



RIGID FRAME: MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES

Frame Line	Col Line	Load ID	Hmax	Vmax	Hmin	Vmin	Anchor Qty	Base Plate Width	Base Plate Length	Base Plate Thickness	Base EL. (in)	
2*	E	3	5.3	17.9	5	-3.7	4	0.750	6.000	9.000	0.375	0.0
2*	A	12	2.7	0.6	10	-4.3	4	0.750	6.000	9.000	0.375	0.0
2*	C	6	0.0	-11.5	6	-11.5	4	0.750	8.000	8.500	0.500	-6.0

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6	E	9	2.4	4.3	11	-2.1	4	0.750	6.000	9.000	0.375	0.0	
6	A	12	1.8	-1.4	8	-2.1	4	0.750	6.000	9.000	0.375	0.0	
6	D	6	0.0	-3.2	6	-3.2	4	0.750	6.000	8.000	0.375	0.0	
6	C	4	0.0	-2.7	4	0.0	-2.7	4	0.750	6.000	8.000	0.375	0.0
6	B	4	0.0	-3.3	4	0.0	-3.3	4	0.750	6.000	8.000	0.375	0.0

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead	Live	Snow	Wind Left	Wind Right
2*	E	0.9	2.6	4.9	0.0	-2.2
2*	D	2.2	0.6	6.4	13.5	0.0
2*	C	1.9	1.3	5.4	11.3	1.5
2*	B	2.2	1.6	6.4	13.4	0.0
2*	A	1.0	0.6	2.5	5.6	0.0

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Frame Line	Col Line	Load ID	Hmax	Vmax	Hmin	Vmin	Anchor Qty	Base Plate Width	Base Plate Length	Base Plate Thickness	Base EL. (in)		
6	E	9	2.4	4.3	11	-2.1	4	0.750	6.000	9.000	0.375	0.0	
6	A	12	1.8	-1.4	8	-2.1	4	0.750	6.000	9.000	0.375	0.0	
6	D	6	0.0	-3.2	6	-3.2	4	0.750	6.000	8.000	0.375	0.0	
6	C	4	0.0	-2.7	4	0.0	-2.7	4	0.750	6.000	8.000	0.375	0.0
6	B	4	0.0	-3.3	4	0.0	-3.3	4	0.750	6.000	8.000	0.375	0.0

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frame Line	Col Line	Dead	Live	Snow	Wind Left	Wind Right
1	E	0.9	2.6	4.9	0.0	-2.2
1	D	2.2	0.6	6.4	13.5	0.0
1	C	1.9	1.3	5.4	11.3	1.5
1	B	2.2	1.6	6.4	13.4	0.0
1	A	1.0	0.6	2.5	5.6	0.0

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

Frame Line	Col Line	Load ID	Hmax	Vmax	Hmin	Vmin	Anchor Qty	Base Plate Width	Base Plate Length	Base Plate Thickness	Base EL. (in)	
1	E	20	1.4	-1.6	21	-1.2	4	0.750	6.000	8.000	0.375	0.0
1	D	20	2.6	-4.7	21	-2.3	4	0.750	6.000	8.000	0.375	0.0
1	C	20	2.7	-5.2	21	-2.5	4	0.750	6.000	8.000	0.375	0.0
1	B	22	2.7	-3.9	21	-2.5	4	0.750	6.000	8.000	0.375	0.0
1	A	20	1.5	-1.8	21	-1.4	4	0.750	6.000	8.000	0.375	0.0

WIND BENT REACTIONS

Loc Line	Col Line	Wind	Seismic	Panel Shear
F_SW A	3	3.1	6.0	9.7
F_SW A	4	3.1	6.0	9.7

BUILDING BRACING REACTIONS

Loc Line	Col Line	Wind	Seismic	Panel Shear
L_EW 1	C,B	2.2	1.8	5.4
F_SW A	3,4	3.4	6.0	9.7
R_EW 6	5,4	3.0	2.4	9.6
B_SW E	3,2	3.0	2.4	9.6

ANCHOR BOLT SUMMARY

Qty	Locate	Dia (in)	Type	Proj (in)
20	Jamb	1/2"	A307	1.50
32	Endwall	3/4"	A307	2.00
56	Frame	3/4"	A307	2.00
8	WindCol	3/4"	A307	2.00

NOTES FOR REACTIONS

The following Design Data is per Package Steel Systems, Inc.'s standard design practices and established procedures and recommendations of the following Organizations and/or Specifications.

American Institute of Steel Construction (AISC 2005)
 American Welding Society Structural Welding Code (AWS D1.1)
 North American United States (NAUS07)

