

# SUN BUILDING SYSTEMS

## APPROVAL SHEET

BUILDER: [REDACTED]

CUSTOMER: [REDACTED]

LOCATION: GUAM, USA

### PURCHASER RESPONSIBILITIES

1. IT IS THE RESPONSIBILITY OF THE PURCHASER TO INSURE THAT ALL PROJECT PLANS, SPECIFICATIONS, AND APPLIED DESIGN LOADS, FULLY MEET THE PROPOSED INTENT AS WELL AS COMPLY WITH ALL APPLICABLE REQUIREMENTS OF ANY GOVERNING AUTHORITIES. AND TO OBTAIN THE APPROPRIATE APPROVALS AND/OR PERMITS AS MAY BE REQUIRED FROM CITY, COUNTY, STATE, OR FEDERAL AGENCIES.
2. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COMPLETELY UNDERSTAND WHAT SUN BUILDING SYSTEMS IS INCLUDING OR EXCLUDING FROM ARCHITECTURAL PLANS AND/OR SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE PURCHASER FOR OVERALL PROJECT COORDINATION, INTERFACE, COMPATIBILITY, AND DESIGN CONCERNING ANY MATERIALS NOT FURNISHED BY SUN BUILDING SYSTEMS WITH THE SYSTEM TO BE FURNISHED BY SUN BUILDING SYSTEMS. THE SPECIFIC DESIGN CRITERIA CONCERNING THIS INTERFACE BETWEEN MATERIALS MUST BE FURNISHED BY THE PURCHASER PRIOR TO RELEASE FOR FABRICATION, OR THE DESIGN ASSUMPTIONS OF SUN BUILDING SYSTEMS WILL GOVERN.
4. IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY ALL DESIGN CRITERIA INCLUDING DEFLECTIONS AND NOTIFY SUN BUILDING SYSTEMS OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO RELEASE FOR FABRICATION.
5. THE PURCHASER IS RESPONSIBLE FOR THE ACCURATE SETTING OF ANCHOR BOLTS AND ERECTION OF STEEL IN ACCORDANCE WITH APPROVED DRAWINGS ONLY TEMPORARY SUPPORTS, GUYS, BRACES, FALSE WORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION WILL BE DETERMINED, FURNISHED AND INSTALLED BY THE PURCHASER.
6. THE PURCHASER IS RESPONSIBLE FOR ALL AFFECTS THAT MAY BE IMPOSED ON FACILITIES, LANDS, ROADS, BUILDINGS, ETC. LOCATED WITHIN THE PROXIMITY OF THE NEW STRUCTURE, BY THE NEW STRUCTURE, AFFECTS INCLUDE BUT ARE NOT LIMITED TO SNOW SLIDING, OR DRIFTING, AND WIND LOADING, SHEDDING, OR VORTEX ACTION.
7. UNLESS SPECIFICALLY STATED OTHERWISE WITHIN THE SUN BUILDING SYSTEMS "PURCHASE OFFER", THE FOLLOWING SHALL GOVERN:
  - a) IN CASE OF DISCREPANCIES BETWEEN SUN BUILDING SYSTEMS STRUCTURAL STEEL DRAWINGS AND PLANS FOR OTHER TRADES, THE STRUCTURAL STEEL DRAWINGS SHALL GOVERN.
  - b) SUN BUILDING SYSTEMS QUALITY CRITERIA, STANDARD PRACTICE, METHODS AND TOLERANCES.
  - c) WHEN WINDOW AND/OR DOOR OPENINGS HAVE A COMBINED AREA GREATER THAN 15% OF GROSS WALL AREA ON ANY WALL, AND THE BUILDING IS DESIGNED AS "ENCLOSED", THEN THE WINDOWS AND OR DOORS REPRESENTING THE EXCESS ABOVE 15% SHALL BE DESIGNED AND DETAILED FOR APPLICABLE LOADING, BY THE PURCHASER.
  - d) THE SUPPLYING OF SEALED ENGINEERING DATA AND DRAWINGS FOR THE METAL BUILDING SYSTEM DOES NOT IMPLY OR CONSTITUTE AN AGREEMENT THAT SUN BUILDING SYSTEMS OR ITS DESIGN ENGINEER IS ACTING AS THE ENGINEER OF RECORD OR DESIGN PROFESSIONAL FOR A CONSTRUCTION PROJECT. THESE DOCUMENTS ARE SEALED ONLY AS TO THE COMPONENTS FURNISHED BY SUN BUILDING SYSTEMS.
  - e) ANY FIELD MODIFICATION OR ALTERATION, OR THE ATTACHMENT OF ANY EQUIPMENT OR COMPONENT TO SUN BUILDING SYSTEMS METAL BUILDING SYSTEMS, OR THE OMITTED INSTALLATION OF ANY SPECIFIED PARTS OR PIECES, WITHOUT THE EXPRESS WRITTEN APPROVAL OF SUN BUILDING SYSTEMS SHALL VOID ANY AND ALL WARRANTIES.

### SUBMITTAL FOR APPROVAL

Sent on: APR 14 2005

In order to schedule this project in the most efficient manner, return these drawings marked in RED with your comments WITHIN TWO WEEKS from the above mentioned date WITH COLORS OF SHEETING AND TRIM

Any changes made AFTER approval of these drawings will delay the fabrication and delivery process.

Please supply colors for the sheeting and trim:

ROOF SHEETING: \_\_\_\_\_

WALL SHEETING: \_\_\_\_\_

LINER: \_\_\_\_\_

SOFFIT: \_\_\_\_\_

FACADE: \_\_\_\_\_

TRIM: \_\_\_\_\_

Trims will be supplied according to the color listed above.  
If any trims need to be a different color please make note here.

APPROVED WITHOUT CHANGES

No changes, proceed with fabrication

APPROVED AS NOTED (MAY INCLUDE CHANGE ORDER)

Fabrication may proceed on the basis of comments indicated.

By signing below, I (We) have reviewed all of the information contained in the approval drawings and have found it to be correct, accurate and consistent with my (our) intent and purpose. I (We) accept all of the purchaser responsibilities. I (We) further state the I (we) are authorized to provide acceptance on behalf of the listed company.

Reviewed by: \_\_\_\_\_

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_



2002 MORGAN ROAD  
SUNNYSIDE, WA. 98944  
(509) 839-7000  
FAX (509) 837-8064

JOB NO.  
**F00929**

FILE NAME:  
APP1

ALL DRAWINGS ARE NOT  
TO SCALE

SHEET 00 OF 14

# SUN BUILDING SYSTEMS

ENGINEERING CALCULATIONS						
BUILDING CODE: <u>UBC-97</u>	JOB NAME: [REDACTED]	DATE: <u>04/08/05</u>	DESIGNED BY: <u>MK</u>	CHECKED BY: <u>RD</u>		
JOB LOCATION: GUAM, USA	BUILDER: [REDACTED]					
DESIGN PARAMETERS			ENGINEER'S SEAL			
FRAME TYPE: MB-1	ROOF SLOPE: 1:12	BAY SIZE: 5 @ 20'-6 3/8"	 <p>EXPIRES 12/20/05 APR 14 2005</p> <p>THIS SEAL IS INTENDED FOR CERTIFICATION OF THE STRUCTURAL DESIGN OF THE METAL BUILDING SYSTEM AND COMPONENTS AS PROVIDED BY SUN BUILDING SYSTEMS. DESIGN AND OVERVIEW OF ALL OTHER PORTIONS OF THE PROJECT ARE NOT WITHIN THE SCOPE OF SUN BUILDING SYSTEMS OR THIS SEAL.</p> <p>SPECIAL LOADS</p>			
NOMINAL WIDTH: 90'-0"	EAVE HEIGHT: 20'-0"					
DESIGN LOADS						
BLDG DEAD LOAD: 7.5 psf	ROOF DEAD LOAD: 2.5 psf	L: 1.00				
LIVE LOAD: 20.0 psf	ROOF SNOW LOAD: 0.0 psf	I: 1.00				
COLLATERAL LOAD: 5.0 psf	SEISMIC ZONE: 4	Z: 0.4	I: 1.00			
WIND SPEED/EXPOS: 170 mph	EXPOSURE: C	I: 1.00				
WIND LOAD: 85.47 psf	ENCLOSURE: ENCLOSED					
CRANE CAPACITY: -- tons	STANDARD ALLOWABLE DEFLECTIONS:					
CRANE TYPE: --	PURLINS: L/150	GIRTS: L/120				
MEZZ LIVE LOAD: -- psf	RIGID FRAME HORIZONTAL: H/60	RIGID FRAME VERTICAL: L/240				
MEZZ DEAD LOAD: -- psf						
IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY ALL DESIGN CRITERIA AND NOTIFY SUN BUILDINGS SYSTEMS OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO RELEASE FOR FABRICATION.						

DATE	NO.	REVISIONS	BY	CHK.	DATE	NO.	REVISIONS	BY	CHK.
04/08/05	00	ISSUE FOR APPROVAL	KG	KG					

MATERIALS	ASTM DESIGNATIONS	
HOT ROLLED MILL SHAPES	A992-04a, GR. 50	FY = 50 ksi MIN.
HOT ROLLED FLAT BAR	A529-04, GR. 50	FY = 50 ksi MIN.
STRUCTURAL STEEL PLATE	A572-04, GR. 50	FY = 50 ksi MIN.
COLD FORMED LIGHT GAUGE SHAPES, GALV. (G90)	A653-04a, HSLA GR. 50	FY = 55 ksi (TYPE-A)
ROOF & WALL SHEETING, GALV. (G90)	A653-04a, SS GR. 50	FY = 50 ksi (CLASS-1)
ROOF & WALL SHEETING, ZINC ALUME (AZ50)	A792-03, SS GR. 50	FY = 50 ksi (CLASS-1)
BOLTS	A325-04b, TYPE-1	
STEEL PIPE	A53-04a, GR. B	FY = 35 ksi MIN.
STRUCTURAL TUBE	A500-03a, GR. B	FY = 46 ksi MIN.

