

DATE:	11/19/2023	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers	
	--			
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	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0.6666667	1.00	0.98	1.00	1.00
2	2	0	2	0.6666667	1.00	0.98	1.00	1.00

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 (50.6%)	0.069 (=L/490)	0.141 (=L/240)	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	80	1265	1345

Reaction Location

A

B

CONNECTORS		(All connectors are Simpson Strong-Tie connectors)*			Header	Joist Nails (in)	Nailer
Support A	Model	Type	Adequacy (%)	Fastening (in)		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 (lb/ft ²)	Uniform	150	150	0	4	Snow	Y
Uniform (lb/ft)	Uniform	17	17	0	4	Dead	Y
Self Weight (lb/ft)	-	1.88	1.88	0	4	Dead	Y



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STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #1	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 18.5 Member Slope: 0/12 Actual Length (ft): 18.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0	1.00	0.27	1.00	1.00
2	2.5	0	2.5	0	1.00	0.91	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (50.9%)	160.9	327.8	15.91	D+S	1.15
Bending Stress Y (psi)	PASS (31.9%)	2072.3	3045.1	7.77	D+S	1.15
Deflection Y (in)	PASS (26.1%)	0.246 (=L/325)	0.333 (=L/240)	18.5	S	0
Bearing Stress (psi)	PASS (31.8%)	566.0	830.4	16	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	188	2341	2529
B	258	3209	3467
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	18.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	18.5	Dead	Y
Self Weight (lbf/ft)	-	7.15	7.15	0	18.5	Dead	Y

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STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis			
CUSTOMER:		REVIEWED BY:	Stephen Curtis			
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers			
	--					
LEVEL:	Roof	LOADING:	ASD			
MEMBER NAME:	Rafters #1	CODE:	2018 International Building Code			
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS			
MATERIAL:	I-Joists					
Weyerhaeuser	TJI 360	(1) 11.875	16(in) O.C.	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 3/12 Actual Length (ft): 16.49 Roof Pitch: 3/12 O.C. Spacing(in): 16

El x10 ⁶ (lbf-in ²)	BSW (lbf/ft)	Lams	K x10 ⁶ (lbf)	Mcap (lbf-ft)	Vcap (lbf)	End Rcap 1.75 NS (lbf)	End Rcap 3.5 NS (lbf)	End Rcap 1.75 WS (lbf)	End Rcap 3.5 WS (lbf)	Int Rcap 3.5 NS (lbf)	Int Rcap 5.25 NS (lbf)	Int Rcap 3.5 WS (lbf)	Int Rcap 5.25 WS (lbf)
419	3	1	4.5	6180	1705	1080	1505	1440	1705	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	6	0	6	1.5
2	10	0	10	2.5

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (24.6%)	1478.7	1960.8	6.08	D+S	1.15
Bending Moment (lbf-ft)	PASS (44.1%)	3976.3	7107.0	5.92	D+S	1.15
Deflection Y (in)	PASS (70.1%)	0.246 (=L/805)	0.825 (=L/240)	0	S	0
Bearing Load (lbf)	PASS (10.3%)	2903.3	3237.3	6	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	264	2639	2903
C	66	659	725

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	150	150	0	16	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	16	Dead	Y
Self Weight (lbf/ft)	-	3	3	0	16	Dead	Y

PASS

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STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 31.5 Member Slope: 0/12 Actual Length (ft): 31.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	29	0	29	0	1.00	0.37	1.00	1.00
2	2.5	0	2.5	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (67.8%)	105.5	327.8	28.98	D+S	1.15
Bending Stress Y (psi)	PASS (38.0%)	1797.1	2900.8	14.49	D+S	1.15
Deflection Y (in)	PASS (18.0%)	0.273 (=L/293)	0.333 (=L/240)	31.5	S	0
Bearing Stress (psi)	PASS (43.3%)	471.2	830.4	29	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	539	4318	4857
B	640	5132	5772
C	0	0	0

Reaction Location

A	B	C
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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	31.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	31.5	Dead	Y
Self Weight (lbf/ft)	-	20.42	20.42	0	31.5	Dead	Y

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STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #3	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	14.29	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 0.98 C_r = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	22	0	22	0	1.00	0.65	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (66.0%)	111.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (30.9%)	2103.7	3045.1	11	D+S	1.15
Deflection Y (in)	PASS (32.6%)	0.988 (=L/356)	1.467 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (60.3%)	297.5	750.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	344	3300	3644
B	344	3300	3644

Reaction Location

A	B
---	---

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	22	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	22	Dead	Y
Self Weight (lbf/ft)	-	14.29	14.29	0	22	Dead	Y



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #4	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 38.5 Member Slope: 0/12 Actual Length (ft): 38.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
140	4666.67	35.73	40.83	4	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	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	36	0	36	0	1.00	0.88	1.00	1.00
2	2.5	0	2.5	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (79.0%)	68.7	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (49.1%)	1476.1	2900.8	18.095	D+S	1.15
Deflection Y (in)	PASS (20.7%)	0.264 (=L/303)	0.333 (=L/240)	38.5	S	0
Bearing Stress (psi)	PASS (63.8%)	300.7	830.4	36	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	1036	5374	6410
B	1191	6176	7367
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	38.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	38.5	Dead	Y
Self Weight (lbf/ft)	-	40.83	40.83	0	38.5	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #5	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 11.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
19.69	207.64	5.02	5.74	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.34	1.00	1.00
2	14	0	14	0	1.00	0.94	1.00	1.00
3	2.5	0	2.5	0	1.00	0.94	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.7%)	168.2	327.8	2.66	D+S	1.15
Bending Stress Y (psi)	PASS (28.5%)	2242.6	3137.0	9.5	D+S	1.15
Deflection Y (in)	PASS (15.3%)	0.282 (=L/283)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (39.7%)	500.6	830.4	16.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	216	2850	3066
C	216	2850	3066
D	0	0	0

Reaction Location

A B C D

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	19	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	19	Dead	Y
Self Weight (lbf/ft)	-	5.74	5.74	0	19	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #6	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 28 Member Slope: 0/12 Actual Length (ft): 28 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
56	1194.67	14.29	16.33	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 0.96C_r = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.56	1.00	1.00
2	23	0	23	0	1.00	0.99	1.00	1.00
3	2.5	0	2.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (68.7%)	102.5	327.8	2.52	D+S	1.15
Bending Stress Y (psi)	PASS (43.6%)	1687.5	2990.2	14	D+S	1.15
Deflection Y (in)	PASS (23.7%)	0.254 (=L/315)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (54.1%)	381.0	830.4	25.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	467	4200	4667
C	467	4200	4667
D	0	0	0

Reaction Location

A B C D

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	28	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	28	Dead	Y
Self Weight (lbf/ft)	-	16.33	16.33	0	28	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Roof	LOADING:	ASD		
MEMBER NAME:	Trusses #7	CODE:	2018 International Building Code		
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS		
MATERIAL:	Structural Composite Lumber				
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 18	24(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 47.5 Member Slope: 0/12 Actual Length (ft): 47.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63	1701	16.08	18.38	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	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	25	0	25	0	1.00	0.46	1.00	1.00
2	20	0	20	0	1.00	0.63	1.00	1.00
3	2.5	0	2.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (64.0%)	118.2	327.8	24.7	D+S	1.15
Bending Stress Y (psi)	PASS (10.7%)	1286.8	1441.6	24.7	D+S	1.15
Deflection Y (in)	PASS (76.2%)	0.396 (=L/1010)	1.667 (=L/240)	10.925	S	0
Bearing Stress (psi)	PASS (38.7%)	491.1	801.1	25	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	350	2971	3321
B	997	8456	9453
C	333	2823	3156
D	0	0	0

Reaction Location

A	B	C	D

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	47.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	47.5	Dead	Y
Self Weight (lbf/ft)	-	18.38	18.38	0	47.5	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #8	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(3) 1.75 X 14	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 45 Member Slope: 0/12 Actual Length (ft): 45 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	29	0	29	0	1.00	0.88	1.00	1.00
2	16	0	16	0	1.00	0.97	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (64.1%)	117.6	327.8	28.8	D+S	1.15
Bending Stress Y (psi)	PASS (34.6%)	1792.1	2738.9	28.8	D+S	1.15
Deflection Y (in)	PASS (42.8%)	1.105 (=L/420)	1.933 (=L/240)	13.05	S	0
Bearing Stress (psi)	PASS (55.9%)	353.6	801.1	29	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	452	3532	3984
B	1160	9052	10212
C	117	917	1034

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 ²)	Uniform	150	150	0	45	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	45	Dead	Y
Self Weight (lbf/ft)	-	21.44	21.44	0	45	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #9	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 9.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 47 Member Slope: 0/12 Actual Length (ft): 47 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.94	1.00	1.00
2	14.5	0	14.5	0	1.00	0.99	1.00	1.00
3	14	0	14	0	1.00	0.94	1.00	1.00
4	16	0	16	0	1.00	0.92	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (56.2%)	143.5	327.8	31.02	D+S	1.15
Bending Stress Y (psi)	PASS (36.8%)	1879.5	2971.7	31.02	D+S	1.15
Deflection Y (in)	PASS (45.4%)	0.182 (=L/439)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (52.1%)	397.9	830.4	17	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	229	2603	2832
C	395	4480	4875
D	447	5069	5516
E	172	1947	2119

Reaction Location

A	B	C	D	E

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	47	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	47	Dead	Y
Self Weight (lbf/ft)	-	9.44	9.44	0	47	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #10	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 7.25	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 11 Member Slope: 0/12 Actual Length (ft): 11 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
12.69	55.57	3.24	3.7	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0	1.00	0.82	1.00	1.00
2	2.5	0	2.5	0	1.00	0.97	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (46.9%)	173.9	327.8	8.47	D+S	1.15
Bending Stress Y (psi)	PASS (43.2%)	1891.7	3330.3	3.85	D+S	1.15
Deflection Y (in)	PASS (48.3%)	0.172 (=L/465)	0.333 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (55.1%)	372.7	830.4	8.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	80	1165	1245
B	147	2135	2282
C	0	0	0

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 ²)	Uniform	150	150	0	11	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	11	Dead	Y
Self Weight (lbf/ft)	-	3.7	3.7	0	11	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #11	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(2) 1.75 X 20	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 35 Member Slope: 0/12 Actual Length (ft): 35 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
70	2333.33	17.86	20.42	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.35	1.00	1.00
2	30	0	30	0	1.00	0.98	1.00	1.00
3	2.5	0	2.5	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (67.6%)	106.3	327.8	2.8	D+S	1.15
Bending Stress Y (psi)	PASS (34.6%)	1898.0	2900.8	17.5	D+S	1.15
Deflection Y (in)	PASS (10.3%)	0.299 (=L/267)	0.333 (=L/240)	35	S	0
Bearing Stress (psi)	PASS (41.9%)	482.0	830.4	2.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	655	5250	5905
C	655	5250	5905
D	0	0	0

Reaction Location

A	B	C	D
---	---	---	---

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	35	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	35	Dead	Y
Self Weight (lbf/ft)	-	20.42	20.42	0	35	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #12	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 23 Member Slope: 0/12 Actual Length (ft): 23 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
28	597.33	7.15	8.17	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 0.96C_r = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.21	1.00	1.00
2	18	0	18	0	1.00	0.88	1.00	1.00
3	2.5	0	2.5	0	1.00	0.88	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.3%)	156.3	327.8	2.53	D+S	1.15
Bending Stress Y (psi)	PASS (34.7%)	1953.2	2990.2	11.5	D+S	1.15
Deflection Y (in)	PASS (30.7%)	0.231 (=L/346)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (26.5%)	610.5	830.4	20.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	289	3450	3739
C	289	3450	3739
D	0	0	0

Reaction Location

A	B	C	D
---	---	---	---

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	23	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	23	Dead	Y
Self Weight (lbf/ft)	-	8.17	8.17	0	23	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #13	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 18	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 20.5 Member Slope: 0/12 Actual Length (ft): 20.5 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
31.5	850.5	8.04	9.19	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	18	0	18	0	1.00	0.19	1.00	1.00
2	2.5	0	2.5	0	1.00	0.85	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (57.3%)	139.9	327.8	17.835	D+S	1.15
Bending Stress Y (psi)	PASS (45.2%)	1613.4	2942.7	8.815	D+S	1.15
Deflection Y (in)	PASS (49.2%)	0.169 (=L/473)	0.333 (=L/240)	20.5	S	0
Bearing Stress (psi)	PASS (25.1%)	621.7	830.4	18	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	231	2648	2879
B	306	3502	3808
C	0	0	0

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 ²)	Uniform	150	150	0	20.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	20.5	Dead	Y
Self Weight (lbf/ft)	-	9.19	9.19	0	20.5	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Trusses #14	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(1) 1.75 X 16	24(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 23 Member Slope: 0/12 Actual Length (ft): 23 Roof Pitch: 0/12 O.C. Spacing(in): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
28	597.33	7.15	8.17	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	2600	1895	285	2510	750	2000	1016.535
Adjusted Values	2704	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 = 0.96C_r = 1.04 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	0.21	1.00	1.00
2	18	0	18	0	1.00	0.88	1.00	1.00
3	2.5	0	2.5	0	1.00	0.88	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (52.3%)	156.3	327.8	2.53	D+S	1.15
Bending Stress Y (psi)	PASS (34.7%)	1953.2	2990.2	11.5	D+S	1.15
Deflection Y (in)	PASS (30.7%)	0.231 (=L/346)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (26.5%)	610.5	830.4	20.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	289	3450	3739
C	289	3450	3739
D	0	0	0

Reaction Location

A	B	C	D
---	---	---	---

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	23	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	23	Dead	Y
Self Weight (lbf/ft)	-	8.17	8.17	0	23	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Rafters #2	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS
MATERIAL:	I-Joists		
Weyerhaeuser	TJI 360	(1) 11.875	16(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.5 Member Slope: 3/12 Actual Length (ft): 17.01 Roof Pitch: 3/12 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)
419	3	1	4.5	6180	1705	1080	1505	1440	1705	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	4	0	4	1
2	12.5	0	12.5	3.125

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (24.1%)	1488.4	1960.8	4.125	D+S	1.15
Bending Moment (lbf-ft)	PASS (49.8%)	3568.1	7107.0	10.89	D+S	1.15
Deflection Y (in)	PASS (73.7%)	0.145 (=L/910)	0.550 (=L/240)	0	S	0
Bearing Load (lbf)	PASS (26.5%)	1272.1	1730.8	16.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	225	2245	2470
C	116	1156	1272

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	150	150	0	16.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	16.5	Dead	Y
Self Weight (lbf/ft)	-	3	3	0	16.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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	Select Structural	(1) 1.5 X 11.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 13.5 Member Slope: 7/12 Actual Length (ft): 15.63 Roof Pitch: 7/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.88	177.98	3.16	3.85	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	1500	1000	180	1700	625	1900	690
Adjusted Values	1725	1000	180	1700	625	1900	690
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} = 0.86C_r = 1.15**BEAM DATA**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	1.458333	1.00	0.91	1.00	1.00
2	11	0	11	6.416666	1.00	0.38	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.8%)	112.3	207.0	2.565	D+S	1.15
Bending Stress Y (psi)	PASS (33.5%)	1318.9	1983.8	8.235	D+S	1.15
Deflection Y (in)	PASS (62.7%)	0.144 (=L/643)	0.386 (=L/240)	0	S	0
Compressive Stress (psi)	PASS (97.4%)	43.7	1711.7	2.565	D+S	1.15
Tensile Stress (psi)	PASS (96.5%)	39.8	1150.0	13.5	D+S	1.15
Bearing Stress (psi)	PASS (56.5%)	301.0	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (33.5%)	0.66	1.00	8.235	D+S	1.15
Bending-Tension (Unit)	PASS (33.5%)	0.67	1.00	8.37	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	200	1918	2118
C	126	1208	1334

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 ²)	Uniform	150	150	0	13.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	13.5	Dead	Y
Self Weight (lbf/ft)	-	3.85	3.85	0	13.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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	Select Structural	(1) 1.5 X 11.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 13.5 Member Slope: 7/12 Actual Length (ft): 15.63 Roof Pitch: 7/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.88	177.98	3.16	3.85	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	1500	1000	180	1700	625	1900	690
Adjusted Values	1725	1000	180	1700	625	1900	690
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} = 0.86 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	1.458333	1.00	0.91	1.00	1.00
2	11	0	11	6.416666	1.00	0.38	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.8%)	112.3	207.0	2.565	D+S	1.15
Bending Stress Y (psi)	PASS (33.5%)	1318.9	1983.8	8.235	D+S	1.15
Deflection Y (in)	PASS (62.7%)	0.144 (=L/643)	0.386 (=L/240)	0	S	0
Compressive Stress (psi)	PASS (97.4%)	43.7	1711.7	2.565	D+S	1.15
Tensile Stress (psi)	PASS (96.5%)	39.8	1150.0	13.5	D+S	1.15
Bearing Stress (psi)	PASS (56.5%)	301.0	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (33.5%)	0.66	1.00	8.235	D+S	1.15
Bending-Tension (Unit)	PASS (33.5%)	0.67	1.00	8.37	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	200	1918	2118
C	126	1208	1334

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	13.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	13.5	Dead	Y
Self Weight (lbf/ft)	-	3.85	3.85	0	13.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Roof	LOADING:	ASD		
MEMBER NAME:	Rafters #5	CODE:	2018 International Building Code		
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS		
MATERIAL:	Solid Sawn				
Douglas Fir-Larch	Select Structural	(1) 1.5 X 11.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 13.5 Member Slope: 7/12 Actual Length (ft): 15.63 Roof Pitch: 7/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
16.88	177.98	3.16	3.85	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	1500	1000	180	1700	625	1900	690
Adjusted Values	1725	1000	180	1700	625	1900	690
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} = 0.86 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	1.458333	1.00	0.91	1.00	1.00
2	11	0	11	6.416666	1.00	0.38	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Stress Y (psi)	PASS (45.8%)	112.3	207.0	2.565	D+S	1.15	
Bending Stress Y (psi)	PASS (33.5%)	1318.9	1983.8	8.235	D+S	1.15	
Deflection Y (in)	PASS (62.7%)	0.144 (=L/643)	0.386 (=L/240)	0	S	0	
Compressive Stress (psi)	PASS (97.4%)	43.7	1711.7	2.565	D+S	1.15	
Tensile Stress (psi)	PASS (96.5%)	39.8	1150.0	13.5	D+S	1.15	
Bearing Stress (psi)	PASS (56.5%)	301.0	692.0	2.5	D+S	1.15	
Bending-Compression (Unit)	PASS (33.5%)	0.66	1.00	8.235	D+S	1.15	
Bending-Tension (Unit)	PASS (33.5%)	0.67	1.00	8.37	D+S	1.15	

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	200	1918	2118
C	126	1208	1334

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	13.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	13.5	Dead	Y
Self Weight (lbf/ft)	-	3.85	3.85	0	13.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Roof	LOADING:	ASD		
MEMBER NAME:	Rafters #6	CODE:	2018 International Building Code		
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS		
MATERIAL:	Solid Sawn				
Douglas Fir-Larch	Select Structural	(5) 1.5 X 11.25	12(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 13.5 Member Slope: 7/12 Actual Length (ft): 15.63 Roof Pitch: 7/12 O.C. Spacing(in): 12

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
84.38	889.89	395.51	19.24	5	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	1500	1000	180	1700	625	1900	690
Adjusted Values	1725	1000	180	1700	625	1900	690
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} = 0.86 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	1.458333	1.00	1.00	0.99	0.99
2	11	0	11	6.416666	1.00	0.99	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (90.9%)	18.9	207.0	2.565	D+S	1.15
Bending Stress Y (psi)	PASS (88.8%)	222.5	1983.8	8.235	D+S	1.15
Deflection Y (in)	PASS (94.4%)	0.022 (=L/4211)	0.386 (=L/240)	0	S	0
Compressive Stress (psi)	PASS (99.4%)	7.4	1173.0	2.565	D+S	1.15
Tensile Stress (psi)	PASS (99.4%)	6.7	1150.0	13.5	D+S	1.15
Bearing Stress (psi)	PASS (92.7%)	50.8	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (88.8%)	0.11	1.00	8.235	D+S	1.15
Bending-Tension (Unit)	PASS (88.8%)	0.11	1.00	8.37	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	348	1439	1787
C	219	906	1125

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	13.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	13.5	Dead	Y
Self Weight (lbf/ft)	-	19.24	19.24	0	13.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Roof	LOADING:	ASD		
MEMBER NAME:	Rafters #7	CODE:	2018 International Building Code		
MEMBER TYPE:	ROOF RAFTER	NDS:	2018 NDS		
MATERIAL:	Solid Sawn				
Douglas Fir-Larch	Select Structural	(1) 1.5 X 9.25	16(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.5 Member Slope: 3/12 Actual Length (ft): 12.88 Roof Pitch: 3/12 O.C. Spacing(in): 16

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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	1500	1000	180	1700	625	1900	690
Adjusted Values	1898	1100	180	1700	625	1900	690
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} = 0.86 C_r = 1.15

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0.625	1.00	0.93	1.00	1.00
2	10	0	10	2.5	1.00	0.45	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (40.4%)	123.5	207.0	2.625	D+S	1.15
Bending Stress Y (psi)	PASS (35.9%)	1398.4	2182.1	7.75	D+S	1.15
Deflection Y (in)	PASS (58.4%)	0.143 (=L/577)	0.344 (=L/240)	0	S	0
Compressive Stress (psi)	PASS (98.7%)	20.6	1642.6	2.625	D+S	1.15
Tensile Stress (psi)	PASS (98.5%)	18.6	1265.0	12.5	D+S	1.15
Bearing Stress (psi)	PASS (54.1%)	317.8	692.0	2.5	D+S	1.15
Bending-Compression (Unit)	PASS (35.9%)	0.64	1.00	7.75	D+S	1.15
Bending-Tension (Unit)	PASS (35.9%)	0.64	1.00	7.875	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	0	0	0
B	162	1611	1773
C	97	966	1063

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	12.5	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	12.5	Dead	Y
Self Weight (lbf/ft)	-	3.16	3.16	0	12.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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) 6.75 X 16.5	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
111.38	2526.82	422.88	25.4	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	14.5	0	14.5	0	1.00	0.99	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (29.4%)	215.1	304.8	14.5	D+S	1.15
Bending Stress Y (psi)	PASS (16.0%)	2267.9	2699.0	7.25	D+S	1.15
Deflection Y (in)	PASS (55.2%)	0.433 (=L/536)	0.967 (=L/240)	7.25	S	0
Bearing Stress (psi)	PASS (23.2%)	430.1	560.0	14.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1619	7	14349	15975
B	1619	7	14349	15975

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	14.5	Live	Y
Self Weight (lbf/ft)	-	25.4	25.4	0	14.5	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	197.908	197.908	0	14.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	B	1979.224	1979.224	0	14.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 16.5	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
111.38	2526.82	422.88	25.4	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00	
2	16	0	16	0	1.00	0.99	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (32.7%)	205.0	304.8	2.59	D+S	1.15
Bending Stress Y (psi)	PASS (14.9%)	2240.5	2634.0	10.73	D+S	1.15
Deflection Y (in)	PASS (27.1%)	0.243 (=L/329)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (29.2%)	396.7	560.0	2.5	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	2073	11	18009	20093
C	1513	8	13142	14663

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	18.5	Live	Y
Self Weight (lbf/ft)	-	25.4	25.4	0	18.5	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	168.393	168.393	0	18.5	Dead	Y
Uniform (lbf/ft)	Rafters #2	B	1683.836	1683.836	0	18.5	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #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 12	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
81	972	307.55	18.47	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00
2	12.5	0	12.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (37.0%)	191.9	304.8	2.55	D+S	1.15
Bending Stress Y (psi)	PASS (22.4%)	2142.7	2760.0	9	D+S	1.15
Deflection Y (in)	PASS (29.2%)	0.236 (=L/339)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (34.9%)	389.6	598.2	2.5	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	1516	9	12947	14472
C	1011	6	8631	9648

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	15	Live	Y
Self Weight (lbf/ft)	-	18.47	18.47	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)	Rafters #3	B	149.962	149.962	0	15	Dead	Y
Uniform (lbf/ft)	Rafters #3	B	1438.574	1438.574	0	15	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #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) 8.75 X 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
157.5	4252.5	1004.88	35.92	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00	
2	16.5	0	16.5	0	1.00	0.99	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.3%)	160.6	304.8	2.66	D+S	1.15
Bending Stress Y (psi)	PASS (33.8%)	1679.9	2537.6	11.02	D+S	1.15
Deflection Y (in)	PASS (48.5%)	0.172 (=L/465)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (22.6%)	462.9	598.2	2.5	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	2459	11	19817	22287
C	1812	8	14602	16422

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	19	Live	Y
Self Weight (lbf/ft)	-	35.92	35.92	0	19	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 #3	C	94.421	94.421	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #3	C	905.773	905.773	0	19	Snow	Y
Uniform (lbf/ft)	Rafters #4	C	94.421	94.421	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #4	C	905.773	905.773	0	19	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #5	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 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 19 Member Slope: 0/12 Actual Length (ft): 19

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
121.5	3280.5	461.32	27.71	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00	
2	16.5	0	16.5	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.8%)	165.2	304.8	2.66	D+S	1.15
Bending Stress Y (psi)	PASS (33.6%)	1728.4	2604.3	11.02	D+S	1.15
Deflection Y (in)	PASS (46.9%)	0.177 (=L/452)	0.333 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (20.4%)	476.3	598.2	2.5	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	1944	11	15737	17692
C	1432	8	11596	13036

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	19	Live	Y
Self Weight (lbf/ft)	-	27.71	27.71	0	19	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 #4	B	149.962	149.962	0	19	Dead	Y
Uniform (lbf/ft)	Rafters #4	B	1438.574	1438.574	0	19	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #6	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) 8.75 X 24	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 24 Member Slope: 0/12 Actual Length (ft): 24

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
210	10080	1339.84	47.9	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	24	0	24	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.4%)	160.3	304.8	24	D+S	1.15
Bending Stress Y (psi)	PASS (20.1%)	1923.4	2408.7	12	D+S	1.15
Deflection Y (in)	PASS (57.6%)	0.679 (=L/566)	1.600 (=L/240)	12	S	0
Bearing Stress (psi)	PASS (16.7%)	466.3	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2640	12	19800	22452
B	2640	12	19800	22452

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	24	Live	Y
Self Weight (lbf/ft)	-	47.9	47.9	0	24	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	172.104	172.104	0	24	Dead	Y
Uniform (lbf/ft)	Trusses #3	B	1650	1650	0	24	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #7	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 18	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
121.5	3280.5	461.32	27.71	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	8.5	0	8.5	0	1.00	0.99	1.00	1.00	
2	2.5	0	2.5	0	1.00	1.00	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (70.0%)	91.5	304.8	8.47	D+S	1.15
Bending Stress Y (psi)	PASS (85.4%)	401.0	2750.6	3.85	D+S	1.15
Deflection Y (in)	PASS (95.3%)	0.016 (=L/4995)	0.333 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (48.2%)	309.9	598.2	8.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	690	4	5585	6279
B	1265	7	10239	11511
C	0	0	0	0

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	Live	Y
Self Weight (lbf/ft)	-	27.71	27.71	0	11	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 #5	B	149.962	149.962	0	11	Dead	Y
Uniform (lbf/ft)	Rafters #5	B	1438.574	1438.574	0	11	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #8	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) 8.75 X 18	DRY		
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BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
157.5	4252.5	1004.88	35.92	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0	1.00	0.99	1.00	1.00
2	2.5	0	2.5	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (69.0%)	94.4	304.8	8.47	D+S	1.15
Bending Stress Y (psi)	PASS (84.6%)	413.5	2680.1	3.85	D+S	1.15
Deflection Y (in)	PASS (95.5%)	0.015 (=L/5328)	0.333 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (46.6%)	319.6	598.2	8.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1356	4	7033	8393
B	2485	7	12894	15386
C	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	1	1	0	11	Live	Y
Self Weight (lbf/ft)	-	35.92	35.92	0	11	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 #5	C	94.421	94.421	0	11	Dead	Y
Uniform (lbf/ft)	Rafters #5	C	905.773	905.773	0	11	Snow	Y
Uniform (lbf/ft)	Rafters #6	C	218.855	218.855	0	11	Dead	Y
Uniform (lbf/ft)	Rafters #6	C	905.772	905.772	0	11	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #9	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 18	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
121.5	3280.5	461.32	27.71	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	8.5	0	8.5	0	1.00	0.99	1.00	1.00	
2	2.5	0	2.5	0	1.00	1.00	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (66.3%)	102.7	304.8	8.47	D+S	1.15
Bending Stress Y (psi)	PASS (83.6%)	450.0	2750.6	3.85	D+S	1.15
Deflection Y (in)	PASS (95.3%)	0.016 (=L/4995)	0.333 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (41.9%)	347.8	598.2	8.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1457	4	5585	7046
B	2671	7	10239	12917
C	0	0	0	0

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	Live	Y
Self Weight (lbf/ft)	-	27.71	27.71	0	11	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 #6	B	347.593	347.593	0	11	Dead	Y
Uniform (lbf/ft)	Rafters #6	B	1438.578	1438.578	0	11	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #10	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) 8.75 X 21	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
183.75	6752.81	1172.36	41.91	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	22	0	22	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (68.9%)	94.7	304.8	22	D+S	1.15
Bending Stress Y (psi)	PASS (5.2%)	2333.4	2462.4	11	D+S	1.15
Deflection Y (in)	PASS (57.4%)	0.625 (=L/563)	1.467 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (20.3%)	446.2	560.0	22	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	3206	25	22856	26087
B	3634	27	25646	29307

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	22	Live	Y
Self Weight (lbf/ft)	-	41.91	41.91	0	22	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	B	1515.921	-	0	-	Dead	Y
Point (lbf)	Beam #3	B	9	-	0	-	Live	Y
Point (lbf)	Beam #3	B	12947.17	-	0	-	Snow	Y
Point (lbf)	Beam #4	B	2458.777	-	11	-	Dead	Y
Point (lbf)	Beam #4	B	10.939	-	11	-	Live	Y
Point (lbf)	Beam #4	B	19817.26	-	11	-	Snow	Y
Point (lbf)	Beam #5	B	1943.628	-	22	-	Dead	Y
Point (lbf)	Beam #5	B	10.939	-	22	-	Live	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #5	B	15737.14	-	22	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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) 8.75 X 21	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 22 Member Slope: 0/12 Actual Length (ft): 22

