524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

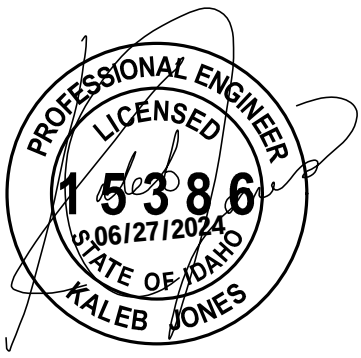
Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

Structural Calculations

Project Title: Vanderheof Residence

Location: Valley County, Idaho

Job #: 2024-7463



Prepared in accordance with 2018 IBC. Calculations expire by: **6/25/2025**

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SITE SPECIFIC DESIGN CRITERIA:

Snow Criteria:

Roof Load (P_f)	150.0	
Ground Load (P_g)	150.0	
Exposure Factor (C_e)	1.0	Partially
Thermal Factor (C_t)	1.0	Typical
Importance (I_s)	1.0	

Wind Criteria:

Wind Speed (V_3)	115 mph	
Wind Exposure	C	Open Terrain
Wind Importance (I_w)	1.0	
Building Category	II	

Seismic Criteria:

Site Class	D		Stiff Soil
Ss	0.51	Fa	1.39
S1	0.15	Fv	2.19
S_{DS}	0.47	S_{D1}	0.22
Risk Category	II		Other
Seismic Importance (I_E)	1.0		
Seismic Design Category (SDC)	D		

Seismic Criteria (continued):

Wall Material	Design Base Shear	Response Coeff., R	
OSB	.09Wp	6.5	Typ @ Ext
GYP	.28Wp	2	Typ @ Int
Cant. Col.	.38Wp	1.5	

Soil Criteria:

Brg. Strength	1500 psf

STRUCTURE SPECIFIC DESIGN CRITERIA:

Live Loads:

Typ Residential	40 psf
Garage (P.V.)	50 psf
Sleeping Area's	30 psf

Roof Dead Loads:

Deck	1.5
Insulation	2.0
Roofing	3.0
Joist	2.5
Ceiling	3.0
Misc	4.5
TOTAL	**17 psf**

Roof not engineered for Tile, Slate or Concrete.

Exterior Wall Dead Loads:

Studs	2.0
Siding	2.5
Insulation	0.5
Gyp. Board	2.5
Sheathing	1.5
Misc	3.0
TOTAL	**12 psf**

Floor Dead Loads:

Deck	2.5
Joist	2.0
Ceiling	2.0
Flooring	2.5
Misc	3.0
TOTAL	**12 psf**

Floor joists not engineered for concrete overlay.

Interior Wall Dead Loads:

Studs	2.0
Gyp. Board	2.5
Misc	3.0
TOTAL	**8 psf**

Deck Dead Load

Decking	4.4
Joist	2.0
	0.0
Misc	3.0
TOTAL	**10 psf**

Deck not engineered for hot tub loading.

Deck not engineered for concrete overlay.

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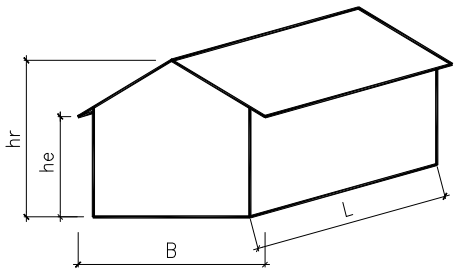
WIND ANALYSIS: Low-rise Building - Based on IBC / ASCE 7

INPUT DATA

Exposure category (B, C or D, ASCE 7-16 26.7.3)		C	
Importance factor (ASCE 7-16 Table 1.5-2)	I_w =	1.00	for all Category
Basic wind speed (ASCE 7-16 26.5.1 or 2018 IBC)	V =	115	*mph*
Topographic factor (ASCE 7-16 26.8 & Table 26.8-1)	K_{zt} =	1.00	Flat
Building height to ridge	h_r =	*27.75 ft*	*ft*
Building height to eave	h_e =	*10.00 ft*	*ft*
Building width	B =	*72.75 ft*	*ft*
Building length	L =	*129.50 ft*	*ft*
Overhang sloped width	O_h =	*3.00 ft*	*ft*
Effective area of components (or Solar Panel area)	A =	*33.3 ft²*	ft^2, <== Overhang? (Yes or No): Yes
Enclosed? (Y/N)		y	



ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_z\ K_{zt}\ K_d\ K_e\ V^2$ = **25.64** psf

where: q_h = velocity pressure at mean roof height, h. (Eq. 26.10-1 page 268)

K_z = velocity pressure exposure coefficient evaluated at height, h, (Tab. 26.10-1, pg 2(= **0.89**

K_d = wind directionality factor. (Tab. 26.6-1, for building, page 266) = **0.85**

h = mean roof height = **18.88** ft

K_e = ground elevation factor. (***1.0*** per Sec. 26.9, page 268)

< 60 ft, [Satisfactory] (ASCE 7-16 26.2.1)

< Min (L, B), [Satisfactory] (ASCE 7-16 26.2.2)

Design pressures for MWFRS

$p = q_h\ [(G\ C_{pf})-(G\ C_{pi})]$

where: p = pressure in appropriate zone. (Eq. 28.3-1, page 311). p_{min} = **16** psf (ASCE 7-16 28.3.4)

$G\ C_{pf}$ = product of gust effect factor and external pressure coefficient, see table below. (Fig. 28.3-1, page 312 & 313)

$G\ C_{pi}$ = product of gust effect factor and internal pressure coefficient.(Tab. 26.13-1, Enclosed Building, page 271)

= **0.18** or **-0.18**

a = width of edge strips, Fig 28.3-1, page 312, MAX[MIN(0.1B, 0.1L, 0.4h), MIN(0.04B, 0.04L), 3] = **7.28** **ft**

Net Pressures (psf), Basic Load Cases

Surface	Roof angle q = 18.43			Roof angle q = 18.43		
	$G\ C_{pf}$	Net Press. W/		$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$		$(+GC_{pi})$	$(-GC_{pi})$
1	0.52	8.63	17.86	-0.45	-16.15	-6.92
2	-0.69	-22.31	-13.08	-0.69	-22.31	-13.08
3	-0.47	-16.63	-7.40	-0.37	-14.10	-4.87
4	-0.42	-15.27	-6.04	-0.45	-16.15	-6.92
5				0.40	5.64	14.87
6				-0.29	-12.05	-2.82
1E	0.78	15.39	24.62	-0.48	-16.92	-7.69
2E	-1.07	-32.05	-22.82	-1.07	-32.05	-22.82
3E	-0.67	-21.88	-12.65	-0.53	-18.20	-8.97
4E	-0.62	-20.46	-11.23	-0.48	-16.92	-7.69
5E				0.61	11.03	20.26
6E				-0.43	-15.64	-6.41

Net Pressures (psf), Torsional Load Cases

Surface	Roof angle q = 18.43		
	$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
1T	0.52	2.16	4.46
2T	-0.69	-5.58	-3.27
3T	-0.47	-4.16	-1.85
4T	0.00	-3.82	-1.51
Surface	Roof angle q = 0.00		
	$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
5T	0.40	1.41	3.72
6T	-0.29	-3.01	-0.71

+ / - Wind Pressure 64%

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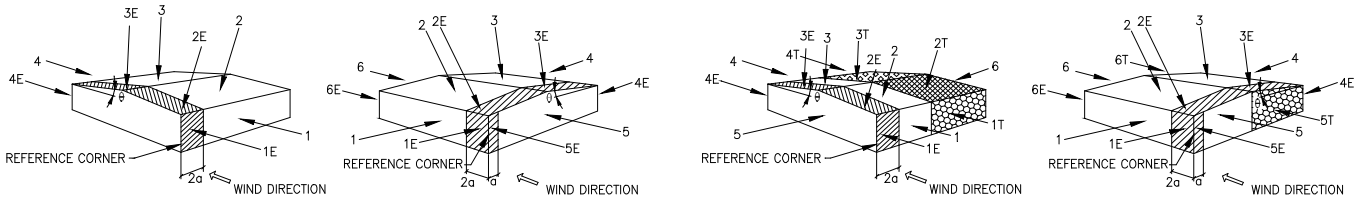


Load Case A (Transverse) Load Case B (Longitudinal) — Basic Load Cases

Load Case A (Transverse) Load Case B (Longitudinal) — Torsional Load Cases

Design pressures for components and cladding

$p = q_h[(G C_p) - (G C_{pi})]$

where: p = pressure on component. (Eq. 30.3-1, pg 33

p_{min} = 16.00 psf (ASCE 7-16 30.2.2)

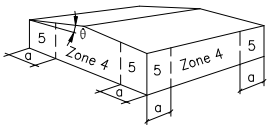
$G C_p$ = 1.00 external pressure coefficie

see table below. (ASCE 7-16 30.3.2)

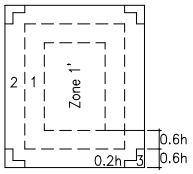
q = 18.43 °

$p_{overhang}$ = **-88.46** psf

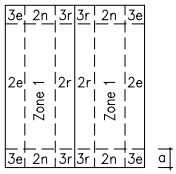
(ASCE 7-16 28.3.3)



Walls



Roof θ≤7°



Roof θ>7°

Comp. & Cladding Coeffs.	Effective Area (ft^2)	Zone 1		Zone 1'		Zone 2		Zone 2e		Zone 2n		Zone 2r	
		GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$
	1764	0.30	-0.80	0.30	-0.80	0.30	-2.20	0.30	-0.80	0.30	-1.00	0.30	-1.00
	Effective Area (ft^2)	Zone 3		Zone 3e		Zone 3r		Zone 4		Zone 5			
		GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$		
	33	0.30	-2.50	0.30	-2.50	0.30	-1.80	0.99	-1.09	0.99	-1.37		

Comp. & Cladding Pressures	Zone 1		Zone 1'		Zone 2		Zone 2e		Zone 2n		Zone 2r	
	Positive	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*
	12.31	-25.13	12.31	-25.13	12.31	-61.02	12.31	-25.13	12.31	-30.25	12.31	-30.25
	Zone 3		Zone 3e		Zone 3r		Zone 4		Zone 5			
	Positive	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*		
	12.31	-68.71	12.31	-68.71	12.31	-50.77	25.41	-27.58	29.89	-39.78		

*(Max Pressure **68.71** psf)*

LOAD CASE 'A' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**3.4 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**6.1 psf**
$0.6*W_w = (Z_1 + Z_4) * 0.6 =$	**14.3 psf**
$0.6*W_{wE} = (Z_{1E} + Z4E) * 0.6 =$	**21.5 psf**

LOAD CASE 'B' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**4.9 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**8.3 psf**
$0.6*W_w = (Z_5 + Z_6) * 0.6 =$	**10.6 psf**
$0.6*W_{wE} = (Z_{5E} + Z_{6E}) * 0.6 =$	**16.0 psf**

ROOF COMPONENTS FACTORED LOAD	
$0.6*Z_{r,c\&c} =$	**18.2 psf**

WALL COMPONENTS FACTORED LOAD	
$0.6*Z_{w,c\&c} =$	**16.6 psf**

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OSB SEISMIC LOADING ANALYSIS

IBC / ASCE 7: Equivalent Lateral Force (ELF) Procedure:

INPUT DATA

Typical floor height:	h =	10	*ft*
Typical floor weight:	w_x =	160.2	*kips*
Number of floors:	n =	1	
Importance factor (ASCE 11.5.1):	I_e =	1.00	
Design spectral response:	S_{DS} =	0.47	g
	S_{D1} =	0.22	g
Mapped spectral resp.:	S_1 =	0.15	g
Period Parameter, C_t: (ASCE Tab 12.8-2):	C_t =	0.020	
Resp. coefficient: (ASCE Tab. 12.2.1):	R =	6.5	
Seismic design category:	SDC =	D	
	h_n =	27.8	*ft*

DESIGN SUMMARY

$C_s = 1.2 * S_{DS} / (R / I_e)$ =	0.0870		**<= Applicable**
Period Parameter, x =	*0.75*	, ASCE Tab 12.8-2	
Period: $T_a = C_t (h_n)^x$ =	*0.24*	sec, ASCE 12.8.2.1	
$C_s < S_{D1} / [(R / I_e) T_a]$ =	*0.1413*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.044 S_{DS} I_e$ =	*0.0207*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.5 S_1 / (R / I_e)$ =	*0.0117*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
k =	*2.30*	, (ASCE 12.8.3, page 91)	
$V = C_s W$ =	***0.0870***	W	
0.7 * V =	***0.0609***	W	
W =	***160***	*kips, total*	

SEISMIC COMPONENT & ANCHORING ANALYSIS

Out-of-plane seismic force for wall design (ASCE 7, Sec.12.11.1)

$$k_a = 1.0 + \frac{L_f}{100} \qquad (12.11\text{-}2)$$

Lf: 10 ft ka: 1.1

$$F_p = 0.4 S_{DS} k_a I_e W_p \qquad (12.11\text{-}1)$$

= ***2.5*** psf ***<= USE FOR O.O.P. WALL***

Where : W_p = **12.0** psf , I_e = 1.00

For seismic design category C and above, flexible diaphragm (ASCE 7)

$$F_{px} = 0.4 S_{DS} I_e w_{px} \qquad (12.10\text{-}3)$$

= ***3.2*** psf ***<= USE FOR ROOF FRAMING UPLIFT***

Where : W_{px} = **17.0** psf ,

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GYP SEISMIC LOADING ANALYSIS

IBC / ASCE 7: Equivalent Lateral Force (ELF) Procedure:

INPUT DATA

Typical floor height:	h =	**10**	*ft*
Typical floor weight:	w_x =	**160.2**	*kips*
Number of floors:	n =	**1**	
Importance factor (ASCE 11.5.1):	I_e =	1.00	
Design spectral response:	S_{DS} =	0.47	g
	S_{D1} =	0.22	g
Mapped spectral resp.:	S_1 =	0.15	g
Period Parameter, C_t: (ASCE Tab 12.8-2):	C_t =	**0.020**	
Resp. coefficient: (ASCE Tab. 12.2.1):	R =	2	
Seismic design category:	SDC =	D	
	h_n =	27.8	*ft*

DESIGN SUMMARY

$C_s = 1.2 * S_{DS} / (R / I_e)$ =	0.2827		**<= Applicable**
Period Parameter, x =	*0.75*	, ASCE Tab 12.8-2	
Period: $T_a = C_t (h_n)^x$ =	*0.24*	sec, ASCE 12.8.2.1	
$C_s < S_{D1} / [(R / I_e) T_a]$ =	*0.4593*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.044 S_{DS} I_e$ =	*0.0207*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.5 S_1 / (R / I_e)$ =	*0.0380*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
k =	*2.30*	, (ASCE 12.8.3, page 91)	
$V = C_s W$ =	***0.2827***	W	
0.7 * V =	***0.1979***	W	
W =	***160***	*kips, total*	

SEISMIC COMPONENT & ANCHORING ANALYSIS

Out-of-plane seismic force for wall design (ASCE 7, Sec.12.11.1)

$$w_{1,seismic} = MAX\left(0.4 I S_{DS} W_p \ , 0.1 W_p\right)$$ = ***0.2*** W_p = ***0.2*** psf ***<= USE FOR DIAPHRAGMS***

Where : W_p = **1.0** psf , I_e = 1.00

(CBC / IBC Tab. 1604.5 & ASCE 7 Tab. 1.5-2)

Out-of-plane seismic force for anchorage design

For seismic design category A & B, any diaphragm (ASCE 7 Sec. 12.11.2)

$$F_{anch,seismic} = MAX\left[0.4 S_{DS} I W_p \frac{\left(h+h_p\right)^2}{2h} \ , \ 0.1 W_p \frac{\left(h+h_p\right)^2}{2h} \ , \ 400 S_{DS} I \ , \ F_{min}\right] =$$

Where : F_{min} = ***0.22*** plf, ***1.85*** W_p = ***188*** plf (Horizontal) ***<= Not Applicable***

(ASCE 7 Sec. 12.11.2 & 11.7.3)

For seismic design category C and above, flexible diaphragm (ASCE 7 Sec. 12.11.2.1)

$$F_{anch,seismic} = MAX\left[0.8 S_{DS} I W_p \frac{\left(h+h_p\right)^2}{2h} \ , \ 0.1 W_p \frac{\left(h+h_p\right)^2}{2h} \ , \ 400 S_{DS} I \ , \ F_{min}\right] =$$

= ***3.69*** W_p = ***188*** plf (Horizontal) ***<= Applicable***

For connections (ASCE 7 Sec. 12.11.2.1)

$F_{conn,seismic}$ = *MAX [0.133 S_{DS} w_p , 0.5 w_p]* = ***0.5*** W_p = ***0.5*** plf (Horizontal)

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WIND / SEISMIC SHEAR FORCE CALCULATIONS:

From ASCE 7-16 Wind & Seismic Loading Analysis

Wall Line	Roof / Floor					Wall					Load above				Loading		
	Wind Force (psf)	Diaph. Weight Wr, We	truss trib (ft)	Area W (ft)	Area L (ft)	Wind Force (psf)	Wall DL (psf)	Wall ht (ft)	wall line dist (ft)	Upr. Flr Wall ht (ft)	Wind (#)	Seismic (#)	*C_s (Wp)	=	**Wind Force (kips)**	**Seismic Force (kips)**	**Lateral Control**
X1-2	9.6	47	6.5	32.0	25.0	17.6	12.0	9.0	32.0				0.06	=	**1.45**	**0.87**	**Wind**
X2-2	9.6	47	6.5	32.0	25.0	17.6	12.0	9.0	32.0				0.06	=	**1.45**	**0.87**	**Wind**
Y1-2	9.6	47	6.5	25.0	32.0	18.5	12.0	9.0	25.0				0.06	=	**1.82**	**1.31**	**Wind**
Y2-2	9.6	47	6.5	25.0	32.0	18.5	12.0	9.0	25.0				0.06	=	**1.82**	**1.31**	**Wind**
X1-1	9.6	47	11.8	40.0	53.5	16.9	12.0	10.0	40.0	0.0	0	0	0.06	=	**2.53**	**2.15**	**Wind**
X2-1	9.6	47	11.8	40.0	53.5	16.9	12.0	10.0	40.0	0.0	0	0	0.06	=	**2.53**	**2.15**	**Wind**
X3-1	9.6	47	17.8	35.0	48.0	17.3	12.0	10.0	35.0	0.0	0	0	0.06	=	**2.88**	**1.70**	**Wind**
X4-1	9.6	47	17.8	35.0	48.0	17.3	12.0	10.0	35.0	0.0	0	0	0.06	=	**2.88**	**1.70**	**Wind**
X5-1	0.0	18	0.0	42.0	64.0	16.8	12.0	10.0	42.0	5.5	1.45	0.87	0.06	=	**3.30**	**1.69**	**Wind**
X6-1	0.0	18	0.0	42.0	64.0	16.8	12.0	10.0	42.0	5.5	1.45	0.87	0.06	=	**3.30**	**1.69**	**Wind**
Y1-1	9.6	47	11.8	35.5	40.0	17.3	12.0	10.0	35.5	0	0	0	0.06	=	**3.54**	**2.29**	**Wind**
Y2-1	9.6	47	11.8	35.5	40.0	17.3	12.0	10.0	35.5	0	0	0	0.06	=	**5.37**	**3.45**	**Wind**
	9.6	47	11.8	28.2	40.0	18.0	12.0	10.0	28.2	0	0	0	0.06	=			
Y3-1	9.6	47	11.8	28.2	40.0	18.0	12.0	10.0	28.2	0	0	0	0.06	=	**4.69**	**2.40**	**Wind**
	9.6	47	17.8	21.5	35.0	19.2	12.0	10.0	21.5	0	0	0	0.06	=			
Y4-1	9.6	47	17.8	21.5	35.0	19.2	12.0	10.0	21.5	0	0	0	0.06	=	**6.08**	**2.59**	**Wind**
	9.6	47	17.8	39.3	32.5	17.0	12.0	10.0	39.3	0	0	0	0.06	=			
Y5-1	9.6	47	17.8	39.3	32.5	17.0	12.0	10.0	39.3	0	0	0	0.06	=	**8.52**	**3.85**	**Wind**
	0.0	18	0.0	39.0	42.0	17.0	12.0	10.0	39.0	5.5	1.82	1.31	0.06	=			
Y6-1	0.0	18	0.0	39.0	42.0	17.0	12.0	10.0	39.0	5.5	1.82	1.31	0.06	=	**5.30**	**2.49**	**Wind**

SNAKE RIVER ENGINEERING
524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

SHEAR WALL CALCULATIONS:

		X1-2	X2-2	Y1-2	Y2-2		
Shear Wall Forces							
Number of Panels		1	1	2	1		
Total length of wall		12.00 ft	12.00 ft	9.00 ft	14.50 ft		
Total length of shear wall	L =	12.00 ft	12.00 ft	9.00 ft	14.50 ft		
Total length of full ht seg.	L_w =	5.50 ft	5.50 ft	9.00 ft	14.50 ft		
height of shear wall	H =	9.00 ft	9.00 ft	9.00 ft	9.00 ft		
Maximum opening height	H' =	4.50 ft	4.50 ft	0.00 ft	0.00 ft		
Total force at top of wall	V_1 =	1450 lbs	1450 lbs	911 lbs	1821 lbs		
Self weight	$w_{DL\ self}$ =	108 plf	108 plf	108 plf	108 plf		
Applied dead load	$w_{DL\ above}$ =	51 plf	51 plf	51 plf	51 plf		
Prefered OSB thickness	in	7/16	7/16	7/16	7/16		
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2		
Wall Connected to Concrete	y/n =	N	N	N	N		
Shear Wall Segments							
		2.75	2.75	9.00	14.50		
		2.75	2.75				
Shear Transfer to Concrete							
	T =	1766 lbs	1766 lbs	481 lbs	439 lbs		
Provide:							
Min # of 1/2 Anchor Bolts							
Load From Above		0.00	0.00	0.00	0.00		
Holdown		**S2**	**S2**	**Perp. Wall**	**Perp. Wall**		
Shear Resisting System							
Force Calculated		335.01	335.01	101.18	125.60		
		OSB	**OSB**	**OSB**	**OSB**		
Min Shear Wall Segment:		2.57 ft	2.57 ft	2.57 ft	2.57 ft		
Provide:	Va=	**SW1**	**SW1**	**SW1**	**SW1**		
Min Shear Wall Segment:							
Provide:	Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		121 plf	121 plf	202 plf	126 plf		
Blocking		**NONE**	**NONE**	**B1**	**NONE**		
Nailing		**See SCHED**	**See SCHED**	**T1**	**See SCHED**		
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.458	0.458	1.000	1.000		
% of maximum opening height	%oh = H'/H =	0.500	0.500	0.000	0.000		
Shear cap adj factor	SCAF =	0.79	0.79	1.00	1.00		
Unit base shear	vbase V_1/L_w =	264 plf	264 plf	101 plf	126 plf		
Effective unit base shear	vreq=v_{base}/SCAF=	335 plf	335 plf	101 plf	126 plf		
Ovrtrn. mo. Ttl. length of wall	OTM =	16.6 k-ft	16.6 k-ft	8.2 k-ft	16.4 k-ft		
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	11.4 k-ft	11.4 k-ft	6.4 k-ft	16.7 k-ft		
	r=	0.6286	0.6286	1.0000	1.0000		
	C_O=	0.7869	0.7869	1.0000	1.0000		

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SRE Project #: 2024-7463
City and State: Valley County, Idaho

SHEAR WALL CALCULATIONS:

		X1-1	X2-1	X3-1	X4-1	X5-1	X6-1
Shear Wall Forces							
Number of Panels		1	1	1	1	1	1
Total length of wall		53.50 ft	46.50 ft	16.31 ft	6.50 ft	64.00 ft	41.00 ft
Total length of shear wall	L =	53.50 ft	46.50 ft	16.31 ft	6.50 ft	64.00 ft	1.50 ft
Total length of full ht seg.	L_w =	14.40 ft	14.00 ft	6.82 ft	2.92 ft	26.92 ft	1.50 ft
height of shear wall	H =	10.00 ft	10.00 ft	10.00 ft	7.00 ft	15.00 ft	10.00 ft
Maximum opening height	H' =	10.00 ft	10.00 ft	4.00 ft	0.00 ft	9.50 ft	0.00 ft
Total force at top of wall	V_1 =	2528 lbs	2528 lbs	2878 lbs	2878 lbs	3302 lbs	3302 lbs
Self weight	$w_{DL\ self}$ =	120 plf	120 plf	120 plf	84 plf	180 plf	120 plf
Applied dead load	$w_{DL\ above}$ =	40 plf	40 plf	40 plf	40 plf	40 plf	40 plf
Prefered OSB thickness	in	7/16	7/16	7/16	7/16	7/16	7/16
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2	1/2	1/2
Wall Connected to Concrete	y/n =	Y	Y	Y	Y	Y	Y
Shear Wall Segments							
		4.67	3.00	3.38	2.92	4.88	1.50
		3.21	3.00	3.44		4.88	
		2.79	4.63			8.88	
		3.73	3.38			3.04	
						5.25	
Shear Transfer to Concrete							
	T =	Not Req'd	Not Req'd	2844 lbs	3500 lbs	Not Req'd	3500 lbs
	1/2 Anchor Bolts @	72 " O.C.	72 " O.C.	72 " O.C.		72 " O.C.	
	Provide:	Code Min.	Code Min.	Code Min.		Code Min.	
	Min # of 1/2 Anchor Bolts	(3) Min	(3) Min	(3) Min		(4) Min	
	Load From Above	0.00	0.00	0.00	0.00	0.00	0.00
				HD2	**HD3**		**HD3**
Shear Resisting System							
Force Calculated		432.33	433.04	471.52	986.73	186.60	2201.13
		OSB	**OSB**	**OSB**	**P.F.**	**OSB**	**P.F.**
Min Shear Wall Segment:		2.86 ft	2.86 ft	2.86 ft	1.33 ft	4.29 ft	1.33 ft
Provide:	Va=	**SW2**	**SW2**	**SW2**	**4689**	**SW1**	**1050**
							B.F.
Min Shear Wall Segment:							1.33 ft
Provide:	Va=						**4400**
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		47 plf	54 plf	176 plf	443 plf	52 plf	81 plf
Blocking		**NONE**	**NONE**	**NONE**	**B2**	**NONE**	**NONE**
Nailing		**See SCHED**	**See SCHED**	**T1**	**T2**	**See SCHED**	**See SCHED**
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.269	0.301	0.418	0.449	0.421	1.000
% of maximum opening height	%oh = H'/H =	1.000	1.000	0.400	0.000	0.633	0.000
Shear cap adj factor	SCAF =	0.41	0.42	0.90	1.00	0.66	1.00
Unit base shear	vbase V_1/L_w =	176 plf	181 plf	422 plf	987 plf	123 plf	2201 plf
Effective unit base shear	vreq=v_{base}/SCAF=	432 plf	433 plf	472 plf	987 plf	187 plf	2201 plf
Ovrtrn. mo. Ttl. length of wall	OTM =	62.2 k-ft	60.6 k-ft	32.1 k-ft	20.1 k-ft	75.3 k-ft	33.0 k-ft
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	228.7 k-ft	172.7 k-ft	21.3 k-ft	0.5 k-ft	450.1 k-ft	0.2 k-ft
	r=	0.2691	0.3011	0.6421	1.0000	0.5341	1.0000
	C_O=	0.4062	0.4170	0.8957	2.2283	0.6573	1.0000

SNAKE RIVER ENGINEERING
524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

SHEAR WALL CALCULATIONS:

		Y1-1	Y2-1	Y3-1	Y4-1	Y5-1	Y6-1
Shear Wall Forces							
Number of Panels		1	2	1	1	1	1
Total length of wall		30.00 ft	40.00 ft	23.67 ft	35.00 ft	34.00 ft	42.00 ft
Total length of shear wall	L =	30.00 ft	10.00 ft	23.67 ft	35.00 ft	34.00 ft	42.00 ft
Total length of full ht seg.	L_w =	19.00 ft	10.00 ft	23.67 ft	18.17 ft	27.50 ft	23.00 ft
height of shear wall	H =	10.00 ft	10.00 ft	10.00 ft	10.00 ft	10.00 ft	15.00 ft
Maximum opening height	H' =	10.00 ft	0.00 ft	0.00 ft	10.00 ft	10.00 ft	15.00 ft
Total force at top of wall	V_1 =	3535 lbs	2683 lbs	4693 lbs	6077 lbs	8518 lbs	5304 lbs
Self weight	$w_{DL\ self}$ =	120 plf	120 plf	120 plf	120 plf	120 plf	180 plf
Applied dead load	$w_{DL\ above}$ =	102 plf	68 plf	221 plf	221 plf	51 plf	162 plf
Prefered OSB thickness	in	7/16	7/16	7/16	7/16	7/16	7/16
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2	1/2	1/2
Wall Connected to Concrete	y/n =	Y	Y	Y	Y	Y	Y
Shear Wall Segments							
		2.75	10.00	23.67	12.50	5.25	5.50
		4.50			2.92	3.17	5.50
		2.75			2.75	19.08	6.00
		4.00					6.00
		5.00					
Shear Transfer to Concrete							
	T =	71 lbs	2119 lbs	Not Req'd	Not Req'd	2126 lbs	Not Req'd
	1/2 Anchor Bolts @	72 " O.C.	72 " O.C.	72 " O.C.	72 " O.C.	48 " O.C.	72 " O.C.
	Provide:	Code Min.	Code Min.	Code Min.	Code Min.	A4	Code Min.
	Min # of 1/2 Anchor Bolts	(4) Min	(3) Min	(5) Min	(6) Min	(9) Min	(6) Min
	Load From Above	0.00	0.00	0.00	0.00	0.00	0.00
	Holdown	**Perp. Wall**	**HD1**			**HD1**	
Shear Resisting System							
Force Calculated		322.53	268.26	198.27	656.29	428.20	439.30
		OSB	**OSB**	**OSB**	**OSB**	**OSB**	**OSB**
	Min Shear Wall Segment:	2.86 ft	2.86 ft	2.86 ft	2.86 ft	2.86 ft	4.29 ft
	Provide: Va=	**SW1**	**SW1**	**SW1**	**SW3**	**SW2**	**SW2**
	Min Shear Wall Segment:						
	Provide: Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		118 plf	134 plf	198 plf	174 plf	251 plf	126 plf
Blocking		**NONE**	**NONE**	**B1**	**NONE**	**B1**	**NONE**
Nailing		**See SCHED**	**See SCHED**	**T1**	**T1**	**T1**	**See SCHED**
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.633	1.000	1.000	0.519	0.809	0.548
% of maximum opening height	%oh = H'/H =	1.000	0.000	0.000	1.000	1.000	1.000
Shear cap adj factor	SCAF =	0.58	1.00	1.00	0.51	0.72	0.53
Unit base shear	vbase V_1/L_w =	186 plf	268 plf	198 plf	335 plf	310 plf	231 plf
Effective unit base shear	vreq=v_{base}/SCAF=	323 plf	268 plf	198 plf	656 plf	428 plf	439 plf
Ovrtrn. mo. Ttl. length of wall	OTM =	61.3 k-ft	26.8 k-ft	46.9 k-ft	119.2 k-ft	117.8 k-ft	151.6 k-ft
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	99.9 k-ft	9.4 k-ft	95.5 k-ft	208.9 k-ft	98.8 k-ft	301.2 k-ft
	r=	0.6333	1.0000	1.0000	0.5191	0.8088	0.5476
	C_O=	0.5769	1.0000	1.0000	0.5097	0.7234	0.5250

SNAKE RIVER ENGINEERING
524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**10' Tall Wall**	**King Stud (3' Max Opening)**	**10' Trimmer**	**King Stud (10' Max Opening)**	**10' Trimmer**	**10' Tall Wall**
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*
Species:	*DF-L*	*DF-L*	*DF-L*	*DF-L*	*DF-L*	*DF-L*
Grade:	*No. 2*	*No. 2*	*No. 2*	*No. 2*	*No. 2*	*No. 2*
Nominal width, t =	*(1) 2*	*(1) 2*	*(2) 2*	*(1) 2*	*(4) 2*	*(1) 2*
Actual width =	1.50 in	1.50 in	3.00 in	1.50 in	6.00 in	1.50 in
Nominal depth, d =	*6*	*6*	*6*	*6*	*6*	*6*
Actual depth =	5.50 in	5.50 in	5.50 in	5.50 in	5.50 in	5.50 in
Span, L =	*10.000 ft*	*10.000 ft*	*10.000 ft*	*10.000 ft*	*10.000 ft*	*10.000 ft*
w/o Plates	9.750 ft	9.750 ft	9.750 ft	9.750 ft	9.750 ft	9.750 ft
Stud spacing, s =	*16 in*	*28 in*	*16 in*	*70 in*	*16 in*	*16 in*
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf	16.55 psf	5.00 psf	16.55 psf
Axial load, P =	*5344 lbs*	*50 lbs*	*6012 lbs*	*50 lbs*	*20040 lbs*	*4973 lbs*
Eccentricity, e =	*0 in*	*0 in*	*0 in*	*0 in*	*0 in*	*0 in*
K_{cE} =	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*
c =	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
w =	22.1 plf	39.0 plf	6.7 plf	96.9 plf	6.7 plf	22.1 plf
Fb	900 psi	900 psi	900 psi	900 psi	900 psi	900 psi
Fv	180 psi	180 psi	180 psi	180 psi	180 psi	180 psi
Fc-prll	1,350 psi	1,350 psi	1,350 psi	1,350 psi	1,350 psi	1,350 psi
Fc-perp	625 psi	625 psi	625 psi	625 psi	625 psi	625 psi
C_d	*1.60*	*1.60*	*1.15*	*1.60*	*1.15*	*1.60*
$C_{F,Fb}$	*1.30*	*1.30*	*1.30*	*1.30*	*1.30*	*1.30*
$C_{F,Fcprll}$	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
C_r	*1.15*	*1.00*	*1.00*	*1.00*	*1.00*	*1.15*
C_p	0.39	0.39	0.51	0.39	0.51	0.39
C_H	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*6.00*
C_b	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*
E	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi
Emin	580,000 psi	580,000 psi	580,000 psi	580,000 psi	580,000 psi	580,000 psi
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**	**1872 psi**	**1346 psi**	**2153 psi**
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**	**288 psi**	**207 psi**	**1728 psi**
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi	2376 psi	1708 psi	2376 psi
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	1061 psi	1061 psi	1061 psi	1061 psi	1061 psi	1061 psi
F'_c = $F_c C_d C_F C_p$ =	**938 psi**	**938 psi**	**876 psi**	**938 psi**	**876 psi**	**938 psi**
$F'_{c\,perp}$ = $F_{c\,perp} Cb$ =	**668 psi**	**668 psi**	**668 psi**	**668 psi**	**668 psi**	**668 psi**
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**
F_{bE} =	**2434 psi**	**2434 psi**	**9734 psi**	**2434 psi**	**38937 psi**	**2434 psi**
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**
R_B =	**17**	**17**	**8**	**17**	**4**	**17**
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**
M = $w L^2/8 + P e/12$ =	262 ft-lbs	463 ft-lbs	79 ft-lbs	1151 ft-lbs	79 ft-lbs	262 ft-lbs
f_b = M/S =	**416 psi**	**735 psi**	**63 psi**	**1827 psi**	**31 psi**	**416 psi**
S =	8 in^3	8 in^3	15 in^3	8 in^3	30 in^3	8 in^3
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**
V = w L/2 =	108 lbs	190 lbs	33 lbs	472 lbs	33 lbs	81 lbs
f_v = 1.5 V/A =	**20 psi**	**35 psi**	**3 psi**	**86 psi**	**1 psi**	**15 psi**
A =	8 in^2	8 in^2	17 in^2	8 in^2	33 in^2	8 in^2
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**
f_c = P/A =	**648 psi**	**6 psi**	**364 psi**	**6 psi**	**607 psi**	**603 psi**
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**
$f_{c\,perp}$ = P/A =	**648 psi**	**6 psi**	**364 psi**	**6 psi**	**607 psi**	**603 psi**
Combined:	**≤ 1.0 OK**					**≤ 1.0 OK**
$(fc/Fc)2 + \{fb/[Fb(1-(fc/FcE)]\}$ =	0.97					0.86
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**
D = 22.5 w $L^4/E' I$ =	**0.13 in**	**0.24 in**	**0.02 in**	**0.59 in**	**0.01 in**	**0.13 in**
I =	21 in^4	21 in^4	42 in^4	21 in^4	83 in^4	21 in^4
SPAN /	**868**	**491**	**5744**	**198**	**11488**	**868**

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Completed by: KKJ
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Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**11' Tall Wall**	**King Stud (6.25' Max Opening)**	**11' Trimmer**	**King Stud (12.75' Max Opening)**	**14.75' Trimmer**	
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	
Species:	*DF-L*	*DF-L*	*DF-L*	*DF-L*	*DF-L*	
Grade:	*No. 2*	*No. 2*	*No. 2*	*No. 2*	*No. 2*	
Nominal width, t =	*(1) 2*	*(1) 2*	*(2) 2*	*(4) 2*	*(2) 2*	
Actual width =	1.50 in	1.50 in	3.00 in	6.00 in	3.00 in	
Nominal depth, d =	*6*	*6*	*6*	*6*	*6*	
Actual depth =	5.50 in	5.50 in	5.50 in	5.50 in	5.50 in	
Span, L =	*11.000 ft*	*11.000 ft*	*11.000 ft*	*14.750 ft*	*14.750 ft*	
w/o Plates	10.750 ft	10.750 ft	10.750 ft	14.500 ft	14.500 ft	
Stud spacing, s =	*16 in*	*48 in*	*16 in*	*87 in*	*16 in*	
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf	16.55 psf	5.00 psf	
Axial load, P =	*3173 lbs*	*50 lbs*	*5741 lbs*	*50 lbs*	*5323 lbs*	
Eccentricity, e =	*0 in*	*0 in*	*0 in*	*0 in*	*0 in*	
K_{cE} =	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	
c =	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	
w =	22.1 plf	65.9 plf	6.7 plf	119.6 plf	6.7 plf	
Fb	900 psi	900 psi	900 psi	900 psi	900 psi	
Fv	180 psi	180 psi	180 psi	180 psi	180 psi	
Fc-prll	1,350 psi	1,350 psi	1,350 psi	1,350 psi	1,350 psi	
Fc-perp	625 psi	625 psi	625 psi	625 psi	625 psi	
C_d	*1.60*	*1.60*	*1.15*	*1.60*	*1.15*	
$C_{F,Fb}$	*1.30*	*1.30*	*1.30*	*1.30*	*1.30*	
$C_{F,Fcprll}$	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	
C_r	*1.15*	*1.00*	*1.00*	*1.00*	*1.00*	
C_p	0.33	0.33	0.44	0.19	0.26	
C_H	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
C_b	*1.07*	*1.07*	*1.07*	*1.07*	*1.07*	
E	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	
Emin	580,000 psi	580,000 psi	580,000 psi	580,000 psi	580,000 psi	
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**	**1872 psi**	**1346 psi**	
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**	**288 psi**	**207 psi**	
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi	2376 psi	1708 psi	
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	873 psi	873 psi	873 psi	480 psi	480 psi	
F'_c = $F_c C_d C_F C_p$ =	**793 psi**	**793 psi**	**754 psi**	**458 psi**	**448 psi**	
$F'_{c\,perp}$ = $F_{c\,perp}$ Cb =	**668 psi**	**668 psi**	**668 psi**	**668 psi**	**668 psi**	
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	
F_{bE} =	**2207 psi**	**2207 psi**	**8829 psi**	**26182 psi**	**6545 psi**	
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	
R_B =	**18**	**18**	**9**	**5**	**10**	
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	
M = $w L^2/8 + P e/12$ =	319 ft-lbs	951 ft-lbs	96 ft-lbs	3145 ft-lbs	175 ft-lbs	
f_b = M/S =	**506 psi**	**1510 psi**	**76 psi**	**1247 psi**	**139 psi**	
S =	8 in^3	8 in^3	15 in^3	30 in^3	15 in^3	
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	
V = w L/2 =	119 lbs	354 lbs	36 lbs	867 lbs	48 lbs	
f_v = 1.5 V/A =	**22 psi**	**64 psi**	**3 psi**	**39 psi**	**4 psi**	
A =	8 in^2	8 in^2	17 in^2	33 in^2	17 in^2	
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	
f_c = P/A =	**385 psi**	**6 psi**	**348 psi**	**2 psi**	**323 psi**	
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	
$f_{c\,perp}$ = P/A =	**385 psi**	**6 psi**	**348 psi**	**2 psi**	**323 psi**	
Combined:	**≤ 1.0 OK**					
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE))]} =	0.66					
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	
D = 22.5 w $L^4/E' I$ =	**0.20 in**	**0.59 in**	**0.03 in**	**0.89 in**	**0.10 in**	
I =	21 in^4	21 in^4	42 in^4	83 in^4	42 in^4	
SPAN /	**647**	**217**	**4286**	**195**	**1746**	