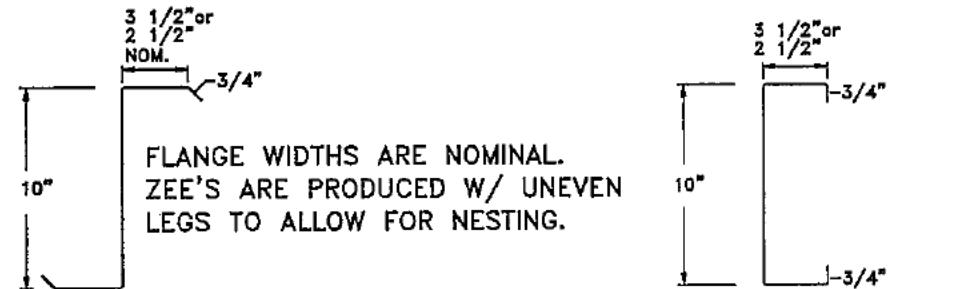
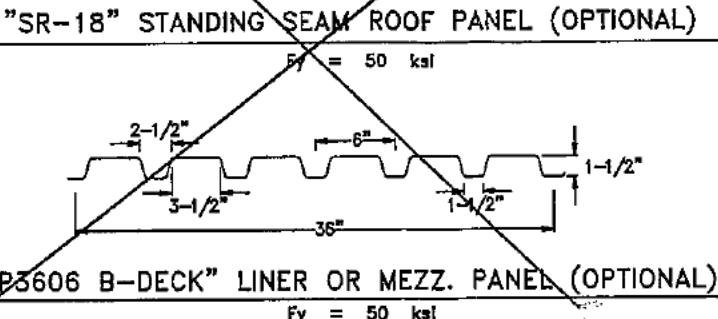
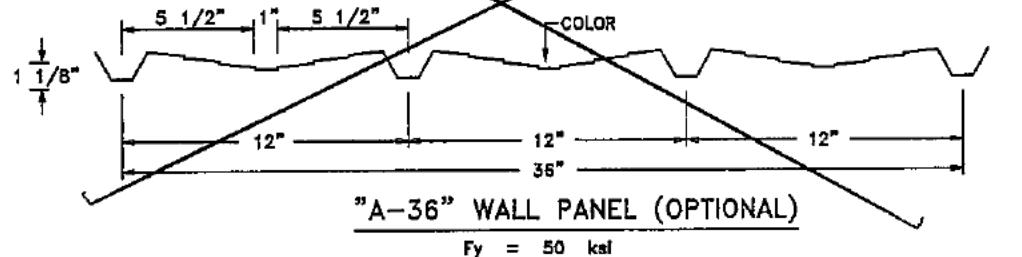
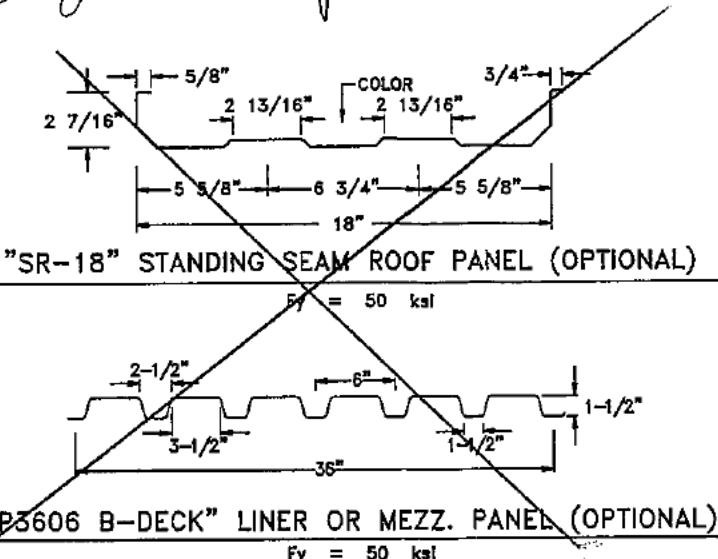
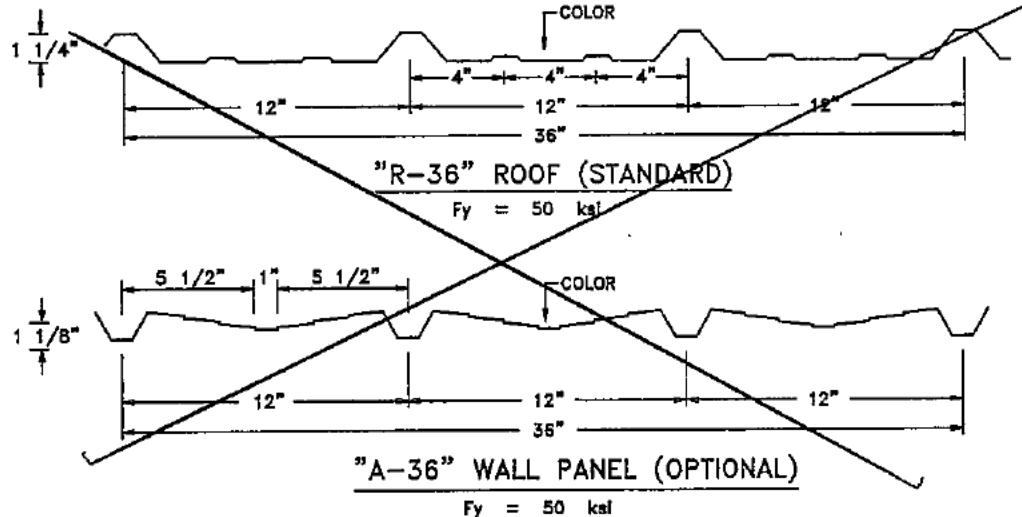
GENERAL NOTES	
1. PRIMER	SHOP PRIMER IS A RUST INHIBITIVE PRIMER. THIS PAINT IS NOT INTENDED FOR LONG-TERM EXPOSURE TO THE ELEMENTS.
2. A325 BOLT TIGHTENING REQUIREMENTS	ALL HIGH STRENGTH BOLTS ARE A325 UNLESS SPECIFICALLY NOTED OTHERWISE. BOLTED CONNECTIONS DESIGNATED AS "SP-X" (WHERE "X" IS A NUMBER) ARE TO BE INSTALLED AND TIGHTENED USING THE "TURN OF THE NUT" METHOD IN ACCORDANCE WITH SECTION 8 OF THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS (JUN 23, 2000 EDITION AVAILABLE AT <a href="http://WWW.BOLTCOUNCIL.ORG/">HTTP://WWW.BOLTCOUNCIL.ORG/</a> ).
	ALL OTHER HIGH STRENGTH, BOLTED CONNECTIONS ARE TO BE INSTALLED AND TIGHTENED TO A "SNUG TIGHT" CONDITION PER THE SAME SECTION OF THE ABOVE-NAMED RCSC SPECIFICATION.
	IT IS THE ERECTOR'S RESPONSIBILITY TO UTILIZE PROPER PROCEDURES AND TO ASSURE PROPER TIGHTNESS.
	NOTE: FOR ALL BOLTED CONNECTIONS, THE DESIGN HAS ASSUMED THAT THREADS ARE INCLUDED IN THE SHEAR PLANE(S) UNLESS SPECIFICALLY NOTED OTHERWISE.

PANEL SYSTEMS			
ROOF SYSTEM	COLOR	GAUGE	
WALL SYSTEM	COLOR	GAUGE	
TRIM SYSTEM	COLOR	GAUGE	
LINER SYSTEM	COLOR	GAUGE	
DECK SYSTEM	COLOR	GAUGE	
FACADE SYSTEM	COLOR	GAUGE	

IAS APPROVED FABRICATORS REPORT NO. FA-348  
DCLU APPROVED FABRICATORS ID. NO. 7241  
CANADIAN WELDING BUREAU CERTIFIED. NO. Y53

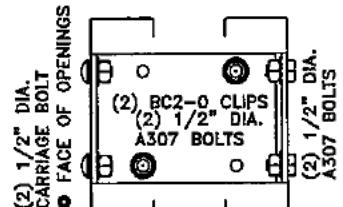
SCHEDULING FOR SHOP FABRICATION IS  
BY APPROVAL OF THESE DRAWINGS

*See separate roof & wall panel submittal*

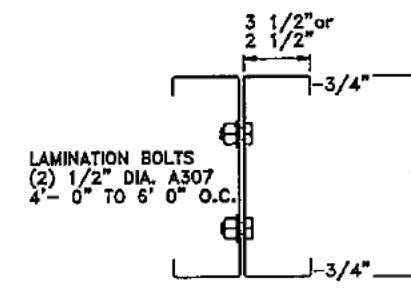
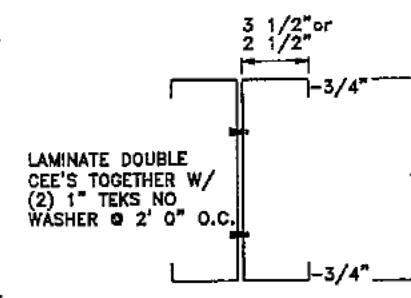


SINGLE "ZEE" SHAPE  
PART DESCRIPTION : 1025Z12  
PART DESCRIPTION : 1035Z12  
PURLINS - P & E  
GIRTS - G  
Fy = 55 ksi

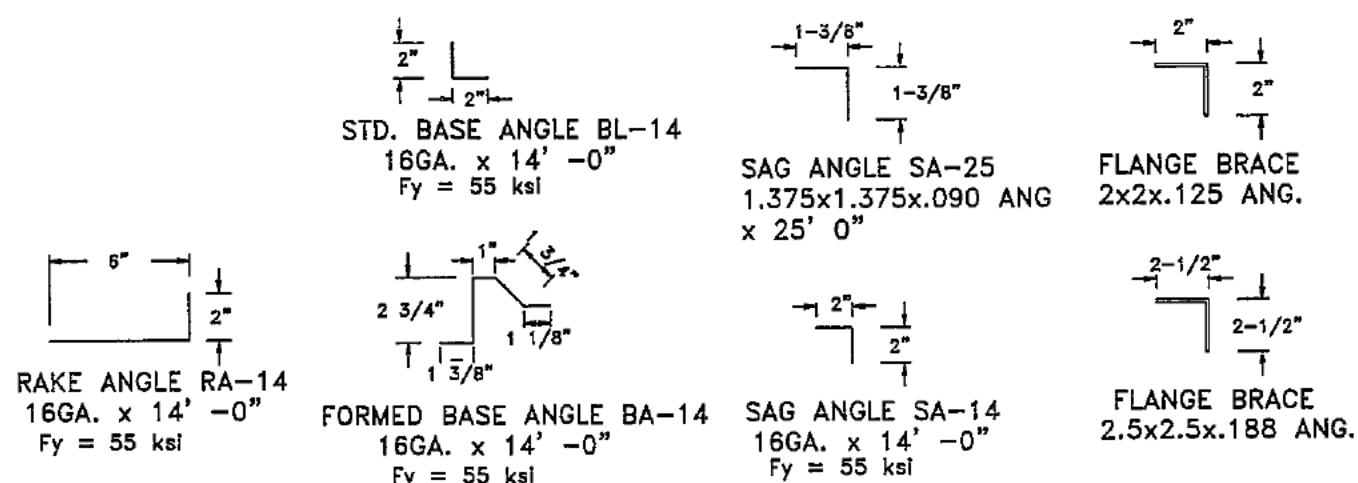
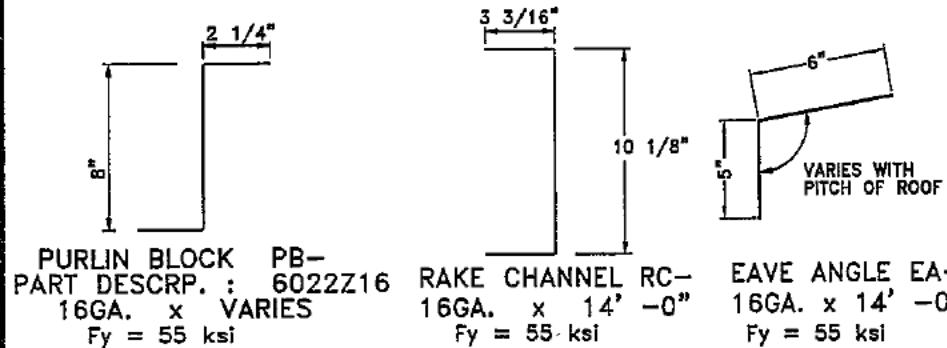
SINGLE "CEE" SHAPE  
PART DESCRIPTION : 1025C12  
PART DESCRIPTION : 1035C12  
JAMB - DJ HEADER - DH  
PURLINS - P & E GIRT - G  
BASE GIRT - BG  
Fy = 55 ksi



DOUBLE "CEE" SHAPE  
PART DESCRIPTION : 1025CC12  
PART DESCRIPTION : 1035CC12  
JAMB - DJ HEADER - DH  
PURLINS - P & E  
GIRTS - G  
Fy = 55 ksi



DOUBLE "CEE" SHAPE  
PART DESCRIPTION : 1025DC12  
PART DESCRIPTION : 1035DC12  
JAMB - DJ HEADER - DH  
PURLINS - P & E  
GIRTS - G  
Fy = 55 ksi



#### PART MARK & ABBREVIATION GLOSSARY

THE FOLLOWING ABBREVIATIONS ARE USED AS PREFIXES FOR PART MARKING IN THE FOLLOWING CONVENTION:  
EX. RF1-4 OR G-1

RF - FRAME MEMBER  
EC - ENDWALL COLUMN  
ER - ENDWALL RAFTER  
FLB - FLOOR BEAM  
PRT - PORTAL RAFTER  
PC - PORTAL COLUMN  
E - EAVE STRUT  
P - PURLIN  
G - GIRT  
DJ - DOOR JAMB  
DH - DOOR HEADER  
AB - ANGLE BRACE  
RB - ROD BRACE  
CB - CABLE BRACE  
FB - FLANGE BRACE  
WB - WIND BRACE  
PB - PURLIN BLOCK  
SC - SOLDIER COLUMN

#### BUILT-UP FRAMING

PART DESCRIPTION : EXAMPLE W08531  
WEB DEPTH (INCHES) W 08 5 3 1 WEB THK (1=10 GA)  
FLANGE WIDTH (INCHES) 10 3 1 FLANGE THK (1/16" INCR)

#### SECONDARY FRAMING

PART DESCRIPTION : EXAMPLE 1025DC12  
WEB DEPTH 10 25 GAGE OF MATERIAL DC 12  
FLANGE WIDTH 10 25 SHAPE OF SECONDARY MEMBER

Z - SINGLE "ZEE" SHAPED MEMBER  
CZ - SINGLE "ZEE" & "CEE" SHAPED MEMBER LAMINATED TOGETHER  
C - SINGLE "CEE" SHAPED MEMBER  
DC - DOUBLE "CEE" SHAPED MEMBER LAMINATED BACK TO BACK  
CC - DOUBLE "CEE" SHAPED MEMBER LAMINATED W/ BC2-O CLIPS  
CJ - SINGLE "CEE" SHAPED DOOR JAMB

#### PURLIN & GIRT LAP INDICATOR

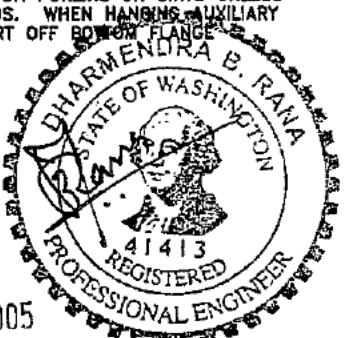
OVERLAPS FOR CONTINUOUS PURLIN & GIRTS ARE CODED AS FOLLOWS:  
#1 LAP = 1'-2 3/4" #2 LAP = 2'-5 3/4" | 2'-5 3/4"

#### DETAIL REFERENCING OR CALL-OUTS

H4 DETAIL CALL OUT (WHEN NO PAGE # IS GIVEN  
REFER TO STANDARD DETAILS.)

