DESIGN PACKAGE

BUILDER: **CASEY CIVIL LLC**
CUSTOMER: **US FISH AND WILDLIFE SERVICE**
JOB NUMBER: **12-B-87514**

TABLE OF CONTENTS

Original Design Completed thru Change Order # 2
Revision History

Rev #	Update Reactions ?	Reason for Revision	Pages Revised	Date Revised	Eng.

Project Engineer: Brandy Masih (Oklahoma City)
Checking Engineer: Vinay Joseph
Signing Engineer: Vinay Joseph, P.E.

Star Building Systems

P.O. Box 94910
Oklahoma City, OK 73143
(405) 636-2010
1-800-879-7827
FAX (405) 636-2419

October 12, 2012

CASEY CIVIL LLC
1080 OLD SPANISH TRL STE 8
SLIDELL, LA 70458-5002

12-B-87514
US FISH AND WILDLIFE SERVICE
BASTROP, LA
30'0" x 60'0" x 16'0"

To Whom It May Concern:

This is to certify that materials for the subject structure have been designed in accordance with the order documents, specifically as shown per the attached Engineering Design Criteria Sheet.

Aspects of code compliance as related to use or occupancy, such as sprinkler requirements, are not addressed by these documents.

These materials, when properly erected on an adequate foundation in accordance with the erection drawings as supplied and using the components as furnished, will meet the attached loading requirements.

This certification does not cover field modifications or the design of materials not furnished by Star Building Systems.

The attached design criteria and calculations are to remain with and form part of this Letter of Certification.

The calculations and the metal building they represent are the product of Star Building Systems or a division of its affiliate NCI Building Systems. The engineer whose seal appears hereon is employed by either Star Building Systems or a division of its affiliate NCI Building Systems and is not the engineer of record for this project.

Cordially,

Star Building Systems
Materials for Metal Buildings
An NCI Company

Vinay Joseph Thottunkal, P.E.
Regional Engineer

STATE OF LOUISIANA
VINAY JOSEPH THOTTUNKAL
License No. 36483
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

12/10/12 10:31 AM

ACCREDITED
AC472

Star Building Systems

P.O. Box 94910
Oklahoma City, OK 73143
(405) 636-2010
1-800-879-7827
FAX (405) 636-2419

SERVICE,BASTROP,Louisiana

Building Code	2012 International Building Code
Building Risk Category	Normal (Risk Category II)
Roof Dead Load	
Superimposed	2.50 psf
Collateral	0.50 psf
(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)	3.85 psf
Snow Exposure Factor (Ce)	1.00
Thermal Factor (Ct)	1.10

Wind

Basic Wind Speed	115.00 mph
Wind Exposure Category	B
Internal Pressure Coef (GCpi)	0.18/-0.18

Loads for components not provided by building manufacturer

Corner Areas (within 3.00' of corner)	23.79 psf pressure -31.85 psf suction
Other Areas	23.79 psf pressure -25.80 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	C		
Soil Site Class	D Stiff Soil		
Ss	0.172 g	Sds	0.183 g
S1	0.092 g	Sd1	0.147 g
Analysis Procedure	Equivalent Lateral Force		
Column Line	All		
Basic Force Resisting System	H		
Response Modification Coefficient (R)	3.00		
Seismic Response Coefficient (Cs)	0.06		
Design Base Shear in kips (V)	0.85		

Basic Structural System (from ASCE 7-10 Table 12.2-1)
H - Steel System not Specifically Detailed for Seismic Resistance

12/6/12 10:31 AM

STATE OF LOUISIANA
VINAY JOSEPH THOTTUNKAL
License No. 36483
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

IAS ACCREDITED AC472

Job Number 12-B-87514
Builder ..... CASEY CIVIL LLC
Jobsite Location ..... US FISH AND WILDLIFE SERVICE,BASTROP,Louisiana

Building Code ..... 2012 International Building Code
Building Risk Category ..... Normal (Risk Category II)
Roof Dead Load
  Superimposed ..... 2.50 psf
  Collateral ..... 0.50 psf
  (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) ..... 3.85 psf
  Snow Exposure Factor (Ce) 1.00
  Thermal Factor (Ct) 1.10

Wind
  Basic Wind Speed ..... 115.00 mph
  Wind Exposure Category ..... B
  Internal Pressure Coef (GCpi) 0.18/-0.18
  Loads for components not provided by building manufacturer
  Corner Areas (within 3.00' of corner) 23.79 psf pressure -31.85 psf suction
  Other Areas 23.79 psf pressure -25.80 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 C
  Soil Site Class ..... D Stiff Soil
  Ss ..... 0.172 g Sds ..... 0.183 g
  S1 ..... 0.092 g Sd1 ..... 0.147 g
  Analysis Procedure ..... Equivalent Lateral Force
  Column Line All
  Basic Force Resisting System H
  Response Modification Coefficient (R) 3.00
  Seismic Response Coefficient (Cs) 0.06
  Design Base Shear in kips (V) 0.85
  Basic Structural System (from ASCE 7-10 Table 12.2-1)
    H - Steel System not Specifically Detailed for Seismic Resistance

BOLT TIGHTENING - All bolted joints with A325-09 Type 1 bolts are specified as snug-tightened joints in accordance with the Specification for Structural Joints Using ASTM A325 or A490 Bolts, June 30, 2004. 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 grade 55, with a minimum yield point of 55 ksi. For Canada, material properties conform to CAN/CSA G40.20/G40.21 or equivalent.

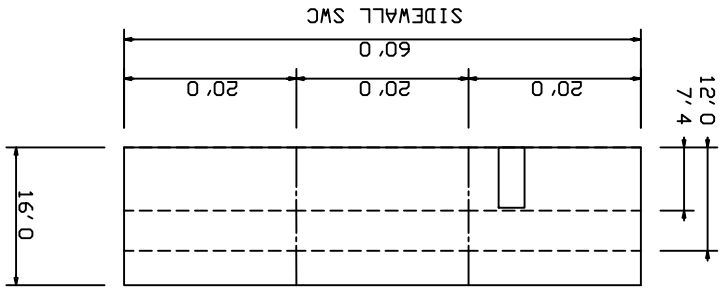
Using 7 x 7 northern gutter with 4 x 5 downspouts, the roof drainage system has been designed using the method outlined in the MBMA Metal Building Systems Manual. Downspout locations have not been located on these drawings. The downspouts are to be placed on the building sidewalls at a spacing not to exceed 60.0 feet with the first downspout from both ends of the gutter run within 48.4 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 8 in/hr rainfall intensity as it corresponds to a 5 year recurrence interval.