SNAKE RIVER ENGINEERING
524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**12' Tall Wall**	**King Stud (8.33' Max Opening)**	**12' Trimmer**			
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*			
Species:	*DF-L*	*DF-L*	*DF-L*			
Grade:	*No. 2*	*No. 2*	*No. 2*			
Nominal width, t =	*(1) 2*	*(2) 2*	*(2) 2*			
Actual width =	1.50 in	3.00 in	3.00 in			
Nominal depth, d =	*6*	*6*	*6*			
Actual depth =	5.50 in	5.50 in	5.50 in			
Span, L =	*12.000 ft*	*12.000 ft*	*12.000 ft*			
w/o Plates	11.750 ft	11.750 ft	11.750 ft			
Stud spacing, s =	*16 in*	*60 in*	*16 in*			
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf			
Axial load, P =	*2895 lbs*	*50 lbs*	*5564 lbs*			
Eccentricity, e =	*0 in*	*0 in*	*0 in*			
K_{cE} =	*0.3*	*0.3*	*0.3*			
c =	*0.8*	*0.8*	*0.8*			
w =	22.1 plf	83.1 plf	6.7 plf			
Fb	900 psi	900 psi	900 psi			
Fv	180 psi	180 psi	180 psi			
Fc-prll	1,350 psi	1,350 psi	1,350 psi			
Fc-perp	625 psi	625 psi	625 psi			
C_d	*1.60*	*1.60*	*1.15*			
$C_{F,Fb}$	*1.30*	*1.30*	*1.30*			
$C_{F,Fcprll}$	*1.10*	*1.10*	*1.10*			
C_r	*1.15*	*1.00*	*1.00*			
C_p	0.28	0.28	0.38			
C_H	*1.00*	*1.00*	*1.00*			
C_b	*1.07*	*1.07*	*1.07*			
E	1,600,000 psi	1,600,000 psi	1,600,000 psi			
Emin	580,000 psi	580,000 psi	580,000 psi			
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**			
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**			
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi			
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	730 psi	730 psi	730 psi			
F'_c = $F_c C_d C_F C_p$ =	**676 psi**	**676 psi**	**650 psi**			
$F'_{c\,perp}$ = $F_{c\,perp} Cb$ =	**668 psi**	**668 psi**	**668 psi**			
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**			
F_{bE} =	**2019 psi**	**8077 psi**	**8077 psi**			
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**			
R_B =	**19**	**9**	**9**			
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**			
M = $w L^2/8 + P e/12$ =	381 ft-lbs	1434 ft-lbs	115 ft-lbs			
f_b = M/S =	**604 psi**	**1137 psi**	**91 psi**			
S =	8 in^3	15 in^3	15 in^3			
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**			
V = w L/2 =	130 lbs	488 lbs	39 lbs			
f_v = 1.5 V/A =	**24 psi**	**44 psi**	**4 psi**			
A =	8 in^2	17 in^2	17 in^2			
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
f_c = P/A =	**351 psi**	**3 psi**	**337 psi**			
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
$f_{c\,perp}$ = P/A =	**351 psi**	**3 psi**	**337 psi**			
Combined:	**≤ 1.0 OK**					
$(fc/Fc)2 + \{fb/[Fb(1-(fc/FcE))]\}$ =	0.81					
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**			
D = 22.5 w $L^4/E' I$ =	**0.28 in**	**0.54 in**	**0.04 in**			
I =	21 in^4	42 in^4	42 in^4			
SPAN /	**496**	**263**	**3282**			

SNAKE RIVER ENGINEERING
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(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**14' Tall Wall**	**King Stud (15' Max Opening)**	**10' Trimmer**			
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*			
Species:	*DF-L*	*DF-L*	*DF-L*			
Grade:	*No. 2*	*No. 2*	*No. 2*			
Nominal width, t =	*(1) 2*	*(3) 2*	*(2) 2*			
Actual width =	1.50 in	4.50 in	3.00 in			
Nominal depth, d =	*6*	*6*	*6*			
Actual depth =	5.50 in	5.50 in	5.50 in			
Span, L =	*14.000 ft*	*12.583 ft*	*10.000 ft*			
w/o Plates	13.750 ft	12.333 ft	9.750 ft			
Stud spacing, s =	*16 in*	*100 in*	*16 in*			
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf			
Axial load, P =	*1781 lbs*	*50 lbs*	*6012 lbs*			
Eccentricity, e =	*0 in*	*0 in*	*0 in*			
K_{cE} =	*0.3*	*0.3*	*0.3*			
c =	*0.8*	*0.8*	*0.8*			
w =	22.1 plf	138.3 plf	6.7 plf			
Fb	900 psi	900 psi	900 psi			
Fv	180 psi	180 psi	180 psi			
Fc-prll	1,350 psi	1,350 psi	1,350 psi			
Fc-perp	625 psi	625 psi	625 psi			
C_d	*1.60*	*1.60*	*1.15*			
$C_{F,Fb}$	*1.30*	*1.30*	*1.30*			
$C_{F,Fcprll}$	*1.10*	*1.10*	*1.10*			
C_r	*1.15*	*1.00*	*1.00*			
C_p	0.21	0.26	0.51			
C_H	*1.00*	*1.00*	*1.00*			
C_b	*1.07*	*1.07*	*1.07*			
E	1,600,000 psi	1,600,000 psi	1,600,000 psi			
Emin	580,000 psi	580,000 psi	580,000 psi			
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**			
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**			
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi			
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	533 psi	663 psi	1061 psi			
F'_c = $F_c C_d C_F C_p$ =	**506 psi**	**619 psi**	**876 psi**			
$F'_{c\,perp}$ = $F_{c\,perp} Cb$ =	**668 psi**	**668 psi**	**668 psi**			
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**			
F_{bE} =	**1726 psi**	**17315 psi**	**9734 psi**			
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**			
R_B =	**20**	**6**	**8**			
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**			
M = $w L^2/8 + P e/12$ =	522 ft-lbs	2629 ft-lbs	79 ft-lbs			
f_b = M/S =	**828 psi**	**1390 psi**	**63 psi**			
S =	8 in^3	23 in^3	15 in^3			
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**			
V = w L/2 =	152 lbs	853 lbs	33 lbs			
f_v = 1.5 V/A =	**28 psi**	**52 psi**	**3 psi**			
A =	8 in^2	25 in^2	17 in^2			
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
f_c = P/A =	**216 psi**	**2 psi**	**364 psi**			
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
$f_{c\,perp}$ = P/A =	**216 psi**	**2 psi**	**364 psi**			
Combined:	**≤ 1.0 OK**					
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE))]} =	0.83					
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**			
D = 22.5 w L^4/E' I =	**0.53 in**	**0.72 in**	**0.02 in**			
I =	21 in^4	62 in^4	42 in^4			
SPAN /	**309**	**205**	**5744**			

SNAKE RIVER ENGINEERING
524 CLEVELAND BLVD. #230
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(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**12' Tall Wall**	**King Stud (9.5' Max Opening)**	**13.25' Trimmer**			
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*			
Species:	*DF-L*	*DF-L*	*DF-L*			
Grade:	*No. 2*	*No. 2*	*No. 2*			
Nominal width, t =	*(1) 2*	*(3) 2*	*(1) 2*			
Actual width =	1.50 in	4.50 in	1.50 in			
Nominal depth, d =	*6*	*6*	*6*			
Actual depth =	5.50 in	5.50 in	5.50 in			
Span, L =	*12.000 ft*	*13.250 ft*	*13.250 ft*			
w/o Plates	11.750 ft	13.000 ft	13.000 ft			
Stud spacing, s =	*16 in*	*67 in*	*16 in*			
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf			
Axial load, P =	*2227 lbs*	*50 lbs*	*3966 lbs*			
Eccentricity, e =	*0 in*	*0 in*	*0 in*			
K_{cE} =	*0.3*	*0.3*	*0.3*			
c =	*0.8*	*0.8*	*0.8*			
w =	22.1 plf	92.8 plf	6.7 plf			
Fb	900 psi	900 psi	900 psi			
Fv	180 psi	180 psi	180 psi			
Fc-prll	1,350 psi	1,350 psi	1,350 psi			
Fc-perp	625 psi	625 psi	625 psi			
C_d	*1.60*	*1.60*	*1.15*			
$C_{F,Fb}$	*1.30*	*1.30*	*1.30*			
$C_{F,Fcprll}$	*1.10*	*1.10*	*1.10*			
C_r	*1.15*	*1.00*	*1.00*			
C_p	0.28	0.24	0.32			
C_H	*1.00*	*1.00*	*1.00*			
C_b	*1.07*	*1.07*	*1.07*			
E	1,600,000 psi	1,600,000 psi	1,600,000 psi			
Emin	580,000 psi	580,000 psi	580,000 psi			
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**			
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**			
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi			
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	730 psi	597 psi	597 psi			
F'_c = $F_c C_d C_F C_p$ =	**676 psi**	**562 psi**	**545 psi**			
$F'_{c\,perp}$ = $F_{c\,perp} Cb$ =	**668 psi**	**668 psi**	**668 psi**			
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**			
F_{bE} =	**2019 psi**	**16427 psi**	**1825 psi**			
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**			
R_B =	**19**	**7**	**20**			
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**			
M = $w L^2/8 + P e/12$ =	381 ft-lbs	1959 ft-lbs	141 ft-lbs			
f_b = M/S =	**604 psi**	**1036 psi**	**223 psi**			
S =	8 in^3	23 in^3	8 in^3			
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**			
V = w L/2 =	130 lbs	603 lbs	43 lbs			
f_v = 1.5 V/A =	**24 psi**	**37 psi**	**8 psi**			
A =	8 in^2	25 in^2	8 in^2			
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
f_c = P/A =	**270 psi**	**2 psi**	**481 psi**			
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**			
$f_{c\,perp}$ = P/A =	**270 psi**	**2 psi**	**481 psi**			
Combined:	**≤ 1.0 OK**					
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE))]} =	0.60					
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**			
D = 22.5 w L^4/E' I =	**0.28 in**	**0.60 in**	**0.13 in**			
I =	21 in^4	62 in^4	21 in^4			
SPAN /	**496**	**261**	**1212**			

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Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	**15' Tall Wall**					
Type:	*2x Lumber (2"-4")*					
Species:	*DF-L*					
Grade:	*No. 2*					
Nominal width, t =	*(1) 2*					
Actual width =	1.50 in					
Nominal depth, d =	*6*					
Actual depth =	5.50 in					
Span, L =	*15.000 ft*					
w/o Plates	14.750 ft					
Stud spacing, s =	*16 in*					
Lat. Pressure, w_{wind} =	16.55 psf					
Axial load, P =	*1113 lbs*					
Eccentricity, e =	*0 in*					
K_{cE} =	*0.3*					
c =	*0.8*					
w =	22.1 plf					
Fb	900 psi					
Fv	180 psi					
Fc-prll	1,350 psi					
Fc-perp	625 psi					
C_d	*1.60*					
$C_{F,Fb}$	*1.30*					
$C_{F,Fcprll}$	*1.10*					
C_r	*1.15*					
C_p	0.19					
C_H	*1.00*					
C_b	*1.07*					
E	1,600,000 psi					
Emin	580,000 psi					
Allowable Stress:						
$F'_b = F_b C_d C_F C_r$ =	**2153 psi**					
$F'_v = F'_v C_d C_H$ =	**288 psi**					
$F^*_c = F_c C_d C_F$ =	2376 psi					
$F_{cE} = (K_{cE} E')/(l_e/d)2$ =	463 psi					
$F'_c = F_c C_d C_F C_p$ =	**443 psi**					
$F'_{c\,perp} = F_{c\,perp} Cb$ =	**668 psi**					
E' = E =	**1600000 psi**					
F_{bE} =	**1609 psi**					
Slenderness Ratio:	**≤ 50 OK**					
R_B =	**21**					
Bending:	**≤ F'b OK**					
M = $w L^2/8 + P e/12$ =	600 ft-lbs					
f_b = M/S =	**952 psi**					
S =	8 in^3					
Shear:	**≤ F'v OK**					
V = w L/2 =	163 lbs					
f_v = 1.5 V/A =	**30 psi**					
A =	8 in^2					
Compression:	**≤ F'c OK**					
f_c = P/A =	**135 psi**					
Compression (perp.):	**≤ F'c OK**					
$f_{c\,perp}$ = P/A =	**135 psi**					
Combined:	**≤ 1.0 OK**					
$(fc/Fc)2 + \{fb/[Fb(1-(fc/FcE)]\}$ =	0.72					
Deflection:	**≥ 180 OK**					
D = 22.5 w $L^4/E' I$ =	**0.71 in**					
I =	21 in^4					
SPAN /	**251**					

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City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

This spreadsheet is used for designing a stud wall according to the NDS.

Description:	15' Tall Wall	King Stud (3' Max Opening)	15' Trimmer	King Stud (6.25' Max Opening)	15' Trimmer	King Stud (5.25' Max Opening)
Type:	2x Lumber (2"-4")	2x Lumber (2"-4")	2x Lumber (2"-4")	2x Lumber (2"-4")	2x Lumber (2"-4")	2x Lumber (2"-4")
Species:	DF-L	DF-L	DF-L	DF-L	DF-L	DF-L
Grade:	No. 2	No. 2	No. 2	No. 2	No. 2	No. 2
Nominal width, t =	(1) 2	(2) 2	(1) 2	(3) 2	(1) 2	(2) 2
Actual width =	1.50 in	3.00 in	1.50 in	4.50 in	1.50 in	3.00 in
Nominal depth, d =	6	6	6	6	6	6
Actual depth =	5.50 in	5.50 in	5.50 in	5.50 in	5.50 in	5.50 in
Span, L =	15.000 ft	15.000 ft	15.000 ft	15.000 ft	15.000 ft	15.000 ft
w/o Plates	14.750 ft	14.750 ft	14.750 ft	14.750 ft	14.750 ft	14.750 ft
Stud spacing, s =	12 in	26 in	12 in	46 in	12 in	40 in
Lat. Pressure, w_{wind} =	16.55 psf	16.55 psf	5.00 psf	16.55 psf	5.00 psf	16.55 psf
Axial load, P =	1587 lbs	50 lbs	2380 lbs	50 lbs	2609 lbs	50 lbs
Eccentricity, e =	0 in	0 in	0 in	0 in	0 in	0 in
K_{cE} =	0.3	0.3	0.3	0.3	0.3	0.3
c =	0.8	0.8	0.8	0.8	0.8	0.8
w =	16.6 plf	36.2 plf	5.0 plf	63.1 plf	5.0 plf	54.8 plf
Fb	900 psi	900 psi	900 psi	900 psi	900 psi	900 psi
Fv	180 psi	180 psi	180 psi	180 psi	180 psi	180 psi
Fc-prll	1,350 psi	1,350 psi	1,350 psi	1,350 psi	1,350 psi	1,350 psi
Fc-perp	625 psi	625 psi	625 psi	625 psi	625 psi	625 psi
C_d	1.60	1.60	1.15	1.60	1.15	1.60
$C_{F,Fb}$	1.30	1.30	1.30	1.30	1.30	1.30
$C_{F,Fcprll}$	1.10	1.10	1.10	1.10	1.10	1.10
C_r	1.15	1.00	1.00	1.00	1.00	1.00
C_p	0.19	0.19	0.25	0.19	0.25	0.19
C_H	1.00	1.00	1.00	1.00	1.00	6.00
C_b	1.07	1.07	1.07	1.07	1.07	1.07
E	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi	1,600,000 psi
Emin	580,000 psi	580,000 psi	580,000 psi	580,000 psi	580,000 psi	580,000 psi
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**	**1346 psi**	**1872 psi**	**1346 psi**	**1872 psi**
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**	**207 psi**	**288 psi**	**207 psi**	**1728 psi**
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi	1708 psi	2376 psi	1708 psi	2376 psi
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	463 psi	463 psi	463 psi	463 psi	463 psi	463 psi
F'_c = $F_c C_d C_F C_p$ =	**443 psi**	**443 psi**	**434 psi**	**443 psi**	**434 psi**	**443 psi**
$F'_{c\,perp}$ = $F_{c\,perp}$ Cb =	**668 psi**	**668 psi**	**668 psi**	**668 psi**	**668 psi**	**668 psi**
E' = E =	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**	**1600000 psi**
F_{bE} =	**1609 psi**	**6435 psi**	**1609 psi**	**14478 psi**	**1609 psi**	**6435 psi**
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**	**≤ 50 OK**
R_B =	**21**	**10**	**21**	**7**	**21**	**10**
Bending:	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**	**≤ F'b OK**
M = $w L^2/8 + P e/12$ =	450 ft-lbs	985 ft-lbs	136 ft-lbs	1716 ft-lbs	136 ft-lbs	1491 ft-lbs
f_b = M/S =	**714 psi**	**781 psi**	**216 psi**	**908 psi**	**216 psi**	**1183 psi**
S =	8 in^3	15 in^3	8 in^3	23 in^3	8 in^3	15 in^3
Shear:	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**	**≤ F'v OK**
V = w L/2 =	122 lbs	267 lbs	37 lbs	465 lbs	37 lbs	122 lbs
f_v = 1.5 V/A =	**22 psi**	**24 psi**	**7 psi**	**28 psi**	**7 psi**	**11 psi**
A =	8 in^2	17 in^2	8 in^2	25 in^2	8 in^2	17 in^2
Compression:	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**
f_c = P/A =	**192 psi**	**3 psi**	**288 psi**	**2 psi**	**316 psi**	**3 psi**
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**	**≤ F'c OK**
$f_{c\,perp}$ = P/A =	**192 psi**	**3 psi**	**288 psi**	**2 psi**	**316 psi**	**3 psi**
Combined:	**≤ 1.0 OK**					
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE))]} =	0.76					
Deflection:	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**	**≥ 180 OK**
D = 22.5 w $L^4/E' I$ =	**0.53 in**	**0.58 in**	**0.16 in**	**0.67 in**	**0.16 in**	**0.88 in**
I =	21 in^4	42 in^4	21 in^4	62 in^4	21 in^4	42 in^4
SPAN /	**334**	**305**	**1106**	**263**	**1106**	**202**

524 CLEVELAND BLVD. #230
CALDWELL, IDAHO 83605
(208) 453-6512

Completed by: KKJ
Review/Check: KKJ

Project Name: Vanderheof Residence
SRE Project #: 2024-7463
City and State: Valley County, Idaho

WOOD TALL WALL & KING STUD ALLOWABLE LOADS (plf):

Load Duration Factor: *1.6*
Max Vert. Load: *50 lbs*
Max Deflection: *L/180*

	Height						
King Stud	**12'**	**14'**	**16'**	**18'**	**20'**	**22'**	**24'**
(1) 2x4 Stud	12.8	NA	NA	NA	NA	NA	NA
(2) 2x4 Stud	25.6	NA	NA	NA	NA	NA	NA
(3) 2x4 Stud	38.4	NA	NA	NA	NA	NA	NA
(1) 2x6 DF #2	57.0	35.8	*24.1*	16.9	NA	NA	NA
(2) 2x6 DF #2	114.0	*71.6*	*48.2*	33.8	NA	NA	NA
(3) 2x6 DF #2	171.0	*107.4*	*72.3*	50.7	NA	NA	NA
(1) 2x8 DF #2	130.0	81.7	55.0	38.7	28.2	21.2	16.3
(2) 2x8 DF #2	260.0	163.4	110.0	77.4	56.4	42.4	32.6
(3) 2x8 DF #2	390.0	245.1	165.0	116.1	84.6	63.6	48.9
(1) 2x6 LSL	67.8	42.7	28.5	20.0	14.7	NA	NA
(2) 2x6 LSL	135.6	85.4	57.0	40.0	29.4	NA	NA
(3) 2x6 LSL	203.4	128.1	85.5	60.0	44.1	NA	NA
(1) 2x8 LSL	155.0	98.3	65.5	46.0	33.5	25.2	19.5
(2) 2x8 LSL	310.0	196.6	131.0	92.0	67.0	50.4	39.0
(3) 2x8 LSL	465.0	294.9	196.5	138.0	100.5	75.6	58.5

***NOTE 1: this table combined with trimmer table to determine combined stress on each common wall stud.**
***NOTE 2: allowable loads are interpolated at heights not in 2' increments.**

WOOD TRIMMER ALLOWABLE LOADS (kips):

Load Duration Factor: *1.0*
Eccentricity *0"*
Weak Axis Braced *Y*

	Height						
Trimmer Type	**8'**	**10'**	**12'**	**14'**	**16'**	**18'**	**20'**
(1) 2x4 Stud	2.4	1.7	1.2	NA	NA	NA	NA
(2) 2x4 Stud	4.9	3.4	2.4	NA	NA	NA	NA
(3) 2x4 Stud	7.1	5.0	3.6	NA	NA	NA	NA
(1) 2x6 DF #2	5.1	5.1	5.0	3.8	3.0	NA	NA
(2) 2x6 DF #2	10.3	10.3	10.1	*7.7*	*6.0*	NA	NA
(3) 2x6 DF #2	15.4	15.4	15.1	*11.6*	*9.1*	NA	NA
(1) 2x8 DF #2	6.7	6.7	6.7	6.7	6.4	5.3	4.4
(2) 2x8 DF #2	13.5	13.5	13.5	13.5	12.9	10.6	8.8
(3) 2x8 DF #2	20.3	20.3	20.3	20.3	19.4	15.9	13.2

***NOTE 1: this table combined with king stud table to determine combined stress on each common wall stud.**
***NOTE 2: allowable loads are interpolated at heights not in 2' increments.**

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--		

PROJECT SUMMARY

Project Name: 24-005 Vanderhoef

Governing Codes:
Building Code: 2018 International Building Code
ASCE: ASCE 7-16
Steel: AISC 360-16
Concrete: ACI 318-14
Masonry: TMS 402/602-16

Module Location: Outlookers
Module Level: Roof
Module Type: Roof Rafter
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 1.5 in. X 5.5 in. X 4 ft @ 24 in. Spacing
Section Adequacy: 28.06%
Controlling Factor: Bending-Tension

Module Location: Beam #1
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 13.5 in. X 12 ft
Section Adequacy: 19.3%
Controlling Factor: Bending Stress Y

Module Location: Beam #2
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 6.75 in. X 36 in. X 33 ft
Section Adequacy: 14.19%
Controlling Factor: Bending Stress Y

Module Location: Beam #3
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (2) 1.75 in. X 9.25 in. X 12.5 ft
Section Adequacy: 50.52%
Controlling Factor: Bending Stress Y

Module Location: Beam #4
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (2) 1.75 in. X 9.25 in. X 12.5 ft
Section Adequacy: 50.52%
Controlling Factor: Bending Stress Y

Module Location: Beam #5
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (3) 1.75 in. X 7.25 in. X 6.5 ft
Section Adequacy: 34.28%
Controlling Factor: Bending Stress Y

Module Location: Beam #6

Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (3) 1.75 in. X 9.25 in. X 7.5 ft
Section Adequacy: 99.34%
Controlling Factor: Bending Stress Y

Module Location: Girder #3
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (3) 1.75 in. X 14 in. X 10.5 ft
Section Adequacy: 57.83%
Controlling Factor: Bearing Stress

Module Location: Girder #4
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (5) 1.75 in. X 20 in. X 18 ft
Section Adequacy: 58.75%
Controlling Factor: Bearing Stress

Module Location: Girder #5
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (5) 1.75 in. X 18 in. X 18.5 ft
Section Adequacy: 57.14%
Controlling Factor: Bending Stress Y

Module Location: Rafters #1
Module Level: Roof
Module Type: Roof Rafter
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 1.5 in. X 7.25 in. X 9.5 ft @ 16 in. Spacing
Section Adequacy: 24.19%
Controlling Factor: Bending-Tension

Module Location: Rafters #2
Module Level: Roof
Module Type: Roof Rafter
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 1.5 in. X 7.25 in. X 10.5 ft @ 16 in. Spacing
Section Adequacy: 3.63%
Controlling Factor: Bending-Tension

Module Location: Rafters #3
Module Level: Roof
Module Type: Roof Rafter
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 1.5 in. X 9.25 in. X 11.5 ft @ 12 in. Spacing
Section Adequacy: 37.13%
Controlling Factor: Bending Stress Y

Module Location: Rafters #4
Module Level: Roof
Module Type: Roof Rafter
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 1.5 in. X 9.25 in. X 10 ft @ 12 in. Spacing
Section Adequacy: 28%
Controlling Factor: Bending Stress Y

Module Location: Beam #6
Module Level: Roof

Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 5.5 in. X 11.5 in. X 7.5 ft
Section Adequacy: 14.05%
Controlling Factor: Bending Stress Y

Module Location: Beam #8
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 3.5 in. X 5.5 in. X 2.5 ft
Section Adequacy: 41.99%
Controlling Factor: Shear Stress Y

Module Location: Beam #7
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 7.5 in. X 11.5 in. X 8 ft
Section Adequacy: 27.99%
Controlling Factor: Bending Stress Y

Module Location: Beam #9
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 7.5 in. X 11.5 in. X 11.5 ft
Section Adequacy: 15.58%
Controlling Factor: Bending Stress Y

Module Location: Beam #10
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 7.5 in. X 11.5 in. X 14.5 ft
Section Adequacy: 97.01%
Controlling Factor: Bending Stress Y

Module Location: Beam #11
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 13.5 in. X 12 ft
Section Adequacy: 23.71%
Controlling Factor: Bending Stress Y

Module Location: Girder #6
Module Level: Roof
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (1) 1.75 in. X 14 in. X 8 ft
Section Adequacy: 47.83%
Controlling Factor: Bearing Stress

Module Location: Beam #13
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 5.5 in. X 11.5 in. X 15 ft
Section Adequacy: 98.74%
Controlling Factor: Bending Stress Y

Module Location: Beam #12
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 15 in. X 9.5 ft
Section Adequacy:

55.32%
Controlling Factor: Bending Stress Y

Module Location: Beam #14
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 11.5 in. X 5 ft
Section Adequacy: 99.43%
Controlling Factor: Bending Stress Y

Module Location: Beam #15
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.125 in. X 13.5 in. X 10 ft
Section Adequacy: 99.28%
Controlling Factor: Shear Stress Y

Module Location: Beam #16
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 12 in. X 12.5 ft
Section Adequacy: 22.11%
Controlling Factor: Bending Stress Y

Module Location: Beam #17
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 3.125 in. X 7.5 in. X 8.5 ft
Section Adequacy: 42.67%
Controlling Factor: Bending-Tension

Module Location: Beam #18
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 12 in. X 8.5 ft
Section Adequacy: 19.45%
Controlling Factor: Bending Stress Y

Module Location: Beam #19
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 12 in. X 11 ft
Section Adequacy: 99.31%
Controlling Factor: Shear Stress Y

Module Location: Beam #20
Module Level: Roof
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.125 in. X 24 in. X 20 ft
Section Adequacy: 16.33%
Controlling Factor: Bearing Stress

Module Location: Beam #21
Module Level: Roof
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 11.5 in. X 8 ft
Section Adequacy: 98.55%
Controlling Factor: Bending Stress Y

Module Location: Beam #22
Module Level: Roof
Module Type: Roof Beam

Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 11.5 in. X 16 ft
Section Adequacy: 20.73%
Controlling Factor: Bending Stress Y

Module Location: Joist #1
Module Level: Floor - 2nd Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 11.875 in. X 12 ft
Section Adequacy: 59.08%
Controlling Factor: Bending Moment

Module Location: Girder #1
Module Level: Floor - 2nd Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (2) 10.75 in. X 24 in. X 40 ft
Section Adequacy: 9.24%
Controlling Factor: Bearing Stress

Module Location: Girder #2
Module Level: Floor - 2nd Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (2) 10.75 in. X 24 in. X 40 ft
Section Adequacy: 69.67%
Controlling Factor: Bearing Stress

Module Location: Header #1
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 3.5 in. X 7.25 in. X 3 ft
Section Adequacy: 99.69%
Controlling Factor: Shear Stress Y

Module Location: Header #2
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (3) 1.75 in. X 11.875 in. X 12 ft
Section Adequacy: 29.86%
Controlling Factor: Bearing Stress

Module Location: Header #3
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 6.75 in. X 24 in. X 10 ft
Section Adequacy: 91.78%
Controlling Factor: Shear Stress Y

Module Location: Header #4
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 6.75 in. X 24 in. X 10 ft
Section Adequacy: 77.28%
Controlling Factor: Shear Stress Y

Module Location: Header #5
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (2) 1.75 in. X 9.25 in. X 6.5 ft
Section Adequacy:

15.93%
Controlling Factor: Bearing Stress

Module Location: Header #6
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 3.5 in. X 7.25 in. X 2.5 ft
Section Adequacy: 99.74%
Controlling Factor: Shear Stress Y

Module Location: Header #7
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 9.5 in. X 3 ft
Section Adequacy: 8.43%
Controlling Factor: Shear Stress Y

Module Location: Header #8
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 3.5 in. X 7.25 in. X 3 ft
Section Adequacy: 99.69%
Controlling Factor: Shear Stress Y

Module Location: Header #9
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 5.5 in. X 7.5 in. X 9 ft
Section Adequacy: 99.61%
Controlling Factor: Shear Stress Y

Module Location: Header #10
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch(North) No. 2
Member Dimensions: (1) 3.5 in. X 7.25 in. X 7.5 ft
Section Adequacy: 31.79%
Controlling Factor: Shear Stress Y

Module Location: Header #11
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 9 in. X 6 ft
Section Adequacy: 99.57%
Controlling Factor: Shear Stress Y

Module Location: Header #12
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 21 in. X 15 ft
Section Adequacy: 33.28%
Controlling Factor: Bearing Stress

Module Location: Header #13
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (3) 1.75 in. X 9.5 in. X 6.5 ft
Section Adequacy: 99.45%
Controlling Factor: Shear Stress Y

Module Location: Header #14
Module Level: Headers - 1st Level

Module Type: Roof Beam
Material Type: Glulams Stress Class Rated 24F-1.8E 24F-V4 DF/DF
Member Dimensions: (1) 5.5 in. X 12 in. X 6 ft
Section Adequacy: 99.57%
Controlling Factor: Shear Stress Y

Module Location: Header #15
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (2) 1.75 in. X 11.25 in. X 13 ft
Section Adequacy: 22.17%
Controlling Factor: Bending Stress Y

Module Location: Header #16
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 9.5 in. X 3 ft
Section Adequacy: 99.66%
Controlling Factor: Shear Stress Y

Module Location: Header #17
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (3) 1.5 in. X 11.25 in. X 6.5 ft
Section Adequacy: 99.05%
Controlling Factor: Bending Stress Y

Module Location: Header #18
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Structural Composite Lumber Weyerhaeuser 2.0E Microlam LVL
Member Dimensions: (2) 1.75 in. X 11.25 in. X 13 ft
Section Adequacy: 22.17%
Controlling Factor: Bending Stress Y

Module Location: Header #19
Module Level: Headers - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5 in. X 9.25 in. X 3.5 ft
Section Adequacy: 99.57%
Controlling Factor: Bearing Stress

Module Location: Joists #1
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 30 ft
Section Adequacy: 64.66%
Controlling Factor: Bearing Load

Module Location: Joists #2
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 30 ft
Section Adequacy: 64.66%
Controlling Factor: Bearing Load

Module Location: Joists #3
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 6 ft

Section Adequacy: 73.86%
Controlling Factor: Shear Force

Module Location: Joists #4
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 15.5 ft
Section Adequacy: 60.01%
Controlling Factor: Bearing Load

Module Location: Joists #5
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 25 ft
Section Adequacy: 55.45%
Controlling Factor: Bearing Load

Module Location: Joists #6
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 37 ft
Section Adequacy: 57.19%
Controlling Factor: Bearing Load

Module Location: Joists #7
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 29 ft
Section Adequacy: 58.53%
Controlling Factor: Bearing Load

Module Location: Joists #8
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 32 ft
Section Adequacy: 58.46%
Controlling Factor: Bearing Load

Module Location: Joists #9
Module Level: Floor - 1st Level
Module Type: Floor Joist
Material Type: I-Joists Weyerhaeuser TJI 110
Member Dimensions: (1) 1.75 in. X 9.5 in. X 29.25 ft
Section Adequacy: 53.48%
Controlling Factor: Bearing Load

Module Location: Beam #23
Module Level: Floor - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 5.5 in. X 9.5 in. X 3 ft
Section Adequacy: 25.84%
Controlling Factor: Shear Stress Y

Module Location: Beam #24
Module Level: Floor - 1st Level
Module Type: Roof Beam
Material Type: Solid Sawn Douglas Fir-Larch No. 2
Member Dimensions: (1) 3.5 in. X 9.25 in. X 3 ft
Section Adequacy: 19.87%
Controlling Factor: Shear Stress Y

Module Location: Footing #1
Module Level: Basement

Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 85.47%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #2
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall
Section Adequacy: 12.7%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #3
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 22.32%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #4
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 30.7%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #5
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 78.97%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #6
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 76.29%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #7
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 24.88%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing - WD-#8
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 27.22%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #9
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 14.26%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing - WD-#10
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 1.333 ft. wide X 10 in. tall
Section Adequacy: 7.53%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #10
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 64.33%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #11
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 85.47%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing - WD-#12
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 3.2 ft. wide X 10 in. tall
Section Adequacy: 81.46%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #13
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 86.76%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #14
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 78.09%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing - WD-#15
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall

Section Adequacy: 26.36%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #16
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 82.51%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #17
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 86.76%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #18
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 1.333 ft. wide X 10 in. tall
Section Adequacy: 82.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing - WD-#19
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 89.66%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #20
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 1.333 ft. wide X 10 in. tall
Section Adequacy: 82.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #21
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 1.333 ft. wide X 10 in. tall
Section Adequacy: 82.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #22
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall
Section Adequacy: 86.76%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #23
Module Level: Basement

Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 18.49%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #24
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall
Section Adequacy: 18.49%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: Footing #24
Module Level: Basement
Module Type: Continuous Footing
Material Type: Concrete
Member Dimensions: 1.333 ft. wide X 10 in. tall
Section Adequacy: 82.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 0 Bars. Transversal: 6" O.C. Spacing

Module Location: SpotFtg Bm #1-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 15.38%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #2-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 7 ft. wide X 12 in. tall X 7 ft long
Section Adequacy: 49.4%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 10 Bars. Transversal: 10 Bars

Module Location: SpotFtg Bm #2-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 5 ft. wide X 10 in. tall X 5 ft long
Section Adequacy: 14.45%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 6 Bars. Transversal: 6 Bars

Module Location: SpotFtg Hdr #3-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 6.5 ft. wide X 12 in. tall X 6.5 ft long
Section Adequacy: 74.64%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 9 Bars. Transversal: 9 Bars

Module Location: SpotFtg Gdr #1-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 5 ft. wide X 10 in. tall X 5 ft long
Section Adequacy: 6.35%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 6 Bars. Transversal: 6 Bars

Module Location: SpotFtg Hdr #4-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 5 ft. wide X 10 in. tall X 5 ft long
Section Adequacy: 75.43%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 6 Bars. Transversal: 6 Bars

Module Location: SpotFtg Gdr #2-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 5 ft. wide X 10 in. tall X 5 ft long
Section Adequacy: 63.34%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 6 Bars. Transversal: 6 Bars

Module Location: SpotFtg Bm #5-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 9.22%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #5-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 9.22%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #6-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 91.37%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #6-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 1.33334 ft. wide X 10 in. tall X 4 ft long
Section Adequacy: 91.27%
Controlling Factor: Soil Bearing Pressure
Reinforcement: Unreinforced (Plain)

Module Location: SpotFtg Hdr #7-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 19.63%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Gdr #3-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long

Section Adequacy: 42.56%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Gdr #4-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 10.92%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Gdr #5-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 8.75%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Gdr #5-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 4 ft. wide X 10 in. tall X 4 ft long
Section Adequacy: 37.78%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 5 Bars. Transversal: 5 Bars

Module Location: SpotFtg Bm #11-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 34.54%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #12-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 70.64%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Hdr #11-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 1.3334 ft. wide X 10 in. tall X 4 ft long
Section Adequacy: 91.51%
Controlling Factor: Soil Bearing Pressure
Reinforcement: Unreinforced (Plain)

Module Location: SpotFtg Hdr #11-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 1.3334 ft. wide X 10 in. tall X 4 ft long
Section Adequacy: 91.51%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 5 Bars. Transversal: 2 Bars

Module Location: SpotFtg Bm #14-1
Module Level: Basement

Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 91.55%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #14-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 91.55%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #15-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 91.35%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #15-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 91.35%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #13-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 91.26%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #13-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 89.56%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #10-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 90.66%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #9-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 75.38%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #9-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 1.3 ft long
Section Adequacy: 17.52%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 2 Bars. Transversal: 3 Bars

Module Location: SpotFtg B #7-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 8.76%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #22-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 50.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #22-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3 ft. wide X 10 in. tall X 3 ft long
Section Adequacy: 9.4%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #19-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 1.3 ft long
Section Adequacy: 90.53%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 2 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #19-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 91.38%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #18-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 4.02%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #18-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long

Section Adequacy: 26.14%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #16-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2.5 ft. wide X 10 in. tall X 2.5 ft long
Section Adequacy: 11.23%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Hdr #16
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 91.63%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Hdr #17
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 2 ft. wide X 10 in. tall X 2 ft long
Section Adequacy: 91.3%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 3 Bars. Transversal: 3 Bars

Module Location: SpotFtg Bm #20-1
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 20.07%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

Module Location: SpotFtg Bm #20-2
Module Level: Basement
Module Type: Isolated Footing
Material Type: Concrete
Member Dimensions: 3.5 ft. wide X 10 in. tall X 3.5 ft long
Section Adequacy: 20.13%
Controlling Factor: Soil Bearing Pressure
Reinforcement: #4 - Longitudinal: 4 Bars. Transversal: 4 Bars

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Outlookers	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 5.5	24(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 4 Member Slope: 4/12 Actual Length (ft): 4.22 Roof Pitch: 4/12 O.C. Spacing(in): 24

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
8.25	20.8	1.55	1.88	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1346	748	180	1485	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0.6666667				
2	2	0	2	0.6666667				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (44.0%)	116.0	207.0	2	D+S	1.15
Bending Stress Y (psi)	PASS (29.8%)	1066.7	1520.1	2	D+S	1.15
Deflection Y (in)	PASS (75.3%)	0.069 (=L/696)	0.281 (=L/171)	4	S	0
Compressive Stress (psi)	PASS (98.5%)	25.3	1683.5	2.04	D+S	1.15
Tensile Stress (psi)	PASS (97.0%)	25.8	859.6	2	D+S	1.15
Bearing Stress (psi)	PASS (78.0%)	146.7	667.6	2	D+S	1.15
Bending-Compression (Unit)	PASS (32.5%)	0.67	1.00	2.04	D+S	1.15
Bending-Tension (Unit)	PASS (28.1%)	0.72	1.00	2	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	80	1265	1345
C	0	0	0

Reaction Location

A B C

CONNECTORS (All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	LU26	Hanger	100	(6) 0.162 x 3.5	(4) 0.148 x 3	N/A

Hanger at support A has seat sloped 0 degrees, skewed 0 degrees.

WSR = web stiffeners required

*Capacity values are adjusted based on specific gravity when members use grades other than those specified in Simpson Strong-Tie's capacity tables.

