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

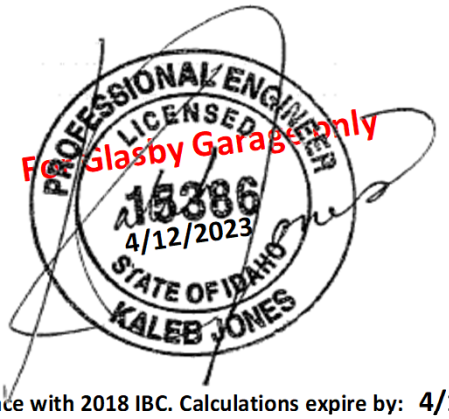
Completed by: TDS
Review/Check: KKJ

Project Name: Glasby Garage
SRE Project #: 2023-4981
City and State: Valley County, Idaho

Structural Calculations

Project Title: Glasby Garage
Address: 13148 Farm to Market Rd
Location: Valley County, Idaho

Job #: 2023-4981



Prepared in accordance with 2018 IBC. Calculations expire by: 4/12/2024

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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**

Floor Dead Loads:

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

Interior Wall Dead Loads:

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

Exterior Wall Dead Loads:

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

Deck Dead Load

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

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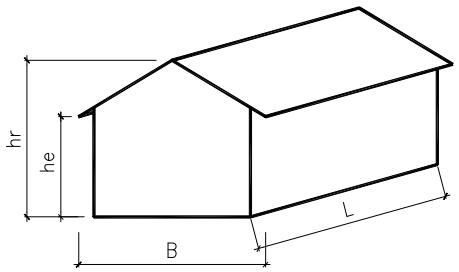
WIND ANALYSIS: Low-rise Building - Based on IBC / ASCE 7

INPUT DATA

Exposure category (B, C or D, ASCE 7-16 26.7.3)		C	
Importance factor (ASCE 7-16 Table 1.5-2)	I_w =	1.00	for all Category
Basic wind speed (ASCE 7-16 26.5.1 or 2018 IBC)	V =	115	*mph*
Topographic factor (ASCE 7-16 26.8 & Table 26.8-1)	K_{zt} =	1.00	Flat
Building height to ridge	h_r =	*23.67 ft*	*ft*
Building height to eave	h_e =	*10.50 ft*	*ft*
Building width	B =	*26.00 ft*	*ft*
Building length	L =	*36.00 ft*	*ft*
Overhang sloped width	O_h =	*3.00 ft*	*ft*
Effective area of components (or Solar Panel area)	A =	*36.8 ft²*	ft^2, <== Overhang? (Yes or No): Yes
Enclosed? (Y/N)		y	



ANALYSIS

Velocity pressure

$q_h = 0.00256\ K_z\ K_{zt}\ K_d\ K_e\ V^2$ = **25.11** 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 = **0.87**

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

h = mean roof height = **17.09** 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] = **3.00** **ft**

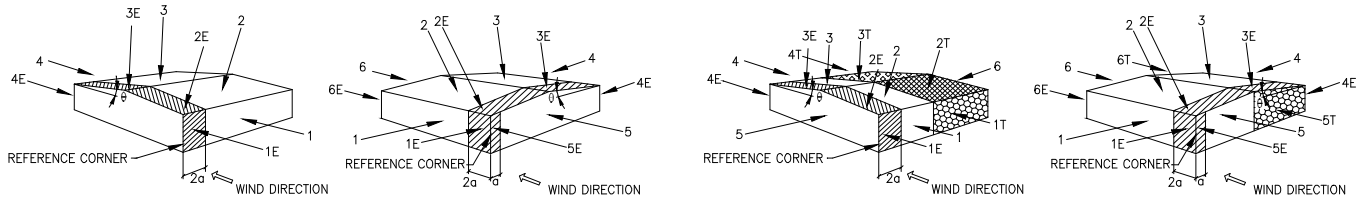
Net Pressures (psf), Basic Load Cases

Surface	Roof angle q = 18.43			Roof angle q = 18.43		
	$G\ C_{pf}$	Net Press. W/		$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$		$(+GC_{pi})$	$(-GC_{pi})$
1	0.52	8.45	17.49	-0.45	-15.82	-6.78
2	-0.69	-21.84	-12.80	-0.69	-21.84	-12.80
3	-0.47	-16.28	-7.24	-0.37	-13.81	-4.77
4	-0.42	-14.95	-5.91	-0.45	-15.82	-6.78
5				0.40	5.52	14.56
6				-0.29	-11.80	-2.76
1E	0.78	15.07	24.11	-0.48	-16.57	-7.53
2E	-1.07	-31.38	-22.35	-1.07	-31.38	-22.35
3E	-0.67	-21.42	-12.39	-0.53	-17.83	-8.79
4E	-0.62	-20.04	-11.00	-0.48	-16.57	-7.53
5E				0.61	10.80	19.83
6E				-0.43	-15.32	-6.28

Net Pressures (psf), Torsional Load Cases

Surface	Roof angle q = 18.43		
	$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
1T	0.52	2.11	4.37
2T	-0.69	-5.46	-3.20
3T	-0.47	-4.07	-1.81
4T	0.00	-3.74	-1.48
Surface	Roof angle q = 0.00		
	$G\ C_{pf}$	Net Press. W/	
		$(+GC_{pi})$	$(-GC_{pi})$
5T	0.40	1.38	3.64
6T	-0.29	-2.95	-0.69

+ / - Wind Pressure	64%



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

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

Design pressures for components and cladding

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

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

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

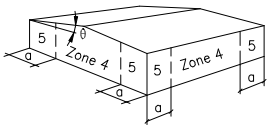
G C_p = 1.00 external pressure coefficie

see table below. (ASCE 7-16 30.3.2)

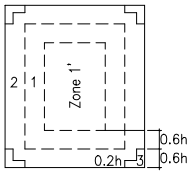
q = 18.43 °

$p_{overhang}$ = **-86.62** psf

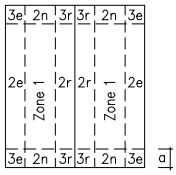
(ASCE 7-16 28.3.3)



Walls



Roof $\theta \leq 7°$



Roof $\theta > 7°$

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
	225	0.30	-0.80	0.30	-0.80	0.30	-2.20	0.30	-0.80	0.30	-1.21	0.30	-1.21
	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		
	37	0.30	-2.50	0.30	-2.50	0.30	-1.80	0.98	-1.08	0.98	-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*
	3.01	-15.57	3.01	-15.57	3.01	-50.72	3.01	-15.57	3.01	-25.94	3.01	-25.94
	Zone 3		**Zone 3e**		**Zone 3r**		**Zone 4**		**Zone 5**			
	Positive	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*	*Positive*	*Negative*		
	3.01	-58.25	3.01	-58.25	3.01	-40.67	20.18	-22.69	20.18	-29.81		

*(Max Pressure **58.25** psf)*

LOAD CASE 'A' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**3.3 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**6.0 psf**
$0.6*W_w = (Z_1 + Z_4) * 0.6 =$	**14.0 psf**
$0.6*W_{wE} = (Z_{1E} + Z4E) * 0.6 =$	**21.1 psf**

LOAD CASE 'B' FACTORED LOADS	
$0.6*W_r = (Z_2 + Z_3) * 0.6 =$	**4.8 psf**
$0.6*W_{rE} = (Z_{2E} + Z_{3E}) * 0.6 =$	**8.1 psf**
$0.6*W_w = (Z_5 + Z_6) * 0.6 =$	**10.4 psf**
$0.6*W_{wE} = (Z_{5E} + Z_{6E}) * 0.6 =$	**15.7 psf**

ROOF COMPONENTS FACTORED LOAD	
$0.6*Z_{r,c\&c} =$	**15.6 psf**

WALL COMPONENTS FACTORED LOAD	
$0.6*Z_{w,c\&c} =$	**13.6 psf**

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OSB SEISMIC LOADING ANALYSIS

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

INPUT DATA

Typical floor height:	h =	**10.5**	*ft*
Typical floor weight:	w_x =	**15.9**	*kips*
Number of floors:	n =	**1**	
Importance factor (ASCE 11.5.1):	I_e =	1.00	
Design spectral response:	S_{DS} =	0.47	g
	S_{D1} =	0.22	g
Mapped spectral resp.:	S_1 =	0.15	g
Period Parameter, C_t: (ASCE Tab 12.8-2):	C_t =	**0.020**	
Resp. coefficient: (ASCE Tab. 12.2.1):	R =	6.5	
Seismic design category:	SDC =	D	
	h_n =	23.7	*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: $T_a = C_t (h_n)^x$ =	*0.21*	sec, ASCE 12.8.2.1	
$C_s < S_{D1} / [(R / I_e) T_a]$ =	*0.1592*	, 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 =	*1.36*	, (ASCE 12.8.3, page 91)	
$V = C_s W$ =	***0.0870***	W	
0.7 * V =	***0.0609***	W	
W =	***16***	*kips, total*	

