Butler Manufacturing™

1540 Genessee Street
Kansas City, MO 64102

STRUCTURAL DESIGN DATA

Project: KR Wholesale
Name: 24-025448-01
Builder PO #: 200440709
Jobsite: 1460 Broadway

City, State: Lees Summit, Missouri 64081
County: Jackson
Country: United States

Prepared By: Shadrach Rubio-Pelayo

TABLE OF CONTENTS

Keith Erick Fix electronically signs and seals this document with his Professional Engineer seal affixed. Printed copies of this document are not signed and sealed. This signature must be verified on an electronic copy.
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01/09/2025

Building Loading - Expanded Report

Shape: Building - Shape 1

Loads and Codes - Shape: Building - Shape 1

City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: IBC 2018 Structural: 16AISC - ASD Rainfall: I: 3.00 inches per hour
Based on Building Code: 2018 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Load Notes
Collateral Load Description - Lights HVAC, mics

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 0.00 psf
Frame Weight (assumed for seismic):2.50 psf

Side	Type	Mag	Units	Shape	Applied to	Description
A	D	0.500	k	Point	Frm	Parapet Post
A	D	2.255	psf	Entire	Frm	Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 : Roof: A
A	D	1.200	psf	Entire	Pur	Covering Weight - 24 MR-24 1.20 : Roof: A
B	D	0.500	k	Point	Frm	Parapet Post
B	D	2.255	psf	Entire	Frm	Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 : Roof: B
B	D	1.200	psf	Entire	Pur	Covering Weight - 24 MR-24 1.20 : Roof: B

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph
Wind Enclosure: Enclosed
Height Used: 23/10/8 (Type: Eave)
Base Elevation: 0/0/0
Site Elevation: 0.0 ft
Primary Zone Strip Width: 2a: 19/1/3

Topographic Factor: Kzt: 1.0000
Directionality Factor: Kd: 0.8500
Ground Elevation Factor: Ke: 1.0000
Primaries
Primaries Wind Exposure: C - Kz: 0.936
Velocity Pressure: qz: 26.94 psf

Gust Factor: G: 1.0000
Least Horiz. Dimension: 125/0/0

NOT Windborne Debris Region
Parts / Portions Zone Strip Width:
Walls, a: 9/6/10
Roof(s), 0.6h: 14/3/14

The 'Envelope Procedure' is Used
Parts and Portions
Parts Wind Exposure Factor: 0.936
Velocity Pressure (C&C): qz:26.94 psf

Snow Load
Ground Snow Load: pg: 20.00 psf
Flat Roof Snow: pf: 14.00 psf
Design Snow (Sloped): ps: 14.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Snow Accumulation Factor: 1.000
Snow Importance: Is: 1.000
Ground / Roof Conversion: 0.70

Rain Surcharge: 0.00
Exposure Factor: 2 Partially Exposed Ce: 1.00
Thermal Factor: Heated - Ct: 1.00
Obstructed or Not Slippery
Slope Reduction: Cs: 1.00
Slope Used: 2.386 deg. (0.5000:12)

Snow Drift on Roof A Snow Drift Number: 1
Basic Snow Density: 16.60 lb/ft3
Snow Uniform: 0/10/2

Start 0/0/0
Wall Start Height: 3/7/8
Snow Drift Height: 2/9/6
Snow Drift Width: 13/5/3
Upper Roof Width: 170/0/0
Sliding Snow: 0.00 psf
Drifting Snow: 46.17 psf
Max Applied Drift Load: 60.17 psf
Truncated Snow: 0.00 psf
Truncated Width: 0/0/0

Snow Drift (from Wall 1, Shape Building - Shape 1)
Average Height: 2/3/14
Upper Roof Slope: 0.000 (0.0000:12)

End 0/0/0
Wall End Height: 1/0/4
Snow Drift Height: 0/2/2
Snow Drift Width: 1/5/1
Upper Roof Width: 170/0/0
Sliding Snow: 0.00 psf
Drifting Snow: 2.95 psf
Max Applied Drift Load: 16.95 psf
Truncated Snow: 0.00 psf
Truncated Width: 0/0/0

Proximity: 0/0/0

Snow Drift on Roof B Snow Drift Number: 1
Basic Snow Density: 16.60 lb/ft3
Snow Uniform: 0/10/2

Start 170/0/0
Wall Start Height: 3/7/8
Snow Drift Height: 2/9/6
Snow Drift Width: 13/5/3
Upper Roof Width: 170/0/0
Sliding Snow: 0.00 psf
Drifting Snow: 46.17 psf
Max Applied Drift Load: 60.17 psf
Truncated Snow: 0.00 psf
Truncated Width: 0/0/0
Proximity: 0/0/0

Proximity: 0/0/0

Snow Drift (from Wall 2, Shape Building - Shape 1)
Average Height: 2/3/14
Upper Roof Slope: 0.000 (0.0000:12)

End 170/0/0
Wall End Height: 1/0/4
Snow Drift Height: 0/2/2
Snow Drift Width: 1/5/1
Upper Roof Width: 170/0/0
Sliding Snow: 0.00 psf
Drifting Snow: 2.95 psf
Max Applied Drift Load: 16.95 psf
Truncated Snow: 0.00 psf
Truncated Width: 0/0/0
Proximity: 0/0/0

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 6.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.0960
Seismic Design Category: B
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Diaphragm Condition: Flexible
Fundamental Period Height Used: 25/2/2

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.3698
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2248
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Side	Type	Mag	Units	Shape	Applied to	Description
1	E	0.160	psf	Entire	Frm Brc	Seismic: Covering Weight - 3.00 NBBMC - Panel + Secondary Weight 0.75 : Wall: 1
1	E	0.375	psf	Entire	Grt	Seismic: Covering Weight - 3.00 NBBMC - Panel + Secondary Weight 0.75 (Cs p = 0.1000) : Wall: 1
1	E	0.853	psf	Spec	Frm Brc	Seismic: Covering Weight - 20.00 NBBMC - Other : Wall: 1
1	E	2.000	psf	Spec	Grt	Seismic: Covering Weight - 20.00 NBBMC - Other (Cs p = 0.1000) : Wall: 1
1	E	0.128	psf	Spec	Frm Brc	Seismic: Covering Weight - 3.00 NBBMC - Panel : Wall: 1
1	E	0.300	psf	Spec	Grt	Seismic: Covering Weight - 3.00 NBBMC - Panel (Cs p = 0.1000) : Wall: 1
2	E	0.155	psf	Entire	Frm Brc	Seismic: Covering Weight - 3.00 NBBMC - Panel + Secondary Weight 0.64 : Wall: 2
3	E	0.159	psf	Entire	Frm Brc	Seismic: Covering Weight - 3.00 NBBMC - Panel + Secondary Weight 0.72 : Wall: 3
4	E	0.152	psf	Entire	Frm Brc	Seismic: Covering Weight - 3.00 NBBMC - Panel + Secondary Weight 0.57 : Wall: 4
A	E	0.416	psf	Entire	Frm	Seismic: Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: A
A	E	0.416	psf	Entire	Brc	Seismic: Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: A
A	E	0.021	k	Point	Frm Brc	Seismic Effect From Parapet Post : Roof: A
B	E	0.416	psf	Entire	Frm	Seismic: Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: B
B	E	0.416	psf	Entire	Brc	Seismic: Covering Weight - 24 MR-24 1.20 + Secondary Weight 1.06 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: B
B	E	0.021	k	Point	Frm Brc	Seismic Effect From Parapet Post : Roof: B

Deflection Conditions
Frames are vertically supporting: Metal Roof Purlins and Panels
Frames are laterally supporting: Metal Wall Girts and Panels
Purlins are supporting: Metal Roof Panels
Girts are supporting: Metal Wall Panels

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 1 and 2)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 2 and 3)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 3 and 4)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 4 and 5)
9	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
10	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
11	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
12	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
13	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
14	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
16	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 5)
17	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
18	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 5)
19	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1
20	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
21	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
22	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
23	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
27	System	1.000	0.6 MW	MW - Wall: 1
28	System	1.000	0.6 MW	MW - Wall: 2
29	System	1.000	0.6 MW	MW - Wall: 3
30	System	1.000	0.6 MW	MW - Wall: 4
31	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
32	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
34	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
35	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
36	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
37	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
38	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
39	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
40	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
41	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
42	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
43	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
44	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
45	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
46	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
47	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
48	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
49	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
50	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 WB1>	D + CG + S + WPR + WB1>
55	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
56	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
57	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
58	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 <WB1	D + CG + S + WPR + <WB1
59	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
60	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
61	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 WB3>	D + CG + S + WPL + WB3>
63	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
64	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
65	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3

66	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 <WB3	D + CG + S + WPL + <WB3
67	System Derived	1.000	0.6 MWB	MWB - Wall: 1
68	System Derived	1.000	0.6 MWB	MWB - Wall: 2
69	System Derived	1.000	0.6 MWB	MWB - Wall: 3
70	System Derived	1.000	0.6 MWB	MWB - Wall: 4
71	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
72	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
73	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
74	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>
8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
33	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
35	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W3>	D + CG + S + W3>
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W3	D + CG + S + <W3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W4>	D + CG + S + W4>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W4	D + CG + S + <W4
39	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
40	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
41	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
42	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 SMS	D + CG + SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S + 1.0 SD	D + CG + S + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
5	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
6	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 7)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 7)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1

11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
12	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
13	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
14	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 5
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 6
16	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
17	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
18	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
19	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
21	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
23	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB1>	D + CG + S + W1> + WB1>
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB1>	D + CG + S + <W2 + WB1>
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
28	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
29	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB1	D + CG + S + W1> + <WB1
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB1	D + CG + S + <W2 + <WB1
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
33	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
35	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB2>	D + CG + S + W1> + WB2>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB2>	D + CG + S + <W2 + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
39	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
40	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB2	D + CG + S + W1> + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB2	D + CG + S + <W2 + <WB2
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
45	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB3>	D + CG + S + W1> + WB3>
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB3>	D + CG + S + <W2 + WB3>
50	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
51	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
52	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB3	D + CG + S + W1> + <WB3
55	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB3	D + CG + S + <W2 + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
57	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB4>	D + CG + S + W1> + WB4>
61	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB4>	D + CG + S + <W2 + WB4>
62	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
63	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
64	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
65	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
66	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB4	D + CG + S + W1> + <WB4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB4	D + CG + S + <W2 + <WB4

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2
3	System	1.000	0.7 E>	E>
4	System	1.000	0.7 <E	<E

Design Load Combinations - Roof - Panel

No.	Origin	Factor	Application	Description

1	System	1.000	1.0 D + 1.0 L	D + L
2	System	1.000	1.0 D + 1.0 SMS	D + SMS
3	System	1.000	1.0 D + 1.0 S + 1.0 SD	D + S + SD
4	System	1.000	1.0 D + 1.0 S	D + S
5	System	1.000	1.0 D + 1.0 US1*	D + US1*
6	System	1.000	1.0 D + 1.0 *US1	D + *US1
7	System	1.000	1.0 D + 0.6 <W2	D + <W2
8	System	1.000	0.6 D + 0.6 W1>	D + W1>

Design Load Combinations - Wall - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	1.0 SMS	SMS
3	System	1.000	180	0.42 W1>	W1>
4	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2
3	System	1.000	90	0.5 E>	E>
4	System	1.000	90	0.5 <E	<E

Deflection Load Combinations - Roof - Panel

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	60	60	1.0 S	S
2	System	1.000	60	60	1.0 SMS	SMS
3	System	1.000	60	60	0.42 <W2	<W2

Load Type Descriptions

D	Material Dead Weight	C	Collateral Load
CG	Collateral Load for Gravity Cases	CU	Collateral Load for Wind Cases
L	Roof Live Load	ASL^	Alternate Span Live Load, Shifted Right
^ASL	Alternate Span Live Load, Shifted Left	PL2	Partial Live, Full, 2 Spans
L>	Live - Notional Right	<L	Live - Notional Left
S	Snow Load	US1*	Unbalanced Snow Load 1, Shifted Right
*US1	Unbalanced Snow Load 1, Shifted Left	US2*	Unbalanced Snow Load 2, Shifted Right
*US2	Unbalanced Snow Load 2, Shifted Left	SD	Snow Drift Load
SS	Sliding Snow Load	RS	Rain Surcharge Load
PF1	Partial Load, Full, 1 Span	PH1	Partial Load, Half, 1 Span
PF2	Partial Load, Full, 2 Spans	PH2	Partial Load, Half, 2 Spans
S>	Snow - Notional Right	<S	Snow - Notional Left
SMS	Specified Min. Roof Snow	SMS>	Specified Min. Roof Snow - Notional Right
<SMS	Specified Min. Roof Snow - Notional Left	PS1	Partial Load, Half Span 1
PS2	Partial Load, Half Span 2	W	Wind Load
W1>	Wind Load, Case 1, Right	<W1	Wind Load, Case 1, Left

W2>	Wind Load, Case 2, Right	<W2	Wind Load, Case 2, Left
W3>	Wind Load, Case 3, Right	<W3	Wind Load, Case 3, Left
W4>	Wind Load, Case 4, Right	<W4	Wind Load, Case 4, Left
W5>	Wind Load, Case 5, Right	<W5	Wind Load, Case 5, Left
W6>	Wind Load, Case 6, Right	<W6	Wind Load, Case 6, Left
WP	Wind Load, Parallel to Ridge	WPR	Wind Load, || Ridge, Right
WPL	Wind Load, || Ridge, Left	WPA1	Wind Parallel - Ref A, Case 1
WPA2	Wind Parallel - Ref A, Case 2	WPB1	Wind Parallel - Ref B, Case 1
WPB2	Wind Parallel - Ref B, Case 2	WPC1	Wind Parallel - Ref C, Case 1
WPC2	Wind Parallel - Ref C, Case 2	WPD1	Wind Parallel - Ref D, Case 1
WPD2	Wind Parallel - Ref D, Case 2	WB1>	Wind Brace Reaction, Case 1, Right
<WB1	Wind Brace Reaction, Case 1, Left	WB2>	Wind Brace Reaction, Case 2, Right
<WB2	Wind Brace Reaction, Case 2, Left	WB3>	Wind Brace Reaction, Case 3, Right
<WB3	Wind Brace Reaction, Case 3, Left	WB4>	Wind Brace Reaction, Case 4, Right
<WB4	Wind Brace Reaction, Case 4, Left	WB5>	Wind Brace Reaction, Case 5, Right
<WB5	Wind Brace Reaction, Case 5, Left	WB6>	Wind Brace Reaction, Case 6, Right
<WB6	Wind Brace Reaction, Case 6, Left	MW	Minimum Wind Load
MWB	Minimum Wind Bracing Reaction	E	Seismic Load
E>	Seismic Load, Right	<E	Seismic Load, Left
EG	Vertical Seismic Effect	EG+	Vertical Seismic Effect, Additive
EG-	Vertical Seismic Effect, Subtractive	EB>	Seismic Brace Reaction, Right
<EB	Seismic Brace Reaction, Left	EHP	Seismic High Performance Load
EHP>	Seismic High Performance Load, Right	<EHP	Seismic High Performance Load, Left
EGHP	Vertical Seismic High Performance Effect	EGHP+	Vertical Seismic High Performance Effect, Additive
EGHP-	Vertical Seismic High Performance Effect, Subtractive	EHPB	Seismic High Performance Brace Reaction
EHPB>	Seismic High Performance Brace Reaction, Right	<EHPB	Seismic High Performance Brace Reaction, Left
FL	Floor Live Load	FL*	Alternate Span Floor Live Load, Shifted Right
*FL	Alternate Span Floor Live Load, Shifted Left	FD	Floor Dead Load
AL	Auxiliary Live Load	AL*>	Auxiliary Live Load, Right, Right
*AL>	Auxiliary Live Load, Right, Left	<AL*	Auxiliary Live Load, Left, Right
<*AL	Auxiliary Live Load, Left, Left	AL*	Aux Live, Right
*AL	Aux Live, Left	AL*>(1)	Auxiliary Live Load, Right, Right, Aisle 1
*AL>(1)	Auxiliary Live Load, Right, Left, Aisle 1	<AL*(1)	Auxiliary Live Load, Left, Right, Aisle 1
<*AL(1)	Auxiliary Live Load, Left, Left, Aisle 1	AL*(1)	Aux Live, Right, Aisle 1
*AL(1)	Aux Live, Left, Aisle 1	AL*>(2)	Auxiliary Live Load, Right, Right, Aisle 2
*AL>(2)	Auxiliary Live Load, Right, Left, Aisle 2	<AL*(2)	Auxiliary Live Load, Left, Right, Aisle 2
<*AL(2)	Auxiliary Live Load, Left, Left, Aisle 2	AL*(2)	Aux Live, Right, Aisle 2
*AL(2)	Aux Live, Left, Aisle 2	AL*>(3)	Auxiliary Live Load, Right, Right, Aisle 3
*AL>(3)	Auxiliary Live Load, Right, Left, Aisle 3	<AL*(3)	Auxiliary Live Load, Left, Right, Aisle 3
<*AL(3)	Auxiliary Live Load, Left, Left, Aisle 3	AL*(3)	Aux Live, Right, Aisle 3
*AL(3)	Aux Live, Left, Aisle 3	AL*>(4)	Auxiliary Live Load, Right, Right, Aisle 4
*AL>(4)	Auxiliary Live Load, Right, Left, Aisle 4	<AL*(4)	Auxiliary Live Load, Left, Right, Aisle 4
<*AL(4)	Auxiliary Live Load, Left, Left, Aisle 4	AL*(4)	Aux Live, Right, Aisle 4
*AL(4)	Aux Live, Left, Aisle 4	AL*>(5)	Auxiliary Live Load, Right, Right, Aisle 5
*AL>(5)	Auxiliary Live Load, Right, Left, Aisle 5	<AL*(5)	Auxiliary Live Load, Left, Right, Aisle 5
<*AL(5)	Auxiliary Live Load, Left, Left, Aisle 5	AL*(5)	Aux Live, Right, Aisle 5
*AL(5)	Aux Live, Left, Aisle 5	ALB	Aux Live Bracing Reaction
ALB>	Aux Live Bracing Reaction, Right	<ALB	Aux Live Bracing Reaction, Left
WALB>	Wind, Aux Live Bracing Reaction, Right	<WALB	Wind, Aux Live Bracing Reaction, Left
ALB>(1)	Aux Live Bracing Reaction, Right, Aisle 1	<ALB(1)	Aux Live Bracing Reaction, Left, Aisle 1
WALB>(1)	Wind, Aux Live Bracing Reaction, Right, Aisle 1	<WALB(1)	Wind, Aux Live Bracing Reaction, Left, Aisle 1
ALB>(2)	Aux Live Bracing Reaction, Right, Aisle 2	<ALB(2)	Aux Live Bracing Reaction, Left, Aisle 2
WALB>(2)	Wind, Aux Live Bracing Reaction, Right, Aisle 2	<WALB(2)	Wind, Aux Live Bracing Reaction, Left, Aisle 2
ALB>(3)	Aux Live Bracing Reaction, Right, Aisle 3	<ALB(3)	Aux Live Bracing Reaction, Left, Aisle 3
WALB>(3)	Wind, Aux Live Bracing Reaction, Right, Aisle 3	<WALB(3)	Wind, Aux Live Bracing Reaction, Left, Aisle 3
ALB>(4)	Aux Live Bracing Reaction, Right, Aisle 4	<ALB(4)	Aux Live Bracing Reaction, Left, Aisle 4
WALB>(4)	Wind, Aux Live Bracing Reaction, Right, Aisle 4	<WALB(4)	Wind, Aux Live Bracing Reaction, Left, Aisle 4
ALB>(5)	Aux Live Bracing Reaction, Right, Aisle 5	<ALB(5)	Aux Live Bracing Reaction, Left, Aisle 5
WALB>(5)	Wind, Aux Live Bracing Reaction, Right, Aisle 5	<WALB(5)	Wind, Aux Live Bracing Reaction, Left, Aisle 5
WALB	Wind, Aux Live Bracing Reaction	AD	Auxiliary Dead Load
U0	User Defined Load	U1	User Defined Load - 1
U2	User Defined Load - 2	U3	User Defined Load - 3
U4	User Defined Load - 4	U5	User Defined Load - 5
U6	User Defined Load - 6	U7	User Defined Load - 7
U8	User Defined Load - 8	U9	User Defined Load - 9
UB	User Brace Reaction	UB1	User Brace Reaction - 1
UB2	User Brace Reaction - 2	UB3	User Brace Reaction - 3

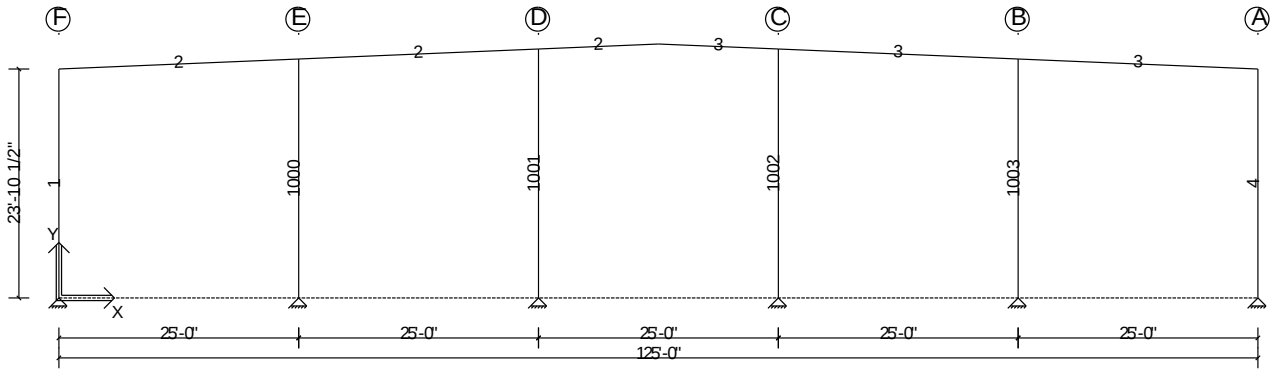
UB4	User Brace Reaction - 4	UB5	User Brace Reaction - 5
UB6	User Brace Reaction - 6	UB7	User Brace Reaction - 7
UB8	User Brace Reaction - 8	UB9	User Brace Reaction - 9
R	Rain Load	T	Temperature Load
V	Shear	WT	Tornado Load
WT1>	Tornado Load, Case 1, Right	<WT1	Tornado Load, Case 1, Left
WT2>	Tornado Load, Case 2, Right	<WT2	Tornado Load, Case 2, Left
WT3>	Tornado Load, Case 3, Right	<WT3	Tornado Load, Case 3, Left
WT4>	Tornado Load, Case 4, Right	<WT4	Tornado Load, Case 4, Left
WT5>	Tornado Load, Case 5, Right	<WT5	Tornado Load, Case 5, Left
WT6>	Tornado Load, Case 6, Right	<WT6	Tornado Load, Case 6, Left
WTP	Tornado Load, Parallel to Ridge	WTPR	Tornado Load, Parallel to Ridge, Right
WTPL	Tornado Load, Parallel to Ridge, Left	WTB1>	Tornado Brace Reaction, Case 1, Right
<WTB1	Tornado Brace Reaction, Case 1, Left	WTB2>	Tornado Brace Reaction, Case 2, Right
<WTB2	Tornado Brace Reaction, Case 2, Left	WTB3>	Tornado Brace Reaction, Case 3, Right
<WTB3	Tornado Brace Reaction, Case 3, Left	WTB4>	Tornado Brace Reaction, Case 4, Right
<WTB4	Tornado Brace Reaction, Case 4, Left	WTB5>	Tornado Brace Reaction, Case 5, Right
<WTB5	Tornado Brace Reaction, Case 5, Left	WTB6>	Tornado Brace Reaction, Case 6, Right
<WTB6	Tornado Brace Reaction, Case 6, Left		

User Applied Surface Loads (Local Coordinate System)

Side	Shape	Units	Type	Description	Mag	X-Loc	Y-Loc	Frm	Brc	Grt	Pur	Pnl	Supp.	Dir.	Loc.
A	PT	k	D	Parapet Post	0.50	0/0/0	-55/0/0	Y	N	N	N	N	N	IN	OF
B	PT	k	D	Parapet Post	0.50	0/0/0	-55/0/0	Y	N	N	N	N	N	IN	OF

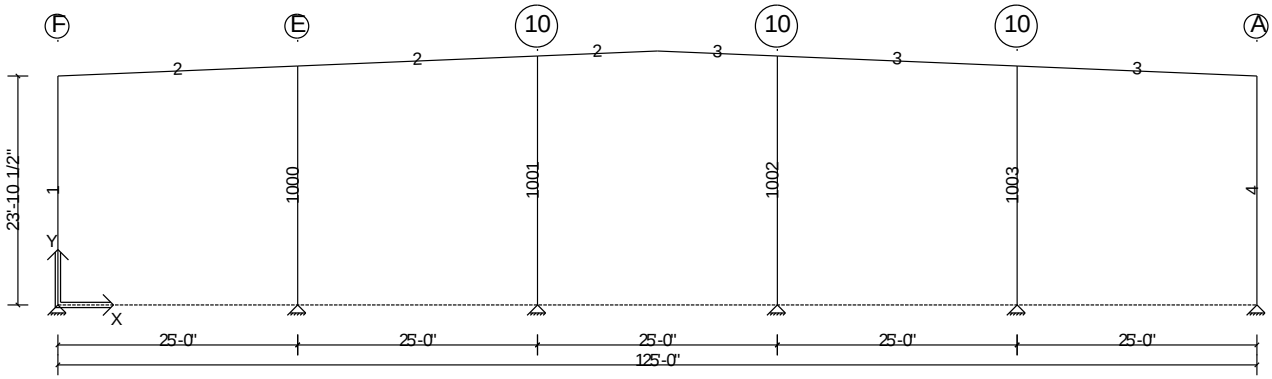
User Defined Frame Point Loads for Cross Section: 2

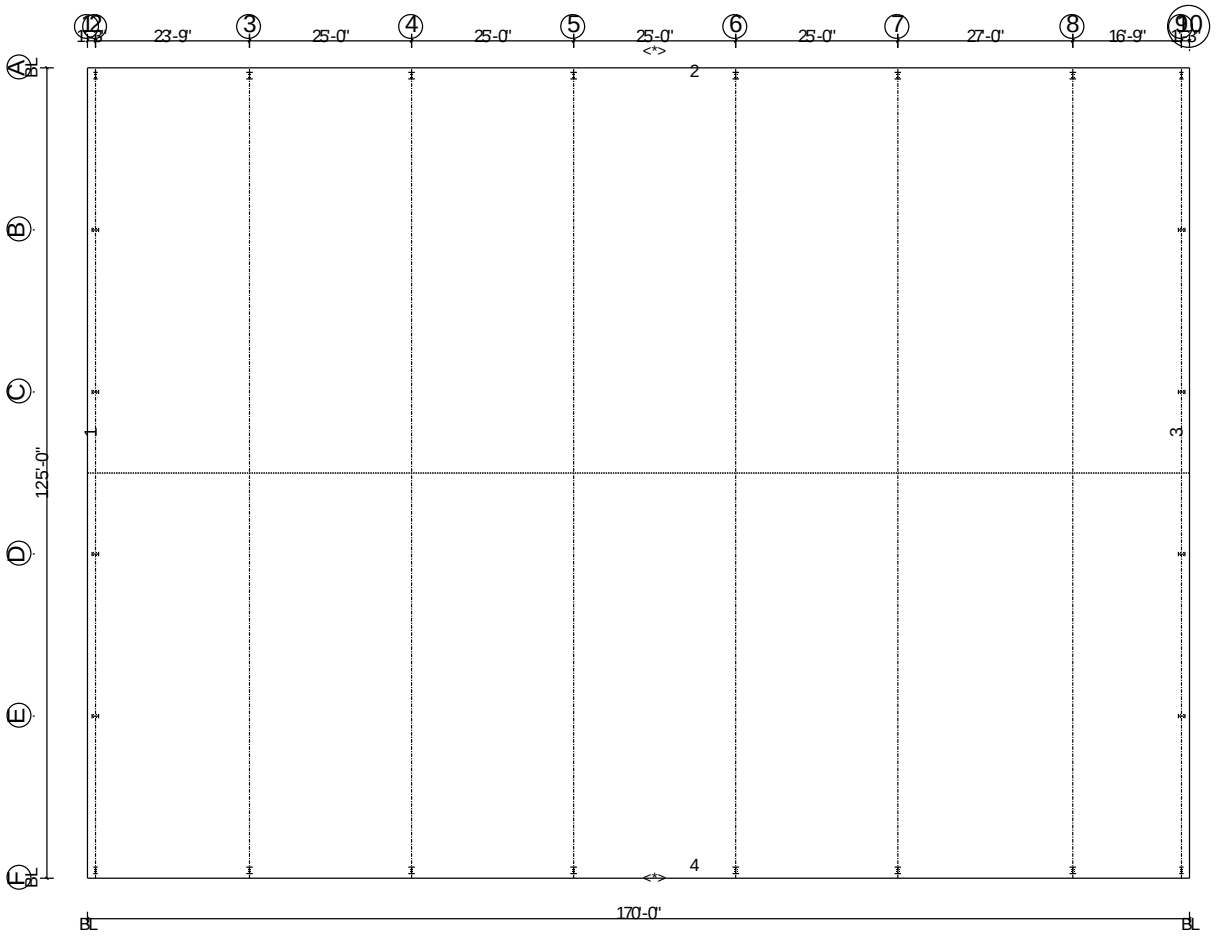
Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
2	k	D	Parapet Post (Building - Shape 1)->Resolved From Plane	-0.53	55/0/0	NA	NA	N	DOWN	1.000	OF



User Defined Frame Point Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
3	k	D	Parapet Post (Building - Shape 1)->Resolved From Plane	-0.54	55/0/0	NA	NA	N	DOWN	1.000	OF





<*> The building is designed with bracing diagonals in the designated bays. Column base reactions, base plates and anchor rods are affected by this bracing and diagonals may not be relocated without consulting the building supplier's engineer.

Bracing - Summary Report

Shape: Building - Shape 1

Loads and Codes - Shape: Building - Shape 1

City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: IBC 2018 Structural: 16AISC - ASD Rainfall: I: 3.00 inches per hour
Based on Building Code: 2018 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads
Collateral Gravity: 5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: 2.26 psf
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used
Primaries Wind Exposure: C - Kz: 0.936
Parts Wind Exposure Factor: 0.936
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 0.0 ft
Primary Zone Strip Width: 2a: 19/1/3
Parts / Portions Zone Strip Width:
Walls, a: 9/6/10
Roof(s), 0.6h: 14/3/14
Velocity Pressure: qz: 26.94, (C&C) 26.94 psf

Snow Load
Ground Snow Load: pg: 20.00 psf

Flat Roof Snow: pf: 14.00 psf
Design Snow (Sloped): ps: 14.00 psf
Rain Surcharge: 0.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Heated - Ct: 1.00
Ground / Roof Conversion: 0.70
Obstructed or Not Slippery

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 6.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.0960
Seismic Design Category: B
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 25/2/2

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.3698
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2248
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

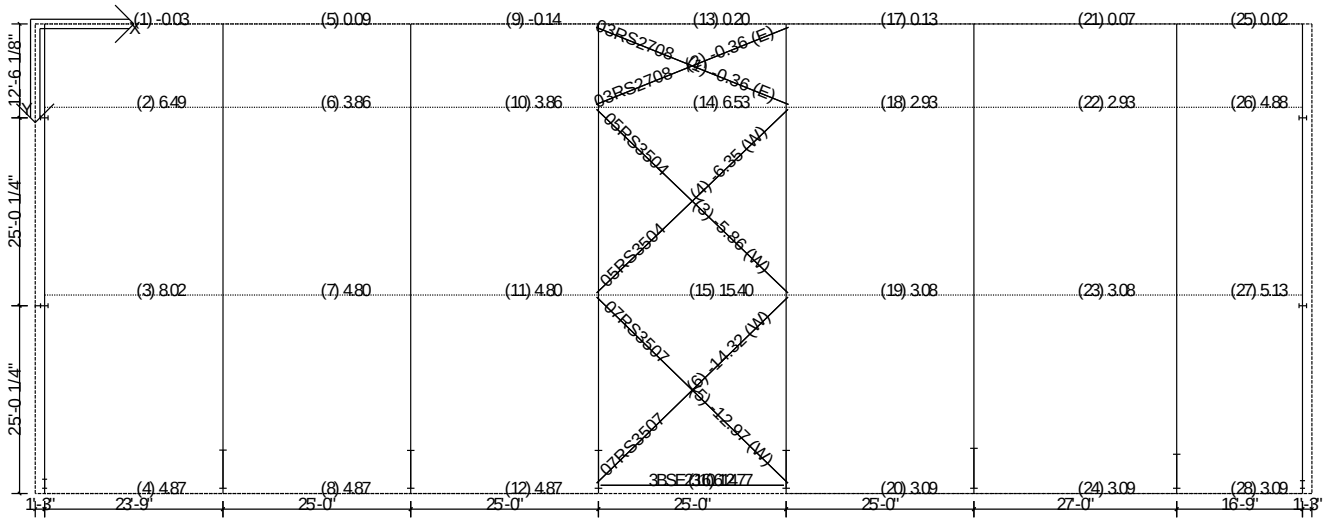
Load Notes
Collateral Load Description - Lights HVAC, mics

Deflection Conditions
Frames are vertically supporting: Metal Roof Purlins and Panels
Frames are laterally supporting: Metal Wall Girts and Panels
Purlins are supporting: Metal Roof Panels
Girts are supporting: Metal Wall Panels

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>

8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
33	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
35	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W3>	D + CG + S + W3>
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W3	D + CG + S + <W3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W4>	D + CG + S + W4>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W4	D + CG + S + <W4
39	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
40	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
41	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
42	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-



Diagonal Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	27.60	25.9	-0.36	1.0000	1.0000	0.142	1.0D+0.7<E	passed	
2	R 0.375	27.60	25.9	-0.36	1.0000	1.0000	0.142	1.0D+0.7E>	passed	
3	R 0.625	35.32	46.1	-5.86	1.0000	1.0000	0.789	1.0D+1.0CG+0.6<W3	passed	
4	R 0.625	35.32	46.1	-6.35	1.0000	1.0000	0.854	1.0D+1.0CG+0.6W3>	passed	
5	R 0.875	35.56	47.7	-12.97	1.0000	1.0000	0.868	1.0D+1.0CG+0.6<W3	passed	
6	R 0.875	35.56	47.7	-14.32	1.0000	1.0000	0.958	1.0D+1.0CG+0.6W3>	passed	

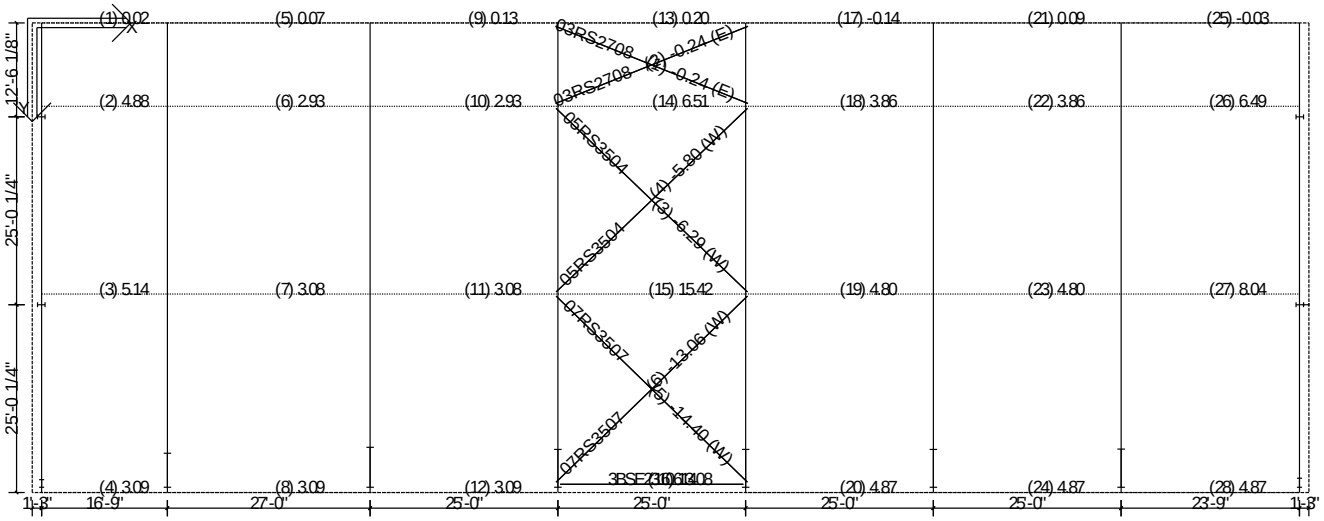
Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.188, Load Case 1.0D+0.7<E, Factored F = 0.36, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+0.7<E, Factored F = 0.36, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.188, Load Case 1.0D+0.7E>, Factored F = 0.36, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+0.7E>, Factored F = 0.36, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
3	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W3, Factored F = 5.86, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W3, Factored F = 5.86, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
4	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W3>, Factored F = 6.35, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W3>, Factored F = 6.35, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
5	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W3, Factored F = 12.97, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W3, Factored F = 12.97, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
6	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W3>, Factored F = 14.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W3>, Factored F = 14.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000,

		web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Strut Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Description
16	FF 2.875x0.079x10	25.00	12.77	1.0000	1.0000	0.846	1.0D+1.0CG+0.6W2>	passed	Eave Strut, Collector

Mem.	End	Strut Connection Design Information
16	Left	Clip 12.00x5.00x0.375 w/ (2) 0.750in. A325T, Clip tensile rupture and Block shear OK, Clip Buckling OK Clip To Web Weld 0.188 One Side Clip To Flange Weld 0.188 One Side => PASSED.
	Right	Clip 12.00x5.00x0.375 w/ (2) 0.750in. A325T, Clip tensile rupture and Block shear OK, Clip Buckling OK Clip To Web Weld 0.188 One Side Clip To Flange Weld 0.188 One Side => PASSED.



