Builder/Contractor Responsibilities

Drawing Validity – These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings – Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (AISC code of standard practice Sept 86 Section 4.2.1)(Mar 05 Section 4.4.1)

Code Official Approval – It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Building Erection – The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector (AISC Code of Standard Practice Sept 86 Section 7.9.1) (Mar 05 Section 7.10.3) (CSA/S16-09 Section 29).

Discrepancies – Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (AISC Code of Standard Practice Sept 86 Section 3.3) (Mar 05 Section 3.3)

Materials by Others – All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans – The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design
The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

Mesco Building Solutions

5244 Bear Creek Court, Irving, Texas 75061

Voice 214-687-9999 Fax 214-687-9737

ENGINEERING DESIGN CRITERIA

Building Code	2012 IBC
Building Risk Category	Normal (Risk Category II)
Roof Dead Load	
Superimposed	2.32 psf
Collateral	0.50 psf
(0.00 psf Ceiling 0.50 psf Other)	
Roof Live Load	20.00 psf reduction allowed
Snow	
Ground Snow Load (Pg)	5.00 psf
Snow Load Importance Factor (I)	1.00
Flat Roof Snow Load (Pf)	5.04 psf
Snow Exposure Factor (Ce)	1.20 (Sheltered)
Thermal Factor (Ct)	1.20 (Unheated)
Wind	
Ultimate Wind Speed (Vult)	154.00 mph
Nominal Wind Speed (Vasd)	119 mph (ASCE7-10 section 1609.3.1)
Wind Exposure Category	B
Internal Pressure Coef (GCpi)	0.18/-0.18 (Enclosed)
Loads for components not provided by building manufacturer	
Corner Areas (within 10.00' of corner)	39.04 psf pressure -52.06 psf suction
Other Areas	39.04 psf pressure -42.30 psf suction
These values are the maximum values required based on a 10 sq ft area.	
Components with larger areas may have lower wind loads.	
Seismic	
Seismic Importance Factor (Ie)	1.00
Seismic Design Category	B
Soil Site Class	D Stiff Soil
Ss	0.102 g Sds 0.109 g
S1	0.056 g Sd1 0.090 g
Analysis Procedure	Equivalent Lateral Force
Column Line	All
Basic Force Resisting System	H
Response Modification Coefficient (R)	3.00
Seismic Response Coefficient (Cs)	0.04
Design Base Shear in kips (V)	3.05
Basic Structural System (from ASCE 7-10 Table 12.2-1)	
H - Steel System not Specifically Detailed for Seismic Resistance	

DEFLECTION CRITERIA

The material supplied by the manufacturer has been designed with the following minimum deflection criteria. The actual deflection may be less depending on actual load and actual member length. The frame sidesway for wind loading is based on ASCE 7 commentary equation CC-3 of 0.7W. The limits shown are at service loads unless indicated otherwise.

BUILDING DEFLECTION LIMITS...: BLDG-A

Roof Limits	Rafters	Purlins	Panels
Live L/	180	150	60
Snow L/	180	180	60
Wind L/	180	180	60
Total Gravity L/	120	120	60
Total Uplift L/	N/A	N/A	60

Frame Limits	Sidesway	Portal Frame Sidesway
Live H/	60	
Snow H/	60	
Wind H/	60	
Seismic Drift H/	40	40
Crane H/	100	
Total Gravity H/	60	
Total Wind H/	60	60
Service Seismic H/	120	120

Wall Limits	Limit
Total Wind Panels L/	60
Total Wind Girts L/	90
Total Wind EW Columns L/	120

The Service Seismic limit as shown here is at service level loads.

PROJECT NOTES

BOLT TIGHTENING - All bolted joints with A325 Type 1 bolts are specified as snug-tightened joints in accordance with the Specification for Structural Joints Using ASTM A325 or A490 Bolts, December 31, 2009. Pretensioning methods, including turn-of-nut, calibrated wrench, twist off type tension control bolts or direct tension indicator are NOT required. Installation Inspection requirements for Snug Tight Bolts (Specification for Structural Joints Section 9.1) is suggested.

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimum yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimum specified yield point of 50 ksi. Hot rolled angles, other than flange braces, conform to ASTM 36 minimum. Hollow structural shapes conform to ASTM A500 grade B, minimum yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold-formed light gage steel members conform to the requirements of ASTM A1011 SS Grade 55, ASTM A1011 HSLAS Grade 55 Class 1, ASTM A653 SS Grade 55, or ASTM A653 HSLAS Grade 55 Class 1 with a minimum yield point of 55 ksi. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

Design criteria as noted is as given within order documents and is applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the manufacturer nor the certifying engineer declares or attests that the loads as designated are proper for local provisions that may apply or for site specific parameters. The design criteria is supplied by the builder, project owner, or an Architect and/or Engineer of Record for the overall construction project.

Using Large eave gutter with 4 x 5 downspouts, the roof drainage system has been designed using the method outlined in the MBMA Metal Building Systems Manual. Downspout locations have not been located on these drawings. The downspouts are to be placed on the building sidewalls at a spacing not to exceed 30 feet with the first downspout from both ends of the gutter run within 1 feet of the end. Downspout spacing that does not exceed the maximum spacing will be in compliance with the building code. The gutter and downspout system as provided by the manufacturer is designed to accommodate 10.00 in/hr rainfall intensity.

X-Bracing is to be installed to a taut condition with all slack removed. Do not tighten beyond this state.

This metal building system is designed as enclosed. All exterior components (i.e. doors, windows, vents, etc.) must be designed to withstand the specified wind loading for the design of components and cladding in accordance with the specified building code.

The materials by the manufacturer will be fabricated in a facility that has received Certification of Accreditation for the Manufacture of Metal Building Systems (AC472) from International Accreditation Service (IAS). This certification is recognized under Section 1704 of the IBC for approved fabricator.

Drawing Index

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX 77032
(346) 400-7004

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E1 of 11

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Mississippi P.E. 13872

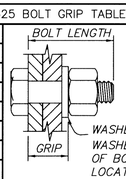
DRME1A ENME1A

Jul 28, 2014

S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

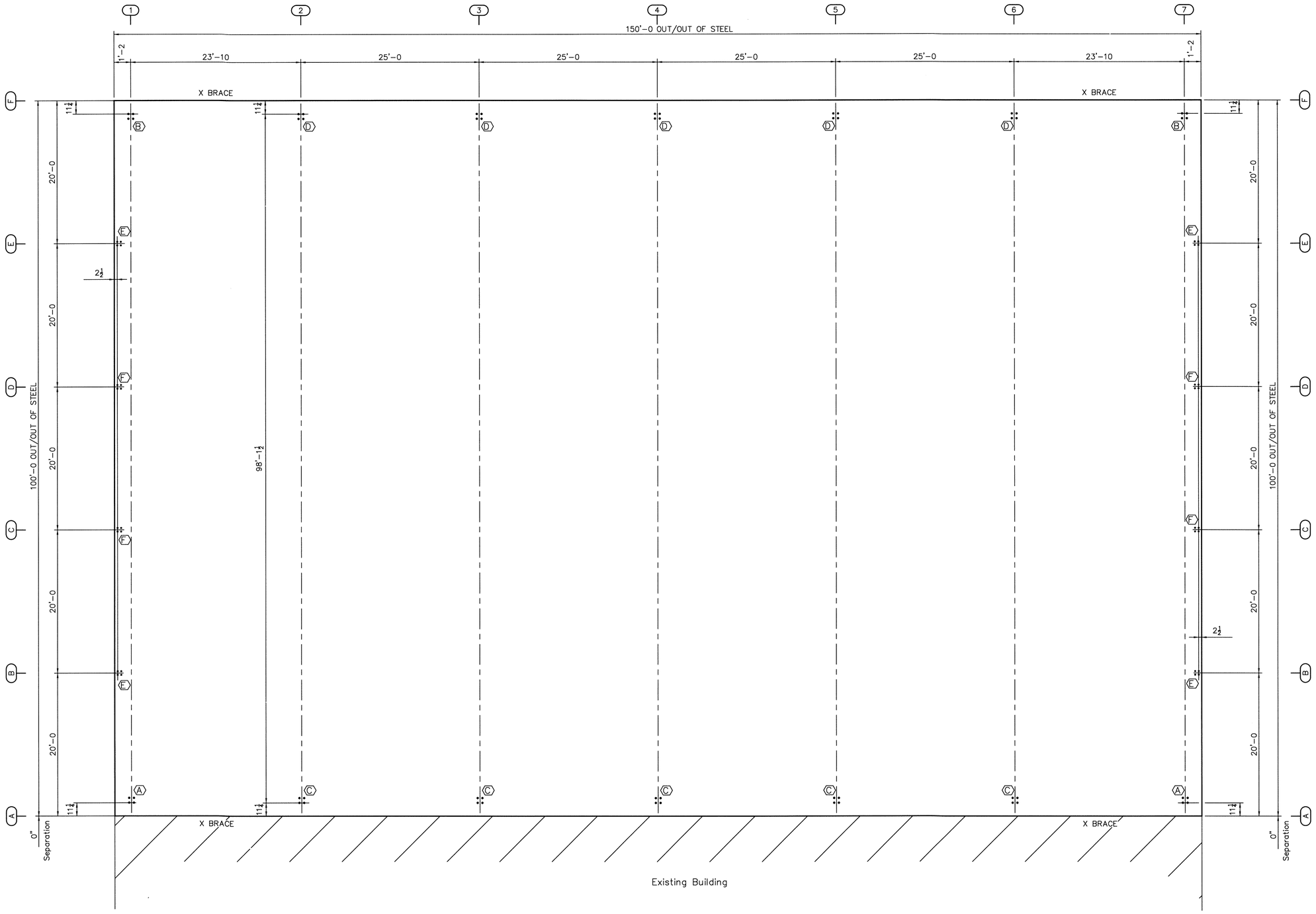
BUILDING DESCRIPTIONS				
Building ID	Width	Length	Height	Slope
Building A	100'-0	150'-0	27'-0	1:12

½"ø A325 BOLT GRIP TABLE	
GRIP	LENGTH
0 TO 9/16"	1 1/4" F.T.
Over 9/16" TO 1 1/16"	1 3/4" F.T.
Over 1 1/16" TO 1 5/16"	2"
Over 1 5/16" TO 1 9/16"	2 1/4"
Over 1 9/16" TO 1 13/16"	2 1/2"
Over 1 13/16" TO 2 1/16"	2 3/4"
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS	
F.T. DENOTES FULLY THREADED	



NOTE:
FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.

WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.



SWC

EWB KEY PLAN EWD

SWA

Anchor Rod Drawings

1) This drawing is for anchor rod placement only and is not foundation design.
2) Foundation must be square and level with all anchor rods true in size, location, and projection.
3) Projection shown must be held to keep threads clear of finished concrete.
4) This structural design data includes magnitude and location of design loads and suppose conditions, material properties, and type and size of major structural members necessary to show compliance with the Order Documents at the time of this issue. Any change to building loads or dimensions may change structural member sizes and locations shown. This structural design data will be superseded and voided by any future mailing.
5) Anchor rod size is determined by shear and tension at the bottom of the base plate. The length of the anchor rod and method of load transfer to the foundation are to be determined by the foundation engineer, and are not provided by the manufacturer.
6) Anchor rods are ASTM F1554 Gr. 36 material unless noted otherwise.

ANCHOR ROD SETTING PLAN

FINISH FLOOR AT ELEVATION 100'-0

ANCHOR BOLTS TO BE DESIGNED BY FOUNDATION ENGINEER USING DIAMETERS SHOWN IN THIS TABLE.

ANCHOR ROD DESCRIPTION	QUANTITY
⅝"ø DIAMETER X	32
¾"ø DIAMETER X	56

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer: AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX. 77032-4090

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS, MS. 39520-0

Drawing Status:
☐ Preliminary Not For Construction
☐ For Approval Not For Construction
☐ For Construction Permit
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: srs 7/23/14
Checked by: SAP 7/23/14
Project Engineer: JS
Job Number: 14-B-54756-1
Sheet Number: F1 of 3

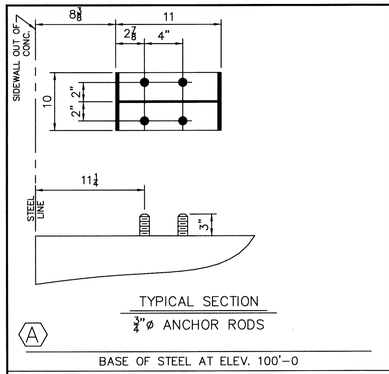
The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

S. HARLEY DAVIDSON REGISTERED PROFESSIONAL ENGINEER 13872 STATE OF MISSISSIPPI

Jul 28, 2014

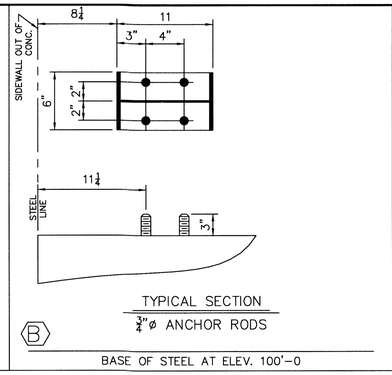


TYPICAL SECTION

3/4"ø ANCHOR RODS

(A)

BASE OF STEEL AT ELEV. 100'-0

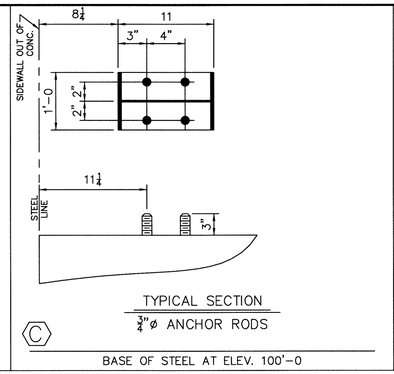


TYPICAL SECTION

3/4"ø ANCHOR RODS

(B)

BASE OF STEEL AT ELEV. 100'-0

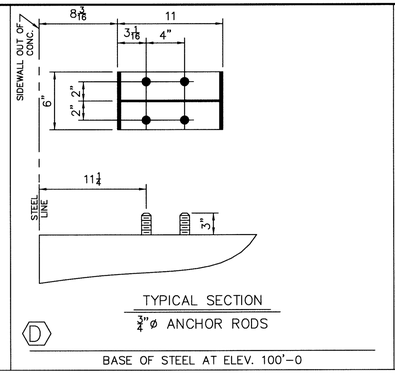


TYPICAL SECTION

3/4"ø ANCHOR RODS

(C)

BASE OF STEEL AT ELEV. 100'-0

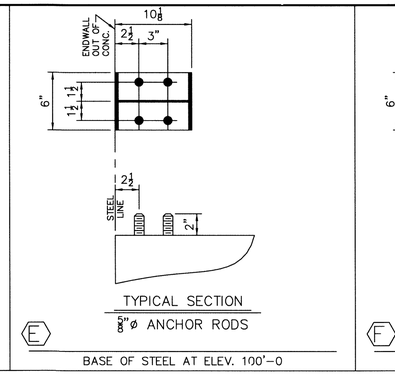


TYPICAL SECTION

3/4"ø ANCHOR RODS

(D)

BASE OF STEEL AT ELEV. 100'-0

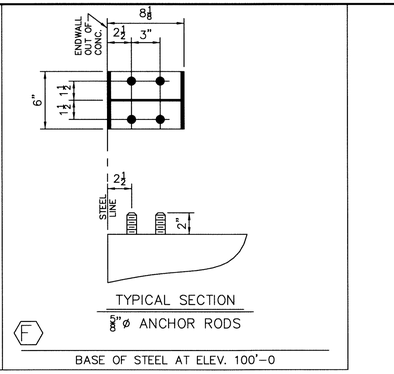


TYPICAL SECTION

5/8"ø ANCHOR RODS

(E)

BASE OF STEEL AT ELEV. 100'-0



TYPICAL SECTION

5/8"ø ANCHOR RODS

(F)

BASE OF STEEL AT ELEV. 100'-0

NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTED OTHERWISE).
   a) A REACTION TABLE IS PROVIDED WITH THE REACTIONS FOR EACH LOAD GROUP.
   b) RIGID FRAMES
      (1) GABLED BUILDINGS
         (a) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE LEFT SIDE OF THE BUILDING, AS SHOWN ON THE ANCHOR ROD DRAWING, FROM THE OUTSIDE OF THE BUILDING.
         (b) INTERIOR COLUMNS ARE SPACED FROM LEFT SIDE TO RIGHT SIDE.
      (2) SINGLE SLOPE BUILDINGS
         (a) LEFT COLUMN IS THE LOW SIDE COLUMN.
         (b) RIGHT COLUMN IS THE HIGH SIDE COLUMN.
         (c) INTERIOR COLUMNS ARE SPACED FROM LOW SIDE TO HIGH SIDE.
   c) ENDWALLS
      (1) LEFT AND RIGHT COLUMNS ARE DETERMINED AS IF VIEWING THE WALL FROM THE OUTSIDE.
      (2) INTERIOR COLUMNS ARE SPACED FROM LEFT TO RIGHT.
   d) ANCHOR ROD SIZE IS DETERMINED BY SHEAR AND TENSION AT THE BOTTOM OF THE BASE PLATE. THE LENGTH OF THE ANCHOR ROD AND METHOD OF LOAD TRANSFER TO THE FOUNDATION ARE TO BE DETERMINED BY THE FOUNDATION ENGINEER.
   e) ANCHOR RODS ARE ASTM F1554 Gr. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
   f) X-BRACING
      (1) ROD BRACING REACTIONS HAVE BEEN INCLUDED IN VALUES SHOWN IN THE REACTION TABLES.
      (2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ AND RBDWEQ) DO NOT INCLUDE THE AMPLIFICATION FACTOR, Ω_0.
      (3) FOR CANADA BUILDING CODE (NBC), WHEN X-BRACING IS PRESENT IN THE SIDEWALL OR ENDWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS (RBUPEQ & RBDWEQ) ARE MULTIPLIED BY FORCE REDUCTION FACTOR, Rd, WHEN SPECIFIED SHORT-PERIOD SPECTRAL ACCELERATION RATIO $I_E F_a S_a(0.2)$ IS GREATER THAN 0.45.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FOUNDATION ENGINEER WILL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS TO DETERMINE BEARING PRESSURES AND CONCRETE DESIGN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN.
   a) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC OR 2010 FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.

THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A,
BAY ST. LOUIS, MS. 39520-0

Customer:
AMERICAN WESTERN STEEL LLC
1250 N. WILSON CONSTRUCTION
DR. SUITE M
HOUSTON, TX. 77032-4090

Drawing Status:
☐ Preliminary
☐ For Approval
☐ (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	srs 7/23/14
Checked by:	SAP 7/23/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	F2 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

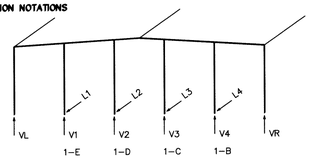
S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

Jul 28, 2014

FRAME DESCRIPTION: Endwall EWD
USER NAME: jspeegle JOB NAME: 54756A
DATE: 7/21/14 FILE: REW3BLDG1
PAGE: EW-1
PATH: R:\Jobs\Active\ENG\14-B-54756\ver01-jspeegle\Bldg-A\run01\

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.
TIME: 15:50:32

REACTION NOTATIONS



Left Endwall

LOAD GROUP REACTION TABLE

COLUMN	LEFT COLUMN			RIGHT COLUMN			1-E			1-D			1-C		
LOAD GROUP	HL	VL	LL	HR	VR	LR	H1	V1	L1	H2	V2	L2	H3	V3	L3
D	0.	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.5	0.	0.	0.5	0.
W+	0.	0.	0.	0.	0.	0.	0.	0.	8.1	0.	0.	8.4	0.	0.	8.4
W-	0.	0.	0.	0.	0.	0.	0.	0.	-9.0	0.	0.	-9.4	0.	0.	-9.4

LOAD GROUP DESCRIPTION

D : DEAD LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W- : WIND LOAD AS AN OUTWARD ACTING SUCTION

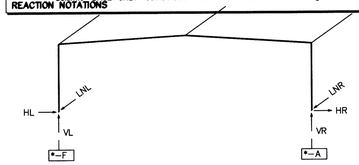
LOAD GROUP REACTION TABLE

COLUMN	1-B		
LOAD GROUP	H4	V4	L4
D	0.	0.5	0.
W+	0.	0.	8.1
W-	0.	0.	-9.0

FRAME ID #2
cs 100./27./13.083 20./154.
USER NAME: jspeegle JOB NAME: 54756A
DATE: 7/22/14 FILE: frames_1_7.fra
PAGE: 2-3

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 1 7
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.500
TIME: 08:26:36

REACTION NOTATIONS



Frame Line 1 & 7

LOAD GROUP REACTION TABLE * = 1 7

COLUMN	*-F			*-A		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR
DL	1.7	3.2	0.0	-1.7	3.6	0.0
LL	5.1	7.8	0.0	-5.1	7.9	0.0
COLL	0.2	0.3	0.0	-0.2	0.3	0.0
SNOW	2.2	3.3	0.0	-2.2	3.3	0.0
EQ	-0.2	-0.1	0.0	-0.2	0.1	0.0
RBUPEQ	0.0	-0.8	-0.7	-0.0	-0.8	-0.7
WL1	-20.8	-28.1	0.0	8.3	-18.3	0.0
WL2	-17.5	-19.6	0.0	5.0	-9.8	0.0
WL3	-8.4	-18.3	0.0	20.9	-28.1	0.0
WL4	-5.1	-9.8	0.0	17.6	-19.6	0.0
LWL1	-10.6	-26.2	0.0	11.4	-20.2	0.0
RBUPLW	0.1	-10.1	-9.3	-0.1	-10.1	-9.3
LWL2	-11.4	-20.1	0.0	10.6	-26.3	0.0
LWL3	-7.3	-17.7	0.0	8.1	-11.6	0.0
LWL4	-8.1	-11.6	0.0	7.3	-17.7	0.0
RS	2.1	2.1	0.0	-2.1	3.5	0.0
LS	2.1	3.5	0.0	-2.1	2.1	0.0
RBDWLW	-0.1	10.1	0.0	0.1	10.1	0.0
RBDWEQ	-0.0	0.8	0.0	0.0	0.8	0.0

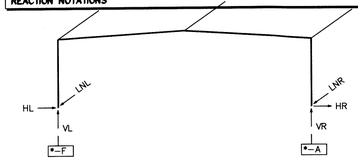
LOAD GROUP DESCRIPTION

DL : Roof Dead Load
LL : Roof Live Load
COLL : Roof Collateral Load
SNOW : Roof Snow Load
EQ : Lateral Seismic Load [parallel to plane of frame]
RBUPEQ : Upward Acting Rod Brace Load from Longit. Seismic
WL1 : Lateral Primary Wind Load
WL2 : Lateral Primary Wind Load
WL3 : Lateral Primary Wind Load
WL4 : Lateral Primary Wind Load
LWL1 : Longitudinal Primary Wind Load
RBUPLW : Upward Acting Rod Brace Load from Longitud. Wind
LWL2 : Longitudinal Primary Wind Load
LWL3 : Longitudinal Primary Wind Load
LWL4 : Longitudinal Primary Wind Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Longit. Wind
RBDWEQ : Downward Acting Rod Brace Load from Long. Seismic

FRAME ID #1
cs 100./27./24.417 20./154.
USER NAME: jspeegle JOB NAME: 54756A
DATE: 7/22/14 FILE: frames_2-6.fra
PAGE: 1-3

SUPPORT REACTIONS FOR EACH LOAD GROUP
*LOCATION: Gridlines: 2 3 4 5 6
NOTES:(1) All reactions are in kips and kip-ft.
(2) The seismic overstrength factor (Omega) is not included in the "RBDWEQ" and "RBUPEQ" Load Group reactions.
Seismic "BASE-ONLY" combination reactions include an overstrength factor of: 2.500
TIME: 08:26:40

REACTION NOTATIONS



Frame Line 2-6

LOAD GROUP REACTION TABLE * = 2 3 4 5 6

COLUMN	*-F			*-A		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR
DL	2.8	4.9	0.0	-2.8	5.3	0.0
LL	10.0	15.0	0.0	-10.0	15.0	0.0
COLL	0.4	0.6	0.0	-0.4	0.6	0.0
SNOW	4.2	6.3	0.0	-4.2	6.3	0.0
EQ	-0.2	-0.1	0.0	-0.2	0.1	0.0
RBUPEQ	0.0	-0.8	-0.7	-0.0	-0.8	-0.7
WL1	-27.8	-37.9	0.0	11.9	-26.4	0.0
WL2	-21.3	-21.6	0.0	5.4	-10.1	0.0
WL3	-12.0	-26.3	0.0	27.9	-37.9	0.0
WL4	-5.5	-10.0	0.0	21.4	-21.6	0.0
LWL1	-13.3	-35.6	0.0	14.2	-28.7	0.0
RBUPLW	0.1	-10.1	-9.3	-0.1	-10.1	-9.3
LWL2	-14.2	-28.7	0.0	13.2	-35.6	0.0
LWL3	-6.8	-19.3	0.0	7.7	-12.4	0.0
LWL4	-7.7	-12.4	0.0	6.8	-19.3	0.0
RS	4.0	4.0	0.0	-4.0	6.7	0.0
LS	4.0	6.7	0.0	-4.0	4.0	0.0
RBDWLW	-0.1	10.1	0.0	0.1	10.1	0.0
RBDWEQ	-0.0	0.8	0.0	0.0	0.8	0.0

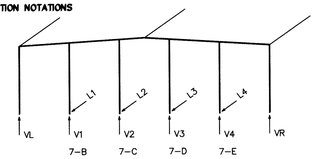
LOAD GROUP DESCRIPTION

DL : Roof Dead Load
LL : Roof Live Load
COLL : Roof Collateral Load
SNOW : Roof Snow Load
EQ : Lateral Seismic Load [parallel to plane of frame]
RBUPEQ : Upward Acting Rod Brace Load from Longit. Seismic
WL1 : Lateral Primary Wind Load
WL2 : Lateral Primary Wind Load
WL3 : Lateral Primary Wind Load
WL4 : Lateral Primary Wind Load
LWL1 : Longitudinal Primary Wind Load
RBUPLW : Upward Acting Rod Brace Load from Longitud. Wind
LWL2 : Longitudinal Primary Wind Load
LWL3 : Longitudinal Primary Wind Load
LWL4 : Longitudinal Primary Wind Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load
RBDWLW : Downward Acting Rod Brace Load from Longit. Wind
RBDWEQ : Downward Acting Rod Brace Load from Long. Seismic

FRAME DESCRIPTION: Endwall EWD
USER NAME: jspeegle JOB NAME: 54756A
DATE: 7/21/14 FILE: REW4BLDG1
PAGE: EW-3
PATH: R:\Jobs\Active\ENG\14-B-54756\ver01-jspeegle\Bldg-A\run01\

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft.
TIME: 15:50:32

REACTION NOTATIONS



Right Endwall

LOAD GROUP REACTION TABLE

COLUMN	LEFT COLUMN			RIGHT COLUMN			7-B			7-C			7-D		
LOAD GROUP	HL	VL	LL	HR	VR	LR	H1	V1	L1	H2	V2	L2	H3	V3	L3
D	0.	0.	0.	0.	0.	0.	0.	0.5	0.	0.	0.5	0.	0.	0.5	0.
W+	0.	0.	0.	0.	0.	0.	0.	0.	8.1	0.	0.	8.4	0.	0.	8.4
W-	0.	0.	0.	0.	0.	0.	0.	0.	-9.0	0.	0.	-9.4	0.	0.	-9.4

LOAD GROUP DESCRIPTION

D : DEAD LOAD
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W- : WIND LOAD AS AN OUTWARD ACTING SUCTION

LOAD GROUP REACTION TABLE

COLUMN	7-E		
LOAD GROUP	H4	V4	L4
D	0.	0.5	0.
W+	0.	0.	8.1
W-	0.	0.	-9.0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS, MS. 39520-0

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX. 77032-4090

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: srs 7/23/14
Checked by: SAP 7/23/14
Project Engineer: JS
Job Number: 14-B-54756-1
Sheet Number: F3 of 3