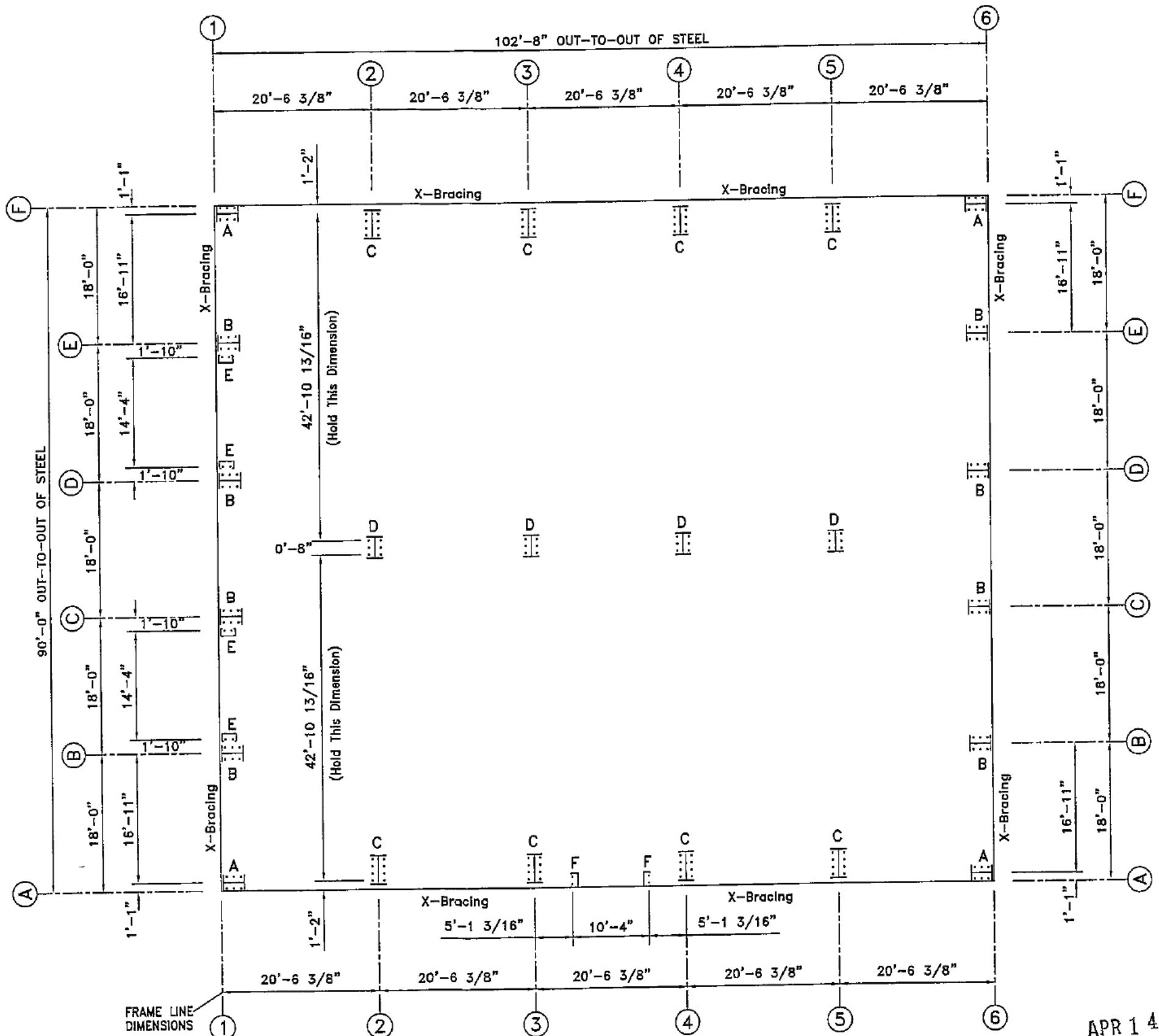
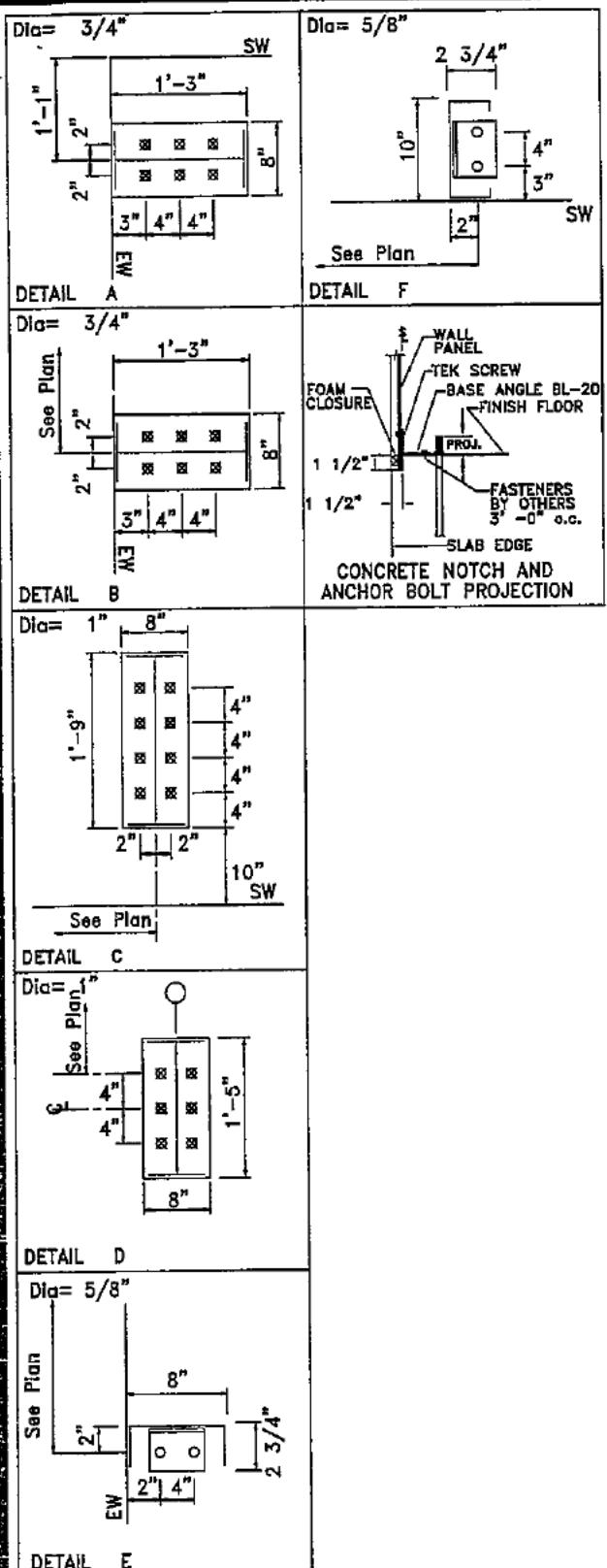
#### GENERAL CONSTRUCTION NOTES:

1.) DO NOT PLACE AUXILIARY LOADS ON PURLINS OR GIRTS UNLESS THEY ARE DESIGNED FOR THESE LOADS. WHEN HANGING AUXILIARY LOADS FOR PURLINS, DO NOT SUPPORT OFF BOTTOM FLANGE OR DRILL HOLES IN BOTTOM FLANGE.



APR 14 2005

DATE	NO.	REVISIONS	BY	CHK/J	FILE NAME	CSD1
04/08/05	00	ISSUE FOR APPROVAL	KG	KG	JOB NUMBER	F00929
					SHEET	02 OF 14



**ANCHOR BOLT PLAN**



2002 MORGAN ROAD  
SUNNYSIDE, WA. 98944  
(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
**ANCHOR BOLT PLAN**

OWNER: [REDACTED]

FILE NAME  
**ABP1**  
JOB NUMBER  
**F00929**  
SHEET **03** OF **14**

### NOTES FOR REACTIONS

- All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
- Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
- Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
- Building reactions are based on the following building data:  

Width (ft)	= 90
Length (ft)	= 102.66
BSW Eave Height (ft)	= 20
BSW Roof Slope	= 1.0:12
Peak Offset from BSW	= 45
FSW Eave Height (ft)	= 20
FSW Roof Slope	= 1.0:12

- Calculations are based on the larger of live loads or snow loads listed below.

Building Code	= UBC 97	
Dead Load psf	= 7.5	
Collateral Load psf	= 5	
Live Load psf	= 20	
Snow Load (UBC, IBC, ASCE) psf	= 0	
Snow Load Ss (NBC) - psf	= --	
Rain Load Sr (NBC) - psf	= --	
Wind (UBC, IBC, ASCE) mph\psf	= 170 mph	
(NBC) Wind 10 yr	= 0	
(NBC) Wind 30 yr	= 0	
Exposure	Closed	
Enclosure	Closed	
Seismic Zone	4	
Seismic Coeff	Ca (UBC) Ss (IBC, ASCE) S1 (IBC, ASCE) Za (NBC) Zy (NBC) V (NBC)	= 0.440 -- -- -- -- --
Importance - Seismic	= 1.00	
Importance - Wind	= 1.00	
Importance - Snow	= 1.00	

- Loading Combinations are:

- 1 DL+CL+LL
- 2 DL+CL+LL/2+WL2
- 3 DL+CL+LL/2+WR2
- 4 DL+WR1
- 5 DL+WL2
- 6 DL+WR2
- 7 DL+CL+LL/2+WL2+WS
- 8 DL+WP+LnWndl
- 9 DL+CL+LL+WR2/2+WS
- 10 DL+CL+LL/2+WR2+WS
- 11 DL+WR1+WS
- 12 DL+CL+LL+WL2/2+WS

### ENDWALL COLUMN: REACTIONS, ANCHOR BOLTS, & BASE PLATES

#### Column\_Reactions (k)

Frm Line	Col Line	Dead Vert	Coll Vert	Live Vert	Wind-Left Horiz Vert	Wind-Right Horiz Vert	Out-Of-Plane Horiz	Wd P	Wd S	Anc. Bolt No D(in)	Base Wid	Plate Len (in)	Thk	Grout (in)	
1	A	0.7	0.5	2.1	0.0	-6.2	5.8	-12.4	-6.7	6	0.750	8.000	15.00	0.625	0.0
1	B	1.0	0.8	3.3	5.8	-16.0	0.0	-9.9	-13.5	6	0.750	8.000	15.00	0.625	0.0
1	C	1.2	1.1	4.2	0.0	-12.4	0.0	-12.4	-14.8	6	0.750	8.000	15.00	0.625	0.0
1	D	1.2	1.1	4.2	0.0	-12.4	0.0	-12.4	-14.8	6	0.750	8.000	15.00	0.625	0.0
1	E	1.0	0.8	3.3	0.0	-9.9	5.8	-16.0	-13.5	6	0.750	8.000	15.00	0.625	0.0
1	F	0.7	0.5	2.1	5.8	-12.4	0.0	-6.2	-6.7	6	0.750	8.000	15.00	0.625	0.0
6	A	1.0	0.8	3.3	0.0	-9.9	5.8	-16.0	-13.5	6	0.750	8.000	15.00	0.625	0.0
6	B	1.2	1.1	4.2	0.0	-12.4	0.0	-12.4	-14.8	6	0.750	8.000	15.00	0.625	0.0
6	C	1.2	1.1	4.2	0.0	-12.4	0.0	-12.4	-14.8	6	0.750	8.000	15.00	0.625	0.0
6	D	1.0	0.8	3.3	5.8	-16.0	0.0	-9.9	-13.5	6	0.750	8.000	15.00	0.625	0.0
6	E	0.7	0.5	2.1	0.0	-6.2	5.8	-12.4	-6.7	6	0.750	8.000	15.00	0.625	0.0

### ENDWALL COLUMN: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

#### Column\_Reactions (k)

Frm Line	Col Line	Load Id	Load Hmax	Vmax	Load Id	Load Hmin	V	Anc. Bolt No D(in)	Base Plate Wid	Plate Len (in)	Thk	Grout (in)	
1	F	7	6.7	-10.4	8	-6.7	-5.5	6	0.750	8.000	15.00	0.625	0.0
1	F	9	6.7	3.4	7	6.7	-10.4	6	0.750	8.000	15.00	0.625	0.0
1	E	10	13.5	-12.9	8	-13.5	-9.0	6	0.750	8.000	15.00	0.625	0.0
1	E	1	0.0	5.1	10	13.5	-12.9	6	0.750	8.000	15.00	0.625	0.0
1	D	11	14.8	-11.2	8	-14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
1	D	1	0.0	6.5	11	14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
1	C	11	14.8	-11.2	8	-14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
1	C	1	0.0	6.5	11	14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
1	B	7	13.5	-12.9	8	-13.5	-9.0	6	0.750	8.000	15.00	0.625	0.0
1	B	1	0.0	5.1	7	13.5	-12.9	6	0.750	8.000	15.00	0.625	0.0
1	A	10	6.7	-10.4	8	-6.7	-5.5	6	0.750	8.000	15.00	0.625	0.0
1	A	12	6.7	3.4	10	6.7	-10.4	6	0.750	8.000	15.00	0.625	0.0
6	A	7	6.7	-10.4	8	-6.7	-5.5	6	0.750	8.000	15.00	0.625	0.0
6	A	9	6.7	3.4	7	6.7	-10.4	6	0.750	8.000	15.00	0.625	0.0
6	B	10	13.5	-12.9	8	-13.5	-9.0	6	0.750	8.000	15.00	0.625	0.0
6	C	11	14.8	-11.2	8	-14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
6	D	11	14.8	-11.2	8	-14.8	-11.2	6	0.750	8.000	15.00	0.625	0.0
6	E	7	13.5	-12.9	8	-13.5	-9.0	6	0.750	8.000	15.00	0.625	0.0
6	F	10	6.7	-10.4	8	-6.7	-5.5	6	0.750	8.000	15.00	0.625	0.0
6	F	12	6.7	3.4	10	6.7	-10.4	6	0.750	8.000	15.00	0.625	0.0