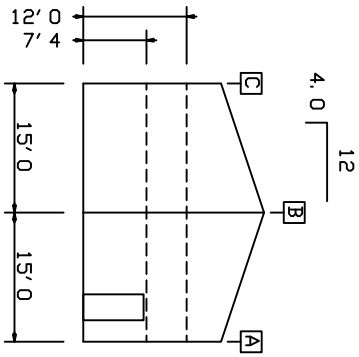
Diaphragm action of the wall panels on building A side B, D is being used to provide stability to the wall. Removal of the wall panels may result in less than minimum length of wall panels required. Field installation of x-bracing or other means to provide stability may be required as a result of the removal of wall panels.

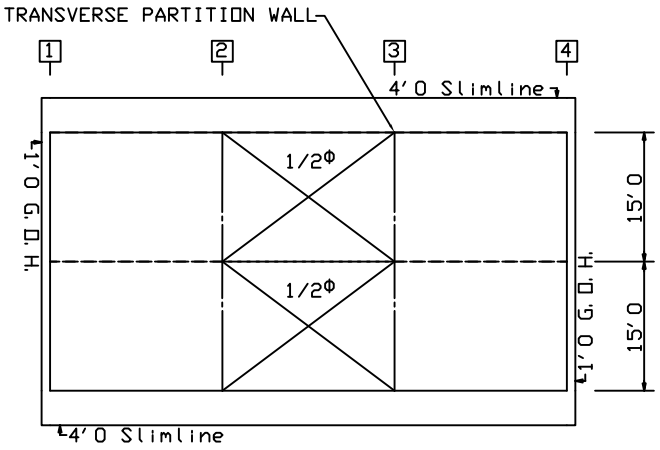
Framed openings, walk doors, and open areas shall be located in the bay and elevation as shown in the erection drawings. The cutting or removal of girts shown on the erection drawings due to the addition of framed openings, walk doors, or open areas not shown may void the design certifications supplied by the metal building manufacturer.

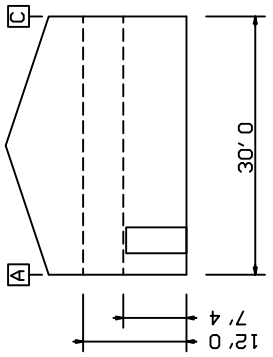
key Strut: x=double Z,
xx=triple Z,
o=pipe(FM)

Builder :
CASEY CIVIL LLC
Job No: 87514A run01
Version: ver01-bdmasih
Tue Oct 09 17:20:36 2012

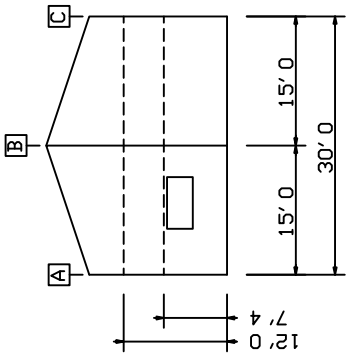


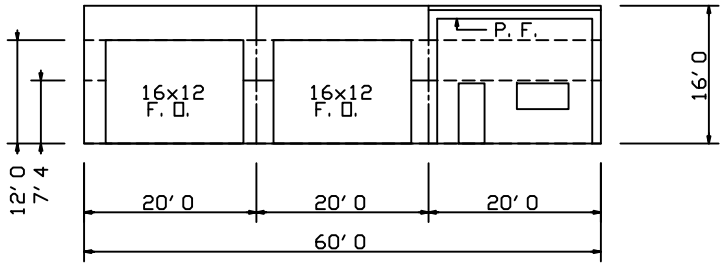






PARTITION WALL @ FL 3





Owner :
US FISH AND WILDLIFE SER
BASTROP LA 71220
P. Ø. G77551

M A I N B U I L D I N G D E S I G N S U M M A R Y R E P O R T

All connections use ASTM A325N bolts, unless noted otherwise.
All anchor rods are checked according to ASTM F1554 Gr. 36 strengths.

ROOF PLANE ------- RPA
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AroofRPA_01.edf

Panel ..... DLOK24-24 ROOF
Purlins ..... 55.0 ksi Yield Strength
Eave Struts ..... 55.0 ksi Yield Strength

PURLIN SPACING : 2@4'7 4'9 1'1

Bay #	Length (ft)	Member Size Identification	Brace Locations		L Lap Exten	R Lap Exten	
LE	1.333	8X2.5Z16	None		0.000	0.000	C
1	19.667	8X2.5Z16	2 points	C	0.000	1.479	C
2	20.000	8X2.5Z16	2 points	C	1.479	1.479	C
3	19.667	8X2.5Z16	2 points	C	1.479	0.000	C
RE	1.333	8X2.5Z16	None	C	0.000	0.000	

Purlin Clip Use 2 A325 Bolts @ Level 2,3,4 @ Supports:1,2,3,4

Purlin Stiffened Clips @ Level 2,4 @ Supports:1,2,3,4
Purlin Backup Plate @ Supports:1,2,3,4,

ROOF PLANE ------- RPC
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AroofRPC_01.edf

Panel ..... DLOK24-24 ROOF
Purlins ..... 55.0 ksi Yield Strength
Eave Struts ..... 55.0 ksi Yield Strength

PURLIN SPACING : 2@4'7 4'9 1'1

Bay #	Length (ft)	Member Size Identification	Brace Locations		L Lap Exten	R Lap Exten	
LE	1.333	8X2.5Z16	None		0.000	0.000	C
1	19.667	8X2.5Z16	2 points	C	0.000	1.479	C
2	20.000	8X2.5Z16	2 points	C	1.479	1.479	C
3	19.667	8X2.5Z16	2 points	C	1.479	0.000	C
RE	1.333	8X2.5Z16	None	C	0.000	0.000	

Purlin Clip Use 2 A325 Bolts @ Level 2,3,4 @ Supports:4,3,2,1

Purlin Stiffened Clips @ Level 2,4 @ Supports:4,3,2,1
Purlin Backup Plate @ Supports:4,3,2,1,

RPC	Purlin Strut	@	15.000 (ft)	:	8X2.5Z16 Bays	3
RPC	Purlin Strut	@	15.000 (ft)	:	8X2.5Z16 Bays	2
RPC	Purlin Strut	@	15.000 (ft)	:	8X2.5Z16 Bays	1
SWC	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	3
SWC	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	2
SWC	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	1
SWA	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	1
SWA	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	2
SWA	Eave Strut	@	16.000 (ft)	:	8X3.5E14 Bays	3

Note: 1) All Purlin strut locations for all roof planes are measured from back sidewall.

