



**REVIEWED
FOR
CODE
COMPLIANCE
01/27/2022**

VP Buildings

3200 Players Club Circle
Memphis, TN 38125-8843

21-007748-01 REACTION REPORT

Project: DC Riding Arena
Name: DC Riding Arena Option 2
Builder PO #:
Jobsite:

City, State: Clark, Colorado 80428
County: Routt
Country: United States

Designed By: Alex Yismma

TABLE OF CONTENTS

Letter of Certification.....	2
Building Loading - Expanded Report.....	4
Reactions - Summary Report w/Controlling Load Comb.....	33



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 2 of 64

Letter of Certification

Contact:
Name: Rule Steel
Address:

Project: DC Riding Arena
Builder PO #:
Jobsite:

City, State: Caldwell, Idaho 83605
Country: United States

City, State: Clark, Colorado 80428
County, Country: Routt, United States

This is to certify that the above referenced project has been designed in accordance with the applicable portions of the Building Code specified below. All loading and building design criteria shown below have been specified by contract and applied in accordance with the building code.

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Riding Arena	120/0/0	250/0/0	30000	14240	34303	16/0/0	16/0/0	4.000:12	4.000:12	36/0/0

Loads and Codes - Shape: Riding Arena

City: Clark County: Routt

State: Colorado

Country: United States

Building Code: 2018 International Building Code

Structural: 16AISC - ASD

Rainfall: I: 4.00 inches per hour

Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Cold Form: 16AISI - ASD

fc: 3000.01 psi Concrete

Dead and Collateral Loads

Collateral Gravity: 2.50 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic): 4.63 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: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 0.7686

NOT Windborne Debris Region

Base Elevation: 0/0/0

Site Elevation: 7270.0 ft

Primary Zone Strip Width: 2a: 20/9/10

Parts / Portions Zone Strip Width: a: 10/4/13

Basic Wind Pressure: q: 21.08, (Parts) 21.08 psf

Snow Load

Ground Snow Load: pg: 93.00 psf

Flat Roof Snow: pf: 71.61 psf
Design Snow (Sloped): ps: 71.61 psf
Rain Surcharge: 0.00
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Kept just above freezing - Ct: 1.10
Ground / Roof Conversion: 0.70
Unobstructed, Slippery

Seismic Load

Lateral Force Resisting Systems using Equivalent Force Procedure

Mapped MCE Acceleration: Ss: 59.40 %g

Mapped MCE Acceleration: S1: 10.30 %g

Site Class: Stiff soil (D) - Default

Seismic Importance: Ie: 1.000

Design Acceleration Parameter: Sds: 0.5246

Design Acceleration Parameter: Sd1: 0.1644

Seismic Design Category: D

Seismic Snow Load: 14.32 psf

% Snow Used in Seismic: 20.00

Diaphragm Condition: Flexible

Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters

Ordinary Steel Moment Frames

Redundancy Factor: Rho: 1.30

Fundamental Period: Ta: 0.3794

R-Factor: 3.50

Overstrength Factor: Omega: 2.50

Deflection Amplification Factor: Cd: 3.00

Base Shear: V: 0.1238 x W

Longitudinal Direction Parameters

Ordinary Steel Concentric Braced Frames

Redundancy Factor: Rho: 1.00

Fundamental Period: Ta: 0.2303

R-Factor: 3.25

Overstrength Factor: Omega: 2.00

Deflection Amplification Factor: Cd: 3.25

Base Shear: V: 0.1614 x W

Building design loads and governing building code is provided by the Builder and is not validated by Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. The Builder is responsible for contacting the local Building Official or project Design Professional to obtain all code and loading information for this specific building site.

The design of this building is in accordance with Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. design practices which have been established based upon pertinent procedures and recommendations of the Standards listed in the Building Code or later editions.



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 3 of 64

This certification DOES NOT apply to the design of the foundation or other on-site structures or components not supplied by Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc., nor does it apply to unauthorized modifications to building components. Furthermore, it is understood that certification is based upon the premise that all components will be erected or constructed in strict compliance with pertinent documents for this project. Varco Pruden Buildings, a division of BlueScope Buildings North America, Inc. DOES NOT provide general review of erection during or after building construction unless specifically agreed to in the contract documents.

The undersigned engineer in responsible charge certifies that this building has been designed in accordance with the contract documents as indicated in this letter.

Engineer in responsible charge

Date: _____ Engineer's Seal:



09/10/2021



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 4 of 64

Building Loading - Expanded Report

Shape: Riding Arena

Loads and Codes - Shape: Riding Arena

City: Clark County: Routt
Building Code: 2018 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

State: Colorado Country: United States
Structural: 16AISC - ASD Rainfall: I: 4.00 inches per hour
Cold Form: 16AISI - ASD f'c: 3000.01 psi Concrete

Dead and Collateral Loads

Collateral Gravity: 2.50 psf
Collateral Uplift: 0.00 psf

Frame Weight (assumed for seismic): 4.63 psf - USR

Side	Type	Mag	Units	Shape	Applied to	Description
2:1	D	4.317	psf	Entire	Frm	Covering Weight - 26 Panel Rib + Secondary Weight 3.41 : Wall: 2, Canopy: 1
2:1	D	0.910	psf	Entire	Pur	Covering Weight - 26 Panel Rib : Wall: 2, Canopy: 1
4:1	D	4.317	psf	Entire	Frm	Covering Weight - 26 Panel Rib + Secondary Weight 3.41 : Wall: 4, Canopy: 1
4:1	D	0.910	psf	Entire	Pur	Covering Weight - 26 Panel Rib : Wall: 4, Canopy: 1
A	D	3.135	psf	Rect	Frm	Covering Weight - 26 Panel Rib + Secondary Weight 2.23 : Roof: A
A	D	0.910	psf	Rect	Pur	Covering Weight - 26 Panel Rib : Roof: A
B	D	3.144	psf	Rect	Frm	Covering Weight - 26 Panel Rib + Secondary Weight 2.23 : Roof: B
B	D	0.910	psf	Rect	Pur	Covering Weight - 26 Panel Rib : 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: 26/0/0 (Type: Mean)
Base Elevation: 0/0/0
Site Elevation: 7270.0 ft
Primary Zone Strip Width: 2a: 20/9/10
Velocity Pressure: qz: 33.86 psf
Topographic Factor: Kzt: 1.0000
Directionality Factor: Kd: 0.8500
Ground Elevation Factor: Ke: 0.7686
Primaries
Primaries Wind Exposure: C - Kz: 0.953
Basic Wind Pressure: q: 21.08 psf

Gust Factor: G: 1.0000
Least Horiz. Dimension: 120/0/0

NOT Windborne Debris Region
Parts / Portions Zone Strip Width: a: 10/4/13
 $qz = 0.00256 * (1.00) * (115.00)^2 * (1.00)$
The 'Envelope Procedure' is Used
Parts and Portions
Parts Wind Exposure Factor: 0.953
Basic Wind Pressure: 21.08 psf

Snow Load

Ground Snow Load: pg: 93.00 psf
Flat Roof Snow: pf: 71.61 psf
Design Snow (Sloped): ps: 71.61 psf
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: Kept just above freezing - Ct: 1.10
Unobstructed, Slippery
Slope Reduction: Cs: 1.00
Slope Used: 18.435 deg. (4.000:12)

Snow Load @ Wall: 2 - Canopy: 1

Ground Snow Load: 93.00 psf
Flat Roof Snow: 78.12 psf
Snow Uniform 73.24 psf
Snow Accumulation Factor: 1.000
Snow Importance: 1.000
Ground / Roof Conversion: 0.70

Snow Exposure Category (Factor): 2 Partially Exposed (1.00)
Thermal Category (Factor): Unheated (1.20)
Unobstructed, Slippery
Rain Surcharge: 0.00
Slope Reduction: 0.94
Slope Used: 18.435 (4.000:12)

Snow Load @ Wall: 4 - Canopy: 1

Ground Snow Load: 93.00 psf
Flat Roof Snow: 78.12 psf
Snow Uniform 73.24 psf
Snow Accumulation Factor: 1.000
Snow Importance: 1.000
Ground / Roof Conversion: 0.70

Snow Exposure Category (Factor): 2 Partially Exposed (1.00)
Thermal Category (Factor): Unheated (1.20)
Unobstructed, Slippery
Rain Surcharge: 0.00
Slope Reduction: 0.94
Slope Used: 18.435 (4.000:12)

Seismic Load

Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 59.40 %g
Mapped MCE Acceleration: S1: 10.30 %g

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 5 of 64

Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.5246
Design Acceleration Parameter: Sd1: 0.1644
Seismic Design Category: D
% Snow Used in Seismic: 20.00
Seismic Snow Load: 14.32 psf
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.1238x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.1614x W

Side	Type	Mag	Units	Shape	Applied to	Description
1	E	2.405	psf	Entire	Frm	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 1.05 : Wall: 1
1	E	2.590	psf	Entire	Brc	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 1.05 : Wall: 1
2	E	2.333	psf	Entire	Frm	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 0.57 : Wall: 2
2	E	2.513	psf	Entire	Brc	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 0.57 : Wall: 2
2:1	E	3.911	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 3.41 + 14.648 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Wall: 2, Canopy: 1
2:1	E	4.212	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 3.41 + 14.648 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Wall: 2, Canopy: 1
2:1	E	0.225	psf	Entire	Frm	Seismic Effect From 5/8" CDX Plywood under Panels : Wall: 2, Canopy: 1
2:1	E	0.242	psf	Entire	Brc	Seismic Effect From 5/8" CDX Plywood under Panels : Wall: 2, Canopy: 1
3	E	2.405	psf	Entire	Frm	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 1.05 : Wall: 3
3	E	2.590	psf	Entire	Brc	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 1.05 : Wall: 3
4	E	2.333	psf	Entire	Frm	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 0.57 : Wall: 4
4	E	2.513	psf	Entire	Brc	Seismic: Covering Weight - 15.00 NBVP - Masonry + Secondary Weight 0.57 : Wall: 4
4:1	E	3.911	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 3.41 + 14.648 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Wall: 4, Canopy: 1
4:1	E	4.212	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 3.41 + 14.648 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Wall: 4, Canopy: 1
4:1	E	0.225	psf	Entire	Frm	Seismic Effect From 5/8" CDX Plywood under Panels : Wall: 4, Canopy: 1
4:1	E	0.242	psf	Entire	Brc	Seismic Effect From 5/8" CDX Plywood under Panels : Wall: 4, Canopy: 1
A	E	3.044	psf	Rect	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 2.23 + 14.322 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Roof: A
A	E	3.969	psf	Rect	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 2.23 + 14.322 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Roof: A
A	E	0.186	psf	Entire	Frm	Seismic Effect From 5/8" CDX Plywood beneath panels : Roof: A
A	E	0.242	psf	Entire	Brc	Seismic Effect From 5/8" CDX Plywood beneath panels : Roof: A
A	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: A
A	E	8.742	plf	Line	Frm	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: A
A	E	11.400	plf	Line	Brc	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: A
A	E	8.742	plf	Line	Frm	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: A
A	E	11.400	plf	Line	Brc	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: A
A	E	21.043	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	27.442	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	21.043	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	27.442	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Counter Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Counter Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Counter Load : Roof: A



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 6 of 64

A	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Counter Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Counter Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Counter Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Counter Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Counter Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Load : Roof: A
A	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Load : Roof: A
A	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Load : Roof: A
B	E	3.045	psf	Rect	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 2.23 + 14.322 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Roof: B
B	E	3.970	psf	Rect	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 2.23 + 14.322 Snow + (Includes 2.500 Collateral 4.630 Frame Weight) : Roof: B
B	E	0.186	psf	Entire	Frm	Seismic Effect From 5/8" CDX Plywood under Panels : Roof: B
B	E	0.242	psf	Entire	Brc	Seismic Effect From 5/8" CDX Plywood under Panels : Roof: B
B	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	2.783	psf	Rect	Frm	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	3.629	psf	Rect	Brc	Seismic Effect From Cupola NBVP Gravity Load : Roof: B
B	E	8.742	plf	Line	Frm	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: B
B	E	11.400	plf	Line	Brc	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: B
B	E	8.742	plf	Line	Frm	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: B
B	E	11.400	plf	Line	Brc	Seismic Effect From Vertical Load Due to Wooden Truss Rake Extension : Roof: B
B	E	21.043	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	27.442	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	21.043	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	27.442	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	13.369	p	Point	Frm	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	17.434	p	Point	Brc	Seismic Effect From Vertical Loads Due To Wooden Corbels : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Counter Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Counter Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Counter Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Counter Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Counter Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Counter Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Counter Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Counter Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Snow Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Snow Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Load : Roof: B
B	E	1.477	psf	Rect	Frm	Seismic Effect From Unbalanced Snow Load : Roof: B
B	E	1.927	psf	Rect	Brc	Seismic Effect From Unbalanced Snow Load : Roof: B

Deflection Conditions

Frames are vertically supporting: Metal Roof Purlins and Panels

Deflection Limit Override V/240

Frames are laterally supporting: Metal Wall Girts and Panels

Deflection Limit Override H/100

Purlins are supporting: Metal Roof Panels

Girts are supporting: Metal Wall Panels

Design Load Combinations - Framing



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 7 of 64

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 PL2	D + CG + PL2(Spans 5 and 6)
10	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 6 and 7)
11	System	1.000	1.0 D + 1.0 CG + 1.0 PL2	D + CG + PL2(Spans 7 and 8)
12	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
13	System	1.000	1.0 D + 1.0 CG + 1.0 <S	D + CG + <S
14	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
15	System	1.000	1.0 D + 1.0 CG + 1.0 <S + 1.0 SD	D + CG + <S + SD
16	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
17	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
18	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
20	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
21	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
22	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
23	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
24	System	1.000	0.6 MW	MW - Wall: 1
25	System	1.000	0.6 MW	MW - Wall: 2
26	System	1.000	0.6 MW	MW - Wall: 3
27	System	1.000	0.6 MW	MW - Wall: 4
28	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
29	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
30	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
31	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
32	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
34	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
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 W2>	D + CG + L + W2>
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 WPL	D + CG + L + WPL
39	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
40	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1>	D + CG + S + W1>
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 W2>	D + CG + S + W2>
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 WPL	D + CG + S + WPL
45	System	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR	D + CG + S + WPR
46	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
47	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
48	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
49	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
50	System	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 E> + 0.525 EG+	D + CG + S + E> + EG+
51	System	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 <E + 0.525 EG+	D + CG + S + <E + EG+
52	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
53	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
54	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
55	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
56	Special	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 E> + 0.525 EG+	D + CG + S + E> + EG+
57	Special	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 <E + 0.525 EG+	D + CG + S + <E + EG+
58	OMF Connection	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
59	OMF Connection	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
60	OMF Connection	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
61	OMF Connection	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
62	OMF Connection	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 E> + 0.525 EG+	D + CG + S + E> + EG+
63	OMF Connection	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 <E + 0.525 EG+	D + CG + S + <E + EG+
64	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
65	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
66	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>

67	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 WB1>	D + CG + S + WPR + WB1>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
69	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
70	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
71	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 <WB1	D + CG + S + WPR + <WB1
72	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
74	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
75	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 WB2>	D + CG + S + WPR + WB2>
76	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
77	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
78	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
79	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPR + 0.45 <WB2	D + CG + S + WPR + <WB2
80	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
81	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
82	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
83	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 WB3>	D + CG + S + WPL + WB3>
84	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
85	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
86	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
87	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 <WB3	D + CG + S + WPL + <WB3
88	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
89	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
90	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
91	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 WB4>	D + CG + S + WPL + WB4>
92	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
93	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
94	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4
95	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 WPL + 0.45 <WB4	D + CG + S + WPL + <WB4
96	System Derived	1.000	0.6 MWB	MWB - Wall: 1
97	System Derived	1.000	0.6 MWB	MWB - Wall: 2
98	System Derived	1.000	0.6 MWB	MWB - Wall: 3
99	System Derived	1.000	0.6 MWB	MWB - Wall: 4
100	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
101	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
102	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
103	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
104	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
105	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
106	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
107	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
108	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.2047 E> + 0.525 EG+ + 0.6825 EB>	D+CG+S+E>+EG++EB>
109	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 E> + 0.525 EG+ + 0.2047 EB>	D+CG+S+E>+EG++EB>
110	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.2047 <E + 0.525 EG+ + 0.6825 EB>	D+CG+S+<E+EG++EB>
111	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 <E + 0.525 EG+ + 0.2047 EB>	D+CG+S+<E+EG++EB>
112	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
113	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
114	Special	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 EB> + 0.525 EG+	D + CG + S + EB> + EG+
115	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
116	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
117	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
118	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
119	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
120	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
121	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
122	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
123	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.2047 E> + 0.525 EG+ + 0.6825 <EB	D+CG+S+E>+EG++<EB
124	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 E> + 0.525 EG+ + 0.2047 <EB	D+CG+S+E>+EG++<EB
125	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.2047 <E + 0.525 EG+ + 0.6825 <EB	D+CG+S+<E+EG++<EB
126	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.6825 <E + 0.525 EG+ + 0.2047 <EB	D+CG+S+<E+EG++<EB
127	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
128	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-
129	Special	1.000	1.0 D + 1.0 CG + 0.15 S + 1.3125 <EB + 0.525 EG+	D + CG + S + <EB + EG+