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

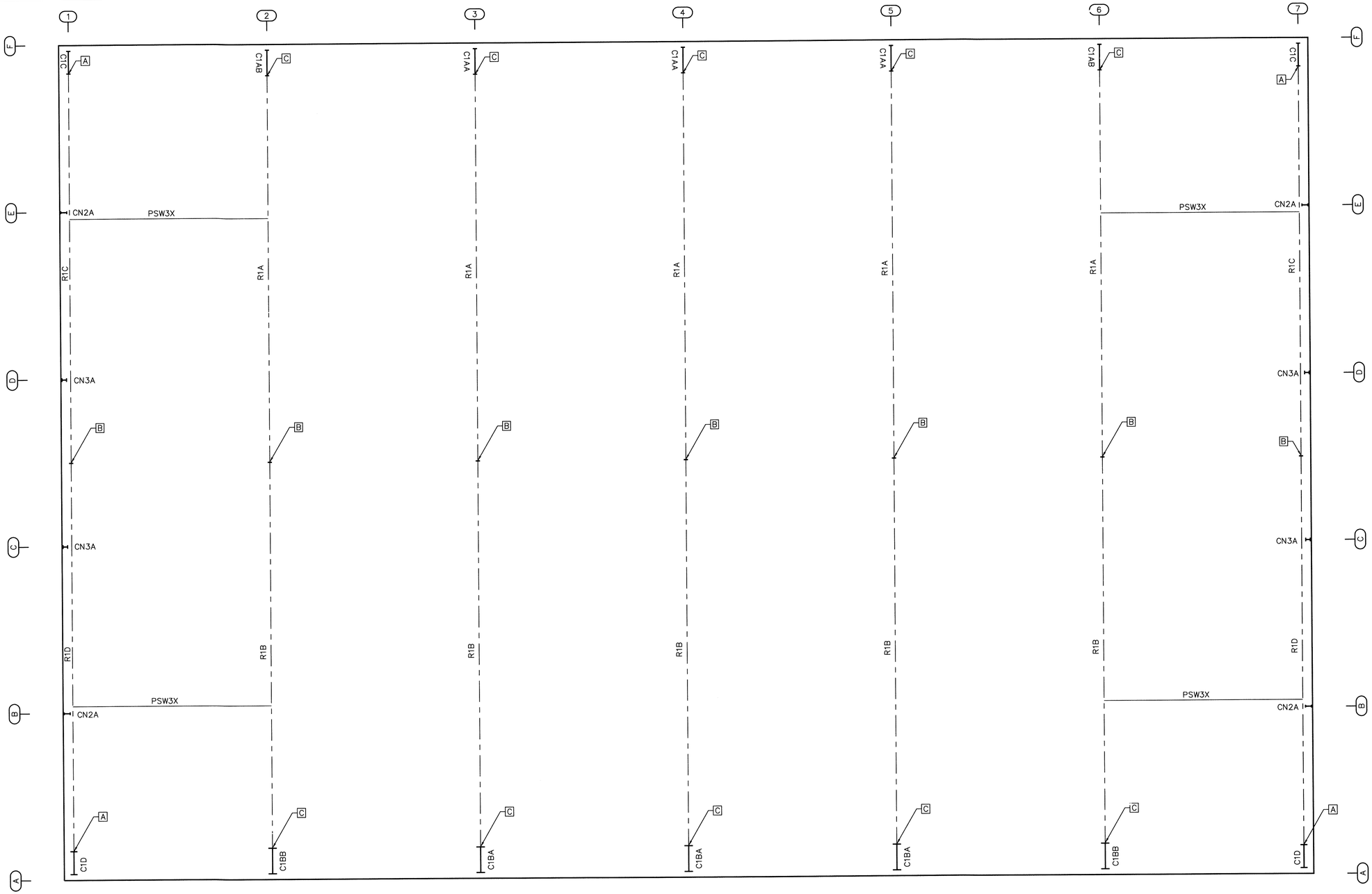
S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

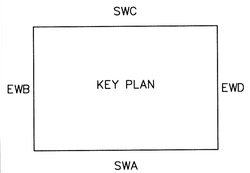
Jul 28, 2014

S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

SPLICE BOLT TABLE				
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(12) ¾ X 2"	A325 B&N	0	0
B	(8) ¾ X 2"	A325 B&N	0	0
C	(16) ¾ X 2½	A325 B&N	0	0



PRIMARY STEEL LOCATION PLAN



Revision	Date	By	Ck'd

Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5500 W SAM HOUSTON PKWY E
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E2 of 11

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S. Harley Davidson, P.E.
Mississippi P.E. 13872

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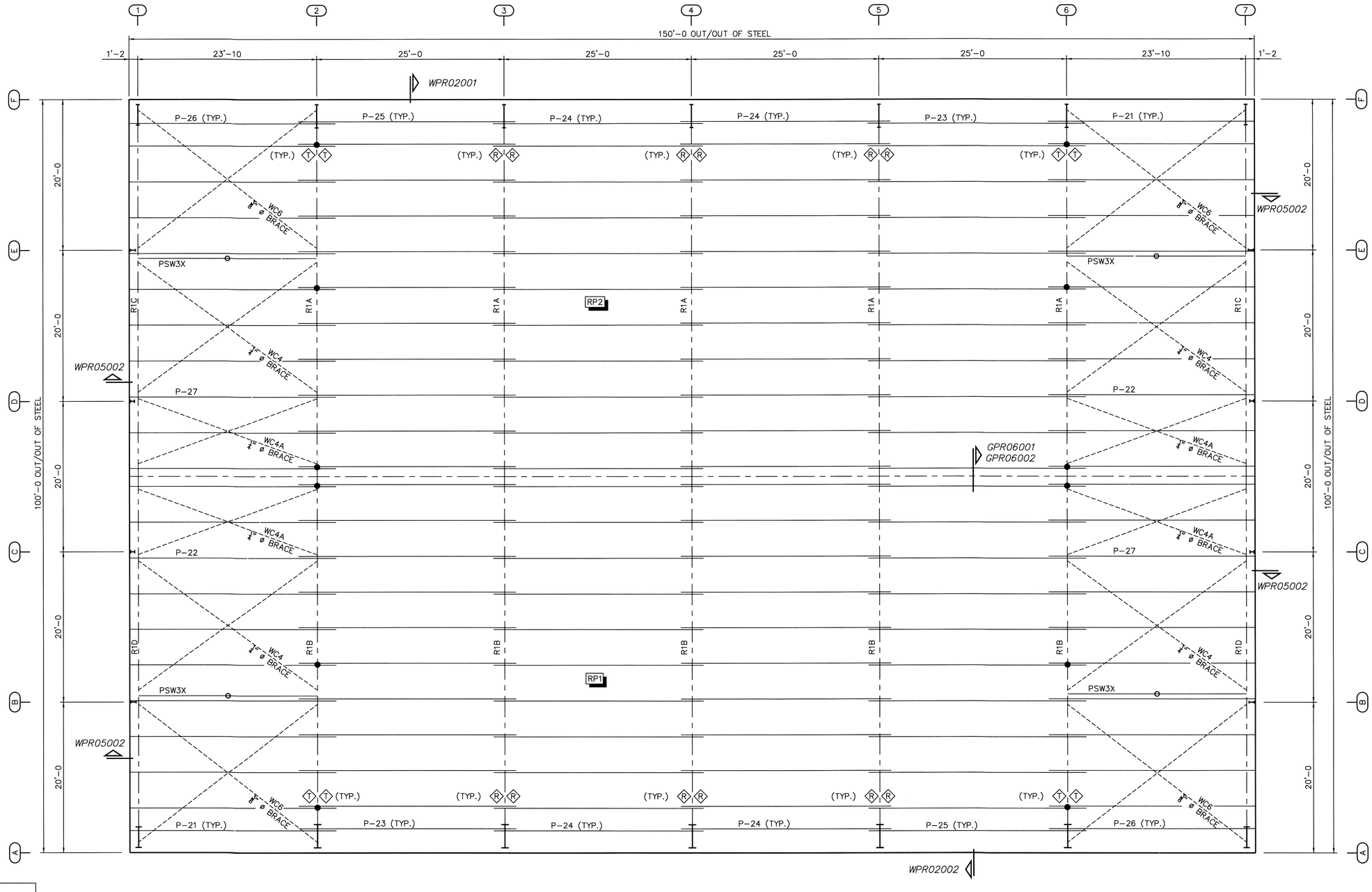
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

Jul 28, 2014

● – DENOTES: CLIP LOCATION
SC90 AT 8" PURLINS
SC92 AT 10" PURLINS
SC94 AT 12" PURLINS

—⊖— DENOTES: PIPE STRUT.
ATTACHED WITH 1"ø X 1¾" A325 BOLTS.



ROOF FRAMING PLAN

SWC
EWB KEY PLAN EWD
SWA

Z_SECTION LAP TABLE

SYMBOL	LAP (LENGTH)	SYMBOL	LAP (LENGTH)
S	0'–2" (3½")	T	2'–4"(2'–5½")
R	1'–4"(1'–5½")	V	3'–0"(3'–1¼")

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A,
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14–B–54756–1
Sheet Number:	E3 of 11

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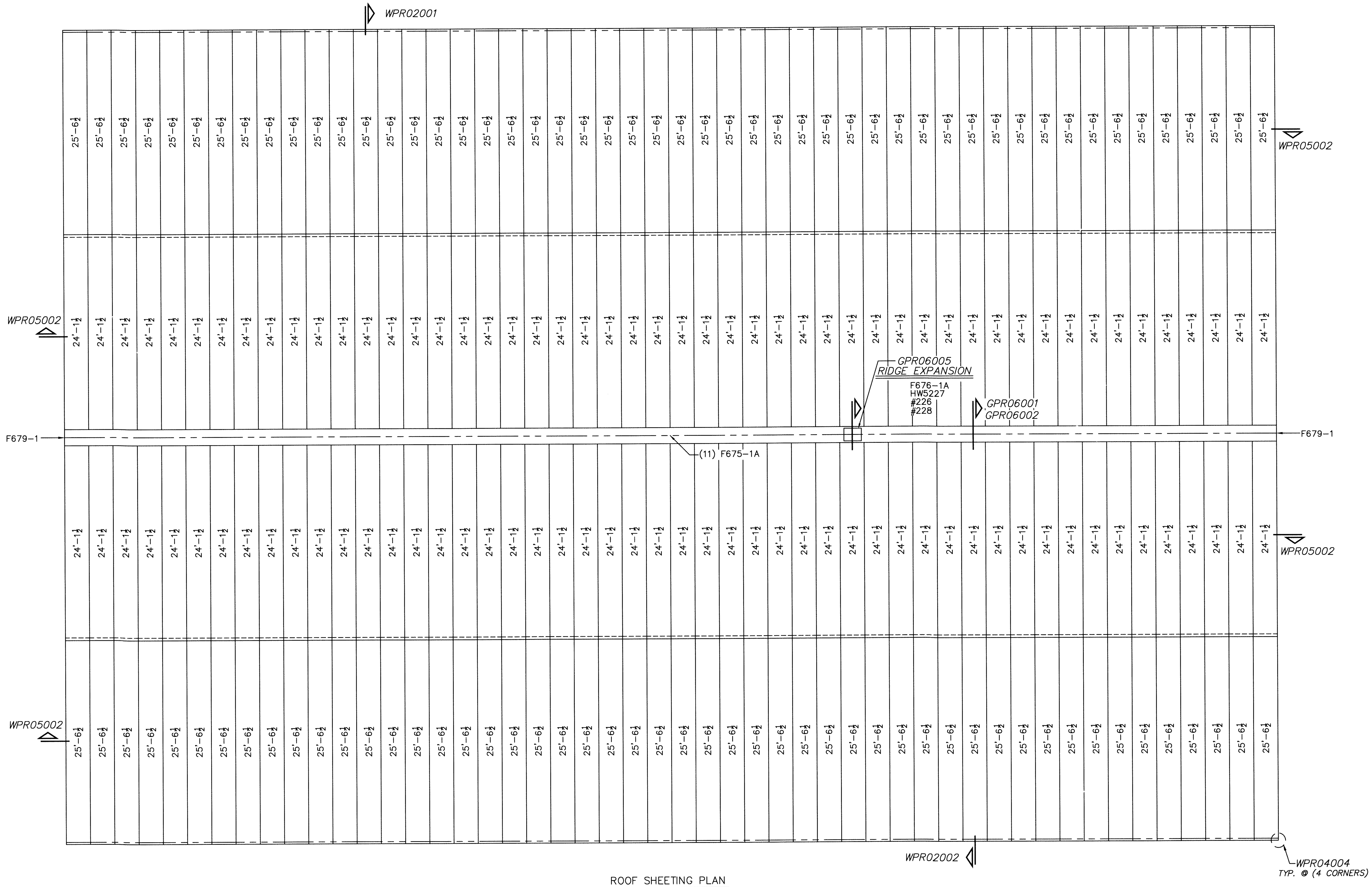
S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

Jul 28, 2014

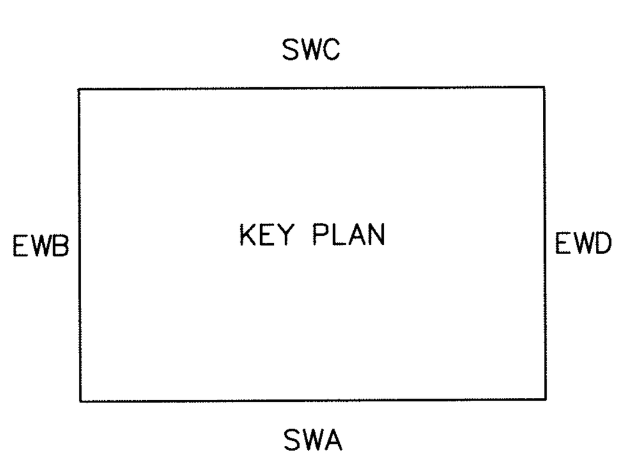
S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL
ENGINEER
13872
STATE OF MISSISSIPPI

PANEL TYPE = PBR (GALVALUME)
PANEL OVERHANG = 3"
FROM OUTER STEEL



ROOF SHEETING PLAN

PANEL TYPE = PBR (GALVALUME)
PANEL OVERHANG = 3"
FROM OUTER STEEL



Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX 77032
MICHAEL VIVIAN

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale: NOT TO SCALE
Drawn by: KEB 7/28/14
Checked by: KEB 7/28/14
Project Engineer: JS
Job Number: 14-B-54756-1
Sheet Number: E4 of 11

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

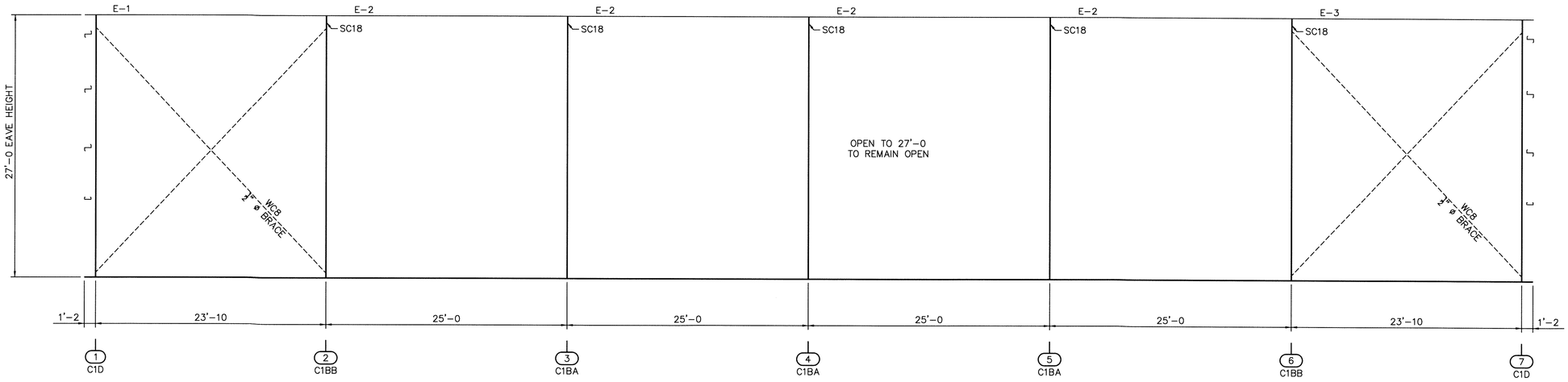
S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

Jul 28, 2014

SCHEDULE OF ACCESSORIES

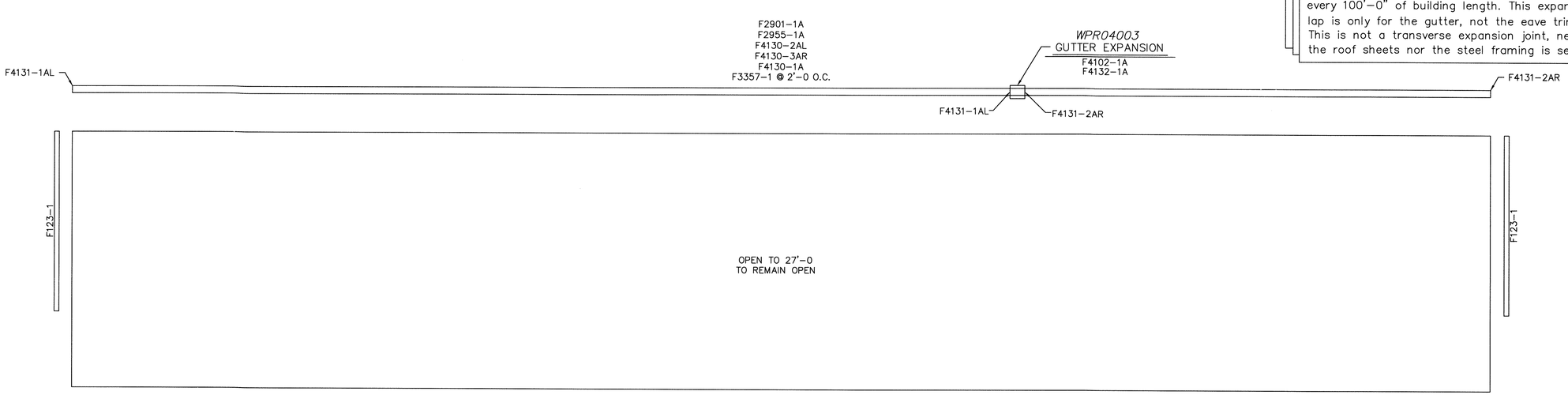
NO. REQD	DESCRIPTION

USE STANDARD WALL PROCEDURES TO ERECT THE SIDEWALL AND ENDWALL PANELS.

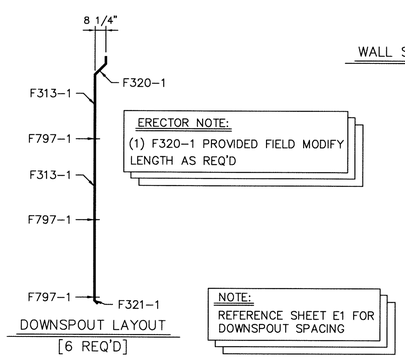


SIDEWALL ELEVATION "SWA" AT GRID LINE "A"

Note:
Gutter Expansion will require a 4" expansion lap every 100'-0" of building length. This expansion lap is only for the gutter, not the eave trim. This is not a transverse expansion joint, neither the roof sheets nor the steel framing is separated.



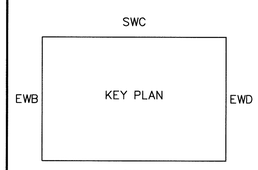
WALL SHEETING ELEVATION "SWA"
BLDG A



DOWNSPOUT LAYOUT
[6 REQ'D]

ERECTOR NOTE:
(1) F320-1 PROVIDED FIELD MODIFY LENGTH AS REQ'D

NOTE:
REFERENCE SHEET E1 FOR DOWNSPOUT SPACING



Z_SECTION LAP TABLE

SYMBOL	LAP (LENGTH)	SYMBOL	LAP (LENGTH)
S	0'-2" (3¾")	T	2'-4"(2'-5¾")
R	1'-4"(1'-5¾")	V	3'-0"(3'-1¾")

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
6565 N. SAM HOUSTON PKWY E
HOUSTON, TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary, Not For Construction
☐ For Approval Not For Construction
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E5 of 11

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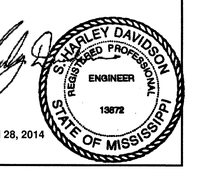
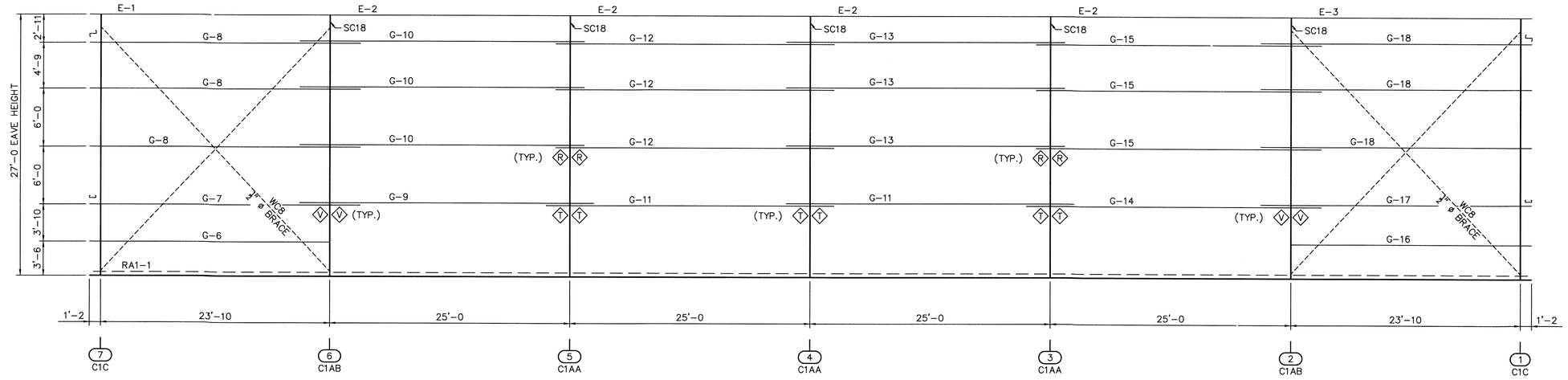
S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

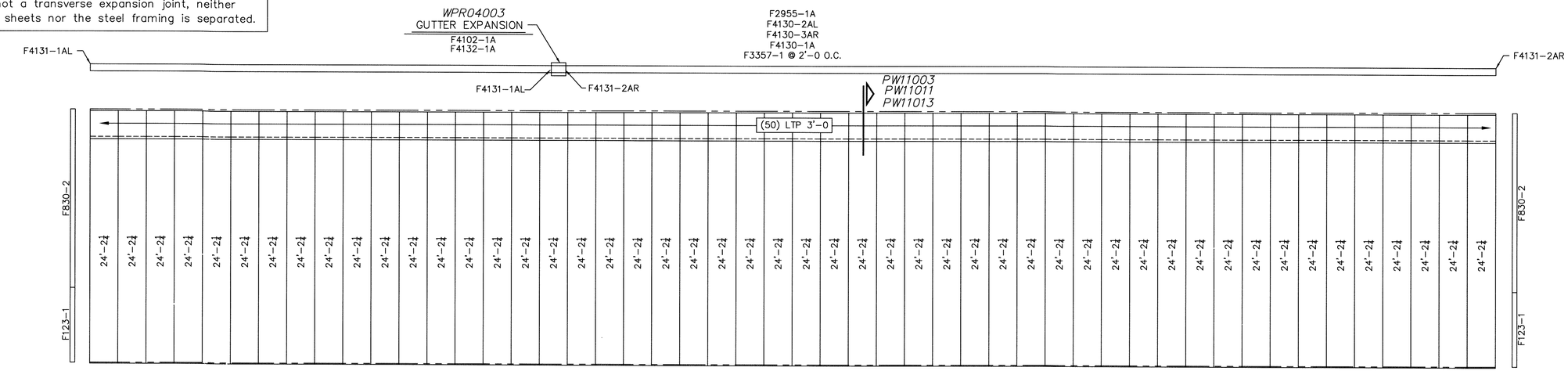


Jul 28, 2014



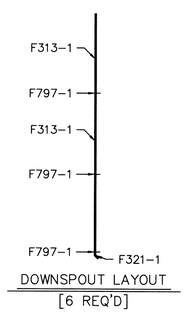
SIDEWALL ELEVATION "SWC" AT GRID LINE "F"

Note:
Gutter Expansion will require a 4" expansion lap every 100'–0" of building length. This expansion lap is only for the gutter, not the eave trim. This is not a transverse expansion joint, neither the roof sheets nor the steel framing is separated.



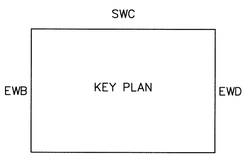
PBR WALL PANELS
PANEL COVERAGE = 3'–0
COLOR = LIGHT STONE
PANEL PKG. REQ'D. = PBS–2

WALL SHEETING ELEVATION "SWC"
BLDG A



DOWNSPOUT LAYOUT
[6 REQ'D]

NOTE:
REFERENCE SHEET E1 FOR DOWNSPOUT SPACING



Z_SECTION LAP TABLE			
SYMBOL	LAP (LENGTH)	SYMBOL	LAP (LENGTH)
S	0'–2" (3¾")	T	2'–4"(2'–5¾")
R	1'–4"(1'–5¾")	V	3'–0"(3'–1¼")

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A,
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX 77032

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14–B–54756–1
Sheet Number:	E6 of 11

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S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

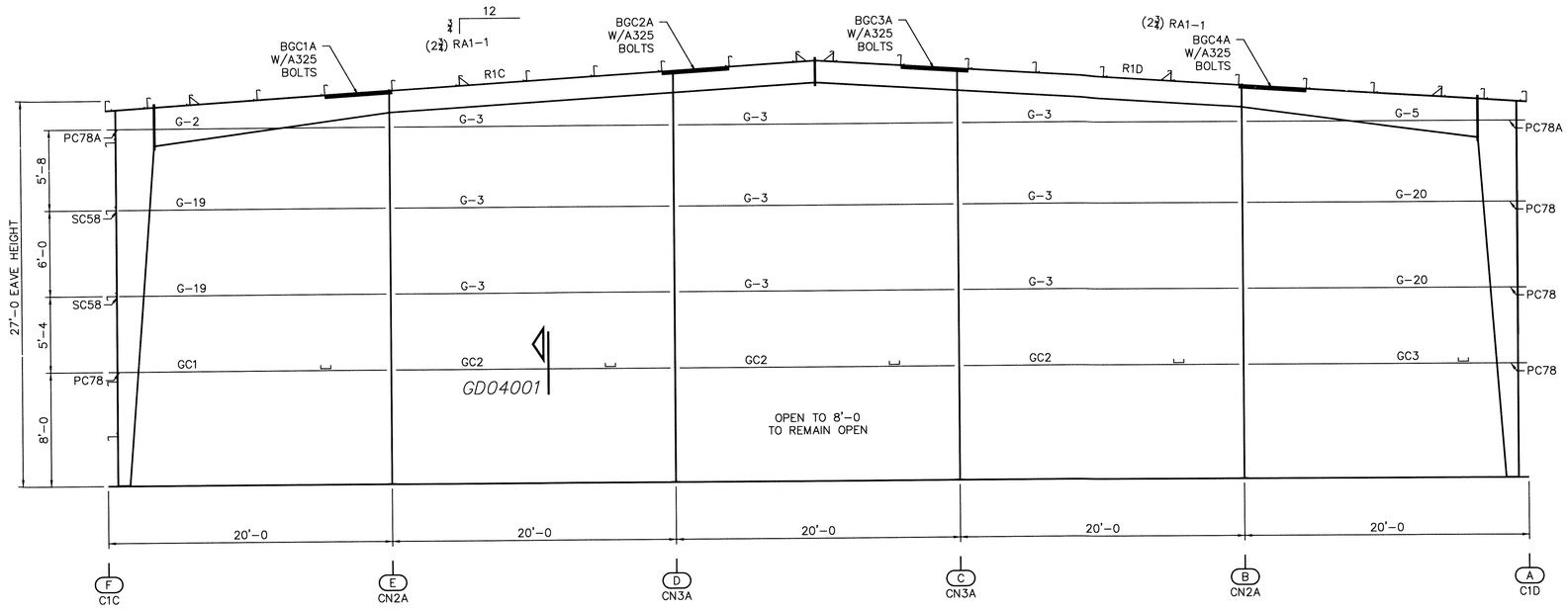
Jul 28, 2014

BRIDGE CHANNEL CONNECTION BGC

(4) 1/2" x 1 1/4" A325 BOLTS @ EACH PURLIN

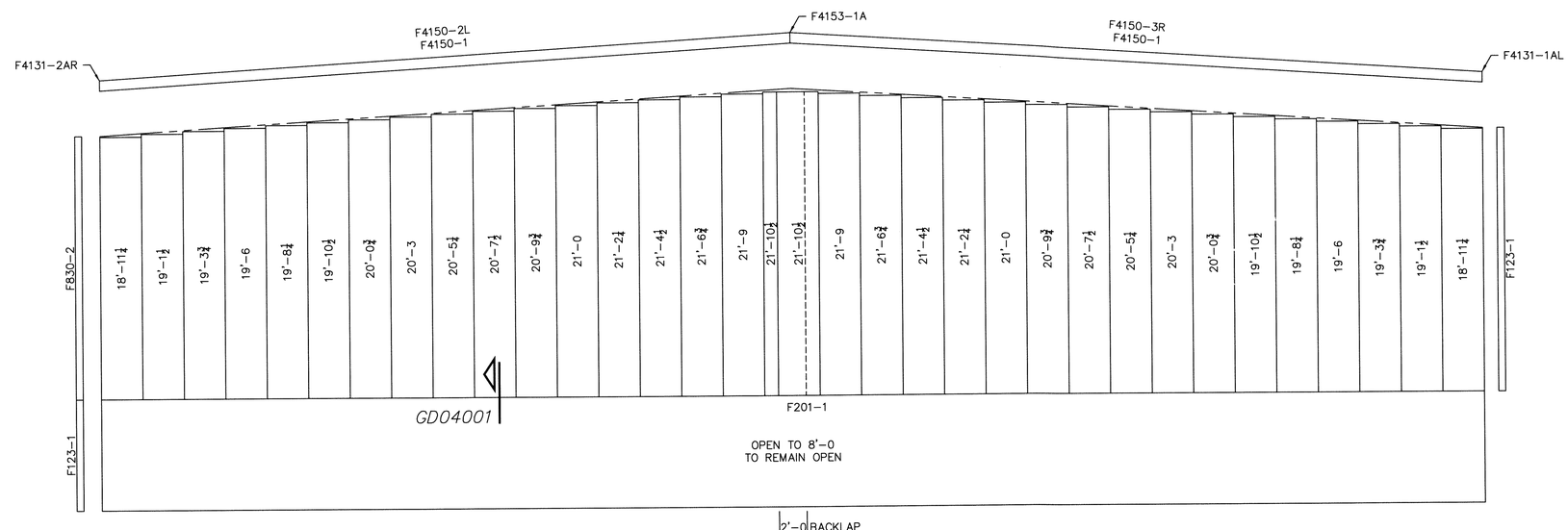
(4) 3/4" x 1 1/2" A325 BOLTS @ EACH COLUMN

CL292– FASTENS BETWEEN THE GIRTS ON EACH SIDE OF THE ENDWALL COLUMNS, AT ALL GIRT ELEVATIONS. REFER TO DETAILS.