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	150	150	0	4	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	4	Dead	Y
Self Weight (lbf/ft)	-	1.88	1.88	0	4	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 13.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
74.25	1127.67	187.17	16.93	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (31.5%)	208.8	304.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (19.3%)	2227.3	2760.0	6	D+S	1.15
Deflection Y (in)	PASS (56.9%)	0.345 (=L/417)	0.800 (=L/180)	6	S	0
Bearing Stress (psi)	PASS (39.0%)	341.7	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1336	6	9000	10342
B	1336	6	9000	10342

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	12	Live	Y
Self Weight (lbf/ft)	-	16.93	16.93	0	12	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #1	C	205.729	205.729	0	12	Dead	Y
Uniform (lbf/ft)	Trusses #1	C	1499.998	1499.998	0	12	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 36	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 33 Member Slope: 0/12 Actual Length (ft): 33

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
243	26244	922.64	55.42	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	33	0	33	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (41.1%)	179.4	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (14.2%)	1973.1	2299.4	16.5	D+S	1.15
Deflection Y (in)	PASS (61.5%)	0.847 (=L/468)	2.200 (=L/180)	16.5	S	0
Bearing Stress (psi)	PASS (19.1%)	453.2	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	4309	16	24750	29075
B	4309	16	24750	29075

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	33	Live	Y
Self Weight (lbf/ft)	-	55.42	55.42	0	33	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #1	B	205.729	205.729	0	33	Dead	Y
Uniform (lbf/ft)	Trusses #1	B	1499.997	1499.997	0	33	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
32.38	230.84	8.26	9.44	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.5	0	12.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (71.2%)	94.5	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (50.5%)	1532.9	3097.8	6.25	D+S	1.15
Deflection Y (in)	PASS (57.2%)	0.357 (=L/420)	0.833 (=L/180)	6.25	S	0
Bearing Stress (psi)	PASS (85.9%)	106.0	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	165	1875	2040
B	165	1875	2040

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	17	17	0	12.5	Dead	Y
Uniform (lbf/ft)	Uniform	300	300	0	12.5	Snow	Y
Self Weight (lbf/ft)	-	9.44	9.44	0	12.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
32.38	230.84	8.26	9.44	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.5	0	12.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (71.2%)	94.5	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (50.5%)	1532.9	3097.8	6.25	D+S	1.15
Deflection Y (in)	PASS (57.2%)	0.357 (=L/420)	0.833 (=L/180)	6.25	S	0
Bearing Stress (psi)	PASS (85.9%)	106.0	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	165	1875	2040
B	165	1875	2040

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	17	17	0	12.5	Dead	Y
Uniform (lbf/ft)	Uniform	300	300	0	12.5	Snow	Y
Self Weight (lbf/ft)	-	9.44	9.44	0	12.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 7.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
38.06	166.72	9.71	11.1	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.07 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (40.3%)	195.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (34.3%)	2104.6	3202.2	3.25	D+S	1.15
Deflection Y (in)	PASS (62.9%)	0.161 (=L/484)	0.433 (=L/180)	3.25	S	0
Bearing Stress (psi)	PASS (77.1%)	171.9	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	630	3	4333	4966
B	630	3	4333	4966

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6.5	Live	Y
Self Weight (lbf/ft)	-	11.1	11.1	0	6.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #5	C	182.87	182.87	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #5	C	1333.333	1333.333	0	6.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 7.5 Member Slope: 0/12 Actual Length (ft): 7.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
48.56	346.26	12.39	14.16	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.4%)	1.6	256.5	0	D	0.9
Bending Stress Y (psi)	PASS (99.3%)	16.0	2424.4	3.75	D	0.9
Deflection Y (in)	PASS (99.7%)	0.002 (=L/45000)	0.500 (=L/180)	3.75	D+L	1
Bearing Stress (psi)	PASS (99.7%)	2.0	750.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	53	4	57
B	53	4	57

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	7.5	Live	Y
Self Weight (lbf/ft)	-	14.16	14.16	0	7.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 10.5 Member Slope: 0/12 Actual Length (ft): 10.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.98C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10.5	0	10.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (58.4%)	118.6	285.0	0	D+L	1
Bending Stress Y (psi)	PASS (67.6%)	825.9	2546.0	4.41	D+L	1
Deflection Y (in)	PASS (84.1%)	0.083 (=L/1518)	0.525 (=L/240)	5.04	L	0
Bearing Stress (psi)	PASS (57.8%)	316.3	750.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	693	5119	5812
B	403	2559	2962

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	1462.5	0	0	10.5	Live	Y
Trapezoidal (lbf/ft)	Trapezoidal	165.75	0	0	10.5	Dead	Y
Self Weight (lbf/ft)	-	21.44	21.44	0	10.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(5) 1.75 X 20	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
175	5833.33	44.66	51.04	5	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 0.93C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18	0	18	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (61.1%)	127.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (60.3%)	1106.5	2789.3	7.92	D+S	1.15
Deflection Y (in)	PASS (81.0%)	0.228 (=L/947)	1.200 (=L/180)	8.64	S	0
Bearing Stress (psi)	PASS (58.8%)	309.4	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	1951	12938	14889
B	1301	7312	8613

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	2062.5	187.5	0	18	Snow	Y
Trapezoidal (lbf/ft)	Trapezoidal	238	21.25	0	18	Dead	Y
Self Weight (lbf/ft)	-	51.04	51.04	0	18	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(5) 1.75 X 18	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
157.5	4252.5	40.19	45.94	5	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors $C_V = 0.95C_r = 1$ Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18.5	0	18.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (62.2%)	123.8	327.8	18.5	D+S	1.15
Bending Stress Y (psi)	PASS (57.1%)	1212.6	2829.5	11.1	D+S	1.15
Deflection Y (in)	PASS (74.4%)	0.316 (=L/703)	1.233 (=L/180)	9.62	S	0
Bearing Stress (psi)	PASS (64.0%)	270.1	750.0	18.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	636	7163	7799
B	1515	11484	12999

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Trapezoidal (lbf/ft)	Trapezoidal	450	1012.5	0	15.5	Snow	Y
Self Weight (lbf/ft)	-	45.94	45.94	0	18.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #4	B	1300.875	-	15.5	-	Dead	Y
Point (lbf)	Girder #4	B	7312.5	-	15.5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 7.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 9.5 Member Slope: 7/12 Actual Length (ft): 11 Roof Pitch: 7/12 O.C. Spacing(in): 16

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
10.88	47.63	2.04	2.48	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1242	690	180	1418	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	1.458333				
2	7	0	7	4.083333				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.2%)	117.5	207.0	2.565	D+S	1.15
Bending Stress Y (psi)	PASS (24.3%)	1081.8	1428.3	6.46	D+S	1.15
Deflection Y (in)	PASS (75.4%)	0.133 (=L/857)	0.540 (=L/211)	6.175	S	0
Compressive Stress (psi)	PASS (96.8%)	45.7	1435.4	2.565	D+S	1.15
Tensile Stress (psi)	PASS (95.5%)	35.9	793.5	9.5	D+S	1.15
Bearing Stress (psi)	PASS (66.4%)	232.8	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (24.3%)	0.76	1.00	6.365	D+S	1.15
Bending-Tension (Unit)	PASS (24.2%)	0.76	1.00	6.555	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	145	1493	1638
C	69	707	776

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft²)	Uniform	150	150	0	9.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	9.5	Dead	Y
Self Weight (lbf/ft)	-	2.48	2.48	0	9.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 7.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 10.5 Member Slope: 4/12 Actual Length (ft): 11.07 Roof Pitch: 4/12 O.C. Spacing(in): 16

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
10.88	47.63	2.04	2.48	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1242	690	180	1418	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.2	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0.8333333				
2	8	0	8	2.666667				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.1%)	132.3	207.0	2.52	D+S	1.15
Bending Stress Y (psi)	PASS (3.7%)	1376.0	1428.3	6.93	D+S	1.15
Deflection Y (in)	PASS (60.4%)	0.139 (=L/906)	0.351 (=L/359)	0	S	0
Compressive Stress (psi)	PASS (97.8%)	29.4	1358.7	2.52	D+S	1.15
Tensile Stress (psi)	PASS (96.9%)	24.3	793.5	10.5	D+S	1.15
Bearing Stress (psi)	PASS (60.5%)	273.3	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (3.7%)	0.96	1.00	6.825	D+S	1.15
Bending-Tension (Unit)	PASS (3.6%)	0.96	1.00	6.93	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	141	1453	1594
C	74	761	835

Reaction Location

A B C

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft²)	Uniform	150	150	0	10.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	10.5	Dead	Y
Self Weight (lbf/ft)	-	2.48	2.48	0	10.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 9.25	12(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5 Roof Pitch: 0/12 O.C. Spacing(in): 12

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
13.88	98.93	2.6	3.16	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1138	632	180	1350	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.1	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				
2	2.5	0	2.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (57.2%)	88.6	207.0	8.97	D+S	1.15
Bending Stress Y (psi)	PASS (37.1%)	823.1	1309.3	4.14	D+S	1.15
Deflection Y (in)	PASS (76.6%)	0.078 (=L/1769)	0.333 (=L/414)	11.5	S	0
Bearing Stress (psi)	PASS (65.6%)	238.1	692.0	9	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	84	623	707
B	148	1102	1250
C	0	0	0

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	150	150	0	11.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	11.5	Dead	Y
Self Weight (lbf/ft)	-	3.16	3.16	0	11.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 1.5 X 9.25	12(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10 Roof Pitch: 0/12 O.C. Spacing(in): 12

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
13.88	98.93	2.6	3.16	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1138	632	180	1350	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.1	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9	0	9	0				
2	1	0	1	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (59.5%)	83.8	207.0	9	D+S	1.15
Bending Stress Y (psi)	PASS (28.0%)	942.7	1309.3	4.4	D+S	1.15
Deflection Y (in)	PASS (64.7%)	0.047 (=L/2553)	0.133 (=L/902)	10	S	0
Bearing Stress (psi)	PASS (74.0%)	180.1	692.0	9	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	90	667	757
B	112	833	945
C	0	0	0

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	150	150	0	10	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	10	Dead	Y
Self Weight (lbf/ft)	-	3.16	3.16	0	10	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 5.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 7.5 Member Slope: 0/12 Actual Length (ft): 7.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
63.25	697.07	159.44	14.15	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.5%)	110.5	195.5	7.5	D+S	1.15
Bending Stress Y (psi)	PASS (14.0%)	864.9	1006.3	3.75	D+S	1.15
Deflection Y (in)	PASS (82.4%)	0.088 (=L/1023)	0.500 (=L/180)	3.75	S	0
Bearing Stress (psi)	PASS (75.4%)	154.0	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	462	4	4198	4664
B	462	4	4198	4664

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	7.5	Live	Y
Self Weight (lbf/ft)	-	14.15	14.15	0	7.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	B	109.037	109.037	0	7.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	B	1119.459	1119.459	0	7.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 3.5 X 5.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 2.5 Member Slope: 0/12 Actual Length (ft): 2.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
19.25	48.53	19.65	4.31	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1105	650	180	1540	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.3	1	1.1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (42.0%)	120.1	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (48.5%)	655.0	1270.8	1.25	D+S	1.15
Deflection Y (in)	PASS (92.4%)	0.013 (=L/2308)	0.167 (=L/180)	1.25	S	0
Bearing Stress (psi)	PASS (87.2%)	80.1	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	142	1	1399	1542
B	142	1	1399	1542

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	2.5	Live	Y
Self Weight (lbf/ft)	-	4.31	4.31	0	2.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	B	109.037	109.037	0	2.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	B	1119.459	1119.459	0	2.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 7.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
86.25	950.55	404.3	19.29	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.6%)	86.8	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (28.0%)	724.6	1006.3	4	D+S	1.15
Deflection Y (in)	PASS (84.3%)	0.083 (=L/1157)	0.533 (=L/180)	4	S	0
Bearing Stress (psi)	PASS (74.7%)	158.4	625.0	8	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	513	4	4478	4995
B	655	4	5877	6536

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	8	Live	Y
Self Weight (lbf/ft)	-	19.29	19.29	0	8	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	B	109.037	109.037	0	8	Dead	Y
Uniform (lbf/ft)	Rafters #1	B	1119.459	1119.459	0	8	Snow	Y
Point (lbf)	Beam #8	A	141.679	-	8	-	Dead	Y
Point (lbf)	Beam #8	A	1399.323	-	8	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 7.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 11.5 Member Slope: 0/12 Actual Length (ft): 11.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
86.25	950.55	404.3	19.29	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0				
2	9.5	0	9.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (73.5%)	51.8	195.5	11.5	D+S	1.15
Bending Stress Y (psi)	PASS (15.6%)	849.5	1006.3	7.475	D+S	1.15
Deflection Y (in)	PASS (75.5%)	0.065 (=L/2123)	0.267 (=L/517)	0	S	0
Bearing Stress (psi)	PASS (88.5%)	72.2	625.0	11.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	350	7	1885	2242
C	385	5	2592	2982

Reaction Location

A B C

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	11.5	Live	Y
Self Weight (lbf/ft)	-	19.29	19.29	0	11.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #7	A	513.324	-	7.5	-	Dead	Y
Point (lbf)	Beam #7	A	4477.835	-	7.5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 7.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 14.5 Member Slope: 0/12 Actual Length (ft): 14.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
86.25	950.55	404.3	19.67	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				
2	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (98.6%)	2.1	153.0	2.61	D	0.9
Bending Stress Y (psi)	PASS (97.0%)	23.5	787.5	8.7	D	0.9
Deflection Y (in)	PASS (98.8%)	0.004 (=L/43500)	0.333 (=L/523)	0	D+L	0
Bearing Stress (psi)	PASS (99.4%)	4.2	667.6	2.5	D	0.9

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	TOTAL
A	0	0
B	172	172
C	113	113

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Self Weight (lbf/ft)	-	19.67	19.67	0	14.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #13	C	39.7977	-	2.5	-	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 13.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
74.25	1127.67	187.17	16.93	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (30.8%)	210.8	304.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (23.7%)	2105.6	2760.0	6.24	D+S	1.15
Deflection Y (in)	PASS (54.9%)	0.361 (=L/399)	0.800 (=L/180)	6	S	0
Bearing Stress (psi)	PASS (38.4%)	345.0	560.0	12	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	340	6	8745	9091
B	340	6	10095	10441

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	12	Live	Y
Trapezoidal (lbf/ft)	Trapezoidal	600	1275	0	12	Snow	Y
Self Weight (lbf/ft)	-	16.93	16.93	0	12	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	11.875	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	11.875	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
24.5	400.17	6.25	7.15	1	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors $C_V = 0.98C_r = 1$ Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.2%)	146.7	327.8	8	D+S	1.15
Bending Stress Y (psi)	PASS (71.4%)	837.1	2927.9	4.4	D+S	1.15
Deflection Y (in)	PASS (89.9%)	0.054 (=L/1778)	0.533 (=L/180)	4.08	S	0
Bearing Stress (psi)	PASS (47.8%)	391.3	750.0	8	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	SNOW	TOTAL
A	97	1450	1547
B	97	2300	2397

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	8	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	8	Dead	Y
Trapezoidal (lbf/ft)	Trapezoidal	0	637.5	0	8	Snow	Y
Self Weight (lbf/ft)	-	7.15	7.15	0	8	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 5.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
63.25	697.07	159.44	14.15	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	7.5	0	7.5	0				
2	7.5	0	7.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.0%)	1.6	153.0	7.5	D	0.9
Bending Stress Y (psi)	PASS (98.7%)	9.8	784.2	7.5	D	0.9
Deflection Y (in)	PASS (99.9%)	0.000 (=L/∞)	0.500 (=L/360)	3.15	D+L	1
Bearing Stress (psi)	PASS (99.3%)	4.7	667.6	7.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	40	3	43
B	133	9	142
C	40	3	43

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	15	Live	Y
Self Weight (lbf/ft)	-	14.15	14.15	0	15	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 15	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 9.5 Member Slope: 0/12 Actual Length (ft): 9.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
82.5	1546.88	207.97	18.82	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9.5	0	9.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (68.1%)	97.3	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (55.3%)	1233.1	2760.0	3.99	D+S	1.15
Deflection Y (in)	PASS (85.2%)	0.094 (=L/1213)	0.633 (=L/180)	4.56	S	0
Bearing Stress (psi)	PASS (68.4%)	176.8	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	286	8	5063	5357
B	233	7	3682	3922

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	9.5	Live	Y
Self Weight (lbf/ft)	-	18.82	18.82	0	9.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #11	A	340.44	-	4	-	Dead	Y
Point (lbf)	Beam #11	A	6	-	4	-	Live	Y
Point (lbf)	Beam #11	A	8744.734	-	4	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope: 0/12 Actual Length (ft): 5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
63.25	697.07	159.44	14.43	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.4%)	0.9	153.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.4%)	4.5	787.5	2.5	D	0.9
Deflection Y (in)	PASS (99.9%)	0.000 (=L/∞)	0.333 (=L/180)	2.5	D+L	1
Bearing Stress (psi)	PASS (99.8%)	1.3	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	36	2	38
B	36	2	38

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	5	Live	Y
Self Weight (lbf/ft)	-	14.43	14.43	0	5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #15	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 13.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
69.19	1050.79	151.44	15.78	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.3%)	1.7	238.5	0	D	0.9
Bending Stress Y (psi)	PASS (99.3%)	15.2	2160.0	5	D	0.9
Deflection Y (in)	PASS (99.7%)	0.002 (=L/60000)	0.667 (=L/180)	5	D+L	1
Bearing Stress (psi)	PASS (99.5%)	3.0	560.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	79	5	84
B	79	5	84

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	Live	Y
Self Weight (lbf/ft)	-	15.78	15.78	0	10	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #16	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 12	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 0/12 Actual Length (ft): 12.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
66	792	166.38	15.05	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.5	0	12.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.6%)	172.0	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (22.1%)	2149.6	2760.0	6.25	D+S	1.15
Deflection Y (in)	PASS (49.6%)	0.420 (=L/357)	0.833 (=L/180)	6.25	S	0
Bearing Stress (psi)	PASS (67.2%)	183.4	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	757	6	6809	7572
B	757	6	6809	7572

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	12.5	Live	Y
Self Weight (lbf/ft)	-	15.05	15.05	0	12.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	B	106.119	106.119	0	12.5	Dead	Y
Uniform (lbf/ft)	Rafters #2	B	1089.504	1089.504	0	12.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 3.125 X 7.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 8.5 Member Slope: 3/12 Actual Length (ft): 8.76

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
23.44	109.86	19.07	5.34	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1528	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	2.125				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (54.3%)	139.2	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (42.7%)	1582.1	2760.0	3.74	D+S	1.15
Deflection Y (in)	PASS (56.4%)	0.255 (=L/400)	0.584 (=L/175)	4.165	S	0
Compressive Stress (psi)	PASS (98.7%)	23.2	1769.8	0	D+S	1.15
Tensile Stress (psi)	PASS (98.9%)	13.9	1265.0	8.5	D+S	1.15
Bearing Stress (psi)	PASS (78.1%)	122.7	560.0	0	D+S	1.15
Bending-Compression (Unit)	PASS (42.7%)	0.57	1.00	3.655	D+S	1.15
Bending-Tension (Unit)	PASS (42.7%)	0.57	1.00	3.825	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	23	4	2218	2245
B	23	4	1315	1342

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	8.5	Live	Y
Trapezoidal (lbf/ft)	Trapezoidal	712.5	112.5	0	8.5	Snow	Y
Self Weight (lbf/ft)	-	5.34	5.34	0	8.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #18	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 12	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 8.5 Member Slope: 0/12 Actual Length (ft): 8.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
66	792	166.38	15.05	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (38.5%)	187.3	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (19.4%)	2223.3	2760.0	2.975	D+S	1.15
Deflection Y (in)	PASS (73.6%)	0.149 (=L/685)	0.567 (=L/180)	3.91	S	0
Bearing Stress (psi)	PASS (28.6%)	399.7	560.0	8.5	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1244	4	6999	8247
B	1465	10	10627	12102

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	8.5	Live	Y
Self Weight (lbf/ft)	-	15.05	15.05	0	8.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Timber Truss #2	B	1823.525	-	3	-	Dead	Y
Point (lbf)	Timber Truss #2	B	10816.65	-	3	-	Snow	Y
Point (lbf)	Beam #16	A	757.323	-	8.5	-	Dead	Y
Point (lbf)	Beam #16	A	6.25	-	8.5	-	Live	Y
Point (lbf)	Beam #16	A	6809.399	-	8.5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #19	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 12	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
66	792	166.38	15.05	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	9.5	0	9.5	0				
2	1.5	0	1.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.3%)	1.7	238.5	9.46	D	0.9
Bending Stress Y (psi)	PASS (99.3%)	14.7	2160.0	4.62	D	0.9
Deflection Y (in)	PASS (99.5%)	0.001 (=L/132000)	0.200 (=L/660)	11	D+L	1
Bearing Stress (psi)	PASS (99.4%)	3.4	598.2	9.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	70	5	75
B	96	6	102
C	0	0	0

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	11	Live	Y
Self Weight (lbf/ft)	-	15.05	15.05	0	11	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #22	C	43.27841	-	9.5	-	Dead	Y
Point (lbf)	Beam #22	C	1428.821	-	9.5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #20	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.125 X 24	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 20 Member Slope: 0/12 Actual Length (ft): 20

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
123	5904	269.22	28.05	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	20	0	20	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.2%)	161.1	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (37.8%)	1609.5	2587.8	10	D+S	1.15
Deflection Y (in)	PASS (71.3%)	0.382 (=L/628)	1.333 (=L/180)	10	S	0
Bearing Stress (psi)	PASS (16.3%)	468.5	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1916	10	11291	13217
B	1914	10	11281	13205

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	20	Live	Y
Self Weight (lbf/ft)	-	28.05	28.05	0	20	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #13	D	163.693	163.693	0	5.5	Dead	Y
Uniform (lbf/ft)	Trusses #13	D	1130.409	1130.409	0	5.5	Snow	Y
Uniform (lbf/ft)	Trusses #14	D	163.338	163.338	5.5	20	Dead	Y
Uniform (lbf/ft)	Trusses #14	D	1127.957	1127.957	5.5	20	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #21	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
63.25	697.07	159.44	14.43	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.1%)	1.4	153.0	0	D	0.9
Bending Stress Y (psi)	PASS (98.5%)	11.4	787.5	4	D	0.9
Deflection Y (in)	PASS (99.7%)	0.002 (=L/48000)	0.533 (=L/180)	4	D+L	1
Bearing Stress (psi)	PASS (99.7%)	2.0	625.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	58	4	62
B	58	4	62

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	8	Live	Y
Self Weight (lbf/ft)	-	14.43	14.43	0	8	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #22	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 11.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
63.25	697.07	159.44	14.43	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8	0	8	0				
2	8	0	8	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (25.4%)	145.9	195.5	8	D+S	1.15
Bending Stress Y (psi)	PASS (20.7%)	793.0	1000.4	8	D+S	1.15
Deflection Y (in)	PASS (90.2%)	0.052 (=L/3692)	0.533 (=L/360)	3.68	S	0
Bearing Stress (psi)	PASS (44.8%)	368.4	667.6	8	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	43	3	2459	2505
B	144	10	10999	11153
C	43	3	1429	1475

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	16	Live	Y
Trapezoidal (lbf/ft)	Trapezoidal	375	1575	0	6.5	Snow	Y
Trapezoidal (lbf/ft)	Trapezoidal	1575	225	6.5	16	Snow	Y
Self Weight (lbf/ft)	-	14.43	14.43	0	16	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Joist #1	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
267	2.5	1	4.5	3160	1560	910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	12	0	12	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (72.4%)	431.0	1560.0	12	D+L	1
Bending Moment (lbf-ft)	PASS (59.1%)	1293.0	3160.0	6	D+L	1
Deflection Y (in)	PASS (76.7%)	0.093 (=L/1548)	0.400 (=L/360)	6	L	0
Bearing Load (lbf)	PASS (68.7%)	431.0	1375.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	111	320	431
B	111	320	431

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B

NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	12	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	12	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	12	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Girder #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(2) 10.75 X 24	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 40 Member Slope: 0/12 Actual Length (ft): 40

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
516	24768	4969.19	117.68	2	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4	0	4	0				
2	32	0	32	0				
3	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (72.4%)	84.1	304.8	36	D+S	1.15
Bending Stress Y (psi)	PASS (42.7%)	1284.4	2242.1	20	D+S	1.15
Deflection Y (in)	PASS (47.8%)	0.278 (=L/1727)	0.533 (=L/901)	0	S	0
Bearing Stress (psi)	PASS (9.2%)	542.9	598.2	36	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	6824	3840	25275	35939
C	6824	3840	25275	35939
D	0	0	0	0

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	40	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	40	Dead	Y
Self Weight (lbf/ft)	-	117.68	117.68	0	40	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #3	B	164.566	164.566	4	36	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	1274.999	1274.999	4	36	Snow	Y
Point (lbf)	Beam #3	B	165.267	-	0	-	Dead	Y
Point (lbf)	Beam #3	B	1875	-	0	-	Snow	Y
Point (lbf)	Beam #4	B	165.267	-	40	-	Dead	Y
Point (lbf)	Beam #4	B	1875	-	40	-	Snow	Y
Uniform (lbf/ft)	Joist #1	B	83.25	83.25	4	36	Dead	Y
Uniform (lbf/ft)	Joist #1	B	240	240	4	36	Live	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 2nd Level	LOADING:	ASD
MEMBER NAME:	Girder #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(2) 10.75 X 24	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 40 Member Slope: 0/12 Actual Length (ft): 40

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
516	24768	4969.19	117.68	2	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4	0	4	0				
2	32	0	32	0				
3	4	0	4	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (92.0%)	21.3	265.0	36	D+L	1
Bending Stress Y (psi)	PASS (83.0%)	330.7	1949.6	20	D+L	1
Deflection Y (in)	PASS (82.7%)	0.092 (=L/5217)	0.533 (=L/901)	0	D+L	1
Bearing Stress (psi)	PASS (69.7%)	181.4	598.2	36	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	0	0	0	0
B	4191	3840	4875	12906
C	4191	3840	4875	12906
D	0	0	0	0

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	150	150	0	40	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	40	Dead	Y
Self Weight (lbf/ft)	-	117.68	117.68	0	40	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #3	A	165.267	-	0	-	Dead	Y
Point (lbf)	Beam #3	A	1875	-	0	-	Snow	Y
Point (lbf)	Beam #4	A	165.267	-	40	-	Dead	Y
Point (lbf)	Beam #4	A	1875	-	40	-	Snow	Y
Uniform (lbf/ft)	Joist #1	A	83.25	83.25	4	36	Dead	Y
Uniform (lbf/ft)	Joist #1	A	240	240	4	36	Live	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 3.5 X 7.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1105	600	180	1470	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.7%)	0.5	162.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	2.5	994.5	1.5	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.200 (=L/180)	1.5	D+Lr	1.25
Bearing Stress (psi)	PASS (99.7%)	1.9	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	9	2	11
B	9	2	11

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	3	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 11.875	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 12 Member Slope: 0/12 Actual Length (ft): 12

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
62.34	732.62	15.91	18.18	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.6%)	99.7	327.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (59.6%)	1208.7	2994.3	6	D+S	1.15
Deflection Y (in)	PASS (74.8%)	0.201 (=L/716)	0.800 (=L/180)	6	S	0
Bearing Stress (psi)	PASS (29.9%)	526.1	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	348	6	3795	4149
B	348	6	3795	4149

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	12	RoofLive	Y
Self Weight (lbf/ft)	-	18.18	18.18	0	12	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	12	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	12	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 24	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
162	7776	615.09	36.95	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (91.8%)	25.1	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (96.5%)	95.6	2698.2	3.8	D+S	1.15
Deflection Y (in)	PASS (99.2%)	0.005 (=L/24000)	0.667 (=L/180)	4.6	S	0
Bearing Stress (psi)	PASS (92.0%)	44.5	560.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	334	5	2372	2711
B	234	5	791	1030

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	RoofLive	Y
Self Weight (lbf/ft)	-	36.95	36.95	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	5	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	5	Snow	Y
Point (lbf)	Girder #1	B	6824.021	-	5	-	Dead	Y
Point (lbf)	Girder #1	B	3840.004	-	5	-	Live	Y
Point (lbf)	Girder #1	B	25275.03	-	5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 6.75 X 24	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
162	7776	615.09	36.95	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (77.3%)	69.2	304.8	10	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (79.1%)	564.7	2698.2	5	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (96.8%)	0.022 (=L/5455)	0.667 (=L/180)	5	D+L	1
Bearing Stress (psi)	PASS (78.0%)	123.1	560.0	10	D+0.75L+0.75S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	2330	1920	5	3228	7483
B	2429	1920	5	4809	9163

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	10	RoofLive	Y
Self Weight (lbf/ft)	-	36.95	36.95	0	10	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	5	10	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	5	10	Snow	Y
Point (lbf)	Girder #2	B	4190.964	-	5	-	Dead	Y
Point (lbf)	Girder #2	B	3840.004	-	5	-	Live	Y
Point (lbf)	Girder #2	B	4875.003	-	5	-	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
32.38	230.84	8.26	9.44	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.04 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (53.2%)	153.4	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (58.3%)	1293.3	3097.8	3.25	D+S	1.15
Deflection Y (in)	PASS (81.3%)	0.081 (=L/963)	0.433 (=L/180)	3.25	S	0
Bearing Stress (psi)	PASS (15.9%)	630.5	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	280	3	3030	3313
B	280	3	3030	3313

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6.5	RoofLive	Y
Self Weight (lbf/ft)	-	9.44	9.44	0	6.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #17	A	36.807	36.807	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #17	A	300	300	0	6.5	Snow	Y
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	6.5	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	6.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 3.5 X 7.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 2.5 Member Slope: 0/12 Actual Length (ft): 2.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1105	600	180	1470	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.7%)	0.4	162.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.8%)	1.7	994.5	1.25	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.167 (=L/180)	1.25	D+Lr	1.25
Bearing Stress (psi)	PASS (99.7%)	1.6	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	7	1	8
B	7	1	8

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	2.5	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	2.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #7	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (8.4%)	155.7	170.0	3	D+L	1
Bending Stress Y (psi)	PASS (77.7%)	195.2	875.0	2.73	D+L	1
Deflection Y (in)	PASS (98.4%)	0.002 (=L/18000)	0.150 (=L/240)	1.74	L	0
Bearing Stress (psi)	PASS (73.7%)	164.3	625.0	3	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	153	427	2	795	1377
B	730	4692	2	795	6219

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #3	A	692.672	-	2.75	-	Dead	Y
Point (lbf)	Girder #3	A	5118.75	-	2.75	-	Live	Y
Uniform (lbf/ft)	Rafters #1	C	51.64893	51.64893	0	3	Dead	Y
Uniform (lbf/ft)	Rafters #1	C	530.2692	530.2692	0	3	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 3.5 X 7.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1105	600	180	1470	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.7%)	0.5	162.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	2.5	994.5	1.5	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.200 (=L/180)	1.5	D+Lr	1.25
Bearing Stress (psi)	PASS (99.7%)	1.9	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	9	2	11
B	9	2	11

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	3	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 5.5 X 7.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 9 Member Slope: 0/12 Actual Length (ft): 9

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
41.25	193.36	103.98	9.23	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	725	475	170	700	625	1300	470
Adjusted Values	725	475	170	700	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				
2	3	0	3	0				
3	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.6%)	0.6	153.0	2.97	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	1.8	651.8	2.97	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.200 (=L/540)	1.35	D+Lr	1.25
Bearing Stress (psi)	PASS (99.7%)	2.0	703.1	3	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	11	1	12
B	30	3	33
C	30	3	33
D	11	1	12

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	9	RoofLive	Y
Self Weight (lbf/ft)	-	9.23	9.23	0	9	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #2	C	55.58615	55.58615	0	10	Dead	Y
Uniform (lbf/ft)	Rafters #2	C	570.692	570.692	0	10	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch(North)	No. 2	(1) 3.5 X 7.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 7.5 Member Slope: 0/12 Actual Length (ft): 7.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1105	600	180	1470	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.3	1.2	1	1.05	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0				
2	3.5	0	3.5	0				
3	2	0	2	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (31.8%)	141.2	207.0	5.475	D+S	1.15
Bending Stress Y (psi)	PASS (64.3%)	451.8	1264.3	5.475	D+S	1.15
Deflection Y (in)	PASS (96.8%)	0.007 (=L/12857)	0.233 (=L/386)	3.75	S	0
Bearing Stress (psi)	PASS (47.9%)	360.4	692.0	2	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	73	1	705	779
B	412	3	4003	4418
C	412	3	4003	4418
D	73	1	705	779

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	7.5	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	7.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	7.5	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	7.5	Snow	Y
Uniform (lbf/ft)	Rafters #3	A	83.739	83.739	0	7.5	Dead	Y
Uniform (lbf/ft)	Rafters #3	A	622.917	622.917	0	7.5	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 9	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6 Member Slope: 0/12 Actual Length (ft): 6

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
49.5	334.12	124.78	11.29	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1497	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6	0	6	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.6%)	1.0	238.5	0	D	0.9
Bending Stress Y (psi)	PASS (99.6%)	8.2	2160.0	3	D	0.9
Deflection Y (in)	PASS (99.9%)	0.001 (=L/72000)	0.400 (=L/180)	3	D+Lr	1.25
Bearing Stress (psi)	PASS (99.6%)	2.2	560.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	34	3	37
B	34	3	37

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6	RoofLive	Y
Self Weight (lbf/ft)	-	11.29	11.29	0	6	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #12	A	286.4721	-	2	-	Dead	Y
Point (lbf)	Beam #12	A	5062.737	-	2	-	Snow	Y
Point (lbf)	Beam #12	A	8.223681	-	2	-	Live	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 21	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 15 Member Slope: 0/12 Actual Length (ft): 15

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
115.5	4244.62	291.16	26.34	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	15	0	15	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.5%)	160.1	304.8	15	D+S	1.15
Bending Stress Y (psi)	PASS (48.8%)	1372.5	2680.1	7.5	D+S	1.15
Deflection Y (in)	PASS (78.1%)	0.219 (=L/822)	1.000 (=L/180)	7.5	S	0
Bearing Stress (psi)	PASS (33.3%)	373.6	560.0	15	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	1336	8	10993	12337
B	1336	8	10993	12337

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	15	RoofLive	Y
Self Weight (lbf/ft)	-	26.34	26.34	0	15	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	15	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	15	Snow	Y
Uniform (lbf/ft)	Rafters #4	B	112.025	112.025	0	15	Dead	Y
Uniform (lbf/ft)	Rafters #4	B	833.332	833.332	0	15	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 9.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
49.88	375.1	12.73	14.55	3	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.03 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.4%)	1.4	256.5	0	D	0.9
Bending Stress Y (psi)	PASS (99.5%)	11.7	2415.6	3.25	D	0.9
Deflection Y (in)	PASS (99.8%)	0.001 (=L/78000)	0.433 (=L/180)	3.25	D+Lr	1.25
Bearing Stress (psi)	PASS (99.6%)	3.2	750.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	47	3	50
B	47	3	50

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6.5	RoofLive	Y
Self Weight (lbf/ft)	-	14.55	14.55	0	6.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Glulams		

Stress Class Rated 24F-1.8E	24F-V4 DF/DF	(1) 5.5 X 12	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6 Member Slope: 0/12 Actual Length (ft): 6

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
66	792	166.38	15.05	1	0.5	1

STRENGTH PROPERTIES

	Fbx+ (psi)	Fbx- (psi)	Fby (psi)	Ft (psi)	Fvx (psi)	Fvy (psi)	Fc (psi)	Fc⊥ (psi)	Ex (psi)	Exmin (psi)	Ey (psi)	Eymin (psi)
Base Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
Adjusted Values	2400	1850	1450	1100	265	230	1650	650	1800000	950000	1600000	850000
C_M	1	1	1	1	1	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1	1	1	1	1	1

Bending Adjustment Factors C_{vr} = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6	0	6	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.6%)	1.0	238.5	0	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	6.2	2160.0	3	D	0.9
Deflection Y (in)	PASS (99.9%)	0.000 (=L/∞)	0.400 (=L/180)	3	D+Lr	1.25
Bearing Stress (psi)	PASS (99.7%)	1.9	560.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	45	3	48
B	45	3	48

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6	RoofLive	Y
Self Weight (lbf/ft)	-	15.05	15.05	0	6	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #15	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 11.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 13 Member Slope: 0/12 Actual Length (ft): 13

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
39.38	415.28	10.05	11.48	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.01 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13	0	13	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.3%)	169.3	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (22.2%)	2347.7	3016.4	6.5	D+S	1.15
Deflection Y (in)	PASS (43.5%)	0.489 (=L/319)	0.867 (=L/180)	6.5	S	0
Bearing Stress (psi)	PASS (71.8%)	211.6	750.0	13	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	333	6	4111	4450
B	333	6	4111	4450

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	13	RoofLive	Y
Self Weight (lbf/ft)	-	11.48	11.48	0	13	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	13	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	13	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #16	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.7%)	0.5	153.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.8%)	1.9	787.5	1.5	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.200 (=L/180)	1.5	D+Lr	1.25
Bearing Stress (psi)	PASS (99.8%)	1.2	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	18	2	20
B	18	2	20

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	RoofLive	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	3	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(3) 1.5 X 11.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
50.62	533.94	85.43	11.55	3	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	900	575	180	1350	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.3%)	1.1	162.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.0%)	7.7	810.0	3.25	D	0.9
Deflection Y (in)	PASS (99.9%)	0.001 (=L/78000)	0.433 (=L/180)	3.25	D+Lr	1.25
Bearing Stress (psi)	PASS (99.5%)	3.0	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	38	3	41
B	38	3	41

Reaction Location

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	6.5	RoofLive	Y
Self Weight (lbf/ft)	-	11.55	11.55	0	6.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #18	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		

Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 11.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 13 Member Slope: 0/12 Actual Length (ft): 13

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	Cfn	Kcr Creep Factor
39.38	415.28	10.05	11.48	2	7.35	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2600	1895	285	2510	750	2000	1017
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1

Bending Adjustment Factors C_V = 1.01 C_r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13	0	13	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.3%)	169.3	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (22.2%)	2347.7	3016.4	6.5	D+S	1.15
Deflection Y (in)	PASS (43.5%)	0.489 (=L/319)	0.867 (=L/180)	6.5	S	0
Bearing Stress (psi)	PASS (43.6%)	423.3	750.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	333	6	4111	4450
B	333	6	4111	4450

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	13	RoofLive	Y
Self Weight (lbf/ft)	-	11.48	11.48	0	13	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Outlookers	B	39.806	39.806	0	13	Dead	Y
Uniform (lbf/ft)	Outlookers	B	632.456	632.456	0	13	Snow	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #19	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3.5 Member Slope: 0/12 Actual Length (ft): 3.5

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
46.25	329.77	96.35	10.55	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

Span	Length (ft)	Unbraced Length (ft) Top	Unbraced Length (ft) Bottom	Beam End Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.5	0	3.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.6%)	0.6	153.0	0	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	2.7	787.5	1.75	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.233 (=L/180)	1.75	D+Lr	1.25
Bearing Stress (psi)	PASS (99.6%)	2.7	625.0	0	D+Lr	1.25

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE ROOF	TOTAL
A	18	2	20
B	18	2	20

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3.5	RoofLive	Y
Self Weight (lbf/ft)	-	10.55	10.55	0	3.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #1	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 30 Member Slope: 0/12 Actual Length (ft): 30 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	7	0	7	0
2	6.5	0	6.5	0
3	8.5	0	8.5	0
4	8	0	8	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (72.2%)	338.7	1220.0	22.2	D+L	1
Bending Moment (lbf-ft)	PASS (80.0%)	499.2	2500.0	21.9	D+L	1
Deflection Y (in)	PASS (94.7%)	0.014 (=L/25714)	0.267 (=L/1348)	26.7	L	0
Bearing Load (lbf)	PASS (64.7%)	683.9	1935.0	22	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	52	151	203
B	137	399	536
C	129	377	506
D	175	509	684
E	56	164	220

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	30	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	30	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	30	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #2	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 30 Member Slope: 0/12 Actual Length (ft): 30 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	7	0	7	0
2	6.5	0	6.5	0
3	8.5	0	8.5	0
4	8	0	8	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (72.2%)	338.7	1220.0	22.2	D+L	1
Bending Moment (lbf-ft)	PASS (80.0%)	499.2	2500.0	21.9	D+L	1
Deflection Y (in)	PASS (94.7%)	0.014 (=L/25714)	0.267 (=L/1348)	26.7	L	0
Bearing Load (lbf)	PASS (64.7%)	683.9	1935.0	22	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	52	151	203
B	137	399	536
C	129	377	506
D	175	509	684
E	56	164	220