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
183.75	6752.81	1172.36	41.91	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	22	0	22	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (78.2%)	66.5	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (34.0%)	1625.6	2462.4	11	D+S	1.15
Deflection Y (in)	PASS (72.3%)	0.407 (=L/865)	1.467 (=L/240)	11	S	0
Bearing Stress (psi)	PASS (42.7%)	320.9	560.0	22	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2968	22	16686	19676
B	4375	22	16686	21083

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	22	Live	Y
Self Weight (lbf/ft)	-	41.91	41.91	0	22	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	B	1264.611	-	0	-	Dead	Y
Point (lbf)	Beam #7	B	7.118	-	0	-	Live	Y
Point (lbf)	Beam #7	B	10239.26	-	0	-	Snow	Y
Point (lbf)	Beam #8	B	2485.462	-	11	-	Dead	Y
Point (lbf)	Beam #8	B	7.118	-	11	-	Live	Y
Point (lbf)	Beam #8	B	12893.94	-	11	-	Snow	Y
Point (lbf)	Beam #9	B	2671.279	-	22	-	Dead	Y
Point (lbf)	Beam #9	B	7.118	-	22	-	Live	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #9	B	10239.29	-	22	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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) 6.75 X 15	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.5 Member Slope: 0/12 Actual Length (ft): 16.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
101.25	1898.44	384.43	23.09	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	16.5	0	16.5	0	1.00	0.99	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (45.7%)	165.3	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (18.9%)	2182.6	2689.9	8.25	D+S	1.15
Deflection Y (in)	PASS (46.4%)	0.590 (=L/447)	1.100 (=L/240)	8.25	S	0
Bearing Stress (psi)	PASS (46.3%)	300.6	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1195	8	9966	11169
B	1195	8	9966	11169

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	16.5	Live	Y
Self Weight (lbf/ft)	-	23.09	23.09	0	16.5	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 #7	B	121.787	121.787	0	16.5	Dead	Y
Uniform (lbf/ft)	Rafters #7	B	1207.942	1207.942	0	16.5	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #13	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 15	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	14.5	0	14.5	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.4%)	160.2	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (26.4%)	2030.2	2760.0	4.06	D+S	1.15
Deflection Y (in)	PASS (67.1%)	0.318 (=L/730)	0.967 (=L/240)	6.525	S	0
Bearing Stress (psi)	PASS (48.0%)	291.2	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	993	13	7216	8222
B	457	10	2749	3216

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	14.5	Live	Y
Self Weight (lbf/ft)	-	17.53	17.53	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 #12	A	1195.253	-	4	-	Dead	Y
Point (lbf)	Beam #12	A	8.25	-	4	-	Live	Y
Point (lbf)	Beam #12	A	9965.521	-	4	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	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	(1) 10.75 X 12	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 23 Member Slope: 0/12 Actual Length (ft): 23

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
129	1548	1242.3	29.42	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13.5	0	13.5	0	1.00	1.00	1.00	1.00
2	9.5	0	9.5	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (38.5%)	187.5	304.8	13.34	D+S	1.15
Bending Stress Y (psi)	PASS (15.9%)	1646.7	1957.7	13.57	D+S	1.15
Deflection Y (in)	PASS (73.9%)	0.235 (=L/919)	0.900 (=L/240)	5.98	S	0
Bearing Stress (psi)	PASS (13.2%)	519.2	598.2	13.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	1205	8883	10088
B	3779	26921	30700
C	827	5737	6564

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	23	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	23	Dead	Y
Self Weight (lbf/ft)	-	29.42	29.42	0	23	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 #7	A	175.167	175.167	0	9	Dead	Y
Uniform (lbf/ft)	Trusses #7	A	1485.512	1485.512	0	9	Snow	Y
Uniform (lbf/ft)	Trusses #8	A	226.248	226.248	9	23	Dead	Y
Uniform (lbf/ft)	Trusses #8	A	1765.835	1765.835	9	23	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Beam #14	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 11.25	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
59.06	622.92	15.07	17.23	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (8.1%)	301.2	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (46.7%)	1606.3	3016.4	2.5	D+S	1.15
Deflection Y (in)	PASS (85.7%)	0.048 (=L/1665)	0.333 (=L/240)	2.5	S	0
Bearing Stress (psi)	PASS (45.2%)	410.7	750.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1289	2	10570	11861
B	1289	2	10570	11861

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)	-	17.23	17.23	0	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 #7	B	498.541	498.541	0	5	Dead	Y
Uniform (lbf/ft)	Trusses #7	B	4227.911	4227.911	0	5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Roof	LOADING:	ASD
MEMBER NAME:	Girder #2	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): 24 Member Slope: 0/12 Actual Length (ft): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
175	5833.33	44.66	51.04	5	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	24	0	24	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (51.5%)	159.0	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (23.1%)	2145.4	2789.3	12.24	D+S	1.15
Deflection Y (in)	PASS (49.9%)	0.802 (=L/479)	1.600 (=L/240)	12	S	0
Bearing Stress (psi)	PASS (19.2%)	605.7	750.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	2324	16226	18550
B	1687	10733	12420

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	24	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	24	Dead	Y
Self Weight (lbf/ft)	-	51.04	51.04	0	24	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 #7	C	166.448	166.448	0	5.5	Dead	Y
Uniform (lbf/ft)	Trusses #7	C	1411.577	1411.577	0	5.5	Snow	Y
Uniform (lbf/ft)	Trusses #9	E	85.825	85.825	5.5	15.5	Dead	Y
Uniform (lbf/ft)	Trusses #9	E	973.715	973.715	5.5	15.5	Snow	Y
Point (lbf)	Girder #3	B	604.464	-	15.5	-	Dead	Y
Point (lbf)	Girder #3	B	5858.824	-	15.5	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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	(2) 1.75 X 18	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
63	1701	16.08	18.38	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0	1.00	0.76	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (53.0%)	153.9	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (42.0%)	1641.5	2829.5	8	D+S	1.15
Deflection Y (in)	PASS (70.2%)	0.317 (=L/808)	1.067 (=L/240)	8	S	0
Bearing Stress (psi)	PASS (29.7%)	527.6	750.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	604	5859	6463
B	604	5859	6463

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	16	Snow	Y
Uniform (lbf/ft)	Uniform	17	17	0	16	Dead	Y
Self Weight (lbf/ft)	-	18.38	18.38	0	16	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	A	40.183	40.183	0	16	Dead	Y
Uniform (lbf/ft)	Trusses #10	A	582.353	582.353	0	16	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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) 8.75 X 27	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 30 Member Slope: 0/12 Actual Length (ft): 30

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
236.25	14352.19	1507.32	53.88	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	30	0	30	0	1.00	0.97	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (46.6%)	162.8	304.8	30	D+S	1.15
Bending Stress Y (psi)	PASS (13.3%)	2017.8	2327.9	15	D+S	1.15
Deflection Y (in)	PASS (49.7%)	1.006 (=L/477)	2.000 (=L/240)	15	S	0
Bearing Stress (psi)	PASS (4.9%)	532.8	560.0	30	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2730	15	22453	25198
B	2761	15	22881	25657

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	30	Live	Y
Self Weight (lbf/ft)	-	53.88	53.88	0	30	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 #12	B	144.708	144.708	0	6	Dead	Y
Uniform (lbf/ft)	Trusses #12	B	1725	1725	0	6	Snow	Y
Uniform (lbf/ft)	Trusses #13	A	115.57	115.57	6	22	Dead	Y
Uniform (lbf/ft)	Trusses #13	A	1323.958	1323.958	6	22	Snow	Y
Uniform (lbf/ft)	Trusses #14	B	144.708	144.708	22	30	Dead	Y
Uniform (lbf/ft)	Trusses #14	B	1725	1725	22	30	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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): 2 Member Slope: 0/12 Actual Length (ft): 2

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (48.2%)	107.3	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (72.1%)	355.1	1270.8	1	D+S	1.15
Deflection Y (in)	PASS (97.5%)	0.003 (=L/10640)	0.133 (=L/240)	1	S	0
Bearing Stress (psi)	PASS (44.7%)	345.7	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	149	1	1665	1815
B	149	1	1665	1815

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	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	2	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	A	94.225	94.225	0	2	Dead	Y
Uniform (lbf/ft)	Trusses #1	A	1170.703	1170.703	0	2	Snow	Y
Uniform (lbf/ft)	Rafters #1	C	49.46	49.46	0	2	Dead	Y
Uniform (lbf/ft)	Rafters #1	C	494.596	494.596	0	2	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #2	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 9.25	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 4.5 Member Slope: 0/12 Actual Length (ft): 4.5

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.24	1	0.49	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	850	500	180	1400	625	1600	580
Adjusted Values	1020	550	180	1400	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**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4.5	0	4.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (8.5%)	189.3	207.0	4.5	D+S	1.15
Bending Stress Y (psi)	PASS (5.8%)	1105.3	1173.0	2.25	D+S	1.15
Deflection Y (in)	PASS (86.1%)	0.042 (=L/1714)	0.300 (=L/240)	2.25	S	0
Bearing Stress (psi)	PASS (37.7%)	389.2	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	340	2	3747	4089
B	340	2	3747	4089

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	4.5	RoofLive	Y
Self Weight (lbf/ft)	-	7.24	7.24	0	4.5	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 #1	A	94.225	94.225	0	4.5	Dead	Y
Uniform (lbf/ft)	Trusses #1	A	1170.703	1170.703	0	4.5	Snow	Y
Uniform (lbf/ft)	Rafters #1	C	49.46	49.46	0	4.5	Dead	Y
Uniform (lbf/ft)	Rafters #1	C	494.596	494.596	0	4.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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) 5.5 X 18	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
99	2673	249.56	22.58	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	10	0	10	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (15.4%)	257.9	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (37.7%)	1719.6	2760.0	5	D+S	1.15
Deflection Y (in)	PASS (78.8%)	0.142 (=L/1127)	0.667 (=L/240)	5	S	0
Bearing Stress (psi)	PASS (7.9%)	515.9	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	1893	5	15131	17029
B	1893	5	15131	17029

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)	-	22.58	22.58	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)	Trusses #2	A	269.255	269.255	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #2	A	2158.835	2158.835	0	10	Snow	Y
Uniform (lbf/ft)	Rafters #2	C	86.735	86.735	0	10	Dead	Y
Uniform (lbf/ft)	Rafters #2	C	867.353	867.353	0	10	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #4	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): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (11.2%)	291.2	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (20.7%)	2455.2	3097.8	3.25	D+S	1.15
Deflection Y (in)	PASS (65.7%)	0.149 (=L/697)	0.433 (=L/240)	3.25	S	0
Bearing Stress (psi)	PASS (20.2%)	598.5	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	1086	3	8340	9429
B	1086	3	8340	9429

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)	-	14.16	14.16	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 #2	B	320.059	320.059	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #2	B	2566.156	2566.156	0	6.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #5	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	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (21.7%)	162.1	207.0	3	D+S	1.15
Bending Stress Y (psi)	PASS (36.7%)	804.8	1270.8	1.5	D+S	1.15
Deflection Y (in)	PASS (91.5%)	0.017 (=L/2824)	0.200 (=L/240)	1.5	S	0
Bearing Stress (psi)	PASS (16.4%)	522.2	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	267	2	2475	2744
B	267	2	2475	2744

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)	-	5.68	5.68	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 #3	A	172.104	172.104	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #3	A	1650	1650	0	3	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #6	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 24	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.75 Member Slope: 0/12 Actual Length (ft): 12.75

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
132	6336	332.75	30.1	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	12.75	0	12.75	0	1.00	0.95	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (4.1%)	292.2	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (30.7%)	1862.5	2687.9	6.375	D+S	1.15
Deflection Y (in)	PASS (79.1%)	0.178 (=L/1146)	0.850 (=L/240)	6.375	S	0
Bearing Stress (psi)	PASS (7.3%)	519.4	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	3960	6	21750	25716
B	3960	6	21750	25716

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	12.75	RoofLive	Y
Self Weight (lbf/ft)	-	30.1	30.1	0	12.75	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 #4	A	517.99	517.99	0	12.75	Dead	Y
Uniform (lbf/ft)	Trusses #4	A	2686.979	2686.979	0	12.75	Snow	Y
Uniform (lbf/ft)	Rafters #7	C	73.073	73.073	0	12.75	Dead	Y
Uniform (lbf/ft)	Rafters #7	C	724.765	724.765	0	12.75	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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(North)	No. 2	(1) 5.5 X 7.5	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (14.1%)	167.8	195.5	0	D+S	1.15
Bending Stress Y (psi)	PASS (19.5%)	671.4	833.8	1.25	D+S	1.15
Deflection Y (in)	PASS (93.5%)	0.011 (=L/3644)	0.167 (=L/240)	1.25	S	0
Bearing Stress (psi)	PASS (10.5%)	559.5	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	756	1	3860	4617
B	756	1	3860	4617

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	RoofLive	Y
Self Weight (lbf/ft)	-	9.23	9.23	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)	Trusses #4	B	595.306	595.306	0	2.5	Dead	Y
Uniform (lbf/ft)	Trusses #4	B	3088.031	3088.031	0	2.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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): 2.5 Member Slope: 0/12 Actual Length (ft): 2.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2.5	0	2.5	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.5%)	117.0	207.0	0	D+S	1.15
Bending Stress Y (psi)	PASS (61.9%)	484.2	1270.8	1.25	D+S	1.15
Deflection Y (in)	PASS (95.8%)	0.007 (=L/5726)	0.167 (=L/240)	1.25	S	0
Bearing Stress (psi)	PASS (39.7%)	377.1	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	215	1	1764	1980
B	215	1	1764	1980

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	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	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)	Trusses #7	C	166.448	166.448	0	2.5	Dead	Y
Uniform (lbf/ft)	Trusses #7	C	1411.577	1411.577	0	2.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #9	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): 3 Member Slope: 0/12 Actual Length (ft): 3

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
48.56	346.26	12.39	14.16	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (27.6%)	237.2	327.8	3	D+S	1.15
Bending Stress Y (psi)	PASS (70.2%)	923.2	3097.8	1.5	D+S	1.15
Deflection Y (in)	PASS (94.0%)	0.012 (=L/4000)	0.200 (=L/240)	1.5	S	0
Bearing Stress (psi)	PASS (35.0%)	487.6	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	891	2	6789	7682
B	891	2	6789	7682

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)	-	14.16	14.16	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 #8	B	579.865	579.865	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #8	B	4525.776	4525.776	0	3	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #10	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): 6.5 Member Slope: 0/12 Actual Length (ft): 6.5

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
48.56	346.26	12.39	14.16	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6.5	0	6.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (56.2%)	143.6	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (60.9%)	1210.9	3097.8	3.25	D+S	1.15
Deflection Y (in)	PASS (82.6%)	0.075 (=L/1386)	0.433 (=L/240)	3.25	S	0
Bearing Stress (psi)	PASS (21.3%)	590.3	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	419	3	4230	4652
B	419	3	4230	4652

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)	-	14.16	14.16	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 #9	B	114.723	114.723	0	6.5	Dead	Y
Uniform (lbf/ft)	Trusses #9	B	1301.57	1301.57	0	6.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #11	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 11.25	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
59.06	622.92	15.07	17.23	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 = 1.01 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	10	0	10	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (55.1%)	147.1	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (48.0%)	1569.2	3016.4	5	D+S	1.15
Deflection Y (in)	PASS (71.1%)	0.193 (=L/829)	0.667 (=L/240)	5	S	0
Bearing Stress (psi)	PASS (1.9%)	735.6	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	454	5	5338	5797
B	454	5	5338	5797

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)	-	17.23	17.23	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)	Trusses #10	B	73.67	73.67	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #10	B	1067.647	1067.647	0	10	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 24	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
132	6336	332.75	30.1	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	10	0	10	0	1.00	0.97	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (0.4%)	303.6	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (66.6%)	919.3	2754.0	4.8	D+S	1.15
Deflection Y (in)	PASS (91.5%)	0.057 (=L/2808)	0.667 (=L/240)	4.9	S	0
Bearing Stress (psi)	PASS (3.6%)	539.6	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	3390	5	23321	26716
B	1872	5	13662	15539

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)	-	30.1	30.1	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)	Trusses #11	C	327.391	327.391	0	10	Dead	Y
Uniform (lbf/ft)	Trusses #11	C	2624.984	2624.984	0	10	Snow	Y
Point (lbf)	Girder #2	B	1687.263	-	0.5	-	Dead	Y
Point (lbf)	Girder #2	B	10733.41	-	0.5	-	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 11.25	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
59.06	622.92	15.07	17.23	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12	0	12	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (67.9%)	105.1	327.8	12	D+S	1.15
Bending Stress Y (psi)	PASS (55.4%)	1344.8	3016.4	6	D+S	1.15
Deflection Y (in)	PASS (70.4%)	0.237 (=L/810)	0.800 (=L/240)	6	S	0
Bearing Stress (psi)	PASS (30.0%)	525.3	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	342	6	3795	4143
B	342	6	3795	4143

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)	-	17.23	17.23	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

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #14	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 9.25	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
32.38	230.84	33.05	7.24	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	1020	550	180	1400	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**

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3	0	3	0	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (0.6%)	205.7	207.0	3	D+S	1.15
Bending Stress Y (psi)	PASS (31.8%)	800.5	1173.0	1.5	D+S	1.15
Deflection Y (in)	PASS (93.5%)	0.013 (=L/3692)	0.200 (=L/240)	1.5	S	0
Bearing Stress (psi)	PASS (32.4%)	422.8	625.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	502	2	3938	4442
B	502	2	3938	4442

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)	-	7.24	7.24	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 #11	B	327.397	327.397	0	3	Dead	Y
Uniform (lbf/ft)	Trusses #11	B	2625.002	2625.002	0	3	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #28	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	AISC:	AISC 360-16
MATERIAL:	Steel		
MC Shapes	MC10x41.1	A992-50	

BEAM PROPERTIES

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

Es x10 ³	Fy x10 ³	Fu x10 ³	Area	depth	tw	tf	bf	Ix	Iy	Zx	Zy	J	Cw
(psi)	(psi)	(psi)	(in ²)	(in)	(in)	(in)	(in)	(in ⁴)	(in ⁴)	(in ³)	(in ³)	(in ⁴)	(in ⁶)
29000	50	65	12.1	10	0.796	0.575	4.32	157	15.7	39.3	9.49	2.26	269

DESIGN PROPERTIES

Lp	Lr	Flange	Web	Flange	Web	Cv	Cv_WA
(in)	(in)	Flexure	Flexure	Compression	Compression		
48	310	Compact	Compact	Non-Slender	Non-Slender	1	1

BEAM DATA

Span	Length	Unbraced Length		Beam End		Pnt/и	Pnc/и	Mn/и	Mn-OOP/и	Vn/и	Vn-OOP/и	Cb	Cb-OOP
		Top	Bottom	Elev. Diff									
1	15	0	15	0		0	0	0	0	0	0	0	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	AISC CODE	LOAD COMBO
Shear Force Y (lbf)	PASS (94.0%)	8515.2	142994.0	0	G2-1	D+S
Moment Y (lbf-ft)	PASS (36.0%)	62708.0	98053.9	7.5	F2-1	D+S
Deflection Y (in)	PASS (60.5%)	0.395 (=L/608)	1.000 (=L/240)	7.5		S

REACTIONS

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

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	1214	4	8	7301	8527
B	1214	4	8	7301	8527

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)	-	41.1	41.1	0	15	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #4	C	1811.726	-	7.5	-	Dead	Y
Point (lbf)	Beam #4	C	8.061	-	7.5	-	Live	Y
Point (lbf)	Beam #4	C	14602.15	-	7.5	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - 1st Level	LOADING:	ASD
MEMBER NAME:	Header #18	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): 15 Member Slope: 0/12 Actual Length (ft): 15

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	3.75	0	3.75	0				
2	3.75	0	3.75	0				
3	3.75	0	3.75	0				
4	3.75	0	3.75	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (99.5%)	0.8	162.0	3.75	D	0.9
Bending Stress Y (psi)	PASS (99.7%)	3.3	990.3	11.25	D	0.9
Deflection Y (in)	PASS (100.0%)	0.000 (=L/∞)	0.250 (=L/180)	1.65	D+Lr	1.25
Bearing Stress (psi)	PASS (35.9%)	400.4	625.0	7.5	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE ROOF	SNOW	TOTAL
A	8	1	0	9
B	24	4	0	28
C	1375	3	7033	8411
D	24	4	0	28
E	8	1	0	9

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	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	15	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #8	A	1355.706	-	7.5	-	Dead	Y
Point (lbf)	Beam #8	A	7033.056	-	7.5	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16 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)
267	2.5	1	4.5	3160	1560	910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (65.9%)	532.5	1560.0	8	D+L	1	
Bending Moment (lbf-ft)	PASS (73.0%)	851.8	3160.0	8	D+L	1	
Deflection Y (in)	PASS (95.7%)	0.011 (=L/8738)	0.267 (=L/360)	3.36	L	0	
Bearing Load (lbf)	PASS (45.0%)	1064.9	1935.0	8	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	80	240	320
B	265	800	1065
C	80	240	320

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	16	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	16	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	16	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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) 11.875	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): 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
(lb-ft ²)	(lb/ft)		(lb)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)
267	2.5	1	4.5	3160	1560	910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10	0	10	0
2	8	0	8	0
3	11	0	11	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lb)	PASS (57.8%)	657.7	1560.0	18.27	D+L		1
Bending Moment (lb-ft)	PASS (65.1%)	1104.2	3160.0	24.36	D+L		1
Deflection Y (in)	PASS (84.0%)	0.059 (=L/2239)	0.367 (=L/360)	24.07	L		0
Bearing Load (lb)	PASS (41.0%)	1141.9	1935.0	18	D+L		1

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	111	334	445
B	253	763	1016
C	284	858	1142
D	121	364	485

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 (lb/ft ²)	Uniform	40	40	0	29	Live	Y
Uniform (lb/ft ²)	Uniform	12	12	0	29	Dead	Y
Self Weight (lb/ft)	-	2.5	2.5	0	29	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

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

El x10 ⁶	BSW	Lams	K x10 ⁶	Mcap	Vcap	End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
(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	1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
						910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	13.5	0	13.5	0
2	10.5	0	10.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (44.8%)	861.1	1560.0	13.44	D+L		1
Bending Moment (lbf-ft)	PASS (38.1%)	1954.5	3160.0	13.44	D+L		1
Deflection Y (in)	PASS (74.5%)	0.115 (=L/1409)	0.450 (=L/360)	6	L		0
Bearing Load (lbf)	PASS (16.4%)	1617.7	1935.0	13.5	D+L		1

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	142	428	570
B	403	1215	1618
C	92	276	368

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	24	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	24	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	24	Dead	Y



DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 19.5 Member Slope: 0/12 Actual Length (ft): 19.5 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)
267	2.5	1	4.5	3160	1560	910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	9.5	0	9.5	0
2	10	0	10	0

PASS-FAIL

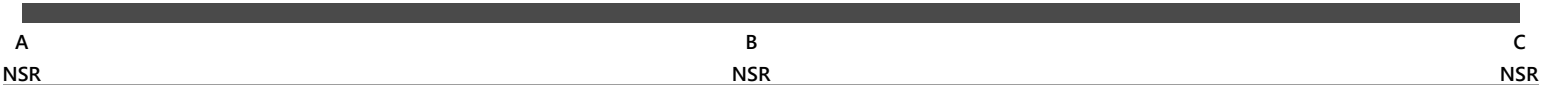
	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (58.1%)	653.4	1560.0	9.555	D+L	1	
Bending Moment (lbf-ft)	PASS (61.0%)	1231.6	3160.0	9.555	D+L	1	
Deflection Y (in)	PASS (91.0%)	0.030 (=L/3996)	0.333 (=L/360)	15.21	L	0	
Bearing Load (lbf)	PASS (16.3%)	372.4	445.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	93	280	373
B	323	975	1298
C	101	305	406

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



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	19.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	19.5	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	19.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design			
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis			
CUSTOMER:		REVIEWED BY:	Stephen Curtis			
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers			
	--					
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 560	(1) 11.875	0(in) O.C.	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.5 Member Slope: 0/12 Actual Length (ft): 16.5 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)
636	4	1	5.3	9500	2050	1265	1725	1740	2050	3000	3455	3475	3930

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	16.5	0	16.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (70.5%)	605.0	2050.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (73.7%)	2495.6	9500.0	8.25	D+L	1	
Deflection Y (in)	PASS (74.6%)	0.140 (=L/1414)	0.550 (=L/360)	8.25	L	0	
Bearing Load (lbf)	PASS (64.9%)	605.0	1725.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	165	440	605
B	165	440	605

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



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	16.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	16.5	Dead	Y
Self Weight (lbf/ft)	-	4	4	0	16.5	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 560	(1) 11.875	0(in) O.C.
			DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.5 Member Slope: 0/12 Actual Length (ft): 16.5 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)
636	4	1	5.3	9500	2050	1265	1725	1740	2050	3000	3455	3475	3930

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	16.5	0	16.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (70.5%)	605.0	2050.0	0	D+L		1
Bending Moment (lbf-ft)	PASS (73.7%)	2495.6	9500.0	8.25	D+L		1
Deflection Y (in)	PASS (74.6%)	0.140 (=L/1414)	0.550 (=L/360)	8.25	L		0
Bearing Load (lbf)	PASS (64.9%)	605.0	1725.0	0	D+L		1

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	165	440	605
B	165	440	605

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



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	16.5	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	16.5	Dead	Y
Self Weight (lbf/ft)	-	4	4	0	16.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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 560	(1) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 14 Member Slope: 0/12 Actual Length (ft): 14 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)
636	4	1	5.3	9500	2050	1265	1725	1740	2050	3000	3455	3475	3930

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	14	0	14	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (63.1%)	756.0	2050.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (72.1%)	2646.0	9500.0	7	D+L	1	
Deflection Y (in)	PASS (76.7%)	0.109 (=L/1542)	0.467 (=L/360)	7	L	0	
Bearing Load (lbf)	PASS (56.2%)	756.0	1725.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	196	560	756
B	196	560	756

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



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	14	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	14	Dead	Y
Self Weight (lbf/ft)	-	4	4	0	14	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
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) 11.875	0(in) O.C.	DRY	

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.5 Member Slope: 0/12 Actual Length (ft): 16.5 O.C. Spacing(in): 24

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

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	2	0	2	0
2	7.25	0	7.25	0
3	7.25	0	7.25	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lb-ft)	PASS (70.6%)	458.7	1560.0	9.405	D+L		1
Bending Moment (lb-ft)	PASS (79.7%)	641.9	3160.0	9.24	D+L		1
Deflection Y (in)	PASS (96.5%)	0.009 (=L/9680)	0.242 (=L/360)	13.365	L		0
Bearing Load (lb-ft)	PASS (52.4%)	921.1	1935.0	9.25	D+L		1

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	0	0	0
B	134	405	539
C	229	692	921
D	74	223	297

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 (lb-ft ²)	Uniform	40	40	0	16.5	Live	Y
Uniform (lb-ft ²)	Uniform	12	12	0	16.5	Dead	Y
Self Weight (lb-ft)	-	2.5	2.5	0	16.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers	
	--			
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) 11.875	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 10 Member Slope: 0/12 Actual Length (ft): 10 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)
267	2.5	1	4.5	3160	1560	910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (65.9%)	532.5	1560.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (57.9%)	1331.3	3160.0	5	D+L	1	
Deflection Y (in)	PASS (79.8%)	0.067 (=L/1789)	0.333 (=L/360)	5	L	0	
Bearing Load (lbf)	PASS (61.3%)	532.5	1375.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	132	400	532
B	132	400	532

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



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	10	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	10	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	10	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Floor - 1st Level	LOADING:	ASD		
MEMBER NAME:	Joists #10	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): 10 Member Slope: 0/12 Actual Length (ft): 10 O.C. Spacing(in): 24

End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)
910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (65.9%)	532.5	1560.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (57.9%)	1331.3	3160.0	5	D+L	1	
Deflection Y (in)	PASS (79.8%)	0.067 (=L/1789)	0.333 (=L/360)	5	L	0	
Bearing Load (lbf)	PASS (61.3%)	532.5	1375.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	132	400	532
B	132	400	532

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



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	10	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	10	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	10	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Floor - 1st Level	LOADING:	ASD		
MEMBER NAME:	Joists #11	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): 10 Member Slope: 0/12 Actual Length (ft): 10 O.C. Spacing(in): 24

End Rcap	End Rcap	End Rcap	End Rcap	Int Rcap	Int Rcap	Int Rcap	Int Rcap
1.75 NS	3.5 NS	1.75 WS	3.5 WS	3.5 NS	5.25 NS	3.5 WS	5.25 WS
(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb)
910	1375	1225	1560	1935	2350	2295	2705

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (65.9%)	532.5	1560.0	0	D+L	1	
Bending Moment (lbf-ft)	PASS (57.9%)	1331.3	3160.0	5	D+L	1	
Deflection Y (in)	PASS (79.8%)	0.067 (=L/1789)	0.333 (=L/360)	5	L	0	
Bearing Load (lbf)	PASS (61.3%)	532.5	1375.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	132	400	532
B	132	400	532

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



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	10	Live	Y
Uniform (lbf/ft ²)	Uniform	12	12	0	10	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	10	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design			
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis			
CUSTOMER:		REVIEWED BY:	Stephen Curtis			
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers			
	--					
LEVEL:	Floor - 1st Level	LOADING:	ASD			
MEMBER NAME:	Deck Joists #1	CODE:	2018 International Building Code			
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS			
MATERIAL:	I-Joists					
Weyerhaeuser	TJI 360	(1) 11.875	0(in) O.C.	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 14 Member Slope: 0/12 Actual Length (ft): 14 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)
419	3	1	4.5	6180	1705	1080	1505	1440	1705	2460	3000	2815	3360

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	10	0	10	0
2	4	0	4	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (24.8%)	1475.2	1960.8	9.94	D+S	1.15	
Bending Moment (lbf-ft)	PASS (68.1%)	2266.7	7107.0	4.2	D+S	1.15	
Deflection Y (in)	PASS (90.0%)	0.050 (=L/3600)	0.500 (=L/360)	4.62	S	0	
Bearing Load (lbf)	PASS (11.0%)	2518.6	2829.0	10	D+S	1.15	

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	449	630	1079
B	1049	1470	2519
C	0	0	0

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



CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	IUS2.37/11.88	Hanger	19.75	(10) 0.148 x 3	(NULL) NULL	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	75	75	0	14	Snow	Y
Uniform (lbf/ft ²)	Uniform	52	52	0	14	Dead	Y
Self Weight (lbf/ft)	-	3	3	0	14	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Deck Joists #2	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 560	(1) 11.875	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 14.5 Member Slope: 0/12 Actual Length (ft): 14.5 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)
636	4	1	5.3	9500	2050	1265	1725	1740	2050	3000	3455	3475	3930