ENDWALL ELEVATION "EWB" AT GRID LINE "1"

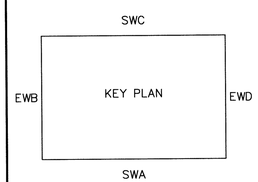
APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
CN3A	536
CN2A	488
C1C	786
C1D	1265
R1C	1075
R1D	1064



PBR WALL PANELS
PANEL COVERAGE = 3'–0
COLOR = LIGHT STONE
PANEL PKG. REQ'D. = PBS–1

WALL SHEETING ELEVATION "EWB"

BLDG A



Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5700 SAM HOUSTON PKWY E
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14–B–54756–1
Sheet Number:	E7 of 11

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S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

Jul 28, 2014

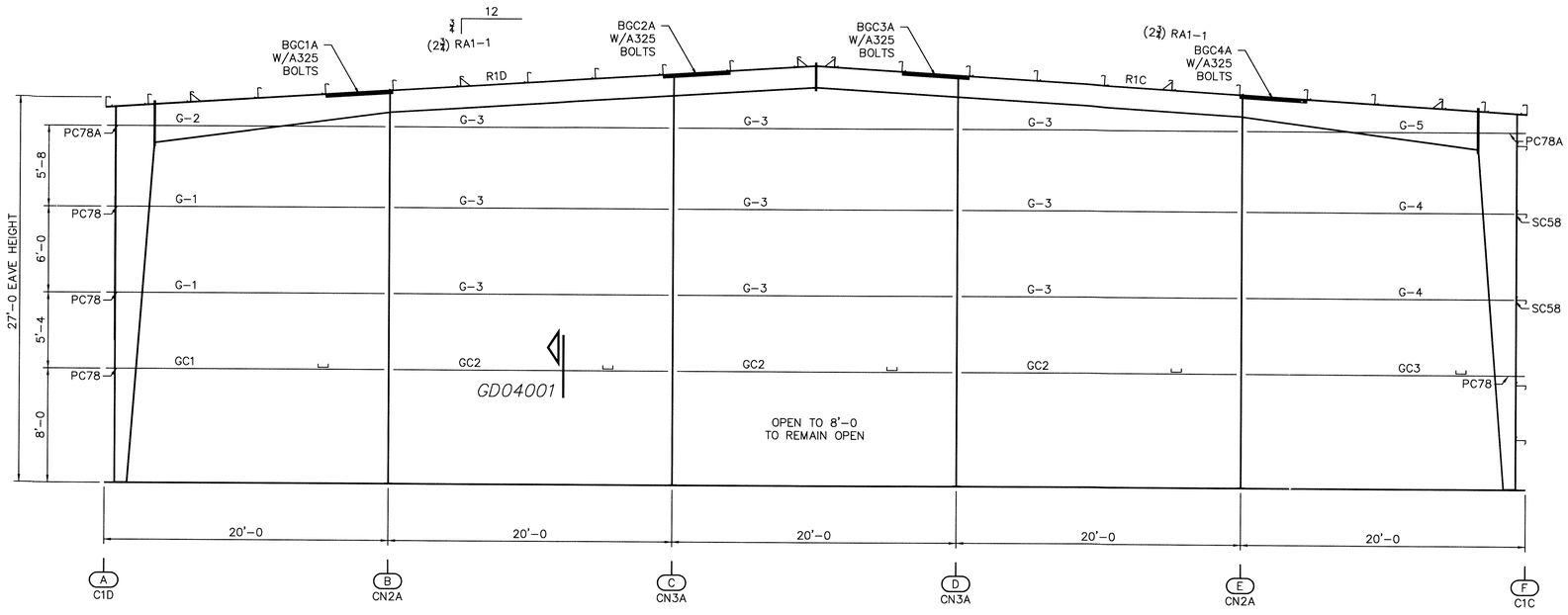
S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

BRIDGE CHANNEL CONNECTION BGC

(4) 1/2" x 1 1/4" A325 BOLTS @ EACH PURLIN

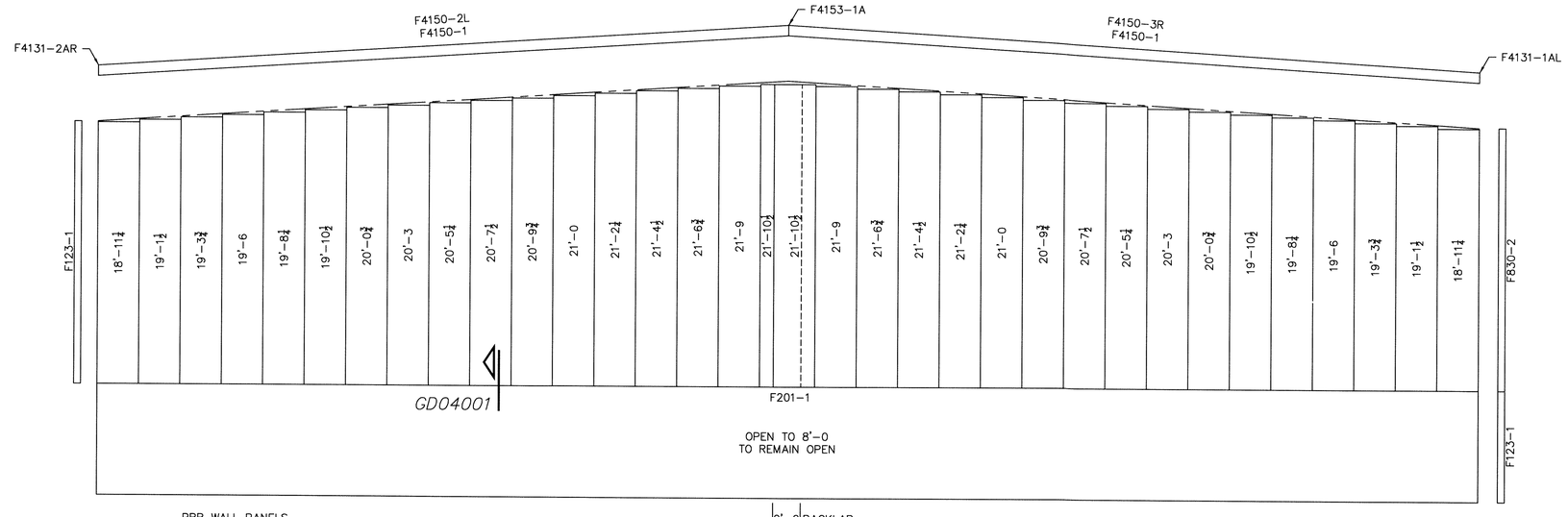
(4) 3/4" x 1 1/2" A325 BOLTS @ EACH COLUMN

CL292– FASTENS BETWEEN THE GIRTS ON EACH SIDE OF THE ENDWALL COLUMNS, AT ALL GIRT ELEVATIONS. REFER TO DETAILS.



ENDWALL ELEVATION "EWD" AT GRID LINE "7"

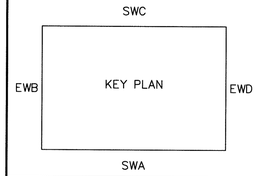
APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
CN3A	536
CN2A	488
C1C	786
C1D	1265
R1C	1075
R1D	1064



PBR WALL PANELS
PANEL COVERAGE = 3'–0
COLOR = LIGHT STONE
PANEL PKG. REQ'D. = PBS–3

WALL SHEETING ELEVATION "EWD"

BLDG A



Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON TX 77032

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14–B–54756–1
Sheet Number:	E8 of 11

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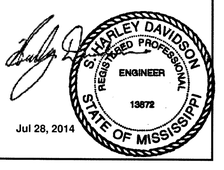
S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

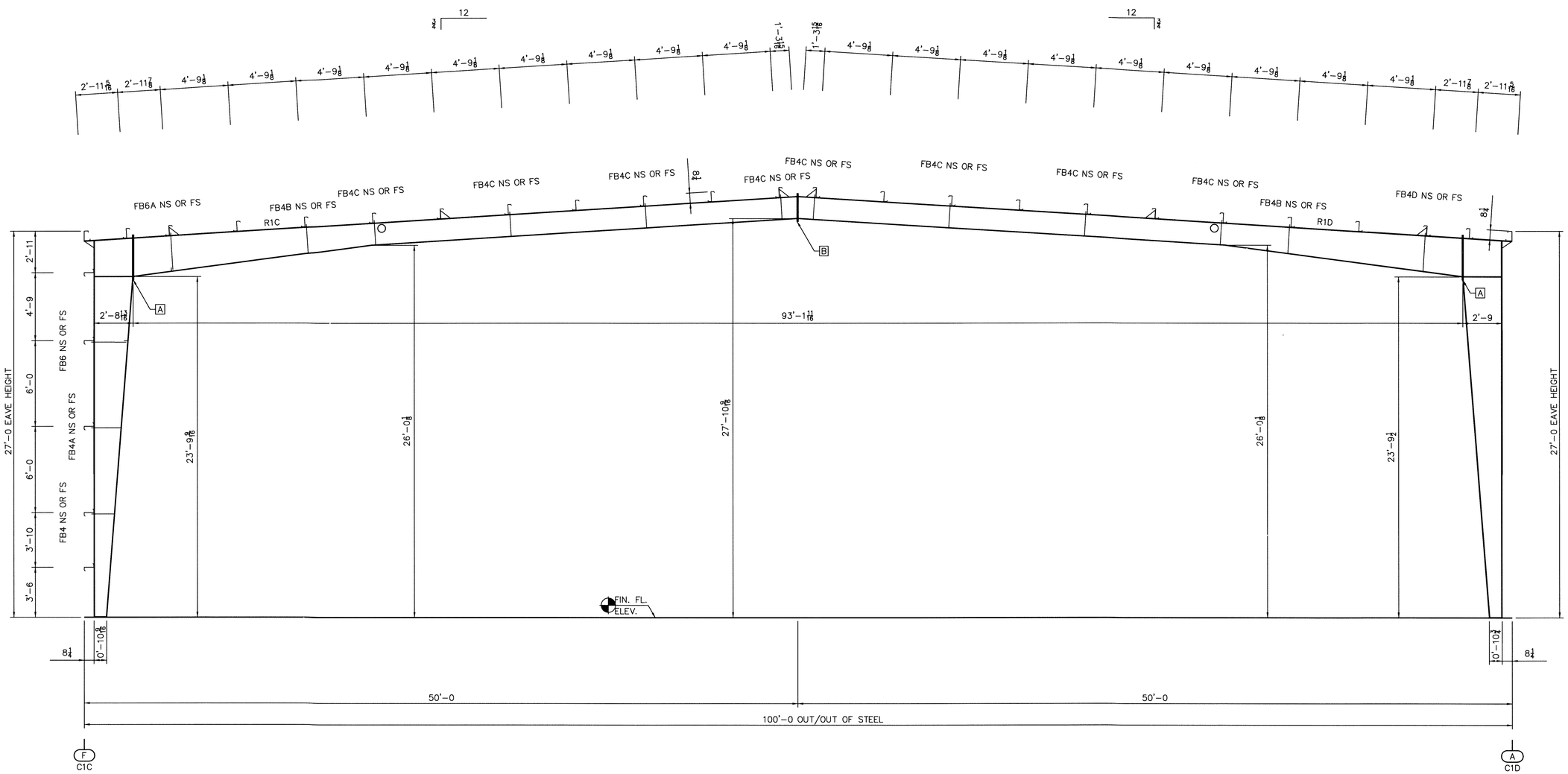


Jul 28, 2014

OY/PROJECTS\XDS-V47-20140424 FRAME = active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x02L active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x02R 7/22/14 08:26:36 7/22/14 08:26:36
OY/PROJECTS\XDS-V47-20140424 FB SET = ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x02L ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x02R

GENERAL NOTES
FRAME CLEARANCES SHOWN ARE APPROXIMATE AND MAY VARY DUE TO CONDITIONS (DEFLECTION).

VERTICAL CLEARANCE DIMENSIONS ARE FROM FINISHED FLOOR REFERENCE ELEVATION.



CROSS SECTION AT FRAME LINE "1"&"7"

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1C	1075
R1D	1064
C1C	786
C1D	1265

	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(12) 3/4 X 2"	A325 B&N	0	0
B	(8) 3/4 X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5703 ALMEDA GENOA
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E9 of 11

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S. Harley Davidson, P.E.
Mississippi P.E. 13872

DRME1A ENME1A

Jul 28, 2014

S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

OY/PROJECTS\XDS-V47-20140424 FRAME = active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01L active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01R 7/22/14 08:26:40 7/22/14 08:26:40
OY/PROJECTS\XDS-V47-20140424 FB SET = ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01L ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01R

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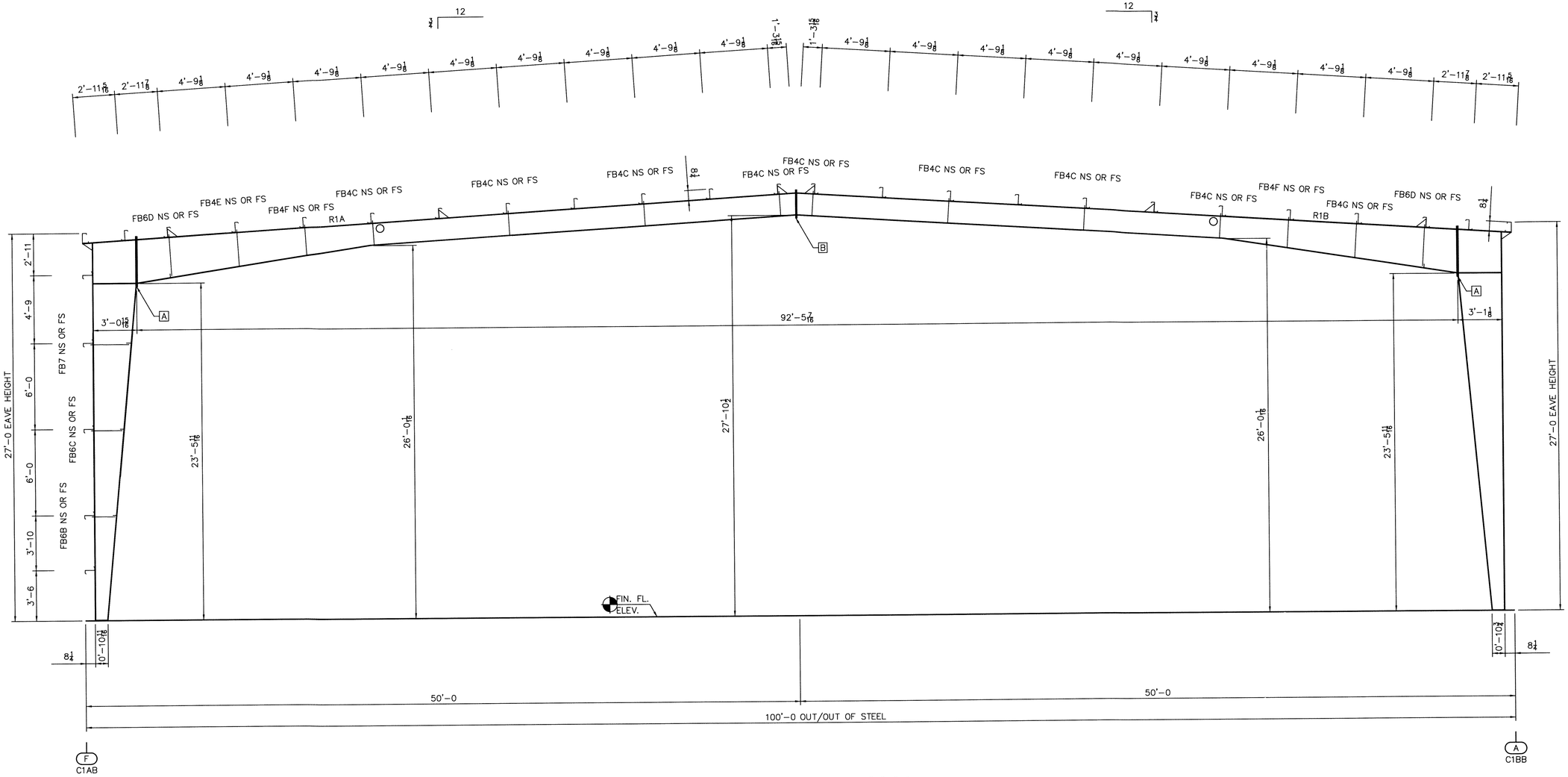

CROSS SECTION AT FRAME LINE "2"&"6"

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1A	1231
R1B	1244
C1AB	995
C1BB	1452

	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(16) $\frac{3}{4}$ X 2$\frac{1}{2}$	A325 B&N	0	0
B	(8) $\frac{3}{4}$ X 2"	A325 B&N	0	0

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 JINDAL A
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA KWS CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
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☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E10 of 11

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Jul 28, 2014

S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

OY/PROJECTS\XDS-V47-20140424 FRAME = active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01L active/ENG/14-B-54756/ver01-jspeegle/Bldg-A/Drftg/x01R 7/22/14 08:26:40 7/22/14 08:26:40
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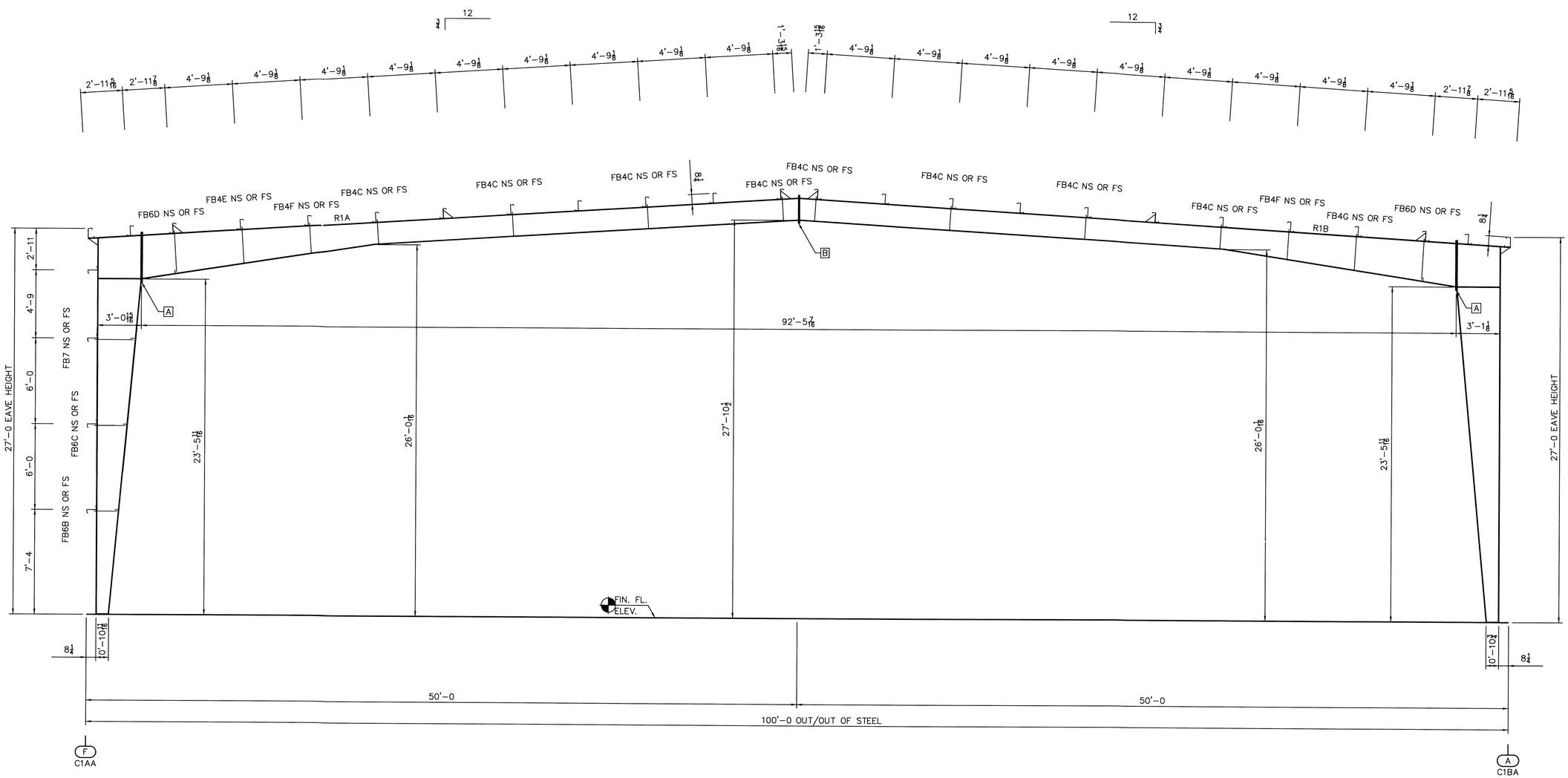

CROSS SECTION AT FRAME LINE "3","4"&"5"

APPROXIMATE MEMBER WEIGHTS	
PART MARK	WEIGHT
R1A	1231
R1B	1244
C1AA	990
C1BA	1450

	SPLICE BOLT TABLE			
CONN.	QTY. SIZE	TYPE	HARDENED WASHERS	BEVELED WASHERS
A	(16) 3/4 X 2 1/2	A325 B&N	0	0
B	(8) 3/4 X 2"	A325 B&N	0	0

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL LLC
DBA W WILSON CONSTRUCTION
5750 N. SAM HOUSTON PKWY E
HOUSTON, TX 77032
MICHAEL VIVIAN

Drawing Status:
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Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	JS
Job Number:	14-B-54756-1
Sheet Number:	E11 of 11

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S. HARLEY DAVIDSON
REGISTERED PROFESSIONAL ENGINEER
13872
STATE OF MISSISSIPPI

Jul 28, 2014

FIELD SERVICE PROCEDURES

IN ORDER TO GIVE YOU PROMPT SERVICES AND KEEP PROBLEMS TO A MINIMUM, PLEASE HANDLE ANY SHORTAGES OR BACK CHARGES IN THE FOLLOWING MANNER: CAREFULLY CHECK YOUR PACKING LIST WHILE UNLOADING. MARK ANY ITEMS, WHICH APPEAR TO BE MISSING AND NOTIFY THE FIELD SERVICE DEPARTMENT AT THE NUMBER SHOWN IN THE TITLEBLOCK AS SOON AS POSSIBLE. CALLING SOMEONE ELSE COULD DELAY THE PROPER RESPONSE.

SHORT MATERIALS – IMMEDIATELY UPON DELIVERY OF MATERIAL, QUANTITIES ARE TO BE VERIFIED BY THE CUSTOMER AGAINST QUANTITIES THAT ARE BILLED ON THE SHIPPING DOCUMENT. NEITHER THE MANUFACTURER NOR THE CARRIER IS RESPONSIBLE FOR THE MATERIAL SHORTAGES AGAINST THE QUANTITIES BILLED ON SHIPPING DOCUMENT IF SUCH SHORTAGES ARE NOT NOTED ON SHIPPING DOCUMENTS WHEN THE MATERIAL IS DELIVERED, AND THEN ACKNOWLEDGED BY THE CARRIER'S AGENT. IF THE CARRIER IS THE MANUFACTURER, CLAIMS FOR SHORTAGES ARE TO BE MADE BY THE CUSTOMER TO THE COMMON CARRIER. IF THE MATERIAL QUANTITIES RECEIVED ARE CORRECT ACCORDING TO THE QUANTITIES THAT ARE BILLED ON THE SHIPPING DOCUMENTS, BUT ARE LESS THAN THE QUANTITIES ORDERED OR THE QUANTITIES THAT ARE NECESSARY TO COMPLETE THE METAL BUILDING ACCORDING TO THE ORDER DOCUMENTS, CLAIM IS TOO BE MADE OF THE MANUFACTURER.

DAMAGED OR DEFECTIVE MATERIAL – DAMAGED OR DEFECTIVE MATERIAL, REGARDLESS OF THE DEGREE OF DAMAGE, MUST BE NOTED ON THE SHIPPING DOCUMENTS BY THE CUSTOMER AND ACKNOWLEDGED IN WRITING BY THE CARRIER'S AGENT. THE MANUFACTURER IS NOT RESPONSIBLE FOR MATERIAL DAMAGED IN UNLOADING OF PACKAGED OR NESTED MATERIALS, INCLUDING, BUT NOT LIMITED TO: FASTENERS, SHEET METAL, "C" & "Z" SECTIONS & COVERING PANELS THAT BECOME WET AND/OR DAMAGED BY WATER WHILE IN THE POSSESSION OF OTHERS. PACKAGED OR NESTED MATERIAL THAT BECOMES WET IN TRANSIT MUST BE UNPACKED, UNSTACKED AND DRIED BY THE CUSTOMER. IF THE CARRIER IS THE MANUFACTURER, THE CUSTOMER MUST MAKE CLAIM FOR DAMAGE DIRECTLY TO THE MANUFACTURER. IF THE CARRIER IS A COMMON CARRIER, THE CUSTOMER MUST MAKE THE CLAIM FOR DAMAGE TO THE COMMON CARRIER. THE MANUFACTURER IS NOT LIABLE FOR ANY CLAIM WHATSOEVER INCLUDING, BUT NOT LIMITED TO LABOR CHARGES OF CONSEQUENTIAL DAMAGES RESULTING FROM THE CUSTOMER'S USE OF DAMAGED OF DEFECTIVE MATERIALS THAT CAN BE DETECTED BY VISUAL INSPECTION.

OIL CANNING IS NOT CAUSE FOR REJECTION

EXCESSIVE MATERIAL – THE MANUFACTURER RESERVES THE RIGHT TO RECOVER ANY MATERIAL DELIVERED IN EXCESS OR THOSE REQUIRED BY THE ORDER DOCUMENTS.

INITIAL CLAIM – IN THE EVENT OF ERROR, THE CUSTOMER MUST PROMPTLY MAKE A WRITTEN OR VERBAL "INITIAL CLAIM" TO THE MANUFACTURER FOR THE CORRECTION OF DESIGN, DRAFTING, BILL OF MATERIALS OF FABRICATION ERROR.
THE "INITIAL CLAIM" INCLUDES:
1. DESCRIPTION OF THE NATURE AND EXTENT OF THE ERRORS,INCLUDING QUANTITIES.
2. DESCRIPTION OF THE NATURE AND EXTENT OF PROPOSED CORRECTIVE WORK INCLUDING ESTIMATED MAN-HOURS.
3. MATERIAL TO BE PURCHASED FROM OTHER THAN THE MANUFACTURER, INCLUDING ESTIMATED QUANTITIES AND COST.
4. MAXIMUM TOTAL COST OF PROPOSED CORRECTIVE WORK AND MATERIAL TO BE PURCHASED FROM OTHER THAN THE MANUFACTURER.