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 9 of 64

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-
43	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.525 E> + 0.525 EG+	D + CG + S + E> + EG+
44	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.525 <E + 0.525 EG+	D + CG + S + <E + EG+

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 S + 1.0 SD	D + CG + S + SD
2	System	1.000	1.0 D + 1.0 CG + 1.0 S	D + CG + S
3	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
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 PF1	D + CG + PF1(Span 1)
6	System	1.000	1.0 D + 1.0 CG + 1.0 PF1	D + CG + PF1(Span 12)
7	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 1)
8	System	1.000	1.0 D + 1.0 CG + 1.0 PH1	D + CG + PH1(Span 12)
9	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 1
10	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 2
11	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 3
12	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 4
13	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 5
14	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 6
15	System	1.000	1.0 D + 1.0 CG + 1.0 PF2	D + CG + PF2- Pattern 7
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB1>	D + CG + W1> + WB1>
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
18	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
19	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB1>	D + CU + <W2 + WB1>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB1>	D + CG + S + W1> + WB1>
21	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB1>	D + CG + S + <W2 + WB1>

22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB1	D + CG + W1> + <WB1
23	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB1	D + CU + <W2 + <WB1
26	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB1	D + CG + S + W1> + <WB1
27	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB1	D + CG + S + <W2 + <WB1
28	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB2>	D + CG + W1> + WB2>
29	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
31	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB2>	D + CU + <W2 + WB2>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB2>	D + CG + S + W1> + WB2>
33	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB2>	D + CG + S + <W2 + WB2>
34	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB2	D + CG + W1> + <WB2
35	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
36	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
37	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB2	D + CU + <W2 + <WB2
38	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB2	D + CG + S + W1> + <WB2
39	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB2	D + CG + S + <W2 + <WB2
40	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB3>	D + CG + W1> + WB3>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
42	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB3>	D + CU + <W2 + WB3>
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB3>	D + CG + S + W1> + WB3>
45	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB3>	D + CG + S + <W2 + WB3>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB3	D + CG + W1> + <WB3
47	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
48	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB3	D + CU + <W2 + <WB3
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB3	D + CG + S + W1> + <WB3
51	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB3	D + CG + S + <W2 + <WB3
52	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB4>	D + CG + W1> + WB4>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
54	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB4>	D + CU + <W2 + WB4>
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 WB4>	D + CG + S + W1> + WB4>
57	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 WB4>	D + CG + S + <W2 + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB4	D + CG + W1> + <WB4
59	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
60	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB4	D + CU + <W2 + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 W1> + 0.45 <WB4	D + CG + S + W1> + <WB4
63	System Derived	1.000	1.0 D + 1.0 CG + 0.75 S + 0.45 <W2 + 0.45 <WB4	D + CG + S + <W2 + <WB4
64	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.525 EB> + 0.525 EG+	D + CG + S + EB> + EG+
65	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
66	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
67	System Derived	1.000	1.0 D + 1.0 CG + 0.15 S + 0.525 <EB + 0.525 EG+	D + CG + S + <EB + EG+
68	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
69	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

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

Design Load Combinations - Roof - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 S	D + S
2	System	1.000	1.0 D + 1.0 US1*	D + US1*
3	System	1.000	1.0 D + 1.0 *US1	D + *US1
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	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	System	1.000	0	240	1.0 L	L
2	System	1.000	0	240	1.0 S	S
3	System	1.000	100	240	0.42 W1>	W1>
4	System	1.000	100	240	0.42 <W1	<W1
5	System	1.000	100	240	0.42 W2>	W2>
6	System	1.000	100	240	0.42 <W2	<W2
7	System	1.000	100	240	0.42 WPL	WPL
8	System	1.000	100	240	0.42 WPR	WPR
9	System	1.000	100	0	1.0 E> + 1.0 EG-	E> + EG-
10	System	1.000	100	0	1.0 <E + 1.0 EG-	<E + EG-

Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	180	1.0 S	S
2	System	1.000	180	0.42 W1>	W1>
3	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

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	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 Bracing Reaction
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



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 12 of 64

<EB	Seismic 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



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 13 of 64

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.
2 - 1	ES	psf	CG	5/8" CDX Plywood under Panels	1.50	0/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
2 - 1	ES	psf	SMS	Specified Min. Roof Snow	20.00	0/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
4 - 1	ES	psf	CG	5/8" CDX Plywood under Panels	1.50	0/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	ES	psf	CG	5/8" CDX Plywood beneath panels	1.50	0/0/0	-63/2/15	Y	Y	N	Y	N	N	IN	OF
A	ES	psf	CG	5/8" CDX Plywood beneath panels	1.50	0/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	ES	psf	CG	5/8" CDX Plywood beneath panels	1.50	250/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	ES	psf	CG	5/8" CDX Plywood beneath panels	1.50	250/0/0	-63/2/15	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	34/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	34/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	45/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	45/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	119/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	119/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	130/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	130/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	204/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	204/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	215/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	CG	Cupola NBVP Gravity Load	22.48	215/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	-7/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	-7/0/0	-16/0/0	Y	Y	N	Y	N	N	IN	OF
A	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	257/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	257/0/0	-16/0/0	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	170.00	0/0/0	-12/3/13	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	0/0/0	-31/7/7	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	0/0/0	-63/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	34/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	34/2/12	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	45/9/4	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	45/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	119/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	119/2/12	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	130/9/4	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	130/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	204/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	204/2/12	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	215/9/4	-18/6/8	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	215/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	34/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	34/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	21/5/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	21/5/8	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	119/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	119/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	106/5/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	106/5/8	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	204/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	204/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	191/5/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	191/5/8	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	45/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	45/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	58/6/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	58/6/8	0/0/0	Y	Y	N	Y	N	N	IN	OF



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 14 of 64

A	RC	psf	SD	SD due to cupola	83.30	130/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	130/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	143/6/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	143/6/8	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	215/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	83.30	215/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	228/6/8	-5/9/4	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	SD	SD due to cupola	0.00	228/6/8	0/0/0	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	170.00	250/0/0	-12/3/13	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	250/0/0	-31/7/7	Y	Y	N	Y	N	N	IN	OF
A	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	250/0/0	-63/0/0	Y	Y	N	Y	N	N	IN	OF
A	RC	psf	S	Snow Counter Load	59.67	-3/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	-3/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	-3/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	-3/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	-7/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	-7/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Counter Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	253/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	S	Snow Counter Load	59.67	253/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	253/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Counter Load	59.67	253/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	257/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	*US1	Unbalanced Snow Load	59.67	257/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	-7/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	-7/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	257/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
A	RC	psf	S	Snow Load	59.67	257/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	ES	psf	CG	5/8" CDX Plywood under Panels	1.50	0/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	119/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	119/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	130/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	130/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	34/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	34/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	45/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	45/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	204/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	204/2/12	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	215/9/4	-6/1/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	CG	Cupola NBVP Gravity Load	22.48	215/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	34/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	34/2/12	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	45/9/4	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	45/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	119/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	119/2/12	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	130/9/4	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	130/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 15 of 64

B	RC	psf	SD	SD due to cupola	83.30	204/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	204/2/12	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	215/9/4	-17/4/5	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	215/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	34/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	34/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	22/7/11	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	22/7/11	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	119/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	119/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	107/7/11	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	107/7/11	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	204/2/12	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	204/2/12	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	192/7/11	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	192/7/11	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	45/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	45/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	57/4/5	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	57/4/5	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	130/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	130/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	142/4/5	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	142/4/5	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	215/9/4	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	83.30	215/9/4	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	227/4/5	-5/9/4	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	SD	SD due to cupola	0.00	227/4/5	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	-7/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	-7/0/0	-16/0/0	Y	Y	N	Y	N	N	IN	OF
B	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	257/0/0	0/0/0	Y	Y	N	Y	N	N	IN	OF
B	LN	plf	CG	Vertical Load Due to Wooden Truss Rake Extension	70.63	257/0/0	-16/0/0	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	170.00	0/0/0	-12/3/13	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	0/0/0	-31/7/7	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	0/0/0	-63/0/0	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	170.00	250/0/0	-12/3/13	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	250/0/0	-31/7/7	Y	Y	N	Y	N	N	IN	OF
B	PT	p	CG	Vertical Loads Due To Wooden Corbels	108.00	250/0/0	-63/0/0	Y	Y	N	Y	N	N	IN	OF
B	RC	psf	S	Snow Counter Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	253/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	253/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	-3/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	-3/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snow Counter Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	253/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	253/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	-3/4/8	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	-3/4/8	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	US1*	Unbalanced Snow Counter Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	OUT	OF
B	RC	psf	S	Snowr Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snowr Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snowr Load	59.67	257/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 16 of 64

B	RC	psf	S	Snowr Load	59.67	257/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snow Load	59.67	-7/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snow Load	59.67	-7/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snow Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	S	Snow Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	250/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	250/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	257/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	257/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	-7/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	-7/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	0/0/0	0/0/0	Y	N	N	Y	Y	N	IN	OF
B	RC	psf	US1*	Unbalanced Snow Load	59.67	0/0/0	-18/3/9	Y	N	N	Y	Y	N	IN	OF



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

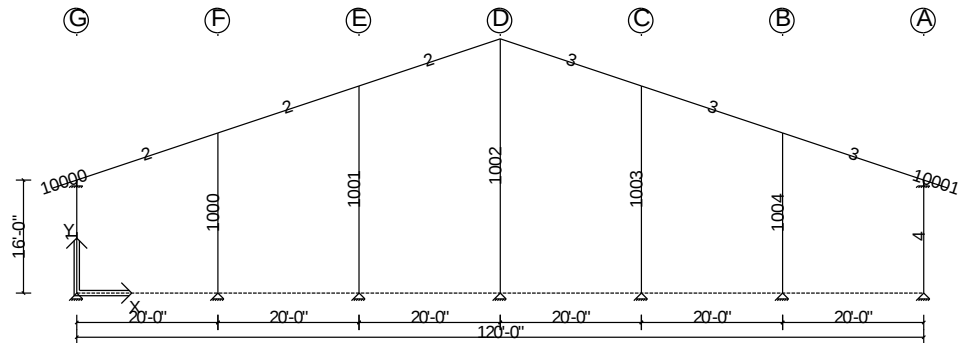
Page: 17 of 64

User Defined Frame Point Loads for Cross Section: 1

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-178.95	12/3/13	NA	NA	N	DOWN	1.000	OF
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	31/7/7	NA	NA	N	DOWN	1.000	OF
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	63/0/0	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-178.95	12/3/13	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	31/7/7	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	63/0/0	NA	NA	N	DOWN	1.000	OF

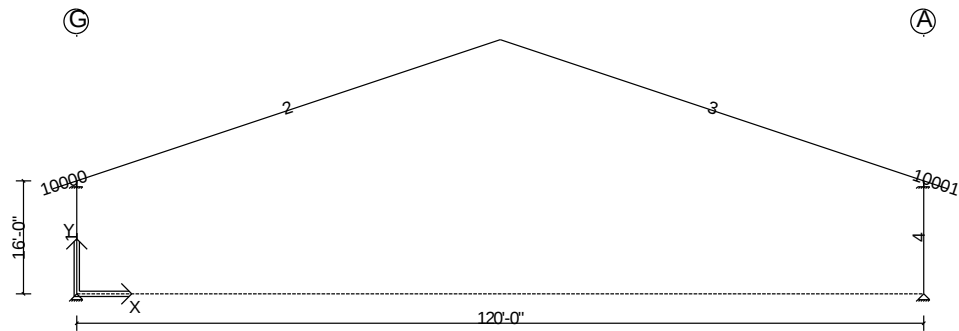
User Defined Frame Line Loads for Cross Section: 1

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-21.57	0/0/0	-21.57	63/2/15	N	DOWN	1.000	OF
2	plf	S>	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	<S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	US1*	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Unbalanced Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Unbalanced Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	S>	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	<S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	US1*	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	*US1	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	63/2/15	N	DOWN	1.000	OF
3	plf	S>	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	<S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	US1*	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	*US1	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	US1*	Unbalanced Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	S>	Snowr Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	<S	Snowr Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	US1*	Snowr Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	*US1	Snowr Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	S	Snowr Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	US1*	Unbalanced Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	3/6/11	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	3/6/11	N	DOWN	1.000	OF



User Defined Frame Line Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-29.25	0/0/0	-29.25	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	3/6/11	N	DOWN	1.000	OF

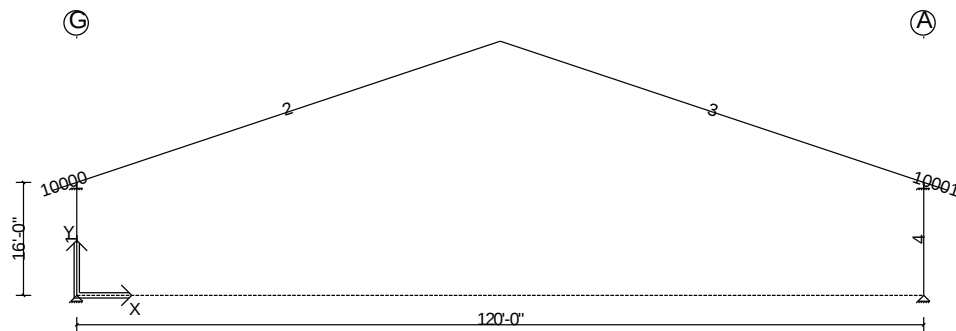


User Defined Frame Point Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
1	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF

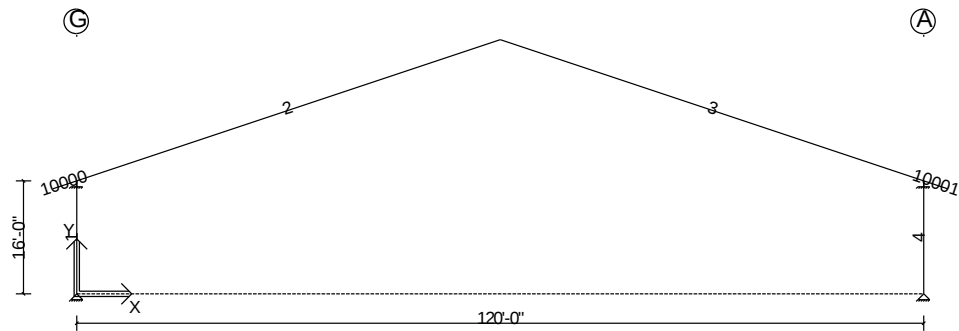
User Defined Frame Line Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF



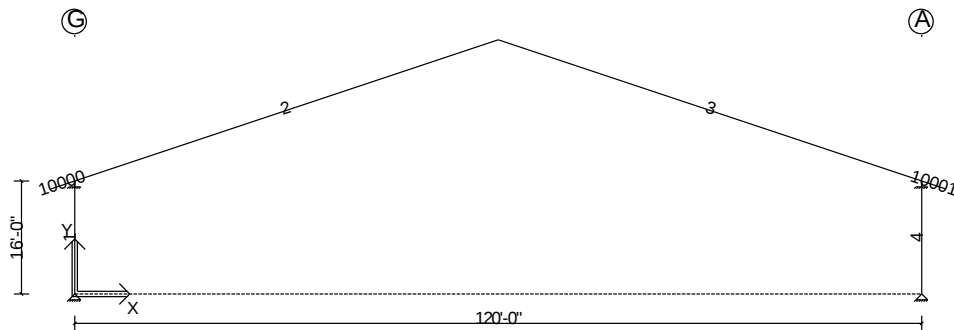
User Defined Frame Line Loads for Cross Section: 4

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF



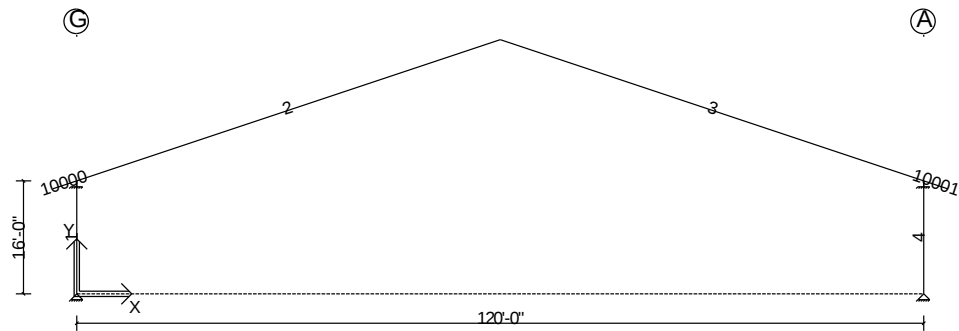
User Defined Frame Line Loads for Cross Section: 5

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF



User Defined Frame Line Loads for Cross Section: 6

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF

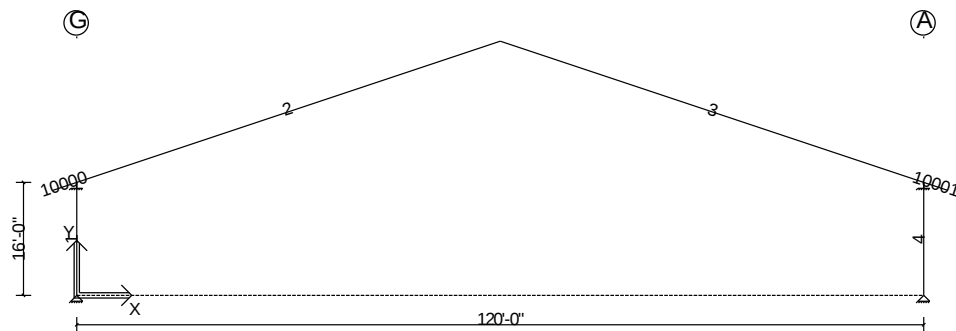


User Defined Frame Point Loads for Cross Section: 7

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
1	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF

