	8/19/08
PLT:	
DATE:	
BY:	
REVISION DESCRIPTION:	
NO.:	

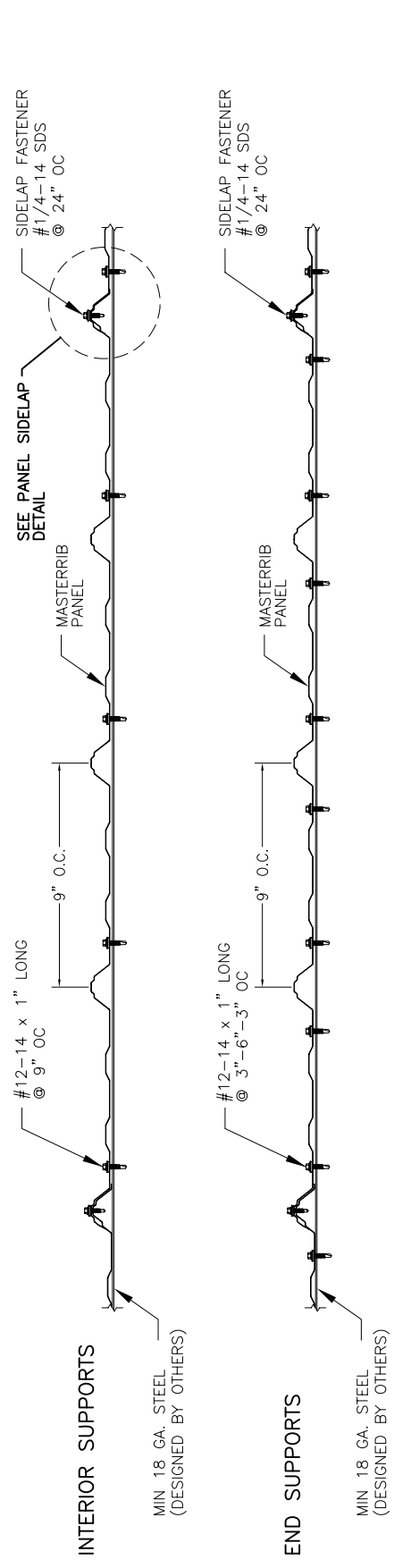
NO.	REVISION DESCRIPTION	BY	DATE

UNION CORRUGATING CO.  
 MANUFACTURER  
 701 S. KING STREET  
 FAYETTEVILLE, NC 28301  
 910-483-2195

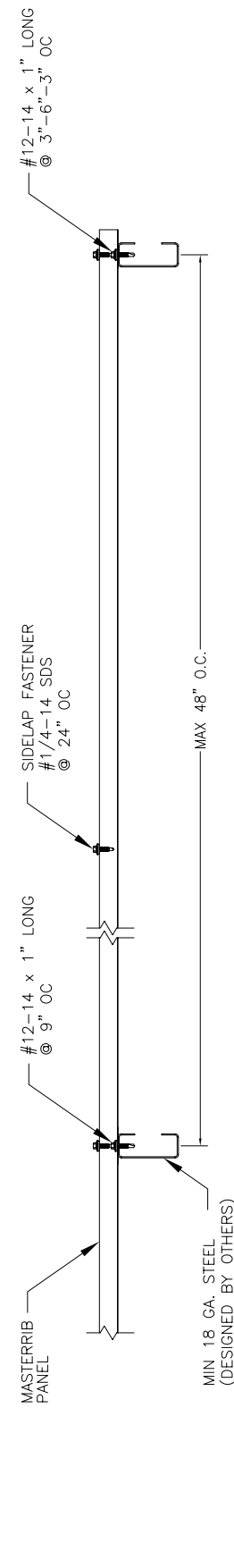
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CERTIFICATION  
 BALA SOCCALINGAM, P.E.  
 P.E. NO. 62240

DRAWING NO.  
 1605-5  
 SHEET NO.  
 1 OF 1



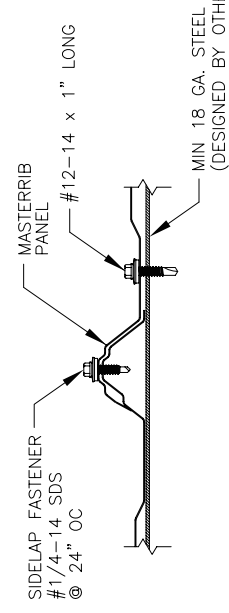
TYPICAL PANEL INSTALLATION X-SECTION



SECTION VIEW

GENERAL NOTES:

1. ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE 29 GA. (t = 0.013"). EFFECTIVE COVERING WIDTH OF PANEL = 36".
3. ROOF PANELS SHALL BE INSTALLED OVER STRUCTURE AS SPECIFIED ON THIS DRAWING.
4. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS PANEL SYSTEM MAY NOT BE INSTALLED WHEN THE REQUIRED DESIGN WIND LOADS ARE GREATER THAN THE ALLOWABLE DESIGN LOADS.
5. ALL FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & THE FLORIDA BUILDING CODE. IF A DIFFERENCE OCCURS BETWEEN THE MINIMUM REQUIREMENTS OF THIS DRAWING & THE CODE, THE CODE SHALL CONTROL.
6. SUPPORTS MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.
7. PANELS MAY SPAN BETWEEN EAVE TO RIDGE SUPPORTS OR RAKE TO RAKE SUPPORTS.



PANEL SIDELAP