SEISMIC COMPONENT & ANCHORING ANALYSIS

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

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

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

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

Out-of-plane seismic force for anchorage design

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

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

Where : F_{min} = ***0.13*** plf, ***1.89*** W_p = ***188*** plf (Horizontal) ***<= Not Applicable***

(ASCE 7 Sec. 12.11.2 & 11.7.3)

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

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

= ***3.77*** W_p = ***188*** plf (Horizontal) ***<= Applicable***

For connections (ASCE 7 Sec. 12.11.2.1)

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

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WIND / SEISMIC SHEAR FORCE CALCULATIONS:

From ASCE 7-16 Wind & Seismic Loading Analysis

Wall Line	Roof / Floor					Wall					Load above				Loading		
	Wind Force (psf)	Diaph. Weight Wr, We	truss trib (ft)	Area W (ft)	Area L (ft)	Wind Force (psf)	Wall DL (psf)	Wall ht (ft)	wall line dist (ft)	Upr. Flr Wall ht (ft)	Wind (#)	Seismic (#)	$*C_s$ (Wp)	=	**Wind Force (kips)**	**Seismic Force (kips)**	**Lateral Control**
X1-1	9.6	47	13.2	36.0	26.0	15.2	12.0	10.5	36.0				0.06	=	**3.71**	**1.62**	**Wind**
X2-1	9.6	47	13.2	36.0	26.0	15.2	12.0	10.5	36.0				0.06	=	**3.71**	**1.62**	**Wind**
Y1-1	9.6	47	13.2	26.0	36.0	15.7	12.0	10.5	26.0				0.06	=	**2.71**	**1.54**	**Wind**
Y2-1	9.6	47	13.2	26.0	36.0	15.7	12.0	10.5	26.0				0.06	=	**2.71**	**1.54**	**Wind**

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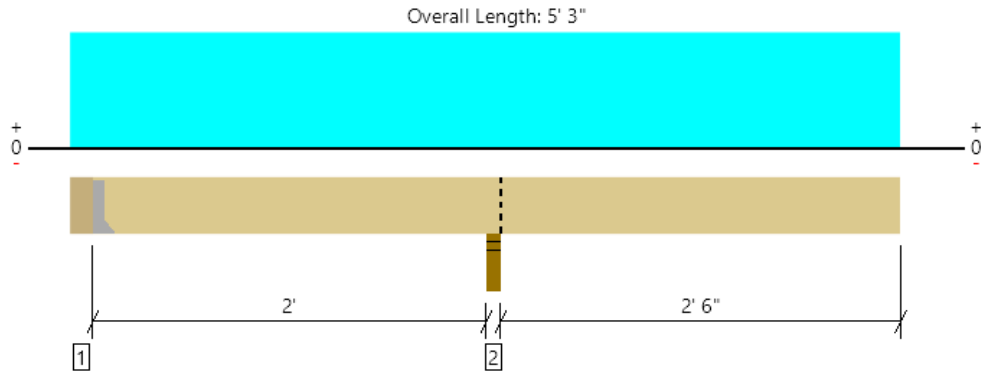
SHEAR WALL CALCULATIONS:

		X1-1	X2-1	Y1-1	Y2-1		
Shear Wall Forces							
Total length of wall		26.00 ft	26.00 ft	36.00 ft	36.00 ft		
Total length of shear wall	L =	26.00 ft	2.00 ft	36.00 ft	36.00 ft		
Total length of full ht seg.	L_w =	23.00 ft	2.00 ft	8.00 ft	10.50 ft		
height of shear wall	H =	10.50 ft	8.00 ft	10.50 ft	10.50 ft		
Maximum opening height	H' =	8.00 ft	0.00 ft	0.00 ft	1.50 ft		
Total force at top of wall	V_1 =	3713 lbs	1856 lbs	2712 lbs	2712 lbs		
Self weight	$w_{DL\ self}$ =	126 plf	96 plf	126 plf	126 plf		
Applied dead load	$w_{DL\ above}$ =	40 plf	40 plf	40 plf	40 plf		
Prefered OSB thickness	in	7/16	7/16	7/16	7/16		
Prefered Gyp thickness	in	1/2	1/2	1/2	1/2		
Wall Connected to Concrete	y/n =	Y	Y	Y	Y		
Shear Wall Segments							
		8.25	2.00	4.00	5.25		
		14.75		4.00	5.25		
Shear Transfer to Concrete							
	T =	485 lbs	3500 lbs	Not Req'd	Not Req'd		
	1/2 Anchor Bolts @	72 '' O.C.		72 '' O.C.	72 '' O.C.		
	Provide:	Code Min.		Code Min.	Code Min.		
	Min # of 1/2 Anchor Bolts	(4) Min		(3) Min	(3) Min		
	Load From Above	0.00	0.00	0.00	0.00		
	Holdown	**Perp. Wall**	**HD3**				
Shear Resisting System							
Force Calculated		185.38	928.25	339.04	258.32		
		OSB	**P.F.**	**OSB**	**OSB**		
Min Shear Wall Segment:		3.00 ft	1.33 ft	3.00 ft	3.00 ft		
Provide:	Va=	**SW1**	**2696**	**SW1**	**SW1**		
Min Shear Wall Segment:							
Provide:	Va=						
Blocking / Nailing Framing Attachment							
Blocking Unit Shear		143 plf	143 plf	75 plf	75 plf		
Blocking		**NONE**	**NONE**	**NONE**	**NONE**		
Nailing		**See SCHED**	**See SCHED**	**See SCHED**	**See SCHED**		
Unit Base Shear							
% of full height segments	%fh = L_w/L =	0.885	1.000	0.222	0.292		
% of maximum opening height	%oh = H'/H =	0.762	0.000	0.000	0.143		
Shear cap adj factor	SCAF =	0.87	1.00	1.00	1.00		
Unit base shear	vbase V_1/L_w =	161 plf	928 plf	339 plf	258 plf		
Effective unit base shear	vreq=v_{base}/SCAF=	185 plf	928 plf	339 plf	258 plf		
Ovrtrn. mo. Ttl. length of wall	OTM =	44.8 k-ft	14.9 k-ft	28.5 k-ft	28.5 k-ft		
Shear wall adjustment factor							
Resist moment total L. of wall	RM =	56.0 k-ft	0.3 k-ft	107.4 k-ft	107.4 k-ft		
	r=	0.9096	1.0000	0.9997	0.7424		
	C_O=	0.8708	1.0000	4.4955	1.6800		

Garage, Outlookers 1

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



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1466 @ 2' 7 1/4"	3281 (3.50")	Passed (45%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	575 @ 2'	1139	Passed (51%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-959 @ 2' 7 1/4"	975	Passed (98%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.152 @ 5' 3"	0.265	Passed (2L/418)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.173 @ 5' 3"	0.353	Passed (2L/368)	--	1.0 D + 1.0 S (Alt Spans)

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).
- Right 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.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Hanger on 5 1/2" DF beam	5.50"	Hanger[1]	1.50"	-3	172/-153	168/-156	See note [1]
2 - Stud wall - DF	3.50"	3.50"	1.56"	182	1284	1466	Blocking

- 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' 10" o/c	
Bottom Edge (Lu)	1' 11" 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
1 - 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 5' 3"	24"	17.0	120.0	Default Load

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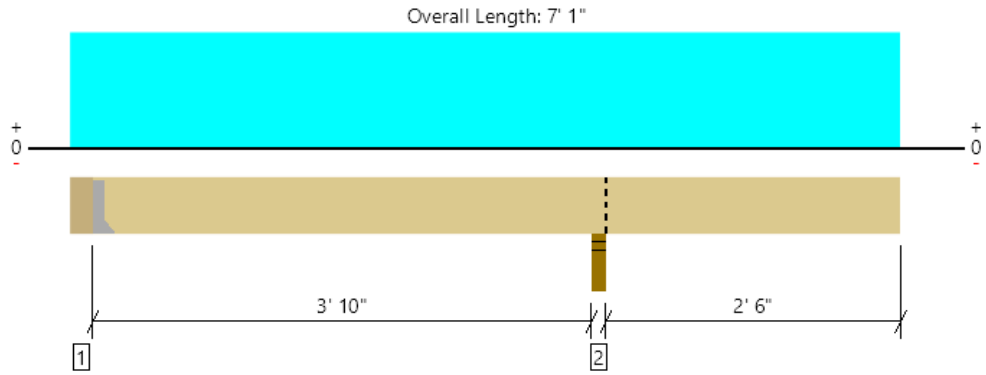
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes
Trevor Steelsmith 04/14/23 Snake River Engineering (208) 453-6512 trevor@snakeriverengineering.com	