Diagonal Bracing Member Design Summary: Roof B

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	27.60	25.9	-0.24	1.0000	1.0000	0.094	1.0D+1.0CG+0.7E>+0.7EG+	passed	
2	R 0.375	27.60	25.9	-0.24	1.0000	1.0000	0.094	1.0D+1.0CG+0.7<E+0.7EG+	passed	
3	R 0.625	35.32	46.1	-6.29	1.0000	1.0000	0.847	1.0D+1.0CG+0.6W2>	passed	
4	R 0.625	35.32	46.1	-5.80	1.0000	1.0000	0.781	1.0D+1.0CG+0.6<W2	passed	
5	R 0.875	35.56	47.7	-14.40	1.0000	1.0000	0.964	1.0D+1.0CG+0.6W4>	passed	
6	R 0.875	35.56	47.7	-13.06	1.0000	1.0000	0.874	1.0D+1.0CG+0.6<W4	passed	

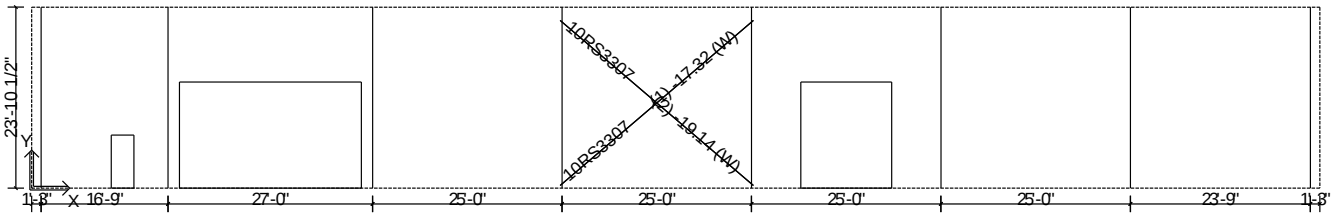
Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 0.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 0.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 0.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 0.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
3	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W2>, Factored F = 6.29, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W2>, Factored F = 6.29, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
4	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W2, Factored F = 5.80, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W2, Factored F = 5.80, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
5	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6W4>, Factored F = 14.40, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W4>, Factored F = 14.40, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
6	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W4, Factored F = 13.06, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.6<W4, Factored F = 13.06, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000,

		web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Strut Bracing Member Design Summary: Roof B

Mem. No.	Bracing Shape	Length (ft)	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Description
16	FF 2.875x0.079x10	25.00	13.08	1.0000	1.0000	0.866	1.0D+1.0CG+0.6W4>	passed	Eave Strut, Collector

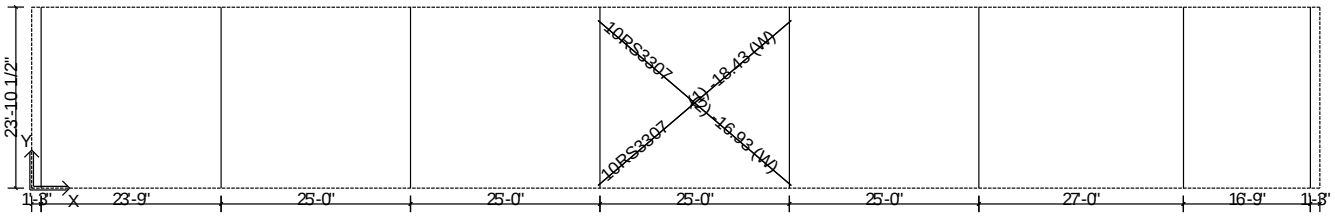
Mem.	End	Strut Connection Design Information
16	Left	Clip 12.00x5.00x0.375 w/ (2) 0.750in. A325T, Clip tensile rupture and Block shear OK, Clip Buckling OK Clip To Web Weld 0.188 One Side Clip To Flange Weld 0.188 One Side => PASSED.
	Right	Clip 12.00x5.00x0.375 w/ (2) 0.750in. A325T, Clip tensile rupture and Block shear OK, Clip Buckling OK Clip To Web Weld 0.188 One Side Clip To Flange Weld 0.188 One Side => PASSED.



Diagonal Bracing Member Design Summary: Sidewall 2

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 1.0	33.54	43.7	-17.32	1.0000	1.0000	0.890	1.0D+1.0CG+0.6<W4	passed	
2	R 1.0	33.54	43.7	-19.14	1.0000	1.0000	0.983	1.0D+1.0CG+0.6W4>	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W4, Factored F = 17.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W4, Factored F = 17.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot with Backing Plate and Stiffener: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W4>, Factored F = 19.14, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W4>, Factored F = 19.14, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.



Diagonal Bracing Member Design Summary: Sidewall 4

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 1.0	33.54	43.7	-18.43	1.0000	1.0000	0.947	1.0D+1.0CG+0.6W2>	passed	
2	R 1.0	33.54	43.7	-16.93	1.0000	1.0000	0.870	1.0D+1.0CG+0.6<W2	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W2>, Factored F = 18.43, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot with Backing Plate and Stiffener: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6W2>, Factored F = 18.43, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W2, Factored F = 16.93, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.6<W2, Factored F = 16.93, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Secondary - Summary Report

Loads and Codes - Shape: Building - Shape 1

City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: IBC 2018 Structural: 16AISC - ASD Rainfall: I: 3.00 inches per hour
Based on Building Code: 2018 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads
Collateral Gravity: 5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: 2.26 psf
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used
Primaries Wind Exposure: C - Kz: 0.936
Parts Wind Exposure Factor: 0.936
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 0.0 ft
Primary Zone Strip Width: 2a: 19/1/3
Parts / Portions Zone Strip Width:
Walls, a: 9/6/10
Roof(s), 0.6h: 14/3/14
Velocity Pressure: qz: 26.94, (C&C) 26.94 psf

Snow Load
Ground Snow Load: pg: 20.00 psf

Flat Roof Snow: pf: 14.00 psf
Design Snow (Sloped): ps: 14.00 psf
Rain Surcharge: 0.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Heated - Ct: 1.00
Ground / Roof Conversion: 0.70
Obstructed or Not Slippery

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 6.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.0960
Seismic Design Category: B
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 25/2/2

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.3698
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2248
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Load Notes
Collateral Load Description - Lights HVAC, mics

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System	1.000	1.0 D + 1.0 CG + 1.0 SMS	D + CG + SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S + 1.0 SD	D + CG + S + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
5	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
6	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 7)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 7)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
12	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
13	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
14	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 5
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 6
16	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+

17	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
18	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
19	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
21	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
23	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB1>	D + CG + S + W1> + WB1>
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB1>	D + CG + S + <W2 + WB1>
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
28	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
29	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB1	D + CG + S + W1> + <WB1
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB1	D + CG + S + <W2 + <WB1
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
33	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
35	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB2>	D + CG + S + W1> + WB2>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB2>	D + CG + S + <W2 + WB2>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
39	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
40	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB2	D + CG + S + W1> + <WB2
43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB2	D + CG + S + <W2 + <WB2
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
45	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB3>	D + CG + S + W1> + WB3>
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB3>	D + CG + S + <W2 + WB3>
50	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
51	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
52	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB3	D + CG + S + W1> + <WB3
55	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB3	D + CG + S + <W2 + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
57	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB4>	D + CG + S + W1> + WB4>
61	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB4>	D + CG + S + <W2 + WB4>
62	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
63	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
64	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
65	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
66	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB4	D + CG + S + W1> + <WB4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB4	D + CG + S + <W2 + <WB4

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2
3	System	1.000	0.7 E>	E>
4	System	1.000	0.7 <E	<E

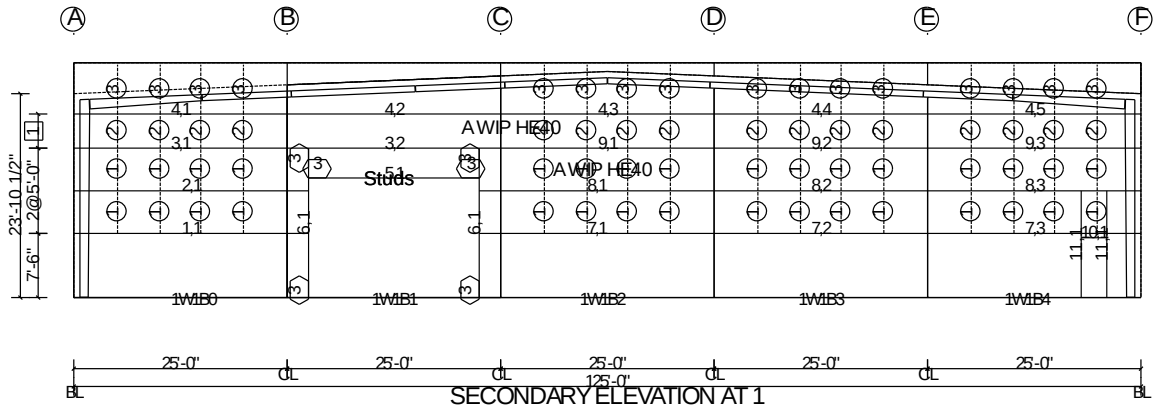
Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	1.0 SMS	SMS
3	System	1.000	180	0.42 W1>	W1>
4	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2
3	System	1.000	90	0.5 E>	E>
4	System	1.000	90	0.5 <E	<E

Wall: 1



Dimension Key
1 4'-0"
2 2'-6"
3 3'-0"

Maximum Secondary Designs for Shape Building - Shape 1 on Side 1

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	27.50	8.50x0.088 Z Sim-60.0	Yes	0.0	Interior	0.00	0.97	0.00	0.00	0.00	1	
2,1	27.50	8.50x0.073 Z Sim-60.0	Yes	0.0	Interior	0.00	1.02	0.00	0.00	0.00	1	
3,1	25.00	8.50x0.073 Z Sim-60.0	Yes	0.0	Interior	0.00	0.96	0.00	0.00	0.00	1	
3,2	25.00	8.50x0.098 Z Sim-60.0	Yes	0.0	Interior	0.00	0.90	0.00	0.00	0.00	1	
4,1	25.00	8.50x0.088 Z Sim-60.0	Yes	0.0	Interior	0.00	0.90	0.00	0.00	0.00	2	
4,3	25.00	8.50x0.079 Z Sim-60.0	Yes	0.0	Interior	0.00	0.95	0.00	0.00	0.00	1	
4,4	25.00	8.50x0.088 Z Sim-60.0	Yes	0.0	Interior	0.00	0.90	0.00	0.00	0.00	2	
4,5	25.00	8.50x0.000 Z Sim-***	Yes	0.0	Interior							
5,1	20.00	8.50x0.088 C Sim-60.0	Yes	0.0	Interior	0.00	0.88	0.00	0.00	0.00	1	
6,1	17.50	8.50x0.079 C Sim-60.0	Yes	0.0	Interior	0.00	0.92	0.05	0.80	0.00	1	
7,1	27.50	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.92	0.37	0.85	0.00	1	
					Right	0.00	0.48	0.20	0.52	0.00	1	10.5
7,2	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.48	0.17	0.50	0.00	1	10.5
					Interior	0.00	1.00	0.31	0.87	0.00	1	
					Right	0.00	0.49	0.17	0.51	0.00	1	10.5
7,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.49	0.20	0.53	0.00	1	10.5
					Interior	0.00	0.94	0.38	0.87	0.00	1	
8,1	27.50	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.72	0.30	0.67	0.00	1	
					Right	0.00	0.37	0.16	0.41	0.00	1	10.5
8,2	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.37	0.13	0.40	0.00	1	10.5
					Interior	0.00	0.85	0.25	0.74	0.00	1	
					Right	0.00	0.41	0.14	0.44	0.00	1	10.5
8,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.41	0.17	0.45	0.00	1	10.5
					Interior	0.00	0.85	0.00	0.00	0.00	1	
9,1	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.68	0.27	0.62	0.00	1	
					Right	0.00	0.35	0.15	0.38	0.00	1	10.5
9,2	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.35	0.12	0.37	0.00	1	10.5
					Interior	0.00	0.73	0.23	0.64	0.00	1	
					Right	0.00	0.36	0.12	0.38	0.00	1	10.5
9,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.36	0.15	0.38	0.00	1	10.5
					Interior	0.00	0.71	0.03	0.53	0.00	1	
10,1	3.00	8.50x0.073 C Sim-***	By Others	0.0	Interior							
11,1	12.50	8.50x0.073 C Sim-***	By Others	0.0	Interior							

Maximum Secondary Deflections for Shape Building - Shape 1 on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	1.45	(L/206)	12.50	1	0.42W1>	Pass
2	1	1.40	(L/215)	12.50	1	0.42W1>	Pass
3	1	1.31	(L/229)	12.50	1	0.42W1>	Pass
3	2	1.50	(L/200)	37.50	1	0.42W1>	Pass
4	1	-1.34	(L/224)	12.50	2	0.42<W2	Pass
4	3	1.34	(L/224)	62.50	1	0.42W1>	Pass
4	4	-1.34	(L/224)	87.50	2	0.42<W2	Pass
4	5	-1.55	(L/193)	112.50	2	0.42<W2	Pass
5	1	0.18	(L/1346)	10.00	1	0.42W1>	Pass
6	1	0.73	(L/287)	9.00	1	0.42W1>	Pass
7	1	0.92	(L/326)	13.50	1	0.42W1>	Pass
7	2	-0.08	(L/3883)	30.88	1	0.42W1>	Pass
7	3	0.96	(L/313)	66.38	1	0.42W1>	Pass
8	1	0.75	(L/401)	13.50	1	0.42W1>	Pass
8	2	-0.08	(L/3713)	48.38	1	0.42W1>	Pass
8	3	0.90	(L/334)	66.38	1	0.42W1>	Pass
9	1	0.70	(L/427)	11.00	1	0.42W1>	Pass
9	2	-0.07	(L/4540)	28.88	1	0.42W1>	Pass
9	3	0.74	(L/406)	63.88	1	0.42W1>	Pass
10	1	-	-	-	-	-	-
11	1	-	-	-	-	-	-

Spandrel Beam(Id=4,2)
Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
25000	8.00	0.2500	0.2500	8.50	8.50	12.50	255.2	55.00	55.00	SS	SS	3P
25001	8.00	0.2500	0.2500	8.50	8.50	12.50	255.2	55.00	55.00	SS	SS	3P

Total Frame Weight = 510.4 (p) (Includes all plates)

Spandrel Beam Connection Design (ASD)

			Connection Plate				Bolt Group						Edge	Weld	Beam Cope		
Mem.	Jt.	Type	Thick.	Height	Length	Fy	Diam.	Spec/Jt.	Bolts	Rows	Gage	Pitch	'a'	Size	Side	C	Depth
Id	No.		in.	in.	in.	ksi	in.		n	r	in.	in.	in.	in.		in.	in.
4,2	1		0.000	0.00	0.00	0	0.000		0	0	0.00	0.00	0.00	(0)-0.0000		0.00	0.00
4,2	2		0.000	0.00	0.00	0	0.000		0	0	0.00	0.00	0.00	(0)-0.0000		0.00	0.00

		Required Strength							Available Strength Ratio					Min. Thickness	
Mem.	Jt.	Load	Axial	Shear	Beam Moment	Pr	Angle	Bolt Group	Bolt Shear	Bearing	Rupture	Max. Ratio	Description	Beam Web	Column
Id	No.	Case	k	k	in-k	k	Deg.	C	%	%	%	%		in.	in.
4,2	1	-1	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00		0.0000	0.0000
4,2	2	-1	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00		0.0000	0.0000

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
25000	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
25001	25/0/0	0/0/0	No	Yes	No	0/0/0	0/0/0	0.0000

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
25000	12.50	8.50	2		0.0		161.2	0.0	35.7		284.5	188.3	0.57	
25000	0.00	8.50		2		2.2				42.1				0.05
25001	0.00	8.50	2		0.0		161.2	0.0	35.7		284.5	188.3	0.57	
25001	12.50	8.50		2		-2.1				42.1				0.05

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag
25000	12.50	300.00	300.0	300.0	6.00	2.00	78.75	21.34	18.53	5.34	20.50	8.13	0.13	363.18	1.14	1.00	1.11	1.00
25001	0.00	300.00	300.0	300.0	6.00	2.00	78.75	21.34	18.53	5.34	20.50	8.13	0.13	363.18	1.14	1.00	1.11	1.00

Influence Areas for Cross Section:Spandrel Beam(Id=4,2)

Location	Distance	Left	Right	Total	Surface	Direction	Override	Area (sq. ft.)
0/0/0 - Side 2	0/0/0	5/0/0	4/9/6(1)	9/9/6	Wall 1 (Building - Shape 1)	Windward		122.26
	25/0/0	5/0/0	4/9/6	9/9/6				

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	240	240	0.42 W1>	W1>
2	System	1.000	240	240	0.42 <W2	<W2
3	System	1.000	240	240	0.5 E>	E>
4	System	1.000	240	240	0.5 <E	<E

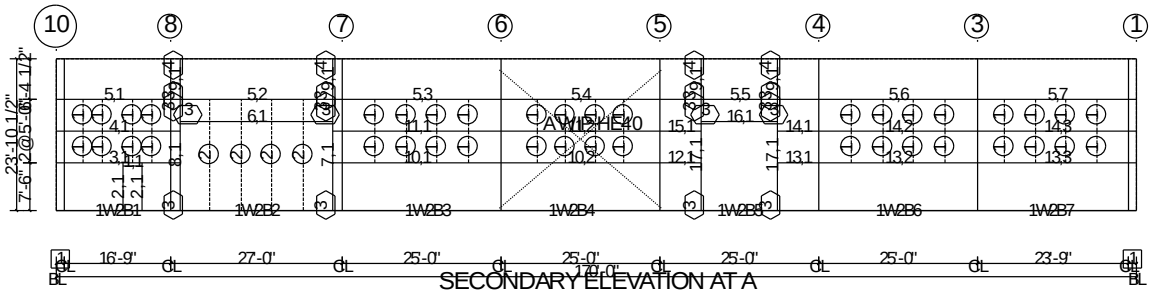
Controlling Frame Deflection Ratios for Cross Section: Spandrel Beam(Id=4,2)

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(L/646)	-0.464	25001	1	2	<W2

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Wall: 2



Dimension Key
1 1'-3"
2 3'-0"
3 4'-6"
4 1'-6"

Maximum Secondary Designs for Shape Building - Shape 1 on Side 2

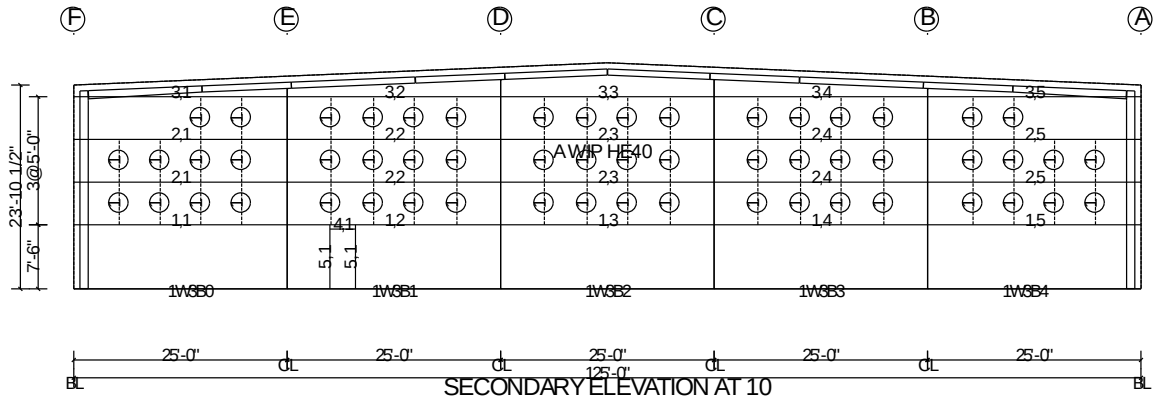
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	3.00	8.50x0.000 C Sim-***	By Others	0.0	Secondary Designs for Shape Building - Shape 1 on Side 2							
2,1	7.50	8.50x0.000 C Sim-***	By Others	0.0	Secondary Designs for Shape Building - Shape 1 on Side 2							
3,1	19.50	8.50x0.068 Z Sim-60.0	Yes	0.0	Interior	0.00	0.73	0.00	0.57	0.00	1	
4,1	19.50	8.50x0.068 Z Sim-60.0	Yes	0.0	Interior	0.00	0.57	0.00	0.00	0.00	1	
5,1	18.00	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.84	0.28	0.74	0.00	1	
					Right	0.00	0.46	0.16	0.48	0.00	1	10.5
5,2	27.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.46	0.34	0.57	0.00	1	16.5
					Interior	0.00	0.73	0.67	0.97	0.00	1	
					Right	0.00	0.51	0.35	0.62	0.00	1	16.5
5,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.51	0.17	0.54	0.00	1	10.5
					Interior	0.00	0.95	0.31	0.84	0.00	1	
					Right	0.00	0.26	0.13	0.29	0.00	1	10.5
5,4	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.26	0.12	0.29	0.00	1	10.5
					Interior	0.00	0.95	0.29	0.82	0.00	1	
					Right	0.00	0.56	0.14	0.58	0.00	1	10.5
5,5	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.56	0.23	0.61	0.00	1	34.5
					Interior	0.00	0.98	0.00	0.00	0.00	1	
					Right	0.00	0.52	0.23	0.57	0.00	1	34.5
5,6	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.52	0.13	0.54	0.00	1	10.5
					Interior	0.00	0.88	0.27	0.76	0.00	1	
					Right	0.00	0.38	0.14	0.40	0.00	1	10.5
5,7	25.00	8.50x0.068 Z Con-60.0	Yes	22.5	Left	0.00	0.38	0.17	0.42	0.00	1	10.5
					Interior	0.00	0.81	0.00	0.63	0.00	1	
6,1	24.00	8.50x0.079 FB Sim-60.0	Yes	0.0	Interior	0.00	0.39	0.00	0.00	0.00	1	
7,1	17.50	8.50x0.088 C Sim-60.0	Yes	0.0	Interior	0.00	0.91	0.04	0.78	0.00	1	
8,1	17.50	8.50x0.088 C Sim-60.0	Yes	0.0	Interior	0.00	0.91	0.04	0.79	0.00	1	
9,1	6.38	8.50x0.073 C Sim-60.0	Yes	0.0	Interior							
10,1	26.50	8.50x0.068 Z Con-60.0	Yes	34.5	Interior	0.00	0.86	0.35	0.78	0.00	1	

					Right	0.00	0.66	0.21	0.70	0.00	1	34.5
10,2	25.00	8.50x0.068 Z Con-60.0	Yes	34.5	Left	0.00	0.66	0.22	0.70	0.00	1	34.5
					Interior	0.00	0.85	0.35	0.78	0.00	1	
11,1	26.50	8.50x0.068 Z Con-60.0	Yes	34.5	Interior	0.00	1.00	0.32	0.88	0.00	1	
					Right	0.00	0.49	0.17	0.52	0.00	1	10.5
11,2	25.00	8.50x0.068 Z Con-60.0	Yes	34.5	Left	0.00	0.49	0.17	0.52	0.00	1	10.5
					Interior	0.00	0.99	0.32	0.87	0.00	1	
12,1	6.50	8.50x0.068 Z Sim-60.0	Yes	0.0	Interior	0.00	0.11	0.00	0.09	0.00	1	
13,1	6.50	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.48	0.22	0.45	0.00	1	
					Right	0.00	0.29	0.13	0.32	0.00	1	10.5
13,2	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.29	0.15	0.33	0.00	1	16.5
					Interior	0.00	0.85	0.32	0.77	0.00	1	
					Right	0.00	0.53	0.18	0.56	0.00	1	16.5
13,3	25.00	8.50x0.068 Z Con-60.0	Yes	22.5	Left	0.00	0.53	0.20	0.57	0.00	1	22.5
					Interior	0.00	0.92	0.36	0.85	0.00	1	
14,1	6.50	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.45	0.19	0.42	0.00	1	
					Right	0.00	0.23	0.10	0.26	0.00	1	10.5
14,2	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.23	0.12	0.26	0.00	1	10.5
					Interior	0.00	0.83	0.27	0.73	0.00	1	
					Right	0.00	0.41	0.15	0.43	0.00	1	10.5
14,3	25.00	8.50x0.068 Z Con-60.0	Yes	22.5	Left	0.00	0.41	0.16	0.44	0.00	1	10.5
					Interior	0.00	0.81	0.30	0.73	0.00	1	
15,1	6.50	8.50x0.068 Z Sim-60.0	Yes	0.0	Interior	0.00	0.09	0.00	0.07	0.00	1	
16,1	12.00	8.50x0.073 C Sim-60.0	Yes	0.0	Interior	0.00	0.18	0.00	0.00	0.00	1	
17,1	17.50	8.50x0.073 C Sim-60.0	Yes	0.0	Interior	0.00	0.89	0.09	0.78	0.00	1	

Maximum Secondary Deflections for Shape Building - Shape 1 on Side 2

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	-	-	-	-	-	-
2	1	-	-	-	-	-	-
3	1	0.42	(L/473)	9.75	1	0.42W1>	Pass
4	1	0.33	(L/608)	9.75	1	0.42W1>	Pass
5	1	-0.08	(L/2615)	14.25	1	0.42W1>	Pass
5	2	0.67	(L/484)	31.38	1	0.42W1>	Pass
5	3	0.25	(L/1182)	59.38	1	0.42W1>	Pass
5	4	-0.16	(L/1920)	90.38	1	0.42W1>	Pass
5	5	0.95	(L/314)	107.88	1	0.42W1>	Pass
5	6	-0.21	(L/1423)	125.88	1	0.42W1>	Pass
5	7	0.79	(L/360)	157.88	1	0.42W1>	Pass
6	1	0.20	(L/1438)	12.00	1	0.42W1>	Pass
7	1	0.74	(L/283)	8.50	1	0.42W1>	Pass
8	1	0.74	(L/283)	8.50	1	0.42W1>	Pass
9	1	-	-	-	-	-	-
10	1	0.64	(L/469)	11.50	1	0.42W1>	Pass
10	2	0.68	(L/440)	41.38	1	0.42W1>	Pass
11	1	0.57	(L/523)	11.50	1	0.42W1>	Pass
11	2	0.61	(L/490)	40.88	1	0.42W1>	Pass
12	1	0.01	(L/7881)	3.50	1	0.42W1>	Pass
13	1	-0.03	(L/2949)	4.00	1	0.42W1>	Pass
13	2	0.33	(L/920)	17.88	1	0.42W1>	Pass
13	3	0.68	(L/417)	45.38	1	0.42W1>	Pass
14	1	-0.02	(L/3418)	4.00	1	0.42W1>	Pass
14	2	0.28	(L/1069)	17.88	1	0.42W1>	Pass
14	3	0.57	(L/499)	45.38	1	0.42W1>	Pass
15	1	0.01	(L/9712)	3.50	1	0.42W1>	Pass
16	1	0.03	(L/4849)	6.00	1	0.42W1>	Pass
17	1	0.67	(L/312)	9.00	1	0.42W1>	Pass

Wall: 3



Dimension Key
1 3'-0"

Maximum Secondary Designs for Shape Building - Shape 1 on Side 3

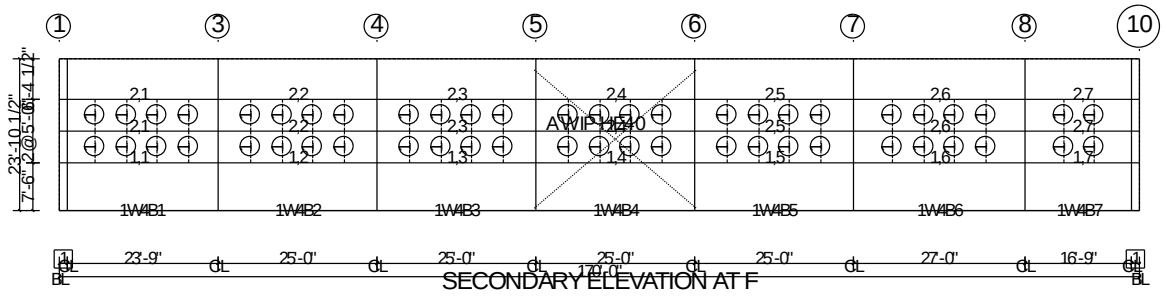
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Interior	0.00	0.95	0.04	0.70	0.00	1	
					Right	0.00	0.54	0.21	0.58	0.00	1	16.5
1,2	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.54	0.19	0.57	0.00	1	16.5
					Interior	0.00	1.00	0.33	0.88	0.00	1	
					Right	0.00	0.39	0.16	0.42	0.00	1	16.5
1,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.39	0.17	0.42	0.00	1	10.5
					Interior	0.00	0.64	0.30	0.61	0.00	1	
					Right	0.00	0.38	0.17	0.41	0.00	1	10.5
1,4	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.38	0.16	0.41	0.00	1	16.5
					Interior	0.00	0.99	0.32	0.87	0.00	1	
					Right	0.00	0.53	0.18	0.56	0.00	1	16.5
1,5	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.53	0.21	0.57	0.00	1	16.5
					Interior	0.00	0.95	0.04	0.71	0.00	1	
2,1	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Interior	0.00	0.82	0.31	0.75	0.00	1	
					Right	0.00	0.42	0.17	0.45	0.00	1	10.5
2,2	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.42	0.14	0.44	0.00	1	10.5
					Interior	0.00	0.86	0.27	0.75	0.00	1	
					Right	0.00	0.30	0.13	0.33	0.00	1	10.5
2,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.30	0.13	0.33	0.00	1	10.5
					Interior	0.00	0.58	0.25	0.54	0.00	1	
					Right	0.00	0.30	0.13	0.33	0.00	1	10.5
2,4	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.30	0.13	0.33	0.00	1	10.5
					Interior	0.00	0.86	0.27	0.75	0.00	1	
					Right	0.00	0.42	0.14	0.44	0.00	1	10.5
2,5	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.42	0.17	0.45	0.00	1	10.5
					Interior	0.00	0.82	0.31	0.75	0.00	1	
3,1	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.63	0.24	0.57	0.00	1	
					Right	0.00	0.32	0.13	0.34	0.00	1	10.5
3,2	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.32	0.11	0.34	0.00	1	10.5
					Interior	0.00	0.65	0.21	0.57	0.00	1	
					Right	0.00	0.28	0.11	0.30	0.00	1	10.5
3,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.28	0.12	0.30	0.00	1	10.5
					Interior	0.00	0.53	0.23	0.49	0.00	1	
					Right	0.00	0.28	0.12	0.30	0.00	1	10.5
3,4	25.00	8.50x0.068 Z Con-60.0	Yes	16.5	Left	0.00	0.28	0.11	0.30	0.00	1	10.5
					Interior	0.00	0.65	0.21	0.57	0.00	1	

					Right	0.00	0.32	0.11	0.34	0.00	1	10.5
3,5	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.32	0.13	0.34	0.00	1	10.5
					Interior	0.00	0.63	0.24	0.57	0.00	1	
4,1	3.00	8.50x0.000 C Sim-***	By Others	0.0	Interior							
5,1	7.50	8.50x0.000 C Sim-***	By Others	0.0	Interior							

Maximum Secondary Deflections for Shape Building - Shape 1 on Side 3

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	0.92	(L/326)	10.50	1	0.42W1>	Pass
1	2	0.18	(L/1629)	38.88	1	0.42W1>	Pass
1	3	0.42	(L/713)	62.38	1	0.42W1>	Pass
1	4	0.14	(L/2110)	86.38	1	0.42W1>	Pass
1	5	0.95	(L/315)	114.38	1	0.42W1>	Pass
2	1	0.77	(L/391)	11.00	1	0.42W1>	Pass
2	2	0.13	(L/2259)	38.88	1	0.42W1>	Pass
2	3	0.35	(L/858)	62.38	1	0.42W1>	Pass
2	4	0.13	(L/2338)	86.38	1	0.42W1>	Pass
2	5	0.78	(L/384)	113.88	1	0.42W1>	Pass
3	1	0.55	(L/541)	11.00	1	0.42W1>	Pass
3	2	0.13	(L/2389)	38.38	1	0.42W1>	Pass
3	3	0.34	(L/895)	62.38	1	0.42W1>	Pass
3	4	0.12	(L/2438)	86.88	1	0.42W1>	Pass
3	5	0.56	(L/531)	114.38	1	0.42W1>	Pass
4	1	-	-	-	-	-	-
5	1	-	-	-	-	-	-

Wall: 4



Dimension Key
1 1'-3"

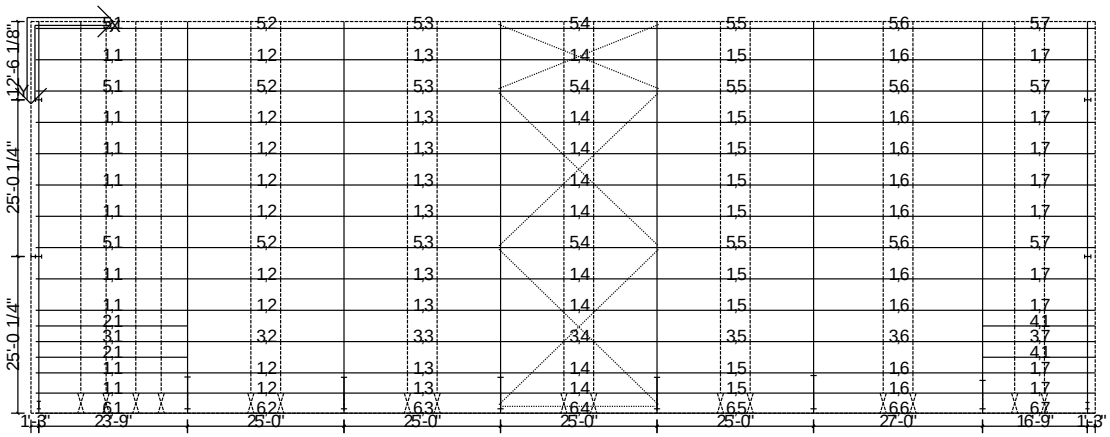
Maximum Secondary Designs for Shape Building - Shape 1 on Side 4

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.95	0.37	0.87	0.00	1	
					Right	0.00	0.49	0.20	0.53	0.00	1	10.5
1,2	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.49	0.18	0.52	0.00	1	10.5
					Interior	0.00	0.99	0.33	0.87	0.00	1	
					Right	0.00	0.38	0.16	0.41	0.00	1	10.5
1,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.38	0.17	0.41	0.00	1	10.5
					Interior	0.00	0.81	0.32	0.74	0.00	1	
					Right	0.00	0.41	0.17	0.45	0.00	1	10.5
1,4	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.41	0.17	0.45	0.00	1	10.5
					Interior	0.00	0.81	0.32	0.74	0.00	1	
					Right	0.00	0.39	0.17	0.42	0.00	1	10.5
1,5	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.39	0.16	0.42	0.00	1	10.5
					Interior	0.00	0.91	0.32	0.81	0.00	1	
					Right	0.00	0.45	0.17	0.49	0.00	1	10.5
1,6	27.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.45	0.18	0.49	0.00	1	10.5
					Interior	0.00	0.89	0.34	0.81	0.00	1	
					Right	0.00	0.41	0.18	0.44	0.00	1	10.5
1,7	18.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.41	0.16	0.44	0.00	1	10.5
					Interior	0.00	0.80	0.30	0.73	0.00	1	
2,1	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Interior	0.00	0.87	0.34	0.79	0.00	1	
					Right	0.00	0.44	0.18	0.48	0.00	1	10.5
2,2	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.44	0.16	0.47	0.00	1	10.5
					Interior	0.00	0.90	0.30	0.79	0.00	1	
					Right	0.00	0.34	0.15	0.37	0.00	1	10.5
2,3	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.34	0.15	0.38	0.00	1	10.5
					Interior	0.00	0.74	0.29	0.67	0.00	1	
					Right	0.00	0.38	0.15	0.41	0.00	1	10.5
2,4	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.38	0.15	0.41	0.00	1	10.5
					Interior	0.00	0.74	0.29	0.67	0.00	1	
					Right	0.00	0.35	0.15	0.38	0.00	1	10.5
2,5	25.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.35	0.15	0.38	0.00	1	10.5
					Interior	0.00	0.82	0.29	0.74	0.00	1	
					Right	0.00	0.41	0.16	0.44	0.00	1	10.5
2,6	27.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.41	0.17	0.44	0.00	1	10.5
					Interior	0.00	0.81	0.31	0.74	0.00	1	
					Right	0.00	0.37	0.16	0.40	0.00	1	10.5
2,7	18.00	8.50x0.068 Z Con-60.0	Yes	10.5	Left	0.00	0.37	0.15	0.40	0.00	1	10.5
					Interior	0.00	0.73	0.28	0.66	0.00	1	

