

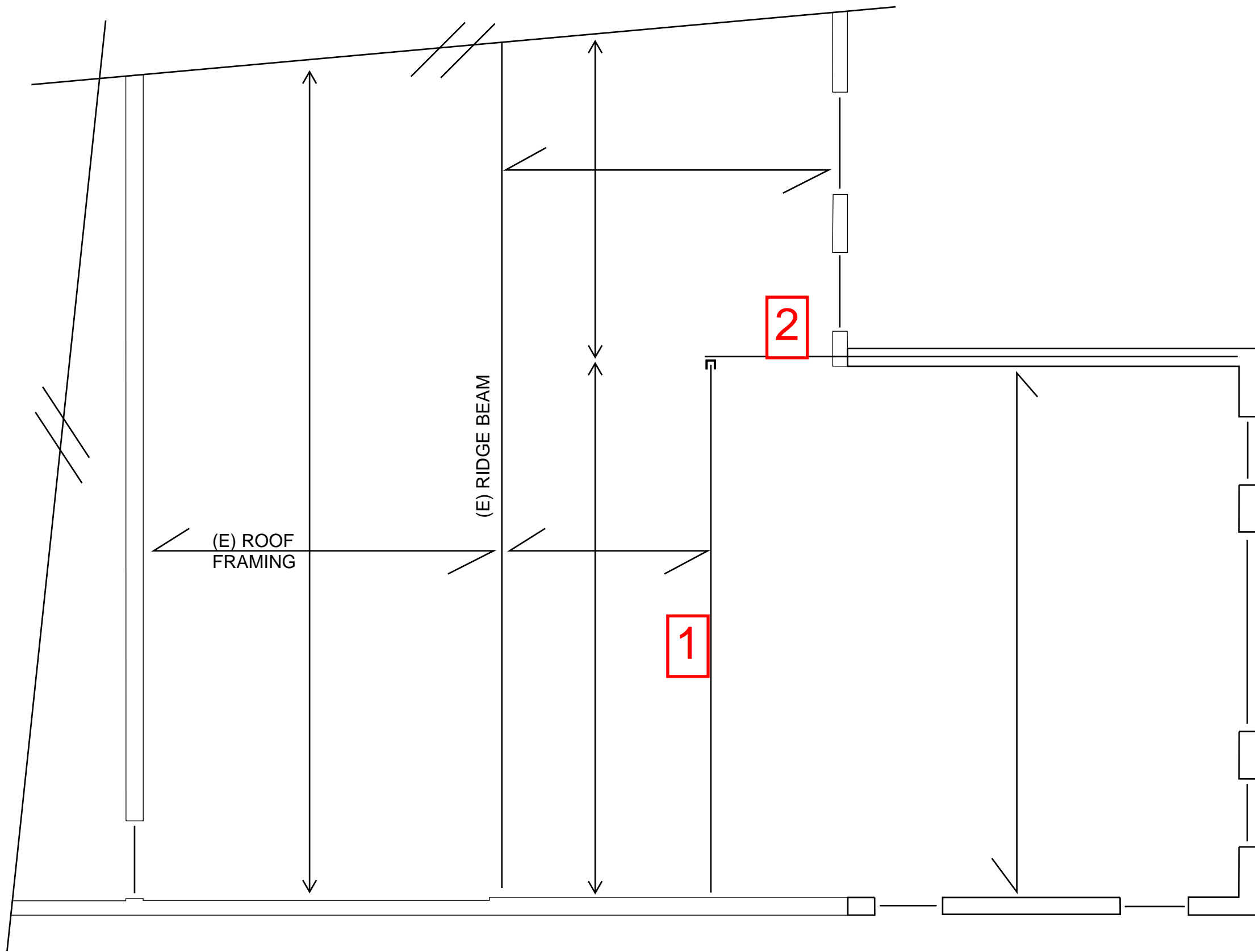
STRUCTURAL CALCULATIONS

Christofferson Residence
4340 90th Ave SE
Mercer Island, WA 98040

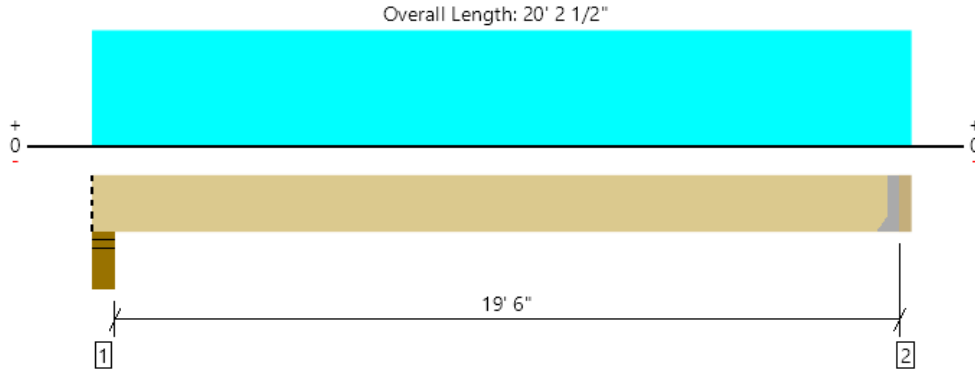
Beth Christofferson
4340 90th Ave SE
Mercer Island, WA 98040

May 20, 2022





Roof Framing, Beam 1
1 piece(s) 5 1/8" x 15" 24F-V4 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5286 @ 19' 11 1/2"	5286 (1.59")	Passed (100%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	4612 @ 18' 8 1/2"	15618	Passed (30%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	25934 @ 10' 1 3/4"	43521	Passed (60%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.418 @ 10' 1 3/4"	0.491	Passed (L/563)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.693 @ 10' 1 3/4"	0.981	Passed (L/340)	--	1.0 D + 1.0 S (All Spans)

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Critical positive moment adjusted by a volume factor of 0.98 that was calculated using length L = 19' 7 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Total	
1 - Stud wall - HF	5.50"	5.50"	2.63"	2168	3297	5465	Blocking
2 - Hanger on 15" HF beam	3.00"	Hanger ¹	1.59"	2146	3270	5416	See note ¹

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- ¹ See Connector grid below for additional information and/or requirements.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	Continuous	
