Structural Calculations

Project Title: Hubble Residence

Location: Featherville, Idaho

Job #: 2026-11458

Disclaimer:

1. Calculations are not to be used for determining lengths of structural members.
2. Calculations are single use and location specific to property listed above.
3. Calulations shall not to be reproduced, reused, or altered in any way.
4. Calculations based on drawings received prior to stamp date. Any changes made after stamp date must be reviewed and approved by Engineer of Record prior to construction.
5. All work to conform to all local, state, and national codes.

Prepared in accordance with 2018 IBC. Calculations expire by: 2/23/2027

SITE SPECIFIC DESIGN CRITERIA:

Snow Criteria:

Roof Load (P_f)	120 psf	
Ground Load (P_g)	120 psf	
Exposure Factor (C_e)	1.0	Partially
Thermal Factor (C_t)	1.0	Typical
Importance (I_s)	1.0	

Wind Criteria:

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

Seismic Criteria:

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

Seismic Criteria (continued):

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

Soil Criteria:

Brg. Strength	1500 psf

STRUCTURE SPECIFIC DESIGN CRITERIA:

Live Loads:

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

Roof Dead Loads:

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

Roof not engineered for Tile, Slate or Concrete.

Exterior Wall Dead Loads:

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

Floor Dead Loads:

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

Floor joists not engineered for concrete overlay.

Interior Wall Dead Loads:

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

Deck Dead Load

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

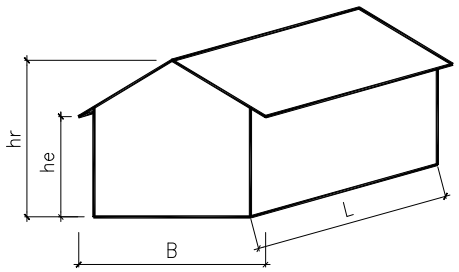
Deck not engineered for hot tub loading.

Deck not engineered for concrete overlay.

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

INPUT DATA

Exposure category (B, C or D, ASCE 7-16 26.7.3)		C	
Importance factor (ASCE 7-16 Table 1.5-2)	I_w =	1.00	for all Category
Basic wind speed (ASCE 7-16 26.5.1 or 2018 IBC)	V =	115	*mph*
Topographic factor (ASCE 7-16 26.8 & Table 26.8-1)	K_{zt} =	1.00	Flat
Building height to ridge	h_r =	*26.00 ft*	*ft*
Building height to eave	h_e =	*20.25 ft*	*ft*
Building width	B =	*88.00 ft*	*ft*
Building length	L =	*90.00 ft*	*ft*
Overhang sloped width	O_h =	*3.00 ft*	*ft*
Effective area of components (or Solar Panel area)	A =	*33.3 ft²*	ft^2, <== Overhang? (Yes or No): Yes
Enclosed? (Y/N)		y	



ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_z\ K_{zt}\ K_d\ K_e\ V^2$ = **26.76** psf

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

K_z = velocity pressure exposure coefficient evaluated at height, h, (Tab. 26.10-1, pg 2) = **0.93**

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

h = mean roof height = **23.13** ft

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

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

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

Design pressures for MWFRS

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

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

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

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

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

a = width of edge strips, Fig 28.3-1, page 312, MAX[MIN(0.1B, 0.1L, 0.4h), MIN(0.04B, 0.04L), 3] = **8.80** **ft**

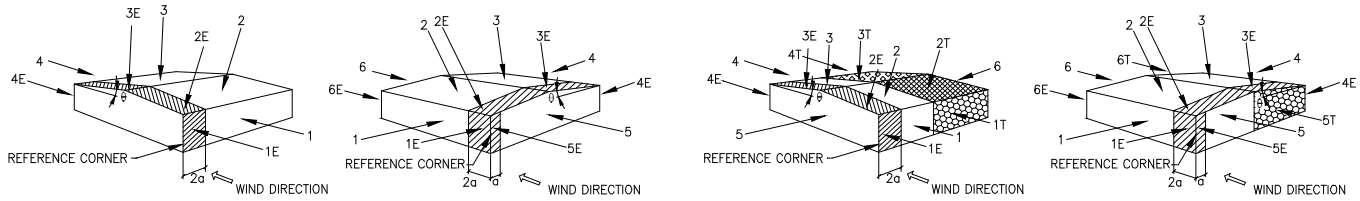
Net Pressures (psf), Basic Load Cases

Surface	Roof angle q = 33.69			Roof angle q = 33.69		
	$G C_{pf}$	Net Press. W/		$G C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$		$(+GC_{pi})$	$(-GC_{pi})$
1	0.56	10.17	19.80	-0.45	-16.86	-7.23
2	0.21	0.80	10.44	-0.69	-23.28	-13.65
3	-0.43	-16.32	-6.69	-0.37	-14.72	-5.08
4	-0.37	-14.72	-5.08	-0.45	-16.86	-7.23
5				0.40	5.89	15.52
6				-0.29	-12.58	-2.94
1E	0.69	13.65	23.28	-0.48	-17.66	-8.03
2E	0.27	2.41	12.04	-1.07	-33.45	-23.82
3E	-0.53	-19.00	-9.37	-0.53	-19.00	-9.37
4E	-0.48	-17.66	-8.03	-0.48	-17.66	-8.03
5E				0.61	11.51	21.14
6E				-0.43	-16.32	-6.69

Net Pressures (psf), Torsional Load Cases

Surface	Roof angle q = 33.69		
	$G C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
1T	0.56	2.54	4.95
2T	0.21	0.20	2.61
3T	-0.43	-4.08	-1.67
4T	0.00	-3.68	-1.27
Surface	Roof angle q = 0.00		
	$G C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
5T	0.40	1.47	3.88
6T	-0.29	-3.14	-0.74

+ / - Wind Pressure	59%



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

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

Design pressures for components and cladding

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

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

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

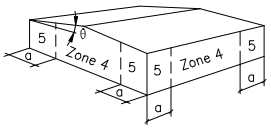
$G C_p$ = 1.00 external pressure coefficie

see table below. (ASCE 7-16 30.3.2)

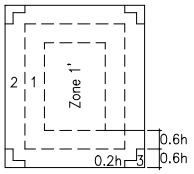
q = 33.69 °

$p_{overhang}$ = **-92.32** psf

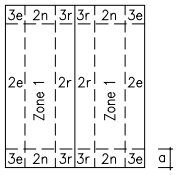
(ASCE 7-16 28.3.3)



Walls



Roof θ≤7°



Roof θ>7°

Comp. & Cladding Coeffs.	Effective Area (ft^2)	Zone 1		Zone 1'		Zone 2		Zone 2e		Zone 2n		Zone 2r	
		GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$
	2581	0.30	-0.80	0.30	-0.80	0.30	-1.80	0.30	-0.80	0.30	-1.00	0.30	-1.00
	Effective Area (ft^2)	Zone 3		Zone 3e		Zone 3r		Zone 4		Zone 5			
		GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$	GC_p	$-GC_p$		
	33	0.30	-1.80	0.30	-1.80	0.30	-1.80	0.99	-1.09	0.99	-1.37		

Comp. & Cladding Pressures	Zone 1		Zone 1'		Zone 2		Zone 2e		Zone 2n		Zone 2r	
	Positive	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*
	12.84	-26.22	12.84	-26.22	12.84	-52.98	12.84	-26.22	12.84	-31.58	12.84	-31.58
	Zone 3		Zone 3e		Zone 3r		Zone 4		Zone 5			
	Positive	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*		
	12.84	-52.98	12.84	-52.98	12.84	-52.98	31.19	-33.87	31.19	-41.52		

*(Max Pressure **52.98** psf)*

LOAD CASE 'A' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**10.3 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**12.8 psf**
$0.6*W_w = (Z_1 + Z_4) * 0.6 =$	**14.9 psf**
$0.6*W_{wE} = (Z_{1E} + Z4E) * 0.6 =$	**18.8 psf**

LOAD CASE 'B' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**5.1 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**8.7 psf**
$0.6*W_w = (Z_5 + Z_6) * 0.6 =$	**11.1 psf**
$0.6*W_{wE} = (Z_{5E} + Z_{6E}) * 0.6 =$	**16.7 psf**

ROOF COMPONENTS FACTORED LOAD	
$0.6*Z_{r,c\&c} =$	**18.9 psf**

WALL COMPONENTS FACTORED LOAD	
$0.6*Z_{w,c\&c} =$	**20.3 psf**

OSB SEISMIC LOADING ANALYSIS

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

INPUT DATA

Typical floor height:	h =	10	*ft*
Typical floor weight:	w_x =	134.6	*kips*
Number of floors:	n =	2	
Importance factor (ASCE 11.5.1):	I_e =	1.00	
Design spectral response:	S_{DS} =	0.47	g
	S_{D1} =	0.22	g
Mapped spectral resp.:	S_1 =	0.15	g
Period Parameter, C_t: (ASCE Tab 12.8-2):	C_t =	0.020	
Resp. coefficient: (ASCE Tab. 12.2.1):	R =	6.5	
Seismic design category:	SDC =	D	
	h_n =	26.0	*ft*

DESIGN SUMMARY

$C_s = 1.2 * S_{DS} / (R / I_e)$ =	0.0870		**<= Applicable**
Period Parameter, x =	*0.75*	, ASCE Tab 12.8-2	
Period: $T_a = C_t (h_n)^x$ =	*0.23*	sec, ASCE 12.8.2.1	
$C_s < S_{D1} / [(R / I_e) T_a]$ =	*0.1484*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.044 S_{DS} I_e$ =	*0.0207*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
$C_s > 0.5 S_1 / (R / I_e)$ =	*0.0117*	, ASCE Tab 12.8.1.1	**<= Not Applicable**
k =	*1.90*	, (ASCE 12.8.3, page 91)	
$V = C_s W$ =	***0.0870***	W	
0.7 * V =	***0.0609***	W	
W =	***269***	*kips, total*	

SEISMIC COMPONENT & ANCHORING ANALYSIS

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

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

Lf: 10 ft ka: 1.1

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

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

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

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

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

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

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

WIND / SEISMIC SHEAR FORCE CALCULATIONS:

From ASCE 7-16 Wind & Seismic Loading Analysis

Wall Line	Roof / Floor					Wall					Load above				Loading		
	Wind Force (psf)	Diaph. Weight Wr, We	truss trib (ft)	Area W (ft)	Area L (ft)	Wind Force (psf)	Wall DL (psf)	Wall ht (ft)	wall line dist (ft)	Upr. Flr Wall ht (ft)	Wind (#)	Seismic (#)	*C_s (Wp)	=	**Wind Force (kips)**	**Seismic Force (kips)**	**Lateral Control**
X1-2	11.5	47	5.8	38.0	20.2	16.7	12.0	9.0	38.0				0.06	=	**2.68**	**1.35**	**Wind**
X2-2	11.5	47	5.8	38.0	20.2	16.7	12.0	9.0	38.0				0.06	=	**2.68**	**1.35**	**Wind**
Y1-2	12.5	47	5.8	20.2	38.0	18.3	12.0	9.0	20.2				0.06	=	**1.56**	**1.23**	**Wind**
Y2-2	12.5	47	5.8	20.2	38.0	18.3	12.0	9.0	20.2				0.06	=	**1.56**	**1.23**	**Wind**
X1-1	0.0	18	0.0	52.0	90.0	16.2	12.0	10.0	52.0	5.5	2.68	1.35	0.06	=	**7.11**	**4.29**	**Wind**
X2-1	0.0	18	0.0	52.0	90.0	16.2	12.0	10.0	52.0	5.5	2.68	1.35	0.06	=	**11.10**	**6.00**	**Wind**
	11.5	47	11.9	36.0	28.0	16.8	12.0	10.0	36.0	0.0	0	0	0.06	=			
X3-1	11.5	47	11.9	36.0	28.0	16.8	12.0	10.0	36.0	0.0	0	0	0.06	=	**3.99**	**1.71**	**Wind**
Y1-1	0.0	18	0.0	27.5	40.0	17.4	12.0	10.0	27.5	5.5	1.56	1.23	0.06	=	**4.07**	**2.04**	**Wind**
Y2-1	0.0	18	0.0	27.5	40.0	17.4	12.0	10.0	27.5	5.5	1.56	1.23	0.06	=	**12.04**	**10.36**	**Wind**
	11.0	47	15.9	62.5	88.0	16.0	12.0	10.0	62.5	0	0	0	0.06	=			
Y3-1	11.0	47	15.9	62.5	88.0	16.0	12.0	10.0	62.5	0	0	0	0.06	=	**7.96**	**8.32**	**Seismic**
Y4-1	11.9	47	11.9	28.0	38.0	17.4	12.0	10.0	28.0	0	0	0	0.06	=	**1.95**	**1.05**	**Wind**

SHEAR WALL CALCULATIONS:

		X1-2	X2-2	Y1-2	Y2-2	X1-1	X1-1
Shear Wall Forces							
Number of Panels		1	1	1	1	1	1
Total length of wall		20.21 ft	20.21 ft	38.00 ft	38.00 ft	90.00 ft	90.00 ft
Total length of shear wall	L =	20.21 ft	15.17 ft	38.00 ft	38.00 ft	14.17 ft	24.46 ft
Total length of full ht seg.	L_w =	6.12 ft	10.20 ft	10.67 ft	10.67 ft	11.67 ft	8.42 ft
height of shear wall	H =	9.00 ft	9.00 ft	9.00 ft	9.00 ft	10.00 ft	12.00 ft
Maximum opening height	H' =	4.50 ft	4.00 ft	9.00 ft	9.00 ft	6.00 ft	12.00 ft
Total force at top of wall	V_1 =	2682 lbs	2682 lbs	1559 lbs	1559 lbs	3569 lbs	2575 lbs
Self weight	$w_{DL\ self}$ =	108 plf	108 plf	108 plf	108 plf	120 plf	144 plf
Applied dead load	$w_{DL\ above}$ =	357 plf	357 plf	51 plf	51 plf	357 plf	51 plf
Prefered OSB thickness	in	7/16	7/16	7/16	7/16	7/16	7/16
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2	1/2	1/2
Wall Connected to Concrete	y/n =	N	N	N	N	Y	Y
Shear Wall Segments							
		3.06	3.04	5.33	5.33	7.29	4.50
		3.06	3.58	5.33	5.33	4.38	3.92
			3.58				
Shear Transfer to Concrete							
	T =	Not Req'd	Not Req'd	Not Req'd	Not Req'd	1030 lbs	3442 lbs
						48 '' O.C.	72 '' O.C.
	Provide:					A4	Code Min.
	Min # of 1/2 Anchor Bolts					(4) Min	(3) Min
	Load From Above	0.00	0.00	0.00	0.00	0.00	0.00
						HD1	**HD3**
Shear Resisting System							
Force Calculated		590.97	291.63	356.28	356.28	349.20	707.28
		OSB	**OSB**	**OSB**	**OSB**	**OSB**	**OSB**
	Min Shear Wall Segment:	2.57 ft	2.57 ft	2.57 ft	2.57 ft	2.86 ft	3.43 ft
	Provide: Va=	**SW3**	**SW1**	**SW1**	**SW1**	**SW1**	**SW4**
	Min Shear Wall Segment:						
	Provide: Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		133 plf	133 plf	41 plf	41 plf	40 plf	29 plf
Blocking		**NONE**	**NONE**	**NONE**	**NONE**	**NONE**	**NONE**
Nailing		**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.303	0.673	0.281	0.281	0.823	0.344
% of maximum opening height	%oh = H'/H =	0.500	0.444	1.000	1.000	0.600	1.000
Shear cap adj factor	SCAF =	0.74	0.90	0.41	0.41	0.88	0.43
Unit base shear	vbase V_1/L_w =	438 plf	263 plf	146 plf	146 plf	306 plf	306 plf
Effective unit base shear	vreq=v_{base}/SCAF=	591 plf	292 plf	356 plf	356 plf	349 plf	707 plf
Ovrtrn. mo. of shrt. pnl	OTM =	32.6 k-ft	26.8 k-ft	34.2 k-ft	34.2 k-ft	40.7 k-ft	14.4 k-ft
Shear wall adjustment factor							
Resist moment of shrt panel	RM =	95.0 k-ft	53.5 k-ft	114.8 k-ft	114.8 k-ft	47.9 k-ft	1.5 k-ft
	r=	0.4649	0.8221	0.2807	0.2807	0.8860	0.3441
	C_O=	0.7415	0.9016	0.4101	0.4101	0.8762	0.4326

SHEAR WALL CALCULATIONS:

		X1-1	X2-1	X2-1	X2-1	X2-1	X3-1
Shear Wall Forces							
Number of Panels		1	1	1	1	1	1
Total length of wall		90.00 ft	90.00 ft	90.00 ft	90.00 ft	90.00 ft	28.00 ft
Total length of shear wall	L =	3.17 ft	15.00 ft	22.46 ft	7.08 ft	21.00 ft	28.00 ft
Total length of full ht seg.	L_w =	3.17 ft	7.71 ft	12.45 ft	7.08 ft	18.09 ft	18.79 ft
height of shear wall	H =	10.00 ft	10.00 ft	11.00 ft	10.00 ft	10.00 ft	10.00 ft
Maximum opening height	H' =	0.00 ft	6.00 ft	11.00 ft	0.00 ft	8.00 ft	6.00 ft
Total force at top of wall	V_1 =	969 lbs	1888 lbs	3050 lbs	1735 lbs	4430 lbs	3988 lbs
Self weight	$w_{DL\ self}$ =	120 plf	120 plf	132 plf	120 plf	120 plf	120 plf
Applied dead load	$w_{DL\ above}$ =	68 plf	68 plf	68 plf	357 plf	34 plf	68 plf
Prefered OSB thickness	in	7/16	7/16	7/16	7/16	7/16	7/16
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2	1/2	1/2
Wall Connected to Concrete	y/n =	Y	Y	Y	Y	Y	Y
Shear Wall Segments							
		3.17	4.54	5.83	7.08	7.88	10.79
			3.17	6.62		10.21	4.00
							4.00
Shear Transfer to Concrete							
	T =	2880 lbs	1755 lbs	2664 lbs	1435 lbs	1799 lbs	327 lbs
	1/2 Anchor Bolts @	36 '' O.C.	72 '' O.C.	72 '' O.C.	72 '' O.C.	60 '' O.C.	72 '' O.C.
	Provide:	A3	Code Min.	Code Min.	Code Min.	A5	Code Min.
	Min # of 1/2 Anchor Bolts	(2) Min	(2) Min	(3) Min	(2) Min	(5) Min	(4) Min
	Load From Above	0.00	0.00	0.00	0.00	0.00	0.00
	Holdown	**HD2**	**HD1**	**HD2**	**HD1**	**HD1**	**Perp. Wall**
Shear Resisting System							
Force Calculated		305.90	340.20	463.09	244.90	292.54	268.07
		OSB	**OSB**	**OSB**	**OSB**	**OSB**	**OSB**
	Min Shear Wall Segment:	2.86 ft	2.86 ft	3.14 ft	2.86 ft	2.86 ft	2.86 ft
	Provide: Va=	**SW1**	**SW1**	**SW2**	**SW1**	**SW1**	**SW1**
	Min Shear Wall Segment:						
	Provide: Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		11 plf	21 plf	34 plf	19 plf	49 plf	142 plf
Blocking		**NONE**	**NONE**	**NONE**	**NONE**	**NONE**	**NONE**
Nailing		**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**
Unit Base Shear							
% of full height segments	%fh = L_w/L =	1.000	0.514	0.554	1.000	0.861	0.671
% of maximum opening height	%oh = H'/H =	0.000	0.600	1.000	0.000	0.800	0.600
Shear cap adj factor	SCAF =	1.00	0.72	0.53	1.00	0.84	0.79
Unit base shear	vbase V_1/L_w =	306 plf	245 plf	245 plf	245 plf	245 plf	212 plf
Effective unit base shear	vreq=v_{base}/SCAF=	306 plf	340 plf	463 plf	245 plf	293 plf	268 plf
Ovrtrn. mo. Ttl. length of wall	OTM =	9.7 k-ft	26.2 k-ft	63.4 k-ft	17.3 k-ft	52.9 k-ft	50.4 k-ft
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	0.9 k-ft	21.2 k-ft	50.4 k-ft	12.0 k-ft	34.0 k-ft	73.7 k-ft
	r=	1.0000	0.6378	0.5545	1.0000	0.8858	0.7727
	C_O=	1.0000	0.7200	0.5288	1.0000	0.8373	0.7917

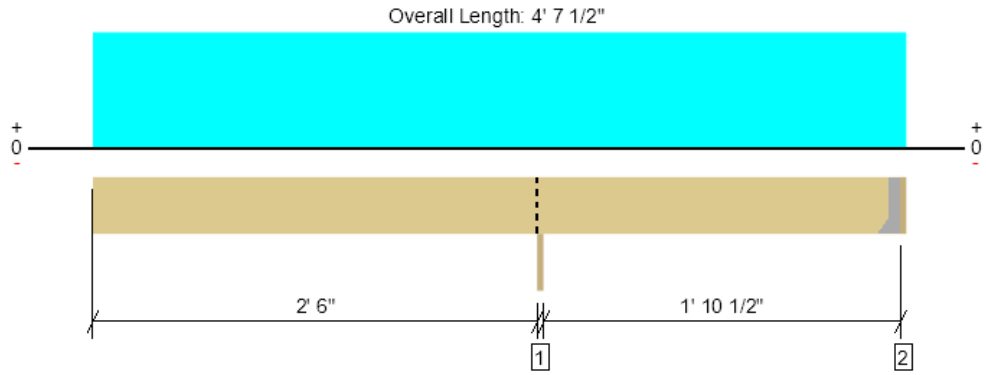
SHEAR WALL CALCULATIONS:

		Y1-1	Y2-1	Y2-1	Y3-1	Y3-1	Y3-1
Shear Wall Forces							
Number of Panels		1	1	1	1	1	2
Total length of wall		40.00 ft	42.00 ft	42.00 ft	88.00 ft	88.00 ft	88.00 ft
Total length of shear wall	L =	40.00 ft	19.23 ft	8.17 ft	1.42 ft	12.00 ft	2.00 ft
Total length of full ht seg.	L_w =	20.25 ft	18.75 ft	8.17 ft	1.42 ft	12.00 ft	2.00 ft
height of shear wall	H =	10.00 ft	10.00 ft	10.00 ft	9.00 ft	10.00 ft	9.00 ft
Maximum opening height	H' =	8.00 ft	0.00 ft	10.00 ft	0.00 ft	0.00 ft	0.00 ft
Total force at top of wall	V_1 =	4074 lbs	8385 lbs	3652 lbs	934 lbs	4755 lbs	1316 lbs
Self weight	$w_{DL\ self}$ =	120 plf	120 plf	120 plf	108 plf	120 plf	108 plf
Applied dead load	$w_{DL\ above}$ =	40 plf	225 plf	8 plf	40 plf	40 plf	40 plf
Prefered OSB thickness	in	7/16	7/16	7/16	7/16	7/16	7/16
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2	1/2	1/2
Wall Connected to Concrete	y/n =	Y	Y	Y	Y	Y	Y
Shear Wall Segments							
		3.50	13.42	8.17	1.42	12.00	2.00
		9.29	5.33				
		4.00					
		3.46					
Shear Transfer to Concrete							
	T =	Not Req'd	2431 lbs	4158 lbs	3500 lbs	3387 lbs	3500 lbs
	1/2 Anchor Bolts @	72 " O.C.	24 " O.C.	24 " O.C.		36 " O.C.	
	Provide:	Code Min.	A2	A2		A3	
	Min # of 1/2 Anchor Bolts	(4) Min	(9) Min	(4) Min		(5) Min	
	Load From Above	0.00	0.00	0.00	0.00	0.00	0.00
			HD2	**HD3**	**HD3**	**HD3**	**HD3**
Shear Resisting System							
Force Calculated		340.22	447.11	447.18	659.55	396.26	657.82
		OSB	**OSB**	**OSB**	**P.F.**	**OSB**	**P.F.**
Min Shear Wall Segment:		2.86 ft	2.86 ft	2.86 ft	1.33 ft	2.86 ft	1.33 ft
Provide:	Va=	**SW1**	**SW2**	**SW2**	**943**	**SW2**	**1610**
Min Shear Wall Segment:							
Provide:	Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		102 plf	200 plf	87 plf	11 plf	54 plf	30 plf
Blocking		**NONE**	**B1**	**NONE**	**NONE**	**NONE**	**NONE**
Nailing		**See SCHED**	**T1**	**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.506	0.975	1.000	1.000	1.000	1.000
% of maximum opening height	%oh = H'/H =	0.800	0.000	1.000	0.000	0.000	0.000
Shear cap adj factor	SCAF =	0.59	1.00	1.00	1.00	1.00	1.00
Unit base shear	vbase V_1/L_w =	201 plf	447 plf	447 plf	660 plf	396 plf	658 plf
Effective unit base shear	vreq=v_{base}/SCAF=	340 plf	447 plf	447 plf	660 plf	396 plf	658 plf
Ovrtrn. mo. Ttl. length of wall	OTM =	68.9 k-ft	83.9 k-ft	36.5 k-ft	8.4 k-ft	47.6 k-ft	11.8 k-ft
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	127.8 k-ft	63.8 k-ft	4.3 k-ft	0.1 k-ft	11.5 k-ft	0.3 k-ft
	r=	0.5617	1.0000	1.0000	1.0000	1.0000	1.0000
	C_O=	0.5913	1.0254	1.0000	1.0000	1.0000	1.0000

SHEAR WALL CALCULATIONS:

		Y4-1					
Shear Wall Forces							
Number of Panels		1					
Total length of wall		79.00 ft					
Total length of shear wall	L =	79.00 ft					
Total length of full ht seg.	L_w =	19.00 ft					
height of shear wall	H =	10.00 ft					
Maximum opening height	H' =	10.00 ft					
Total force at top of wall	V_1 =	1951 lbs					
Self weight	$w_{DL\ self}$ =	120 plf					
Applied dead load	$w_{DL\ above}$ =	40 plf					
Prefered OSB thickness	in	7/16					
Prefered Gyp thickness	in	1/2					
Wall Connected to Concrete	y/n =	Y					
Shear Wall Segments							
		4.00					
		4.00					
		4.00					
		3.50					
		3.50					
Shear Transfer to Concrete							
	T =	Not Req'd					
	1/2 Anchor Bolts @	72 " O.C.					
	Provide:	Code Min.					
	Min # of 1/2 Anchor Bolts	(2) Min					
	Load From Above	0.00					
Shear Resisting System							
Force Calculated		258.72					
		OSB					
	Min Shear Wall Segment:	2.86 ft					
	Provide: Va=	**SW1**					
	Min Shear Wall Segment:						
	Provide: Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		25 plf					
Blocking		**NONE**					
Nailing		**See SCHED**					
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.241					
% of maximum opening height	%oh = H'/H =	1.000					
Shear cap adj factor	SCAF =	0.40					
Unit base shear	vbase V_1/L_w =	103 plf					
Effective unit base shear	vreq=v_{base}/SCAF=	259 plf					
Ovrtrn. mo. Ttl. length of wall	OTM =	49.2 k-ft					
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	498.6 k-ft					
	r=	0.2405					
	C_O=	0.3970					

1 piece(s) 2 x 6 DF No.2 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1432 @ 2' 6 3/4"	1406 (1.50")	Passed (102%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	587 @ 3' 1"	1139	Passed (52%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-900 @ 2' 6 3/4"	975	Passed (92%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.130 @ 0	0.256	Passed (2L/474)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.148 @ 0	0.342	Passed (2L/416)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 4' 6"
System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Left cantilever length exceeds 1/3 member length or 1/2 back span length. Additional bracing should be considered.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- -281 lbs uplift at support located at 4' 6". Strapping or other restraint may be required.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Beam - DF	1.50"	1.50"	1.50"	178	1254	1432	Blocking
2 - Hanger on 5 1/2" DF beam	1.50"	Hanger[1]	1.50"	-21	59/-261	38/-281	See note [1]

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 6" o/c	
Bottom Edge (Lu)	4' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	LU26	1.50"	N/A	6-10dx1.5	4-10dx1.5	

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

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 4' 7 1/2"	24"	17.0	120.0	Default Load

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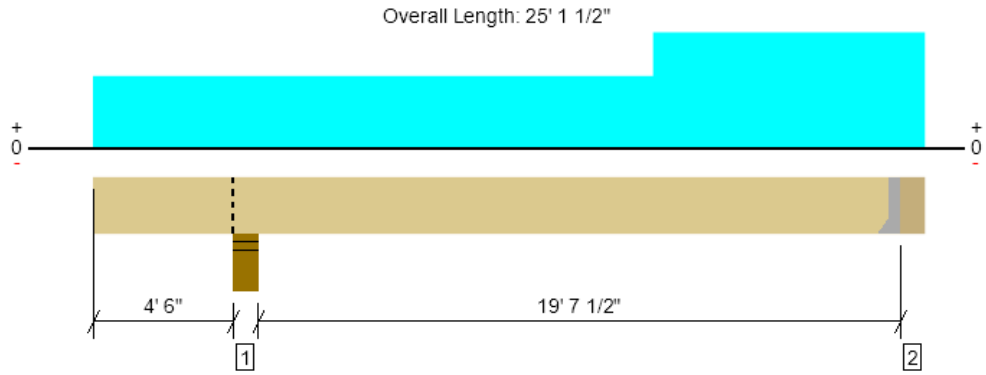
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

2 piece(s) 1 3/4" x 11 1/4" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2839 @ 24' 7 1/2"	3938 (1.50")	Passed (72%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	2517 @ 23' 8 1/4"	8603	Passed (29%)	1.15	1.0 D + 1.0 S (Alt Spans)
Moment (Ft-lbs)	11842 @ 15' 9 3/4"	18558	Passed (64%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.879 @ 14' 11 3/8"	0.994	Passed (L/271)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	1.040 @ 14' 11 1/2"	1.325	Passed (L/229)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 24' 7 1/2"
System : Roof
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Upward deflection on left cantilever exceeds 0.4".

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Stud wall - DF	6.00"	6.00"	1.59"	586	2896	3482	Blocking
2 - Hanger on 11 1/4" DF beam	6.00"	Hanger[1]	1.50"	461	2543	3004	See note [1]

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	11' 2" o/c	
Bottom Edge (Lu)	24' 8" o/c	

•Maximum allowable bracing intervals based on applied load.

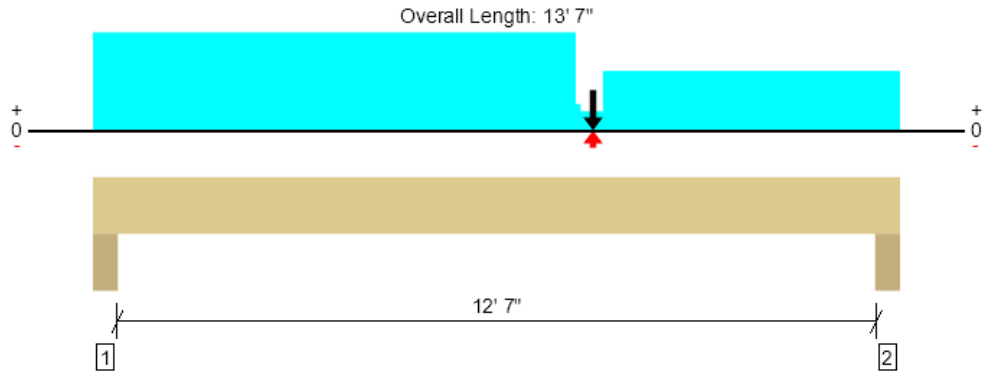
Connector: Simpson Strong-Tie						
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	HHUS48	3.00"	N/A	22-10d	8-10d	

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

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 24' 7 1/2"	N/A	11.5	--	
1 - Uniform (PSF)	0 to 17' 3" (Front)	1' 6"	17.0	120.0	Default Load
2 - Uniform (PSF)	17' 3" to 25' 1 1/2" (Front)	2' 5"	17.0	120.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

1 piece(s) 8 3/4" x 16 1/2" 24F-V4 DF Glulam



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	25512 @ 4 1/2"	34125 (6.00")	Passed (75%)	--	1.0 D + 1.0 S (All Spans) [1]
Shear (lbs)	18426 @ 1' 10 1/2"	29332	Passed (63%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Pos Moment (Ft-lbs)	76806 @ 6' 9"	88080	Passed (87%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.324 @ 6' 9 1/8"	0.321	Passed (L/475)	--	1.0 D + 1.0 S (All Spans) [1]
Total Load Defl. (in)	0.382 @ 6' 9 1/8"	0.642	Passed (L/403)	--	1.0 D + 1.0 S (All Spans) [1]

Member Length : 13' 7"
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.96 was calculated for positive bending using length L = 12' 10".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Factored	
1 - Trimmer - DF	6.00"	6.00"	4.49"	3875	1811	21637	25512	None
2 - Trimmer - DF	6.00"	6.00"	3.81"	3229	1110	18422	21651	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	13' 7" o/c	
Bottom Edge (Lu)	13' 7" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 13' 7"	N/A	35.1	--	--	
1 - Uniform (PSF)	0 to 8' 2 1/2"	7' 1 1/4"	12.0	40.0	--	Default Load
2 - Uniform (PSF)	8' 2 1/2" to 13' 7"	1' 6"	12.0	40.0	--	Default Load
3 - Uniform (PSF)	0 to 13' 7"	5' 2 1/2"	17.0	--	120.0	Snow
4 - Uniform (PSF)	8' 7" to 13' 7"	12' 1/2"	17.0	--	120.0	Snow
5 - Uniform (PSF)	0 to 8' 1 1/2"	21' 6"	17.0	--	120.0	Snow
6 - Point (lb)	8' 5"	N/A	635	266/-27	3382	Linked from: GT1, Support 4

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3 piece(s) 2 x 10 DF No.2

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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	6326 @ 2' 10 1/2"	8438 (3.00")	Passed (75%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	3322 @ 1' 11 3/4"	5744	Passed (58%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	3415 @ 2' 3 1/4"	6088	Passed (56%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.006 @ 1' 7 1/16"	0.069	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.007 @ 1' 7 1/16"	0.138	Passed (L/999+)	--	1.0 D + 1.0 S (All Spans)

Member Length : 3'
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Factored	
1 - Trimmer - DF	3.00"	3.00"	1.50"	381	729	1354	1943	None
2 - Trimmer - DF	3.00"	3.00"	2.25"	959	1148	5368	6326	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' o/c	
Bottom Edge (Lu)	3' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3'	N/A	10.6	--	--	
1 - Uniform (PSF)	0 to 2' 2"	9' 1 1/2"	12.0	40.0	--	Default Load
2 - Uniform (PSF)	2' 5" to 3'	6' 7"	12.0	40.0	--	Default Load
3 - Uniform (PSF)	2' 5" to 3'	11' 4 1/4"	17.0	--	120.0	Snow
4 - Point (lb)	2' 3 1/4"	N/A	912	933	5927	Linked from: GT1, Support 2

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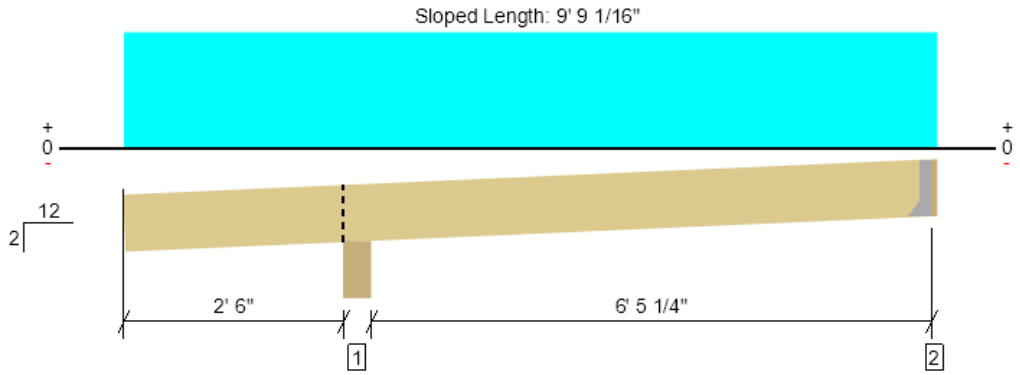
1 piece(s) 2 x 8 DF No.2 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	833 @ 9' 6"	1406 (1.50")	Passed (59%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	839 @ 3' 7 7/8"	1501	Passed (56%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	1264 @ 6' 5 9/16"	1564	Passed (81%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.118 @ 6' 3 1/8"	0.341	Passed (L/692)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.131 @ 6' 3 3/8"	0.454	Passed (L/625)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 9' 8 3/4"
System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 2/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Beveled Plate - DF	6.75"	6.75"	1.94"	232	1612	1843	Blocking
2 - Hanger on 7 1/4" DF Ledger	1.50"	Hanger[1]	1.50"	100	767	867	See note [1]

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6' 9" o/c	
Bottom Edge (Lu)	9' 2" o/c	

- Maximum allowable bracing intervals based on applied load.
- Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	LRU28Z	1.94"	N/A	6-10dx1.5	5-10d	

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

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 9' 7 1/2"	24"	17.0	120.0	Default Load

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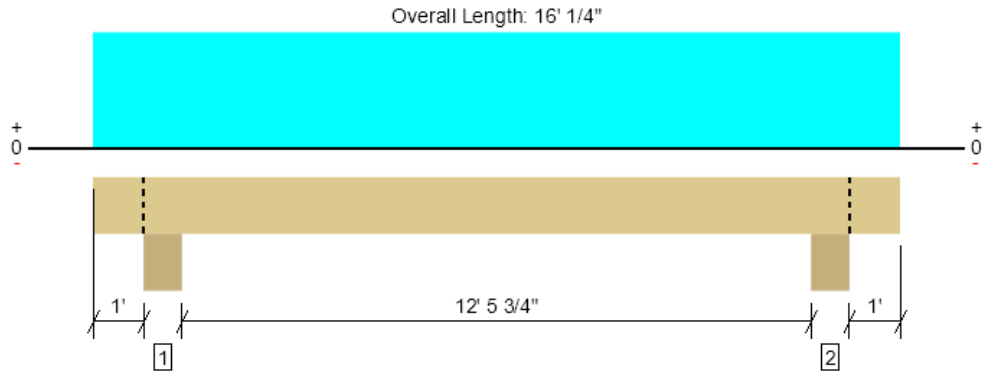
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

1 piece(s) 6 3/4" x 9" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	6729 @ 1' 4 5/8"	40584 (9.25")	Passed (17%)	--	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	4620 @ 2' 6 1/4"	12342	Passed (37%)	1.15	1.0 D + 1.0 S (Adj Spans)
Pos Moment (Ft-lbs)	17906 @ 8' 1/8"	20959	Passed (85%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-803 @ 1' 4 5/8"	16156	Passed (5%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.659 @ 8' 1/8"	0.663	Passed (L/241)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.763 @ 8' 1/8"	0.883	Passed (L/208)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 16' 1/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on left and right cantilevers exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 13' 1".
- Volume factor of 1.00 was calculated for negative bending using length L = 1' 6 3/8".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Column - DF	9.25"	9.25"	1.53"	935	5794	6729	Blocking
2 - Column - DF	9.25"	9.25"	1.53"	935	5794	6729	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	16' o/c	
Bottom Edge (Lu)	16' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 16' 1/4"	N/A	14.8	--	
1 - Uniform (PSF)	0 to 16' 1/4" (Top)	6'	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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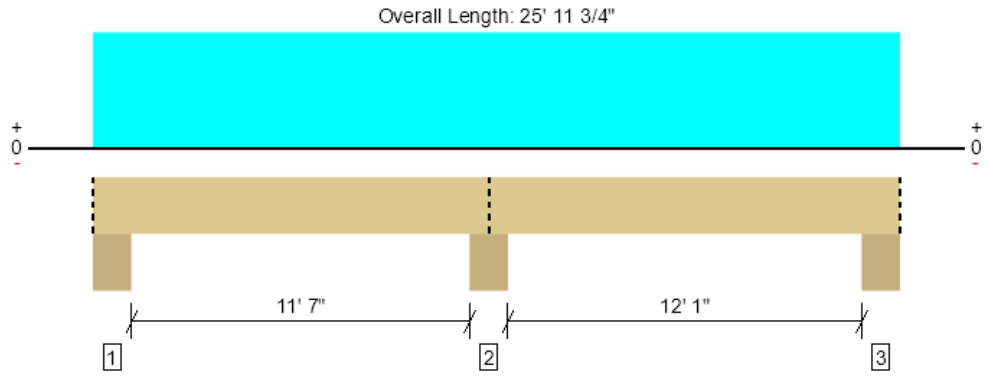
1 piece(s) 6 3/4" x 10 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	17182 @ 12' 8 7/8"	40584 (9.25")	Passed (42%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	7292 @ 14'	14399	Passed (51%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	14417 @ 20' 2 15/16"	28527	Passed (51%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-21229 @ 12' 8 7/8"	21990	Passed (97%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.262 @ 19' 7 3/8"	0.630	Passed (L/577)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.294 @ 19' 7 7/8"	0.840	Passed (L/513)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 25' 11 3/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 10' 2 1/8".
- Volume factor of 1.00 was calculated for negative bending using length L = 6' 2 3/16".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.25"	9.25"	1.50"	784	5313	6097	Blocking
2 - Column - DF	9.25"	9.25"	3.92"	2365	14817	17182	Blocking
3 - Column - DF	9.25"	9.25"	1.50"	832	5553	6385	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	26' o/c	
Bottom Edge (Lu)	26' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 25' 11 3/4"	N/A	17.2	--	
1 - Uniform (PSF)	0 to 25' 11 3/4" (Top)	8'	17.0	120.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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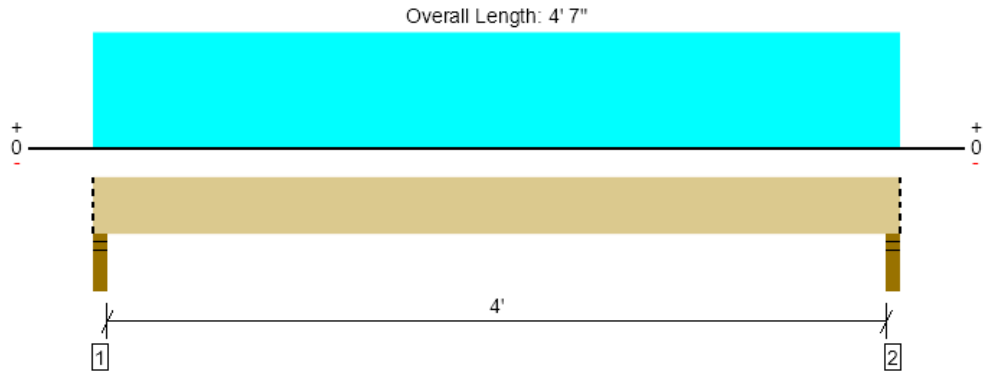
2 piece(s) 1 3/4" x 7 1/4" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	4785 @ 2"	7656 (3.50")	Passed (63%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2915 @ 10 3/4"	5544	Passed (53%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	4715 @ 2' 3 1/2"	8182	Passed (58%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.079 @ 2' 3 1/2"	0.213	Passed (L/647)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.090 @ 2' 3 1/2"	0.283	Passed (L/564)	--	1.0 D + 1.0 S (All Spans)

Member Length : 4' 7"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Stud wall - DF	3.50"	3.50"	2.19"	609	4177	4785	Blocking
2 - Stud wall - DF	3.50"	3.50"	2.19"	609	4177	4785	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 7" o/c	
Bottom Edge (Lu)	4' 7" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4' 7"	N/A	7.4	--	
1 - Uniform (PSF)	0 to 4' 7" (Top)	14' 2 1/4"	17.0	120.0	Default Load
2 - Uniform (PSF)	0 to 4' 7" (Back)	1'	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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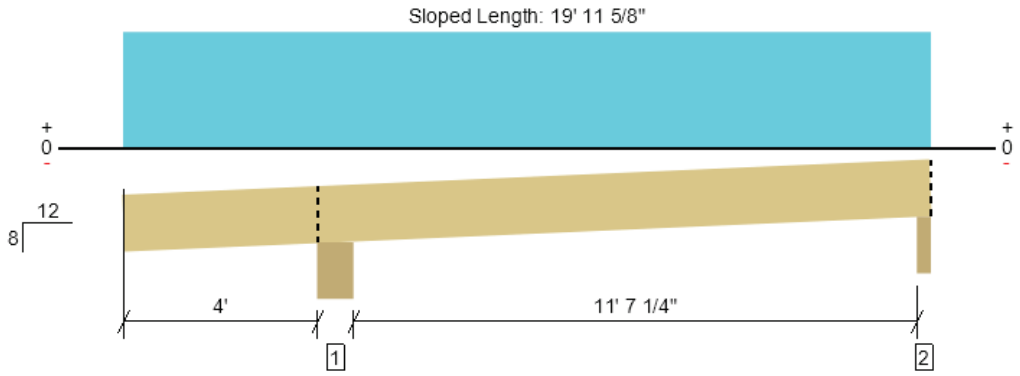
1 piece(s) 2 x 12 DF No.2 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1081 @ 16' 5"	3164 (3.38")	Passed (34%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1062 @ 5' 6 1/8"	2329	Passed (46%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	2908 @ 10' 10 1/8"	3138	Passed (93%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.325 @ 10' 6 1/2"	0.724	Passed (L/535)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.370 @ 10' 6 13/16"	0.966	Passed (L/470)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 20' 7 1/8"
System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Beveled Plate - DF	8.75"	8.75"	1.86"	305	1789	2094	Blocking
2 - Beveled Plate - DF	3.38"	3.38"	1.50"	148	933	1081	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 2" o/c	
Bottom Edge (Lu)	8' 2" o/c	