### BRACING REACTIONS, PANEL SHEAR

Wall Loc	Col Line	± Reactions (k)	Panel Shear (lb/ft)		
Loc	Line	Wind Vert	Seismic Vert	Wind Horiz	Seismic Horiz
L_EW	1 F	5.8	6.1	1.6	1.7
	E	5.8	6.1	1.6	1.7
	B	5.8	6.1	1.6	1.7
	A	5.8	6.1	1.6	1.7
F_SW	A 2,3	27.3	24.1	6.3	5.6
	4,5	27.3	24.1	6.3	5.6
R_EW	6 A	5.8	6.1	1.6	1.7
	B	5.8	6.1	1.6	1.7
	C	5.8	6.1	1.6	1.7
	D	5.8	6.1	1.6	1.7
B_SW	F 5,4	27.3	24.1	6.3	5.6
	3,2	27.3	24.1	6.3	5.6

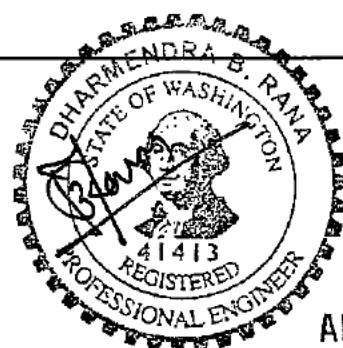
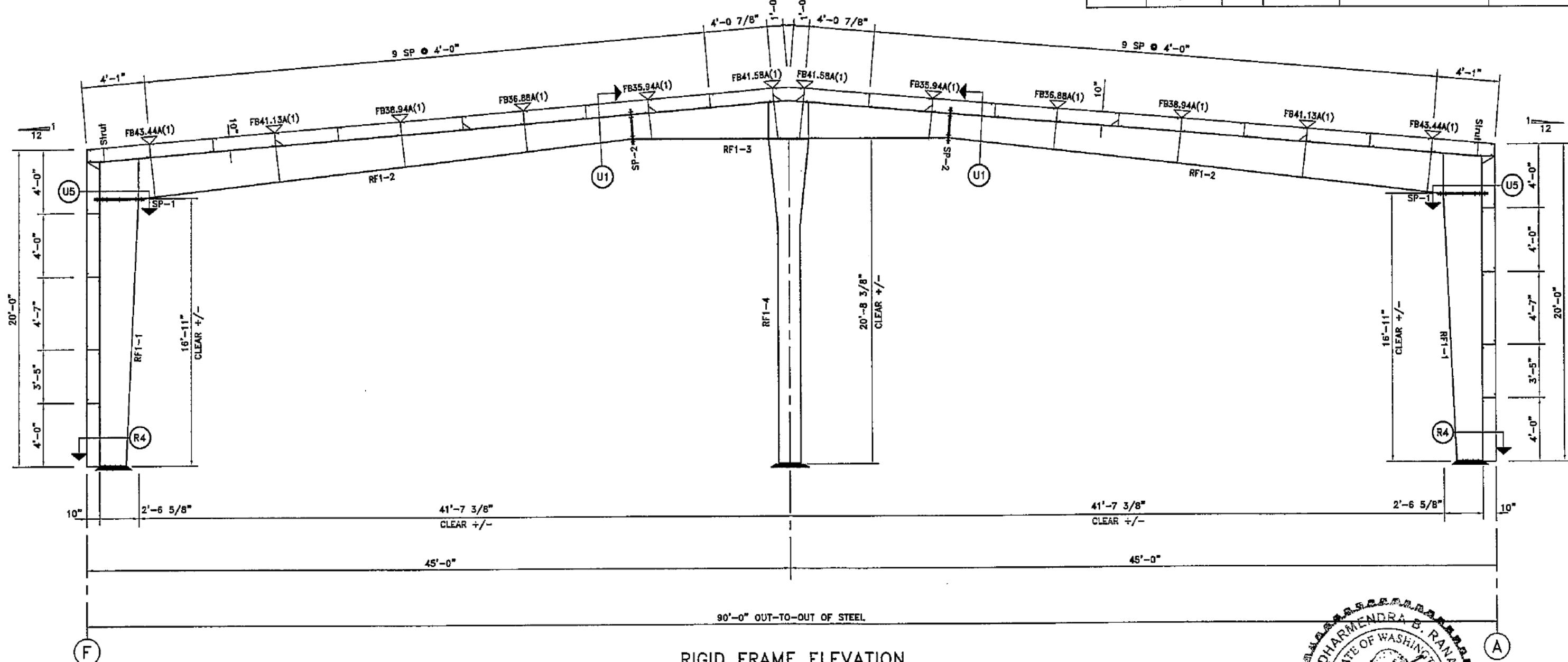
### ANCHOR BOLT SUMMARY

Qnt	Loc	Dia (in)	Proj (in)
O 12	DJ	5/8"	2.50
72	EW	3/4"	2.75
88	RF	1"	3.00

SPLICE PLATES & BOLTS						CAP PLATE BOLTS					
Splice Mark	Quan Top/Bot/Int	Bolt Type	Dia Len	Plate Size Wid	Thick	Length	Col Id	Qnt	Typ	Dia	Len
Sp - 1	6	4	2	A325	1.000	3.00	RF1-4	8	A325	0.750	2.75
Sp - 2	4	4	0	A325	0.625	2.50					

▽FLANGE BRACES: Both Sides(U.N.)  
FBxxA(1); xx=length(in), (1)=one side  
A = L2x1/8

PIECE	MEMBER SIZE TABLE (in)		OUTSIDE FLANGE W x T x LEN	INSIDE FLANGE W x T x LEN
	WEB DEPTH START-END	WEB PLATE THICK		
RF1-1	20.0/30.0	0.188	201.4	7x5/16x201.4
RF1-2	30.0/25.6 25.6/18.0	0.250 0.188	172.5 240.0	7x1/4 x240.0 7x1/4 x138.4
RF1-3	18.0/28.0 28.0/18.0	0.250 0.250	119.6 119.6	8x3/8 x120.0 8x3/8 x120.0
RF1-4	29.8/15.9 16.0/16.0	0.188 0.134	65.4 179.4	8x3/8 x 65.8 8x3/8 x179.4



APR 14 2005

EXPIRES 12/20/05

DATE	NO.	REVISIONS	BY	CHK/
04/08/05	00	ISSUE FOR APPROVAL	KG	KG



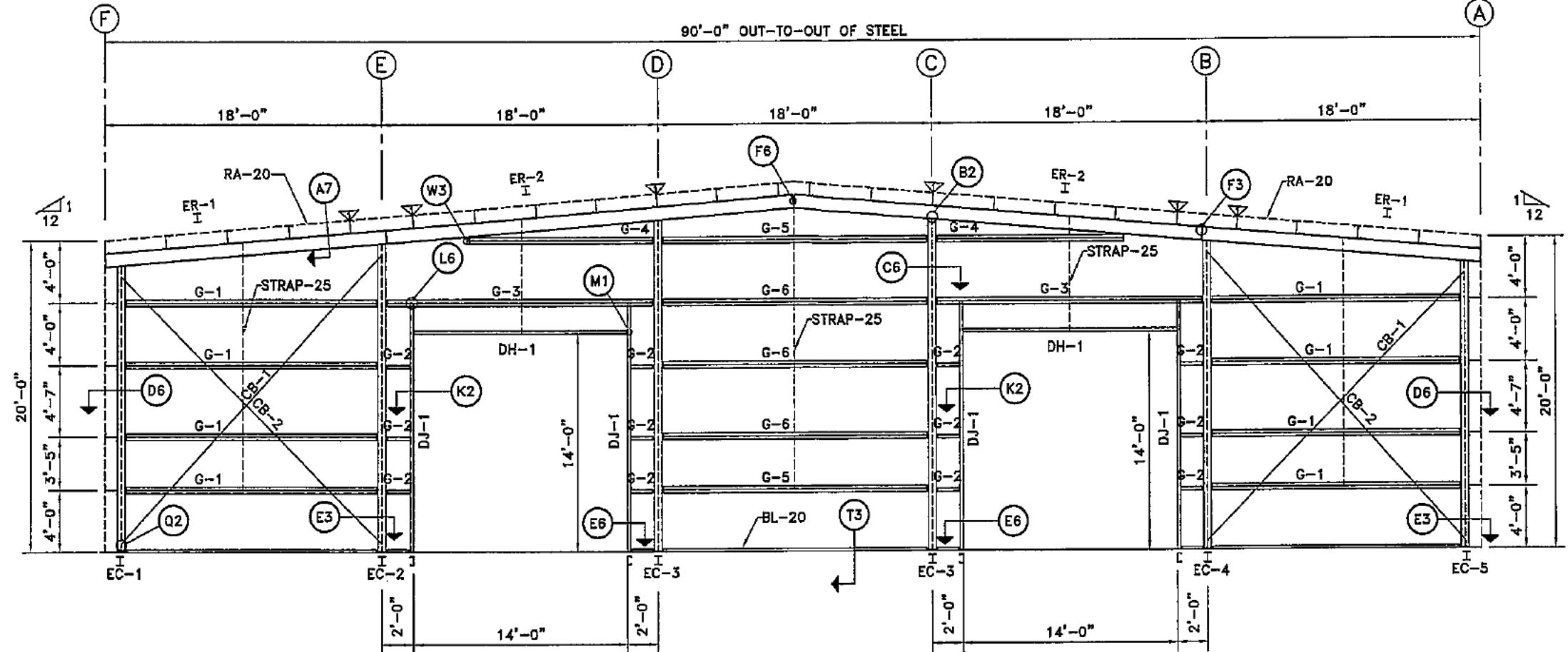
2002 MORGAN ROAD  
SUNNYSIDE, WA 98944  
(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
RIGID FRAME SECTION  
AT FRAME LINE 2 TO 5

THIS DRAWING IS NOT  
TO SCALE

OWNER: [REDACTED]  
LOCATION: GUAM, USA  
BUILDER: [REDACTED]

FILE NAME: RFS1  
JOB NUMBER: F00929  
SHEET OF 05 14



ALL PANELS WILL BE SUPPLIED BY OTHERS  
ASSUMED PANEL THICKNESS IS TO BE 24 GA.

**NOTE:-**  
ROOF, WALL PANEL SUPPLIED BY OTHERS  
SHALL MEET OR EXCEED THE FOLLOWING  
SECTION PROPERTIES.

Gauge	Thickness (in.)	Weight (psf)	$I_x$ (in $^4$ /ft)	$S_x$ (in $^3$ /ft)	$V_a$ (klips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
						$I_{xe}$ (in $^4$ /ft)	$S_{xe}$ (in $^4$ /ft)	$M_a$ (in.klips/ft.)	$I_{xe}$ (in $^4$ /ft)	$S_{xe}$ (in $^4$ /ft)	$M_a$ (in.klips/ft.)
24.000	0.0225	1.1040	0.0633	0.0633	0.9750	0.0560	0.0581	1.7400	0.0497	0.0621	1.8600

## ENDWALL SHEETING & TRIMS : FRAME LINE 1

**PANELS : BY OTHERS**



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(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
**LEFT ENDWALL FRAMING  
& SHEETING ELEVATIONS**