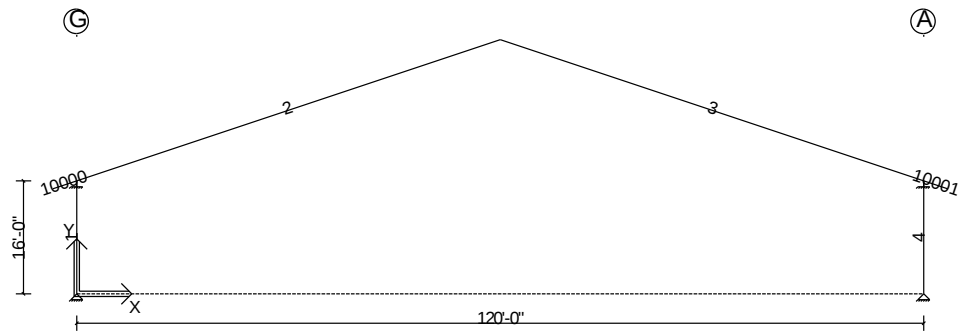
User Defined Frame Line Loads for Cross Section: 7

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF



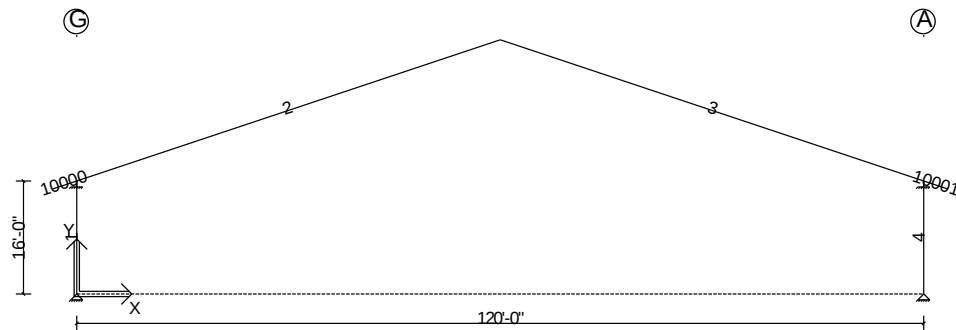
User Defined Frame Line Loads for Cross Section: 8

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF



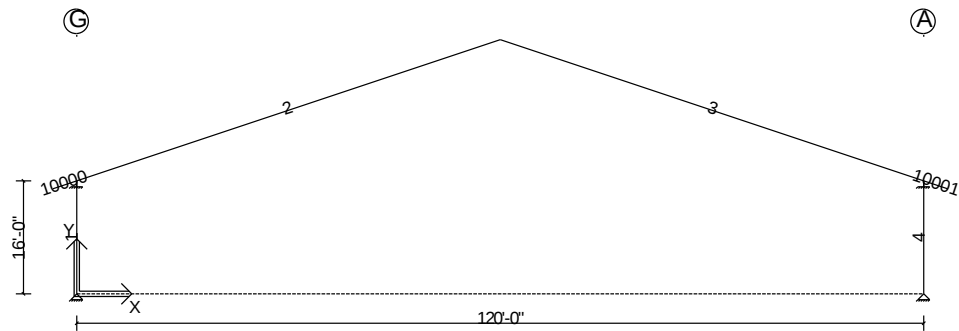
User Defined Frame Line Loads for Cross Section: 9

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF



User Defined Frame Line Loads for Cross Section: 10

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-33.75	0/0/0	-33.75	3/6/11	N	DOWN	1.000	OF

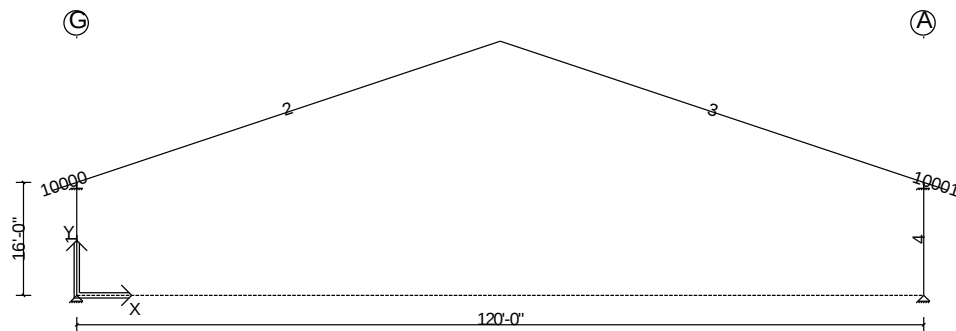


User Defined Frame Point Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
1	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
1	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W1>	W1>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W1	<W1 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF
4	k	W2>	W2>Reaction Due to cupola	1.20	15/11/14	NA	NA	N	RIGHT	1.000	OF
4	k	<W2	<W2 Reaction Due to cupola	-1.20	15/11/14	NA	NA	N	LEFT	1.000	OF

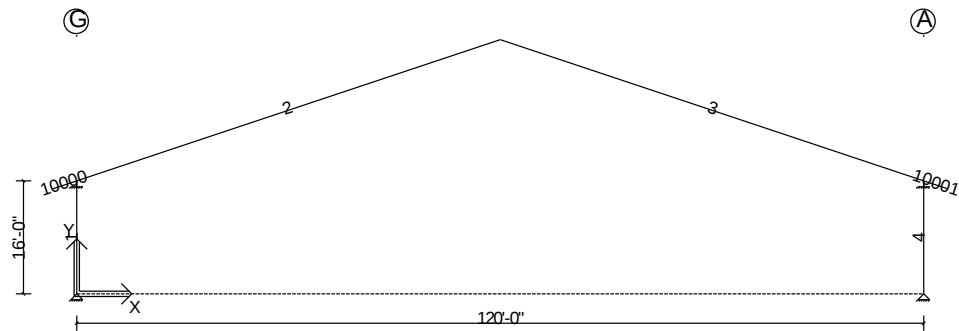
User Defined Frame Line Loads for Cross Section: 11

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-265.20	0/0/0	-265.20	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-222.05	0/0/0	-222.05	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-822.72	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-250.17	0/0/0	-250.17	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-30.00	0/0/0	-30.00	3/6/11	N	DOWN	1.000	OF



User Defined Frame Line Loads for Cross Section: 12

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-29.25	0/0/0	-29.25	63/2/15	N	DOWN	1.000	OF
2	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	18/6/6	N	DOWN	1.000	OF
2	plf	SD	SD due to cupola->Resolved From Plane	-266.67	0/0/0	-266.67	5/9/2	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	63/2/15	N	DOWN	1.000	OF
3	plf	CG	Cupola NBVP Gravity Load->Resolved From Plane	-18.72	0/0/0	-18.72	6/0/14	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-69.35	5/9/6	-0.00	17/4/4	N	DOWN	1.000	OF
3	plf	SD	SD due to cupola->Resolved From Plane	-232.49	0/0/0	-232.49	5/9/2	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	3/6/11	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-29.25	0/0/0	-29.25	3/6/11	N	DOWN	1.000	OF





21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

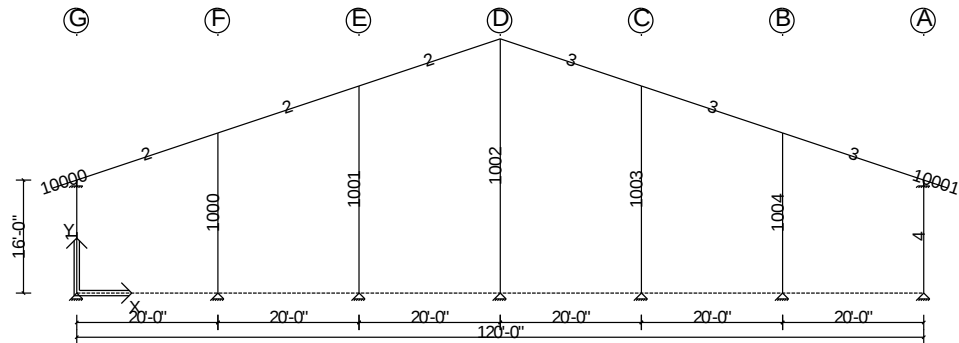
Page: 30 of 64

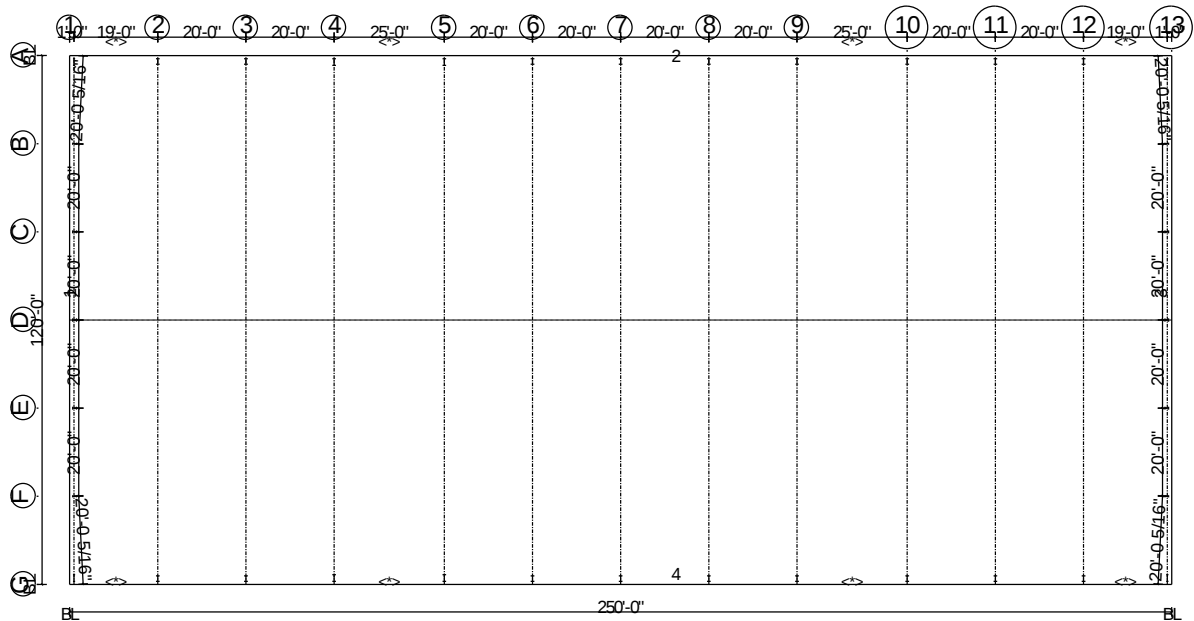
User Defined Frame Point Loads for Cross Section: 13

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-178.95	12/3/13	NA	NA	N	DOWN	1.000	OF
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	31/7/7	NA	NA	N	DOWN	1.000	OF
2	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	63/0/0	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-178.95	12/3/13	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	31/7/7	NA	NA	N	DOWN	1.000	OF
3	p	CG	Vertical Loads Due To Wooden Corbels->Resolved From Plane	-113.68	63/0/0	NA	NA	N	DOWN	1.000	OF

User Defined Frame Line Loads for Cross Section: 13

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	CG	5/8" CDX Plywood beneath panels->Resolved From Plane	-21.57	0/0/0	-21.57	63/2/15	N	DOWN	1.000	OF
2	plf	S>	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	<S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	US1*	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Unbalanced Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
2	plf	*US1	Unbalanced Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	S>	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	<S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	US1*	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	*US1	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
2	plf	S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	63/2/15	N	DOWN	1.000	OF
3	plf	S>	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	<S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	US1*	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	*US1	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	S	Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	US1*	Unbalanced Snow Counter Load->Resolved From Plane	229.88	0/0/0	229.88	18/3/7	N	UP	1.000	OF
3	plf	S>	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	<S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	US1*	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	*US1	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	S	Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
3	plf	US1*	Unbalanced Snow Load->Resolved From Plane	-229.88	0/0/0	-229.88	18/3/7	N	DOWN	1.000	OF
10001	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	3/6/11	N	DOWN	1.000	OF
10000	plf	CG	5/8" CDX Plywood under Panels->Resolved From Plane	-21.57	0/0/0	-21.57	3/6/11	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.



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 33 of 64

Reactions - Summary Report w/Controlling Load Comb

Shape: Riding Arena

Builder Contact:
Name: Rule Steel
Address:

Project: DC Riding Arena
Builder PO #:
Jobsite:

City, State Zip: Caldwell, Idaho 83605
Country: United States

City, State Zip: Clark, Colorado 80428
County, Country: Routt, United States

Loads and Codes - Shape: Riding Arena

City: Clark County: Routt
Building Code: 2018 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

State: Colorado Country: United States
Structural: 16AISC - ASD Rainfall: 1: 4.00 inches per hour
Cold Form: 16AISI - ASD f'c: 3000.01 psi Concrete

Dead and Collateral Loads

Collateral Gravity: 2.50 psf
Collateral Uplift: 0.00 psf

Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic): 4.63 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: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000
Ground Elevation Factor: Ke: 0.7686

NOT Windborne Debris Region
Base Elevation: 0/0/0
Site Elevation: 7270.0 ft
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 10/4/13
Basic Wind Pressure: q: 21.08, (Parts) 21.08 psf

Snow Load

Ground Snow Load: pg: 93.00 psf

Flat Roof Snow: pf: 71.61 psf
Design Snow (Sloped): ps: 71.61 psf
Rain Surcharge: 0.00
Exposure Factor: 2 Partially Exposed - Ce: 1.00
Snow Importance: Is: 1.000
Thermal Factor: Kept just above freezing - Ct: 1.10
Ground / Roof Conversion: 0.70
Unobstructed, Slippery

Seismic Load

Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 59.40 %g
Mapped MCE Acceleration: S1: 10.30 %g
Site Class: Stiff soil (D) - Default
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 0.5246
Design Acceleration Parameter: Sd1: 0.1644
Seismic Design Category: D
Seismic Snow Load: 14.32 psf
% Snow Used in Seismic: 20.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters

Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.1238 x W

Longitudinal Direction Parameters

Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.00
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.1614 x W



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

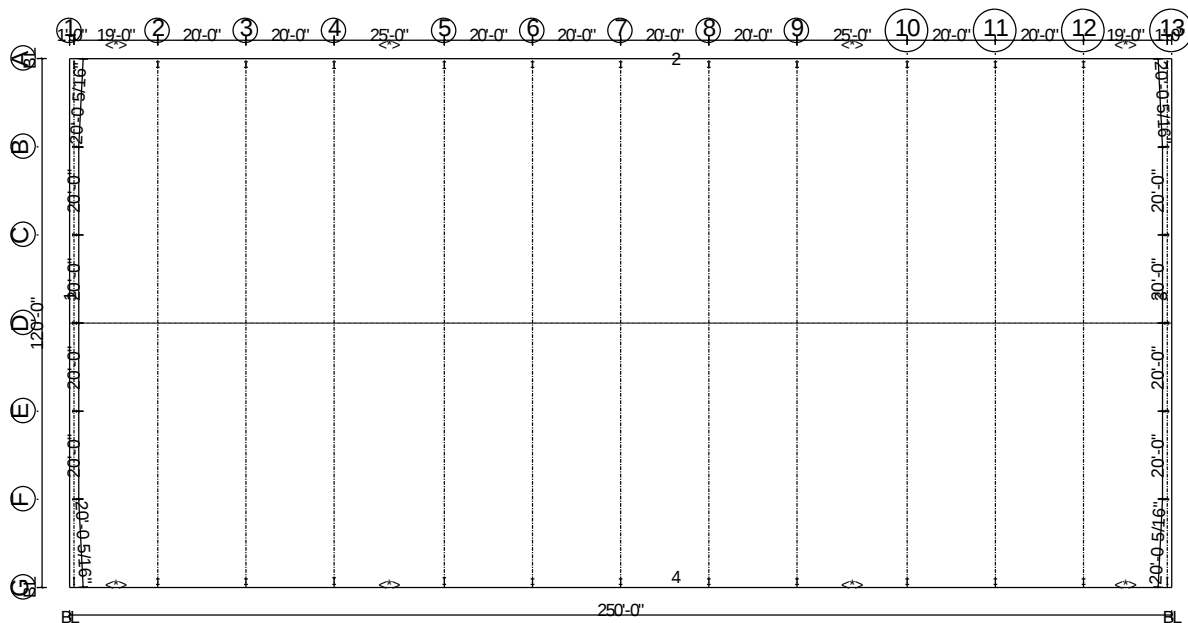
Page: 34 of 64

Overall Building Description

Shape	Overall Width	Overall Length	Floor Area (sq. ft.)	Wall Area (sq. ft.)	Roof Area (sq. ft.)	Max. Eave Height	Min. Eave Height 2	Max. Roof Pitch	Min. Roof Pitch	Peak Height
Riding Arena	120/0/0	250/0/0	30000	14240	34303	16/0/0	16/0/0	4.000:12	4.000:12	36/0/0

Overall Shape Description

Roof 1	Roof 2	From Grid	To Grid	Width	Length	Eave Ht.	Eave Ht. 2	Pitch	Pitch 2	Dist. to Ridge	Peak Height
A	B	1-A	1-G	120/0/0	250/0/0	16/0/0	16/0/0	4.000:12	4.000:12	60/0/0	36/0/0

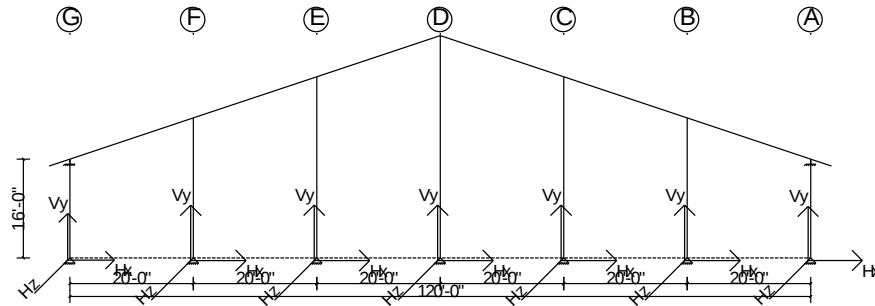


<*> The building is designed with bracing diagonals in the designated bays. Column base reactions, base plates and anchor rods are affected by this bracing and diagonals may not be relocated without consulting the building supplier's engineer.