•Maximum allowable bracing intervals based on applied load.
•Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 16' 7 3/8"	16"	17.0	120.0	Default Load

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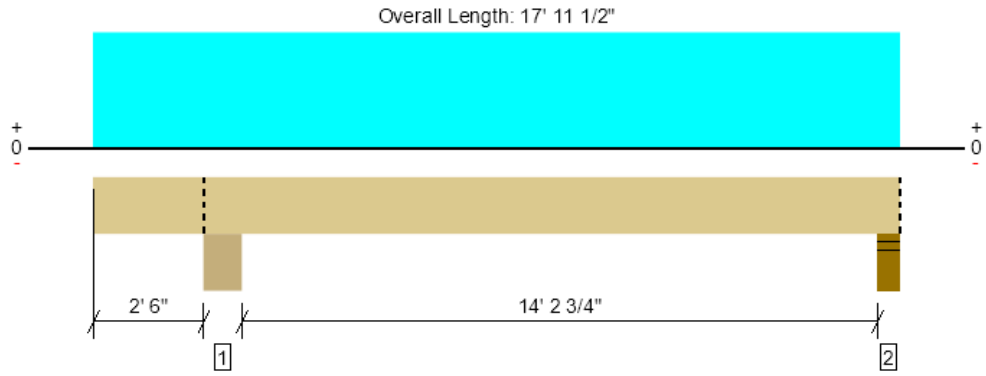
1 piece(s) 6 3/4" x 12" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	10568 @ 17' 7 1/2"	23203 (5.50")	Passed (46%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	8780 @ 4' 3 1/4"	16457	Passed (53%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	36411 @ 10' 5"	37260	Passed (98%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-5833 @ 2' 10 5/8"	28721	Passed (20%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.701 @ 10' 3 11/16"	0.737	Passed (L/252)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.806 @ 10' 3 3/4"	0.983	Passed (L/219)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 17' 11 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 14' 5".
- Volume factor of 1.00 was calculated for negative bending using length L = 3' 5 3/8".
- Upward deflection on left cantilever exceeds 0.4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.25"	9.25"	3.37"	2014	12751	14764	Blocking
2 - Stud wall - DF	5.50"	5.50"	2.51"	1418	9150	10568	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	18' o/c	
Bottom Edge (Lu)	18' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 17' 11 1/2"	N/A	19.7	--	
1 - Uniform (PSF)	0 to 17' 11 1/2" (Top)	10' 1"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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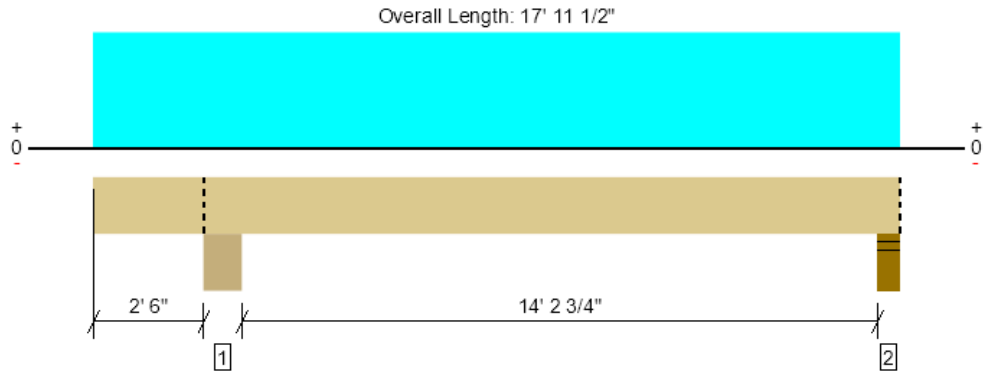
1 piece(s) 6 3/4" x 13 1/2" 24F-V4 DF Glulam



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	12481 @ 17' 7 1/2"	23203 (5.50")	Passed (54%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	10163 @ 4' 4 3/4"	18514	Passed (55%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	43003 @ 10' 5"	47076	Passed (91%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-6888 @ 2' 10 5/8"	36350	Passed (19%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.582 @ 10' 3 11/16"	0.737	Passed (L/304)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.669 @ 10' 3 3/4"	0.983	Passed (L/265)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 17' 11 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on left cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 14' 5".
- Volume factor of 1.00 was calculated for negative bending using length L = 3' 5 3/8".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Column - DF	9.25"	9.25"	3.97"	2368	15069	17437	Blocking
2 - Stud wall - DF	5.50"	5.50"	2.96"	1668	10814	12481	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	18' o/c	
Bottom Edge (Lu)	18' o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 17' 11 1/2"	N/A	22.1	--	
1 - Uniform (PSF)	0 to 17' 11 1/2" (Top)	11' 11"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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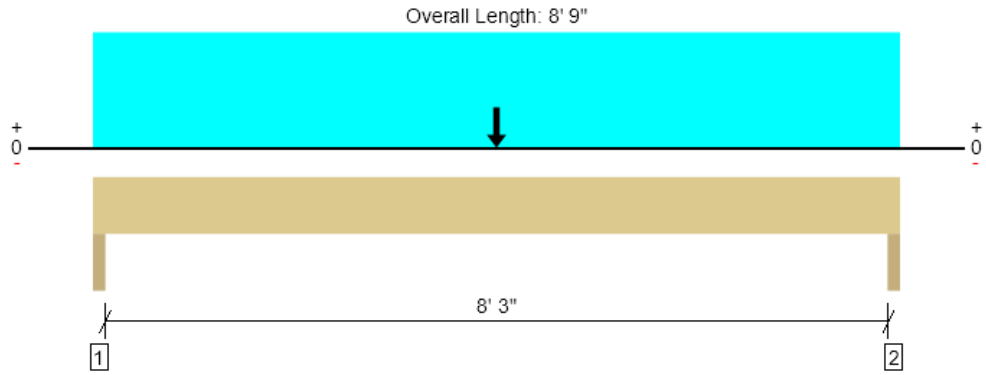
2 piece(s) 1 3/4" x 14" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	7203 @ 1 1/2"	7875 (3.00")	Passed (91%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	6891 @ 1' 5"	10707	Passed (64%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	28509 @ 4' 4 1/2"	27897	Passed (102%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.220 @ 4' 4 1/2"	0.283	Passed (L/463)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.256 @ 4' 4 1/2"	0.425	Passed (L/399)	--	1.0 D + 1.0 S (All Spans)

Member Length : 8' 9"
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Trimmer - DF	3.00"	3.00"	2.74"	1008	6195	7203	None
2 - Trimmer - DF	3.00"	3.00"	2.74"	1008	6195	7203	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6" o/c	
Bottom Edge (Lu)	8' 9" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 8' 9"	N/A	14.3	--	
1 - Uniform (PSF)	0 to 8' 9"	1' 6"	17.0	120.0	Default Load
2 - Point (lb)	4' 4 1/2"	N/A	1668	10814	Linked from: B06, Support 2

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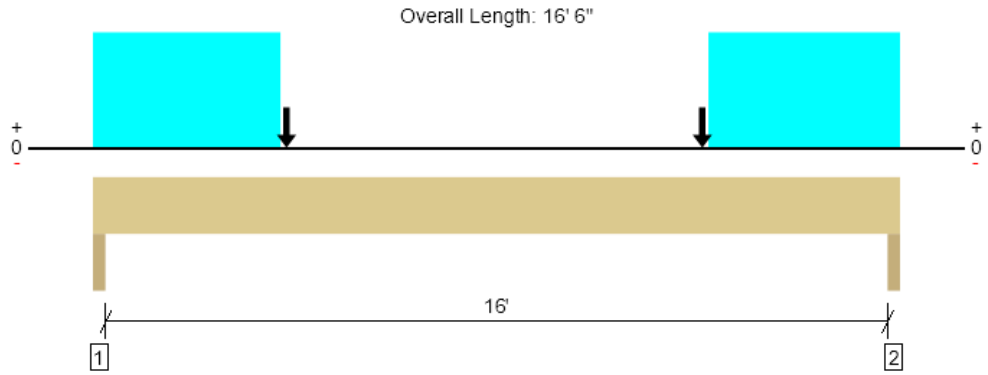
3 piece(s) 1 3/4" x 14" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	8209 @ 1 1/2"	11813 (3.00")	Passed (69%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	7887 @ 1' 5"	16060	Passed (49%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	30103 @ 10' 1 7/8"	41846	Passed (72%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.596 @ 8' 3 1/16"	0.542	Failed (L/327)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.707 @ 8' 3 1/16"	0.813	Passed (L/276)	--	1.0 D + 1.0 S (All Spans)

Member Length : 16' 6"
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Trimmer - DF	3.00"	3.00"	2.08"	1288	6920	8209	None
2 - Trimmer - DF	3.00"	3.00"	2.07"	1279	6865	8144	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	9' 7" o/c	
Bottom Edge (Lu)	16' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 16' 6"	N/A	21.5	--	
1 - Uniform (PSF)	0 to 3' 10"	1' 6"	17.0	120.0	Default Load
2 - Uniform (PSF)	12' 7" to 16' 6"	1' 6"	17.0	120.0	Default Load
3 - Point (lb)	3' 11 1/2"	N/A	1008	6195	Linked from: HDR @ B07, Support 1
4 - Point (lb)	12' 5 1/2"	N/A	1008	6195	Linked from: HDR @ B07, Support 2

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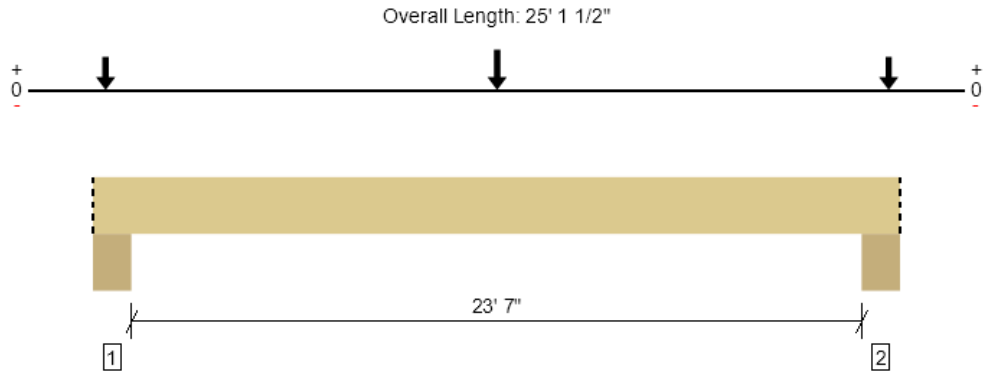
1 piece(s) 8 3/4" x 19 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	24020 @ 24' 5 3/4"	52609 (9.25")	Passed (46%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	9155 @ 22' 8 3/4"	34665	Passed (26%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	106840 @ 12' 7"	113721	Passed (94%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.755 @ 12' 6 13/16"	1.192	Passed (L/379)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.904 @ 12' 6 13/16"	1.589	Passed (L/316)	--	1.0 D + 1.0 S (All Spans)

Member Length : 25' 1 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.89 was calculated for positive bending using length L = 23' 10".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.25"	9.25"	4.22"	3717	20272	23989	Blocking
2 - Column - DF	9.25"	9.25"	4.22"	3721	20299	24020	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	25' 2" o/c	
Bottom Edge (Lu)	25' 2" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 25' 1 1/2"	N/A	41.5	--	
1 - Point (lb)	12' 7" (Top)	N/A	2368	15069	Linked from: B06, Support 1
2 - Point (lb)	4 3/4" (Top)	N/A	2014	12751	Linked from: B05/ B07, Support 1
3 - Point (lb)	24' 9 1/4" (Top)	N/A	2014	12751	Linked from: B05/ B07, Support 1

• Side loads are assumed to not induce cross-grain tension.

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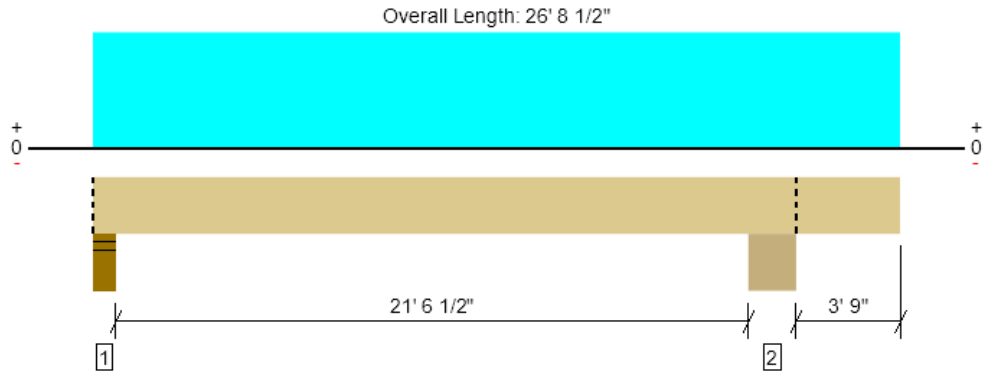
1 piece(s) 8 3/4" x 19 1/2" 24F-V4 DF Glulam



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	19218 @ 4"	30078 (5.50")	Passed (64%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	16118 @ 20' 4 1/2"	34665	Passed (46%)	1.15	1.0 D + 1.0 S (Alt Spans)
Pos Moment (Ft-lbs)	101070 @ 11' 2 1/8"	114801	Passed (88%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-15379 @ 22' 5 3/4"	98314	Passed (16%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.782 @ 11' 4 1/16"	1.107	Passed (L/340)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.908 @ 11' 3 7/8"	1.476	Passed (L/293)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 26' 8 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Upward deflection on right cantilever exceeds overhang deflection criteria.
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.90 was calculated for positive bending using length L = 21' 8 3/16".
- Volume factor of 1.00 was calculated for negative bending using length L = 5' 7/16".
- Upward deflection on right cantilever exceeds 0.4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Stud wall - DF	5.50"	5.50"	3.51"	2748	16470	19218	Blocking
2 - Column - DF	11.50"	11.50"	4.75"	3922	23088	27010	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	26' 9" o/c	
Bottom Edge (Lu)	26' 9" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 26' 8 1/2"	N/A	41.5	--	
1 - Uniform (PSF)	0 to 26' 8 1/2" (Top)	12' 3"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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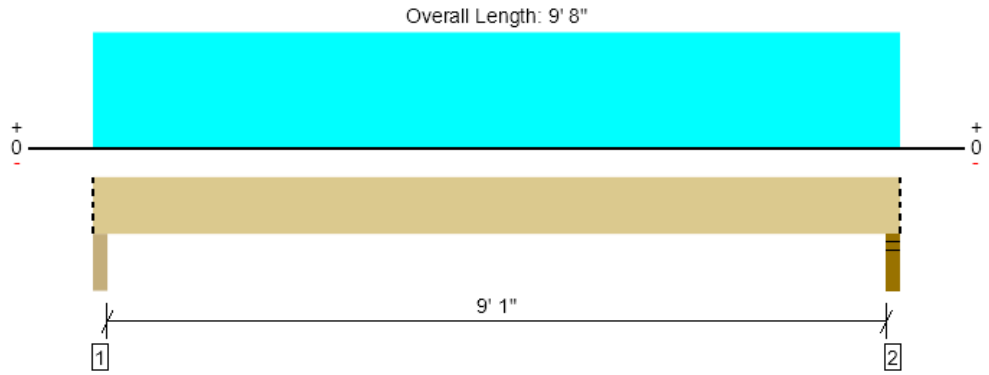
1 piece(s) 1 3/4" x 9 1/2" 2.0E Microllam® LVL



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3003 @ 9' 6"	3828 (3.50")	Passed (78%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2330 @ 1' 1"	3633	Passed (64%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	6766 @ 4' 10"	6771	Passed (100%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.409 @ 4' 10"	0.467	Passed (L/274)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.471 @ 4' 10"	0.622	Passed (L/238)	--	1.0 D + 1.0 S (All Spans)

Member Length : 9' 8"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Column - DF	3.50"	3.50"	2.29"	393	2610	3003	Blocking
2 - Stud wall - DF	3.50"	3.50"	2.75"	393	2610	3003	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	6" o/c	
Bottom Edge (Lu)	9' 8" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 9' 8"	N/A	4.8	--	
1 - Uniform (PSF)	0 to 9' 8" (Top)	3' 6"	17.0	120.0	Default Load
2 - Uniform (PSF)	0 to 9' 8" (Front)	1'	17.0	120.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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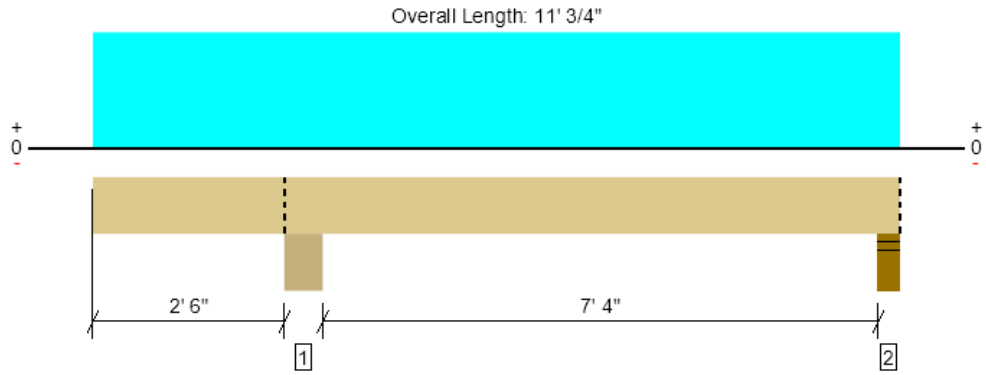
1 piece(s) 6 3/4" x 7 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	6290 @ 2' 10 5/8"	40584 (9.25")	Passed (15%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2950 @ 3' 10 3/4"	10285	Passed (29%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	5617 @ 7' 1 5/16"	14555	Passed (39%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-3568 @ 2' 10 5/8"	11219	Passed (32%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.124 @ 6' 10 13/16"	0.392	Passed (L/761)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.140 @ 6' 10 15/16"	0.523	Passed (L/675)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 11' 3/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 7' 2 7/8".
- Volume factor of 1.00 was calculated for negative bending using length L = 3' 11 3/8".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.25"	9.25"	1.50"	860	5430	6290	Blocking
2 - Stud wall - DF	5.50"	5.50"	1.50"	436	2952	3389	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	11' 1" o/c	
Bottom Edge (Lu)	11' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 11' 3/4"	N/A	12.3	--	
1 - Uniform (PSF)	0 to 11' 3/4" (Top)	6' 2"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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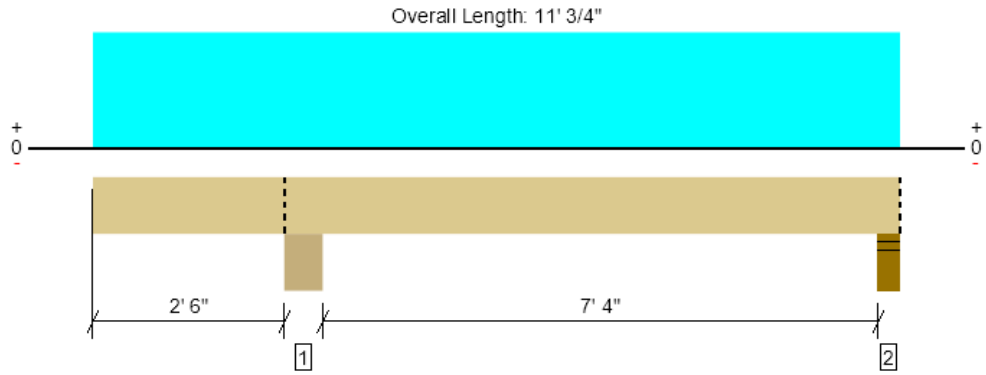
1 piece(s) 6 3/4" x 7 1/2" 24F-V4 DF Glulam



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	6845 @ 2' 10 5/8"	40584 (9.25")	Passed (17%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	3211 @ 3' 10 3/4"	10285	Passed (31%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	6113 @ 7' 1 5/16"	14555	Passed (42%)	1.15	1.0 D + 1.0 S (Alt Spans)
Neg Moment (Ft-lbs)	-3883 @ 2' 10 5/8"	11219	Passed (35%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.135 @ 6' 10 13/16"	0.392	Passed (L/698)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.152 @ 6' 10 15/16"	0.523	Passed (L/620)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 11' 3/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 7' 2 7/8".
- Volume factor of 1.00 was calculated for negative bending using length L = 3' 11 3/8".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.25"	9.25"	1.56"	928	5916	6845	Blocking
2 - Stud wall - DF	5.50"	5.50"	1.50"	471	3217	3688	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	11' 1" o/c	
Bottom Edge (Lu)	11' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 11' 3/4"	N/A	12.3	--	
1 - Uniform (PSF)	0 to 11' 3/4" (Top)	6' 8 5/8"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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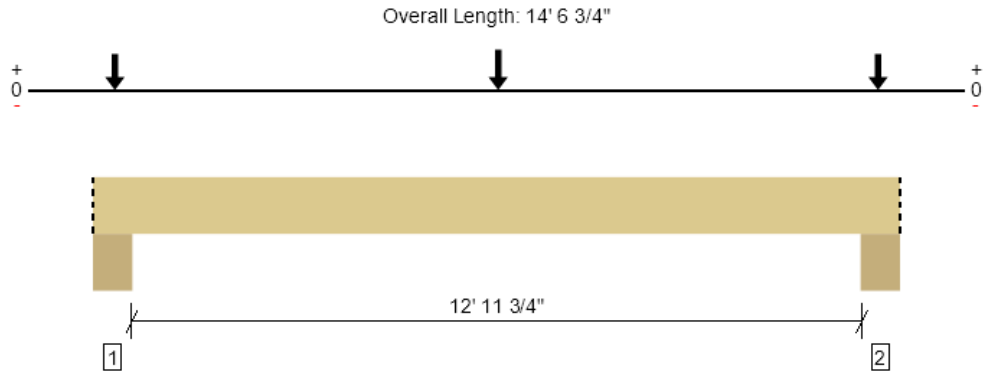
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

1 piece(s) 8 3/4" x 9" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	9868 @ 13' 10 3/4"	54031 (9.50")	Passed (18%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	3548 @ 13' 1/4"	15999	Passed (22%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	23053 @ 7' 3 3/4"	27169	Passed (85%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.515 @ 7' 3 7/16"	0.661	Passed (L/308)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.610 @ 7' 3 7/16"	0.882	Passed (L/260)	--	1.0 D + 1.0 S (All Spans)

Member Length : 14' 6 3/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 13' 2 3/4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	9.50"	9.50"	1.73"	1461	8374	9835	Blocking
2 - Column - DF	9.50"	9.50"	1.73"	1466	8402	9868	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	14' 7" o/c	
Bottom Edge (Lu)	14' 7" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 14' 6 3/4"	N/A	19.1	--	
1 - Point (lb)	7' 3 3/4" (Top)	N/A	928	5916	Linked from: B13, Support 1
2 - Point (lb)	4 3/4" (Top)	N/A	860	5430	Linked from: B12/ B14, Support 1
3 - Point (lb)	14' 2" (Top)	N/A	860	5430	Linked from: B12/ B14, Support 1

• Side loads are assumed to not induce cross-grain tension.