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	30	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	30	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	30	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #3	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 6 Member Slope: 0/12 Actual Length (ft): 6 O.C. Spacing(in): 24

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	6	0	6	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (73.9%)	318.9	1220.0	6	D+L	1
Bending Moment (lbf-ft)	PASS (80.9%)	478.4	2500.0	3	D+L	1
Deflection Y (in)	PASS (92.6%)	0.015 (=L/4800)	0.200 (=L/360)	3	L	0
Bearing Load (lbf)	PASS (73.9%)	318.9	1220.0	0	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	79	240	319
B	79	240	319

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A B

NSR NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	6	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	6	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	6	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #4	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 15.5 Member Slope: 0/12 Actual Length (ft): 15.5 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	10.5	0	10.5	0
2	5	0	5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (64.1%)	438.4	1220.0	10.385	D+L	1
Bending Moment (lbf-ft)	PASS (70.9%)	727.7	2500.0	10.54	D+L	1
Deflection Y (in)	PASS (85.2%)	0.052 (=L/3577)	0.350 (=L/531)	4.805	L	0
Bearing Load (lbf)	PASS (60.0%)	773.9	1935.0	10.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	78	227	305
B	198	576	774
C	8	23	31

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C
NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	15.5	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	15.5	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	15.5	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #5	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 25 Member Slope: 0/12 Actual Length (ft): 25 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	10.5	0	10.5	0
2	10	0	10	0
3	4.5	0	4.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (62.5%)	457.0	1220.0	10.5	D+L	1
Bending Moment (lbf-ft)	PASS (66.0%)	849.3	2500.0	10.5	D+L	1
Deflection Y (in)	PASS (86.9%)	0.046 (=L/6522)	0.350 (=L/857)	4.5	L	0
Bearing Load (lbf)	PASS (55.5%)	862.0	1935.0	10.5	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	75	220	295
B	220	642	862
C	142	415	557
D	20	57	77

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	25	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	25	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	25	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #6	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 37 Member Slope: 0/12 Actual Length (ft): 37 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	8.5	0	8.5	0
2	8.5	0	8.5	0
3	10	0	10	0
4	10	0	10	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (64.3%)	435.8	1220.0	27.01	D+L	1
Bending Moment (lbf-ft)	PASS (68.8%)	779.3	2500.0	27.01	D+L	1
Deflection Y (in)	PASS (88.9%)	0.037 (=L/12000)	0.333 (=L/1333)	32.56	L	0
Bearing Load (lbf)	PASS (57.2%)	828.4	1935.0	27	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	62	180	242
B	174	508	682
C	158	460	618
D	212	617	829
E	71	208	279

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	37	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	37	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	37	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #7	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 29 Member Slope: 0/12 Actual Length (ft): 29 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	9	0	9	0
2	10	0	10	0
3	10	0	10	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (65.4%)	422.2	1220.0	19.14	D+L	1
Bending Moment (lbf-ft)	PASS (72.6%)	685.6	2500.0	18.85	D+L	1
Deflection Y (in)	PASS (88.2%)	0.039 (=L/8923)	0.333 (=L/1045)	24.65	L	0
Bearing Load (lbf)	PASS (58.5%)	802.4	1935.0	19	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	65	189	254
B	188	549	737
C	205	597	802
D	73	212	285

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	29	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	29	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	29	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #8	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 32 Member Slope: 0/12 Actual Length (ft): 32 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	9.5	0	9.5	0
2	4.25	0	4.25	0
3	8.25	0	8.25	0
4	10	0	10	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (65.0%)	426.5	1220.0	22.08	D+L	1
Bending Moment (lbf-ft)	PASS (71.8%)	706.2	2500.0	22.08	D+L	1
Deflection Y (in)	PASS (88.2%)	0.039 (=L/9846)	0.333 (=L/1153)	27.52	L	0
Bearing Load (lbf)	PASS (58.5%)	803.8	1935.0	22	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	71	207	278
B	170	497	667
C	66	193	259
D	205	598	803
E	73	212	285

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D	E
NSR	NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	32	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	32	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	32	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Joists #9	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS
MATERIAL:	I-Joists		

Weyerhaeuser	TJI 110	(1) 9.5	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 29.25 Member Slope: 0/12 Actual Length (ft): 29.25 O.C. Spacing(in): 16

						End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
EI x10^6	BSW	Lams	K x10^6	Mcap	Vcap	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lbf-in^2)	(lbf/ft)		(lbf)	(lbf-ft)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)	(lbf)
157	2.3	1	4.5	2500	1220	910	1220	910	1220	1935	2350	1935	2350

BEAM DATA

		Unbraced Length (ft)		Beam End
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)
1	8.5	0	8.5	0
2	8.25	0	8.25	0
3	12.5	0	12.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (57.9%)	513.1	1220.0	16.965	D+L	1
Bending Moment (lbf-ft)	PASS (60.8%)	980.8	2500.0	16.673	D+L	1
Deflection Y (in)	PASS (74.3%)	0.107 (=L/3280)	0.417 (=L/842)	23.692	L	0
Bearing Load (lbf)	PASS (53.5%)	900.2	1935.0	16.75	D+L	1

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	TOTAL
A	66	193	259
B	145	423	568
C	230	670	900
D	94	273	367

Reaction Location WS-Web Stiffener Required NSR-No Stiffener Required

A	B	C	D
NSR	NSR	NSR	NSR

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft^2)	Uniform	40	40	0	29.25	Live	Y
Uniform (lbf/ft^2)	Uniform	12	12	0	29.25	Dead	Y
Self Weight (lbf/ft)	-	2.3	2.3	0	29.25	Dead	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #23	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 5.5 X 9.5	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
52.25	392.96	131.71	11.92	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	875	425	170	600	625	1300	470
Adjusted Values	875	425	170	600	625	1300	470
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (25.8%)	145.0	195.5	3	D+S	1.15
Bending Stress Y (psi)	PASS (45.4%)	549.4	1006.3	1.5	D+S	1.15
Deflection Y (in)	PASS (94.9%)	0.010 (=L/3600)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (73.3%)	166.9	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	723	218	4328	5269
B	723	218	4328	5269

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	Live	Y
Self Weight (lbf/ft)	-	11.92	11.92	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #9	D	420.232	420.232	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #9	D	2885.024	2885.024	0	3	Snow	Y
Uniform (lbf/ft)	Joists #8	C	49.637	49.637	0	3	Dead	Y
Uniform (lbf/ft)	Joists #8	C	144.662	144.662	0	3	Live	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #24	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		

Douglas Fir-Larch	No. 2	(1) 3.5 X 9.25	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 3 Member Slope: 0/12 Actual Length (ft): 3

Area (in^2)	Ix (in^4)	Iy (in^4)	BSW (lbf/ft)	Lams	G	Kcr Creep Factor
32.38	230.84	33.05	7.38	1	0.5	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10^3	Emin (psi) x10^3
Base Values	900	575	180	1350	625	1600	580
Adjusted Values	1080	632	180	1350	625	1600	580
C_M	1	1	1	1	1	1	1
C_T	1	1	1	1	1	1	1
C_i	1	1	1	1	1	1	1
C_F	1.2	1.1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (19.9%)	165.9	207.0	3	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	645.6	1242.0	1.5	D+S	1.15
Deflection Y (in)	PASS (95.0%)	0.010 (=L/3600)	0.200 (=L/180)	1.5	S	0
Bearing Stress (psi)	PASS (70.2%)	186.0	625.0	0	D+S	1.15

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	SNOW	TOTAL
A	543	66	3038	3647
B	543	66	3038	3647

Reaction Location

A B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	3	Live	Y
Self Weight (lbf/ft)	-	7.38	7.38	0	3	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #10	B	339.751	339.751	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #10	B	2025.004	2025.004	0	3	Snow	Y
Uniform (lbf/ft)	Joists #5	D	14.66	14.66	0	3	Dead	Y
Uniform (lbf/ft)	Joists #5	D	42.725	42.725	0	3	Live	Y

PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #1	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

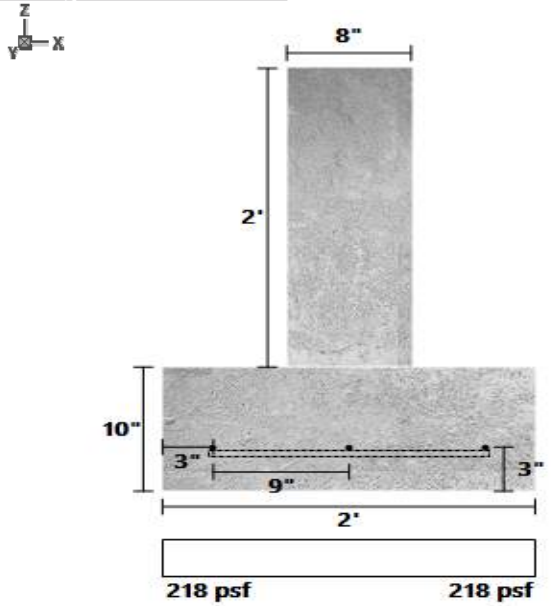
PASS-FAIL

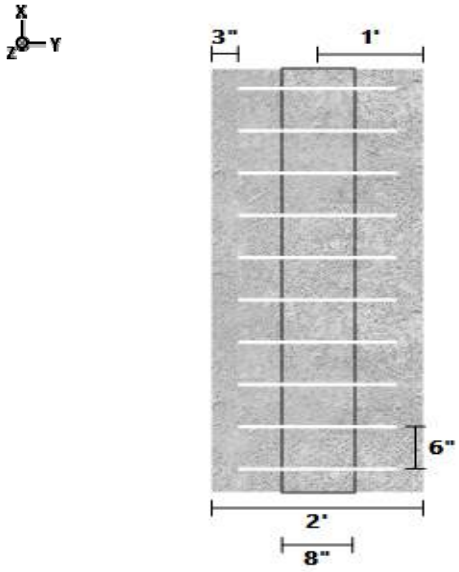
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (85.5%)	218.0	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.3	15774.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.2	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #1 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #2	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
3	10	362.5	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (12.7%)	1309.5	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (93.2%)	1608.2	23661.6	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (89.0%)	1236.1	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	3.0	3.0	D	LRFD

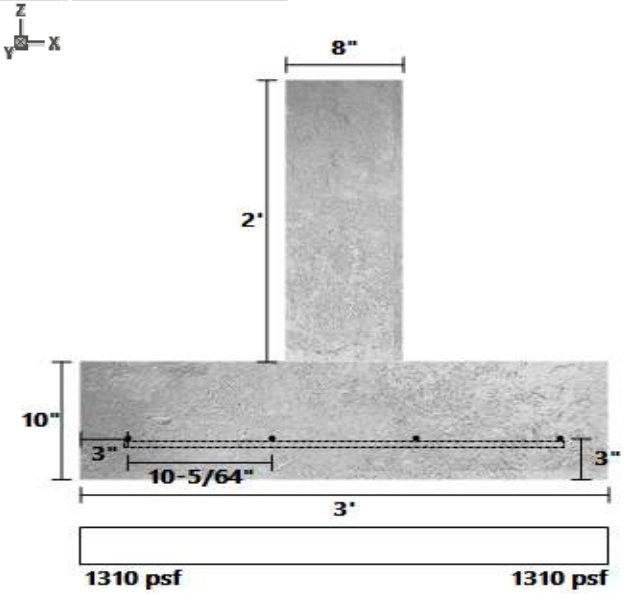
LOAD LIST

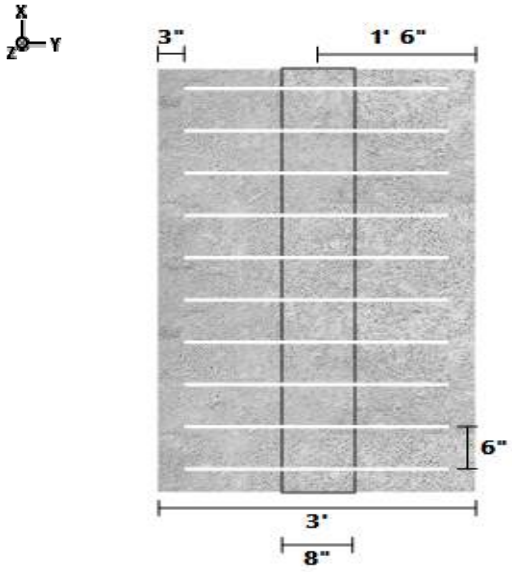
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #2	C	290.629	290.629	0	1	Live	Z
Uniform (lbf/ft)	Trusses #2	C	597.785	597.785	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #2	C	2775.015	2775.015	0	1	Snow	Z

Footing #2 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #3	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (22.3%)	1165.1	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (96.4%)	566.9	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (97.1%)	326.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

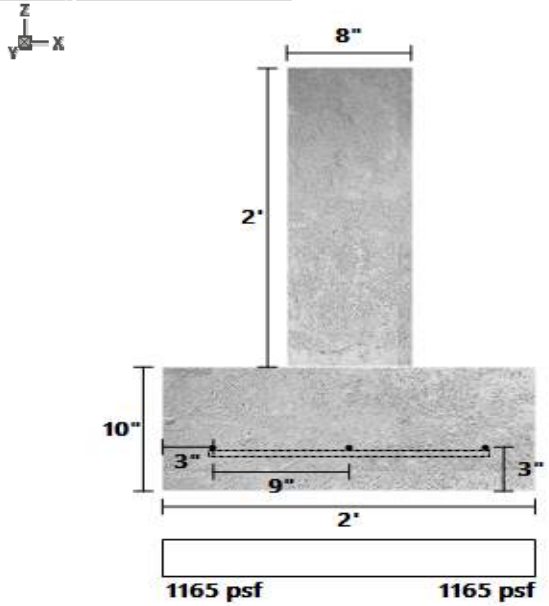
LOAD LIST

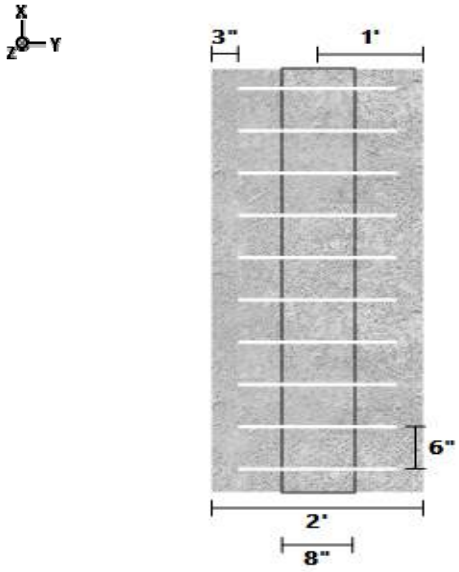
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #5	B	228.588	228.588	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #5	B	1666.667	1666.667	0	1	Snow	Z

Footing #3 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #4	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (30.7%)	1039.5	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (96.5%)	555.0	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (97.2%)	320.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

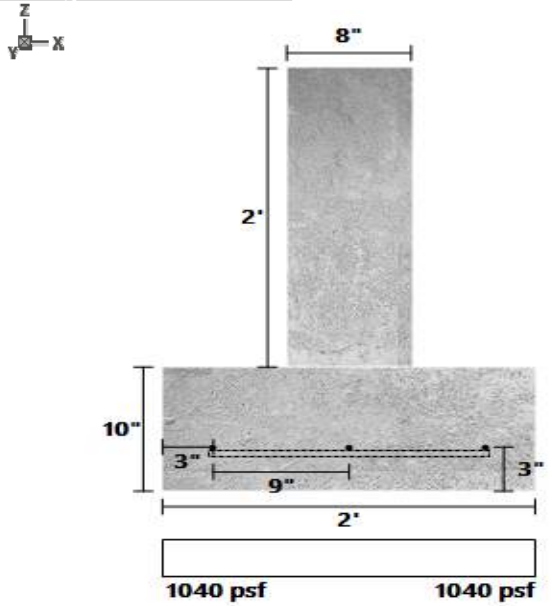
LOAD LIST

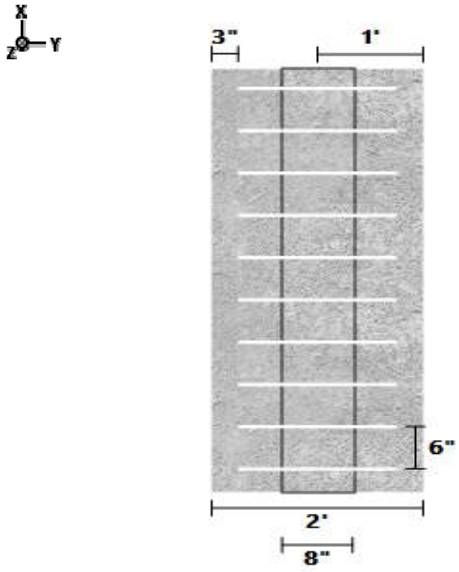
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #5	C	182.8703	182.8703	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #5	C	1333.333	1333.333	0	1	Snow	Z
Uniform (lbf/ft)	Joists #8	B	127.8346	127.8346	0	1	Dead	Z
Uniform (lbf/ft)	Joists #8	B	372.5598	372.5598	0	1	Live	Z

Footing #4 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #5	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (79.0%)	315.4	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (99.6%)	56.5	15774.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (99.7%)	32.6	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

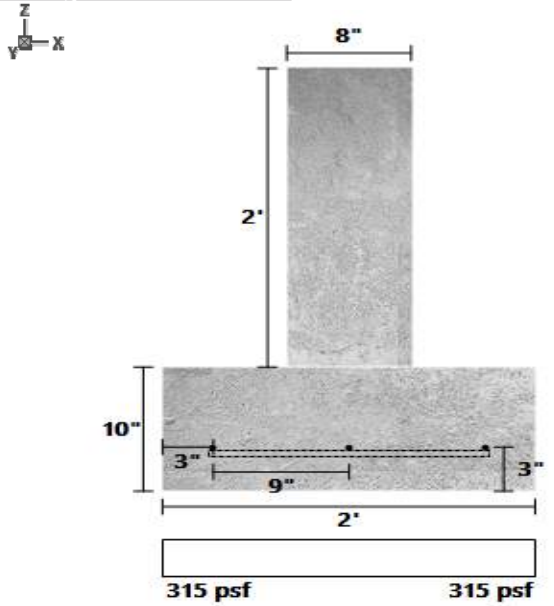
LOAD LIST

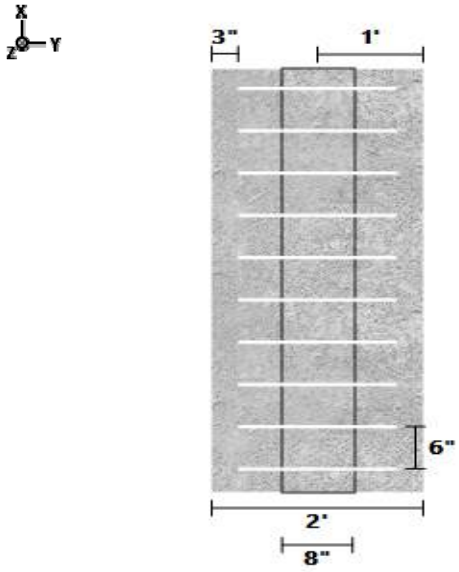
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #9	A	49.76741	49.76741	0	1	Dead	Z
Uniform (lbf/ft)	Joists #9	A	145.0417	145.0417	0	1	Live	Z

Footing #5 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #6	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (76.3%)	355.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (99.5%)	79.8	15774.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (99.6%)	46.0	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

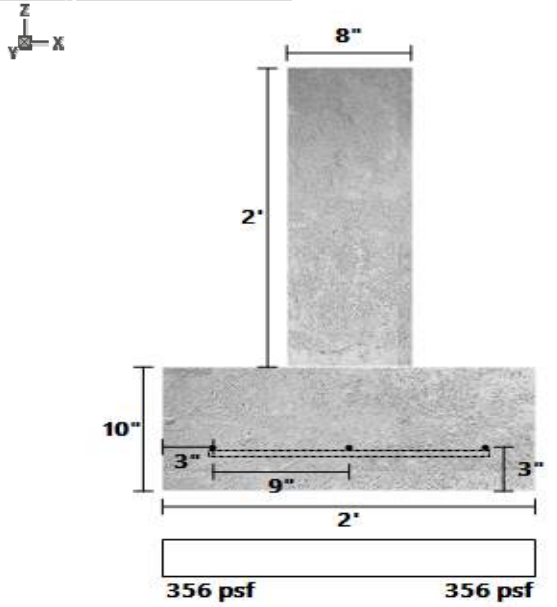
LOAD LIST

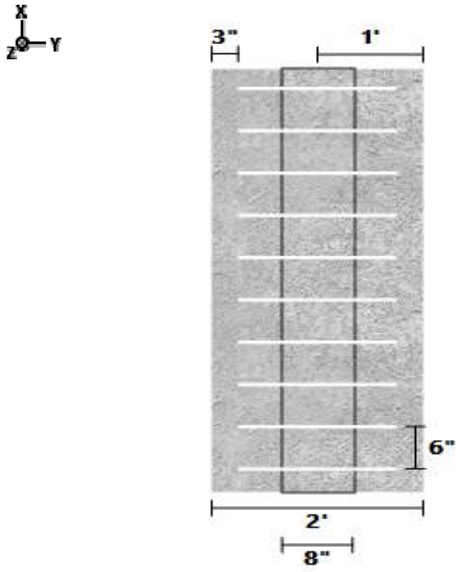
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #9	D	70.30922	70.30922	0	1	Dead	Z
Uniform (lbf/ft)	Joists #9	D	204.9085	204.9085	0	1	Live	Z

Footing #6 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #7	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (24.9%)	1126.8	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (96.3%)	578.8	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (97.0%)	333.7	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

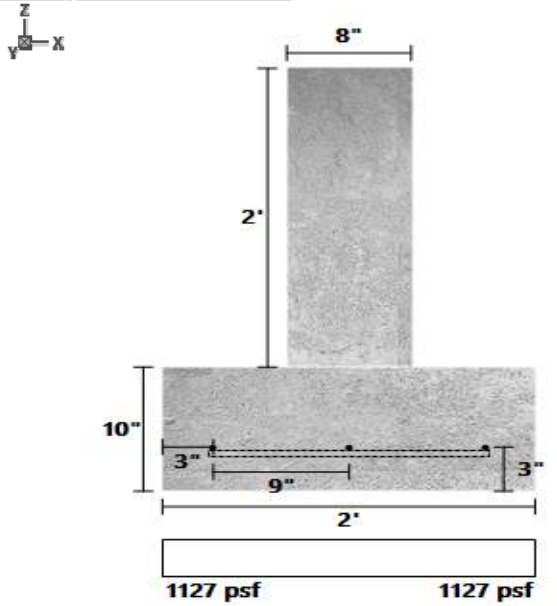
LOAD LIST

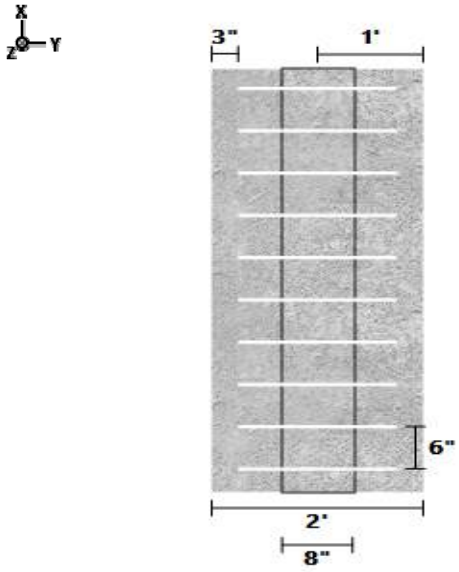
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #7	B	210.8726	210.8726	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #7	B	1537.503	1537.503	0	1	Snow	Z
Uniform (lbf/ft)	Joists #9	D	70.30922	70.30922	0	1	Dead	Z
Uniform (lbf/ft)	Joists #9	D	204.9085	204.9085	0	1	Live	Z

Footing #7 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#8	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (27.2%)	1091.8	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (94.3%)	905.8	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (94.0%)	679.4	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

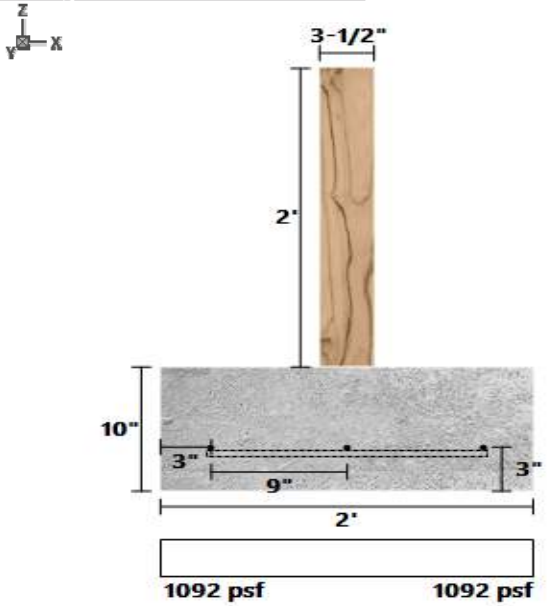
LOAD LIST

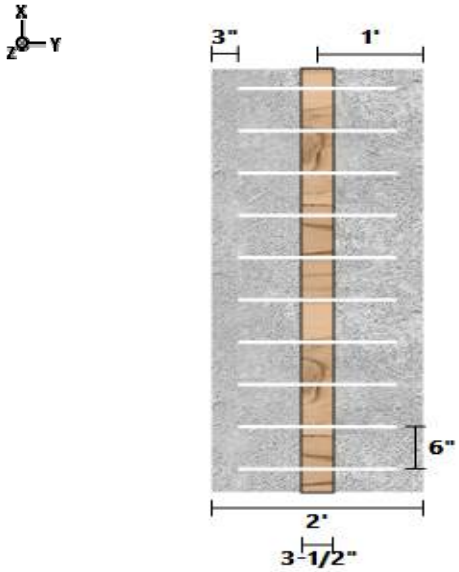
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #7	C	210.8725	210.8725	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #7	C	1537.5	1537.5	0	1	Snow	Z
Uniform (lbf/ft)	Joists #9	B	108.8916	108.8916	0	1	Dead	Z
Uniform (lbf/ft)	Joists #9	B	317.3525	317.3525	0	1	Live	Z

Footing - WD-#8 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #9	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (14.3%)	1286.1	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (94.4%)	1109.9	19718.0	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (93.5%)	733.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

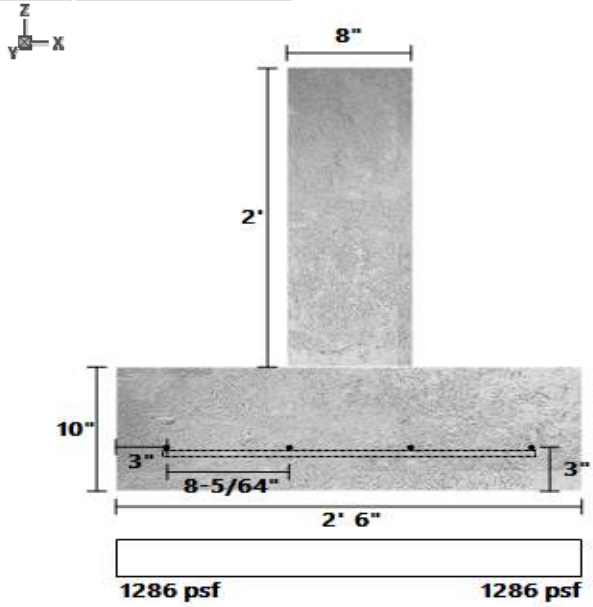
LOAD LIST

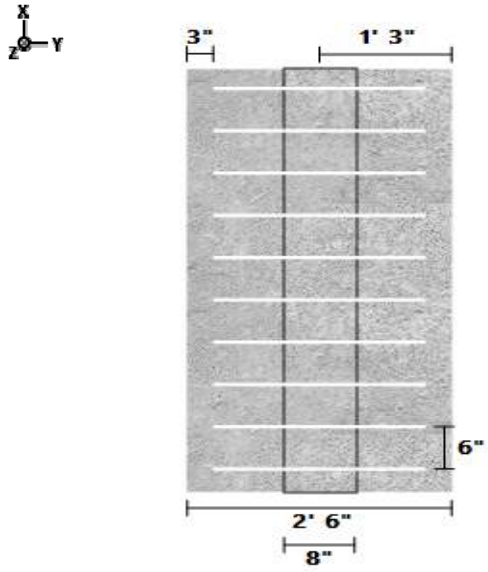
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #8	B	251.2905	251.2905	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #8	B	1787.84	1787.84	0	1	Snow	Z
Uniform (lbf/ft)	Rafters #2	C	55.58615	55.58615	0	1	Dead	Z
Uniform (lbf/ft)	Rafters #2	C	570.692	570.692	0	1	Snow	Z
Uniform (lbf/ft)	Joists #8	E	54.43644	54.43644	0	1	Dead	Z
Uniform (lbf/ft)	Joists #8	E	158.649	158.649	0	1	Live	Z

Footing #9 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#10	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.333 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (7.5%)	1387.0	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (95.5%)	469.6	10513.6	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (96.9%)	345.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	1.3	1.3	D	LRFD

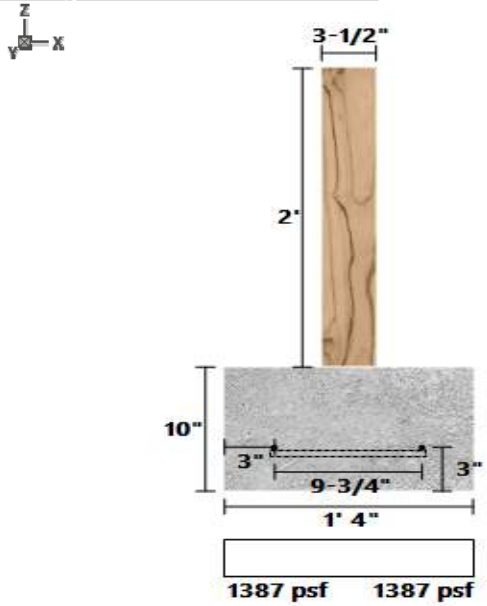
LOAD LIST

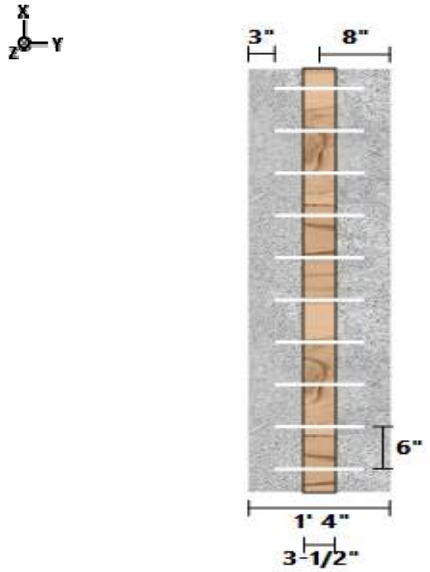
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #8	A	191.4595	191.4595	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #8	A	1362.162	1362.162	0	1	Snow	Z
Uniform (lbf/ft)	Joists #8	C	49.63721	49.63721	0	1	Dead	Z
Uniform (lbf/ft)	Joists #8	C	144.6622	144.6622	0	1	Live	Z

Footing - WD-#10 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #10	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (64.3%)	535.1	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (98.6%)	217.9	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (98.9%)	125.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

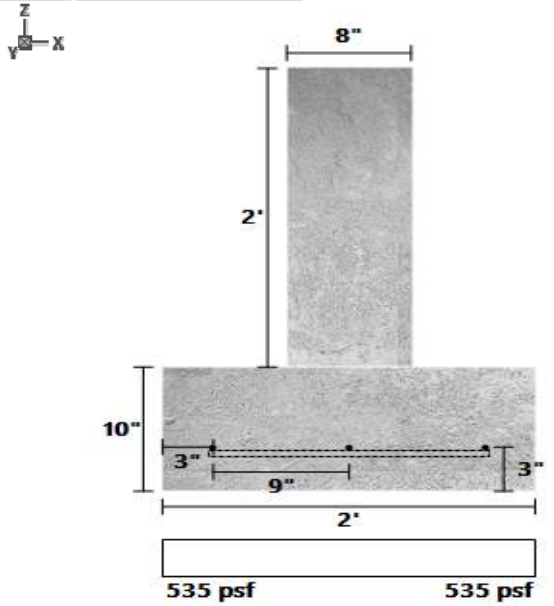
LOAD LIST

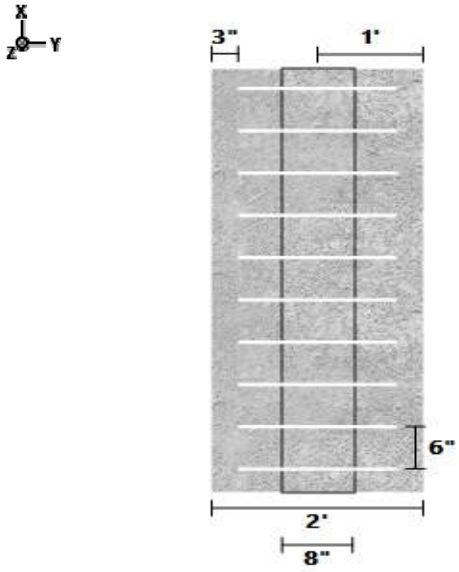
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Rafters #1	C	51.64893	51.64893	0	1	Dead	Z
Uniform (lbf/ft)	Rafters #1	C	530.2692	530.2692	0	1	Snow	Z
Uniform (lbf/ft)	Joists #8	A	53.27842	53.27842	0	1	Dead	Z
Uniform (lbf/ft)	Joists #8	A	155.2741	155.2741	0	1	Live	Z

Footing #10 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #11	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

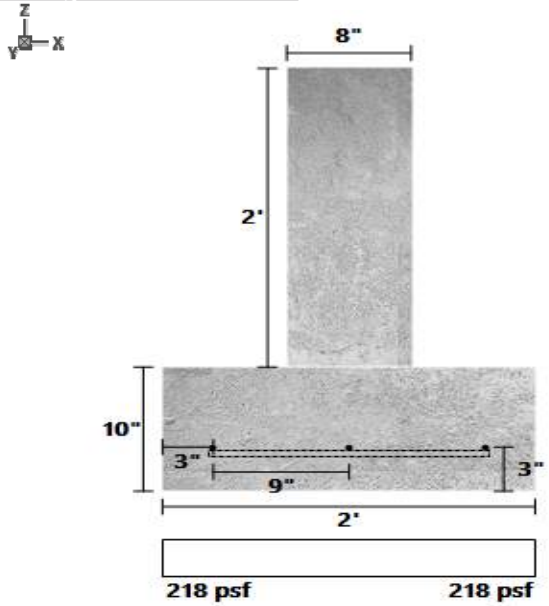
PASS-FAIL

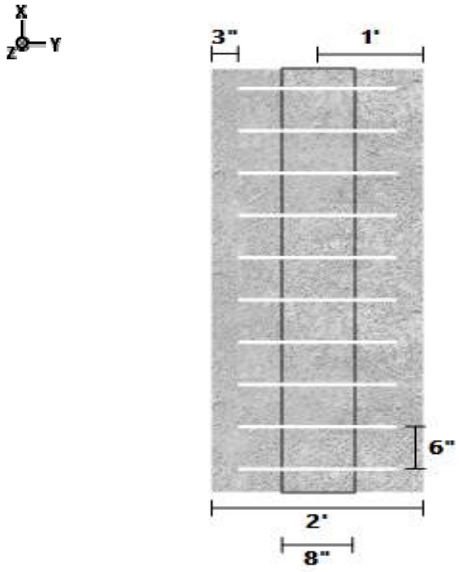
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (85.5%)	218.0	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.3	15774.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.2	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #11 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#12	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
3.2	10	386.6667	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (81.5%)	278.2	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (99.1%)	230.0	25239.1	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (98.0%)	228.6	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	3.2	3.2	D	LRFD

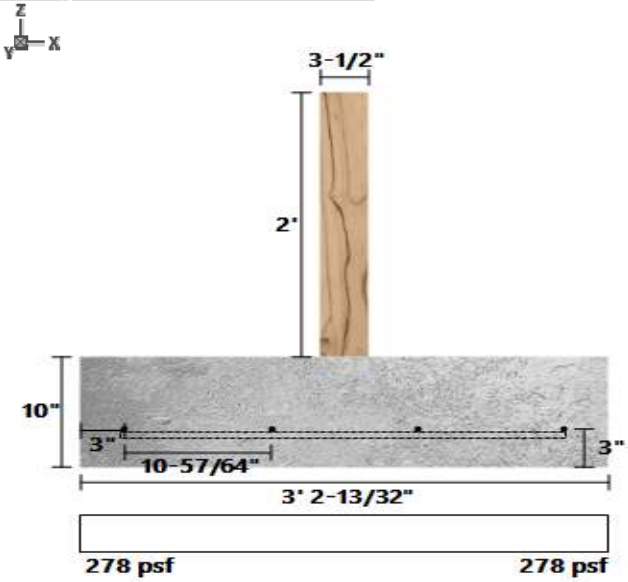
LOAD LIST

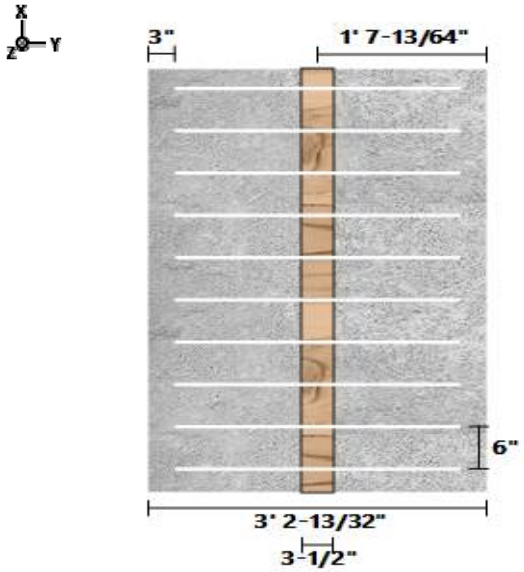
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #5	C	106.7536	106.7536	0	1	Dead	Z
Uniform (lbf/ft)	Joists #5	C	311.1216	311.1216	0	1	Live	Z

Footing - WD-#12 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #13	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

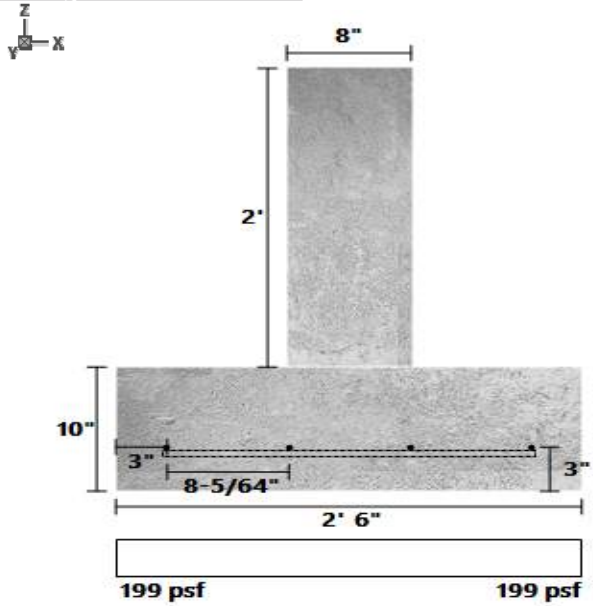
PASS-FAIL

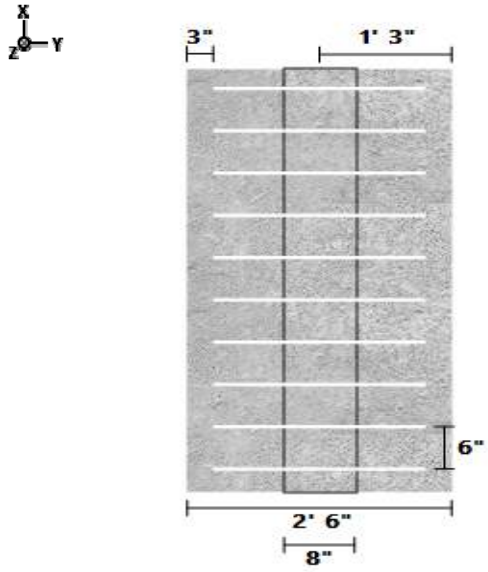
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (86.8%)	198.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.4	19718.0	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.3	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #13 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #14	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (78.1%)	328.7	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (99.6%)	64.2	15774.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (99.7%)	37.0	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