Maximum Secondary Deflections for Shape Building - Shape 1 on Side 4

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	0.74	(L/386)	11.25	1	0.42W1>	Pass
1	2	0.23	(L/1304)	38.38	1	0.42W1>	Pass
1	3	0.37	(L/814)	62.38	1	0.42W1>	Pass
1	4	0.35	(L/852)	87.88	1	0.42W1>	Pass
1	5	0.27	(L/1098)	111.88	1	0.42W1>	Pass
1	6	0.61	(L/527)	138.88	1	0.42W1>	Pass
1	7	0.09	(L/2256)	163.38	1	0.42W1>	Pass
2	1	0.67	(L/424)	11.25	1	0.42W1>	Pass
2	2	0.21	(L/1433)	38.38	1	0.42W1>	Pass
2	3	0.34	(L/895)	62.38	1	0.42W1>	Pass
2	4	0.32	(L/936)	87.88	1	0.42W1>	Pass
2	5	0.25	(L/1206)	111.88	1	0.42W1>	Pass
2	6	0.56	(L/580)	138.88	1	0.42W1>	Pass
2	7	0.08	(L/2449)	163.38	1	0.42W1>	Pass

Roof: A



Maximum Secondary Designs for Shape Building - Shape 1 on Side A

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	24.25	8.50x0.073 Z Con-60.0	Yes	34.5	Interior	0.00	0.99	0.00	0.78	0.00	63	
					Right	0.00	0.73	0.27	0.78	0.00	5	34.5
1,2	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.73	0.24	0.77	0.00	5	34.5
					Interior	0.00	0.98	0.42	0.90	0.00	5	
					Right	0.00	0.65	0.29	0.71	0.00	5	34.5
1,3	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.65	0.30	0.72	0.00	5	34.5
					Interior	0.00	0.86	0.58	0.92	0.00	5	
					Right	0.00	0.79	0.38	0.88	0.00	5	34.5
1,4	25.00	8.50x0.060 Z Con-60.0	Yes	46.5	Left	0.00	0.79	0.38	0.88	0.00	5	34.5
					Interior	0.00	0.86	0.58	0.92	0.00	5	
					Right	0.00	0.73	0.36	0.81	0.00	5	34.5
1,5	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.73	0.36	0.81	0.00	5	34.5
					Interior	0.00	0.77	0.54	0.83	0.00	5	
					Right	0.00	0.81	0.31	0.87	0.00	5	34.5
1,6	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.81	0.33	0.88	0.00	5	46.5
					Interior	0.00	0.91	0.46	0.88	0.00	5	
					Right	0.00	0.69	0.32	0.76	0.00	5	46.5
1,7	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.69	0.28	0.75	0.00	5	22.5
					Interior	0.00	0.61	0.46	0.68	0.00	5	
2,1	24.25	8.50x0.068 Z Con-60.0	Yes	34.5	Interior	0.00	0.97	0.00	0.00	0.00	63	
3,1	24.25	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.76	0.18	0.65	0.00	1	
					Right	0.00	0.37	0.10	0.38	0.00	2	10.5
3,2	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.37	0.14	0.40	0.00	2	10.5
					Interior	0.00	0.87	0.29	0.78	0.00	1	
					Right	0.00	0.45	0.15	0.48	0.00	2	10.5
3,3	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.45	0.15	0.48	0.00	1	10.5
					Interior	0.00	0.88	0.28	0.78	0.00	1	
					Right	0.00	0.44	0.15	0.46	0.00	1	10.5
3,4	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.44	0.15	0.46	0.00	1	10.5
					Interior	0.00	0.84	0.28	0.75	0.00	1	

					Right	0.00	0.41	0.15	0.44	0.00	63	10.5
3,5	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.41	0.14	0.44	0.00	63	10.5
					Interior	0.00	0.92	0.28	0.81	0.00	2	
					Right	0.00	0.52	0.15	0.54	0.00	2	10.5
3,6	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.52	0.17	0.55	0.00	1	16.5
					Interior	0.00	1.02	0.32	0.90	0.00	1	
					Right	0.00	0.38	0.15	0.40	0.00	1	16.5
3,7	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.38	0.08	0.38	0.00	1	10.5
					Interior	0.00	0.74	0.15	0.62	0.00	1	
4,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.87	0.00	0.00	0.00	63	
5,1	24.25	8.50x0.098 Z Con-60.0	Yes	34.5	Interior	0.22	0.62	0.00	0.93	0.00	33	
					Right	0.10	0.50	0.13	0.62	0.00	35	34.5
5,2	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.07	0.50	0.11	0.58	0.00	35	34.5
					Interior	0.14	0.75	0.30	0.94	0.00	35	
					Right	0.00	0.61	0.25	0.66	0.00	5	34.5
5,3	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.10	0.55	0.23	0.66	0.00	35	34.5
					Interior	0.20	0.66	0.50	0.91	0.00	35	
					Right	0.10	0.58	0.21	0.69	0.00	35	34.5
5,4	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.24	0.58	0.21	0.88	0.00	59	46.5
					Interior	0.39	0.52	0.23	1.02	0.00	59	
					Right	0.24	0.53	0.20	0.83	0.00	59	46.5
5,5	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.58	0.22	0.62	0.00	5	46.5
					Interior	0.13	0.70	0.48	0.87	0.00	41	
					Right	0.00	0.90	0.38	0.98	0.00	5	46.5
5,6	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.90	0.41	0.99	0.00	5	46.5
					Interior	0.13	0.76	0.00	0.93	0.00	41	
					Right	0.00	0.78	0.39	0.87	0.00	5	46.5
5,7	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.78	0.35	0.86	0.00	5	34.5
					Interior	0.34	0.59	0.00	0.97	0.00	63	
6,1	24.25	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.18	0.37	0.00	0.58	0.00	33	
6,2	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.30	0.41	0.02	0.74	0.00	33	
6,3	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.30	0.41	0.02	0.74	0.00	33	
6,4	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.00	0.45	0.02	0.35	0.00	1	
6,5	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.19	0.41	0.02	0.62	0.00	39	
6,6	27.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.12	0.53	0.02	0.77	0.00	39	
6,7	18.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.21	0.32	0.00	0.54	0.00	39	

Maximum Secondary Deflections for Shape Building - Shape 1 on Side A

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	1.01	(L/281)	11.00	3	0.42W1>	Pass
1	2	-0.38	(L/790)	36.63	2	1.0SMS	Pass
1	3	-0.50	(L/594)	61.63	2	1.0SMS	Pass
1	4	-0.50	(L/595)	87.13	2	1.0SMS	Pass
1	5	-0.33	(L/896)	111.13	2	1.0SMS	Pass
1	6	-0.87	(L/373)	138.13	2	1.0SMS	Pass
1	7	0.24	(L/844)	161.13	3	0.42W1>	Pass
2	1	1.20	(L/238)	12.50	3	0.42W1>	Pass
3	1	0.28	(L/1011)	9.50	3	0.42W1>	Pass
3	2	-0.54	(L/555)	36.13	2	1.0SMS	Pass
3	3	-0.38	(L/786)	61.63	2	1.0SMS	Pass
3	4	-0.47	(L/636)	86.63	2	1.0SMS	Pass
3	5	0.30	(L/1007)	111.13	3	0.42W1>	Pass
3	6	-0.90	(L/360)	138.13	2	1.0SMS	Pass
3	7	0.16	(L/1245)	156.63	2	1.0SMS	Pass
4	1	0.29	(L/692)	8.50	3	0.42W1>	Pass
5	1	0.78	(L/364)	11.00	3	0.42W1>	Pass
5	2	-0.23	(L/1329)	37.63	2	1.0SMS	Pass
5	3	-0.49	(L/608)	61.63	2	1.0SMS	Pass
5	4	-0.34	(L/895)	87.13	2	1.0SMS	Pass
5	5	-0.32	(L/947)	111.13	2	1.0SMS	Pass
5	6	-0.86	(L/376)	138.13	2	1.0SMS	Pass
5	7	0.23	(L/870)	161.13	3	0.42W1>	Pass
6	1	0.45	(L/637)	12.50	3	0.42W1>	Pass
6	2	0.51	(L/588)	36.75	3	0.42W1>	Pass
6	3	0.51	(L/588)	61.75	3	0.42W1>	Pass
6	4	0.51	(L/588)	86.75	3	0.42W1>	Pass
6	5	0.51	(L/588)	111.75	3	0.42W1>	Pass

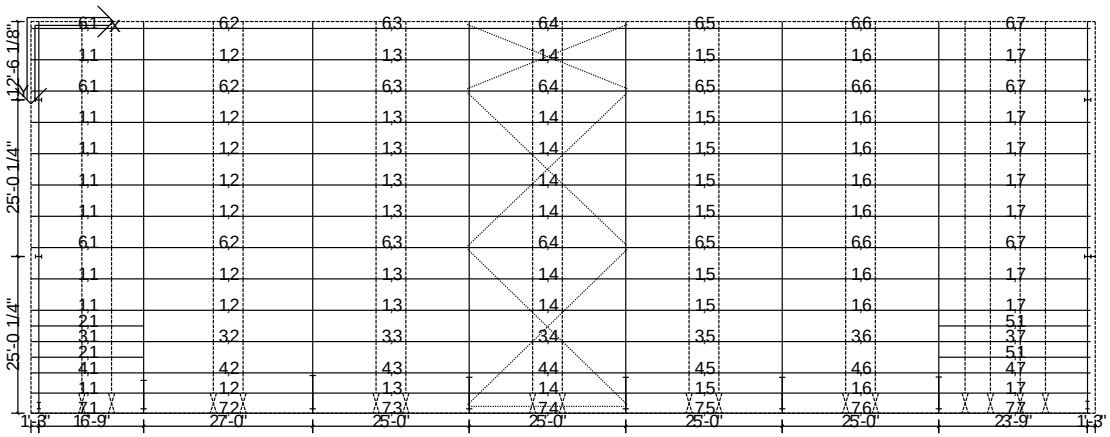
6	6	-0.69	(L/471)	137.75	2	1.0SMS	Pass
6	7	0.13	(L/1573)	159.75	3	0.42W1>	Pass

Purlin Anchorage Forces for Shape Building - Shape 1, Roof A, Panel Type is MR24, Pitch = 0.500:12 AR Clip if req'd - EPC3

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.073	-26.18	2	13	24.25	N	62.55	1.617	0.652
2	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
3	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
4	0.060	-26.18	2	13	25.00	N	62.55	1.667	0.600
5	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
6	0.079	-26.18	2	13	27.00	N	62.55	1.800	0.706
7	0.079	-26.18	2	13	18.00	N	62.55	1.200	0.301

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	0.16D	0.01D (k)	0.15W	0	0, 13	0.731	7.078	0.069	0.002	0.029
	BR.1		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.3		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.4		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
2(24.25)	Frame	0.59D	0.03D (k)	0.20W	0	0, 13	2.762	14.106	0.069	0.005	0.067
	BR.1		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
3(49.25)	Frame	0.86D	0.05D (k)	0.21W	0	0, 13	4.028	14.919	0.069	0.005	0.068
	BR.1		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
4(74.25)	Frame	0.51D	0.03D (k)	0.19W	0	0, 13	2.385	12.509	0.069	0.005	0.067
	BR.1		0.05T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.05T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
5(99.25)	Frame	0.50D	0.03D (k)	0.19W	0	0, 13	2.372	12.509	0.069	0.005	0.066
	BR.1		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
6(124.25)	Frame	0.84D	0.04D (k)	0.21W	0	0, 13	3.954	14.914	0.069	0.005	0.068
	BR.1		0.04T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.04T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
7(151.25)	Frame	0.70D	0.04D (k)	0.21W	0	0, 13	3.277	15.150	0.069	0.004	0.065
	BR.1		0.03T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
8(169.25)	Frame	0.33D	0.02D (k)	0.16W	0	0, 13	1.545	7.714	0.069	0.004	0.062

Roof: B



Maximum Secondary Designs for Shape Building - Shape 1 on Side B

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition % Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.61	0.46	0.68	0.00	4	
					Right	0.00	0.69	0.28	0.75	0.00	4	22.5
1,2	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.69	0.32	0.76	0.00	4	46.5
					Interior	0.00	0.91	0.46	0.88	0.00	4	
					Right	0.00	0.81	0.33	0.88	0.00	4	46.5
1,3	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.81	0.31	0.87	0.00	4	34.5
					Interior	0.00	0.77	0.54	0.83	0.00	4	
					Right	0.00	0.73	0.36	0.81	0.00	4	34.5
1,4	25.00	8.50x0.060 Z Con-60.0	Yes	46.5	Left	0.00	0.73	0.36	0.81	0.00	4	34.5
					Interior	0.00	0.86	0.58	0.92	0.00	4	
					Right	0.00	0.79	0.38	0.88	0.00	4	34.5
1,5	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.79	0.38	0.88	0.00	4	34.5
					Interior	0.00	0.86	0.58	0.92	0.00	4	
					Right	0.00	0.65	0.30	0.72	0.00	4	34.5
1,6	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.65	0.29	0.71	0.00	4	34.5
					Interior	0.00	0.98	0.42	0.90	0.00	4	
					Right	0.00	0.73	0.24	0.77	0.00	4	34.5
1,7	24.25	8.50x0.073 Z Con-60.0	Yes	34.5	Left	0.00	0.73	0.27	0.78	0.00	4	34.5
					Interior	0.00	0.99	0.00	0.78	0.00	63	
2,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.87	0.00	0.00	0.00	63	
3,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.74	0.15	0.62	0.00	1	
					Right	0.00	0.38	0.08	0.38	0.00	2	10.5
3,2	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.38	0.15	0.40	0.00	2	16.5
					Interior	0.00	1.02	0.32	0.90	0.00	1	
					Right	0.00	0.52	0.17	0.55	0.00	1	16.5
3,3	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.52	0.15	0.54	0.00	2	10.5
					Interior	0.00	0.92	0.28	0.81	0.00	1	
					Right	0.00	0.41	0.14	0.44	0.00	63	10.5
3,4	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.41	0.15	0.44	0.00	63	10.5
					Interior	0.00	0.84	0.28	0.75	0.00	1	

					Right	0.00	0.44	0.15	0.57	0.55	1	10.5
3,5	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.44	0.15	0.57	0.55	1	10.5
					Interior	0.00	0.88	0.28	0.78	0.00	1	
					Right	0.00	0.45	0.15	0.58	0.56	2	10.5
3,6	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.45	0.15	0.58	0.56	2	10.5
					Interior	0.00	0.87	0.29	0.78	0.00	1	
					Right	0.00	0.37	0.14	0.40	0.00	1	10.5
3,7	24.25	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.37	0.10	0.38	0.00	1	10.5
					Interior	0.00	0.76	0.18	0.65	0.00	1	
4,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.00	0.68	0.16	0.58	0.00	1	
					Right	0.00	0.33	0.09	0.34	0.00	63	10.5
4,2	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.33	0.13	0.36	0.00	63	10.5
					Interior	0.00	0.82	0.26	0.73	0.00	1	
					Right	0.00	0.42	0.14	0.44	0.00	2	10.5
4,3	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.42	0.13	0.44	0.00	1	10.5
					Interior	0.00	0.84	0.24	0.73	0.00	1	
					Right	0.00	0.35	0.12	0.37	0.00	63	10.5
4,4	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.35	0.12	0.37	0.00	63	10.5
					Interior	0.00	0.70	0.23	0.63	0.00	1	
					Right	0.00	0.37	0.13	0.39	0.00	63	10.5
4,5	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.37	0.12	0.39	0.00	63	10.5
					Interior	0.00	0.71	0.23	0.63	0.00	1	
					Right	0.00	0.36	0.12	0.38	0.00	63	10.5
4,6	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.36	0.12	0.39	0.00	63	10.5
					Interior	0.00	0.70	0.23	0.62	0.00	1	
					Right	0.00	0.36	0.12	0.38	0.00	63	10.5
4,7	24.25	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.36	0.10	0.37	0.00	63	10.5
					Interior	0.00	0.71	0.20	0.62	0.00	1	
5,1	24.25	8.50x0.068 Z Con-60.0	Yes	34.5	Interior	0.00	0.97	0.00	0.75	0.00	63	
6,1	18.00	8.50x0.079 Z Con-60.0	Yes	34.5	Interior	0.35	0.59	0.00	0.97	0.00	63	
					Right	0.00	0.78	0.35	0.86	0.00	4	34.5
6,2	27.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.78	0.39	0.87	0.00	4	46.5
					Interior	0.13	0.76	0.00	0.93	0.00	65	
					Right	0.00	0.90	0.41	0.99	0.00	4	46.5
6,3	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.00	0.90	0.38	0.98	0.00	4	46.5
					Interior	0.13	0.70	0.48	0.87	0.00	65	
					Right	0.00	0.58	0.22	0.62	0.00	4	46.5
6,4	25.00	8.50x0.079 Z Con-60.0	Yes	46.5	Left	0.24	0.53	0.20	0.83	0.00	59	46.5
					Interior	0.39	0.52	0.23	1.02	0.00	59	
					Right	0.24	0.58	0.21	0.89	0.00	59	46.5
6,5	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.10	0.58	0.21	0.69	0.00	59	34.5
					Interior	0.20	0.66	0.50	0.91	0.00	59	
					Right	0.10	0.55	0.23	0.67	0.00	59	34.5
6,6	25.00	8.50x0.079 Z Con-60.0	Yes	34.5	Left	0.00	0.61	0.25	0.66	0.00	4	34.5
					Interior	0.14	0.75	0.30	0.94	0.00	59	
					Right	0.07	0.50	0.11	0.58	0.00	59	34.5
6,7	24.25	8.50x0.098 Z Con-60.0	Yes	34.5	Left	0.10	0.50	0.13	0.62	0.00	59	34.5
					Interior	0.22	0.62	0.00	0.93	0.00	57	
7,1	18.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.21	0.32	0.00	0.54	0.00	63	
7,2	27.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.22	0.53	0.02	0.77	0.00	63	
7,3	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.19	0.41	0.02	0.62	0.00	63	
7,4	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.00	0.45	0.02	0.35	0.00	1	
7,5	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.30	0.41	0.02	0.74	0.00	57	
7,6	25.00	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.18	0.41	0.02	0.74	0.00	57	
7,7	24.25	10.00x0.079 EZ Sim-60.0	Yes	0.0	Interior	0.18	0.37	0.00	0.58	0.00	57	

Maximum Secondary Deflections for Shape Building - Shape 1 on Side B

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	0.24	(L/850)	8.25	3	0.42W1>	Pass
1	2	-0.87	(L/373)	30.88	2	1.0SMS	Pass
1	3	-0.33	(L/896)	57.88	2	1.0SMS	Pass
1	4	-0.50	(L/595)	82.38	2	1.0SMS	Pass
1	5	-0.51	(L/593)	107.88	2	1.0SMS	Pass
1	6	-0.38	(L/790)	132.38	2	1.0SMS	Pass
1	7	1.02	(L/279)	158.38	3	0.42W1>	Pass
2	1	0.29	(L/692)	9.75	3	0.42W1>	Pass
3	1	0.16	(L/1234)	12.75	2	1.0SMS	Pass

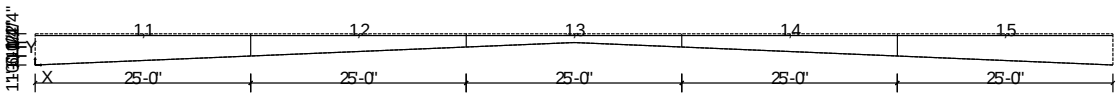
3	2	-0.89	(L/362)	30.88	2	1.0SMS	Pass
3	3	0.30	(L/1002)	57.88	3	0.42W1>	Pass
3	4	-0.47	(L/637)	82.38	2	1.0SMS	Pass
3	5	-0.38	(L/787)	107.38	2	1.0SMS	Pass
3	6	-0.54	(L/551)	132.88	2	1.0SMS	Pass
3	7	0.30	(L/962)	159.88	3	0.42W1>	Pass
4	1	0.09	(L/2140)	13.75	2	1.0SMS	Pass
4	2	-0.72	(L/453)	30.88	2	1.0SMS	Pass
4	3	0.27	(L/1110)	57.88	3	0.42W1>	Pass
4	4	-0.38	(L/796)	82.38	2	1.0SMS	Pass
4	5	0.34	(L/873)	107.38	3	0.42W1>	Pass
4	6	-0.36	(L/825)	132.38	2	1.0SMS	Pass
4	7	0.45	(L/629)	158.88	3	0.42W1>	Pass
5	1	1.20	(L/238)	12.00	3	0.42W1>	Pass
6	1	0.23	(L/877)	7.75	3	0.42W1>	Pass
6	2	-0.86	(L/375)	31.38	2	1.0SMS	Pass
6	3	-0.32	(L/943)	57.88	2	1.0SMS	Pass
6	4	-0.33	(L/900)	82.38	2	1.0SMS	Pass
6	5	-0.49	(L/610)	107.88	2	1.0SMS	Pass
6	6	-0.22	(L/1345)	131.88	2	1.0SMS	Pass
6	7	0.79	(L/363)	158.38	3	0.42W1>	Pass
7	1	0.13	(L/1573)	9.75	3	0.42W1>	Pass
7	2	-0.69	(L/471)	31.50	2	1.0SMS	Pass
7	3	0.51	(L/588)	57.50	3	0.42W1>	Pass
7	4	0.51	(L/588)	82.50	3	0.42W1>	Pass
7	5	0.51	(L/588)	107.50	3	0.42W1>	Pass
7	6	0.51	(L/588)	132.50	3	0.42W1>	Pass
7	7	0.45	(L/637)	157.00	3	0.42W1>	Pass

Purlin Anchorage Forces for Shape Building - Shape 1, Roof B, Panel Type is MR24, Pitch = 0.500:12 AR Clip if req'd - EPC3

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.079	-26.18	2	13	18.00	N	62.55	1.200	0.301
2	0.079	-26.18	2	13	27.00	N	62.55	1.800	0.706
3	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
4	0.060	-26.18	2	13	25.00	N	62.55	1.667	0.600
5	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
6	0.079	-26.18	2	13	25.00	N	62.55	1.667	0.574
7	0.073	-26.18	2	13	24.25	N	62.55	1.617	0.652

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	0.33D	0.02D (k)	0.16W	0	0, 13	1.545	7.714	0.069	0.004	0.062
	BR.1		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.03T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
2(18.00)	Frame	0.70D	0.04D (k)	0.21W	0	0, 13	3.285	15.150	0.069	0.004	0.065
	BR.1		0.04T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.04T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
3(45.00)	Frame	0.84D	0.04D (k)	0.21W	0	0, 13	3.954	14.914	0.069	0.005	0.068
	BR.1		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
4(70.00)	Frame	0.51D	0.03D (k)	0.19W	0	0, 13	2.385	12.509	0.069	0.005	0.067
	BR.1		0.05T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.05T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
5(95.00)	Frame	0.50D	0.03D (k)	0.19W	0	0, 12	2.375	12.657	0.069	0.005	0.067
	BR.1		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
6(120.00)	Frame	0.86D	0.05D (k)	0.21W	0	0, 13	4.028	14.919	0.069	0.005	0.068
	BR.1		0.00T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.01T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
7(145.00)	Frame	0.59D	0.03D (k)	0.20W	0	0, 13	2.766	14.106	0.069	0.005	0.067
	BR.1		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.2		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.3		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
	BR.4		0.08T (in-k)	4.35	1	1, 0			0.069	0.000	0.000
8(169.25)	Frame	0.16D	0.01D (k)	0.15W	0	0, 13	0.731	7.078	0.069	0.002	0.029

Wall: 1 - Parapet 1



Maximum Secondary Designs for Shape Building - Shape 1 on Side 1

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Location	Stress Condition						
						% Axial	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	25.00	8.50x0.088 C Sim-60.0	Yes	0.0	Interior	0.00	0.90	0.00	0.00	0.00	2	
1,2	25.00	8.50x0.073 C Sim-60.0	Yes	0.0	Interior	0.00	0.95	0.00	0.00	0.00	2	
1,3	25.00	8.50x0.068 C Sim-60.0	Yes	0.0	Interior	0.00	0.90	0.00	0.00	0.00	2	
1,4	25.00	8.50x0.073 C Sim-60.0	Yes	0.0	Interior	0.00	0.95	0.00	0.00	0.00	2	
1,5	25.00	8.50x0.088 C Sim-60.0	Yes	0.0	Interior	0.00	0.91	0.00	0.00	0.00	2	

Maximum Secondary Deflections for Shape Building - Shape 1 on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description	Design Status
1	1	-1.55	(L/193)	12.50	2	0.42<W2	Pass
1	2	-1.52	(L/197)	37.50	2	0.42<W2	Pass
1	3	-1.35	(L/222)	62.50	2	0.42<W2	Pass
1	4	-1.52	(L/197)	87.50	2	0.42<W2	Pass
1	5	-1.55	(L/193)	112.50	2	0.42<W2	Pass

Framing - Summary Report

Loads and Codes - Shape: Building - Shape 1

City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: IBC 2018 Structural: 16AISC - ASD Rainfall: I: 3.00 inches per hour
Based on Building Code: 2018 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads
Collateral Gravity: 5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: 2.26 psf
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used
Primaries Wind Exposure: C - Kz: 0.936
Parts Wind Exposure Factor: 0.936
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 0.0 ft
Primary Zone Strip Width: 2a: 19/1/3
Parts / Portions Zone Strip Width:
Walls, a: 9/6/10
Roof(s), 0.6h: 14/3/14
Velocity Pressure: qz: 26.94, (C&C) 26.94 psf

Snow Load
Ground Snow Load: pg: 20.00 psf

Flat Roof Snow: pf: 14.00 psf
Design Snow (Sloped): ps: 14.00 psf
Rain Surcharge: 0.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Heated - Ct: 1.00
Ground / Roof Conversion: 0.70
Obstructed or Not Slippery

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 6.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.0960
Seismic Design Category: B
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 25/2/2

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.3698
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

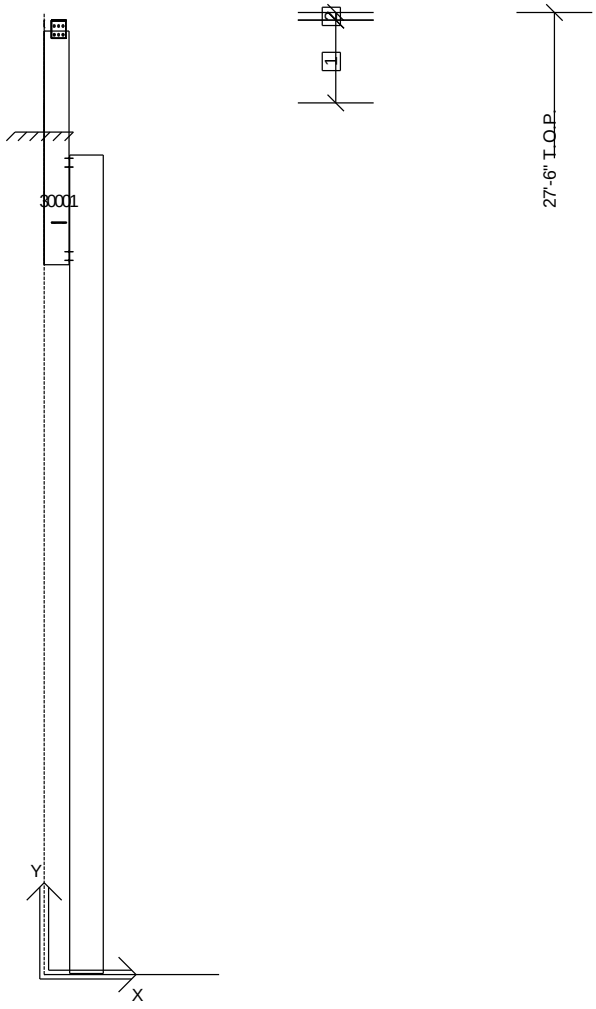
Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2248
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Load Notes
Collateral Load Description - Lights HVAC, mics

Deflection Conditions
Frames are vertically supporting: Metal Roof Purlins and Panels
Frames are laterally supporting: Metal Wall Girts and Panels
Purlins are supporting: Metal Roof Panels
Girts are supporting: Metal Wall Panels

Wall: 1, Frame at: 25/0/0

Frame Cross Section: B



Dimension Key

1 2'-4 3/8"
2 2 5/8"

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
25/0/0	37/6/0		0.0000		-	Automatic Design

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
5	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
6	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
7	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
8	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
9	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
10	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
11	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
12	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
13	System	1.000	0.6 MW	MW - Wall: 1
14	System	1.000	0.6 MW	MW - Wall: 2
15	System	1.000	0.6 MW	MW - Wall: 3
16	System	1.000	0.6 MW	MW - Wall: 4
17	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
28	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
29	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
30	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
31	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
32	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
33	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
35	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
36	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape

Total Frame Weight = 0.0 (p) (Includes all plates)

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
SMS>	0.0	0.0	0.0	0.0
<SMS	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
WPL	0.0	0.0	0.0	0.0
WPR	0.0	0.0	0.0	0.0

MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	0.0	0.0	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
SMS	0.0	0.0	0.0	0.0

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case

Parapet Post Summary

X-Loc	Grid	Moment	Shear	Attachment Length	Parapet Size	Reaction	Column bearing	Stiffener required?	Allowable w/stiff	Stiff Width	Thickness	Length
0/0/0	B-1	42.07	2.55	32.0	2	3.35	13.57	N				
						0.80	13.57	N				

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear

Parameters Used for Axial and Flexural Design

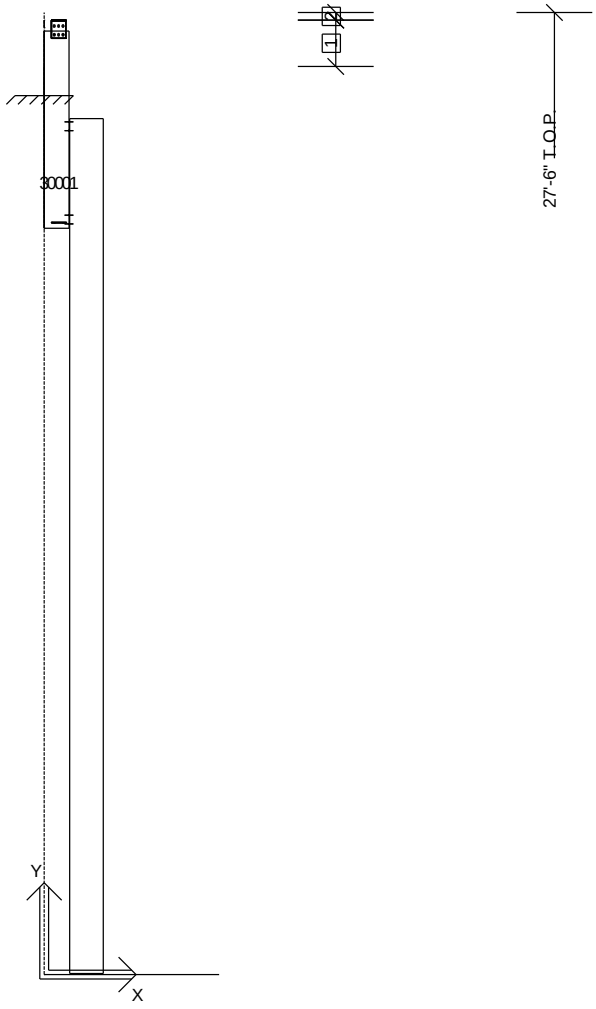
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Wall: 1, Frame at: 50/0/0

Frame Cross Section: C



Dimension Key

1 1'-3 7/8"
2 2 5/8"

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
50/0/0	25/0/0		0.0000		-	Automatic Design

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
5	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
6	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
7	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
8	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
9	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
10	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
11	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
12	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
13	System	1.000	0.6 MW	MW - Wall: 1
14	System	1.000	0.6 MW	MW - Wall: 2
15	System	1.000	0.6 MW	MW - Wall: 3
16	System	1.000	0.6 MW	MW - Wall: 4
17	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
28	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
29	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
30	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
31	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
32	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
33	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
35	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
36	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape

Total Frame Weight = 0.0 (p) (Includes all plates)

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
SMS>	0.0	0.0	0.0	0.0
<SMS	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
WPL	0.0	0.0	0.0	0.0
WPR	0.0	0.0	0.0	0.0

MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	0.0	0.0	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
SMS	0.0	0.0	0.0	0.0

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case

Parapet Post Summary

X-Loc	Grid	Moment	Shear	Attachment Length	Parapet Size	Reaction	Column bearing	Stiffener required?	Allowable w/stiff	Stiff Width	Thickness	Length
0/0/0	C-1	15.72	1.50	32.0	2	1.80	13.57	N				
						0.30	13.57	N				

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear

Parameters Used for Axial and Flexural Design

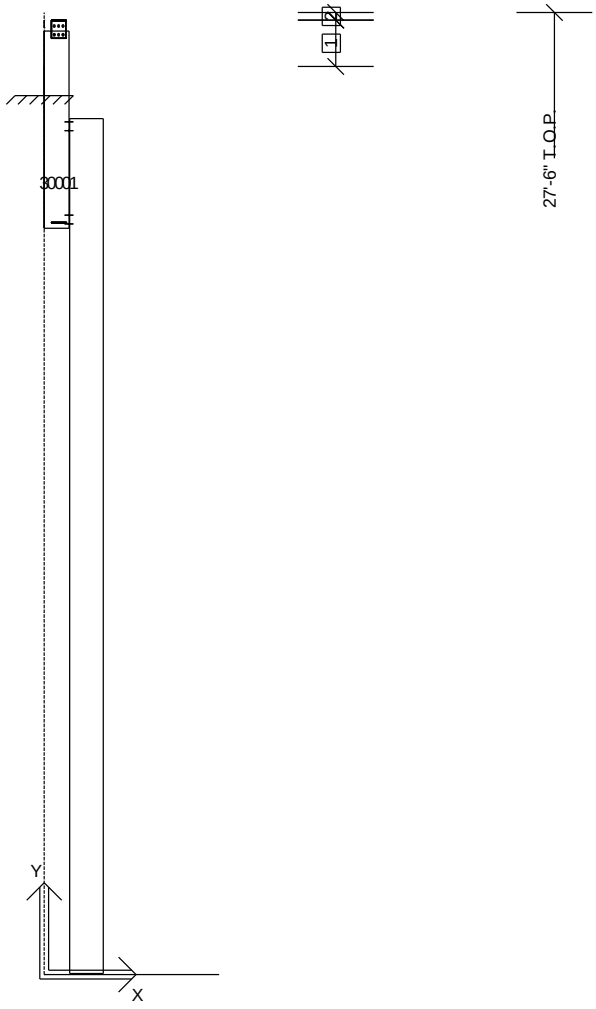
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Wall: 1, Frame at: 75/0/0

Frame Cross Section: D



Dimension Key

1 1'-3 7/8"
2 2 5/8"

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
75/0/0	25/0/0		0.0000		-	Automatic Design

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
5	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
6	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
7	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
8	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
9	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
10	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
11	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
12	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
13	System	1.000	0.6 MW	MW - Wall: 1
14	System	1.000	0.6 MW	MW - Wall: 2
15	System	1.000	0.6 MW	MW - Wall: 3
16	System	1.000	0.6 MW	MW - Wall: 4
17	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
28	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
29	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
30	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
31	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
32	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
33	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
35	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
36	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape

Total Frame Weight = 0.0 (p) (Includes all plates)

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
SMS>	0.0	0.0	0.0	0.0
<SMS	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
WPL	0.0	0.0	0.0	0.0
WPR	0.0	0.0	0.0	0.0

MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	0.0	0.0	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
SMS	0.0	0.0	0.0	0.0

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case

Parapet Post Summary

X-Loc	Grid	Moment	Shear	Attachment Length	Parapet Size	Reaction	Column bearing	Stiffener required?	Allowable w/stiff	Stiff Width	Thickness	Length
0/0/0	D-1	15.72	1.50	32.0	2	1.80	13.57	N				
						0.30	13.57	N				