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		Top	Bottom	Elev. Diff (ft)
1	14.5	0	14.5	0

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (46.7%)	1256.7	2357.5	14.5	D+S	1.15
Bending Moment (lbf-ft)	PASS (58.3%)	4555.4	10925.0	7.25	D+S	1.15
Deflection Y (in)	PASS (78.4%)	0.156 (=L/1673)	0.725 (=L/360)	7.25	S	0
Bearing Load (lbf)	PASS (36.7%)	1256.7	1983.8	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	532	725	1257
B	532	725	1257

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



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft ²)	Uniform	75	75	0	14.5	Snow	Y
Uniform (lbf/ft ²)	Uniform	52	52	0	14.5	Dead	Y
Self Weight (lbf/ft)	-	4	4	0	14.5	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design			
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis			
CUSTOMER:		REVIEWED BY:	Stephen Curtis			
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers			
	--					
LEVEL:	Floor - 1st Level	LOADING:	ASD			
MEMBER NAME:	Deck Joists #3	CODE:	2018 International Building Code			
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS			
MATERIAL:	I-Joists					
Weyerhaeuser	TJI 560	(1) 16	0(in) O.C.	DRY		

BEAM PROPERTIES

Start (ft): 0 End (ft): 18 Member Slope: 0/12 Actual Length (ft): 18 O.C. Spacing(in): 12

						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)
1252	4.5	1	5.3	12925	2710	1265	1725	1740	2200	3000	3455	3475	3930

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (62.0%)	1183.5	3116.5	18	D+S	1.15	
Bending Moment (lbf-ft)	PASS (64.2%)	5325.8	14863.8	9	D+S	1.15	
Deflection Y (in)	PASS (84.3%)	0.141 (=L/2298)	0.900 (=L/360)	9	S	0	
Bearing Load (lbf)	PASS (40.3%)	1183.5	1983.8	0	D+S	1.15	

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	508	675	1183
B	508	675	1183

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



CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	IUS3.56/16 (Min)	Hanger	34.43	(14) 0.148 x 3	(NULL) NULL	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	75	75	0	18	Snow	Y
Uniform (lbf/ft ²)	Uniform	52	52	0	18	Dead	Y
Self Weight (lbf/ft)	-	4.5	4.5	0	18	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design			
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis			
CUSTOMER:		REVIEWED BY:	Stephen Curtis			
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers			
	--					
LEVEL:	Floor - 1st Level	LOADING:	ASD			
MEMBER NAME:	Deck Joists #4	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): 10 Member Slope: 0/12 Actual Length (ft): 10 O.C. Spacing(in): 16

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

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Force (lbf)	PASS (52.1%)	859.2	1794.0	0	D+S	1.15
Bending Moment (lbf-ft)	PASS (40.9%)	2147.9	3634.0	5	D+S	1.15
Deflection Y (in)	PASS (83.1%)	0.084 (=L/2143)	0.500 (=L/360)	5	S	0
Bearing Load (lbf)	PASS (45.7%)	859.2	1581.3	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	359	500	859
B	359	500	859

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



CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	IUS1.81/11.88	Hanger	36.12	(10) 0.148 x 3	(NULL) NULL	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	75	75	0	10	Snow	Y
Uniform (lbf/ft ²)	Uniform	52	52	0	10	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	10	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	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) 5.125 X 15	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 14 Member Slope: 0/12 Actual Length (ft): 14

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	14	0	14	0	1.00	0.98	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (42.8%)	174.4	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (29.2%)	1953.2	2760.0	7	D+S	1.15
Deflection Y (in)	PASS (73.8%)	0.245 (=L/914)	0.933 (=L/240)	7	S	0
Bearing Stress (psi)	PASS (43.4%)	317.1	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	3793	7	5145	8945
B	3793	7	5145	8945

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	14	Live	Y
Self Weight (lbf/ft)	-	17.53	17.53	0	14	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #1	B	524.3	524.3	0	14	Dead	Y
Uniform (lbf/ft)	Deck Joists #1	B	735	735	0	14	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design		
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis		
CUSTOMER:		REVIEWED BY:	Stephen Curtis		
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers		
	--				
LEVEL:	Floor - 1st Level	LOADING:	ASD		
MEMBER NAME:	Deck Joists #5	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): 6 Member Slope: 0/12 Actual Length (ft): 6 O.C. Spacing(in): 24

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

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End
		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 (43.7%)	1009.5	1794.0	6	D+S	1.15	
Bending Moment (lbf-ft)	PASS (58.3%)	1514.3	3634.0	3	D+S	1.15	
Deflection Y (in)	PASS (89.1%)	0.033 (=L/3273)	0.300 (=L/360)	3	S	0	
Bearing Load (lbf)	PASS (36.2%)	1009.5	1581.3	0	D+S	1.15	

REACTIONS

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

Y axis	DEAD	SNOW	TOTAL
A	110	900	1010
B	110	900	1010

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	150	150	0	6	Snow	Y
Uniform (lbf/ft ²)	Uniform	17	17	0	6	Dead	Y
Self Weight (lbf/ft)	-	2.5	2.5	0	6	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design	
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis	
CUSTOMER:		REVIEWED BY:	Stephen Curtis	
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers	
	--			
LEVEL:	Floor - 1st Level	LOADING:	ASD	
MEMBER NAME:	Deck Joists #6	CODE:	2018 International Building Code	
MEMBER TYPE:	FLOOR JOIST	NDS:	2018 NDS	
MATERIAL:	I-Joists			
Weyerhaeuser	TJI 360	(1) 11.875	0(in) O.C.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 8 Member Slope: 0/12 Actual Length (ft): 8 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)
419	3	1	4.5	6180	1705	1080	1505	1440	1705	2460	3000	2815	3360

BEAM DATA

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

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Force (lbf)	PASS (55.4%)	874.7	1960.8	0	D+0.75L+0.75S	1.15	
Bending Moment (lbf-ft)	PASS (75.4%)	1749.3	7107.0	4	D+0.75L+0.75S	1.15	
Deflection Y (in)	PASS (90.8%)	0.037 (=L/2595)	0.400 (=L/240)	4	D+L	1	
Bearing Load (lbf)	PASS (49.5%)	874.7	1730.8	0	D+0.75L+0.75S	1.15	

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	295	373	400	1068
B	295	373	400	1068

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



CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	IUS2.37/11.88	Hanger	34.97	(10) 0.148 x 3	(NULL) NULL	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	75	75	0	8	Snow	Y
Uniform (lbf/ft ²)	Uniform	53	53	0	8	Dead	Y
Uniform (lbf/ft ²)	Hot Tub	70	70	0	8	Live	Y
Self Weight (lbf/ft)	-	3	3	0	8	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #17	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 14	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	14.29	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	8.5	0	8.5	0	1.00	0.96	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (57.8%)	138.3	327.8	0	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (65.6%)	1007.9	2927.9	4.25	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (90.3%)	0.055 (=L/2474)	0.567 (=L/240)	4.25	S	0
Bearing Stress (psi)	PASS (68.7%)	234.8	750.0	0	D+0.75L+0.75S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1233	1194	3188	5615
B	1233	1194	3188	5615

Reaction Location

A

B

CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	HGUS412	Hanger	51.93	(56) 0.162 x 3.5	(20) 0.162 x 3.5	N/A
Support B						
Primary	HGUS412	Hanger	51.93	(56) 0.162 x 3.5	(20) 0.162 x 3.5	N/A

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

Hanger at support B 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)	Uniform	1	1	0	8.5	Live	Y
Self Weight (lbf/ft)	-	14.29	14.29	0	8.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #5	A	54.75	54.75	0	8.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #5	A	450	450	0	8.5	Snow	Y
Uniform (lbf/ft)	Deck Joists #6	B	221	221	0	8.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	B	280	280	0	8.5	Live	Y
Uniform (lbf/ft)	Deck Joists #6	B	300	300	0	8.5	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #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 14	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	14.29	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14.5	0	14.5	0	1.00	0.89	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (74.2%)	84.4	327.8	14.5	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (42.2%)	1693.1	2927.9	8.555	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (78.3%)	0.210 (=L/1105)	0.967 (=L/240)	7.685	S	0
Bearing Stress (psi)	PASS (80.9%)	143.3	750.0	14.5	D+0.75L+0.75S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	614	501	1319	2434
B	826	707	1869	3402

Reaction Location

A

B

CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	HUS412	Hanger	34.58	(10) 0.162 x 3.5	(10) 0.162 x 3.5	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)	Uniform	1	1	0	14.5	Live	Y
Self Weight (lbf/ft)	-	14.29	14.29	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 #17	A	1232.677	-	8.5	-	Dead	Y
Point (lbf)	Beam #17	A	3187.5	-	8.5	-	Snow	Y
Point (lbf)	Beam #17	A	1194.25	-	8.5	-	Live	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #19	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 14	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	14.29	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 = 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14.5	0	14.5	0	1.00	0.89	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (74.2%)	84.4	327.8	14.5	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (42.2%)	1693.1	2927.9	8.555	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (78.3%)	0.210 (=L/1105)	0.967 (=L/240)	7.685	S	0
Bearing Stress (psi)	PASS (80.9%)	143.3	750.0	14.5	D+0.75L+0.75S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	614	501	1319	2434
B	826	707	1869	3402

Reaction Location

A

B

CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	HUS412	Hanger	34.58	(10) 0.162 x 3.5	(10) 0.162 x 3.5	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)	Uniform	1	1	0	14.5	Live	Y
Self Weight (lbf/ft)	-	14.29	14.29	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 #17	B	1232.677	-	8.5	-	Dead	Y
Point (lbf)	Beam #17	B	3187.5	-	8.5	-	Snow	Y
Point (lbf)	Beam #17	B	1194.25	-	8.5	-	Live	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	23-014 Chambers
LEVEL:	Floor - 1st Level	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 15	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 15.5 Member Slope: 0/12 Actual Length (ft): 15.5

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
76.88	1441.41	168.26	17.53	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	15.5	0	15.5	0	1.00	0.97	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.7%)	159.4	304.8	15.5	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (33.2%)	1842.9	2760.0	6.665	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (69.8%)	0.312 (=L/596)	1.033 (=L/180)	7.75	D+L	1
Bearing Stress (psi)	PASS (48.2%)	289.8	560.0	15.5	D+0.75L+0.75S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	3157	1158	4458	8773
B	3101	2100	4658	9859

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	15.5	Live	Y
Self Weight (lbf/ft)	-	17.53	17.53	0	15.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #2	A	398.75	398.75	0	6	Dead	Y
Uniform (lbf/ft)	Deck Joists #2	A	398.75	398.75	14	15.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #2	A	543.75	543.75	0	6	Snow	Y
Uniform (lbf/ft)	Deck Joists #2	A	543.75	543.75	14	15.5	Snow	Y
Uniform (lbf/ft)	Deck Joists #6	A	221	221	6	14	Dead	Y
Uniform (lbf/ft)	Deck Joists #6	A	280	280	6	14	Live	Y
Uniform (lbf/ft)	Deck Joists #6	A	300	300	6	14	Snow	Y
Point (lbf)	Beam #18	A	613.688	-	6	-	Dead	Y

LINKED LOAD LIST CONT.

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #18	A	501.422	-	6	-	Live	Y
Point (lbf)	Beam #18	A	1318.966	-	6	-	Snow	Y
Point (lbf)	Beam #19	A	613.688	-	14	-	Dead	Y
Point (lbf)	Beam #19	A	501.422	-	14	-	Live	Y
Point (lbf)	Beam #19	A	1318.966	-	14	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #21	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): 21.5 Member Slope: 0/12 Actual Length (ft): 21.5

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

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	21.5	0	21.5	0	1.00	0.89	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (47.9%)	158.8	304.8	21.5	D+S	1.15
Bending Stress Y (psi)	PASS (33.5%)	1707.4	2569.1	10.75	D+S	1.15
Deflection Y (in)	PASS (78.7%)	0.305 (=L/1128)	1.433 (=L/240)	10.75	S	0
Bearing Stress (psi)	PASS (17.5%)	462.1	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	5768	11	7256	13035
B	5768	11	7256	13035

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	21.5	Live	Y
Self Weight (lbf/ft)	-	28.05	28.05	0	21.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #3	A	508.5	508.5	0	21.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #3	A	675	675	0	21.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #22	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): 16.5 Member Slope: 0/12 Actual Length (ft): 16.5

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

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	16.5	0	16.5	0	1.00	0.97	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (61.3%)	118.1	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (37.3%)	1731.8	2760.0	8.25	D+S	1.15
Deflection Y (in)	PASS (69.9%)	0.331 (=L/798)	1.100 (=L/240)	8.25	S	0
Bearing Stress (psi)	PASS (65.5%)	193.2	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	2353	8	3094	5455
B	2353	8	3094	5455

Reaction Location

A

B

CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support A	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	HHUS5.50/10	Hanger	14.64	(30) 0.162 x 3.5	(10) 0.162 x 3.5	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)	Uniform	1	1	0	16.5	Live	Y
Self Weight (lbf/ft)	-	15.78	15.78	0	16.5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Deck Joists #4	A	269.375	269.375	0	16.5	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	A	375	375	0	16.5	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #23	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 18	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 16.25 Member Slope: 0/12 Actual Length (ft): 16.25

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
92.25	2490.75	201.92	21.04	1	0.5	1

STRENGTH PROPERTIES

	Fbx+	Fbx-	Fby	Ft	Fvx	Fvy	Fc	Fc _⊥	Ex	Exmin	Ey	Eymin
	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(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)		Beam End					
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)	
1	16.25	0	16.25	0	1.00	0.96	1.00	1.00	

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (80.8%)	58.6	304.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (66.1%)	920.7	2719.2	6.013	D+S	1.15
Deflection Y (in)	PASS (91.0%)	0.097 (=L/2680)	1.083 (=L/240)	7.475	S	0
Bearing Stress (psi)	PASS (77.2%)	127.9	560.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1655	13	1951	3619
B	1040	11	1142	2193

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	16.25	Live	Y
Self Weight (lbf/ft)	-	21.04	21.04	0	16.25	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	A	2352.525	-	6	-	Dead	Y
Point (lbf)	Beam #22	A	8.25	-	6	-	Live	Y
Point (lbf)	Beam #22	A	3093.75	-	6	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #24	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 11.25	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
59.06	622.92	15.07	17.23	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 = 1.01 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16.25	0	16.25	0	1.00	0.97	1.00	1.00
2	9	0	9	0	1.00	0.99	1.00	1.00
3	7.75	0	7.75	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.7%)	184.4	327.8	16.5	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (34.1%)	1690.6	2566.5	16.17	D+L	1
Deflection Y (in)	PASS (57.0%)	0.466 (=L/418)	1.083 (=L/180)	7.26	D+L	1
Bearing Stress (psi)	PASS (11.8%)	706.8	801.1	25.25	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	1212	3144	-300	4056
B	3525	7154	5209	15888
C	3109	2427	17298	22834
D	635	1971	-1067	1539

Reaction Location

A	B	C	D

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)	-	17.23	17.23	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)	Joists #4	A	46.336	46.336	0	16.25	Dead	Y
Uniform (lbf/ft)	Joists #4	A	139.881	139.881	0	16.25	Live	Y
Uniform (lbf/ft)	Joists #5	B	123.75	123.75	0	16.25	Dead	Y
Uniform (lbf/ft)	Joists #5	B	330	330	0	16.25	Live	Y
Uniform (lbf/ft)	Joists #6	B	123.75	123.75	16.25	33	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)	Joists #6	B	330	330	16.25	33	Live	Y
Uniform (lbf/ft)	Joists #11	A	66.25	66.25	25.5	33	Dead	Y
Uniform (lbf/ft)	Joists #11	A	200	200	25.5	33	Live	Y
Point (lbf)	Beam #14	A	1289.419	-	20.75	-	Dead	Y
Point (lbf)	Beam #14	B	1289.419	-	25.25	-	Dead	Y
Point (lbf)	Beam #14	A	10569.78	-	20.75	-	Snow	Y
Point (lbf)	Beam #14	B	10569.78	-	25.25	-	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #25	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): 5 Member Slope: 0/12 Actual Length (ft): 5

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
62.34	732.62	15.91	18.18	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (43.3%)	185.9	327.8	0	D+S	1.15
Bending Stress Y (psi)	PASS (74.9%)	752.4	2994.3	2.5	D+S	1.15
Deflection Y (in)	PASS (92.9%)	0.024 (=L/3330)	0.333 (=L/240)	2.5	S	0
Bearing Stress (psi)	PASS (64.3%)	267.5	750.0	0	D+S	1.15

REACTIONS

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

Y axis	DEAD	LIVE	SNOW	TOTAL
A	937	2	6789	7728
B	937	2	6789	7728

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)	-	18.18	18.18	0	5	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Header #9	A	891.044	-	1	-	Dead	Y
Point (lbf)	Header #9	B	891.044	-	4	-	Dead	Y
Point (lbf)	Header #9	A	6788.664	-	1	-	Snow	Y
Point (lbf)	Header #9	B	6788.664	-	4	-	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #26	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Weyerhaeuser	2.0E Microlam LVL	(4) 1.75 X 11.875	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 14 Member Slope: 0/12 Actual Length (ft): 14

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
83.12	976.83	21.21	24.25	4	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	14	0	14	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Stress Y (psi)	PASS (62.0%)	108.3	285.0	0	D+L	1	1
Bending Stress Y (psi)	PASS (41.2%)	1531.5	2603.7	7	D+L	1	1
Deflection Y (in)	PASS (59.4%)	0.379 (=L/443)	0.933 (=L/180)	7	D+L	1	1
Bearing Stress (psi)	PASS (79.2%)	155.8	750.0	0	D+L	1	1

REACTIONS

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

Y axis	DEAD	LIVE	TOTAL
A	1722	4277	5999
B	1722	4277	5999

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	14	Live	Y
Self Weight (lbf/ft)	-	24.25	24.25	0	14	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #6	A	123.75	123.75	0	14	Dead	Y
Uniform (lbf/ft)	Joists #6	A	330	330	0	14	Live	Y
Uniform (lbf/ft)	Joists #7	B	98	98	0	14	Dead	Y
Uniform (lbf/ft)	Joists #7	B	280	280	0	14	Live	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #27	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): 9.5 Member Slope: 0/12 Actual Length (ft): 9.5

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
62.34	732.62	15.91	18.18	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	2	0	2	0	1.00	1.00	1.00	1.00
2	7.5	0	7.5	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (17.4%)	270.8	327.8	1.995	D+S	1.15
Bending Stress Y (psi)	PASS (79.5%)	609.0	2967.4	2.09	D+S	1.15
Deflection Y (in)	PASS (85.5%)	0.039 (=L/1643)	0.267 (=L/240)	0	S	0
Bearing Stress (psi)	PASS (47.3%)	421.9	801.1	2	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	1493	487	10688	12668
C	-26	282	-751	-495

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	9.5	Live	Y
Uniform (lbf/ft)	Uniform	80	80	0	9.5	Live	Y
Self Weight (lbf/ft)	-	18.18	18.18	0	9.5	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 #6	C	233.333	233.333	0	2	Dead	Y
Uniform (lbf/ft)	Trusses #6	C	2100.008	2100.008	0	2	Snow	Y
Point (lbf)	Girder #1	C	827.399	-	1.75	-	Dead	Y
Point (lbf)	Girder #1	C	5737.028	-	1.75	-	Snow	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #29	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 11.875	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
20.78	244.21	5.3	6.06	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		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 (66.8%)	85.1	256.5	3	D	0.9
Bending Stress Y (psi)	PASS (89.0%)	258.0	2343.3	1.5	D	0.9
Deflection Y (in)	PASS (98.5%)	0.003 (=L/12000)	0.200 (=L/180)	1.5	D+L	0
Bearing Stress (psi)	PASS (83.7%)	122.5	750.0	0	D	0.9

REACTIONS

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

Y axis	DEAD	TOTAL
A	1179	1179
B	1179	1179

Reaction Location

A

B

CONNECTORS

(All connectors are Simpson Strong-Tie connectors)*

Support B	Model	Type	Adequacy (%)	Header Fastening (in)	Joist Nails (in)	Nailer Thickness (in)
Primary	MIU1.81/9	Hanger	43.16	(16) 0.162 x 3.5	(2) 0.148 x 1.5	N/A

Hanger at support B 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)	Uniform	780	780	0	3	Dead	Y
Self Weight (lbf/ft)	-	6.06	6.06	0	3	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #30	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 11.875	DRY

BEAM PROPERTIES

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

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
20.78	244.21	5.3	6.06	1	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		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 (66.8%)	85.1	256.5	3	D		0.9
Bending Stress Y (psi)	PASS (89.0%)	258.0	2343.3	1.5	D		0.9
Deflection Y (in)	PASS (98.5%)	0.003 (=L/12000)	0.200 (=L/180)	1.5	D+L		0
Bearing Stress (psi)	PASS (83.7%)	122.5	750.0	0	D		0.9

REACTIONS

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

Y axis	DEAD	TOTAL
A	1179	1179
B	1179	1179

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	780	780	0	3	Dead	Y
Self Weight (lbf/ft)	-	6.06	6.06	0	3	Dead	Y

PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Floor - 1st Level	LOADING:	ASD
MEMBER NAME:	Beam #31	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 11.875	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 24 Member Slope: 0/12 Actual Length (ft): 24

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
41.56	488.41	10.61	12.12	2	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13.5	0	13.5	0				
2	10.5	0	10.5	0				

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (36.8%)	162.1	256.5	13.44	D	0.9
Bending Stress Y (psi)	PASS (54.5%)	1020.2	2243.8	13.44	D	0.9
Deflection Y (in)	PASS (84.6%)	0.139 (=L/1165)	0.900 (=L/180)	6.96	D+L	0
Bearing Stress (psi)	PASS (48.7%)	411.0	801.1	13.5	D	0.9

REACTIONS

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

Y axis	DEAD	TOTAL
A	703	703
B	7912	7912
C	-115	-115

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)	Stone	780	780	8.5	16	Dead	Y
Self Weight (lbf/ft)	-	12.12	12.12	0	24	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #29	B	1179.092	-	8.5	-	Dead	Y
Point (lbf)	Beam #30	B	1179.092	-	16	-	Dead	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	23-014 Chambers
LEVEL:	Headers - Basement	LOADING:	ASD
MEMBER NAME:	Header #15	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): 4 Member Slope: 0/12 Actual Length (ft): 4

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
25.38	111.15	25.9	5.68	1	0.49	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	4	0	4	0	1.00	0.99	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR	CD
Shear Stress Y (psi)	PASS (28.0%)	149.0	207.0	0	D+S	1.15	
Bending Stress Y (psi)	PASS (22.4%)	986.4	1270.8	2	D+S	1.15	
Deflection Y (in)	PASS (90.3%)	0.026 (=L/1848)	0.267 (=L/180)	2	D+L	1	
Bearing Stress (psi)	PASS (23.2%)	480.0	625.0	0	D+S	1.15	

REACTIONS

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

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	TOTAL
A	1170	428	2	1350	2950
B	1170	428	2	1350	2950

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	4	RoofLive	Y
Self Weight (lbf/ft)	-	5.68	5.68	0	4	Dead	Y

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Joists #3	A	70.947	70.947	0	4	Dead	Y
Uniform (lbf/ft)	Joists #3	A	214.181	214.181	0	4	Live	Y
Uniform (lbf/ft)	Deck Joists #3	B	508.5	508.5	0	4	Dead	Y
Uniform (lbf/ft)	Deck Joists #3	B	675	675	0	4	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - Basement	LOADING:	ASD
MEMBER NAME:	Header #16	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): 13 Member Slope: 0/12 Actual Length (ft): 13

Area	I _x	I _y	BSW	Lams	C _{fn}	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb/ft)			Creep Factor
73.5	1200.5	18.76	21.44	3	7.35	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _{c⊥} (psi)	E (psi) x10 ³	E _{min} (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 = 0.98 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)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	13	0	13	0	1.00	0.98	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (61.8%)	125.1	327.8	0	D+0.75L+0.75S	1.15
Bending Stress Y (psi)	PASS (52.4%)	1394.3	2927.9	6.5	D+0.75L+0.75S	1.15
Deflection Y (in)	PASS (77.0%)	0.199 (=L/784)	0.867 (=L/180)	6.5	D+L	1
Bearing Stress (psi)	PASS (74.0%)	194.7	750.0	0	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	2695	2145	6	2438	7284
B	2695	2145	6	2438	7284

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)	-	21.44	21.44	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)	Joists #5	A	123.75	123.75	0	13	Dead	Y
Uniform (lbf/ft)	Joists #5	A	330	330	0	13	Live	Y
Uniform (lbf/ft)	Deck Joists #4	B	269.375	269.375	0	13	Dead	Y
Uniform (lbf/ft)	Deck Joists #4	B	375	375	0	13	Snow	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Headers - Basement	LOADING:	ASD
MEMBER NAME:	Header #17	CODE:	2018 International Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Douglas Fir-Larch(North)	No. 2	(3) 1.5 X 11.25	DRY

BEAM PROPERTIES

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

Area	Ix	Iy	BSW	Lams	G	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
50.62	533.94	85.43	11.32	3	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	850	500	180	1400	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

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	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 (68.0%)	57.7	180.0	0	D+L	1	
Bending Stress Y (psi)	PASS (27.6%)	615.2	850.0	5	D+L	1	
Deflection Y (in)	PASS (84.6%)	0.103 (=L/1166)	0.667 (=L/180)	5	D+L	1	
Bearing Stress (psi)	PASS (53.9%)	288.4	625.0	0	D+L	1	

REACTIONS

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

Y axis	DEAD	LIVE	LIVE ROOF	TOTAL
A	547	1400	5	1952
B	547	1400	5	1952

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)	-	11.32	11.32	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)	Joists #7	A	98	98	0	10	Dead	Y
Uniform (lbf/ft)	Joists #7	A	280	280	0	10	Live	Y

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (26.4%)	1104.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.5%)	557.0	15774.4	1.2D+1.6S+L	LRFD
Moment (lb/ft)	PASS (97.1%)	321.2	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

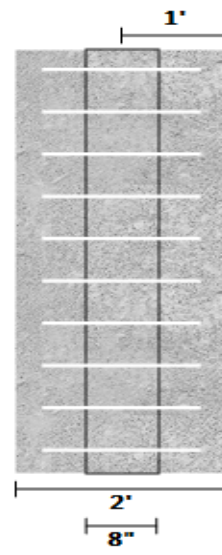
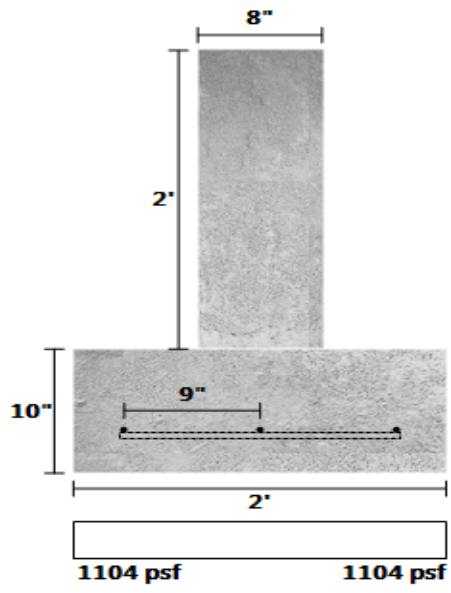
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #1	B	129.1234	129.1234	0	1	Dead	Z
Uniform (lb/ft)	Trusses #1	B	1604.295	1604.295	0	1	Snow	Z
Uniform (lb/ft)	Joists #1	C	39.75331	39.75331	0	1	Dead	Z
Uniform (lb/ft)	Joists #1	C	120.01	120.01	0	1	Live	Z

Footing #1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #2	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (5.9%)	1411.7	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (95.4%)	728.3	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (96.3%)	419.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

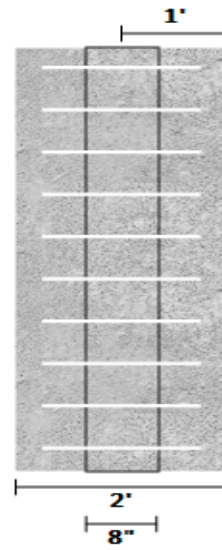
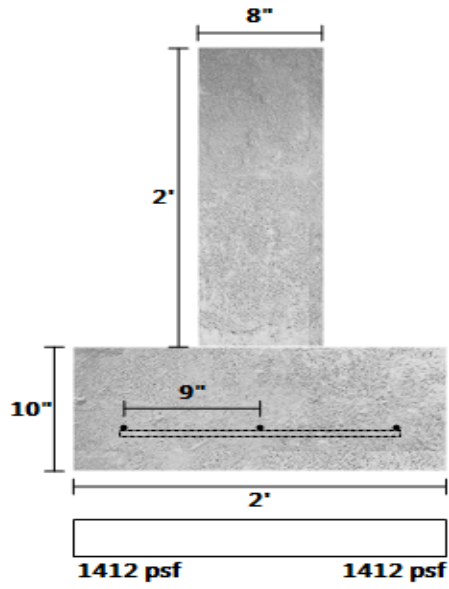
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #1	A	94.22536	94.22536	0	1	Dead	Z
Uniform (lb/ft)	Trusses #1	A	1170.703	1170.703	0	1	Snow	Z
Uniform (lb/ft)	Rafters #1	C	49.4596	49.4596	0	1	Dead	Z
Uniform (lb/ft)	Rafters #1	C	494.5959	494.5959	0	1	Snow	Z
Uniform (lb/ft)	Joists #1	A	39.75331	39.75331	0	1	Dead	Z
Uniform (lb/ft)	Joists #1	A	120.01	120.01	0	1	Live	Z
Uniform (lb/ft)	Deck Joists #1	A	224.7	224.7	0	1	Dead	Z
Uniform (lb/ft)	Deck Joists #1	A	315	315	0	1	Snow	Z

Footing #2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #3	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.2%)	1376.8	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.9%)	1206.2	19718.0	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (92.9%)	797.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