R1-01

AUTHORIZATION FOR CORRECTIVE WORK

NORMAL ERECTION OPERATIONS INCLUDE THE CORRECTION OF MINOR MISFITS BY MODERATE AMOUNTS OF REAMING, CHIPPING, WELDING OR CUTTING AND THE DRAWING OF ELEMENTS INTO LINE THROUGH THE USE OF DRIFT PINS. ERRORS WHICH CANNOT BE CORRECTED BY THE FOREGOING MEANS OR WHICH REQUIRE MAJOR CHANGES IN THE MEMBER CONFIGURATION SHOULD BE REPORTED IMMEDIATELY TO THE OWNER AND FABRICATOR BY THE ERECTOR, TO ENABLE WHOEVER IS RESPONSIBLE EITHER TO CORRECT THE ERROR OR TO APPROVE THE MOST EFFICIENT AND ECONOMICAL METHOD OF CORRECTION TO BE USED BY OTHERS. (AISC 303-10, SECTION 7.14) (MAR 05 SECTION 7.14) IF THE ERROR IS THE FAULT OF THE MANUFACTURER, AN "AUTHORIZATION FOR CORRECTIVE WORK" MUST BE ISSUED IN WRITING BY THE MANUFACTURER TO AUTHORIZE THE CORRECTIVE WORK AT A COST NOT TO EXCEED THE MAXIMUM TOTAL COST SET FORTH. ALTERNATIVE CORRECTIVE WORK OTHER THAN THAT PROPOSED IN THE "INITIAL CLAIM" MAY BE DIRECTED BY THE MANUFACTURER IN THE "AUTHORIZATION OF CORRECTIVE WORK." ONLY THE FIELD SERVICE DEPARTMENT MAY AUTHORIZE CORRECTIVE WORK.

FINAL CLAIM – THE "FINAL CLAIM" IN WRITING MUST BE FORWARDED BY THE CUSTOMER TO THE MANUFACTURER WITHIN TEN (10) DAYS OF COMPLETION OF THE CORRECTIVE WORK AUTHORIZED BY THE MANUFACTURER.

THE "FINAL CLAIM" MUST INCLUDE:
1. ACTUAL NUMBER OF MAN-HOURS BY DATE OF DIRECT LABOR USE ON CORRECTIVE WORK AND ACTUAL HOURLY RATES OF PAY
2. TAXES AND INSURANCE ON TOTAL ACTUAL DIRECT LABOR.
3. OTHER DIRECT COSTS ON ACTUAL DIRECT LABOR.
4. COST OF MATERIAL (NOT MINOR SUPPLIES) AUTHORIZED BY THE MANUFACTURER TO BE PURCHASED FROM OTHER THAN THE MANUFACTURER, INCLUDING COPIES OF PAID INVOICES.
5. TOTAL ACTUAL DIRECT COST OF CORRECTIVE WORK (SUM OF 1, 2, 3 & 4). THE "FINAL CLAIM" MUST BE SIGNED AND CERTIFIED TRUE AND CORRECT BY THE CUSTOMER. "FINAL CLAIMS" ARE CREDITED TO THE CUSTOMER BY THE MANUFACTURER IN AN AMOUNT NOT TO EXCEED THE LESSER OF THE MAXIMUM TOTAL COST SET FORTH IN WRITING IN THE "AUTHORIZATION FOR CORRECTIVE WORK" OR TOTAL ACTUAL DIRECT COST OF CORRECTIVE WORK.

**** IMPORTANT NOTE **** – COST OF EQUIPMENT (RENTAL OR DEPRECIATION), SMALL TOOLS, SUPERVISION, OVERHEAD AND PROFIT ARE NOT SUBJECTED TO CLAIMS.

SHIPMENT ARRIVAL TIME – EVERY EFFORT WILL BE MADE TO SEE THAT THE CARRIER ARRIVES AT THE JOBSITE ON THE REQUESTED DAY AND AT THE REQUESTED HOUR. MANUFACTURER MAKES NO WARRANTY AND ACCEPTS NO RESPONSIBILITY FOR COSTS ASSOCIATED WITH A SHIPMENT NOT ARRIVING AT A REQUESTED TIME UNLESS A SEPARATE AGREEMENT HAS BEEN MADE IN WRITING FOR A GUARANTEED ARRIVAL TIME.

R1-02

UNLOADING, HANDLING, AND STORING MATERIALS

STRUCTURAL – A GREAT AMOUNT OF TIME AND TROUBLE CAN BE SAVED IF THE BUILDING PARTS ARE UNLOADED AT THE BUILDING SITE ACCORDING TO A PRE-ARRANGED PLAN. PROPER LOCATION AND HANDLING OF COMPONENTS WILL ELIMINATE UNNECESSARY HANDLING.

NOTE: PIECE MARKS ARE STENCILED ON PRIMARY STRUCTURAL MEMBERS AT LOWER END, 1'-0" FROM END. INSPECT ALL SHIPMENTS PRIOR TO RELEASING THE TIE-DOWNS FOR LOADS THAT MAY HAVE SHIFTED DURING TRANSIT!

REMEMBER, SAFETY FIRST!
BLOCKING UNDER THE COLUMNS AND RAFTERS PROTECTS THE SPLICE PLATES AND THE SLAB FROM DAMAGE DURING THE UNLOADING PROCESS. IT ALSO FACILITATES THE PLACING OF SLINGS OR CABLES AROUND THE MEMBERS FOR LATER LIFTING AND ALLOWS MEMBERS TO BE BOLTED TOGETHER INTO SUB-ASSEMBLIES WHILE ON THE GROUND. EXTRA CARE SHOULD ALWAYS BE EXERCISED IN THE UNLOADING OPERATION TO PREVENT INJURIES FROM HANDLING THE STEEL AND TO PREVENT DAMAGE TO MATERIALS AND THE CONCRETE SLAB. IF WATER IS ALLOWED TO REMAIN FOR EXTENDED PERIODS IN BUNDLES OF PRIMED PARTS SUCH AS GIRTS, PURLINS, ETC., THE PIGMENT WILL FADE AND THE PAINT WILL GRADUALLY SOFTEN REDUCING ITS BOND TO THE STEEL. THEREFORE, UPON RECEIPT OF A JOB, ALL BUNDLES OF PRIMED PARTS SHOULD BE STORED AT AN ANGLE TO ALLOW ANY TRAPPED WATER TO DRAIN AWAY AND PERMIT AIR CIRCULATION FOR DRYING. PUDDLES OF WATER SHOULD NOT BE ALLOWED TO COLLECT AND REMAIN ON COLUMNS OR RAFTERS FOR THE SAME REASON.
THE COAT OF SHOP PRIMER IS INTENDED TO PROTECT THE STEEL FRAMING FOR ONLY A SHORT PERIOD OF EXPOSURE TO ORDINARY ATMOSPHERIC CONDITIONS. THE COAT OF SHOP PRIMER DOES NOT PROVIDE THE UNIFORMITY OF APPEARANCE, OR THE DURABILITY AND CORROSION RESISTANCE OF A FIELD APPLIED FINISH COAT OF PAINT OVER A SHOP PRIMER.

TOUCH-UP OF THESE MINOR ABRASIONS IS THE RESPONSIBILITY OF THE END CUSTOMER. ALL PRIMER SHOULD BE TOUCHED UP AS REQUIRED BEFORE ERECTION! – SEE R1-06 TITLED "SHOP PRIMED STEEL"

TEMPORARY SUPPORTS

TEMPORARY SUPPORTS, SUCH AS TEMPORARY GUYS, BRACES, FALSE WORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION WILL BE DETERMINED AND FURNISHED AND INSTALLED BY THE ERECTOR. THESE TEMPORARY SUPPORTS WILL SECURE THE STEEL FRAMING, OR ANY PARTLY ASSEMBLED STEEL FRAMING, AGAINST LOADS COMPARABLE IN INTENSITY TO THOSE FOR WHICH THE STRUCTURE WAS DESIGNED, RESULTING FROM WIND, SEISMIC FORCES AND ERECTION OPERATIONS, BUT NOT THE LOADS RESULTING FROM THE PERFORMANCE OF WORK BY OR THE ACTS OF OTHERS, NOR SUCH UNPREDICTABLE LOADS AS THOSE DUE TO TORNADO, EXPLOSION OR COLLISION. (SECT. 7.9.1 AISC CODE OF STANDARD PRACTICE, 9TH ED.).

R1-03

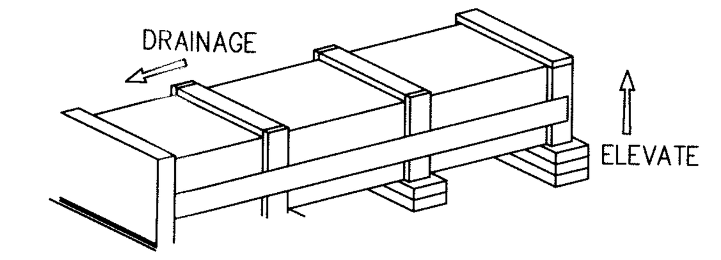
ROOF AND WALL PANELS

MANUFACTURER'S WALL AND ROOF PANELS INCLUDING COLOR COATED, GALVALUME & GALVANIZED, PROVIDE EXCELLENT SERVICE UNDER WIDELY VARIED CONDITIONS. ALL UNLOADING & ERECTION PERSONNEL SHOULD FULLY UNDERSTAND THAT THESE PANELS ARE QUALITY MERCHANDISE, WHICH MERITS CAUTIOUS CARE IN HANDLING.

UNDER NO CIRCUMSTANCES SHOULD PANELS BE HANDLED ROUGHLY. PACKAGES OF SHEETS SHOULD BE LIFTED OFF THE TRUCK WITH EXTREME CARE TAKEN TO INSURE THAT NO DAMAGE OCCURS TO ENDS OF THE SHEETS OR TO SIDE RIBS. THE PACKAGES SHOULD BE STORED OFF THE GROUND SUFFICIENTLY HIGH TO ALLOW AIR CIRCULATION UNDERNEATH THE PACKAGES. THIS AVOIDS GROUND MOISTURE & DETERS PEOPLE FROM WALKING ON THE PACKAGES. ONE END OF THE PACKAGE SHOULD ALWAYS BE ELEVATED TO ENCOURAGE DRAINAGE IN CASE OF RAIN. THE MFGR EXERCISES EXTREME CAUTION DURING FABRICATING AND SHIPPING OPERATIONS TO INSURE THAT ALL PANEL STOCK IS KEPT DRY. HOWEVER, DUE TO CLIMATIC CONDITIONS, WATER FORMED BY CONDENSATION OF HUMID AIR CAN BECOME TRAPPED BETWEEN STACKED SHEETS. WATER CAN ALSO BE TRAPPED BETWEEN THE STACKED SHEETS WHEN EXPOSED TO RAIN. THIS MAY CAUSE DISCOLORATION CAUSED BY TRAPPED MOISTURE. THE STAIN IS USUALLY SUPERFICIAL & HAS LITTLE EFFECT ON THE APPEARANCE OR SERVICE LIFE OF THE PANELS AS LONG AS IT IS NOT PERMITTED TO REMAIN ON THE PANELS. HOWEVER, MOISTURE IN CONTACT WITH THE SURFACE OF THE PANELS OVER AN EXTENDED PERIOD CAN SEVERELY ATTACK THE FINISH & REDUCE THE EFFECTIVE SERVICE LIFE. SEE R1-07 "DAMAGE FROM CONDENSATION OR TRAPPED WATER."

CAUTION: CARE SHOULD ALWAYS BE TAKEN WHEN WALKING ON PANELS. USE SAFETY LINES AND NETS WHEN NECESSARY! PANELS ARE SLIPPERY. WIPE DRY ANY MOISTURE OR SURFACE MATERIAL THAT HAS PUDDLED FROM BUNDLES STORED ON A SLOPE. DEW, FROST, OR OTHER FORMS OF MOISTURE GREATLY INCREASE THE SLIPPERINESS OF THE PANELS. ALWAYS ASSUME PANEL SURFACE IS SLIPPERY & ACT ACCORDINGLY. NEVER WALK OR STEP ON SKYLIGHTS OR TRANSLUCENT PANELS!

USE WOOD BLOCKING TO ELEVATE & SLOPE THE PANELS IN A MANNER THAT WILL ALLOW MOISTURE TO DRAIN. WOOD BLOCKING PLACED BETWEEN BUNDLES WILL PROVIDE ADDITIONAL AIR CIRCULATION. WHEN HANDLING OR UNCRATING THE PANELS, LIFT RATHER THAN SLIDE THEM APART. BURRED EDGES MAY SCRATCH THE COATED SURFACES WHEN SHEETS ARE SLID OVER ONE ANOTHER. NEVER ALLOW PANELS TO BE WALKED ON WHILE ON THE GROUND.



R1-04

DAMAGE DURING CONSTRUCTION

THE QUALITY OF WORKMANSHIP IN STEEL ERECTION, CONSTRUCTION PRACTICES, AND HANDLING METHODS USED DURING THE CONSTRUCTION OF THE METAL BUILDING CAN SIGNIFICANTLY AFFECT THE APPEARANCE AND PERFORMANCE OF THE BUILDING PANELS. PANEL DAMAGE DURING CONSTRUCTION CAN BE THE RESULT OF FAULTY INSTALLATION METHODS AND/OR CARELESSNESS.

OVERDRIVEN FASTENERS CAUSE INDENTATIONS OR SHALLOW POCKETS IN THE PANEL AROUND THE FASTENER HEAD. RAIN WATER OR CONDENSED MOISTURE COMBINED WITH ATMOSPHERIC POLLUTANTS (PRINCIPALLY SULFUR DIOXIDES) AND DIRT PARTICLES COLLECT IN THESE POCKETS. THE COMBINATION OF POLLUTANTS AND WATER CREATES ACID SOLUTIONS THAT WILL CAUSE CORROSION DAMAGE TO THE PANEL AND FASTENER. RAIN MAY WASH SOME POLLUTANTS AWAY, BUT MOISTURE IN THE FORM OF HIGH HUMIDITY CAN KEEP THESE AREAS WET AND CONTINUE THE PROBLEM. OVERDRIVING THE FASTENER ALSO FORCES THE SEALING WASHER FROM UNDER THE FASTENER HEAD CREATING A LEAK AT THIS POINT. PROPER TORQUE ADJUSTMENT OF THE SCREW GUN OR PREFERABLY THE USE OF A DEPTH GAUGE WILL ELIMINATE THE PROBLEM OF OVERDRIVEN FASTENERS.

IT IS EXTREMELY IMPORTANT THAT ALL DRILL SHAVINGS FROM THE INSTALLATION OF PANEL FASTENERS AND FILLINGS FROM THE SAW CUTTING OF PANELS BE REMOVED FROM THE PANEL SURFACE. CORROSION CAN OCCUR IN A MATTER OF HOURS WHEN THESE SHAVINGS OR FILLINGS ARE NOT REMOVED AND ARE ALLOWED TO COME IN CONTACT WITH WATER OR CONDENSED MOISTURE. WHEN PANELS ARE PRE-DRILLED OR CUT IN THE STACK PRIOR TO ERECTION ALL SHAVINGS OR FILLINGS MUST BE CLEANED FROM BOTH SIDES OF THE PANEL. TO PREVENT CORROSION OF THE PANEL BY THESE PARTICLES IT IS IMPERATIVE THAT THE ROOF BE SWEPT CLEAN AT LEAST DAILY AND CERTAINLY AT JOB COMPLETION. THE FINAL CLEANING OF THE ROOF SHOULD BE DONE PRIOR TO INSTALLING THE GUTTER SO THAT THE SHAVINGS ARE NOT DEPOSITED INTO THE GUTTER AND LEFT TO CORRODE. ANY OTHER FOREIGN OBJECTS OR DEBRIS LEFT BY CONSTRUCTION PERSONNEL SHOULD ALSO BE REMOVED FROM THE ROOF. DURING THE ERECTION OF THE ROOF AND THE INSTALLATION OF EQUIPMENT SUCH AS AIR CONDITIONING UNITS, ETC...

PERSONNEL WALKING ON THE PANELS CAN CAUSE DAMAGE. WORKMEN SHOULD STEP OR WALK IN THE BROAD FLAT AREAS OF THE PANEL AND AVOID STEPPING ON THE PANEL ENDS AND EDGES WHICH CAN BE BENT BY CARELESS HANDLING. IF THIS DAMAGE IS SEVERE, THE EDGES MUST BE STRAIGHTENED PRIOR TO ERECTION SINCE THE APPEARANCE AND/OR WEATHER TIGHTNESS OF THE PANEL COULD BE AFFECTED. DRAGGING ONE PANEL ACROSS ANOTHER CAN CUT OR ABRADE THE COATING CAUSING UNSIGHTLY MARKS ON THE PANEL SURFACE.

ATTEMPTS TO ERECT PANELS DURING WINDY CONDITIONS SHOULD BE AVOIDED TO PREVENT DAMAGE AND FOR SAFETY CONSIDERATIONS.

LEAVING DIRT PILED AGAINST THE EXTERIOR WALL PANELS AT THE FOUNDATION WILL CAUSE PANEL DAMAGE. THIS DIRT MAY BE WET OR AT LEAST WILL CONTAIN SOME MOISTURE. MUD MAY HAVE BEEN SPLASHED ONTO THE WALL DURING CONSTRUCTION. CORROSION DAMAGE MAY OCCUR WHERE THIS DIRT OR MUD CONTACTS THE PANELS. IN AREAS WHERE LIME STABILIZATION OF THE SOIL IS REQUIRED, CORROSION DAMAGE FROM THE SOIL'S CONTENT WILL BE ACCELERATED AND MOST LIKELY BE SEVERE. ALL DIRT MUST BE REMOVED FROM THE PANEL WALLS AT THE COMPLETION OF THE WORK. PRE-PAINTED PANELS MAY REQUIRE TOUCH-UP IF THE COATING HAS BEEN DAMAGED DURING HANDLING OR ERECTION.

THE APPEARANCE OF THE BLDG. MAY BE AFFECTED IF DAMAGED SPOTS OR SCRATCHES ARE LOCATED IN HIGHLY VISIBLE PLACES SUCH AS AROUND DOORS, WINDOWS, ETC... IF THE DAMAGE IS EXTENSIVE THEN REPLACEMENT OF THE ENTIRE PANEL SHOULD BE CONSIDERED.

R1-05

TYPES OF FINISHES

SHOP PRIMED STEEL
ALL STRUCTURAL MEMBERS OF THE METAL BUILDING SYSTEM NOT FABRICATED OF CORROSION RESISTANT MATERIAL OR PROTECTED BY A CORROSION RESISTANT COATING ARE PAINTED WITH ONE COAT OF SHOP PRIMER MEETING THE PERFORMANCE REQUIREMENTS OF SSPC PAINT SPECIFICATION NO. 15. THE COAT OF SHOP PRIMER IS INTENDED TO PROTECT THE STEEL FRAMING FOR ONLY A SHORT PERIOD OF EXPOSURE TO ORDINARY ATMOSPHERIC CONDITIONS. SHOP PRIMED STEEL WHICH IS STORED IN THE FIELD PENDING ERECTION SHOULD BE KEPT FREE OF THE GROUND AND SO POSITIONED AS TO MINIMIZE WATER-HOLDING POCKETS, DUST, MUD AND OTHER CONTAMINATION OF THE PRIMER FILM. REPAIRS OF DAMAGE TO PRIMED SURFACES AND/OR REMOVAL OF FOREIGN MATERIAL DUE TO IMPROPER FIELD STORAGE OR SITE CONDITIONS ARE NOT THE RESPONSIBILITY OF THE MANUFACTURER. THE MANUFACTURER IS NOT RESPONSIBLE FOR DETERIORATION OF THE SHOP COAT OF PRIMER OR CORROSION THAT MAY RESULT FROM EXPOSURE TO ATMOSPHERIC AND ENVIRONMENTAL CONDITIONS, NOR THE COMPATIBILITY OF THE PRIMER TO ANY FIELD APPLIED COATING. MINOR ABRASIONS TO THE SHOP COAT (INCLUDING GALVANIZING) CAUSED BY HANDLING, LOADING, SHIPPING UNLOADING AND ERECTION AFTER PAINTING OR GALVANIZING ARE UNAVOIDABLE. (MBMA 06 IV 4.2.4)

GALVALUME
GALVALUME IS THE TRADE NAME FOR A PATENTED STEEL SHEET & COIL PRODUCT HAVING A COATING OF CORROSION RESISTANT ALUMINUM-ZINC ALLOY. THE ALLOY MIXTURE IS BALANCED TO OBTAIN THE COATING THAT RETAINS THE CORROSION RESISTANCE & HEAT REFLECTIVITY OF ALUMINUM & THE SACRIFICAL ACTION OF GALVANIZED. THE BEST PROPERTIES OF BOTH ALUMINUM & ZINC ARE COMBINED IN THIS COATING & OFFER ADDED SERVICE LIFE FOR BUILDING PANELS.

PRE-PAINTED
USING GALVALUME STEEL AS A SUBSTRATE, PRE-PAINTED STEEL IS GIVEN AN ADDITIONAL RUST INHIBITOR PRIMER COAT. THIS PRIMER COAT FURTHER INCREASES THE CORROSION RESISTANCE. THESE COATINGS ARE APPLIED TO THE EXTERIOR SURFACE OF THE PANELS AND THE WASH COAT, DESIGNED ONLY FOR INTERIOR USE, IS APPLIED ON THE OPPOSITE SIDE. GALVALUME AND PRE-PAINTED STEEL CAN GIVE EXCELLENT SERVICE FOR MANY YEARS IF A FEW RULES CONCERNING THEIR CARE AND MAINTENANCE ARE OBSERVED. ALL OF THESE FINISHES ARE EQUALLY SUBJECT TO DAMAGE AND CORROSION WHEN CARE IS NOT PROVIDED.

PAINT AND COATING MAINTENANCE

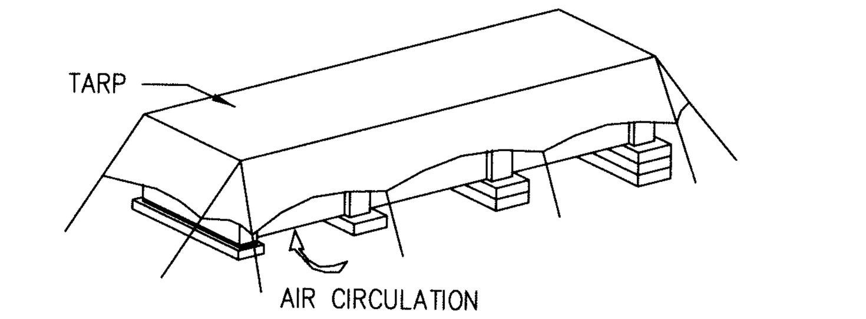
REMOVE SMUDGE MARKS FROM BARE GALVALUME®. FORMULA 409 HAS PROVEN TO BE SOMEWHAT EFFECTIVE. LIGHTLY RUB WITH A CLEAN CLOTH AND RINSE WITH WATER. DO NOT RUB MORE THAN REQUIRED TO REMOVE SMUDGE. NO PRODUCT WILL REMOVE ALL SMUDGE MARKS. REMOVE RUST STAINS. SOFT SCRUB WITHOUT BLEACH HAS PROVEN TO BE SOMEWHAT EFFECTIVE. LIGHTLY RUB WITH A SOFT CLOTH AND RINSE WITH WATER. DO NOT RUB MORE THAN REQUIRED TO REMOVE STAIN. NO PRODUCT WILL COMPLETELY REMOVE RUST STAINS. TO TOUCH-UP SCRATCHES IN PAINT (NOT TO BARE METAL), CLEAN AREA TO BE PAINTED WITH MILD DETERGENT. RINSE THOROUGHLY AND DRY. USING A SMALL ARTIST'S BRUSH, LIGHTLY APPLY THE MINIMAL AMOUNT OF COLOR MATCHED TOUCH-UP PAINT REQUIRED TO FILL/COVER THE SCRATCH. CONTACT BUILDING MANUFACTURER FOR ASSISTANCE WITH ORDERING/PURCHASING TOUCH-UP PAINT AS NEEDED.

R1-06

DAMAGE FROM CONDENSATION OR TRAPPED WATER

IT IS EXTREMELY IMPORTANT THAT THE PANELS BE MONITORED FOR EVIDENCE OF TRAPPED WATER OR MOISTURE CONDENSATION WHILE AWAITING ERECTION. HIGH HUMIDITY CONDITIONS WITH TEMPERATURE CYCLING WILL CAUSE CONDENSATION BETWEEN THE PANELS WITHIN THE BUNDLE. CONDENSATION CAN OCCUR FREQUENTLY NEAR THE SEA COAST OR OTHER LARGE BODIES OF WATER.

IF JOBSITE COVERS ARE USED, THEY SHOULD BE TIED AWAY FROM THE BUNDLE AT THE CORNERS TO ALLOW AIR CIRCULATION AROUND THE BUNDLE. THIS WILL HELP PREVENT MOISTURE EVAPORATING FROM THE GROUND OR BUILDING FLOOR FROM CONDENSING ON THE PANELS. PLASTIC OR OTHER IMPERMEABLE COVERS ARE NOT RECOMMENDED. IMMEDIATE ACTION IS REQUIRED IF THE PANELS ARE FOUND TO BE WET FROM ANY CAUSE. THE BUNDLES MUST BE OPENED AND EACH PANEL UNSTACKED AND THOROUGHLY DRIED ON BOTH SIDES. RE-STACKING THE PANELS AT A SLIGHT ANGLE TO EACH OTHER TO PREVENT NESTING WILL ALLOW AIR CIRCULATION AND ASSIST IN KEEPING THE PANELS DRY. IN SEVERE CONDITIONS LARGE FANS CAN BE USED TO CIRCULATE AIR BETWEEN THE UNSTACKED PANELS AND ACCELERATE DRYING. DAMAGE TO THE PANEL COATING OCCURS WHEN PANELS BECOME WET AND ARE ALLOWED TO STAY WET. DAMAGE CAN OCCUR TO NESTED PANELS WITHIN 24-48 HOURS. THIS DAMAGE SHOWS AS CORROSION AND DISCOLORATION OF THE PANEL SURFACE AND IS COMMONLY CALLED WET STORAGE STAIN, ZINC OXIDATION, OR "WHITE RUST".



A SOFTENING OF THE PAINT FILM CAN OCCUR WITH PRE-PAINTED STEEL UNDER WET STORAGE CONDITIONS AND THE DURABILITY OF THE PANEL FINISH SUBSTANTIALLY DECREASED. BARE GALVANIZED AND GALVALUME PANELS REACT MORE QUICKLY TO SURFACE OXIDATION SINCE THEY LACK THE ADDITIONAL PROTECTION OF PAINT. ZINC COATED OR GALVALUME PANELS UNDER NORMAL EXPOSURE FORM A ZINC OR ALUMINUM OXIDE FILM ON THEIR SURFACE ALLOWING A SLOW OXIDATION PROCESS CALLED "WEATHERING" TO OCCUR THAT INHIBITS FURTHER CORROSION. IN NESTED BUNDLES CONSTANT CONTACT OF THE PANELS WITH CONDENSED OR TRAPPED WATER PREVENTS THIS WEATHERING PROCESS.

RAPID OXIDATION OF THE ZINC OR ZINC ALUMINUM COATING CAN NOW OCCUR AND MAY LEAD TO "RED RUST" IN A SHORT TIME. IF DISCOLORATION OR STAINS ARE MINOR, A HOUSEHOLD CLEANER OF THE TYPE USED ON PORCELAIN SINKS AND BATHTUBS MAY BE USED TO REMOVE THE STAINS. WIRE BRUSHING OR USING ABRASIVE MATERIALS SHOULD BE AVOIDED SINCE SCRATCHING OR REMOVAL OF THE COATING COULD OCCUR. PANELS WITH SIGNIFICANT DAMAGE SHOULD BE REPLACED BY THE BUYER BEFORE ERECTION.