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear

Parameters Used for Axial and Flexural Design

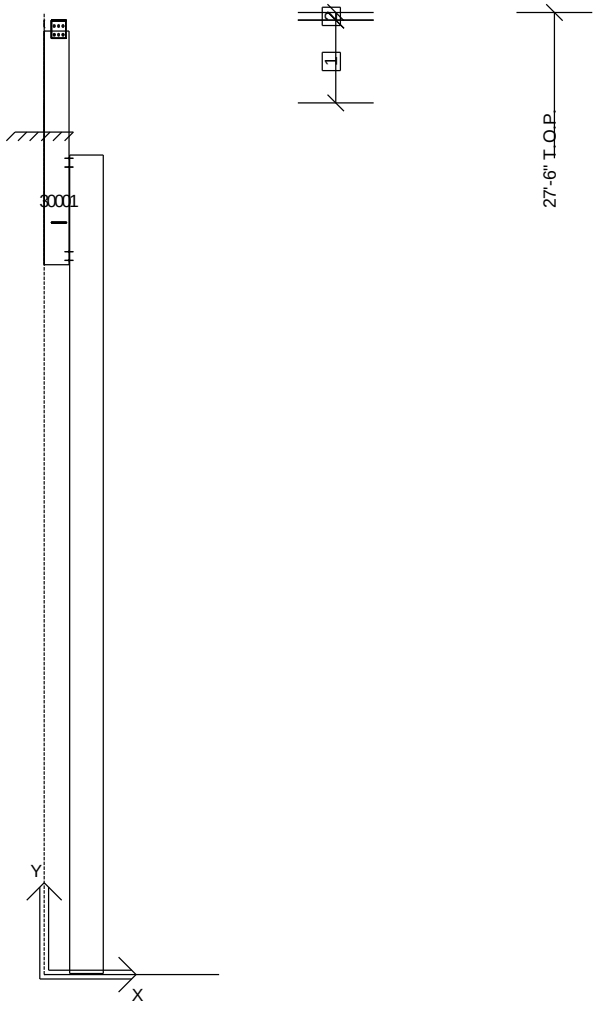
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Wall: 1, Frame at: 100/0/0

Frame Cross Section: E



Dimension Key

1 2'-4 3/8"
2 2 5/8"

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
100/0/0	37/6/0		0.0000		-	Automatic Design

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
4	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
5	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
6	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
7	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
8	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
9	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
10	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
11	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
12	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
13	System	1.000	0.6 MW	MW - Wall: 1
14	System	1.000	0.6 MW	MW - Wall: 2
15	System	1.000	0.6 MW	MW - Wall: 3
16	System	1.000	0.6 MW	MW - Wall: 4
17	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
28	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
29	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
30	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
31	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
32	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
33	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
34	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
35	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
36	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape

Total Frame Weight = 0.0 (p) (Includes all plates)

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	0.0	0.0
CG	0.0	0.0	0.0	0.0
L>	0.0	0.0	0.0	0.0
<L	0.0	0.0	0.0	0.0
SMS>	0.0	0.0	0.0	0.0
<SMS	0.0	0.0	0.0	0.0
S>	0.0	0.0	0.0	0.0
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	0.0	0.0
US1*	0.0	0.0	0.0	0.0
*US1	0.0	0.0	0.0	0.0
W2>	0.0	0.0	0.0	0.0
<W2	0.0	0.0	0.0	0.0
WPL	0.0	0.0	0.0	0.0
WPR	0.0	0.0	0.0	0.0

MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	0.0	0.0	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	0.0	0.0	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	0.0	0.0	0.0	0.0
<W1	0.0	0.0	0.0	0.0
L	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0
E>	0.0	0.0	0.0	0.0
EG+	0.0	0.0	0.0	0.0
<E	0.0	0.0	0.0	0.0
EG-	0.0	0.0	0.0	0.0
SMS	0.0	0.0	0.0	0.0

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case

Parapet Post Summary

X-Loc	Grid	Moment	Shear	Attachment Length	Parapet Size	Reaction	Column bearing	Stiffener required?	Allowable w/stiff	Stiff Width	Thickness	Length
0/0/0	E-1	42.06	2.55	32.0	2	3.35	13.57	N				
						0.80	13.57	N				

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear

Parameters Used for Axial and Flexural Design

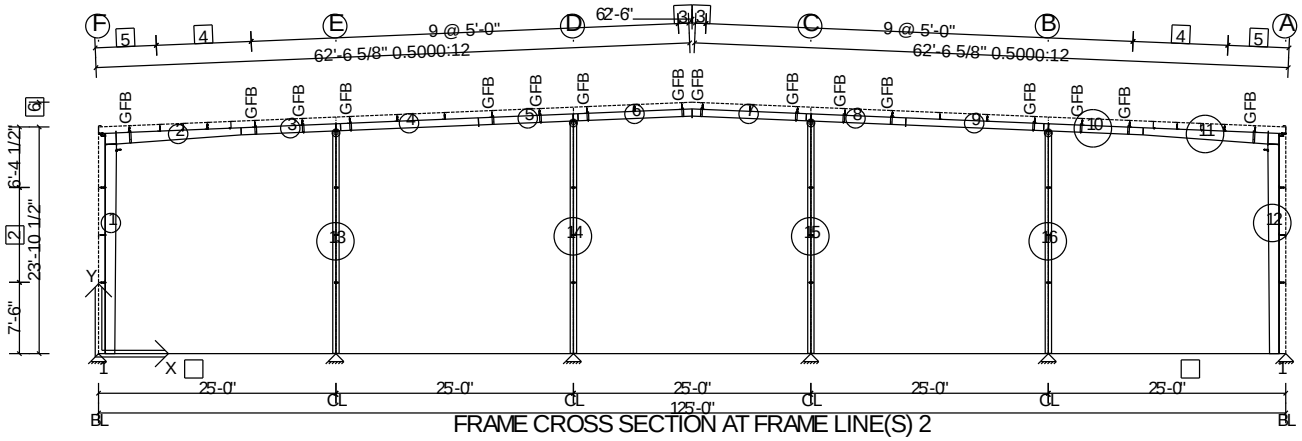
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Wall: 4, Frame at: 1/3/0

Frame Cross Section: 2



Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 4 @ 2'-6"
5 2 @ 3'-2 5/8"
6 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX001) and 12(CX001): 121'-2 13/16"
Vert. Clearance at member 1(CX001): 21'-10 7/16"
Vert. Clearance at member 12(CX001): 21'-10 7/16"
Vert. Clearance at member 13(EPX001): 23'-5 1/2"
Vert. Clearance at member 14(EPX002): 24'-6"
Vert. Clearance at member 15(EPX003): 24'-6"
Vert. Clearance at member 16(EPX004): 23'-5 1/2"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
1/3/0	13/1/8	Rigid Endwall 1	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 1 and 2)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 2 and 3)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 3 and 4)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 4 and 5)
9	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
10	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
11	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
12	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
13	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
14	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
16	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 5)
17	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
18	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 5)
19	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1
20	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
21	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
22	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
23	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
27	System	1.000	0.6 MW	MW - Wall: 1
28	System	1.000	0.6 MW	MW - Wall: 2
29	System	1.000	0.6 MW	MW - Wall: 3
30	System	1.000	0.6 MW	MW - Wall: 4
31	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
32	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
34	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
35	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
36	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
37	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
38	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
39	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
40	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
41	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
42	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
43	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
44	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
45	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
46	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
47	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
48	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
49	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
50	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	8.00	0.2500	0.1345	12.00	14.00	23.20	480.5	55.00	55.00	BP	KN	3P
2	5.00	0.2500	0.1345	14.00	9.00	14.30	190.2	55.00	55.00	KN	SS	3P
3	5.00	0.2500	0.1345	9.00	9.00	10.47	129.9	55.00	55.00	SS	SS	3P
4	5.00	0.2500	0.1345	9.00	9.00	14.53	187.4	55.00	55.00	SS	SP	3P
5	5.00	0.2500	0.1345	9.00	9.00	10.49	137.3	55.00	55.00	SP	SS	3P

6	5.00	0.2500	0.1345	9.00	9.00	12.04	156.4	55.00	55.00	SS	SP	3P
7	5.00	0.2500	0.1345	9.00	9.00	12.04	156.4	55.00	55.00	SS	SP	3P
8	5.00	0.2500	0.1345	9.00	9.00	10.49	137.3	55.00	55.00	SP	SS	3P
9	5.00	0.2500	0.1345	9.00	9.00	14.53	187.4	55.00	55.00	SS	SP	3P
10	5.00	0.2500	0.1345	9.00	9.00	10.47	129.9	55.00	55.00	SS	SS	3P
11	5.00	0.2500	0.1345	14.00	9.00	14.30	190.2	55.00	55.00	KN	SS	3P
12	8.00	0.2500	0.1345	12.00	14.00	23.20	480.5	55.00	55.00	BP	KN	3P
13	8.00	0.2500	0.1345	12.00	12.00	23.46	466.1	55.00	55.00	BP	CP	3P
14	8.00	0.2500	0.1345	12.00	12.00	24.50	485.8	55.00	55.00	BP	CP	3P
15	8.00	0.2500	0.1345	12.00	12.00	24.50	485.8	55.00	55.00	BP	CP	3P
16	8.00	0.2500	0.1345	12.00	12.00	23.46	466.1	55.00	55.00	BP	CP	3P

Total Frame Weight = 4467.2 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
12	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
13	25/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
14	50/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
15	75/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
16	100/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 2

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Interior Column		
X-Loc		0/0/0		25/0/0			50/0/0			75/0/0			100/0/0		
Grid1 - Grid2		2-F		1-E			1-D			1-C			1-B		
Base Plate W x L (in.)		9 X 13		9 X 13			9 X 13			9 X 13			9 X 13		
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.		100'-0"		100'-0"			100'-0"			100'-0"			100'-0"		
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
D	Frm	0.11	1.38	-	-	1.69	-	-	1.50	-	-	1.55	-	-	1.48
CG	Frm	0.11	0.83	-	-	1.64	-	-	1.64	-	-	1.64	-	-	1.64
L>	Frm	0.38	2.95	-	-	5.81	-	-	5.83	-	-	5.83	-	-	5.81
<L	Frm	0.38	2.95	-	-	5.81	-	-	5.83	-	-	5.83	-	-	5.81
ASL^	Frm	-0.20	-0.58	-	-	3.63	-	-	2.79	-	-	2.79	-	-	3.63
^ASL	Frm	0.58	3.52	-	-	2.19	-	-	3.04	-	-	3.04	-	-	2.19
SMS>	Frm	0.43	3.32	-	-	6.55	-	-	6.57	-	-	6.57	-	-	6.55
<SMS	Frm	0.43	3.32	-	-	6.55	-	-	6.57	-	-	6.57	-	-	6.55
S>	Frm	0.30	2.33	-	-	4.59	-	-	4.60	-	-	4.60	-	-	4.59
SD	Frm	0.37	2.66	-	-	3.06	-	-	0.58	-	-	0.58	-	-	3.06
<S	Frm	0.30	2.33	-	-	4.59	-	-	4.60	-	-	4.60	-	-	4.59
US1*	Frm	0.17	0.81	-	-	1.19	-	-	1.81	-	-	7.04	-	-	5.69
*US1	Frm	0.17	2.05	-	-	5.69	-	-	7.04	-	-	1.81	-	-	1.19
W2>	Frm	-5.40	-5.86	-	-0.03	-5.21	-	-	-8.14	-	-	-2.65	-	-0.03	-5.75
<W2	Frm	2.75	0.80	-	0.05	-5.75	-	-	-2.65	-	-	-8.14	-	0.05	-5.21
WPL	Frm	1.61	-4.04	-	-	-5.26	-	-	-6.58	-	-	-10.28	-	-	-11.19
WPR	Frm	2.10	-5.41	-	-	-11.19	-	-	-10.28	-	-	-6.58	-	-	-5.26
MW - Wall: 1	Frm	-	-	-	0.02	-	-	-	-	-	-	-	-	0.02	-
MW - Wall: 2	Frm	1.56	1.89	-	-	-2.22	-	-	0.52	-	-	-0.63	-	-	1.94
MW - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-3.74	-1.50	-	-	1.94	-	-	-0.63	-	-	0.52	-	-	-2.22
CU	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W1>	Frm	-4.30	-7.69	-	7.19	-8.23	-	7.54	-11.26	-	7.54	-5.77	-	7.19	-8.76
<W1	Frm	3.86	-1.04	-	-6.45	-8.76	-	-6.79	-5.77	-	-6.79	-11.26	-	-6.45	-8.23
L	Frm	0.38	2.95	-	-	5.81	-	-	5.83	-	-	5.83	-	-	5.81
S	Frm	0.30	2.33	-	-	4.59	-	-	4.60	-	-	4.60	-	-	4.59
E>	Frm	-0.40	-0.46	-	0.05	0.54	-	0.05	-0.15	-	0.18	0.15	-	0.19	-0.54
EG+	Frm	-	0.05	-	-	0.09	-	-	0.08	-	-	0.08	-	-	0.08

<E	Frm	0.40	0.46	-	-0.05	-0.54	-	-0.05	0.15	-	-0.18	-0.15	-	-0.19	0.54
EG-	Frm	-	-0.05	-	-	-0.09	-	-	-0.08	-	-	-0.08	-	-	-0.08
SMS	Frm	0.43	3.32	-	-	6.55	-	-	6.57	-	-	6.57	-	-	6.55

Type		Exterior Column					
X-Loc		125/0/0					
Grid1 - Grid2		2-A					
Base Plate W x L (in.)		9 X 13					
Base Plate Thickness (in.)		0.375					
Anchor Rod Qty/Diam. (in.)		4 - 0.750					
Column Base Elev.		100'-0"					
Load Type	Desc.	Hx	Vy				
D	Frm	-0.11	1.02	-	-	-	-
CG	Frm	-0.11	0.83	-	-	-	-
L>	Frm	-0.38	2.95	-	-	-	-
<L	Frm	-0.38	2.95	-	-	-	-
ASL^	Frm	0.20	-0.58	-	-	-	-
^ASL	Frm	-0.58	3.52	-	-	-	-
SMS>	Frm	-0.43	3.32	-	-	-	-
<SMS	Frm	-0.43	3.32	-	-	-	-
S>	Frm	-0.30	2.33	-	-	-	-
SD	Frm	-0.37	2.66	-	-	-	-
<S	Frm	-0.30	2.33	-	-	-	-
US1*	Frm	-0.17	2.05	-	-	-	-
*US1	Frm	-0.17	0.81	-	-	-	-
W2>	Frm	-2.75	0.80	-	-	-	-
<W2	Frm	5.40	-5.86	-	-	-	-
WPL	Frm	-2.10	-5.41	-	-	-	-
WPR	Frm	-1.61	-4.04	-	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-
MW - Wall: 2	Frm	3.74	-1.50	-	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-
MW - Wall: 4	Frm	-1.56	1.89	-	-	-	-
CU	Frm	-	-	-	-	-	-
W1>	Frm	-3.86	-1.04	-	-	-	-
<W1	Frm	4.30	-7.69	-	-	-	-
L	Frm	-0.38	2.95	-	-	-	-
S	Frm	-0.30	2.33	-	-	-	-
E>	Frm	-0.40	0.46	-	-	-	-
EG+	Frm	-	0.04	-	-	-	-
<E	Frm	0.40	-0.46	-	-	-	-
EG-	Frm	-	-0.04	-	-	-	-
SMS	Frm	-0.43	3.32	-	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	8.6	8.6
CG	0.0	0.0	8.2	8.2
L>	0.0	0.0	29.2	29.2
<L	0.0	0.0	29.2	29.2
ASL^	0.0	0.0	11.7	11.7
^ASL	0.0	0.0	17.5	17.5
SMS>	0.0	0.0	32.9	32.9
<SMS	0.0	0.0	32.9	32.9
S>	0.0	0.0	23.0	23.0
SD	0.0	0.0	12.6	12.6
<S	0.0	0.0	23.0	23.0
US1*	0.0	0.0	18.6	18.6
*US1	0.0	0.0	18.6	18.6
W2>	8.1	8.2	26.8	26.8
<W2	8.1	8.2	26.8	26.8
WPL	0.5	0.5	42.8	42.8

WPR	0.5	0.5	42.8	42.8
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	5.3	5.3	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	5.3	5.3	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	8.1	8.2	42.8	42.8
<W1	8.1	8.2	42.8	42.8
L	0.0	0.0	29.2	29.2
S	0.0	0.0	23.0	23.0
E>	0.8	0.8	0.0	0.0
EG+	0.0	0.0	0.4	0.4
<E	0.8	0.8	0.0	0.0
EG-	0.0	0.0	0.4	0.4
SMS	0.0	0.0	32.9	32.9

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	2-F	3.03	23	2.38	32	-	-	-	-	3.79	31	7.19	11	-	-	-	-
25/0/0	1-E	-	-	-	-	3.87	32	4.31	31	5.70	34	10.97	11	-	-	-	-
50/0/0	1-D	-	-	-	-	4.07	32	4.52	31	5.86	31	10.18	14	-	-	-	-
75/0/0	1-C	-	-	-	-	4.07	32	4.52	31	5.83	32	10.23	13	-	-	-	-
100/0/0	1-B	-	-	-	-	3.87	32	4.31	31	5.83	33	10.77	11	-	-	-	-
125/0/0	2-A	2.38	31	3.03	24	-	-	-	-	4.00	32	6.83	11	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	2-F	1	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
25/0/0	1-E	13	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
50/0/0	1-D	14	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
75/0/0	1-C	15	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
100/0/0	1-B	16	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
125/0/0	2-A	12	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	3.09	-1.69	24	2.37	-3.73	32	0.95	7.27	12	-	-	-	33
25/0/0	4.22	-3.89	31	0.03	-5.75	33	0.05	11.22	11	-	-	-	0
50/0/0	4.47	-2.51	31	4.40	-5.65	31	0.02	10.21	13	-	-	-	0
75/0/0	4.47	-2.51	31	4.40	-5.65	31	0.02	10.21	13	-	-	-	0
100/0/0	4.22	-3.89	31	0.03	-5.75	33	0.05	11.22	11	-	-	-	0
125/0/0	3.09	-1.69	24	2.37	-3.73	32	0.95	7.27	12	-	-	-	33

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.168	24	0.097	32	-	0	-	0	0.056	12	0.113	32	0.044	12	0.076	12	0.091	24
25/0/0	0.229	31	0.150	33	-	0	-	0	0.087	11	0.175	33	0.068	11	0.118	11	0.124	31
50/0/0	0.242	31	0.147	31	-	0	-	0	0.079	13	0.172	31	0.062	13	0.107	13	0.132	31
75/0/0	0.242	31	0.147	31	-	0	-	0	0.079	13	0.172	31	0.062	13	0.107	13	0.132	31
100/0/0	0.229	31	0.150	33	-	0	-	0	0.087	11	0.175	33	0.068	11	0.118	11	0.124	31
125/0/0	0.168	24	0.097	32	-	0	-	0	0.056	12	0.113	32	0.044	12	0.076	12	0.091	24

Web Stiffener Summary

Mem.	Stiff.	Desc.	Loc.	Web Depth	h/t	a/h	a	Thick.	Width	Side	Welding

No.	No.		(ft)	(in.)			(in.)	(in.)	(in.)		Description
1	1	S9	22.00	13.524	100.55	N/A	N/A	0.2500	3.000	Both	SP-BS-0.1250,W-OS-0.1250,F-OS-0.1250
3	1	S2	9.97	8.500	63.20	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
5	1	S2	9.99	8.500	63.20	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
8	1	S2	9.99	8.500	63.20	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
10	1	S2	9.97	8.500	63.20	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
12	1	S9	22.00	13.524	100.55	N/A	N/A	0.2500	3.000	Both	SP-BS-0.1250,W-OS-0.1250,F-OS-0.1250

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem.	Jt.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.375	8.00	19.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
2	1	KN(Face)	0.375	6.00	19.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
4	2	SP	0.375	6.00	12.00	0.750	A325N/ST	3.00	11	Flush	5.50	31	Extended	3.25
5	1	SP	0.375	6.00	12.00	0.750	A325N/ST	3.00	11	Flush	5.50	31	Extended	3.25
6	2	SP	0.375	6.00	12.01	0.750	A325N/ST	3.00	11	Flush	5.63	31	Extended	3.25
7	2	SP	0.375	6.00	12.01	0.750	A325N/ST	3.00	11	Flush	5.63	31	Extended	3.25
8	1	SP	0.375	6.00	12.00	0.750	A325N/ST	3.00	11	Flush	5.50	31	Extended	3.25
9	2	SP	0.375	6.00	12.00	0.750	A325N/ST	3.00	11	Flush	5.50	31	Extended	3.25
11	1	KN(Face)	0.375	6.00	19.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
12	2	KN(Face)	0.375	8.00	19.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
13	2	CP	0.375	9.00	12.50	0.500	A325/-	3.00	11	Flush (0)	3.00	11	Flush	3.00
14	2	CP	0.375	9.00	12.50	0.500	A325/-	3.00	11	Flush (0)	3.00	11	Flush	3.00
15	2	CP	0.375	9.00	12.50	0.500	A325/-	3.00	11	Flush (0)	3.00	11	Flush	3.00
16	2	CP	0.375	9.00	12.50	0.500	A325/-	3.00	11	Flush (0)	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	37	-1.3	4.0	443.0	AISC DG-16/Thin plate	0.420	0.041	0.926	0.324	0.458	0.030	0.959	0.516
2	1	37	-1.3	4.0	443.0	AISC DG-16/Thin plate	0.420	0.041	0.926	0.324	0.458	0.030	0.734	0.516
4	2	31	0.7	0.8	82.1	AISC DG-16/Thin plate	0.368	0.017	0.587	0.000	0.000	0.013	0.959	0.516
5	1	31	0.7	0.8	82.1	AISC DG-16/Thin plate	0.368	0.017	0.587	0.000	0.000	0.013	0.959	0.516
6	2	32	1.2	0.0	51.2	AISC DG-16/Thin plate	0.242	0.000	0.386	0.000	0.000	0.000	0.959	0.516
7	2	32	1.2	0.0	51.2	AISC DG-16/Thin plate	0.242	0.000	0.386	0.000	0.000	0.000	0.959	0.516
8	1	31	0.7	0.8	82.1	AISC DG-16/Thin plate	0.368	0.017	0.587	0.000	0.000	0.013	0.959	0.516
9	2	31	0.7	0.8	82.1	AISC DG-16/Thin plate	0.368	0.017	0.587	0.000	0.000	0.013	0.959	0.516
11	1	37	-1.3	4.0	443.0	AISC DG-16/Thin plate	0.420	0.041	0.926	0.324	0.458	0.030	0.734	0.516
12	2	37	-1.3	4.0	443.0	AISC DG-16/Thin plate	0.420	0.041	0.926	0.324	0.458	0.030	0.959	0.516

Inside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	32	0.5	3.5	322.0	AISC DG-16/Thin plate	0.363	0.048	0.765	0.324	0.434	0.042	0.959	0.516
2	1	32	0.5	3.5	322.0	AISC DG-16/Thin plate	0.363	0.048	0.765	0.324	0.434	0.042	0.959	0.516
4	2	3	0.0	0.7	158.4	AISC DG-16/Thin plate	0.278	0.010	0.610	0.270	0.399	0.009	0.959	0.516
5	1	3	0.0	0.7	158.4	AISC DG-16/Thin plate	0.278	0.010	0.610	0.270	0.399	0.009	0.959	0.516
6	2	4	-0.8	0.0	169.8	AISC DG-16/Thin plate	0.292	0.001	0.640	0.270	0.399	0.000	0.959	0.516
7	2	4	-0.8	0.0	169.8	AISC DG-16/Thin plate	0.292	0.001	0.640	0.270	0.399	0.000	0.959	0.516
8	1	3	0.0	0.7	158.4	AISC DG-16/Thin plate	0.278	0.010	0.610	0.270	0.399	0.009	0.959	0.516
9	2	3	0.0	0.7	158.4	AISC DG-16/Thin plate	0.278	0.010	0.610	0.270	0.399	0.009	0.959	0.516
11	1	32	0.5	3.5	322.0	AISC DG-16/Thin plate	0.363	0.048	0.765	0.324	0.434	0.042	0.959	0.516
12	2	32	0.5	3.5	322.0	AISC DG-16/Thin plate	0.363	0.048	0.765	0.324	0.434	0.042	0.959	0.516

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem.	Jt.	Ld	Axial	Shear	Ld	Axial	Shear	Bolt	Bolt	Bolt	Plate	Flange	Flange	Flange	Web
No.	No.	Cs	(k)	(k)	Cs	(k)	(k)	Tension	Shear	V + T	Bending	Yielding	Bearing	Weld	Weld
13	2	0	4.5	5.4	0	5.8	0.2	0.181	0.253	0.000	0.126	0.044	0.102	0.114	0.167
14	2	0	6.0	5.2	0	6.0	5.2	0.188	0.243	0.000	0.131	0.045	0.098	0.104	0.161
15	2	0	6.0	5.2	0	6.0	5.2	0.188	0.243	0.000	0.131	0.045	0.098	0.103	0.161
16	2	0	4.5	5.4	0	5.8	0.2	0.181	0.253	0.000	0.126	0.044	0.102	0.113	0.167

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.1250	Both	-	CJP	99.0000	CJP	-	Fillet	0.1250	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	1	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	1	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
11	1	KN(Face)	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
12	2	KN(Face)	Fillet	0.1250	Both	-	CJP	99.0000	CJP	-	Fillet	0.1250	Both	-	-	-	-	-
13	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
14	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
15	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
16	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/4/15	59/4/0	GFB2050	0.604	0	
3	1/5/7	46/1/6	GFB2037	0.188	11	
3	6/5/7	41/1/6	GFB2033	0.238	3	
4	0/11/12	36/1/6	GFB2033	0.461	14	
5	1/5/6	21/1/6	GFB2037	0.151	3	
5	6/5/6	16/1/6	GFB2033	0.221	4	
6	0/11/8	11/1/6	GFB2033	0.417	6	
6	10/11/8	1/1/6	GFB2037	0.118	4	
7	10/11/8	1/1/6	GFB2037	0.118	7	
7	0/11/8	11/1/6	GFB2033	0.417	4	
8	6/5/6	16/1/6	GFB2033	0.221	3	
8	1/5/6	21/1/6	GFB2037	0.151	0	
9	0/11/12	36/1/6	GFB2033	0.461	32	
10	6/5/7	41/1/6	GFB2033	0.238	4	
10	1/5/7	46/1/6	GFB2037	0.188	0	
11	1/4/15	59/4/0	GFB2050	0.604	31	

Top OF Post Summary

X-Loc	Grid	Top Reaction	Conn. Force	Condition	Flg Mn Moment	Rb Allow Shear	Comp	FB Force R1	FB Angle R2	Min Purlin	FB Typ	Purlin Bearing	Bolt Shear	FB/WSF Bearing
25/0/0	1-E	5.38	3.55	Std	85.94	4.22	N	2.88	27.89	0.098	GFB	4.12	4.71	3.07
							N	1.14	27.89	0.073	GFB	3.07	4.71	3.07
50/0/0	1-D	5.05	3.24	Std	85.94	4.26	N	2.64	27.89	0.098	GFB	4.12	4.71	3.07
							N	1.03	27.89	0.073	GFB	3.07	4.71	3.07
75/0/0	1-C	5.05	3.24	Std	85.94	4.26	N	2.64	27.89	0.098	GFB	4.12	4.71	3.07
							N	1.03	27.89	0.073	GFB	3.07	4.71	3.07
100/0/0	1-B	5.38	3.55	Std	85.94	4.22	N	2.88	27.89	0.098	GFB	4.12	4.71	3.07
							N	1.14	27.89	0.073	GFB	3.07	4.71	3.07

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	22.08	14.00	38		-5.2		-451.7	0.0	42.4		617.8	132.0	0.79	
1	0.00	12.00		23		3.0				21.8				0.14
2	1.98	13.46	24		-0.7		-297.5	0.0	28.7		422.9	95.9	0.72	
2	0.56	14.00		12		5.9				21.7				0.27
3	9.99	9.00	11		-0.5		-276.3	0.0	72.8		420.2	97.1	0.66	
3	9.99	9.00		11		-5.8				22.1				0.26
4	0.00	9.00	11		-1.0		-276.3	0.0	68.5		420.2	97.1	0.66	
4	0.00	9.00		11		4.9				22.1				0.22
5	10.00	9.00	6		0.0		-251.5	0.0	120.2		420.2	97.1	0.60	
5	10.00	9.00		14		-5.0				22.1				0.23
6	0.00	9.00	6		-0.3		-251.5	0.0	88.1		420.2	97.1	0.60	

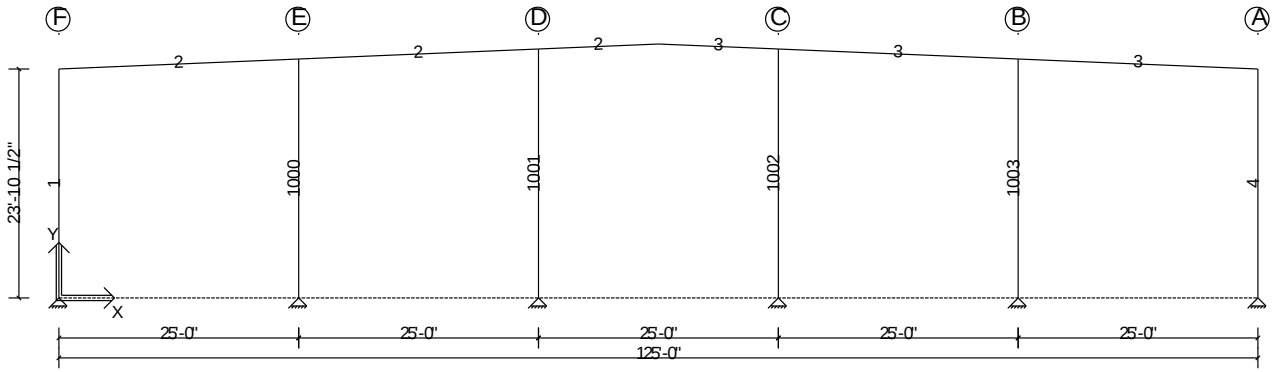
6	0.00	9.00		6		4.6				22.1				0.21
7	0.00	9.00	7		-0.3		-254.9	0.0	88.1		420.2	97.1	0.61	
7	0.00	9.00		7		-4.7				22.1				0.21
8	10.00	9.00	7		0.0		-255.0	0.0	120.2		420.2	97.1	0.61	
8	10.00	9.00		13		5.0				22.1				0.23
9	1.47	9.00	13		-0.5		-146.5	0.0	24.2		232.0	97.1	0.64	
9	0.00	9.00		12		-4.9				22.1				0.22
10	9.99	9.00	12		-0.6		-262.2	0.0	72.8		420.2	97.1	0.63	
10	9.99	9.00		12		5.5				22.1				0.25
11	1.98	13.46	23		-0.7		-306.3	0.0	28.7		396.6	95.9	0.78	
11	0.56	14.00		11		-5.6				21.7				0.26
12	22.08	14.00	37		-4.9		-459.2	0.0	42.4		619.0	132.0	0.80	
12	0.00	12.00		24		-3.0				21.8				0.14
13	11.73	12.00	31		4.1		-306.7	0.0	183.0		378.2	142.6	0.82	
13	23.46	12.00		32		-5.3				21.8				0.24
14	12.25	12.00	31		5.7		-337.3	0.0	183.0		357.4	142.6	0.96	
14	24.50	12.00		31		4.9				21.8				0.23
15	12.25	12.00	31		2.5		-337.2	0.0	183.0		345.9	142.6	0.98	
15	24.50	12.00		31		4.9				21.8				0.23
16	11.73	12.00	31		3.9		-306.7	0.0	183.0		377.3	142.6	0.82	
16	23.46	12.00		32		-5.3				21.8				0.24

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	22.08	264.92	264.9	264.9	5.82	2.00	216.66	21.34	30.95	5.33	33.63	8.06	0.09	1008.46	1.54	1.00	1.06	0.65	
2	1.98	278.16	158.7	158.7	4.24	1.25	133.49	5.21	19.83	2.08	22.16	3.18	0.06	227.36	1.60	1.00	1.09	0.92	
3	9.99	278.16	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.24	1.00	1.10	0.92	
4	0.00	300.26	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.24	1.00	1.10	0.92	
5	10.00	300.26	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.20	1.00	1.10	1.00	
6	0.00	150.13	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.20	1.00	1.10	0.90	
7	0.00	150.13	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.20	1.00	1.10	0.90	
8	10.00	300.26	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.20	1.00	1.10	1.00	
9	1.47	300.26	180.0	180.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.45	1.00	1.10	1.00	
10	9.99	278.16	60.0	60.0	3.64	1.25	54.75	5.21	12.17	2.08	13.37	3.16	0.06	99.72	1.24	1.00	1.10	0.92	
11	1.98	278.16	158.7	158.7	4.24	1.25	133.49	5.21	19.83	2.08	22.16	3.18	0.06	227.36	1.50	1.00	1.09	0.92	
12	22.08	264.92	264.9	264.9	5.82	2.00	216.66	21.34	30.95	5.33	33.63	8.06	0.09	1008.46	1.54	1.00	1.06	0.65	
13	11.73	285.99	281.5	281.5	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.18	1.00	1.08	1.00	
14	12.25	298.49	294.0	294.0	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.20	1.00	1.08	1.00	
15	12.25	298.49	294.0	294.0	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.16	1.00	1.08	1.00	
16	11.73	285.99	281.5	281.5	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.18	1.00	1.08	1.00	

User Defined Frame Point Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
2	k	D	Parapet Post (Building - Shape 1)->Resolved From Plane	-0.53	55/0/0	NA	NA	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 2

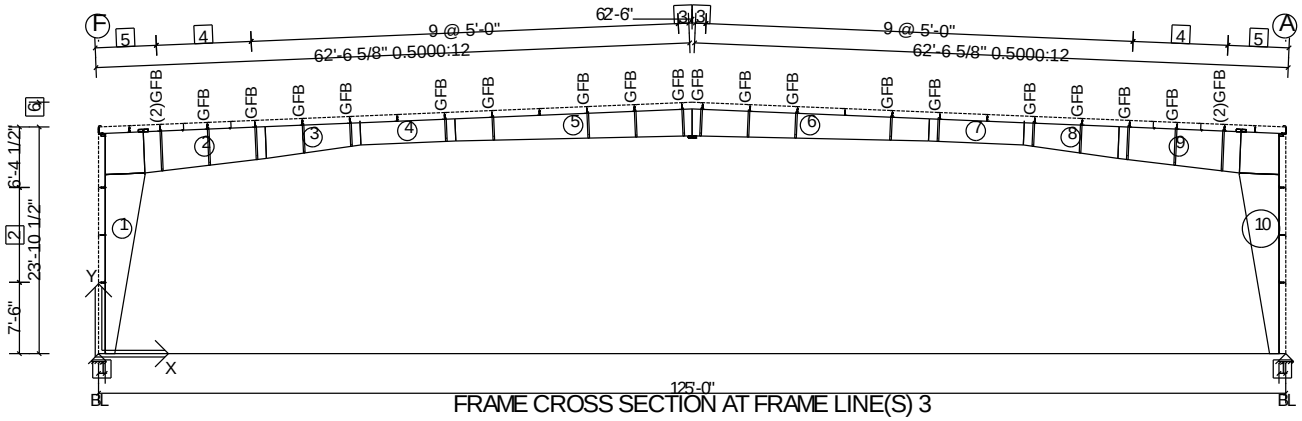
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/95)	-2.829	12	2	8	<W2
Max. Vertical Deflection for Span 1	(L/655)	0.434	3	1	6	<W1
Max. Vertical Deflection for Span 2	(L/952)	0.315	5	1	5	W1>
Max. Vertical Deflection for Span 3	(L/1028)	-0.292	7	2	4	SMS
Max. Vertical Deflection for Span 4	(L/952)	0.315	9	2	6	<W1
Max. Vertical Deflection for Span 5	(L/655)	0.434	11	2	5	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 0.653 (k/in)
Fundamental Period (calculated) (T): 1.718 (sec.)