Eave strut interior connection at SWA uses (2)-1/2" A325 bolts.
Eave strut interior connection at SWC uses (2)-1/2" A325 bolts.
Eave strut connection at end-frame uses (4)-1/2" A325 bolts.

BRACING ---- Roof: 1 bays Rod
Plane SWA :Portal Frame
Plane SWC :Diaphragm
Plane EWB :Diaphragm
Plane EWD :Diaphragm

Star Building Systems, OKC, OK
Design Summary Program User: bdmasih Job Number: 87514A
Design Summary Report Version: 4.21.3 run01 Date: 10/09/12
Manufacturing Plant - NCI Start Time: 05:20:28
R:\..\12-B-87514\ver01-bdmasih\Bldg-A\run01\87514A_bldg_A_01.cds
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M A I N B U I L D I N G D E S I G N S U M M A R Y R E P O R T

All connections use ASTM A325N bolts, unless noted otherwise.
All anchor rods are checked according to ASTM F1554 Gr. 36 strengths.

ROOF PLANE ------- RPA
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AroofRPA_01.edf

Panel ..... DLOK24-24 ROOF
Purlins ..... 55.0 ksi Yield Strength
Eave Struts ..... 55.0 ksi Yield Strength

PURLIN SPACING : 2@4'7 4'9 1'1

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
LE	1.333	8X2.5Z16	None	0.000	0.000 C
1	19.667	8X2.5Z16	2 points	C 0.000	1.479 C
2	20.000	8X2.5Z16	2 points	C 1.479	1.479 C
3	19.667	8X2.5Z16	2 points	C 1.479	0.000 C
RE	1.333	8X2.5Z16	None	C 0.000	0.000

Purlin Clip Use 2 A325 Bolts @ Level 2,3,4 @ Supports:1,2,3,4

Purlin Stiffened Clips @ Level 2,4 @ Supports:1,2,3,4
Purlin Backup Plate @ Supports:1,2,3,4,

ROOF PLANE ------- RPC
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AroofRPC_01.edf

Panel ..... DLOK24-24 ROOF
Purlins ..... 55.0 ksi Yield Strength
Eave Struts ..... 55.0 ksi Yield Strength

PURLIN SPACING : 2@4'7 4'9 1'1

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
LE	1.333	8X2.5Z16	None	0.000	0.000 C
1	19.667	8X2.5Z16	2 points	C 0.000	1.479 C
2	20.000	8X2.5Z16	2 points	C 1.479	1.479 C
3	19.667	8X2.5Z16	2 points	C 1.479	0.000 C
RE	1.333	8X2.5Z16	None	C 0.000	0.000

Purlin Clip Use 2 A325 Bolts @ Level 2,3,4 @ Supports:4,3,2,1

Purlin Stiffened Clips @ Level 2,4 @ Supports:4,3,2,1
Purlin Backup Plate @ Supports:4,3,2,1,

Star Building Systems, OKC, OK
Design Summary Program User: bdmasih Job Number: 87514A
Design Summary Report Version: 4.21.3 run01 Date: 10/09/12
Manufacturing Plant - NCI Start Time: 05:13:09
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Partition Wall @ FL3 Design ..... Bearing Frame (BF)
R:\Jobs\Active\ENG\12-B-87514\prtwl03-bdmasih\Bldg-A\run01\AwallEWD_01.edf

Panel PBR26

Girts ..... 55.0 ksi Yield Strength

Girts Spacings : 7'4 4'8

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten	
1	7'4	28.625	8X2.5Z16	None	S 0.000	0.000	S
1	12'0	28.625	8X2.5Z16	None	S 0.000	0.000	S

Endwall Plane EWB Design ..... Bearing Frame (BF)
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AwallEWB_01.edf

Panel PBR26

RAFTERS -----

Mem #	Description Member Size Identification	Length (ft)	Start (ft)	End (ft)
1	W8X10 50.0 ksi	14.560	0.000	14.560
	connections... Left: Type-IV SEP		Right: Type-III SEP	
2	W8X10 50.0 ksi	14.560	14.560	29.119
	connections... Left: Type-III SEP		Right: Type-IV SEP	

Type-IV SEP = (2)-1/2" A325N bolts w/ 3/8" Shear End Plate
Type-III SEP = (4)-1/2" A325N bolts w/ 3/8" Shear End Plate

Flange Braces at following purlins (horizontal distance from eave) :
PLANE SWA: None
PLANE SWC: None

Girts ..... 55.0 ksi Yield Strength

Girts Spacings : 7'4 4'8

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	7'4	14.312	8X2.5Z16	None	S 0.000	0.000 S
2	7'4	14.312	8X2.5Z16	None	S 0.000	0.000 S
1	12'0	14.312	8X2.5Z16	None	S 0.000	0.000 S
2	12'0	14.312	8X2.5Z16	None	S 0.000	0.000 S

COLUMNS ----- (1.000" Inset columns)

Col #	Dist. from left	Description Member Size Ident.	Base Elev (ft)	Base plate design information Thickness & rods
1-C	0.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36
1-B	15.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36
1-A	30.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36

ENDWALL COLUMN TO BRIDGE CHANNEL CONNECTIONS:

COL. NO.	STRUT-TO-COLUMN CLIP ENDWALL PLANE 1	DOGLEG TO INSIDE COLUMN FLANGE
PLANE SWC:		
1-C		
1-B	AT PEAK, TYPE 3 CONN.,(4)-1/2" A325N CF Brdg Channel (0.3750") (4)-3/4" A325N W8X10 COLUMN EXTENSION w/ 12.000 " LAP LENGTH; 8X2.5C12 BRIDGE CHANNEL	
1-A		
PLANE SWA:		

Endwall Plane EWD Design ..... Bearing Frame (BF)
R:\Jobs\Active\ENG\12-B-87514\ver01-bdmasih\Bldg-A\run01\AwallEWD_01.edf

Panel PBR26

RAFTERS -----

Mem #	Description Member Size Identification	Length (ft)	Start (ft)	End (ft)
1	W8X10 50.0 ksi	14.560	0.000	14.560
	connections... Left: Type-IV SEP		Right: Type-III SEP	
2	W8X10 50.0 ksi	14.560	14.560	29.119
	connections... Left: Type-III SEP		Right: Type-IV SEP	