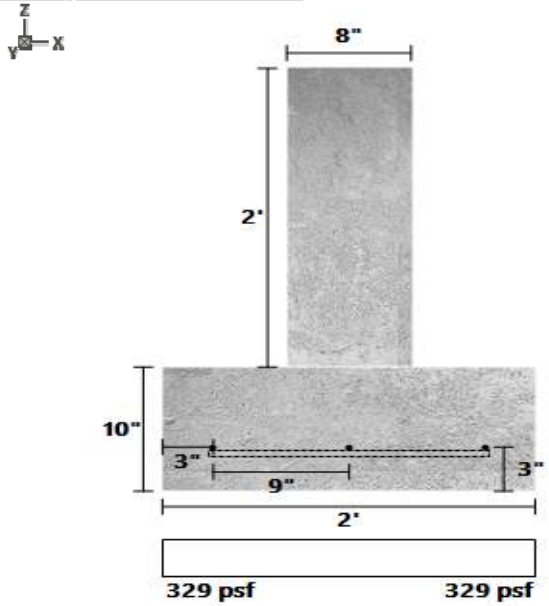
LOAD LIST

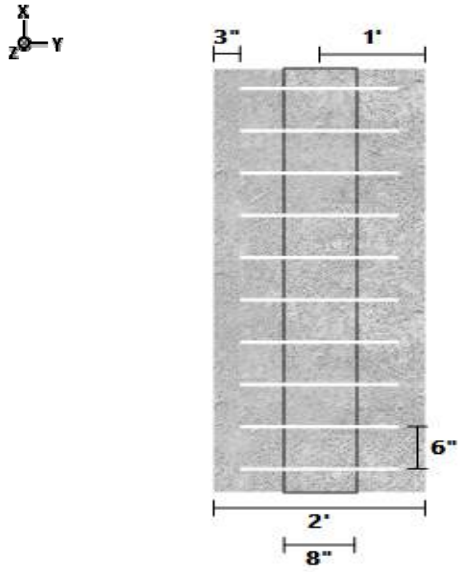
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #5	A	56.55777	56.55777	0	1	Dead	Z
Uniform (lbf/ft)	Joists #5	A	164.8314	164.8314	0	1	Live	Z

Footing #14 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#15	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (26.4%)	1104.6	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (94.2%)	914.6	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (93.9%)	686.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

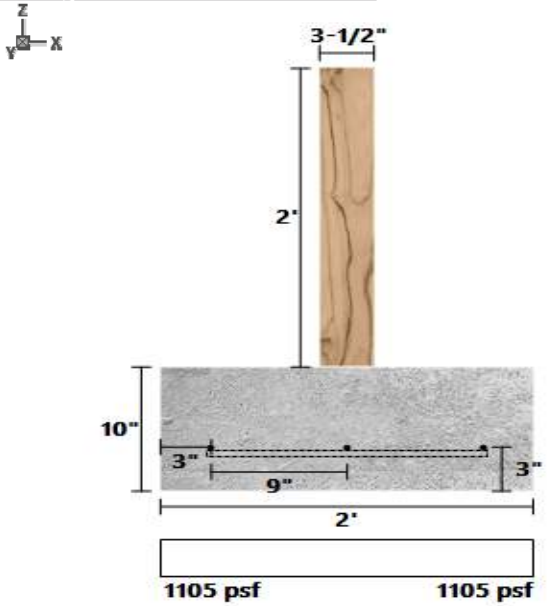
LOAD LIST

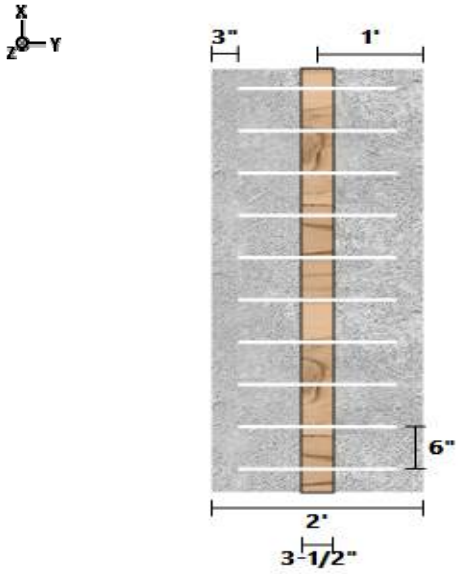
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #12	C	223.521	223.521	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #12	C	1552.678	1552.678	0	1	Snow	Z
Uniform (lbf/ft)	Joists #5	C	106.7536	106.7536	0	1	Dead	Z
Uniform (lbf/ft)	Joists #5	C	311.1216	311.1216	0	1	Live	Z

Footing - WD-#15 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #16	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (82.5%)	262.4	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (99.7%)	61.2	19718.0	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (99.6%)	40.5	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

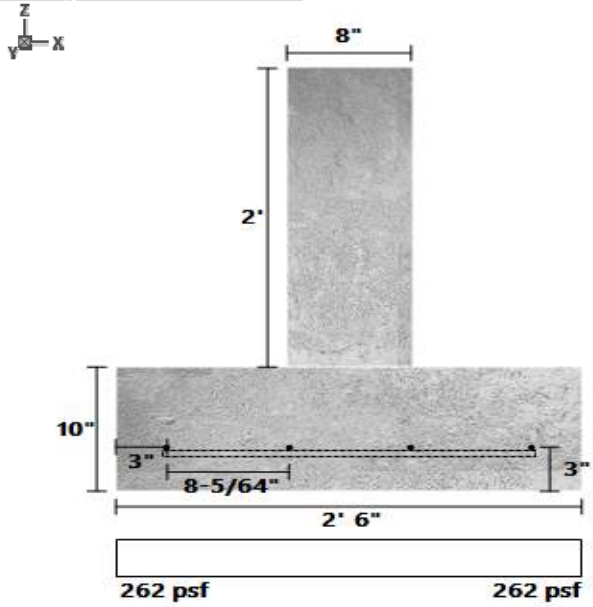
LOAD LIST

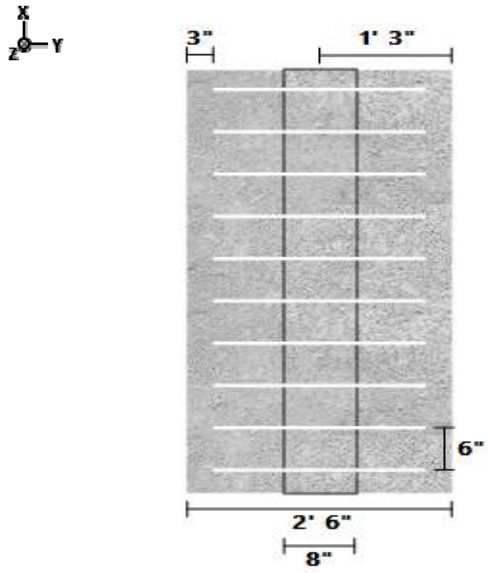
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #3	B	39.45	39.45	0	1	Dead	Z
Uniform (lbf/ft)	Joists #3	B	120	120	0	1	Live	Z

Footing #16 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #17	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

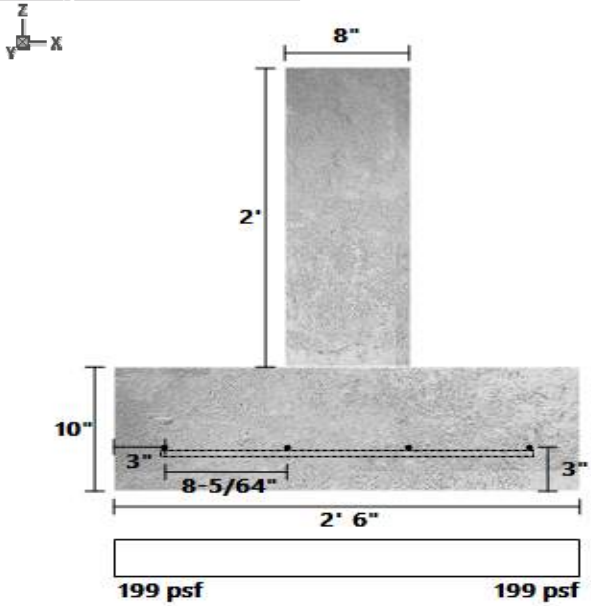
PASS-FAIL

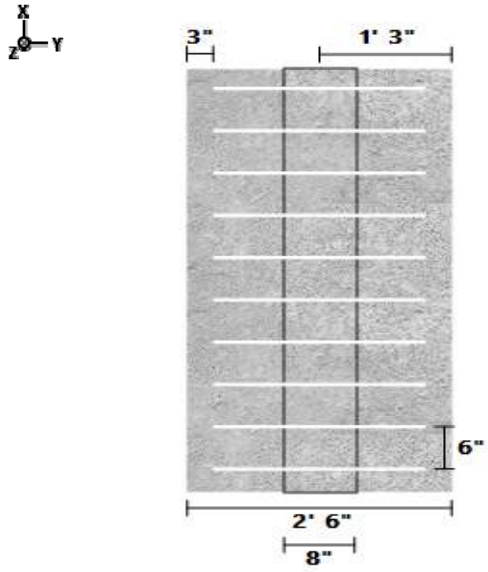
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (86.8%)	198.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.4	19718.0	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.3	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #17 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #18	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.333 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

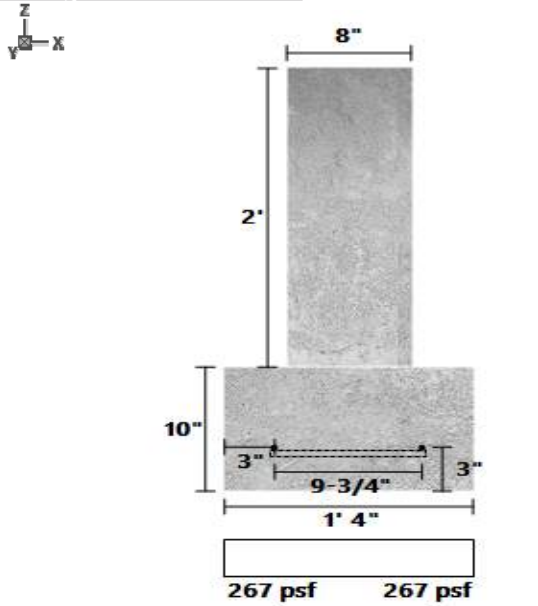
PASS-FAIL

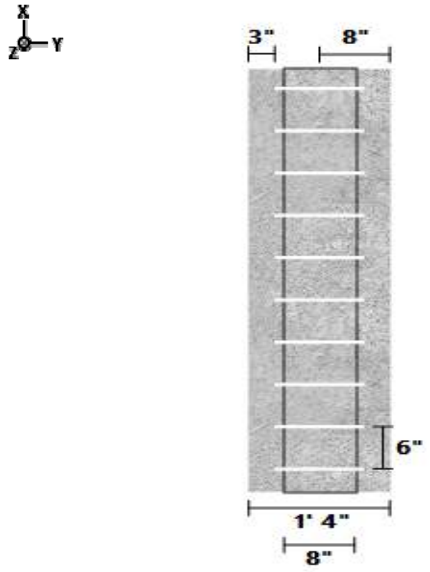
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (82.2%)	266.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.1	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	1.3	1.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #18 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing - WD-#19	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	84.58334

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
3.5	24	Wood	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

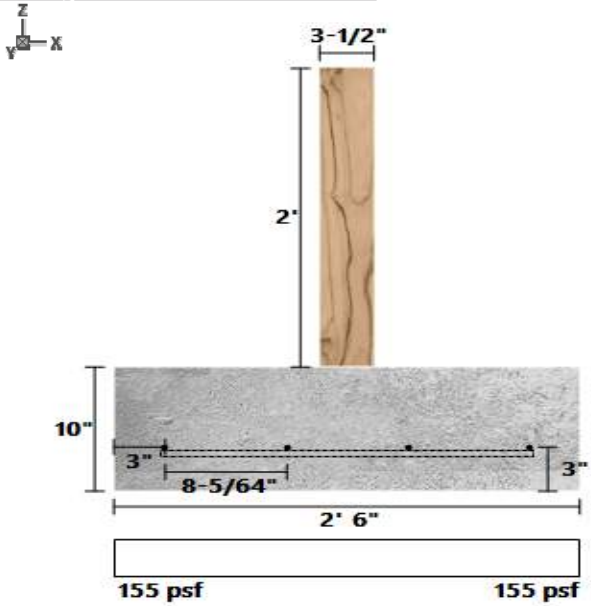
PASS-FAIL

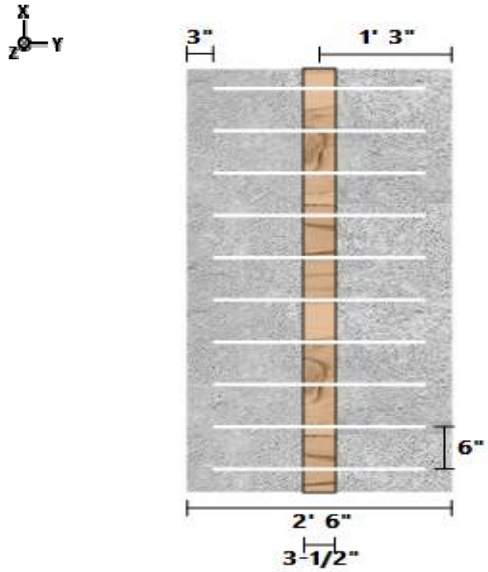
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (89.7%)	155.1	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.5	19718.0	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.4	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing - WD-#19 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #20	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.333 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

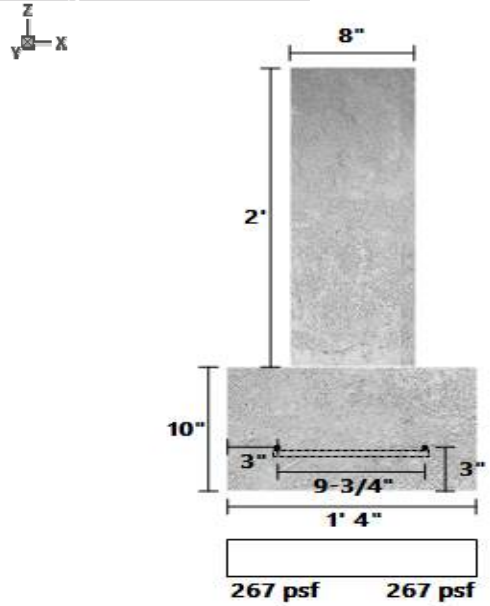
PASS-FAIL

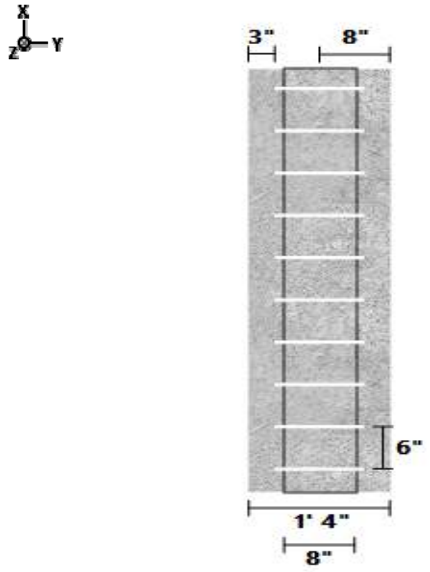
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (82.2%)	266.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.1	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	1.3	1.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #20 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #21	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.333 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

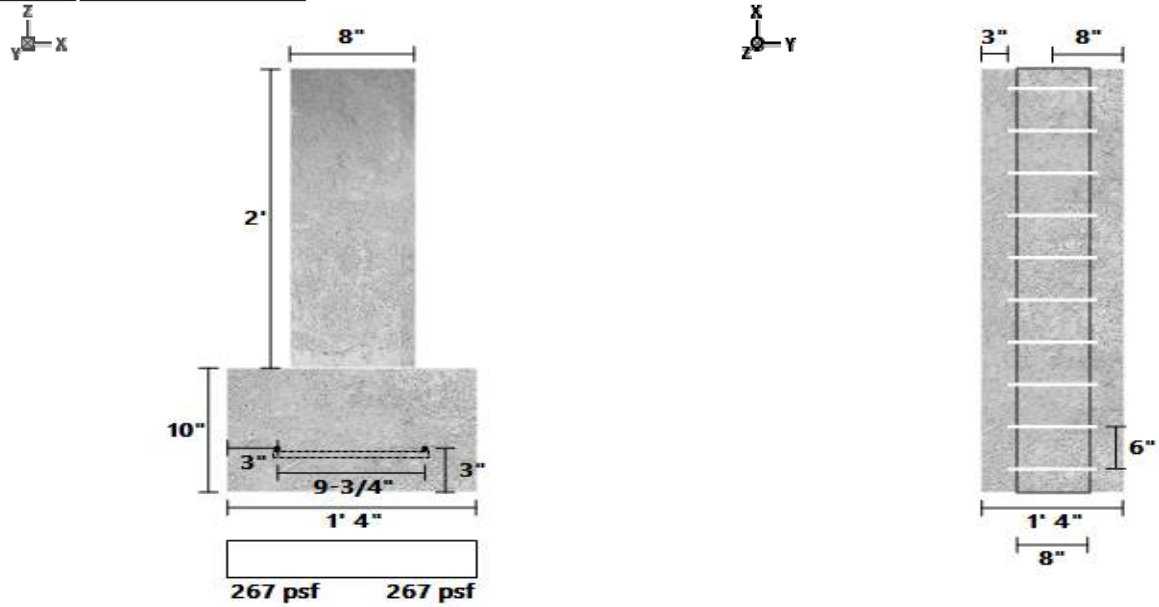
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (82.2%)	266.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.1	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	1.3	1.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #21 DIAGRAMS



PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #22	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (4) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2.5	10	302.0833	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

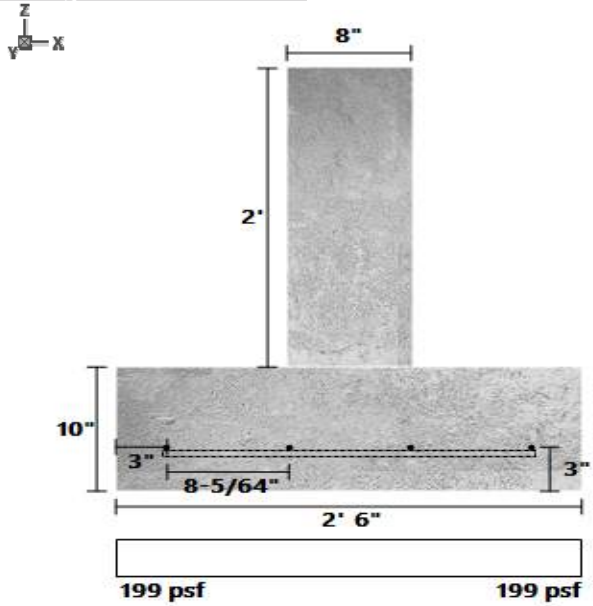
PASS-FAIL

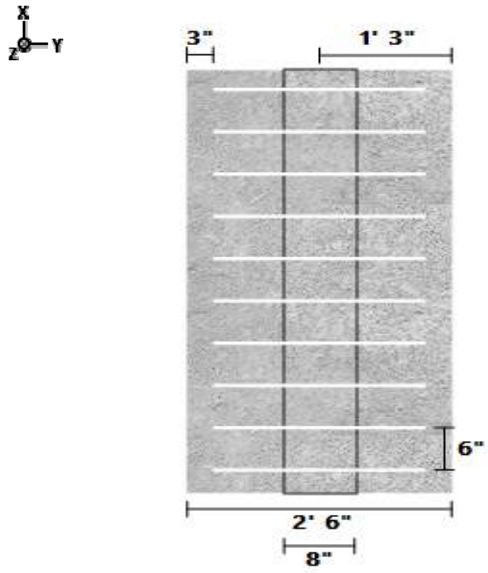
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (86.8%)	198.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.4	19718.0	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.3	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	2.5	2.5	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #22 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #23	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (18.5%)	1222.6	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (96.2%)	600.9	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (96.9%)	346.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

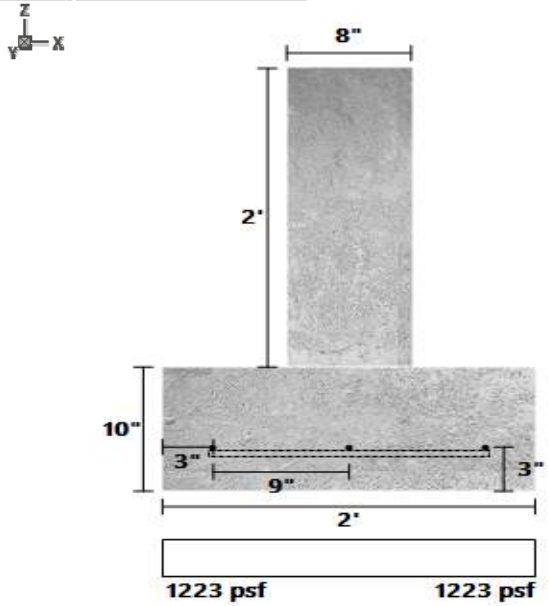
LOAD LIST

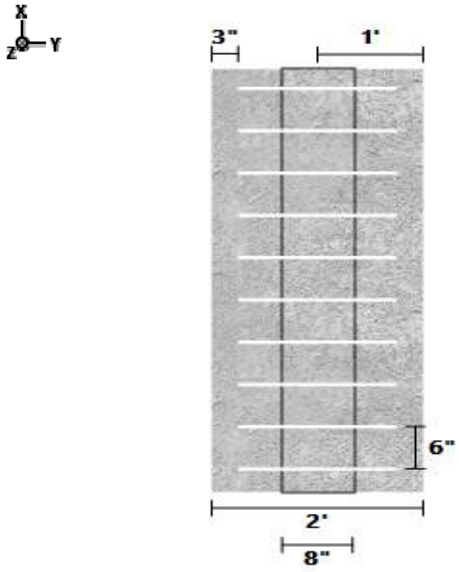
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #15	B	247.7301	247.7301	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #15	B	1762.497	1762.497	0	1	Snow	Z

Footing #23 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #24	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (3) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
2	10	241.6667	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (18.5%)	1222.6	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (96.2%)	600.9	15774.4	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (96.9%)	346.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.0	2.0	D	LRFD

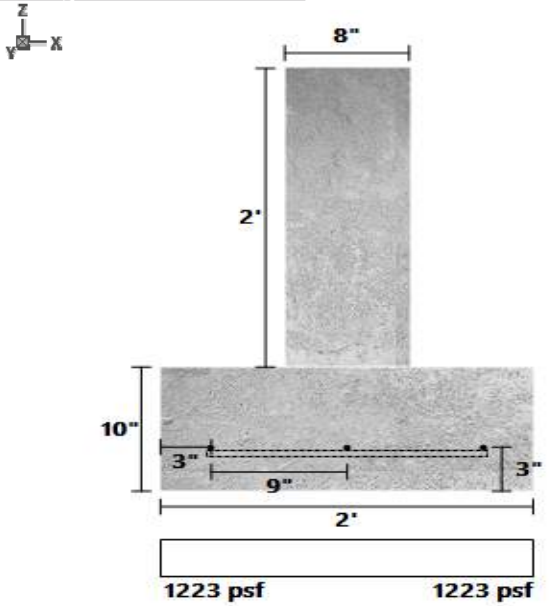
LOAD LIST

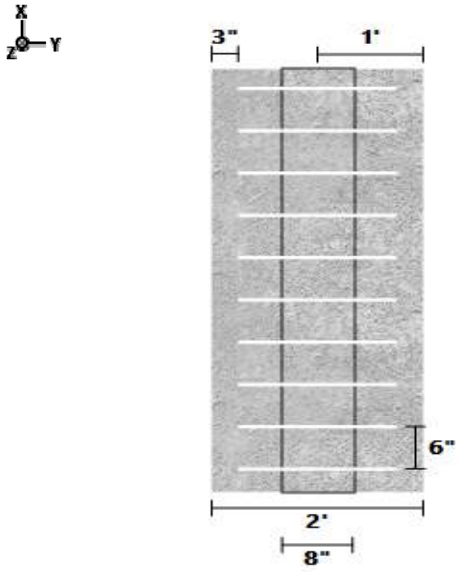
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #15	C	247.7295	247.7295	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #15	C	1762.496	1762.496	0	1	Snow	Z

Footing #24 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #24	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.333 (ft) Wide X 10 (in) Deep	Soil Depth TOF: 0 (ft)	Long. (2) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING

Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)
1.333	10	161.0708	193.3333

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	3122019	145	0.75

STEM WALL

Width (in)	Height (in)	Material	Stemwall Offset (in)
8	24	Concrete	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	Bottom Bar Spacing (in.)	fy (psi)	Es (psi)
4	6	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

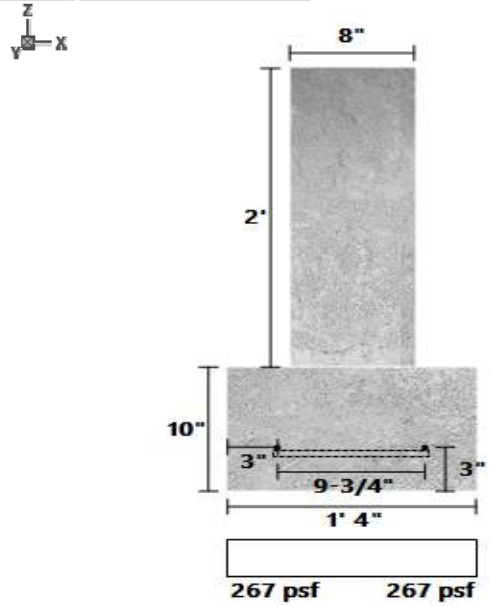
PASS-FAIL

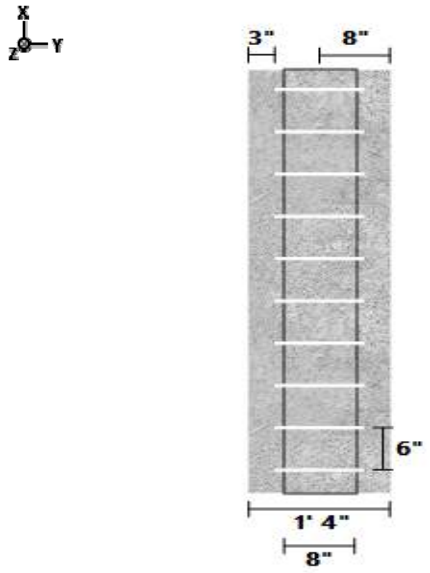
	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (82.2%)	266.6	1500.0	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.1	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	1.3	1.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Uniform	1	1	0	1	Live	Z

Footing #24 DIAGRAMS





PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #1-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (15.4%)	1269.3	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (80.0%)	4725.2	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (80.0%)	4725.2	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (82.8%)	13322.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (84.2%)	3631.9	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (84.2%)	3631.9	22946.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (92.5%)	16010.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

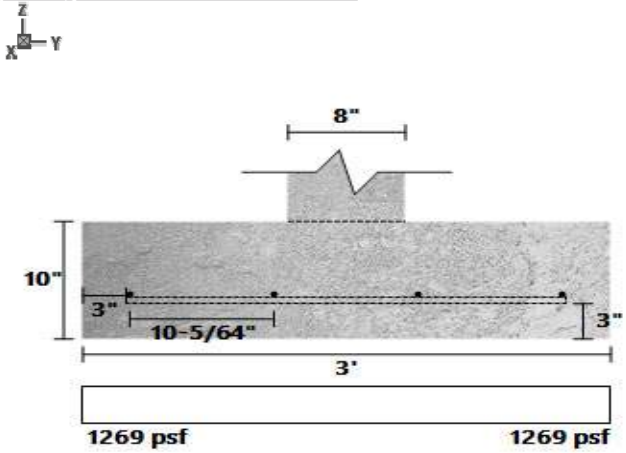
LOAD LIST

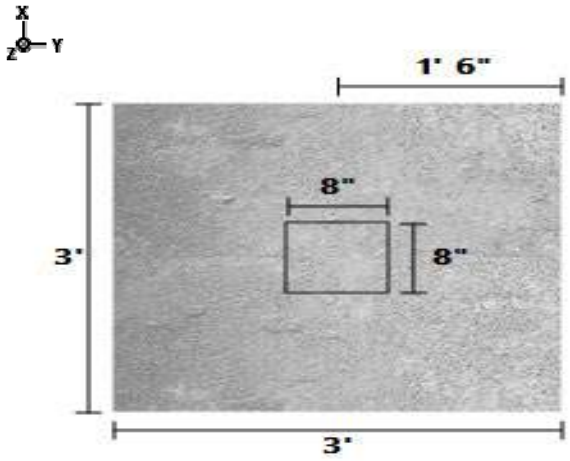
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

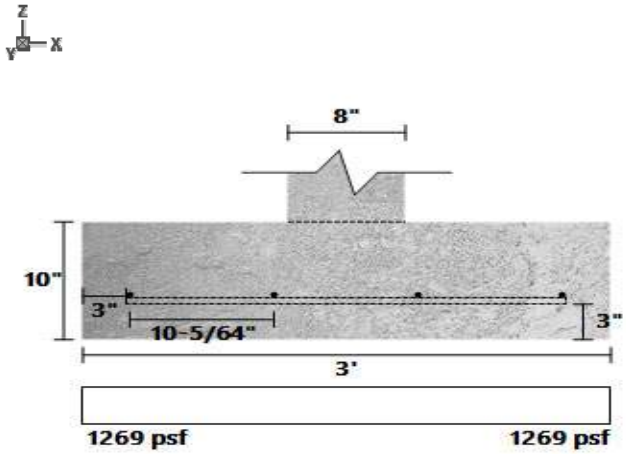
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #1	A	1335.979	-	0	-	Dead	Z
Point (lbf)	Beam #1	A	6	-	0	-	Live	Z
Point (lbf)	Beam #1	A	8999.988	-	0	-	Snow	Z

SpotFtg Bm #1-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #2-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

7 (ft) X 7 (ft) X 12 (in)	Soil Depth TOF: 0 (ft)	Bot. (10) #4 Long, (10) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
7	7	12	49	7105

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	30	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (49.4%)	759.0	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (72.0%)	18547.6	66252.5	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (72.0%)	18547.6	66252.5	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (68.7%)	42072.3	134240.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (77.6%)	16754.9	74875.5	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (55.7%)	33188.0	74875.5	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (94.2%)	46334.5	795600.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	49.0	49.0	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

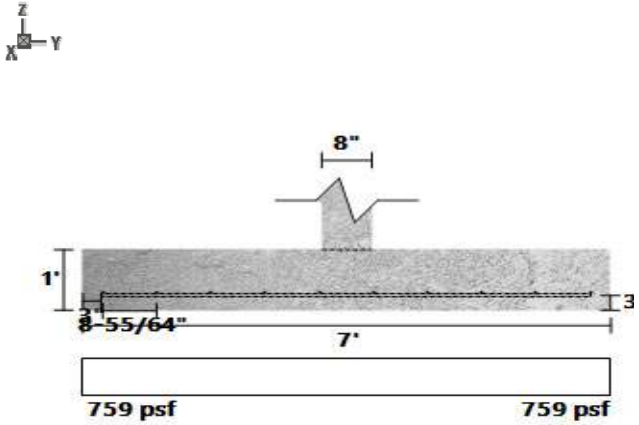
LINKED LOAD LIST

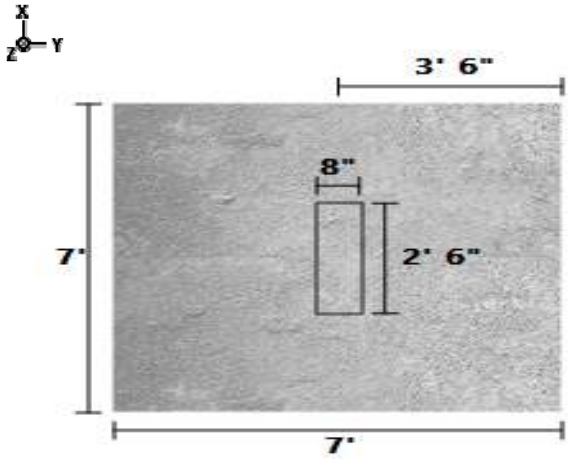
Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #2	A	4308.976	-	0	-	Dead	Z
Point (lbf)	Beam #2	A	16.5	-	0	-	Live	Z
Point (lbf)	Beam #2	A	24749.95	-	0	-	Snow	Z
Point (lbf)	Header #3	B	234.4941	-	0	-	Dead	Z

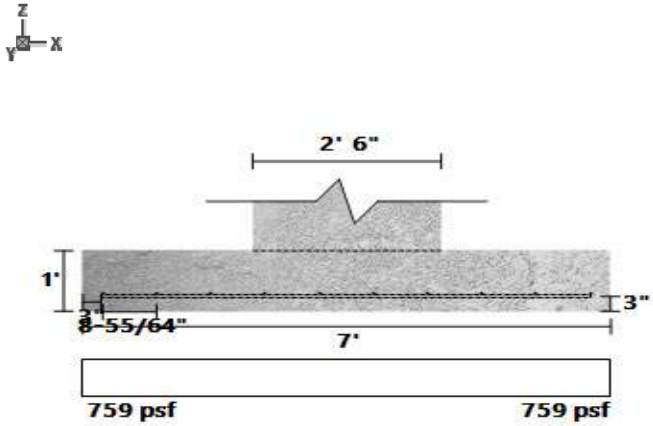
LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #3	B	790.5691	-	0	-	Snow	Z

SpotFtg Bm #2-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #2-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

5 (ft) X 5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (6) #4 Long, (6) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
5	5	10	20.83	3020.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (14.5%)	1283.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (57.2%)	16888.9	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (57.2%)	16888.9	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (45.7%)	42081.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (39.2%)	21025.6	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (39.2%)	21025.6	34556.4	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (78.9%)	44788.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	25.0	25.0	D	LRFD

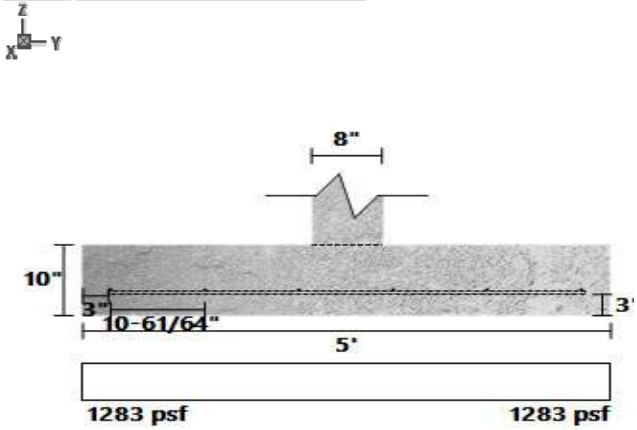
LOAD LIST

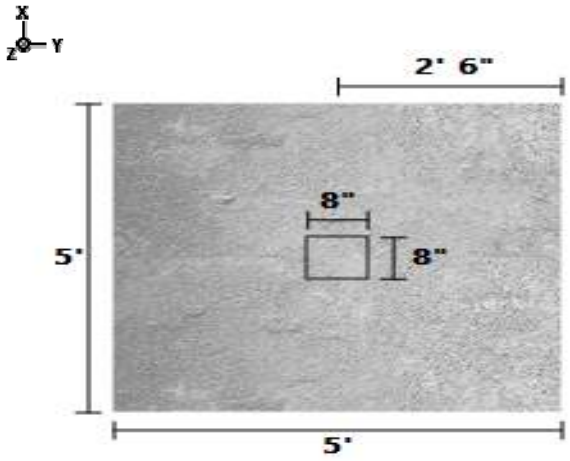
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

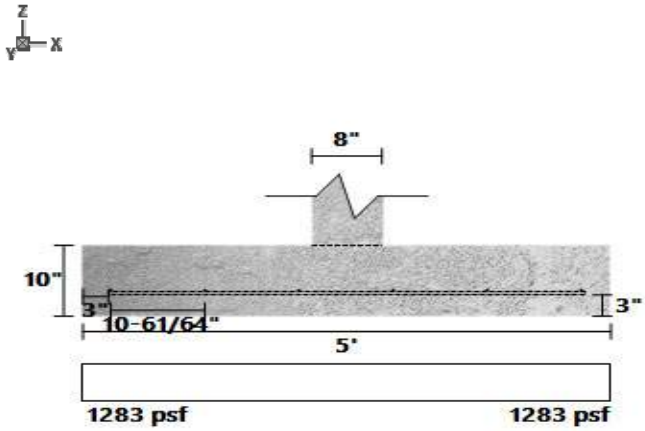
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #2	B	4308.976	-	0	-	Dead	Z
Point (lbf)	Beam #2	B	16.5	-	0	-	Live	Z
Point (lbf)	Beam #2	B	24749.95	-	0	-	Snow	Z

SpotFtg Bm #2-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #3-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

6.5 (ft) X 6.5 (ft) X 12 (in)	Soil Depth TOF: 0 (ft)	Bot. (9) #4 Long, (9) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
6.5	6.5	12	42.25	6126.25

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
24	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (74.6%)	380.4	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (92.1%)	4851.8	61520.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (92.1%)	4851.8	61520.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (88.3%)	15218.5	130138.9	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (83.8%)	10945.6	67455.5	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (90.3%)	6513.8	67455.5	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (97.4%)	16726.7	636480.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	42.3	42.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

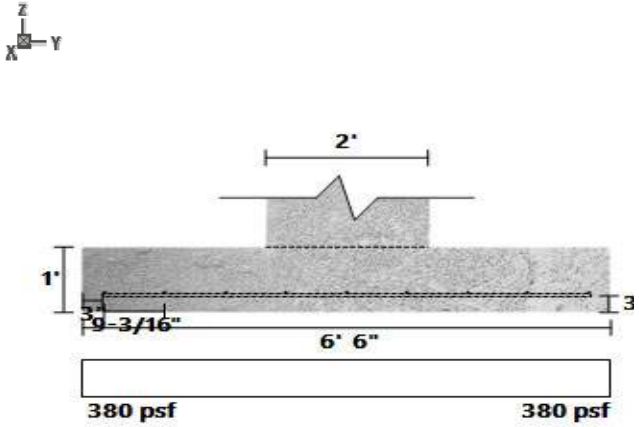
LINKED LOAD LIST

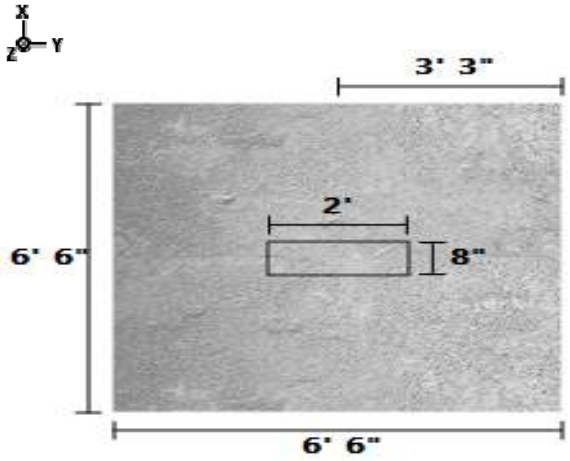
Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #3	A	334.0089	-	0	-	Dead	Z
Point (lbf)	Header #3	A	2371.708	-	0	-	Snow	Z
Point (lbf)	Header #4	B	2429.491	-	0	-	Dead	Z
Point (lbf)	Header #4	B	1920.002	-	0	-	Live	Z