Bottom Edge (Lu)	Continuous	

Connector: Simpson Strong-Tie							
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories	
2 - Face Mount Hanger	HGUS5.25/10	4.00"	N/A	46-10d	16-10d		

- Refer to manufacturer notes and instructions for proper installation and use of all connectors.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 19' 11 1/2"	N/A	18.7	--	
1 - Uniform (PSF)	0 to 20' 2 1/2" (Front)	13'	15.0	25.0	Default Load

Weyerhaeuser Notes

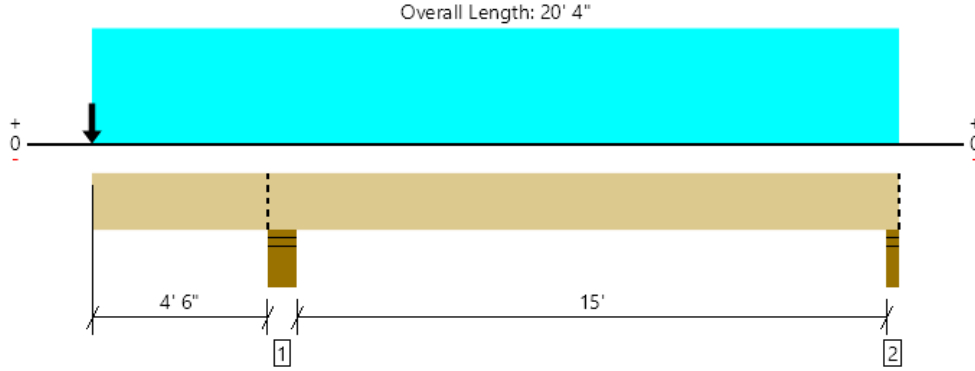
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The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Steven Nickolas Bykonen Carter Quinn (206) 264-7784 ssn@bcq-se.com	



Roof Framing, Beam 2
1 piece(s) 5 1/8" x 16 1/2" 24F-V8 DF Glulam



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	12734 @ 4' 9 1/2"	14529 (7.00")	Passed (88%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	6779 @ 3' 1 1/2"	17180	Passed (39%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	4005 @ 15' 10 1/8"	53486	Passed (7%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-31014 @ 4' 9 1/2"	52497	Passed (59%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.253 @ 0	0.319	Passed (2L/454)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.388 @ 0	0.479	Passed (2L/296)	--	1.0 D + 1.0 S (Alt Spans)