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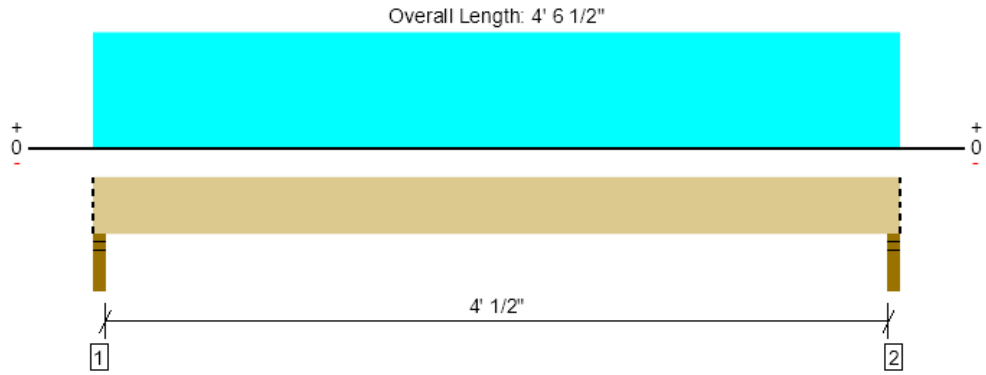
1 piece(s) 5 1/8" x 7 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	7604 @ 1 1/2"	9609 (3.00")	Passed (79%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	4674 @ 10 1/2"	7809	Passed (60%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	7710 @ 2' 3 1/4"	11051	Passed (70%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.069 @ 2' 3 1/4"	0.215	Passed (L/748)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.079 @ 2' 3 1/4"	0.286	Passed (L/653)	--	1.0 D + 1.0 S (All Spans)

Member Length : 4' 6 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 4' 3 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Stud wall - DF	3.00"	3.00"	2.37"	962	6642	7604	Blocking
2 - Stud wall - DF	3.00"	3.00"	2.37"	962	6642	7604	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 7" o/c	
Bottom Edge (Lu)	4' 7" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 4' 6 1/2"	N/A	9.3	--	
1 - Uniform (PSF)	0 to 4' 6 1/2" (Top)	24' 4 1/2"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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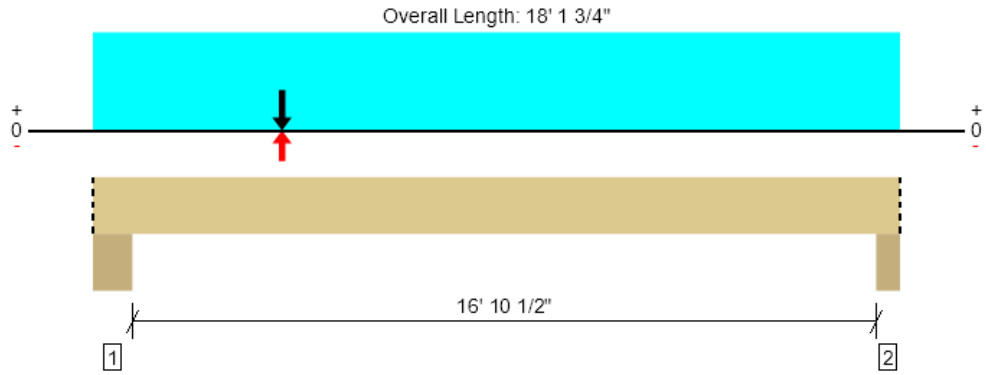
1 piece(s) 8 3/4" x 12" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	6883 @ 17' 9 1/2"	32703 (5.75")	Passed (21%)	--	1.0 D + 1.0 S (All Spans) [1]
Shear (lbs)	7353 @ 1' 9 1/2"	21333	Passed (34%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Pos Moment (Ft-lbs)	30944 @ 8' 5 1/2"	46728	Passed (66%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.642 @ 9' 3/16"	0.856	Passed (L/320)	--	1.0 D + 1.0 S (All Spans) [1]
Total Load Defl. (in)	0.730 @ 9' 5/8"	1.142	Passed (L/282)	--	1.0 D + 1.0 S (All Spans) [1]

Member Length : 18' 1 3/4"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.97 was calculated for positive bending using length L = 17' 1 1/2".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Column - DF	9.50"	9.50"	1.52"	911	7715	8626	Blocking
2 - Column - DF	5.75"	5.75"	1.50"	957	5926	6883	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	18' 2" o/c	
Bottom Edge (Lu)	18' 2" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 18' 1 3/4"	N/A	25.5	--	
1 - Uniform (PSF)	0 to 18' 1 3/4" (Top)	5'	17.0	120.0	Default Load
2 - Point (lb)	4' 3" (Top)	N/A	-138	2754/-1997	Linked from: GT3, Support 1

• Side loads are assumed to not induce cross-grain tension.

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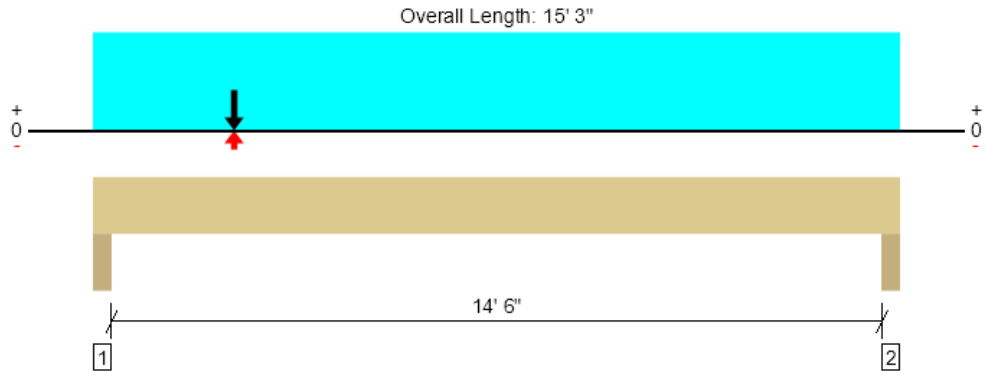
1 piece(s) 8 3/4" x 16 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	24178 @ 3"	25594 (4.50")	Passed (94%)	--	1.0 D + 1.0 S (All Spans) [1]
Shear (lbs)	20090 @ 1' 9"	29332	Passed (68%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Pos Moment (Ft-lbs)	73053 @ 7' 1 1/16"	86863	Passed (84%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.425 @ 7' 5 7/8"	0.492	Passed (L/417)	--	1.0 D + 1.0 S (All Spans) [1]
Total Load Defl. (in)	0.493 @ 7' 5 7/8"	0.738	Passed (L/359)	--	1.0 D + 1.0 S (All Spans) [1]

Member Length : 15' 3"
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.95 was calculated for positive bending using length L = 14' 9".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Trimmer - DF	4.50"	4.50"	4.25"	3375	20803	24178	None
2 - Trimmer - DF	4.50"	4.50"	3.35"	2627	16430	19057	None

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 15' 3"	N/A	35.1	--	
1 - Uniform (PSF)	0 to 15' 3"	16' 9 1/2"	17.0	120.0	Default Load
2 - Point (lb)	2' 8"	N/A	1113	6504/-565	Linked from: GT3, Support 2

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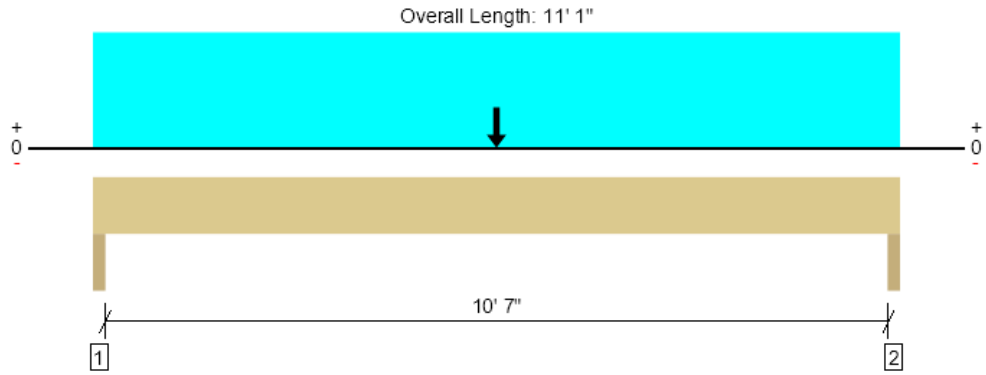
3 piece(s) 1 3/4" x 9 1/4" 2.0E Microllam® LVL



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	3061 @ 1 1/2"	11813 (3.00")	Passed (26%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2837 @ 1' 1/4"	10611	Passed (27%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	13211 @ 5' 6 1/2"	19327	Passed (68%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.320 @ 5' 6 1/2"	0.361	Passed (L/406)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.373 @ 5' 6 1/2"	0.542	Passed (L/348)	--	1.0 D + 1.0 S (All Spans)

Member Length : 11' 1"
System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Snow	Factored	Accessories
1 - Trimmer - DF	3.00"	3.00"	1.50"	455	2606	3061	None
2 - Trimmer - DF	3.00"	3.00"	1.50"	455	2606	3061	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	11' 1" o/c	
Bottom Edge (Lu)	11' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 11' 1"	N/A	14.2	--	
1 - Uniform (PSF)	0 to 11' 1"	1' 6"	17.0	120.0	Default Load
2 - Point (lb)	5' 6 1/2"	N/A	471	3217	Linked from: B13, Support 2

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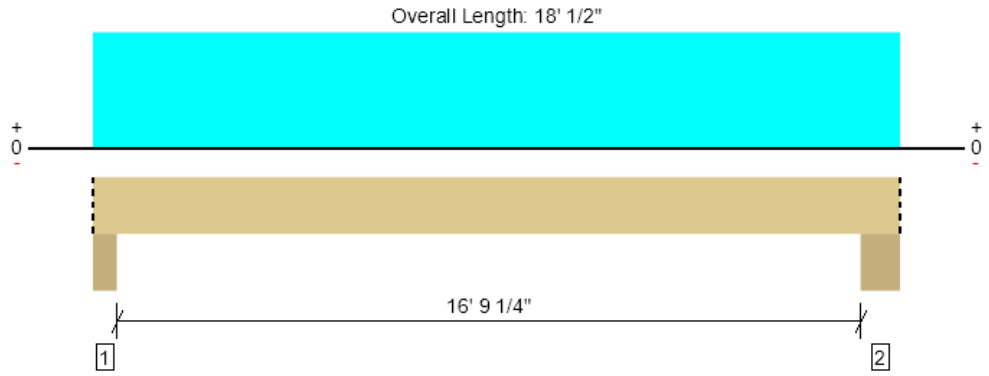

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal (typ.).

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	11792 @ 4 1/4"	32703 (5.75")	Passed (36%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	9658 @ 1' 7 1/4"	23999	Passed (40%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	48172 @ 8' 10 3/8"	58483	Passed (82%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.667 @ 8' 10 3/8"	0.851	Passed (L/306)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.778 @ 8' 10 3/8"	1.135	Passed (L/263)	--	1.0 D + 1.0 S (All Spans)

Member Length : 18' 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.96 was calculated for positive bending using length L = 17' 1/4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	5.75"	5.75"	2.07"	1686	10106	11792	Blocking
2 - Column - DF	9.50"	9.50"	2.15"	1746	10462	12207	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	18' 1" o/c	
Bottom Edge (Lu)	18' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 18' 1/2"	N/A	28.7	--	
1 - Uniform (PSF)	0 to 18' 1/2" (Top)	9' 6"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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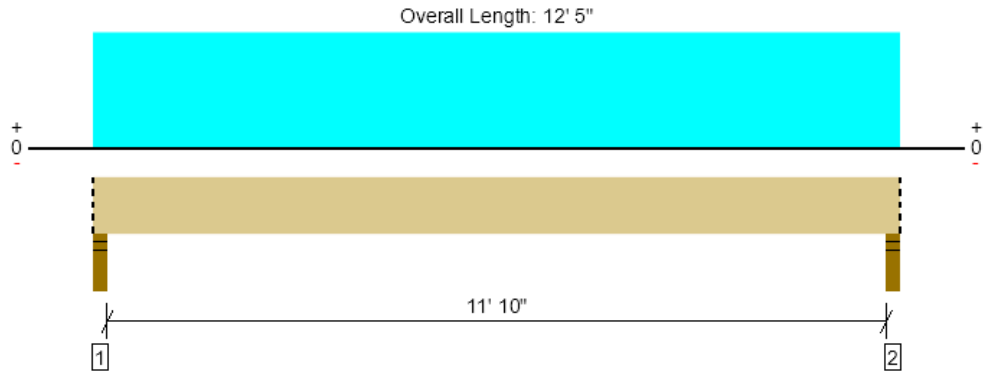

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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	10355 @ 2"	11211 (3.50")	Passed (92%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	7992 @ 1' 5"	14057	Passed (57%)	1.15	1.0 D + 1.0 S (All Spans)
Pos Moment (Ft-lbs)	30442 @ 6' 2 1/2"	35805	Passed (85%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.367 @ 6' 2 1/2"	0.604	Passed (L/395)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.423 @ 6' 2 1/2"	0.806	Passed (L/343)	--	1.0 D + 1.0 S (All Spans)

Member Length : 12' 5"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 1.00 was calculated for positive bending using length L = 12' 1".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Stud wall - DF	3.50"	3.50"	3.23"	1376	8979	10355	Blocking
2 - Stud wall - DF	3.50"	3.50"	3.23"	1376	8979	10355	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	12' 5" o/c	
Bottom Edge (Lu)	12' 5" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 12' 5"	N/A	16.8	--	
1 - Uniform (PSF)	0 to 12' 5" (Top)	12' 5/8"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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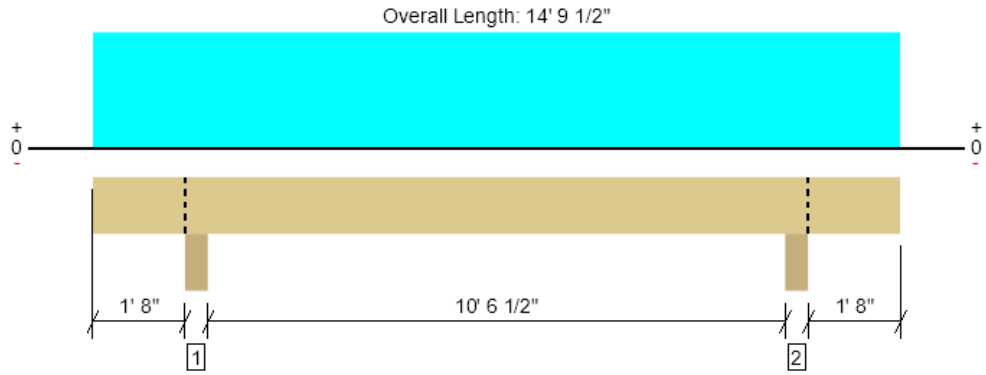
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

1 piece(s) 6 x 10 DF No.2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2996 @ 1' 10 3/4"	18906 (5.50")	Passed (16%)	--	1.0 D + 1.0 S (Adj Spans)
Shear (lbs)	1826 @ 2' 11"	6810	Passed (27%)	1.15	1.0 D + 1.0 S (Adj Spans)
Moment (Ft-lbs)	5655 @ 7' 4 3/4"	6937	Passed (82%)	1.15	1.0 D + 1.0 S (Alt Spans)
Live Load Defl. (in)	0.204 @ 7' 4 3/4"	0.550	Passed (L/648)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.238 @ 7' 4 3/4"	0.733	Passed (L/556)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 14' 9 1/2"
System : Roof
Member Type : Drop Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 0/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Lumber grading provisions must be extended over the length of the member per NDS 4.2.5.5.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Column - DF	5.50"	5.50"	1.50"	454	2542	2996	Blocking
2 - Column - DF	5.50"	5.50"	1.50"	454	2542	2996	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	14' 10" o/c	
Bottom Edge (Lu)	14' 10" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 14' 9 1/2"	N/A	13.2	--	
1 - Uniform (PSF)	0 to 14' 9 1/2" (Top)	2' 10"	17.0	120.0	Default Load

• Side loads are assumed to not induce cross-grain tension.

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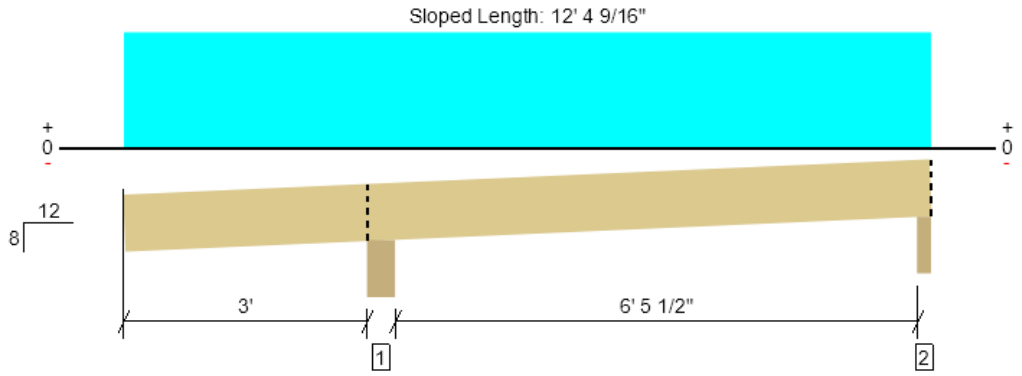
1 piece(s) 2 x 8 DF No.2 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	591 @ 10' 1 1/4"	3164 (3.38")	Passed (19%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	640 @ 4' 13/16"	1501	Passed (43%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-1008 @ 3' 3 3/8"	1564	Passed (64%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.173 @ 0	0.394	Passed (2L/548)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.183 @ 0	0.526	Passed (2L/518)	--	1.0 D + 1.0 S (Alt Spans)

Member Length : 12' 9 7/16"
System : Roof
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD
Member Pitch : 8/12

- Deflection criteria: LL (L/240) and TL (L/180).
- Overhang deflection criteria: LL (2L/240) and TL (2L/180).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Beveled Plate - DF	6.75"	6.75"	1.50"	204	1197	1401	Blocking
2 - Beveled Plate - DF	3.38"	3.38"	1.50"	77	514	591	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	12' 5" o/c	
Bottom Edge (Lu)	9' 9" o/c	

•Maximum allowable bracing intervals based on applied load.
•Dimensions for lateral bracing intervals are measured along the length of the member for sloped conditions.

Vertical Load	Location (Side)	Spacing	Dead (0.90)	Snow (1.15)	Comments
1 - Uniform (PSF)	0 to 10' 3 5/8"	16"	17.0	120.0	Default Load

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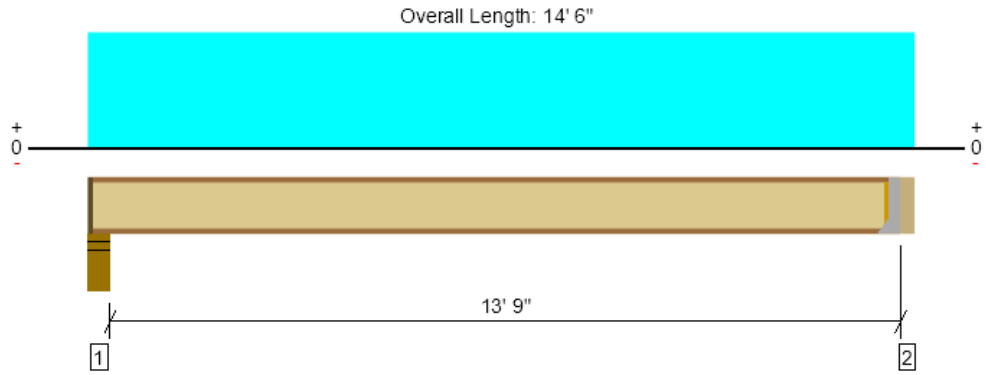
1 piece(s) 11 7/8" TJI® 110 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	719 @ 14' 2 1/2"	910 (1.75")	Passed (79%)	1.00	1.0 D + 1.0 L (All Spans)
Shear (lbs)	719 @ 14' 2 1/2"	1560	Passed (46%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	2488 @ 7' 3 1/2"	3160	Passed (79%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.220 @ 7' 3 1/2"	0.346	Passed (L/754)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.286 @ 7' 3 1/2"	0.692	Passed (L/580)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	43	40	Passed	--	--

Member Length : 14' 1 1/4"
System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

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

Supports	Bearing Length			Loads to Supports (lbs)			Accessories	Details
	Total	Available	Required	Dead	Floor Live	Factored		
1 - Stud wall - DF	5.50"	4.25"	1.75"	175	583	758	1 1/4" Rim Board	A3
2 - Hanger on 11 7/8" DF beam	3.50"	Hanger[1]	1.75" / - [2]	173	577	750	See note [1]	--

- Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- [1] See Connector grid below for additional information and/or requirements.
- [2] Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 6" o/c	
Bottom Edge (Lu)	14' 1" o/c	

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

Connector: Simpson Strong-Tie

Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
2 - Face Mount Hanger	MIU1.81/9	2.50"	N/A	16-10dx1.5	2-10dx1.5	Web Stiffeners

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

Vertical Load	Location	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 to 14' 6"	24"	12.0	40.0	Default Load

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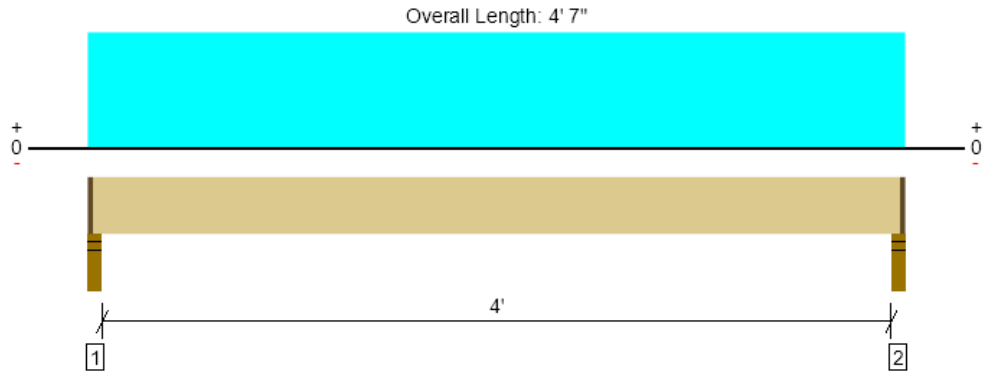
1 piece(s) 4 x 10 DF No.2