- For maximum reactions tables, all loading conditions are examined and only the maximum/minimum horizontal or vertical reactions along with the corresponding horizontal or vertical for those load IDs are reported.
- Positive reactions are shown in the sketch. Foundation loads are in the opposite directions.
- Bracing reactions are in the plane of the brace with the horizontal pointing away from the braced bay. The vertical reaction can be downward or upward.
- Reactions given are based on the design data below. Reactions are not furnished for loads not listed.
- The endwall column reactions do NOT include wind and seismic reactions from endwall bracing. Reactions given in the bracing reactions table should be combined with the appropriate basic column reactions as necessary to determine the maximum reactions for foundation design.
- The rigid frame maximum reactions include wind and seismic reactions from sidewall bracing. Reactions given in the bracing reactions table should not be combined with the appropriate basic column reactions as necessary to determine the maximum reactions for foundation design.
- Foundation construction and design is not the responsibility of Package Steel Systems, Inc. The embedment of the anchor bolts in concrete is the responsibility of the foundation designer.
- Suggested anchor rod diameter, quantity, minimum projection and placement are shown. All anchor rods are assumed to be ASTM F1544 Grade 36 or equal. Anchor rods (not by PSS) shall be set to a tolerance of +1/8" in both elevation and location.
- Column base plates are designed not to exceed a bearing pressure of 1050 pounds per sq. inch (0.35f'c where f'c = 3000 psi) unless noted otherwise.
- Basic design wind pressure is furnished. For components and cladding not specifically designed and/or furnished by PSS, the design pressures and suctions shall be increased based on tributary area and location. Confirmation of the design loads and adequacy to resist such loads shall be the responsibility of a licensed design professional by others.

Building Reactions are based on the following information:

Building Code/Edition	IBC 09	Snow Loads
Building Size		
Width (ft.)	95	Ground Snow (Pg)
Length (ft.)	115	Flat Roof Snow (Pf)
Back Side Eave Height (ft.)	20	Snow Exposure Factor (Ce)
Front Side Eave Height (ft.)	21.98	Snow Thermal Factor (Ct)
Back Side Roof Slope	0.25:12	Snow Importance Factor (Is)
Front Side Roof Slope		Sloped Roof Factor (Cs)
Roof Dead, Collateral, & Live Loads		Seismic Loads
Dead Load	5.00 psf	Seismic Importance (Ie)
Collateral Load	5.00 psf	Seismic Design Category (A/B/C/D)
Live Load	20.00 psf	Site Class-Type
Live Load Reduction Taken	No	Seismic Response Coeff. (Sds)
Wind Loads		Seismic Response Coeff. (Sd1)
Basic Wind Speed (3 Second Gust)	100 mph	Response Modification (Rf)
Wind Exposure	B	Response Modification (Rm)
Building Enclosure (C/D/P)	Closed	Design Base Shear (V) = Longit.
Wind Importance Factor (Iw)	1.00	Design Base Shear (V) = Transv.
Internal Pressure Coeff. (GcP)	0.18	Analysis Procedure: Equivalent Lateral Force
		Auxiliary Load(s)
		(4) 400# Unit Heaters Suspended off Purlins

Acronyms:

AUX = Auxiliary Load - Case x
 C = Closed
 CL = Collateral Load
 DL = Dead Load
 FXUNB_LL = Unbalanced Live Load for Frame IDx
 LL = Max of (Live or Snow)
 LLR = Live Load Unbalanced
 LrWindL = Longitudinal Wind Load - Left
 LrWindR = Longitudinal Wind Load - Right
 mph = miles per hour

Open
 BF = Braced Frame
 MF = Moment Frame
 P = Partially Enclosed
 psf = pounds per square foot
 SEIS = Seismic
 WLx = Wind Left - Case x
 WP = Wind Pressure
 WRx = Wind Right - Case x
 WS = Wind Suction

Loading Conditions are as follows:

- Dead+Collateral+Snow
- Dead+Collateral+Snow+Slide_Snow
- Dead+Collateral+0.75Snow+0.75Wind_Right1
- 0.6Dead+Wind_Left1
- 0.6Dead+Wind_Left2
- 0.6Dead+Wind_Long1+LWIND1_L2E
- 0.6Dead+Wind_Long1+LWIND1_R2E
- 1.07Dead+1.07Collateral+0.7Seismic_Left
- 1.07Dead+1.07Collateral+0.7Seismic_Right
- 1.05Dead+1.05Collateral+0.75Live+0.52Seismic_Left
- 0.53Dead+0.7Seismic_Left
- 0.53Dead+0.7Seismic_Right
- 0.53Dead+0.7Seismic_Long
- Dead+Collateral+Snow/2+FIPAT_SL_1
- Dead+Collateral+Snow/2+FIPAT_SL_2
- Dead+Collateral+Snow/2+FIPAT_SL_3
- Dead+Collateral+Snow/2+FIPAT_SL_4
- Dead+Collateral+Snow/2+FIPAT_SL_5
- Dead+Collateral+Snow/2+FIPAT_SL_1
- 0.6Dead+Wind_Left2+Wind_Suction
- 0.6Dead+Wind_Pressure+Wind_Long1
- 0.6Dead+Wind_Right2+Wind_Suction

REV.	DESCRIPTION	DATE	DRAFT	ENG.
3				
2				
1	BUILDING HAS BEEN REDESIGNED DUE TO SEISMIC SOIL SITE CLASS CHANGE.	12/21/15	TMZ	ZRM
	INITIAL DRAWING RELEASED FOR CONSTRUCTION			CURRENT REVISION: 1
PACKAGE STEEL SYSTEMS, INC.		Biskup Construction Inc.		
PROJECT	Moongate Properties	ANCHOR BOLT REACTIONS & NOTES		
ID	1511-038	DESIGN:ZRM	DESIGN CHECK:ZRM	PACKAGE
PROJECT	1039 Riverside Street	DRAFT:TMZ	DRAFT CHECK:TMZ	
ADDRESS	Portland, ME 04103	DATE:12/03/15	DRAWING: ABLT-2	