System : Roof
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/360) and TL (L/240).
- Overhang deflection criteria: LL (2L/360) and TL (2L/240).
- Moment capacity over cantilever support 1 has been reduced by 1.8% to lessen the effects of buckling.
- Critical positive moment adjusted by a volume factor of 1.00 that was calculated using length L = 8' 8 3/4".
- Critical negative moment adjusted by a volume factor of 0.98 that was calculated using length L = 18' 4 7/8".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Total	
1 - Stud wall - HF	7.00"	7.00"	6.13"	5101	7633	12734	Blocking
2 - Stud wall - HF	3.00"	3.00"	1.50"	535	1353/-232	1888/-232	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	Continuous	
Bottom Edge (Lu)	All Bearing Points	

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 20' 4"	N/A	20.5	--	
1 - Uniform (PSF)	0 to 20' 4" (Front)	10'	15.0	25.0	Default Load
2 - Point (lb)	0 (Front)	N/A	2168	3297	Linked from: Beam 1, Support 1

Weyerhaeuser Notes

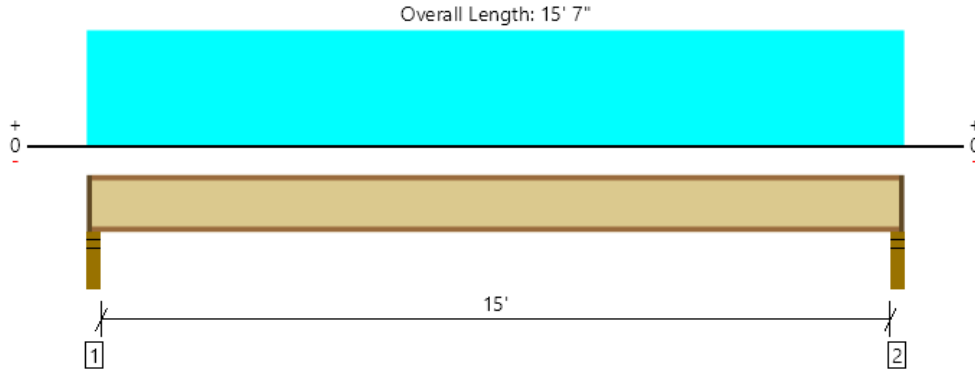
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ForteWEB Software Operator	Job Notes
Steven Nickolas Bykonen Carter Quinn (206) 264-7784 ssn@bcq-se.com	



2nd Floor Framing, Joist A
1 piece(s) 11 7/8" TJI @ 110 @ 16" OC



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	564 @ 2 1/2"	1041 (2.25")	Passed (54%)	1.00	1.0 D + 1.0 L (All Spans)
Shear (lbs)	550 @ 3 1/2"	1560	Passed (35%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	2109 @ 7' 9 1/2"	3160	Passed (67%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.217 @ 7' 9 1/2"	0.379	Passed (L/840)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.298 @ 7' 9 1/2"	0.758	Passed (L/611)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	51	40	Passed	--	--

System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: 1/2" Gypsum ceiling.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Stud wall - HF	3.50"	2.25"	1.75"	156	416	572	1 1/4" Rim Board
2 - Stud wall - HF	3.50"	2.25"	1.75"	156	416	572	1 1/4" Rim Board

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 10" o/c	
Bottom Edge (Lu)	15' 5" o/c	

- TJI joists are only analyzed using Maximum Allowable bracing solutions.
- Maximum allowable bracing intervals based on applied load.

Vertical Load	Location	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 to 15' 7"	16"	15.0	40.0	Default Load

Weyerhaeuser Notes

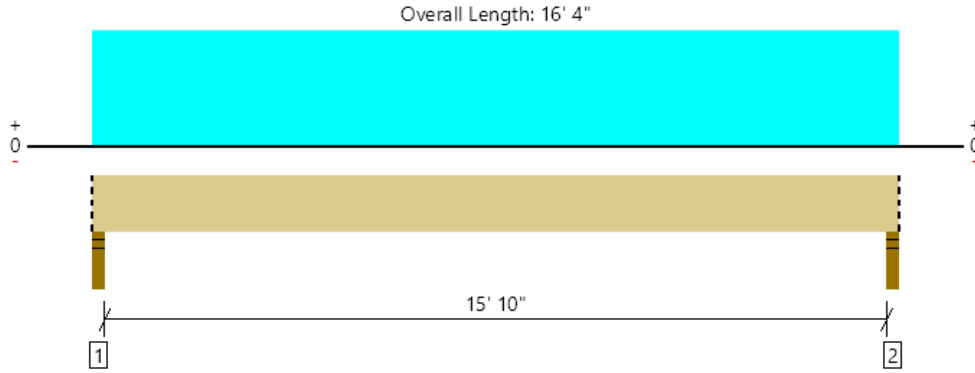
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2nd Floor Framing, Beam 1
 1 piece(s) 5 1/4" x 11 7/8" 2.0E Parallam® PSL