Weyerhaeuser

Garage, Outlookers 2
1 piece(s) 2 x 6 DF No.2 @ 16" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1007 @ 4' 5 1/4"	3281 (3.50")	Passed (31%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	414 @ 3' 10"	1139	Passed (36%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-639 @ 4' 5 1/4"	975	Passed (66%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.124 @ 7' 1"	0.265	Passed (2L/512)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.138 @ 7' 1"	0.353	Passed (2L/462)	--	1.0 D + 1.0 S (Alt Spans)

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).
- Right 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.
- Applicable calculations are based on NDS.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Snow	Factored	
1 - Hanger on 5 1/2" DF beam	5.50"	Hanger[1]	1.50"	36	321	357	See note [1]
2 - Stud wall - DF	3.50"	3.50"	1.50"	125	882	1007	Blocking

- 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' 8" o/c	
Bottom Edge (Lu)	6' 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
1 - 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 7' 1"	16"	17.0	120.0	Default Load

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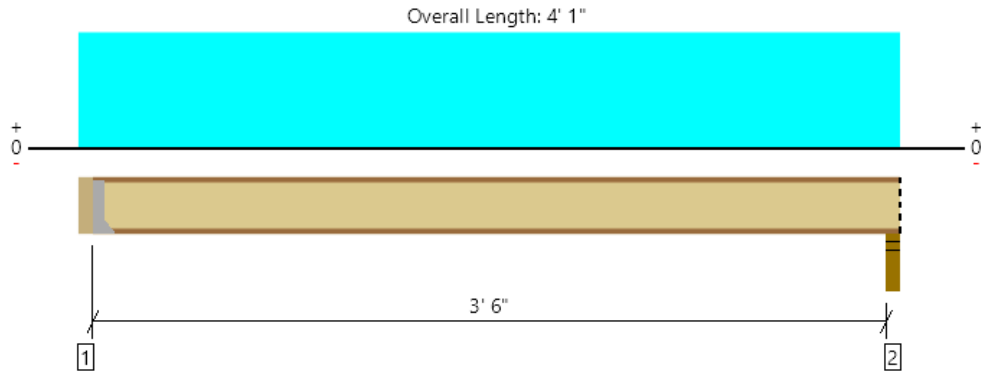
ForteWEB Software Operator	Job Notes
Trevor Steelsmith 04/14/23 Snake River Engineering (208) 453-6512 trevor@snakeriverengineering.com	

Weyerhaeuser

Garage, Floor: Joist
1 piece(s) 11 7/8" TJI® 110 @ 24" OC



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	186 @ 3 1/2"	910 (1.75")	Passed (20%)	1.00	1.0 D + 1.0 L (All Spans)
Shear (lbs)	186 @ 3 1/2"	1560	Passed (12%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	167 @ 2' 1"	3160	Passed (5%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.003 @ 2' 1"	0.090	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
Total Load Defl. (in)	0.004 @ 2' 1"	0.179	Passed (L/999+)	--	1.0 D + 1.0 L (All Spans)
TJ-Pro™ Rating	69	40	Passed	--	--

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

- Deflection criteria: LL (L/480) and TL (L/240).
- Allowed moment does not reflect the adjustment for the beam stability factor.
- A structural analysis of the deck has not been performed.
- Deflection analysis is based on composite action with a single layer of 23/32" 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
	Total	Available	Required	Dead	Floor Live	Factored	
1 - Hanger on 11 7/8" DF beam	3.50"	Hanger[1]	1.75" / - [2]	50	167	217	See note [1]
2 - Stud wall - DF	3.50"	3.50"	1.75"	48	160	208	Blocking

- 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.
- [2] Required Bearing Length / Required Bearing Length with Web Stiffeners

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	3' 10" o/c	
Bottom Edge (Lu)	3' 10" 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
1 - Face Mount Hanger	IUS1.81/11.88	2.00"	N/A	10-10dx1.5	2-Strong-Grip	

- 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 4' 1"	24"	12.0	40.0	Default Load

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ForteWEB Software Operator	Job Notes
Trevor Steelsmith 04/14/23 Snake River Engineering (208) 453-6512 trevor@snakeriverengineering.com	

Weyerhaeuser

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

Completed by: TDS
Review/Check: KKJ

Project Name: Glasby Garage
SRE Project #: 2023-4981
City and State: Valley County, Idaho

Beam Calculations

	Additional Drift	Roof	Floor	Deck	Wall	Total Load	Total Load
Trib	0.0	3.5	1	0	3.33		*571.5 plf*
Dead Load	-	*59.5*	12.0	0.0	40.0	*111.5 plf*	
Live / Snow Load	0	*420.0*	40.0	0.0	-	*460.0 plf*	

Description:	*10.0 ft Opening*								
Header Callout	(3)2x12 DF-L No. 2								
Trimmers	(1) 2x6 DF-L No. 2								
King Studs	(1) 2x6 DF-L No. 2								
Wood Design									
Species	*DF-L*								
Grade	*No. 2*								
Width	*4.50 in*								
Depth	*11.25 in*								
Reaction									
Dead Load	557 lbs								
Live Load	2,300 lbs								
Load									
l_u	*10.0 ft*								
l_e	*19.1 ft*								
Adjustment Factors									
Cd	1.15								
CF	1								
Material Properties									
Fb	900 psi								
Fv	180 psi								
E	1,600,000 psi								
Emin	580,000 psi								
Calculated Prop.									
A	50.63 in^2								
I	533.94 in^4								
S	94.92 in^3								
RB	11.29								
Emin'	580,000 psi								
FbE	5,462 psi								
Fb*	1,035 psi								
CL	1								
Shear and Moment									
M	85,719 lb-in								
V	2,857 lbs								
Stress									
fb	903 psi								
Fb'	1,023 psi								
fb/Fb'	0.88								
fv	85 psi								
Fv'	207 psi								
fv/Fv'	0.41								
Max Ratio	0.88								
	Pass								
Deflection									
Δ_{TL}	0.15 in								
	L/797								
Δ_{LL}	0.12 in								
	L/990								
	Pass								

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SRE Project #: 2023-4981
City and State: Valley County, Idaho

Beam Calculations

	Additional Drift	Roof	Floor	Deck	Wall	Total Load	Total Load
Trib	0.0	16	8.335	0	3.33		
							2,665.4 plf
Dead Load	-	*272.0*	100.0	0.0	40.0	*412.0 plf*	
Live / Snow Load	0	*1920.0*	333.4	0.0	-	*2,253.4 plf*	

Description:	*1.5 ft Opening*								
Header Callout	(2)2x6 DF-L No. 2								
Trimmers	(1) 2x6 DF-L No. 2								
King Studs	(1) 2x6 DF-L No. 2								
Wood Design									
Species	*DF-L*								
Grade	*No. 2*								
Width	*3.00 in*								
Depth	*5.50 in*								
Reaction									
Dead Load	309 lbs								
Live Load	1,690 lbs								
Load									
l_u	*1.5 ft*								
l_e	*3.1 ft*								
Adjustment Factors									
Cd	1.15								
CF	1.3								
Material Properties									
Fb	900 psi								
Fv	180 psi								
E	1,600,000 psi								
Emin	580,000 psi								
Calculated Prop.									
A	16.50 in^2								
I	41.59 in^4								
S	15.13 in^3								
RB	4.76								
Emin'	580,000 psi								
FbE	30,715 psi								
Fb*	1,346 psi								
CL	1								
Shear and Moment									
M	8,996 lb-in								
V	1,999 lbs								
Stress									
fb	595 psi								
Fb'	1,342 psi								
fb/Fb'	0.44								
fv	182 psi								
Fv'	207 psi								
fv/Fv'	0.88								
Max Ratio	0.88								
	Pass								
Deflection									
Δ_{TL}	0.00 in								
	L/3,946								
Δ_{LL}	0.00 in								
	L/4,667								
	Pass								

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SRE Project #: 2023-4981
City and State: Valley County, Idaho

WOOD HEADER ALLOWABLE LOADS (kips/ft)

Load Duration Factor: *1.15*
LVL Grade: *2.0E*
Top Chord Bracing: *2'-0" O.C.*
Max TL Deflection: *L/240, 0.75in*
Repetitive Stress Increase: *No*