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1359 @ 2"	4922 (2.25")	Passed (28%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	764 @ 1' 3/4"	3885	Passed (20%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1403 @ 2' 3 1/2"	4492	Passed (31%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.009 @ 2' 3 1/2"	0.106	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.012 @ 2' 3 1/2"	0.213	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 4' 4 1/2"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Stud wall - DF	3.50"	2.25"	1.50"	342	1081	1423	1 1/4" Rim Board
2 - Stud wall - DF	3.50"	2.25"	1.50"	342	1081	1423	1 1/4" Rim Board

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 5" o/c	
Bottom Edge (Lu)	4' 5" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	1 1/4" to 4' 5 3/4"	N/A	8.2	--	
1 - Uniform (PSF)	0 to 4' 7" (Front)	6' 9"	12.0	40.0	Default Load
2 - Uniform (PSF)	0 to 4' 7" (Back)	5' 1/2"	12.0	40.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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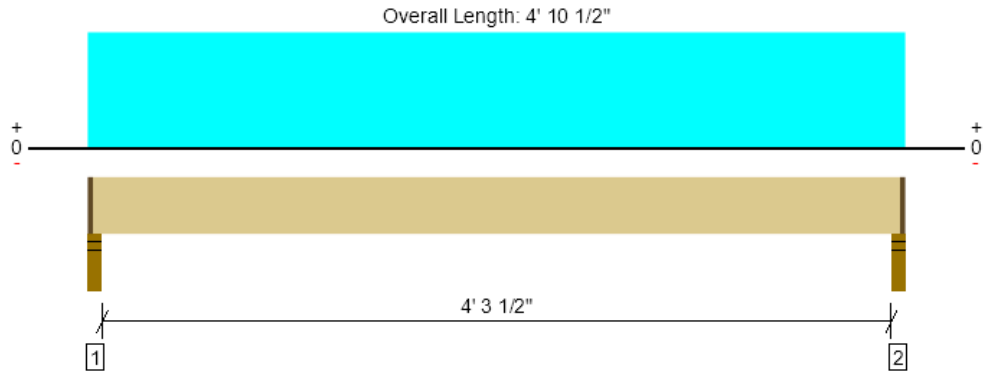
1 piece(s) 4 x 10 DF No.2



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1409 @ 2"	4922 (2.25")	Passed (29%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	831 @ 1' 3/4"	3885	Passed (21%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1557 @ 2' 5 1/4"	4492	Passed (35%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.012 @ 2' 5 1/4"	0.114	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.016 @ 2' 5 1/4"	0.227	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 4' 8"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			
	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Stud wall - DF	3.50"	2.25"	1.50"	354	1117	1471	1 1/4" Rim Board
2 - Stud wall - DF	3.50"	2.25"	1.50"	354	1117	1471	1 1/4" Rim Board

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 8" o/c	
Bottom Edge (Lu)	4' 8" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	1 1/4" to 4' 9 1/4"	N/A	8.2	--	
1 - Uniform (PSF)	0 to 4' 10 1/2" (Front)	6' 5"	12.0	40.0	Default Load
2 - Uniform (PSF)	0 to 4' 10 1/2" (Back)	5' 1/2"	12.0	40.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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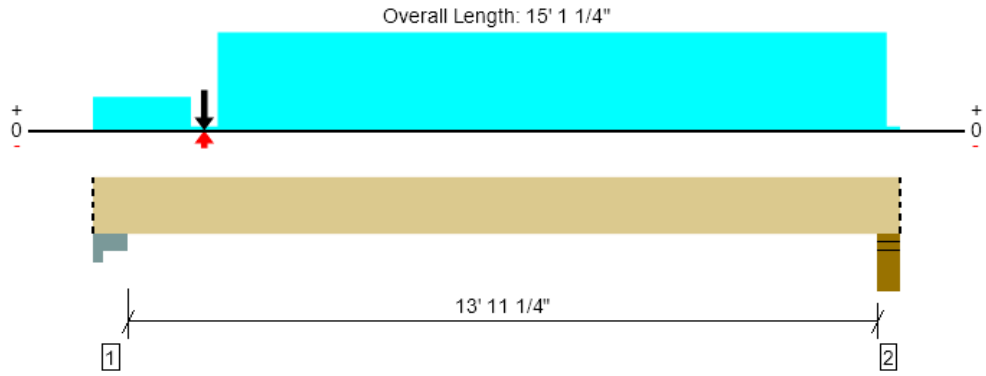
1 piece(s) 8 3/4" x 19 1/2" 24F-V4 DF Glulam



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	24634 @ 14' 9 1/4"	30078 (5.50")	Passed (82%)	--	1.0 D + 1.0 S (All Spans) [1]
Shear (lbs)	32247 @ 2' 4"	34665	Passed (93%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Pos Moment (Ft-lbs)	93318 @ 7' 1 3/16"	119776	Passed (78%)	1.15	1.0 D + 1.0 S (All Spans) [1]
Live Load Defl. (in)	0.300 @ 7' 6 3/16"	0.355	Passed (L/567)	--	1.0 D + 1.0 S (All Spans) [1]
Total Load Defl. (in)	0.354 @ 7' 6 1/4"	0.709	Passed (L/480)	--	1.0 D + 1.0 S (All Spans) [1]

Member Length : 15' 1 1/4"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Volume factor of 0.94 was calculated for positive bending using length L = 14' 2 1/4".
- The effects of positive or negative camber have not been accounted for when calculating deflection.
- The specified glulam is assumed to have its strong laminations at the bottom of the beam. Install with proper side up as indicated by the manufacturer.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Factored	
1 - Column Cap - steel	8.50"	8.50"	6.55"	5502	3440	31780	37281	Blocking
2 - Stud wall - DF	5.50"	5.50"	4.50"	3836	2077	20798	24634	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	15' 1" o/c	
Bottom Edge (Lu)	15' 1" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 15' 1 1/4"	N/A	41.5	--	--	
1 - Uniform (PSF)	2' 4" to 14' 10 1/4" (Front)	6' 6"	12.0	40.0	--	Default Load
2 - Uniform (PSF)	0 to 1' 10" (Top)	7' 6"	17.0	--	120.0	Snow
3 - Uniform (PSF)	2' 4" to 14' 10 1/4" (Top)	21' 3 1/4"	17.0	--	120.0	Snow
4 - Uniform (PSF)	0 to 15' 1 1/4" (Front)	1'	17.0	--	120.0	Snow
5 - Point (lb)	2' 1" (Top)	N/A	2717	2262/-214	17157	Linked from: GT2, Support 2

• Side loads are assumed to not induce cross-grain tension.

Weyerhaeuser Notes

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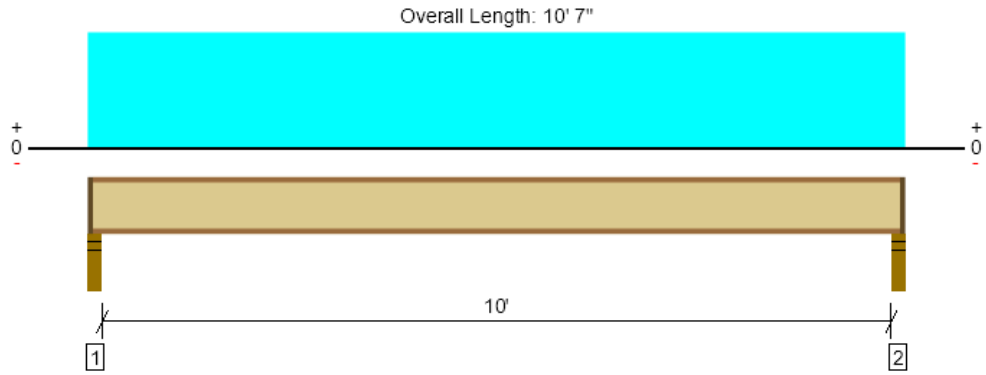
1 piece(s) 9 1/2" TJI® 110 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	540 @ 2 1/2"	1041 (2.25")	Passed (52%)	1.00	1.0 D + 1.0 L (All Spans)
Shear (lbs)	520 @ 3 1/2"	1220	Passed (43%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1344 @ 5' 3 1/2"	2500	Passed (54%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.113 @ 5' 3 1/2"	0.254	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.147 @ 5' 3 1/2"	0.508	Passed (L/827)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	48	40	Passed	--	--

Member Length : 10' 4 1/2"
System : Floor
Member Type : Joist
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.
- Additional considerations for the TJ-Pro™ Rating include: None.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories	Details
	Total	Available	Required	Dead	Floor Live	Factored		
1 - Stud wall - DF	3.50"	2.25"	1.75"	127	423	550	1 1/4" Rim Board	A3
2 - Stud wall - DF	3.50"	2.25"	1.75"	127	423	550	1 1/4" Rim Board	A3

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 3" o/c	
Bottom Edge (Lu)	10' 5" o/c	

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

Vertical Load	Location	Spacing	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 to 10' 7"	24"	12.0	40.0	Default Load

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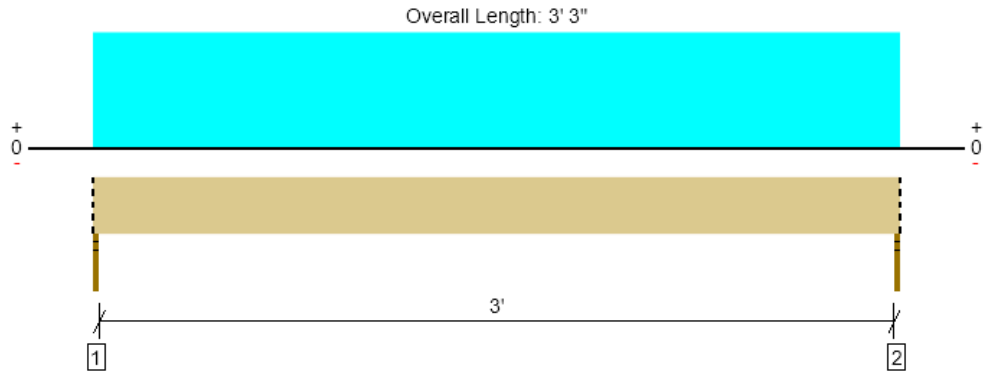
1 piece(s) 4 x 10 DF No.2



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1711 @ 0	3281 (1.50")	Passed (52%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	768 @ 10 3/4"	3885	Passed (20%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	1390 @ 1' 7 1/2"	4492	Passed (31%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.005 @ 1' 7 1/2"	0.081	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.007 @ 1' 7 1/2"	0.162	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)

Member Length : 3' 3"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Factored	
1 - Stud wall - DF	1.50"	1.50"	1.50"	405	1306	1711	Blocking
2 - Stud wall - DF	1.50"	1.50"	1.50"	405	1306	1711	Blocking

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

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

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 3' 3"	N/A	8.2	--	
1 - Uniform (PSF)	0 to 3' 3" (Front)	8' 8 1/2"	12.0	40.0	Default Load
2 - Uniform (PSF)	0 to 3' 3" (Top)	11' 4 1/2"	12.0	40.0	Default Load

- Side loads are assumed to not induce cross-grain tension.

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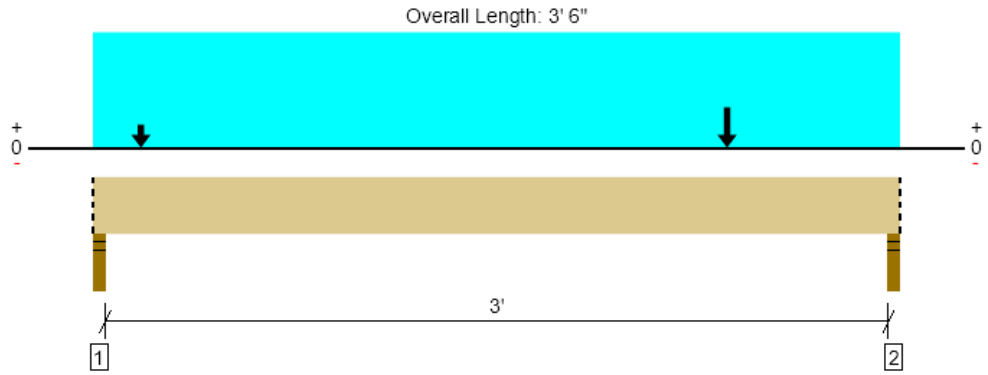
1 piece(s) 4 x 10 DF No.2



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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	5404 @ 3' 4 1/2"	6563 (3.00")	Passed (82%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	3400 @ 2' 5 3/4"	4468	Passed (76%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	3290 @ 2' 9"	5166	Passed (64%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.011 @ 1' 10 3/16"	0.081	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.014 @ 1' 10 3/16"	0.162	Passed (L/999+)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

Member Length : 3' 6"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2018
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Factored	
1 - Stud wall - DF	3.00"	3.00"	1.71"	771	1586	2386	3749	Blocking
2 - Stud wall - DF	3.00"	3.00"	2.47"	980	1563	4336	5404	Blocking

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

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 6" o/c	
Bottom Edge (Lu)	3' 6" o/c	

•Maximum allowable bracing intervals based on applied load.

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 to 3' 6"	N/A	8.2	--	--	
1 - Uniform (PSF)	0 to 3' 6" (Front)	9' 1"	12.0	40.0	--	Default Load
2 - Point (lb)	2 1/2" (Top)	N/A	381	729	1354	Linked from: HDR@GT1(2), Support 1
3 - Point (lb)	2' 9" (Top)	N/A	959	1148	5368	Linked from: HDR@GT1(2), Support 2

• Side loads are assumed to not induce cross-grain tension.

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Floor 2 (1)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		9	6.67		3

Loading

	Roof							Comb Total
	Dead: 17 Snow: 120							*3,042.0 plf*
Span	38							**Total**
Dead	*374.0 plf*							*402.0 plf*
Live								*0.0 plf*
Snow	*2,640.0 plf*							*2,640.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	4337plf
			Size:	42 x 10 in Cont. Footing W/4 #4 Rebar Cont.

Openings

Opening Size	2.5 ft	3.0 ft						

	Header Callout	(2)2x10 DF-L No. 2	(2)2x12 DF-L No. 2						
Stress	Max Ratio	0.99	0.98						
		Pass	Pass						
Deflection	Δ_{TL}	0.01 in	0.01 in						
		L/3,552	L/3,698						
	Δ_{LL}	0.01 in	0.01 in						
		L/4,093	L/4,261						
		Pass	Pass						

	Trimmers	(2) 2x6 DF-L No. 2	(2) 2x6 DF-L No. 2						
	Bearing Area	2.03 in	2.43 in						
Bend.	M/S	101 psi	101 psi						
		Pass	Pass						
Comp.	P/A	461 psi	553 psi						
		Pass	Pass						
Def.	Δ_{TL}	0.03 in	0.03 in						
		L/3,974	L/3,974						
		Pass	Pass						

	King Studs	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2						
Bend.	M/S	649 psi	727 psi						
		Pass	Pass						
Comp.	P/A	6 psi	6 psi						
		Pass	Pass						
Def.	Δ_{TL}	0.17 in	0.19 in						
		L/620	L/554						
		Pass	Pass						

Wind Check	Good	Good						
Lateral Bracing Hardware	Not Req'd	Not Req'd						
Reactions	3,802 lbs	4,563 lbs						
Req'd) **Pad Footing**	Not Req'd	Not Req'd						

Floor 1 (1)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	6.67		3

Loading

	Roof	Deck Cover	Upper Floor					Comb Total
	Dead: 17 Snow: 120	Dead: 17 Snow: 120	Dead: 12 Live: 40					*4,558.8 plf*
Span	38	10.75	13.75					**Total**
Dead	*374.0 plf*	*142.4 plf*	*82.5 plf*					*638.8 plf*
Live			*275.0 plf*					*275.0 plf*
Snow	*2,640.0 plf*	*1,005.0 plf*						*3,645.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 12 O.C.	Continuous Footing	Additional Footing Load:	4406plf
			Size:	42 x 10 in Cont. Footing W/4 #4 Rebar Cont.

Openings

Opening Size		**2.5 ft**							
Header Callout		(3)7.25 LVL 2.0E							
Stress	Max Ratio	0.69							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/2,497							
	Δ_{LL}	0.01 in							
		L/2,903							
		Pass							
Trimmers		(2) 2x6 DF-L No. 2							
Bearing Area		1.74 in							
Bend.	M/S	94 psi							
		Pass							
Comp.	P/A	345 psi							
		Pass							
Def.	Δ_{TL}	0.03 in							
		L/3,829							
		Pass							
King Studs		(1) 2x6 DF-L No. 2							
Bend.	M/S	742 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.24 in							
		L/486							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		5,699 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (2)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	6.67		3

Loading

	Roof	Deck Cover	Upper Floor					Comb Total
	Dead: 17 Snow: 120	Dead: 17 Snow: 120	Dead: 12 Live: 40					*4,558.8 plf*
Span	38	10.75	13.75					**Total**
Dead	*374.0 plf*	*142.4 plf*	*82.5 plf*					*638.8 plf*
Live			*275.0 plf*					*275.0 plf*
Snow	*2,640.0 plf*	*1,005.0 plf*						*3,645.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x10 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	4406plf
			Size:	42 x 10 in Cont. Footing W/4 #4 Rebar Cont.

Openings

Opening Size		**12.6 ft**							
Header Callout		8.75x18 DF/DF 24F - V4							
Stress	Max Ratio	0.90							
		Pass							
Deflection	Δ_{TL}	0.33 in							
		L/462							
	Δ_{LL}	0.28 in							
		L/538							
		Pass							
Trimmers		(4) 2x10 DF-L No. 2							
Bearing Area		5.24 in							
Bend.	M/S	44 psi							
		Pass							
Comp.	P/A	517 psi							
		Pass							
Def.	Δ_{TL}	0.01 in							
		L/13,663							
		Pass							
King Studs		(1) 2x10 DF-L No. 2							
Bend.	M/S	968 psi							
		Pass							
Comp.	P/A	4 psi							
		Pass							
Def.	Δ_{TL}	0.19 in							
		L/627							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		28,675 lbs							
Req'd)	**Pad Footing**	60 x 60 x 10 in Pad Footing							
		W/(6)#4							

Floor 1 (3)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	6.67		3

Loading

	Roof	Upper Floor						Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40						*3,468.9 plf*
Span	38	15.96						**Total**
Dead	*374.0 plf*	*95.8 plf*						*509.7 plf*
Live		*319.2 plf*						*319.2 plf*
Snow	*2,640.0 plf*							*2,640.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	3619plf
			Size:	36 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size		**2.0 ft**							
Header Callout		(2)2x8 DF-L No. 2							
Stress	Max Ratio	0.99							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/3,418							
	Δ_{LL}	0.01 in							
		L/4,006							
		Pass							
Trimmers		(2) 2x6 DF-L No. 2							
Bearing Area		1.59 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	420 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
King Studs		(1) 2x6 DF-L No. 2							
Bend.	M/S	710 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.23 in							
		L/508							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		3,469 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (4)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	6.67		1.5

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					588.0 plf
Span	2	0	0					Total
Dead	42.5 plf	0.0 plf	25.5 plf					108.0 plf
Live		0.0 plf						0.0 plf
Snow	300.0 plf		180.0 plf					480.0 plf

Load from Above	Calc					

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	860plf
			Size:	12 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size	3.0 ft	3.5 ft	7.2 ft	7.3 ft	8.1 ft			
Header Callout	(2)2x6 DF-L No. 2	(2)2x6 DF-L No. 2	(2)2x10 DF-L No. 2	(2)2x10 DF-L No. 2	(3)7.25 LVL 2.0E			
Stress: Max Ratio	0.39	0.53	0.95	0.97	0.32			
	Pass	Pass	Pass	Pass	Pass			
Deflection: Δ_{TL}	0.02 in	0.03 in	0.11 in	0.12 in	0.17 in			
	L/2,236	L/1,408	L/780	L/754	L/569			
Δ_{LL}	0.01 in	0.02 in	0.09 in	0.09 in	0.14 in			
	L/2,739	L/1,725	L/955	L/923	L/697			
	Pass	Pass	Pass	Pass	Pass			
Trimmers	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2			
Bearing Area	0.47 in	0.55 in	1.12 in	1.14 in	0.73 in			
Bend.: M/S	126 psi	126 psi	126 psi	126 psi	126 psi			
	Pass	Pass	Pass	Pass	Pass			
Comp.: P/A	107 psi	125 psi	255 psi	258 psi	289 psi			
	Pass	Pass	Pass	Pass	Pass			
Def.: Δ_{TL}	0.04 in	0.04 in	0.04 in	0.04 in	0.04 in			
	L/2,872	L/2,872	L/2,872	L/2,872	L/2,872			
	Pass	Pass	Pass	Pass	Pass			
King Studs	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(2) 2x6 DF-L No. 2			
Bend.: M/S	902 psi	998 psi	1700 psi	1716 psi	940 psi			
	Pass	Pass	Pass	Pass	Pass			
Comp.: P/A	6 psi	6 psi	6 psi	6 psi	3 psi			
	Pass	Pass	Pass	Pass	Pass			
Def.: Δ_{TL}	0.29 in	0.32 in	0.55 in	0.56 in	0.30 in			
	L/400	L/362	L/212	L/210	L/384			
	Pass	Pass	Pass	Pass	Pass			
Wind Check	Good	Good	Good	Good	Good			
Lateral Bracing Hardware	Not Req'd	Not Req'd	Not Req'd	Not Req'd	Not Req'd			
Reactions	882 lbs	1,029 lbs	2,107 lbs	2,131 lbs	2,381 lbs			
Req'd): Pad Footing	Not Req'd	Not Req'd	Not Req'd	Not Req'd	Not Req'd			

Floor 1 (5)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	6.67		0

Loading

	Upper Floor	Upper Floor	Deck Cover					Comb Total
	Dead: 12 Live: 40	Dead: 12 Live: 40	Dead: 17 Snow: 120					659.6 plf
Span	23.834	0	0					Total
Dead	143.0 plf	0.0 plf	0.0 plf					183.0 plf
Live	476.7 plf	0.0 plf						476.7 plf
Snow			0.0 plf					0.0 plf

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	1186plf
			Size:	12 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size	2.5 ft							

	Header Callout	(2)2x6 DF-L No. 2							
Stress	Max Ratio	0.36							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/3,444							
	Δ_{LL}	0.01 in							
		L/4,765							
		Pass							
	Trimmers	(1) 2x6 DF-L No. 2							
	Bearing Area	0.44 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	100 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
	King Studs	(1) 2x6 DF-L No. 2							
Bend.	M/S	806 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.26 in							
		L/448							
		Pass							
	Wind Check	Good							
	Lateral Bracing Hardware	Not Req'd							
	Reactions	825 lbs							
Req'd)	Pad Footing	Not Req'd							

Floor 1 (6)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	6.67		0

Loading

	Upper Floor	Upper Floor	Deck Cover					Comb Total
	Dead: 12 Live: 40	Dead: 12 Live: 40	Dead: 17 Snow: 120					659.6 plf
Span	23.834	0	0					Total
Dead	143.0 plf	0.0 plf	0.0 plf					183.0 plf
Live	476.7 plf	0.0 plf						476.7 plf
Snow			0.0 plf					0.0 plf

Load from Above	Calc						

Size

Stud Wall	2x4 DF-L No. 2@ 12 O.C.	Continuous Footing	Additional Footing Load:	1194plf
			Size:	12 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size	2.5 ft							

	Header Callout	(2)2x6 DF-L No. 2							
Stress	Max Ratio	0.36							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/3,444							
	Δ_{LL}	0.01 in							
		L/4,765							
		Pass							

	Trimmers	(1) 2x4 DF-L No. 2							
	Bearing Area	0.44 in							
Bend.	M/S	94 psi							
		Pass							
Comp.	P/A	100 psi							
		Pass							
Def.	Δ_{TL}	0.03 in							
		L/3,829							
		Pass							

	King Studs	(1) 2x4 DF-L No. 2							
Bend.	M/S	742 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.24 in							
		L/486							
		Pass							

Wind Check	Good							
Lateral Bracing Hardware	Not Req'd							
Reactions	825 lbs							
Pad Footing (Req'd)	Not Req'd							

Floor 1 (7)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	6.67		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*1,878.5 plf*
Span	22.46	1	0					**Total**
Dead	*207.9 plf*	*6.0 plf*	*17.0 plf*					*270.9 plf*
Live		*20.0 plf*						*20.0 plf*
Snow	*1,467.6 plf*		*120.0 plf*					*1,587.6 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load: 2071plf					
			Size: 18 x 8 in Cont. Footing W/2 #4 Rebar Cont.					