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3528 @ 1 1/2"	6379 (3.00")	Passed (55%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	2992 @ 1' 2 7/8"	12053	Passed (25%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	13968 @ 8' 2"	29854	Passed (47%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.326 @ 8' 2"	0.402	Passed (L/592)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.470 @ 8' 2"	0.804	Passed (L/411)	--	1.0 D + 1.0 L (All Spans)

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

• Deflection criteria: LL (L/480) and TL (L/240).

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Stud wall - HF	3.00"	3.00"	1.66"	1078	2450	3528	Blocking
2 - Stud wall - HF	3.00"	3.00"	1.66"	1078	2450	3528	Blocking

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	Continuous	
Bottom Edge (Lu)	Continuous	

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 16' 4"	N/A	19.5	--	
1 - Uniform (PSF)	0 to 16' 4" (Front)	7' 6"	15.0	40.0	Default Load

Weyerhaeuser Notes

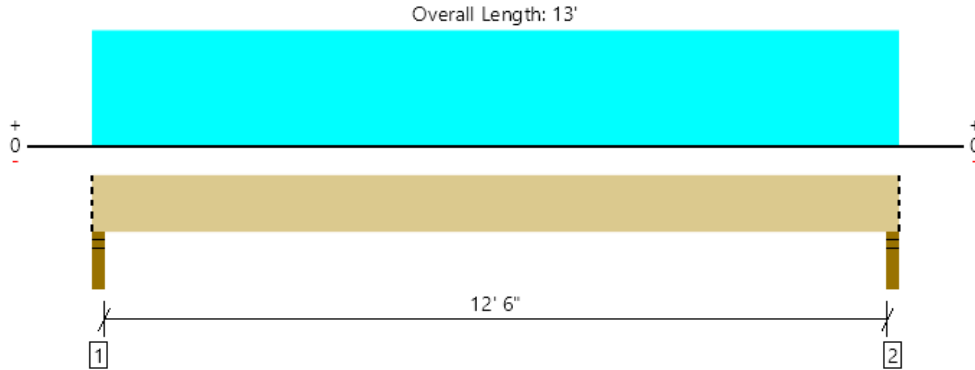
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ForteWEB Software Operator	Job Notes
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2nd Floor Framing, Beam 2
 1 piece(s) 3 1/2" x 11 7/8" 1.55E TimberStrand® LSL



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2782 @ 1' 1/2"	4253 (3.00")	Passed (65%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2251 @ 1' 2 7/8"	9878	Passed (23%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	8697 @ 6' 6"	18346	Passed (47%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.215 @ 6' 6"	0.319	Passed (L/713)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.367 @ 6' 6"	0.637	Passed (L/417)	--	1.0 D + 1.0 S (All Spans)

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC 2018
 Design Methodology : ASD

• Deflection criteria: LL (L/480) and TL (L/240).

Supports	Bearing Length			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Total	
1 - Stud wall - HF	3.00"	3.00"	1.96"	1157	260	1625	3042	Blocking
2 - Stud wall - HF	3.00"	3.00"	1.96"	1157	260	1625	3042	Blocking

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	Continuous	
Bottom Edge (Lu)	Continuous	

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 13'	N/A	13.0	--	--	
1 - Uniform (PSF)	0 to 13' (Front)	1'	15.0	40.0	-	Default Load
2 - Uniform (PSF)	0 to 13' (Front)	10'	15.0	-	25.0	Default Load

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ForteWEB Software Operator	Job Notes
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Search Information

Address:	4340 90th Avenue Southeast, Mercer Island, WA
Coordinates:	47.56790119999999, -122.218545
Elevation:	372 ft
Timestamp:	2021-12-22T17:19:47.018Z
Hazard Type:	Seismic
Reference Document:	ASCE7-16
Risk Category:	II
Site Class:	D-default