**THIS DRAWING IS NOT  
TO SCALE**

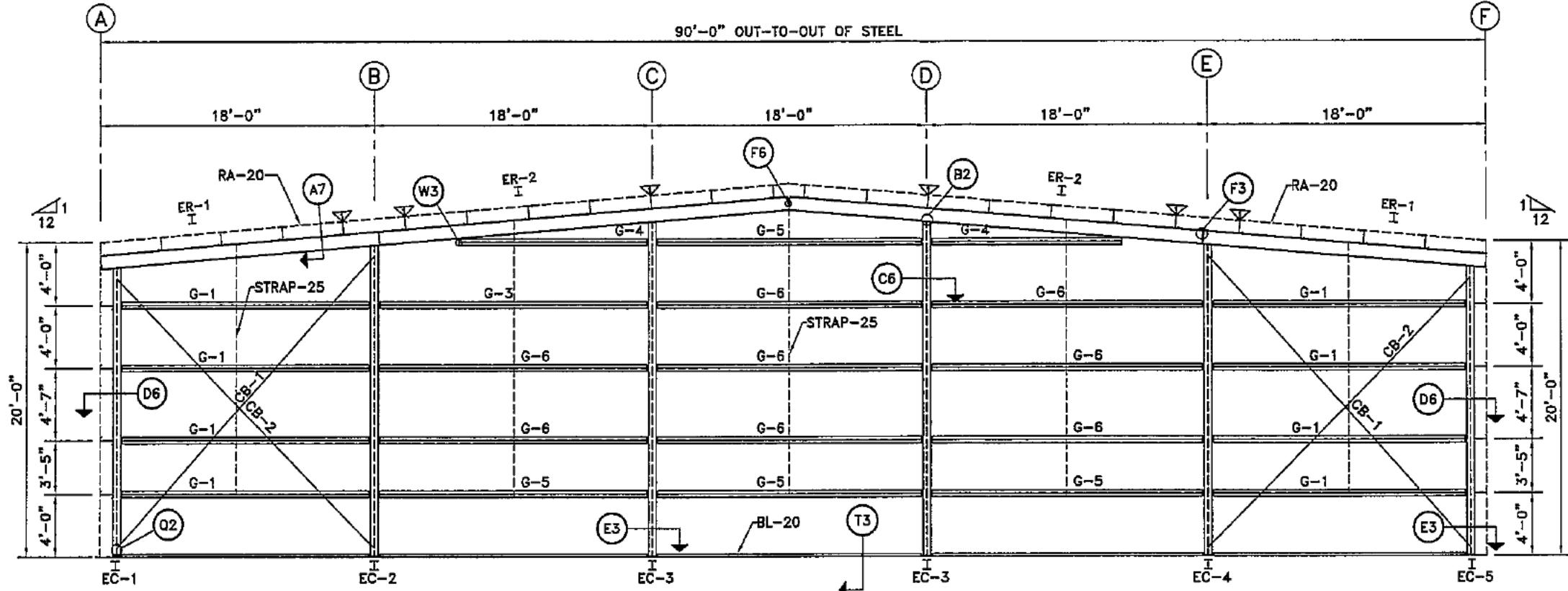
OWNER : [REDACTED]

#### **SECTION:**

APR 14 2005

**EXPIRES 12/20/05**

	FILE NAME <b>LEW1</b>
	JOB NUMBER <b>F00929</b>
SHEET <b>06</b>	OF <b>14</b>



WALL PANELS WILL BE SUPPLIED BY OTHERS  
ASSUMED PANEL THICKNESS IS TO BE 24 GA.

**NOTE:-**  
ROOF, WALL PANEL SUPPLIED BY OTHERS  
SHALL MEET OR EXCEED THE FOLLOWING  
SECTION PROPERTIES.

#### ENDWALL SHEETING & TRIMS : FRAME LINE 6

PANELS : BY OTHERS

Gauge	Thickness ( in.)	Weight ( psf.)	$I_x$ (in <sup>4</sup> /ft)	$S_x$ (in <sup>3</sup> /ft)	$V_a$ (kips/ft)	Top In Compression (Positive Bending)		Bottom In Compression (Negative Bending)			
						$I_{xe}$ (in <sup>4</sup> /ft)	$S_{xe}$ (in <sup>4</sup> /ft)	$M_a$ (in.kips/ft.)	$I_{xe}$ (in <sup>4</sup> /ft)	$S_{xe}$ (in <sup>4</sup> /ft)	$M_a$ (in.kips/ft.)
24.000	0.0225	1.1040	0.0633	0.0633	0.9750	0.0560	0.0581	1.7400	0.0497	0.0621	1.8600

DATE	NO.	REVISIONS	BY	CHK./
04/08/05	00	ISSUE FOR APPROVAL	SP	KG



2002 MORGAN ROAD  
SUNNYSIDE, WA 98944  
(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
**RIGHT ENDWALL FRAMING  
& SHEETING ELEVATIONS**

THIS DRAWING IS NOT  
TO SCALE

OWNER:

LOCATION: GUAM, USA

BUILDER:

FILE NAME

REW1

JOB NUMBER

F00929

SHEET

07

OF

14

BOLT TABLE FRAME LINE 6			
LOCATION	QUAN	TYPE	DIA LENGTH
ER-1/ER-2	8	A325	1/2" 1 1/2"
ER-2/ER-2	8	A325	1/2" 1 1/2"
Columns	4	A325	1/2" 1 1/2"

MEMBER TABLE FRAME LINE 6		
MARK	PART	LENGTH
EC-1	W14641	18'-4 3/16"
EC-2	W14641	19'-9 3/16"
EC-3	W14741	21'-3 3/16"
EC-4	W14641	19'-9 3/16"
EC-5	W14641	18'-4 3/16"
ER-1	W10641	18'-7 5/16"
ER-2	W10641	26'-5 3/16"
G-1	8025DC16	16'-3 1/2"
G-4	8025DC16	14'-4 7/8"
G-5	8025DC16	17'-3 1/2"
G-6	8025DC14	17'-3 1/2"
CB-1	CAB.5	23'-4"
CB-2	CAB.5	22'-4"

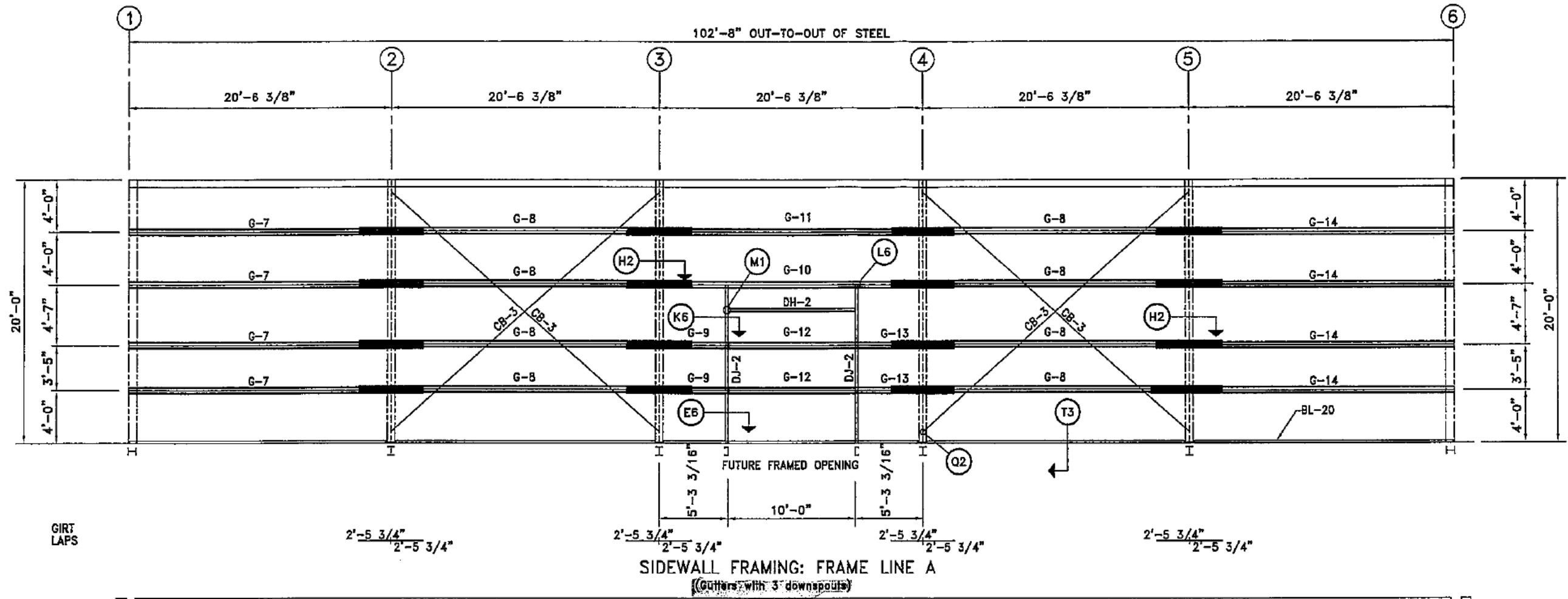
ANGLE TABLE FRAME LINE 6	
PART	LENGTH
BL-20	20'-0"
RA-20	20'-0"
STRAP-25	563'-0"

FLANGE BRACE TABLE FRAME LINE 6		
ID	MARK	LENGTH
1	FB27.56	2'-3 9/16"



APR 14 2005

EXPIRES 12/20/05



WALL PANELS WILL BE SUPPLIED BY OTHERS  
ASSUMED PANEL THICKNESS IS TO BE 24 GA.

**NOTE:-**  
ROOF, WALL PANEL SUPPLIED BY OTHERS  
SHALL MEET OR EXCEED THE FOLLOWING  
SECTION PROPERTIES.

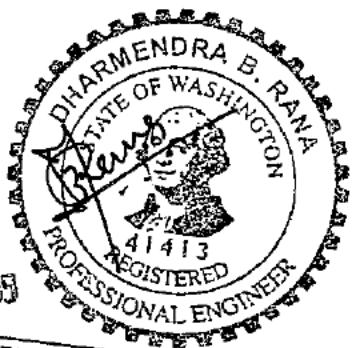
## SIDEWALL SHEETING & TRIMS : FRAME LINE A

**PANELS : BY OTHERS**

Gauge	Thickness (in.)	Weight (psf.)	ix (in <sup>4</sup> /ft)	Sx (in <sup>3</sup> /ft)	Va (kips/ft)	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
						ixe	Sxe	Ma	ixe	Sxe	Ma
24.000	0.0225	1.1040	0.0633	0.0633	0.9750	0.0560	0.0581	1.7400	0.0497	0.0621	1.8600

APR 1 4 2005

**EXPIRES 12/20/05**



2002 MORGAN ROAD  
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(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
**FRONT SIDEWALL FRAMING  
& SHEETING ELEVATIONS**

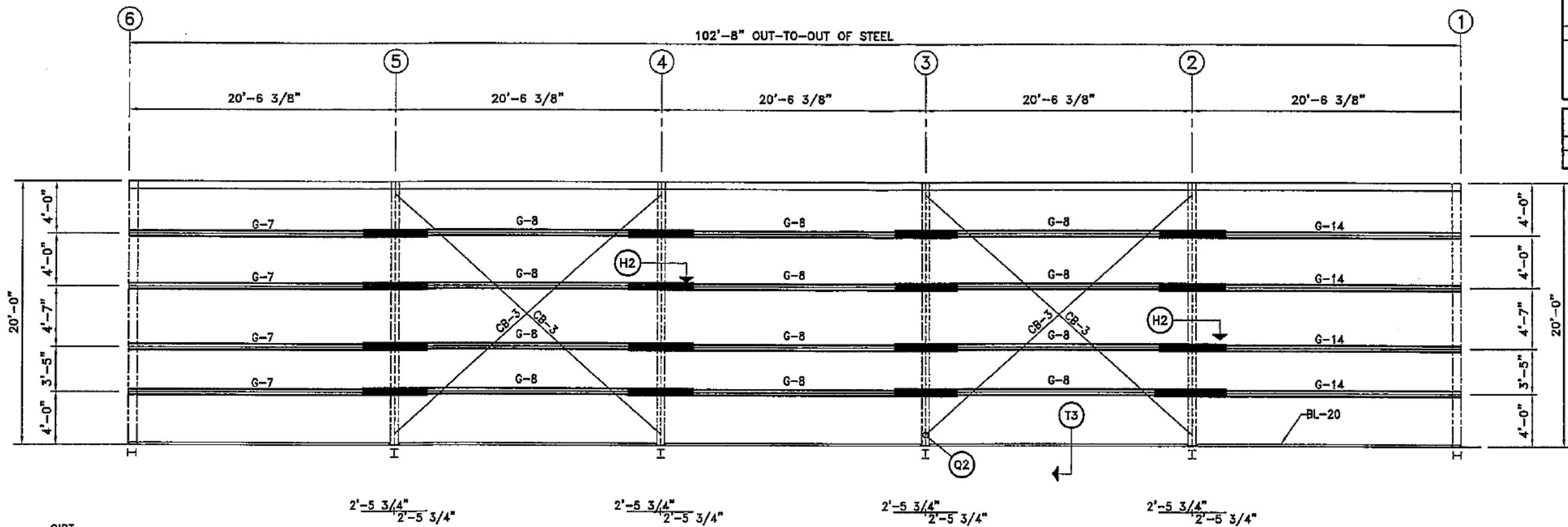
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THIS DRAWING IS NOT  
TO SCALE

OWNER : [REDACTED]  
LOCATION: GUAM, USA

**BUILDER:**

FILE NAME	FSW1
JOB NUMBER	F00929
SHEET	OF
08	14



SIDEWALL FRAMING: FRAME LINE F

(Gutters with 3 downspouts)

WALL PANELS WILL BE SUPPLIED BY OTHERS  
ASSUMED PANEL THICKNESS IS TO BE 24 GA.

NOTE:-  
ROOF, WALL PANEL SUPPLIED BY OTHERS  
SHALL MEET OR EXCEED THE FOLLOWING  
SECTION PROPERTIES.