	Header Span										
Header Type	**2'**	**3'**	**4'**	**5'**	**6'**	**8'**	**10'**	**12'**	**14'**	**16'**	**18'**
(2) 2x4 DF Stud	1.15	0.69	0.29	0.22	0.12	NA	NA	NA	NA	NA	NA
(3) 2x4 DF Stud	1.84	1.04	0.46	0.35	0.18	NA	NA	NA	NA	NA	NA
(2) 2x6 DF #2	3.34	1.44	0.83	0.48	0.36	0.20	0.12	NA	NA	NA	NA
(3) 2x6 DF #2	5.06	2.19	1.27	0.72	0.55	0.30	0.18	0.13	NA	NA	NA
(2) 2x8 DF #2	5.41	2.30	1.27	0.80	0.59	0.32	0.20	0.14	0.09	NA	NA
(3) 2x8 DF #2	8.74	3.39	2.19	1.18	0.97	0.53	0.33	0.23	0.16	0.12	NA
(2) 2x10 DF #2	8.05	3.39	1.96	1.18	0.89	0.48	0.31	0.21	0.15	0.10	NA
(3) 2x10 DF #2	13.23	5.18	3.22	1.80	1.38	0.82	0.52	0.36	0.25	0.20	0.15
(2) 2x12 DF #2	10.81	4.83	2.65	1.60	1.15	0.67	0.41	0.29	0.21	0.15	0.12
(3) 2x12 DF #2	17.94	7.02	4.49	2.40	1.96	1.10	0.70	0.48	0.35	0.26	0.21
(2) 1-3/4x7-1/4 LVL	13.80	6.79	3.80	2.40	1.61	0.94	0.52	0.30	0.18	0.12	NA
(3) 1-3/4x7-1/4 LVL	20.70	10.47	5.64	3.50	2.53	1.38	0.79	0.45	0.28	0.17	NA
(2) 1-3/4x9-1/2 LVL	24.73	10.47	5.64	3.75	2.65	1.50	0.92	0.63	0.39	0.24	0.15
(3) 1-3/4x9-1/2 LVL	37.15	17.25	8.51	6.00	4.03	2.30	1.38	0.95	0.60	0.37	0.22
(2) 1-3/4x11-7/8 LVL	40.71	17.25	8.86	6.00	4.49	2.53	1.61	1.12	0.82	0.53	0.32
(3) 1-3/4x11-7/8 LVL	61.30	24.15	13.23	8.75	6.67	3.80	2.42	1.61	1.15	0.79	0.48
(2) 1-3/4x14 LVL	56.47	24.15	12.54	8.00	5.75	3.45	2.19	1.50	1.13	0.86	0.54
(3) 1-3/4x14 LVL	85.10	28.75	18.86	12.00	8.63	5.29	3.34	2.30	1.61	1.27	0.81

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Review/Check: KKJ

Project Name: Glasby Garage
SRE Project #: 2023-4981
City and State: Valley County, Idaho

TALL WALL CALCULATIONS:

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

Description:	**10.5' Tall Wall**	**King Stud (10' Max Opening)**				
Type:	*2x Lumber (2"-4")*	*2x Lumber (2"-4")*				
Species:	*DF-L*	*DF-L*				
Grade:	*No. 2*	*No. 2*				
Nominal width, t =	*(1) 2*	*(1) 2*				
Actual width =	1.50 in	1.50 in				
Nominal depth, d =	*6*	*6*				
Actual depth =	5.50 in	5.50 in				
Span, L =	*10.500 ft*	*10.500 ft*				
w/o Plates	10.250 ft	10.250 ft				
Stud spacing, s =	*16 in*	*70 in*				
Lat. Pressure, w_{wind} =	13.61 psf	13.61 psf				
Axial load, P =	*3197 lbs*	*50 lbs*				
Eccentricity, e =	*0 in*	*0 in*				
K_{cE} =	*0.3*	*0.3*				
c =	*0.8*	*0.8*				
w =	18.2 plf	79.7 plf				
Fb	900 psi	900 psi				
Fv	180 psi	180 psi				
Fc-prll	1,350 psi	1,350 psi				
Fc-perp	625 psi	625 psi				
C_d	*1.60*	*1.60*				
$C_{F,Fb}$	*1.30*	*1.30*				
$C_{F,Fcprll}$	*1.10*	*1.10*				
C_r	*1.15*	*1.00*				
C_p	0.36	0.36				
C_H	*1.00*	*1.00*				
C_b	*1.07*	*1.07*				
E	1,600,000 psi	1,600,000 psi				
Emin	580,000 psi	580,000 psi				
Allowable Stress:						
F'_b = $F_b C_d C_F C_r$ =	**2153 psi**	**1872 psi**				
F'_v = $F'_v C_d C_H$ =	**288 psi**	**288 psi**				
F^*_c = $F_c C_d C_F$ =	2376 psi	2376 psi				
F_{cE} = $(K_{cE} E')/(l_e/d)2$ =	960 psi	960 psi				
F'_c = $F_c C_d C_F C_p$ =	**862 psi**	**862 psi**				
$F'_{c\,perp}$ = $F_{c\,perp}$ Cb =	**668 psi**	**668 psi**				
E' = E =	**1600000 psi**	**1600000 psi**				
F_{bE} =	**2315 psi**	**2315 psi**				
Slenderness Ratio:	**≤ 50 OK**	**≤ 50 OK**				
R_B =	**17**	**17**				
Bending:	**≤ F'b OK**	**≤ F'b OK**				
M = $w L^2/8 + P e/12$ =	238 ft-lbs	1047 ft-lbs				
f_b = M/S =	**378 psi**	**1661 psi**				
S =	8 in^3	8 in^3				
Shear:	**≤ F'v OK**	**≤ F'v OK**				
V = w L/2 =	93 lbs	408 lbs				
f_v = 1.5 V/A =	**17 psi**	**74 psi**				
A =	8 in^2	8 in^2				
Compression:	**≤ F'c OK**	**≤ F'c OK**				
f_c = P/A =	**388 psi**	**6 psi**				
Compression (perp.):	**≤ F'c OK**	**≤ F'c OK**				
$f_{c\,perp}$ = P/A =	**388 psi**	**6 psi**				
Combined:	**≤ 1.0 OK**					
(fc/Fc)2 + {fb/[Fb(1-(fc/FcE))]} =	0.50					
Deflection:	**≥ 180 OK**	**≥ 180 OK**				
D = 22.5 w L^4/E' I =	**0.14 in**	**0.59 in**				
I =	21 in^4	21 in^4				
SPAN /	**908**	**207**				

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

Load Duration Factor: *1.6*
Max Vert. Load: *50 lbs*

Max Deflection: *L/180*

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

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

WOOD TRIMMER ALLOWABLE LOADS (kips):

Load Duration Factor: *1.0*
Eccentricity: *0"*

Weak Axis Braced: *Y*

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

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

Individual Footing Design

Program: ***Continuous Footing***

Soil Bearing Pressure: *1500psf*

Roof				
Roof Dead	*(17psf)*	*(5.0ft)*	=	**85plf**
Snow Live	*(120psf)*	*(5.0ft)*	=	**600plf**

Upper Floor				
Floor Dead	*(12psf)*	*(2.0ft)*	=	**24plf**
Floor Live	*(40psf)*	*(2.0ft)*	=	**80plf**

Main Floor				
Floor Dead	*(12psf)*	*(.0ft)*	=	**plf**
Floor Live	*(40psf)*	*(.0ft)*	=	**plf**

Deck Cover				
Roof Dead	*(17psf)*	*(.0ft)*	=	**plf**
Snow Live	*(120psf)*	*(.0ft)*	=	**plf**

Deck Floor				
Floor Dead	*(12psf)*	*(.0ft)*	=	**plf**
Snow Live	*(120psf)*	*(.0ft)*	=	**plf**

Misc				
Wall Load:	*(12psf)*	*(10.5ft)*	=	**126plf**
Conc Stem:	*(145pcf)*	*(2 x .5ft)*	=	**145plf**
Misc Load:	*(.0ft)*	*(.0ft)* *(.0ft)*	=	**plf**

980plf

Use Footing Width:	**12**	**x**	**8**	**in**
W/		**(2)**	**#4**	**Cont.**

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

Completed by: TDS
Review/Check: KKJ

Project Name: Glasby Garage
SRE Project #: 2023-4981
City and State: Valley County, Idaho

Individual Footing Design

Program: ***Continuous Footing***

Soil Bearing Pressure: *1500psf*

Roof				
Roof Dead	*(17psf)*	*(16.1ft)*	=	**274plf**
Snow Live	*(120psf)*	*(16.1ft)*	=	**1935plf**

Upper Floor				
Floor Dead	*(12psf)*	*(8.3ft)*	=	**100plf**
Floor Live	*(40psf)*	*(8.3ft)*	=	**333plf**