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

Frame ID: end frames

Frame Type: Continuous Beam



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 1

Type			Exterior Column			Interior Column			Interior Column			Interior Column		
X-Loc			0/0/0			20/0/0			40/0/0			60/0/0		
Grid1 - Grid2			1-G			1-F			1-E			1-D		
Base Plate W x L (in.)			8 X 19			8 X 11			9 X 11			10 X 11		
Base Plate Thickness (in.)			0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)			4 - 1.000			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.			100'-0"			100'-0"			100'-0"			100'-0"		
Load Type	Load Description	Desc.	Hx	Hx	Vy	Hx	Hx	Vy	Hx	Hx	Vy	Hx	Hx	Vy
D	Material Dead Weight	Frm	0.07	-	1.34	-	-	1.72	-	-	1.97	-	-	2.48
CG	Collateral Load for Gravity Cases	Frm	0.06	-	0.93	-	-	1.17	-	-	1.25	-	-	1.41
L>	Live - Notional Right	Frm	0.30	-	4.02	-	-	5.39	-	-	5.27	-	-	5.92
<L	Live - Notional Left	Frm	0.30	-	4.02	-	-	5.39	-	-	5.27	-	-	5.92
ASL^	Alternate Span Live Load, Shifted Right	Frm	0.17	-	3.01	-	-	2.48	-	-	2.82	-	-	2.95
^ASL	Alternate Span Live Load, Shifted Left	Frm	0.13	-	1.01	-	-	2.91	-	-	2.45	-	-	2.97
S>	Snow - Notional Right	Frm	1.14	-	15.13	-	-	20.47	-	-	20.01	-	-	22.45
<S	Snow - Notional Left	Frm	1.14	-	15.13	-	-	20.47	-	-	20.01	-	-	22.45
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	0.80	-	4.94	-	-	6.66	-	-	2.26	-	-	25.24
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	0.85	-	15.07	-	-	19.05	-	-	28.57	-	-	25.21
W1>	Wind Load, Case 1, Right	Frm	-1.38	-	-5.86	-	4.40	-7.76	-	5.72	-7.87	-	6.91	-3.22
<W1	Wind Load, Case 1, Left	Frm	1.07	-	-4.10	-	-3.95	-5.56	-	-5.13	-4.88	-	-6.20	-3.22
W2>	Wind Load, Case 2, Right	Frm	-1.79	-	-4.65	-	-	-6.05	-	-	-6.20	-	-	-2.79
<W2	Wind Load, Case 2, Left	Frm	0.67	-	-2.90	-	-	-3.84	-	-	-3.22	-	-	-2.79
WPL	Wind Load, Ridge, Left	Frm	-1.12	-	-6.36	-	-	-3.63	-	-	-5.34	-	-	-2.91
WPR	Wind Load, Ridge, Right	Frm	2.23	-	-4.29	-	-	-11.03	-	-	-8.77	-	-	-2.85
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.56	-	2.03	-	-	-1.79	-	-	0.33	-	-	-1.03
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-2.74	-	-0.83	-	-	1.64	-	-	-0.32	-	-	-1.09
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	0.30	-	4.02	-	-	5.39	-	-	5.27	-	-	5.92
S	Snow Load	Frm	1.14	-	15.13	-	-	20.47	-	-	20.01	-	-	22.45
E>	Seismic Load, Right	Frm	-3.73	-	-4.51	-	0.50	4.04	-	0.67	-0.70	-	0.80	-0.06
EG+	Vertical Seismic Effect, Additive	Frm	0.02	-	0.26	-	-	0.32	-	-	0.33	-	-	0.37
<E	Seismic Load, Left	Frm	3.73	-	4.51	-	-0.50	-4.04	-	-0.67	0.70	-	-0.80	0.06
EG-	Vertical Seismic Effect, Subtractive	Frm	-0.02	-	-0.26	-	-	-0.32	-	-	-0.33	-	-	-0.37
WB1>	Wind Brace Reaction, Case 1, Right	Brc	0.18	-2.98	-2.87	-	-	-0.07	-	-	0.01	-	-	-0.12
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-0.10	-	2.94	-	-	-0.06	-	-	0.01	-	-	0.06
WB2>	Wind Brace Reaction, Case 2, Right	Brc	0.18	-2.98	-2.90	-	-	-0.07	-	-	0.01	-	-	-0.12



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 36 of 64

<WB2	Wind Brace Reaction, Case 2, Left	Brc	-0.10	-	2.96	-	-	-0.06	-	-	0.01	-	-	0.06
WB3>	Wind Brace Reaction, Case 3, Right	Brc	0.18	-2.82	-2.80	-	-	-0.08	-	-	0.01	-	-	-0.12
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-0.10	-	2.86	-	-	-0.05	-	-	0.01	-	-	0.06
WB4>	Wind Brace Reaction, Case 4, Right	Brc	0.18	-2.83	-2.80	-	-	-0.08	-	-	0.01	-	-	-0.12
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-0.10	-	2.85	-	-	-0.05	-	-	0.01	-	-	0.06
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	0.16	-3.11	-2.51	-	-	-0.07	-	-	0.01	-	-	-0.11
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-0.08	-	2.53	-	-	-0.05	-	-	0.01	-	-	0.05
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	0.95	-18.22	-15.01	-	-	-0.42	-	-	0.08	-	-	-0.65
<EB	Seismic Brace Reaction, Left	Brc	-0.51	-	15.41	-	-	-0.29	-	-	0.06	-	-	0.30

Type			Interior Column			Interior Column			Exterior Column					
X-Loc			80/0/0			100/0/0			120/0/0					
Grid1 - Grid2			1-C			1-B			1-A					
Base Plate W x L (in.)			9 X 11			8 X 11			8 X 19					
Base Plate Thickness (in.)			0.375			0.375			0.375					
Anchor Rod Qty/Diam. (in.)			4 - 0.750			4 - 0.750			4 - 1.000					
Column Base Elev.			100'-0"			100'-0"			100'-0"					
Load Type	Load Description	Desc.	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy			
D	Material Dead Weight	Frm	-	-	1.97	-	-	1.72	-0.07	-	1.35	-	-	-
CG	Collateral Load for Gravity Cases	Frm	-	-	1.25	-	-	1.17	-0.06	-	0.93	-	-	-
L>	Live - Notional Right	Frm	-	-	5.28	-	-	5.38	-0.30	-	4.03	-	-	-
<L	Live - Notional Left	Frm	-	-	5.28	-	-	5.38	-0.30	-	4.03	-	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	-	-	2.45	-	-	2.87	-0.17	-	1.06	-	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-	-	2.82	-	-	2.51	-0.13	-	2.97	-	-	-
S>	Snow - Notional Right	Frm	-	-	20.02	-	-	20.45	-1.14	-	15.14	-	-	-
<S	Snow - Notional Left	Frm	-	-	20.02	-	-	20.45	-1.14	-	15.14	-	-	-
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	-	-	28.58	-	-	19.07	-0.80	-	15.02	-	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	-	-	2.26	-	-	6.61	-0.85	-	5.00	-	-	-
W1>	Wind Load, Case 1, Right	Frm	-	5.72	-4.89	-	4.40	-5.55	-1.07	-	-4.11	-	-	-
<W1	Wind Load, Case 1, Left	Frm	-	-5.13	-7.87	-	-3.95	-7.75	1.38	-	-5.86	-	-	-
W2>	Wind Load, Case 2, Right	Frm	-	-	-3.22	-	-	-3.83	-0.66	-	-2.90	-	-	-
<W2	Wind Load, Case 2, Left	Frm	-	-	-6.20	-	-	-6.04	1.78	-	-4.65	-	-	-
WPL	Wind Load, Ridge, Left	Frm	-	-	-8.78	-	-	-11.11	-2.33	-	-4.17	-	-	-
WPR	Wind Load, Ridge, Right	Frm	-	-	-5.34	-	-	-3.54	1.22	-	-6.48	-	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	-	-	-0.32	-	-	1.71	2.82	-	-0.92	-	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-	-	0.32	-	-	-1.85	-1.64	-	2.12	-	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	-	-	5.28	-	-	5.38	-0.30	-	4.03	-	-	-
S	Snow Load	Frm	-	-	20.02	-	-	20.45	-1.14	-	15.14	-	-	-
E>	Seismic Load, Right	Frm	-	0.67	0.70	-	0.50	-4.19	-3.92	-	4.73	-	-	-
EG+	Vertical Seismic Effect, Additive	Frm	-	-	0.33	-	-	0.32	-0.02	-	0.26	-	-	-
<E	Seismic Load, Left	Frm	-	-0.67	-0.70	-	-0.50	4.19	3.92	-	-4.73	-	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-	-	-0.33	-	-	-0.32	0.02	-	-0.26	-	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-	-	-	-	-	-	-0.18	-2.82	-2.80	-	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-	-	0.01	-	-	-0.05	0.10	-	2.79	-	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-	-	-	-	-	-	-0.18	-2.83	-2.84	-	-	-
<WB2	Wind Brace Reaction, Case 2, Left	Brc	-	-	0.01	-	-	-0.05	0.10	-	2.81	-	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-	-	-	-	-	-	-0.18	-2.98	-3.00	-	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-	-	0.01	-	-	-0.06	0.10	-	2.99	-	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-	-	-	-	-	-	-0.18	-2.98	-3.01	-	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-	-	0.01	-	-	-0.06	0.10	-	2.99	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-	-	-	-	-	-	-0.16	-3.11	-2.58	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-	-	-	-	-	-0.05	0.08	-	2.53	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-	-	-	-	-	0.05	-0.95	-18.22	-15.43	-	-	-
<EB	Seismic Brace Reaction, Left	Brc	-	-	0.06	-	-	-0.28	0.51	-	15.38	-	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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	1-G	3.50	120	3.79	103	16.58	100	-	-	14.26	104	17.71	117	-	-	-	-
20/0/0	1-F	-	-	-	-	2.37	19	2.64	18	5.63	73	23.36	12	-	-	-	-
40/0/0	1-E	-	-	-	-	3.08	19	3.43	18	4.08	33	31.79	17	-	-	-	-
60/0/0	1-D	-	-	-	-	3.72	19	4.14	18	0.65	27	29.13	16	-	-	-	-
80/0/0	1-C	-	-	-	-	3.08	19	3.43	18	4.09	32	31.80	16	-	-	-	-
100/0/0	1-B	-	-	-	-	2.37	19	2.64	18	5.67	85	23.34	12	-	-	-	-
120/0/0	1-A	3.97	101	3.67	122	16.58	100	-	-	14.71	106	17.74	115	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 1

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

X-Loc		0/0/0			20/0/0			40/0/0			60/0/0			80/0/0		
Grid1 - Grid2		1-G			1-F			1-E			1-D			1-C		
Ld	Description	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)
12	D + CG + S>	1.27	-	17.40	-	-	23.36	-	-	23.22	-	-	26.34	-	-	23.24
16	D + CG + US1*	0.93	-	7.21	-	-	9.56	-	-	5.47	-	-	29.13	-	-	31.80
17	D + CG + *US1	0.98	-	17.34	-	-	21.94	-	-	31.79	-	-	29.10	-	-	5.48
18	D + CG + W1>	-0.70	-	-1.25	-	2.64	-1.76	-	3.43	-1.50	-	4.14	1.96	-	3.43	0.28
19	D + CG + <W1	0.77	-	-0.19	-	-2.37	-0.44	-	-3.08	0.29	-	-3.72	1.96	-	-3.08	-1.51
27	MW - Wall: 4	-1.64	-	-0.50	-	-	0.99	-	-	-0.19	-	-	-0.65	-	-	0.19
32	D + CU + WPL	-0.62	-	-3.01	-	-	-1.15	-	-	-2.02	-	-	-0.26	-	-	-4.09
33	D + CU + WPR	1.38	-	-1.77	-	-	-5.59	-	-	-4.08	-	-	-0.22	-	-	-2.02
73	D + CU + WPR + WB2>	1.49	-1.79	-3.50	-	-	-5.63	-	-	-4.08	-	-	-0.29	-	-	-2.02
85	D + CU + WPL + <WB3	-0.68	-	-1.29	-	-	-1.18	-	-	-2.02	-	-	-0.23	-	-	-4.08
100	D + CG + E> + EG+ + EB>	-0.01	-16.58	-12.44	-	0.14	3.84	-	0.18	3.32	-	0.22	3.54	-	0.18	3.64
101	D + CG + E> + EG+ + EB>	-2.99	-4.98	-5.75	-	0.46	6.68	-	0.61	2.83	-	0.73	3.91	-	0.61	4.08
103	D + CG + <E + EG+ + EB>	3.79	-4.98	2.46	-	-0.46	-0.67	-	-0.61	4.10	-	-0.73	4.02	-	-0.61	2.81
104	D + CU + E> + EG- + EB>	-0.12	-16.58	-14.26	-	0.14	1.53	-	0.18	0.83	-	0.22	0.62	-	0.18	1.14
106	D + CU + <E + EG- + EB>	1.92	-16.58	-11.80	-	-0.14	-0.68	-	-0.18	1.21	-	-0.22	0.66	-	-0.18	0.76
115	D + CG + E> + EG+ + <EB	-1.34	-	15.24	-	0.14	3.96	-	0.18	3.31	-	0.22	4.40	-	0.18	3.69
117	D + CG + <E + EG+ + <EB	0.69	-	17.71	-	-0.14	1.75	-	-0.18	3.69	-	-0.22	4.44	-	-0.18	3.31
120	D + CU + E> + EG- + <EB	-3.50	-	0.73	-	0.46	4.41	-	0.61	0.33	-	0.73	1.26	-	0.61	1.60
122	D + CU + <E + EG- + <EB	3.28	-	8.94	-	-0.46	-2.95	-	-0.61	1.61	-	-0.73	1.37	-	-0.61	0.33

X-Loc		100/0/0			120/0/0								
Grid1 - Grid2		1-B			1-A								
Ld	Description	Hx	Hz	Vy	Hx	Hz	Vy						
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)						
12	D + CG + S>	-	-	23.34	-1.27	-	17.42	-	-	-	-	-	-
16	D + CG + US1*	-	-	21.96	-0.93	-	17.29	-	-	-	-	-	-
17	D + CG + *US1	-	-	9.50	-0.98	-	7.28	-	-	-	-	-	-
18	D + CG + W1>	-	2.64	-0.44	-0.77	-	-0.19	-	-	-	-	-	-
19	D + CG + <W1	-	-2.37	-1.76	0.70	-	-1.24	-	-	-	-	-	-
27	MW - Wall: 4	-	-	-1.11	-0.98	-	1.27	-	-	-	-	-	-
32	D + CU + WPL	-	-	-5.63	-1.44	-	-1.70	-	-	-	-	-	-
33	D + CU + WPR	-	-	-1.09	0.69	-	-3.08	-	-	-	-	-	-
73	D + CU + WPR + WB2>	-	-	-1.09	0.58	-1.70	-4.78	-	-	-	-	-	-
85	D + CU + WPL + <WB3	-	-	-5.67	-1.38	-	0.10	-	-	-	-	-	-
100	D + CG + E> + EG+ + EB>	-	0.14	2.02	-2.08	-16.58	-10.30	-	-	-	-	-	-
101	D + CG + E> + EG+ + EB>	-	0.46	-0.68	-3.97	-4.97	2.54	-	-	-	-	-	-
103	D + CG + <E + EG+ + EB>	-	-0.46	6.95	3.16	-4.97	-6.07	-	-	-	-	-	-
104	D + CU + E> + EG- + EB>	-	0.14	-0.29	-1.97	-16.58	-12.12	-	-	-	-	-	-
106	D + CU + <E + EG- + EB>	-	-0.14	2.00	0.17	-16.58	-14.71	-	-	-	-	-	-
115	D + CG + E> + EG+ + <EB	-	0.14	1.72	-0.75	-	17.74	-	-	-	-	-	-
117	D + CG + <E + EG+ + <EB	-	-0.14	4.01	1.39	-	15.16	-	-	-	-	-	-
120	D + CU + E> + EG- + <EB	-	0.46	-3.08	-3.46	-	9.13	-	-	-	-	-	-
122	D + CU + <E + EG- + <EB	-	-0.46	4.55	3.67	-	0.52	-	-	-	-	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 38 of 64