SIDEWALL SHEETING & TRIMS : FRAME LINE F  
PANELS : BY OTHERS

Gauge	Thickness (in.)	Weight (psf)	$I_x$ ( $\text{in}^4/\text{ft}$ )	$S_x$ ( $\text{in}^3/\text{ft}$ )	$V_a$ (kips/ft)	Top In Compression (Positive Bending)		Bottom In Compression (Negative Bending)			
						$I_{xe}$ ( $\text{in}^4/\text{ft}$ )	$S_{xe}$ ( $\text{in}^4/\text{ft}$ )	$M_a$ (in.kips/ft.)	$I_{xe}$ ( $\text{in}^4/\text{ft}$ )		
24.000	0.0225	1.1040	0.0633	0.0633	0.9750	0.0560	0.0581	1.7400	0.0497	0.0621	1.8600

DATE	NO.	REVISIONS	BY	CHK/J
04/08/05	00	ISSUE FOR APPROVAL	SP	KG



2002 MORGAN ROAD  
SUNNYSIDE, WA 98944  
(509) 839-7000  
FAX (509) 837-8064

DRAWING TITLE:  
BACK SIDEWALL FRAMING  
& SHEETING ELEVATIONS

THIS DRAWING IS NOT  
TO SCALE

OWNER: [REDACTED]  
LOCATION: GUAM, USA  
BUILDER: [REDACTED]

MEMBER TABLE FRAME LINE F		
MARK	PART	LENGTH
G-7	1025Z12	22'-11 7/8"
G-8	1025Z14	25'-5 7/8"
G-14	1025Z12	22'-11 7/8"
CB-3	ABR3.0	27'-4"

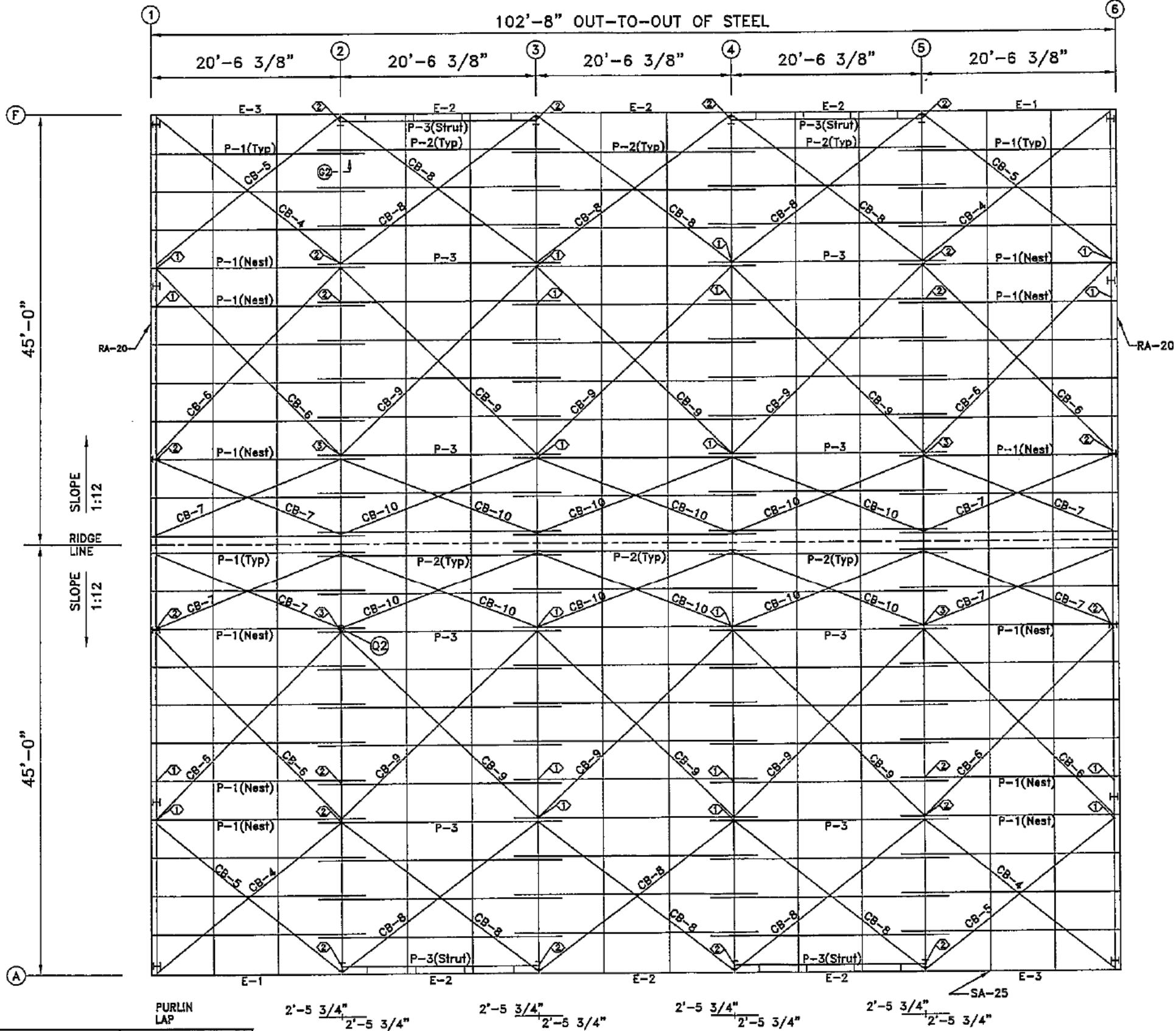
ANGLE TABLE FRAME LINE F	
PART	LENGTH
BL-20	20'-0"

ADD. 1 4/2005  
APR 1 2005

EXPIRES 12/20/05



FILE NAME  
BSW1  
JOB NUMBER  
F00929  
SHEET  
09 OF  
14



NOTE:- ROOF, WALL PANEL SUPPLIED BY OTHERS SHALL MEET OR EXCEED THE FOLLOWING SECTION PROPERTIES.											
Gauge	Thickness (in.)	Weight (psf)	I <sub>x</sub> (in <sup>4</sup> /ft)	S <sub>x</sub> (in <sup>3</sup> /ft)	V <sub>d</sub>	Top In Compression (Positive Bending)	Bottom In Compression (Negative Bending)	I <sub>x</sub> (in <sup>4</sup> /ft)	S <sub>x</sub> (in <sup>3</sup> /ft)	Ma	
24.000	0.0225	1.1040	0.0633	0.0633	0.9750	0.0560	0.0581	1.7400	0.0497	0.0521	1.8600

### ROOF FRAMING PLAN

SPECIAL BOLTS ROOF PLAN					
ID	QUAN	TYPE	DIA	LENGTH	WASH
1	2	A325	1/2"	1 1/2"	2
2	4	A307	1/2"	1 1/4"	2
3	4	A325	1/2"	1 1/2"	2

MEMBER TABLE ROOF PLAN		
MARK	PART	LENGTH
P-1	1025Z12	22'-11 7/8"
P-2	1025Z14	25'-5 7/8"
P-3	1025Z12	25'-5 7/8"
E-1	ES10C12	20'-5 7/8"
E-2	ES10C12	20'-5 7/8"
E-3	ES10C12	20'-5 7/8"
CB-4	CAB.5	23'-6"
CB-5	CAB.5	23'-4"
CB-6	CAB.375	26'-5"
CB-7	CAB.25	20'-3"
CB-8	CAB.5	23'-8"
CB-9	CAB.375	26'-8"
CB-10	CAB.25	20'-7"

ANGLE TABLE ROOF PLAN	
PART	LENGTH
RA-20	20'-0"
SA-25	25'-0"



ROOF SHEETING  
PANELS: 24 Ga. R-36  
Zincalume  
(BY OTHERS)