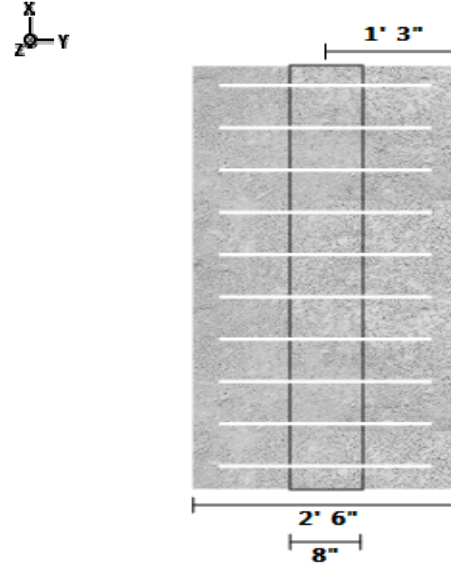
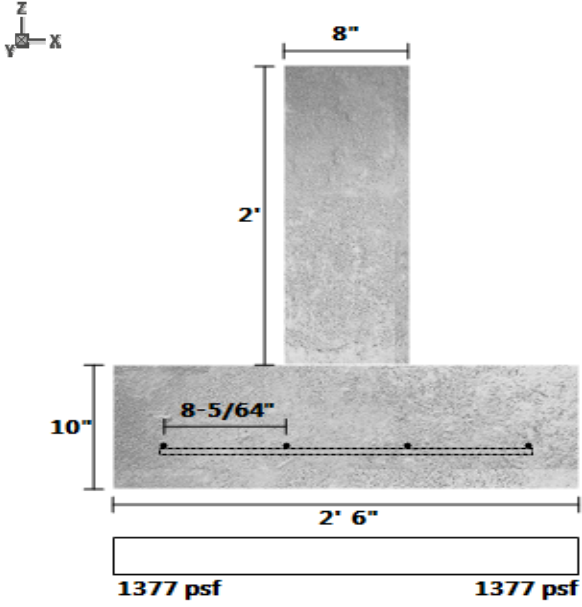
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #2	B	320.0586	320.0586	0	1	Dead	Z
Uniform (lb/ft)	Trusses #2	B	2566.156	2566.156	0	1	Snow	Z
Uniform (lb/ft)	Joists #2	D	60.3484	60.3484	0	1	Dead	Z
Uniform (lb/ft)	Joists #2	D	182.1838	182.1838	0	1	Live	Z

Footing #3 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #4	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (5) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
3.5	10	422.9167	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (4.8%)	1427.5	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (91.9%)	2222.9	27605.2	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (82.5%)	1964.6	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.5	3.5	D	LRFD

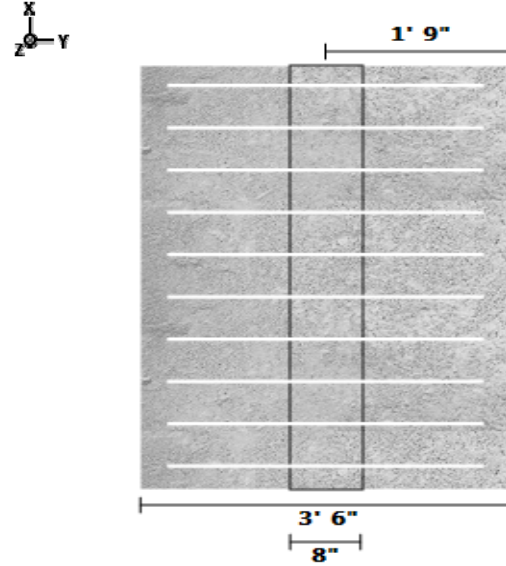
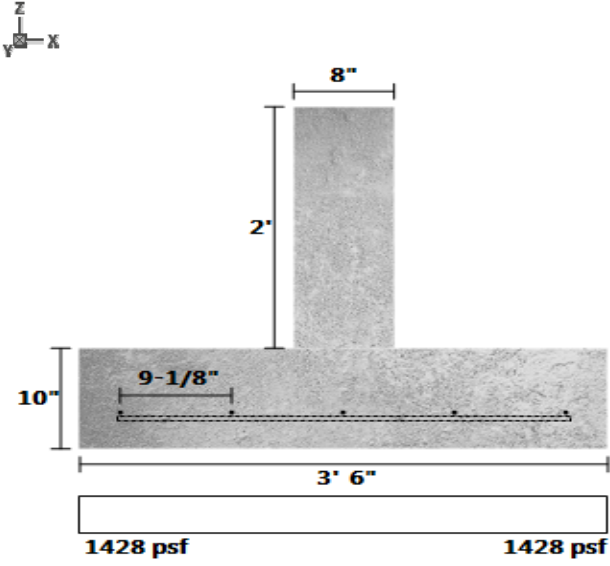
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #2	A	269.2547	269.2547	0	1	Dead	Z
Uniform (lb/ft)	Trusses #2	A	2158.835	2158.835	0	1	Snow	Z
Uniform (lb/ft)	Rafters #2	C	86.73534	86.73534	0	1	Dead	Z
Uniform (lb/ft)	Rafters #2	C	867.3534	867.3534	0	1	Snow	Z
Uniform (lb/ft)	Joists #2	A	55.40074	55.40074	0	1	Dead	Z
Uniform (lb/ft)	Joists #2	A	167.2475	167.2475	0	1	Live	Z
Uniform (lb/ft)	Deck Joists #2	B	398.75	398.75	0	1	Dead	Z
Uniform (lb/ft)	Deck Joists #2	B	543.75	543.75	0	1	Snow	Z

Footing #4 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #5	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.2%)	1376.8	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (93.9%)	1206.2	19718.0	1.2D+1.6S+L	LRFD
Moment (lb/ft)	PASS (92.9%)	797.5	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

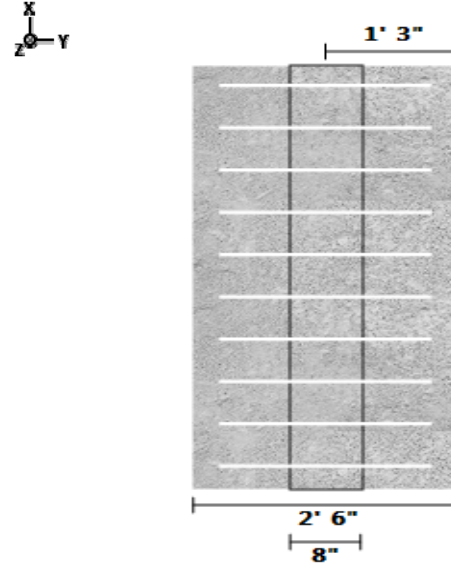
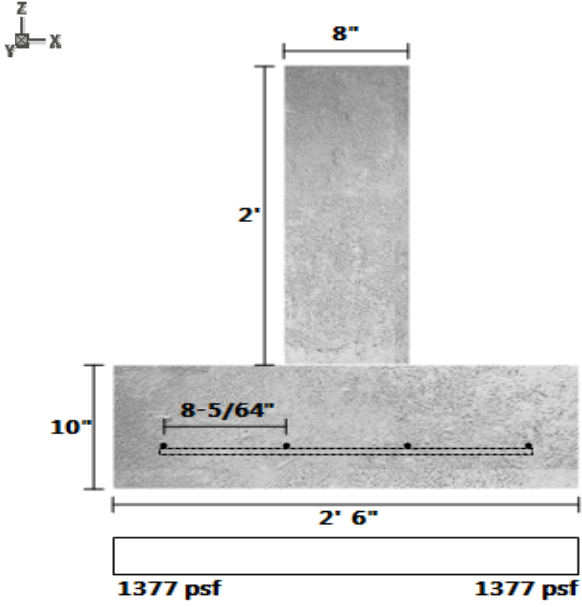
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #2	B	320.0586	320.0586	0	1	Dead	Z
Uniform (lb/ft)	Trusses #2	B	2566.156	2566.156	0	1	Snow	Z
Uniform (lb/ft)	Joists #2	D	60.3484	60.3484	0	1	Dead	Z
Uniform (lb/ft)	Joists #2	D	182.1838	182.1838	0	1	Live	Z

Footing #5 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #6	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.25 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (6) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
4.25	10	513.5417	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	24	Concrete	10		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (43.3%)	850.0	1500.0	D+S	ASD
Overturning (lb-ft)	PASS (37.5%)	1679.5	2687.0	D+S	ASD
One-Way Shear (lb)	PASS (97.2%)	938.9	33520.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (94.3%)	640.3	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.3	4.3	D	LRFD
Eccentricity (in)	PASS (10.0%)	7.7	8.5	D+S	ASD

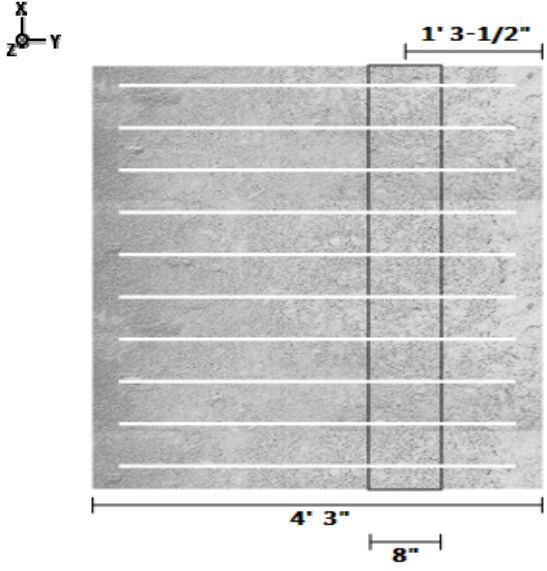
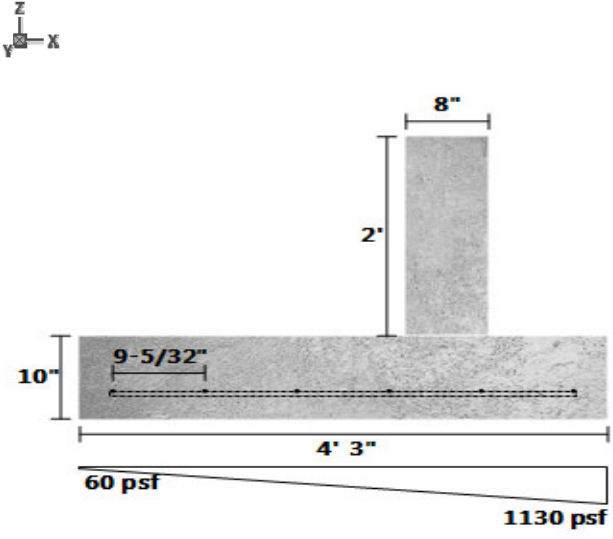
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #3	A	172.1042	172.1042	0	1	Dead	Z
Uniform (lb/ft)	Trusses #3	A	1650	1650	0	1	Snow	Z

Footing #6 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #7	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.5 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (6) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
4.5	10	543.75	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	8.5		
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 (84.5%)	231.8	1500.0	D+L	ASD
Overturning (lbf-ft)	PASS (74.2%)	268.0	1037.4	D+L	ASD
One-Way Shear (lbf)	PASS (99.6%)	136.0	35492.4	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (99.0%)	109.2	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	4.5	4.5	D	LRFD
Eccentricity (in)	PASS (65.2%)	3.1	9.0	D+L	ASD

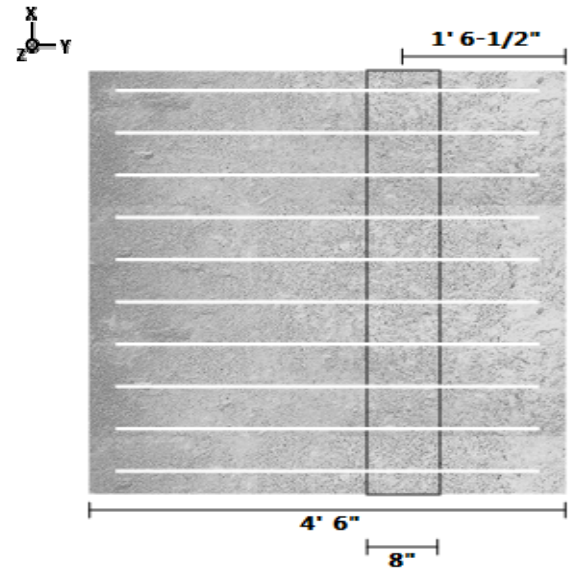
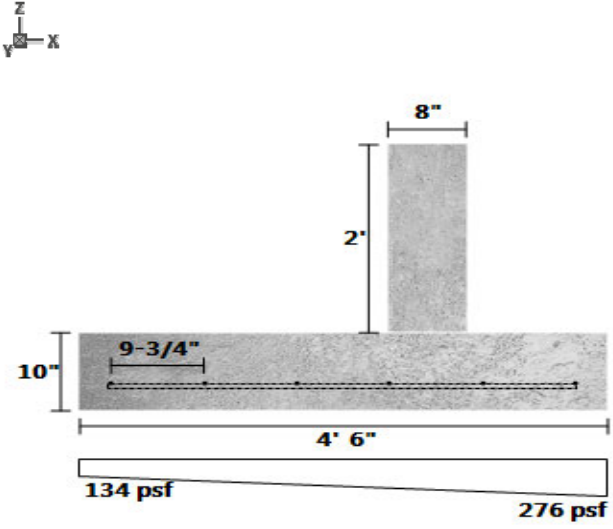
LOAD LIST

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
Stemwall Weight (lbf/ft)		193.33	193.33	0	1	Dead	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	C	45.78942	45.78942	0	1	Dead	Z
Uniform (lbf/ft)	Joists #3	C	138.2322	138.2322	0	1	Live	Z

Footing #7 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #8	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 (19.5%)	1206.9	1500.0	D+S	ASD
One-Way Shear (lbf)	PASS (99.3%)	77.5	10513.6	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (99.3%)	82.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

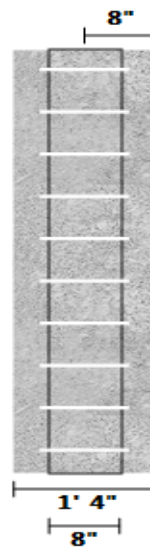
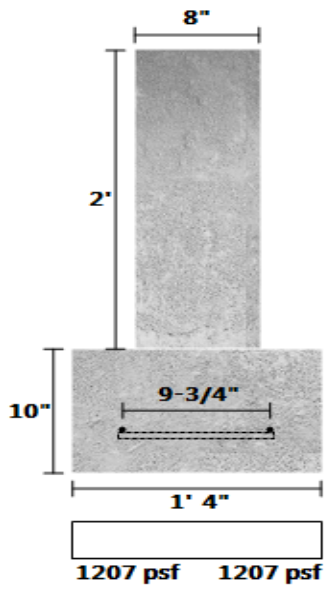
LOAD LIST

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
Stemwall Weight (lbf/ft)		193.33	193.33	0	1	Dead	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	A	70.94733	70.94733	0	1	Dead	Z
Uniform (lbf/ft)	Joists #3	A	214.1806	214.1806	0	1	Live	Z
Uniform (lbf/ft)	Deck Joists #3	B	508.5001	508.5001	0	1	Dead	Z
Uniform (lbf/ft)	Deck Joists #3	B	675	675	0	1	Snow	Z

Footing #8 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #9	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (32.5%)	1011.8	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (97.0%)	478.4	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (97.5%)	275.9	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

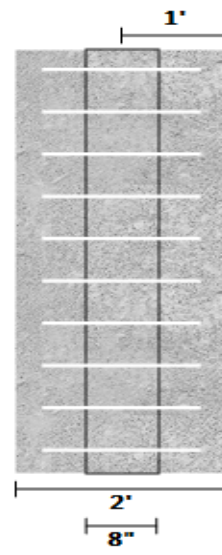
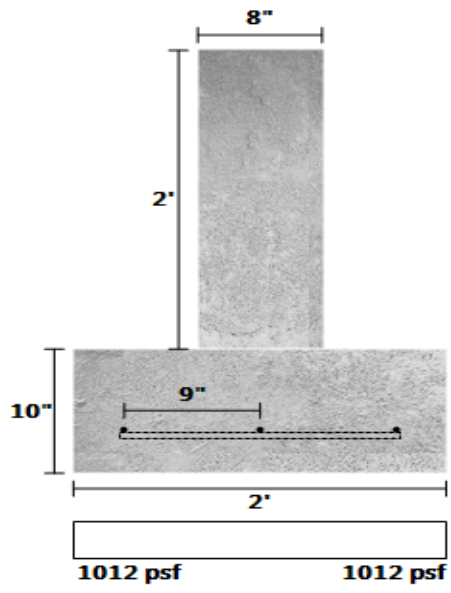
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Rafters #3	B	149.9624	149.9624	0	1	Dead	Z
Uniform (lb/ft)	Rafters #3	B	1438.574	1438.574	0	1	Snow	Z

Footing #9 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (26.0%)	1110.6	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.7%)	524.1	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (97.3%)	302.2	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

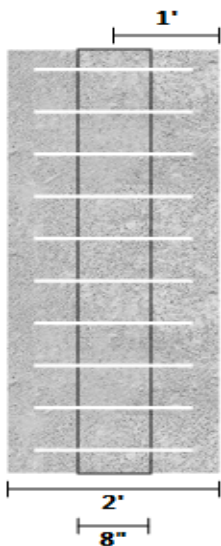
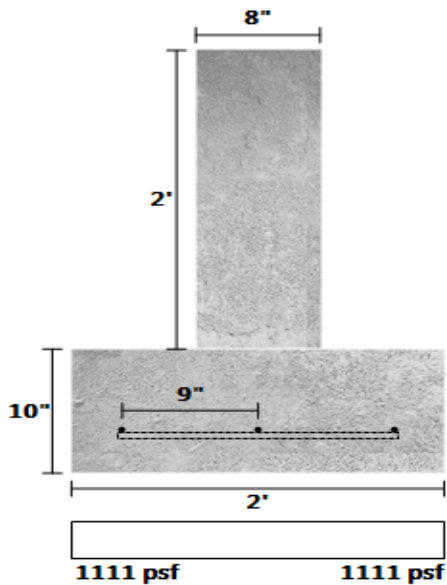
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Rafters #6	B	347.5934	347.5934	0	1	Dead	Z
Uniform (lb/ft)	Rafters #6	B	1438.578	1438.578	0	1	Snow	Z

Footing #10 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #11	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (4.7%)	1429.9	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (92.7%)	1732.2	23661.6	1.2D+1.6S+L	LRFD
Moment (lb/ft)	PASS (88.2%)	1331.4	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.0	3.0	D	LRFD

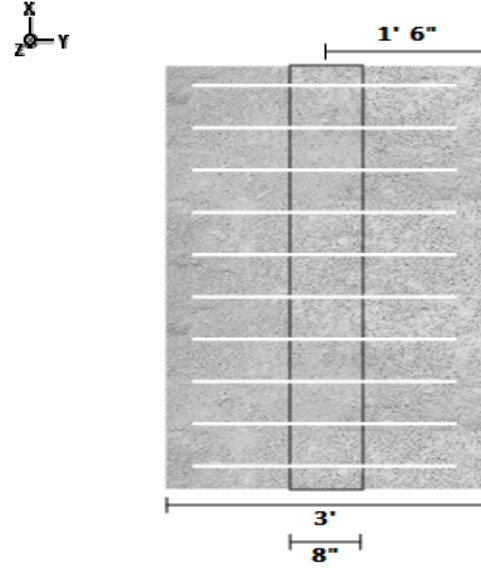
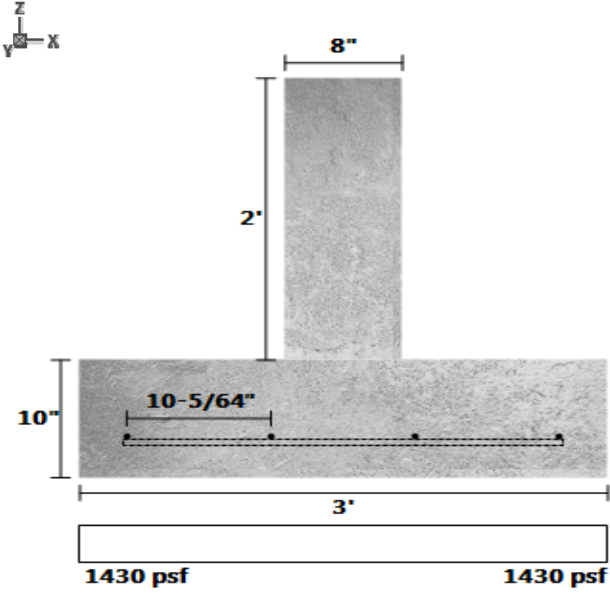
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #4	B	595.306	595.306	0	1	Dead	Z
Uniform (lb/ft)	Trusses #4	B	3088.031	3088.031	0	1	Snow	Z
Uniform (lb/ft)	Joists #4	C	50.47816	50.47816	0	1	Dead	Z
Uniform (lb/ft)	Joists #4	C	152.3869	152.3869	0	1	Live	Z

Footing #11 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #12	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (68.9%)	466.4	1500.0	D+L	ASD
One-Way Shear (lb/ft)	PASS (99.9%)	15.6	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lb-ft)	PASS (99.9%)	16.7	11245.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

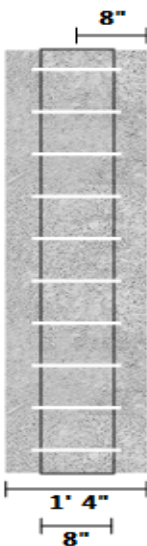
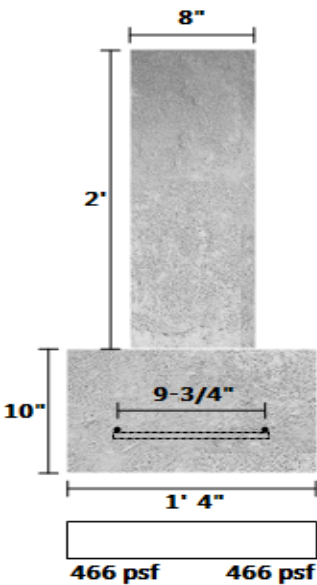
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Joists #10	A	66.25	66.25	0	1	Dead	Z
Uniform (lb/ft)	Joists #10	A	200	200	0	1	Live	Z

Footing #12 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #13	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 (51.3%)	730.6	1500.0	D+0.75L+0.75S	ASD
One-Way Shear (lbf)	PASS (99.6%)	42.2	10513.6	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (99.6%)	45.2	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

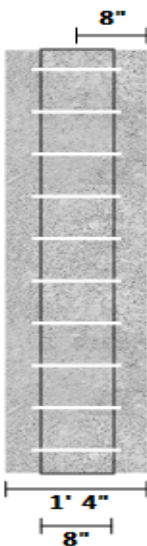
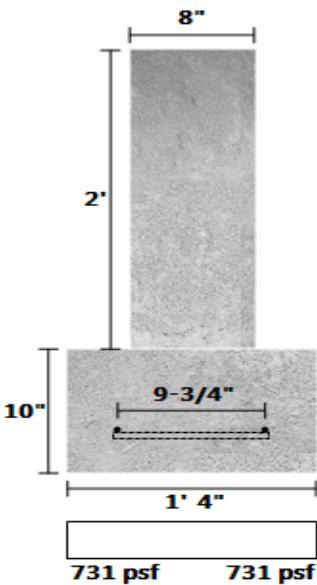
LOAD LIST

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
Stemwall Weight (lbf/ft)		193.33	193.33	0	1	Dead	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	C	58.73104	58.73104	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #8	C	458.3885	458.3885	0	1	Snow	Z
Uniform (lbf/ft)	Joists #11	B	66.25	66.25	0	1	Dead	Z
Uniform (lbf/ft)	Joists #11	B	200	200	0	1	Live	Z

Footing #13 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #14	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (5) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
4	10	483.3333	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (3.6%)	1445.6	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (91.3%)	2749.4	31548.8	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (75.5%)	2756.3	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

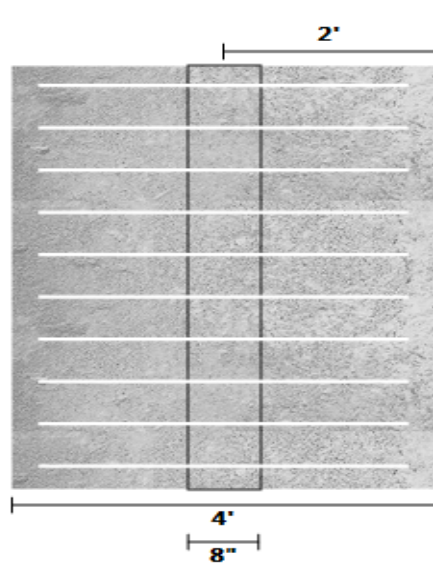
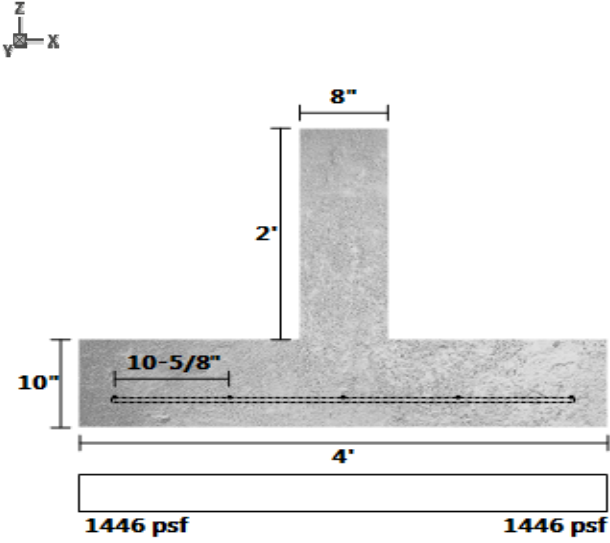
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #8	B	579.8651	579.8651	0	1	Dead	Z
Uniform (lb/ft)	Trusses #8	B	4525.776	4525.776	0	1	Snow	Z

Footing #14 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #15	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.1%)	1378.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.1%)	97.4	10513.6	1.2D+1.6S+L	LRFD
Moment (lb/ft)	PASS (99.1%)	104.1	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

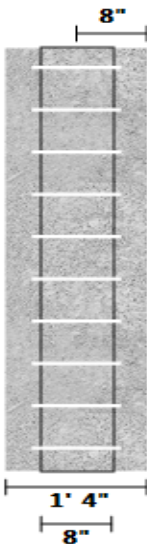
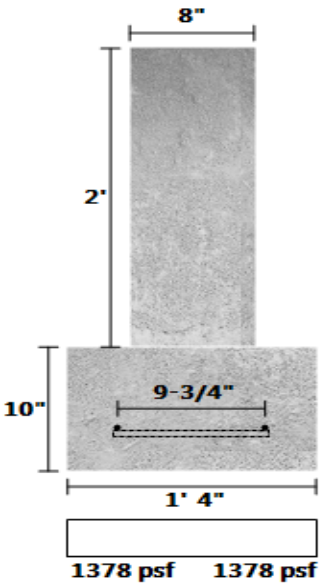
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #9	B	114.7235	114.7235	0	1	Dead	Z
Uniform (lb/ft)	Trusses #9	B	1301.57	1301.57	0	1	Snow	Z
Uniform (lb/ft)	Joists #9	A	66.25	66.25	0	1	Dead	Z
Uniform (lb/ft)	Joists #9	A	200	200	0	1	Live	Z

Footing #15 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #16	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (48.7%)	770.2	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (99.6%)	41.3	10513.6	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (99.6%)	44.2	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	1.3	1.3	D	LRFD

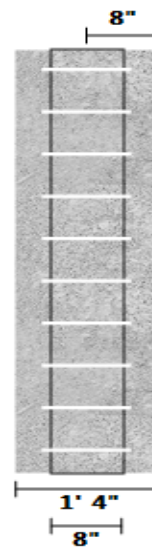
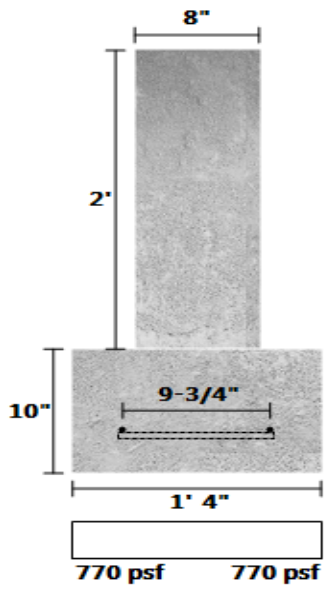
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Outlookers	B	39.80587	39.80587	0	1	Dead	Z
Uniform (lb/ft)	Outlookers	B	632.4556	632.4556	0	1	Snow	Z

Footing #16 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 13 (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	13	392.7083	483.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/ft ³)	Agg. Dia. (in)		
3000	3122019	145	0.75		
STEM WALL					
Width (in)	Height (in)	Material	Stemwall Offset (in)		
8	60	Concrete	0		
SOIL					
Bearing Strength (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (10.7%)	1340.2	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.8%)	812.1	25633.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (96.0%)	668.5	16547.3	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

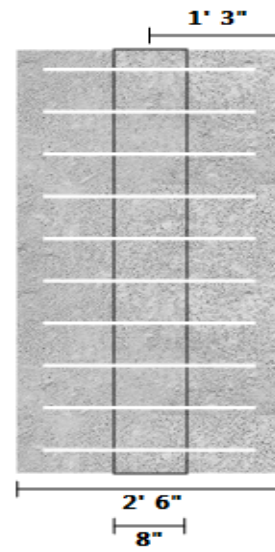
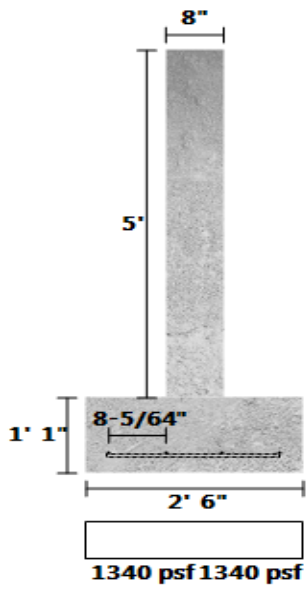
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		483.33	483.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #9	C	197.4369	197.4369	0	1	Dead	Z
Uniform (lb/ft)	Trusses #9	C	2239.977	2239.977	0	1	Snow	Z
Uniform (lb/ft)	Joists #8	D	36.93954	36.93954	0	1	Dead	Z
Uniform (lb/ft)	Joists #8	D	111.5156	111.5156	0	1	Live	Z

Footing #17 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #18	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
5 (ft) Wide X 13 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (8) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
5	13	785.4167	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	11		
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			