Openings

Opening Size	**3.0 ft**							

	Header Callout	(2)2x8 DF-L No. 2							
Stress	Max Ratio	0.94							
		Pass							
Deflection	Δ_{TL}	0.02 in							
		L/1,603							
	Δ_{LL}	0.02 in							
		L/1,873							
		Pass							
	Trimmers	(2) 2x6 DF-L No. 2							
	Bearing Area	1.50 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	342 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
	King Studs	(1) 2x6 DF-L No. 2							
Bend.	M/S	902 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.29 in							
		L/400							
		Pass							
	Wind Check	Good							
	Lateral Bracing Hardware	Not Req'd							
	Reactions	2,818 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (8)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	6.67		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,152.5 plf*
Span	26.46	1	0					**Total**
Dead	*241.9 plf*	*6.0 plf*	*17.0 plf*					*304.9 plf*
Live		*20.0 plf*						*20.0 plf*
Snow	*1,707.6 plf*		*120.0 plf*					*1,827.6 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load: 2345plf					
			Size:	24 x 8 in Cont. Footing W/2 #4 Rebar Cont.				

Openings

Opening Size	**6.0 ft**							

	Header Callout	(2)9.5 LVL 2.0E							
Stress	Max Ratio	0.89							
		Pass							
Deflection	Δ_{TL}	0.13 in							
		L/574							
	Δ_{LL}	0.11 in							
		L/668							
		Pass							
	Trimmers	(2) 2x6 DF-L No. 2							
	Bearing Area	2.95 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	391 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
	King Studs	(1) 2x6 DF-L No. 2							
Bend.	M/S	1477 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.48 in							
		L/244							
		Pass							
	Wind Check	Good							
	Lateral Bracing Hardware	Not Req'd							
	Reactions	6,457 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (9)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		14.58	12.25		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*439.0 plf*
Span	2	0	0					**Total**
Dead	*34.0 plf*	*0.0 plf*	*17.0 plf*					*79.0 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*240.0 plf*		*120.0 plf*					*360.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	775plf
			Size:	12 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size		**16.0 ft**							
Header Callout		(2)14 LVL 2.0E							
Stress	Max Ratio	0.57							
		Pass							
Deflection	Δ_{TL}	0.40 in							
		L/475							
	Δ_{LL}	0.33 in							
		L/579							
		Pass							
Trimmers		(2) 2x6 DF-L No. 2							
Bearing Area		1.61 in							
Bend.	M/S	272 psi							
		Pass							
Comp.	P/A	426 psi							
		Pass							
Def.	Δ_{TL}	0.19 in							
		L/905							
		Pass							
King Studs		(6) 2x6 DF-L No. 2							
Bend.	M/S	1221 psi							
		Pass							
Comp.	P/A	1 psi							
		Pass							
Def.	Δ_{TL}	0.86 in							
		L/201							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Add Hardware (1185 lbs)							
Reactions		3,512 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (10)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		15.334	11		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*463.0 plf*
Span	2	0	0					**Total**
Dead	*34.0 plf*	*0.0 plf*	*17.0 plf*					*103.0 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*240.0 plf*		*120.0 plf*					*360.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	784plf
			Size:	12 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size	3.0 ft	3.5 ft	6.5 ft					
Header Callout	(2)2x6 DF-L No. 2	(2)2x6 DF-L No. 2	(2)2x8 DF-L No. 2					
Stress	Max Ratio	0.31	0.42	0.91					
		Pass	Pass	Pass					
Deflection	Δ_{TL}	0.01 in	0.02 in	0.12 in					
		L/2,839	L/1,788	L/639					
	Δ_{LL}	0.01 in	0.02 in	0.09 in					
		L/3,652	L/2,300	L/822					
		Pass	Pass	Pass					
Trimmers	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2					
Bearing Area		0.37 in	0.43 in	0.80 in					
Bend.	M/S	301 psi	301 psi	301 psi					
		Pass	Pass	Pass					
Comp.	P/A	84 psi	98 psi	182 psi					
		Pass	Pass	Pass					
Def.	Δ_{TL}	0.23 in	0.23 in	0.23 in					
		L/776	L/776	L/776					
		Pass	Pass	Pass					
King Studs	(2) 2x6 DF-L No. 2	(2) 2x6 DF-L No. 2	(4) 2x6 DF-L No. 2					
Bend.	M/S	1080 psi	1194 psi	941 psi					
		Pass	Pass	Pass					
Comp.	P/A	3 psi	3 psi	2 psi					
		Pass	Pass	Pass					
Def.	Δ_{TL}	0.84 in	0.93 in	0.73 in					
		L/216	L/195	L/248					
		Pass	Pass	Pass					
Wind Check	Good	Good	Good					
Lateral Bracing Hardware	Not Req'd	Not Req'd	Not Req'd					
Reactions	695 lbs	810 lbs	1,505 lbs					
Req'd)	**Pad Footing**	Not Req'd	Not Req'd	Not Req'd					

Floor 1 (11)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	8		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,595.5 plf*
Span	33.54	0	0					**Total**
Dead	*302.1 plf*	*0.0 plf*	*17.0 plf*					*343.1 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*2,132.4 plf*		*120.0 plf*					*2,252.4 plf*

Load from Above	Calc					

Size

Stud Wall	2x10 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	2859plf
			Size:	30 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size		**14.5 ft**							
Header Callout		5.125x19.5 DF/DF 24F - V4							
Stress	Max Ratio	0.98							
		Pass							
Deflection	Δ_{TL}	0.44 in							
		L/395							
	Δ_{LL}	0.38 in							
		L/455							
		Pass							
Trimmers		(4) 2x10 DF-L No. 2							
Bearing Area		5.87 in							
Bend.	M/S	44 psi							
		Pass							
Comp.	P/A	452 psi							
		Pass							
Def.	Δ_{TL}	0.01 in							
		L/13,663							
		Pass							
King Studs		(1) 2x10 DF-L No. 2							
Bend.	M/S	1098 psi							
		Pass							
Comp.	P/A	4 psi							
		Pass							
Def.	Δ_{TL}	0.21 in							
		L/553							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		18,817 lbs							
Req'd)	**Pad Footing**	48 x 48 x 8 in Pad Footing							
		W/(4)#4							

Floor 1 (12)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	8		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*1,133.7 plf*
Span	12.2	0	0					**Total**
Dead	*120.7 plf*	*0.0 plf*	*17.0 plf*					*161.7 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*852.0 plf*		*120.0 plf*					*972.0 plf*

Load from Above	Calc					

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	1398plf
			Size:	16 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size		**6.0 ft**							
Header Callout		(3)2x10 DF-L No. 2							
Stress	Max Ratio	0.84							
		Pass							
Deflection	Δ_{TL}	0.07 in							
		L/1,034							
	Δ_{LL}	0.06 in							
		L/1,206							
		Pass							
Trimmers		(1) 2x6 DF-L No. 2							
Bearing Area		1.21 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	412 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
King Studs		(1) 2x6 DF-L No. 2							
Bend.	M/S	1477 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.48 in							
		L/244							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		3,401 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (13)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	8		0

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,044.8 plf*
Span	29.5	0	0					**Total**
Dead	*250.8 plf*	*0.0 plf*	*0.0 plf*					*274.8 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*1,770.0 plf*		*0.0 plf*					*1,770.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	2195plf
			Size:	24 x 8 in Cont. Footing W/2 #4 Rebar Cont.

Openings

Opening Size		**14.6 ft**							
Header Callout		5.125x18 DF/DF 24F - V4							
Stress	Max Ratio	0.90							
		Pass							
Deflection	Δ_{TL}	0.45 in							
		L/386							
	Δ_{LL}	0.39 in							
		L/446							
		Pass							
Trimmers		(4) 2x6 DF-L No. 2							
Bearing Area		4.66 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	603 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
King Studs		(2) 2x6 DF-L No. 2							
Bend.	M/S	1562 psi							
		Pass							
Comp.	P/A	3 psi							
		Pass							
Def.	Δ_{TL}	0.51 in							
		L/231							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		14,927 lbs							
Req'd)	**Pad Footing**	42 x 42 x 8 in Pad Footing							
		W/(4)#4							

Floor 1 (14)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	8		0

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,832.5 plf*
Span	41	0	0					**Total**
Dead	*348.5 plf*	*0.0 plf*	*0.0 plf*					*372.5 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*2,460.0 plf*		*0.0 plf*					*2,460.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	3039plf
			Size:	30 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size	3.0 ft	5.0 ft						

	Header Callout	(3)2x10 DF-L No. 2	(2)9.5 LVL 2.0E						
Stress	Max Ratio	0.74	0.97						
		Pass	Pass						
Deflection	Δ_{TL}	0.01 in	0.08 in						
		L/3,312	L/753						
	Δ_{LL}	0.01 in	0.07 in						
		L/3,813	L/867						
		Pass	Pass						

	Trimmers	(2) 2x6 DF-L No. 2	(3) 2x6 DF-L No. 2						
	Bearing Area	1.51 in	3.24 in						
Bend.	M/S	126 psi	126 psi						
		Pass	Pass						
Comp.	P/A	515 psi	429 psi						
		Pass	Pass						
Def.	Δ_{TL}	0.04 in	0.04 in						
		L/2,872	L/2,872						
		Pass	Pass						

	King Studs	(1) 2x6 DF-L No. 2	(1) 2x6 DF-L No. 2						
Bend.	M/S	902 psi	1285 psi						
		Pass	Pass						
Comp.	P/A	6 psi	6 psi						
		Pass	Pass						
Def.	Δ_{TL}	0.29 in	0.42 in						
		L/400	L/281						
		Pass	Pass						

Wind Check	Good	Good						
Lateral Bracing Hardware	Not Req'd	Not Req'd						
Reactions	4,249 lbs	7,081 lbs						
Req'd) **Pad Footing**	Not Req'd	Not Req'd						

Floor 1 (15)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	8		0

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					3,403.8 plf
Span	49.34	0	0					Total
Dead	419.4 plf	0.0 plf	0.0 plf					443.4 plf
Live		0.0 plf						0.0 plf
Snow	2,960.4 plf		0.0 plf					2,960.4 plf

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	3560plf
			Size:	36 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size								
Header Callout								
Stress	Max Ratio							
Deflection	Δ_{TL}							
	Δ_{LL}							
Trimmers								
Bearing Area								
Bend.	M/S							
Comp.	P/A							
Def.	Δ_{TL}							
King Studs								
Bend.	M/S							
Comp.	P/A							
Def.	Δ_{TL}							
Wind Check								
Lateral Bracing Hardware								
Reactions								
Req'd)	**Pad Footing**							

Floor 1 (16)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	8		3

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,193.4 plf*
Span	19.67	0	0					**Total**
Dead	*218.2 plf*	*0.0 plf*	*51.0 plf*					*293.2 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*1,540.2 plf*		*360.0 plf*					*1,900.2 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load: 2709plf				
			Size: 24 x 8 in Cont. Footing W/2 #4 Rebar Cont.				

Openings

Opening Size	2.5 ft							

	Header Callout	(2)2x8 DF-L No. 2							
Stress	Max Ratio	0.91							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/2,372							
	Δ_{LL}	0.01 in							
		L/2,738							
		Pass							
	Trimmers	(1) 2x6 DF-L No. 2							
	Bearing Area	1.46 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	332 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
	King Studs	(1) 2x6 DF-L No. 2							
Bend.	M/S	806 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.26 in							
		L/448							
		Pass							
	Wind Check	Good							
	Lateral Bracing Hardware	Not Req'd							
	Reactions	2,742 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (17)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	8		1

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*1,942.0 plf*
Span	24	0	0					**Total**
Dead	*221.0 plf*	*0.0 plf*	*17.0 plf*					*262.0 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*1,560.0 plf*		*120.0 plf*					*1,680.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing		Additional Footing Load:			2218plf	
				Size:	24 x 8 in Cont. Footing W/2 #4 Rebar Cont.			

Openings

Opening Size		**2.5 ft**							
Header Callout		(2)2x8 DF-L No. 2							
Stress	Max Ratio	0.81							
		Pass							
Deflection	Δ_{TL}	0.01 in							
		L/2,679							
	Δ_{LL}	0.01 in							
		L/3,097							
		Pass							
Trimmers		(1) 2x6 DF-L No. 2							
Bearing Area		1.29 in							
Bend.	M/S	126 psi							
		Pass							
Comp.	P/A	294 psi							
		Pass							
Def.	Δ_{TL}	0.04 in							
		L/2,872							
		Pass							
King Studs		(1) 2x6 DF-L No. 2							
Bend.	M/S	806 psi							
		Pass							
Comp.	P/A	6 psi							
		Pass							
Def.	Δ_{TL}	0.26 in							
		L/448							
		Pass							
Wind Check		Good							
Lateral Bracing Hardware		Not Req'd							
Reactions		2,428 lbs							
Req'd)	**Pad Footing**	Not Req'd							

Floor 1 (18)

Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
Y	Y		10	8		3

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,353.0 plf*
Span	22	0	0					**Total**
Dead	*238.0 plf*	*0.0 plf*	*51.0 plf*					*313.0 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*1,680.0 plf*		*360.0 plf*					*2,040.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	2869plf
			Size:	30 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size								
Header Callout								
Stress	Max Ratio							
Deflection	Δ_{TL}							
	Δ_{LL}							
Trimmers								
Bearing Area								
Bend.	M/S							
Comp.	P/A							
Def.	Δ_{TL}							
King Studs								
Bend.	M/S							
Comp.	P/A							
Def.	Δ_{TL}							
Wind Check								
Lateral Bracing Hardware								
Reactions								
Req'd)	**Pad Footing**							

Floor 1 (19)	Wall on Concrete	Ext Wall		Plate Height	Header Height		Overhang
	Y	Y		10	8		3

Loading

	Roof	Upper Floor	Deck Cover					Comb Total
	Dead: 17 Snow: 120	Dead: 12 Live: 40	Dead: 17 Snow: 120					*2,764.0 plf*
Span	28	0	0					**Total**
Dead	*289.0 plf*	*0.0 plf*	*51.0 plf*					*364.0 plf*
Live		*0.0 plf*						*0.0 plf*
Snow	*2,040.0 plf*		*360.0 plf*					*2,400.0 plf*

Load from Above	Calc						

Size

Stud Wall	2x6 DF-L No. 2@ 16 O.C.	Continuous Footing	Additional Footing Load:	3280plf
			Size:	30 x 10 in Cont. Footing W/3 #4 Rebar Cont.

Openings

Opening Size	3.0 ft	10.0 ft						

		Header Callout	(3)2x10 DF-L No. 2	(3)14 LVL 2.0E						
Stress		Max Ratio	0.72	0.86						
			Pass	Pass						
Deflection		Δ_{TL}	0.01 in	0.26 in						
			L/3,394	L/463						
		Δ_{LL}	0.01 in	0.22 in						
			L/3,908	L/534						
			Pass	Pass						

		Trimmers	(1) 2x6 DF-L No. 2	(3) 2x6 DF-L No. 2						
		Bearing Area	1.47 in	4.21 in						
Bend.		M/S	126 psi	126 psi						
			Pass	Pass						
Comp.		P/A	503 psi	558 psi						
			Pass	Pass						
Def.		Δ_{TL}	0.04 in	0.04 in						
			L/2,872	L/2,872						
			Pass	Pass						

		King Studs	(1) 2x6 DF-L No. 2	(2) 2x6 DF-L No. 2						
Bend.		M/S	902 psi	1122 psi						
			Pass	Pass						
Comp.		P/A	6 psi	3 psi						
			Pass	Pass						
Def.		Δ_{TL}	0.29 in	0.36 in						
			L/400	L/322						
			Pass	Pass						

Wind Check	Good	Good						
Lateral Bracing Hardware	Not Req'd	Not Req'd						

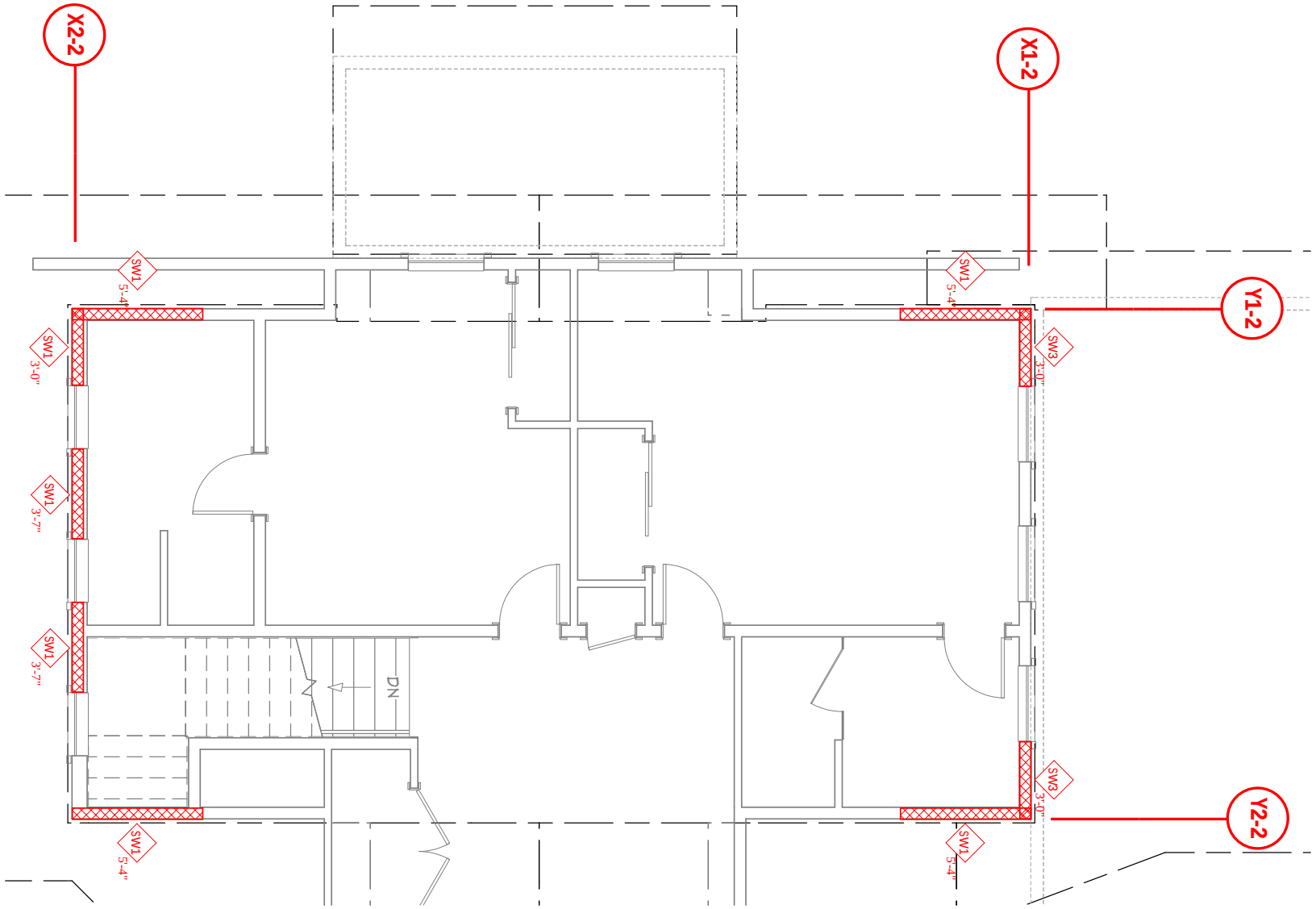
Reactions	4,146 lbs	13,820 lbs						

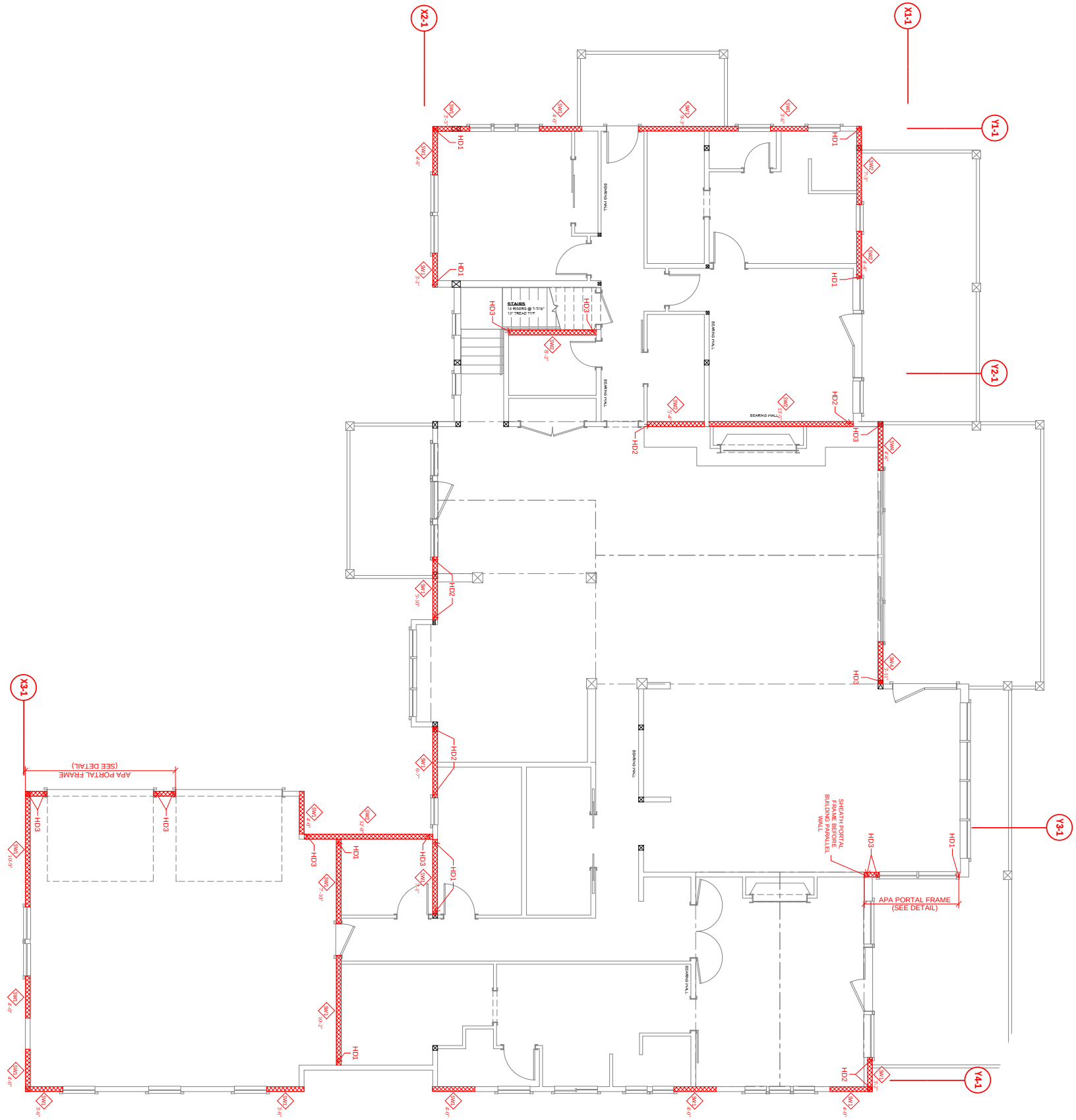
Req'd)	Pad Footing	Not Req'd	42 x 42 x 8 in Pad Footing						
			W/(4)#4						