APR 1 4 2005

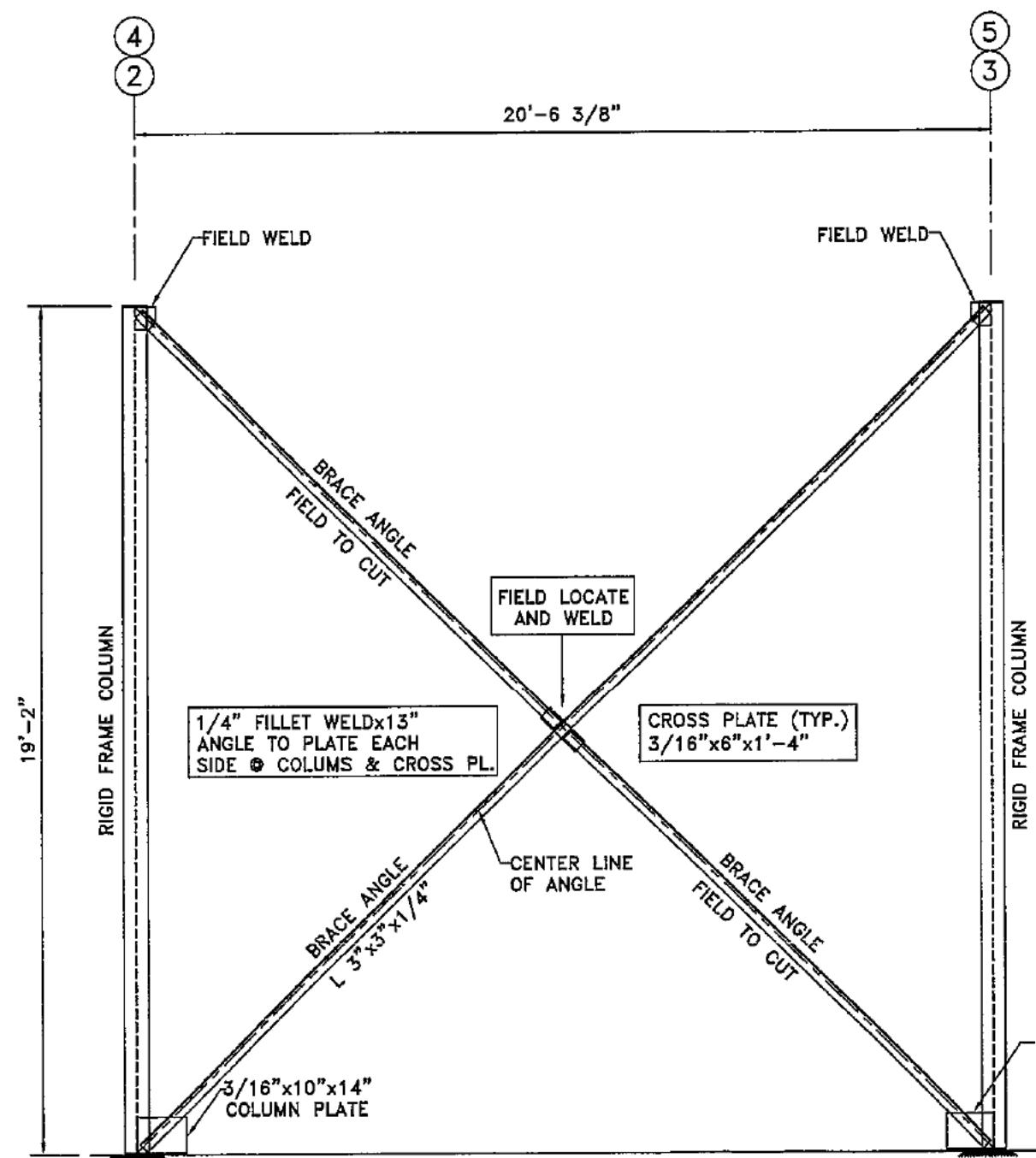
EXPIRES 12/20/05

FILE NAME  
RFP1

JOB NUMBER  
F00929

SHEET 10 OF 14

DATE	NO.	REVISIONS	BY	CHK./
04/08/05	00	ISSUE FOR APPROVAL	KG	KG

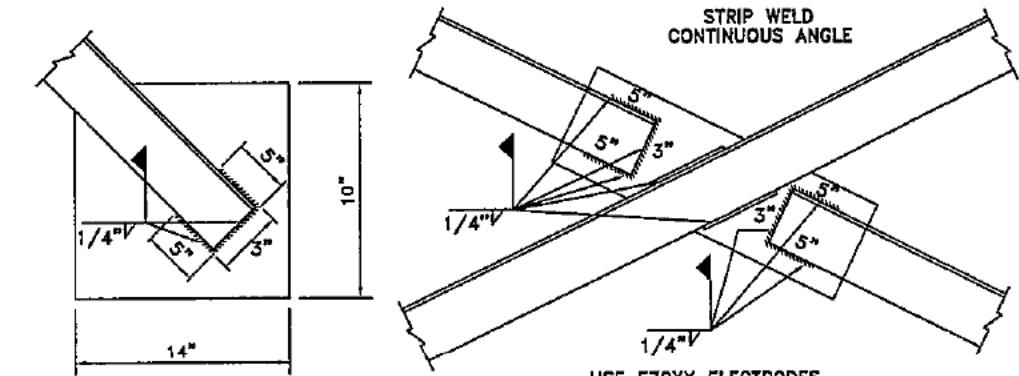


#### ANGLE BRACING LAYOUT

TWO SETS AS DRAWN AND NOTED FOR FRAME LINE A ONLY  
TWO SETS AS DRAWN AND NOTED BUT OPP. HAND FOR FRAME LINE F ONLY

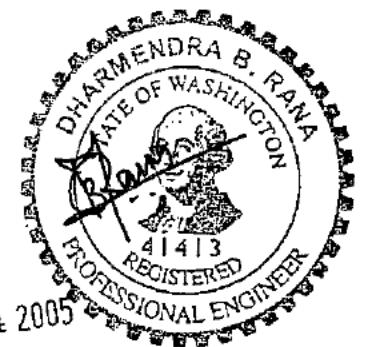
#### TYPICAL WELD @ CENTER PLATES

( 1/4" FILLETS ) FIELD WELD



ANGLE BRACE WELD DETAILS

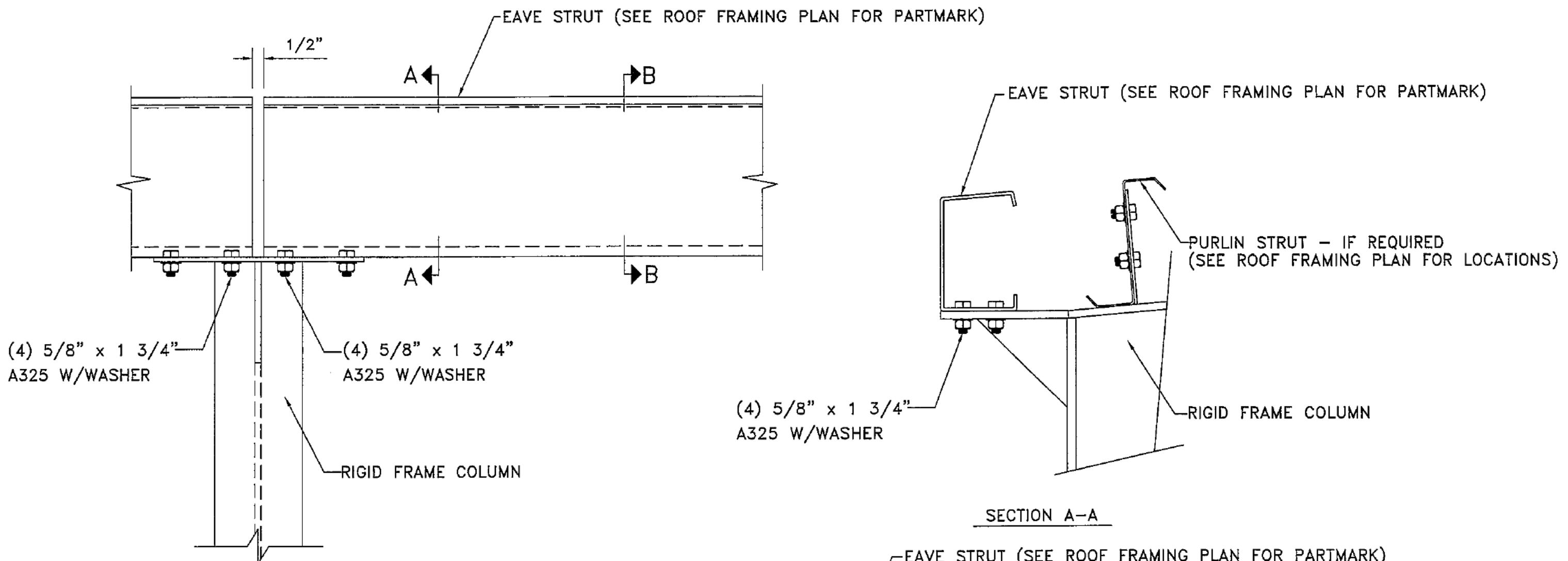
USE E70XX ELECTRODES  
ALL WELDS PER AWS STANDARDS FOR WORKMANSHIP



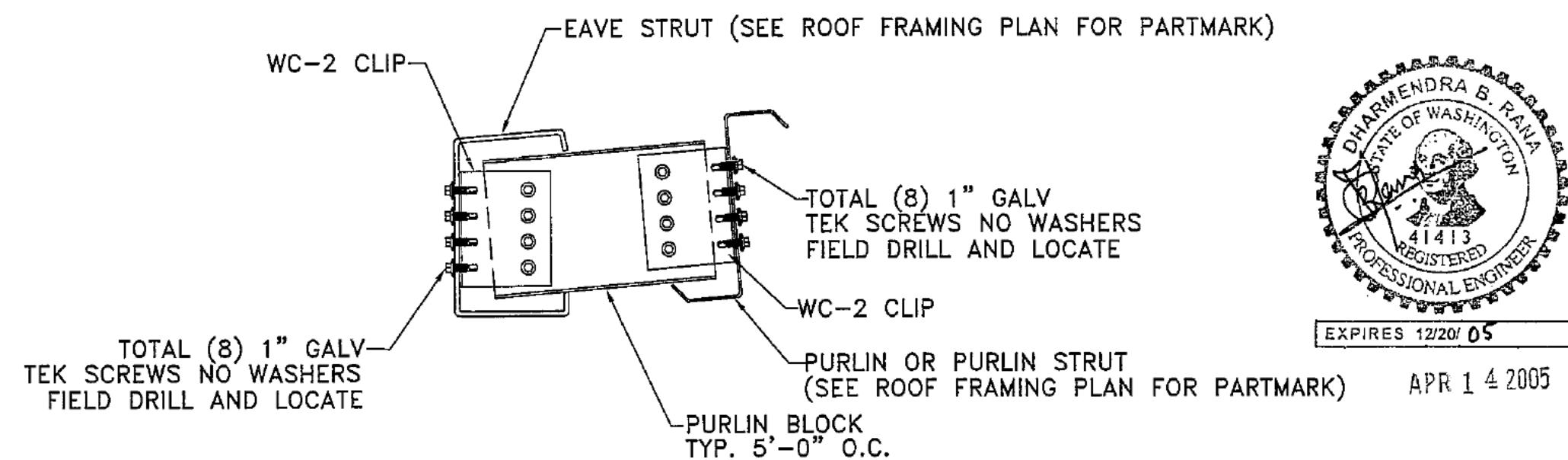
APR 14 2005

EXPIRES 12/20/05

DATE	NO.	REVISIONS	BY	CHK./ SP KG
04/08/05	00	ISSUE FOR APPROVAL		



### FORMED EAVE STRUT DETAILS



EXPIRES 12/20/05

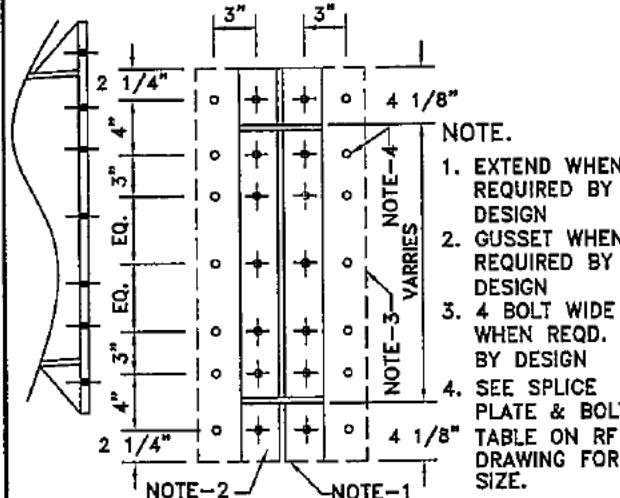
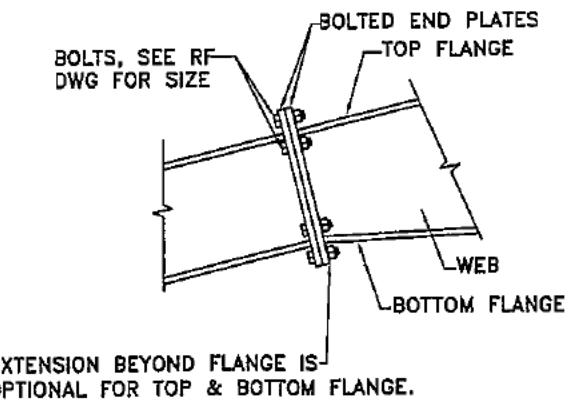
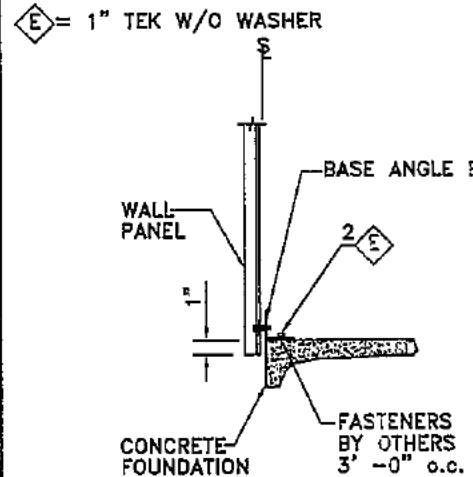
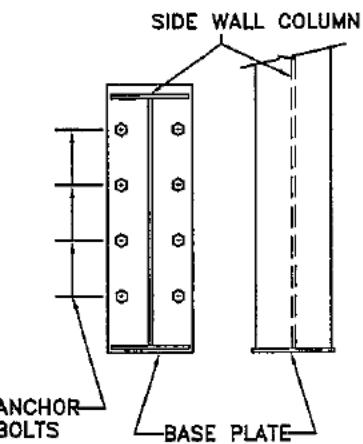
APR 14 2005

### SECTION B-B (FOR USE WITH STRUT OR PURLIN BLOCK ONLY)

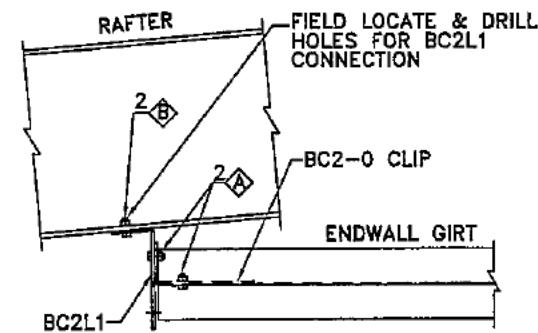
DATE	NO.	REVISIONS	BY	CHK/J
04/08/05	00	ISSUE FOR APPROVAL	SP	KG

<p><b>A</b> 1/2" x 1 1/4" A307 W/WASHER 1" TEK W/O WASHER</p>	<p><b>B</b> 1/2" x 1 1/2" A325 W/WASHER</p>	<p><b>C</b> = 1/2" x 1 1/4" A307 BOLTS W/ WASHER</p>	<p><b>D</b> = 1/2" x 1 1/4" A307 BOLTS W/ WASHER</p>	
<p><b>A7</b> RAFTER TO PURFLIN DETAIL AT ENDWALL</p> <p><b>B2</b> ENDWALL RAFTER TO COLUMN RAFTER DETAIL AT ENDWALL</p> <p><b>C</b> = 1/2" x 1 1/4" A307 CARRIAGE BOLTS W/WASHER</p>	<p><b>A</b> = 1/2" x 1" A307 BOLTS W/ WASHER</p>	<p><b>C6</b> ENDWALL COLUMN TO WALL GIRT DETAIL AT ENDWALL</p> <p><b>D6</b> CORNER COLUMN TO WALL GIRT DETAIL AT ENDWALL</p> <p><b>E3</b> COLUMN BASE PLATE DETAIL AT ENDWALL</p> <p><b>F</b> SEE LAP PAGE FOR ERECTION STEPS</p>	<p><b>A</b> = 1/2" x 1 1/4" A307 BOLTS W/ WASHER</p> <p><b>D</b> ALTERNATE ERECTION BOLT VARIABLES</p> <p><b>E</b> SEE FRAMING PLAN FOR LAP LENGTHS.</p> <p><b>F</b> FLANGE BRACE L2X1/8 IF &lt; 50' L2.5X3/16 IF &gt; 50'</p> <p><b>G</b> 1/2" X 1 1/4" A307 W/WASHER</p> <p><b>H</b> 1/2" X 1 1/2" A325 W/WASHER</p> <p><b>I</b> NOTE 1: SEE RIGID FRAME DWG FOR FLANGE BRC. BOLT SIZE AND TYPE. FLG BRC ONE SIDE OF FRAME ONLY, UNLESS NOTED OTHERWISE.</p>	<p><b>J</b> 1/2" X 1 1/4" A307 W/WASHER</p> <p><b>K</b> 1/2" X 1 1/2" A325 W/WASHER</p> <p><b>L</b> SEE LAP PAGE FOR ERECTION STEPS</p> <p><b>M</b> FLANGE BRACE VARIABLES</p> <p><b>N</b> ERECTION BOLT ALTERNATE</p> <p><b>O</b> EXTERIOR GIRTS NOTE: FLANGE BRACE ONE SIDE OF FRAME ONLY, UNLESS NOTED OTHERWISE</p>
<p><b>E6</b> COLUMN OR DOOR JAMB BASE PLATE DETAIL AT ENDWALL</p> <p><b>F3</b> I-BEAM RAFTER SPLICE DETAIL AT ENDWALL</p> <p><b>G</b> 1/2" x 1 1/4" A307 W/WASHER</p> <p><b>H</b> 1/2"x1 1/4" A307 CARRIAGE BOLTS W/WASHER</p>	<p><b>I</b> 1/2" x 1 1/4" A307 W/WASHER</p> <p><b>J</b> 1/2" x 1-1/4" CARRIAGE W/WASHER</p>	<p><b>F6</b> I-BEAM RAFTER PEAK CONNECTION DETAIL AT ENDWALL</p> <p><b>G2</b> PURFLIN CONNECTION BYPASS LAP @ INTERIOR RAFTER</p> <p><b>H2</b> WALL GIRT TO FRAME COLUMN</p>	<p><b>I</b> CABLE</p> <p><b>J</b> COMPLETE INSTALLATION BY WRAPPING LEGS ON STRAND COMpletely. MAKE SURE ENDS ARE SNAPPED INTO PLACE.</p> <p><b>K</b> COLUMN OR RAFTER WEB HILLSIDE WASHER</p> <p><b>L</b> FLAT WASHER</p> <p><b>M</b> EYEBOLT</p> <p><b>N</b> SLOT IN WEB TO INSERT HILLSIDE WASHER AND EYEBOLT</p> <p><b>O</b> NUT</p>	<p>APR 14 2005</p> <p>EXPIRES 12/20/05</p>
<p><b>K2</b> WALL GIRT TO DOOR JAMB</p>	<p><b>L6</b> DOOR JAMB TO WALL GIRT</p>	<p><b>M1</b> DOOR HEADER TO DOOR JAMB</p>	<p><b>Q2</b> DIAGONAL CABLE, EYEBOLT END</p>	