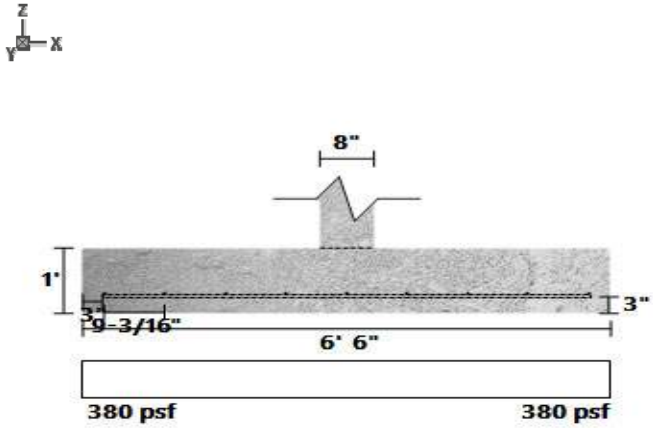
LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #4	B	4809.21	-	0	-	Snow	Z

SpotFtg Hdr #3-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #1-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

5 (ft) X 5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (6) #4 Long, (6) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
5	5	10	20.83	3020.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (6.3%)	1404.8	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (49.8%)	19785.5	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (49.8%)	19785.5	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (36.4%)	49299.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (28.7%)	24631.7	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (28.7%)	24631.7	34556.4	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (75.3%)	52469.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	25.0	25.0	D	LRFD

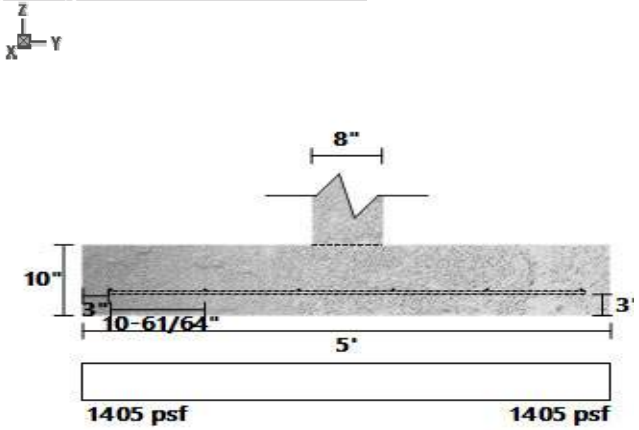
LOAD LIST

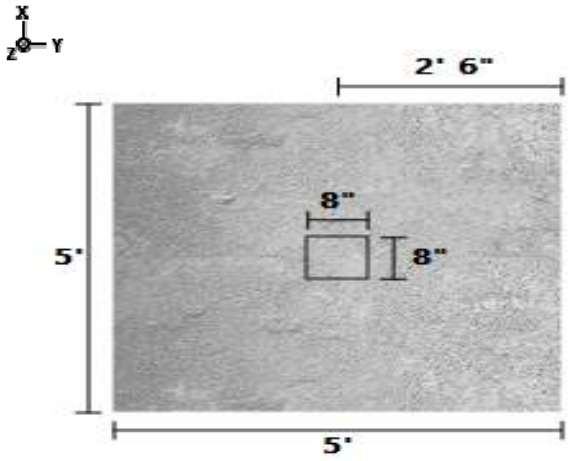
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

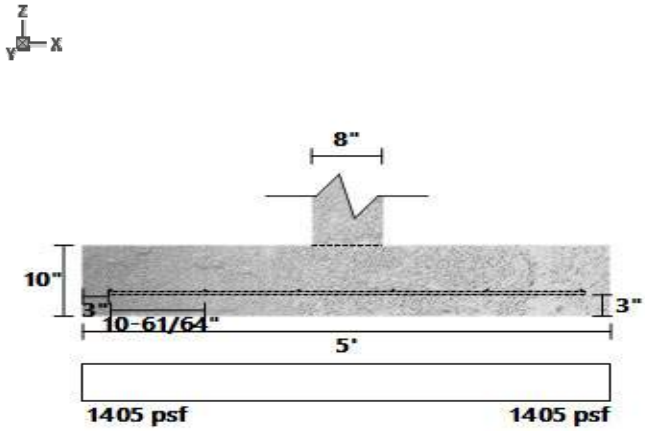
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #1	C	6824.027	-	0	-	Dead	Z
Point (lbf)	Girder #1	C	3840.016	-	0	-	Live	Z
Point (lbf)	Girder #1	C	25275.05	-	0	-	Snow	Z

SpotFtg Gdr #1-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #4-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

5 (ft) X 5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (6) #4 Long, (6) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
5	5	10	20.83	3020.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (75.4%)	368.5	1500.0	D+0.75L+0.75S	ASD
One-Way Shear X (lbf)	PASS (90.6%)	3726.3	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (90.6%)	3726.3	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (88.0%)	9284.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (86.6%)	4639.0	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (86.6%)	4639.0	34556.4	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (95.3%)	9881.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	25.0	25.0	D	LRFD

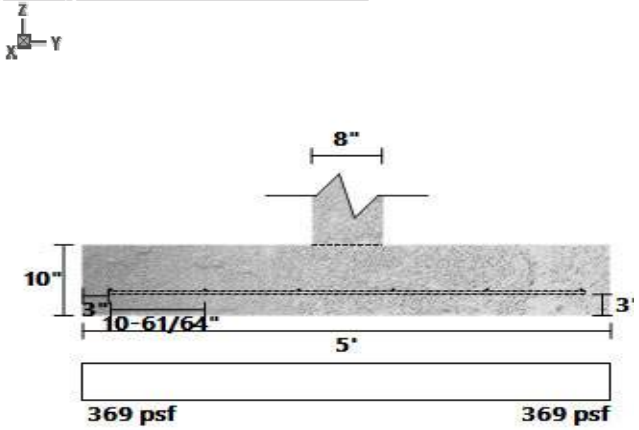
LOAD LIST

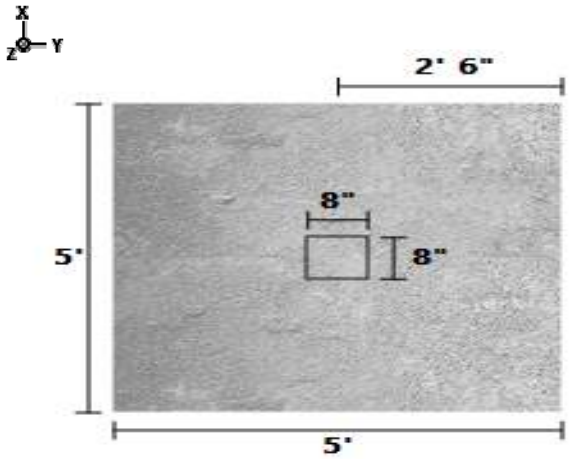
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

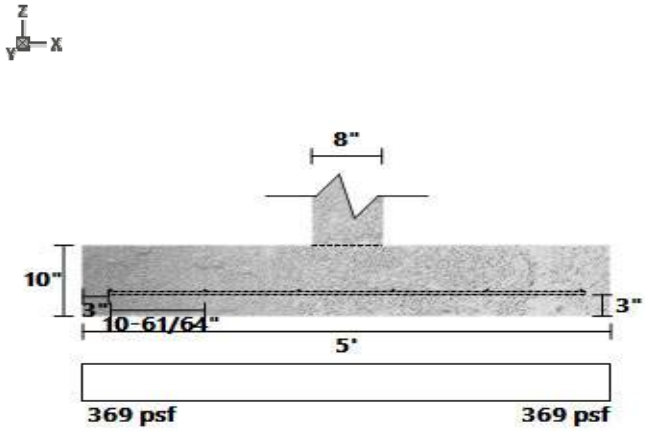
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #4	A	2329.977	-	0	-	Dead	Z
Point (lbf)	Header #4	A	1920.002	-	0	-	Live	Z
Point (lbf)	Header #4	A	3228.07	-	0	-	Snow	Z

SpotFtg Hdr #4-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #2-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

5 (ft) X 5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (6) #4 Long, (6) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
5	5	10	20.83	3020.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (63.3%)	550.0	1500.0	D+0.75L+0.75S	ASD
One-Way Shear X (lbf)	PASS (84.1%)	6286.0	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (84.1%)	6286.0	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (79.8%)	15662.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (77.4%)	7825.7	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (77.4%)	7825.7	34556.4	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (92.1%)	16670.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	25.0	25.0	D	LRFD

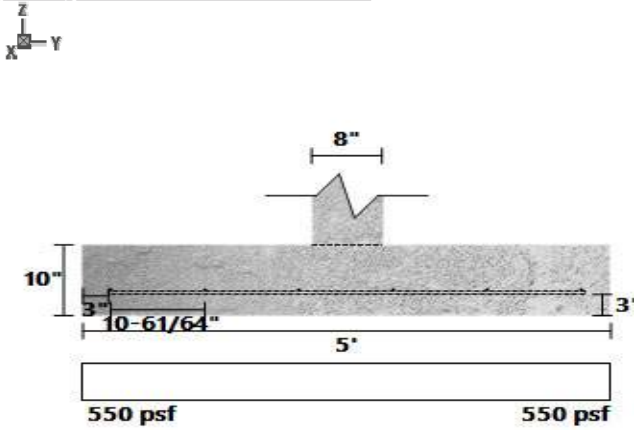
LOAD LIST

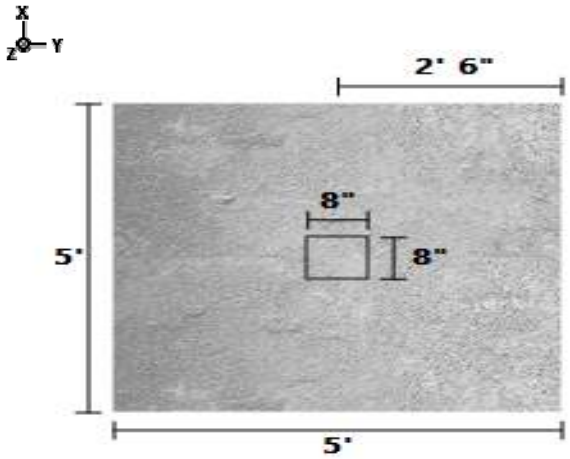
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

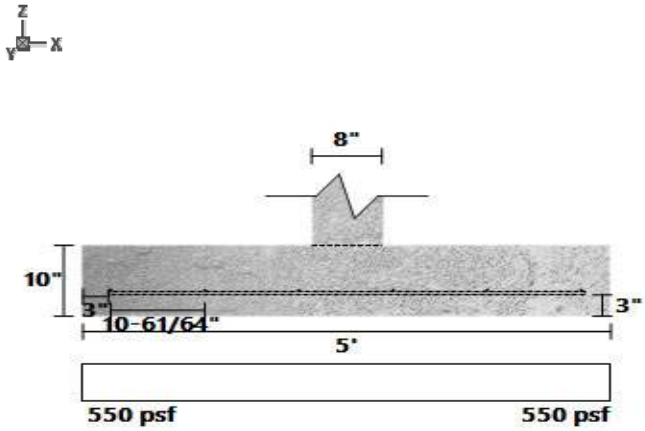
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #2	C	4190.956	-	0	-	Dead	Z
Point (lbf)	Girder #2	C	3840.016	-	0	-	Live	Z
Point (lbf)	Girder #2	C	4875	-	0	-	Snow	Z

SpotFtg Gdr #2-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #5-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (9.2%)	1361.8	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (88.1%)	1882.7	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (88.1%)	1882.7	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (91.2%)	5687.2	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (91.2%)	1507.3	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (91.2%)	1507.3	17124.7	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (92.3%)	7690.8	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

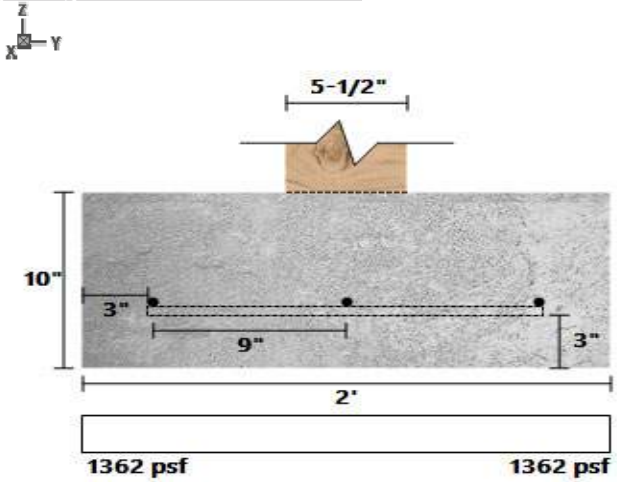
LOAD LIST

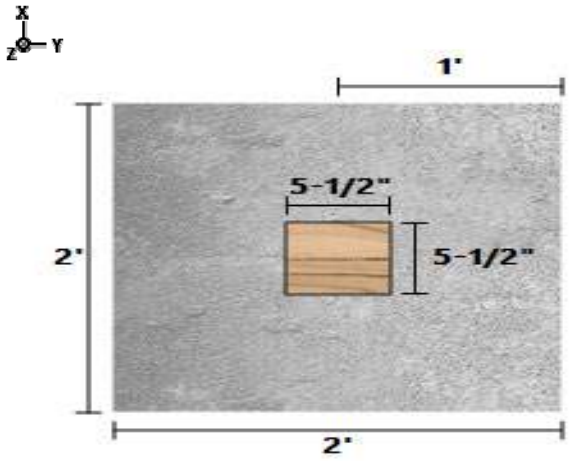
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

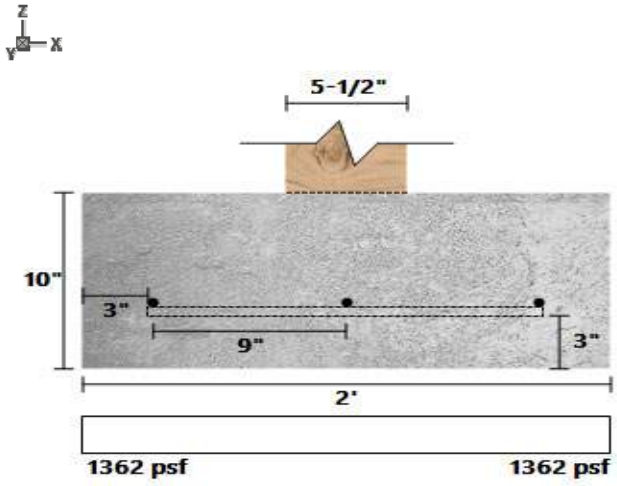
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #5	A	630.4076	-	0	-	Dead	Z
Point (lbf)	Beam #5	A	4333.332	-	0	-	Snow	Z

SpotFtg Bm #5-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #5-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (9.2%)	1361.8	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (88.1%)	1882.7	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (88.1%)	1882.7	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (91.2%)	5687.2	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (91.2%)	1507.3	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (91.2%)	1507.3	17124.7	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (92.3%)	7690.8	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

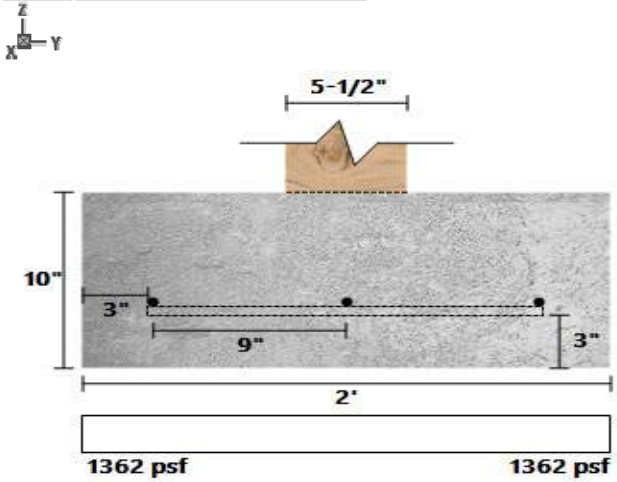
LOAD LIST

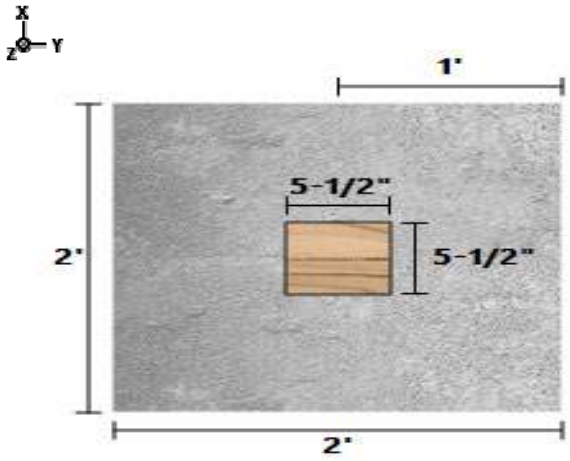
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

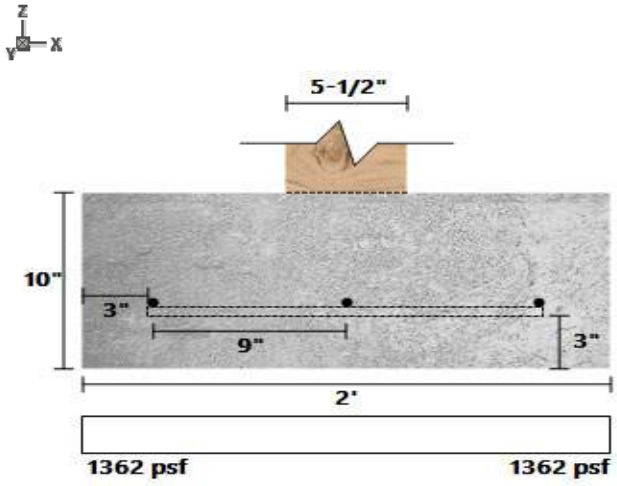
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #5	B	630.4076	-	0	-	Dead	Z
Point (lbf)	Beam #5	B	4333.332	-	0	-	Snow	Z

SpotFtg Bm #5-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #6-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.4%)	129.5	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	22.0	19718.0	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	22.0	19718.0	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	62.0	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	19.2	17278.2	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	19.2	17278.2	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	74.4	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

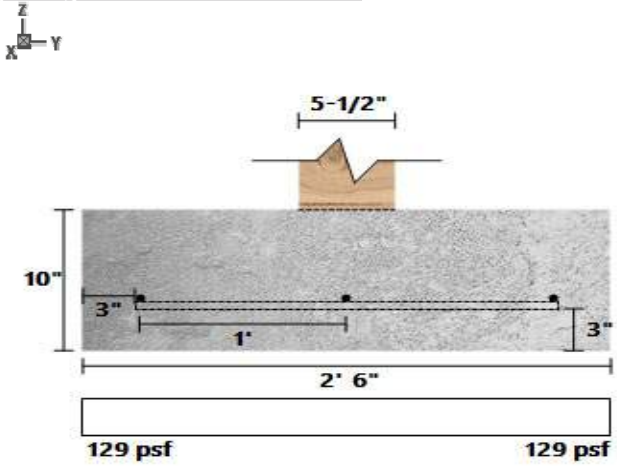
LOAD LIST

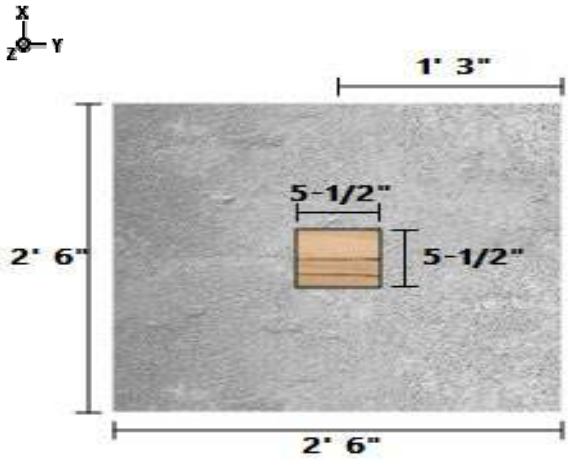
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

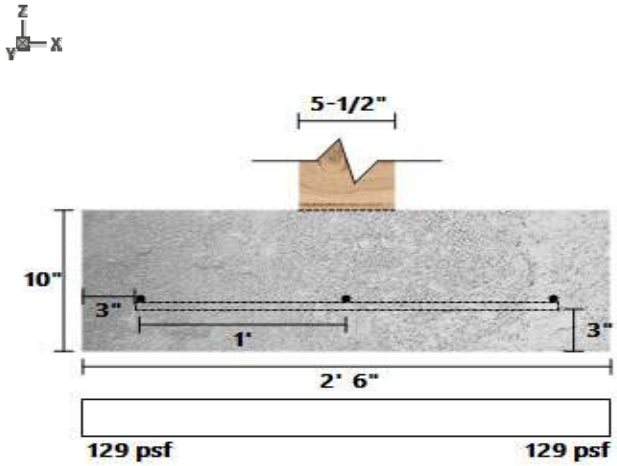
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #6	A	53.11523	-	0	-	Dead	Z

SpotFtg Bm #6-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #6-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.33334 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Unreinforced (Plain) Concrete

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
1.33334	4	10	4.44	644.45

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
None	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.3%)	131.0	1500.0	D+L	ASD
Two-Way Shear (lbf)	PASS (100.0%)	43.0	140217.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.8%)	25.8	16431.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	3.1	5477.3	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	74.4	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	5.3	5.3	D	LRFD

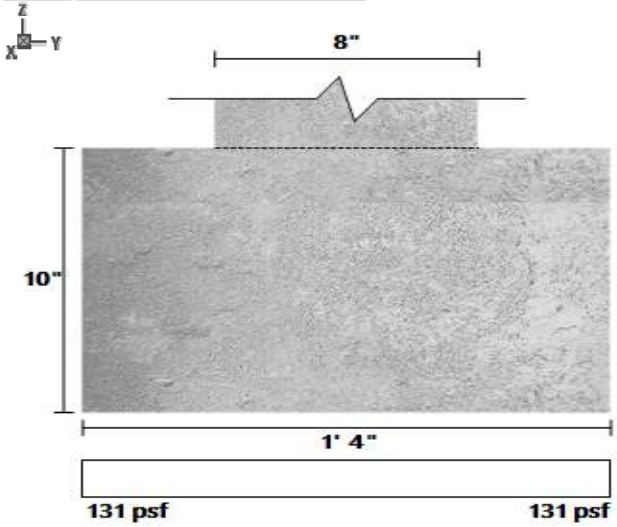
LOAD LIST

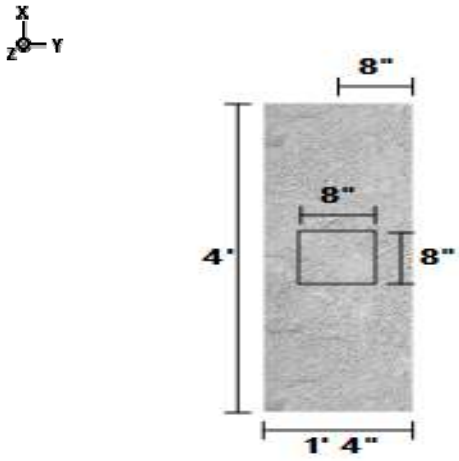
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

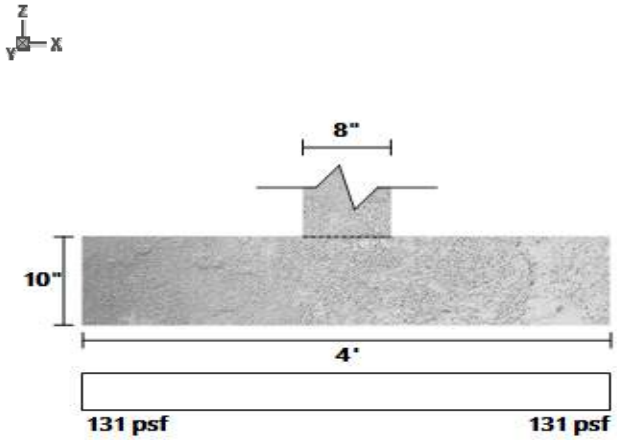
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #6	B	53.11523	-	0	-	Dead	Z

SpotFtg Bm #6-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #7-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2.5	10	4.17	604.17

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (19.6%)	1205.5	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (91.4%)	1692.6	19718.0	1.2D+1.6L+0.5S	LRFD
One-Way Shear Y (lbf)	PASS (89.3%)	1692.6	15774.4	1.2D+1.6L+0.5S	LRFD
Two-Way Shear (lbf)	PASS (92.1%)	6129.1	77557.5	1.2D+1.6L+0.5S	LRFD
Moment X (lbf-ft)	PASS (91.4%)	1476.1	17124.7	1.2D+1.6L+0.5S	LRFD
Moment Y (lbf-ft)	PASS (94.4%)	975.9	17278.2	1.2D+1.6L+0.5S	LRFD
Crushing (lbf)	PASS (95.9%)	8783.1	212160.0	1.2D+1.6L+0.5S	LRFD
Compression (ft^2)	PASS (100.0%)	5.0	5.0	D	LRFD

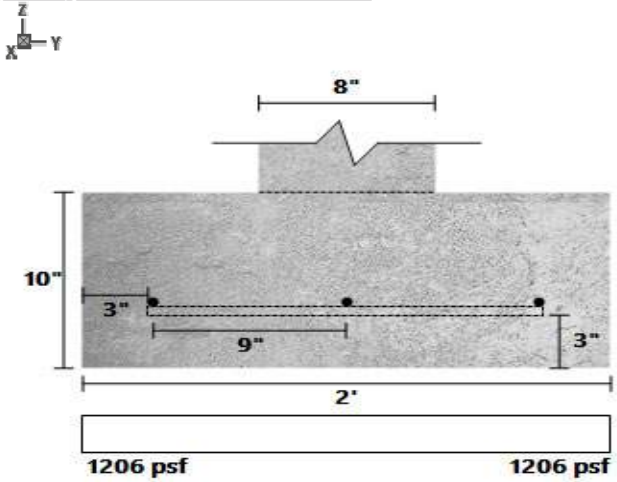
LOAD LIST

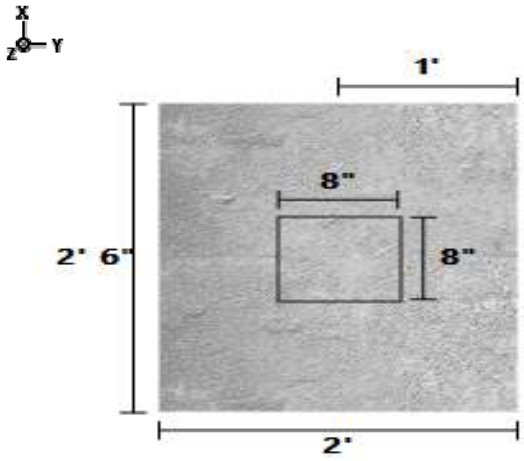
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

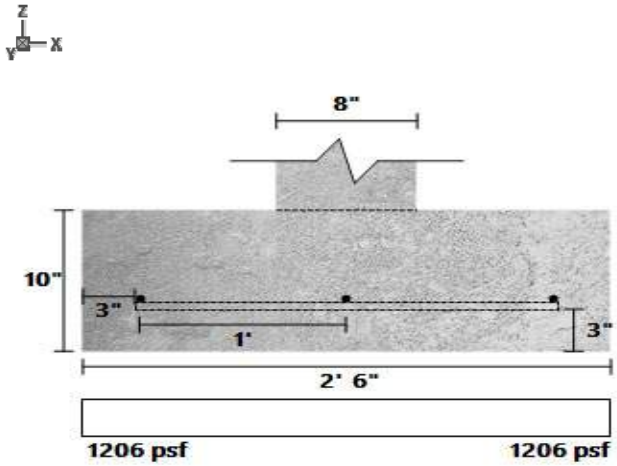
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #7	B	730.2972	-	0	-	Dead	Z
Point (lbf)	Header #7	B	4692.172	-	0	-	Live	Z
Point (lbf)	Header #7	B	795.4047	-	0	-	Snow	Z

SpotFtg Hdr #7-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #3-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (42.6%)	861.6	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (92.9%)	1121.1	15774.4	1.2D+1.6L+0.5Lr	LRFD
One-Way Shear Y (lbf)	PASS (92.9%)	1121.1	15774.4	1.2D+1.6L+0.5Lr	LRFD
Two-Way Shear (lbf)	PASS (94.7%)	3386.6	64412.2	1.2D+1.6L+0.5Lr	LRFD
Moment X (lbf-ft)	PASS (94.8%)	897.6	17124.7	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lbf-ft)	PASS (94.8%)	897.6	17124.7	1.2D+1.6L+0.5Lr	LRFD
Crushing (lbf)	PASS (95.4%)	4579.7	100278.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

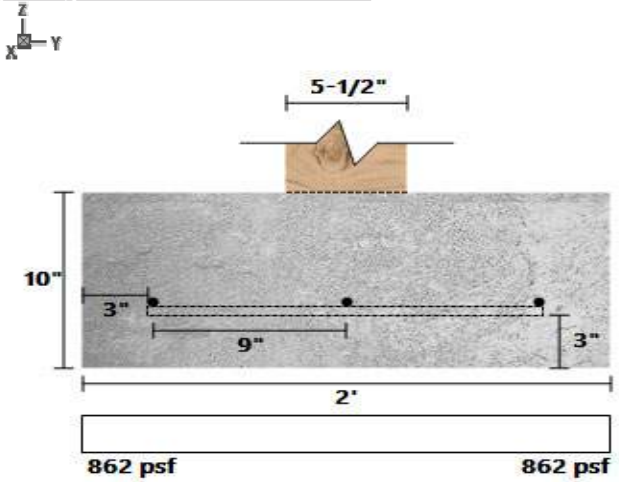
LOAD LIST

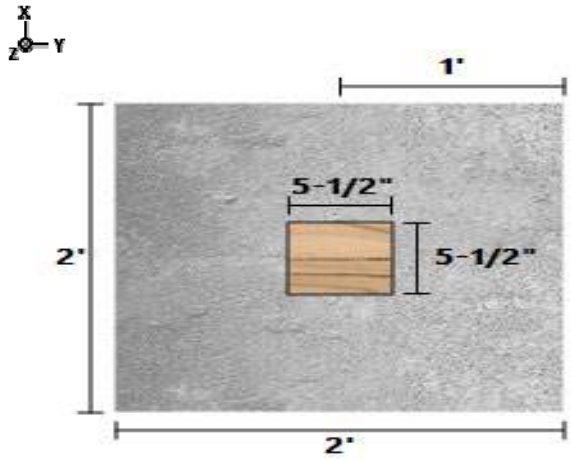
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

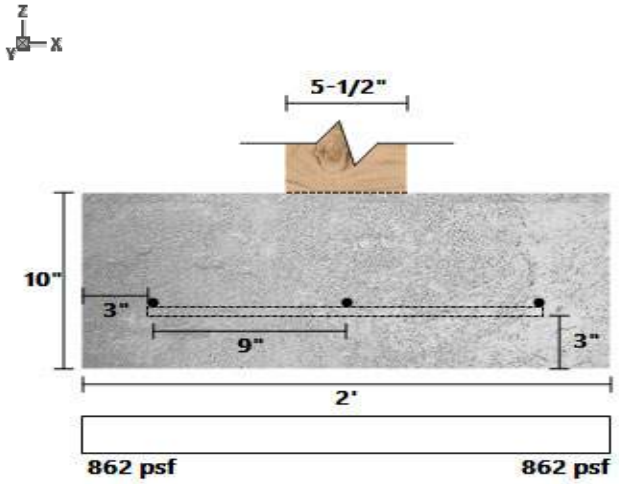
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #3	B	402.6093	-	0	-	Dead	Z
Point (lbf)	Girder #3	B	2559.375	-	0	-	Live	Z

SpotFtg Gdr #3-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #4-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (10.9%)	1336.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (70.4%)	8160.8	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (70.4%)	8160.8	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (67.3%)	21082.2	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (61.8%)	8804.1	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (61.8%)	8804.1	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (77.0%)	23042.4	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

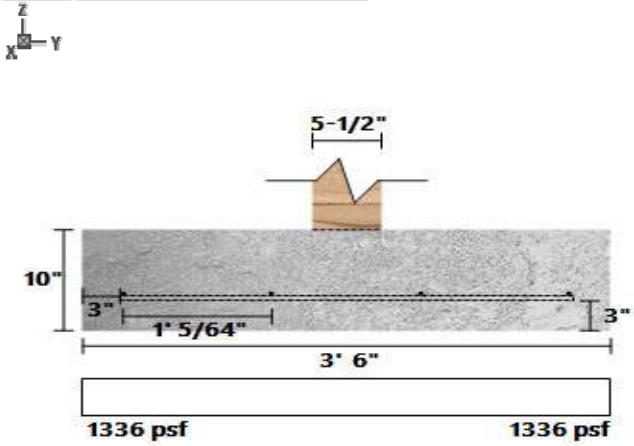
LOAD LIST

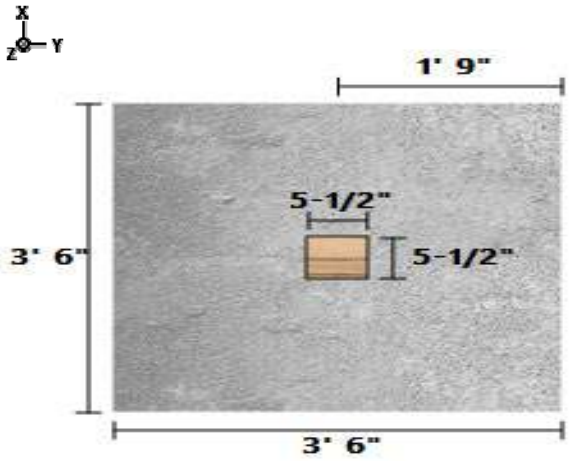
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

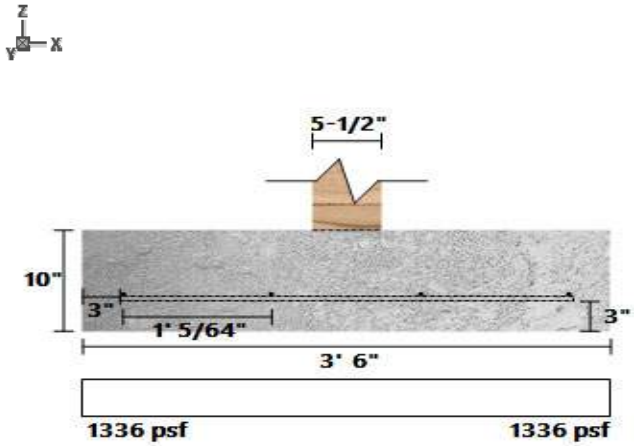
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #4	A	1951.125	-	0	-	Dead	Z
Point (lbf)	Girder #4	A	12937.5	-	0	-	Snow	Z

SpotFtg Gdr #4-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #5-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (8.8%)	1368.7	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (81.7%)	3616.6	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (81.7%)	3616.6	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (84.2%)	10186.9	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (81.8%)	3152.1	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (81.8%)	3152.1	17278.2	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (87.8%)	12225.3	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

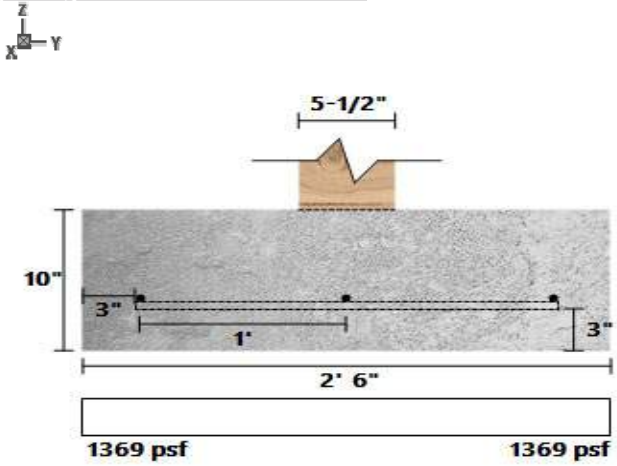
LOAD LIST

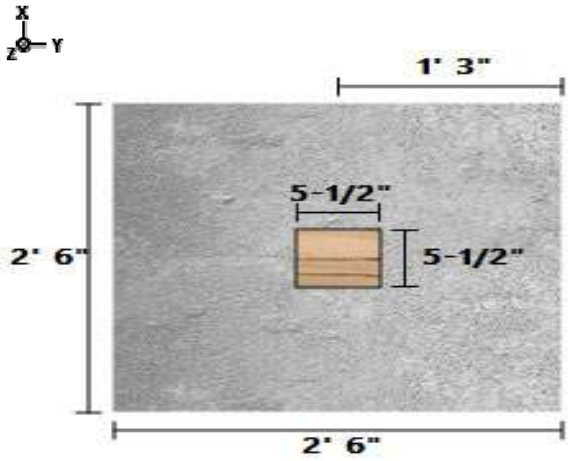
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

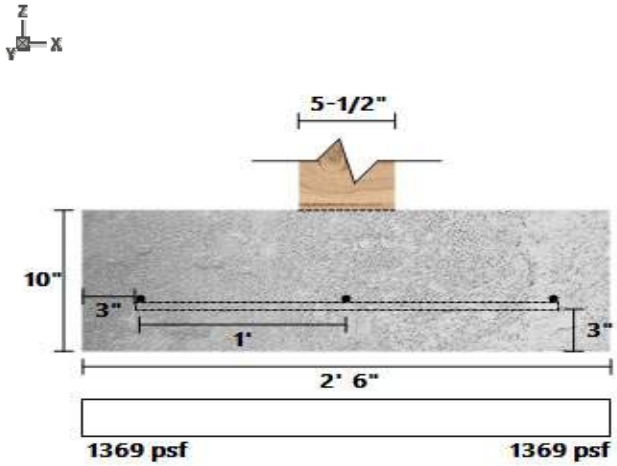
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #5	A	635.875	-	0	-	Dead	Z
Point (lbf)	Girder #5	A	7163.263	-	0	-	Snow	Z

SpotFtg Gdr #5-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #5-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

4 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (5) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (37.8%)	933.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (77.8%)	6993.8	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (77.8%)	6993.8	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (76.4%)	18285.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (75.6%)	7011.3	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (75.6%)	7011.3	28754.4	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (90.5%)	20192.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	16.0	16.0	D	LRFD

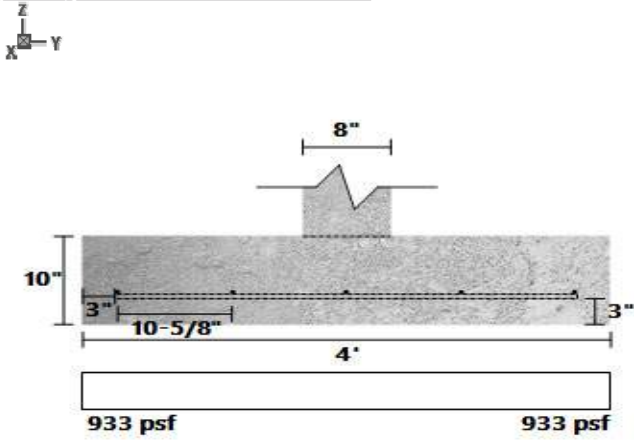
LOAD LIST

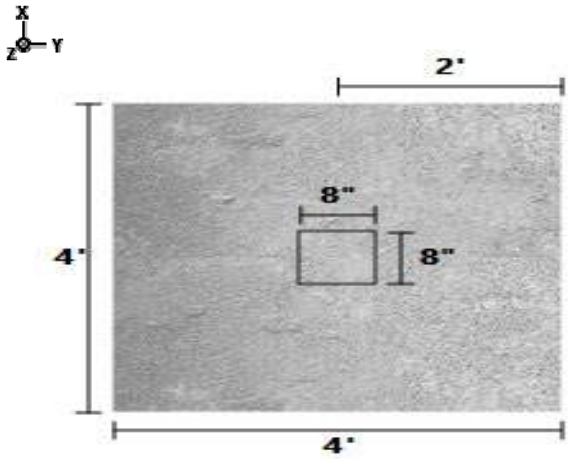
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