Basic Parameters

Name	Value	Description
S_S	1.421	MCE_R ground motion (period=0.2s)
S_1	0.494	MCE_R ground motion (period=1.0s)
S_{MS}	1.705	Site-modified spectral acceleration value
S_{M1}	* null	Site-modified spectral acceleration value
S_{DS}	1.137	Numeric seismic design value at 0.2s SA
S_{D1}	* null	Numeric seismic design value at 1.0s SA

* See Section 11.4.8

▼Additional Information

Name	Value	Description
SDC	* null	Seismic design category
F_a	1.2	Site amplification factor at 0.2s
F_v	* null	Site amplification factor at 1.0s
CR_S	0.902	Coefficient of risk (0.2s)
CR_1	0.898	Coefficient of risk (1.0s)
PGA	0.608	MCE_G peak ground acceleration
F_{PGA}	1.2	Site amplification factor at PGA
PGA_M	0.73	Site modified peak ground acceleration

T_L	6	Long-period transition period (s)
SsRT	1.421	Probabilistic risk-targeted ground motion (0.2s)
SsUH	1.575	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	3.782	Factored deterministic acceleration value (0.2s)
S1RT	0.494	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.55	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	1.496	Factored deterministic acceleration value (1.0s)
PGAd	1.281	Factored deterministic acceleration value (PGA)

* See Section 11.4.8

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey [Seismic Design Web Services](#).

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Search Information

Address: 4340 90th Avenue Southeast, Mercer Island, WA
Coordinates: 47.56790119999999, -122.2185545
Elevation: 372 ft
Timestamp: 2021-12-22T17:19:17.702Z
Hazard Type: Wind



ASCE 7-16

ASCE 7-10

ASCE 7-05

MRI 10-Year -----	67 mph	MRI 10-Year -----	72 mph	ASCE 7-05 Wind Speed -----	85 mph
MRI 25-Year -----	73 mph	MRI 25-Year -----	79 mph		
MRI 50-Year -----	78 mph	MRI 50-Year -----	85 mph		
MRI 100-Year -----	83 mph	MRI 100-Year -----	91 mph		
Risk Category I -----	92 mph	Risk Category I -----	100 mph		
Risk Category II -----	97 mph	Risk Category II -----	110 mph		
Risk Category III -----	105 mph	Risk Category III-IV -----	115 mph		
Risk Category IV -----	108 mph				

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Disclaimer

Hazard loads are interpolated from data provided in ASCE 7 and rounded up to the nearest whole integer. Per ASCE 7, islands and coastal areas outside the last contour should use the last wind speed contour of the coastal area – in some cases, this website will extrapolate past the last wind speed contour and therefore, provide a wind speed that is slightly higher. NOTE: For queries near wind-borne debris region boundaries, the resulting determination is sensitive to rounding which may affect whether or not it is considered to be within a wind-borne debris region.

Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.

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Seismic

Project: Christofferson Residence

Seismic Design Parameters		
Site Class	D	
Risk Category	II	Table 1.5-1
Importance Factor	1	Table 1.5-2
S _s	1.421	From USGS
S ₁	0.494	
F _a	1.200	Table 11.4-1
F _v	1.806	Table 11.4-2
S _{ms}	1.705	Eq. 11.4-1
S _{m1}	0.892	Eq. 11.4-2
S _{ds}	1.137	Eq. 11.4-3
S _{d1}	0.595	Eq. 11.4-4
R	6.5	Table 12.2-1
C _s	0.175	Eq. 12.8-2
k	1	12.8.3
ρ	1	
Seismic Design Category	D	Table 11.6-1

Seismic Weight

Areas (ft ²)	
Roof	315
Level 2	315

Loads	
DL-Floor (psf)	25
DL-Roof (psf)	15

Seismic Base Shear	
V _{ultimate} (k)	2.2
V _{allowable} (k)	1.5

Eq. 12.8-1

Level	Weight (k)	Height (ft)	$w_x f_x^k$	C _{vx}	F _x (ult.)	F _x (allow.)
Roof	4.725	18	85.1	0.56	1.2	0.9
Level 2	7.875	8.5	66.9	0.44	1.0	0.7
TOTAL	12.6	-	152.0	1	2.2	1.5

All references are from ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other Structures