Main Floor				
Floor Dead	*(12psf)*	*(.0ft)*	=	**plf**
Floor Live	*(40psf)*	*(.0ft)*	=	**plf**

Deck Cover				
Roof Dead	*(17psf)*	*(.0ft)*	=	**plf**
Snow Live	*(120psf)*	*(.0ft)*	=	**plf**

Deck Floor				
Floor Dead	*(12psf)*	*(.0ft)*	=	**plf**
Snow Live	*(120psf)*	*(.0ft)*	=	**plf**

Misc				
Wall Load:	*(12psf)*	*(10.5ft)*	=	**126plf**
Conc Stem:	*(145pcf)*	*(2 x .5ft)*	=	**145plf**
Misc Load:	*(.0ft)*	*(.0ft)* *(.0ft)*	=	**plf**

2580plf

Use Footing Width:	**24**	**x**	**8**	**in**
W/		**(2)**	**#4**	**Cont.**

PAD FOOTING DESIGN CAPACITIES:

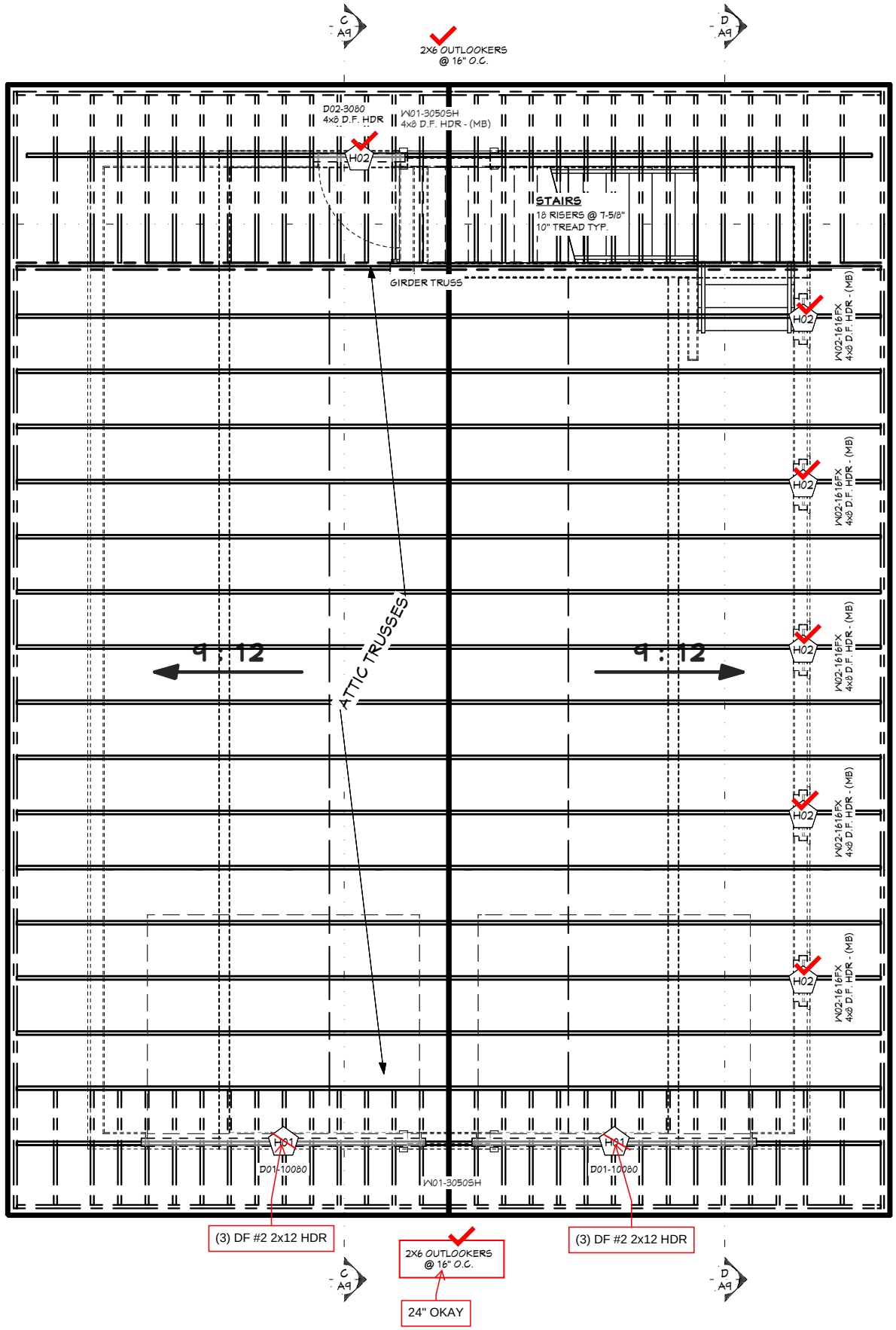
Soil Bearing (1500 psf)			
Dimensions (Inches)	Capacity	# of Bars	Min. Col. Size
72 x 72 x 12	47,500 lbs	10	3.5 sq.
66 x 66 x 12	39,750 lbs	8	3.5 sq.
60 x 60 x 10	33,450 lbs	6	3.5 sq.
54 x 54 x 10	27,000 lbs	5	3.5 sq.
48 x 48 x 8	21,500 lbs	4	3.5 sq.
42 x 42 x 8	16,500 lbs	4	3.5 sq.
36 x 36 x 8	12,000 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.

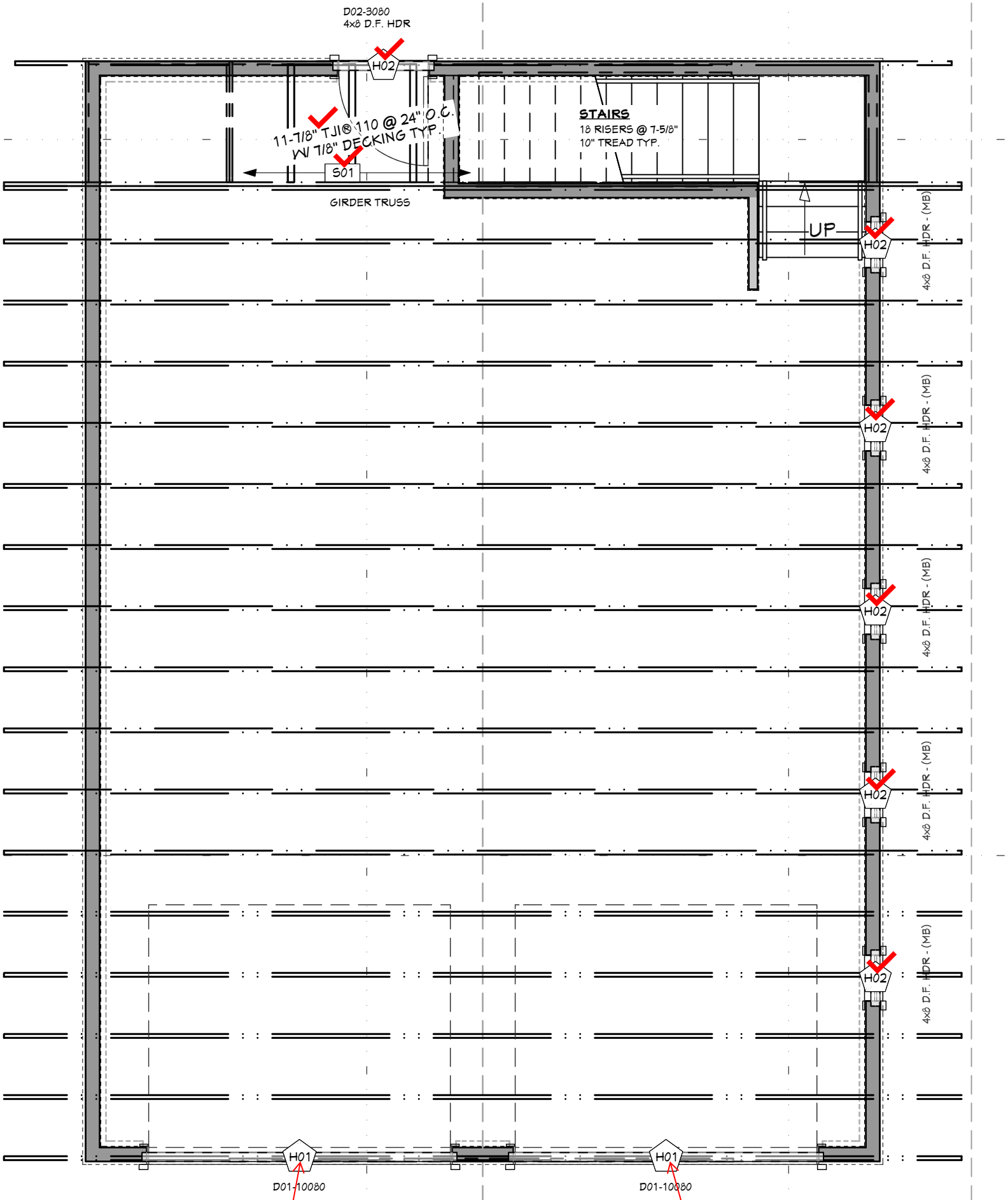
CONT. FOOTING DESIGN CAPACITIES:

Soil Bearing (1500 psf)				
Dimensions (Inches)			Capacity	# of Bars
60	x	10	6,850 plf	6
54	x	10	6,200 plf	5
48	x	10	5,500 plf	4
42	x	10	4,750 plf	4
36	x	10	4,000 plf	3
30	x	10	3,400 plf	3
24	x	8	2,800 plf	2
18	x	8	2,100 plf	2
16	x	8	1,850 plf	2
12	x	8	1,350 plf	2

Bars to be 3 1/2" from bottom of footing.