Type-IV SEP = (2)-1/2" A325N bolts w/ 3/8" Shear End Plate
Type-III SEP = (4)-1/2" A325N bolts w/ 3/8" Shear End Plate

Flange Braces at following purlins (horizontal distance from eave) :
PLANE SWA: None
PLANE SWC: None

Girts ..... 55.0 ksi Yield Strength

Girts Spacings : 7'4 4'8

Bay #	Elev. (ft-in)	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten
1	7'4	14.312	8X2.5Z16	None	S 0.000	0.000 S
2	7'4	14.312	8X2.5Z16	None	S 0.000	0.000 S
1	12'0	14.312	8X2.5Z16	None	S 0.000	0.000 S
2	12'0	14.312	8X2.5Z16	None	S 0.000	0.000 S

COLUMNS ----- (1.000" Inset columns)

Col #	Dist. from left	Description Member Size Ident.	Base Elev (ft)	Base plate design information Thickness & rods
4-A	0.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36
4-B	15.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36
4-C	30.000'	W8X10 50.0 ksi	0.0000'	0.375" BP thk w/(4)-0.625" A36

ENDWALL COLUMN TO BRIDGE CHANNEL CONNECTIONS:

COL. NO.	STRUT-TO-COLUMN CLIP ENDWALL PLANE 4	DOGLEG TO INSIDE FLANGE
PLANE SWA:		
4-A		
4-B	AT PEAK, TYPE 3 CONN.,(4)-1/2" A325N CF Brdg Channel (0.3750") (4)-3/4" A325N W8X10 COLUMN EXTENSION w/ 12.000 " LAP LENGTH; 8X2.5C12 BRIDGE CHANNEL	
4-C		
PLANE SWC:		

FRAMES -----	Type	Span	Live	Wind	Eave	Trib	Grid Labels
	CS	30.000	20.00	115.00	16.00	19.83	2-3

Note: Use square anchor rod layout.

A-SWA-CF01 C A N O P Y D E S I G N S U M M A R Y R E P O R T

BUILDING DATA

CANOPY 4'0 x 59'4 x 16'0 4.:12
Bays: 19'8 20'0 19'8

Wind Exposure Category: B

Live Load: 20.00 psf
Tributary Check: No
Ground snow: 5.00 psf
Roof Snow Load: 3.85 psf
Wind Load: 115.00 mph
Dead Load: 5.12 psf

PANELS ----- Roof: DLOK24-24 ROOF

PURLINS ---- Spacings(From Free-End): 2@2'0

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten	Bear Stiff
1	21.000	8X2.5Z16	2 points	S 0.000	0.000	S
2	20.000	8X2.5Z16	2 points	S 0.000	0.000	S
3	21.000	8X2.5Z16	2 points	S 0.000	0.000	S

Purlin Clip Use 2 A325 Bolts @ Level 2, @ Supports:1,2,3,4

EAVE STRUTS ---- 8X2.5C16 @ Bays 1 - 3

RAFTER ---- Hot-Rolled

Length (ft)	Mem Depths at Start(in)	End(in)	Member Description
6.191	7.890	7.890	W8X10

A-SWC-CF01 C A N O P Y D E S I G N S U M M A R Y R E P O R T

BUILDING DATA

CANOPY 4'0 x 59'4 x 16'0 4.:12
Bays: 19'8 20'0 19'8

Wind Exposure Category: B

Live Load: 20.00 psf
Tributary Check: No
Ground snow: 5.00 psf
Roof Snow Load: 3.85 psf
Wind Load: 115.00 mph
Dead Load: 5.12 psf

PANELS ----- Roof: DLOK24-24 ROOF

PURLINS ---- Spacings(From Free-End): 2@2'0

Bay #	Length (ft)	Member Size Identification	Brace Locations	L Lap Exten	R Lap Exten	Bear Stiff
1	21.000	8X2.5Z16	2 points	S 0.000	0.000	S
2	20.000	8X2.5Z16	2 points	S 0.000	0.000	S
3	21.000	8X2.5Z16	2 points	S 0.000	0.000	S