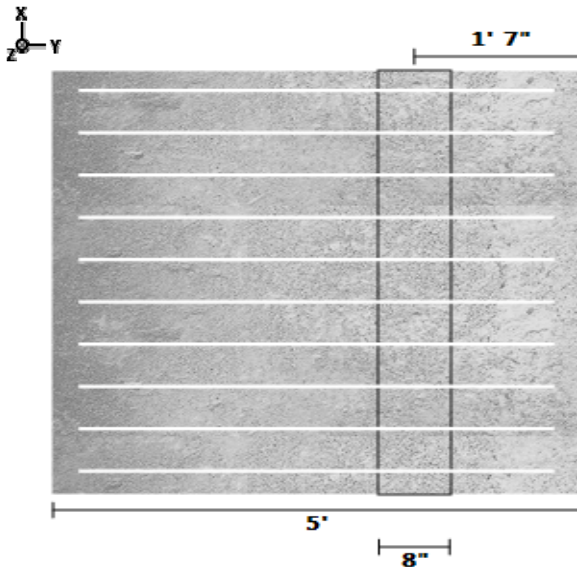
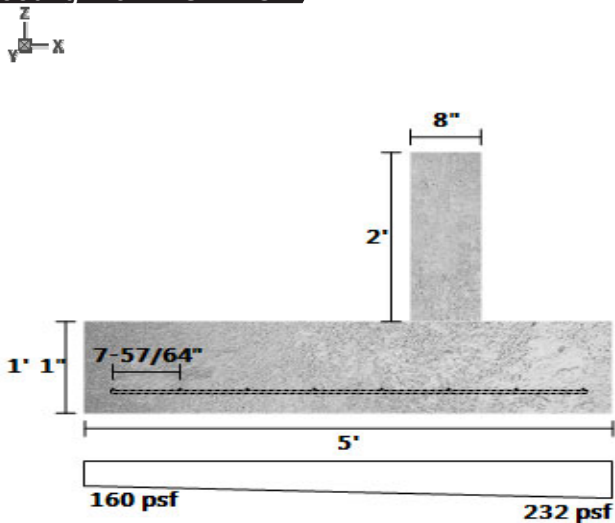
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lbf/ft ²)	PASS (86.1%)	208.8	1500.0	D+L	ASD
Overturning (lbf-ft)	PASS (85.5%)	178.1	1224.7	D+L	ASD
One-Way Shear (lbf)	PASS (100.0%)	0.9	51266.8	1.2D+1.6L+0.5Lr	LRFD
Moment (lbf-ft)	PASS (100.0%)	0.9	16547.3	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	5.0	5.0	D	LRFD
Eccentricity (in)	PASS (81.6%)	1.8	10.0	D+L	ASD

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



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #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	193.3333		
CONCRETE					
fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (13.2%)	1301.4	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (94.4%)	1099.2	19718.0	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (93.5%)	726.8	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

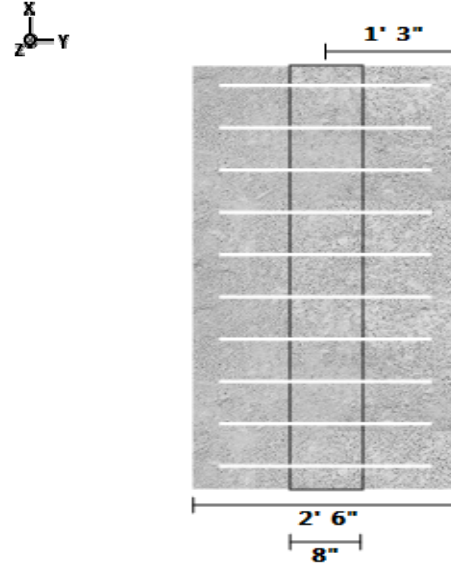
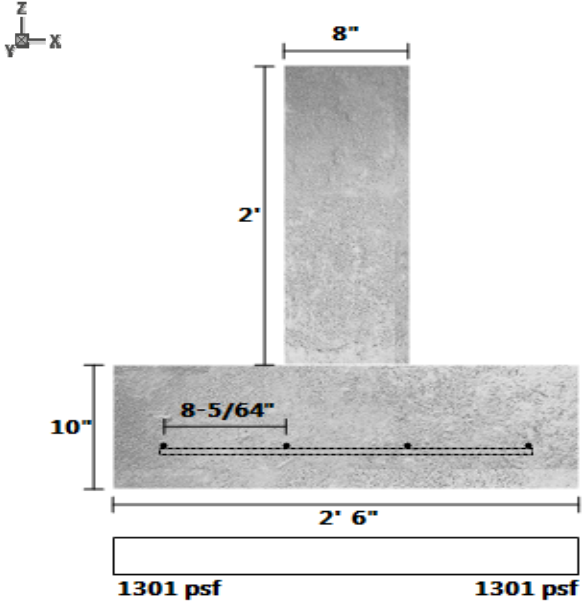
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #9	D	223.4178	223.4178	0	1	Dead	Z
Uniform (lb/ft)	Trusses #9	D	2534.738	2534.738	0	1	Snow	Z

Footing #19 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (lb/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 (lb/ft ²)	Density (lb/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			

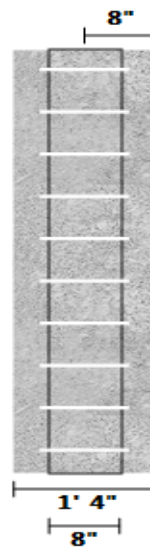
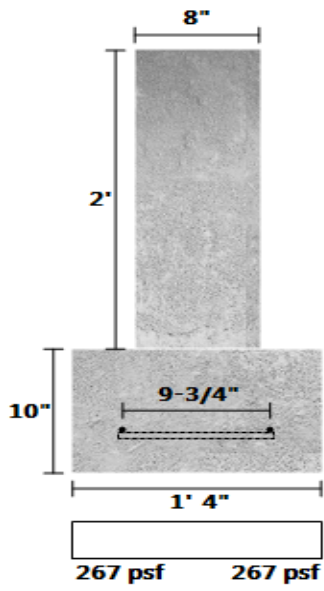
PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOAD COMBO	CALCULATION TYPE
Soil Bearing Pressure (lb/ft ²)	PASS (82.2%)	266.6	1500.0	D+L	ASD
One-Way Shear (lb)	PASS (100.0%)	0.1	10513.6	1.2D+1.6L+0.5Lr	LRFD
Moment (lb-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 (lb/ft)	Uniform	1	1	0	1	Live	Z

Footing #20 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #21	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.1%)	1379.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (94.1%)	1167.6	19718.0	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (93.1%)	772.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

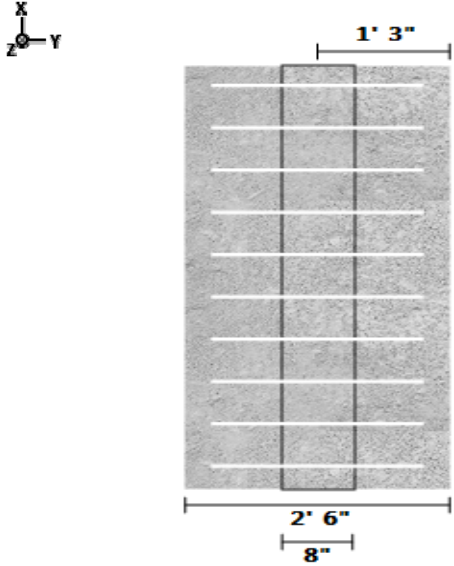
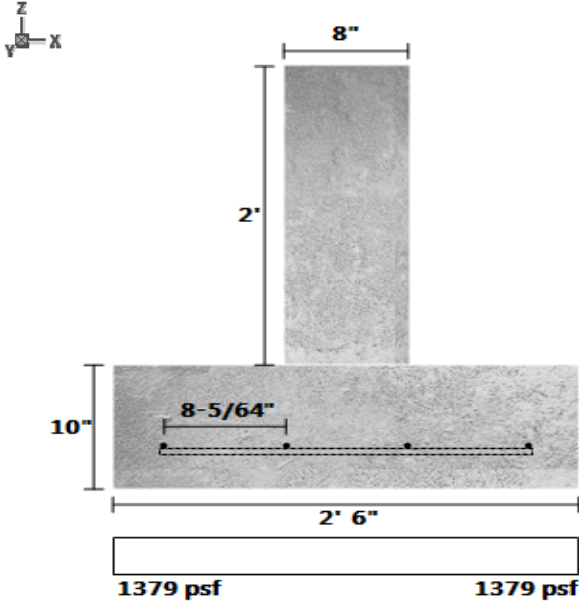
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #11	C	327.3913	327.3913	0	1	Dead	Z
Uniform (lb/ft)	Trusses #11	C	2624.984	2624.984	0	1	Snow	Z

Footing #21 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.1%)	1379.1	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (94.1%)	1167.6	19718.0	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (93.1%)	772.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.5	2.5	D	LRFD

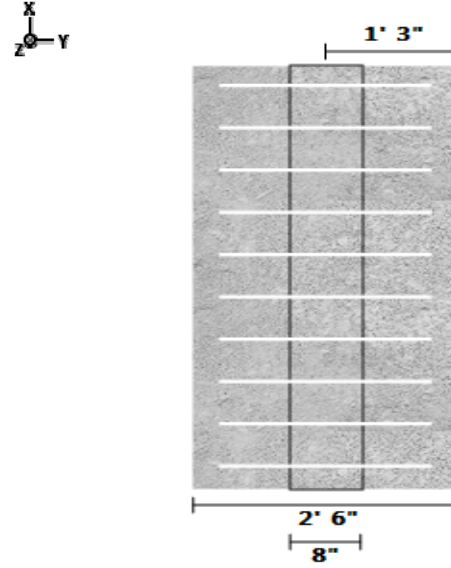
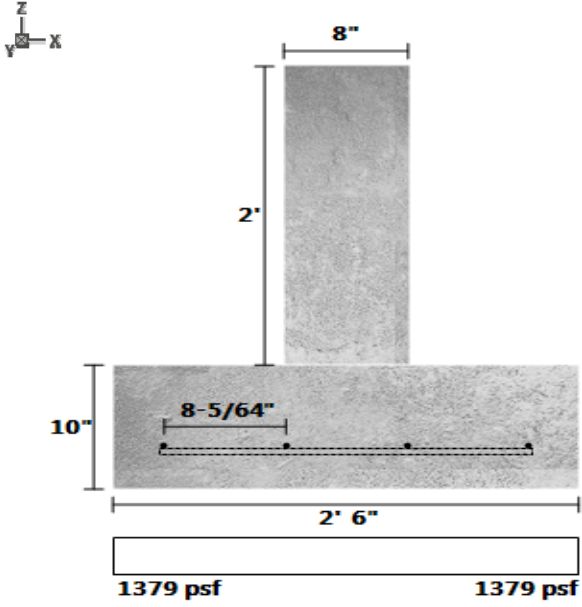
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #11	B	327.3971	327.3971	0	1	Dead	Z
Uniform (lb/ft)	Trusses #11	B	2625.002	2625.002	0	1	Snow	Z

Footing #22 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (23.2%)	1152.4	1500.0	D+S	ASD
One-Way Shear (lb/ft)	PASS (96.4%)	565.5	15774.4	1.2D+1.6S+L	LRFD
Moment (lb-ft)	PASS (97.1%)	326.1	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	2.0	2.0	D	LRFD

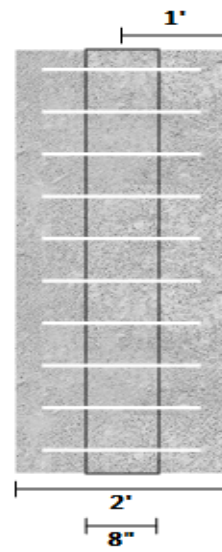
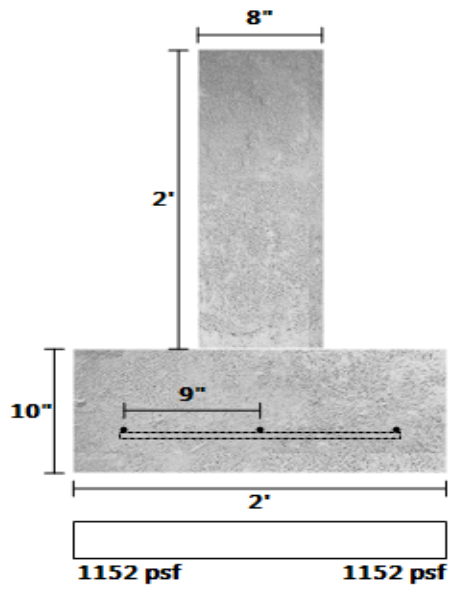
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Uniform	1	1	0	1	Live	Z
Stemwall Weight (lb/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb/ft)	Trusses #12	B	144.7083	144.7083	0	1	Dead	Z
Uniform (lb/ft)	Trusses #12	B	1725	1725	0	1	Snow	Z

Footing #23 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	Footing #24	CODE:	2018 International Building Code
MEMBER TYPE:	CONTINUOUS FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) Wide X 10 (in) Deep		Soil Depth TOF: 0 (ft)	Long. (5) #4 Bars, Transv: #4 @6(in) O.C.

MATERIAL PROPERTIES

FOOTING					
Width (ft)	Depth (in)	Footing Weight (lb/ft)	Stemwall Weight (lb/ft)		
3.5	10	422.9167	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	7		
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 (34.6%)	981.2	1500.0	D+S	ASD
Overturning (lbf-ft)	PASS (44.5%)	1223.4	2205.1	D+S	ASD
One-Way Shear (lbf)	PASS (96.7%)	898.6	27605.2	1.2D+1.6S+L	LRFD
Moment (lbf-ft)	PASS (94.9%)	568.0	11245.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	3.5	3.5	D	LRFD
Eccentricity (in)	PASS (20.1%)	5.6	7.0	D+S	ASD

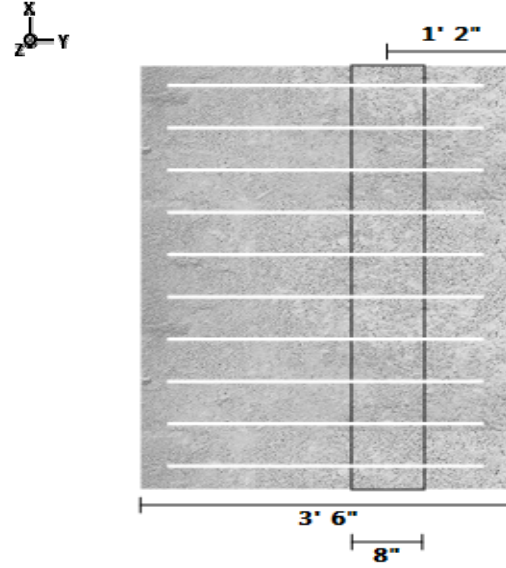
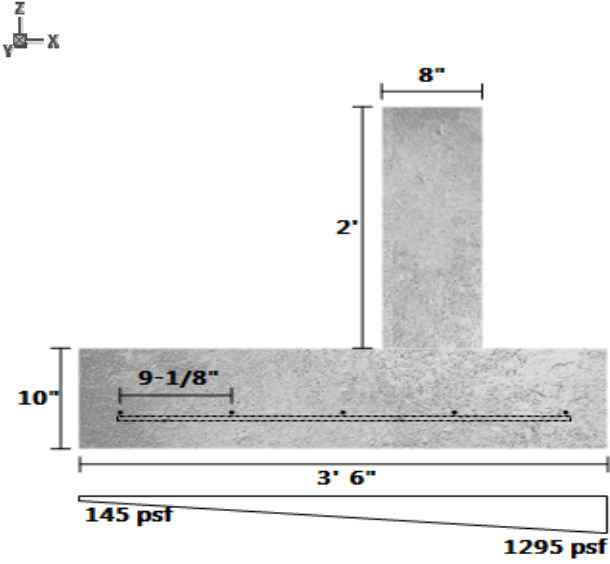
LOAD LIST

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
Stemwall Weight (lbf/ft)		193.33	193.33	0	1	Dead	Z

LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	Trusses #13	B	152.8516	152.8516	0	1	Dead	Z
Uniform (lbf/ft)	Trusses #13	B	1751.043	1751.043	0	1	Snow	Z

Footing #24 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
4.5 (ft) X 4.5 (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 (ft³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (9.9%)	1350.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (61.4%)	13701.3	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (61.4%)	13701.3	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (55.0%)	34887.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (46.7%)	15388.5	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (46.7%)	15388.5	28872.8	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (82.2%)	37700.4	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	20.3	20.3	D	LRFD

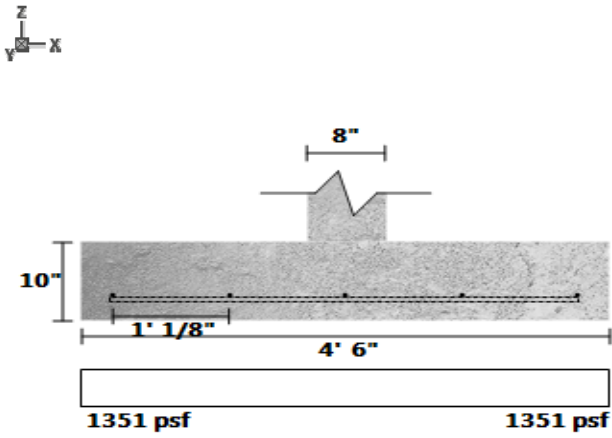
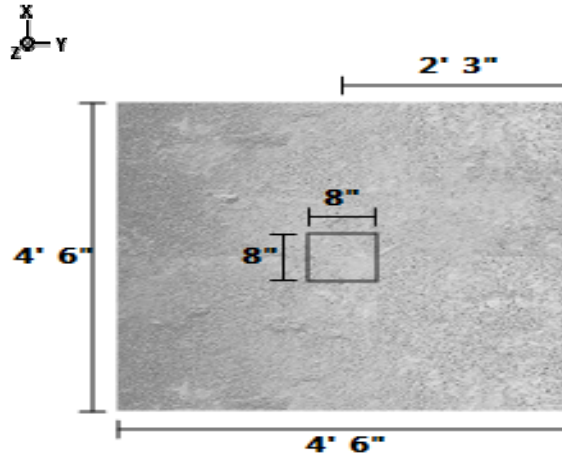
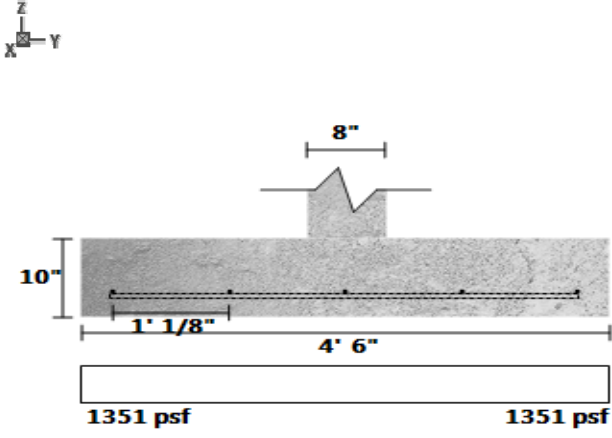
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #1	A	1618.993	-	0	-	Dead	Z
Point (lb/ft)	Beam #1	A	7.25	-	0	-	Live	Z
Point (lb/ft)	Beam #1	A	14349.37	-	0	-	Snow	Z
Point (lb/ft)	Beam #16	A	3792.83	-	0	-	Dead	Z
Point (lb/ft)	Beam #16	A	7	-	0	-	Live	Z
Point (lb/ft)	Beam #16	A	5145	-	0	-	Snow	Z

SpotFtg Bm #1-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #1-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
4.5 (ft) X 4.5 (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)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (9.9%)	1350.8	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (61.4%)	13701.3	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (61.4%)	13701.3	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (55.0%)	34887.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (46.7%)	15388.5	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (46.7%)	15388.5	28872.8	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (82.2%)	37700.5	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

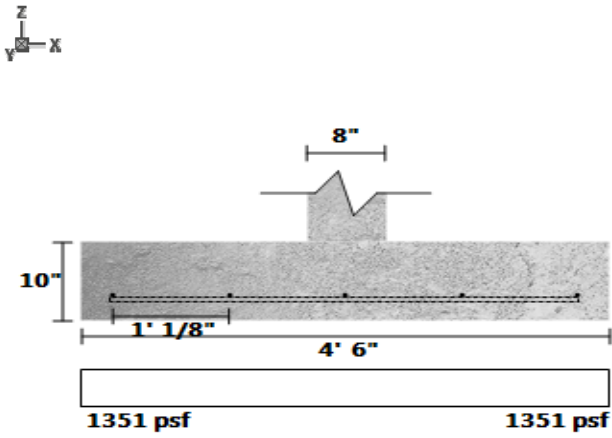
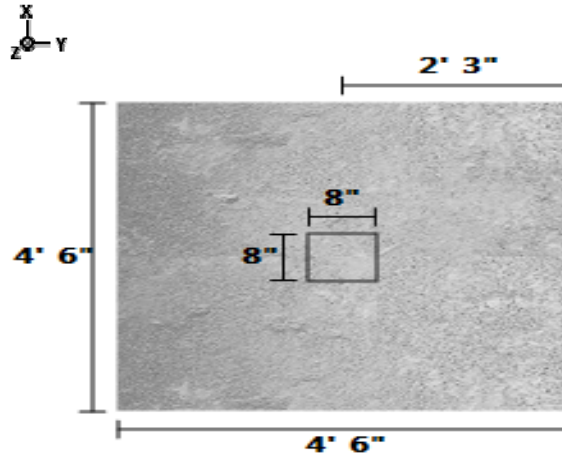
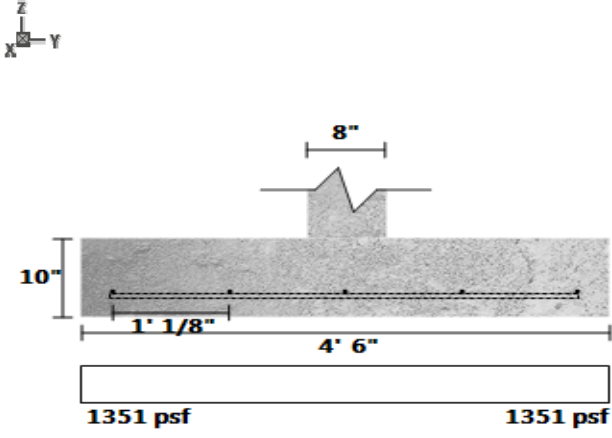
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #1	B	1618.993	-	0	-	Dead	Z
Point (lb/ft)	Beam #1	B	7.25	-	0	-	Live	Z
Point (lb/ft)	Beam #1	B	14349.38	-	0	-	Snow	Z
Point (lb/ft)	Beam #16	B	3792.83	-	0	-	Dead	Z
Point (lb/ft)	Beam #16	B	7	-	0	-	Live	Z
Point (lb/ft)	Beam #16	B	5145	-	0	-	Snow	Z

SpotFtg Bm #1-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #4	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2.5 (ft) X 3 (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)
2.5	3	10	6.25	906.25

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (8.2%)	1377.7	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (85.1%)	2929.7	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (82.2%)	2929.7	16431.7	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (87.0%)	10253.9	78872.1	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (73.0%)	3323.0	12323.8	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (76.0%)	2461.8	10269.8	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (93.1%)	14648.5	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	7.5	7.5	D	LRFD

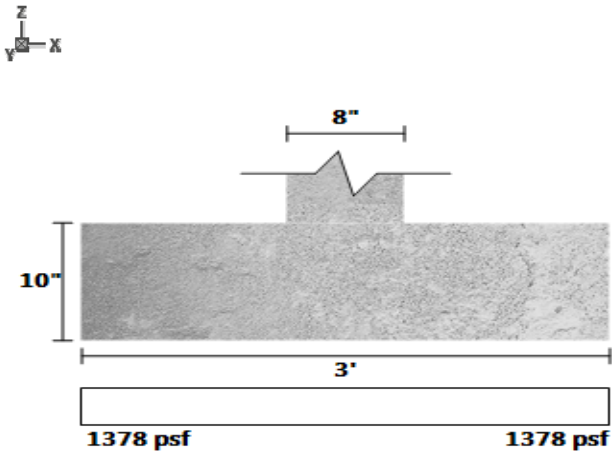
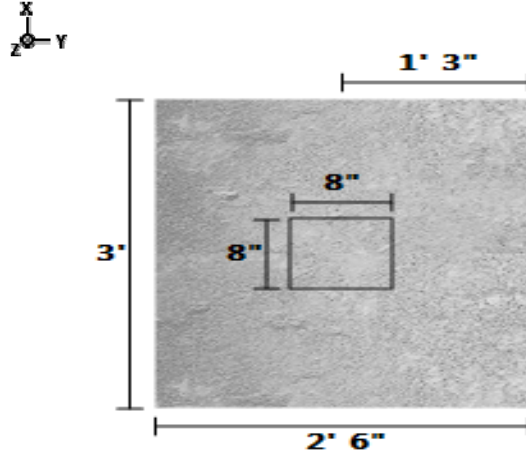
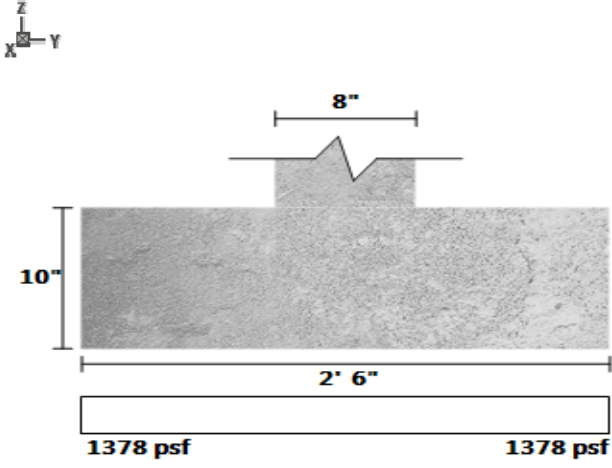
LOAD LIST

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	1086.225	-	0	-	Dead	Z
Point (lbf)	Header #4	A	8340.006	-	0	-	Snow	Z

SpotFtg Hdr #4 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #3	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (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)
3.5	4	10	11.67	1691.67

CONCRETE			
fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (10.9%)	1336.8	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (71.2%)	7566.3	26290.7	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (67.1%)	7566.3	23004.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (71.8%)	22225.9	78872.1	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (44.0%)	9195.1	16431.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (47.2%)	7592.5	14377.7	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (87.5%)	26481.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	14.0	14.0	D	LRFD

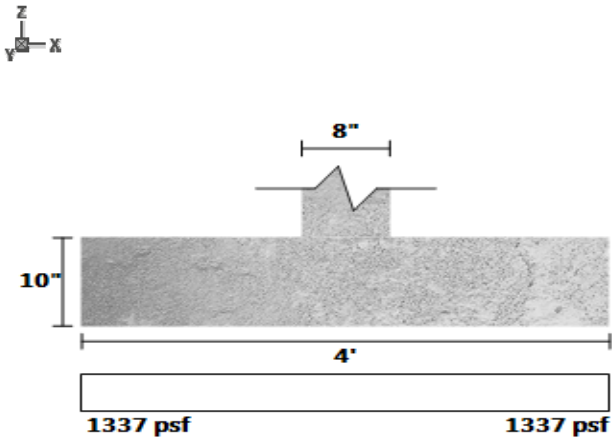
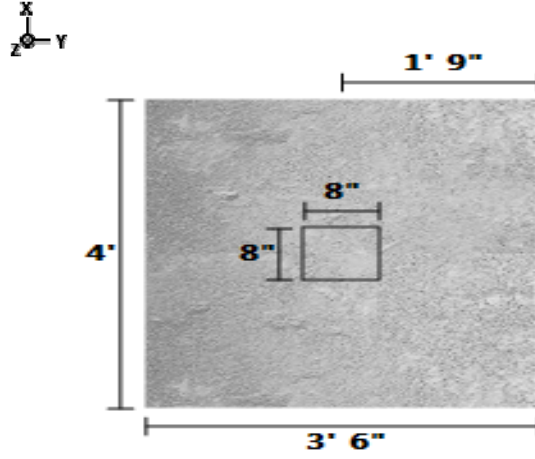
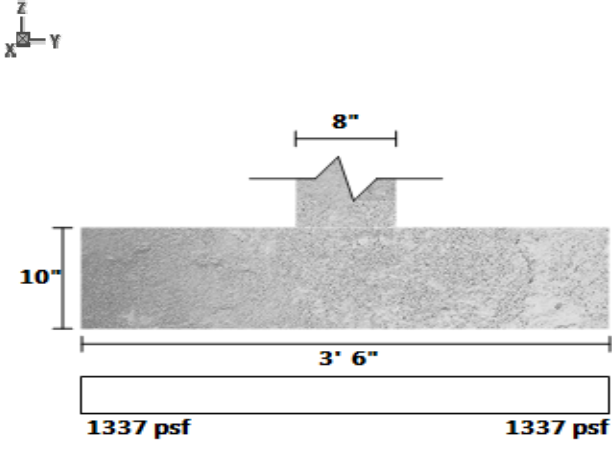
LOAD LIST

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 #3	A	1892.845	-	0	-	Dead	Z
Point (lbf)	Header #3	A	15130.94	-	0	-	Snow	Z

SpotFtg Hdr #3 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	23-014 Chambers
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		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (18.1%)	1228.7	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (58.5%)	16363.0	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (58.5%)	16363.0	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (47.4%)	40771.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (41.1%)	20370.9	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (41.1%)	20370.9	34556.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (79.5%)	43393.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	25.0	25.0	D	LRFD

