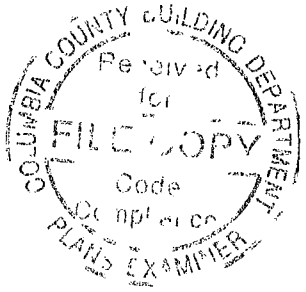
Schafer Engineering LLC

14952 Main St. Alachua FL 32615



Prepared for:

O'NEAL CONSTRUCTION
PAT & SHARON REEVES RESIDENCE
417 SW HILLTOP TERRACE
FORT WHITE, FLORIDA

By:

Schafer Engineering, LLC

386-462-1340 / 352-375-6329

NO COPIES ARE TO BE PERMITTED

SCHAFER ENGINEERING, LLC

7104 NW 42ND LANE \ GAINESVILLE FL. 32606
PHONE: 386-462-1340 \ 352-375-6329

Trusses Pre-engineered, pre-fabricated with the manufacturer's required bracing system installed

Roof Sheathing Type OSB Size 7/16" Fastener type nails 8d / 113 Ring Shank

Interior zone spacing Interior 6" Periphery 4"

Edge and end zone spacing Interior 6" Periphery 4"

Double Top Plate Type Spruce Grade #1 #2 Size 2 x 4 Nail Spacing 8" o c

Stud Type Spruce Grade #1 #2 Size 2 x 4

Interior stud spacing 16" End stud spacing 16"

Shear Wall Siding Type OSB Thickness 7/16"

79 ft Trans Fastener 8d/131 Spacing Int 8 Edge 4"

35 ft Long Fastener 8d/131 Spacing Int 8 Edge 4"

Allowable Unit Shear on Shear Walls 314 pounds per linear foot

Unit Shear Transferred from Diaphragm Trans 142 Long 102

Wall Tension Transferred by Siding Nails 8d/131 @ 4" O C Edges

Foundation Anchor Bolts Concrete Strength 3000 psi Size 1/2"

Washer 2" Embedment 7" Location of first anchor bolt from corner 8"

Anchor Bolts @ 48" o c Model A307 Loc from corner 8"

Type of Foundation (1) - #5 rebar continuous required in bond beam

Floor Slab 4" Cmu size 8" x 16" Height 24" Rein #5 at 72" o c

Monolithic Footing Depth 20" Bottom Width 16 Rein 3 #5 rebars

Stemwall Footing Width 20 Depth 10 Rein 3 #5 rebar

Interior Footings 16" Wide X 10" Deep with 2-#5 rebar continuous

Special Comments All window and door headers to be 2 ply 2 x 12 syp # with 7/1" osb flitch

Install 6 x 6 x 9' lvl columns with max span of 13' Simpson CB66 or equal for column to pad foundation Install 36" x 36" 24" deep 3000 psi concrete pad with (5) #5 rebar each way

Truss company to size and supply floor system and lvl headers

Notes

1 All walls to be nailed with same nailing pattern as the shear walls
2 This wind load is not valid without a raised, embossed seal (NO COPIES)
3 1500 psf soil bearing pressure minimum
4 Fiber mesh or WWM may be used in concrete slab All steel must be grade 40 min
5 Trusses must be installed and anchored in accordance to the truss engineering
6 All headers spanning over 12' must be pre-engineered
7 The foundatioin is for minimum design use, and may be increased
8 Wind load is for one use only \ FBC-2010 \ No copies permitted

9-18-13

Bruce Schafer, P E #48984
7104 NW 42ND LN
GAINESVILLE, FL 32606

SCHAFER ENGINEERING, LLC

7104 N.W. 42ND LN GAINESVILLE, FL 32606 PH: 386-462-1340

September 18, 2013

SUMMARY: 5' X 10' Open Front Porch \ Reeves Residence \ O'Neal Construction
Wind Speed: 135 M.P.H. \ No Copies Permitted \ FBC-2010 \ Not Valid without raised seal

Foundation:

Stem wall footing: 20" deep x 12" wide with (2) #5 rebar continuous.

Columns:

4" x 4" x 8' @ 60" maximum bearing spacing. Simpson CB44 \ LCE44 or equal.

Rafters:

2 x 6 syp #2 rafters # 24" o.c. with 6' max. span. Install 2 x 6 syp #2 collar ties with (4) 12d nails min. for each collar tie to rafter connection. Simpson H-10 or equal for header to rafter connection.

Install 2 x 12 ridge beam with maximum span of 5'0". Simpson HUS210 or equal.

Header:

Install 2 ply 2 x 12 syp #2 header with a maximum clear span of 10'-0" \ Simpson (2) LCE4 or equal for header to rafter connection.