Purlin Clip Use 2 A325 Bolts @ Level 2, @ Supports:1,2,3,4

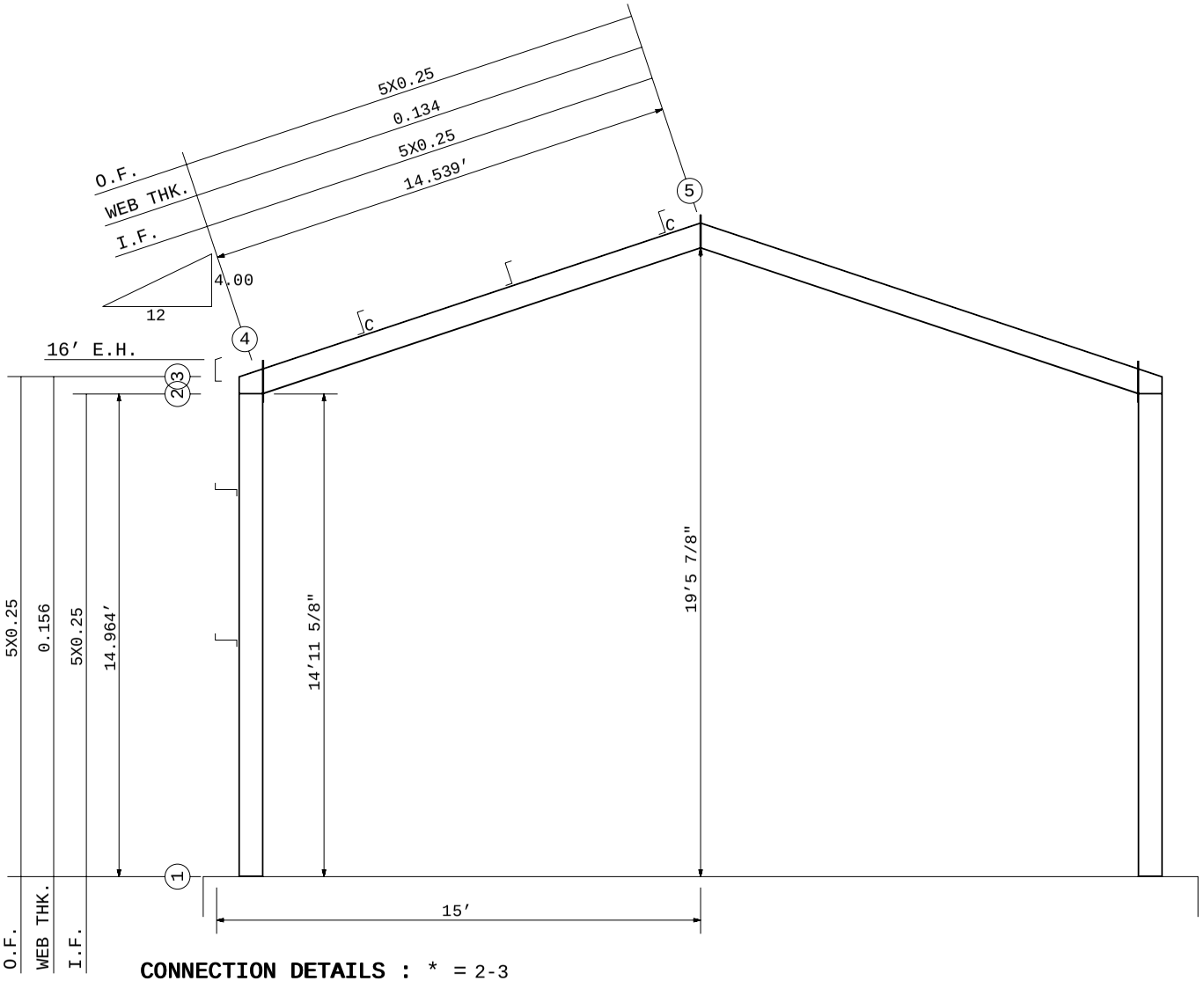
EAVE STRUTS ---- 8X2.5C16 @ Bays 1 - 3

RAFTER ---- Hot-Rolled

Length (ft)	Mem Depths at Start(in)	End(in)	Member Description
6.191	7.890	7.890	W8X10

LOCATION: Gridlines 2-3
DETAIL FILE: 12-B-87514\ver01-bdmasih\Bldg-A\Drftg\x02L
BOLTS:A325 SNUG TIGHT WEIGHT: 902 lbs
PURLINS(horz. from eave) :8"-Z 2@4'7",4'9"
GIRTS (vert. from floor): 8"-Z 7'4",4'8"[8.25"]

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.



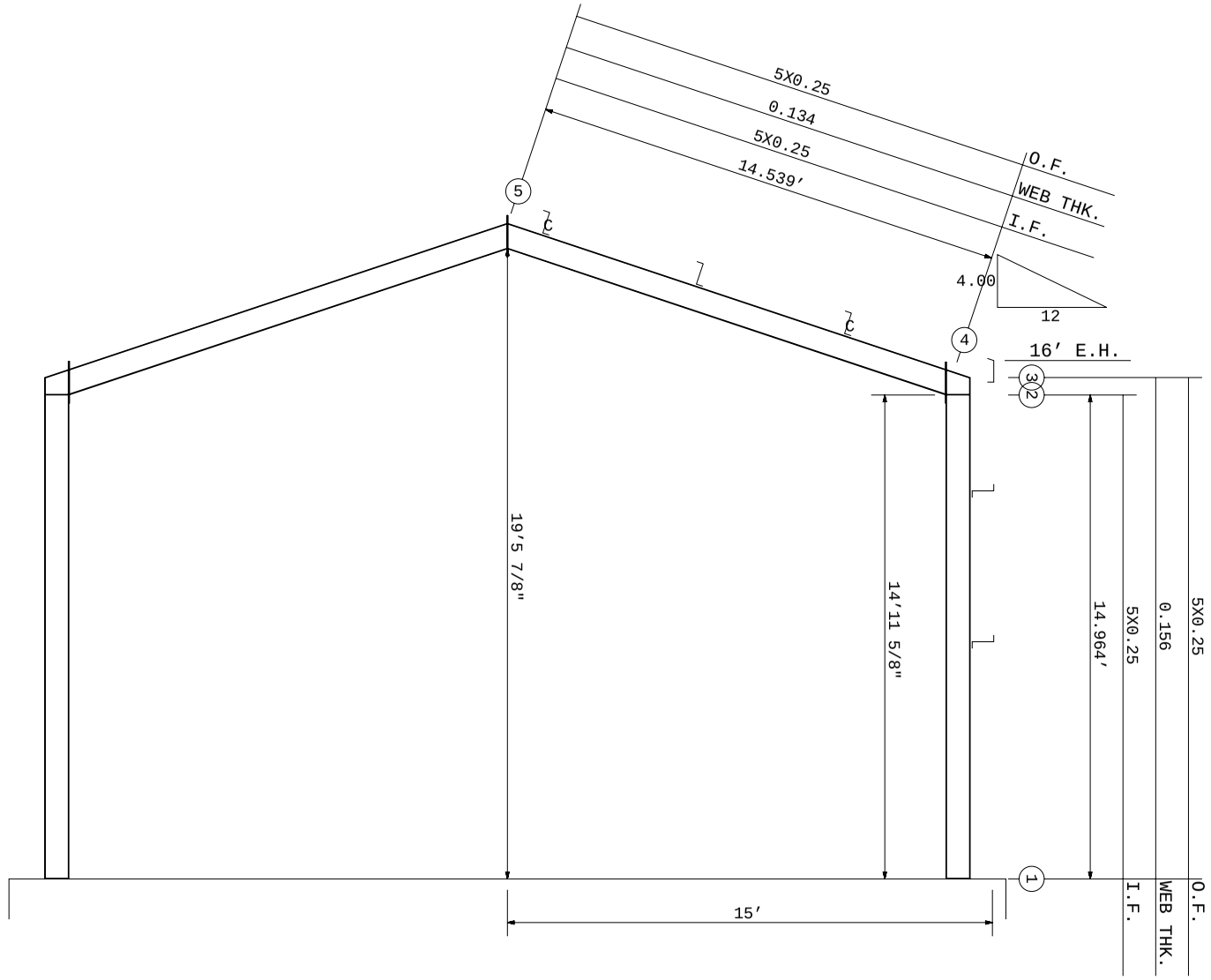
CONNECTION DETAILS : * = 2-3

Location	(1)*-C	(2)	(3)	(4)	(5)
Web Dep.	8.5	8.5	N/A	8.5	8.5
Type	BASE	HORZ STF	CAP (EXT)	2E/2E	2E/2E
Plate(DN)	6.0X0.375	2.25X0.25	6.0X0.375	6.0X0.5	6.0X0.375
Plate(UP)	N/A	N/A	N/A	6.0X0.375	6.0X0.375
Bolts	(4)-3/4	N/A	N/A	(8)-3/4	(8)-3/4

LOCATION: Gridlines 2-3
DETAIL FILE: 12-B-87514\ver01-bdmasih\Bldg-A\Drftg\x02R
BOLTS:A325 SNUG TIGHT WEIGHT: 902 lbs
PURLINS(horz. from eave) :8"-Z 2@4'7",4'9"
GIRTS (vert. from floor): 8"-Z 7'4",4'8"[8.25"]

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.