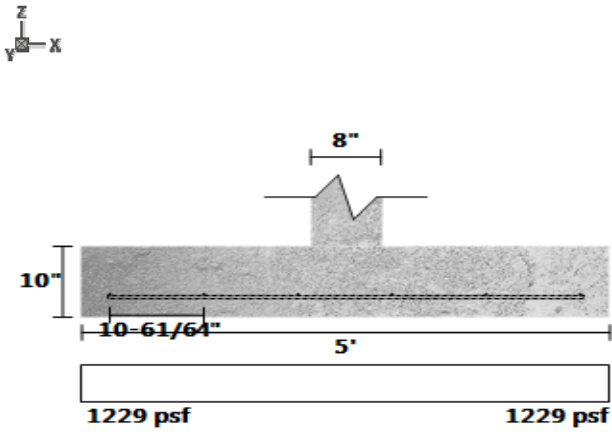
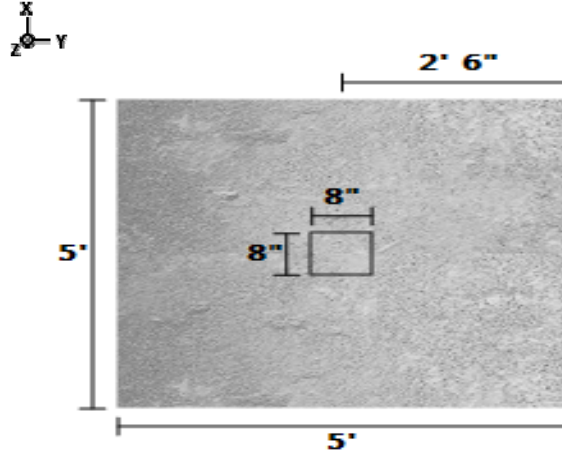
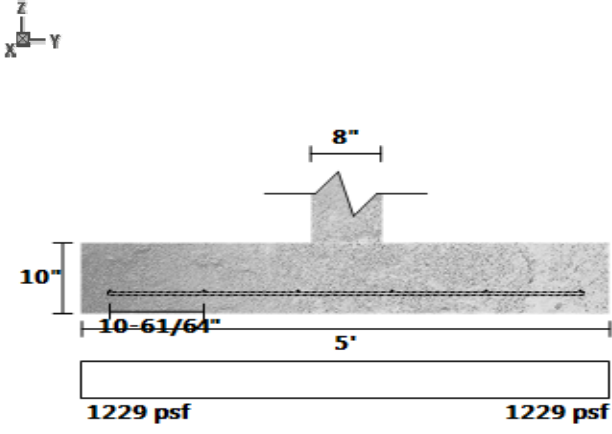
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #2	B	2072.694	-	0	-	Dead	Z
Point (lb/ft)	Beam #2	B	10.69531	-	0	-	Live	Z
Point (lb/ft)	Beam #2	B	18009.15	-	0	-	Snow	Z
Point (lb/ft)	Beam #20	A	3157.135	-	0	-	Dead	Z
Point (lb/ft)	Beam #20	A	1158.438	-	0	-	Live	Z
Point (lb/ft)	Beam #20	A	4458.172	-	0	-	Snow	Z

SpotFtg Bm #2-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
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 (lb/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	24	Concrete	0	0

SOIL					
Bearing Strength (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (6.7%)	1400.1	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (56.2%)	29013.8	66252.5	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (56.2%)	29013.8	66252.5	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (61.0%)	80651.3	206644.8	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (43.3%)	42459.2	74875.5	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (43.3%)	42459.2	74875.5	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (95.0%)	95108.5	1909440.0	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 (lb/ft)	Point	1	-	0	-	Live	Z

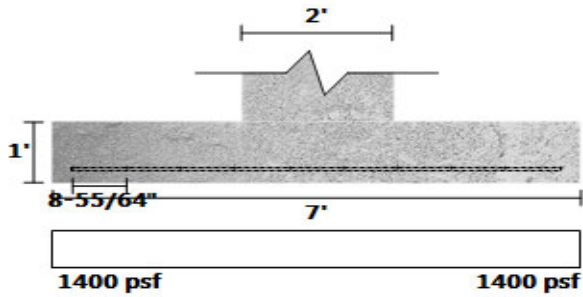
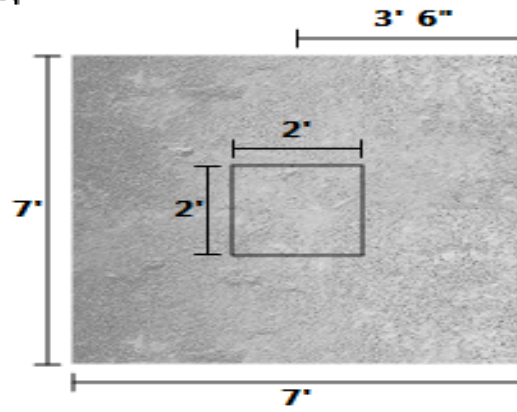
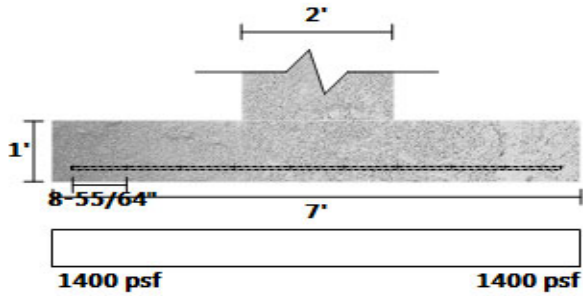
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	Beam #2	C	1512.503	-	0	-	Dead	Z
Point (lb/ft)	Beam #2	C	7.804683	-	0	-	Live	Z
Point (lb/ft)	Beam #2	C	13141.81	-	0	-	Snow	Z
Point (lb/ft)	Beam #10	A	3206.296	-	0	-	Dead	Z
Point (lb/ft)	Beam #10	A	25.4695	-	0	-	Live	Z
Point (lb/ft)	Beam #10	A	22855.79	-	0	-	Snow	Z
Point (lb/ft)	Beam #20	B	3100.587	-	0	-	Dead	Z
Point (lb/ft)	Beam #20	B	2099.906	-	0	-	Live	Z
Point (lb/ft)	Beam #20	B	4657.891	-	0	-	Snow	Z
Point (lb/ft)	Beam #21	A	5767.941	-	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)	Beam #21	A	10.75	-	0	-	Live	Z
Point (lbf)	Beam #21	A	7256.25	-	0	-	Snow	Z

SpotFtg Bm #2-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #28-1	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 (ft³)	Footing Weight (lb/ft)
3	3	10	7.5	1087.5

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (10.2%)	1347.0	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (78.6%)	5056.4	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (78.6%)	5056.4	23661.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (81.6%)	14256.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (83.1%)	3886.5	22946.6	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (83.1%)	3886.5	22946.6	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (91.9%)	17132.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	9.0	9.0	D	LRFD

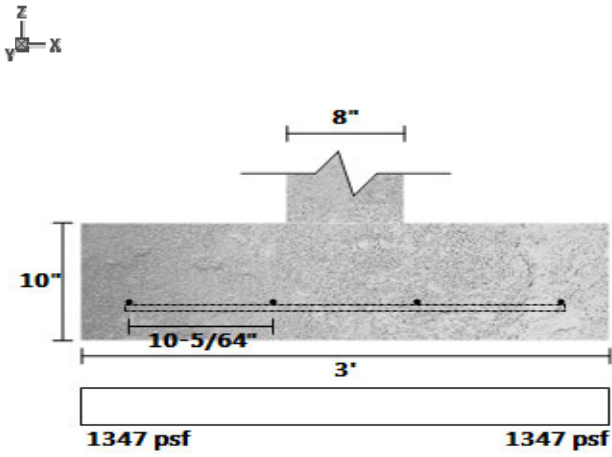
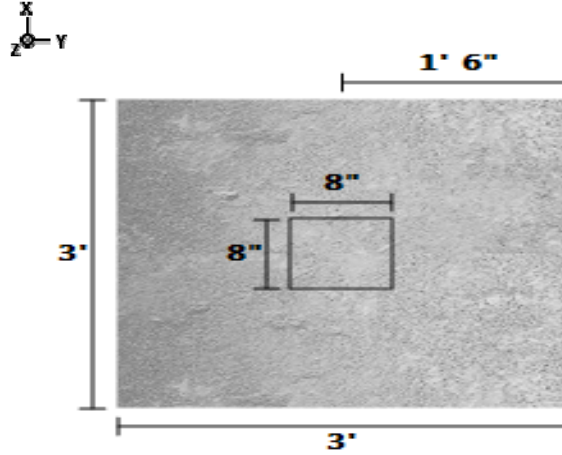
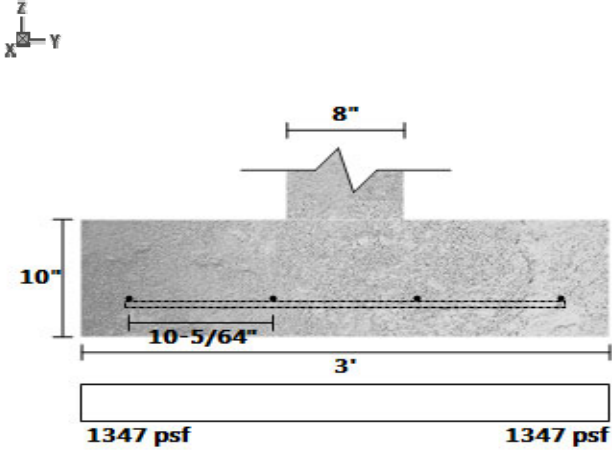
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Header #15	A	1170.247	-	0	-	Dead	Z
Point (lb/ft)	Header #15	A	428.362	-	0	-	Live	Z
Point (lb/ft)	Header #15	A	1350	-	0	-	Snow	Z
Point (lb/ft)	Beam #28	A	1214.113	-	0	-	Dead	Z
Point (lb/ft)	Beam #28	A	7301.076	-	0	-	Snow	Z
Point (lb/ft)	Beam #28	A	7.499999	-	0	-	RoofLive	Z

SpotFtg Bm #28-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #28-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
3.5 (ft) X 2 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (3) #4 Long, (4) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
3.5	2	10	5.83	845.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (10.8%)	1337.3	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (73.0%)	4262.6	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (84.6%)	4262.6	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (86.7%)	10303.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (93.7%)	1460.0	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (78.0%)	3767.2	17124.7	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (93.8%)	13139.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	7.0	7.0	D	LRFD

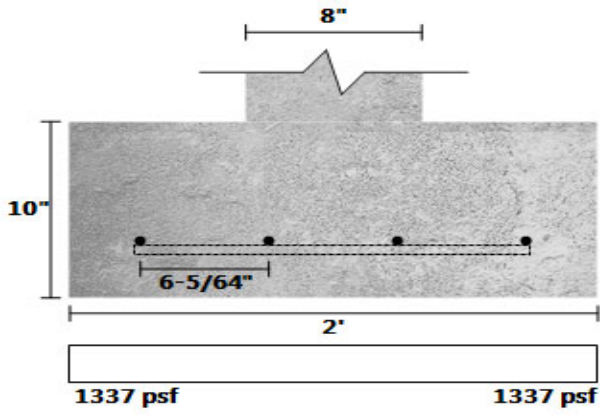
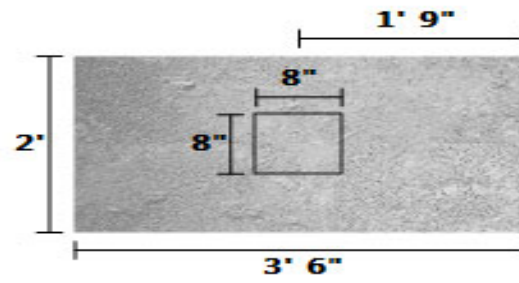
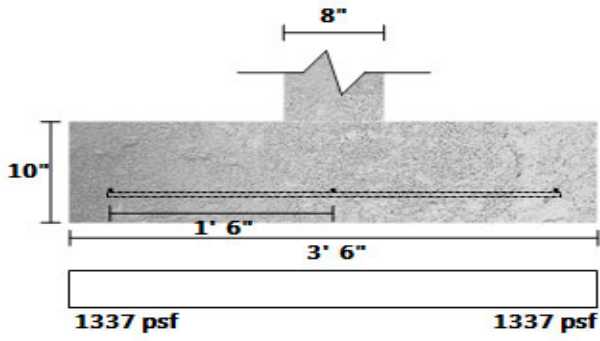
LOAD LIST

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 #28	B	1214.113	-	0	-	Dead	Z
Point (lbf)	Beam #28	B	7301.076	-	0	-	Snow	Z
Point (lbf)	Beam #28	B	7.499999	-	0	-	RoofLive	Z

SpotFtg Bm #28-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
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)
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 (4.9%)	1425.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (47.8%)	32131.4	61520.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (47.8%)	32131.4	61520.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (26.1%)	78062.9	105688.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (20.6%)	53552.4	67455.5	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (20.6%)	53552.4	67455.5	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (61.4%)	81836.8	212160.0	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

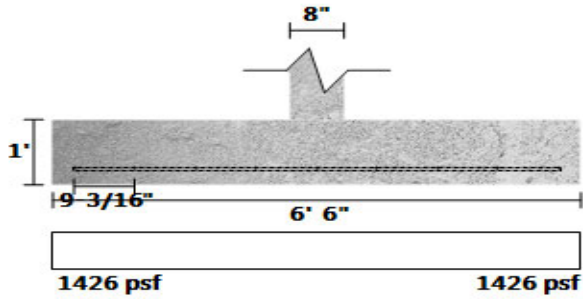
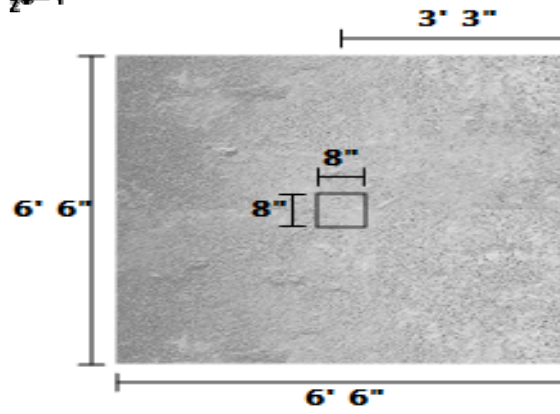
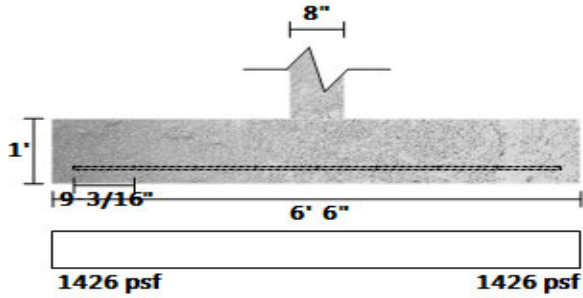
LINKED LOAD LIST

Type	Member	Support	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lbf)	Beam #10	B	3634.003	-	0	-	Dead	Z
Point (lbf)	Beam #10	B	27.4085	-	0	-	Live	Z
Point (lbf)	Beam #10	B	25645.77	-	0	-	Snow	Z
Point (lbf)	Beam #13	A	992.6407	-	0	-	Dead	Z
Point (lbf)	Beam #13	A	13.22413	-	0	-	Live	Z
Point (lbf)	Beam #13	A	7216.402	-	0	-	Snow	Z
Point (lbf)	Beam #21	B	5767.941	-	0	-	Dead	Z
Point (lbf)	Beam #21	B	10.75	-	0	-	Live	Z
Point (lbf)	Beam #21	B	7256.25	-	0	-	Snow	Z
Point (lbf)	Beam #23	A	1654.846	-	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)	Beam #23	A	13.32884	-	0	-	Live	Z
Point (lbf)	Beam #23	A	1951.441	-	0	-	Snow	Z

SpotFtg Bm #5-1 DIAGRAMS



PASS

DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
5.5 (ft) X 5.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (7) #4 Long, (7) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft³)	Footing Weight (lb/ft)
5.5	5.5	10	25.21	3655.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	Agg. Dia. (in)
3000	0	145	0.75

CALCULATION VARIABLES

Bo (in)	0
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COLUMN

Width (in)	Length (in)	Material	Offset X (in)	Offset Y (in)
8	8	Concrete	0	0

SOIL

Bearing Strength (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (6.7%)	1399.3	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (46.2%)	23333.2	43379.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (46.2%)	23333.2	43379.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (26.4%)	57095.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (20.7%)	31907.7	40229.0	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (20.7%)	31907.7	40229.0	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (71.7%)	60097.2	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	30.3	30.3	D	LRFD

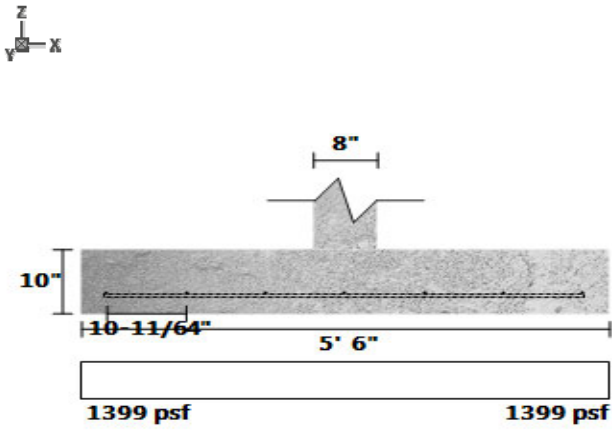
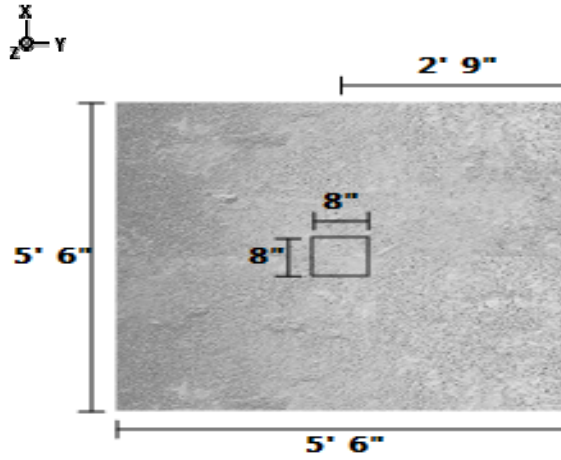
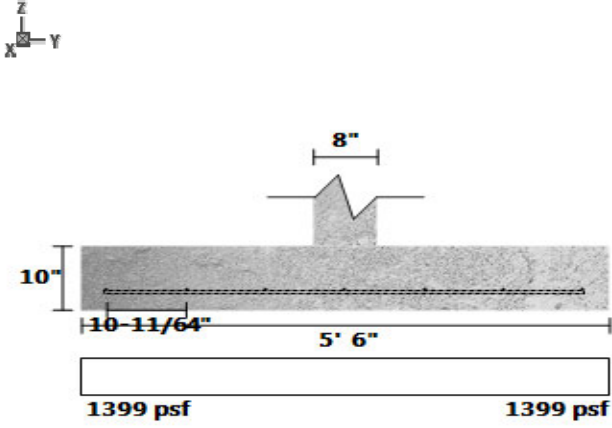
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #5	C	1432.148	-	0	-	Dead	Z
Point (lb/ft)	Beam #5	C	8.060603	-	0	-	Live	Z
Point (lb/ft)	Beam #5	C	11595.77	-	0	-	Snow	Z
Point (lb/ft)	Beam #6	A	2639.985	-	0	-	Dead	Z
Point (lb/ft)	Beam #6	A	12	-	0	-	Live	Z
Point (lb/ft)	Beam #6	A	19800	-	0	-	Snow	Z
Point (lb/ft)	Beam #13	B	456.839	-	0	-	Dead	Z
Point (lb/ft)	Beam #13	B	9.525867	-	0	-	Live	Z
Point (lb/ft)	Beam #13	B	2749.112	-	0	-	Snow	Z

SpotFtg Bm #5-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
4.5 (ft) X 5 (ft) X 13 (in)		Soil Depth TOF: 0 (ft)	Bot. (8) #4 Long, (7) #4 Short

MATERIAL PROPERTIES

FOOTING				
Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4.5	5	13	24.38	3534.38

CONCRETE				
fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (2.2%)	1467.4	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (70.2%)	15287.3	51266.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (66.9%)	15287.3	46140.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (66.1%)	41116.6	121331.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (63.4%)	21381.1	58446.2	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (72.1%)	18590.7	66735.0	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (78.5%)	45545.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	22.5	22.5	D	LRFD

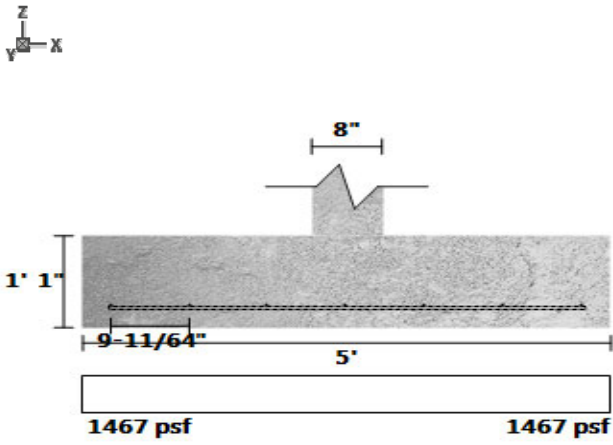
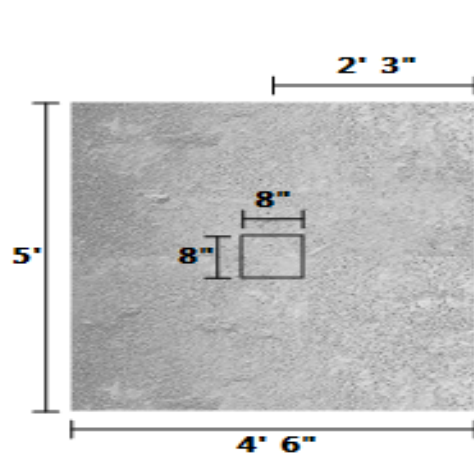
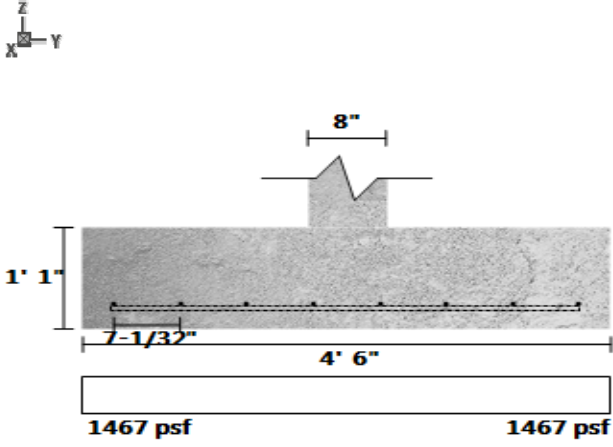
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #6	B	2639.985	-	0	-	Dead	Z
Point (lb/ft)	Beam #6	B	12	-	0	-	Live	Z
Point (lb/ft)	Beam #6	B	19800	-	0	-	Snow	Z
Point (lb/ft)	Beam #9	A	1457.061	-	0	-	Dead	Z
Point (lb/ft)	Beam #9	A	5585.067	-	0	-	Snow	Z

SpotFtg Bm #6-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #7-1	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (25.0%)	1124.8	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (87.4%)	2481.9	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (87.4%)	2481.9	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (90.5%)	7404.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (90.5%)	1641.0	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (90.5%)	1641.0	17278.2	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (95.4%)	9764.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	6.3	6.3	D	LRFD

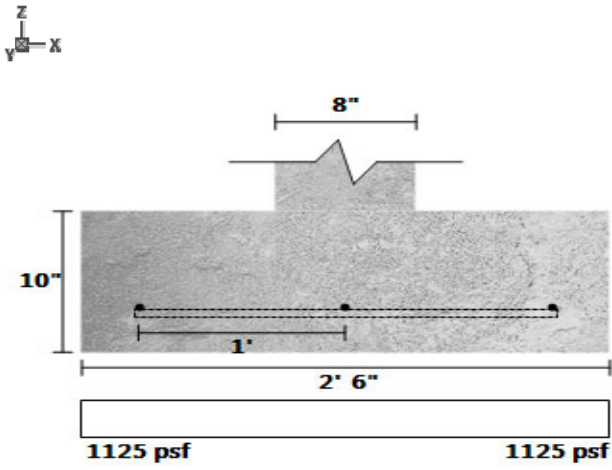
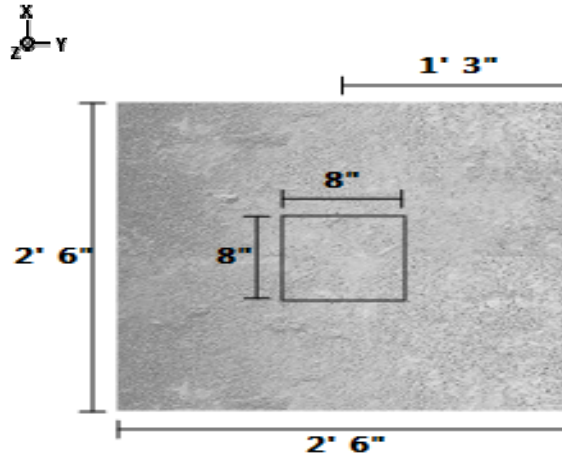
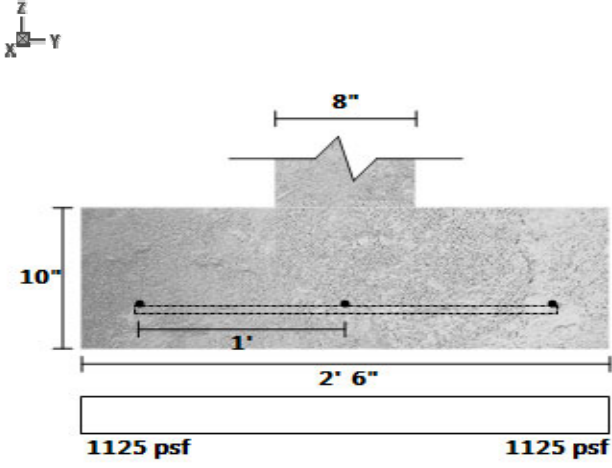
LOAD LIST

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 #7	A	689.7874	-	0	-	Dead	Z
Point (lbf)	Beam #7	A	5585.052	-	0	-	Snow	Z

SpotFtg Bm #7-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #7-2	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (10.1%)	1349.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (66.8%)	10488.5	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (66.8%)	10488.5	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (64.6%)	27423.1	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (63.4%)	10514.8	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (63.4%)	10514.8	28754.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (85.7%)	30282.6	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

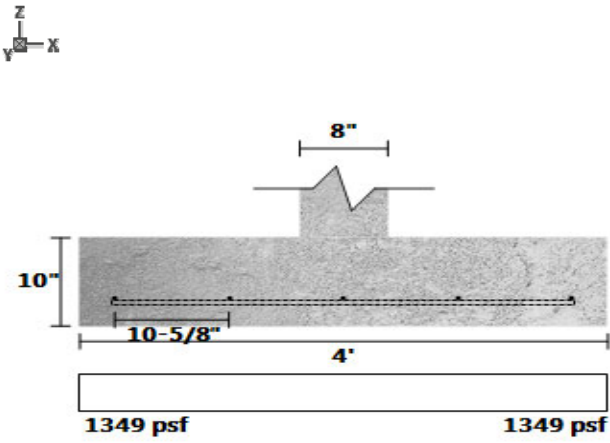
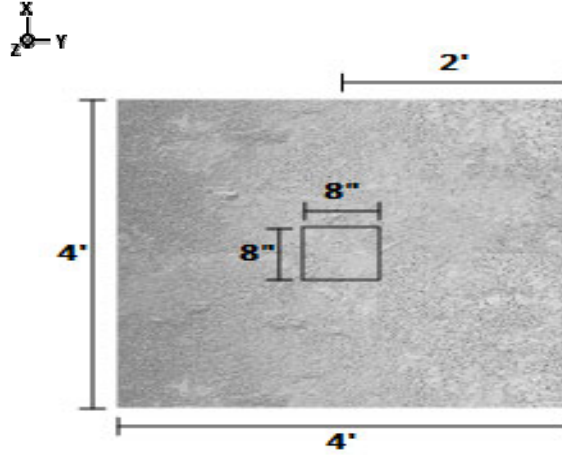
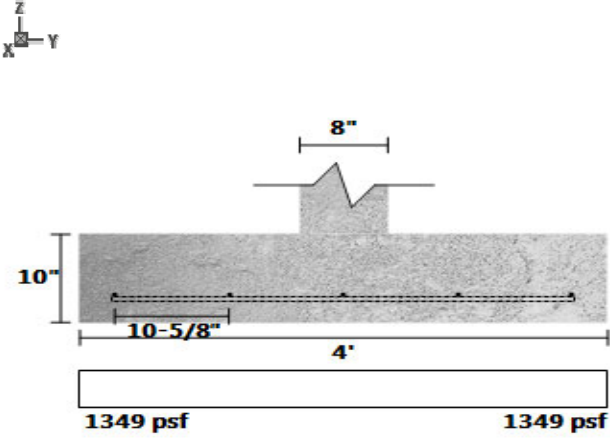
LOAD LIST

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)	Beam #11	A	2968.329	-	0	-	Dead	Z
Point (lbf)	Beam #11	A	21.67699	-	0	-	Live	Z
Point (lbf)	Beam #11	A	16686.23	-	0	-	Snow	Z

SpotFtg Bm #7-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	-- --	PROJECT NAME:	23-014 Chambers
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		
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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (4.2%)	1437.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (64.9%)	11073.2	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (64.9%)	11073.2	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (62.7%)	28951.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (61.4%)	11100.9	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (61.4%)	11100.9	28754.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (84.9%)	31970.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

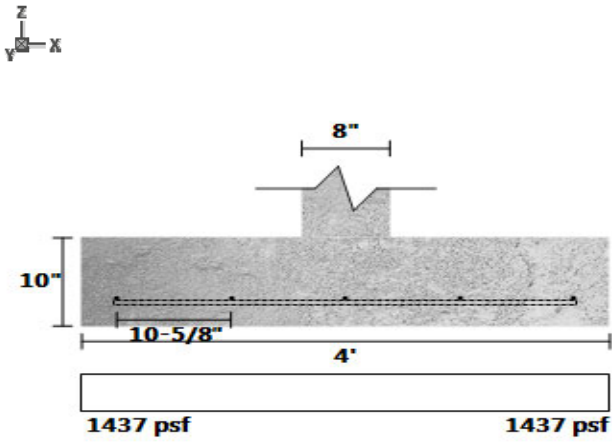
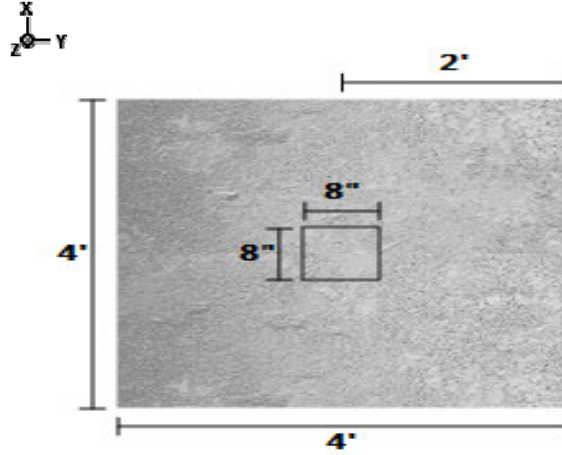
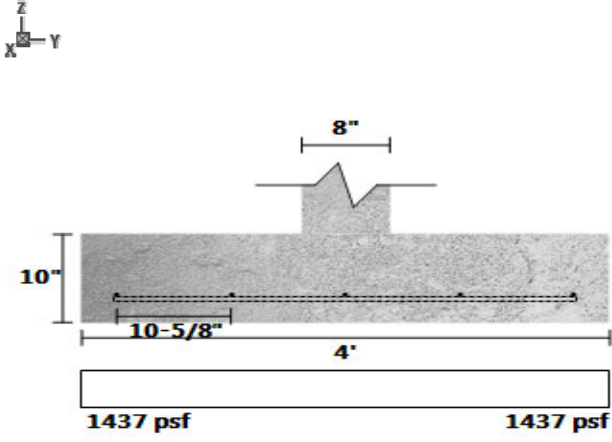
LOAD LIST