Wind

Project: Christofferson Residence

Wind Load Parameters

Chapter 28 - Envelope Procedure

Exposure	B
Risk Category	II
Mean Roof Height (ft)	20
Roof Slope (X/12)	3
Angle	14.0
a (ft)	3
K_d	0.85
K_{zt}	1.9
V (mph)	97
K_z	0.70
q_h (psf)	27.23
Minimum Wind Pressure on Walls (psf)	16
Minimum Wind Pressure on Roof (psf)	8

Sec. 26.7

Table 1.5-1

Figure 28.3-1 Note "a"

Table 26.6-1

Table 26.10-1

Eq. 26.10-1

Sec. 28.3.4

Building Geometry

Level	Height (ft)	Trib. Height (ft)	Load Case A Direction (ft)		Load Case B Direction (ft)	
			Plan North/South		Plan East/West	
Above Roof	4	4	20.83		15	
Roof	8	4	20.83		15	
Level 2	8	8	20.83		15	

Height below Level

"Long" Dimension

"Short" Dimension

GC_{pf} Values Summary (28.3-1)

Building Surface	Load Case A	Load Case B
Roof	0.25	-
Roof Corners	0.44	-
Wall	0.85	0.69
Wall Corners	1.28	1.04

Load Case A - Plan North/South

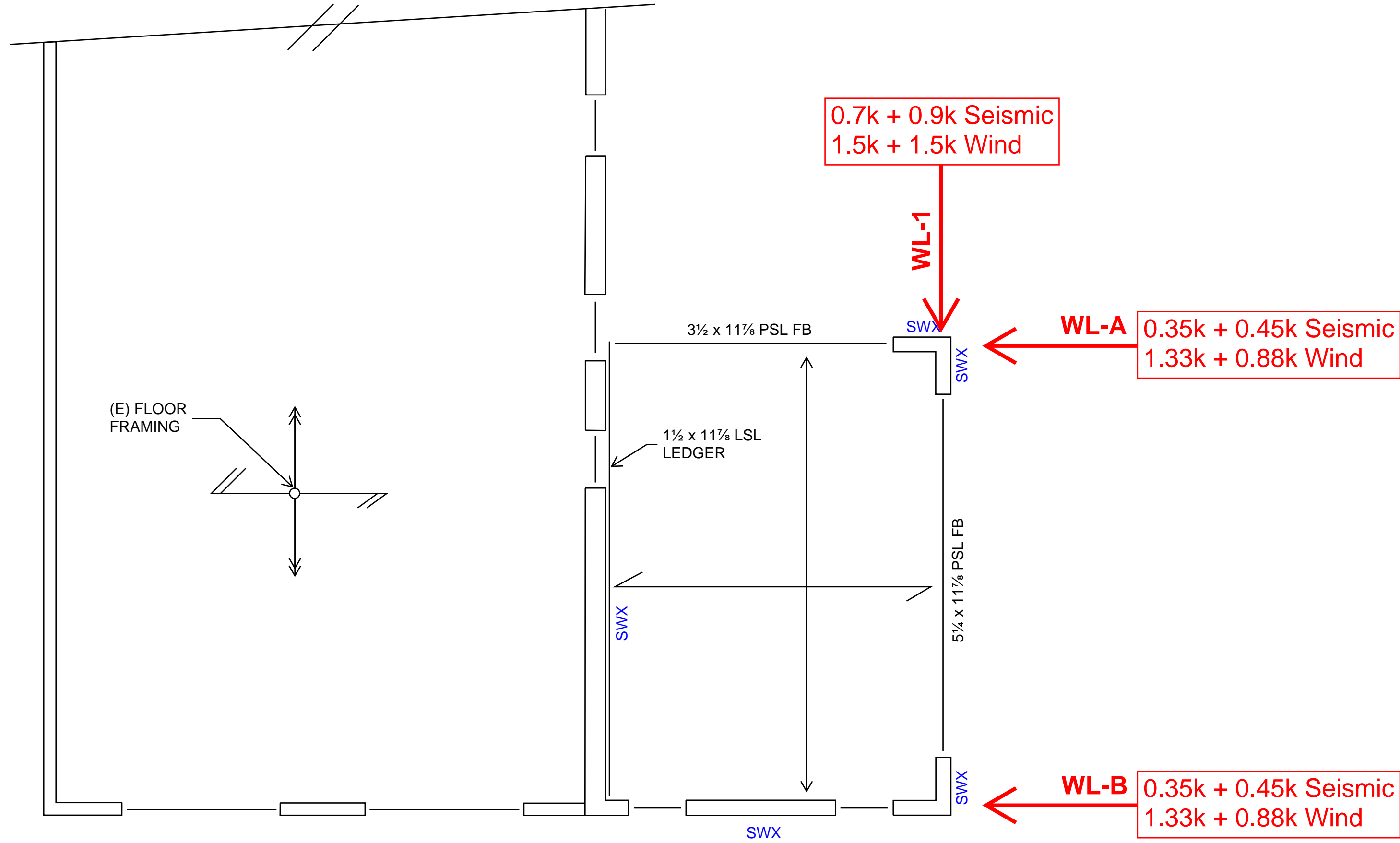
Level	A (ft ²)	F = q _h *GC _{pf} *A (k)		Total Wind Load (Ultimate, k)	Minimum Load (Ultimate, k)	Total (allowable, k)
Roof - roof	59	0.40		0.68	0.67	0.41
Corners	24	0.28				
Roof - walls	59	1.38		2.21	1.33	1.33
Corners	24	0.84				
Level 2	119	2.75		4.43	2.67	2.66
Corners	48	1.67				