R1-07

SAFETY COMMITMENT

THE BUILDER/CONTRACTOR IS RESPONSIBLE FOR APPLYING AND OBSERVING ALL PERTINENT SAFETY RULES AND OSHA STANDARDS AS APPLICABLE.
THE BUILDING MANUFACTURER HAS A COMMITMENT TO MANUFACTURE QUALITY BUILDING COMPONENTS THAT CAN BE SAFELY ERECTED. HOWEVER, THE SAFETY COMMITMENT AND JOB SITE PRACTICES OF THE ERECTOR ARE BEYOND THE CONTROL OF THE BUILDING MANUFACTURER.
IT IS STRONGLY RECOMMENDED THAT SAFE WORKING CONDITIONS AND ACCIDENT PREVENTION PRACTICES BE THE TOP PRIORITY OF ANY JOB SITE.
LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, WHETHER STANDARD STATUTORY OR CUSTOMARY, SHOULD ALWAYS BE FOLLOWED TO HELP INSURE WORKER SAFETY.
MAKE CERTAIN ALL EMPLOYEES KNOW THE SAFEST AND MOST PRODUCTIVE WAY OF ERECTING A BUILDING. EMERGENCY PROCEDURES SHOULD BE KNOWN TO ALL EMPLOYEES. DAILY MEETINGS HIGHLIGHTING SAFETY PROCEDURES ARE ALSO RECOMMENDED. THE USE OF HARD HATS, RUBBER SOLE SHOES FOR ROOF WORK, PROPER EQUIPMENT FOR HANDLING MATERIAL AND SAFETY NETS WHERE APPLICABLE, ARE RECOMMENDED.
FOR PURPOSES OF DETERMINING LIFT REQUIREMENTS, NO BUNDLE SUPPLIED BY THE MANUFACTURER WILL EXCEED 4,000 POUNDS. FOR FURTHER INFORMATION ALSO REFERENCE THE BILL OF MATERIALS FOR INDIVIDUAL MEMBER WEIGHTS OF OTHER STRUCTURAL MEMBERS. IF ADDITIONAL INFORMATION IS REQUIRED CONTACT THE FIELD SERVICE DEPARTMENT.

ICE AND SNOW REMOVAL

EXCESSIVE ICE AND SNOW SHOULD BE REMOVED FROM ROOF IMMEDIATELY TO PREVENT DAMAGE TO ROOF AND POSSIBLE COLLAPSE. DO NOT USE METAL TOOLS TO REMOVE THE ICE OR SNOW AS THIS CAN DAMAGE THE PAINT AND/OR GALVALUME COATINGS. ALSO, BE CAREFUL AROUND PLUMBING PIPES AND FLASHINGS.
BE EXTREMELY CAREFUL IF YOUR ROOF HAS LIGHT TRANSMITTING PANELS. THESE PANELS WILL NOT SUPPORT A PERSON'S WEIGHT AND WILL BE DIFFICULT OR IMPOSSIBLE TO SEE IF THEY ARE COVERED WITH ICE AND SNOW. SEE 2002 MBMA LOW-RISE BUILDING SYSTEMS MANUAL APPENDIX A8 FOR DETAILS ON SNOW REMOVAL PROCEDURES. THESE PROCEDURES SHOULD COMMENCE WHEN HALF OF THE DESIGN ROOF SNOW LOAD SHOWN ON THIS SHEET IS REALIZED.

DEBRIS REMOVAL

ANY FOREIGN DEBRIS SUCH AS SAWDUST, DIRT, LEAVES, ANIMAL DROPPINGS, ETC. WILL CAUSE CORROSION OF THE ROOF, GUTTERS, TRIM, ETC. IF LEFT ON BUILDING SURFACE FOR A LONG ENOUGH TIME. THE ROOF SHOULD BE PERIODICALLY INSPECTED FOR SUCH CONDITIONS AND IF FOUND, THEY SHOULD BE RECTIFIED IN A MANNER CONSISTENT WITH THESE ROOF MAINTENANCE GUIDELINES. NEVER ALLOW TREATED LUMBER OR CONCRETE/MORTAR/GROUT TO COME IN CONTACT WITH ROOF PANELS, ESPECIALLY GALVALUME®, FOR EXTENDED PERIODS OF TIME.

PERIODIC INSPECTION

ALL HIGH-STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED FOR TIGHTNESS, PARTICULARLY IN CRANE BUILDINGS AND AFTER ANY SEISMIC ACTIVITY OR WIND ACTIVITY. THE CRANE MANUFACTURER WILL SPECIFY A MINIMUM PERIOD BUT IT SHOULD NOT EXCEED 2 YEARS.

DRAINAGE

* KEEP ROOF FREE OF DEBRIS AND KEEP DEBRIS OUT OF GUTTER TO ALLOW WATER TO QUICKLY DRAIN FROM ROOF.
* DO NOT USE WOOD BLOCKING TO HOLD EQUIPMENT OFF OF PANEL SEAMS. THIS BLOCKS THE FLOW OF WATER AND HOLDS MOISTURE.
* DO NOT ALLOW ROOFTOP AC UNITS OR EVAPORATIVE COOLERS TO DRAIN ONTO THE ROOF.
* ANYTHING THAT TRAPS OR HOLDS MOISTURE ON A ROOF WILL CAUSE PREMATURE CORROSION.

R1-08

ROOF MAINTENANCE GUIDELINES

* INSPECT ROOF FOR DAMAGE AFTER HEAVY STORMS.
* INSPECT AND RESEAL AS NECESSARY ALL ROOF CURBS AND OTHER PENETRATIONS WITH URETHANE SEALANT.
* ALWAYS GET MANUFACTURER APPROVAL BEFORE MAKING ANY MODIFICATIONS TO THE ROOF.
* REPAINT ANY AREAS THAT ARE SUSCEPTIBLE TO RUST AS REQUIRED.
* WHEN PERFORMING ROOF MAINTENANCE, ALWAYS TAKE THE FOLLOWING PRECAUTIONS:
  * USE FALL PROTECTION AND OTHER SAFETY EQUIPMENT AS REQUIRED.
  * DO NOT WALK ON ROOF FLASHINGS SUCH AS GUTTER, RAKE, HIP OR RIDGE FLASH.
  * DO NOT WALK ON LIGHT TRANSMITTING PANELS (LTPS). THEY WILL NOT SUPPORT A PERSON'S WEIGHT.
  * GUARD ALL LTPS AND ROOF OPENINGS.
* STEP ONLY IN THE PANEL FLAT DIRECTLY ON OR IN CLOSE PROXIMITY TO A SUPPORTING ROOF STRUCTURAL.
* AFTER OTHER TRADES HAVE BEEN ON THE ROOF FOR ANY REASON. INSPECT THE ROOF FOR DAMAGE CAUSED BY WORKERS INCLUDING CHEMICAL OR SOLVENT SPILLS, SCRATCHES IN THE PAINT OR GALVALUME R COATING, EXCESSIVE FOOT TRAFFIC AND PUNCTURES. MAKE SURE THAT ANY DEBRIS OR SCRAP LEFT BEHIND BY THE WORKERS IS REMOVED FROM THE ROOF IMMEDIATELY. AVOID USING CUTOFF SAWS AND WELDING EQUIPMENT OVER THE ROOF. IN CASES WHERE THIS IS NOT POSSIBLE, THE ROOF MUST ADEQUATELY PROTECTED.

FOOT TRAFFIC

KEEP FOOT TRAFFIC TO A MINIMUM. HEAVY FOOT TRAFFIC CAN CAUSE PONDING ON LOW PITCHED ROOFS. THIS IS PARTICULARLY TRUE JUST UPSLOPE FROM THE EAVE AND AT ENDLAPS. ALWAYS WALK IN THE FLAT OF THE PANEL NEAR A SUPPORTING ROOF STRUCTURAL. DO NOT WALK ON TRIM OR IN GUTTERS. ON BARE GALVALUME® ROOFS, EXCESSIVE FOOT TRAFFIC MAY CAUSE BLACK BURNISH MARKS. IF REGULAR FOOT TRAFFIC IS PLANNED FOR A ROOF, PROVISIONS SHOULD BE MADE FOR A PROPERLY DESIGNED AND INSTALLED ROOF WALKWAY SYSTEM. IN ORDER TO LIMIT ACCESS TO THE ROOF, ROOF HATCHES OR ACCESS LADDERS SHOULD BE LOCKED AT ALL TIMES. A SIGN SHOULD BE POSTED AT THE POINT OF ACCESS, STATING THAT ONLY AUTHORIZED PERSONNEL ARE ALLOWED ONTO THE ROOF. IN ADDITION, A LOG BOOK SHOULD BE KEPT OF ALL VISITS TO THE ROOF AND THE REASON FOR SUCH VISITS.

DISSIMILAR METALS

NEVER ALLOW YOUR ROOF TO COME IN CONTACT WITH, OR WATER RUNOFF FROM, ANY DISSIMILAR METAL INCLUDING BUT NOT LIMITED TO: COPPER, LEAD OR GRAPHITE. THIS INCLUDES COPPER AND ARSENIC SALTS USED IN TREATED LUMBER, CALCIUM USED IN CONCRETE, MORTAR AND GROUT.

R1-09

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer:
AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

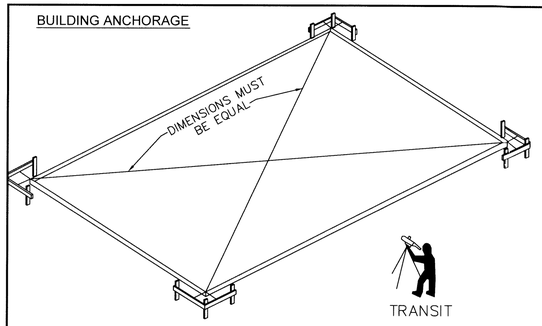
Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14-B-54756-1
Sheet Number:	R1 of 13

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only.The undersigned engineer is not the overall engineer of record for this project.

BUILDING ANCHORAGE



1. To determine that the foundation is square, measure diagonal dimensions to be sure they are of equal length.
2. To determine that the foundation is level, set up a transit or level and use a level rod to obtain the elevation at all columns.
3. Carefully check the location of all anchor rods against the Anchor Rod Setting Plan furnished by the Manufacturer. All dimensions must be identical to assure a proper start-up.

AISC CODE OF STANDARD PRACTICE TOLERANCES FOR SETTING ANCHOR RODS

7.5.1. Anchor rods, foundation bolts and other embedded items shall be set by the owner's designated representative for construction in accordance with embedment drawings that have been approved by the owner's designated representatives for design and construction. The variation in location of these items from the dimensions shown in the embedment drawings shall be as follows:

(a) The variation in dimension between the centers of any two anchor rods within an anchor-rod group shall be equal to or less than 1/8 in. [3 mm].
(b) The variation in dimension between the centers of adjacent anchor-rod groups shall be equal to or less than 1/4 in. [6 mm].
(c) The variation in elevation of the tops of anchor rods shall be equal to or less than plus or minus 1/2 in. [13 mm].
(d) The accumulated variation in dimension between centers of the anchor-rod groups along the column line through multiple anchor-rod groups shall be equal to or less than 1/4 in. per 100 ft [2 mm per 10000 mm], but not to exceed a total of 1 in. [25 mm]
(e) The variation in dimension from center of any anchor-rod group to the column line through that group shall be equal to or less than 1/4 in. [6 mm].

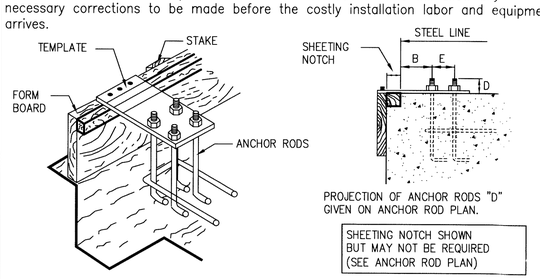
The tolerances that are specified in (b), (c) and (d) shall apply to offset dimensions shown in the structural design drawings, measured parallel and perpendicular to the nearest column line, for individual columns that are shown in the structural design drawings as offset from column lines.

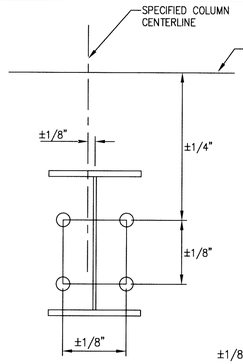
7.5.2. Unless otherwise specified in the contract documents, anchor rods shall be set with their longitudinal axis perpendicular to the theoretical bearing surface.

7.5.3. Embedded items and connection materials that are part of the work of other trades, but that will receive structural steel, shall be located and set by the owner's designated representative for construction in accordance with an approved embedment drawing. The variation in location of these items shall be limited to a magnitude that is consistent with the tolerances that are specified in Section 7.13 for the erection of the structural steel.

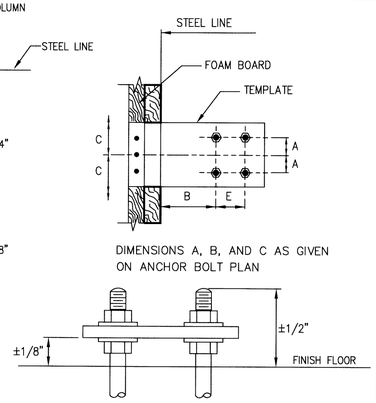
7.5.4. All work performed by the owner's designated representative for construction shall be completed so as not to delay or interfere with the work of the fabricator and the erector. The owner's designated representative for construction shall conduct a survey of the as-built locations of anchor rods, foundation bolts and other embedded items, and shall verify that all items covered in Section 7.5 meet the corresponding tolerances. When corrective action is necessary, the owner's designated representative for construction shall obtain the guidance and approval of the owner's designated representative for design.

It is extremely important that anchor bolts be placed accurately in accordance with the Anchor Rod Setting Plan. All anchor rods should be held in place with a template or similar means, so that they will remain plumb and in correct location during placing of the concrete. A final check should be made after the completion of the concrete work and prior to the steel installation. This will allow any necessary corrections to be made before the costly installation labor and equipment arrives.



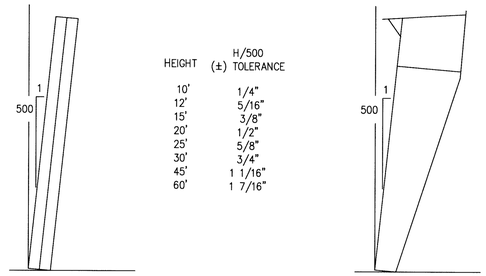


ANCHOR ROD SETTING TOLERANCES



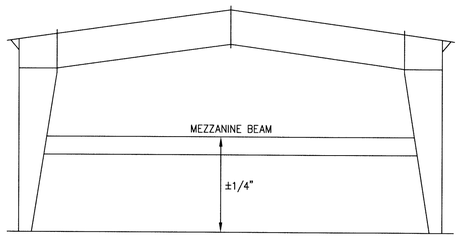
BASE PLATE AND ANCHOR ROD TOLERANCES

FIELD TOLERANCES

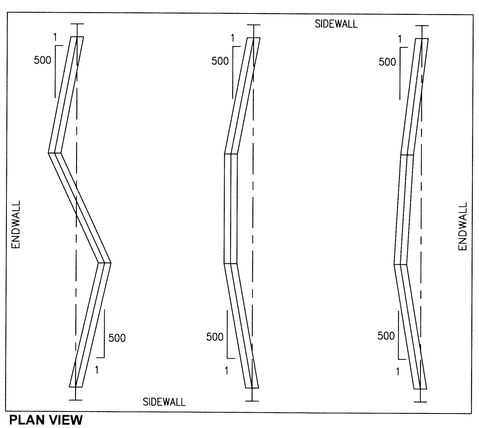


HEIGHT	H/500 (±) TOLERANCE
10'	1/4"
12'	5/16"
15'	3/8"
20'	1/2"
25'	5/8"
30'	3/4"
45'	1 1/16"
60'	1 7/16"

COLUMN ALIGNMENT TOLERANCES



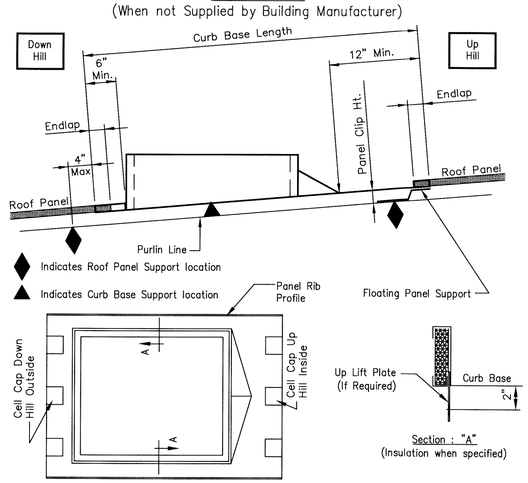
MEZZANINE BEAM HEIGHT TOLERANCE



PLAN VIEW

ALIGNMENT TOLERANCE FOR MEMBERS WITH FIELD SPLICES

ROOF CURBS
(When not Supplied by Building Manufacturer)

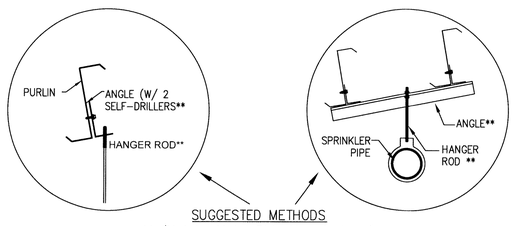


The curb details shown illustrate the building manufacturers recomended curb style and installation method. It is the erector / installer's responsibility to provide the proper curb style and install them in accordance with the procedures established by these details. Failure by the erector / installer to follow these recommendations may result in the curbs damaging the roof system or excluded from warranties.

All roof curbs to be:

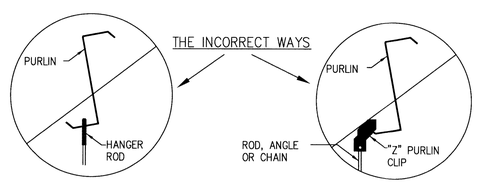
1. .080 Aluminum or 18ga. Stainless (No Galvalume/No Galvanized)
2. Panel rib to rib installation (No flat skirt or lay-over Curbs)
3. Installed over low end / under high end application for water flow at panel splice
4. Up lift prevention for clip applied roof systems are required if:
   a. Wind load exceeds 110 mph or
   b. Curb base crosses a purlin
5. Supported on (4) four side by primary or secondary framing 6. Max Single Curb weight Recommend = 1500#

SUGGESTED METHOD OF PURLIN ATTACHMENT (FOR BLDG ACCESSORIES)

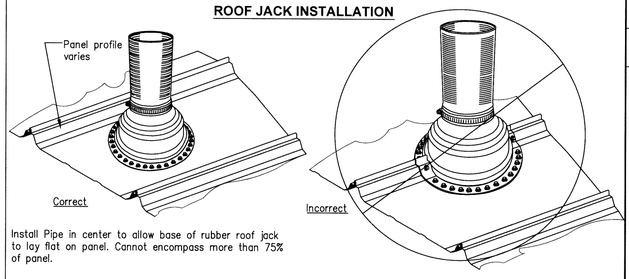


** (Not by Metal Bldg Manufacturer)

An angle is self-tapped to the web of the purlin to catch hanger rod. This method does not preclude other forms of attachment to the purlin web.
The total hanger load shall not exceed the design collateral load for the building.
A sample calculation is shown below:
5' (purlin spacing) x 5' (hanger spacing) x 6 psf (collateral load) = 150 lbs.
See cover sheet for design collateral load for this building.
Note: If this building is designed for 0 psf collateral load, then adding any suspended system (ie. duct work, piping, lights, ceilings, etc.) will correspondingly reduce the design live load.



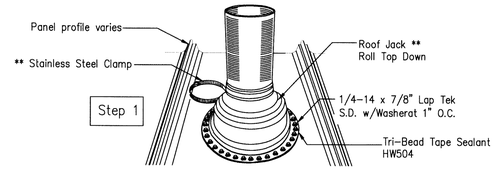
ROOF JACK INSTALLATION

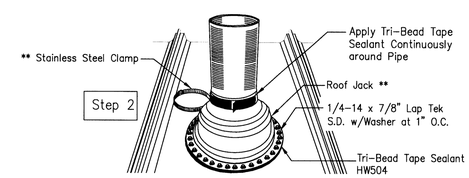


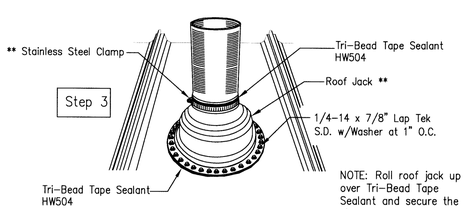
Install Pipe in center to allow base of rubber roof jack to lay flat on panel. Cannot encompass more than 75% of panel.

- ☐ Do not use galvanized roof jacks, lead hats or other residential grade roof jacks. These roof jacks do not have 20-year service life and, in the case of lead hats, will cause galvanic corrosion of the roof panels.
- ☐ Use EPDM rubber roof jacks with an integral aluminum band bonded into the perimeter of the base. For high temperature applications (200-400 degrees Fahrenheit) use silicone rubber roof jacks. Retrofit rubber roof jacks are available for applications in which the top of the pipe is inaccessible, eliminating the possibility of sliding the roof jack over the top of the pipe.
- ☐ Do not use tube caulk/silicone to seal roof jack to the roof panels. Use only tape sealant as supplied by Metal Bldg Manufacturer. Fasten the roof jack to the roof panels with 1/4"-14 x 7/8" Lap Tek Stitch Screws at 1" on center around base of roof jack.
- ☐ Roll down the top of the roof jack and apply tape sealant continuously around the exposed portion of the pipe. Roll the top of the roof jack back over the tape sealant. Apply the stainless steel clamp over top of roof jack and firmly tighten to form a secure compression seal.
- ☐ Do not install a pipe through the standing seam of the roof panel. Keep pipe penetration in center of panel to allow the base of the rubber roof jack to seal to the pan of the panel.
  If a pipe must be installed through a panel seam, or if the pipe diameter is so large to block the flow of water down the roof panel, you must install a "pipe curb" into the roof and then seal the pipe curb with rubber roof jack. For pipes in which top cannot be accessed, a two-piece pipe curb is available.
- ☐ In Northern climates, protect all pipe penetrations from moving ice or snow with a snow retention system immediately up slope from the pipe.

ROOF JACK INSTALLATION
(Not by Metal Bldg Manufacturer) **







Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
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Project Name & Location:
JINDAL SAW USA
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BAY ST. LOUIS MS 39520

Customer:
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DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14-B-54756-1
Sheet Number:	R2 of 13

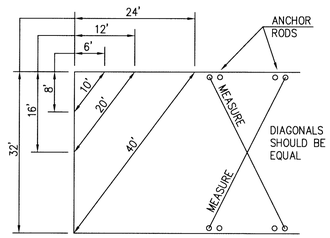
The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

PRE-ERECTION NOTES:

The following notes, procedures and suggested recommendations are important parts of the pre-erection process.

1.) Prior to the time the erection crew arrives, a responsible person should check the job site for foundation readiness, square, and accuracy and Anchor Rod size and location.

The drawing shown below indicates a method which may be used to check the foundation and bolts for square.



Measure along adjacent sides of foundation using a pair of dimensions shown. If the diagonal distance between these points is as noted, the corner is square. Diagonal measurements between opposite Anchor Rods will indicate if these bolts are set square.

2.) When unloading the building, carefully check off each item from the packing list. Bundles and boxes will have a list attached indicating the contents.

3.) Unload and layout the building columns on the foundation.

4.) Unload the rafters onto the foundation so that they can be erected from whichever end of the building you wish to start. Your crane will move from one end of the building to the other while standing columns and hanging rafters .

5.) Layout the girts and purlins on dunnage or wood blocking around the foundation as near as possible to where they will be installed.

6.) Unload and place trim crates out of the way, since these will be the last required.

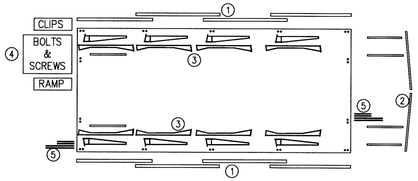
7.) Unload and place panels and insulation out of the way.

NOTE: In extremely cold conditions, the vinyl facing on insulation will become brittle, requiring very careful handling.

8.) Avoid lifting panel stacks with cables, chains or other devices which could damage the panel. Upon unloading, and every morning thereafter, inspect he panel bundles for moisture between the panels. This is especially important with galvalume or galvanized panels. The panel finish must be protected at all times before and during erection to preserve the appearance and function of the panels.

9.) All hardware boxes should be protected from theft and moisture, especially items such as tube caulking and locksets. Store mastic away from heat.

LAYOUT OF BUILDING COMPONENT



1. Girts, Eave Struts and Purlins
2. End Frames and Endpost
3. Main Frames
4. Clips, Bolts, Screws, ETC.
5. Endwall Girts

1.) Layout primary and secondary framing around the slab as shown.

2.) Place components and crates on the slab or on wood blocking to prevent contact with the ground.

3.) Block one end of components higher than other end to allow drainage of rain water.

4.) Leave one end of the building open for erection equipment access.

5.) Construct temporary ramp of timbers from grade to slab to prevent damage to concrete edge from equipment traffic.

6.) Install clips and flange braces onto columns and rafters before these members are in the air. Clip and flange brace locations are shown on erection drawings.

GENERAL ERECTION NOTES

1.) All clips, flange braces, bolts, bracing systems, ETC. must be installed as shown on erection drawings.

2.) It is extremely important, especially during construction, that panels at the eaves, rakes and ridges be kept secure.

3.) Column bases must not be lag screwed or "RED HEADED" to concrete unless specified on erection drawings for the building.

4.) Tighten column wind brace rods/cables (exterior and interior) before tightening roof rods/cables. Roof rods/cables are tightened from eave to peak. 5.) High strength bolts (A325) must be used where specified.

TEMPORARY CONSTRUCTION BRACING

1.) It is the responsibility of the erector to maintain stability of the structure during all stages of erection, particularly when left overnight.

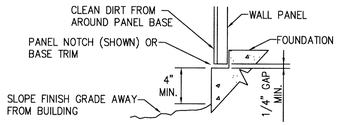
2.) Temporary supports, such as temporary guys, braces or other elements shall be the total and complete responsibility of the erector. The temporary supports required shall be determined and furnished by the erector.

3.) Temporary construction supports shall be provided wherever necessary to accommodate all construction loads to which the structure may be subjected, left in place as long as may be required for safety.

PANEL CAUTIONS AND NOTES

To minimize potential of corrosive action at the bottom edge of wall panels, the contractor must assure that the following procedures are followed:

1.) The concrete foundation should be cured for a minimum of seven (7) days before wall panels are installed. (un-cured concrete is highly alkaline and metal panels can undergo varying degrees of corrosive attack when in direct contact with the concrete.) After the first week of the curing cycle, the reaction between metallic coatings on steel and the concrete is essentially halted.



2.) Top of finish grade at building to be a minimum of four (4) inches below bottom of panel.

3.) Finish grade is to slope away from building to insure proper drainage.

4.) Upon completion of finish grading, all dirt is to be cleaned from around base of wall panel where it may have collected in panel notch or on base trim.

FASTENER INSTALLATION

Correct fastener installation is one of the most critical steps when installing roof/wall panels. Drive the fastener in until it is tight and the washer is firmly seated. Do not overdrive fasteners. A slight extrusion of neoprene around the washer is a good visual tightness check. Always use the proper tool to install fasteners. A fastener driver (screw gun) with a RPM of 1700-2000 should be used for self-drilling screws. A 500-600 RPM fastener driver should be used for self-tapping screws. Discard worn sockets, these can cause the fastener to wobble during installation.

CORRECT DEGREE OF TIGHTNESS NOTE SLIGHT CIRCLE OF SEALANT

TOO TIGHT SEALANT SQUEEZED TOO THIN EXTRUDES FAR BEYOND FASTENER HEAD

TOO LOOSE SEALANT IS NOT COMPRESSED TO FORM SEAL

NOTE: Always remove metal filings from surface of panels at the end of each work period. Rusting filings can destroy the paint finish and void any warranty.

MASTIC SEALANT

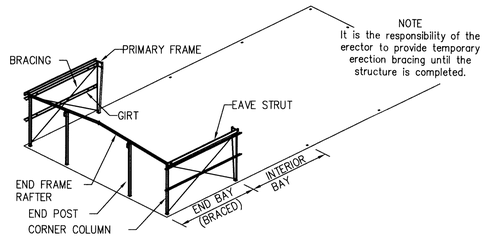
Proper mastic application is critical to the weather tightness of a building. Mastic should not be stretched when installed. Apply only to clean, dry surfaces. Keep only enough mastic on the roof that can be installed in a day. During warm weather, store mastic in a cool dry place. During cold weather (below 60°) mastic must be kept warm (60°-90°) until application. After mastic has been applied, keep protective paper in place until panel is ready to be installed.

IMPORTANT NOTE:

All details, recommendations and suggestions contained in the ERECTION GUIDE portion of this drawings set are for general guidelines only, and not meant to be all-inclusive. Industry accepted installation practices with regard to all areas not specifically discussed in this section should be followed. Only experienced, knowledgeable installers familiar with accepted practices should be used to assure a quality project.