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)	Beam #11	B	4374.997	-	0	-	Dead	Z
Point (lbf)	Beam #11	B	21.677	-	0	-	Live	Z
Point (lbf)	Beam #11	B	16686.26	-	0	-	Snow	Z

SpotFtg Bm #9-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #6	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (9.7%)	1354.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (53.3%)	18413.5	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (53.3%)	18413.5	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (40.8%)	45880.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (33.7%)	22923.6	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (33.7%)	22923.6	34556.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (77.0%)	48831.3	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	25.0	25.0	D	LRFD

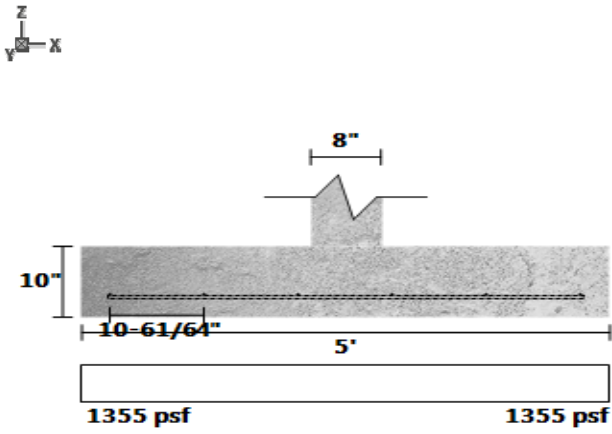
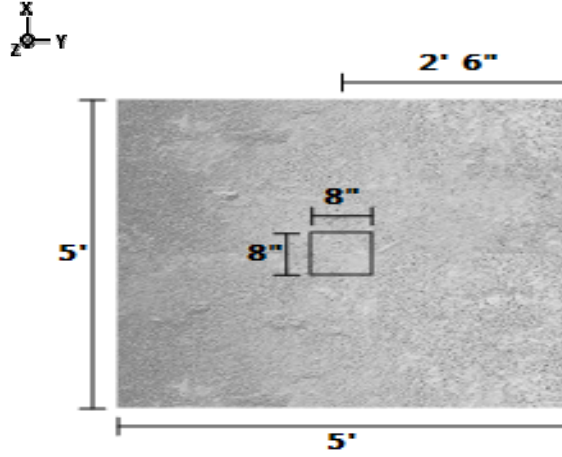
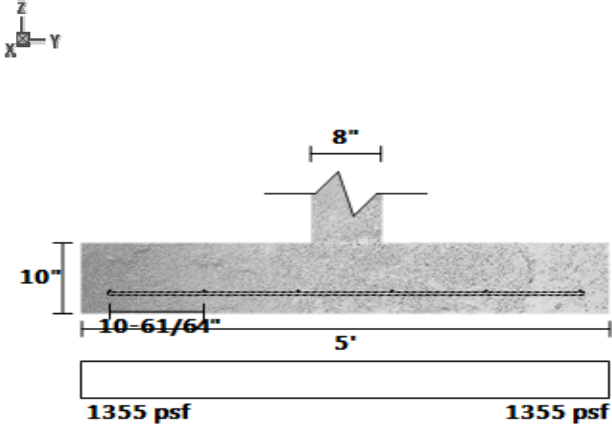
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Header #6	A	3959.948	-	0	-	Dead	Z
Point (lb/ft)	Header #6	A	21749.87	-	0	-	Snow	Z
Point (lb/ft)	Header #6	A	6.375	-	0	-	RoofLive	Z
Point (lb/ft)	Header #16	A	2694.656	-	0	-	Dead	Z
Point (lb/ft)	Header #16	A	2145	-	0	-	Live	Z
Point (lb/ft)	Header #16	A	2437.5	-	0	-	Snow	Z
Point (lb/ft)	Header #16	A	6.5	-	0	-	RoofLive	Z

SpotFtg Hdr #6 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
4 (ft) X 5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (6) #4 Long, (5) #4 Short

MATERIAL PROPERTIES

FOOTING				
Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
4	5	10	16.67	2416.67

CONCRETE				
fc' (psi)	Ec (psi)	Density (lb/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	18	Concrete	0	0

SOIL					
Bearing Strength (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (3.0%)	1455.6	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (64.1%)	14141.2	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (55.2%)	14141.2	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (63.6%)	35653.4	98078.9	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (56.5%)	12503.8	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (59.0%)	14176.6	34556.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (91.4%)	40828.7	477360.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.0	20.0	D	LRFD

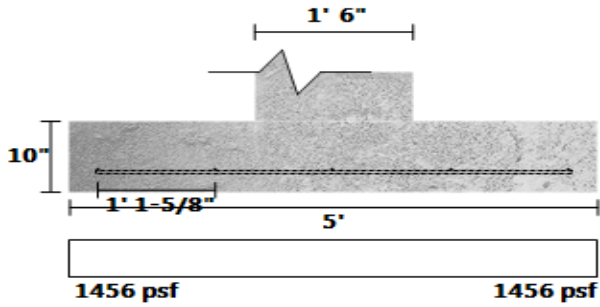
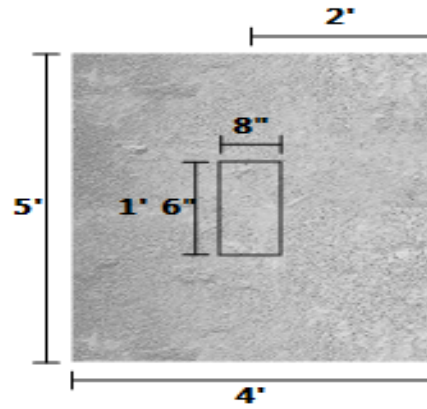
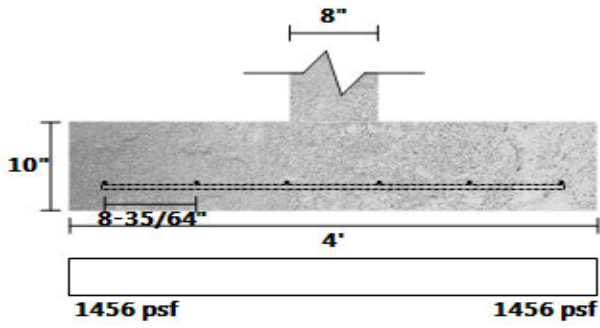
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Beam #12	B	1195.253	-	0	-	Dead	Z
Point (lb/ft)	Beam #12	B	8.25	-	0	-	Live	Z
Point (lb/ft)	Beam #12	B	9965.521	-	0	-	Snow	Z
Point (lb/ft)	Girder #1	A	1204.852	-	0	-	Dead	Z
Point (lb/ft)	Girder #1	A	8883.262	-	0	-	Snow	Z
Point (lb/ft)	Beam #22	B	2352.525	-	0	-	Dead	Z
Point (lb/ft)	Beam #22	B	8.25	-	0	-	Live	Z
Point (lb/ft)	Beam #22	B	3093.75	-	0	-	Snow	Z

SpotFtg Bm #12-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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 (ft³)	Footing Weight (lb/ft)
5	5	10	20.83	3020.83

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (10.1%)	1348.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (54.5%)	17952.9	39436.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (54.5%)	17952.9	39436.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (42.3%)	44732.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (35.3%)	22350.2	34556.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (35.3%)	22350.2	34556.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (77.6%)	47609.9	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	25.0	25.0	D	LRFD

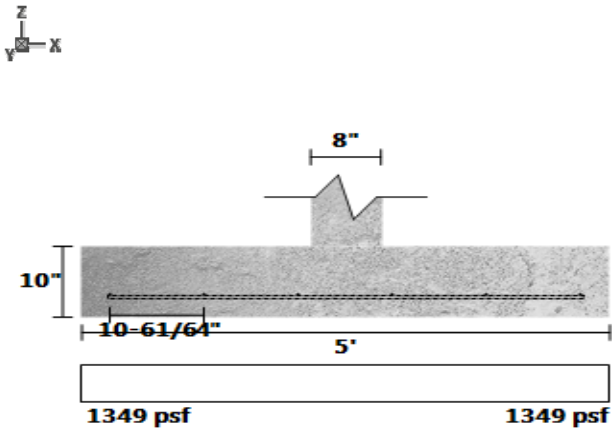
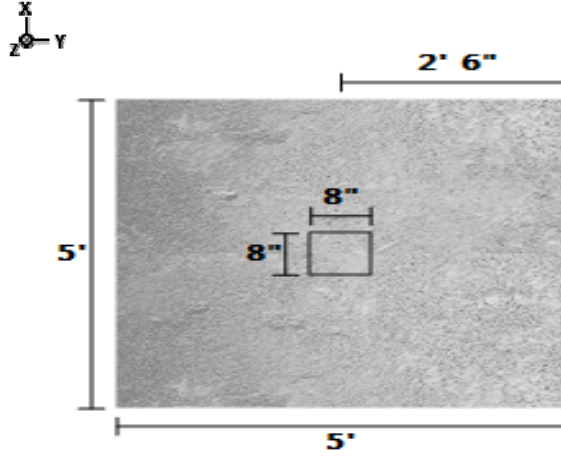
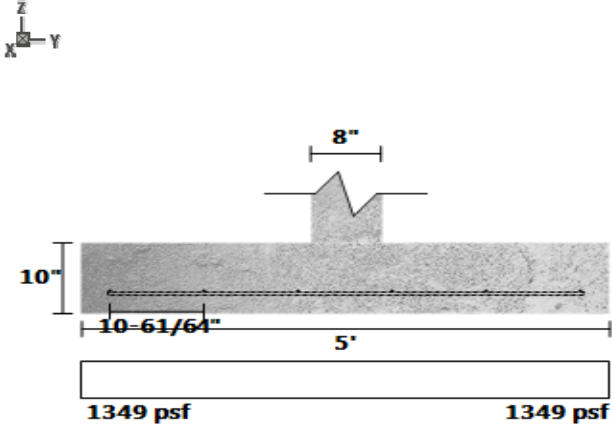
LOAD LIST

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	B	3779.409	-	0	-	Dead	Z
Point (lbf)	Girder #1	B	26921	-	0	-	Snow	Z

SpotFtg Gdr #1-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #1-3	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 (ft³)	Footing Weight (lb/ft)
4	4	10	13.33	1933.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (13.8%)	1292.4	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (67.6%)	10235.8	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (67.6%)	10235.8	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (65.5%)	26762.4	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (64.3%)	10261.5	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (64.3%)	10261.5	28754.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (86.1%)	29553.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	16.0	16.0	D	LRFD

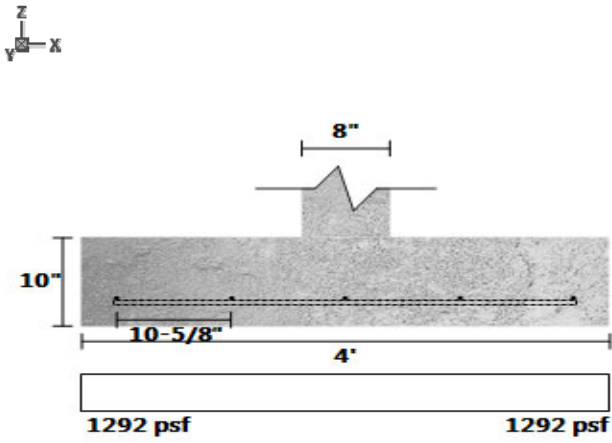
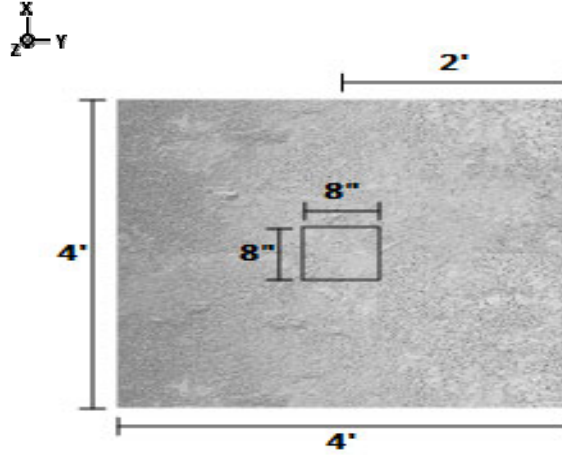
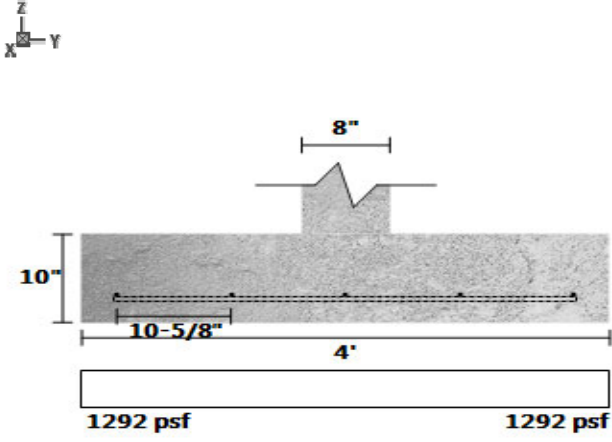
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Girder #1	C	827.3987	-	0	-	Dead	Z
Point (lb/ft)	Girder #1	C	5737.028	-	0	-	Snow	Z
Point (lb/ft)	Beam #27	B	1493.258	-	0	-	Dead	Z
Point (lb/ft)	Beam #27	B	487.3661	-	0	-	Live	Z
Point (lb/ft)	Beam #27	B	10687.9	-	0	-	Snow	Z

SpotFtg Gdr #1-3 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Gdr #2-1	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (14.7%)	1280.2	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (68.4%)	9958.3	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (68.4%)	9958.3	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (66.4%)	26036.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (65.3%)	9983.2	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (65.3%)	9983.2	28754.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (86.4%)	28751.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

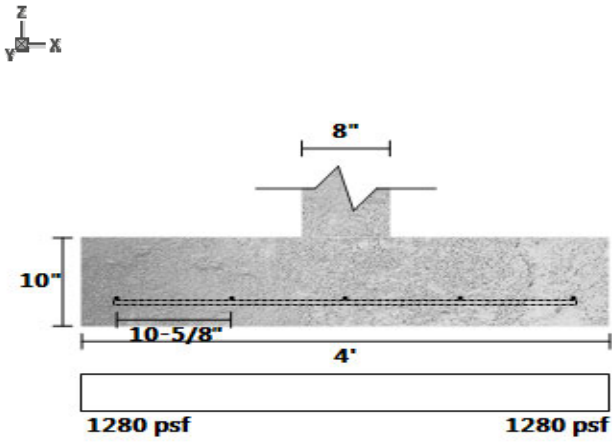
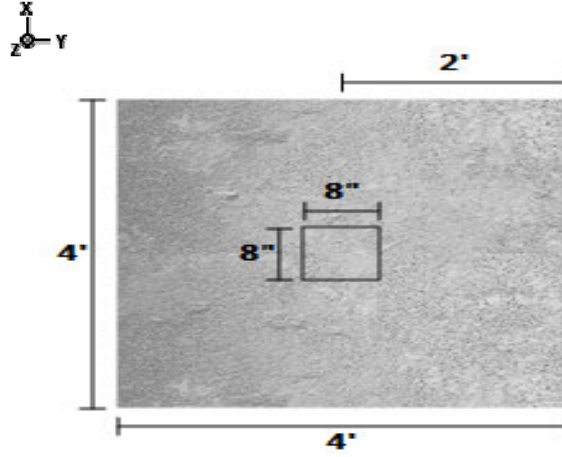
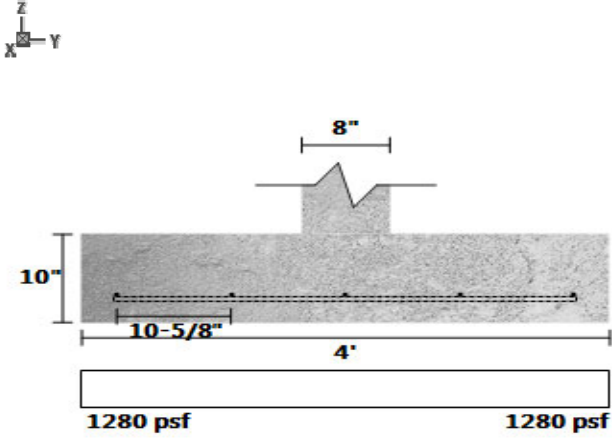
LOAD LIST

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 #2	A	2323.913	-	0	-	Dead	Z
Point (lbf)	Girder #2	A	16226.23	-	0	-	Snow	Z

SpotFtg Gdr #2-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
5.5 (ft) X 5.5 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (7) #4 Long, (7) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft ³)	Footing Weight (lb/ft)
5.5	5.5	10	25.21	3655.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (5.7%)	1414.5	1500.0	D+S	ASD
One-Way Shear X (lb/ft)	PASS (45.8%)	23521.4	43379.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lb/ft)	PASS (45.8%)	23521.4	43379.6	1.2D+1.6S+L	LRFD
Two-Way Shear (lb/ft)	PASS (25.8%)	57556.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lb/ft)	PASS (20.0%)	32165.1	40229.0	1.2D+1.6S+L	LRFD
Moment Y (lb/ft)	PASS (20.0%)	32165.1	40229.0	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (71.4%)	60582.0	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	30.3	30.3	D	LRFD

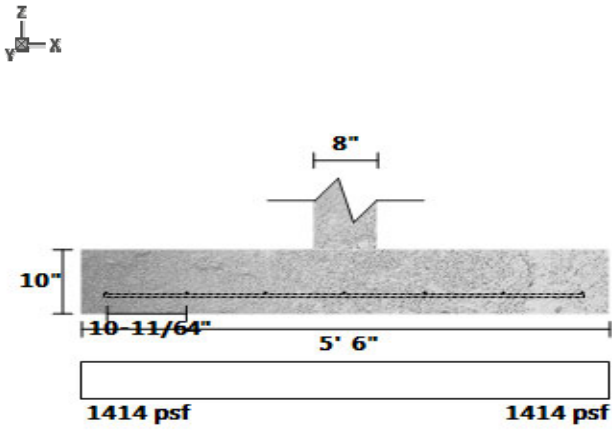
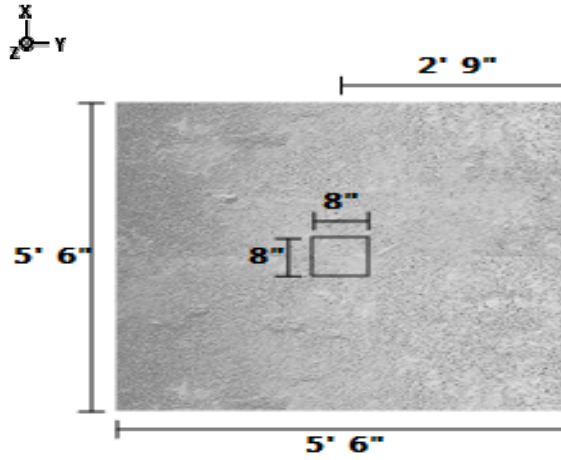
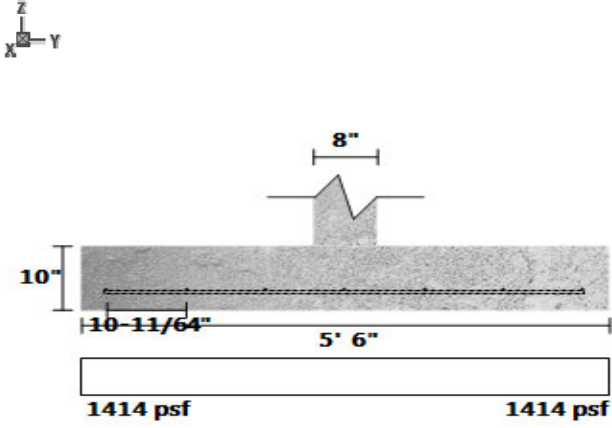
LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Point (lb/ft)	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 (lb/ft)	Girder #2	B	1687.263	-	0	-	Dead	Z
Point (lb/ft)	Girder #2	B	10733.41	-	0	-	Snow	Z
Point (lb/ft)	Header #12	A	3390.343	-	0	-	Dead	Z
Point (lb/ft)	Header #12	A	23321.5	-	0	-	Snow	Z
Point (lb/ft)	Header #12	A	5.000061	-	0	-	RoofLive	Z

SpotFtg Gdr #2-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Hdr #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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (7.4%)	1388.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (71.7%)	7820.0	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (71.7%)	7820.0	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (72.8%)	21132.7	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (70.1%)	6911.3	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (70.1%)	6911.3	23076.6	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (88.6%)	24105.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

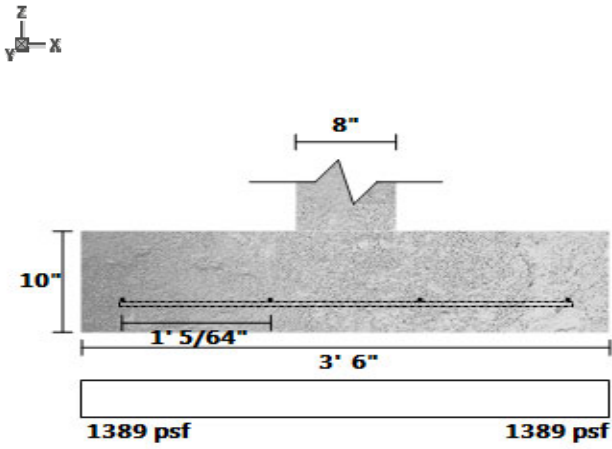
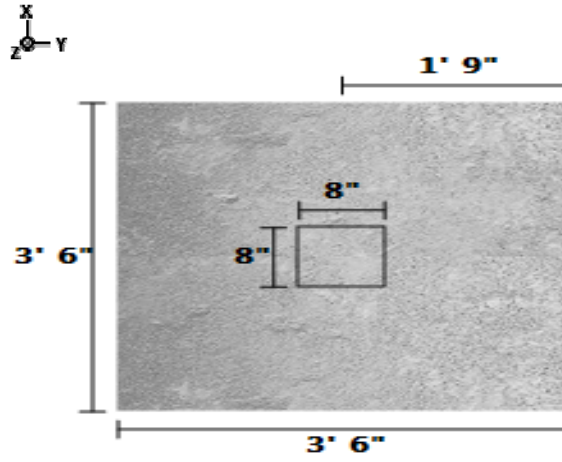
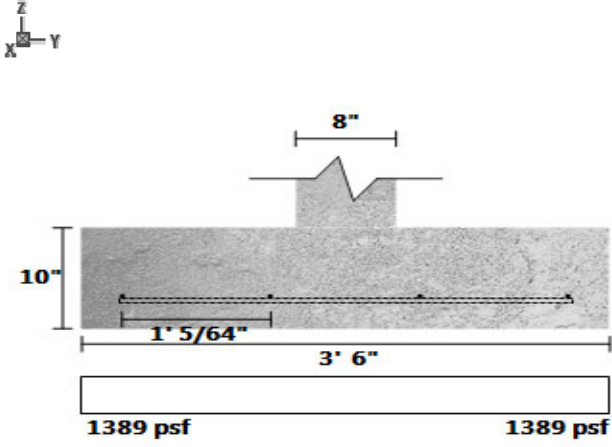
LOAD LIST

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)	Header #12	B	1871.848	-	0	-	Dead	Z
Point (lbf)	Header #12	B	13661.62	-	0	-	Snow	Z
Point (lbf)	Header #12	B	5.00001	-	0	-	RoofLive	Z

SpotFtg Hdr #12-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
4.5 (ft) X 4.5 (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 (ft³)	Footing Weight (lb/ft)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (9.0%)	1364.4	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (59.8%)	14252.4	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (59.8%)	14252.4	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (53.2%)	36290.8	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (44.6%)	16007.5	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (44.6%)	16007.5	28872.8	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (81.5%)	39216.8	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	20.3	20.3	D	LRFD

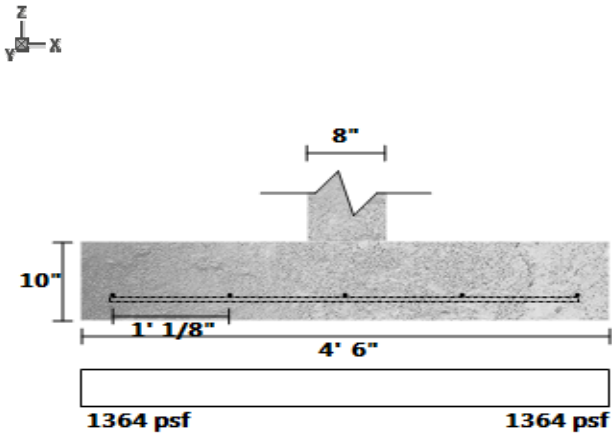
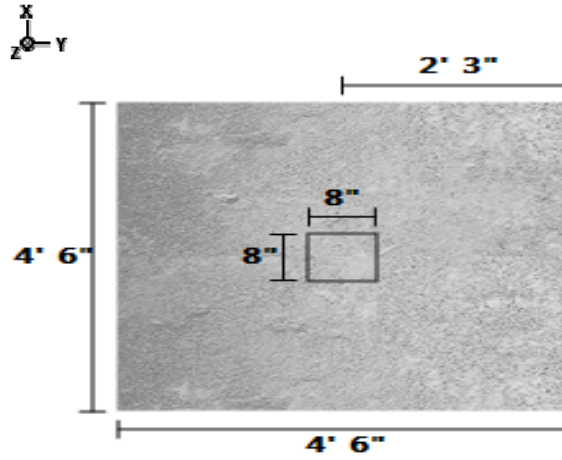
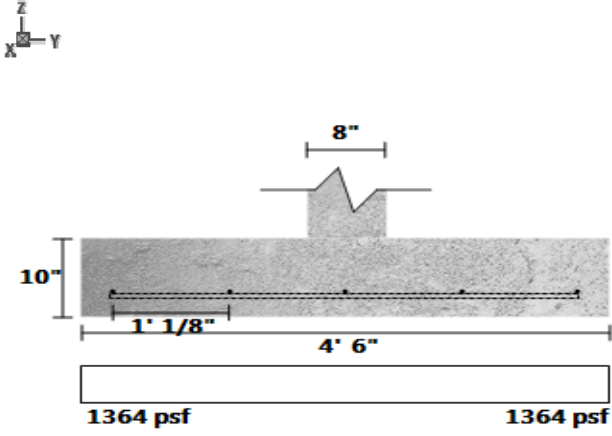
LOAD LIST

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 #15	A	2730.198	-	0	-	Dead	Z
Point (lbf)	Beam #15	A	15	-	0	-	Live	Z
Point (lbf)	Beam #15	A	22452.83	-	0	-	Snow	Z

SpotFtg Bm #15-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
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		
4.5 (ft) X 4.5 (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)
4.5	4.5	10	16.88	2446.88

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (7.5%)	1387.1	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (59.1%)	14514.7	35492.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (59.1%)	14514.7	35492.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (52.3%)	36958.6	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (43.5%)	16302.0	28872.8	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (43.5%)	16302.0	28872.8	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (81.2%)	39938.4	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	20.3	20.3	D	LRFD

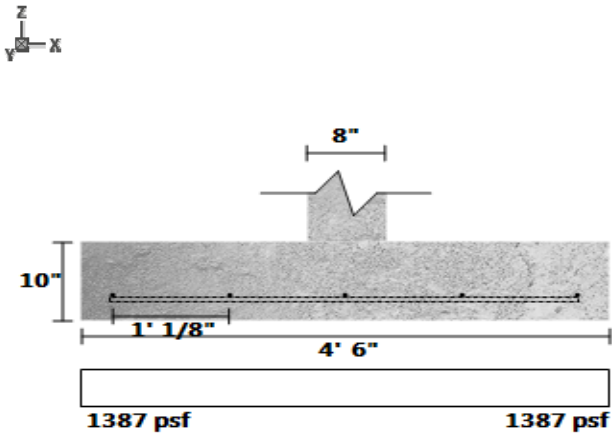
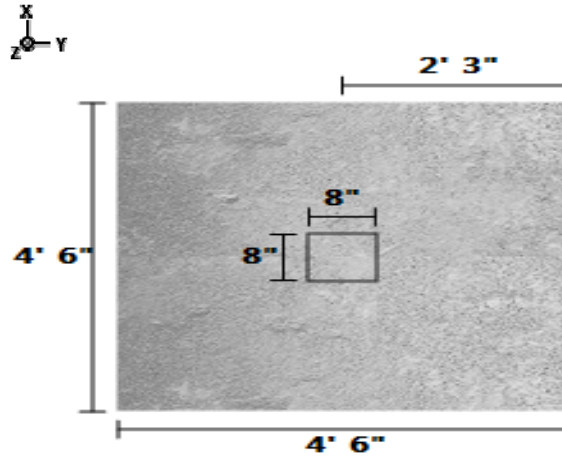
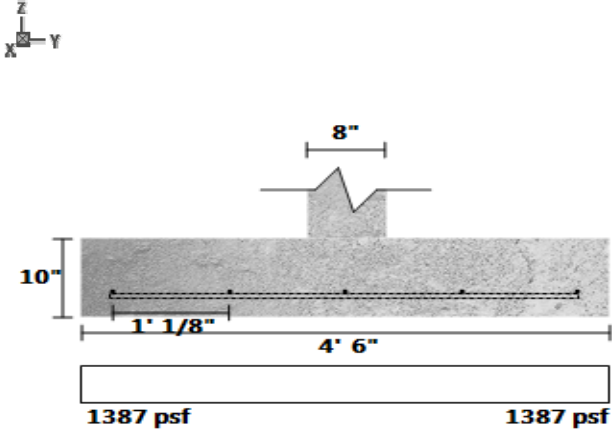
LOAD LIST