Wall: 4, Frame at: 25/0/0

Frame Cross Section: 3



FRAME CROSS SECTION AT FRAME LINE(S) 3

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 4 @ 2'-6"
5 2 @ 3'-2 5/8"
6 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX002) and 10(CX002): 115'-2 3/4"
Vert. Clearance at member 1(CX002): 18'-9 1/4"
Vert. Clearance at member 10(CX002): 18'-9 1/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
25/0/0	24/4/8	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.2500	12.00	50.00	23.20	1775.4	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	52.00	40.00	16.83	997.2	55.00	55.00	KN	SS	3P
3	6.00	0.5000	0.1875	40.00	28.00	10.00	440.0	55.00	55.00	SS	SP	3P
4	6.00	0.3750	0.1644	28.00	28.00	10.00	330.7	55.00	55.00	SP	SS	3P
5	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
6	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
7	6.00	0.3750	0.1644	28.00	28.00	10.00	330.7	55.00	55.00	SP	SS	3P
8	6.00	0.5000	0.1875	40.00	28.00	10.00	440.0	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	52.00	40.00	16.83	997.2	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.2500	12.00	50.00	23.20	1775.4	55.00	55.00	BP	KN	3P

Total Frame Weight = 9366.2 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 3

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		125/0/0				
Grid1 - Grid2		3-F		3-A				
Base Plate W x L (in.)		13 X 13		13 X 13				
Base Plate Thickness (in.)		0.750		0.750				
Anchor Rod Qty/Diam. (in.)		4 - 1.250		4 - 1.250				
Column Base Elev.		100'-0"		100'-0"				
Load Type	Desc.	Hx	Vy	Hx	Vy			

D	Frm	6.08	7.86	-6.08	7.86	-	-	-
CG	Frm	7.32	7.62	-7.32	7.62	-	-	-
SMS>	Frm	29.29	30.47	-29.29	30.47	-	-	-
<SMS	Frm	29.29	30.47	-29.29	30.47	-	-	-
S>	Frm	20.50	21.33	-20.50	21.33	-	-	-
SD	Frm	0.33	0.64	-0.33	0.64	-	-	-
<S	Frm	20.50	21.33	-20.50	21.33	-	-	-
US1*	Frm	17.83	12.52	-17.83	21.91	-	-	-
*US1	Frm	17.83	21.91	-17.83	12.52	-	-	-
W2>	Frm	-24.45	-22.47	12.78	-12.37	-	-	-
<W2	Frm	-12.78	-12.37	24.45	-22.47	-	-	-
WPL	Frm	-26.47	-28.35	25.82	-36.05	-	-	-
WPR	Frm	-25.82	-36.05	26.47	-28.35	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.63	0.99	7.18	-0.99	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-7.18	-0.99	-2.63	0.99	-	-	-
CU	Frm	-	-	-	-	-	-	-
W1>	Frm	-35.95	-37.25	24.27	-27.15	-	-	-
<W1	Frm	-24.27	-27.15	35.95	-37.25	-	-	-
S	Frm	20.50	21.33	-20.50	21.33	-	-	-
E>	Frm	-0.72	-0.27	-0.72	0.27	-	-	-
EG+	Frm	0.37	0.38	-0.37	0.38	-	-	-
<E	Frm	0.72	0.27	0.72	-0.27	-	-	-
EG-	Frm	-0.37	-0.38	0.37	-0.38	-	-	-
L	Frm	17.57	18.28	-17.57	18.28	-	-	-
SMS	Frm	29.29	30.47	-29.29	30.47	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	15.7	15.7
CG	0.0	0.0	15.2	15.2
SMS>	0.0	0.0	60.9	60.9
<SMS	0.0	0.0	60.9	60.9
S>	0.0	0.0	42.7	42.7
SD	0.0	0.0	1.3	1.3
<S	0.0	0.0	42.7	42.7
US1*	0.0	0.0	34.4	34.4
*US1	0.0	0.0	34.4	34.4
W2>	11.7	11.7	34.8	34.8
<W2	11.7	11.7	34.8	34.8
WPL	0.7	0.7	64.4	64.4
WPR	0.7	0.7	64.4	64.4
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	9.8	9.8	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	9.8	9.8	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	11.7	11.7	64.4	64.4
<W1	11.7	11.7	64.4	64.4
S	0.0	0.0	42.7	42.7
E>	1.4	1.4	0.0	0.0
EG+	0.0	0.0	0.8	0.8
<E	1.4	1.4	0.0	0.0
EG-	0.0	0.0	0.8	0.8
L	0.0	0.0	36.6	36.6
SMS	0.0	0.0	60.9	60.9

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	3-F	17.92	15	42.69	1	-	-	-	-	17.63	15	45.95	1	-	-	-	-

125/0/0	3-A	42.69	1	17.92	16	-	-	-	-	17.63	16	45.95	1	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	3-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875
125/0/0	3-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	43.88	46.00	2	17.80	-17.64	16	43.88	46.00	2	-	-	-	28
125/0/0	43.88	46.00	2	17.80	-17.64	16	43.88	46.00	2	-	-	-	28

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.856	2	0.165	16	0.173	16	-	0	0.246	2	0.073	16	0.082	2	0.363	2	0.680	2
125/0/0	0.856	2	0.165	16	0.173	16	-	0	0.246	2	0.073	16	0.082	2	0.363	2	0.680	2

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.80	49.086	196.34	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
10	1	S9	18.80	49.086	196.34	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.625	12.00	58.25	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	31	Extended	4.25/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
2	1	KN(Face)	0.625	6.00	58.25	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	31	Extended	4.25/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
3	2	SP	0.500	6.00	31.05	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
4	1	SP	0.500	6.00	31.00	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
5	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
6	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
7	1	SP	0.500	6.00	31.00	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
8	2	SP	0.500	6.00	31.05	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
9	1	KN(Face)	0.625	6.00	58.25	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	31	Extended	4.25/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
10	2	KN(Face)	0.625	12.00	58.25	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	31	Extended	4.25/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	1	-46.4	38.2	9322.1	AISC DG-16/Thin plate	0.852	0.175	0.984	0.000	0.000	0.092	0.918	0.799
2	1	1	-46.4	38.2	9322.1	AISC DG-16/Thin plate	0.852	0.175	0.984	0.000	0.000	0.092	0.999	0.799
3	2	6	-32.2	16.8	1941.1	AISC DG-16/Thin plate	0.806	0.229	0.850	0.485	0.718	0.149	0.959	0.719
4	1	6	-32.2	16.8	1941.1	AISC DG-16/Thin plate	0.806	0.229	0.850	0.485	0.718	0.149	0.787	0.719
5	2	17	18.6	2.9	1161.0	AISC DG-16/Thin plate	0.717	0.040	0.982	0.000	0.000	0.020	0.959	0.719
6	2	17	18.6	2.9	1161.0	AISC DG-16/Thin plate	0.717	0.040	0.982	0.000	0.000	0.020	0.959	0.719
7	1	6	-32.2	16.8	1941.1	AISC DG-16/Thin plate	0.808	0.229	0.844	0.485	0.718	0.149	0.788	0.719
8	2	6	-32.2	16.8	1941.1	AISC DG-16/Thin plate	0.808	0.229	0.844	0.485	0.718	0.149	0.959	0.719
9	1	1	-46.4	38.2	9322.1	AISC DG-16/Thin plate	0.852	0.175	0.984	0.000	0.000	0.092	0.999	0.799

10	2	1	-46.4	38.2	9322.1	AISC DG-16/Thin plate	0.852	0.175	0.984	0.000	0.000	0.092	0.918	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	16	16.7	15.6	3503.0	AISC DG-16/Thin plate	0.627	0.119	0.844	0.485	0.814	0.083	0.959	0.799
2	1	16	16.7	15.6	3503.0	AISC DG-16/Thin plate	0.627	0.119	0.844	0.485	0.814	0.083	0.959	0.799
3	2	18	19.1	6.7	780.0	AISC DG-16/Thin plate	0.625	0.091	0.855	0.000	0.000	0.046	0.959	0.719
4	1	18	19.1	6.7	780.0	AISC DG-16/Thin plate	0.625	0.091	0.855	0.000	0.000	0.046	0.959	0.719
5	2	1	-43.8	0.7	3823.2	AISC DG-16/Thin plate	0.857	0.006	0.882	0.000	0.000	0.003	0.897	0.719
6	2	1	-43.8	0.7	3823.2	AISC DG-16/Thin plate	0.857	0.006	0.882	0.000	0.000	0.003	0.897	0.719
7	1	18	19.1	6.7	780.0	AISC DG-16/Thin plate	0.624	0.091	0.846	0.000	0.000	0.046	0.959	0.719
8	2	18	19.1	6.7	780.0	AISC DG-16/Thin plate	0.624	0.091	0.846	0.000	0.000	0.046	0.959	0.719
9	1	16	16.7	15.6	3503.0	AISC DG-16/Thin plate	0.627	0.119	0.844	0.485	0.814	0.083	0.959	0.799
10	2	16	16.7	15.6	3503.0	AISC DG-16/Thin plate	0.627	0.119	0.844	0.485	0.814	0.083	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/9/2	56/1/6	(2)GFB6001	1.720	0	
2	6/9/2	51/1/6	GFB5077	2.872	0	B
2	11/9/2	46/1/6	GFB4071	2.730	0	
3	3/11/0	41/1/6	GFB4050	2.280	2	
3	8/11/0	36/1/6	GFB4007	1.868	5	
4	8/11/0	26/1/6	GFB3021	0.752	6	
5	3/11/0	21/1/6	GFB3111	0.841	6	
5	13/11/0	11/1/6	GFB4007	0.991	1	
5	18/11/0	6/1/6	GFB4027	0.957	1	
5	23/11/0	1/1/6	GFB4027	0.882	1	
6	23/11/0	1/1/6	GFB4027	0.882	0	
6	18/11/0	6/1/6	GFB4027	0.957	2	
6	13/11/0	11/1/6	GFB4007	0.991	2	
6	3/11/0	21/1/6	GFB3111	0.841	2	
7	8/11/0	26/1/6	GFB3021	0.752	0	
8	8/11/0	36/1/6	GFB4007	1.868	0	
8	3/11/0	41/1/6	GFB4050	2.280	6	
9	11/9/2	46/1/6	GFB4071	2.730	0	
9	6/9/2	51/1/6	GFB5077	2.872	1	B
9	1/9/2	56/1/6	(2)GFB6001	1.720	1	

(B) - (2) Washers req'd at Secondary Connection

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.10	50.00	2		-49.4		-9178.2	0.0	255.4		10366.0	891.4	0.98	
1	0.00	12.00		2		-40.0				59.4				0.67
2	1.83	52.00	2		-46.4		-9322.1	0.0	351.6		10029.5	398.3	1.00	

2	1.83	52.00		2		38.2				115.6				0.33
3	0.00	40.00	2		-45.8		-4145.0	0.0	204.4		4866.4	308.3	0.98	
3	0.00	40.00		2		28.8				41.7				0.69
4	8.92	28.00	6		-32.1		1976.2	0.0	94.0		2573.8	228.8	1.02	
4	0.00	28.00		2		24.2				32.1				0.75
5	13.92	31.36	1		-43.9		3469.1	0.0	160.3		4500.0	380.0	0.96	
5	0.00	28.00		2		17.0				42.5				0.40
6	13.92	31.36	2		-43.9		3469.1	0.0	160.3		4500.0	380.0	0.96	
6	0.00	28.00		1		-17.0				42.5				0.40
7	8.92	28.00	5		-32.1		1976.1	0.0	94.0		2573.8	228.8	1.02	
7	0.00	28.00		1		-24.2				32.1				0.75
8	0.00	40.00	1		-45.8		-4145.0	0.0	204.4		4866.4	308.3	0.98	
8	0.00	40.00		1		-28.8				41.7				0.69
9	1.83	52.00	1		-46.4		-9322.1	0.0	351.6		10029.5	398.3	1.00	
9	1.83	52.00		1		-38.2				115.6				0.33
10	19.10	50.00	1		-49.4		-9178.2	0.0	255.4		10366.0	891.4	0.98	
10	0.00	12.00		1		40.0				59.4				0.67

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52	
2	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51	
3	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58	
4	8.92	693.84	120.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.59	0.96	1.00	0.65	
5	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70	
6	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70	
7	8.92	693.84	120.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.14	0.96	1.00	0.65	
8	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58	
9	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51	
10	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 3

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/601)	-0.420	10	2	10	WPR
Max. Vertical Deflection for Span 1	(L/316)	-4.511	6	2	4	SMS

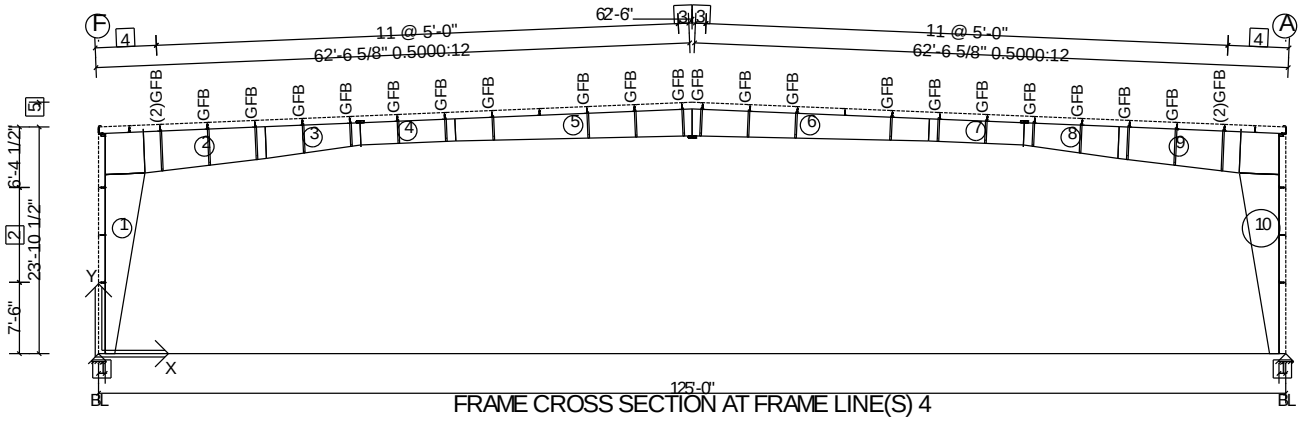
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 10.278 (k/in)
Fundamental Period (calculated) (T): 0.581 (sec.)

Wall: 4, Frame at: 50/0/0

Frame Cross Section: 4



FRAME CROSS SECTION AT FRAME LINE(S) 4

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 2 @ 3'-2 5/8"
5 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX003) and 10(CX003): 115'-2 15/16"
Vert. Clearance at member 1(CX003): 18'-11 7/8"
Vert. Clearance at member 10(CX003): 18'-11 7/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
50/0/0	25/0/0	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
3	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
4	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P
5	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
6	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
7	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P
8	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P

Total Frame Weight = 9449.9 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 4

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		125/0/0				
Grid1 - Grid2		4-F		4-A				
Base Plate W x L (in.)		13 X 13		13 X 13				
Base Plate Thickness (in.)		0.750		0.750				
Anchor Rod Qty/Diam. (in.)		4 - 1.250		4 - 1.250				
Column Base Elev.		100'-0"		100'-0"				
Load Type	Desc.	Hx	Vy	Hx	Vy			

D	Frm	6.17	7.95	-6.17	7.95	-	-	-
CG	Frm	7.51	7.81	-7.51	7.81	-	-	-
SMS>	Frm	30.04	31.25	-30.04	31.25	-	-	-
<SMS	Frm	30.04	31.25	-30.04	31.25	-	-	-
S>	Frm	21.03	21.87	-21.03	21.88	-	-	-
SD	Frm	-	-	-	-	-	-	-
<S	Frm	21.03	21.87	-21.03	21.88	-	-	-
US1*	Frm	18.29	12.84	-18.29	22.47	-	-	-
*US1	Frm	18.29	22.47	-18.29	12.84	-	-	-
W2>	Frm	-21.27	-19.14	10.74	-10.34	-	-	-
<W2	Frm	-10.74	-10.34	21.27	-19.14	-	-	-
WPL	Frm	-24.15	-26.58	23.59	-33.22	-	-	-
WPR	Frm	-23.59	-33.22	24.15	-26.58	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.70	1.02	7.37	-1.02	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-7.37	-1.02	-2.70	1.02	-	-	-
CU	Frm	-	-	-	-	-	-	-
W1>	Frm	-33.06	-34.30	22.53	-25.50	-	-	-
<W1	Frm	-22.53	-25.50	33.06	-34.30	-	-	-
S	Frm	21.03	21.87	-21.03	21.88	-	-	-
E>	Frm	-0.74	-0.27	-0.74	0.27	-	-	-
EG+	Frm	0.38	0.39	-0.38	0.39	-	-	-
<E	Frm	0.74	0.27	0.74	-0.27	-	-	-
EG-	Frm	-0.38	-0.39	0.38	-0.39	-	-	-
L	Frm	18.02	18.75	-18.02	18.75	-	-	-
SMS	Frm	30.04	31.25	-30.04	31.25	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	15.9	15.9
CG	0.0	0.0	15.6	15.6
SMS>	0.0	0.0	62.5	62.5
<SMS	0.0	0.0	62.5	62.5
S>	0.0	0.0	43.8	43.8
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	43.8	43.8
US1*	0.0	0.0	35.3	35.3
*US1	0.0	0.0	35.3	35.3
W2>	10.5	10.5	29.5	29.5
<W2	10.5	10.5	29.5	29.5
WPL	0.6	0.6	59.8	59.8
WPR	0.6	0.6	59.8	59.8
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	10.1	10.1	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	10.1	10.1	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	10.5	10.5	59.8	59.8
<W1	10.5	10.5	59.8	59.8
S	0.0	0.0	43.8	43.8
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.8	0.8
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.8	0.8
L	0.0	0.0	37.5	37.5
SMS	0.0	0.0	62.5	62.5

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	4-F	16.14	15	43.72	1	-	-	-	-	15.81	15	47.01	1	-	-	-	-

125/0/0	4-A	43.72	1	16.14	16	-	-	-	-	15.81	16	47.01	1	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	4-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875
125/0/0	4-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	44.96	47.07	2	16.03	-15.81	16	44.96	47.07	2	-	-	-	28
125/0/0	44.96	47.07	2	16.03	-15.81	16	44.96	47.07	2	-	-	-	28

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.877	2	0.148	16	0.150	16	-	0	0.252	2	0.065	16	0.084	2	0.371	2	0.697	2
125/0/0	0.877	2	0.148	16	0.150	16	-	0	0.252	2	0.065	16	0.084	2	0.371	2	0.697	2

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
10	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
2	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
3	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,														
4	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,														
5	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,														
6	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,														
7	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,														
8	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,														
9	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
10	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	2	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799
2	1	2	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799
3	2	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.959	0.719
4	1	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.809	0.719
5	2	17	17.2	2.6	1052.3	AISC DG-16/Thin plate	0.653	0.035	0.894	0.000	0.000	0.018	0.959	0.719
6	2	17	17.2	2.6	1052.3	AISC DG-16/Thin plate	0.653	0.035	0.894	0.000	0.000	0.018	0.959	0.719
7	1	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.810	0.719
8	2	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.959	0.719
9	1	2	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799

10	2	2	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
2	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
3	2	17	17.7	6.1	691.6	AISC DG-16/Thin plate	0.568	0.083	0.945	0.647	0.957	0.072	0.959	0.719
4	1	17	17.7	6.1	691.6	AISC DG-16/Thin plate	0.568	0.083	0.945	0.647	0.957	0.072	0.959	0.719
5	2	2	-44.9	0.7	3923.2	AISC DG-16/Thin plate	0.880	0.006	0.905	0.000	0.000	0.003	0.920	0.719
6	2	2	-44.9	0.7	3923.2	AISC DG-16/Thin plate	0.880	0.006	0.905	0.000	0.000	0.003	0.920	0.719
7	1	17	17.7	6.1	691.6	AISC DG-16/Thin plate	0.568	0.083	0.935	0.647	0.957	0.072	0.959	0.719
8	2	17	17.7	6.1	691.6	AISC DG-16/Thin plate	0.568	0.083	0.935	0.647	0.957	0.072	0.959	0.719
9	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
10	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/9/0	56/1/6	(2)GFB6001	1.763	0	
2	6/9/0	51/1/6	GFB5077	2.944	0	B
2	11/9/0	46/1/6	GFB4071	2.799	0	
3	3/11/0	41/1/6	GFB4050	2.339	2	
3	8/11/0	36/1/6	GFB4007	1.917	5	
4	3/11/0	31/1/6	GFB3021	1.484	5	
4	8/11/0	26/1/6	GFB3021	0.666	6	
5	3/11/0	21/1/6	GFB3111	0.750	6	
5	13/11/0	11/1/6	GFB4007	0.892	1	
5	18/11/0	6/1/6	GFB4027	0.864	1	
5	23/11/0	1/1/6	GFB4027	0.801	1	
6	23/11/0	1/1/6	GFB4027	0.801	0	
6	18/11/0	6/1/6	GFB4027	0.864	5	
6	13/11/0	11/1/6	GFB4007	0.892	2	
6	3/11/0	21/1/6	GFB3111	0.750	2	
7	8/11/0	26/1/6	GFB3021	0.666	0	
7	3/11/0	31/1/6	GFB3021	1.484	5	
8	8/11/0	36/1/6	GFB4007	1.917	0	
8	3/11/0	41/1/6	GFB4050	2.339	6	
9	11/9/0	46/1/6	GFB4071	2.799	0	
9	6/9/0	51/1/6	GFB5077	2.944	1	B
9	1/9/0	56/1/6	(2)GFB6001	1.763	1	

(B) - (2) Washers req'd at Secondary Connection

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.10	50.00	2		-50.6		-9406.3	0.0	255.4		10366.0	891.4	1.01	

1	0.00	12.00		2		-41.0				59.4				0.69
2	1.83	52.00	2		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
2	1.83	52.00		2		39.1				115.6				0.34
3	0.00	40.00	2		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
3	0.00	40.00		2		29.5				41.7				0.71
4	10.00	28.00	6		-32.8		2196.6	0.0	141.6		2573.8	228.8	0.99	
4	0.00	28.00		2		24.8				32.1				0.77
5	13.92	31.36	1		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
5	0.00	28.00		2		17.4				42.5				0.41
6	13.92	31.36	2		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
6	0.00	28.00		1		-17.4				42.5				0.41
7	10.00	28.00	5		-32.8		2196.6	0.0	141.6		2573.8	228.8	0.99	
7	0.00	28.00		1		-24.8				32.1				0.77
8	0.00	40.00	1		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
8	0.00	40.00		1		-29.5				41.7				0.71
9	1.83	52.00	1		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
9	1.83	52.00		1		-39.1				115.6				0.34
10	19.10	50.00	1		-50.6		-9406.3	0.0	255.4		10366.0	891.4	1.01	
10	0.00	12.00		1		41.0				59.4				0.69

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52	
2	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51	
3	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58	
4	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65	
5	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70	
6	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70	
7	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65	
8	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58	
9	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51	
10	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 4

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/689)	-0.367	10	2	10	WPR
Max. Vertical Deflection for Span 1	(L/308)	-4.626	6	2	4	SMS

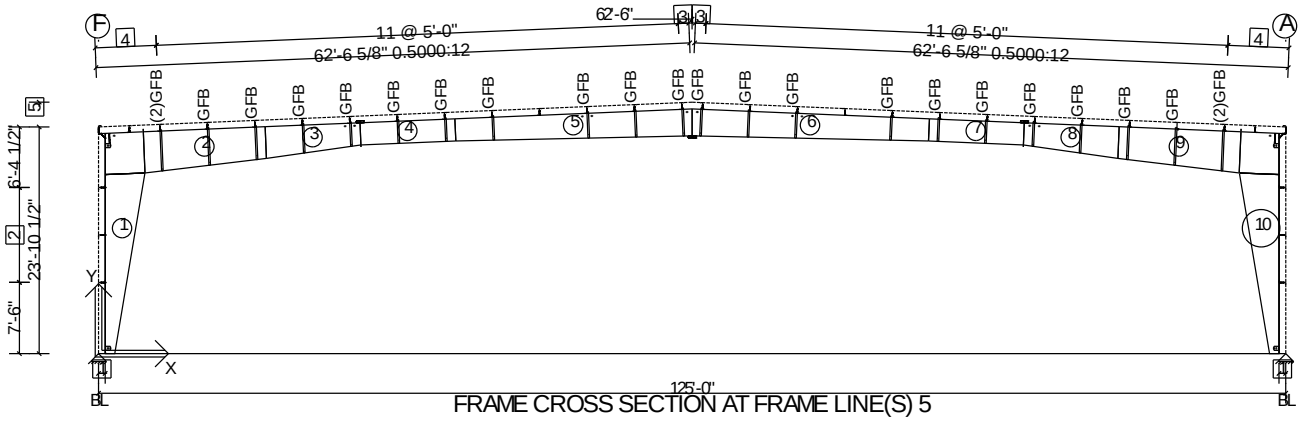
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 10.278 (k/in)
Fundamental Period (calculated) (T): 0.588 (sec.)

Wall: 4, Frame at: 75/0/0

Frame Cross Section: 5



FRAME CROSS SECTION AT FRAME LINE(S) 5

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 2 @ 3'-2 5/8"
5 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX004) and 10(CX005): 115'-2 15/16"
Vert. Clearance at member 1(CX004): 18'-11 7/8"
Vert. Clearance at member 10(CX005): 18'-11 7/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
75/0/0	25/0/0	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-
29	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 WB1>	D + CG + S + WPR + WB1>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
33	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 <WB1	D + CG + S + WPR + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
36	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 WB3>	D + CG + S + WPL + WB3>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
39	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
40	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 <WB3	D + CG + S + WPL + <WB3
41	System Derived	1.000	0.6 MWB	MWB - Wall: 1
42	System Derived	1.000	0.6 MWB	MWB - Wall: 2
43	System Derived	1.000	0.6 MWB	MWB - Wall: 3
44	System Derived	1.000	0.6 MWB	MWB - Wall: 4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
46	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
47	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
48	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
3	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
4	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P
5	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
6	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
7	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P

8	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P

Total Frame Weight = 9449.9 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 5

Type		Exterior Column			Exterior Column					
X-Loc		0/0/0			125/0/0					
Grid1 - Grid2		5-F			5-A					
Base Plate W x L (in.)		13 X 13			13 X 13					
Base Plate Thickness (in.)		0.750			0.750					
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 1.250					
Column Base Elev.		100'-0"			100'-0"					
Load Type	Desc.	Hx	Hz	Vy	Hx	Hz	Vy			
D	Frm	6.17	-	7.95	-6.17	-	7.95	-	-	-
CG	Frm	7.51	-	7.81	-7.51	-	7.81	-	-	-
SMS>	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-
<SMS	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-
S>	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
SD	Frm	-	-	-	-	-	-	-	-	-
<S	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
US1*	Frm	18.29	-	12.84	-18.29	-	22.47	-	-	-
*US1	Frm	18.29	-	22.47	-18.29	-	12.84	-	-	-
W2>	Frm	-21.27	-	-19.14	10.74	-	-10.34	-	-	-
<W2	Frm	-10.74	-	-10.34	21.27	-	-19.14	-	-	-
WPL	Frm	-24.15	-	-26.58	23.59	-	-33.22	-	-	-
WPR	Frm	-23.59	-	-33.22	24.15	-	-26.58	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.70	-	1.02	7.37	-	-1.02	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-7.37	-	-1.02	-2.70	-	1.02	-	-	-
CU	Frm	-	-	-	-	-	-	-	-	-
W1>	Frm	-33.06	-	-34.30	22.53	-	-25.50	-	-	-
<W1	Frm	-22.53	-	-25.50	33.06	-	-34.30	-	-	-
S	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
E>	Frm	-0.74	-	-0.27	-0.74	-	0.27	-	-	-
EG+	Frm	0.38	-	0.39	-0.38	-	0.39	-	-	-
<E	Frm	0.74	-	0.27	0.74	-	-0.27	-	-	-
EG-	Frm	-0.38	-	-0.39	0.38	-	-0.39	-	-	-
WB1>	Brc	0.45	-22.02	-20.97	-0.45	-21.02	-20.13	-	-	-
<WB1	Brc	-0.51	-	19.01	0.51	-	18.05	-	-	-
WB3>	Brc	0.46	-21.02	-20.02	-0.46	-22.02	-21.09	-	-	-
<WB3	Brc	-0.51	-	18.05	0.51	-	19.01	-	-	-
MWB - Wall: 1	Brc	0.32	-15.03	-14.31	-0.32	-15.03	-14.39	-	-	-
MWB - Wall: 2	Brc	-	-	-	-	-	-	-	-	-
MWB - Wall: 3	Brc	-0.33	-	12.02	0.33	-	12.02	-	-	-
MWB - Wall: 4	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	0.10	-4.80	-4.57	-0.10	-4.95	-4.74	-	-	-
<EB	Brc	-0.13	-	4.58	0.13	-	4.72	-	-	-
L	Frm	18.02	-	18.75	-18.02	-	18.75	-	-	-
SMS	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	15.9	15.9
CG	0.0	0.0	15.6	15.6
SMS>	0.0	0.0	62.5	62.5

<SMS	0.0	0.0	62.5	62.5
S>	0.0	0.0	43.8	43.8
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	43.8	43.8
US1*	0.0	0.0	35.3	35.3
*US1	0.0	0.0	35.3	35.3
W2>	10.5	10.5	29.5	29.5
<W2	10.5	10.5	29.5	29.5
WPL	0.6	0.6	59.8	59.8
WPR	0.6	0.6	59.8	59.8
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	10.1	10.1	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	10.1	10.1	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	10.5	10.5	59.8	59.8
<W1	10.5	10.5	59.8	59.8
S	0.0	0.0	43.8	43.8
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.8	0.8
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.8	0.8
WB1>	0.0	0.0	41.1	41.1
<WB1	0.0	0.0	37.1	37.1
WB3>	0.0	0.0	41.1	41.1
<WB3	0.0	0.0	37.1	37.1
MWB - Wall: 1	0.0	0.0	28.7	28.7
MWB - Wall: 2	0.0	0.0	0.0	0.0
MWB - Wall: 3	0.0	0.0	24.0	24.0
MWB - Wall: 4	0.0	0.0	0.0	0.0
EB>	0.0	0.0	9.3	9.3
<EB	0.0	0.0	9.3	9.3
L	0.0	0.0	37.5	37.5
SMS	0.0	0.0	62.5	62.5

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	5-F	16.14	15	43.72	1	13.21	29	-	-	27.74	30	47.01	1	-	-	-	-
125/0/0	5-A	43.72	1	16.14	16	13.21	35	-	-	27.82	36	47.01	1	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	5-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875
125/0/0	5-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	44.96	47.07	1	10.04	-27.84	36	44.96	47.07	1	13.21	-27.84	10.04	36
125/0/0	44.96	47.07	1	10.04	-27.84	36	44.96	47.07	1	13.21	-27.84	10.04	36

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.877	1	0.261	36	-	36	-	0	0.252	1	0.115	36	0.084	1	0.371	1	0.697	1
125/0/0	0.877	1	0.261	36	-	36	-	0	0.252	1	0.115	36	0.084	1	0.371	1	0.697	1

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
10	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem.	Jt.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
2	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
3	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
4	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
5	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
6	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
7	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
8	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
9	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
10	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799
2	1	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799
3	2	6	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.959	0.719
4	1	6	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.809	0.719
5	2	33	17.6	2.6	1059.8	AISC DG-16/Thin plate	0.659	0.035	0.903	0.000	0.000	0.018	0.959	0.719
6	2	33	17.6	2.6	1059.8	AISC DG-16/Thin plate	0.659	0.035	0.903	0.000	0.000	0.018	0.959	0.719
7	1	6	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.810	0.719
8	2	6	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.959	0.719
9	1	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799
10	2	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
2	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
3	2	30	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.949	0.647	0.957	0.072	0.959	0.719
4	1	30	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.949	0.647	0.957	0.072	0.959	0.719
5	2	1	-44.9	0.6	3923.2	AISC DG-16/Thin plate	0.880	0.005	0.905	0.000	0.000	0.003	0.920	0.719
6	2	1	-44.9	0.6	3923.2	AISC DG-16/Thin plate	0.880	0.005	0.905	0.000	0.000	0.003	0.920	0.719
7	1	30	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.939	0.647	0.957	0.072	0.959	0.719
8	2	30	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.939	0.647	0.957	0.072	0.959	0.719
9	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
10	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-

6	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/9/0	56/1/6	(2)GFB6001	1.763	0	
2	6/9/0	51/1/6	GFB5077	2.944	0	
2	11/9/0	46/1/6	GFB4071	2.799	0	
3	3/11/0	41/1/6	GFB4050	2.339	2	
3	8/11/0	36/1/6	GFB4007	1.917	5	
4	3/11/0	31/1/6	GFB3021	1.484	5	
4	8/11/0	26/1/6	GFB3021	0.679	6	
5	3/11/0	21/1/6	GFB3111	0.760	6	
5	13/11/0	11/1/6	GFB4007	0.899	1	
5	18/11/0	6/1/6	GFB4027	0.870	1	
5	23/11/0	1/1/6	GFB4027	0.801	1	
6	23/11/0	1/1/6	GFB4027	0.801	0	
6	18/11/0	6/1/6	GFB4027	0.870	5	
6	13/11/0	11/1/6	GFB4007	0.899	2	
6	3/11/0	21/1/6	GFB3111	0.760	2	
7	8/11/0	26/1/6	GFB3021	0.679	0	
7	3/11/0	31/1/6	GFB3021	1.484	5	
8	8/11/0	36/1/6	GFB4007	1.917	0	
8	3/11/0	41/1/6	GFB4050	2.339	6	
9	11/9/0	46/1/6	GFB4071	2.799	0	
9	6/9/0	51/1/6	GFB5077	2.944	1	B
9	1/9/0	56/1/6	(2)GFB6001	1.763	1	

(B) - (2) Washers req'd at Secondary Connection

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.10	50.00	2		-50.6		-9406.3	0.0	255.4		10366.0	891.4	1.01	
1	0.00	12.00		2		-41.0				59.4				0.69
2	1.83	52.00	2		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
2	1.83	52.00		2		39.1				115.6				0.34
3	0.00	40.00	2		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
3	0.00	40.00		2		29.5				41.7				0.71
4	10.00	28.00	6		-32.8		2196.7	0.0	141.6		2573.8	228.8	0.99	
4	0.00	28.00		2		24.8				32.1				0.77
5	13.92	31.36	1		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
5	0.00	28.00		2		17.4				42.5				0.41
6	13.92	31.36	2		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
6	0.00	28.00		1		-17.4				42.5				0.41
7	10.00	28.00	5		-32.8		2196.5	0.0	141.6		2573.8	228.8	0.99	
7	0.00	28.00		1		-24.8				32.1				0.77
8	0.00	40.00	1		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
8	0.00	40.00		1		-29.5				41.7				0.71
9	1.83	52.00	1		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
9	1.83	52.00		1		-39.1				115.6				0.34
10	19.10	50.00	1		-50.6		-9406.3	0.0	255.4		10366.0	891.4	1.01	
10	0.00	12.00		1		41.0				59.4				0.69

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52	
2	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.7	1.04	0.95	1.00	0.51	

3	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.484	1.18	0.90	1.00	0.58
4	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65
5	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70
6	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70
7	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65
8	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58
9	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51
10	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 5

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/689)	-0.367	10	2	10	WPR
Max. Vertical Deflection for Span 1	(L/308)	-4.626	6	2	4	SMS

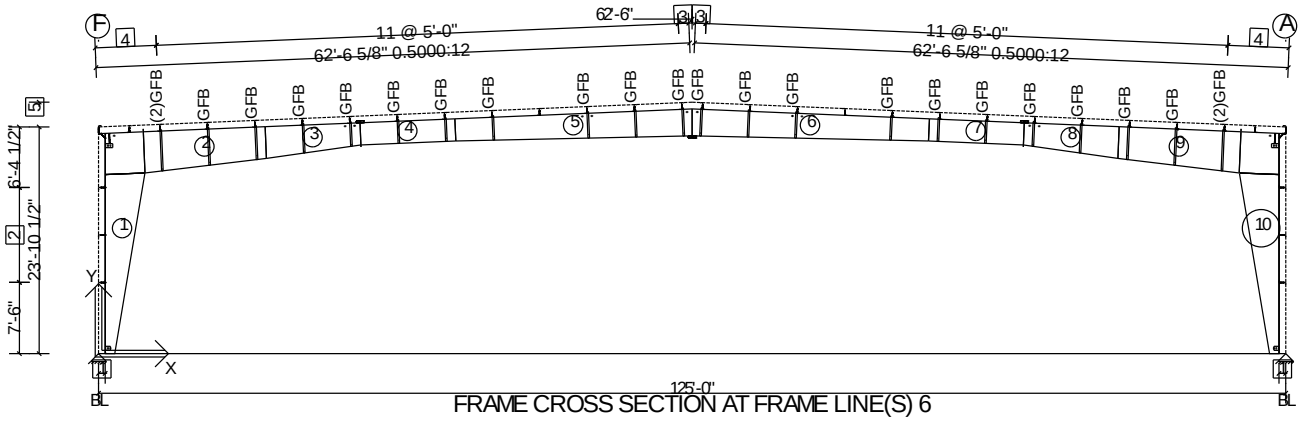
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 10.278 (k/in)
Fundamental Period (calculated) (T): 0.588 (sec.)