Roof Sheathing:

7/16" osb minimum attached to the top chords of the rafters with 8d/113 gauge ring shank nails spaced at 4" o.c. edges and 6" interior. Install ceiling diaphragm with the same nail size, nail patterns and the same grade material as the roof sheathing.

9-18-13

Bruce Schafer, P.E. #48984
7104 N.W. 42nd Ln.
Gainesville, Florida, 32606

SCHAFER ENGINEERING, LLC

7104 N.W. 42ND LN GAINESVILLE, FL 32606 PH: 386-462-1340

September 17, 2013

SUMMARY: 22' X 14' Open Rear Porch \ Reeves Residence \ O'Neal Construction
Wind Speed: 135 M.P.H. \ No Copies Permitted \ FBC-2010 \ Not Valid without raised seal

Foundation:

36" x 36" x 30" concrete wrap with (4) layers of (4) #5 rebar installed into the column in opposing directions. The treated posts must have a minimum embedment of 27" in the depth of the concrete pads.

Columns:

6" x 6" x 8'-0" @ 22'-0" maximum spacing using (2) Simpson LCE4 or equal.

Trusses

Install pre-engineered, pre-fabricated trusses with the manufactures required bracing system. Install a ceiling diaphragm using the same nail pattern, nail spacing and the same grade material as the roof sheathing.

Sheathing:

Install 7/16" osb minimum sheathing on the top chords of the trusses using 8d / 113 gauge nails at 4" o.c. edges and 6" interior.

Headers:

Install (2) ply 1.75 x 16 deep lvl open rear porch headers with a maximum span of 22'-0".

9-18-17

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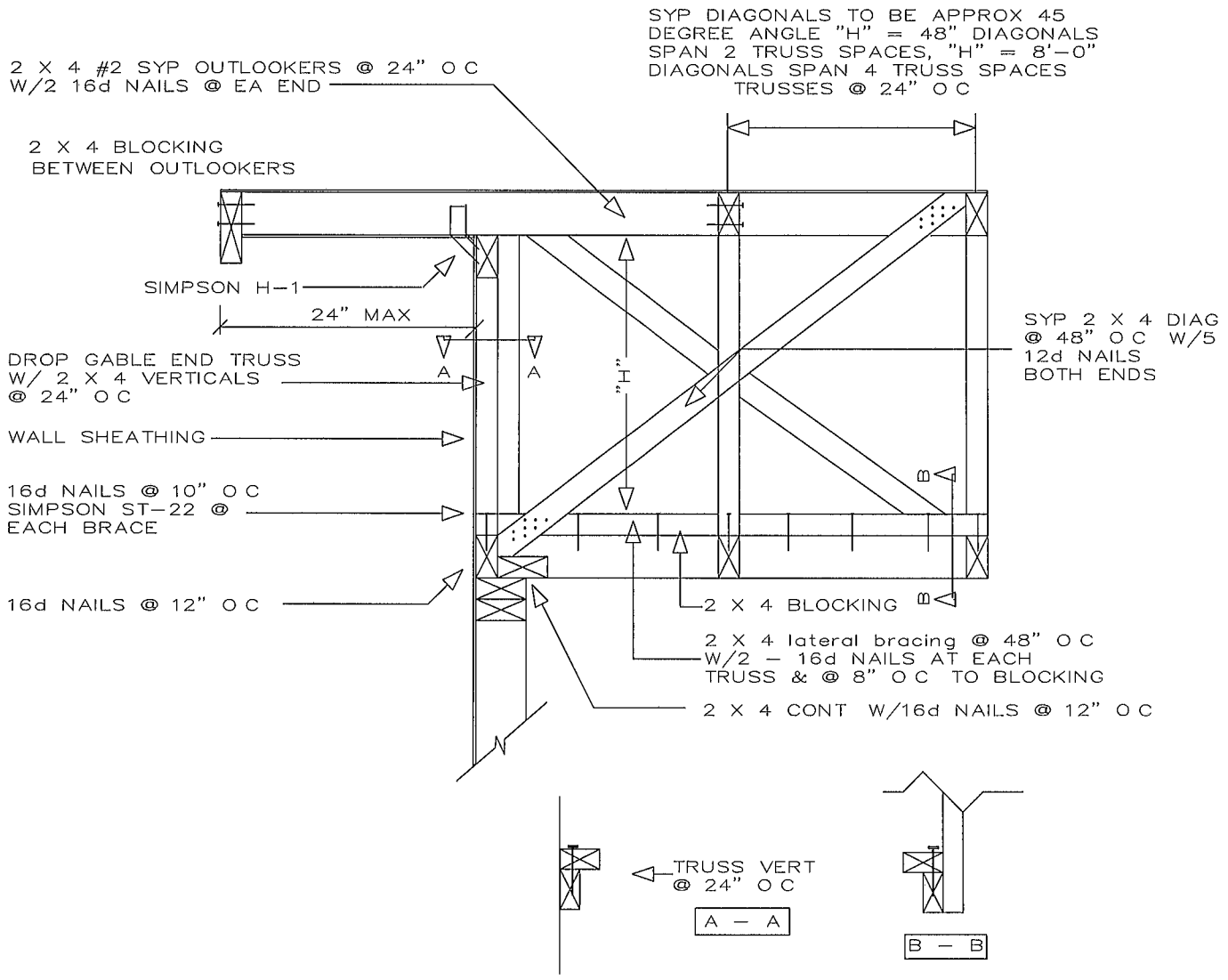