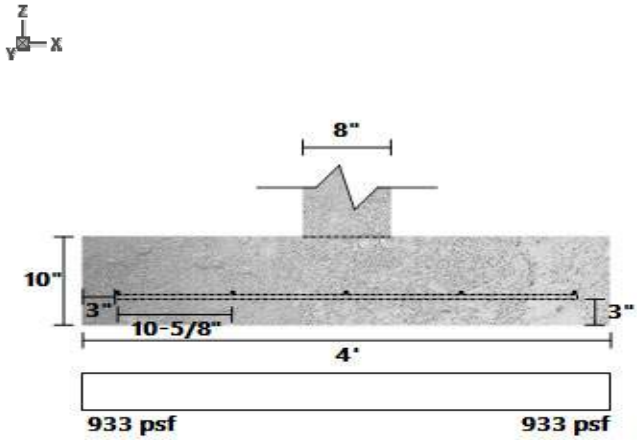
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Girder #5	B	1514.84	-	0	-	Dead	Z
Point (lbf)	Girder #5	B	11483.59	-	0	-	Snow	Z

SpotFtg Gdr #5-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #11-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (34.5%)	981.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (78.6%)	5915.5	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (78.6%)	5915.5	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (76.3%)	15281.7	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (72.3%)	6381.8	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (72.3%)	6381.8	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (83.3%)	16702.6	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

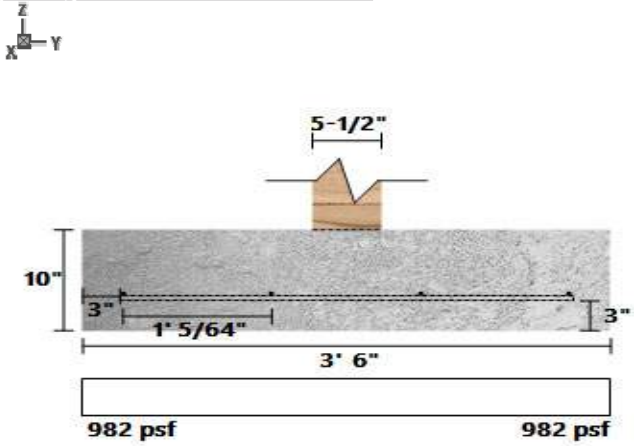
LOAD LIST

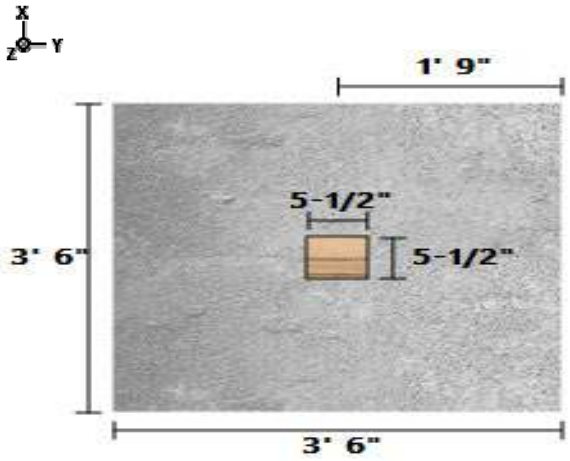
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

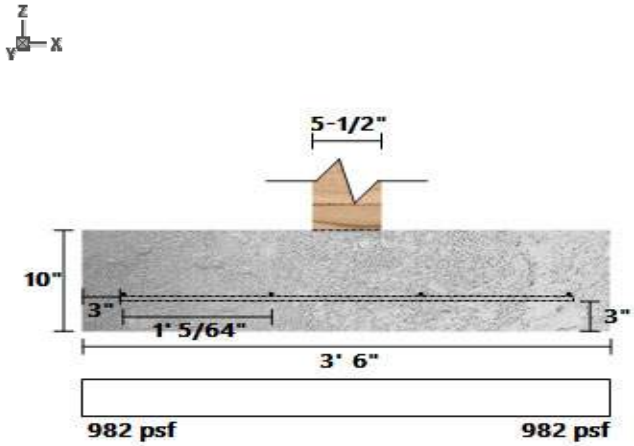
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #10	C	112.9037	-	0	-	Dead	Z
Point (lbf)	Beam #11	B	340.4405	-	0	-	Dead	Z
Point (lbf)	Beam #11	B	6	-	0	-	Live	Z
Point (lbf)	Beam #11	B	10094.73	-	0	-	Snow	Z

SpotFtg Bm #11-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #12-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (70.6%)	440.4	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (92.1%)	2188.3	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (92.1%)	2188.3	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (91.2%)	5653.1	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (89.8%)	2360.8	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (89.8%)	2360.8	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (93.8%)	6178.7	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

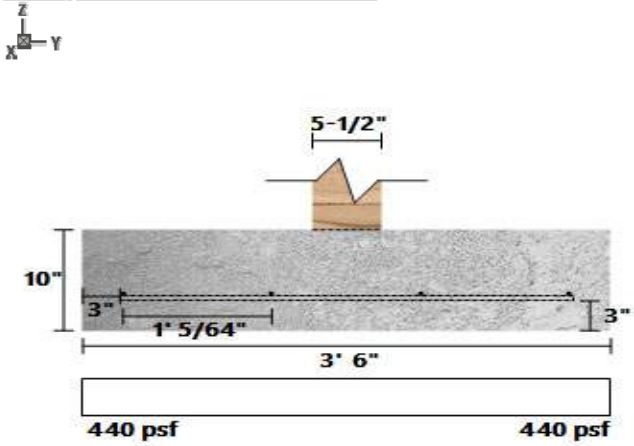
LOAD LIST

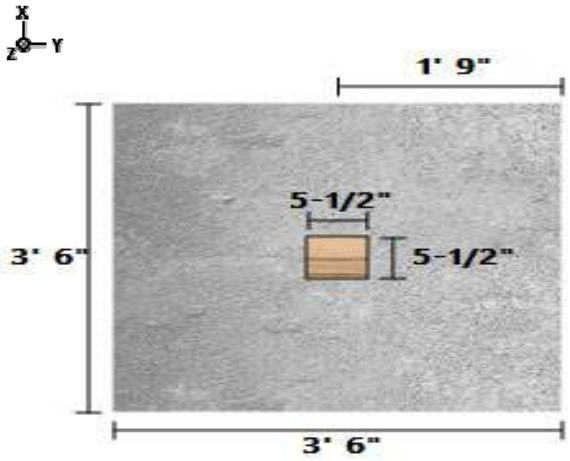
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

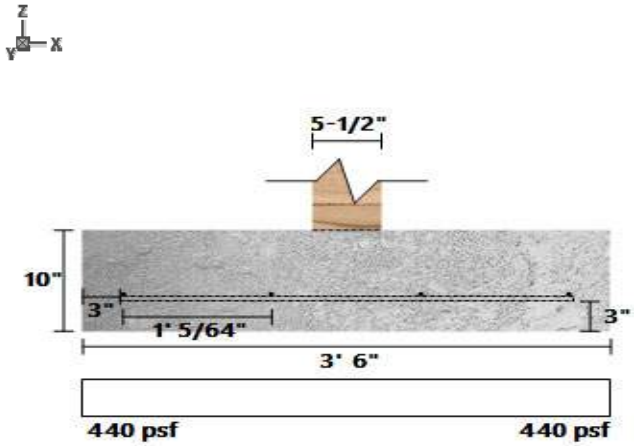
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #12	B	232.7183	-	0	-	Dead	Z
Point (lbf)	Beam #12	B	3681.994	-	0	-	Snow	Z
Point (lbf)	Beam #12	B	7.276316	-	0	-	Live	Z

SpotFtg Bm #12-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #11-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.3334 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Unreinforced (Plain) Concrete

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
1.3334	4	10	4.44	644.48

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
None	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.5%)	127.4	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (100.0%)	0.7	26290.7	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (100.0%)	0.7	8764.0	1.4D	LRFD
Two-Way Shear (lbf)	PASS (100.0%)	32.6	67917.6	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	21.1	16431.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	5.4	5477.5	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	47.4	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	5.3	5.3	D	LRFD

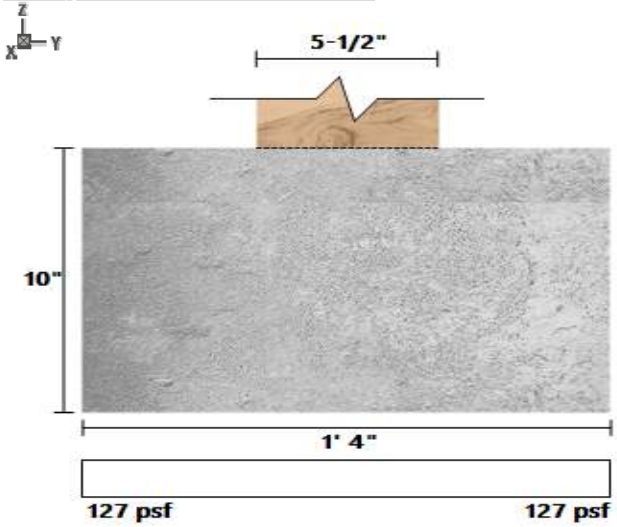
LOAD LIST

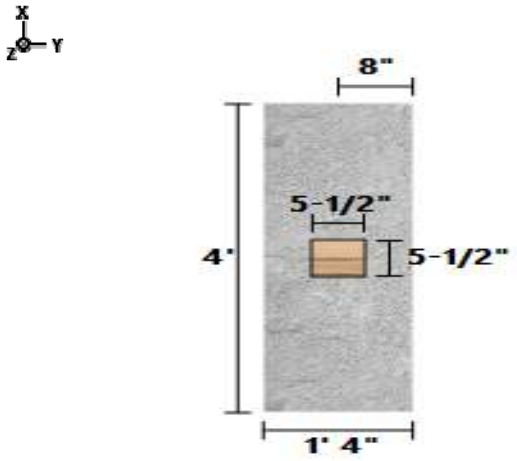
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

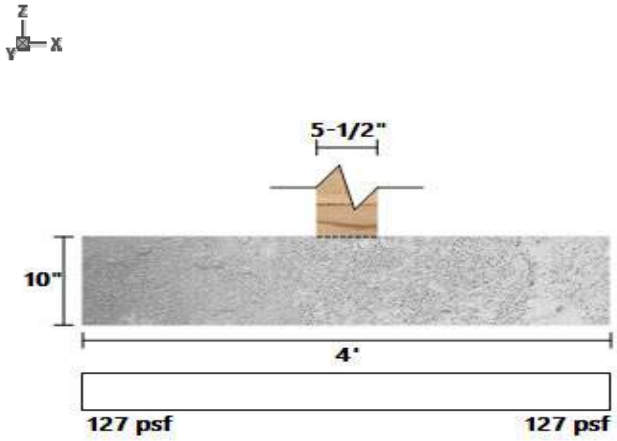
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #11	A	33.86842	-	0	-	Dead	Z

SpotFtg Hdr #11-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #11-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

1.3334 (ft) X 4 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (5) #4 Long, (2) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
1.3334	4	10	4.44	644.48

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.5%)	127.4	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (100.0%)	1.9	31548.8	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (100.0%)	1.9	10516.8	1.4D	LRFD
Two-Way Shear (lbf)	PASS (100.0%)	34.0	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	16.5	11416.5	1.4D	LRFD
Moment Y (lbf-ft)	PASS (100.0%)	2.0	28754.4	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	47.4	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	5.3	5.3	D	LRFD

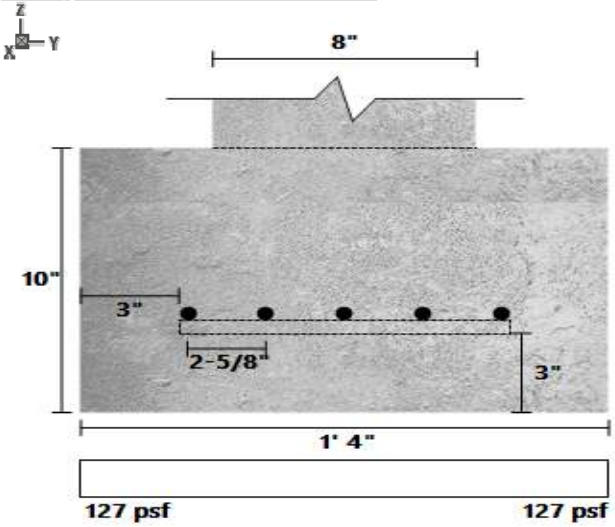
LOAD LIST

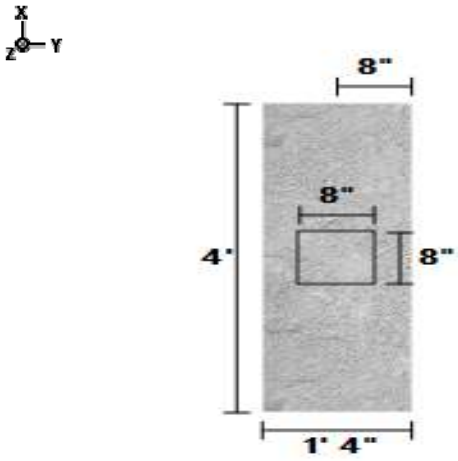
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

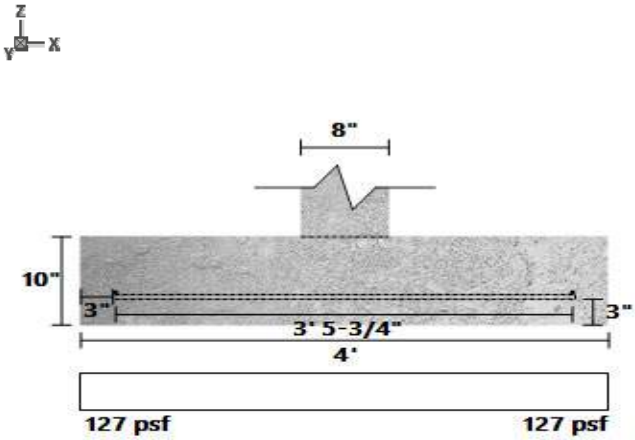
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #11	B	33.86842	-	0	-	Dead	Z

SpotFtg Hdr #11-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #14-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.5%)	126.8	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	14.9	19718.0	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	14.9	19718.0	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	42.1	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	13.0	17278.2	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	13.0	17278.2	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	50.5	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

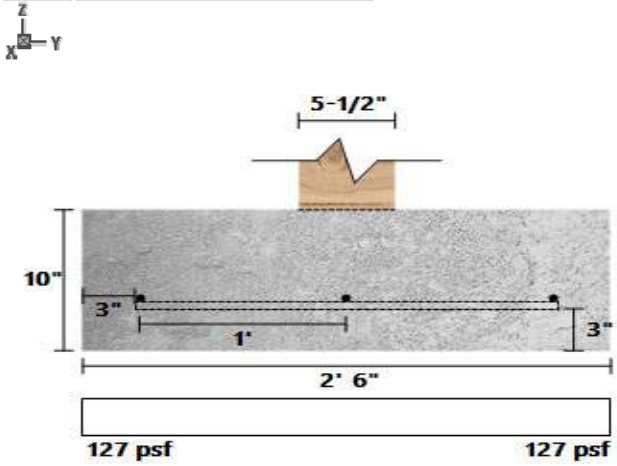
LOAD LIST

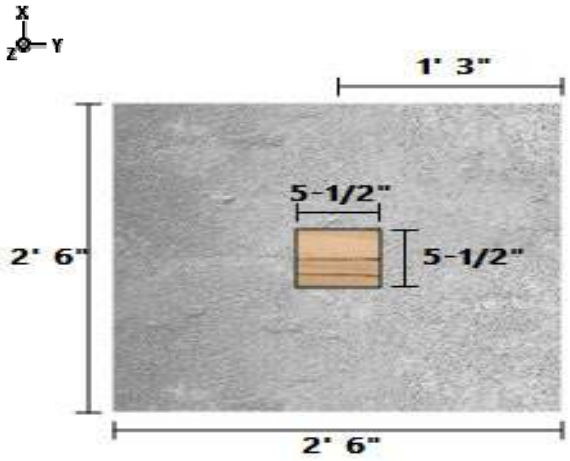
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

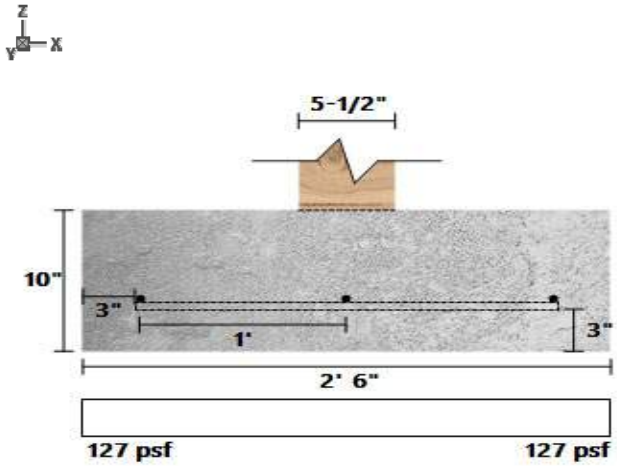
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #14	A	36.0636	-	0	-	Dead	Z

SpotFtg Bm #14-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #14-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.5%)	126.8	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	14.9	19718.0	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	14.9	19718.0	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	42.1	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	13.0	17278.2	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	13.0	17278.2	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	50.5	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

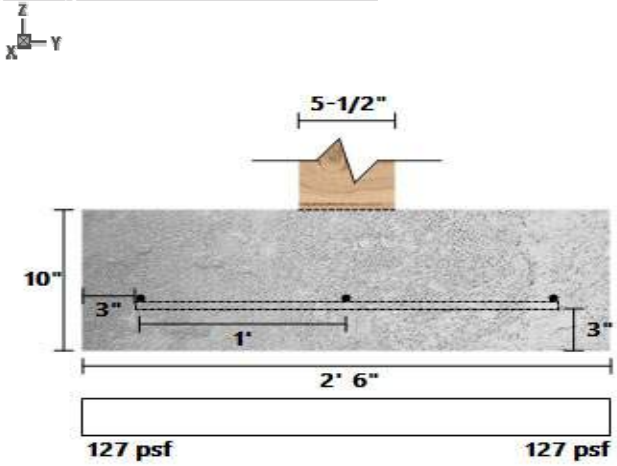
LOAD LIST

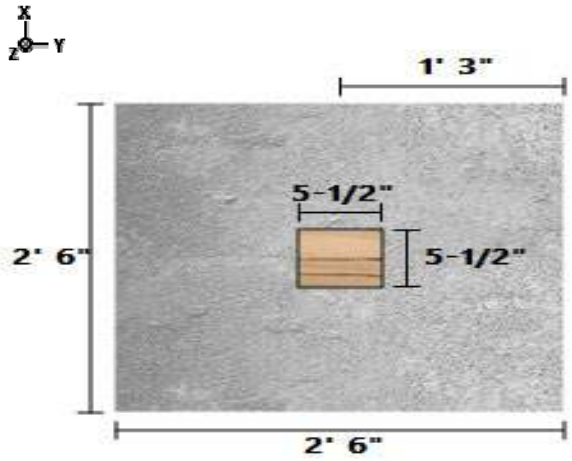
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

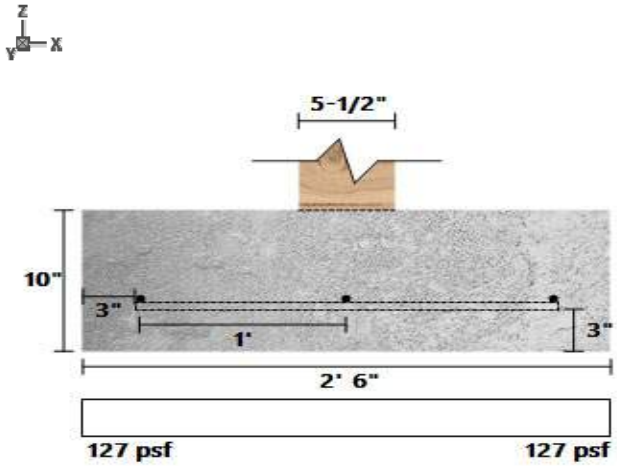
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #14	B	36.0636	-	0	-	Dead	Z

SpotFtg Bm #14-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #15-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.4%)	129.7	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.8%)	36.4	23661.6	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.8%)	36.4	23661.6	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.8%)	97.7	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.8%)	35.3	22946.6	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.8%)	35.3	22946.6	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	110.5	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

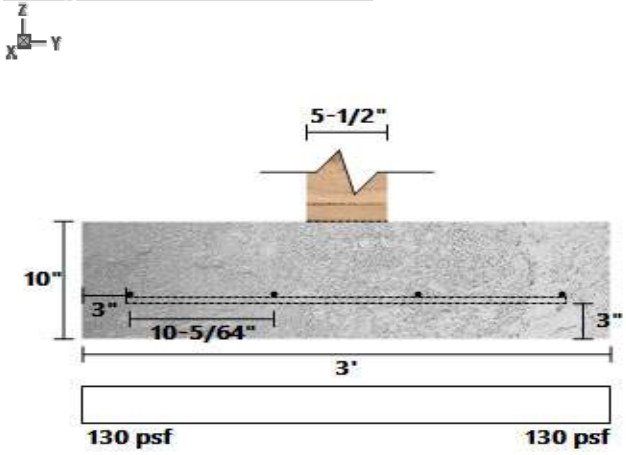
LOAD LIST

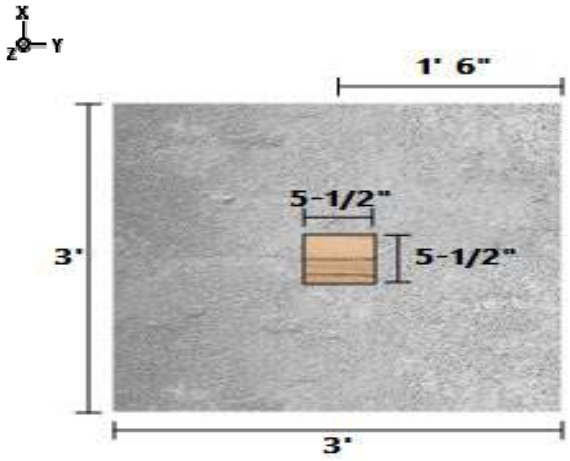
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

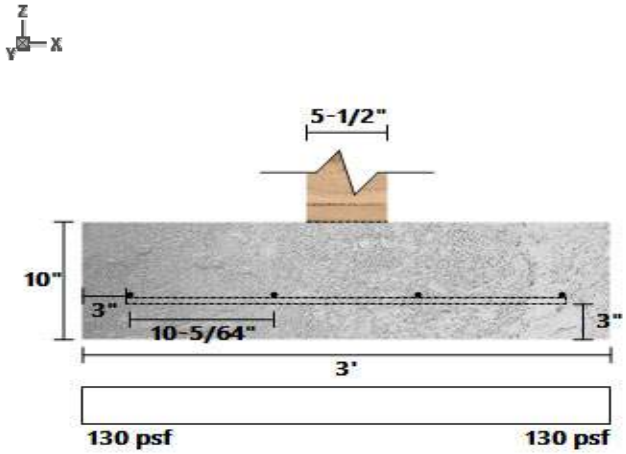
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #15	A	78.89803	-	0	-	Dead	Z

SpotFtg Bm #15-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #15-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.4%)	129.7	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	32.6	23661.6	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	32.6	23661.6	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	91.9	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	25.1	22946.6	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	25.1	22946.6	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	110.5	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

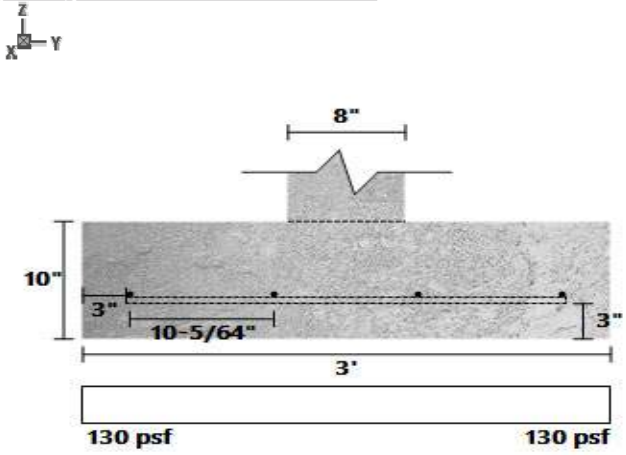
LOAD LIST

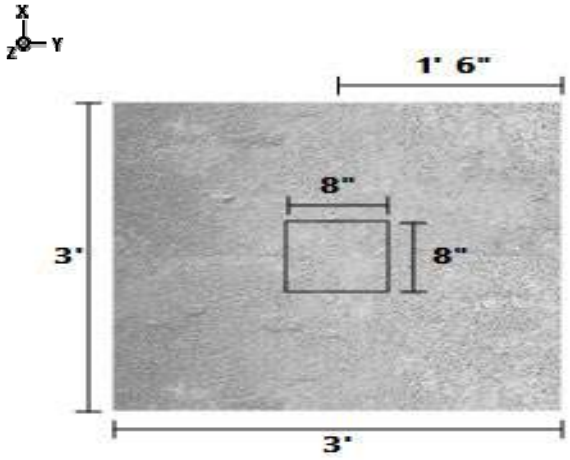
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

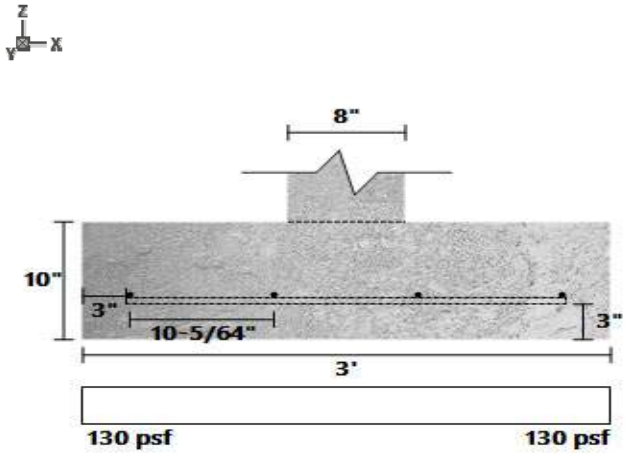
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #15	B	78.89803	-	0	-	Dead	Z

SpotFtg Bm #15-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #13-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.3%)	131.0	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	10.7	15774.4	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	10.7	15774.4	1.4D	LRFD
Two-Way Shear (lbf)	PASS (100.0%)	34.7	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (100.0%)	6.2	17124.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (100.0%)	6.2	17124.7	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	55.7	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

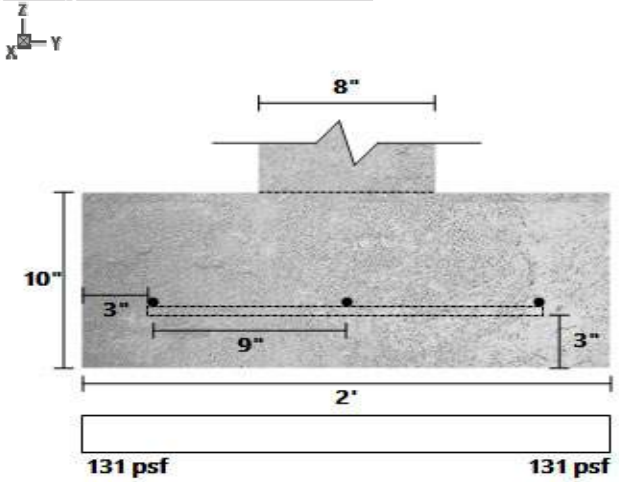
LOAD LIST

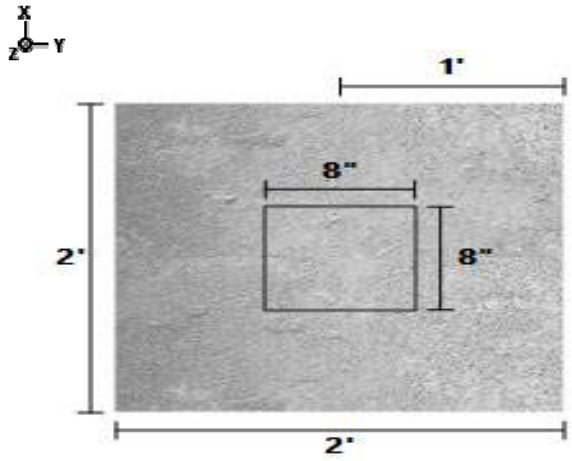
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

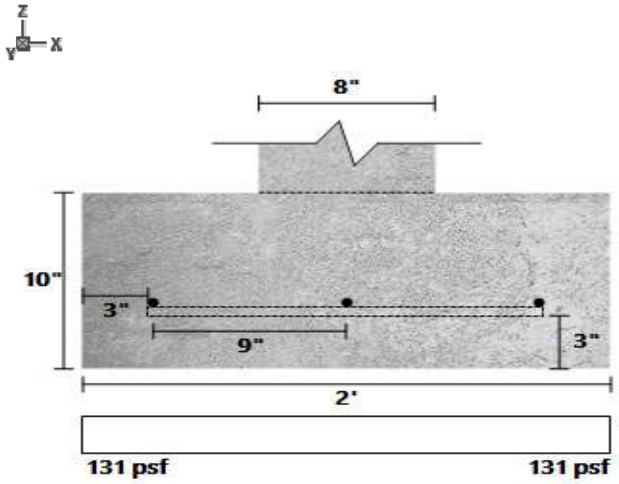
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #13	A	39.7977	-	0	-	Dead	Z

SpotFtg Bm #13-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #13-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (89.6%)	156.6	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.8%)	35.8	15774.4	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.8%)	35.8	15774.4	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	115.6	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	20.6	17124.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	20.6	17124.7	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	185.7	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

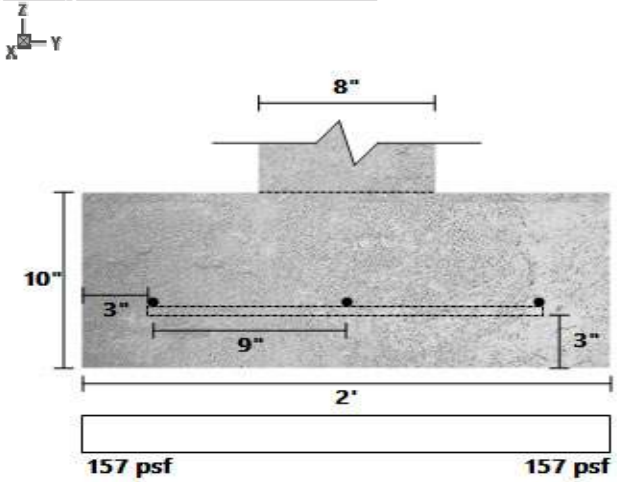
LOAD LIST

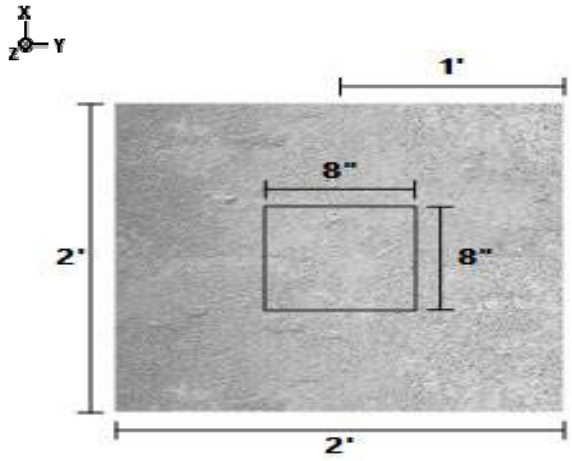
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

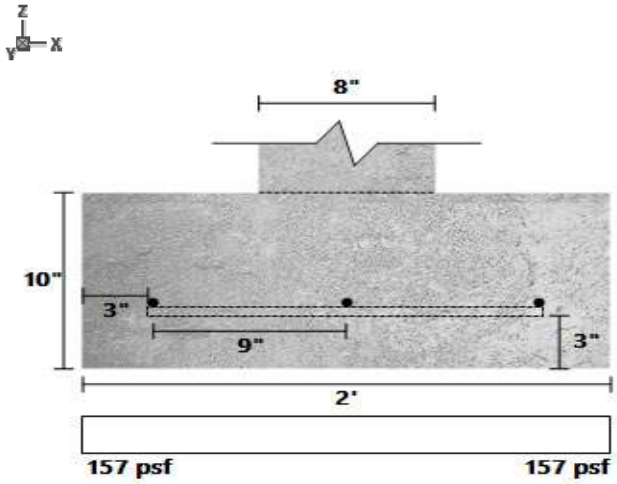
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #13	B	132.6413	-	0	-	Dead	Z
Point (lbf)	Beam #13	B	9.374532	-	0	-	Live	Z

SpotFtg Bm #13-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #10-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (90.7%)	140.1	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.7%)	71.2	23661.6	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.7%)	71.2	23661.6	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.7%)	200.8	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.8%)	54.7	22946.6	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.8%)	54.7	22946.6	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	241.3	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

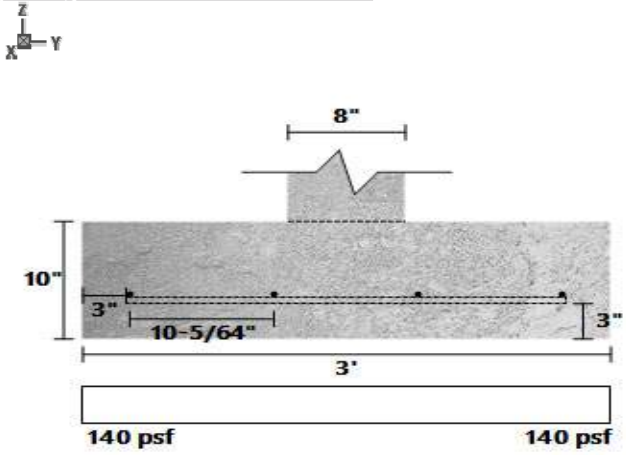
LOAD LIST

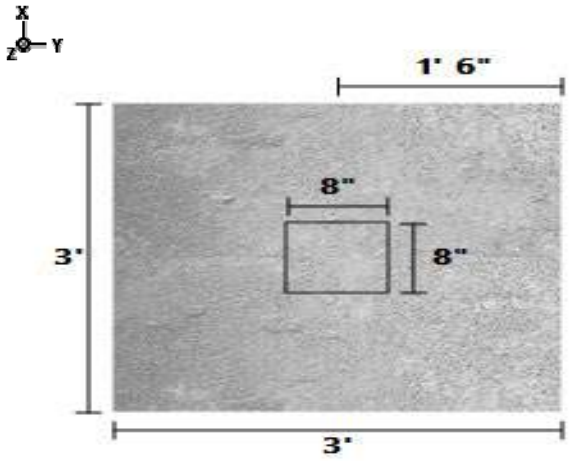
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

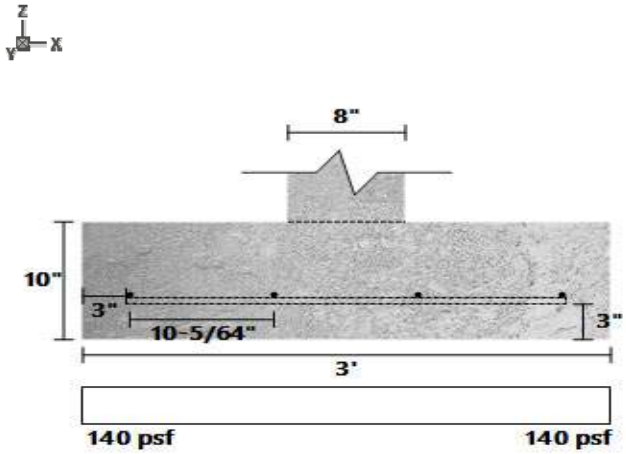
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #10	B	172.3266	-	0	-	Dead	Z

SpotFtg Bm #10-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #9-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (75.4%)	369.3	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (95.7%)	1016.8	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (95.7%)	1016.8	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (96.3%)	2866.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (96.6%)	781.5	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (96.6%)	781.5	22946.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (98.4%)	3445.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

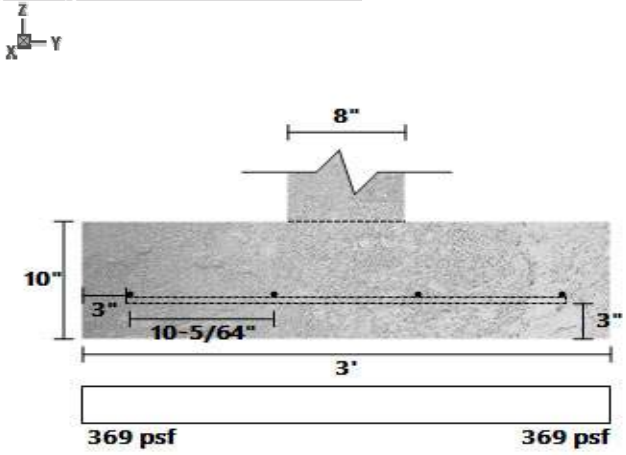
LOAD LIST

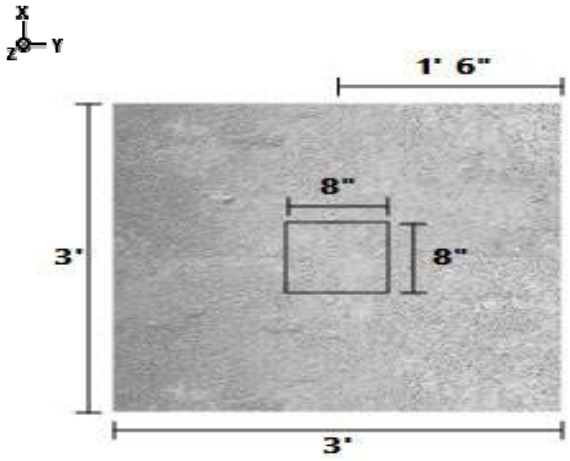
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

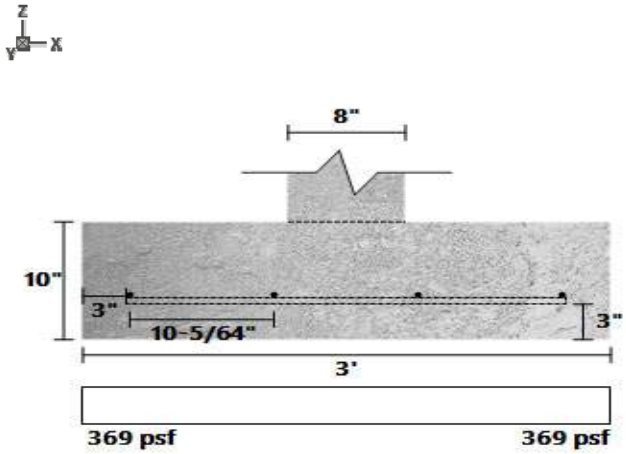
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #9	B	350.4343	-	0	-	Dead	Z
Point (lbf)	Beam #9	B	6.960521	-	0	-	Live	Z
Point (lbf)	Beam #9	B	1885.408	-	0	-	Snow	Z

SpotFtg Bm #9-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #9-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 1.3334 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (2) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	1.3334	10	2.22	322.24

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (17.5%)	1237.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (91.6%)	888.5	10516.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (94.4%)	888.5	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (97.4%)	1998.5	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (98.9%)	192.1	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (95.5%)	512.3	11416.5	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (97.8%)	4610.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	2.7	2.7	D	LRFD