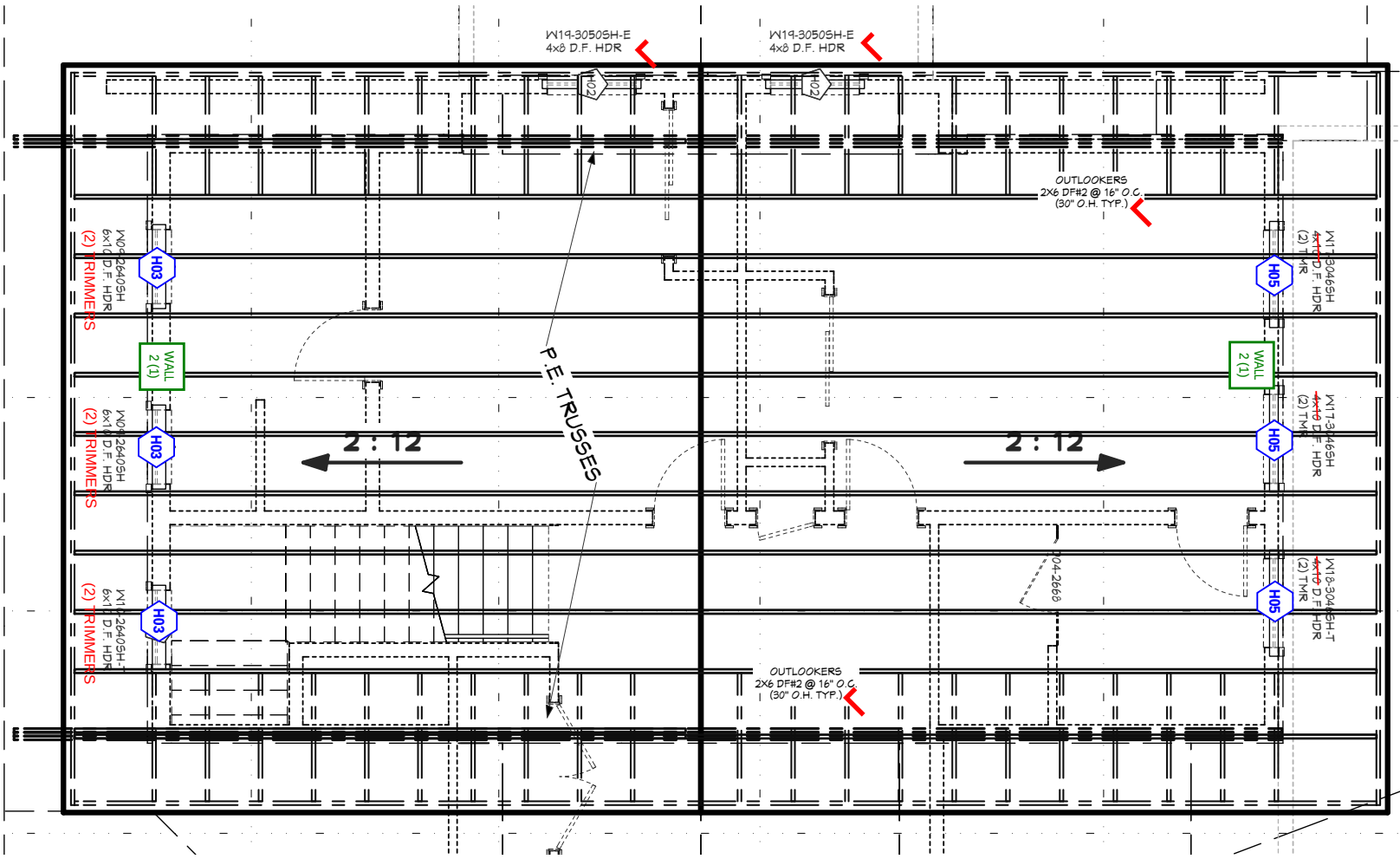
Pad Footing Design Capacities

Soil Bearing (1500 psf)			Min. Column Size
Dimensions (Inches)	Capacity	# of Bars	
168 x 168 x 20	238,000 lbs	21	17. sq.
156 x 156 x 18	208,000 lbs	19	17. sq.
144 x 144 x 18	178,000 lbs	18	16. sq.
132 x 132 x 16	152,000 lbs	14	15. sq.
120 x 120 x 16	126,000 lbs	12	12. sq.
108 x 108 x 14	104,000 lbs	14	12. sq.
102 x 102 x 14	92,000 lbs	14	9. sq.
96 x 96 x 14	76,400 lbs	13	6. sq.
90 x 90 x 12	73,800 lbs	11	10.5 sq.
84 x 84 x 12	63,200 lbs	10	7.5 sq.
78 x 78 x 12	55,000 lbs	9	6. sq.
72 x 72 x 12	47,000 lbs	8	6. sq.
66 x 66 x 10	39,750 lbs	6	6.5 sq.
60 x 60 x 10	33,250 lbs	6	5.5 sq.
54 x 54 x 10	27,000 lbs	5	5.5 sq.
48 x 48 x 8	21,500 lbs	4	5.5 sq.
42 x 42 x 8	16,500 lbs	4	3.5 sq.
36 x 36 x 8	12,000 lbs	4	3.5 sq.
30 x 30 x 8	8,350 lbs	3	3.5 sq.
24 x 24 x 8	5,300 lbs	2	3.5 sq.
18 x 18 x 8	2,900 lbs	2	3.5 sq.

Bars to be 3 1/2" from bottom of pad. Evenly space in both directions.

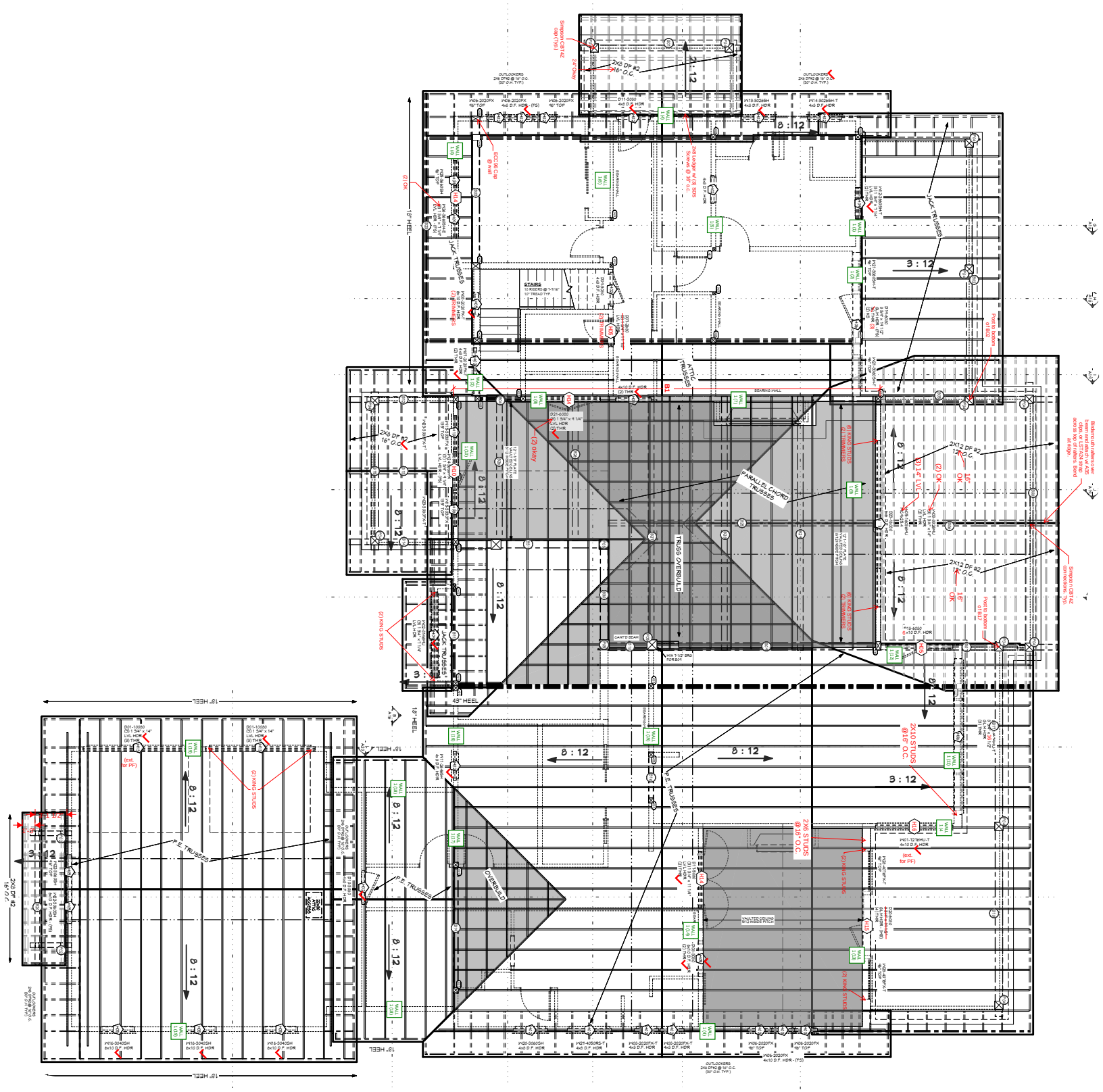

X2-2
X1-2
Y1-2
Y2-2
SW1
5'-4"
SW1
3'-0"
SW1
3'-7"
SW1
3'-7"
SW3
3'-0"
SW3
3'-0"
DN

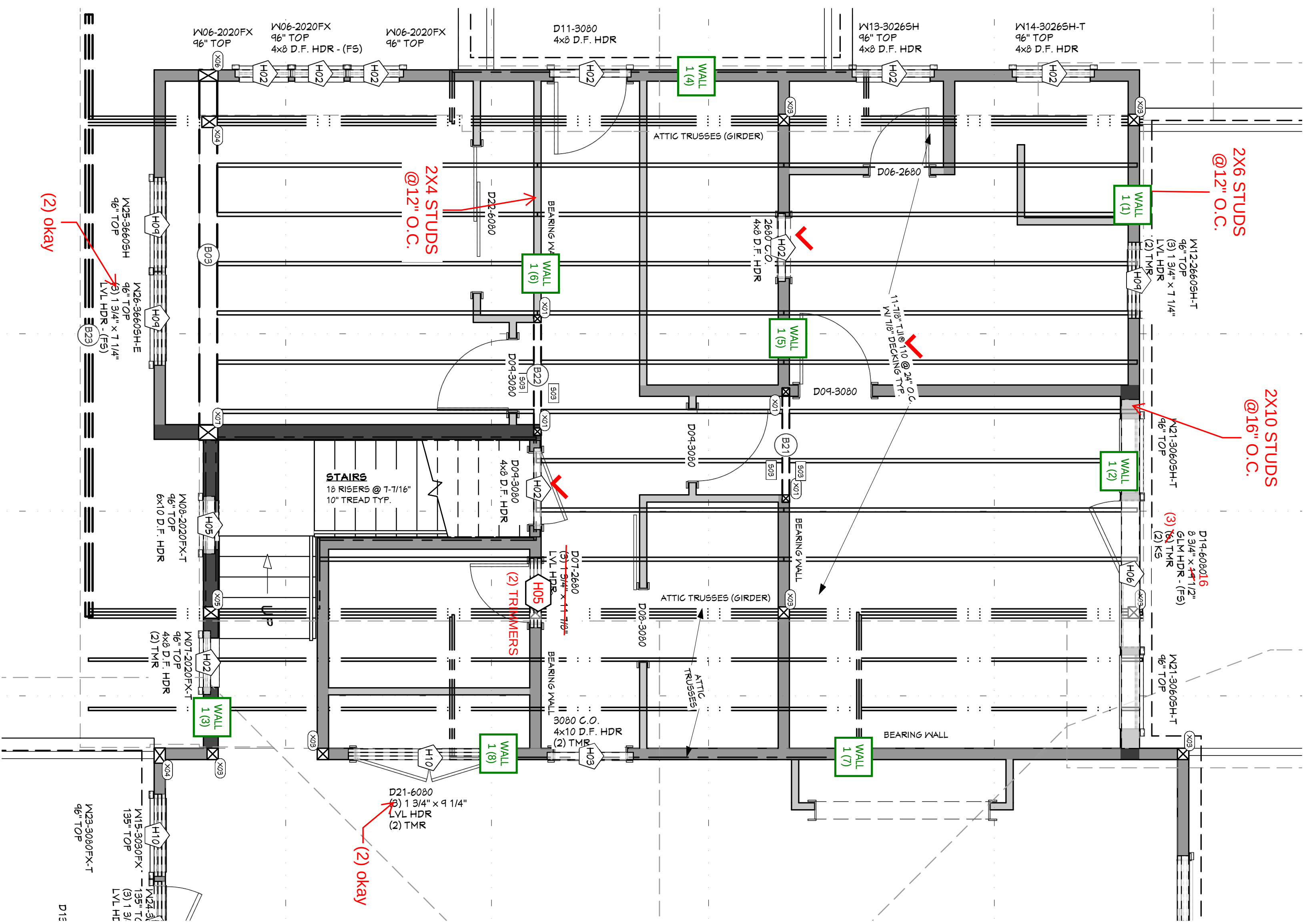

X2-1
X1-1
Y1-1
Y2-1
Y3-1
Y4-1
X3-1
STAIRS
11 RISERS @ 7-7/16"
10" TREAD TYP.
BEARING WALL
HD1
HD2
HD3
APA PORTAL FRAME
(SEE DETAIL)
SHEATH PORTAL FRAME BEFORE BUILDING PARALLEL WALL