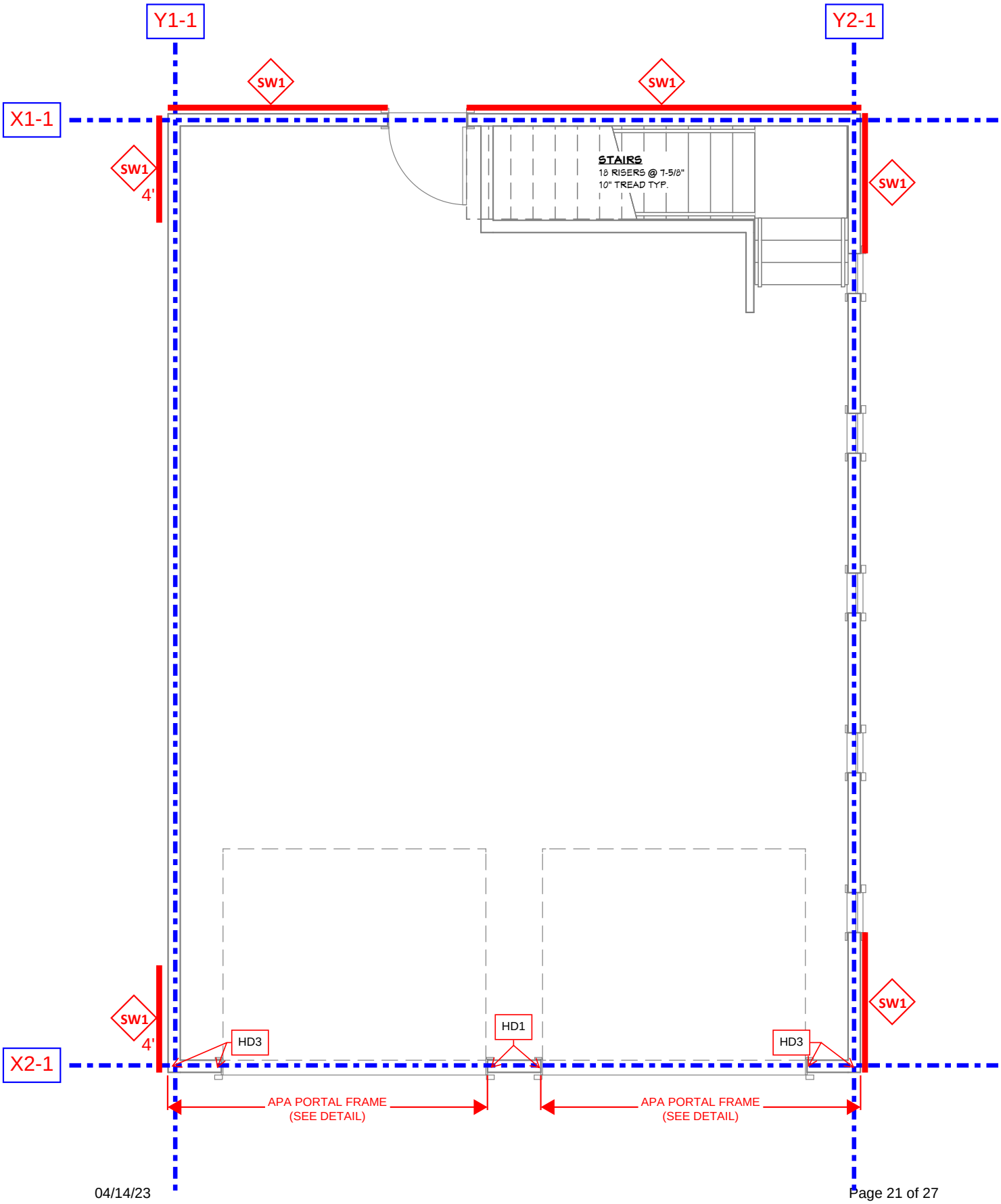


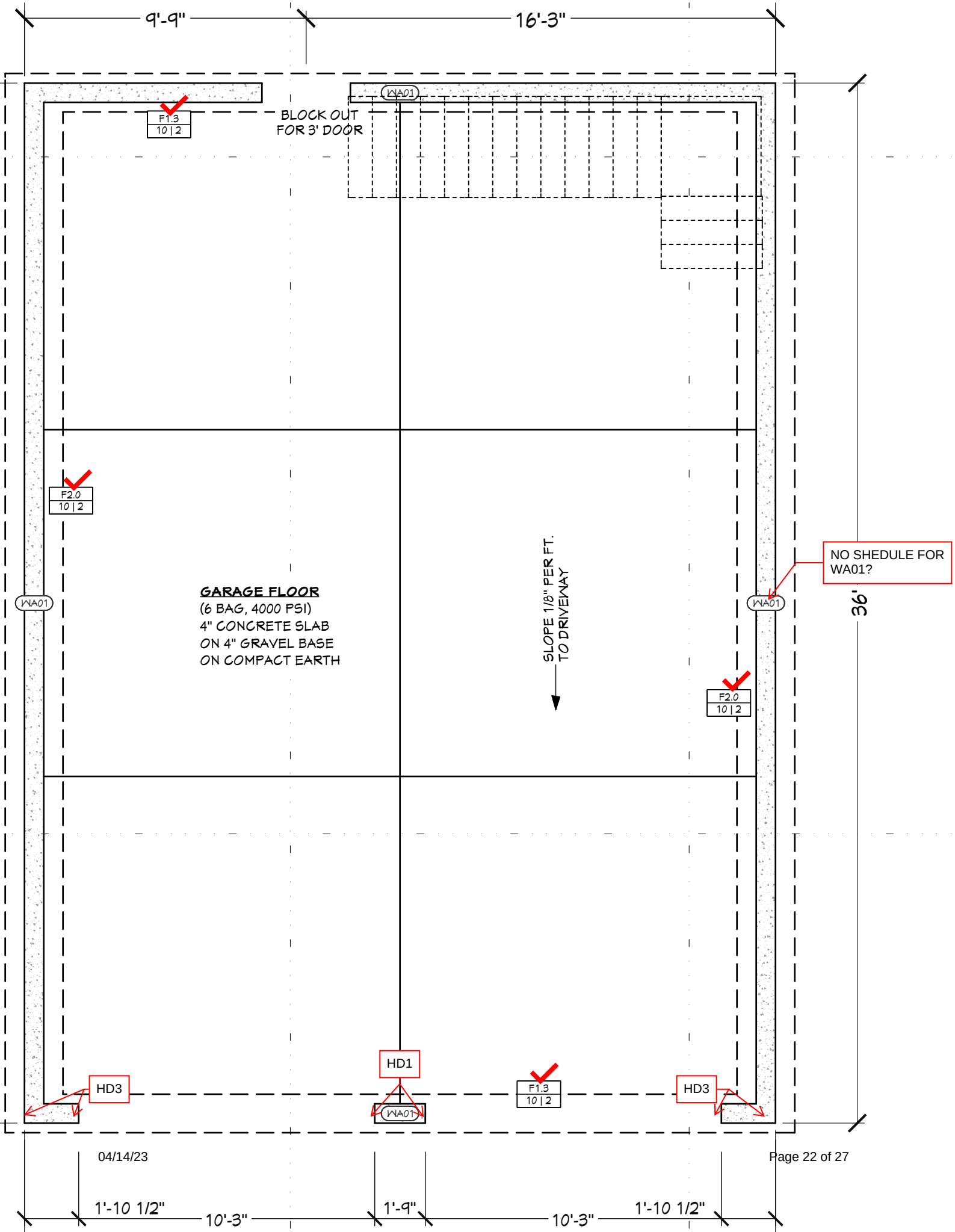
EXTERIOR WALLS:
DF #2 2x6 STUDS @ 16" O.C. W/
(1) KING STUD & (1) TRIMMER @ EACH END OF EACH OPENING U.N.O.