Wall: 4, Frame at: 100/0/0

Frame Cross Section: 6



FRAME CROSS SECTION AT FRAME LINE(S) 6

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 2 @ 3'-2 5/8"
5 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX006) and 10(CX007): 115'-2 15/16"
Vert. Clearance at member 1(CX006): 18'-11 7/8"
Vert. Clearance at member 10(CX007): 18'-11 7/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
100/0/0	25/0/0	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-
29	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 WB1>	D + CG + S + WPR + WB1>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
33	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
34	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 <WB1	D + CG + S + WPR + <WB1
35	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
36	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 WB3>	D + CG + S + WPL + WB3>
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
39	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
40	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 <WB3	D + CG + S + WPL + <WB3
41	System Derived	1.000	0.6 MWB	MWB - Wall: 1
42	System Derived	1.000	0.6 MWB	MWB - Wall: 2
43	System Derived	1.000	0.6 MWB	MWB - Wall: 3
44	System Derived	1.000	0.6 MWB	MWB - Wall: 4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
46	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
47	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
48	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
3	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
4	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P
5	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
6	6.00	0.6250	0.1875	28.00	34.00	25.00	1139.8	55.00	55.00	SS	SP	3P
7	6.00	0.3750	0.1644	28.00	28.00	10.00	325.7	55.00	55.00	SP	SS	3P

8	6.00	0.5000	0.1875	40.00	28.00	10.00	435.1	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	52.00	40.00	16.82	1029.4	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.2500	12.00	50.00	23.20	1795.0	55.00	55.00	BP	KN	3P

Total Frame Weight = 9449.9 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 6

Type		Exterior Column			Exterior Column					
X-Loc		0/0/0			125/0/0					
Grid1 - Grid2		6-F			6-A					
Base Plate W x L (in.)		13 X 13			13 X 13					
Base Plate Thickness (in.)		0.750			0.750					
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 1.250					
Column Base Elev.		100'-0"			100'-0"					
Load Type	Desc.	Hx	Hz	Vy	Hx	Hz	Vy			
D	Frm	6.17	-	7.95	-6.17	-	7.95	-	-	-
CG	Frm	7.51	-	7.81	-7.51	-	7.81	-	-	-
SMS>	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-
<SMS	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-
S>	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
SD	Frm	-	-	-	-	-	-	-	-	-
<S	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
US1*	Frm	18.29	-	12.84	-18.29	-	22.47	-	-	-
*US1	Frm	18.29	-	22.47	-18.29	-	12.84	-	-	-
W2>	Frm	-21.27	-	-19.14	10.74	-	-10.34	-	-	-
<W2	Frm	-10.74	-	-10.34	21.27	-	-19.14	-	-	-
WPL	Frm	-24.15	-	-26.58	23.59	-	-33.22	-	-	-
WPR	Frm	-23.59	-	-33.22	24.15	-	-26.58	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.70	-	1.02	7.37	-	-1.02	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-7.37	-	-1.02	-2.70	-	1.02	-	-	-
CU	Frm	-	-	-	-	-	-	-	-	-
W1>	Frm	-33.06	-	-34.30	22.53	-	-25.50	-	-	-
<W1	Frm	-22.53	-	-25.50	33.06	-	-34.30	-	-	-
S	Frm	21.03	-	21.88	-21.03	-	21.88	-	-	-
E>	Frm	-0.74	-	-0.27	-0.74	-	0.27	-	-	-
EG+	Frm	0.38	-	0.39	-0.38	-	0.39	-	-	-
<E	Frm	0.74	-	0.27	0.74	-	-0.27	-	-	-
EG-	Frm	-0.38	-	-0.39	0.38	-	-0.39	-	-	-
WB1>	Brc	-0.57	-	21.03	0.57	-	20.07	-	-	-
<WB1	Brc	0.42	19.90	-19.06	-0.42	18.91	-18.00	-	-	-
WB3>	Brc	-0.57	-	20.07	0.57	-	21.03	-	-	-
<WB3	Brc	0.41	18.91	-18.10	-0.41	19.90	-18.96	-	-	-
MWB - Wall: 1	Brc	-0.40	-	14.35	0.40	-	14.35	-	-	-
MWB - Wall: 2	Brc	-	-	-	-	-	-	-	-	-
MWB - Wall: 3	Brc	0.27	12.59	-12.06	-0.27	12.59	-11.99	-	-	-
MWB - Wall: 4	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	-0.13	-	4.58	0.13	-	4.72	-	-	-
<EB	Brc	0.10	4.80	-4.59	-0.10	4.95	-4.71	-	-	-
L	Frm	18.02	-	18.75	-18.02	-	18.75	-	-	-
SMS	Frm	30.04	-	31.25	-30.04	-	31.25	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	15.9	15.9
CG	0.0	0.0	15.6	15.6
SMS>	0.0	0.0	62.5	62.5

<SMS	0.0	0.0	62.5	62.5
S>	0.0	0.0	43.8	43.8
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	43.8	43.8
US1*	0.0	0.0	35.3	35.3
*US1	0.0	0.0	35.3	35.3
W2>	10.5	10.5	29.5	29.5
<W2	10.5	10.5	29.5	29.5
WPL	0.6	0.6	59.8	59.8
WPR	0.6	0.6	59.8	59.8
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	10.1	10.1	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	10.1	10.1	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	10.5	10.5	59.8	59.8
<W1	10.5	10.5	59.8	59.8
S	0.0	0.0	43.8	43.8
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.8	0.8
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.8	0.8
WB1>	0.0	0.0	41.1	41.1
<WB1	0.0	0.0	37.1	37.1
WB3>	0.0	0.0	41.1	41.1
<WB3	0.0	0.0	37.1	37.1
MWB - Wall: 1	0.0	0.0	28.7	28.7
MWB - Wall: 2	0.0	0.0	0.0	0.0
MWB - Wall: 3	0.0	0.0	24.0	24.0
MWB - Wall: 4	0.0	0.0	0.0	0.0
EB>	0.0	0.0	9.3	9.3
<EB	0.0	0.0	9.3	9.3
L	0.0	0.0	37.5	37.5
SMS	0.0	0.0	62.5	62.5

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	6-F	16.14	15	43.72	1	-	-	11.94	32	26.60	33	47.01	1	-	-	-	-
125/0/0	6-A	43.72	1	16.14	16	-	-	11.94	38	26.53	39	47.01	1	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	6-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875
125/0/0	6-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	44.96	47.07	1	10.10	-26.62	33	44.96	47.07	2	11.94	-26.62	10.10	33
125/0/0	44.96	47.07	1	10.10	-26.62	33	44.96	47.07	2	11.94	-26.62	10.10	33

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.877	1	0.249	33	-	33	-	0	0.252	2	0.110	33	0.084	2	0.371	2	0.697	1
125/0/0	0.877	1	0.249	33	-	33	-	0	0.252	2	0.110	33	0.084	2	0.371	2	0.697	1

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
10	1	S9	18.80	48.771	195.08	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem.	Jt.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
2	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
3	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
4	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
5	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
6	2	SP	0.500	6.00	37.14	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
7	1	SP	0.375	6.00	33.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
8	2	SP	0.375	6.00	33.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
9	1	KN(Face)	0.750	8.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00
10	2	KN(Face)	0.750	12.00	56.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	11	Flush	40.44/3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799
2	1	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799
3	2	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.959	0.719
4	1	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.583	0.141	0.959	0.000	0.000	0.095	0.809	0.719
5	2	30	17.6	2.6	1060.6	AISC DG-16/Thin plate	0.660	0.035	0.904	0.000	0.000	0.018	0.959	0.719
6	2	30	17.6	2.6	1060.6	AISC DG-16/Thin plate	0.660	0.035	0.904	0.000	0.000	0.018	0.959	0.719
7	1	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.810	0.719
8	2	5	-32.9	17.3	1992.9	AISC DG-16/Thin plate	0.584	0.141	0.955	0.000	0.000	0.095	0.959	0.719
9	1	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.999	0.799
10	2	1	-47.5	39.1	9554.0	AISC DG-16/Thin plate	0.709	0.142	0.914	0.506	0.771	0.070	0.940	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
2	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
3	2	39	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.949	0.647	0.957	0.072	0.959	0.719
4	1	39	17.4	6.1	698.9	AISC DG-16/Thin plate	0.571	0.083	0.949	0.647	0.957	0.072	0.959	0.719
5	2	1	-44.9	0.7	3923.2	AISC DG-16/Thin plate	0.880	0.006	0.905	0.000	0.000	0.003	0.920	0.719
6	2	1	-44.9	0.7	3923.2	AISC DG-16/Thin plate	0.880	0.006	0.905	0.000	0.000	0.003	0.920	0.719
7	1	39	17.4	6.1	698.9	AISC DG-16/Thin plate	0.570	0.083	0.939	0.647	0.957	0.072	0.959	0.719
8	2	39	17.4	6.1	698.9	AISC DG-16/Thin plate	0.570	0.083	0.939	0.647	0.957	0.072	0.959	0.719
9	1	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799
10	2	16	15.2	14.1	3183.1	AISC DG-16/Thin plate	0.966	0.127	0.886	0.000	0.000	0.077	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-

6	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/9/0	56/1/6	(2)GFB6001	1.763	0	
2	6/9/0	51/1/6	GFB5077	2.944	0	
2	11/9/0	46/1/6	GFB4071	2.799	0	
3	3/11/0	41/1/6	GFB4050	2.339	2	
3	8/11/0	36/1/6	GFB4007	1.917	5	
4	3/11/0	31/1/6	GFB3021	1.484	5	
4	8/11/0	26/1/6	GFB3021	0.681	6	
5	3/11/0	21/1/6	GFB3111	0.762	6	
5	13/11/0	11/1/6	GFB4007	0.900	1	
5	18/11/0	6/1/6	GFB4027	0.871	1	
5	23/11/0	1/1/6	GFB4027	0.801	1	
6	23/11/0	1/1/6	GFB4027	0.801	0	
6	18/11/0	6/1/6	GFB4027	0.871	5	
6	13/11/0	11/1/6	GFB4007	0.900	2	
6	3/11/0	21/1/6	GFB3111	0.762	2	
7	8/11/0	26/1/6	GFB3021	0.681	0	
7	3/11/0	31/1/6	GFB3021	1.484	5	
8	8/11/0	36/1/6	GFB4007	1.917	0	
8	3/11/0	41/1/6	GFB4050	2.339	6	
9	11/9/0	46/1/6	GFB4071	2.799	0	
9	6/9/0	51/1/6	GFB5077	2.944	1	
9	1/9/0	56/1/6	(2)GFB6001	1.763	1	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.10	50.00	2		-50.6		-9406.3	0.0	255.4		10366.0	891.4	1.01	
1	0.00	12.00		2		-41.0				59.4				0.69
2	1.83	52.00	2		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
2	1.83	52.00		2		39.1				115.6				0.34
3	0.00	40.00	2		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
3	0.00	40.00		2		29.5				41.7				0.71
4	10.00	28.00	6		-32.8		2196.6	0.0	141.6		2573.8	228.8	0.99	
4	0.00	28.00		2		24.8				32.1				0.77
5	13.92	31.36	1		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
5	0.00	28.00		2		17.4				42.5				0.41
6	13.92	31.36	2		-45.0		3560.1	0.0	160.3		4500.0	380.0	0.98	
6	0.00	28.00		1		-17.4				42.5				0.41
7	10.00	28.00	5		-32.8		2196.6	0.0	141.6		2573.8	228.8	0.99	
7	0.00	28.00		1		-24.8				32.1				0.77
8	0.00	40.00	1		-46.9		-4249.8	0.0	204.4		4866.4	308.3	1.01	
8	0.00	40.00		1		-29.5				41.7				0.71
9	1.83	52.00	1		-47.5		-9554.0	0.0	351.6		10029.5	398.3	1.02	
9	1.83	52.00		1		-39.1				115.6				0.34
10	19.10	50.00	1		-50.6		-9406.4	0.0	255.4		10366.0	891.4	1.01	
10	0.00	12.00		1		41.0				59.4				0.69

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag
1	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52
2	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51
3	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58
4	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65

5	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70
6	13.92	693.84	120.0	60.0	13.14	3.75	2197.36	22.52	140.16	7.51	157.73	11.51	1.04	5316.15	1.15	0.97	1.00	0.70
7	10.00	693.84	60.0	60.0	8.98	2.25	1135.80	13.51	81.13	4.50	92.68	6.93	0.25	2577.53	1.11	0.96	1.00	0.65
8	0.00	693.84	60.1	60.1	13.31	3.00	3267.36	18.02	163.37	6.01	189.80	9.34	0.59	7029.48	1.18	0.90	1.00	0.58
9	1.83	693.84	21.3	21.3	23.36	3.75	8353.00	22.63	321.27	7.54	393.87	12.49	1.50	14931.74	1.04	0.95	1.00	0.51
10	19.10	229.17	229.2	229.2	24.25	6.00	9802.02	144.06	392.08	24.01	447.06	36.77	1.26	88248.08	1.66	0.94	1.00	0.52

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 6

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/689)	-0.367	10	2	10	WPR
Max. Vertical Deflection for Span 1	(L/308)	-4.626	6	2	4	SMS

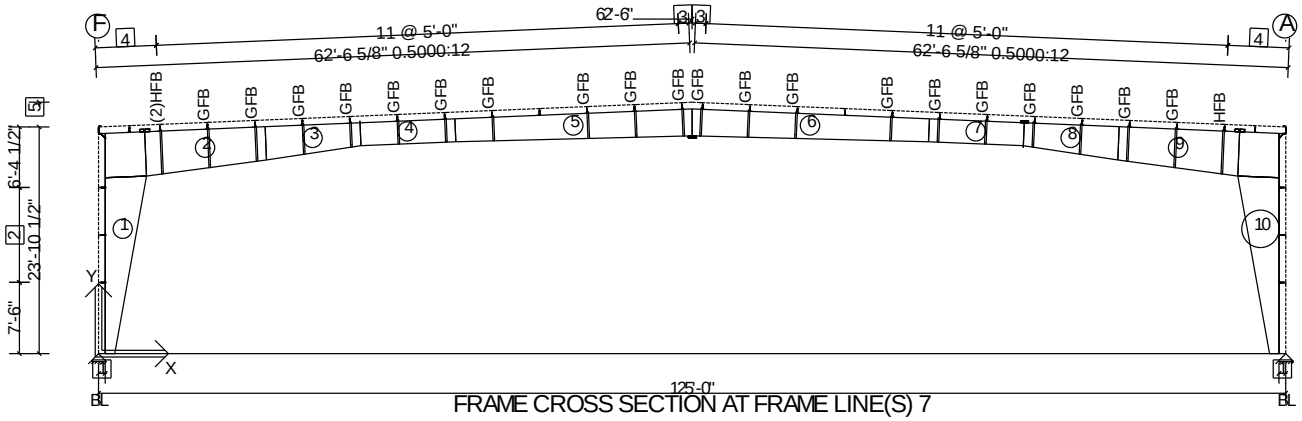
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 10.278 (k/in)
Fundamental Period (calculated) (T): 0.588 (sec.)

Wall: 4, Frame at: 125/0/0

Frame Cross Section: 7



FRAME CROSS SECTION AT FRAME LINE(S) 7

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 2 @ 3'-2 5/8"
5 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX008) and 10(CX008): 114'-10 15/16"
Vert. Clearance at member 1(CX008): 18'-7 15/16"
Vert. Clearance at member 10(CX008): 18'-7 15/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
125/0/0	26/0/0	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.2500	12.00	52.00	23.20	1803.8	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	56.00	42.00	16.83	1028.0	55.00	55.00	KN	SS	3P
3	6.00	0.5000	0.1875	42.00	29.00	10.00	450.5	55.00	55.00	SS	SP	3P
4	6.00	0.3750	0.1644	29.00	29.00	10.00	337.1	55.00	55.00	SP	SS	3P
5	6.00	0.6250	0.1875	29.00	34.00	25.00	1147.7	55.00	55.00	SS	SP	3P
6	6.00	0.6250	0.1875	29.00	34.00	25.00	1147.7	55.00	55.00	SS	SP	3P
7	6.00	0.3750	0.1644	29.00	29.00	10.00	331.9	55.00	55.00	SP	SS	3P
8	6.00	0.5000	0.1875	42.00	29.00	10.00	445.4	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	56.00	42.00	16.83	1028.0	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.2500	12.00	52.00	23.20	1803.8	55.00	55.00	BP	KN	3P

Total Frame Weight = 9523.9 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 7

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		125/0/0				
Grid1 - Grid2		7-F		7-A				
Base Plate W x L (in.)		13 X 13		13 X 13				
Base Plate Thickness (in.)		0.750		0.750				
Anchor Rod Qty/Diam. (in.)		4 - 1.250		4 - 1.250				
Column Base Elev.		100'-0"		100'-0"				
Load Type	Desc.	Hx	Vy	Hx	Vy			

D	Frm	6.43	8.17	-6.43	8.17	-	-	-
CG	Frm	7.90	8.13	-7.90	8.12	-	-	-
SMS>	Frm	31.60	32.50	-31.60	32.50	-	-	-
<SMS	Frm	31.60	32.50	-31.60	32.50	-	-	-
S>	Frm	22.12	22.75	-22.12	22.75	-	-	-
SD	Frm	-	-	-	-	-	-	-
<S	Frm	22.12	22.75	-22.12	22.75	-	-	-
US1*	Frm	19.25	13.35	-19.25	23.37	-	-	-
*US1	Frm	19.25	23.37	-19.25	13.35	-	-	-
W2>	Frm	-22.31	-19.92	11.35	-10.76	-	-	-
<W2	Frm	-11.35	-10.76	22.31	-19.92	-	-	-
WPL	Frm	-25.48	-27.65	24.90	-34.56	-	-	-
WPR	Frm	-24.90	-34.57	25.48	-27.65	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.81	1.06	7.66	-1.06	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-7.66	-1.06	-2.81	1.06	-	-	-
CU	Frm	-	-	-	-	-	-	-
W1>	Frm	-34.75	-35.69	23.79	-26.53	-	-	-
<W1	Frm	-23.79	-26.53	34.75	-35.69	-	-	-
S	Frm	22.12	22.75	-22.12	22.75	-	-	-
E>	Frm	-0.77	-0.28	-0.77	0.28	-	-	-
EG+	Frm	0.39	0.41	-0.39	0.41	-	-	-
<E	Frm	0.77	0.28	0.77	-0.28	-	-	-
EG-	Frm	-0.39	-0.41	0.39	-0.41	-	-	-
L	Frm	18.96	19.50	-18.96	19.50	-	-	-
SMS	Frm	31.60	32.50	-31.60	32.50	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	16.3	16.3
CG	0.0	0.0	16.2	16.3
SMS>	0.0	0.0	65.0	65.0
<SMS	0.0	0.0	65.0	65.0
S>	0.0	0.0	45.5	45.5
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	45.5	45.5
US1*	0.0	0.0	36.7	36.7
*US1	0.0	0.0	36.7	36.7
W2>	11.0	11.0	30.7	30.7
<W2	11.0	11.0	30.7	30.7
WPL	0.6	0.6	62.2	62.2
WPR	0.6	0.6	62.2	62.2
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	10.5	10.5	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	10.5	10.5	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	11.0	11.0	62.2	62.2
<W1	11.0	11.0	62.2	62.2
S	0.0	0.0	45.5	45.5
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.8	0.8
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.8	0.8
L	0.0	0.0	39.0	39.0
SMS	0.0	0.0	65.0	65.0

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	7-F	16.99	15	45.93	1	-	-	-	-	16.51	15	48.79	1	-	-	-	-

125/0/0	7-A	45.93	1	16.99	16	-	-	-	-	16.51	16	48.79	1	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	7-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875
125/0/0	7-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	BS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	47.16	48.85	1	16.89	-16.51	16	47.16	48.85	1	-	-	-	28
125/0/0	47.16	48.85	1	16.89	-16.51	16	47.16	48.85	1	-	-	-	28

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.920	1	0.155	16	0.159	16	-	0	0.262	1	0.068	16	0.087	1	0.385	1	0.731	1
125/0/0	0.920	1	0.155	16	0.159	16	-	0	0.262	1	0.068	16	0.087	1	0.385	1	0.731	1

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	18.46	50.738	202.95	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
10	1	S9	18.46	50.738	202.95	N/A	N/A	0.5000	5.250	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.625	12.00	59.62	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	12	Flush	2.75/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
2	1	KN(Face)	0.625	6.00	59.63	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	12	Flush	2.75/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
3	2	SP	0.500	6.00	32.05	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
4	1	SP	0.500	6.00	32.00	0.750	A325N/ST	3.00	31	Extended	3.50	12	Flush	2.00
5	2	SP	0.500	6.00	37.15	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
6	2	SP	0.500	6.00	37.15	0.750	A325N/ST	3.00	12	Flush	2.00	43	Ext/Gusset	3.75/2.00
		Gusset In 2.625 x 0.2500 x 4.63 SP-BS-0.1875,												
7	1	SP	0.375	6.00	34.00	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
8	2	SP	0.375	6.00	34.04	0.750	A325N/ST	3.00	43	Ext/Gusset	3.50/2.00	31	Extended	3.50/2.00
		Gusset Out 2.500 x 0.2500 x 4.38 SP-BS-0.1875,												
9	1	KN(Face)	0.625	6.00	59.63	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	12	Flush	2.75/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												
10	2	KN(Face)	0.625	12.00	59.62	1.000	A325N/ST	3.50	43	Ext/Gusset	4.25/2.75	12	Flush	2.75/2.75
		Gusset Out 3.125 x 0.3750 x 5.50 SP-BS-0.3125,												

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	1	-50.1	40.1	9866.6	AISC DG-16/Thin plate	0.821	0.183	0.949	0.000	0.000	0.096	0.888	0.799
2	1	1	-50.1	40.1	9866.6	AISC DG-16/Thin plate	0.821	0.183	0.949	0.000	0.000	0.096	0.999	0.799
3	2	5	-34.6	17.8	2161.3	AISC DG-16/Thin plate	0.866	0.242	0.912	0.485	0.718	0.158	0.959	0.719
4	1	5	-34.6	17.8	2161.3	AISC DG-16/Thin plate	0.866	0.242	0.912	0.485	0.718	0.158	0.846	0.719
5	2	17	18.2	2.7	1052.0	AISC DG-16/Thin plate	0.660	0.037	0.904	0.000	0.000	0.019	0.959	0.719
6	2	17	18.2	2.7	1052.0	AISC DG-16/Thin plate	0.660	0.037	0.904	0.000	0.000	0.019	0.959	0.719
7	1	5	-34.6	17.8	2161.3	AISC DG-16/Thin plate	0.609	0.145	0.997	0.000	0.000	0.098	0.847	0.719

8	2	5	-34.6	17.8	2161.3	AISC DG-16/Thin plate	0.609	0.145	0.997	0.000	0.000	0.098	0.959	0.719
9	1	1	-50.1	40.1	9866.6	AISC DG-16/Thin plate	0.821	0.183	0.949	0.000	0.000	0.096	0.999	0.799
10	2	1	-50.1	40.1	9866.6	AISC DG-16/Thin plate	0.821	0.183	0.949	0.000	0.000	0.096	0.888	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	16	16.2	14.5	3305.5	AISC DG-16/Thin plate	0.595	0.111	0.980	0.000	0.000	0.058	0.959	0.799
2	1	16	16.2	14.5	3305.5	AISC DG-16/Thin plate	0.595	0.111	0.980	0.000	0.000	0.058	0.959	0.799
3	2	17	18.6	6.3	758.4	AISC DG-16/Thin plate	0.589	0.085	0.808	0.000	0.000	0.043	0.959	0.719
4	1	17	18.6	6.3	758.4	AISC DG-16/Thin plate	0.589	0.085	0.808	0.000	0.000	0.043	0.959	0.719
5	2	2	-47.1	0.9	3897.4	AISC DG-16/Thin plate	0.863	0.007	0.887	0.000	0.000	0.003	0.902	0.719
6	2	2	-47.1	0.9	3897.4	AISC DG-16/Thin plate	0.863	0.007	0.887	0.000	0.000	0.003	0.902	0.719
7	1	17	18.6	6.3	758.4	AISC DG-16/Thin plate	0.601	0.085	0.988	0.647	0.957	0.074	0.959	0.719
8	2	17	18.6	6.3	758.4	AISC DG-16/Thin plate	0.601	0.085	0.988	0.647	0.957	0.074	0.959	0.719
9	1	16	16.2	14.5	3305.5	AISC DG-16/Thin plate	0.595	0.111	0.980	0.000	0.000	0.058	0.959	0.799
10	2	16	16.2	14.5	3305.5	AISC DG-16/Thin plate	0.595	0.111	0.980	0.000	0.000	0.058	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.3125	Both	-	Fillet	0.3750	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.2500	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.2500	Both	-	Fillet	0.2500	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/7/5	56/1/6	(2)HFB6022	1.730	0	
2	6/7/5	51/1/6	GFB5097	2.922	0	
2	11/7/5	46/1/6	GFB5057	2.373	0	
3	3/11/0	41/1/6	GFB4050	2.407	2	
3	8/11/0	36/1/6	GFB4007	2.007	5	
4	3/11/0	31/1/6	GFB4007	1.226	5	
4	8/11/0	26/1/6	GFB4007	0.490	6	
5	3/11/0	21/1/6	GFB4007	0.735	6	
5	13/11/0	11/1/6	GFB4007	0.889	1	
5	18/11/0	6/1/6	GFB4027	0.864	1	
5	23/11/0	1/1/6	GFB4027	0.802	1	
6	23/11/0	1/1/6	GFB4027	0.802	0	
6	18/11/0	6/1/6	GFB4027	0.864	5	
6	13/11/0	11/1/6	GFB4007	0.889	2	
6	3/11/0	21/1/6	GFB4007	0.735	1	
7	8/11/0	26/1/6	GFB4007	0.490	0	
7	3/11/0	31/1/6	GFB4007	1.226	5	
8	8/11/0	36/1/6	GFB4007	2.007	0	
8	3/11/0	41/1/6	GFB4050	2.407	6	
9	11/7/5	46/1/6	GFB5057	2.373	0	
9	6/7/5	51/1/6	GFB5097	2.922	1	
9	1/7/5	56/1/6	HFB6022	1.730	1	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	18.78	52.00	2		-52.8		-9643.4	0.0	257.7		10775.0	891.9	1.00	

1	0.00	12.00		2		-42.7				59.4				0.72
2	1.88	56.00	2		-50.1		-9866.5	0.0	356.1		10883.7	398.5	0.98	
2	1.88	56.00		2		40.1				115.4				0.35
3	0.00	42.00	2		-49.4		-4501.2	0.0	203.4		5094.8	308.9	1.03	
3	0.00	42.00		2		30.3				41.6				0.73
4	10.00	29.00	6		-34.5		2173.8	0.0	144.3		2670.8	229.0	0.96	
4	0.00	29.00		2		25.7				32.1				0.80
5	13.92	31.80	1		-47.2		3532.6	0.0	159.7		4567.8	380.1	0.98	
5	0.00	29.00		2		18.0				42.5				0.42
6	13.92	31.80	2		-47.2		3532.6	0.0	159.7		4567.8	380.1	0.98	
6	0.00	29.00		1		-18.0				42.5				0.42
7	10.00	29.00	5		-34.5		2173.9	0.0	144.3		2670.8	229.0	0.96	
7	0.00	29.00		1		-25.7				32.1				0.80
8	0.00	42.00	1		-49.4		-4501.2	0.0	203.4		5094.8	308.9	1.03	
8	0.00	42.00		1		-30.3				41.6				0.73
9	1.88	56.00	1		-50.1		-9866.6	0.0	356.1		10883.7	398.5	0.98	
9	1.88	56.00		1		-40.1				115.4				0.35
10	18.78	52.00	1		-52.8		-9643.5	0.0	257.7		10775.0	891.9	1.00	
10	0.00	12.00		1		42.7				59.4				0.72

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	18.78	225.35	225.4	225.4	24.75	6.00	10720.56	144.07	412.33	24.01	471.56	36.80	1.27	95525.03	1.66	0.93	1.00	0.51	
2	1.88	692.07	19.5	19.5	24.61	3.75	10023.59	22.64	357.99	7.55	441.84	12.59	1.54	17355.19	1.03	0.92	1.00	0.48	
3	0.00	692.07	60.1	60.1	13.69	3.00	3660.39	18.02	174.30	6.01	203.30	9.36	0.59	7759.82	1.17	0.89	1.00	0.56	
4	10.00	692.07	60.0	60.0	9.14	2.25	1230.74	13.51	84.88	4.50	97.21	6.94	0.25	2767.58	1.11	0.95	1.00	0.64	
5	13.92	692.07	120.0	60.0	13.23	3.75	2267.50	22.52	142.62	7.51	160.63	11.52	1.05	5469.76	1.15	0.97	1.00	0.69	
6	13.92	692.07	120.0	60.0	13.23	3.75	2267.50	22.52	142.62	7.51	160.63	11.52	1.05	5469.76	1.15	0.97	1.00	0.69	
7	10.00	692.07	60.0	60.0	9.14	2.25	1230.74	13.51	84.88	4.50	97.21	6.94	0.25	2767.58	1.11	0.95	1.00	0.64	
8	0.00	692.07	60.1	60.1	13.69	3.00	3660.39	18.02	174.30	6.01	203.30	9.36	0.59	7759.82	1.17	0.89	1.00	0.56	
9	1.88	692.07	19.5	19.5	24.61	3.75	10023.59	22.64	357.99	7.55	441.84	12.59	1.54	17355.19	1.03	0.92	1.00	0.48	
10	18.78	225.35	225.4	225.4	24.75	6.00	10720.56	144.07	412.33	24.01	471.56	36.80	1.27	95525.03	1.66	0.93	1.00	0.51	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 7

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/722)	-0.347	10	2	10	WPR
Max. Vertical Deflection for Span 1	(L/328)	-4.345	6	2	4	SMS

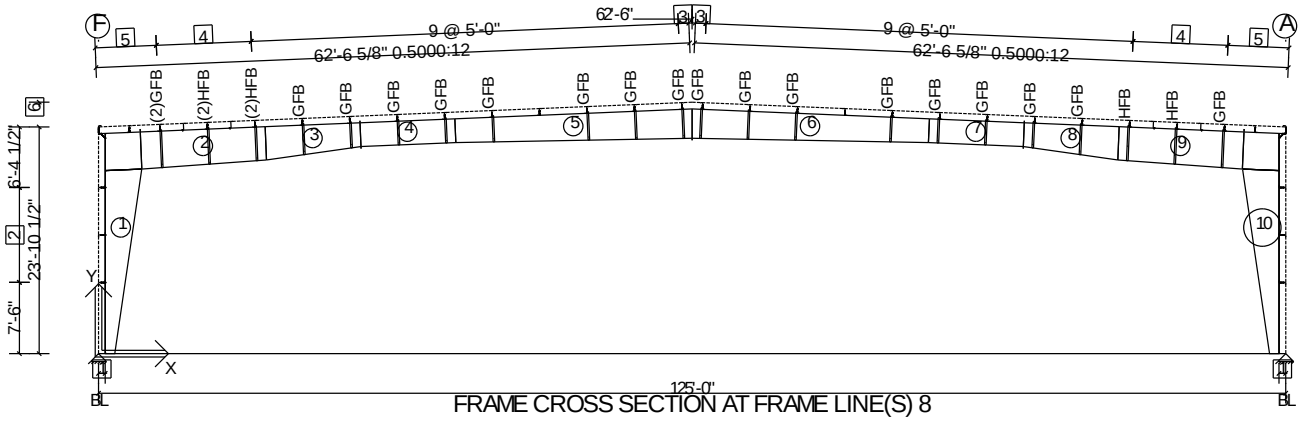
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 11.564 (k/in)
Fundamental Period (calculated) (T): 0.566 (sec.)