TYPICAL GABLE END BRACING

9-18-17

Bruce Schafer, P E #48984
7104 NW 42ND LN
GAINESVILLE, FL 32606

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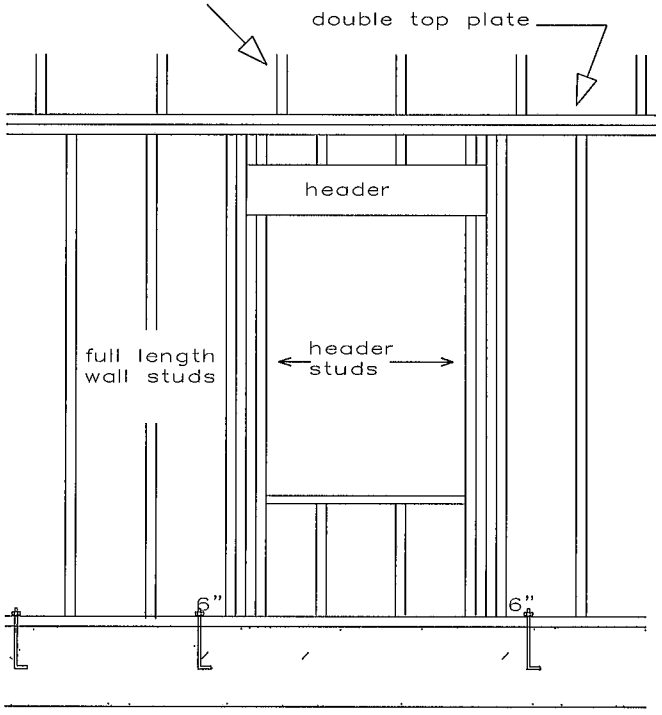
see truss engineering for required anchorage from truss to top plate and bracing system to be installed



total each truss uplift on the header and divide by two for header and header stud anchorages

		Maximum Header Span (ft)					
		3'	6'	9'	12'	15'	18'
		Number of Header Studs Supporting End of Header					
		1	1	2	2	2	2
Unsupported Wall Height	Stud Spacing	Number of Full Length Studs at Each End of Header					
10'-0" or less	12"	2	2	3	3	3	3
	16"	2	2	3	3	3	3
	24"	1	2	2	2	2	2
Greater than 10'-0"	12"	2	2	3	4	5	5
	16"	2	2	3	3	4	4
	24"	1	2	2	2	3	3

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TIE-DOWN TABLES

HEADER STRAPPING				
Uplift Lbs	Top Connector	Rating Lbs	Bottom Connector	Rating Lbs
to 455	LSTA19	635	H3	320
to 910	LSTA12	795	2-H3	640
to 1265	LSTA18	1110	LTT19	1305
to 1750	2-LSTA12	1810	LTT20	1750
to 2530	2-LSTA18	2530	HD2A-2 5	2165
to 2865	3-LSTA18	3255	HD2A-3 5	2865
to 3700	3-LSTA24	3880	HD5A-3	3130

Total the uplift for each truss sitting on the header and divide by 2 to determine the uplift on the header Use proper bolt anchors sufficient to support required uplift loads

TRUSSES \ GIRDERS			
Uplift Lbs	Top Connector	Bottom Connector	Rating Lbs
to 535	H2 5A	NA	
to 1015	H10A	NA	
to 1215	TS22	LTT19	1305
to 1750	2-TS22	LTT20	1750
to 2570	2-TS22	HD2A	2775
to 3665	3-TS22	HD5A	4010
to 5420	2-MST37	HTT22	5250
to 9660	2-MST60	HD10A	9540

Two 12d common toenials are required per truss for each bearing point into top plate
It is the contractors responsibility to provide a continuous load path from truss to foundation