Member Sizes and Connection Details Same as Left Side

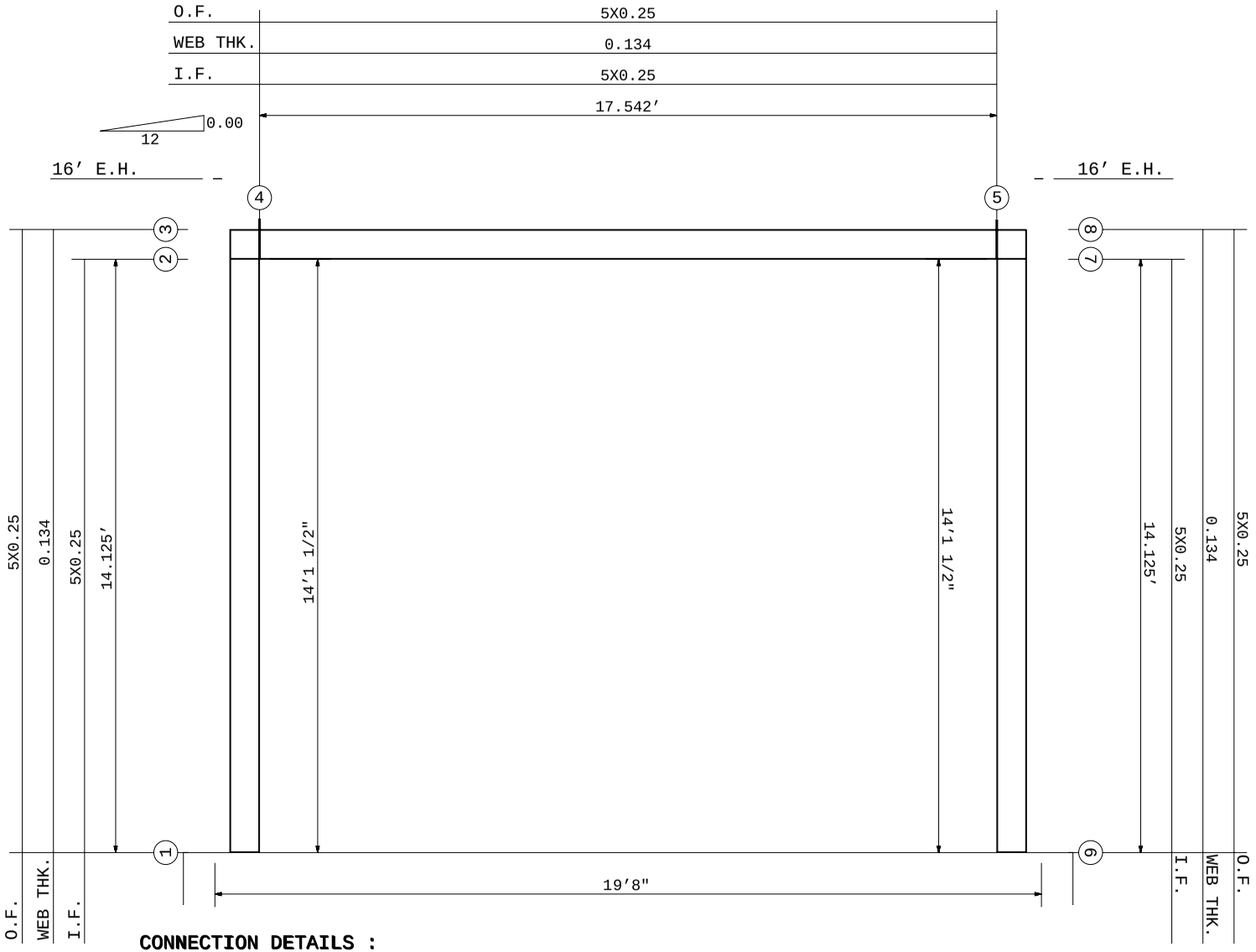


CONNECTION DETAILS : * = 2-3

Location	(1)*-A	(2)	(3)	(4)	(5)
Web Dep.	8.5	8.5	N/A	8.5	8.5
Type	BASE	HORZ STF	CAP (EXT)	2E/2E	2E/2E
Plate(DN)	6.0X0.375	2.25X0.25	6.0X0.375	6.0X0.5	6.0X0.375
Plate(UP)	N/A	N/A	N/A	6.0X0.375	6.0X0.375
Bolts	(4)-3/4	N/A	N/A	(8)-3/4	(8)-3/4

LOCATION: bays 3-(Gridline A)
DETAIL FILE: 12-B-87514\ver01-bdmasih\Bldg-A\Drftg\x03L
BOLTS:A325 SNUG TIGHT WEIGHT: 623 lbs
Rafter Offset : [14"]
Column Offsets : [4.25"]- LEFT COLUMN [4.25"]- RIGHT COLUMN

(1) All sectional dimensions are in inches.
(2) All Flange lengths are measured along outer flange.