Wall: 4, Frame at: 152/0/0

Frame Cross Section: 8



FRAME CROSS SECTION AT FRAME LINE(S) 8

Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 4 @ 2'-6"
5 2 @ 3'-2 5/8"
6 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX009) and 10(CX009): 115'-10 15/16"
Vert. Clearance at member 1(CX009): 19'-4 3/4"
Vert. Clearance at member 10(CX009): 19'-4 3/4"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
152/0/0	21/10/8	Clearspan	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
3	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
4	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
5	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
6	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	12.00	0.5000	0.3125	12.00	46.00	23.20	1882.0	55.00	55.00	BP	KN	3P
2	6.00	0.6250	0.3125	47.00	42.00	16.82	1023.0	55.00	55.00	KN	SS	3P
3	6.00	0.3750	0.1875	42.00	30.00	10.00	399.8	55.00	55.00	SS	SP	3P
4	6.00	0.3125	0.1644	30.00	30.00	10.00	313.5	55.00	55.00	SP	SS	3P
5	6.00	0.5000	0.1875	30.00	37.00	25.00	1058.6	55.00	55.00	SS	SP	3P
6	6.00	0.5000	0.1875	30.00	37.00	25.00	1058.6	55.00	55.00	SS	SP	3P
7	6.00	0.3125	0.1644	30.00	30.00	10.00	313.5	55.00	55.00	SP	SS	3P
8	6.00	0.3750	0.1875	42.00	30.00	10.00	399.8	55.00	55.00	SS	SP	3P
9	6.00	0.6250	0.3125	47.00	42.00	16.82	1023.0	55.00	55.00	KN	SS	3P
10	12.00	0.5000	0.3125	12.00	46.00	23.20	1882.0	55.00	55.00	BP	KN	3P

Total Frame Weight = 9354.0 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 8

Type		Exterior Column		Exterior Column				
X-Loc		0/0/0		125/0/0				
Grid1 - Grid2		8-F		8-A				
Base Plate W x L (in.)		13 X 13		13 X 13				
Base Plate Thickness (in.)		0.750		0.750				
Anchor Rod Qty/Diam. (in.)		4 - 1.250		4 - 1.250				
Column Base Elev.		100'-0"		100'-0"				
Load Type	Desc.	Hx	Vy	Hx	Vy			

D	Frm	5.50	7.48	-5.50	7.48	-	-	-
CG	Frm	6.49	6.84	-6.49	6.84	-	-	-
SMS>	Frm	25.96	27.34	-25.96	27.34	-	-	-
<SMS	Frm	25.96	27.34	-25.96	27.34	-	-	-
S>	Frm	18.17	19.14	-18.17	19.14	-	-	-
SD	Frm	-	-	-	-	-	-	-
<S	Frm	18.17	19.14	-18.17	19.14	-	-	-
US1*	Frm	15.80	11.23	-15.80	19.66	-	-	-
*US1	Frm	15.80	19.66	-15.80	11.23	-	-	-
W2>	Frm	-23.63	-22.11	12.43	-12.27	-	-	-
<W2	Frm	-12.43	-12.27	23.63	-22.11	-	-	-
WPL	Frm	-24.92	-26.69	24.29	-34.22	-	-	-
WPR	Frm	-24.29	-34.22	24.92	-26.69	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-	-
MW - Wall: 2	Frm	2.38	0.89	6.43	-0.89	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-6.43	-0.89	-2.38	0.89	-	-	-
CU	Frm	-	-	-	-	-	-	-
W1>	Frm	-33.80	-35.38	22.61	-25.54	-	-	-
<W1	Frm	-22.61	-25.54	33.80	-35.38	-	-	-
S	Frm	18.17	19.14	-18.17	19.14	-	-	-
E>	Frm	-0.65	-0.24	-0.65	0.24	-	-	-
EG+	Frm	0.32	0.34	-0.32	0.34	-	-	-
<E	Frm	0.65	0.24	0.65	-0.24	-	-	-
EG-	Frm	-0.32	-0.34	0.32	-0.34	-	-	-
L	Frm	15.58	16.41	-15.58	16.41	-	-	-
SMS	Frm	25.96	27.34	-25.96	27.34	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	15.0	15.0
CG	0.0	0.0	13.7	13.7
SMS>	0.0	0.0	54.7	54.7
<SMS	0.0	0.0	54.7	54.7
S>	0.0	0.0	38.3	38.3
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	38.3	38.3
US1*	0.0	0.0	30.9	30.9
*US1	0.0	0.0	30.9	30.9
W2>	11.2	11.2	34.4	34.4
<W2	11.2	11.2	34.4	34.4
WPL	0.6	0.6	60.9	60.9
WPR	0.6	0.6	60.9	60.9
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	8.8	8.8	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	8.8	8.8	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	11.2	11.2	60.9	60.9
<W1	11.2	11.2	60.9	60.9
S	0.0	0.0	38.3	38.3
E>	1.3	1.3	0.0	0.0
EG+	0.0	0.0	0.7	0.7
<E	1.3	1.3	0.0	0.0
EG-	0.0	0.0	0.7	0.7
L	0.0	0.0	32.8	32.8
SMS	0.0	0.0	54.7	54.7

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	8-F	16.98	15	37.95	1	-	-	-	-	16.74	15	41.66	1	-	-	-	-

125/0/0	8-A	37.95	1	16.98	16	-	-	-	-	16.74	16	41.66	1	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	8-F	1	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	OS-0.2500
125/0/0	8-A	10	0.750	13	13	No	4	1.250	5.0	5.0	Std	OS-0.1875	OS-0.2500

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	38.98	41.70	1	16.86	-16.74	16	38.98	41.70	1	-	-	-	28
125/0/0	38.98	41.70	1	16.86	-16.74	16	38.98	41.70	1	-	-	-	28

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.761	1	0.157	16	0.161	16	-	0	0.223	1	0.069	16	0.075	1	0.314	1	0.902	1
125/0/0	0.761	1	0.157	16	0.161	16	-	0	0.223	1	0.069	16	0.075	1	0.314	1	0.902	1

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	19.21	44.825	143.44	N/A	N/A	0.5000	5.250	Both	SP-BS-0.3750,W-OS-0.1875,F-OS-0.1875
10	1	S9	19.21	44.825	143.44	N/A	N/A	0.5000	5.250	Both	SP-BS-0.3750,W-OS-0.1875,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.750	12.00	51.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	12	Flush	3.00/3.00
2	1	KN(Face)	0.750	8.00	51.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	12	Flush	3.00/3.00
3	2	SP	0.375	6.00	35.29	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.50/2.00
4	1	SP	0.375	6.00	35.25	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.50/2.00
5	2	SP	0.500	6.00	40.02	0.750	A325N/ST	3.00	12	Flush	2.00	33	Extended	3.50/2.00
6	2	SP	0.500	6.00	40.02	0.750	A325N/ST	3.00	12	Flush	2.00	33	Extended	3.50/2.00
7	1	SP	0.375	6.00	35.25	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.50/2.00
8	2	SP	0.375	6.00	35.29	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.50/2.00
9	1	KN(Face)	0.750	8.00	51.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	12	Flush	3.00/3.00
10	2	KN(Face)	0.750	12.00	51.25	1.125	A325N/ST	4.00	33	Extended	5.00/3.00	12	Flush	3.00/3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	1	-40.4	35.6	8492.4	AISC DG-16/Thin plate	0.717	0.129	0.925	0.506	0.771	0.064	0.944	0.799
2	1	1	-40.4	35.6	8492.4	AISC DG-16/Thin plate	0.717	0.129	0.925	0.506	0.771	0.064	0.999	0.799
3	2	6	-28.6	15.1	1592.3	AISC DG-16/Thin plate	0.545	0.154	0.965	0.485	0.718	0.111	0.799	0.719
4	1	6	-28.6	15.1	1592.3	AISC DG-16/Thin plate	0.545	0.154	0.965	0.485	0.718	0.111	0.799	0.719
5	2	18	17.4	2.8	1182.1	AISC DG-16/Thin plate	0.658	0.038	0.897	0.000	0.000	0.019	0.959	0.719
6	2	18	17.4	2.8	1182.1	AISC DG-16/Thin plate	0.658	0.038	0.897	0.000	0.000	0.019	0.959	0.719
7	1	6	-28.6	15.1	1592.3	AISC DG-16/Thin plate	0.545	0.154	0.962	0.485	0.718	0.111	0.959	0.719
8	2	6	-28.6	15.1	1592.3	AISC DG-16/Thin plate	0.545	0.154	0.962	0.485	0.718	0.111	0.959	0.719
9	1	1	-40.4	35.6	8492.4	AISC DG-16/Thin plate	0.717	0.129	0.925	0.506	0.771	0.064	0.999	0.799
10	2	1	-40.4	35.6	8492.4	AISC DG-16/Thin plate	0.717	0.129	0.925	0.506	0.771	0.064	0.944	0.799

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	16	15.3	15.4	3394.0	AISC DG-16/Thin plate	0.584	0.093	0.827	0.000	0.000	0.047	0.959	0.799

2	1	16	15.3	15.4	3394.0	AISC DG-16/Thin plate	0.584	0.093	0.827	0.000	0.000	0.047	0.959	0.799
3	2	18	17.9	6.4	696.7	AISC DG-16/Thin plate	0.544	0.087	0.912	0.485	0.718	0.073	0.799	0.719
4	1	18	17.9	6.4	696.7	AISC DG-16/Thin plate	0.544	0.087	0.912	0.485	0.718	0.073	0.799	0.719
5	2	2	-38.9	0.6	3629.3	AISC DG-16/Thin plate	0.734	0.005	0.952	0.588	0.869	0.003	0.929	0.719
6	2	2	-38.9	0.6	3629.3	AISC DG-16/Thin plate	0.734	0.005	0.952	0.588	0.869	0.003	0.929	0.719
7	1	18	17.9	6.4	696.7	AISC DG-16/Thin plate	0.544	0.087	0.908	0.485	0.718	0.073	0.959	0.719
8	2	18	17.9	6.4	696.7	AISC DG-16/Thin plate	0.544	0.087	0.908	0.485	0.718	0.073	0.959	0.719
9	1	16	15.3	15.4	3394.0	AISC DG-16/Thin plate	0.584	0.093	0.827	0.000	0.000	0.047	0.959	0.799
10	2	16	15.3	15.4	3394.0	AISC DG-16/Thin plate	0.584	0.093	0.827	0.000	0.000	0.047	0.959	0.799

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
3	2	SP	Fillet	0.1875	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	1	SP	Fillet	0.1875	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	2	SP	Fillet	0.2500	Both	-	Fillet	0.3125	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.2500	Both	-	Fillet	0.3125	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	1	SP	Fillet	0.1875	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	2	SP	Fillet	0.1875	Both	-	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	1	KN(Face)	Fillet	0.5000	Both	-	Fillet	0.3125	Both	-	Fillet	0.1875	Both	-	-	-	-	-
10	2	KN(Face)	Fillet	0.3750	Both	-	CJP	99.0000	CJP	-	Fillet	0.1875	Both	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	2/0/13	56/1/6	(2)GFB5077	1.650	0	
2	7/0/13	51/1/6	(2)HFB5077	2.598	0	B
2	12/0/13	46/1/6	(2)HFB5057	1.921	0	
3	3/11/0	41/1/6	GFB4050	1.695	2	
3	8/11/0	36/1/6	GFB4007	1.355	5	
4	3/11/0	31/1/6	GFB4007	0.786	6	
4	8/11/0	26/1/6	GFB4007	0.540	6	
5	3/11/0	21/1/6	GFB4007	0.770	6	
5	13/11/0	11/1/6	GFB4027	0.891	1	
5	18/11/0	6/1/6	GFB4050	0.858	1	
5	23/11/0	1/1/6	GFB4050	0.791	1	
6	23/11/0	1/1/6	GFB4050	0.791	0	
6	18/11/0	6/1/6	GFB4050	0.858	2	
6	13/11/0	11/1/6	GFB4027	0.891	2	
6	3/11/0	21/1/6	GFB4007	0.770	2	
7	8/11/0	26/1/6	GFB4007	0.540	0	
7	3/11/0	31/1/6	GFB4007	0.786	5	
8	8/11/0	36/1/6	GFB4007	1.355	0	
8	3/11/0	41/1/6	GFB4050	1.695	6	
9	12/0/13	46/1/6	HFB5057	1.921	0	
9	7/0/13	51/1/6	HFB5077	2.598	1	B
9	2/0/13	56/1/6	GFB5077	1.650	1	

(B) - (2) Washers req'd at Secondary Connection

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.49	46.00	2		-44.4		-8408.7	0.0	267.6		10480.4	897.1	0.89	
1	0.00	12.00		2		-35.9				74.2				0.48
2	1.70	47.00	2		-40.4		-8492.4	0.0	344.3		8933.4	398.0	1.01	
2	1.70	47.00		2		35.6				115.9				0.31
3	0.00	42.00	2		-40.7		-3544.8	0.0	157.8		4129.4	234.7	1.02	
3	0.00	42.00		2		25.9				41.4				0.63
4	10.00	30.00	6		-28.5		2036.1	0.0	125.8		2334.5	178.4	1.00	

4	0.00	30.00		2		21.7				31.9				0.68
5	13.92	33.92	1		-39.0		3302.8	0.0	123.3		4124.5	306.5	1.03	
5	0.00	30.00		2		15.3				42.0				0.36
6	13.92	33.92	2		-39.0		3302.8	0.0	123.3		4124.5	306.5	1.03	
6	0.00	30.00		1		-15.3				42.0				0.36
7	10.00	30.00	5		-28.5		2036.1	0.0	125.8		2334.5	178.4	1.00	
7	0.00	30.00		1		-21.7				31.9				0.68
8	0.00	42.00	1		-40.7		-3544.8	0.0	157.8		4129.4	234.7	1.02	
8	0.00	42.00		1		-25.9				41.4				0.63
9	1.70	47.00	1		-40.4		-8492.4	0.0	344.3		8933.4	398.0	1.01	
9	1.70	47.00		1		-35.6				115.9				0.31
10	19.49	46.00	1		-44.4		-8408.7	0.0	267.6		10480.4	897.1	0.89	
10	0.00	12.00		1		35.9				74.2				0.48

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag	
1	19.49	233.84	233.8	233.8	26.06	6.00	8584.05	144.11	373.22	24.02	431.20	37.10	1.46	74588.23	1.66	1.00	1.00	0.54	
2	1.70	697.48	25.1	25.1	21.80	3.75	6526.38	22.62	277.72	7.54	337.43	12.37	1.45	12159.91	1.04	0.97	1.00	0.55	
3	0.00	697.48	60.1	60.1	12.23	2.25	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.19	0.86	1.00	0.51	
4	10.00	697.48	60.0	60.0	8.58	1.88	1173.55	11.26	78.24	3.75	91.13	5.82	0.17	2481.19	1.10	0.94	1.00	0.59	
5	13.92	697.48	120.0	60.0	12.17	3.00	2232.47	18.02	131.64	6.01	151.04	9.29	0.57	5030.20	1.14	0.95	1.00	0.63	
6	13.92	697.48	120.0	60.0	12.17	3.00	2232.47	18.02	131.64	6.01	151.04	9.29	0.57	5030.19	1.14	0.95	1.00	0.63	
7	10.00	697.48	60.0	60.0	8.58	1.88	1173.55	11.26	78.24	3.75	91.13	5.82	0.17	2481.19	1.10	0.94	1.00	0.59	
8	0.00	697.48	60.1	60.1	12.23	2.25	3045.98	13.52	145.05	4.51	173.42	7.11	0.30	5857.48	1.19	0.86	1.00	0.51	
9	1.70	697.48	25.1	25.1	21.80	3.75	6526.38	22.62	277.72	7.54	337.43	12.37	1.45	12159.91	1.04	0.97	1.00	0.55	
10	19.49	233.84	233.8	233.8	26.06	6.00	8584.05	144.11	373.22	24.02	431.20	37.10	1.46	74588.23	1.66	1.00	1.00	0.54	

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 8

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/612)	0.417	1	2	9	WPL
Max. Vertical Deflection for Span 1	(L/320)	-4.468	6	2	4	SMS

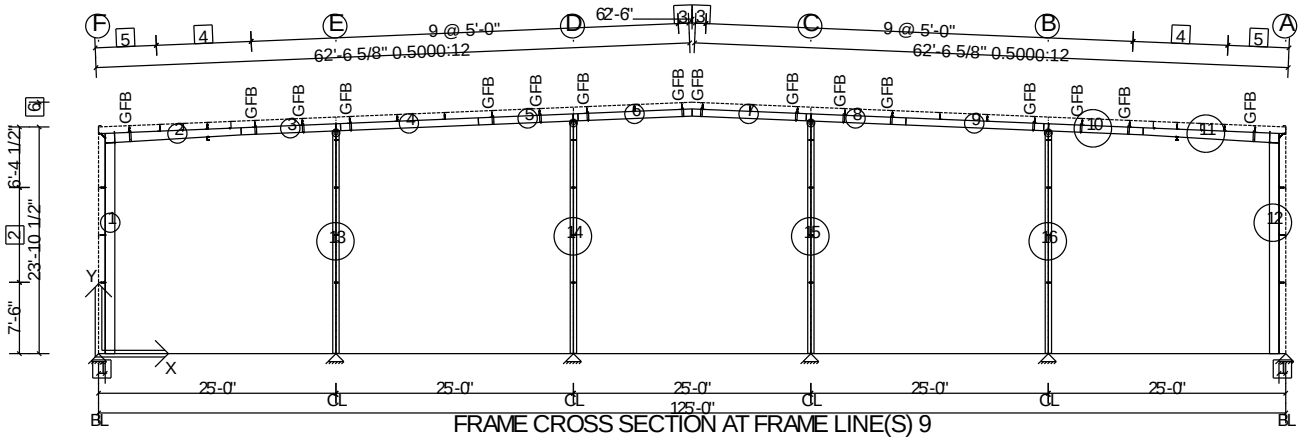
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 9.562 (k/in)
Fundamental Period (calculated) (T): 0.571 (sec.)

Wall: 4, Frame at: 168/9/0

Frame Cross Section: 9



Dimension Key

1 8 1/2"
2 2 @ 5'-0"
3 1'-1 3/8"
4 4 @ 2'-6"
5 2 @ 3'-2 5/8"
6 26'-5 3/4" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX010) and 12(CX010): 121'-6 13/16"
Vert. Clearance at member 1(CX010): 22'-0 5/16"
Vert. Clearance at member 12(CX010): 22'-0 5/16"
Vert. Clearance at member 13(EPX005): 23'-5 1/2"
Vert. Clearance at member 14(EPX006): 24'-6"
Vert. Clearance at member 15(EPX007): 24'-6"
Vert. Clearance at member 16(EPX008): 23'-5 1/2"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
168/9/0	9/7/8	Rigid Endwall 2	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 1 and 2)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 2 and 3)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 3 and 4)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 4 and 5)
9	System	1.000	1.0 D + 1.0 CG + 1.0 SMS>	D + CG + SMS>
10	System	1.000	1.0 D + 1.0 CG + 1.0 <SMS	D + CG + <SMS
11	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
12	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
13	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
14	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 1)
16	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 5)
17	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
18	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 5)
19	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1
20	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
21	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
22	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
23	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
27	System	1.000	0.6 MW	MW - Wall: 1
28	System	1.000	0.6 MW	MW - Wall: 2
29	System	1.000	0.6 MW	MW - Wall: 3
30	System	1.000	0.6 MW	MW - Wall: 4
31	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
32	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
34	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
35	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
36	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
37	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
38	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
39	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
40	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
41	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
42	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W1	D + CG + S + <W1
43	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W2>	D + CG + S + W2>
44	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2	D + CG + S + <W2
45	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL	D + CG + S + WPL
46	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
47	System	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
48	System	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
49	System	1.000	0.6 D + 0.6 CU + 0.7 E> + 0.7 EG-	D + CU + E> + EG-
50	System	1.000	0.6 D + 0.6 CU + 0.7 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	8.00	0.2500	0.1345	12.00	12.00	23.20	467.6	55.00	55.00	BP	KN	3P
2	5.00	0.1875	0.1345	12.00	9.00	14.30	157.5	55.00	55.00	KN	SS	3P
3	5.00	0.1875	0.1345	9.00	9.00	10.47	108.2	55.00	55.00	SS	SS	3P
4	5.00	0.1875	0.1345	9.00	9.00	14.52	156.1	55.00	55.00	SS	SP	3P
5	5.00	0.1875	0.1345	9.00	9.00	10.50	114.5	55.00	55.00	SP	SS	3P

6	5.00	0.1875	0.1345	9.00	9.00	12.04	130.3	55.00	55.00	SS	SP	3P
7	5.00	0.1875	0.1345	9.00	9.00	12.04	130.3	55.00	55.00	SS	SP	3P
8	5.00	0.1875	0.1345	9.00	9.00	10.50	114.5	55.00	55.00	SP	SS	3P
9	5.00	0.1875	0.1345	9.00	9.00	14.52	156.1	55.00	55.00	SS	SP	3P
10	5.00	0.1875	0.1345	9.00	9.00	10.47	108.2	55.00	55.00	SS	SS	3P
11	5.00	0.1875	0.1345	12.00	9.00	14.30	157.5	55.00	55.00	KN	SS	3P
12	8.00	0.2500	0.1345	12.00	12.00	23.20	467.6	55.00	55.00	BP	KN	3P
13	8.00	0.2500	0.1345	12.00	12.00	23.46	466.6	55.00	55.00	BP	CP	3P
14	8.00	0.2500	0.1345	12.00	12.00	24.50	486.3	55.00	55.00	BP	CP	3P
15	8.00	0.2500	0.1345	12.00	12.00	24.50	486.3	55.00	55.00	BP	CP	3P
16	8.00	0.2500	0.1345	12.00	12.00	23.46	466.6	55.00	55.00	BP	CP	3P

Total Frame Weight = 4173.8 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
13	No	Yes
14	No	Yes
15	No	Yes
16	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
12	125/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
13	25/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
14	50/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
15	75/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
16	100/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 9

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Interior Column		
X-Loc		0/0/0		25/0/0			50/0/0			75/0/0			100/0/0		
Grid1 - Grid2		9-F		10-E			D-10			C-10			B-10		
Base Plate W x L (in.)		9 X 13		9 X 13			9 X 13			9 X 13			9 X 13		
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.		100'-0"		100'-0"			100'-0"			100'-0"			100'-0"		
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
D	Frm	0.09	0.88	-	-	1.21	-	-	1.29	-	-	1.23	-	-	1.43
CG	Frm	0.08	0.61	-	-	1.21	-	-	1.21	-	-	1.21	-	-	1.21
L>	Frm	0.30	2.37	-	-	4.72	-	-	4.71	-	-	4.71	-	-	4.72
<L	Frm	0.30	2.37	-	-	4.72	-	-	4.71	-	-	4.71	-	-	4.72
ASL^	Frm	-0.15	-0.45	-	-	2.91	-	-	2.25	-	-	2.25	-	-	2.91
^ASL	Frm	0.44	2.81	-	-	1.81	-	-	2.45	-	-	2.45	-	-	1.81
SMS>	Frm	0.30	2.43	-	-	4.84	-	-	4.83	-	-	4.83	-	-	4.84
<SMS	Frm	0.30	2.43	-	-	4.84	-	-	4.83	-	-	4.83	-	-	4.84
S>	Frm	0.21	1.70	-	-	3.39	-	-	3.38	-	-	3.38	-	-	3.39
SD	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<S	Frm	0.21	1.70	-	-	3.39	-	-	3.38	-	-	3.38	-	-	3.39
US1*	Frm	0.12	0.59	-	-	0.88	-	-	1.33	-	-	5.17	-	-	4.19
*US1	Frm	0.12	1.50	-	-	4.19	-	-	5.17	-	-	1.33	-	-	0.88
W2>	Frm	-4.05	-4.42	-	-	-3.90	-	-	-6.16	-	-	-1.96	-	-	-4.36
<W2	Frm	2.06	0.60	-	-	-4.36	-	-	-1.96	-	-	-6.16	-	-	-3.90
WPL	Frm	1.22	-2.95	-	-	-3.97	-	-	-4.90	-	-	-7.67	-	-	-8.45
WPR	Frm	1.59	-3.98	-	-	-8.45	-	-	-7.67	-	-	-4.90	-	-	-3.97
MW - Wall: 1	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW - Wall: 2	Frm	1.14	1.39	-	-	-1.65	-	-	0.41	-	-	-0.49	-	-	1.48
MW - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW - Wall: 4	Frm	-2.76	-1.13	-	-	1.48	-	-	-0.49	-	-	0.41	-	-	-1.65
CU	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W1>	Frm	-3.21	-5.74	-	7.22	-6.14	-	7.54	-8.45	-	7.54	-4.25	-	7.22	-6.61
<W1	Frm	2.90	-0.72	-	-6.50	-6.61	-	-6.78	-4.25	-	-6.78	-8.45	-	-6.50	-6.14
L	Frm	0.30	2.37	-	-	4.72	-	-	4.71	-	-	4.71	-	-	4.72
S	Frm	0.21	1.70	-	-	3.39	-	-	3.38	-	-	3.38	-	-	3.39
E>	Frm	-0.30	-0.34	-	0.05	0.41	-	0.05	-0.12	-	0.05	0.12	-	0.05	-0.41
EG+	Frm	-	0.03	-	-	0.06	-	-	0.06	-	-	0.06	-	-	0.06

<E	Frm	0.30	0.34	-	-0.05	-0.41	-	-0.05	0.12	-	-0.05	-0.12	-	-0.05	0.41
EG-	Frm	-	-0.03	-	-	-0.06	-	-	-0.06	-	-	-0.06	-	-	-0.06
SMS	Frm	0.30	2.43	-	-	4.84	-	-	4.83	-	-	4.83	-	-	4.84

Type		Exterior Column					
X-Loc		125/0/0					
Grid1 - Grid2		9-A					
Base Plate W x L (in.)		9 X 13					
Base Plate Thickness (in.)		0.375					
Anchor Rod Qty/Diam. (in.)		4 - 0.750					
Column Base Elev.		100'-0"					
Load Type	Desc.	Hx	Vy				
D	Frm	-0.09	1.24	-	-	-	-
CG	Frm	-0.08	0.61	-	-	-	-
L>	Frm	-0.30	2.37	-	-	-	-
<L	Frm	-0.30	2.37	-	-	-	-
ASL^	Frm	0.15	-0.45	-	-	-	-
^ASL	Frm	-0.44	2.81	-	-	-	-
SMS>	Frm	-0.30	2.43	-	-	-	-
<SMS	Frm	-0.30	2.43	-	-	-	-
S>	Frm	-0.21	1.70	-	-	-	-
SD	Frm	-	-	-	-	-	-
<S	Frm	-0.21	1.70	-	-	-	-
US1*	Frm	-0.12	1.50	-	-	-	-
*US1	Frm	-0.12	0.59	-	-	-	-
W2>	Frm	-2.06	0.60	-	-	-	-
<W2	Frm	4.05	-4.42	-	-	-	-
WPL	Frm	-1.59	-3.98	-	-	-	-
WPR	Frm	-1.22	-2.95	-	-	-	-
MW - Wall: 1	Frm	-	-	-	-	-	-
MW - Wall: 2	Frm	2.76	-1.13	-	-	-	-
MW - Wall: 3	Frm	-	-	-	-	-	-
MW - Wall: 4	Frm	-1.14	1.39	-	-	-	-
CU	Frm	-	-	-	-	-	-
W1>	Frm	-2.90	-0.72	-	-	-	-
<W1	Frm	3.21	-5.74	-	-	-	-
L	Frm	-0.30	2.37	-	-	-	-
S	Frm	-0.21	1.70	-	-	-	-
E>	Frm	-0.30	0.34	-	-	-	-
EG+	Frm	-	0.04	-	-	-	-
<E	Frm	0.30	-0.34	-	-	-	-
EG-	Frm	-	-0.04	-	-	-	-
SMS	Frm	-0.30	2.43	-	-	-	-

Sum of Forces with Reactions Check - Framing

	Horizontal		Vertical	
Load Type	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	7.3	7.3
CG	0.0	0.0	6.0	6.0
L>	0.0	0.0	23.6	23.6
<L	0.0	0.0	23.6	23.6
ASL^	0.0	0.0	9.4	9.4
^ASL	0.0	0.0	14.1	14.1
SMS>	0.0	0.0	24.2	24.2
<SMS	0.0	0.0	24.2	24.2
S>	0.0	0.0	16.9	16.9
SD	0.0	0.0	0.0	0.0
<S	0.0	0.0	16.9	16.9
US1*	0.0	0.0	13.7	13.7
*US1	0.0	0.0	13.7	13.7
W2>	6.1	6.1	20.2	20.2
<W2	6.1	6.1	20.2	20.2
WPL	0.4	0.4	31.9	31.9

WPR	0.4	0.4	31.9	31.9
MW - Wall: 1	0.0	0.0	0.0	0.0
MW - Wall: 2	3.9	3.9	0.0	0.0
MW - Wall: 3	0.0	0.0	0.0	0.0
MW - Wall: 4	3.9	3.9	0.0	0.0
CU	0.0	0.0	0.0	0.0
W1>	6.1	6.1	31.9	31.9
<W1	6.1	6.1	31.9	31.9
L	0.0	0.0	23.6	23.6
S	0.0	0.0	16.9	16.9
E>	0.6	0.6	0.0	0.0
EG+	0.0	0.0	0.3	0.3
<E	0.6	0.6	0.0	0.0
EG-	0.0	0.0	0.3	0.3
SMS	0.0	0.0	24.2	24.2

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	9-F	2.26	23	1.79	32	-	-	-	-	2.92	31	4.30	4	-	-	-	-
25/0/0	10-E	-	-	-	-	3.90	32	4.33	31	4.35	34	7.68	5	-	-	-	-
50/0/0	D-10	-	-	-	-	4.07	32	4.52	31	4.30	31	7.84	6	-	-	-	-
75/0/0	C-10	-	-	-	-	4.07	32	4.52	31	4.33	32	7.78	7	-	-	-	-
100/0/0	B-10	-	-	-	-	3.90	32	4.33	31	4.22	33	7.89	8	-	-	-	-
125/0/0	9-A	1.79	31	2.26	24	-	-	-	-	2.70	32	4.66	4	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage and pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	9-F	1	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
25/0/0	10-E	13	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
50/0/0	D-10	14	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
75/0/0	C-10	15	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
100/0/0	B-10	16	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
125/0/0	9-A	12	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	2.33	-1.20	23	1.77	-2.71	31	0.54	4.57	4	-	-	-	33
25/0/0	4.27	-2.74	31	0.02	-4.29	34	0.08	8.11	8	-	-	-	0
50/0/0	4.48	-1.78	31	3.97	-4.15	32	0.05	7.88	6	-	-	-	0
75/0/0	4.48	-1.78	31	3.97	-4.15	32	0.05	7.88	6	-	-	-	0
100/0/0	4.27	-2.74	31	0.02	-4.29	34	0.08	8.11	8	-	-	-	0
125/0/0	2.33	-1.20	23	1.77	-2.71	31	0.54	4.57	4	-	-	-	33

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.126	23	0.070	31	-	0	-	0	0.035	4	0.082	31	0.028	4	0.048	4	0.069	23
25/0/0	0.231	31	0.112	34	-	0	-	0	0.063	8	0.130	34	0.049	8	0.085	8	0.126	31
50/0/0	0.243	31	0.108	32	-	0	-	0	0.061	6	0.126	32	0.048	6	0.083	6	0.133	31
75/0/0	0.243	31	0.108	32	-	0	-	0	0.061	6	0.126	32	0.048	6	0.083	6	0.133	31
100/0/0	0.231	31	0.112	34	-	0	-	0	0.063	8	0.130	34	0.049	8	0.085	8	0.126	31
125/0/0	0.126	23	0.070	31	-	0	-	0	0.035	4	0.082	31	0.028	4	0.048	4	0.069	23

Web Stiffener Summary

Mem.	Stiff.	Desc.	Loc.	Web Depth	h/t	a/h	a	Thick.	Width	Side	Welding

No.	No.		(ft)	(in.)			(in.)	(in.)	(in.)		Description
1	1	S9	22.16	11.520	85.65	N/A	N/A	0.2500	3.000	Both	SP-BS-0.1250,W-OS-0.1250,F-OS-0.1250
3	1	S2	9.97	8.625	64.13	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
5	1	S2	10.00	8.625	64.13	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
8	1	S2	10.00	8.625	64.13	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
10	1	S2	9.97	8.625	64.13	N/A	N/A	0.1875	2.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
12	1	S9	22.16	11.520	85.65	N/A	N/A	0.2500	3.000	Both	SP-BS-0.1250,W-OS-0.1250,F-OS-0.1250

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem.	Jt.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.375	8.00	17.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
2	1	KN(Face)	0.375	6.00	17.13	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
4	2	SP	0.375	6.00	10.00	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
5	1	SP	0.375	6.00	10.00	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
6	2	SP	0.375	6.00	10.01	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
7	2	SP	0.375	6.00	10.01	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
8	1	SP	0.375	6.00	10.00	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
9	2	SP	0.375	6.00	10.00	0.750	A325N/ST	3.00	11	Flush	2.50	11	Flush	2.50
11	1	KN(Face)	0.375	6.00	17.13	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
12	2	KN(Face)	0.375	8.00	17.12	0.750	A325N/ST	3.00	32	Extended	3.50/2.00	31	Extended	3.25/2.00
13	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00
14	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00
15	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00
16	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	38	-1.1	3.3	369.6	AISC DG-16/Thin plate	0.415	0.033	0.931	0.324	0.446	0.024	0.959	0.516
2	1	38	-1.1	3.3	369.6	AISC DG-16/Thin plate	0.415	0.033	0.931	0.324	0.446	0.024	0.715	0.516
4	2	32	0.5	0.6	61.7	AISC DG-16/Thin plate	0.275	0.013	0.443	0.000	0.000	0.010	0.719	0.516
5	1	32	0.5	0.6	61.7	AISC DG-16/Thin plate	0.275	0.013	0.443	0.000	0.000	0.010	0.719	0.516
6	2	31	0.8	0.0	38.3	AISC DG-16/Thin plate	0.181	0.000	0.290	0.000	0.000	0.000	0.719	0.516
7	2	31	0.8	0.0	38.3	AISC DG-16/Thin plate	0.181	0.000	0.290	0.000	0.000	0.000	0.719	0.516
8	1	32	0.5	0.6	61.7	AISC DG-16/Thin plate	0.275	0.013	0.443	0.000	0.000	0.010	0.719	0.516
9	2	32	0.5	0.6	61.7	AISC DG-16/Thin plate	0.275	0.013	0.443	0.000	0.000	0.010	0.719	0.516
11	1	38	-1.1	3.3	369.6	AISC DG-16/Thin plate	0.415	0.033	0.931	0.324	0.446	0.024	0.715	0.516
12	2	38	-1.1	3.3	369.6	AISC DG-16/Thin plate	0.415	0.033	0.931	0.324	0.446	0.024	0.959	0.516

Inside Flange		Required Strength					Strength Ratios *							
Mem.	Jt.	Ld	Axial	Shear	Moment	Design	Bolt	Bolt	Plate	Shear	Shear	Bearing	Flange	Web
No.	No.	Cs	(k)	(k)	(in-k)	Proc.	Tension	Shear	Bending	Yielding	Rupture	Tearing	Weld	Weld
1	2	31	0.3	2.7	240.7	AISC DG-16/Thin plate	0.316	0.036	0.678	0.324	0.434	0.031	0.959	0.516
2	1	31	0.3	2.7	240.7	AISC DG-16/Thin plate	0.316	0.036	0.678	0.324	0.434	0.031	0.719	0.516
4	2	3	0.0	0.6	126.4	AISC DG-16/Thin plate	0.543	0.012	0.873	0.000	0.000	0.010	0.719	0.516
5	1	3	0.0	0.6	126.4	AISC DG-16/Thin plate	0.543	0.012	0.873	0.000	0.000	0.010	0.719	0.516
6	2	4	-0.6	0.0	135.9	AISC DG-16/Thin plate	0.572	0.001	0.919	0.000	0.000	0.001	0.719	0.516
7	2	4	-0.6	0.0	135.9	AISC DG-16/Thin plate	0.572	0.001	0.919	0.000	0.000	0.001	0.719	0.516
8	1	3	0.0	0.6	126.4	AISC DG-16/Thin plate	0.543	0.012	0.873	0.000	0.000	0.010	0.719	0.516
9	2	3	0.0	0.6	126.4	AISC DG-16/Thin plate	0.543	0.012	0.873	0.000	0.000	0.010	0.719	0.516
11	1	31	0.3	2.7	240.7	AISC DG-16/Thin plate	0.316	0.036	0.678	0.324	0.434	0.031	0.719	0.516
12	2	31	0.3	2.7	240.7	AISC DG-16/Thin plate	0.316	0.036	0.678	0.324	0.434	0.031	0.959	0.516

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem.	Jt.	Ld	Axial	Shear	Ld	Axial	Shear	Bolt	Bolt	Bolt	Plate	Flange	Flange	Flange	Web
No.	No.	Cs	(k)	(k)	Cs	(k)	(k)	Tension	Shear	V + T	Bending	Yielding	Bearing	Weld	Weld
13	2	0	3.4	4.3	0	4.3	0.2	0.135	0.204	0.000	0.094	0.032	0.082	0.082	0.135
14	2	0	4.4	4.6	0	4.4	4.6	0.138	0.215	0.000	0.096	0.033	0.087	0.080	0.142
15	2	0	4.4	4.6	0	4.4	4.6	0.138	0.215	0.000	0.096	0.033	0.087	0.080	0.142
16	2	0	3.4	4.3	0	4.3	0.2	0.135	0.204	0.000	0.094	0.032	0.082	0.082	0.135

Bolted End-Plate Connections Weld Data:

Mem.	Jt.		Outside Flange				Inside Flange				Web				WS_P_01 Web Weld			
No.	No.	Type	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes	Type	Size (in.)	Side	Notes
1	2	KN(Face)	Fillet	0.1250	Both	-	CJP	99.0000	CJP	-	Fillet	0.1250	Both	-	-	-	-	-
2	1	KN(Face)	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
4	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
5	1	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
6	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
7	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
8	1	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
9	2	SP	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
11	1	KN(Face)	Fillet	0.1875	Both	-	Fillet	0.1250	Both	-	Fillet	0.1250	Both	-	-	-	-	-
12	2	KN(Face)	Fillet	0.1250	Both	-	CJP	99.0000	CJP	-	Fillet	0.1250	Both	-	-	-	-	-
13	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
14	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
15	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-
16	2	CP	Fillet	0.1875	One	-	Fillet	0.1875	One	-	Fillet	0.1875	One	-	-	-	-	-

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
2	1/6/14	59/4/0	GFB2050	0.531	0	
3	1/5/7	46/1/6	GFB2037	0.129	32	
3	6/5/7	41/1/6	GFB2033	0.181	3	
4	0/11/12	36/1/6	GFB2033	0.324	5	
5	1/5/8	21/1/6	GFB2037	0.107	3	
5	6/5/8	16/1/6	GFB2033	0.166	4	
6	0/11/8	11/1/6	GFB2033	0.313	6	
6	10/11/8	1/1/6	GFB2037	0.083	4	
7	10/11/8	1/1/6	GFB2037	0.083	7	
7	0/11/8	11/1/6	GFB2033	0.313	4	
8	6/5/8	16/1/6	GFB2033	0.166	3	
8	1/5/8	21/1/6	GFB2037	0.107	0	
9	0/11/12	36/1/6	GFB2033	0.324	32	
10	6/5/7	41/1/6	GFB2033	0.181	4	
10	1/5/7	46/1/6	GFB2037	0.129	0	
11	1/6/14	59/4/0	GFB2050	0.531	38	

Top OF Post Summary

X-Loc	Grid	Top Reaction	Conn. Force	Condition	Flg Mn Moment	Rb Allow Shear	Comp	FB Force R1	FB Angle R2	Min Purlin	FB Typ	Purlin Bearing	Bolt Shear	FB/WSF Bearing
25/0/0	10-E	4.33	2.54	Std	64.45	3.16	N	2.06	28.03	0.060	GFB	2.52	4.71	3.07
							N	0.82	28.03	0.060	GFB	2.52	4.71	3.07
50/0/0	D-10	4.52	2.73	Std	64.45	3.19	N	2.22	28.03	0.060	GFB	2.52	4.71	3.07
							N	0.86	28.03	0.060	GFB	2.52	4.71	3.07
75/0/0	C-10	4.52	2.73	Std	64.45	3.19	N	2.22	28.03	0.060	GFB	2.52	4.71	3.07
							N	0.86	28.03	0.060	GFB	2.52	4.71	3.07
100/0/0	B-10	4.33	2.54	Std	64.45	3.16	N	2.06	28.03	0.060	GFB	2.52	4.71	3.07
							N	0.82	28.03	0.060	GFB	2.52	4.71	3.07

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	22.24	12.00	38		-4.0		-380.8	0.0	43.3		543.1	142.6	0.75	
1	0.00	12.00		23		2.3				21.8				0.10
2	2.06	11.64	38		-1.0		-310.5	0.0	22.6		320.8	55.8	0.99	
2	0.48	12.00		4		3.5				21.6				0.16
3	9.99	9.00	5		0.0		-196.9	0.0	57.3		292.8	58.4	0.67	
3	9.99	9.00		5		-3.7				21.8				0.17
4	1.47	9.00	5		-0.4		-135.8	0.0	18.2		197.8	58.4	0.70	
4	0.00	9.00		5		3.7				21.8				0.17
5	10.01	9.00	6		0.0		-202.5	0.0	100.2		292.8	58.4	0.69	
5	10.01	9.00		14		-3.7				21.8				0.17
6	0.00	9.00	6		-0.2		-202.5	0.0	66.3		292.8	58.4	0.69	