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
12	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
16	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
17	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
18	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
27	System	1.000	0.6 MW	MW - Wall: 4
32	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
73	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
85	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
100	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
101	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
103	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
104	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
106	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
115	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
117	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
120	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
122	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB

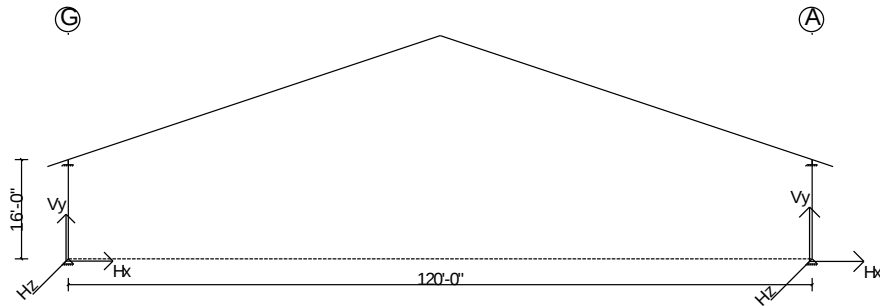
Bracing

X-Loc	Grid	Description
0/0/0	1-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	1-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 20/0/0

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 2

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 2-G 14 X 16 0.750 4 - 2.000 100'-0"			Exterior Column 120/0/0 2-A 14 X 16 0.750 4 - 2.000 100'-0"				
Load Type	Load Description	Desc.	Hx	Hz	Vy	Hx	Hz	Vy		
D	Material Dead Weight	Frm	6.61	-	9.34	-6.61	-	9.34	-	-
CG	Collateral Load for Gravity Cases	Frm	4.23	-	5.05	-4.23	-	5.05	-	-
L>	Live - Notional Right	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
<L	Live - Notional Left	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.32	-	14.04	-12.32	-	14.04	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.17	-	1.32	0.17	-	1.32	-	-
S>	Snow - Notional Right	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
<S	Snow - Notional Left	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
SD	Snow Drift Load	Frm	2.59	-	1.77	-2.59	-	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	61.65	-	49.40	-61.66	-	85.97	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	61.66	-	85.97	-61.66	-	49.40	-	-
W1>	Wind Load, Case 1, Right	Frm	-19.48	-	-25.40	14.19	-	-20.55	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.19	-	-20.55	19.48	-	-25.40	-	-
W2>	Wind Load, Case 2, Right	Frm	-13.83	-	-16.52	8.54	-	-11.66	-	-
<W2	Wind Load, Case 2, Left	Frm	-8.54	-	-11.66	13.83	-	-16.52	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.94	-	-18.75	11.46	-	-22.89	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.46	-	-22.89	14.94	-	-18.75	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.45	-	0.70	6.66	-	-0.70	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.66	-	-0.70	-1.45	-	0.70	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
S	Snow Load	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
E>	Seismic Load, Right	Frm	-4.79	-	-2.40	-4.79	-	2.40	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.17	-	1.43	-1.17	-	1.43	-	-
<E	Seismic Load, Left	Frm	4.79	-	2.40	4.79	-	-2.40	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.17	-	-1.43	1.17	-	-1.43	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-0.09	-	2.98	0.09	-	2.86	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	0.06	2.91	-2.93	-0.06	2.76	-2.77	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-0.09	-	3.02	0.09	-	2.90	-	-

<WB2	Wind Brace Reaction, Case 2, Left	Brc	0.07	2.91	-2.95	-0.07	2.76	-2.79	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-0.10	-	2.92	0.10	-	3.06	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	0.07	2.76	-2.85	-0.07	2.91	-2.97	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-0.10	-	2.93	0.10	-	3.06	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	0.07	2.76	-2.85	-0.07	2.91	-2.97	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-0.08	-	2.62	0.08	-	2.62	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	0.06	2.99	-2.53	-0.06	2.99	-2.51	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-0.50	-	15.68	0.50	-	15.71	-	-
<EB	Seismic Brace Reaction, Left	Brc	0.35	17.81	-15.39	-0.35	17.81	-15.26	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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-G	7.73	23	86.30	9	-	-	16.21	110	10.06	114	104.77	9	-	-	-	-
120/0/0	2-A	86.30	9	7.73	24	-	-	16.21	110	9.94	116	104.75	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 2

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		2-G			2-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)										
9	D + CG + S> + SD	86.30	-	104.77	-86.30	-	104.75	-	-	-	-
23	D + CU + W1>	-7.73	-	-9.64	4.55	-	-6.72	-	-	-	-
24	D + CU + <W1	-4.55	-	-6.72	7.73	-	-9.64	-	-	-	-
110	D + CG + E> + EG+ + <EB	10.66	16.21	0.73	-13.28	16.21	2.16	-	-	-	-
114	D + CU + E> + EG- + <EB	2.15	16.21	-10.06	-4.77	16.21	-8.63	-	-	-	-
116	D + CU + <E + EG- + <EB	4.76	16.21	-8.75	-2.15	16.21	-9.94	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
110	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
114	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
116	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB

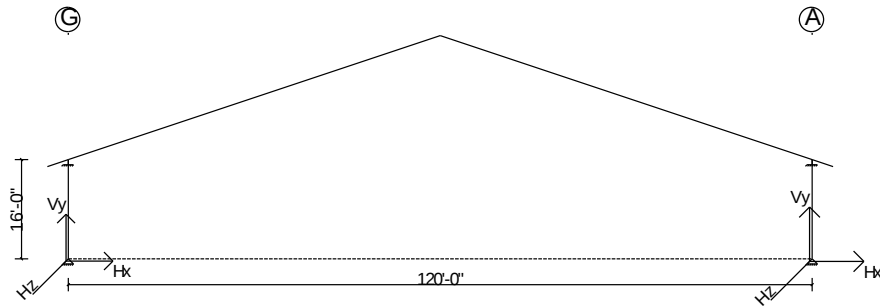
Bracing

X-Loc	Grid	Description
0/0/0	2-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	2-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 40/0/0

Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 3

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 3-G 14 X 16 0.750 4 - 2.000 100'-0"		Exterior Column 120/0/0 3-A 14 X 16 0.750 4 - 2.000 100'-0"			
Load Type	Load Description	Desc.	Hx	Vy	Hx	Vy		
D	Material Dead Weight	Frm	6.99	9.83	-6.99	9.83	-	-
CG	Collateral Load for Gravity Cases	Frm	6.07	6.35	-6.07	6.35	-	-
L>	Live - Notional Right	Frm	12.46	15.75	-12.46	15.75	-	-
<L	Live - Notional Left	Frm	12.46	15.75	-12.46	15.75	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.63	14.40	-12.63	14.40	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.18	1.35	0.18	1.35	-	-
S>	Snow - Notional Right	Frm	74.74	90.88	-74.74	90.88	-	-
<S	Snow - Notional Left	Frm	74.74	90.88	-74.74	90.88	-	-
SD	Snow Drift Load	Frm	10.89	7.62	-10.89	7.51	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	63.21	50.67	-63.21	88.18	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	63.22	88.18	-63.22	50.67	-	-
W1>	Wind Load, Case 1, Right	Frm	-18.34	-23.01	11.66	-18.37	-	-
<W1	Wind Load, Case 1, Left	Frm	-11.66	-18.37	18.34	-23.01	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.53	-13.90	5.85	-9.26	-	-
<W2	Wind Load, Case 2, Left	Frm	-5.85	-9.26	12.53	-13.90	-	-
WPL	Wind Load, Ridge, Left	Frm	-13.04	-17.03	10.19	-20.42	-	-
WPR	Wind Load, Ridge, Right	Frm	-10.19	-20.42	13.04	-17.03	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.49	0.71	6.83	-0.71	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.83	-0.71	-1.49	0.71	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-
L	Roof Live Load	Frm	12.46	15.75	-12.46	15.75	-	-
S	Snow Load	Frm	74.74	90.88	-74.74	90.88	-	-
E>	Seismic Load, Right	Frm	-5.06	-2.54	-5.06	2.54	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.38	1.59	-1.38	1.59	-	-
<E	Seismic Load, Left	Frm	5.06	2.54	5.06	-2.54	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.38	-1.59	1.38	-1.59	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

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-G	6.81	23	98.70	9	-	-	-	-	7.91	23	114.68	9	-	-	-	-
120/0/0	3-A	98.70	9	6.81	24	-	-	-	-	7.91	24	114.56	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 3

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

X-Loc		0/0/0		120/0/0			
Grid1 - Grid2		3-G		3-A			
Ld	Description	Hx	Vy	Hx	Vy		
Cs	(application factor not shown)	(k)	(k)	(k)	(k)		
9	D + CG + S> + SD	98.70	114.68	-98.70	114.56	-	-
23	D + CU + W1>	-6.81	-7.91	2.80	-5.13	-	-
24	D + CU + <W1	-2.80	-5.13	6.81	-7.91	-	-

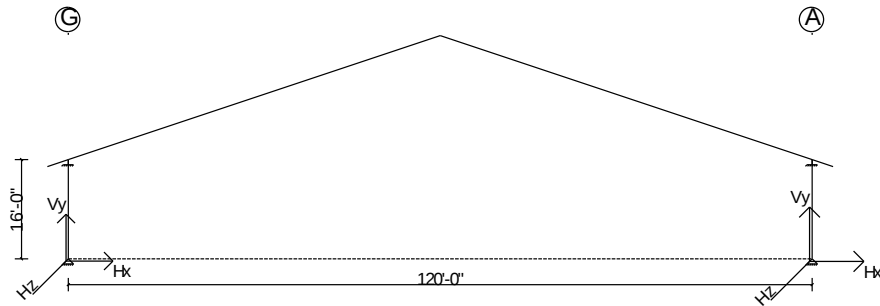
ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1

Wall: 4, Frame at: 60/0/0

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 4

Type			Exterior Column			Exterior Column				
X-Loc			0/0/0			120/0/0				
Grid1 - Grid2			4-G			4-A				
Base Plate W x L (in.)			14 X 19			14 X 19				
Base Plate Thickness (in.)			0.750			0.750				
Anchor Rod Qty/Diam. (in.)			4 - 2.000			4 - 2.000				
Column Base Elev.			100'-0"			100'-0"				
Load Type	Load Description	Desc.	Hx	Hx	Vy	Hx	Hx	Vy		
D	Material Dead Weight	Frm	8.42	-	11.52	-8.42	-	11.52	-	-
CG	Collateral Load for Gravity Cases	Frm	4.81	-	5.81	-4.81	-	5.81	-	-
L>	Live - Notional Right	Frm	13.86	-	17.72	-13.86	-	17.72	-	-
<L	Live - Notional Left	Frm	13.86	-	17.72	-13.86	-	17.72	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	14.07	-	16.20	-14.07	-	16.20	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.20	-	1.52	0.20	-	1.52	-	-
S>	Snow - Notional Right	Frm	83.19	-	102.24	-83.19	-	102.24	-	-
<S	Snow - Notional Left	Frm	83.19	-	102.24	-83.19	-	102.24	-	-
SD	Snow Drift Load	Frm	2.62	-	1.77	-2.62	-	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	70.62	-	56.96	-70.62	-	99.24	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	70.62	-	99.24	-70.62	-	56.96	-	-
W1>	Wind Load, Case 1, Right	Frm	-18.98	-	-25.59	14.17	-	-20.97	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.17	-	-20.97	18.98	-	-25.59	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.60	-	-15.34	7.79	-	-10.72	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.79	-	-10.72	12.60	-	-15.34	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.36	-	-19.15	11.15	-	-22.98	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.15	-	-22.98	14.36	-	-19.15	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.64	-	0.81	7.72	-	-0.81	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-7.72	-	-0.81	-1.64	-	0.81	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	13.86	-	17.72	-13.86	-	17.72	-	-
S	Snow Load	Frm	83.19	-	102.24	-83.19	-	102.24	-	-
E>	Seismic Load, Right	Frm	-5.52	-	-2.78	-5.52	-	2.78	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.34	-	1.65	-1.34	-	1.65	-	-
<E	Seismic Load, Left	Frm	5.52	-	2.78	5.52	-	-2.78	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.34	-	-1.65	1.34	-	-1.65	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	0.06	-3.03	-2.30	-0.06	-2.87	-2.23	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-0.08	-	2.32	0.08	-	2.21	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	0.06	-3.03	-2.33	-0.06	-2.87	-2.25	-	-

<WB2	Wind Brace Reaction, Case 2, Left	Brc	-0.08	-	2.34	0.08	-	2.22	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	0.06	-2.87	-2.26	-0.06	-3.03	-2.38	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-0.08	-	2.26	0.08	-	2.37	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	0.06	-2.87	-2.26	-0.06	-3.03	-2.38	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-0.08	-	2.26	0.08	-	2.37	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	0.05	-3.16	-2.02	-0.05	-3.16	-2.03	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-0.07	-	2.01	0.07	-	2.01	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	0.32	-18.54	-12.07	-0.32	-18.54	-12.20	-	-
<EB	Seismic Brace Reaction, Left	Brc	-0.44	-	12.15	0.44	-	12.12	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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-G	6.33	23	99.04	9	16.87	95	-	-	8.44	23	121.34	9	-	-	-	-
120/0/0	4-A	99.04	9	6.33	24	16.87	95	-	-	8.44	24	121.33	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 4

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		4-G			4-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)				
9	D + CG + S> + SD	99.04	-	121.34	-99.04	-	121.33	-	-	-	-
23	D + CU + W1>	-6.33	-	-8.44	3.45	-	-5.67	-	-	-	-
24	D + CU + <W1	-3.45	-	-5.67	6.33	-	-8.44	-	-	-	-
95	D + CG + E> + EG+ + EB>	12.95	-16.87	6.75	-15.96	-16.87	8.15	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
95	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>

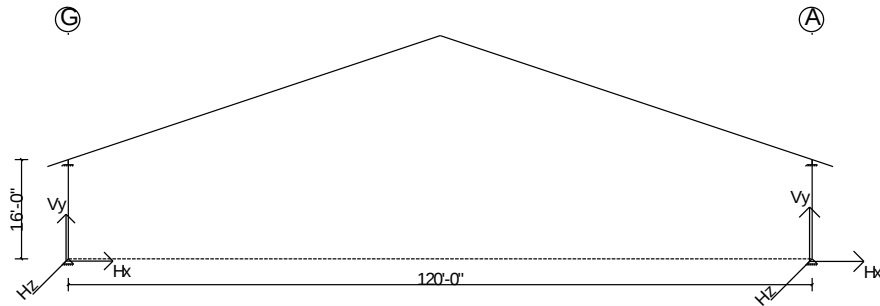
Bracing

X-Loc	Grid	Description
0/0/0	4-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	4-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 85/0/0

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 5

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 5-G 14 X 19 0.750 4 - 2.000 100'-0"			Exterior Column 120/0/0 5-A 14 X 19 0.750 4 - 2.000 100'-0"				
Load Type	Load Description	Desc.	Hx	Hz	Vy	Hx	Hz	Vy		
D	Material Dead Weight	Frm	8.52	-	11.93	-8.52	-	11.57	-	-
CG	Collateral Load for Gravity Cases	Frm	4.65	-	5.70	-4.65	-	5.70	-	-
L>	Live - Notional Right	Frm	13.87	-	17.72	-13.87	-	17.72	-	-
<L	Live - Notional Left	Frm	13.87	-	17.72	-13.87	-	17.72	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	14.08	-	16.20	-14.08	-	16.20	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.20	-	1.52	0.20	-	1.52	-	-
S>	Snow - Notional Right	Frm	83.26	-	102.24	-83.26	-	102.24	-	-
<S	Snow - Notional Left	Frm	83.26	-	102.24	-83.26	-	102.24	-	-
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	70.73	-	56.96	-70.73	-	99.24	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	70.65	-	99.24	-70.65	-	56.96	-	-
W1>	Wind Load, Case 1, Right	Frm	-18.98	-	-25.59	14.18	-	-20.97	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.18	-	-20.97	18.99	-	-25.59	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.60	-	-15.34	7.80	-	-10.72	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.80	-	-10.72	12.61	-	-15.34	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.38	-	-19.15	11.17	-	-22.98	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.15	-	-22.98	14.36	-	-19.15	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.65	-	0.81	7.71	-	-0.81	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-7.73	-	-0.81	-1.63	-	0.81	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	13.87	-	17.72	-13.87	-	17.72	-	-
S	Snow Load	Frm	83.26	-	102.24	-83.26	-	102.24	-	-
E>	Seismic Load, Right	Frm	-5.52	-	-2.77	-5.50	-	2.77	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.32	-	1.64	-1.32	-	1.64	-	-
<E	Seismic Load, Left	Frm	5.52	-	2.77	5.50	-	-2.77	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.32	-	-1.64	1.32	-	-1.64	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-0.08	-	2.31	0.08	-	2.22	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	0.06	3.03	-2.33	-0.06	2.87	-2.20	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-0.08	-	2.34	0.08	-	2.24	-	-