	TOP CONNECTOR	RATING LBS	BOTTOM CONNECTOR	RATING LBS
BEAM SEATS	LSTA18	1110	LTT19	1305
POSTS	2-LSTA18	2220	ABU44	2300

1 Simpson or equivlent hardware may be used
For nailing into spruce members multiply table values by 86

2 See truss engineering for anchor uplift values

3 This schedule is not meant to be a replacement to the specified values of any manufactures values

Bruce Schafer, P E #48984
7104 NW 42ND LN
GAINESVILLE, FL 32606

Wind Load Design per ASCE 7-05

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	135	mph
Structural Category	II	
Exposure	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof (Theta)	4.67	Deg
Type of Roof	Gabled	
Eave Height (Eht)	17.33	ft
Ridge Height (RHt)	22.67	ft
Mean Roof Height (Ht)	20.08	ft
Width Perp. to Wind (B)	65.08	ft
Width Parallel to Wind (L)	67.33	ft
Damping Ratio (beta)	0.01	

Red values should be changed only through "Main Menu"

Calculated Parameters		
Importance Factor	1	
Non-Hurricane, Hurricane (v=85-100 mph) & Alaska		
Table C6-4 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Am =	0.250	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.31
Flexible Structure	No

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.8842	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8567	
Gust Factor Category III: Flexible or Dynamically Sensitive Structures			
Vhref	V*(5280/3600)	198.00	ft/s
Vzm	bm*(zm/33)^Am*Vhref	87.00	ft/s
NF1	NatFreq*Lzm/Vzm	3.56	Hz
Rn	(7.47*NF1)/(1+10.302*NF1)^1.667	0.0627	
Nh	4.6*NatFreq*Ht/Vzm	1.06	
Nb	4.6*NatFreq*B/Vzm	3.44	
Nd	15.4*NatFreq*Depth/Vzm	11.92	
Rh	1/Nh-(1/(2*Nh^2)*(1-Exp(-2*Nh)))	0.5514	
Rb	1/Nb-(1/(2*Nb^2)*(1-Exp(-2*Nb)))	0.2484	
Rd	1/Nd-(1/(2*Nd^2)*(1-Exp(-2*Nd)))	0.0804	
RR	((1/Beta)*Rn*Rh*Rb*(0.53+0.47*Rd))^0.5	0.6985	
gg	+(2*LN(3600*n1))^0.5+0.577/(2*LN(3600*n1))^0.5	4.19	
Gust3	0.925*((1+1.7*Izm*(3.4^2*Q^2+GG^2*RR^2)^0.5)/(1+1.7*3.4*Izm))	1.06	

Gust Factor Summary			
Main Wind-force resisting system:		**Components and Cladding:**	
Gust Factor Category:	I	Gust Factor Category:	I
Gust Factor (G)	0.86	Gust Factor (G)	0.86

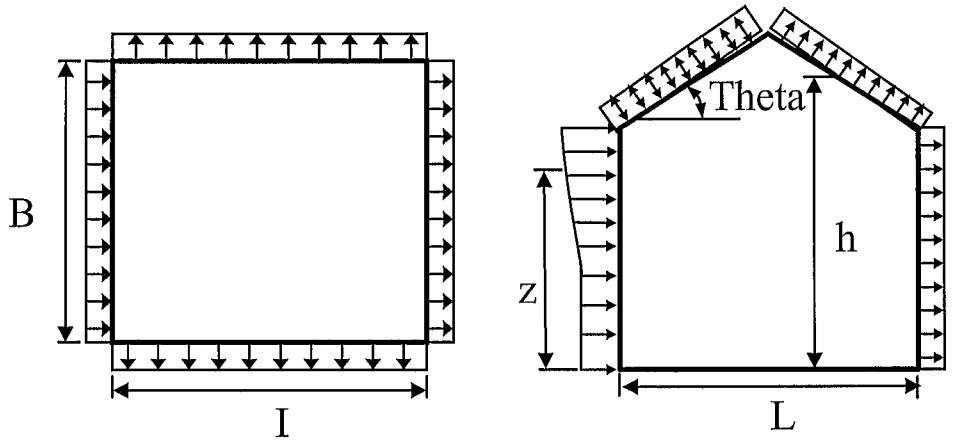
Wind Load Design per ASCE 7-05

6.5.12.2.1 Design Wind Pressure - Buildings of All Heights (Non-flexible)

Elev. ft	Kz	Kzt	Kd 1.00	qz lb/ft^2	Pressure (lb/ft^2) Windward Wall* +GCpi	-GCpi
22.67	0.70	1.00	1.00	32.69	17.16	27.65
20.08	0.70	1.00	1.00	32.69	17.16	27.65
20	0.70	1.00	1.00	32.69	17.16	27.65
17.33	0.70	1.00	1.00	32.69	17.16	27.65
15	0.70	1.00	1.00	32.69	17.16	27.65