It is emphasized that the Manufacturer is only a manufacturer of metal building components and is not engaged in the installation of its products. Opinions expressed by the Manufacturer about installation practices noted in the ERECTION GUIDE are intended to represent only a guide as to the sequencing and how the components could be assembled to create a building. Both the quality and safety of installation and the ultimate customer satisfaction with the completed building are determined by the experience, expertise, and skills of the installation crews, as well as the equipment available for handling the materials. Actual installation operations, techniques and site conditions are beyond the Manufacturers control.

STEP 1: ERECT FIRST BAY WALL FRAMING



1A: Determine from erection drawings furnished with the building the location of the first braced bay. Framing for this bay will be erected first.

1B: Stand adjacent primary frame column and corner column over the anchor rods. Shim or chip out under the base plate if required to ensure that the base is level, at the correct elevation, and is in full contact with the foundation. Plumb and align the columns and install washers and nuts onto the Anchor Rods.

NOTE: The end frame may be a bearing frame with the rafter supported by end posts, or a rigid frame with the rafter self-supporting, and not attached to the end posts. The procedure shown is for a bearing frame. If the building has a rigid end frame, it is erected the same as interior frames as described in steps 1 and 2.

1C: Attach wall girts to the primary frame column and corner column. Bolt girts to the corner column with two bolts. Bolt girt to primary frame column with one bolt through the column flange and secure bolt with sub-nut (see detail on erection drawings).

1D: Install the eave strut by bolting to the top of the columns. Refer to the erection drawings and attach column flange brace where shown. Flange braces may be required on one or both sides of the columns. If a flange brace connects to a girt in the adjacent bay, that brace will be bolted to the girt after the adjacent bay girts are installed.

NOTE: As wall girts are installed around the building, framing for factory located framed openings and accessory framing to which the girts attach should be installed. Field located accessory framing may be installed at the same time as girts or at a later time.

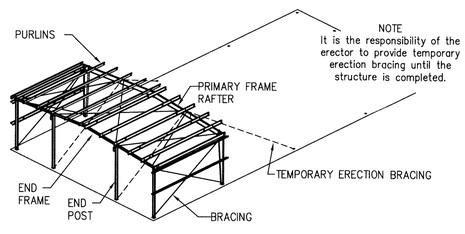
1E: Install wall bracing systems (rods, cables, knee bracing, portal bracing) at this time but do not tighten completely until the bay is plumbed.

1F: Repeat steps 1B thru 1E for wall framing on the opposite side of the building.

1G: Attach clips to the end posts and stand these posts over the Anchor Rods. Follow the procedure as described for corner columns in step 1B.

1H: Bolt required clips and flange braces to the end frame rafter sections and lift into place atop the end posts. Bolt rafter sections to corner column and end post cap plates. Bolt rafter sections together at peak.

STEP 2: ERECT FIRST BAY ROOF FRAMING



CAUTION

Until rafters are bolted in place with purlins and flange braces installed, they are easily damaged by incorrect or careless handling procedures. Use extreme caution when lifting rafters. Two booms should be used to lift any pinched rafter section 80 feet or more in length.

2A: Bolt primary frame rafter together at peak connection (unless rafter length requires lifting in sections). Attach the required clips and flange braces to the rafter before lifting since these items are more easily installed on the ground. Lift rafter into place between sidewall columns and install bolts in rafter to column knee connections.

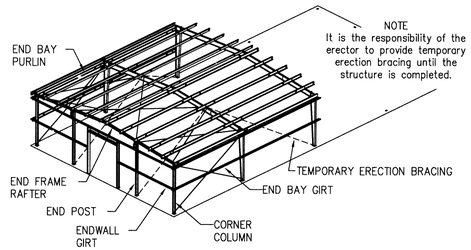
2B: Install end bay purlins from end frame rafter to the first interior frame rafter. The end bay purlins will overlap the interior bay purlins at the frame as described in step 1C. Complete flange brace connection to purlins.

2C: Install roof bracing systems but do not tighten completely until the bay is plumbed.

2D: Plumb and square the first bay. After alignment, tighten wall bracing first and the roof bracing working from eave to peak. Tighten any remaining bolts.

Plumbing and aligning a total structural system begins with the first braced bay and continues through completion. Accurate alignment of the first bay is essential for correct alignment of succeeding bays. The installer is responsible for choosing the best method suited for plumbing and aligning the structural system.

STEP 3: ERECT ENDWALL GIRTS AND FIRST INTERIOR BAY



3A: After end frame is plumb and square, install endwall girts and flange braces for end post if required.

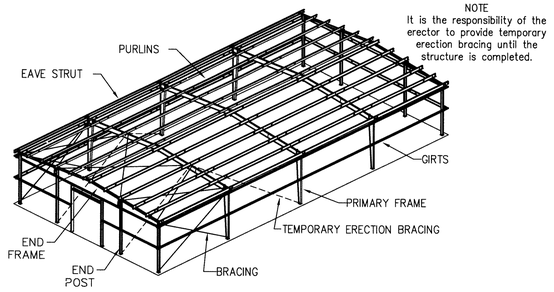
3B: Attacn wall girts to the primary frame columns (see step 1C).

3C: Install eave struts (see step 1D).

3D: Attach roof purlins for this bay to the two rafters. Purlins will bolt to the rafter flange in the same manner as girts to column flanges (see step 1C). Connect flange braces to purlins.

3E: Check alignment, plumb and square the two bays just erected. Tighten all bolts and bracing.

STEP 4: ERECT REMAINING STRUCTURAL FRAMING



Starting at the opposite end of the first bay erected, install the remaining interior frames, girts, purlins, eave struts, bracing, end frames and end posts using the procedures described in the preceding steps. Be sure all wall girts, roof purlins and flange braces as shown on the erection drawings are installed. Constant checks should be made to ensure the building is square, plumb and aligned.

All X-Bracing should be checked that it is installed to a taut condition with all slack removed. Do not tighten beyond this state.

Revision	Date	Description	By	Ck'd

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Project Name & Location:
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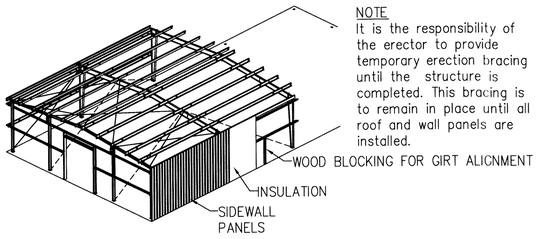
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14-B-54756-1
Sheet Number:	R3 of 13

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

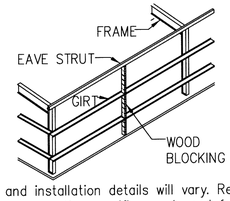
STEP 5: INSTALL SIDEWALL PANELS



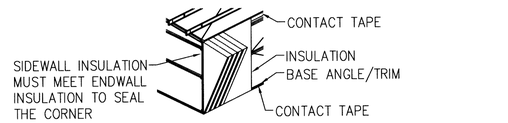
5A: Before installing wall panels, the girts must be aligned to a level position so that there is no visible sag. This should be done directly ahead of panel installation.

Girt leveling may be accomplished by standing a section of gable angle vertically against the outside girt flanges at approximate mid-bay location. When girts are level, attach the girt flanges to the angle with vise grip pliers or temporary screws. Wood blocking cut to fit the spaces may also be used for alignment.

NOTE: Temporary girt blocking is not recommended on concealed fastener panels. The removal of the blocks after panel installation can cause oil canning.

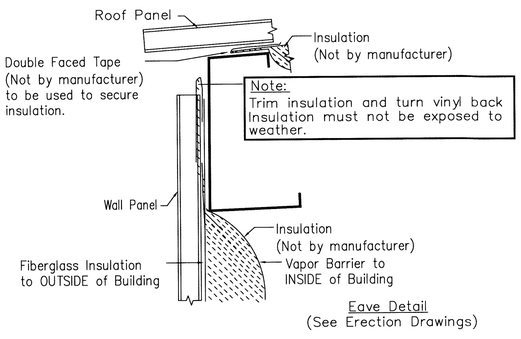


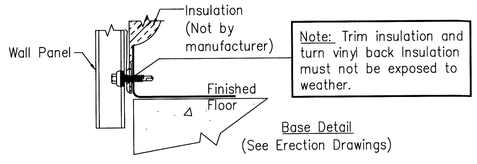
NOTE:
Wall panel type and installation details will vary. Refer to the erection drawings and details for the specific panel used for your building.



5B: If walls are to be insulated, place a continuous run of contact tape along the eave strut and base member.

NOTE:
At the base, cut off the insulation a minimum of 1/2" above the bottom of the wall panel. This will prevent the insulation from hanging below the wall panel and wicking moisture.





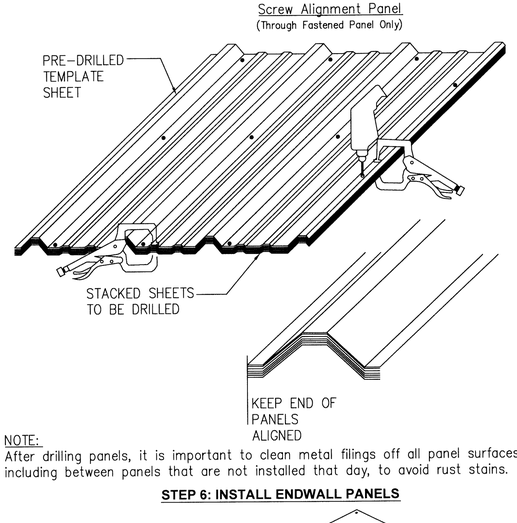
Starting at a building corner, attach the first piece of blanket insulation to the contact tape on the eave strut. Pull tight and adhere to tape at the base. It is recommended that insulation not be installed more than 6 feet ahead of panels.

5C: Sidewall panels should be installed so that the panel sidelap is in a direction away from the prevailing wind. (refer to appropriate lap detail included with erection drawings.)

5D: Install remaining sidewall insulation and panels, being careful to maintain correct panel coverage. It is suggested that the foundation be marked in increments of panel width to allow visual checking of panel coverage as installation progresses.

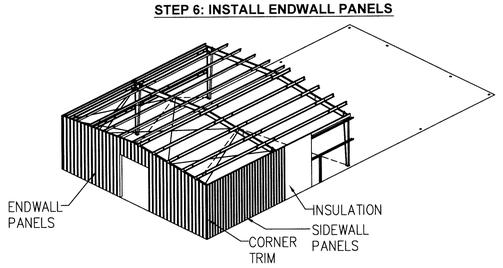
NOTE: Check periodically to ensure that all panels are aligned and plumb.

5E: At the finishing corner of a sidewall, the last panel may required additional lap or trimming for installation of corner trim refer to the details in the erection drawings.



NOTE:
After drilling panels, it is important to clean metal filings off all panel surfaces, including between panels that are not installed that day, to avoid rust stains.

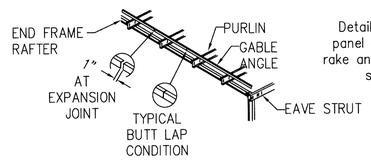
STEP 6: INSTALL ENDWALL PANELS



6A: Install gable angles/supports onto the ends of purlins and eave struts. This angle is to butt-up to each other or is spliced as required except at expansion joints where a one inch gap is maintained between ends of adjacent sections to allow for expansion.

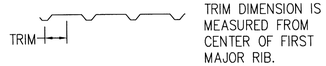
Gable angle splices may occur on or between purlins and the angle must be attached to each purlin and the eave strut.

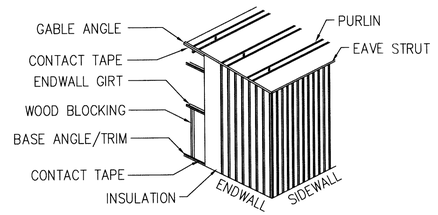
NOTE: Wall panel type and installation details will vary. Refer to the erection drawings and details for the specific panel used for your building.



NOTE
Detail shown for ribbed roof panel only. For standing seam rake and gable angle installation, see erection details.

6B: See erection drawings sheeting layouts for panel starting dimensions, panel trim locations, and lap locations.





6C: Align and level girts on endwall.

6D: If the walls are to be insulated, place a continuous run of contact tape along the gable angle and base member. Starting at the corner of the endwall, attach the first piece of insulation to the contact tape on the gable angle, pull tight and adhere to tape at the base. Cut off excess insulation. It is recommended that insulation not be installed more than 6 feet ahead of panels.

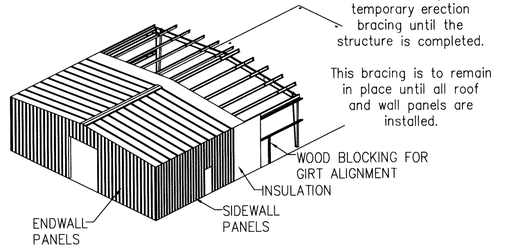
NOTE:
At the base cut off the insulation a minimum of 1/2 inch above the bottom of the wall panel. This will prevent the insulation from hanging below the wall panel and wicking moisture.

6E: Start at the corner, trim panel (if required) and set in place. Refer to corner details in the erection drawings for the panel starting distance from the corner, When the panel is located and plumb, install fasteners.

6F: Install remaining endwall insulation and panels, being careful to maintain the correct panel coverage as suggested in step 5D.

6G: Install corner trim.

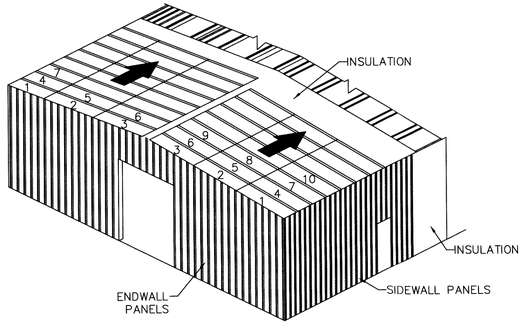
STEP 7: INSTALL ROOF PANELS



7A: Install eave trim over top of sidewall panels and eave struts with fasteners per erection drawings eave detail.

7B: If the roof is insulated, place a continuous run of contact tape along top of eave struts at both sidewalls. Lay a starter roll of blanket insulation from eave to eave across roof and secure to contact tape. (refer to packing list for width of insulation starter roll). It is recommended that insulation be installed no more than 6 feet ahead of panels.

NOTE: For **PBR** roofs with a ridge panel, it is recommended that both sides of the ridge of a building be sheeted simultaneously. This will keep the insulation covered for the maximum amount of time and the panel ribs can be kept in proper alignment for the ridge panel. This is critical on the "PBR" panels so that the ridge caps can be properly installed. Check for proper coverage as the sheeting progresses. Note panel-sheeting sequence below!



STEP 7: INSTALL ROOF PANELS (Con't)

7C: Install the first run of roof panels across the building from eave to eave, or eave to ridge. To allow proper installation of rake trim, the starting location for the first panel must be as shown in rake details included with the erection drawings. When the first run is properly located and aligned with the correct endlaps and eave overhang, fasten to purlins. Roof panels should be installed so that the sidelap is in a direction away from the prevailing wind. Refer to appropriate lap detail.

7D: Install remaining roof insulation and panels. To avoid accumulative error due to panel coverage gain or loss, properly align each panel before it is fastened. Occasional checks should be made to ensure that correct panel coverage is maintained. Special attention should be given to fastener, mastic and closure requirements. Refer to details with erection drawings.

7E: At finishing end of roof, the last panels may require field modification for installation of rake trim. Refer to rake details. DO NOT BACK LAP THROUGH FASTENED ROOF SHEETS.

NOTE: Roof panel types and installation requirements will vary. Refer to the appropriate details for the specific panel used.

IMPORTANT: Loose fasteners, blind rivets, drill shaving, ETC. must be removed from roof to guard against corrosion.

NEVER STEP ON LIGHT TRANSMITTING PANELS, TRANSLUCENT PANELS, OR UNATTENDED ROOF PANELS.

Panels May Collapse If Not Properly Secured!

Roof panels must be completely attached to the purlins and to panels on either side before they can be a safe walking surface. Light transmitting panels or translucent panels can never be considered as a walking surface.

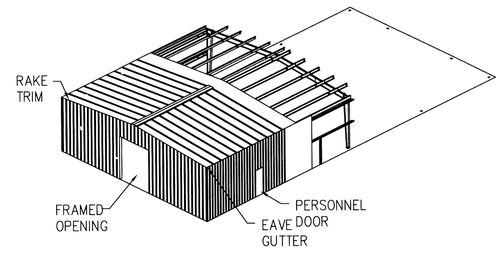
Partially attached or unattached panels should never be walked on!

Do Not:

1. Step on rib at edge of panel.
2. Step near crease in rib at edge of panel.
3. Step within 5 feet of edge on unsecured panel.

A single roof panel must never be used as a work platform. An OSHA approved runway should be used for work platforms! (Consult OSHA Safety and Health Regulations for the Construction Industry). Safety First!

STEP 8: INSTALL TRIM AND ACCESSORIES



8A: Install rake trim and gable closure.

8B: If included with the building, install the eave gutter, corner closures and downspouts.

NOTE:
Remove all loose fasteners, blind rivets, drill shavings, etc... from gutter to guard against corrosion.

8C: Install accessories (doors, windows, louvers, etc...) not previously installed. Refer to the appropriate details for installation instructions.

IMPORTANT: Remove debris from roof and wall surfaces during installation and after. Clean surface of sheeting as required to remove smudges and touch-up any minor/mild scratches with color match touch-up paint.

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A,
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

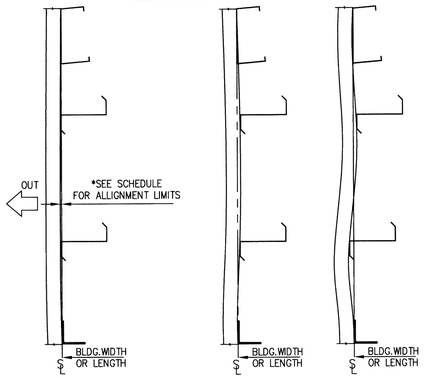
Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE	
Drawn by:	KEB	7/28/14
Checked by:	KEB	7/28/14
Project Engineer:		
Job Number:	14-B-54756-1	
Sheet Number:	R4 of 13	

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

SECONDARY STEEL ALIGNMENT FOR ALL VERTICAL IMP PROJECTS

SUPPORT ALIGNMENT LIMITS	
SUPPORT SPAN	MAX DEVIATION LIMIT
Up To 4'-0"	1/16"
4'-0" To 8'-0"	1/8"
8'-0" And Up	1/4"



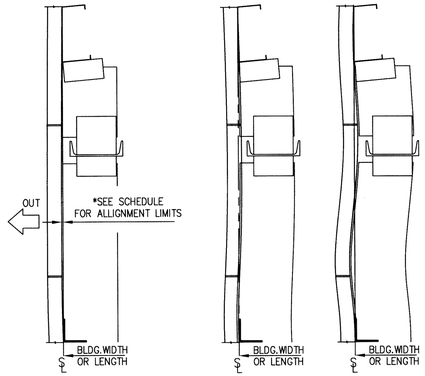
CORRECT ALIGNMENT

MIS-ALIGNMENT
(Unacceptable, Avoid These Conditions)

R5-1

SECONDARY STEEL ALIGNMENT FOR ALL HORIZONTAL IMP PROJECTS

SUPPORT ALIGNMENT LIMITS	
SUPPORT SPAN	MAX DEVIATION LIMIT
Up To 4'-0"	1/16"
4'-0" To 8'-0"	1/8"
8'-0" And Up	1/4"



CORRECT ALIGNMENT

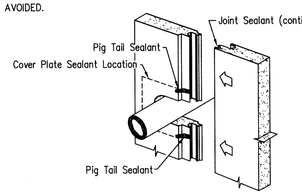
MIS-ALIGNMENT
(Unacceptable, Avoid These Conditions)

R5-2

PENETRATION FLASHING THROUGH IMP WALLS

WEATHER SEAL – IF THE PENETRATION IS THROUGH AN EXTERIOR WALL WITH VERTICAL WALL PANEL JOINTS, IT IS BEST TO AVOID LOCATING THE PENETRATION WHERE IT WILL INTERSECT A WALL PANEL JOINT AND BE SUBJECT TO WATER DRAINING FROM THE PANEL JOINT INTO THE PENETRATION CAVITY.

SHOWN BELOW ARE WEATHER SEAL DETAILS WHEN INTERSECTING A PANEL JOINT CANNOT BE AVOIDED.

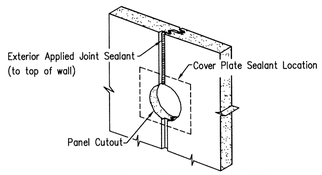


WEATHER & VAPOR SEAL (Existing Penetrant, New Wall)
(EXTERIOR PANEL)

EXISTING PENETRANT – NEW WALL
IF A NEW WALL IS INSTALLED AROUND AN EXISTING PENETRANT, SEALANT MUST BE APPLIED TO THE EXTERIOR TONGUE & GROOVE OF THE WALL PANEL JOINT TO PREVENT WATER ENTERING THE PANEL JOINT.

SEALANT PIGTAILS MUST ALSO BE APPLIED TO THE INTERFACE WITH THE PERIMETER SEALANT OF THE PENETRATION COVER PLATES.

NEW PENETRANT – EXISTING WALL
IF THE PENETRANT IS INSTALLED THROUGH AN EXISTING WALL, EITHER THE EXISTING WALL MUST HAVE BEEN INSTALLED WITH THE EXTERIOR JOINT SEALANT OR AN EXTERIOR GRADE SEALANT MUST NOW BE APPLIED ALONG THE EXTERIOR FILLET OF THE PANEL JOINT FOR THE FULL HEIGHT OF THE WALL.



WEATHER SEAL (New Penetrant, Existing Wall)
(EXTERIOR PANEL)

R5-3

PENETRATION FLASHING THROUGH IMP WALLS (con't)

VAPOR SEALS – DEPENDING UPON THE BUILDINGS VAPOR CONTROL REQUIREMENTS, EITHER THE EXTERIOR OR INTERIOR SIDE OF THE WALL PANEL JOINTS MAY HAVE JOINT SEALANT TO FUNCTION AS THE VAPOR BARRIER.

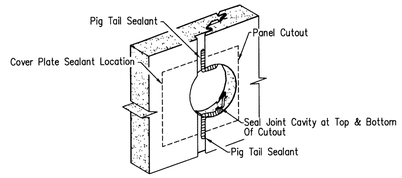
EXISTING PENETRANT – NEW WALL
ON AN EXTERIOR WALL WITH THE VAPOR BARRIER ON THE EXTERIOR SIDE OF THE WALL, THE WEATHER SEAL DESCRIBED ABOVE ALSO FUNCTIONS AS THE VAPOR SEAL.

FOR INTERIOR WALLS AND FOR EXTERIOR WALLS WITH VAPOR BARRIER ON THE INTERIOR SIDE OF THE WALL, INSTALL THE PIGTAIL SEALANTS TO THE INTERFACE WITH THE COVER PLATE SEALANT IN THE SAME MANNER AS DESCRIBED ABOVE FOR THE WEATHER SEAL.

NEW PENETRANT – EXISTING WALL
TO PREVENT WATER VAPOR ENTERING THE PENETRATION CAVITY ON THE VAPOR BARRIER SIDE OF THE WALL, PIGTAIL SEALANTS MUST BE APPLIED ON THE PANEL JOINT TO INTERFACE WITH THE PERIMETER SEALANT OF THE PENETRATION COVER PLATES.

APPLY THE PIGTAIL SEALANT TO THE SEAL OF THE TONGUE-AND-GROOVE JOINT CAVITIES AT THE TOP AND BOTTOM EDGES OF THE PANEL CUT OUT.

EXTEND THE PIGTAIL SEALANT ALONG THE EXTERIOR FILLET OF THE PANEL JOINT TO INTERFACE WITH THE COVER PLATE SEALANT.



VAPOR SEAL (New Penetrant, Existing Wall)
(INTERIOR PANEL)

R5-4

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

☐ For Construction Permit
☒ For Erector Installation

Customer:
AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)

Scale: NOT TO SCALE
Drawn by: KEB 7/28/14
Checked by: KEB 7/28/14
Project Engineer:
Job Number: 14-B-54756-1
Sheet Number: R5 of 13

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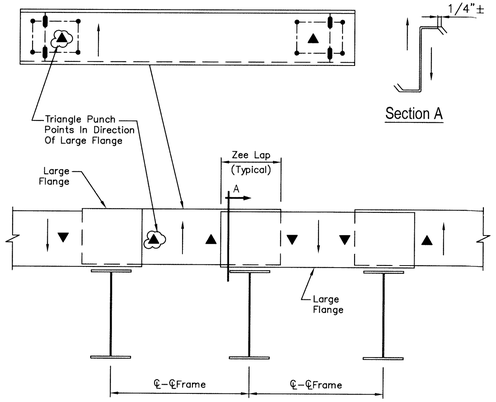
By-Pass Zee Installation

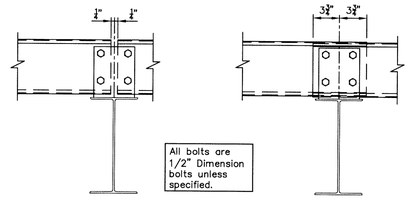
Page CF01121 | Date Dec '10 | Rev. 00

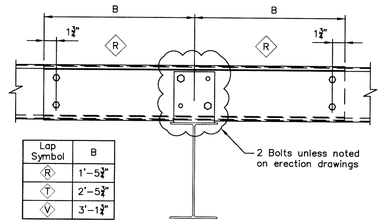


The large leg of the Zee must be alternated from top to bottom in order to nest the member correctly. A triangle has been added to the end of the Zee near the connection holes, that will point to the large leg of the member.

By-Pass Purlin and Girt Connections

Page CF01122 | Date Dec '10 | Rev. 00





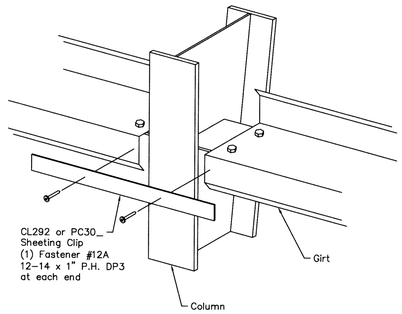
Lap Symbol	B
Ⓡ	1'–5½"
Ⓣ	2'–5½"
Ⓥ	3'–1½"

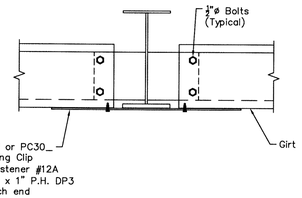
Lap Detail

By–Pass Purlin / Girt Lap Details

Girts at Column
Flush Sidewall or Endwall Girts

Page CF01123 | Date Feb '11 | Rev. 01



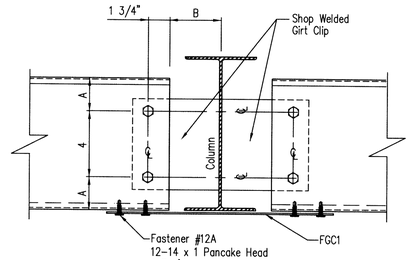


Sidewall or Endwall Interior Flush Girt Connection Detail

SHT. NO. PF02020 | Date Feb '11 | Rev. No. 01

Columns shown as hot rolled for demonstration only. They may be built up or cold form also.