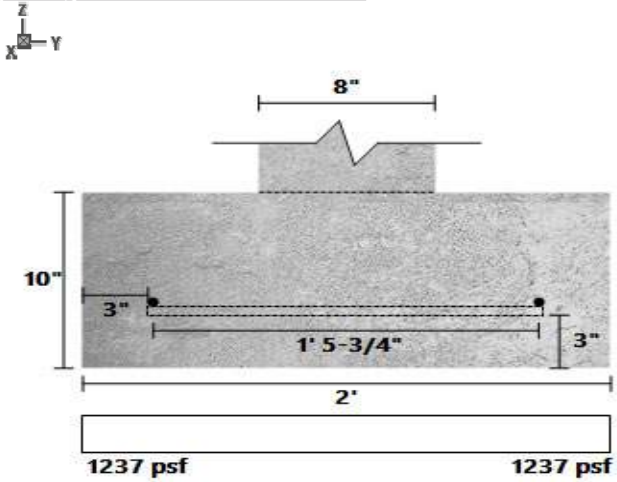
LOAD LIST

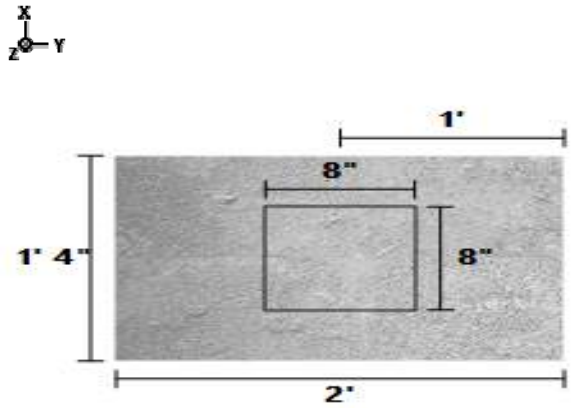
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

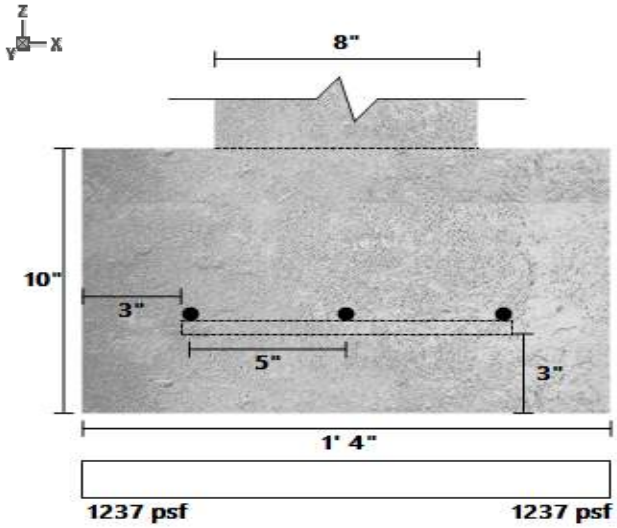
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #9	C	384.7734	-	0	-	Dead	Z
Point (lbf)	Beam #9	C	2592.432	-	0	-	Snow	Z

SpotFtg Bm #9-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg B #7-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (8.8%)	1368.6	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (90.5%)	1499.6	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (90.5%)	1499.6	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (93.8%)	4842.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (95.0%)	864.6	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (95.0%)	864.6	17124.7	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (96.3%)	7781.5	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

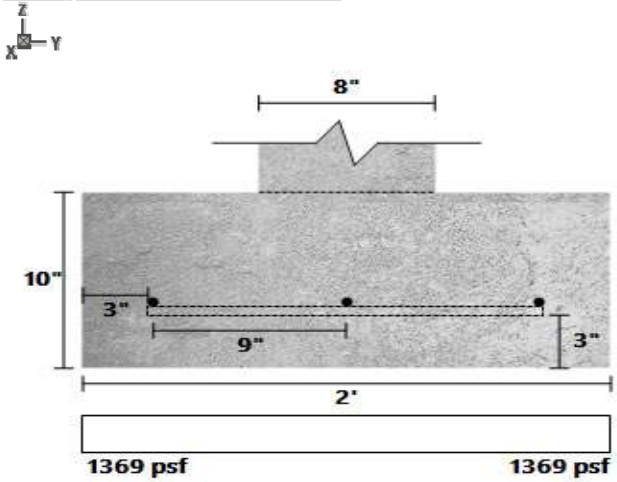
LOAD LIST

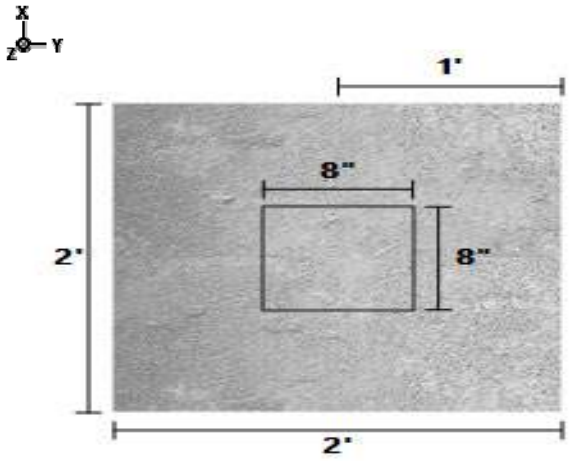
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

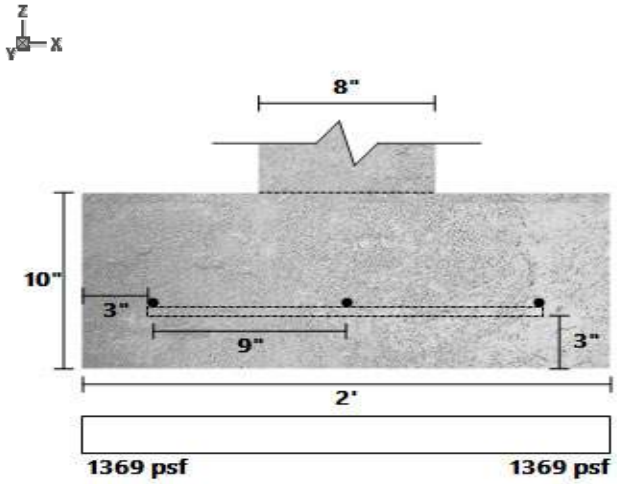
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #7	A	513.3242	-	0	-	Dead	Z
Point (lbf)	Beam #7	A	4477.835	-	0	-	Snow	Z

SpotFtg B #7-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #22-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (50.2%)	746.5	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (95.1%)	768.5	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (95.1%)	768.5	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (96.8%)	2481.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (97.4%)	443.1	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (97.4%)	443.1	17124.7	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (98.1%)	3987.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

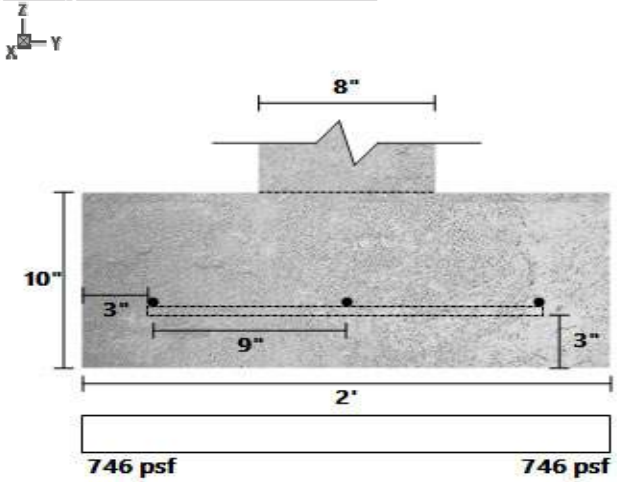
LOAD LIST

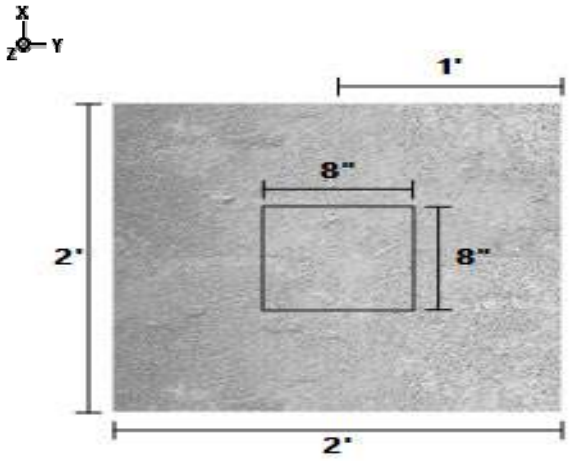
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

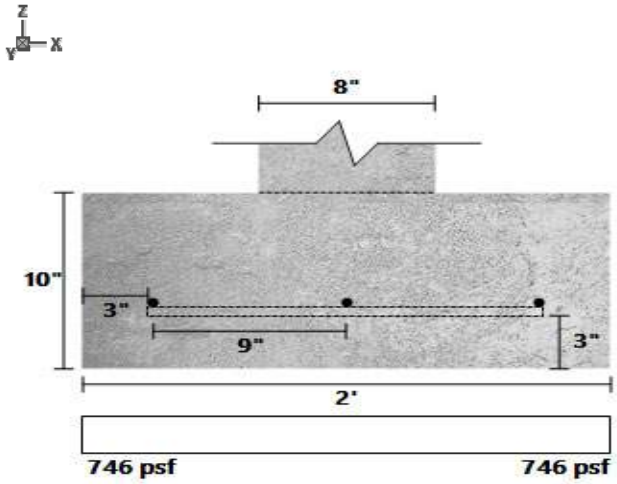
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #22	A	43.27842	-	0	-	Dead	Z
Point (lbf)	Beam #22	A	2459.29	-	0	-	Snow	Z

SpotFtg Bm #22-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #22-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3 (ft) X 3 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (9.4%)	1359.0	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (77.8%)	5248.5	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (77.8%)	5248.5	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (80.9%)	14797.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (82.4%)	4034.1	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (82.4%)	4034.1	22946.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (91.6%)	17783.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	9.0	9.0	D	LRFD

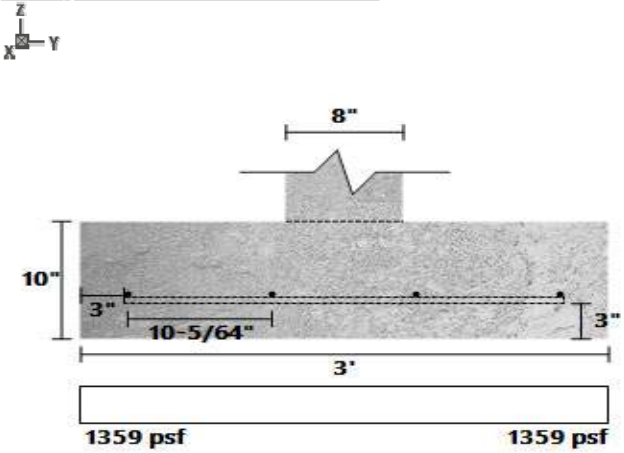
LOAD LIST

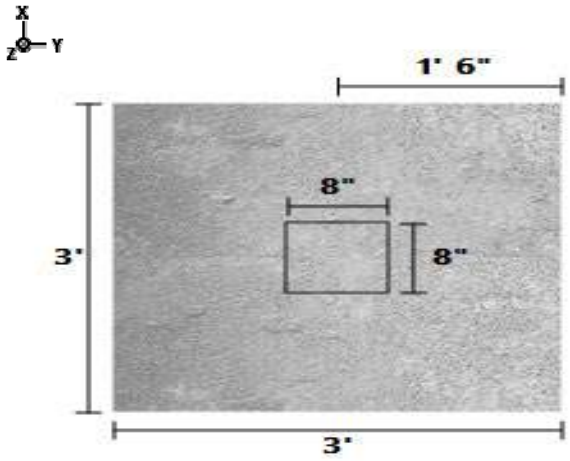
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

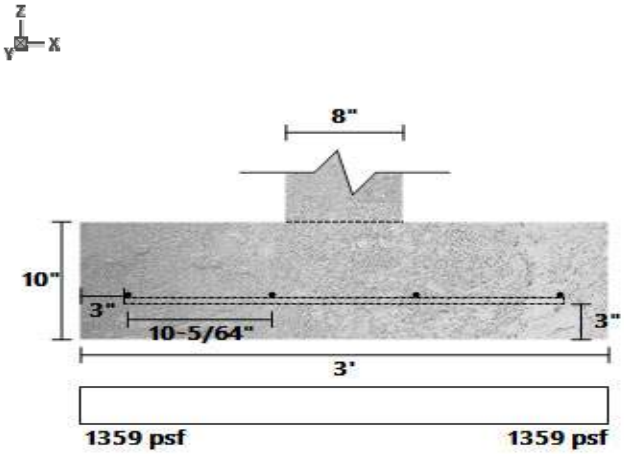
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #22	B	144.2502	-	0	-	Dead	Z
Point (lbf)	Beam #22	B	9.999709	-	0	-	Live	Z
Point (lbf)	Beam #22	B	10999.39	-	0	-	Snow	Z

SpotFtg Bm #22-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #19-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 1.3334 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (2) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	1.3334	10	2.78	402.8

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (90.5%)	142.1	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.8%)	24.8	10516.8	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	24.8	19718.0	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	53.4	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (100.0%)	4.1	17278.2	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	16.4	11416.5	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	97.6	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	3.3	3.3	D	LRFD

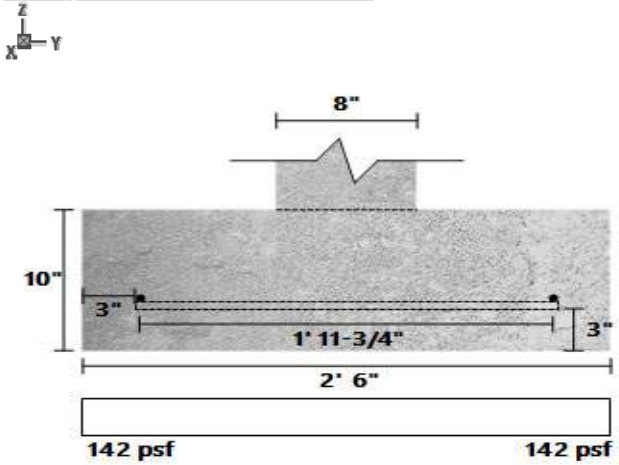
LOAD LIST

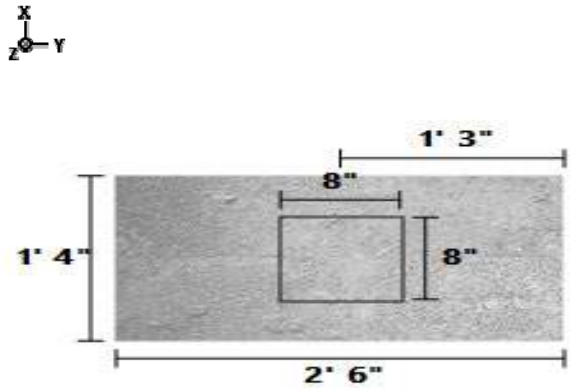
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

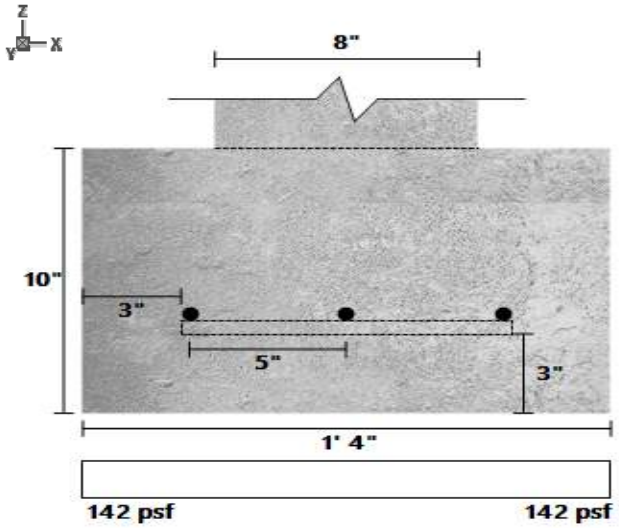
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #19	A	69.71754	-	0	-	Dead	Z

SpotFtg Bm #19-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #19-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.4%)	129.3	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.8%)	43.5	27605.2	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.8%)	43.5	27605.2	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.8%)	117.7	77557.5	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.8%)	38.5	23076.6	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.8%)	38.5	23076.6	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	134.2	212160.0	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

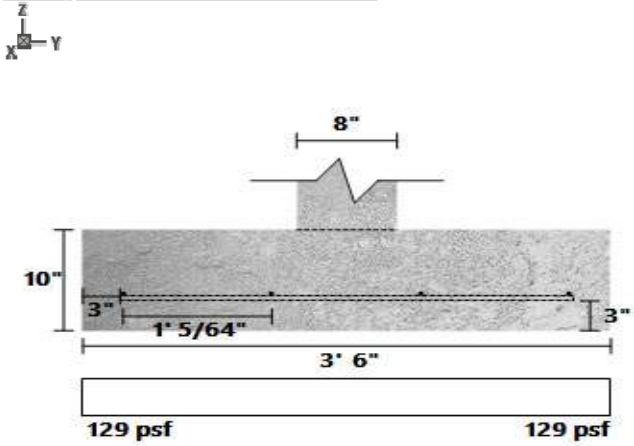
LOAD LIST

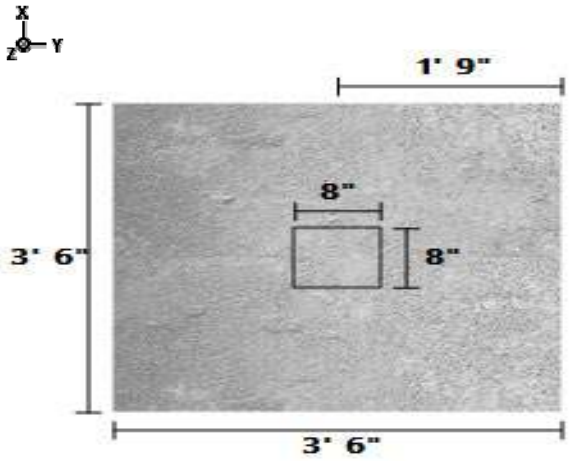
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

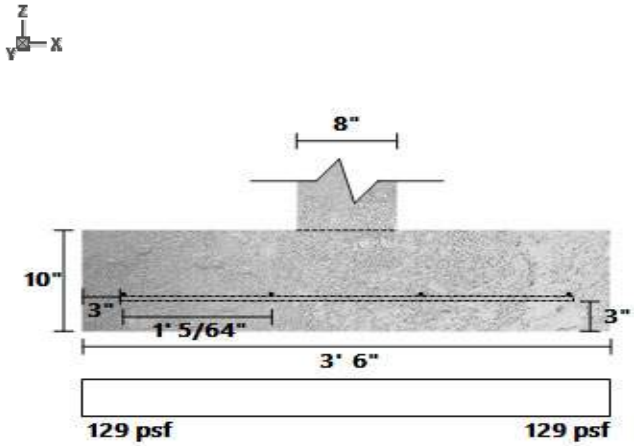
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #19	B	95.86126	-	0	-	Dead	Z
Point (lbf)	Beam #19	B	6.368401	-	0	-	Live	Z

SpotFtg Bm #19-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #18-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (4.0%)	1439.7	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (83.6%)	3225.9	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (83.6%)	3225.9	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (87.6%)	9624.0	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (87.7%)	2133.0	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (87.7%)	2133.0	17278.2	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (94.0%)	12692.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

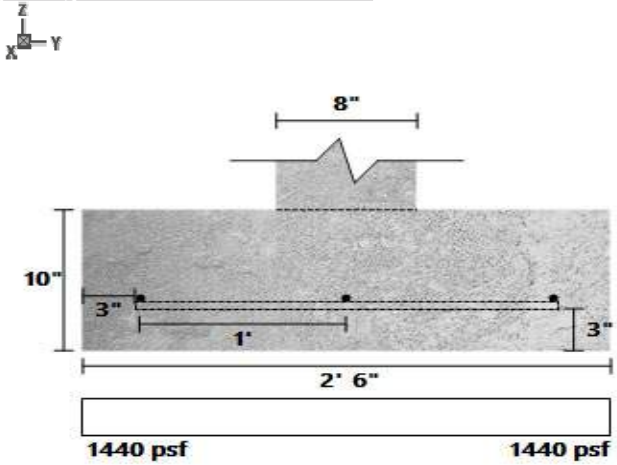
LOAD LIST

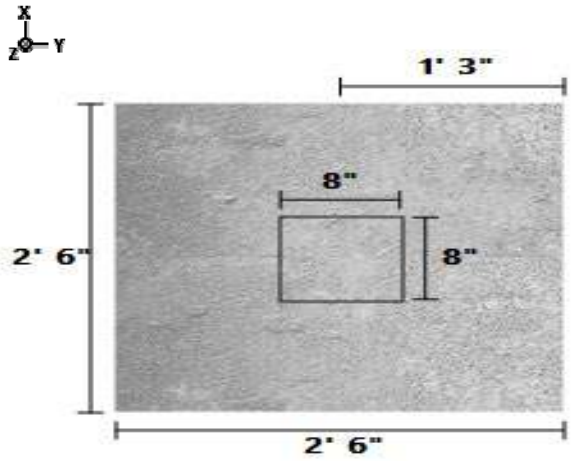
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

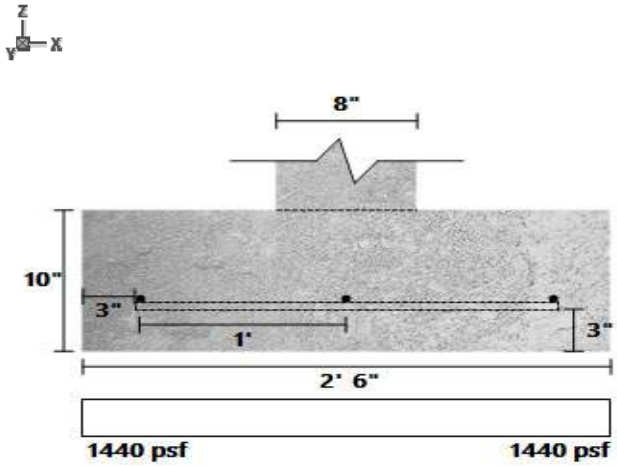
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #18	A	1243.902	-	0	-	Dead	Z
Point (lbf)	Beam #18	A	6999.003	-	0	-	Snow	Z

SpotFtg Bm #18-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #18-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (26.1%)	1107.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (77.9%)	6089.9	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (77.9%)	6089.9	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (78.8%)	16457.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (76.7%)	5382.2	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (76.7%)	5382.2	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (91.2%)	18772.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

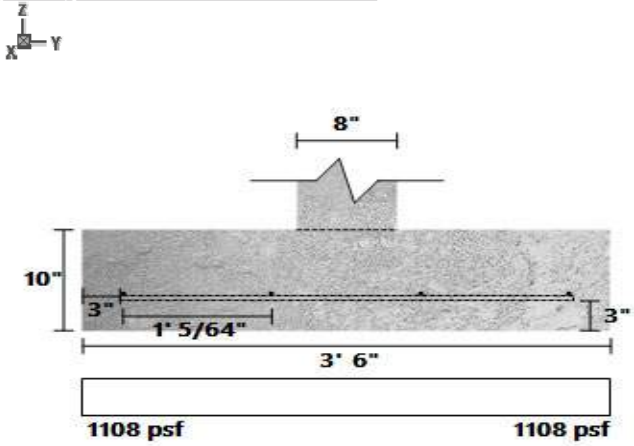
LOAD LIST

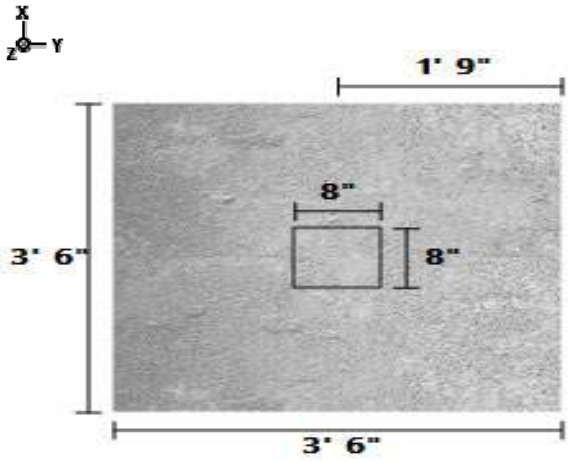
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

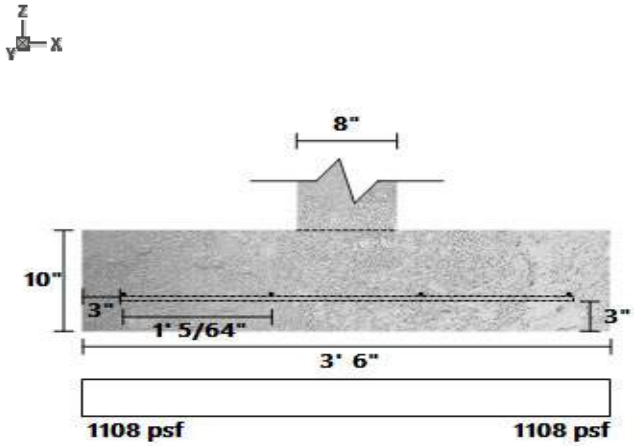
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #18	B	1464.895	-	0	-	Dead	Z
Point (lbf)	Beam #18	B	10627.04	-	0	-	Snow	Z
Point (lbf)	Beam #18	B	10.5	-	0	-	Live	Z

SpotFtg Bm #18-2 DIAGRAMS







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DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #16-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2.5 (ft) X 2.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (11.2%)	1331.5	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (84.8%)	3002.0	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (84.8%)	3002.0	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (88.5%)	8955.9	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (88.5%)	1984.9	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (88.5%)	1984.9	17278.2	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (94.4%)	11811.1	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	6.3	6.3	D	LRFD

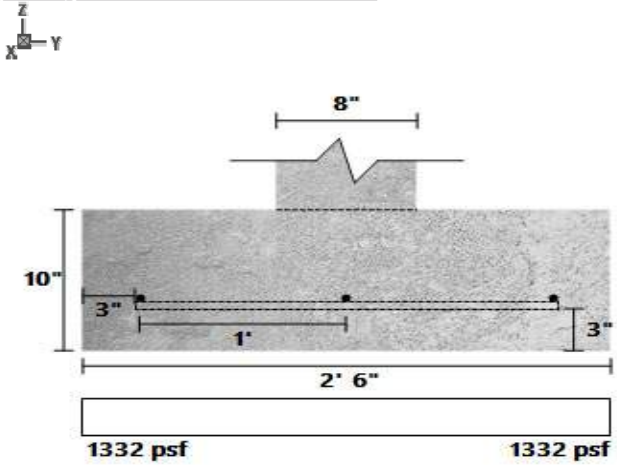
LOAD LIST

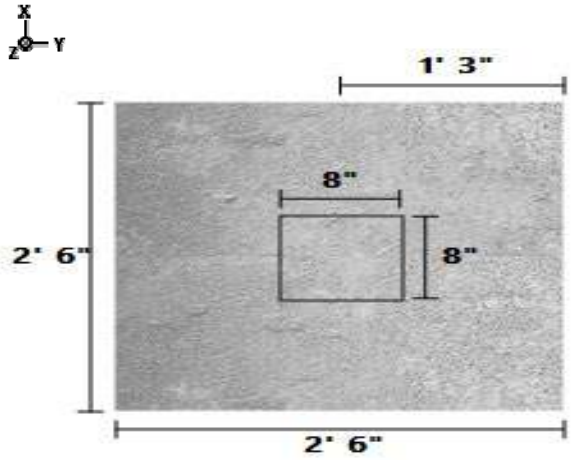
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

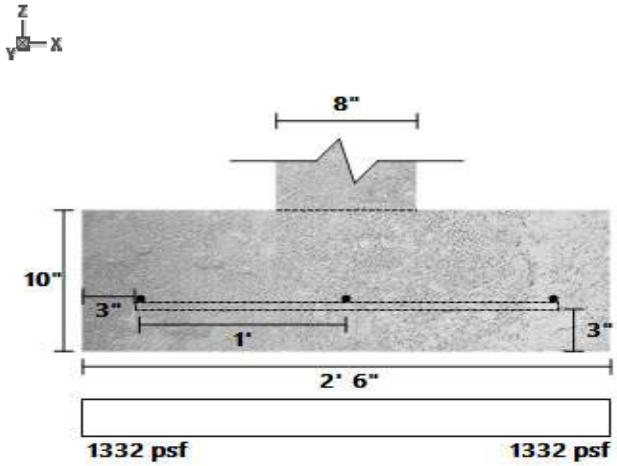
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #16	B	757.3234	-	0	-	Dead	Z
Point (lbf)	Beam #16	B	6.25	-	0	-	Live	Z
Point (lbf)	Beam #16	B	6809.399	-	0	-	Snow	Z

SpotFtg Bm #16-2 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #16	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.6%)	125.6	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (100.0%)	6.1	15774.4	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (100.0%)	6.1	15774.4	1.4D	LRFD
Two-Way Shear (lbf)	PASS (100.0%)	18.5	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (100.0%)	4.9	17124.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (100.0%)	4.9	17124.7	1.4D	LRFD
Crushing (lbf)	PASS (100.0%)	25.0	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

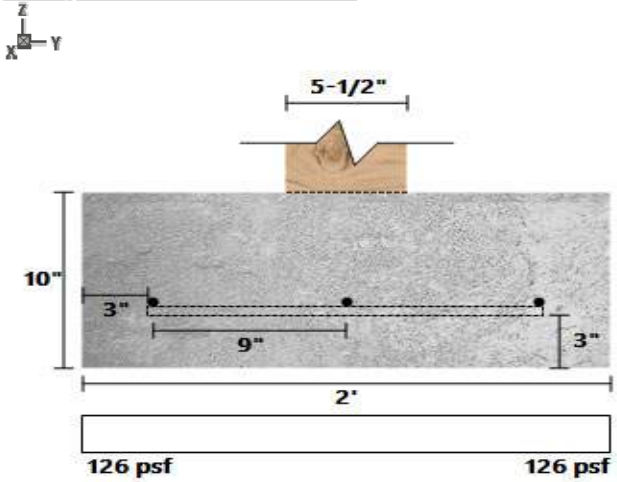
LOAD LIST

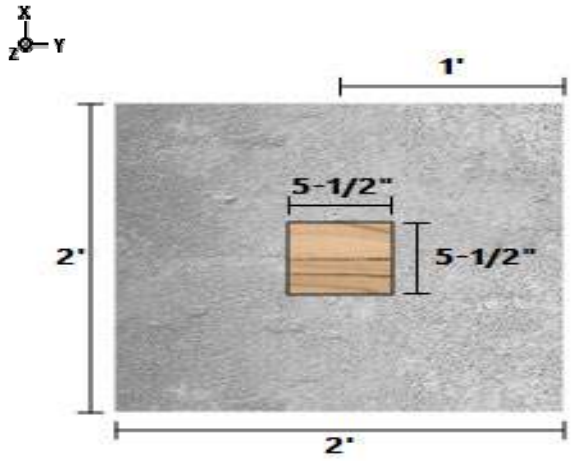
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

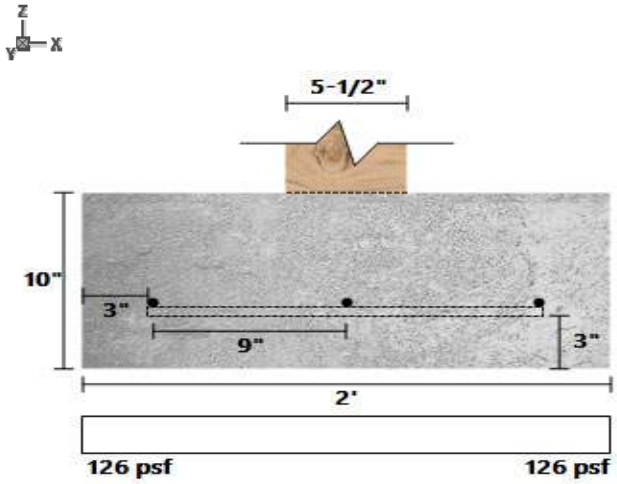
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #16	A	17.875	-	0	-	Dead	Z

SpotFtg Hdr #16 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	24-005 Vanderhoef
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #17	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

2 (ft) X 2 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (91.3%)	130.5	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (99.9%)	12.9	15774.4	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (99.9%)	12.9	15774.4	1.4D	LRFD
Two-Way Shear (lbf)	PASS (99.9%)	38.9	64412.2	1.4D	LRFD
Moment X (lbf-ft)	PASS (99.9%)	10.3	17124.7	1.4D	LRFD
Moment Y (lbf-ft)	PASS (99.9%)	10.3	17124.7	1.4D	LRFD
Crushing (lbf)	PASS (99.9%)	52.5	100278.8	1.4D	LRFD
Compression (ft^2)	PASS (100.0%)	4.0	4.0	D	LRFD

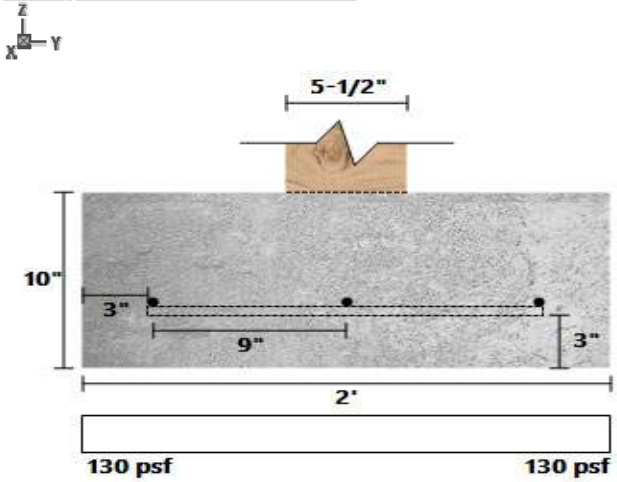
LOAD LIST

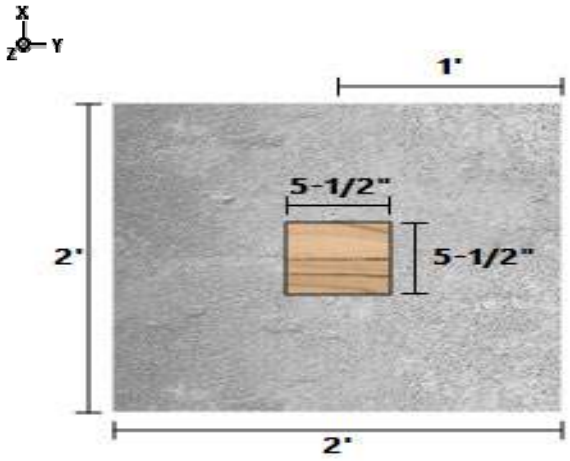
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

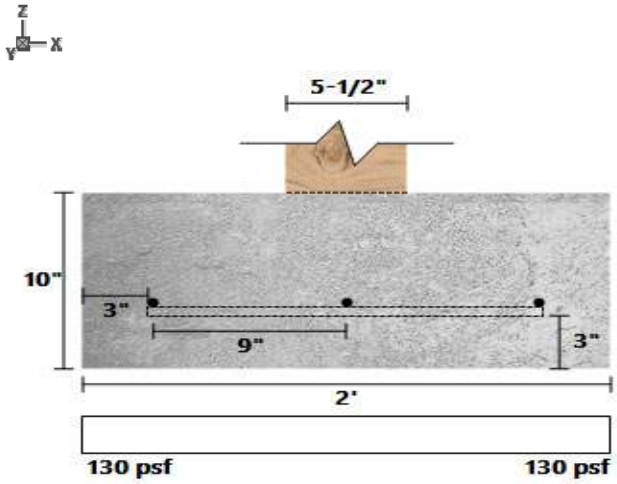
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #17	A	37.52467	-	0	-	Dead	Z

SpotFtg Hdr #17 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #20-1	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
5.5	5.5	Wood	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (20.1%)	1198.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (73.9%)	7216.4	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (73.9%)	7216.4	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (71.1%)	18642.3	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (66.3%)	7785.2	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (66.3%)	7785.2	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (79.7%)	20375.6	100278.8	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

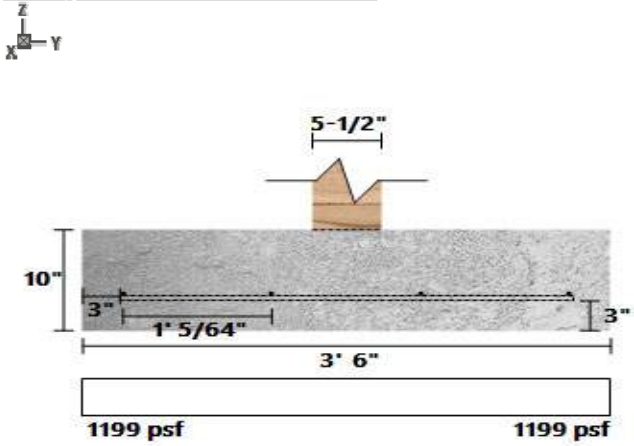
LOAD LIST

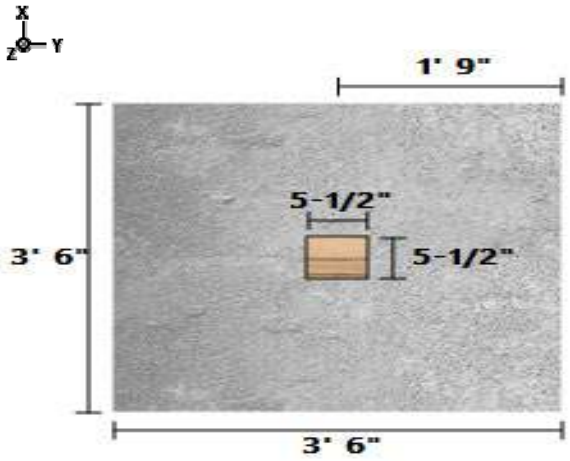
Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

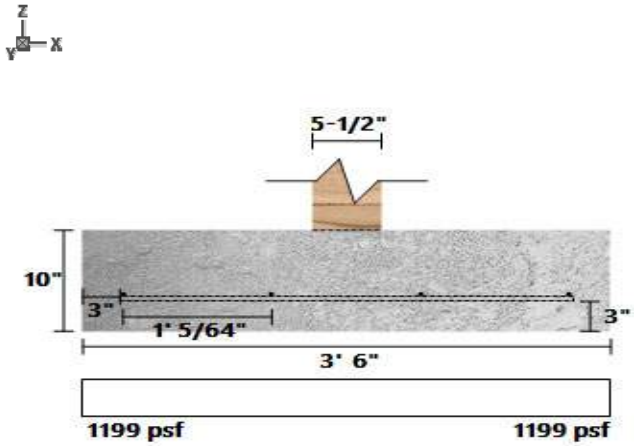
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #20	A	1915.591	-	0	-	Dead	Z
Point (lbf)	Beam #20	A	9.999996	-	0	-	Live	Z
Point (lbf)	Beam #20	A	11291.2	-	0	-	Snow	Z

SpotFtg Bm #20-1 DIAGRAMS







PASS

DATE:	6/11/2024	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	24-005 Vanderhoef
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #20-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		

3.5 (ft) X 3.5 (ft) X 10 (in)	Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft^3)	Footing Weight (lb/ft)
3.5	3.5	10	10.21	1480.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lbf/ft^3)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)
0

COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lbf/ft^2)	Density (lbf/ft^3)	Cohesion	Friction Angle	Depth (ft)	Rankine Coefficient (Kp)
1500	140	0	30	0	3

REBAR

Bottom Bar Size #	fy (psi)	Es (psi)
4	60000	2.9E+07

COVER

Top Cover (in.	Bottom Cover (in.	Side Cover (in.
3	3	3

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft^2)	PASS (20.1%)	1198.0	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (76.1%)	6604.3	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (76.1%)	6604.3	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf)	PASS (77.0%)	17847.4	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (74.7%)	5836.9	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (74.7%)	5836.9	23076.6	1.2D+1.6S+L	LRFD
Crushing (lbf)	PASS (90.4%)	20358.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft^2)	PASS (100.0%)	12.3	12.3	D	LRFD

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Point	1	-	0	-	Live	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #20	B	1914.175	-	0	-	Dead	Z
Point (lbf)	Beam #20	B	10	-	0	-	Live	Z
Point (lbf)	Beam #20	B	11281.43	-	0	-	Snow	Z

SpotFtg Bm #20-2 DIAGRAMS