Figure 6-3 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems



Variable	Formula	Value	Units
Kh	2.01*(Ht/zg)^(2/Alpha)	0.62	
Kht	Topographic factor (Fig 6-2)	1.00	
Qh	.00256*(V)^2*ImpFac*Kh*Kht*Kd	29.14	psf

Wall Pressure Coefficients, Cp	
Surface	Cp
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.80

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Description	Cp	Pressure (psf) +GCpi	-GCpi
Leeward Walls (Wind Dir Parallel to 65.08 ft wall)	-0.49	-17.56	-7.06
Leeward Walls (Wind Dir Parallel to 67.33 ft wall)	-0.50	-17.73	-7.24
Side Walls	-0.70	-22.72	-12.23
Roof - Normal to Ridge (Theta<10)			
Dist from Windward Edge: 0 ft to 10.04 ft	-0.90	-27.72	-17.22
Dist from Windward Edge: 10.04 ft to 20.08 ft	-0.90	-27.72	-17.22
Dist from Windward Edge: 20.08 ft to 40.16 ft	-0.50	-17.73	-7.24
Dist from Windward Edge: > 40.16 ft	-0.30	-12.74	-2.24
Roof - Parallel to Ridge (All Theta)			
Dist from Windward Edge: 0 ft to 10.04 ft	-0.90	-27.72	-17.22
Dist from Windward Edge: 10.04 ft to 20.08 ft	-0.90	-27.72	-17.22
Dist from Windward Edge: 20.08 ft to 40.16 ft	-0.50	-17.73	-7.24
Dist from Windward Edge: > 40.16 ft	-0.30	-12.74	-2.24

* Horizontal distance from windward edge

Wind Load Design per ASCE 7-05

Figure 6-4 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(Ht/zg)^(2/Alpha)	=	0.62
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	29.14

Case A						
Surface	**GCpf**	**+GCpi**	**-GCpi**	**qh (psf)**	**Min P (psf)**	**Max P (psf)**
1	0.40	0.18	-0.18	32.69	7.19	18.96
2	-0.69	0.18	-0.18	32.69	-28.44	-16.67
3	-0.37	0.18	-0.18	32.69	-17.98	-6.21
4	-0.29	0.18	-0.18	32.69	-15.36	-3.60
5	0.00	0.18	-0.18	32.69	-5.88	5.88
6	0.00	0.18	-0.18	32.69	-5.88	5.88
1E	0.61	0.18	-0.18	32.69	14.06	25.82
2E	-1.07	0.18	-0.18	32.69	-40.86	-29.09
3E	-0.53	0.18	-0.18	32.69	-23.21	-11.44
4E	-0.43	0.18	-0.18	32.69	-19.94	-8.17
5E	0.00	0.18	-0.18	32.69	-5.88	5.88
6E	0.00	0.18	-0.18	32.69	-5.88	5.88

* p = qh * (GCpf - GCpi)

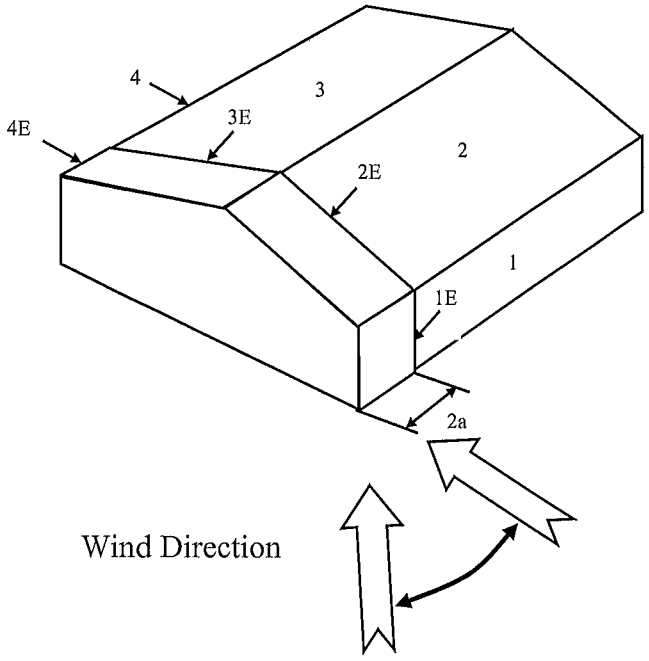


Figure 6-4 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(Ht/zg)^(2/Alpha)	=	0.62
Kht =	Topographic factor (Fig 6-2)	=	1.00