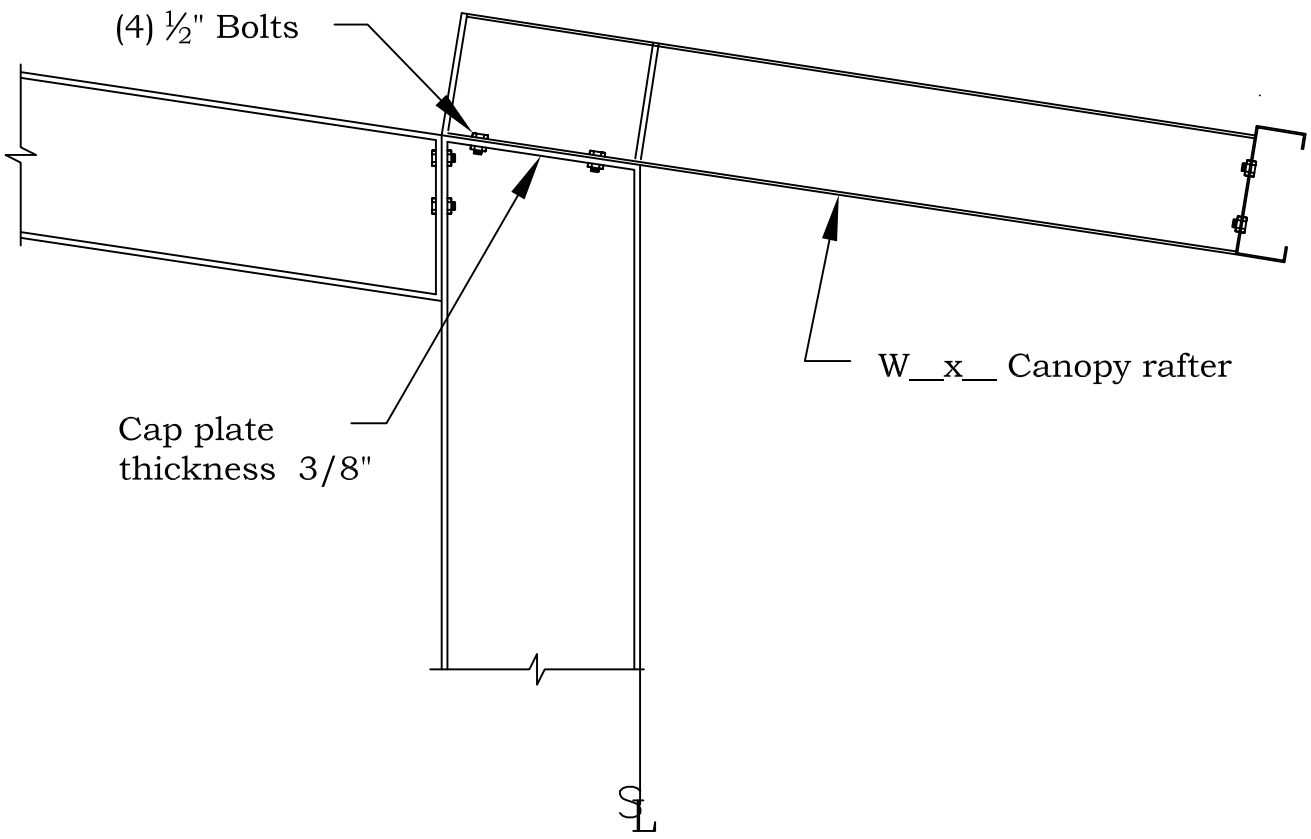


CONNECTION DETAILS :

Location	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Web Dep.	8.0	8.0	N/A	8.0	8.0	8.0	8.0	N/A
Type	BASE	HORZ STF	CAP (EXT)	2E/1F	2E/1F	BASE	HORZ STF	CAP (EXT)
Plate(DN)	6.0X0.375	2.25X0.25	5.0X0.25	6.0X0.375 C	6.0X0.375 C	6.0X0.375	2.25X0.25	5.0X0.25
Plate(UP)	N/A	N/A	N/A	6.0X0.375 R	6.0X0.375 R	N/A	N/A	N/A
Bolts	(4)-3/4	N/A	N/A	(6)-3/4	(6)-3/4	(4)-3/4	N/A	N/A

NON–STANDARD SLIMLINE
CANOPY CONNECTION AT A
ENDWALL CORNER COLUMN

JOB NO.
12-B-87514



Provide 1/4" stiffener, Ns/Fs, above column flange
Provide 1/4" endplate at uphill end of rafter

REACTIONS

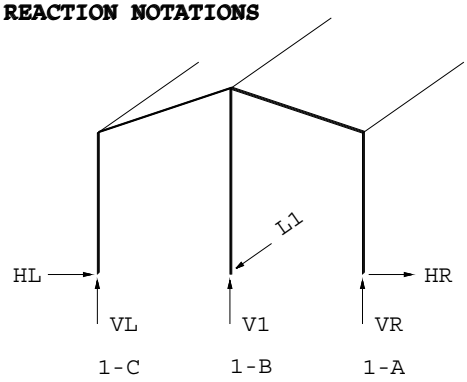
BUILDER: CASEY CIVIL LLC
CUSTOMER: US FISH AND WILDLIFE SERVICE
JOB NUMBER: 12-B-87514

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 IBC and UBC based building codes, when x-bracing is present in the endwall, individual transverse seismic loads (EQ) do not include the amplification factor, Ω_0.
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.
   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.

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft. **TIME:** 17:20:26

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

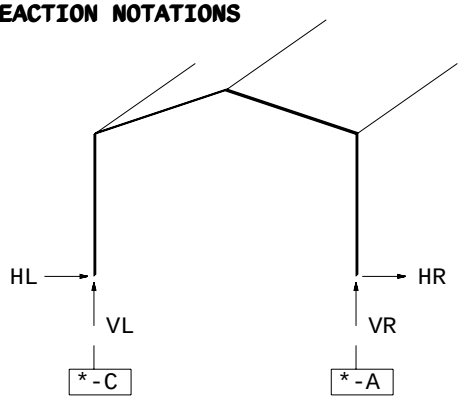
COLUMN	1-C			1-A			1-B		
LOAD GROUP	HL	VL	LL	HR	VR	LR	H1	V1	L1
D	0.0	0.8	0.	0.0	0.8	0.	0.	0.8	0.0
C	0.0	0.0	0.	0.0	0.0	0.	0.	0.1	0.
L	-0.1	2.9	0.	0.1	2.9	0.	0.	3.1	0.0
S	0.0	0.6	0.	0.0	0.6	0.	0.	0.6	0.0
SBAL	0.0	0.3	0.	0.0	0.3	0.	0.	0.6	0.0
W+	-0.1	-2.5	0.	0.1	-2.5	0.	0.	-4.7	2.8
W-	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	-3.1
WR	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	0.0
WL	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	0.0
SUR	0.0	0.4	0.	0.0	0.3	0.	0.	0.6	0.0
SUL	0.0	0.3	0.	0.0	0.4	0.	0.	0.6	0.0