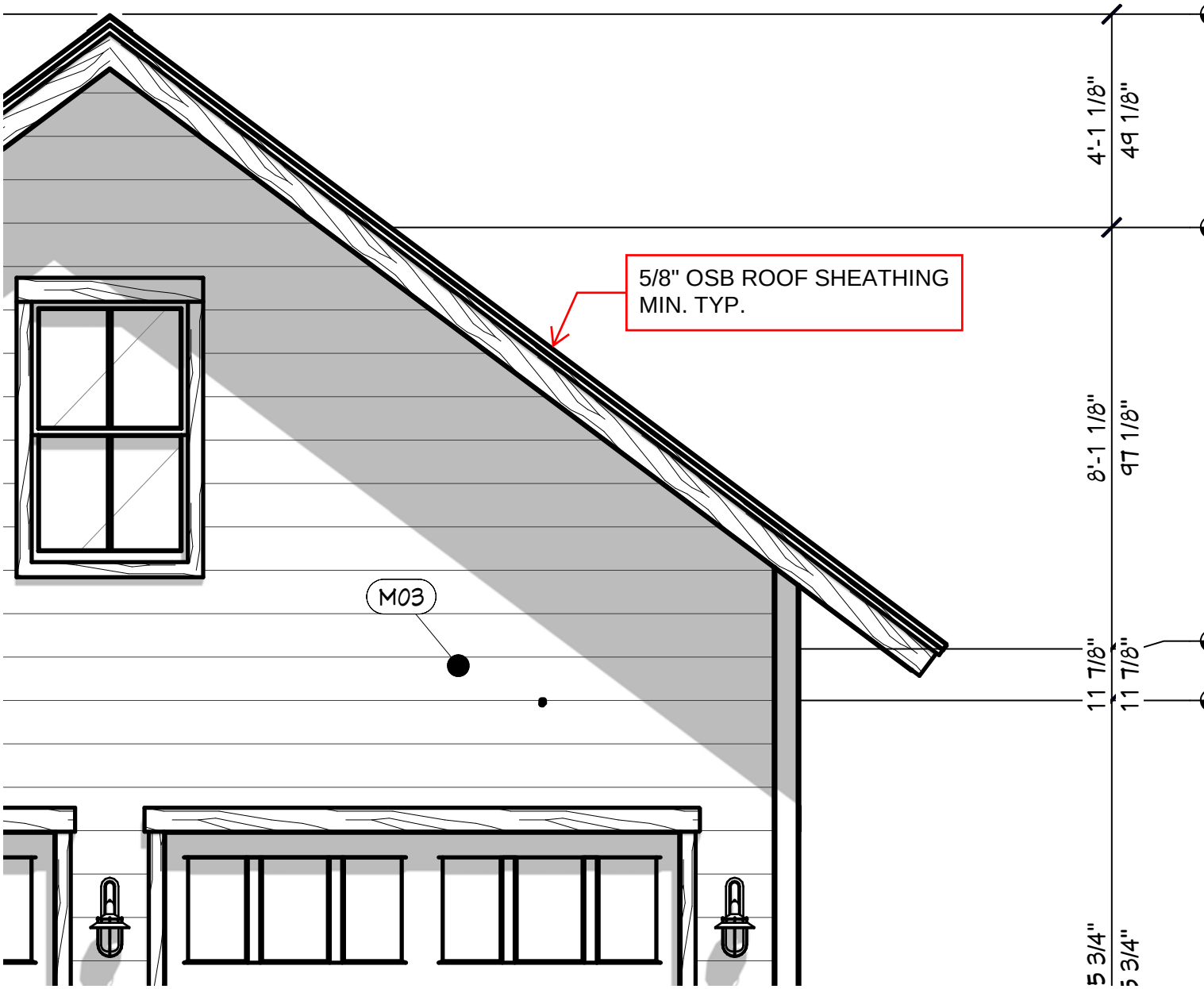


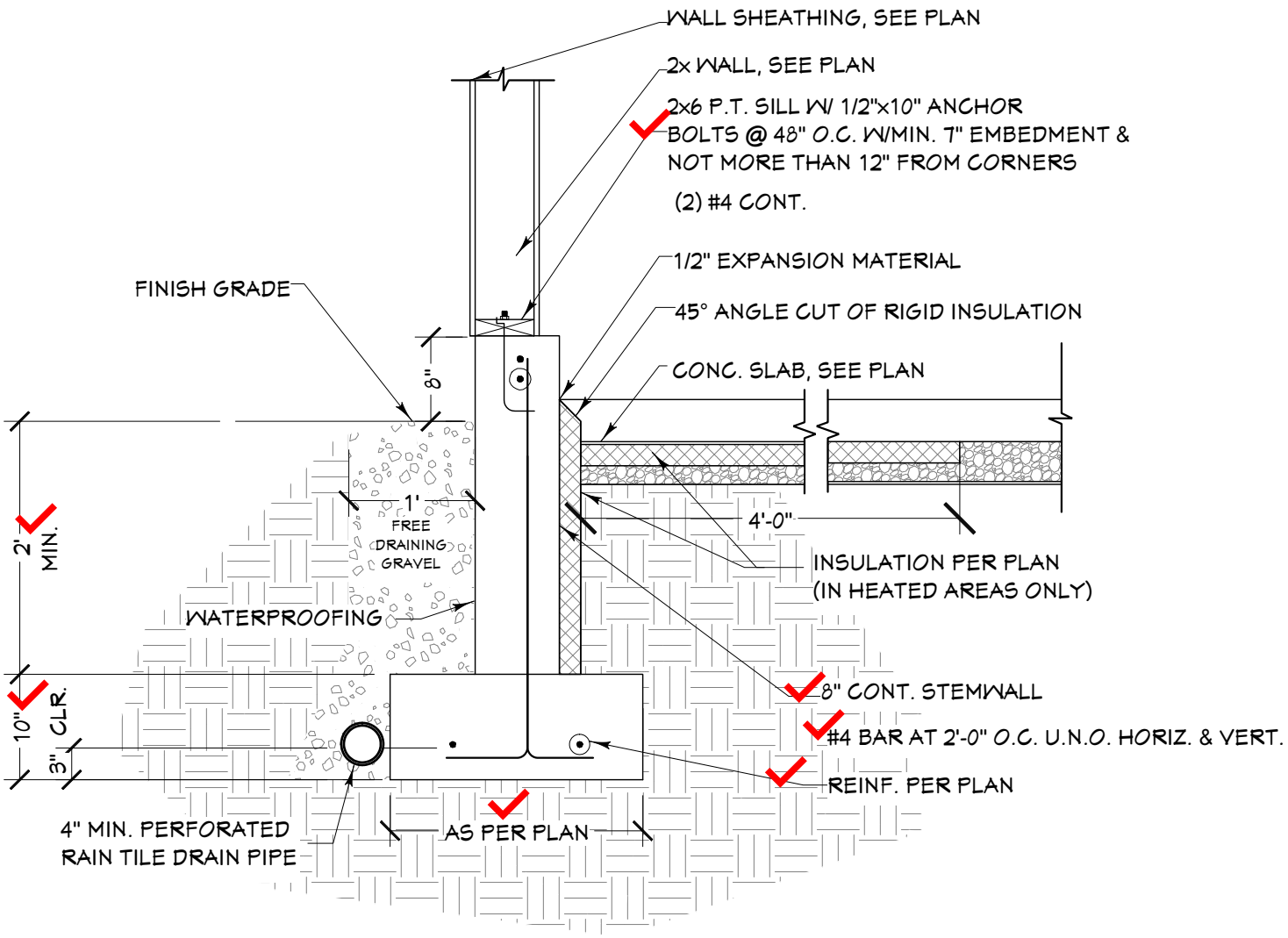
(3) DF #2 2x12 HDR

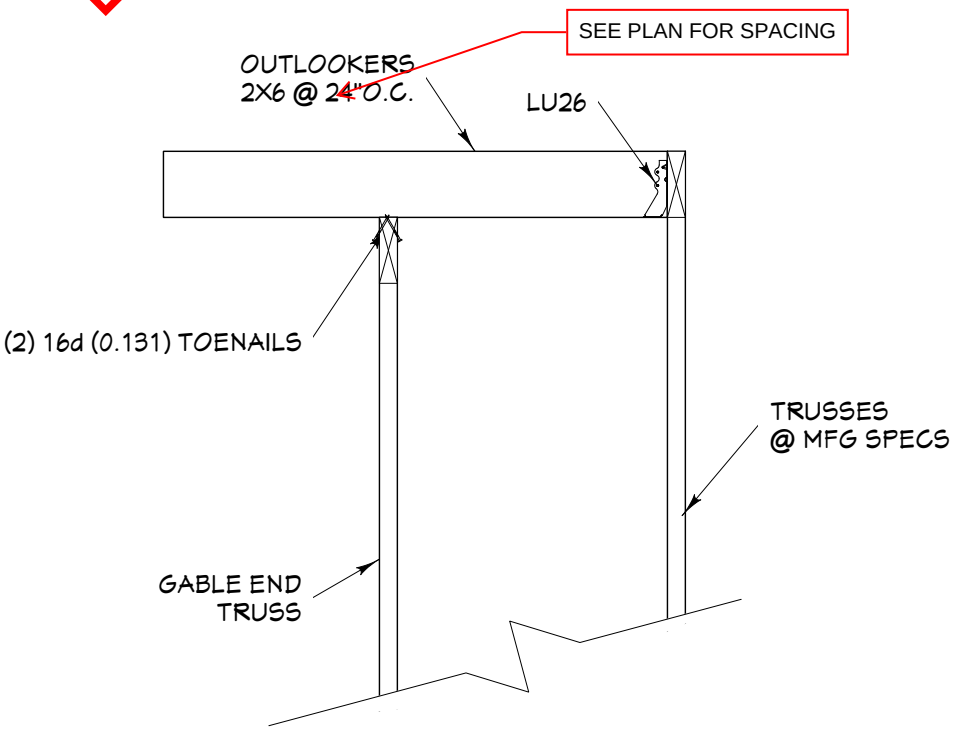
(3) DF #2 2x12 HDR


Y1-1
Y2-1
X1-1
X2-1
SW1
SW1
SW1
4'
SW1
SW1
4'
SW1
STAIRS
18 RISERS @ 7-5/8"
10" TREAD TYP.
HD3
HD1
HD3
APA PORTAL FRAME
(SEE DETAIL)
APA PORTAL FRAME
(SEE DETAIL)


9'-9"
16'-3"
F1.3
10 | 2
BLOCK OUT
FOR 3' DOOR
WA01
F2.0
10 | 2
WA01
GARAGE FLOOR
(6 BAG, 4000 PSI)
4" CONCRETE SLAB
ON 4" GRAVEL BASE
ON COMPACT EARTH
SLOPE 1/8" PER FT.
TO DRIVEWAY
WA01
F2.0
10 | 2
NO SHEDULE FOR
WA01?
36'
HD3
HD1
F1.3
10 | 2
HD3
WA01
1'-10 1/2"
10'-3"
1'-9"
10'-3"
1'-10 1/2"

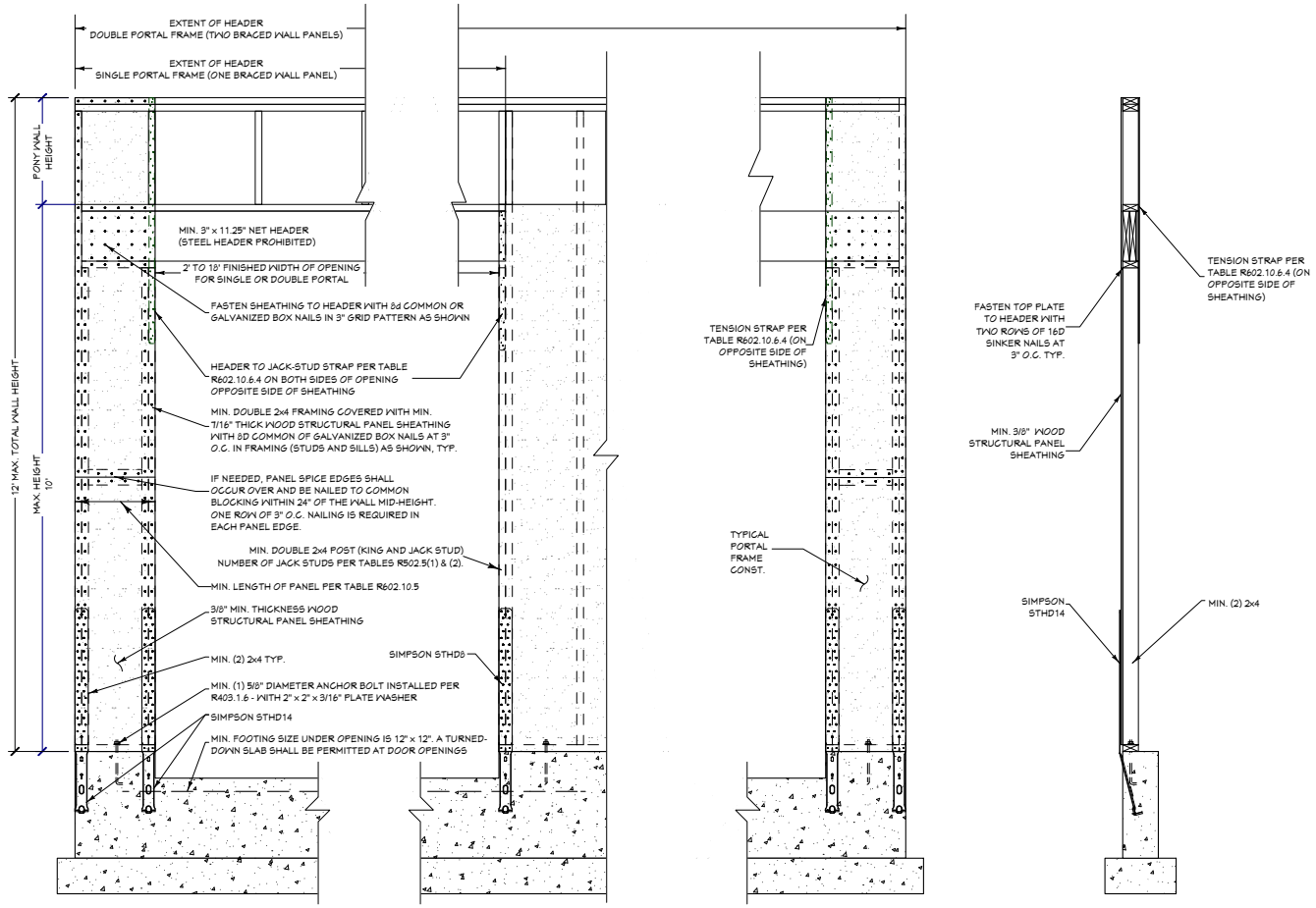

5/8" OSB ROOF SHEATHING
MIN. TYP.
M03
4'-1 1/8"
49 1/8"
8'-1 1/8"
97 1/8"
11 7/8"
11 7/8"
5 3/4"


WALL SHEATHING, SEE PLAN
2x WALL, SEE PLAN
2x6 P.T. SILL W/ 1/2"x10" ANCHOR BOLTS @ 48" O.C. W/MIN. 7" EMBEDMENT & NOT MORE THAN 12" FROM CORNERS
(2) #4 CONT.
1/2" EXPANSION MATERIAL
45° ANGLE CUT OF RIGID INSULATION
CONC. SLAB, SEE PLAN