Wind Load Design per ASCE 7-05

Qh = 0.00256*(V)^2*ImpFac*Kh*Kht*Kd = 29.14

Case B						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	-0.45	0.18	-0.18	32.69	-20.59	-8.83
2	-0.69	0.18	-0.18	32.69	-28.44	-16.67
3	-0.37	0.18	-0.18	32.69	-17.98	-6.21
4	-0.45	0.18	-0.18	32.69	-20.59	-8.83
5	0.40	0.18	-0.18	32.69	7.19	18.96
6	-0.29	0.18	-0.18	32.69	-15.36	-3.60
1E	-0.48	0.18	-0.18	32.69	-21.57	-9.81
2E	-1.07	0.18	-0.18	32.69	-40.86	-29.09
3E	-0.53	0.18	-0.18	32.69	-23.21	-11.44
4E	-0.48	0.18	-0.18	32.69	-21.57	-9.81
5E	0.61	0.18	-0.18	32.69	14.06	25.82
6E	-0.43	0.18	-0.18	32.69	-19.94	-8.17

* p = qh * (GCpf - GCpi)

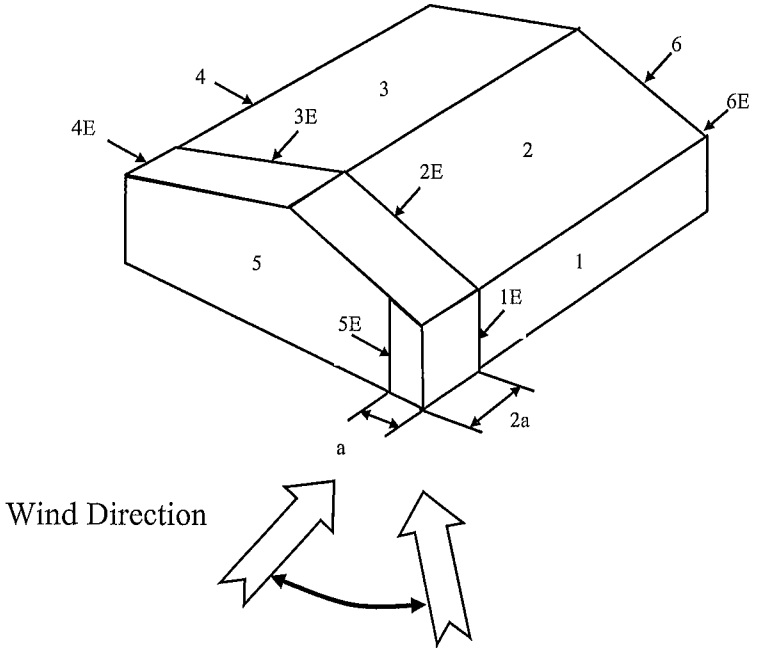
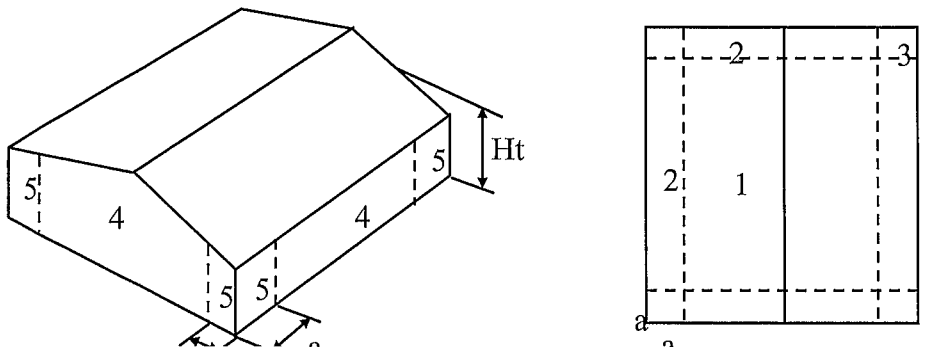
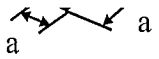


Figure 6-5 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft



Wind Load Design per ASCE 7-05



Gabled Roof
Theta <= 10

a = 6.508 ==> 6.51 ft

Component	Width (ft)	Length (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2)	
					Max	Min	Max	Min
	16	7	112.00	5	0.81	-1.03	28.99	-35.25
	0	0	0.00					
	0	0	0.00					
	0	0	0.00					
	0	0	0.00					
	0	0	0.00					
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	0	0	0.00					
	0	0	0.00					
	0	0	0.00					
	0	0	0.00					

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

Table 6-7 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

Table 6-9 Force Coefficients for Monoslope Roofs over Open Buildings, Cf

Variable	Description	Value	
L	Roof dimension normal to wind direction	67.33	ft
B	Roof dimension parallel to wind direction	65.08	ft
L/B	Ratio of L to B	1.035	
Theta	Slope of Roof	4.67	Deg

Wind Load Design per ASCE 7-05

Cf	Force Coefficient	0.00	
X	Distance to center of pressure from windward edge	0.00	ft