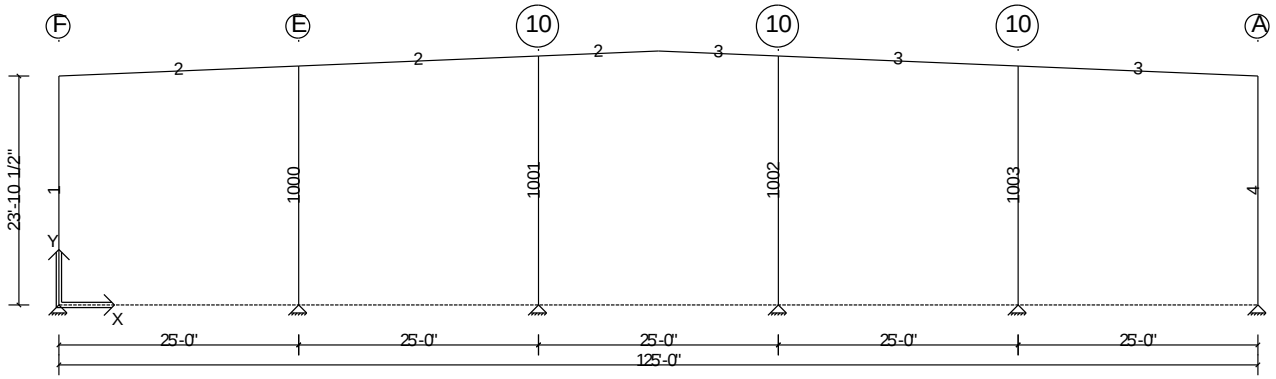
6	0.00	9.00		6		3.7				21.8				0.17
7	0.00	9.00	7		-0.2		-198.6	0.0	66.3		292.8	58.4	0.68	
7	0.00	9.00		7		-3.7				21.8				0.17
8	10.01	9.00	7		0.0		-198.7	0.0	100.2		292.8	58.4	0.68	
8	10.01	9.00		7		3.7				21.8				0.17
9	0.00	9.00	8		-0.4		-208.5	0.0	54.8		292.8	58.4	0.72	
9	0.00	9.00		8		-3.7				21.8				0.17
10	9.99	9.00	8		0.0		-208.6	0.0	57.3		292.8	58.4	0.71	
10	9.99	9.00		8		3.9				21.8				0.18
11	0.48	12.00	37		-1.0		-357.4	0.0	63.6		407.7	55.4	0.88	
11	0.48	12.00		4		-3.7				21.6				0.17
12	22.24	12.00	37		-4.3		-370.7	0.0	43.3		541.6	142.6	0.73	
12	0.00	12.00		24		-2.3				21.8				0.10
13	11.73	12.00	31		3.1		-309.4	0.0	183.0		374.0	142.6	0.84	
13	0.00	12.00		31		-4.3				21.8				0.20
14	12.25	12.00	31		4.1		-337.1	0.0	183.0		351.9	142.6	0.97	
14	0.00	12.00		31		-4.5				21.8				0.21
15	12.25	12.00	31		1.8		-337.1	0.0	183.0		343.2	142.6	0.99	
15	0.00	12.00		31		-4.5				21.8				0.21
16	11.73	12.00	31		2.7		-309.4	0.0	183.0		372.6	142.6	0.84	
16	0.00	12.00		31		-4.3				21.8				0.20

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Aeff/ Ag
1	22.24	266.84	266.8	266.8	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.55	1.00	1.08	0.70
2	2.06	280.06	158.7	158.7	3.39	0.94	77.58	3.91	13.32	1.56	15.01	2.39	0.03	128.26	1.89	1.00	1.13	0.97
3	9.99	280.06	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	0.89
4	1.47	300.26	180.0	180.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.78	1.00	1.11	1.00
5	10.01	300.26	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	1.00
6	0.00	150.13	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	0.83
7	0.00	150.13	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	0.83
8	10.01	300.26	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	1.00
9	0.00	300.26	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	0.91
10	9.99	280.06	60.0	60.0	3.04	0.94	43.60	3.91	9.69	1.56	10.76	2.38	0.03	75.87	1.20	1.00	1.11	0.89
11	0.48	280.06	19.0	19.0	3.44	0.94	83.02	3.91	13.84	1.56	15.62	2.40	0.03	136.35	1.08	1.00	1.13	0.73
12	22.24	266.84	266.8	266.8	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.54	1.00	1.08	0.70
13	11.73	285.99	281.5	281.5	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.17	1.00	1.08	1.00
14	12.25	298.49	294.0	294.0	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.18	1.00	1.08	1.00
15	12.25	298.49	294.0	294.0	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.15	1.00	1.08	1.00
16	11.73	285.99	281.5	281.5	5.55	2.00	155.13	21.34	25.85	5.33	27.95	8.05	0.09	736.41	1.16	1.00	1.08	1.00

User Defined Frame Point Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
3	k	D	Parapet Post (Building - Shape 1)->Resolved From Plane	-0.54	55/0/0	NA	NA	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	User	1.000	0	10	1.0 D	D
2	User	1.000	0	10	1.0 CG	CG
3	System	1.000	0	180	1.0 L	L
4	System	1.000	0	180	1.0 SMS	SMS
5	System	1.000	60	180	0.42 W1>	W1>
6	System	1.000	60	180	0.42 <W1	<W1
7	System	1.000	60	180	0.42 W2>	W2>
8	System	1.000	60	180	0.42 <W2	<W2
9	System	1.000	60	180	0.42 WPL	WPL
10	System	1.000	60	180	0.42 WPR	WPR
11	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
12	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 9

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/88)	-3.078	12	2	8	<W2
Max. Vertical Deflection for Span 1	(L/640)	0.445	3	1	6	<W1
Max. Vertical Deflection for Span 2	(L/1010)	0.297	5	1	5	W1>
Max. Vertical Deflection for Span 3	(L/1111)	-0.270	7	2	4	SMS
Max. Vertical Deflection for Span 4	(L/1010)	0.297	9	2	6	<W1
Max. Vertical Deflection for Span 5	(L/640)	0.445	11	2	5	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 0.440 (k/in)
Fundamental Period (calculated) (T): 1.804 (sec.)

Covering - Summary Report

Shape: Building - Shape 1

Loads and Codes - Shape: Building - Shape 1

City: Lees Summit **County:** Jackson **State:** Missouri **Country:** United States
Building Code: IBC 2018 Structural: 16AISC - ASD Rainfall: I: 3.00 inches per hour
Based on Building Code: 2018 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads
Collateral Gravity: 5.00 psf
Collateral Uplift: 0.00 psf
Roof Covering + Second. Dead Load: 2.26 psf
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used
Primaries Wind Exposure: C - Kz: 0.936
Parts Wind Exposure Factor: 0.936
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 0.0 ft
Primary Zone Strip Width: 2a: 19/1/3
Parts / Portions Zone Strip Width:
Walls, a: 9/6/10
Roof(s), 0.6h: 14/3/14
Velocity Pressure: qz: 26.94, (C&C) 26.94 psf

Snow Load
Ground Snow Load: pg: 20.00 psf

Flat Roof Snow: pf: 14.00 psf
Design Snow (Sloped): ps: 14.00 psf
Rain Surcharge: 0.00 psf
Specified Minimum Roof Snow: 20.00 psf (Code)
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Heated - Ct: 1.00
Ground / Roof Conversion: 0.70
Obstructed or Not Slippery

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 12.00 %g
Mapped MCE Acceleration: S1: 6.00 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.1280
Design Acceleration Parameter: Sd1: 0.0960
Seismic Design Category: B
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 25/2/2

Transverse Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.3698
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Longitudinal Direction Parameters
System NOT detailed for Seismic
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2248
R-Factor: 3.00
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.0427 x W

Load Notes
Collateral Load Description - Lights HVAC, mics

Covering Design Loads - Wall: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Not designed	23.28	0/0/0	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	0/0/0	-1.000		IN	1.080
End Zone	psf	W1>	Not designed	23.28	115/5/6	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	115/5/6	-1.000		IN	1.080
Interior Area	psf	W1>	Not designed	18.91	9/6/10	-1.000		OUT	-1.170
Interior Area	psf	<W2	Not designed	17.46	9/6/10	-1.000		IN	1.080

Covering Design Loads - Wall: 2

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Not designed	23.28	0/0/0	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	0/0/0	-1.000		IN	1.080
End Zone	psf	W1>	Not designed	23.28	160/5/6	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	160/5/6	-1.000		IN	1.080
Interior Area	psf	W1>	Not designed	18.91	9/6/10	-1.000		OUT	-1.170
Interior Area	psf	<W2	Not designed	17.46	9/6/10	-1.000		IN	1.080

Covering Design Loads - Wall: 3

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Not designed	23.28	0/0/0	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	0/0/0	-1.000		IN	1.080
End Zone	psf	W1>	Not designed	23.28	115/5/6	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	115/5/6	-1.000		IN	1.080
Interior Area	psf	W1>	Not designed	18.91	9/6/10	-1.000		OUT	-1.170
Interior Area	psf	<W2	Not designed	17.46	9/6/10	-1.000		IN	1.080

Covering Design Loads - Wall: 4

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Not designed	23.28	0/0/0	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	0/0/0	-1.000		IN	1.080
End Zone	psf	W1>	Not designed	23.28	160/5/6	-1.000		OUT	-1.440
End Zone	psf	<W2	Not designed	17.46	160/5/6	-1.000		IN	1.080
Interior Area	psf	W1>	Not designed	18.91	9/6/10	-1.000		OUT	-1.170
Interior Area	psf	<W2	Not designed	17.46	9/6/10	-1.000		IN	1.080

Covering Design Loads - Roof: A

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.18	0/0/0	121.000	0.18	IN	0.999
Entire Surface	psf	S	Standard Spacing is Adequate	15.19	0/0/0	121.000	0.13	IN	0.999
Unbalanced Snow	psf	*US1	Standard Spacing is Adequate	15.19	0/0/0	121.000	0.13	IN	0.999
Entire Surface	psf	SMS	Standard Spacing is Adequate	21.18	0/0/0	121.000	0.18	IN	0.999
Unbalanced Snow	psf	*US1	Standard Spacing is Adequate	23.63	0/0/0	121.000	0.20	IN	0.999
Snow Drift	psf	SD	Standard Spacing is Adequate	54.12	0/0/0	121.000	0.45	IN	0.999
Snow Drift	psf	SD	Standard Spacing is Adequate	39.73	0/0/0	121.000	0.33	IN	0.999
Snow Drift	psf	SD	Standard Spacing is Adequate	25.33	0/0/0	121.000	0.21	IN	0.999
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	155/8/2	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	155/8/2	31.000	0.96	OUT	-1.880
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	165/2/11	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	165/2/11	36.000	1.00	OUT	-2.265
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	155/8/2	36.000	1.00	OUT	-2.265
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	4/9/5	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	4/9/5	31.000	0.96	OUT	-1.880
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	0/0/0	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	0/0/0	36.000	1.00	OUT	-2.265
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	0/0/0	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	0/0/0	36.000	1.00	OUT	-2.265
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	28/7/13	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	141/4/3	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	141/4/3	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	141/4/3	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	141/4/3	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	28/7/13	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Interior Area	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Interior Area	psf	W1>	Standard Spacing is Adequate	16.74	28/7/13	31.000	0.54	OUT	-1.080

Covering Design Loads - Roof: B

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	21.18	0/0/0	121.000	0.18	IN	0.999
Entire Surface	psf	S	Standard Spacing is Adequate	15.19	0/0/0	121.000	0.13	IN	0.999
Unbalanced Snow	psf	US1*	Standard Spacing is Adequate	15.19	0/0/0	121.000	0.13	IN	0.999
Entire Surface	psf	SMS	Standard Spacing is Adequate	21.18	0/0/0	121.000	0.18	IN	0.999
Unbalanced Snow	psf	US1*	Standard Spacing is Adequate	23.63	0/0/0	121.000	0.20	IN	0.999

Snow Drift	psf	SD	Standard Spacing is Adequate	25.33	170/0/0	121.000	0.21	IN	0.999
Snow Drift	psf	SD	Standard Spacing is Adequate	39.73	170/0/0	121.000	0.33	IN	0.999
Snow Drift	psf	SD	Standard Spacing is Adequate	54.12	170/0/0	121.000	0.45	IN	0.999
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	155/8/2	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	155/8/2	31.000	0.96	OUT	-1.880
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	165/2/11	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	165/2/11	36.000	1.00	OUT	-2.265
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	155/8/2	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	155/8/2	36.000	1.00	OUT	-2.265
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Side Zone	psf	<W2	Standard Spacing is Adequate	8.96	4/9/5	121.000	0.07	IN	0.480
Side Zone	psf	W1>	Standard Spacing is Adequate	29.67	4/9/5	31.000	0.96	OUT	-1.880
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	0/0/0	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	0/0/0	36.000	1.00	OUT	-2.265
Corner Zone	psf	<W2	Standard Spacing is Adequate	8.96	0/0/0	121.000	0.07	IN	0.480
Corner Zone	psf	W1>	Non-std Spacing: 4/6/0 Required	35.89	0/0/0	36.000	1.00	OUT	-2.265
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	28/7/13	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	141/4/3	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	141/4/3	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	141/4/3	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	141/4/3	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	28/7/13	31.000	0.96	OUT	-1.880
Misc. Edge Zone	psf	<W2	Standard Spacing is Adequate	8.96	14/3/14	121.000	0.07	IN	0.480
Misc. Edge Zone	psf	W1>	Standard Spacing is Adequate	29.67	14/3/14	31.000	0.96	OUT	-1.880
Interior Area	psf	<W2	Standard Spacing is Adequate	8.96	28/7/13	121.000	0.07	IN	0.480
Interior Area	psf	W1>	Standard Spacing is Adequate	16.74	28/7/13	31.000	0.54	OUT	-1.080

Covering Design Loads - Wall: 1 - Parapet: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone in Extension	psf	W1>	Not designed	20.98	0/0/0	-1.000		OUT	-1.260
End Zone in Extension	psf	<W2	Not designed	14.99	0/0/0	-1.000		IN	0.900
End Zone in Extension	psf	W1>	Not designed	20.98	114/0/0	-1.000		OUT	-1.260
End Zone in Extension	psf	<W2	Not designed	14.99	114/0/0	-1.000		IN	0.900
Interior Area in Extension	psf	W1>	Not designed	16.49	11/0/0	-1.000		OUT	-0.990
Interior Area in Extension	psf	<W2	Not designed	14.99	11/0/0	-1.000		IN	0.900

Panel Data

Wall/Roof	Type	Thickness	Finish	Color	Direction	Gable Dir	Max. Length
Wall: 1	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Location: 2	NBBMC - Other	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Location: 3	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Parapet: 1	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Location	NBBMC - Other	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Location	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Wall: 2	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Wall: 3	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Wall: 4	NBBMC - Panel	0	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0/0/0
Roof: A	MR-24	24	AlZn	Plain AlZn	Right to Left	Not Applicable	50/0/0
Roof: B	MR-24	24	AlZn	Plain AlZn	Right to Left	Not Applicable	50/0/0

Fastener Data

Wall/Roof	Type	Length	Spacing	Washers	Insul. Block	Mod. Ctrl.	Ice Damming
Wall: 1	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Location: 2	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Location: 3	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Parapet: 1	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Location	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Location	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes

Wall: 2	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Wall: 3	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Wall: 4	Not Applicable	Not Applicable	Not Applicable	Yes	None	No	Yes
Roof: A	Stainless	Standard Option	Standard Option	Yes	Thermal Block - Extra Tall Clip	No	Yes
Roof: B	Stainless	Standard Option	Standard Option	Yes	Thermal Block - Extra Tall Clip	No	Yes

Stud Wall

Wall	Use Bay Spaces	Max. Stud Panel Width	Stud Spacing	Deflection	Weight	Thickness	Wall Panel Offset	Description

Appendices

Welded Single-Plate Shear Connection

Job No.	24-025448-01
Page:	1
Date:	12/12/24
Prepared By:	SR
Reviewed By:	
Rev:	5.83 Apr 2023

Steel Specification: AISC 360- 16 (15th)

Ref: DP 3.11.1

Notes: KR Wholesale Wind Beam

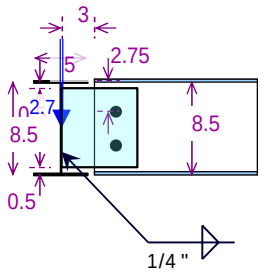
Configuration (Select)

- ○ Mezz. Beam to 3-PL Column Flange
- ○ Wall Strut or Mezz. Beam to Column Web
- ○ Mezz. Beam to HSS Column
- ○ Mezz. Beam to Girder
- ● Spandrel Beam to 3-PL Column
- ○ Roof Strut to 3-PL Rafter Web
- ○ General - Beam Side Only

NOTE TO DETAILING:

WARNINGS:

Section View



☑ Auto Select Bolts

Vert. Rows (Select)
● 1 Row 2
○ 2 Rows 2

Design Method (Select)
● ASD ○ LRFD ○ LSD

☐ High Seismic

Beam: 3-Plate

Flange Width b_f (in)	Flg Thick. t_f (in)	Web Thick. t_w (in)	Depth d (in)	Horizontal offset (in)	Yield F_{yb} (ksi)	E (ksi)
8	0.25	0.25	8.5	0	55	29000
				0.25		

Support: 3-Plate

Flange Width b_{fc} (in)	Flg Thick. t_{fc} (in)	Web Thick. t_c (in)	Depth d_g (in)
5	0.25	0.1345	8.5

Connection Plate

Thickness t_p (in)	Length L_v (in)	Width L_h (in)	Yield F_{yp} (ksi)
0.375	7	7	55

Bolt Group A325 T

Bolt Diameter: ○ 1/2" ● 3/4" ○ 7/8" ○ 1"

Bolts n	Rows r	Gage g (in)	Pitch p (in)
2	1	3	3

☐ Threads Excluded ☐ Short Slots || to Hr

Weld

Each Side w (in/16)	Edge a (in)
3	5

Match plate strength

Beam Cope

	Length c (in)	Depth d_c (in)
Top >	0.00	0.00
Bottom >	0.00	0.00

Required Strength (Beam reactions)

Axial H_r (kips)	Shear V_r (kips)	Moment ΔM (kips)	Resultant P_r (kips)	Angle θ (°)
0	2.7 (Down / In)	0	2.70	0.0

Strength Ratios

Group coeff C	Bolt Shear %	Bearing %	Rupture %	Max. Ratio %
0.56	0.40	0.24	0.02	0.40

Plate Moment M_r (in-k)	Upper Left Corner Position s_v (in)	s_h (in)
13.5	0.5	3
	0.5	

Clip Clearances Etc.

L_{eh} (in)=	2.0
L_{ev} (in)=	2.00
clear (in)=	0.5
s_{vb} (in)	0.5

	Limit State	Nominal Strength	Ω	Allowable Strength		Strength Ratio	Additional data					
1	Bolt group shear	13.46	2.00	**6.73**	kips	**0.40**	r_n (k/bolt)=	23.86	C_{min}=	0.23	e_x (in)=	5
2	Bearing - connection plate	33.32	2.00	**16.66**	kips	0.16	F_{up} (ksi)=	70.00	L_c (in)=	1.563	L_b (in)=	3
3	Bearing - beam web	22.21	2.00	**11.11**	kips	0.24	F_{ub} (ksi)=	70.00				
4	Plate flexure - ductility	168.44	1.67	**100.86**	in-kips	0.13						
☑ 5	Yielding - connection plate	86.6	1.67	**51.87**	kips	0.05			A_v (in²)=	2.625	A_{bg} (in²)=	6.000
☑ 6	Yielding - beam	198.0	1.67	**118.56**	kips	0.02			A_{vb} (in²)=	2.125	h_o (in)=	8.50
☑ 7	Rupture - connection plate	82.69	2.00	**41.34**	kips	0.07			A_{vn} (in²)=	1.969		
☑ 8	Rupture - beam	233.63	2.00	**116.81**	kips	0.02			A_{vnb} (in²)=	1.688	A_{bn} (in²)=	5.563
☑ 9	Block shear - connection plate	78.14	2.00	**39.07**	kips	0.07	A_{nv} (in²)=	1.383	A_{nt} (in²)=	0.586	U_{bs}=	1.000
☑ 10	Block shear - beam	#N/A	2.00		kips		A_{nv} (in²)=	0.922	A_{nt} (in²)=	0.391		
☑ 11	Plate local buckling flexure	168.44	1.67	**100.86**	in-kips	0.13	F_{cr} (ksi)=	55.00	S_p (in³)=	3.063	λ=	0.433
☑ 12	Plate flexure w/ shear		1.50		in-kips	0.01	F_{cr} (ksi)=	54.97	Z_p (in³)=	4.594	f_v (ksi)=	1.029
☑ 13	Flexural buckling - 1 side cope	#N/A	1.67		in-kips		F_{cr} (ksi)=	#N/A	f_{adj} =	#N/A	k=	#N/A
☐ 14	Flexural buckling - 2 side cope	#N/A	1.67		in-kips		F_{cr} (ksi)=	#N/A			f_d =	#N/A
☑ 15	Coped beam flexural rupture	210.73	2.00	**105.36**	in-kips	0.08	$S_{net\ T}$ (in³)	3.010	I_{net} (in⁴)=	#N/A	y_B (in)=	#N/A
☑ 16	Fillet weld: plate-to-web	103.9	2.00	**51.97**	kips	0.05	F_w (ksi)=	42.00	A_w (in²)=	2.475	F_{EXX} (ksi)=	70.00
☑ 17	Support element rupture	47.45	2.00	**23.73**	kips	0.11	F_{uc} (ksi)=	70.00	No beam in adjacent bay			
☐ 18	Punching shear - column web	92.27	2.00		in-kips							
19	Bolt group flexural strength	87.67			in-kips	OK-Excep.1			C'=	2.94	$t_{p\ max}$ (in)=	**#N/A**
☑ 20	Axial compr. buckling - plate	144.38	1.67	**86.45**	kips		F_{cr} (ksi)=	55.00	$F_{e\ pl}$ (ksi)=	#N/A	λpl=	32.3

Notes:

Detailing Summary:

Clip > 3MZE0700607000002B
Bolts > (2) - 0.75" dia. A325T
Weld > 1/4 " Both Sides

Clip Offset (Optional) > Not Selected / Clip Centered / Clip Offset RIGHT / Clip Offset LEFT

BLUESCOPE BUILDINGS

Section Strength Check

AISC 360 - 16 (15th)

I-Shaped Beam-Column

Design Method = ASD

Unit System: ☐ Metric Units

Job No:	24-025448
Page:	1
Date:	12/12/2024
Prepared By:	SR
Reviewed By:	
Rev: 5.96	May 2024

Note: KR Wholesale Parapet Post

INPUT DATA

☐ LRFD

Required Strength		INPUT		
(Compression)	Axial P_r =	3.50	kips	Used
Strong Axis Shear	V_r =	3.50	kips	3.66
Strong Axis Moment	M_{rx} =	112.00	in-k	114.20
Weak Axis Moment	M_{ry} =	0.00	in-k	
Weak Axis Shear	V_{ry} =		kips	

☑ Add self-weight (moment Mx & V)

☐ Generate floor loads (program adds Mx & V)

Material Strength		User override		
Fy (ksi) =	55			
Fu (ksi) =	70			
E (ksi) =	29000	G (ksi) =	11200	

Unsupported Length	INPUT		
L_x =	54	in	
L_y =	54	in	
L_t =	54	in	
L_b =	54	in	
K_x =	1.00		
K_y =	1.00		
K_t =	1.00		
C_b =	1.140		1.14
a_c =	0	in	

MEMBER DATA

(in)

b_f =	6
t_f =	0.25
t_w =	0.1875
d =	7

AISC 360 SPECIFICATION - STRENGTH CHECK

Combined Strength Ratio	**0.329**	OK	H1.1 (H1-1b)	
Shear Ratio	**0.141**	OK	G3.	
Standard Weld OK				

Member Weight (plf) = **72.42**

ALLOWABLE STRENGTHS

Tension	Pc (kips) =	139.22
Compression	Pc (kips) =	**124.73**
Shear	Vc (kips) =	**25.99**
Moment-X	Mcx (in-k) =	**362.15**
Moment-Y	Mcy (in-k) =	129.59
Shear-Y	Vcy (kips) =	59.40

DESIGN DATA

Flange Properties		Web Properties			
$\lambda = b_f/(2t_f)$ =	**12.00**	$\lambda = h/t_w$ =	**34.67**	Lp (in) =	41.99
λ_{pf} =	8.73	λ_{pw} =	86.34	Lr (in) =	143.35
λ_{rf} =	21.49	λ_{rw} =	130.89	R_{pc} =	N/A
Flexure	noncompact	Flexure	compact	R_{pg} =	N/A
Axial	non-slender	Axial	slender	h/t_w =	34.67
$\lambda_{rf\ axial}$ =	12.11	$\lambda_{rw\ axial}$ =	34.21	$(h/t_w)MAX$ =	275.55
Q_s =	1.000	Q_a =	1.000	k_c =	0.6794
				f (ksi) =	49.28

max (KL/r) = 36.96

CROSS SECTION PROPERTIES

A (in2) =	4.22	Ix (in4) =	38.48	Iy (in4) =	9	rt (in) =	1.663	h (in) =	6.5
An (in2) =	4.22	Sx (in3) =	10.99	Sy (in3) =	3	rts (in) =	1.663	hc (in) =	6.5
Afg (in2) =	1.5	rx (in) =	3.02	ry (in) =	1.461	J (in4) =	0.0768	ho (in) =	6.75
Afn (in2) =	1.5	Zx (in3) =	12.11	Zy (in3) =	4.557	Cw (in6) =	102.56	a_w =	1.883
				Iyc (in4) =	4.5				

Stiffener Spacing **a** = 1 in (0.08 ft) … a/h = 0.15

Max. stiff. spacing for TFA (ft) = 1.62 — Stiffeners are NOT required

Tension field action: ☑ Use if permitted — Full TFA permitted

☐ Unframed endpanel

Stiffener size (in): 3.5 x 0.375 - both sides

Required stiffener I_s:	0.683	in4	
Provided stiffener I_s:	11.603	in4	OK
Required stiffener area A_s:	0	in2	
Provided stiffener area A_s:	2.625	in2	OK
Stiffener maximum **b/t**:	12.86		
Provided stiffener **b/t**:	9.33		OK

Flange Holes

flanges with holes = 0

Bolt db = 0.5 in

Selected flange size is not affected by Flexural Rupture

Bolted End-Plate Moment Connection

AISC 360 - 16 (15th)

AISC Design Guide #16 Method (Ref: nDP 3.1.1)

Job No.		
Page:		
Date:		
Prepared By:		
Reviewed By:		
Revision:	4.52	06/17/24

Notes: Parapet post to Support beam connection

OPTIMIZATION LIST >>

Required Strength:

M (in-k) =	80
V (kips) =	3
P (kips) =	3

Design Method

- (•) ASD
- ( ) LRFD
- ( ) LSD (Canada)

Member Geometry:

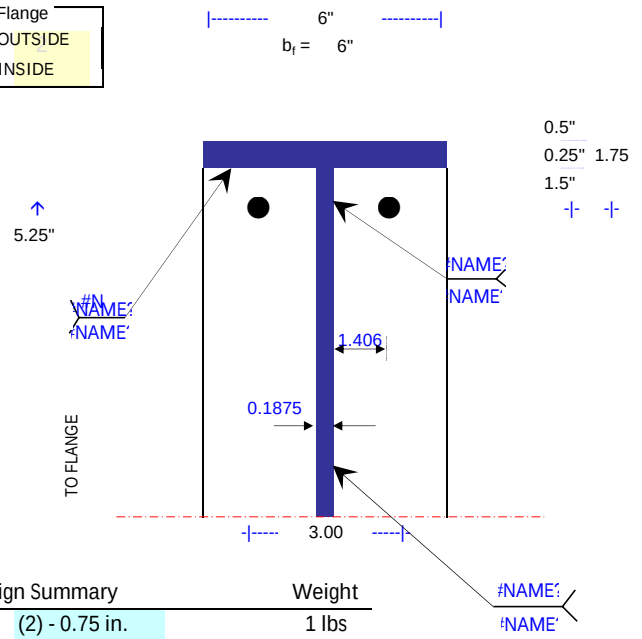
	ANALYSIS SIDE	OTHER SIDE
b_f (in) =	6	6
t_f (in) =	0.25	0.25
t_w (in) =	0.1875	0.1875
d (in) =	7	
slope k =	0.0000	0.0000

Configuration: Select Button OR Click on "Standard" / "Wide" for Auto-select

			INSIDE ROWS > 1	2	3	4
STANDARD	FLUSH		(•) 11	( ) 12	( ) 13	( ) 14
		STIFFENER		( ) 22		
	EXTENDED		( ) 31 <IMF	( ) 32	( ) 33	
		GUSSET	( ) 41 <IMF	( ) 42	( ) 43	
WIDE	FLUSH		( ) 51	( ) 52	( ) 53	( ) 54
		STIFFENER		( ) 62		
	EXTENDED		( ) 71	( ) 72	( ) 73	
		GUSSET	( ) 81	( ) 82	( ) 83	

Flange

- ( ) OUTSIDE
- (•) INSIDE



User Override:

b_p (in) =	
t_p (in) =	0.625
F_{py} (ksi) =	55
F_{pu} (ksi) =	70
Flange Weld	Default
w_{fi} (in) =	
b_{wT} (in) =	
w_{wT} (in) =	
Max. Ratio =	1.05
Installation	
Tool	Conventional
Washers	0
Shear resisted by:	
	Default
# Compr Bolts	0
p_{so} (in) =	
p_{si} (in) =	
b_s (in) =	
t_s (in) =	
g (in) =	
g_o (in) =	
p_{fi} (in) =	
p_{fo} (in) =	
p_b (in) =	
p_{ext} (in) =	

Application:

Dead, Live, Wind or Low Seismic (OMF, R=3)

Design Procedure:

1 Thick Plate (No prying) — Procedure OK

Bolt Diameter

- ( ) 1/2"
- ( ) 5/8"
- (•) 3/4"
- ( ) 7/8
- ( ) 1"
- ( ) 1" 1/8
- ( ) 1" 1/4
- ( ) 1" 1/2

Bolts: ASTM Grade

A325-N

Snug-tight

h_g (in) =	
t_g (in) =	
L_g (in) =	
F_{yf} (ksi) =	55
F_{yw} (ksi) =	55
F_{ys} (ksi) =	55
FlushL	0.5
F_{EXX} (ksi) =	70
$_{max}$Fillet (in) =	0.625
$_{min}$Fillet (in) =	0.25
$_{min}$FilletW (in) =	0.25

Allowable Flexural Strength: 204 (in-k)

M_{np}/M_{pl} =	0.620
Y (in) =	30.6
$d_{b\,req}$ (in) =	0.491
$t_{p\,req}$ (in) =	0.521
$\phi M_{q\,max}$ =	#N/A

Strength Ratios

65.5%	Bolt Tension
6.1%	Bolt Shear
69.6%	Plate Bending
0.0%	Shear Yielding
0.0%	Shear Rupture
3.0%	Bearing/Tearing
47.9%	Flange Weld
36.1%	Web Weld

Design Summary

		Weight
Bolts:	(2) - 0.75 in.	1 lbs
Plate:	0.625 in.	4 lbs
Cost Index	8.3	Σ = 5 lbs
Λ =	8.247	

Messages:

Flange & Web Welds:

w_{fi} (in) =	#NAME?	(2-sided)
b_{wT} (in) =	3	
w_{wT} (in) =	#NAME?	(2-sided)
w_{ww} (k) =	#NAME?	(2-sided)

Stiffener:	NONE	Gusset:	NONE
L_s (in) =		L_g (in) =	
w_{sp} (in) =		w_{gp} (in) =	
w_{sw} (in) =		w_{gf} (in) =	

PTW Flange-to-Web Fillet Weld

Submerged Arc Weld (SAW) Process ... T-Joint

Ref: nDP 3.5

Job No.	24-025448-01
Page:	1
Date:	12/13/24
Prepared By:	SR
Reviewed By:	
Rev:	1 09/22

Notes : *Concrac Weld Check FOR RFs*

Member Properties

Member length	L	*ft*	23.25			
Flange width	b_f	*in*	12			
Flange thickness	t_f	*in*	0.5			
Web thickness	t_w	*in*	0.25			Z_x (*in*^{3})
Depth: Left end	d(1)	*in*	12	.....		76.6
Right end	d(2)		50	.....		447.1
Yield strength	F_y	*ksi*	55			
Material overstrength	R_y		1.1			

Weld Strength

Filler metal strength	F_{EXX}	*ksi*	70	
Nominal strength	F_w	*ksi*	42	weld metal strength
Weld size	a_w	*in*	0.125	SAW fillet weld (BBNA standard)
Weld size - User			0	SAW fillet weld (User override)
Weld Effective Area	A_w	*in*^{2} */in*	0.0884	per Sec J2.2a
Resistance factor	ϕ		0.75	
Weld Strength	R_w	*kips/in*	1.856	

Design Parameters

Design Method (Select)

● ASD ○ LRFD ○ LSD (Canada)

Maximum Strength Ratio		1
Conversion factor	α_s	1.50

☑ AISC 341-16 Section D1.6 Check

☐ Capacity Limited Strength (Use where applicable)

Seismic-force resisting system		OMF
Diaphragm condition		Flexible
Member expected behavior is		Min Inelastic
Overstrength factor	Ω_o	2.50
Strain hardening factor		1.10

Design per AISC 360 (ASD) & AISC 341-16

Required Shear Strength

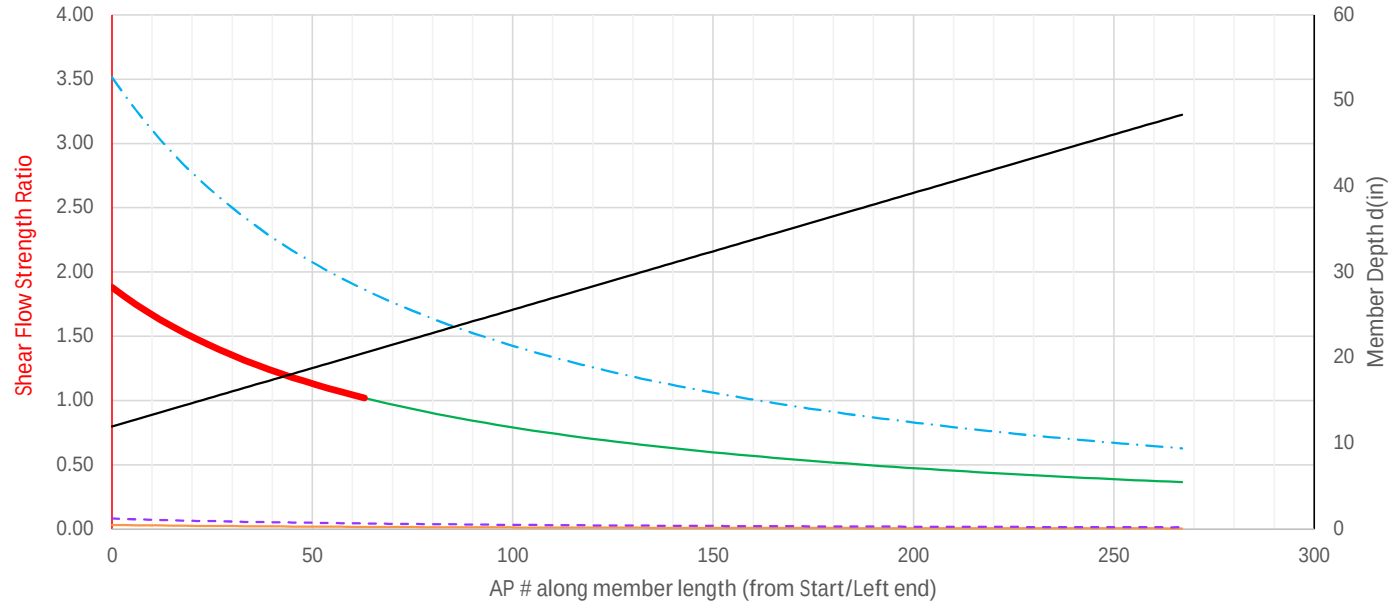
(Shear normal to member axis)

				Elastic Non-Seismic	Elastic Seismic	Overstr. Seismic	Inelastic Strength
Left end	☐ Fixed	V(1)	*kips*	43	0.77	1.9	71.1
Right end	☑ Fixed	V(2)	*kips*	43	0.77	1.9	71.1

☐ Overstrength Included

Reinforcing weld location

	L *ft*	d *in*	v *kips/in*	Strength Ratio	Governing Case	Opposite Side Fillet Weld *in/16*
Start location	0.00	12.00	3.493	1.88	Elastic (Non-Seismic or Low Seismic)	2
End locoation	5.25	20.58	1.896	1.02	Elastic (Non-Seismic or Low Seismic)	1



Show > ☑ Elastic Non-Seismic (or Low Seismic) ☑ Elastic Seismic ☑ Seismic Overstrength ☑ Seismic Inelastic — Governing Ratio (When Reinforcement Required)