Girt	A
8"	2"
10"	3"
12"	4"



Note: Use 1/2" Dia. x 1 1/4" A325 bolts as shown

Column Flange	B	2 Bolt Clip	4 Bolt Clip
Up to 7 7/8"	4 1/8"	SC–3	SC–16
8" to 9 7/8"	5 1/8"	SC–56	SC–72
10" to 11 7/8"	6 1/8"	SC–57	SC–73
12" +	7 1/8"	SC–272	SC–273

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
I ROAD A,
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL L
DBA WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
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☐ For Approval (Not For Construction)
☐ For Construction Permit
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Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14–B–54756–1
Sheet Number:	R6 of 13

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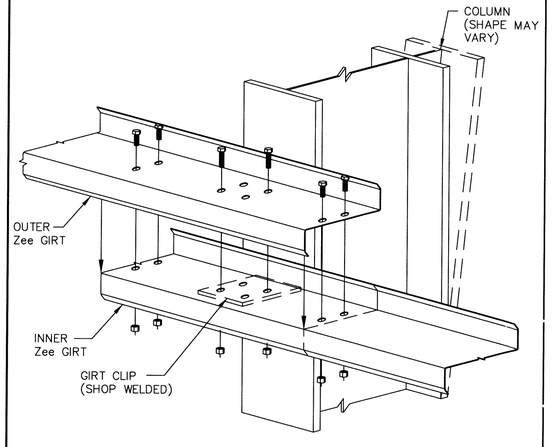
WELDED CLIP PRIMARY FRAME DETAIL GIRT ATTACHMENT DETAIL TO GIRT CLIP

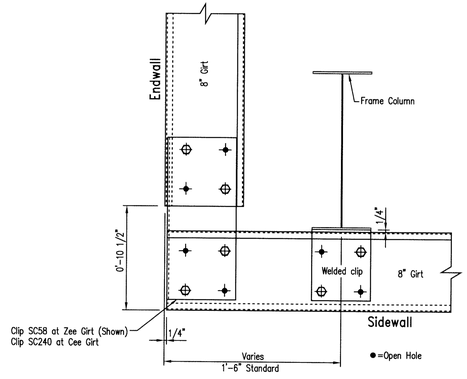
SHT. NO. CF01120 | DATE Feb '11 | REV. 01



ALL BOLTS ARE A325 WITHOUT WASHERS

Weld Clip Corner Detail - Variable Frame Set Back
8" Bypass Girt Sidewall - 8" Girt Endwall

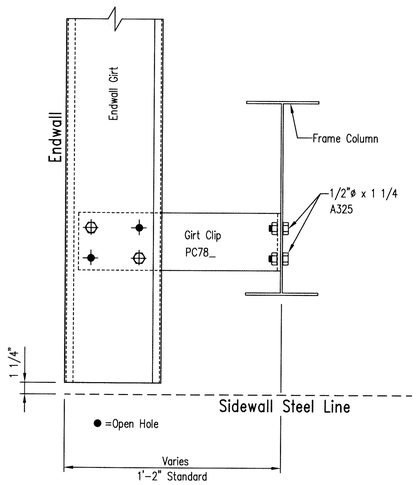
Page EF03001 | Date Sep '12 | Rev. 02



All bolts are 1/2" x 1 1/4" A325 without washers unless noted.

Weld Clip Corner Detail
Variable Frame Setback - No Girt Bypass Sidewall - Girt at Endwall

Page EF03012 | Date May '14 | Rev. 03

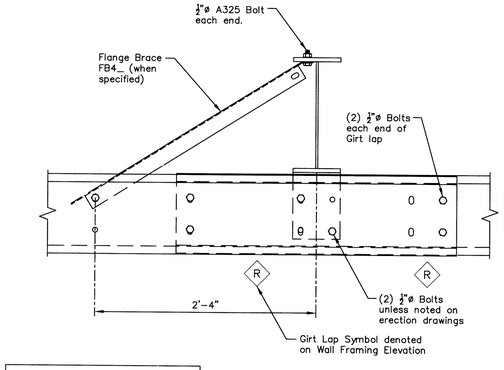


All bolts are 1/2" x 1 1/4" A325 without washers unless noted.

By-Pass Girt to Column
Standard Connection - Flange Brace FB4_

Page CF01124 | Date Jan '14 | Rev. 01

Erection Note
Lap and attachment of Girt varies refer to "Elevation Plan" and Lap Detail for requirements.

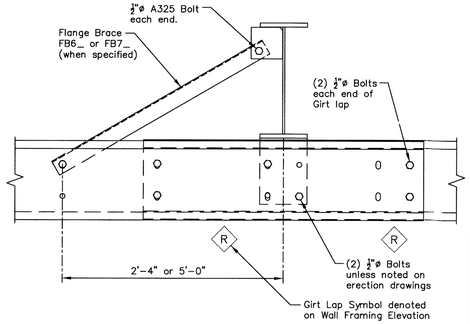


Erection Note
Flange Braces may be required one or both sides of Column.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Elevation Plan".

By-Pass Girt to Column
Standard Connection - Flange Brace FB6_ or FB7_

Page CF01127 | Date Jan '14 | Rev. 01

Erection Note
Lap and attachment of Girt varies refer to "Elevation Plan" and Lap Detail for requirements.

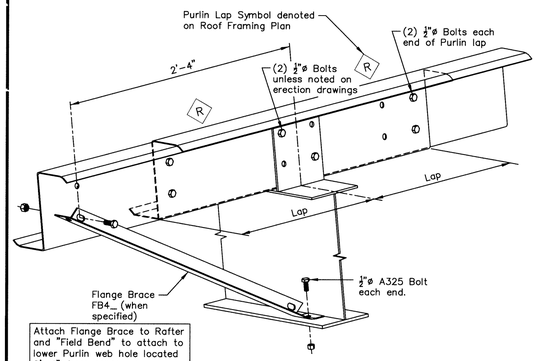


Erection Note
Flange Braces may be required one or both sides of Column.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Elevation Plan".

Purlin to Rafter
Standard Connection - Flange Brace FB4_

Page CF02036 | Date Dec '10 | Rev. 00

Erection Note
Lap and attachment of Purlin varies refer to Roof Plan and Lap Detail for requirements.



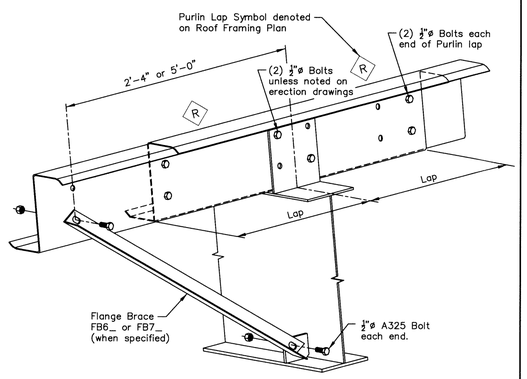
Attach Flange Brace to Rafter and "Field Bend" to attach to lower Purlin web hole located 2'-4" from center of Rafter.

Erection Note
Flange Braces may be required one or both sides of Rafter.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Roof Plan".

Purlin to Rafter
Standard Connection - Flange Brace FB6_ or FB7_

Page CF02039 | Date Dec '10 | Rev. 00

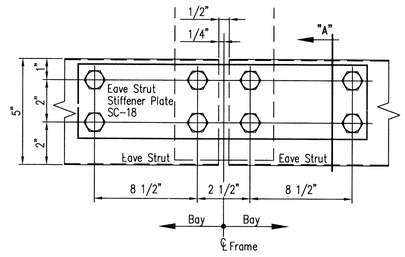
Erection Note
Lap and attachment of Purlin varies refer to Roof Plan and Lap Detail for requirements.

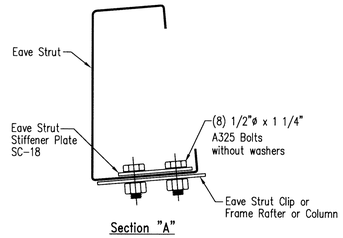


Erection Note
Flange Braces may be required one or both sides of Rafter.
For requirements, and locations at Main Frame and Rigid Frame in Endwall refer to "Cross Section".
For requirements, and locations at Bearing Frame Endwall refer to "Roof Plan".

Eave Strut Stiffener Plate
Low Eave Interior Bay

SHT NO. CF02031 | DATE Sep '10 | REV NO 00

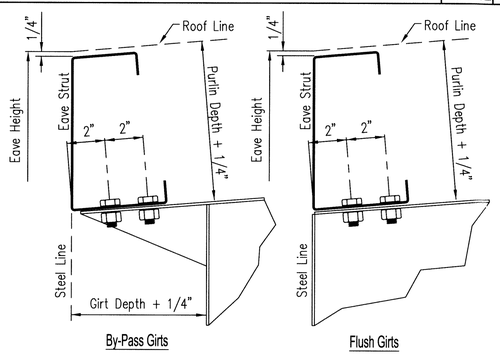


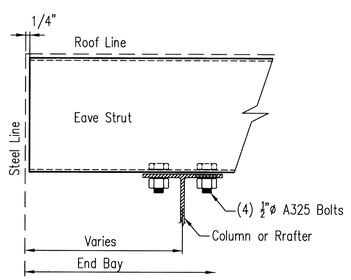


Section "A"

Eave Strut Connection at End Bay
ByPass And Flush Girts

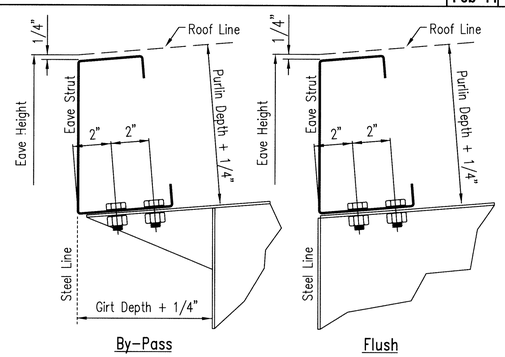
SHT NO. CF02033 | DATE Feb '12 | REV. NO 03

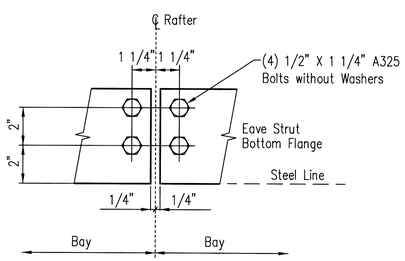




Eave Strut Connection at Main Frame
Interior Bay

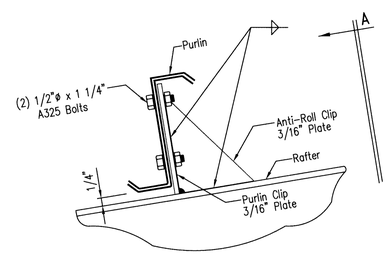
SHT NO. CF02030 | DATE Feb '11 | REV. NO 01

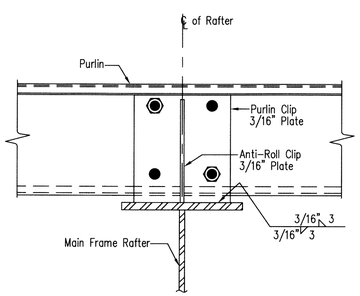




Purlin Anti-Roll Clip
(at Built-up/Hot-Rolled Rafter)

SHT NO. CF02034 | DATE Feb '11 | REV. NO 01

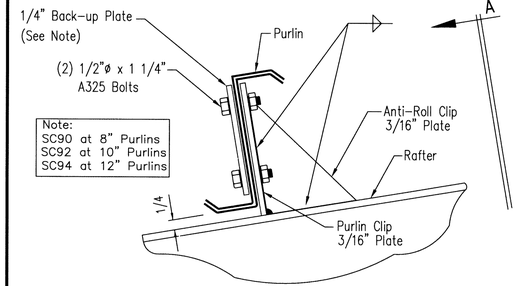


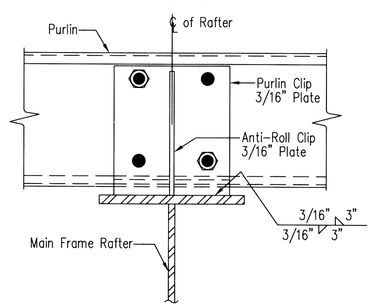


Section A

Purlin Anti-Roll Clip (W/Back-up Plate)
(at Built-up/Hot-Rolled Rafter)

SHT NO. CF02035 | DATE Mar '13 | REV. NO 02





Section A

Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer: AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
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☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE		
Drawn by:	KEB	7/28/14	
Checked by:	KEB	7/28/14	
Project Engineer:			
Job Number:	14-B-54756-1		
Sheet Number:	R7 of 13		

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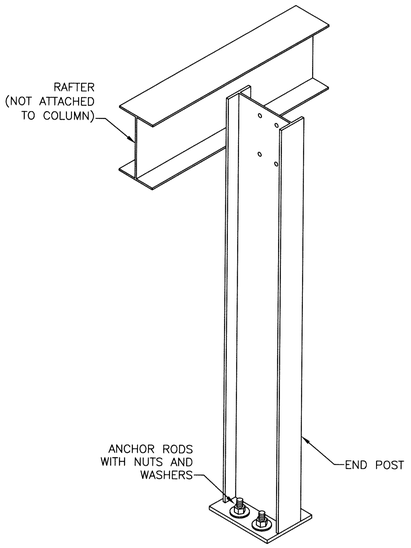
END FRAME DETAIL
RIGID END FRAME WITH INSET GIRTS
END POST NOT AT PEAK

SHT. NO. EF08010 | DATE May 09 | REV. 00

NOTES:
- Use 1/2"ø A325 bolts unless noted otherwise.
- Frame shapes may vary.
- See erection drawing for elevations and marks.

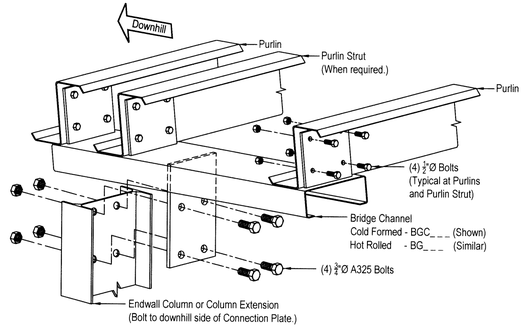
NOTE: SEE END POST TO PURLIN/BRIDGE CLIP CONNECTION



Endwall Column attachment
located between Purlins at Slope

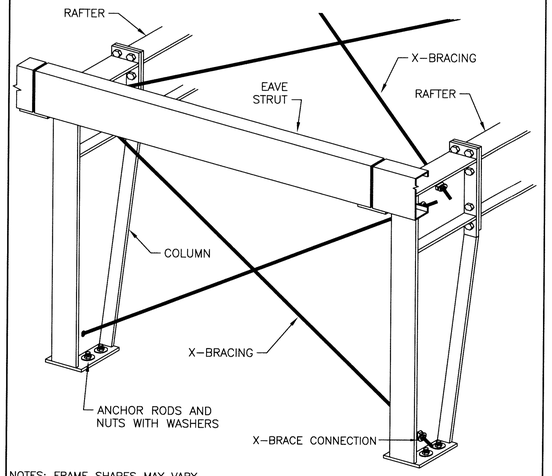
SHT. NO. EF09102 | DATE Dec '12 | REV. 01

Notes:
1.) See AC00916 / AC00920 for Jamb/Support Column attachment when located at same Purlin space (or adjacent Purlin space) as Endwall Column.
2.) Bridge Channel may span multiple Purlin spaces when required.
3.) Wind Edge Strip Purlins, when required, do not attach to Bridge Channel.
4.) Purlins and Purlin Strut extends past Bridge Channel flange when "Optional" Overhang or Facade is required at endwall.



PRIMARY FRAME DETAIL
BY-PASS - NO GIRTS WITH X-BRACING

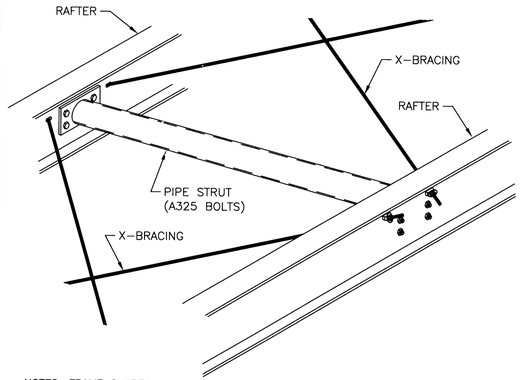
SHT. NO. PF02002 | DATE Feb. 10 | REV. 01



NOTES: FRAME SHAPES MAY VARY.
SEE FRAME CROSS SECTIONS FOR ADDITIONAL FRAME INFORMATION.
X-BRACES ARE PERMANENT AND MAY NOT BE REMOVED AFTER ERECTION UNLESS NOTED FOR PLUMBING PURPOSES ON ERECTION DRAWINGS.

PRIMARY FRAME DETAIL
X-BRACING WEB MOUNTED PIPE STRUT

SHT. NO. PF04006 | DATE DEC. 05 | REV. 00



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X-BRACES ARE PERMANENT AND MAY NOT BE REMOVED AFTER ERECTION UNLESS NOTED FOR PLUMBING PURPOSES ON ERECTION DRAWINGS.

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A,
BAY ST. LOUIS MS 39520

Customer: AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

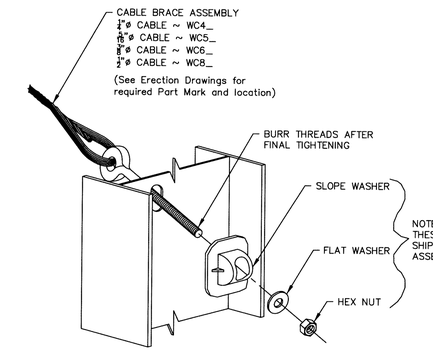
Drawing Status:
☐ Preliminary, Not For Construction
☐ For Approval
☐ Not For Construction
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE	
Drawn by:	KEB	7/28/14
Checked by:	KEB	7/28/14
Project Engineer:		
Job Number:	14-B-54756-1	
Sheet Number:	R8 of 13	

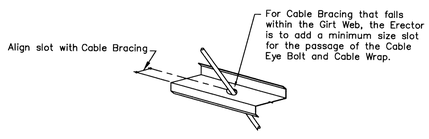
The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

Cable Brace
Attachment at Web

Page PF04111 | Date Jan '14 | Rev. 01

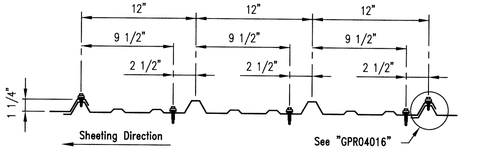


ERECTION NOTE: DETAIL SHOWN AT COLUMN SIMILAR AT RAFTER.

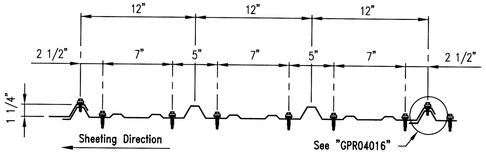


PBR Roof Panel Fastener
and Tape Sealant Location

Page GPR00011 | Date Dec '12 | Rev. 00



All Roof Members Except As Noted Below

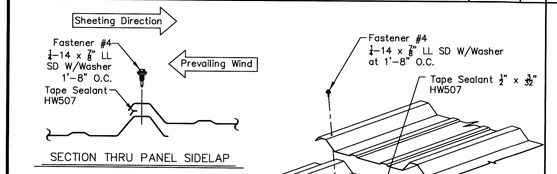


At Eave Strut, Panel End Lap, and Peak Purlin

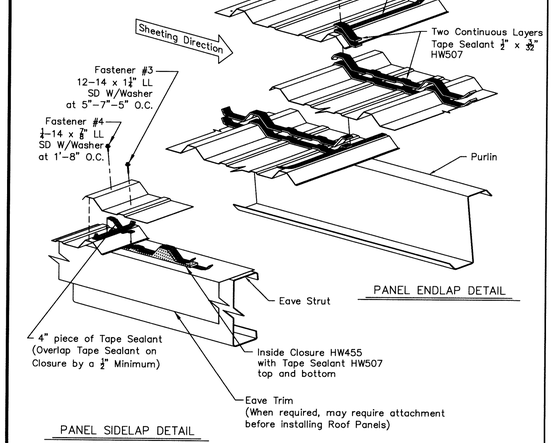
Note:
Screw Patterns Shown
Satisfy U.L. 90 Requirements
For Roof

PBR Panel
Side Lap and End Lap Details

Page GPR04016 | Date Jun '14 | Rev. 02



SECTION THRU PANEL SIDELAP

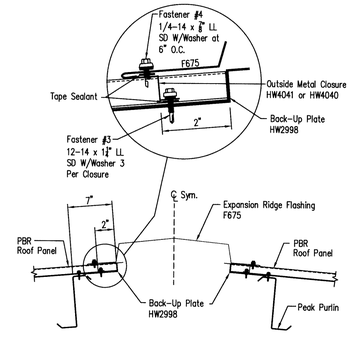


PANEL ENDLAP DETAIL

PANEL SIDELAP DETAIL
AT LOW EAVE

PBR Panel
Expansion Ridge

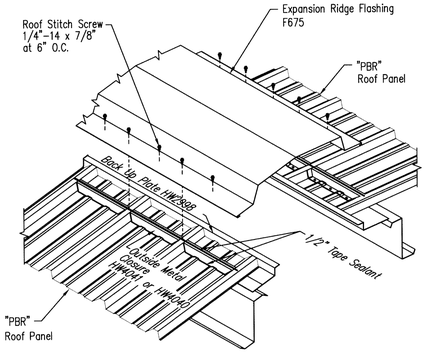
Page GPR06002 | Date Mar '14 | Rev. 01

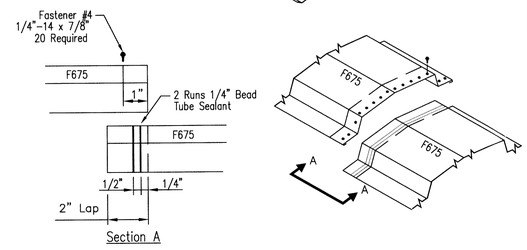


PBR Panel Expansion Ridge

Sht. No. GPR06001 | Date Dec '12 | Rev. 00

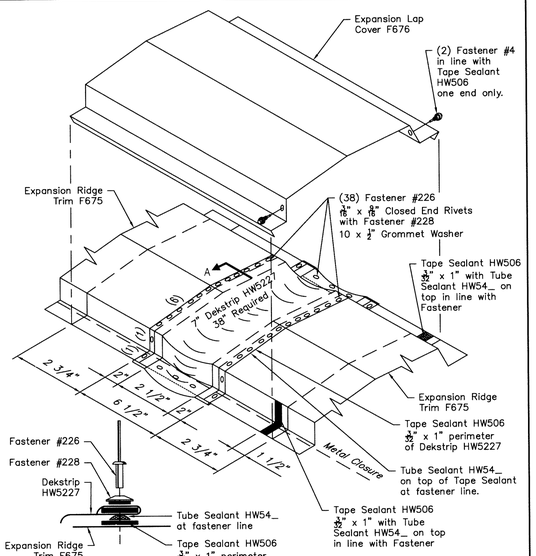
Refer to the PBR Panel Technical Installation Manual for the installation of the roof panel.





PBR Roof Panel Expansion Ridge - Expansion Lap Cover

Page GPR06005 | Date Jan '14 | Rev. 01

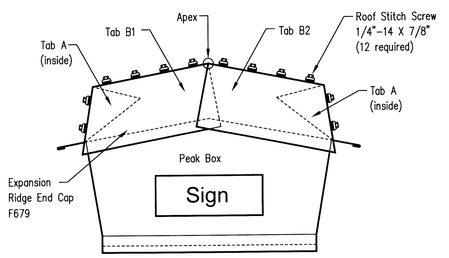


Place the edge of the Dekstrip over the F675 making sure that the end of the Dekstrip is past the downhill edge of the Metal Outside Closure. Use Duck-Bill pliers to crimp the flange of the Expansion Lap Cover over the Expansion Ridge Trim.

Note:
Expansion Joint required at 100'-0" intervals. Locate Expansion Joint between panel ribs only.

PBR Roof Expansion Ridge End Cap Assembly

Sht. No. GPR06000 | Date Dec '12 | Rev. 00

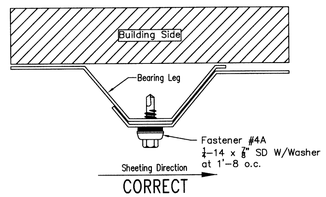


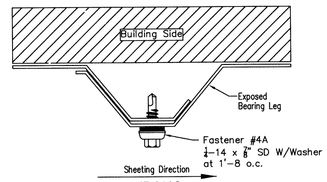
Expansion Ridge End Cap Assembly

1. Apply (2) runs of tube sealant along vertical and horizontal surfaces of expansion end cap.
2. Place end cap inside expansion ridge flashing, allowing the end cap to conform to the ridge flashing profile. Do not deform the top of the ridge by exerting too much pressure.
3. Make sure tab is even with, but not resting on top of the peak box. Tab "A" must be able to pivot in front of the peak box because of panel contraction.
4. Using a screwdriver, insert the blade in the apex of tab "B1" and "B2", and twist the blade enough to cause tab "B1" to spread slightly away from tab "B2".
5. Secure the end cap to the ridge flashing with (12) Stitch Screws 1/4"-14 X 7/8" as shown.

PBR Wall Panel Panel Side Lap

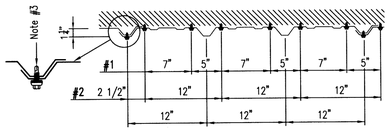
Page PW05002 | Date Mar '14 | Rev. 02

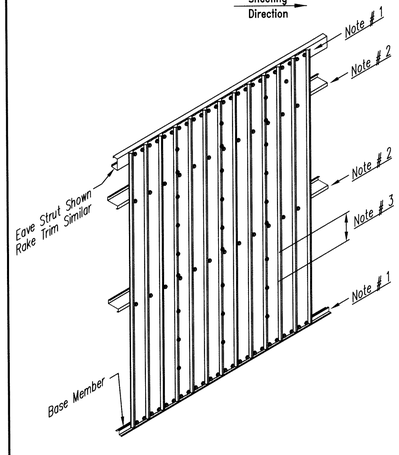




PBR Wall Panel Fastener Location

Page PW05003 | Date Mar '14 | Rev. 02





Note #1
Fastener #17A
12-14 x 1 1/4"
SD W/Washer
5", 7", 5" o.c.

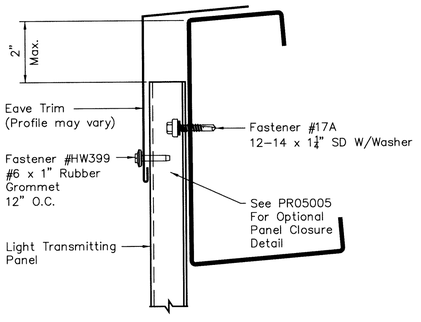
Note #2
Fastener #17A
12-14 x 1 1/4"
SD W/Washer
at 1'-0 o.c.

Note #3
Fastener #4A
1/4-14 x 3/8"
SD W/Washer
at 1'-8 o.c.

Light Transmitting Wall Panel Eave Trim

Page PW11003 | Date Mar '14 | Rev. 03

Refer to the installation drawing supplied with the building for application of the roof system and specific eave condition.



Note: Field Cutting Light Transmitting Panels

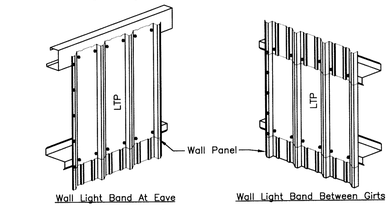
Light transmitting panels may need to be cut in the field. If required, follow these steps:

- Up to five (5) LTP's may be cut at one time.
- A circular saw with a 24 tooth per inch blade will work best.
- Cut slow and allow the blade to work without excess pressure.
- Allow the blade to cool between cuts.

PBR Light Transmitting Wall Panel Girt Front Leg Down

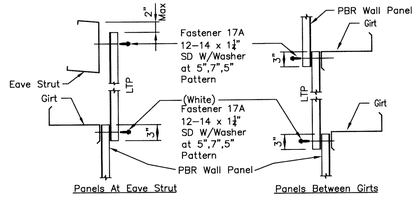
Page PW11011 | Date Mar '14 | Rev. 02

Light Transmitting Panels less than 10'-8" may require field cutting to length (see PW11003 to PW11007 for instructions).



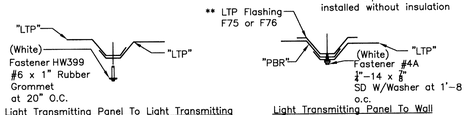
Wall Light Band At Eave

Wall Light Band Between Girts



Panels At Eave Strut

Panels Between Girts

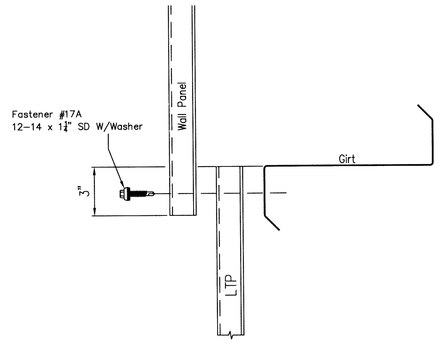


Light Transmitting Panel To Light Transmitting Panel Sidelap

Light Transmitting Panel To Wall Panel Sidelap

Light Transmitting Panel End Lap Girt Front Leg Down

Page PW11013 | Date Mar '14 | Rev. 01



Note: Field Cutting Light Transmitting Panels

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- A circular saw with a 24 tooth per inch blade, will work best.
- Cut slow and allow the blade to work without excess pressure.
- Allow the blade to cool between cuts.