FORTE

JOB SUMMARY REPORT
Job.4te

01: Floor			
Member Name	**Results**	**Current Solution**	**Comments**
TJI24	Passed	1 Piece(s) 16" TJI® 360 @ 19 2" OC	
BM1	Passed	3 Piece(s) 1 3/4" x 16" 1 9E Microllam® LVL	
BM2	Passed	3 Piece(s) 1 3/4" x 16" 1 9E Microllam® LVL	

Forte Software Operator

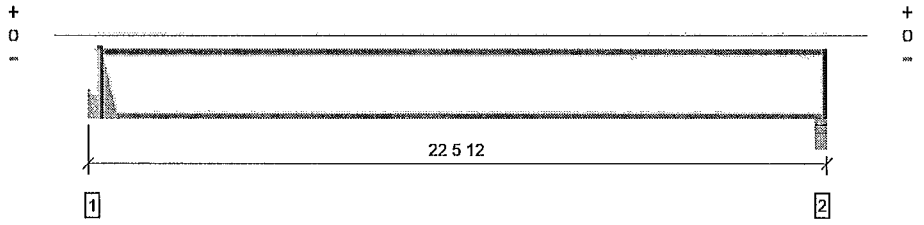
Kimber Holloway
Builders FirstSource
(386) 755-6894
kim holloway@bldr com

Job Notes

FORTE® **MEMBER REPORT** *Floor, TJI24* **PASSED**

1 piece(s) 16" TJI® 360 @ 19.2" OC

Overall Length 22 5 12



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	914 @ 0 3 8	1080 (1 75")	Passed (85%)	1 00	1 0 D + 1 0 L (All Spans)
Shear (lbs)	914 @ 0 3 8	2190	Passed (42%)	1 00	1 0 D + 1 0 L (All Spans)
Moment (Ft lbs)	5024 @ 11 3 6	8405	Passed (60%)	1 00	1 0 D + 1 0 L (All Spans)
Live Load Defl (in)	0 391 @ 11 3 6	0 733	Passed (L/674)	--	1 0 D + 1 0 L (All Spans)
Total Load Defl (in)	0 509 @ 11 3 6	1 099	Passed (L/519)	--	1 0 D + 1 0 L (All Spans)
TJ-Pro™ Rating	43	40	Passed		

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

- Deflection criteria LL (L/360) and TL (L/240)
- Bracing (Lu) All compression edges (top and bottom) must be braced at 4 3 12 o/c unless detailed otherwise Proper attachment and positioning of lateral bracing is required to achieve member stability
- 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 5/8 Gypsum ceiling, bridging or blocking at max 8' o.c.

Supports	Bearing			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 Hanger on 16" LVL beam	3 50"	Hanger[1]	1 75	217	722	939	See note [1]
2 - Stud wall SPF	3 50"	2 25'	1 75	215	717	932	1 1/4" Rim Board

- 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.

Connector: Simpson Strong-Tie Connectors						
Support	Model	Seat Length	Top Nails	Face Nails	Member Nails	Accessories
1 Top Mount Hanger	ITS2 37/16	2 00'	4-10d x 1 1/2	2-10d x 1 1/2	N/A	

Loads	Location	Spacing	Dead (0 90)	Floor Live (1.00)	Comments
1 Uniform(PSF)	0 0 0 to 22 5 12	19 2	12.0	40 0	Residential Living Areas

Weyerhaeuser Notes

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

SUSTAINABLE FORESTRY INITIATIVE

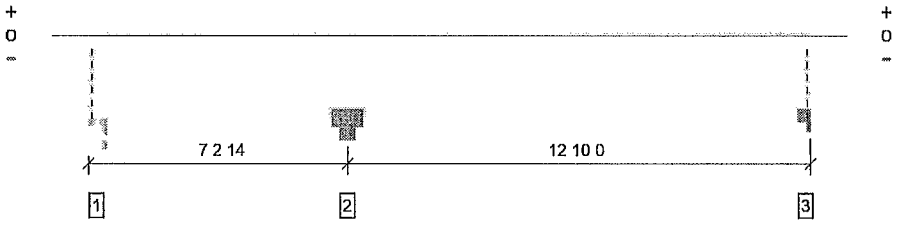
Forte Software Operator	Job Notes
Kimber Holloway Builders FirstSource (386) 755-6894 kim holloway@bldr com	