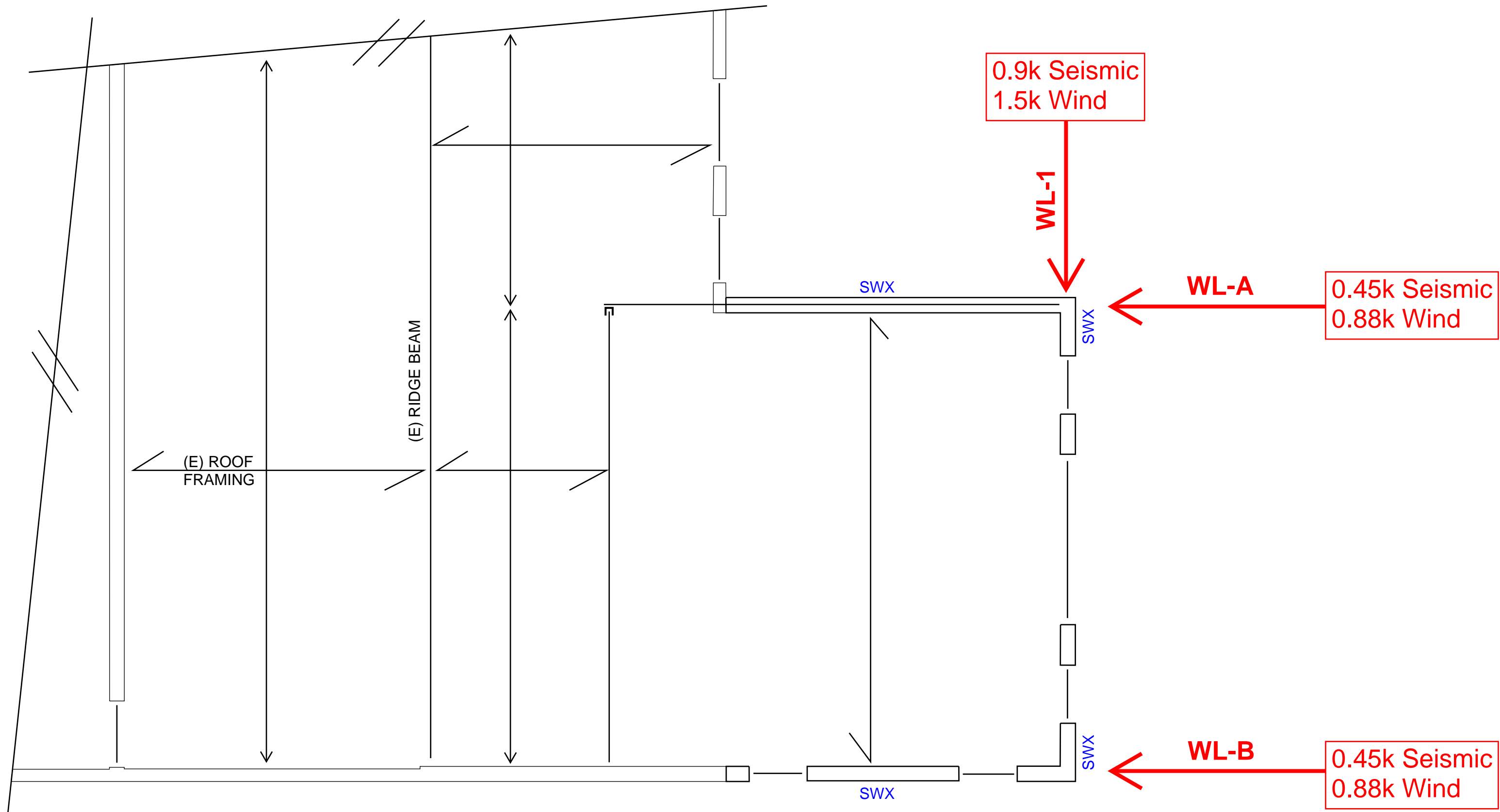
Load Case B - Plan East/West

Level	A (ft ²)	F = q _h *GC _{pf} *A (k)		Total Wind Load (Ultimate, k)	Minimum Load (Ultimate, k)	Total (allowable, k)
Roof - roof	48	0.90		1.24	0.48	0.75
Corners	12	0.34				
Roof - walls	48	0.90		1.24	0.96	0.75
Corners	12	0.34				
Level 2	96	1.80		2.48	1.92	1.49
Corners	24	0.68				

Wind Loads Summary

Level	Plan North/South		Plan East/West	
	Wind Load (Ultimate, k)	Wind Load (Allowable, k)	Wind Load (Ultimate, k)	Wind Load (Allowable, k)
Roof	2.89	1.74	2.48	1.49
Level 2	4.43	2.66	2.48	1.49
Base Shear	7.32	4.39	4.97	2.98





WL-A

Level	Total Wall Line Lengths (ft)	Seismic Forces (k)	Wind Forces (k)	Story Heights (ft)
Roof	15	0.45	0.88	8
Level 2	2.5	0.8	2.21	7.5

Max H/W Ratio ² 3.5

ROOF

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
15	0.53	1.00	30	59	1200	150	-0.17	0.06
		Shear Wall	SW-1			Strap Tie	Strap Tie/Holdown Not Required	

LEVEL 2

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
2.5	3.00	1.14	366	884	188	25	2.34	6.57
		Shear Wall	SW-4			Holdown	HDU8 w/ (3) 2x	

¹ Increase per 4.3.4.2 ANSI/AWC SDPWS-2015

² Per Table 4.3.4 ANSI/AWC SDPWS-2015

WL-B

Level	Total Wall Line Lengths (ft)	Seismic Forces (k)	Wind Forces (k)	Story Heights (ft)