<WB2	Wind Brace Reaction, Case 2, Left	Brc	0.06	3.03	-2.35	-0.06	2.87	-2.22	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-0.08	-	2.27	0.08	-	2.37	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	0.06	2.87	-2.27	-0.06	3.03	-2.36	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-0.08	-	2.27	0.08	-	2.37	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	0.06	2.87	-2.27	-0.06	3.03	-2.36	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-0.07	-	2.02	0.07	-	2.02	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	0.05	3.14	-2.02	-0.05	3.14	-2.00	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-0.44	-	12.12	0.44	-	12.15	-	-
<EB	Seismic Brace Reaction, Left	Brc	0.32	18.55	-12.20	-0.32	18.55	-12.07	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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-G	6.28	23	96.43	7	-	-	16.88	110	8.20	23	119.87	7	-	-	-	-
120/0/0	5-A	96.43	7	6.28	24	-	-	16.88	110	8.41	24	119.51	7	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 5

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		5-G			5-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)				
7	D + CG + S>	96.43	-	119.87	-96.43	-	119.51	-	-	-	-
23	D + CU + W1>	-6.28	-	-8.20	3.39	-	-5.64	-	-	-	-
24	D + CU + <W1	-3.39	-	-5.43	6.28	-	-8.41	-	-	-	-
110	D + CG + E> + EG+ + <EB	12.88	16.88	6.92	-15.89	16.88	8.20	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
7	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
110	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB

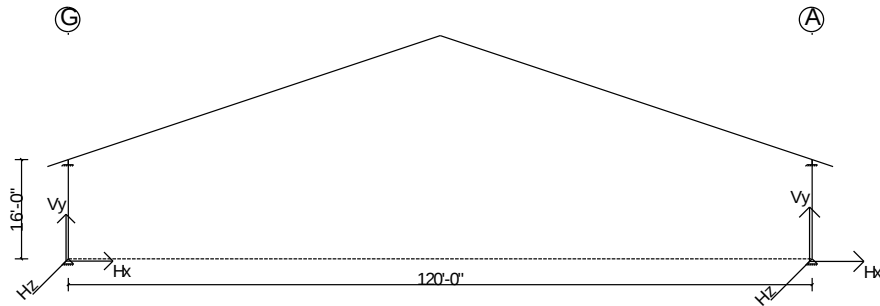
Bracing

X-Loc	Grid	Description
0/0/0	5-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	5-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 105/0/0

Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 6

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 6-G 14 X 16 0.750 4 - 2.000 100'-0"		Exterior Column 120/0/0 6-A 14 X 16 0.750 4 - 2.000 100'-0"			
Load Type	Load Description	Desc.	Hx	Vy	Hx	Vy		
D	Material Dead Weight	Frm	6.99	9.72	-6.99	9.72	-	-
CG	Collateral Load for Gravity Cases	Frm	4.33	5.18	-4.33	5.18	-	-
L>	Live - Notional Right	Frm	12.45	15.75	-12.45	15.75	-	-
<L	Live - Notional Left	Frm	12.45	15.75	-12.45	15.75	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.63	14.40	-12.63	14.40	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.18	1.35	0.18	1.35	-	-
S>	Snow - Notional Right	Frm	74.72	90.88	-74.72	90.88	-	-
<S	Snow - Notional Left	Frm	74.72	90.88	-74.72	90.88	-	-
SD	Snow Drift Load	Frm	2.59	1.77	-2.59	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	63.20	50.67	-63.20	88.18	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	63.20	88.18	-63.20	50.67	-	-
W1>	Wind Load, Case 1, Right	Frm	-17.13	-22.74	12.86	-18.65	-	-
<W1	Wind Load, Case 1, Left	Frm	-12.86	-18.65	17.13	-22.74	-	-
W2>	Wind Load, Case 2, Right	Frm	-11.33	-13.63	7.05	-9.53	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.05	-9.53	11.33	-13.63	-	-
WPL	Wind Load, Ridge, Left	Frm	-13.04	-17.03	10.18	-20.42	-	-
WPR	Wind Load, Ridge, Right	Frm	-10.19	-20.42	13.04	-17.03	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.49	0.71	6.83	-0.71	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.83	-0.71	-1.49	0.71	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-
L	Roof Live Load	Frm	12.45	15.75	-12.45	15.75	-	-
S	Snow Load	Frm	74.72	90.88	-74.72	90.88	-	-
E>	Seismic Load, Right	Frm	-4.91	-2.46	-4.91	2.46	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.20	1.47	-1.20	1.47	-	-
<E	Seismic Load, Left	Frm	4.91	2.46	4.91	-2.46	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.20	-1.47	1.20	-1.47	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 48 of 64

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

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-G	6.09	23	88.63	9	-	-	-	-	7.81	23	107.55	9	-	-	-	-
120/0/0	6-A	88.63	9	6.09	24	-	-	-	-	7.81	24	107.53	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 6

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

X-Loc		0/0/0		120/0/0			
Grid1 - Grid2		6-G		6-A			
Ld	Description	Hx	Vy	Hx	Vy		
Cs	(application factor not shown)	(k)	(k)	(k)	(k)		
9	D + CG + S> + SD	88.63	107.55	-88.63	107.53	-	-
23	D + CU + W1>	-6.09	-7.81	3.52	-5.36	-	-
24	D + CU + <W1	-3.52	-5.36	6.09	-7.81	-	-

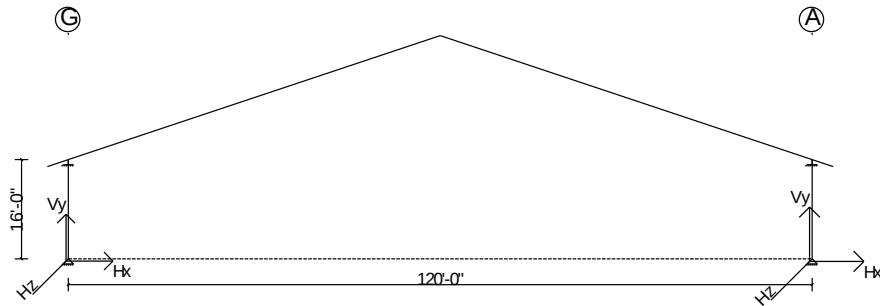
ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1

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

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 7

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 7-G 14 X 16 0.750 4 - 2.000 100'-0"		Exterior Column 120/0/0 7-A 14 X 16 0.750 4 - 2.000 100'-0"			
Load Type	Load Description	Desc.	Hx	Vy	Hx	Vy		
D	Material Dead Weight	Frm	6.99	9.83	-6.99	9.83	-	-
CG	Collateral Load for Gravity Cases	Frm	6.07	6.35	-6.07	6.35	-	-
L>	Live - Notional Right	Frm	12.46	15.75	-12.46	15.75	-	-
<L	Live - Notional Left	Frm	12.46	15.75	-12.46	15.75	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.63	14.40	-12.63	14.40	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.18	1.35	0.18	1.35	-	-
S>	Snow - Notional Right	Frm	74.74	90.88	-74.74	90.88	-	-
<S	Snow - Notional Left	Frm	74.74	90.88	-74.74	90.88	-	-
SD	Snow Drift Load	Frm	10.89	7.62	-10.89	7.51	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	63.21	50.67	-63.21	88.18	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	63.22	88.18	-63.22	50.67	-	-
W1>	Wind Load, Case 1, Right	Frm	-18.34	-23.01	11.66	-18.37	-	-
<W1	Wind Load, Case 1, Left	Frm	-11.66	-18.37	18.34	-23.01	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.53	-13.90	5.86	-9.26	-	-
<W2	Wind Load, Case 2, Left	Frm	-5.86	-9.26	12.53	-13.90	-	-
WPL	Wind Load, Ridge, Left	Frm	-13.04	-17.03	10.19	-20.42	-	-
WPR	Wind Load, Ridge, Right	Frm	-10.19	-20.42	13.04	-17.03	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.49	0.71	6.83	-0.71	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.83	-0.71	-1.49	0.71	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-
L	Roof Live Load	Frm	12.46	15.75	-12.46	15.75	-	-
S	Snow Load	Frm	74.74	90.88	-74.74	90.88	-	-
E>	Seismic Load, Right	Frm	-5.06	-2.54	-5.06	2.54	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.38	1.59	-1.38	1.59	-	-
<E	Seismic Load, Left	Frm	5.06	2.54	5.06	-2.54	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.38	-1.59	1.38	-1.59	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 50 of 64

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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-G	6.81	23	98.70	9	-	-	-	-	7.91	23	114.68	9	-	-	-	-
120/0/0	7-A	98.70	9	6.81	24	-	-	-	-	7.91	24	114.56	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 7

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

X-Loc		0/0/0		120/0/0			
Grid1 - Grid2		7-G		7-A			
Ld	Description	Hx	Vy	Hx	Vy		
Cs	(application factor not shown)	(k)	(k)	(k)	(k)		
9	D + CG + S> + SD	98.70	114.68	-98.70	114.56	-	-
23	D + CU + W1>	-6.81	-7.91	2.80	-5.13	-	-
24	D + CU + <W1	-2.80	-5.13	6.81	-7.91	-	-

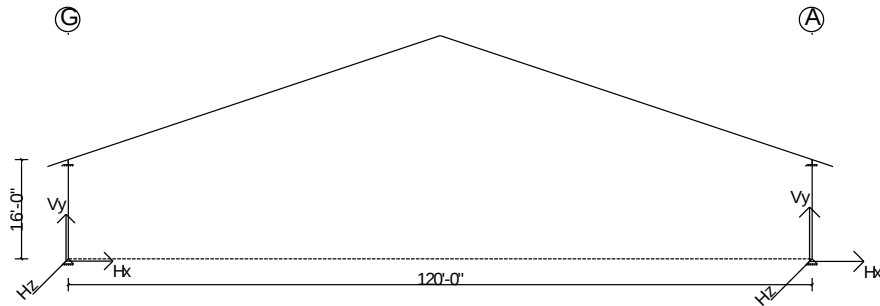
ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1

Wall: 4, Frame at: 145/0/0

Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 8

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 8-G 14 X 16 0.750 4 - 2.000 100'-0"		Exterior Column 120/0/0 8-A 14 X 16 0.750 4 - 2.000 100'-0"			
Load Type	Load Description	Desc.	Hx	Vy	Hx	Vy		
D	Material Dead Weight	Frm	6.99	9.83	-6.99	9.83	-	-
CG	Collateral Load for Gravity Cases	Frm	4.34	5.18	-4.34	5.18	-	-
L>	Live - Notional Right	Frm	12.46	15.75	-12.46	15.75	-	-
<L	Live - Notional Left	Frm	12.46	15.75	-12.46	15.75	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.63	14.40	-12.63	14.40	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.18	1.35	0.18	1.35	-	-
S>	Snow - Notional Right	Frm	74.74	90.88	-74.74	90.88	-	-
<S	Snow - Notional Left	Frm	74.74	90.88	-74.74	90.88	-	-
SD	Snow Drift Load	Frm	2.59	1.77	-2.59	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	63.21	50.67	-63.21	88.18	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	63.22	88.18	-63.22	50.67	-	-
W1>	Wind Load, Case 1, Right	Frm	-17.14	-22.74	12.86	-18.65	-	-
<W1	Wind Load, Case 1, Left	Frm	-12.86	-18.65	17.14	-22.74	-	-
W2>	Wind Load, Case 2, Right	Frm	-11.33	-13.63	7.06	-9.53	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.06	-9.53	11.33	-13.63	-	-
WPL	Wind Load, Ridge, Left	Frm	-13.04	-17.03	10.19	-20.42	-	-
WPR	Wind Load, Ridge, Right	Frm	-10.19	-20.42	13.04	-17.03	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.49	0.71	6.83	-0.71	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.83	-0.71	-1.49	0.71	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-
L	Roof Live Load	Frm	12.46	15.75	-12.46	15.75	-	-
S	Snow Load	Frm	74.74	90.88	-74.74	90.88	-	-
E>	Seismic Load, Right	Frm	-4.91	-2.46	-4.91	2.46	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.20	1.47	-1.20	1.47	-	-
<E	Seismic Load, Left	Frm	4.91	2.46	4.91	-2.46	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.20	-1.47	1.20	-1.47	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 52 of 64

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

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-G	6.09	23	88.66	9	-	-	-	-	7.75	23	107.66	9	-	-	-	-
120/0/0	8-A	88.66	9	6.09	24	-	-	-	-	7.75	24	107.64	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 8

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

X-Loc		0/0/0		120/0/0			
Grid1 - Grid2		8-G		8-A			
Ld	Description	Hx	Vy	Hx	Vy		
Cs	(application factor not shown)	(k)	(k)	(k)	(k)		
9	D + CG + S> + SD	88.66	107.66	-88.66	107.64	-	-
23	D + CU + W1>	-6.09	-7.75	3.52	-5.29	-	-
24	D + CU + <W1	-3.52	-5.29	6.09	-7.75	-	-

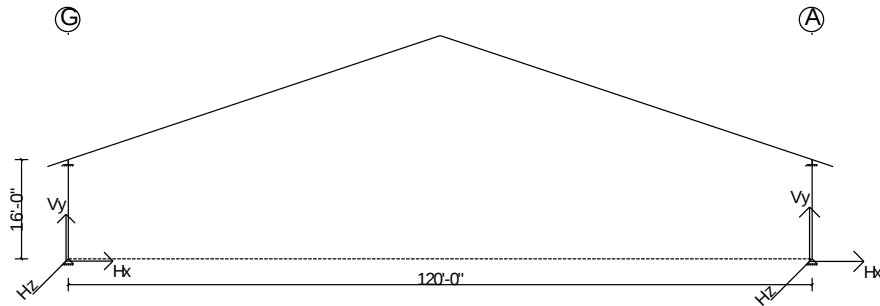
ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1

Wall: 4, Frame at: 165/0/0

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 9

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 9-G 14 X 16 0.750 4 - 2.000 100'-0"			Exterior Column 120/0/0 9-A 14 X 16 0.750 4 - 2.000 100'-0"				
Load Type	Load Description	Desc.	Hx	Hx	Vy	Hx	Hx	Vy		
D	Material Dead Weight	Frm	7.49	-	10.43	-7.49	-	10.43	-	-
CG	Collateral Load for Gravity Cases	Frm	4.69	-	5.70	-4.69	-	5.70	-	-
L>	Live - Notional Right	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
<L	Live - Notional Left	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	14.20	-	16.20	-14.20	-	16.20	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.20	-	1.52	0.20	-	1.52	-	-
S>	Snow - Notional Right	Frm	84.02	-	102.24	-84.02	-	102.23	-	-
<S	Snow - Notional Left	Frm	84.02	-	102.24	-84.02	-	102.23	-	-
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	71.10	-	57.00	-71.10	-	99.20	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	71.11	-	99.20	-71.11	-	57.00	-	-
W1>	Wind Load, Case 1, Right	Frm	-19.25	-	-25.58	14.45	-	-20.98	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.45	-	-20.98	19.25	-	-25.58	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.73	-	-15.33	7.93	-	-10.73	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.93	-	-10.73	12.73	-	-15.33	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.64	-	-19.16	11.44	-	-22.98	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.44	-	-22.98	14.64	-	-19.16	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.67	-	0.80	7.69	-	-0.80	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-7.69	-	-0.80	-1.67	-	0.80	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
S	Snow Load	Frm	84.02	-	102.24	-84.02	-	102.23	-	-
E>	Seismic Load, Right	Frm	-5.51	-	-2.75	-5.51	-	2.75	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.33	-	1.64	-1.33	-	1.64	-	-
<E	Seismic Load, Left	Frm	5.51	-	2.75	5.51	-	-2.75	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.33	-	-1.64	1.33	-	-1.64	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	0.05	-3.02	-2.30	-0.05	-2.87	-2.22	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-0.07	-	2.33	0.07	-	2.21	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	0.05	-3.02	-2.31	-0.05	-2.86	-2.24	-	-

<WB2	Wind Brace Reaction, Case 2, Left	Brc	-0.07	-	2.35	0.07	-	2.24	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	0.05	-2.87	-2.25	-0.05	-3.02	-2.37	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-0.08	-	2.27	0.08	-	2.38	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	0.05	-2.86	-2.25	-0.05	-3.02	-2.37	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-0.08	-	2.27	0.08	-	2.38	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	0.05	-3.15	-2.01	-0.05	-3.15	-2.03	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-0.07	-	2.04	0.07	-	2.04	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	0.27	-18.50	-12.04	-0.27	-18.49	-12.17	-	-
<EB	Seismic Brace Reaction, Left	Brc	-0.39	-	12.17	0.39	-	12.15	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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-G	7.06	23	96.20	7	16.83	95	-	-	9.09	23	118.37	7	-	-	-	-
120/0/0	9-A	96.20	7	7.06	24	16.83	95	-	-	9.09	24	118.37	7	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 9

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		9-G			9-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)				
7	D + CG + S>	96.20	-	118.37	-96.20	-	118.37	-	-	-	-
23	D + CU + W1>	-7.06	-	-9.09	4.18	-	-6.33	-	-	-	-
24	D + CU + <W1	-4.18	-	-6.33	7.06	-	-9.09	-	-	-	-
95	D + CG + E> + EG+ + EB>	11.86	-16.83	5.58	-14.87	-16.83	6.97	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
7	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
95	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>