DATE	NO.	REVISIONS	BY	CHK/J
04/08/05	00	ISSUE FOR APPROVAL	SP	KG



(A) 1/2" x 1 1/4" A307 W/WASHER  
(B) 1/2" x 1 1/2" A325 W/WASHER



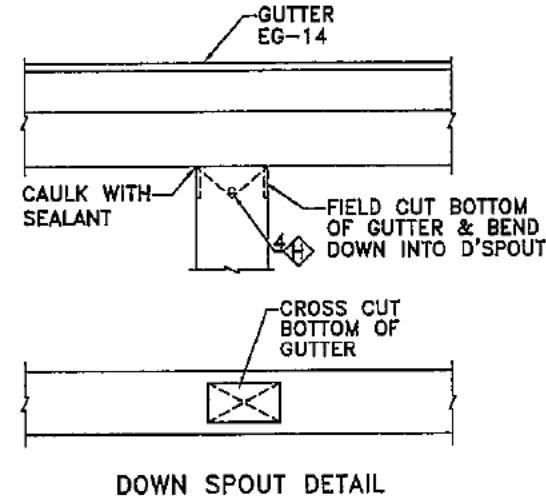
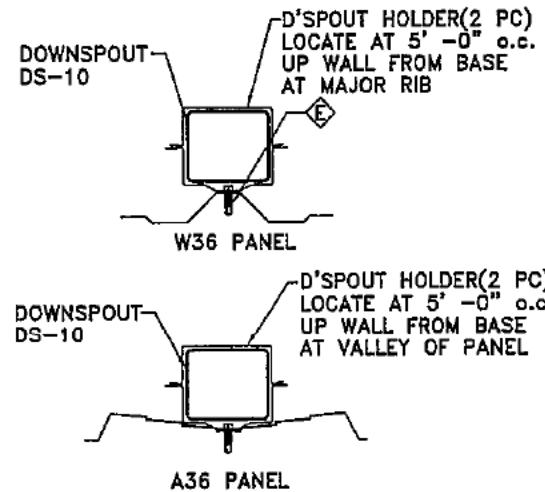
**R4** ANCHOR BOLT AT SIDEWALL COLUMN  
DETAIL AT SIDEWALL

**T3** SECTION THRU WALL PANEL  
DETAIL AT FOUNDATION

**U1** BOLTED END PLATE RAFTER SPLICE  
DETAIL AT RAFTER

**U5** HORIZONTAL HAUNCH SPLICE  
BOLTED END PLATE

**W3** GIRT TO RAFTER DETAIL



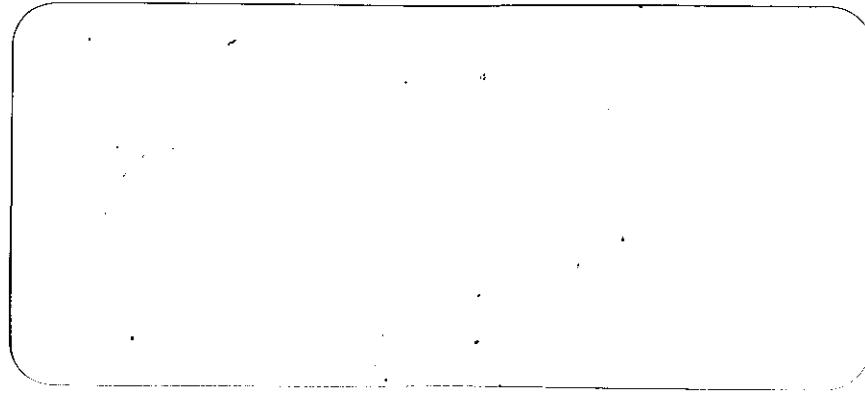
DOWNSPOUT HOLDER DETAIL  
GUTTER AND DOWN SPOUT DETAILS

DOWNSPOUT TO GUTTER - METHOD 1  
GUTTER AND DOWN SPOUT DETAILS



EXPIRES 12/20/05

DATE	NO.	REVISIONS	BY	CHK/
04/08/05	00	ISSUE FOR APPROVAL	SP	KG



# **STRUCTURAL CALCULATIONS**

# SUN BUILDING SYSTEMS

## DESIGN CERTIFICATION

This is to certify that the metal building system to be furnished shall be designed in accordance with the order documents and will meet or exceed the load requirements as specified below. This includes all primary and secondary framing members, roof and siding panels, and all accessories furnished. The Owner and /or Contractor are responsible for retaining a Professional Engineer if building components are altered, except as required to fit manufacturer's drawings.

### ENGINEERING CALCULATIONS

BUILDING CODE: <u>UBC 97</u>	JOB NUMBER: F00929  JOB NAME: [REDACTED]	DATE: <u>4/6/2005 14:56</u>  DESIGNED BY: <u>MAK</u>
	JOB LOCATION: Guam, USA  BUILDER: [REDACTED]	CHECKED BY: <u>Rana - D.</u>

DESIGN PARAMETERS		COMMENTS
FRAME TYPE:	MB-1	
ROOF SLOPE:	1:12	
BAY SIZE:	20.5334 ft	
NOMINAL WIDTH:	90 ft	
LENGTH:	102.6667 ft	
EAVE HEIGHT:	20 ft	The structural integrity of this building design requires roof and wall sheeting, supplied by others, have the following minimum material properties: Gauge - 24, Thickness - 0.0225 in., Weight - 1.1040 psf, Moment of Inertia - 0.0633 in4, Section Modulus - 0.0663 in3, Allowable Shear - 0.9750 kips/ft, Positive Bending Effective Moment of Inertia - 0.0580 in4, Positive Bending Effective Section Modulus - 0.0581 in3, Positive Bending Effective Allowable Moment - 1.7400 in.kips/ft, Negative Bending Effective Moment of Inertia - 0.0497 in4, Negative Bending Effective Section Modulus - 0.0621 in3, Negative Bending Allowable Moment - 1.8600 in.kips/ft. Roof and wall panel shall also be of through fastened type, and installation shall conform to fastener schedule provided on the drawings.

DESIGN LOADS			ENGINEER'S SEAL
BLDG DEAD LOAD:	7.5	psf	
ROOF DEAD LOAD:	2.5	psf	
LIVE LOAD:	20	psf	
ROOF SNOW LOAD:	0	psf	
COLLATERAL LOAD:	5	psf	
SEISMIC ZONE:	4		
WIND SPEED/EXPOS:	170	mph	
ENCLOSURE:	Enclosed	C	
CRANE CAPACITY:		ton	
CRANE TYPE:			

SPECIAL LOADS:

APR

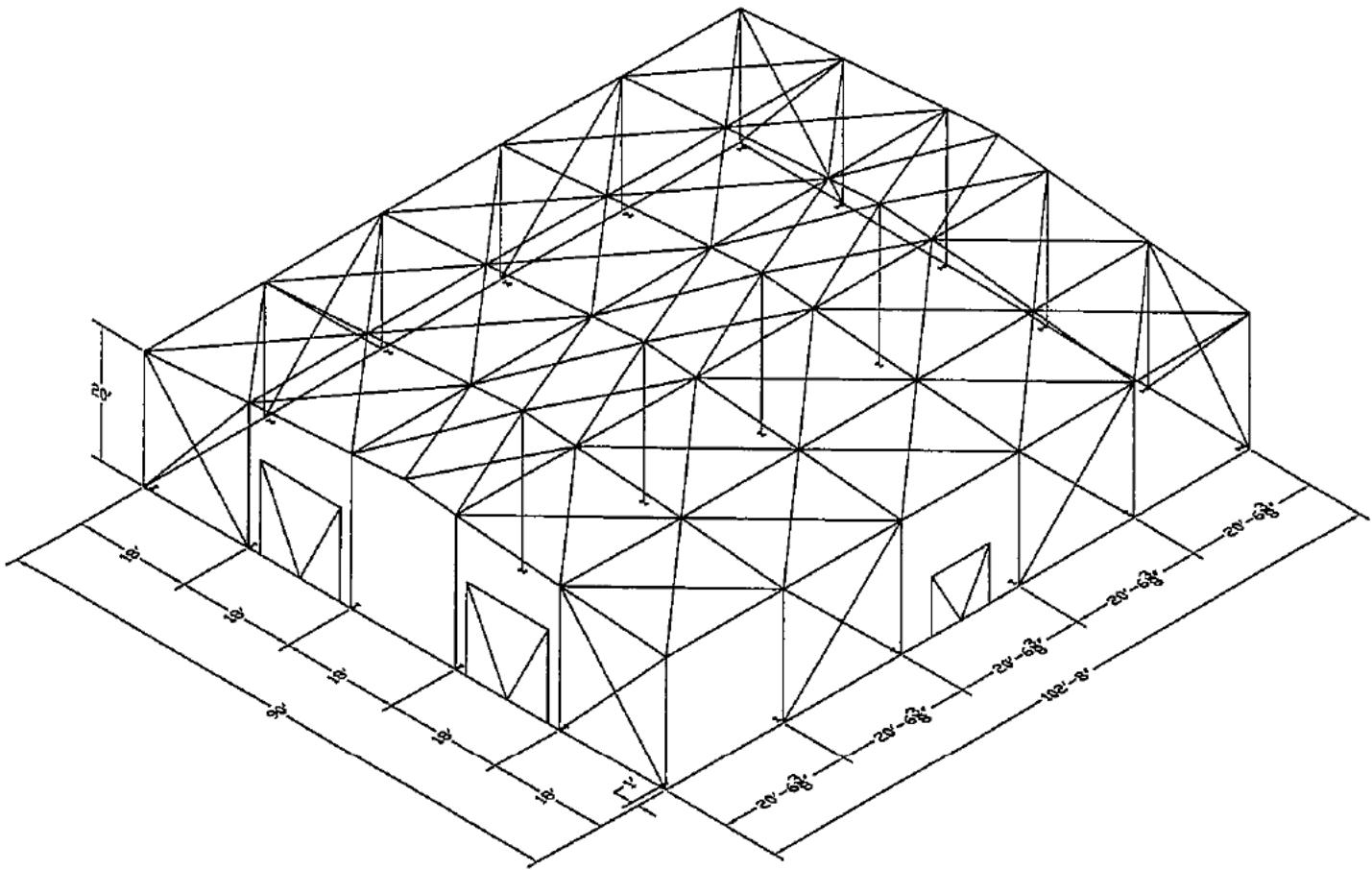
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EXPIRES 12/20/05

This seal is intended for certification of the structural design of the Metal Building System and Components as provided by SUN BUILDING SYSTEMS. Design and overview of all other portions of this project are NOT within the scope of SUN BUILDING SYSTEMS.



IT IS THE RESPONSIBILITY OF THE PURCHASER TO VERIFY ALL DESIGN CRITERIA AND NOTIFY SUN BUILDING SYSTEMS OF ANY DISCREPANCIES OR INCONSISTENCIES PRIOR TO RELEASE FOR FABRICATION.



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4/6/2005

Live Load	20 PSF	Building Dead Load	7.5 PSF
Wind Load	85.47 PSF ( 170 MPH, C ,I= 1 ,ht= 21.88 )		
Aux Load	5 PSF		
Seismic Zone	4 ( Z= 0.4 ,I= 1 )		
Eave Height	20 feet		
Pitch	1 :12	1 :12	
Peak Height	23.75 feet		
Building Type	Symmetrical		
Width	90.00 feet	45 to peak	
Length	102.67 feet		
Purlins Spacing	4.00 feet on center		
Height of Floor	0.00 feet (if applicable)		

No other buildings within 20', except as noted  
Wall and Roof Condition = Enclosed