Roof	6.5	0.45	0.88	8
Level 2	6.5	0.8	2.21	7.5

Max H/W Ratio ² 3.5

ROOF

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
6.5	1.23	1.00	69	135	520	65	0.38	0.91
		Shear Wall	SW-1			Strap Tie	Strap Tie/Holddown Not Required	

LEVEL 2

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
6.5	1.15	1.00	123	340	488	65	0.76	2.38
		Shear Wall	SW-2			Holddown	HDU4 w/ (2) 2x	

¹ Increase per 4.3.4.2 ANSI/AWC SDPWS-2015

² Per Table 4.3.4 ANSI/AWC SDPWS-2015

WL-1

Level	Total Wall Line Lengths (ft)	Seismic Forces (k)	Wind Forces (k)	Story Heights (ft)
Roof	5	0.9	1.5	8
Level 2	5	1.6	3	8

Max H/W Ratio ² 3.5

ROOF

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
2.5	3.20	1.18	212	300	200	25	1.37	2.33
2.5	3.20	1.18	212	300	200	25	1.37	2.33
		Shear Wall	SW-1			Strap Tie	MSTC52	

LEVEL 2

Length (ft)	H/W Ratio	Increase ¹	Force in Wall Elements		Dead Loads		Seismic Overturning (k)	Wind Overturning (k)
			Seismic Shear (plf)	Wind Shear (plf)	Wall (lb)	Floor (lb)		
2.5	3.20	1.18	376	600	200	25	2.49	4.73
2.5	3.20	1.18	376	600	200	25	2.49	4.73
		Shear Wall	SW-3			Holdown	HDU8 w/ (2) 2x	

¹ Increase per 4.3.4.2 ANSI/AWC SDPWS-2015

² Per Table 4.3.4 ANSI/AWC SDPWS-2015