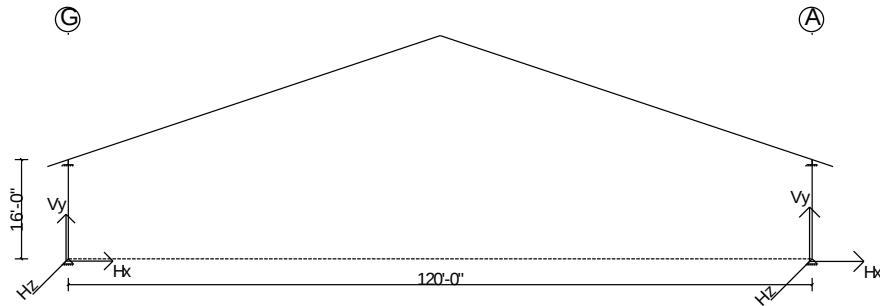
Bracing

X-Loc	Grid	Description
0/0/0	9-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	9-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 190/0/0

Frame ID: Rigid Frame

Frame Type: Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 10

Type			Exterior Column			Exterior Column				
X-Loc			0/0/0			120/0/0				
Grid1 - Grid2			10-G			10-A				
Base Plate W x L (in.)			14 X 16			14 X 16				
Base Plate Thickness (in.)			0.750			0.750				
Anchor Rod Qty/Diam. (in.)			4 - 2.000			4 - 2.000				
Column Base Elev.			100'-0"			100'-0"				
Load Type	Load Description	Desc.	Hx	Hx	Vy	Hx	Hx	Vy		
D	Material Dead Weight	Frm	7.49	-	10.43	-7.49	-	10.43	-	-
CG	Collateral Load for Gravity Cases	Frm	4.85	-	5.81	-4.85	-	5.81	-	-
L>	Live - Notional Right	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
<L	Live - Notional Left	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	14.20	-	16.20	-14.20	-	16.20	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.20	-	1.52	0.20	-	1.52	-	-
S>	Snow - Notional Right	Frm	84.02	-	102.23	-84.02	-	102.23	-	-
<S	Snow - Notional Left	Frm	84.02	-	102.23	-84.02	-	102.23	-	-
SD	Snow Drift Load	Frm	2.59	-	1.77	-2.59	-	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	71.10	-	57.00	-71.10	-	99.20	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	71.11	-	99.20	-71.11	-	57.00	-	-
W1>	Wind Load, Case 1, Right	Frm	-19.25	-	-25.58	14.45	-	-20.98	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.45	-	-20.98	19.25	-	-25.58	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.73	-	-15.33	7.93	-	-10.73	-	-
<W2	Wind Load, Case 2, Left	Frm	-7.93	-	-10.73	12.73	-	-15.33	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.64	-	-19.16	11.44	-	-22.98	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.44	-	-22.98	14.64	-	-19.16	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.67	-	0.80	7.69	-	-0.80	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-7.69	-	-0.80	-1.67	-	0.80	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	14.00	-	17.72	-14.00	-	17.72	-	-
S	Snow Load	Frm	84.02	-	102.23	-84.02	-	102.23	-	-
E>	Seismic Load, Right	Frm	-5.52	-	-2.76	-5.52	-	2.76	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.35	-	1.65	-1.35	-	1.65	-	-
<E	Seismic Load, Left	Frm	5.52	-	2.76	5.52	-	-2.76	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.35	-	-1.65	1.35	-	-1.65	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-0.07	-	2.30	0.07	-	2.21	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	0.05	3.03	-2.34	-0.05	2.88	-2.20	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-0.07	-	2.32	0.07	-	2.23	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 56 of 64

<WB2	Wind Brace Reaction, Case 2, Left	Brc	0.05	3.04	-2.36	-0.05	2.88	-2.23	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-0.07	-	2.26	0.07	-	2.36	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	0.05	2.88	-2.28	-0.05	3.03	-2.37	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-0.07	-	2.26	0.07	-	2.36	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	0.05	2.88	-2.28	-0.05	3.04	-2.37	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-0.07	-	2.02	0.07	-	2.02	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	0.05	3.18	-2.04	-0.05	3.18	-2.03	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-0.39	-	12.09	0.39	-	12.11	-	-
<EB	Seismic Brace Reaction, Left	Brc	0.27	18.57	-12.22	-0.27	18.57	-12.09	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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	10-G	7.06	23	98.96	9	-	-	16.90	110	9.09	23	120.25	9	-	-	-	-
120/0/0	10-A	98.96	9	7.06	24	-	-	16.90	110	9.09	24	120.24	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 10

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		10-G			10-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)				
9	D + CG + S> + SD	98.96	-	120.25	-98.96	-	120.24	-	-	-	-
23	D + CU + W1>	-7.06	-	-9.09	4.18	-	-6.33	-	-	-	-
24	D + CU + <W1	-4.18	-	-6.33	7.06	-	-9.09	-	-	-	-
110	D + CG + E> + EG+ + <EB	12.03	16.90	5.52	-15.04	16.90	7.15	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
110	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB

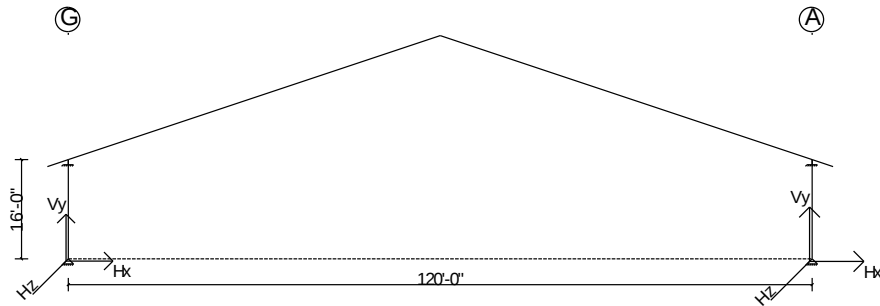
Bracing

X-Loc	Grid	Description
0/0/0	10-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	10-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 210/0/0

Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 11

Type X-Loc Grid1 - Grid2 Base Plate W x L (in.) Base Plate Thickness (in.) Anchor Rod Qty/Diam. (in.) Column Base Elev.			Exterior Column 0/0/0 11-G 14 X 16 0.750 4 - 2.000 100'-0"		Exterior Column 120/0/0 11-A 14 X 16 0.750 4 - 2.000 100'-0"			
Load Type	Load Description	Desc.	Hx	Vy	Hx	Vy		
D	Material Dead Weight	Frm	6.99	9.83	-6.99	9.83	-	-
CG	Collateral Load for Gravity Cases	Frm	6.07	6.35	-6.07	6.35	-	-
L>	Live - Notional Right	Frm	12.46	15.75	-12.46	15.75	-	-
<L	Live - Notional Left	Frm	12.46	15.75	-12.46	15.75	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.63	14.40	-12.63	14.40	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.18	1.35	0.18	1.35	-	-
S>	Snow - Notional Right	Frm	74.74	90.88	-74.74	90.88	-	-
<S	Snow - Notional Left	Frm	74.74	90.88	-74.74	90.88	-	-
SD	Snow Drift Load	Frm	10.89	7.62	-10.89	7.51	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	63.21	50.67	-63.21	88.18	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	63.22	88.18	-63.22	50.67	-	-
W1>	Wind Load, Case 1, Right	Frm	-18.34	-23.01	11.66	-18.37	-	-
<W1	Wind Load, Case 1, Left	Frm	-11.66	-18.37	18.34	-23.01	-	-
W2>	Wind Load, Case 2, Right	Frm	-12.53	-13.90	5.85	-9.26	-	-
<W2	Wind Load, Case 2, Left	Frm	-5.85	-9.26	12.53	-13.90	-	-
WPL	Wind Load, Ridge, Left	Frm	-13.04	-17.03	10.19	-20.42	-	-
WPR	Wind Load, Ridge, Right	Frm	-10.19	-20.42	13.04	-17.03	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.49	0.71	6.83	-0.71	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.83	-0.71	-1.49	0.71	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-
L	Roof Live Load	Frm	12.46	15.75	-12.46	15.75	-	-
S	Snow Load	Frm	74.74	90.88	-74.74	90.88	-	-
E>	Seismic Load, Right	Frm	-5.06	-2.54	-5.06	2.54	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.38	1.59	-1.38	1.59	-	-
<E	Seismic Load, Left	Frm	5.06	2.54	5.06	-2.54	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.38	-1.59	1.38	-1.59	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 58 of 64

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

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	11-G	6.81	23	98.70	9	-	-	-	-	7.91	23	114.68	9	-	-	-	-
120/0/0	11-A	98.70	9	6.81	24	-	-	-	-	7.91	24	114.56	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 11

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

X-Loc		0/0/0		120/0/0			
Grid1 - Grid2		11-G		11-A			
Ld	Description	Hx	Vy	Hx	Vy		
Cs	(application factor not shown)	(k)	(k)	(k)	(k)		
9	D + CG + S> + SD	98.70	114.68	-98.70	114.56	-	-
23	D + CU + W1>	-6.81	-7.91	2.80	-5.13	-	-
24	D + CU + <W1	-2.80	-5.13	6.81	-7.91	-	-

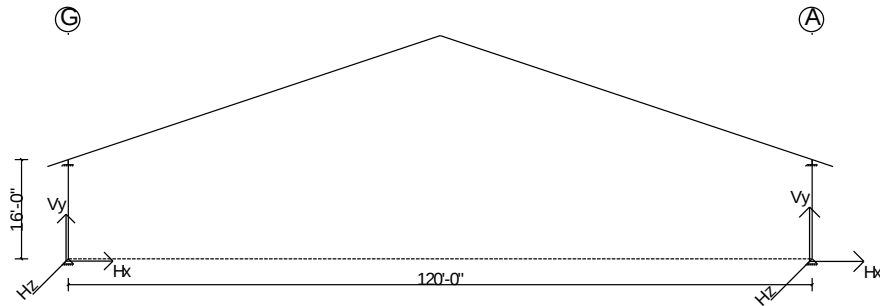
ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1

Wall: 4, Frame at: 230/0/0

Frame ID:Rigid Frame

Frame Type:Rigid Frame



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 12

Type			Exterior Column			Exterior Column				
X-Loc			0/0/0			120/0/0				
Grid1 - Grid2			12-G			12-A				
Base Plate W x L (in.)			14 X 16			14 X 16				
Base Plate Thickness (in.)			0.750			0.750				
Anchor Rod Qty/Diam. (in.)			4 - 2.000			4 - 2.000				
Column Base Elev.			100'-0"			100'-0"				
Load Type	Load Description	Desc.	Hx	Hx	Vy	Hx	Hx	Vy		
D	Material Dead Weight	Frm	6.61	-	9.34	-6.61	-	9.34	-	-
CG	Collateral Load for Gravity Cases	Frm	4.23	-	5.05	-4.23	-	5.05	-	-
L>	Live - Notional Right	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
<L	Live - Notional Left	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	12.32	-	14.04	-12.32	-	14.04	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-0.17	-	1.32	0.17	-	1.32	-	-
S>	Snow - Notional Right	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
<S	Snow - Notional Left	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
SD	Snow Drift Load	Frm	2.59	-	1.77	-2.59	-	1.76	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	61.65	-	49.40	-61.66	-	85.97	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	61.66	-	85.97	-61.66	-	49.40	-	-
W1>	Wind Load, Case 1, Right	Frm	-19.48	-	-25.40	14.19	-	-20.55	-	-
<W1	Wind Load, Case 1, Left	Frm	-14.19	-	-20.55	19.48	-	-25.40	-	-
W2>	Wind Load, Case 2, Right	Frm	-13.83	-	-16.52	8.54	-	-11.66	-	-
<W2	Wind Load, Case 2, Left	Frm	-8.54	-	-11.66	13.83	-	-16.52	-	-
WPL	Wind Load, Ridge, Left	Frm	-14.94	-	-18.75	11.46	-	-22.89	-	-
WPR	Wind Load, Ridge, Right	Frm	-11.46	-	-22.89	14.94	-	-18.75	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.45	-	0.70	6.66	-	-0.70	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-6.66	-	-0.70	-1.45	-	0.70	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	12.14	-	15.36	-12.14	-	15.36	-	-
S	Snow Load	Frm	72.87	-	88.60	-72.87	-	88.60	-	-
E>	Seismic Load, Right	Frm	-4.79	-	-2.40	-4.79	-	2.40	-	-
EG+	Vertical Seismic Effect, Additive	Frm	1.17	-	1.43	-1.17	-	1.43	-	-
<E	Seismic Load, Left	Frm	4.79	-	2.40	4.79	-	-2.40	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-1.17	-	-1.43	1.17	-	-1.43	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	0.06	-2.93	-2.92	-0.06	-2.78	-2.82	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-0.09	-	3.01	0.09	-	2.85	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	0.06	-2.93	-2.94	-0.06	-2.78	-2.84	-	-

<WB2	Wind Brace Reaction, Case 2, Left	Brc	-0.09	-	3.04	0.09	-	2.89	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	0.07	-2.78	-2.86	-0.07	-2.93	-3.01	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-0.10	-	2.93	0.10	-	3.07	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	0.07	-2.78	-2.85	-0.07	-2.93	-3.00	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-0.10	-	2.94	0.10	-	3.07	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	0.06	-3.05	-2.56	-0.06	-3.05	-2.58	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-0.08	-	2.66	0.08	-	2.66	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	0.35	-17.94	-15.37	-0.35	-17.93	-15.50	-	-
<EB	Seismic Brace Reaction, Left	Brc	-0.50	-	15.74	0.50	-	15.71	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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	12-G	7.73	23	86.30	9	16.32	95	-	-	10.03	99	104.77	9	-	-	-	-
120/0/0	12-A	86.30	9	7.73	24	16.32	95	-	-	10.15	101	104.75	9	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 12

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

X-Loc		0/0/0			120/0/0						
Grid1 - Grid2		12-G			12-A						
Ld	Description	Hx (k)	Hz (k)	Vy (k)	Hx (k)	Hz (k)	Vy (k)				
Cs	(application factor not shown)										
9	D + CG + S> + SD	86.30	-	104.77	-86.30	-	104.75	-	-	-	-
23	D + CU + W1>	-7.73	-	-9.64	4.55	-	-6.72	-	-	-	-
24	D + CU + <W1	-4.55	-	-6.72	7.73	-	-9.64	-	-	-	-
95	D + CG + E> + EG+ + EB>	10.67	-16.32	0.76	-13.28	-16.32	1.95	-	-	-	-
99	D + CU + E> + EG- + EB>	2.15	-16.32	-10.03	-4.77	-16.32	-8.84	-	-	-	-
101	D + CU + <E + EG- + EB>	4.77	-16.32	-8.72	-2.15	-16.32	-10.15	-	-	-	-

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
9	System	1.000	1.0 D + 1.0 CG + 1.0 S> + 1.0 SD	D + CG + S> + SD
23	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
95	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
99	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
101	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>

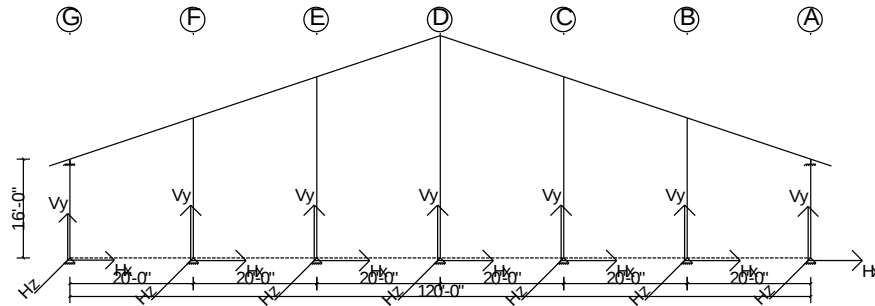
Bracing

X-Loc	Grid	Description
0/0/0	12-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	12-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.

Wall: 4, Frame at: 249/0/0

Frame ID: end frames

Frame Type: Continuous Beam



Values shown are resisting forces of the foundation.

Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 13

Type			Exterior Column			Interior Column			Interior Column			Interior Column		
X-Loc			0/0/0			20/0/0			40/0/0			60/0/0		
Grid1 - Grid2			13-G			13-F			13-E			13-D		
Base Plate W x L (in.)			8 X 19			8 X 11			9 X 11			10 X 11		
Base Plate Thickness (in.)			0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)			4 - 1.000			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.			100'-0"			100'-0"			100'-0"			100'-0"		
Load Type	Load Description	Desc.	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
D	Material Dead Weight	Frm	0.09	-	1.55	-	-	1.74	-	-	1.99	-	-	2.48
CG	Collateral Load for Gravity Cases	Frm	0.07	-	0.94	-	-	1.16	-	-	1.25	-	-	1.40
L>	Live - Notional Right	Frm	0.34	-	4.07	-	-	5.34	-	-	5.29	-	-	5.88
<L	Live - Notional Left	Frm	0.34	-	4.07	-	-	5.34	-	-	5.29	-	-	5.88
ASL^	Alternate Span Live Load, Shifted Right	Frm	0.19	-	3.05	-	-	2.45	-	-	2.83	-	-	2.92
^ASL	Alternate Span Live Load, Shifted Left	Frm	0.14	-	1.03	-	-	2.89	-	-	2.46	-	-	2.96
S>	Snow - Notional Right	Frm	1.29	-	15.34	-	-	20.28	-	-	20.06	-	-	22.31
<S	Snow - Notional Left	Frm	1.29	-	15.34	-	-	20.28	-	-	20.06	-	-	22.31
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	0.90	-	5.08	-	-	6.54	-	-	2.30	-	-	25.13
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	0.96	-	15.22	-	-	18.90	-	-	28.63	-	-	25.09
W1>	Wind Load, Case 1, Right	Frm	-1.42	-	-5.91	-	4.40	-7.71	-	5.72	-7.88	-	6.91	-3.18
<W1	Wind Load, Case 1, Left	Frm	1.03	-	-4.16	-	-3.95	-5.51	-	-5.13	-4.90	-	-6.20	-3.18
W2>	Wind Load, Case 2, Right	Frm	-1.82	-	-4.70	-	-	-6.00	-	-	-6.21	-	-	-2.76
<W2	Wind Load, Case 2, Left	Frm	0.63	-	-2.94	-	-	-3.80	-	-	-3.23	-	-	-2.76
WPL	Wind Load, Ridge, Left	Frm	-1.15	-	-6.40	-	-	-3.60	-	-	-5.35	-	-	-2.88
WPR	Wind Load, Ridge, Right	Frm	2.19	-	-4.34	-	-	-10.98	-	-	-8.79	-	-	-2.81
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	1.54	-	2.00	-	-	-1.77	-	-	0.32	-	-	-1.02
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-2.75	-	-0.84	-	-	1.65	-	-	-0.32	-	-	-1.08
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	0.34	-	4.07	-	-	5.34	-	-	5.29	-	-	5.88
S	Snow Load	Frm	1.29	-	15.34	-	-	20.28	-	-	20.06	-	-	22.31
E>	Seismic Load, Right	Frm	-3.71	-	-4.50	-	0.50	4.02	-	0.67	-0.69	-	0.80	-0.07
EG+	Vertical Seismic Effect, Additive	Frm	0.02	-	0.26	-	-	0.32	-	-	0.33	-	-	0.36
<E	Seismic Load, Left	Frm	3.71	-	4.50	-	-0.50	-4.02	-	-0.67	0.69	-	-0.80	0.07
EG-	Vertical Seismic Effect, Subtractive	Frm	-0.02	-	-0.26	-	-	-0.32	-	-	-0.33	-	-	-0.36
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-0.10	-	2.93	-	-	-0.05	-	-	0.01	-	-	0.06
<WB1	Wind Brace Reaction, Case 1, Left	Brc	0.18	2.98	-2.95	-	-	0.01	-	-	-	-	-	-0.12
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-0.10	-	2.96	-	-	-0.05	-	-	0.01	-	-	0.06



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 62 of 64

<WB2	Wind Brace Reaction, Case 2, Left	Brc	0.18	2.99	-2.99	-	-	0.01	-	-	-	-	-	-0.12
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-0.11	-	2.87	-	-	-0.04	-	-	0.01	-	-	0.06
<WB3	Wind Brace Reaction, Case 3, Left	Brc	0.18	2.83	-2.87	-	-	-	-	-	-	-	-	-0.12
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-0.11	-	2.86	-	-	-0.04	-	-	0.01	-	-	0.06
<WB4	Wind Brace Reaction, Case 4, Left	Brc	0.18	2.83	-2.88	-	-	-	-	-	-	-	-	-0.12
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-0.09	-	2.58	-	-	-0.04	-	-	-	-	-	0.06
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	0.16	3.16	-2.62	-	-	0.01	-	-	-	-	-	-0.11
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-0.55	-	15.44	-	-	-0.25	-	-	0.06	-	-	0.34
<EB	Seismic Brace Reaction, Left	Brc	0.93	18.26	-15.49	-	-	0.07	-	-	-0.02	-	-	-0.63

Type			Interior Column			Interior Column			Exterior Column				
X-Loc			80/0/0			100/0/0			120/0/0				
Grid1 - Grid2			13-C			13-B			13-A				
Base Plate W x L (in.)			9 X 11			8 X 11			8 X 19				
Base Plate Thickness (in.)			0.375			0.375			0.375				
Anchor Rod Qty/Diam. (in.)			4 - 0.750			4 - 0.750			4 - 1.000				
Column Base Elev.			100'-0"			100'-0"			100'-0"				
Load Type	Load Description	Desc.	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy		
D	Material Dead Weight	Frm	-	-	1.99	-	-	1.74	-0.09	-	1.56	-	-
CG	Collateral Load for Gravity Cases	Frm	-	-	1.25	-	-	1.16	-0.07	-	0.94	-	-
L>	Live - Notional Right	Frm	-	-	5.29	-	-	5.33	-0.34	-	4.08	-	-
<L	Live - Notional Left	Frm	-	-	5.29	-	-	5.33	-0.34	-	4.08	-	-
ASL^	Alternate Span Live Load, Shifted Right	Frm	-	-	2.46	-	-	2.85	-0.19	-	1.08	-	-
^ASL	Alternate Span Live Load, Shifted Left	Frm	-	-	2.83	-	-	2.49	-0.14	-	2.99	-	-
S>	Snow - Notional Right	Frm	-	-	20.08	-	-	20.26	-1.29	-	15.35	-	-
<S	Snow - Notional Left	Frm	-	-	20.08	-	-	20.26	-1.29	-	15.35	-	-
SD	Snow Drift Load	Frm	-	-	-	-	-	-	-	-	-	-	-
US1*	Unbalanced Snow Load 1, Shifted Right	Frm	-	-	28.64	-	-	18.93	-0.90	-	15.16	-	-
*US1	Unbalanced Snow Load 1, Shifted Left	Frm	-	-	2.31	-	-	6.48	-0.96	-	5.15	-	-
W1>	Wind Load, Case 1, Right	Frm	-	5.72	-4.90	-	4.40	-5.50	-1.03	-	-4.16	-	-
<W1	Wind Load, Case 1, Left	Frm	-	-5.13	-7.89	-	-3.95	-7.71	1.42	-	-5.91	-	-
W2>	Wind Load, Case 2, Right	Frm	-	-	-3.23	-	-	-3.79	-0.63	-	-2.95	-	-
<W2	Wind Load, Case 2, Left	Frm	-	-	-6.22	-	-	-6.00	1.82	-	-4.70	-	-
WPL	Wind Load, Ridge, Left	Frm	-	-	-8.80	-	-	-11.07	-2.30	-	-4.21	-	-
WPR	Wind Load, Ridge, Right	Frm	-	-	-5.35	-	-	-3.49	1.26	-	-6.53	-	-
MW	Minimum Wind Load - Wall: 1	Frm	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 2	Frm	-	-	-0.33	-	-	1.73	2.84	-	-0.94	-	-
MW	Minimum Wind Load - Wall: 3	Frm	-	-	-	-	-	-	-	-	-	-	-
MW	Minimum Wind Load - Wall: 4	Frm	-	-	0.32	-	-	-1.84	-1.63	-	2.11	-	-
CU	Collateral Load for Wind Cases	Frm	-	-	-	-	-	-	-	-	-	-	-
L	Roof Live Load	Frm	-	-	5.29	-	-	5.33	-0.34	-	4.08	-	-
S	Snow Load	Frm	-	-	20.08	-	-	20.26	-1.29	-	15.35	-	-
E>	Seismic Load, Right	Frm	-	0.67	0.70	-	0.50	-4.20	-3.93	-	4.75	-	-
EG+	Vertical Seismic Effect, Additive	Frm	-	-	0.33	-	-	0.32	-0.02	-	0.26	-	-
<E	Seismic Load, Left	Frm	-	-0.67	-0.70	-	-0.50	4.20	3.93	-	-4.75	-	-
EG-	Vertical Seismic Effect, Subtractive	Frm	-	-	-0.33	-	-	-0.32	0.02	-	-0.26	-	-
WB1>	Wind Brace Reaction, Case 1, Right	Brc	-	-	-	-	-	-0.04	0.10	-	2.81	-	-
<WB1	Wind Brace Reaction, Case 1, Left	Brc	-	-	0.01	-	-	-0.07	-0.18	2.83	-2.74	-	-
WB2>	Wind Brace Reaction, Case 2, Right	Brc	-	-	-	-	-	-0.04	0.10	-	2.83	-	-
<WB2	Wind Brace Reaction, Case 2, Left	Brc	-	-	0.01	-	-	-0.07	-0.18	2.83	-2.77	-	-
WB3>	Wind Brace Reaction, Case 3, Right	Brc	-	-	0.01	-	-	-0.05	0.11	-	3.01	-	-
<WB3	Wind Brace Reaction, Case 3, Left	Brc	-	-	0.01	-	-	-0.06	-0.18	2.98	-2.95	-	-
WB4>	Wind Brace Reaction, Case 4, Right	Brc	-	-	0.01	-	-	-0.05	0.11	-	3.00	-	-
<WB4	Wind Brace Reaction, Case 4, Left	Brc	-	-	0.01	-	-	-0.06	-0.18	2.99	-2.96	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 1	Brc	-	-	-	-	-	-0.04	0.09	-	2.57	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 2	Brc	-	-	-	-	-	-	-	-	-	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 3	Brc	-	-	0.01	-	-	-0.07	-0.16	3.16	-2.55	-	-
MWB	Minimum Wind Bracing Reaction - Wall: 4	Brc	-	-	-	-	-	-	-	-	-	-	-
EB>	Seismic Brace Reaction, Right	Brc	-	-	0.05	-	-	-0.25	0.55	-	15.47	-	-
<EB	Seismic Brace Reaction, Left	Brc	-	-	0.07	-	-	-0.39	-0.93	18.26	-15.06	-	-

Maximum Combined Reactions Summary with Factored Loads - Framing

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

Appropriate Load Factors must be applied for design of foundations.

X-Loc	Grid	Hz left (-Hx) (k)	Load Case	Hz Right (Hx) (k)	Load Case	Hz In (-Hz) (k)	Load Case	Hz 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	13-G	3.49	105	3.80	118	-	-	16.62	115	14.57	119	17.95	102	-	-	-	-
20/0/0	13-F	-	-	-	-	2.37	19	2.64	18	5.58	73	23.18	12	-	-	-	-
40/0/0	13-E	-	-	-	-	3.08	19	3.43	18	4.08	33	31.88	17	-	-	-	-
60/0/0	13-D	-	-	-	-	3.72	19	4.14	18	0.65	27	29.00	16	-	-	-	-
80/0/0	13-C	-	-	-	-	3.08	19	3.43	18	4.08	32	31.89	16	-	-	-	-
100/0/0	13-B	-	-	-	-	2.37	19	2.64	18	5.64	93	23.16	12	-	-	-	-
120/0/0	13-A	4.00	116	3.69	107	-	-	16.62	115	14.25	121	18.05	100	-	-	-	-

Maximum Frame Reactions - Factored Load Cases at Frame Cross Section: 13

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

X-Loc		0/0/0			20/0/0			40/0/0			60/0/0			80/0/0		
Grid1 - Grid2		13-G			13-F			13-E			13-D			13-C		
Ld	Description	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)	(k)
12	D + CG + S>	1.45	-	17.83	-	-	23.18	-	-	23.31	-	-	26.18	-	-	23.32
16	D + CG + US1*	1.06	-	7.57	-	-	9.44	-	-	5.54	-	-	29.00	-	-	31.89
17	D + CG + *US1	1.11	-	17.71	-	-	21.80	-	-	31.88	-	-	28.97	-	-	5.55
18	D + CG + W1>	-0.70	-	-1.06	-	2.64	-1.73	-	3.43	-1.48	-	4.14	1.97	-	3.43	0.31
19	D + CG + <W1	0.77	-	-0.00	-	-2.37	-0.41	-	-3.08	0.31	-	-3.72	1.97	-	-3.08	-1.49
27	MW - Wall: 4	-1.65	-	-0.50	-	-	0.99	-	-	-0.19	-	-	-0.65	-	-	0.19
32	D + CU + WPL	-0.63	-	-2.91	-	-	-1.12	-	-	-2.01	-	-	-0.24	-	-	-4.08
33	D + CU + WPR	1.36	-	-1.67	-	-	-5.55	-	-	-4.08	-	-	-0.20	-	-	-2.02
73	D + CU + WPR + WB2>	1.30	-	0.10	-	-	-5.58	-	-	-4.07	-	-	-0.16	-	-	-2.02
93	D + CU + WPL + <WB4	-0.53	1.70	-4.63	-	-	-1.12	-	-	-2.01	-	-	-0.31	-	-	-4.07
100	D + CG + E> + EG+ + EB>	-1.35	-	15.50	-	0.14	3.99	-	0.18	3.34	-	0.22	4.42	-	0.18	3.72
102	D + CG + <E + EG+ + EB>	0.67	-	17.95	-	-0.14	1.80	-	-0.18	3.72	-	-0.22	4.46	-	-0.18	3.33
105	D + CU + E> + EG- + EB>	-3.49	-	0.88	-	0.46	4.41	-	0.61	0.35	-	0.73	1.26	-	0.61	1.62
107	D + CU + <E + EG- + EB>	3.27	-	9.06	-	-0.46	-2.91	-	-0.61	1.61	-	-0.73	1.39	-	-0.61	0.35
115	D + CG + E> + EG+ + <EB	0.00	16.62	-12.65	-	0.14	4.29	-	0.18	3.27	-	0.22	3.54	-	0.18	3.73
116	D + CG + E> + EG+ + <EB	-2.96	4.99	-5.65	-	0.46	6.80	-	0.61	2.84	-	0.73	3.89	-	0.61	4.13
118	D + CG + <E + EG+ + <EB	3.80	4.99	2.54	-	-0.46	-0.52	-	-0.61	4.10	-	-0.73	4.02	-	-0.61	2.86
119	D + CU + E> + EG- + <EB	-0.12	16.62	-14.57	-	0.14	1.98	-	0.18	0.76	-	0.22	0.64	-	0.18	1.22
121	D + CU + <E + EG- + <EB	1.90	16.62	-12.11	-	-0.14	-0.21	-	-0.18	1.14	-	-0.22	0.67	-	-0.18	0.84

X-Loc		100/0/0			120/0/0								
Grid1 - Grid2		13-B			13-A								
Ld	Description	Hx	Hz	Vy	Hx	Hz	Vy						
Cs	(application factor not shown)	(k)	(k)	(k)	(k)	(k)	(k)						
12	D + CG + S>	-	-	23.16	-1.45	-	17.84	-	-	-	-	-	-
16	D + CG + US1*	-	-	21.83	-1.06	-	17.66	-	-	-	-	-	-
17	D + CG + *US1	-	-	9.38	-1.11	-	7.65	-	-	-	-	-	-
18	D + CG + W1>	-	2.64	-0.40	-0.77	-	-0.00	-	-	-	-	-	-
19	D + CG + <W1	-	-2.37	-1.73	0.70	-	-1.05	-	-	-	-	-	-
27	MW - Wall: 4	-	-	-1.10	-0.98	-	1.26	-	-	-	-	-	-
32	D + CU + WPL	-	-	-5.60	-1.43	-	-1.59	-	-	-	-	-	-
33	D + CU + WPR	-	-	-1.05	0.70	-	-2.99	-	-	-	-	-	-
73	D + CU + WPR + WB2>	-	-	-1.08	0.77	-	-1.29	-	-	-	-	-	-
93	D + CU + WPL + <WB4	-	-	-5.64	-1.54	1.79	-3.37	-	-	-	-	-	-
100	D + CG + E> + EG+ + EB>	-	0.14	1.75	-0.73	-	18.05	-	-	-	-	-	-
102	D + CG + <E + EG+ + EB>	-	-0.14	4.04	1.41	-	15.46	-	-	-	-	-	-
105	D + CU + E> + EG- + EB>	-	0.46	-3.07	-3.47	-	9.29	-	-	-	-	-	-
107	D + CU + <E + EG- + EB>	-	-0.46	4.58	3.69	-	0.66	-	-	-	-	-	-
115	D + CG + E> + EG+ + <EB	-	0.14	1.62	-2.09	16.62	-9.74	-	-	-	-	-	-
116	D + CG + E> + EG+ + <EB	-	0.46	-0.81	-4.00	4.99	2.88	-	-	-	-	-	-
118	D + CG + <E + EG+ + <EB	-	-0.46	6.84	3.16	4.99	-5.75	-	-	-	-	-	-
119	D + CU + E> + EG- + <EB	-	0.14	-0.69	-1.96	16.62	-11.66	-	-	-	-	-	-
121	D + CU + <E + EG- + <EB	-	-0.14	1.61	0.18	16.62	-14.25	-	-	-	-	-	-



21-007748-01 Reaction Report

Date: 9/1/2021

Time: 08:05 PM

Page: 64 of 64

ASD Load Combinations - Framing

No.	Origin	Factor	Application	Description
12	System	1.000	1.0 D + 1.0 CG + 1.0 S>	D + CG + S>
16	System	1.000	1.0 D + 1.0 CG + 1.0 US1*	D + CG + US1*
17	System	1.000	1.0 D + 1.0 CG + 1.0 *US1	D + CG + *US1
18	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
19	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
27	System	1.000	0.6 MW	MW - Wall: 4
32	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
33	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
73	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
93	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
100	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
102	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
105	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
107	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
115	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
116	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
118	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
119	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
121	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB

Bracing

X-Loc	Grid	Description
0/0/0	13-G	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.
120/0/0	13-A	Diagonal bracing at base is attached to column. Reactions ARE included with frame reactions.