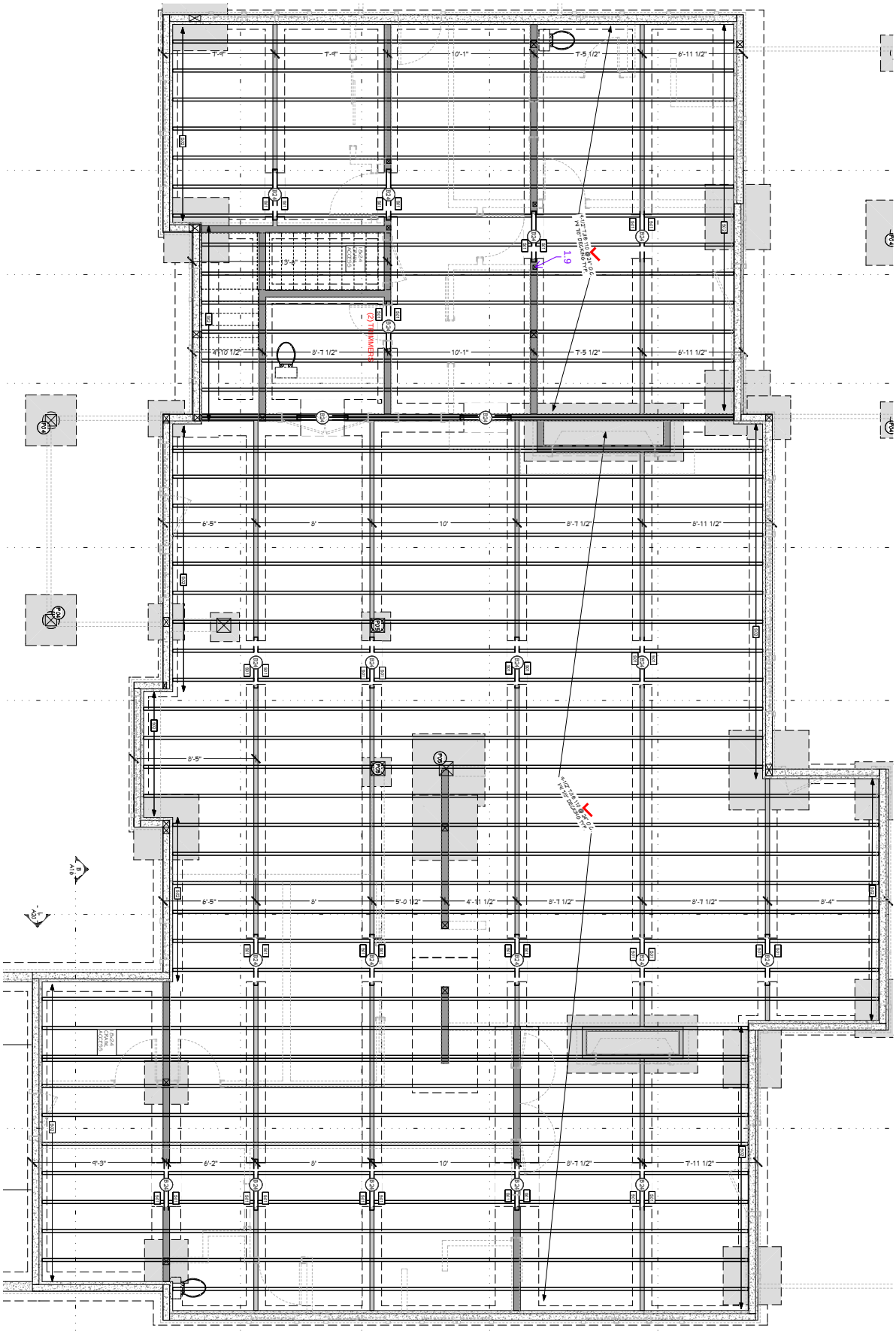


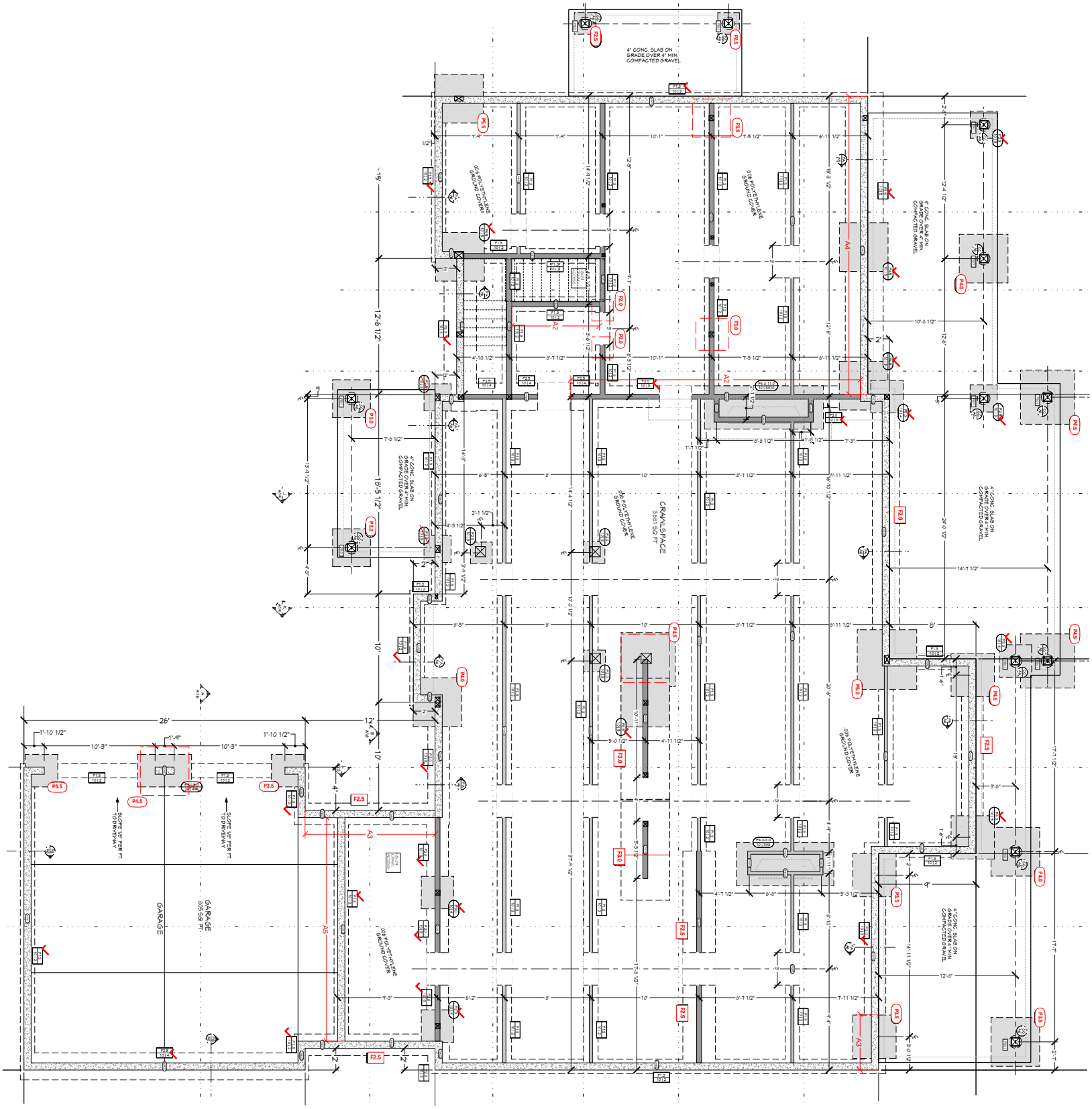
BEAM SCHEDULE

NO.	FLR.	PLY(S)	NOTES	CTR. LG +/-	MIN BRG	T.O. BEAM	B.O. BEAM	CALC #
B01	1	1	(B-01) 6 3/4 X 13 1/2 GLULAM 9" MIN.	15'-9"		10'-1 1/2"	9'	1
B02	1	1	(B-02) 6 3/4 X 13 1/2 GLULAM 10.5" MIN.	26'-1 1/2"		10'-1 1/2"	9'	2
B03	1	1	(B-03) 8 3/4 X 24 GLULAM OR BOX GIRDER 19.5" MIN.	15'-0 1/4"		12'-1 1/8"	10'-1 1/8"	3
B04	1	3 2 MIN.	(B-04) 1 3/4 X 7 1/4 MICROLLAM LVL✓	4'-7 1/4"		10'-8 3/8"	10'-1 1/8"	4
B05	1	1	(B-05) 6 3/4 X 18 GLULAM 12" MIN.	17'-9 5/8"		13'-10 1/8"	12'-4 1/8"	5
B06	1	1	(B-06) 6 3/4 X 18 GLULAM 13.5" MIN.	17'-7 1/4"		21'-10"	20'-4"	6
B07	1	1	(B-07) 6 3/4 X 18 GLULAM 12" MIN.	17'-10"		13'-10 1/8"	12'-4 1/8"	7
B08	1	1	(B-08) 8 3/4 X 24 GLULAM 19.5" MIN.	27'-9 3/4"		12'-4 1/8"	10'-4 1/8"	8
B09	1	1	(B-09) 8 3/4 X 24 GLULAM 19.5" MIN.	22'-5 1/2"		11'-1 1/8"	9'-1 1/8"	9
B10	1	1	(B-10) 8 3/4 X 24 GLULAM 19.5" MIN.	4'-4 1/4"		11'-1 1/8"	9'-1 1/8"	10
B11	1	1	(B-11) 1 3/4 X 11 1/4 MICROLLAM LVL OR STRUCT. GABLE9.5" MIN	10'		12'-0 3/8"	11'-1 1/8"	11
B12	1	1	(B-12) 6 3/4 X 13 1/2 GLULAM 7.5" MIN.	10'-8 1/2"		14'-2 5/8"	13'-1 1/8"	12
B13	1	1	(B-13) 6 3/4 X 18 GLULAM 7.5" MIN.	10'-8 1/2"		19'	17'-6"	13
B14	1	1	(B-14) 6 3/4 X 13 1/2 GLULAM 7.5" MIN.	10'-9 3/8"		14'-2 5/8"	13'-1 1/8"	14
B15	1	1	(B-15) 8 3/4 X 13 1/2 GLULAM 9" MIN.	15'-6"		13'-1 1/8"	11'-11 5/8"	15
B16	1	1	(B-16) 5 1/2 X 15 GLULAM 7.5" MIN.	4'-11 1/2"		11'-4 1/8"	10'-1 1/8"	16
B17	1	1	(B-17) 8 3/4 X 16 1/2 GLULAM 12" MIN.	18'-2"		10'-1 1/2"	8'-9"	17
B18	1	1	(B-18) 8 3/4 X 16 1/2 GLULAM 13.5" MIN.	18'-8 1/4"		10'-1 1/2"	8'-9"	18
B19	1	1	(B-19) 5 1/2 X 15 GLULAM OR BOX GIRDER 13.5" MIN.	12'-10 1/4"		11'-4 1/8"	10'-1 1/8"	19
B20	1	1	(B-20) 6X12 D.F. #2 6x10 MIN.	14'-9 1/4"	0"	10'-4 5/8"	9'-5 1/8"	20
B21	1	1	(B-21) 4X10 D.F. #2✓	4'-7 1/2"		10'-10 3/8"	10'-1 1/8"	21
B22	1	1	(B-22) 4X10 D.F. #2✓	4'-10 1/2"		10'-10 3/8"	10'-1 1/8"	22
B23	1	2	(B-23) 1 3/4 X 7 1/4 MICROLLAM LVL STRUCTURAL FASCIA	24'-5 3/8"		9'-9 3/8"	9'-2 1/8"	23
B24	0	21	(B-36CS) 4X10 D.F. #2 (CRAWL SPACE HDRS) (1-PLY)✓	3'-6"		-0'-0 7/8"	-0'-10 1/8"	36CS
B25	1	1	(B-100F) 6 3/4 X 18 D.F. #2 (COSMETIC)	26'-3 7/8"		19'-10 1/2"	18'-4 1/2"	100F
B26	1	2	(B-101F) 6 3/4 X 13 1/2 D.F. #2 (COSMETIC)	14'-1 7/8"		12'-2 1/8"	11'-0 5/8"	101F
B27	1	1	(B-102F) 6 3/4 X 13 D.F. #2 (COSMETIC)	24'-11 1/2"		12'-2 1/8"	11'-1 1/8"	102F
B28	1	1	(B-103F) 6 3/4 X 13 D.F. #2 (COSMETIC)	24'-11 1/2"		12'-2 1/8"	11'-1 1/8"	103F
B29	1	1	(B-104F) 6 3/4 X 13 D.F. #2 (COSMETIC)	24'-11 1/2"		12'-2 1/8"	11'-1 1/8"	104F
B30	1	1	(B-105F) 8 3/4 X 24 GLULAM (COSMETIC)	10'-8 3/8"		11'-1 1/8"	9'-1 1/8"	105F
B31	1	1	(B-106F) 8 3/4 X 24 GLULAM (COSMETIC)	14'-2 3/4"		11'-1 1/8"	9'-1 1/8"	106F


TRUSS OVERBUILD
PARALLEL CHORD TRUSSES
ATTIC TRUSSES
JACK TRUSSES
STAIRS
2X6 STUDS @16" O.C.
2X10 STUDS @16" O.C.
2X12 DF #2 16" O.C.
8 : 12
3 : 12
18" HEEL
45° HEEL


W06-2020FX
96" TOP
W06-2020FX
96" TOP
4x8 D.F. HDR - (FS)
W06-2020FX
96" TOP
D11-3080
4x8 D.F. HDR
W13-3026SH
96" TOP
4x8 D.F. HDR
W14-3026SH-T
96" TOP
4x8 D.F. HDR
ATTIC TRUSSES (GIRDER)
D06-2680
2X4 STUDS
@12" O.C.
2X6 STUDS
@12" O.C.
(2) okay
2X10 STUDS
@16" O.C.
STAIRS
18 RISERS @ 7-7/16"
10" TREAD TYP.
(2) TRIMMERS
BEARING WALL
ATTIC TRUSSES
D21-6080
(3) 1 3/4" x 9 1/4"
LVL HDR
(2) TMR
(2) okay
3080 C.O.
4x10 D.F. HDR
(2) TMR



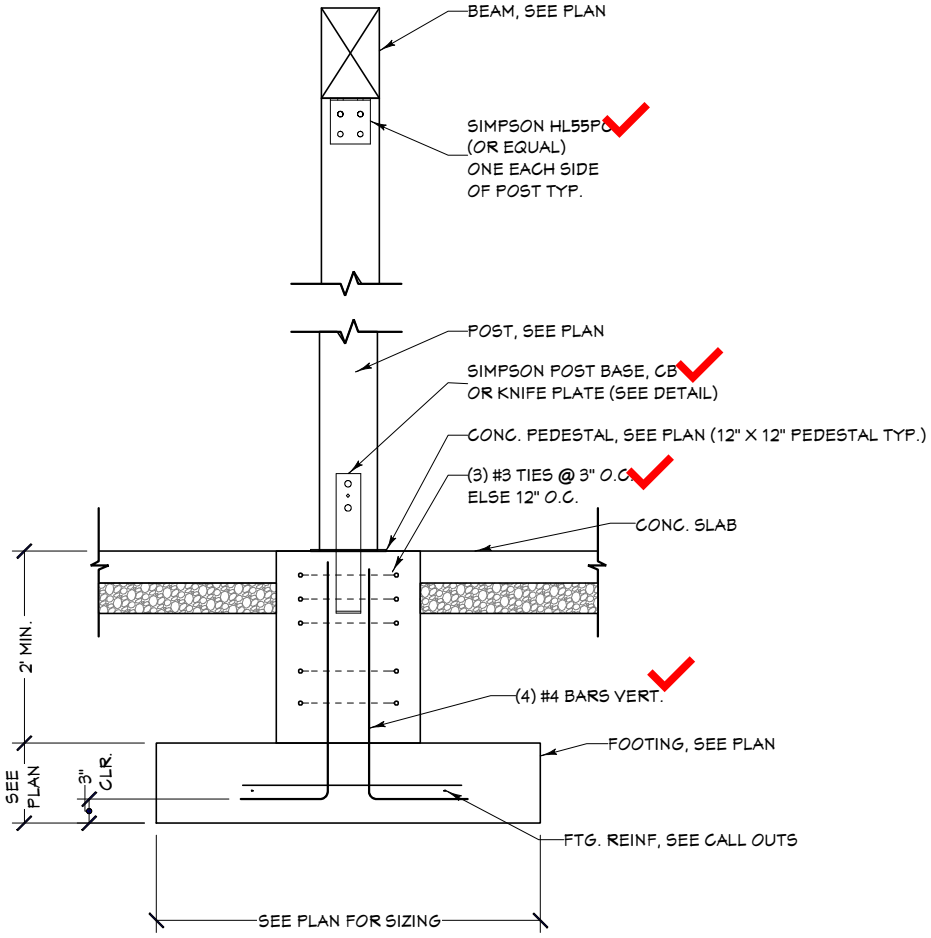

4" CONC. SLAB ON GRADE OVER 4" MIN. COMPACTED GRAVEL
6MIL POLYETHYLENE GROUND COVER
CRAWLSPACE
380 SQ. FT.
GARAGE
605.59 SF.
SLOPE 1/8" PER FT TO DRIVEWAY
26'
12'
10'-3"
1'-4"
1'-10 1/2"

CONTINUOUS FOOTING SCHEDULE (ALL FOOTINGS "F1.3" UNO)

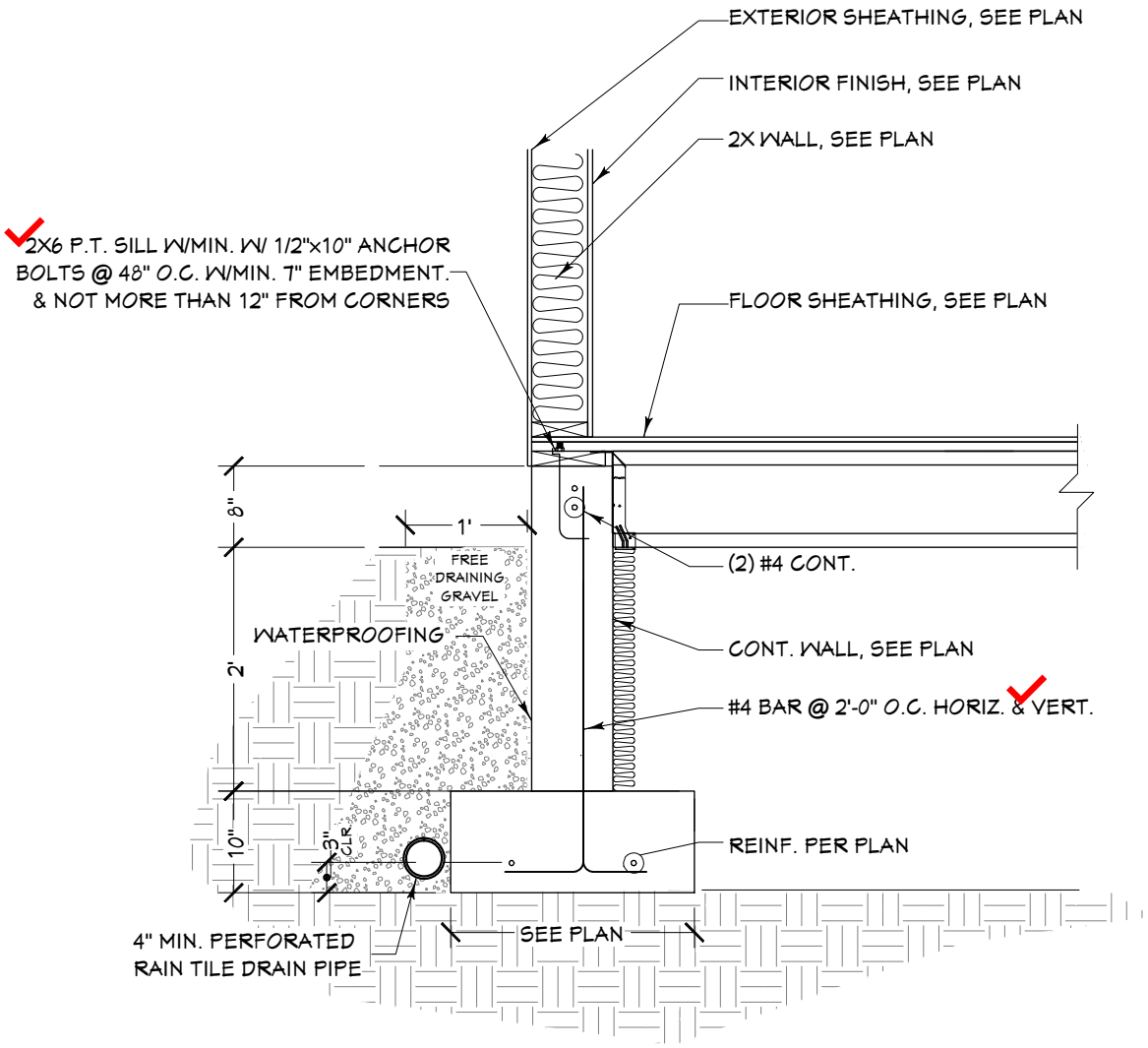
CALLOUT	FOOTING SIZE	REINFORCEMENT
F1.3 / 10 | 2	16" X 10"	(2) #4 CONT. REBAR
F2.0 / 10 | 3	24" X 10"	(3) #4 CONT. REBAR
F2.5 / 10 | 4	30" X 10"	(4) #4 CONT. REBAR
F3.0 / 10 | 4	36" X 10"	(4) #4 CONT. REBAR
F3.5 / 10 | 5	42" X 10"	(5) #4 CONT. REBAR
F4.5 / 10 | 6	54" X 10"	(6) #4 CONT. REBAR

PAD FOOTING SCHEDULE

CALLOUT	FOOTING SIZE	REINFORCEMENT	QTY
F2.0 / 10 | 3	24" X 24" X 10"	(3) #4 REBAR E.W.	5
F2.5 / 10 | 3	30" X 30" X 10"	(3) #4 REBAR E.W.	4
F3.0 / 10 | 4	36" X 36" X 10"	(4) #4 REBAR E.W.	6
F3.0-5.0 / 10 | 4x6	36" X 60" X 10"	(4X6) #4 REBAR GRID	1
F3.5 / 10 | 4	42" X 42" X 10"	(4) #4 REBAR E.W.	2
F4.0 / 10 | 5	48" X 48" X 10"	(5) #4 REBAR E.W.	4
F4.5 / 10 | 5	54" X 54" X 10"	(5) #4 REBAR E.W.	9
F5.0 / 10 | 6	60" X 60" X 10"	(6) #4 REBAR E.W.	3
F5.5 / 10 | 7	66" X 66" X 10"	(7) #4 REBAR E.W.	1
F4.0-9.0 / 10 | 3X8	108" X 48" X 10"	(3X8) #4 REBAR GRID	1
F4.0-11.0 / 10 | 3X10	132" X 48" X 10"	(3X10) #4 REBAR GRID	1

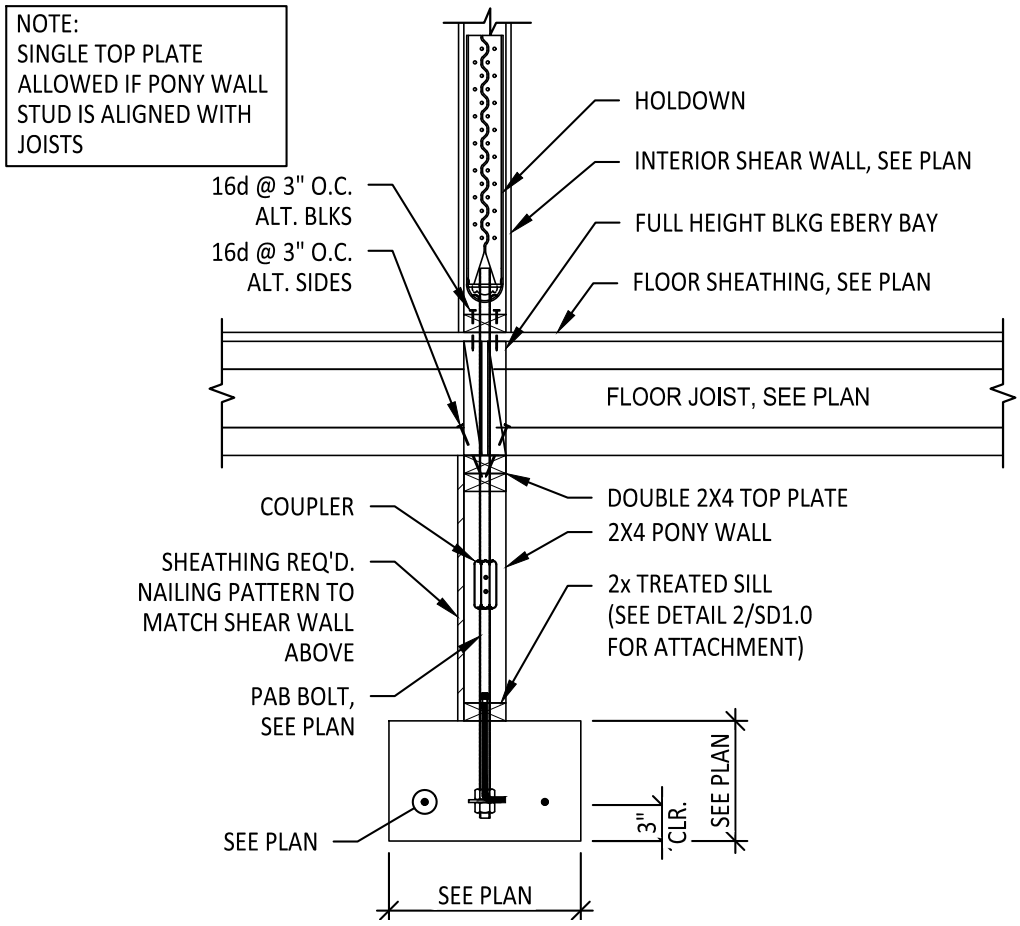


CC POST FOUNDATION DETAIL
NTS



FA FOUNDATION @ CRAWL SPACE - HANGERED JOISTS DETAIL

3/4 IN = 1 FT



4 / SD1.0

TYPICAL HOLD-DOWN DETAIL

SCALE: 3/4" = 1'-0"

OSB SHEAR WALL SCHEDULE:

MARK	SHEATHING	SIDES OF WALL	SHEET NAILING PERIMETER / FIELD		SHEET STAPLING PERIMETER / FIELD	BLKG	NAILING (UNO) BOTTOM PLATE INTO RIM
SW1	7/16" APA RATED	1	8d @ 6 / 12	OR	16ga x 1-1/2" @ 3 / 12 (NOT FOR WALLS >10')	YES	(2) 16d NAILS PER 16" BAY
SW2	7/16" APA RATED	1	8d @ 4 / 12	OR	16ga x 1-1/2" @ 2 / 12 (NOT FOR WALLS >10')	YES	(3) 16d NAILS PER 16" BAY
SW3	7/16" APA RATED	1	8d @ 3 / 12			YES	(4) 16d NAILS PER 16" BAY
SW4	7/16" APA RATED	1	8d @ 2 / 12		(4x STUDS @ SHEATHING PERIMETER)	YES	(4) SDS SCREWS PER 16" BAY

TYP. NOTES:

1 ALL SHEATHING PANEL EDGES SHALL BE BLOCKED UNO
2 PROVIDE SAME NAILING PATTERN ABOVE AND BELOW OPENINGS AS ADJACENT SHEAR PANEL.
3 ALL EXTERIOR WALLS SHALL BE SHEARWALL "SW1" WITHOUT BLKG UNO
4 FASTEN GABLE/RIM TO SHEAR WALLS BELOW W/ 10d TOENAILS @ 12" O.C. UNO
5 FASTEN TRUSS HEELS TO SHEAR WALLS W/ H2.5A AND (2) 10d TOENAILS @ EACH
6 GYP BOARD SHEAR WALLS MAY BE SUBSTITUTED WITH AN SW1 SHEAR WALL @ CONTRACTOR'S OPTION
7 WALL SHEATHING CAN BE APPLIED TO EITHER SIDE OF THE WALL. (UNLESS NOTED OTHERWISE)

BLOCKING KEY NOTES:

MARK		DESCRIPTION
B1	-	FULL HEIGHT BLOCKING BETWEEN EVERY OTHER FRAMING BAY W/ (6)10d TOENAILS FROM BLOCKING TO TOP PLATE, NAIL SHEATHING TO BLOCKING 3" O.C.

TYP. NOTES:

1 FASTEN GABLE/RIM TO SHEAR WALLS BELOW W/ 10d TOENAILS @ 12" O.C. UNO
2 FASTEN TRUSS HEELS TO SHEAR WALLS W/ H2.5A AND (2) 10d TOENAILS @ EACH

HOLDOWN SCHEDULE:

MARK	STRAP TYPE	STRAP FASTENERS	# OF STUDS		ANCHOR BOLT TYPE	# OF STUDS	ANCHOR BOLT FASTENERS
HD1	LSTHD8 OR LSTHD8RJ W/ RIM	(20) 16d SINKERS	2	OR	DTT2Z W/1/2Ø x10"	2	(8) 1/4"x1-1/2" SDS
HD2	STHD10 OR STHD10RJ W/ RIM	(24) 16d SINKERS	2	OR	HDU2- SDS2.5 W/ SB5/8x24 OR PAB5 @ INT. PONY WALLS	2	(6) 1/4"x2-1/2" SDS
HD3	STHD14 OR STHD14RJ W/ RIM	(30) 16d SINKERS	2	OR	HDU5-SDS2.5 W/ SB5/8x24 OR PAB5 @ INT. PONY WALLS	2	(14) 1/4"x2-1/2" SDS

Note:

ALL HDU HOLDOWNS CAN BE SUBSTITUTED FOR THEIR HDUE COUNTERPART AT THE CONTRACTORS OPTION .

ANCHOR BOLT KEY NOTES:

A2	-	1/2"Ø ANCHOR BOLTS @ 24" O.C.
A3	-	1/2"Ø ANCHOR BOLTS @ 36" O.C.
A4	-	1/2"Ø ANCHOR BOLTS @ 48" O.C.
A5	-	1/2"Ø ANCHOR BOLTS @ 60" O.C.