FINISH GRADE
8"
1'
FREE DRAINING GRAVEL
4'-0"
2' MIN.
INSULATION PER PLAN (IN HEATED AREAS ONLY)
WATERPROOFING
8" CONT. STEMWALL
#4 BAR AT 2'-0" O.C. U.N.O. HORIZ. & VERT.
10"
3" CLR.
REINF. PER PLAN
4" MIN. PERFORATED RAIN TILE DRAIN PIPE
AS PER PLAN



OUTLOOKER DETAIL

3/4 IN = 1 FT



PORTAL FRAME DETAIL

3/8 IN = 1 FT

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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	YES	(2) 16d NAILS 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)

HOLDOWN SCHEDULE:

MARK	STRAP TYPE	STRAP FASTENERS	# OF STUDS		ANCHOR BOLT	# OF STUDS	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
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

HANGER SCHEDULE

CALLOUT	MODEL	TOP NAILS	SEAT LG.	MEMBER NAILS	FACE NAILS
S01	IUS1.81/11.88	N/A	2.00"	2-STRONG-GRIP	10-10DX1.5

HEADER SCHEDULE

NO.	TYPE
H01	(1) 3 1/2 X 12 1/16 D.F.
H02	(1) 4X8 D.F.

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 | 2	24" X 10"	(2) #4 CONT. REBAR