FORTE® **MEMBER REPORT** *Floor, BM1*

PASSED

3 piece(s) 1 3/4" x 16" 1.9E Microllam® LVL

Overall Length 20 0 14



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	19891 @ 7 2 14	35438 (9 00")	Passed (56%)		1 0 D + 0 75 L + 0 75 Lr (All Spans)
Shear (lbs)	8775 @ 8 11 6	19950	Passed (44%)	1 25	1 0 D + 0 75 L + 0 75 Lr (All Spans)
Moment (Ft-lbs)	22713 @ 7 2 14	58339	Passed (39%)	1 25	1 0 D + 0 75 L + 0 75 Lr (All Spans)
Live Load Defl (in)	0 106 @ 14 0 12	0 421	Passed (L/999+)		1 0 D + 0 75 L + 0 75 Lr (Alt Spans)
Total Load Defl (in)	0 191 @ 14 1 4	0 631	Passed (L/794)		1 0 D + 0 75 L + 0 75 Lr (Alt Spans)

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

- Deflection criteria LL (L/360) and TL (L/240)
- Bracing (Lu) All compression edges (top and bottom) must be braced at 16 10 13 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Roof Live	Total	
1 Column SPF	5 25"	5 25	1 50'	1117	1703/-912	1537/ 74	4357/ 986	Blocking
2 Column Cap steel	9 00'	9 00'	5 05'	9100	6446	7942	23488	None
3 Column Cap steel	4 00'	4 00'	2 08	3697	2701/-83	3278	9676/-83	Blocking

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

Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (non-snow: 1.25)	Comments
1 Uniform(PSF)	0 0 0 to 20 0 14	1 0 0	12 0	40 0		Residential Living Areas
2 Uniform(PLF)	0 0 0 to 20 0 14	N/A	135 0	451 0		TJI24
3 Uniform(PLF)	0 0 0 to 20 0 14	N/A	120 0			Wall Above
4 Uniform(PLF)	0 0 0 to 20 0 14	N/A	174 0		262 0	Roof Below
5 Uniform(PLF)	0 0 0 to 20 0 14	N/A	229 0		343 0	Roof Above

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SUSTAINABLE FORESTRY INITIATIVE

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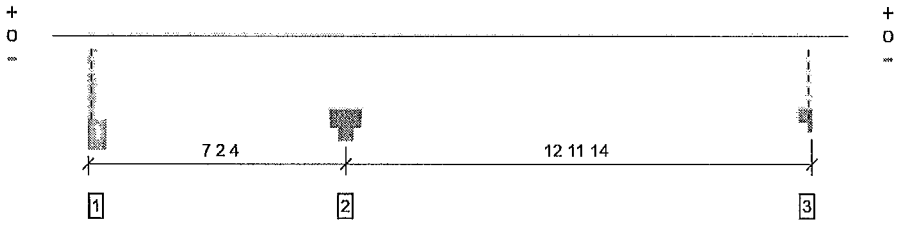
FORTE® **MEMBER REPORT** *Floor, BM2* **PASSED**

3 piece(s) 1 3/4" x 16" 1.9E Microllam® LVL

Overall Length: 20 2 2



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	20092 @ 7 2 4	35438 (9 00")	Passed (57%)		1 0 D + 0 75 L + 0 75 Lr (All Spans)
Shear (lbs)	8914 @ 8 10 12	19950	Passed (45%)	1 25	1 0 D + 0 75 L + 0 75 Lr (All Spans)
Moment (Ft-lbs)	-23250 @ 7 2 4	58339	Passed (40%)	1 25	1 0 D + 0 75 L + 0 75 Lr (All Spans)
Live Load Defl (in)	0 111 @ 14 1 3	0 426	Passed (L/999+)		1 0 D + 0 75 L + 0 75 Lr (Alt Spans)
Total Load Defl (in)	0 199 @ 14 1 10	0 639	Passed (L/770)	--	1 0 D + 0 75 L + 0 75 Lr (Alt Spans)

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

- Deflection criteria LL (L/360) and TL (L/240).
- Bracing (Lu) All compression edges (top and bottom) must be braced at 16 5 8 o/c unless detailed otherwise Proper attachment and positioning of lateral bracing is required to achieve member stability

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Roof Live	Total	
1 Column SPF	5 25"	5 25"	1 50'	1052	1694/-948	1503/ 125	4249/ 1073	Blocking
2 Column Cap steel	9 00"	9 00'	5 10'	9192	6511	8023	23726	None
3 Column Cap steel	4 00"	4 00"	2 10'	3742	2730/ 79	3315	9787/ 79	Blocking

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

Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Roof Live (non-snow 1.25)	Comments
1 Uniform(PSF)	0 0 0 to 20 2 2	1 0 0	12.0	40.0		Residential Living Areas
2 Uniform(PLF)	0 0 0 to 20 2 2	N/A	135 0	451 0		TJI24
3 Uniform(PLF)	0 0 0 to 20 2 2	N/A	120.0			Wall Above
4 Uniform(PLF)	0 0 0 to 20 2 2	N/A	174 0		262 0	Roof Below
5 Uniform(PLF)	0 0 0 to 20 2 2	N/A	229 0		343 0	Roof Above

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