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 #15	B	2761.284	-	0	-	Dead	Z
Point (lbf)	Beam #15	B	15.00003	-	0	-	Live	Z
Point (lbf)	Beam #15	B	22880.56	-	0	-	Snow	Z

SpotFtg Bm #15-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #23-2	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 (55.6%)	666.3	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (96.2%)	595.0	15774.4	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (96.2%)	595.0	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (97.5%)	1921.2	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (98.0%)	343.0	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (98.0%)	343.0	17124.7	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (98.5%)	3087.4	212160.0	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

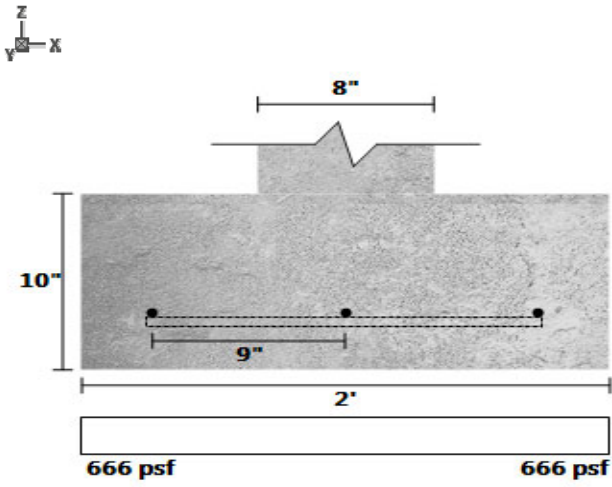
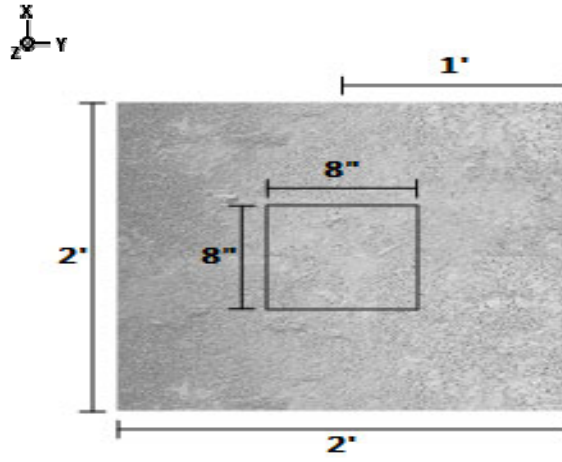
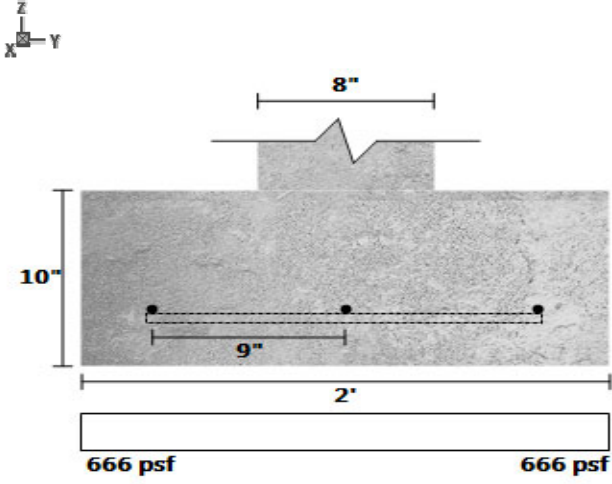
LOAD LIST

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 #23	B	1039.57	-	0	-	Dead	Z
Point (lbf)	Beam #23	B	11.17115	-	0	-	Live	Z
Point (lbf)	Beam #23	B	1142.307	-	0	-	Snow	Z

SpotFtg Bm #23-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-1	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (19.3%)	1210.3	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (89.9%)	1588.0	15774.4	1.2D+1.6L+0.5Lr	LRFD
One-Way Shear Y (lbf)	PASS (89.9%)	1588.0	15774.4	1.2D+1.6L+0.5Lr	LRFD
Two-Way Shear (lbf-ft)	PASS (92.6%)	4797.2	64412.2	1.2D+1.6L+0.5Lr	LRFD
Moment X (lbf-ft)	PASS (92.6%)	1271.5	17124.7	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lbf-ft)	PASS (92.6%)	1271.5	17124.7	1.2D+1.6L+0.5Lr	LRFD
Crushing (psi)	PASS (93.5%)	6487.3	100278.8	1.2D+1.6L+0.5Lr	LRFD
Compression (ft ²)	PASS (100.0%)	4.0	4.0	D	LRFD

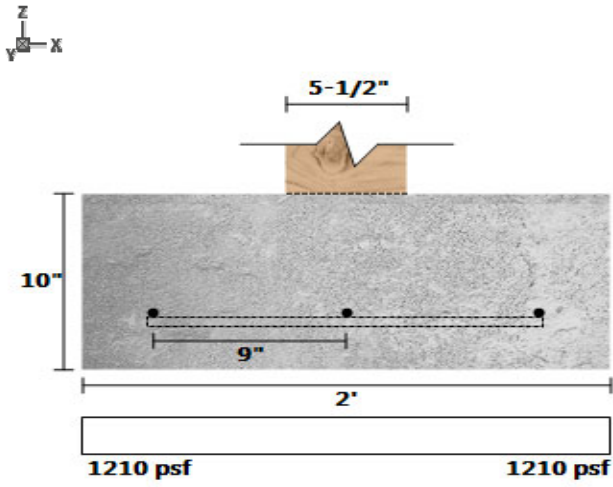
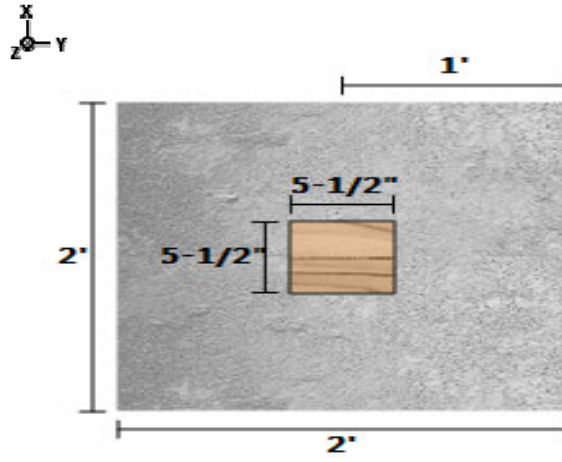
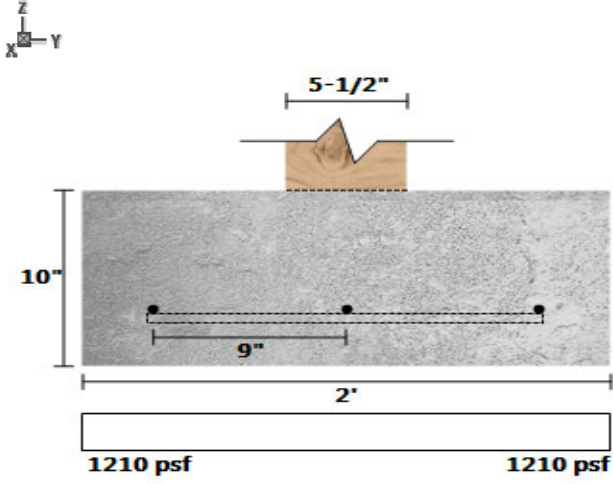
LOAD LIST

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)	Beam #24	A	1212.368	-	0	-	Dead	Z
Point (lbf)	Beam #24	A	3144.283	-	0	-	Live	Z
Point (lbf)	Beam #24	A	-300.4812	-	0	-	Snow	Z

SpotFtg Bm #24-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-2	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (22.3%)	1165.5	1500.0	D+0.75L+0.75S	ASD
One-Way Shear X (lbf)	PASS (74.7%)	6983.6	27605.2	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (74.7%)	6983.6	27605.2	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (72.0%)	18041.0	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (67.4%)	7534.1	23076.6	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (67.4%)	7534.1	23076.6	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (80.3%)	19718.4	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	12.3	12.3	D	LRFD

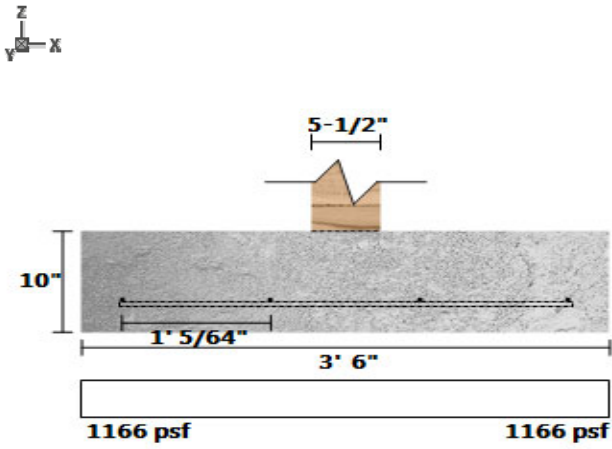
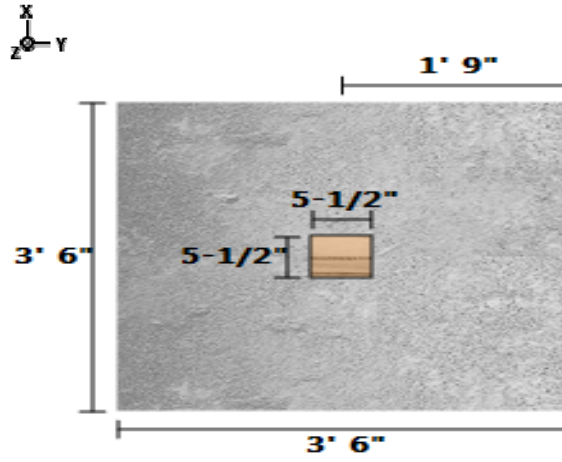
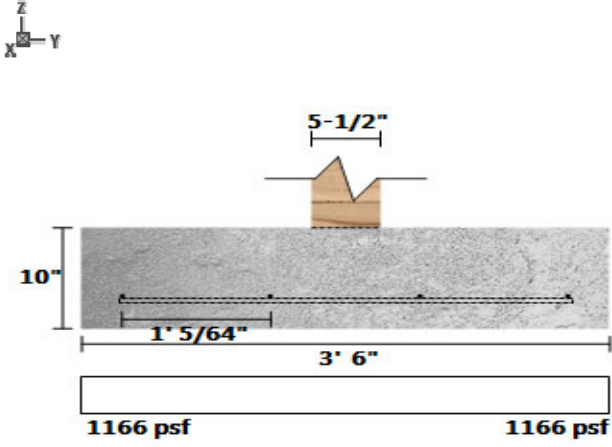
LOAD LIST

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)	Beam #24	B	3524.618	-	0	-	Dead	Z
Point (lbf)	Beam #24	B	7153.623	-	0	-	Live	Z
Point (lbf)	Beam #24	B	5208.907	-	0	-	Snow	Z

SpotFtg Bm #24-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-3	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 (lb/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 (lb/ft ²)	Density (lb/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 (lb/ft ²)	PASS (6.9%)	1396.3	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (60.1%)	12600.7	31548.8	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (60.1%)	12600.7	31548.8	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (50.9%)	31633.0	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (47.7%)	15035.4	28754.4	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (47.7%)	15035.4	28754.4	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (66.3%)	33836.9	100278.8	1.2D+1.6S+L	LRFD
Compression (ft ²)	PASS (100.0%)	16.0	16.0	D	LRFD

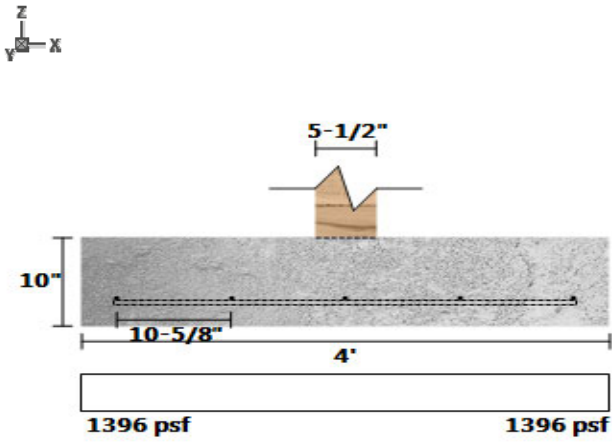
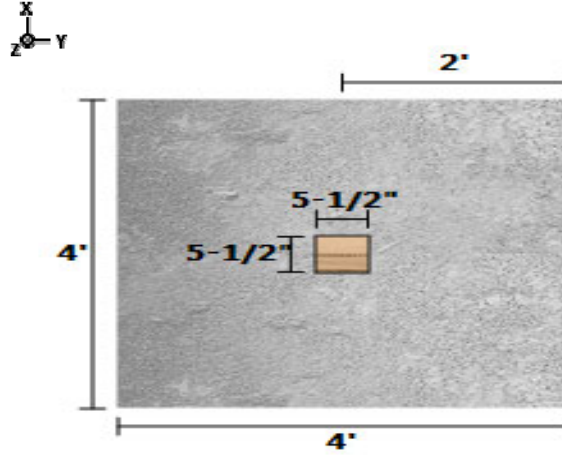
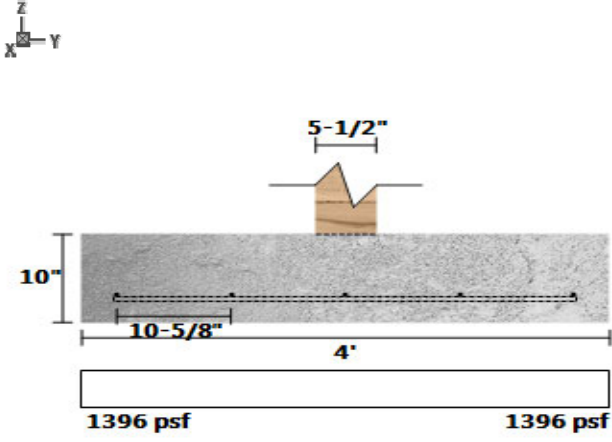
LOAD LIST

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)	Beam #24	C	3109.371	-	0	-	Dead	Z
Point (lbf)	Beam #24	C	2427.375	-	0	-	Live	Z
Point (lbf)	Beam #24	C	17298.28	-	0	-	Snow	Z

SpotFtg Bm #24-3 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #24-5	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 (ft³)	Footing Weight (lb/ft)
2	2	10	3.33	483.33

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (48.5%)	772.4	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (95.2%)	754.7	15774.4	1.2D+1.6L+0.5Lr	LRFD
One-Way Shear Y (lbf)	PASS (95.2%)	754.7	15774.4	1.2D+1.6L+0.5Lr	LRFD
Two-Way Shear (lbf-ft)	PASS (96.9%)	2437.0	77557.5	1.2D+1.6L+0.5Lr	LRFD
Moment X (lbf-ft)	PASS (97.5%)	435.1	17124.7	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lbf-ft)	PASS (97.5%)	435.1	17124.7	1.2D+1.6L+0.5Lr	LRFD
Crushing (psi)	PASS (98.2%)	3916.2	212160.0	1.2D+1.6L+0.5Lr	LRFD
Compression (ft²)	PASS (100.0%)	4.0	4.0	D	LRFD

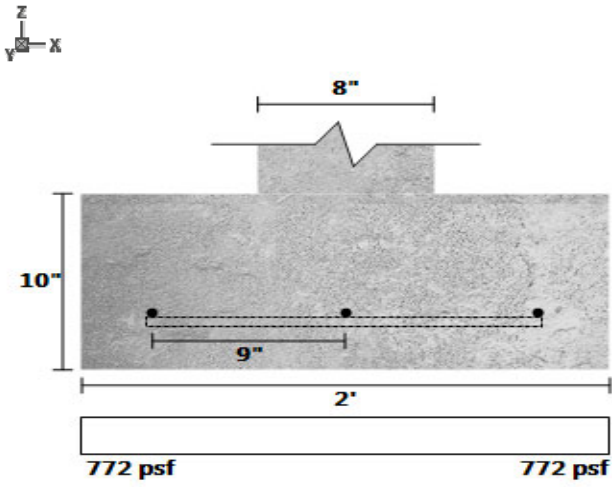
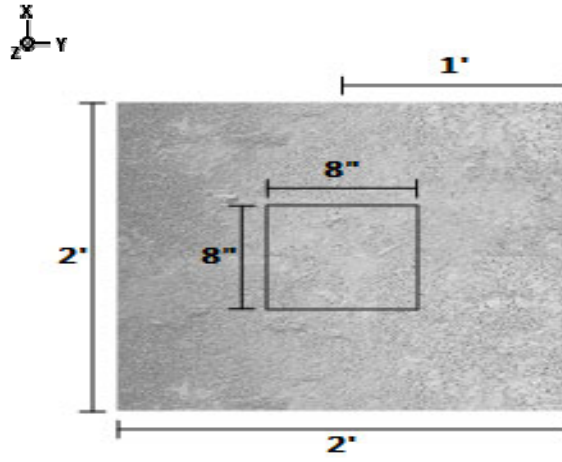
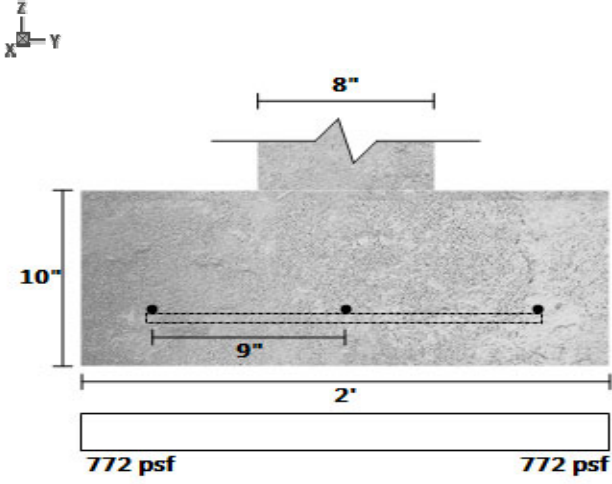
LOAD LIST

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 #24	D	634.5228	-	0	-	Dead	Z
Point (lbf)	Beam #24	D	-1067.233	-	0	-	Snow	Z
Point (lbf)	Beam #24	D	1970.745	-	0	-	Live	Z

SpotFtg Bm #24-5 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #25-1	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 (ft³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (9.5%)	1356.9	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (82.0%)	3546.1	19718.0	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (82.0%)	3546.1	19718.0	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (84.5%)	9988.1	64412.2	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (82.1%)	3090.6	17278.2	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (82.1%)	3090.6	17278.2	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (88.0%)	11986.7	100278.8	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	6.3	6.3	D	LRFD

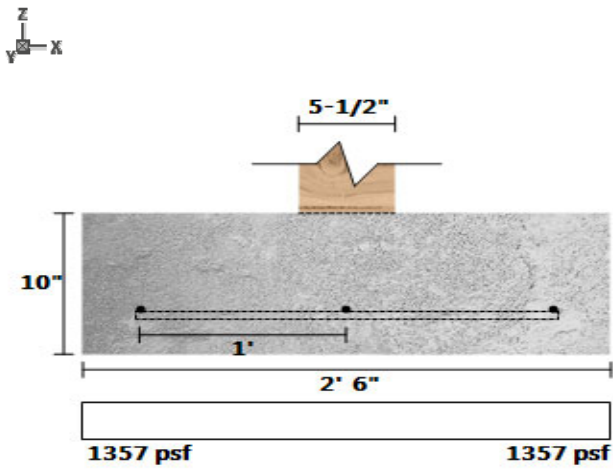
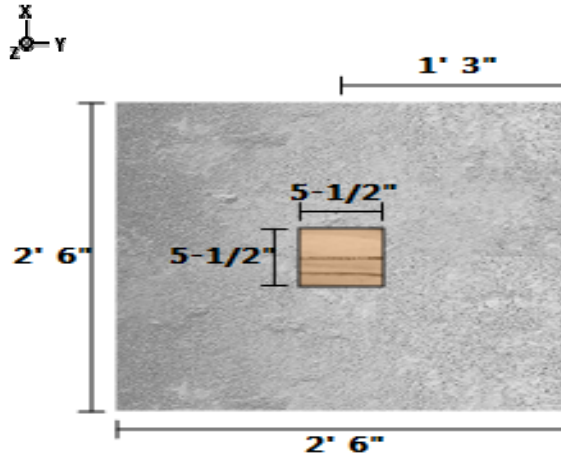
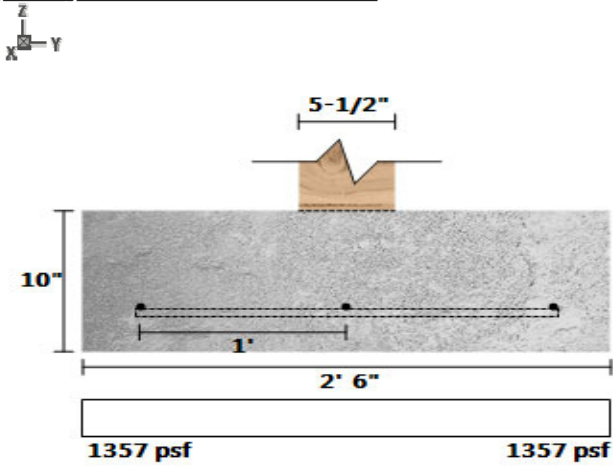
LOAD LIST

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 #25	A	936.5029	-	0	-	Dead	Z
Point (lbf)	Beam #25	A	6788.676	-	0	-	Snow	Z

SpotFtg Bm #25-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #25-2	CODE:	2018 International Building Code
MEMBER TYPE:	ISOLATED FOOTING	ACI:	ACI 318-14
MATERIAL:	Concrete		
2 (ft) X 3 (ft) X 10 (in)		Soil Depth TOF: 0 (ft)	Bot. (4) #4 Long, (3) #4 Short

MATERIAL PROPERTIES

FOOTING

Width (ft)	Length (ft)	Depth (in)	Volume (ft³)	Footing Weight (lb/ft)
2	3	10	5	725

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (6.1%)	1408.4	1500.0	D+S	ASD
One-Way Shear X (lbf)	PASS (90.2%)	2309.9	23661.6	1.2D+1.6S+L	LRFD
One-Way Shear Y (lbf)	PASS (85.4%)	2309.9	15774.4	1.2D+1.6S+L	LRFD
Two-Way Shear (lbf-ft)	PASS (88.4%)	8968.3	77557.5	1.2D+1.6S+L	LRFD
Moment X (lbf-ft)	PASS (84.1%)	2719.2	17124.7	1.2D+1.6S+L	LRFD
Moment Y (lbf-ft)	PASS (94.2%)	1331.9	22946.6	1.2D+1.6S+L	LRFD
Crushing (psi)	PASS (94.4%)	11986.7	212160.0	1.2D+1.6S+L	LRFD
Compression (ft²)	PASS (100.0%)	6.0	6.0	D	LRFD

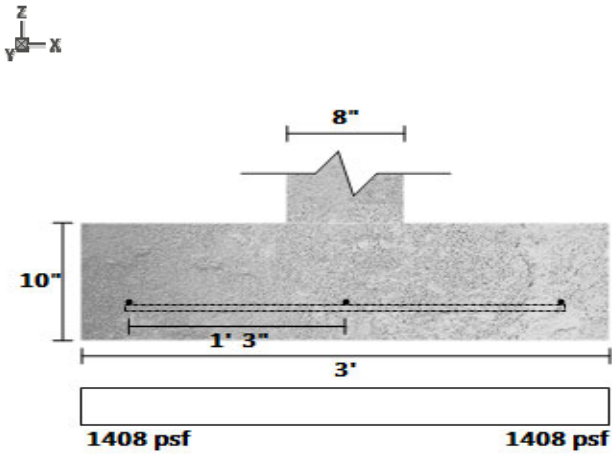
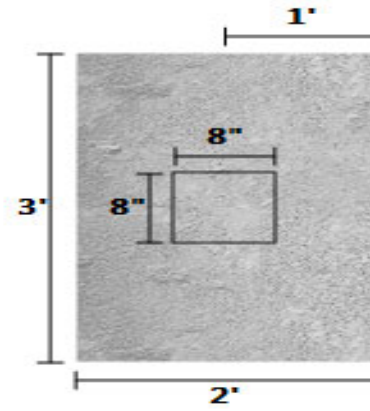
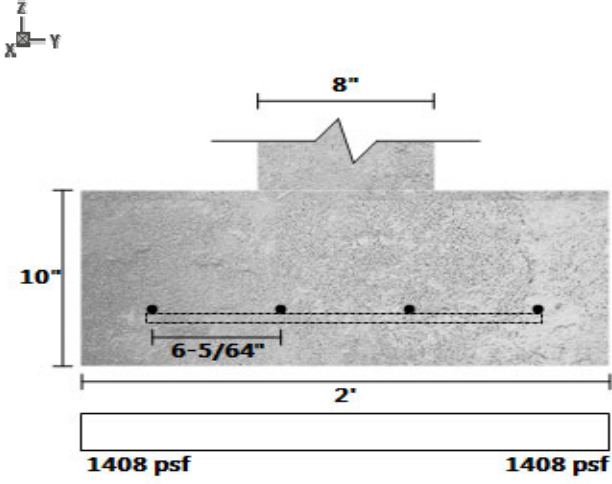
LOAD LIST

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 #25	B	936.5039	-	0	-	Dead	Z
Point (lbf)	Beam #25	B	6788.672	-	0	-	Snow	Z

SpotFtg Bm #25-2 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #26-1	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 (ft³)	Footing Weight (lb/ft)
2.5	2.5	10	5.21	755.21

CONCRETE

fc' (psi)	Ec (psi)	Density (lb/ft³)	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 (lb/ft²)	Density (lb/ft³)	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 (lb/ft²)	PASS (27.9%)	1080.8	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (88.5%)	2264.9	19718.0	1.2D+1.6L+0.5Lr	LRFD
One-Way Shear Y (lbf)	PASS (88.5%)	2264.9	19718.0	1.2D+1.6L+0.5Lr	LRFD
Two-Way Shear (lbf-ft)	PASS (91.3%)	6757.0	77557.5	1.2D+1.6L+0.5Lr	LRFD
Moment X (lbf-ft)	PASS (91.3%)	1497.6	17278.2	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lbf-ft)	PASS (91.3%)	1497.6	17278.2	1.2D+1.6L+0.5Lr	LRFD
Crushing (psi)	PASS (95.8%)	8911.2	212160.0	1.2D+1.6L+0.5Lr	LRFD
Compression (ft²)	PASS (100.0%)	6.3	6.3	D	LRFD

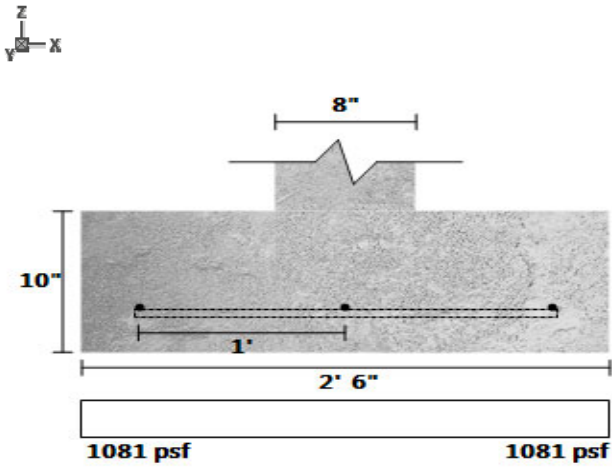
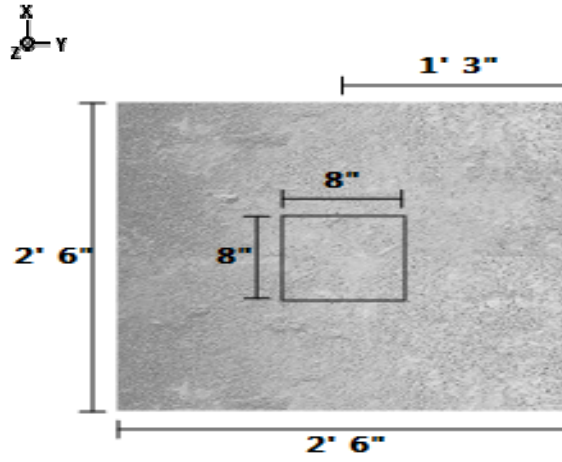
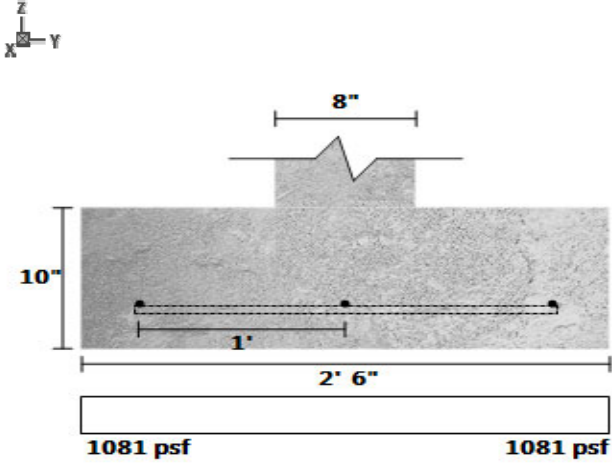
LOAD LIST

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 #26	A	1721.964	-	0	-	Dead	Z
Point (lbf)	Beam #26	A	4277	-	0	-	Live	Z

SpotFtg Bm #26-1 DIAGRAMS



DATE:	11/19/2023	COMPANY:	SMC Design
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	Stephen Curtis
CUSTOMER:		REVIEWED BY:	Stephen Curtis
PROJ. ADDRESS:	--	PROJECT NAME:	23-014 Chambers
	--		
LEVEL:	Basement	LOADING:	ASD
MEMBER NAME:	SpotFtg Bm #26-2	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	48	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 (16.9%)	1245.8	1500.0	D+L	ASD
One-Way Shear X (lbf)	PASS (98.9%)	348.3	31548.8	1.4D	LRFD
One-Way Shear Y (lbf)	PASS (96.7%)	348.3	10516.8	1.2D+1.6L+0.5Lr	LRFD
Moment Y (lbf-ft)	PASS (98.7%)	371.4	28754.4	1.2D+1.6L+0.5Lr	LRFD
Crushing (psi)	PASS (99.0%)	8911.2	900141.1	1.2D+1.6L+0.5Lr	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 #26	B	1721.964	-	0	-	Dead	Z
Point (lbf)	Beam #26	B	4277	-	0	-	Live	Z

SpotFtg Bm #26-2 DIAGRAMS