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Customer: AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL WIVIAN

Project Name & Location:
JINDAL SAW USA
1 ROAD A
BAY ST. LOUIS MS 39520

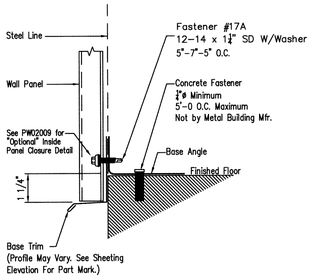
Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14-B-54756-1
Sheet Number:	R9 of 13

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

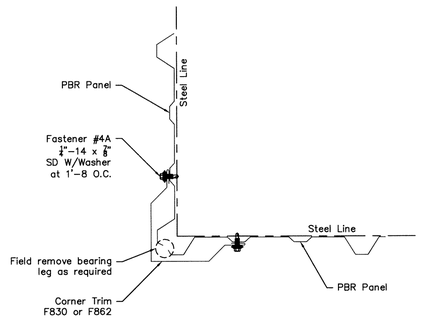
PBR Wall Panel
Base Angle Without Recess With Base Trim

Page PW02005 | Date Jun '14 | Rev. 03



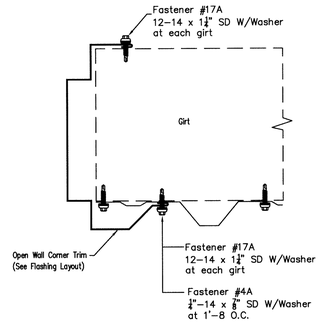
PBR Wall Panel
Outside Corner Trim

Page PW03001 | Date Mar '14 | Rev. 04



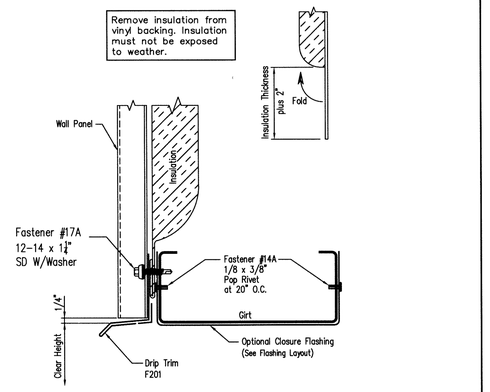
PBR Wall Panel
Open Wall Corner Trim

Page PW03003 | Date Mar '14 | Rev. 01



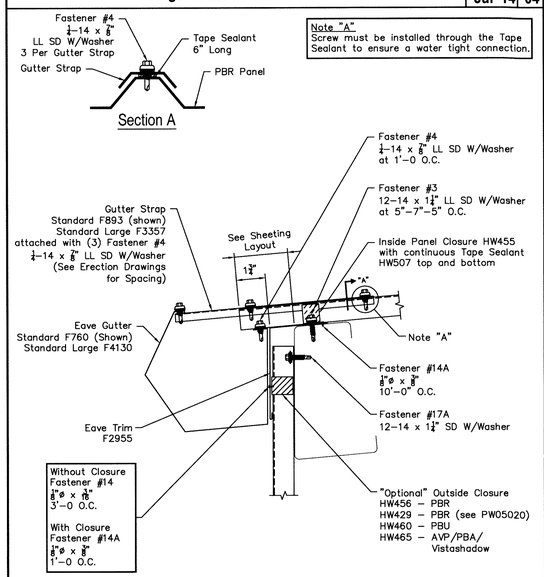
Open Wall with Cee Girt

Page GD04001 | Date Mar '14 | Rev. 01



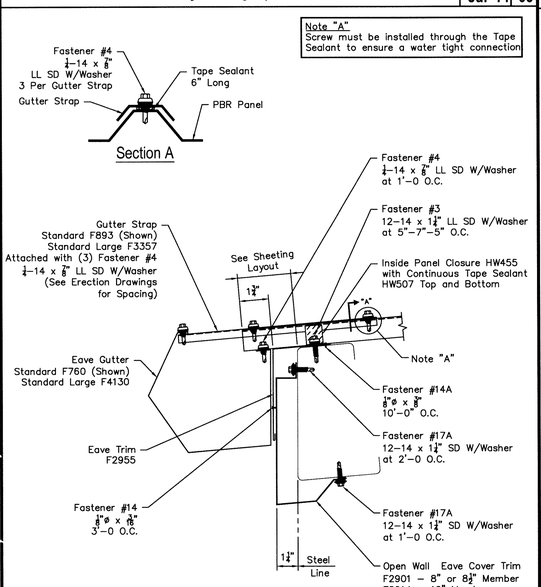
PBR Roof Panel - Classic Standard and Standard Large Gutter - Sheeted Wall

Page WPR02001 | Date Jul '14 | Rev. 04



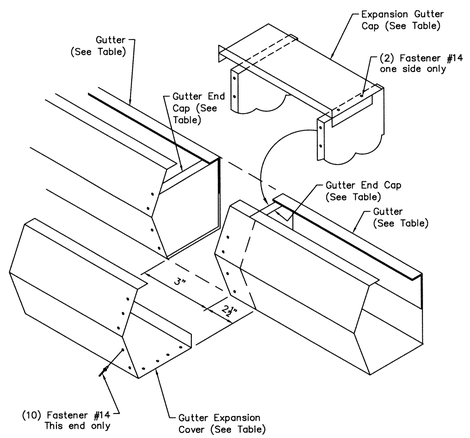
PBR Panel - Classic Standard and Standard Large Gutter Partially or Fully Open Wall

Page WPR02002 | Date Jul '14 | Rev. 03



PBR Roof
Gutter Expansion Installation - 100'-0" Maximum

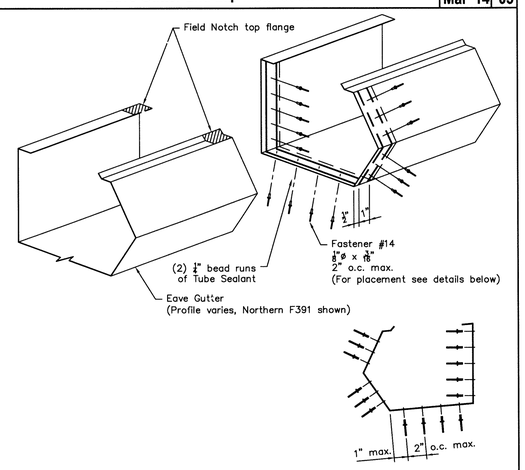
Page WPR04003 | Date Dec '12 | Rev. 03

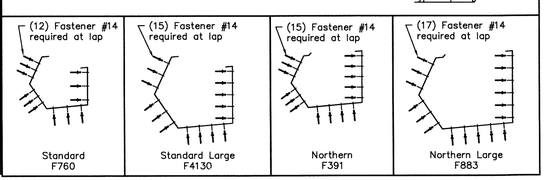


	Gutter	Gutter End Cap	Expansion Cover	Expansion Cap
Standard	F760	F761 (12) Fastener #14	F643	F635
Standard Large	F4130	F4131 (14) Fastener #14	F4102	F4132
Northern	F391	F392 (15) Fastener #14	F656	F658
Northern Large	F883	F894 (17) Fastener #14	F641	F629

PBR Roof
Eave Gutter End Lap Installation

Page WPR04002 | Date Mar '14 | Rev. 03





Revision	Date	By	Ck'd	Description

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
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Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
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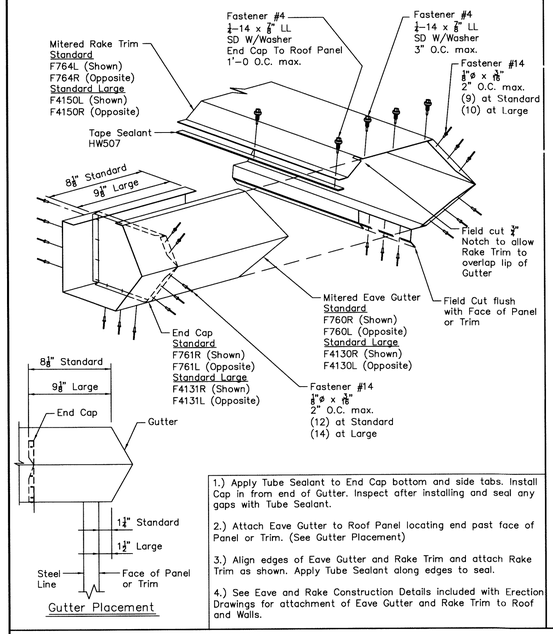
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE
Drawn by:	KEB 7/28/14
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14–B–54756–1
Sheet Number:	R10 of 13

PBR Roof Panel - Standard and Standard Large
Low Eave Rake Corner with Eave Gutter - 1 1/4" Wall Panel

Page WPR04004 | Date Mar '14 | Rev. 03



1.) Apply Tube Sealant to End Cap bottom and side tabs. Install Cap in from end of Gutter. Inspect after installing and seal any gaps with Tube Sealant.

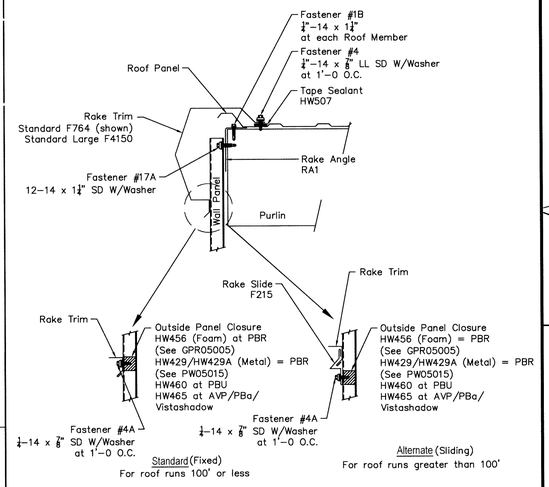
2.) Attach Eave Gutter to Roof Panel locating end past face of Panel or Trim. (See Gutter Placement)

3.) Align edges of Eave Gutter and Rake Trim and attach Rake Trim as shown. Apply Tube Sealant along edges to seal.

4.) See Eave and Rake Construction Details included with Erection Drawings for attachment of Eave Gutter and Rake Trim to Roof and Walls.

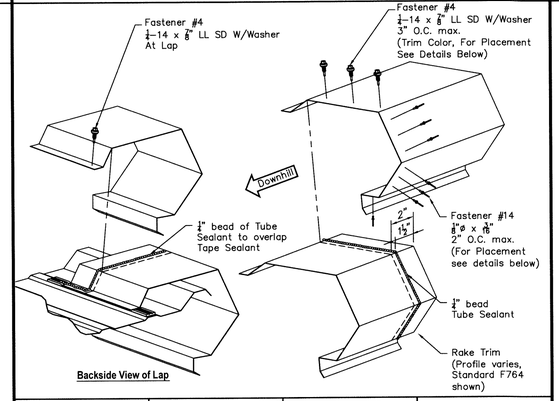
PBR Panel - Standard and Standard Large
Classic Rake Trim - Sheeted Wall

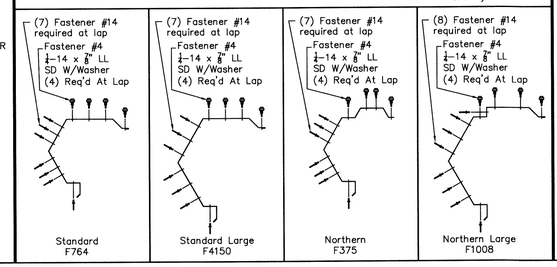
Page WPR05002 | Date Jun '14 | Rev. 04



PBR Roof
Rake End Lap Installation - 1 1/4" Wall Panel

Page WPR05010 | Date Mar '14 | Rev. 02



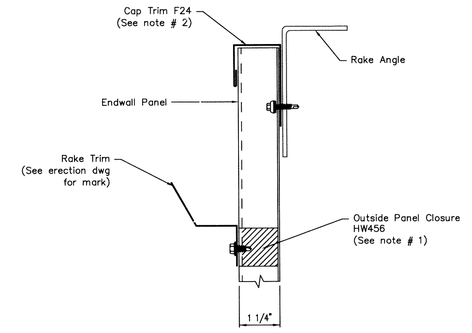


PBR Panel
End Panel Cap Trim - Sheeted Wall

Page GPR05005 | Date Jun '14 | Rev. 04

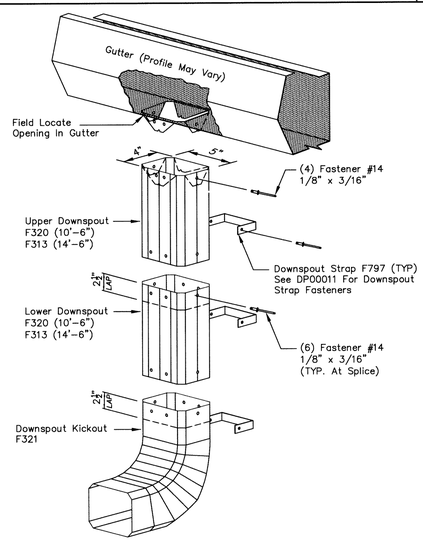
Note # 1: Outside Panel Closures HW456 are required on all sheeted endwalls with a roof slope of 4:12 or less.

Note # 2: Cap Trim F24 will replace the Outside Panel Closures HW456 on all sheetes endwalls with a roof slope greater than 4:12.



Roll Form Downspout Layout

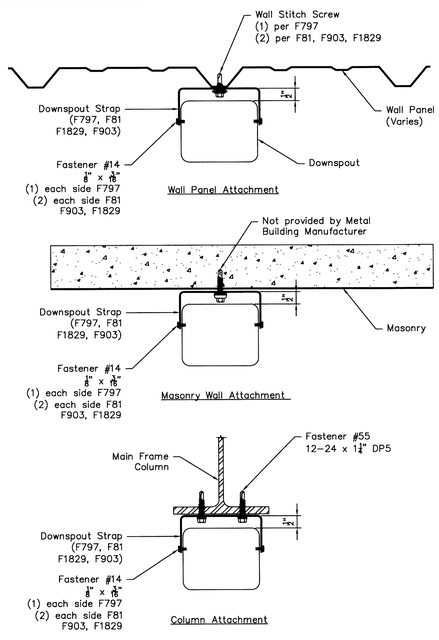
Date DP00001 | Date Dec '12 | Rev. 00



Note:
1. Refer to the building erection drawings for the spacing of the downspouts.
2. Locate all downspouts over a panel major rib if possible.
3. A field splice is required for eave heights greater than 16'–0". Always measure the required length starting at the swaged end. After cutting to length, insert the swaged end of the cut downspout into the top of the lower downspout.
4. Downspout straps F797 are Located at the bottom of a downspout, below a splice, and at mid point of downspout longer than 10'–6". See DP00011 for downspout strap fasteners.

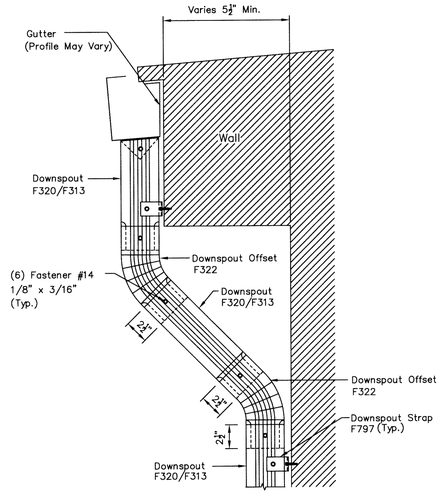
Downspout Strap Attachment To Wall

Date DP00011 | Date Feb '14 | Rev. 01



Roll Form Downspout At Partial Height Open Wall

Date DP00005 | Date Dec '12 | Rev. 00



Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

Project Name & Location:
JINDAL SAW USA
1 ROAD A.
BAY ST. LOUIS MS 39520

Customer:
AMERICAN WESTERN STEEL L
DBA W WILSON CONSTRUCTIO
HOUSTON TX 77032
MICHAEL VIVIAN

Drawing Status:
☐ Preliminary (Not For Construction)
☐ For Approval (Not For Construction)
☐ For Construction Permit
☒ For Erector Installation

Scale:	NOT TO SCALE	
Drawn by:	KEB	7/28/14
Checked by:	KEB	7/28/14
Project Engineer:		
Job Number:	14–B–54756–1	
Sheet Number:	R11 of 13	

The engineer whose seal appears hereon is an employee for the manufacturer for the materials described herein. Said seal or certification is limited to the products designed and manufactured by manufacturer only. The undersigned engineer is not the overall engineer of record for this project.

Various Fasteners

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Fastener #17
12–14 x 1"
5/16" Hex Washer Head
w/ Washer

Fastener #38
1/4"–14 x 7/8" Lap TEK
5/16" Hex Washer Head

Fastener #268
12–14 x 1 7/8" Standoff
Long Life
5/16" Hex Washer Head
w/ Washer

Fastener #268SS
12–14 x 1 7/8" Standoff
Stainless Steel Cap
5/16" Hex Washer Head
w/ Washer

Fastener #12A
12–14 x 1" DP3
Pancake Head

Fastener #55
12–24 x 1 1/4" DP5
5/16" Hex Washer Head

Fastener #70
12–24 x 1 1/2" DP5
5/16" Hex Washer Head

Fastener #142
1/4"–14 x 1 1/2"
5/16" Hex Washer Head

Fastener #76
12–14 x 2"
5/16" Hex Washer Head

Fastener #61
12–14 x 1 1/4"
5/16" Hex Washer Head

Fastener #1B
1/4"–14 x 1 1/4"
5/16" Hex Washer Head

Fastener #16
12–24 x 1 3/4"
Pancake SD DP5
W/O Washer

Fasteners

SHT. NO. G000004 | DATE Mar 26 | REV. 02

FASTENER #271
8–18 x 1/2"
Trim Screw

FASTENER #24
8 x 5/8"
Nibbed Driller

FASTENER #228
10 x 1/2"
Grommet Washer

FASTENER #14
1/8" x 3/16"
Pop Rivet
Stainless Steel

FASTENER #14A
1/8" x 3/8"
Pop Rivet
Stainless Steel

FASTENER #226
3/16" x 9/16"
Closed End Rivet

FASTENER #43
L.T.P. Member Screw
1/4"–14 x 1 1/4"
5/16" Hex Washer Head
w/ 1 1/8" O.D. Washer

FASTENER #43L
L.T.P. Member Screw (Long Life)
1/4"–14 x 1 1/4"
5/16" Hex Washer Head
w/ 1 1/8" O.D. Washer

FASTENER #HW399
#6 x 1" Rubber Grommet
1/4" Hex Head w/ Washer

FASTENER #44
L.T.P. Stitch Screw
1/4"–14 x 7/8"
5/16" Hex Washer Head
w/ 1 1/8" O.D. Washer

FASTENER #44L
L.T.P. Stitch Screw (Long Life)
1/4"–14 x 7/8"
5/16" Hex Washer Head
w/ 1 1/8" O.D. Washer

FASTENER #35
#14 x 1 1/8" O.D.
Bonded Washer

PBR, PBU, AVP, PBA, VistaShadow Panel Fasteners

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Wall Fasteners	Roof Fasteners Long Life (Optional at Wall)	Optional Roof or Wall Fasteners Stainless Steel Cap
Member Screw Fastener #17A 12–14 x 1 1/4" 5/16" Hex Washer Head w/washer	Member Screw Fastener #3 12–14 x 1 1/4" 5/16" Hex Washer Head w/washer	Member Screw Fastener #3SS 12–14 x 1 1/4" 5/16" Hex Washer Head w/washer
Member Screw Optional Fastener #17B 12–14 x 1 1/2" 5/16" Hex Washer Head w/washer	Member Screw Optional Fastener #3A 12–14 x 1 1/2" 5/16" Hex Washer Head w/washer	Member Screw Optional Fastener #3ASS 12–14 x 1 1/2" 5/16" Hex Washer Head w/washer
Member Screw Optional Fastener #28 12–14 x 2" 5/16" Hex Washer Head w/washer	Member Screw Optional Fastener #58 12 x 2" 5/16" Hex Washer Head w/washer	Member Screw Optional Fastener #272SS 12–14 x 2" 5/16" Hex Washer Head w/washer
Stitch Screw Fastener #4A 1/4–14 x 7/8" 5/16" Hex Washer Head w/washer	Stitch Screw Fastener #4 1/4–14 x 7/8" 5/16" Hex Washer Head w/washer	Stitch Screw Fastener #4SS 1/4–14 x 7/8" 5/16" Hex Washer Head w/washer

PBR Roof
Perimeter Trim Reference - Trim Fastener / Mastic

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Eave Trim	Eave Trim LAP	Closure Vented Ridge	Metal Closure	Back–Up Plate Longitudinal Ridge
F771	2" LAP	HW4040	HW4041	HW2998
Fastener #4A 1/4–14 x 7/8" SD W/Washer 1'–0" O.C. Fastener #14A 10'–0" O.C. Trim Color	12" Tube Sealant (8) Fastener #14 Trim Color	(3) Fastener #3 12–14 x 1 1/4" LL SD W/Washer (2) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Roof Color 28" Tape Mastic	(3) Fastener #3 12–14 x 1 1/4" LL SD W/Washer (2) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Roof Color 28" Tape Mastic	20'–0" Long
Expansion Ridge Trim	Ridge Closure	Flat Eave Trim	Inside Closure	Outside Closure
F675	F679	F2955	HW455	HW456
Fastener #4 1/4–14 x 7/8" LL SD W/Washer 2 runs at 6" O.C. 16) Fastener #4 1/4–14 x 7/8" LL SD W/Washer per lap Trim Color 68" Tube Sealant	30" Tube Caulking 12) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	13" Tube Sealant (2) #14 per 2" Lap #14 3'–0" o.c w/out Closure #14A 1'–0" o.c. w/Closure Trim Color		
	Rake Slide Trim	Ridge Cap	Parapet High Side	
	F215	F52	F195	
	Fastener #4A 1/4–14 x 7/8" SD W/O Washer 1'–0" O.C. Trim Color	121" Tape Mastic (12) Fastener #4 1/4–14 x 7/8" LL SD W/Washer (6) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Panel Color	14" Tube Sealant (2) Fastener #14 & (2) Fastener #4 1/4–14 x 7/8" LL SD W/Washer at Lap Fastener #4 1/4–14 x 7/8" LL SD W/Washer 1'–0" O.C. Trim Color	

PBR Roof
Perimeter Trim Reference - Standard Large Trim

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	GUTTER	GUTTER LAP	GUTTER CAP	EXPANSION COVER	GUTTER CLIP
	F4130	2" LAP	F4131	F4102/F4132	F3357
	Fastener #4 1/4–14 x 7/8" LL SD W/Washer 1'–0" O.C. Roof Color	60" Tube Sealant (15) Fastener #14 Trim Color	30" Tube Sealant (14) Fastener #14 Trim Color	(12) Fastener #14 Trim Color	(2) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Roof Color (1) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color
1 1/4" Wall Panel	RAKE	RAKE LAP	RAKE CAP	CORNER BOX	Peak Box
	F4150	2" LAP	F1012	F4152	F4153
	Fastener #4 1/4–14 x 7/8" LL SD W/Washer 1'–0" O.C. Fastener #4A 1/4–14 x 7/8" SD W/Washer 1'–0" O.C. Trim Color	25" Tube Caulking (7) Fastener #14 (4) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	25" Tube Sealant (8) Fastener #14 Trim Color	20" Tube Sealant (7) Fastener #14 (4) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	(12) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color (3) Fastener #4A 1/4–14 x 7/8" SD W/Washer Trim Color
1 1/4" Wall Panel	HIGHSIDE	HIGHSIDE LAP	OUTSIDE CORNER	INSIDE CORNER	
	F4165	2" LAP	Right as Shown	Field Work	
	Fastener #4 1/4–14 x 7/8" LL SD W/Washer 1'–0" O.C. Fastener #4A 1/4–14 x 7/8" SD W/Washer 1'–0 O.C. Trim Color	26" Tube Sealant (9) Fastener #14 (3) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	24" Tube Sealant (9) Fastener #14 (5) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	24" Tube Sealant (9) Fastener #14 (3) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	
	OUTSIDE CORNER	INSIDE CORNER	OUTSIDE CORNER	INSIDE CORNER	
	Right as Shown	Field Work	Field Work	Field Work	
	31" Tube Sealant (24) Fastener #14 (3) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	27" Tube Sealant (13) Fastener #14 (4) Fastener #4 1/4–14 x 7/8" LL SD W/Washer Trim Color	26" Tube Sealant (14) Fastener #14 Trim Color	26" Tube Sealant (14) Fastener #14 Trim Color	

Tape Sealant and Tube Sealant

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TRI–BEAD TAPE SEALER HW504 3/16" X 7/8" X 25'–0"	FLAT TAPE SEALER HW507 3/32" X 1/2" X 50'–0"	TAPE SEALER – SWAGED HW515 3/16" X 2 1/4" X 6" 6" BattenLok HS
TRIPLE BEAD TAPE SEALER HW502 3/16" X 2 1/2" X 20'–0"	FLAT TAPE SEALER HW506 3/32" X 1" X 45'–0"	
URETHANE TUBE SEALANT HW540 (White) HW541 (Gray) HW542 (Bronze)	TAPE SEALER MINOR RIB HW512 4" 7/32" X 1 3/8" X 4" DoubleLok	NON–SKINNING BUTYL TUBE (VAPOR SEALANT) IMP7100 (WHITE)
DEKSTRIP 7" WIDE = HW5227 DEKSTRIP 9" WIDE = HW5228 DEKSTRIP 12" WIDE = HW5229 COLOR = Gray SCREWS 2" O.C. MAX. PERIMETER TAPE SEALANT BOTH SIDES TUBE SEALANT EACH END 2" x 24GA. TERMINATION STRIP EACH END		

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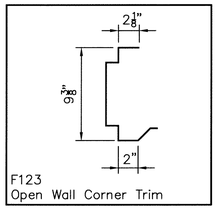
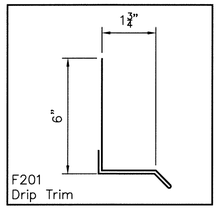
Checked by:	KEB 7/28/14
Project Engineer:	
Job Number:	14–B–54756–1
Sheet Number:	R12 of 13



F123
Open Wall Corner Trim



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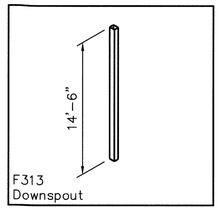
Drip Trim



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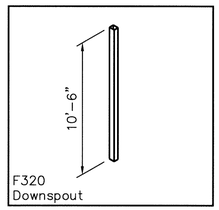
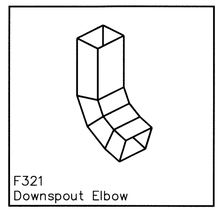
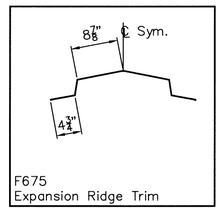
Downspout

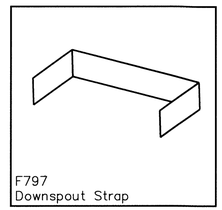


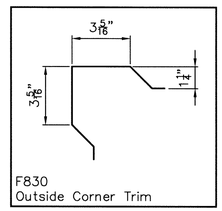
F320
Downspout


F321
Downspout Elbow

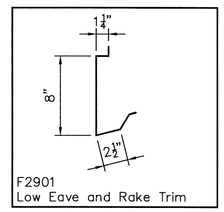


F675
Expansion Ridge Trim

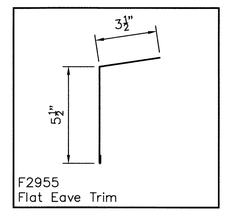

F797
Downspout Strap



F830
Outside Corner Trim



F2901
Low Eave and Rake Trim



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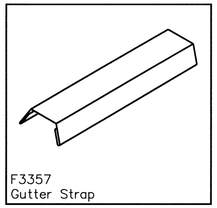
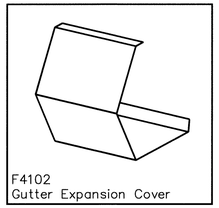
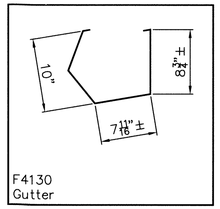
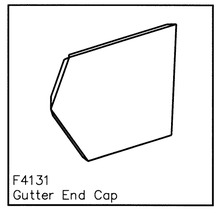
Flat Eave Trim

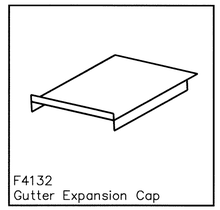

F3357
Gutter Strap


F4102
Gutter Expansion Cover



F4130
Gutter


F4131
Gutter End Cap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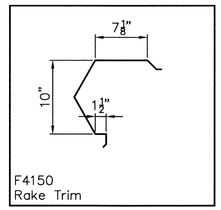
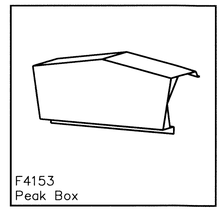
Gutter Expansion Cap



F4150
Rake Trim


F4153
Peak Box

Revision	Date	Description	By	Ck'd

Mesco Building Solutions
5244 Bear Creek Court, Irving, Texas 75061
Voice 214-687-9999 Fax 214-687-9737

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