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
S : DESIGN SNOW LOAD
SBAL : BALANCED ROOF SNOW
W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
W- : WIND LOAD AS AN OUTWARD ACTING SUCTION
WR : WIND FORCE FROM THE RIGHT
WL : WIND FORCE FROM THE LEFT
SUR : UNBALANCED SNOW - WIND FROM RIGHT TO LEFT
SUL : UNBALANCED SNOW - WIND FROM LEFT TO RIGHT

SUPPORT REACTIONS FOR EACH LOAD GROUP
***LOCATION: Gridlines:** 2-3
NOTE: All reactions are in kips and kip-ft. **TIME:**08:44:39

REACTION NOTATIONS



LOAD GROUP REACTION TABLE * = 2-3

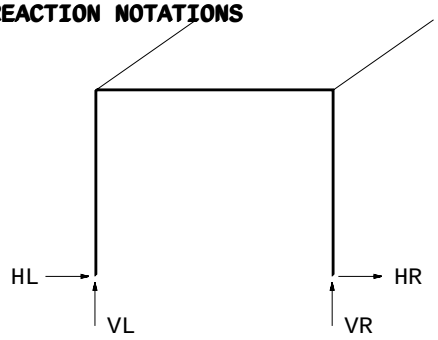
COLUMN	*-C			*-A		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR
DL	0.1	1.6	0.0	-0.1	1.6	0.0
COLL	0.0	0.1	0.0	0.0	0.1	0.0
PLLL1	-0.1	1.8	0.0	0.1	-0.2	0.0
PLL1	0.7	3.6	0.0	-0.7	3.6	0.0
PLLR1	-0.1	-0.2	0.0	0.1	1.8	0.0
LL	0.5	5.2	0.0	-0.5	5.2	0.0
SNOW	0.2	1.5	0.0	-0.2	1.5	0.0
EQ	-0.1	-0.2	0.0	-0.1	0.2	0.0
WL1	-2.7	-8.5	0.0	-2.4	-3.6	0.0
WL2	-3.5	-6.3	0.0	-1.6	-1.5	0.0
LWL1	1.8	-5.4	0.0	-1.0	-4.8	0.0
LWL2	1.0	-4.8	0.0	-1.8	-5.4	0.0
LWL3	1.0	-3.3	0.0	-0.2	-2.6	0.0
LWL4	0.2	-2.6	0.0	-1.0	-3.3	0.0
WL3	2.4	-3.6	0.0	2.7	-8.5	0.0
WL4	1.6	-1.5	0.0	3.5	-6.3	0.0
RS	0.2	0.8	0.0	-0.2	1.7	0.0
LS	0.2	1.7	0.0	-0.2	0.8	0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
COLL : Roof Collateral Load
PLLL1 : Pattern Live Load Left Leanto/Canopy [PLLLxx]
PLL1 : Pattern Live Load [PLLxx]
PLLR1 : Pattern Live Load Right Leanto/Canopy [PLLRxx]
LL : Roof Live Load
SNOW : Roof Snow Load
EQ : Lateral Seismic Load [parallel to plane of frame]
WL1 : Lateral Primary Wind Load
WL2 : Lateral Primary Wind Load
LWL1 : Longitudinal Primary Wind Load
LWL2 : Longitudinal Primary Wind Load
LWL3 : Longitudinal Primary Wind Load
LWL4 : Longitudinal Primary Wind Load
WL3 : Lateral Primary Wind Load
WL4 : Lateral Primary Wind Load
RS : Unbalanced Right Roof Snow Load
LS : Unbalanced Left Roof Snow Load

SUPPORT REACTIONS FOR EACH LOAD GROUP
LOCATION:bays 3-(Gridline A)
NOTE: All reactions are in kips and kip-ft. **TIME:**08:44:38

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

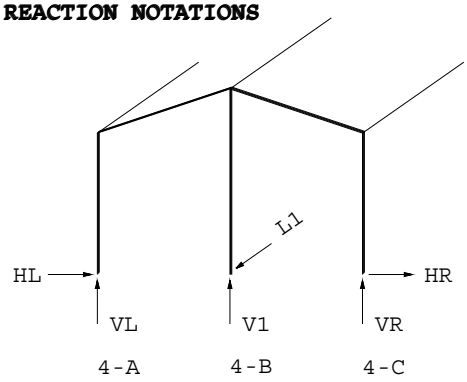
COLUMN	LEFT COLUMN			RIGHT COLUMN		
LOAD GROUP	HL	VL	LNL	HR	VR	LNR
DL	0.0	0.3	0.0	0.0	0.3	0.0
EQ	-0.2	-0.4	0.0	-0.2	0.4	0.0
WL1	-1.1	-1.9	0.0	-1.2	1.9	0.0
WL2	1.2	1.9	0.0	1.1	-1.9	0.0

LOAD GROUP DESCRIPTION

DL : Roof Dead Load
EQ : Lateral Seismic Load [parallel to plane of frame]
WL1 : Lateral Primary Wind Load
WL2 : Lateral Primary Wind Load

SUPPORT REACTIONS FOR EACH LOAD GROUP
NOTE: All reactions are in kips and kip-ft. **TIME:** 17:20:26

REACTION NOTATIONS



LOAD GROUP REACTION TABLE

COLUMN	4-A			4-C			4-B		
LOAD GROUP	HL	VL	LL	HR	VR	LR	H1	V1	L1
D	0.0	0.8	0.	0.0	0.8	0.	0.	0.8	0.0
C	0.0	0.0	0.	0.0	0.0	0.	0.	0.1	0.
L	-0.1	2.9	0.	0.1	2.9	0.	0.	3.1	0.0
S	0.0	0.6	0.	0.0	0.6	0.	0.	0.6	0.0
SBAL	0.0	0.3	0.	0.0	0.3	0.	0.	0.6	0.0
W+	-0.1	-2.5	0.	0.1	-2.5	0.	0.	-4.7	2.8
W-	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	-3.1
WR	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	0.0
WL	-0.1	-2.9	0.	0.1	-2.9	0.	0.	-4.7	0.0
SUR	0.0	0.6	0.	0.0	0.2	0.	0.	0.6	0.0
SUL	0.0	0.2	0.	0.0	0.6	0.	0.	0.6	0.0

LOAD GROUP DESCRIPTION

D : DEAD LOAD
C : COLLATERAL LOAD
L : LIVE LOAD
S : DESIGN SNOW LOAD
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W+ : WIND LOAD AS AN INWARD ACTING PRESSURE
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