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WIND ANALYSIS -- 120MPH Wind Velocity or as interpolated

2023 8th edition Florida Building Code

Calculations as per Section ***1609ASCE 7-22***

Prepared By
James Zaleski PE 51544

Borchardt Resident
Columbia County, Fl.

Prepared by (print legibly): James Zaleski
Design Professional FL Lic. #: 51544

Importance factor: 1.0 Building Category: ENCLOSED
Wind Exposure (s): B Risk Category II
Internal Pressure Coefficient +/-.18

Mean Roof Height *20.67* **End Zone Length 7.0 feet**

_ MAX OVERHANG 1.5 FT MAX

MANUFACTURED TRUSSES TO BE USED
Roof Slope =-8/12 – 12/12

TRUSS SPAN/LOCATION HURRICANE CLIPS
HC MODEL–1 Simpson H-10A IN ALL AREAS

ROOF SHEATHING MATERIAL –7/16" OSB
NAILING – 8D RING SHANK

NAILING PATTERN
EDGES-
6" O.C FIELD – 6" O.C

4" O.C FIRST ROW AT ALL EAVES

Plan May Be Mirrored at Contractors Option

JAMES A. ZALESKI LICENSE No. 51544 STATE OF FLORIDA PROFESSIONAL ENGINEER

BEAM SPAN TABLE	
Span (FT.)	Header Size
0' - 4'-0"	2-2x10 w/7/16" OSB Flitch Plate
4'-0" - 9'-4"	2-2x10 w/7/16" OSB Flitch Plate
9'-4" - 12'-0"	2-2x10 w/7/16" OSB Flitch Plate
12'-0" - 15'-4"	3 1/2" X 11 7/8" LVL (or equal)

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Wall Exterior Panel – Sheath with 7/16" OSB
– 2 X 4 STUDS AT 16" O.C. UP TO 10 FEET

– 2 X 4 STUDS AT 12" O.C. UP TO 12 FEET

– 2 X 6 STUDS AT 16" O.C. UP TO 16 FEET

ALL WALLS OVER 10 FEET TO HAVE 2 ROWS OF BLOCKING

SEE ATTACHED DETAILS

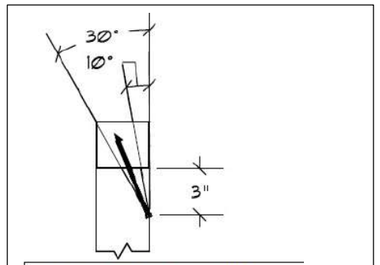
POSTS USE SIMPSON ABU BASE WITH 2-LSTA24 STRAPS AT TOP AND 2 SIMPSON SDWC 15600 SCREWS FROM POST TO BEAM

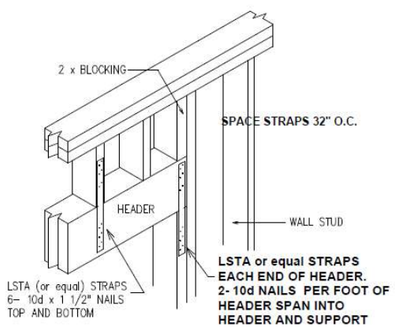
MIN NAIL PENETRATION – 1-1/2"
Nail Type 8D
Edge Nail Spacing 4" o.c
Intermediate Nail Spacing 8" o.c
SIMPSON SDWC15600 SCREWS AT THE TOP OF STUDS AND SIMPSON SDWC15450 SCREWS AT THE BOTTOM OF STUDS AT ALL CORNERS AND 48" O.C

SIMPSON SPH STRAPS MAY BE USED IN LIEU OF SCREWS

BEAM TO WALL/CORNER CONNECTION – POCKET AND NAIL INTO WALL W/ (10) 16 PENNY NAILS, STRAP W/ SIMPSON H7Z.

10" 'J' BOLT MINIMUM 48" O.C. w/
3 GA. x 3" x 3" BEARING PLATE





HEADER CONN.

James Zaleski PE #51544 2305 Haverhill Rd Tall Fl 32312 ph 850-766-7778

USE (3) 2x HEADERS WITH 2x6 WALLS AND (2) 2x HEADERS WITH 2x4 WALLS.
VERIFY HEADER SIZE W/ OPENING FRAMING & HEADER SCHEDULE ON THIS SHEET.
ASSEMBLE ALL HEADERS WITH 16D NAILS STAGGERED 6" O.C. W/ 2" EDGE DISTANCE
ALL HEADERS SHALL BE 2x12 U.O.N.
ATTACH ALL LVL BEAMS W/ SIMPSON SDWS 0.220 SCREWS (OR EQUAL) STAGGERED W/ 1–1/2" MIN. EDGE DISTANCE.

- (2) ROWS @ 24" O.C. < 10" LVL
- (3) ROWS @ 24" O.C. > 10" LVL
- 2 & 3 PLY – 3–1/2" LONG STAGGER INSTALLED FROM BOTH OUTER PLIES
- 4 PLY – 6" LONG STAGGER INSTALLED FROM BOTH OUTER PLIES

FOR WINDOWS PLACED WITHIN 3'–0" OF EXTERIOR CORNERS, WALL STUDS SHALL BE SPACED @ 8" O.C.

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COMPONENTS AND CLADDING PRESSURES: (WORST CASE LOADS MAY BE USED)

COMPONENTS AND CLADDING

ZONE per

SEE ATTACHED

MAIN WIND FORCE RESISTING SYSTEMS (MWFRS) (WORST CASE LOADS MAY BE USED)

SEE ATTACHED

All Load Bearing and Shear Walls To be Framed as per FBC
Alternative Hurricane Clips are acceptable as long as they meet the requirements shown

See Attached header schedule

PROVIDE GABLE END BRACING DETAIL, all vaulted or high ceilings shall be balloon framed to the ceiling diaphram.

NOTES: PLEASE READ & complete all blanks!!!!

1. ***See floor plan for wall bracing locations or circle 100% if structural sheathing is required on all exterior walls, with the nailing pattern indicated above.***
2. ***There are _ _, there are not_X_ interior shear walls, locate interior shear walls on plan.***
3. ***Gable ends required to be sheathed with same material as shear wall? Yes or (No) (circle one)***
4. ***Wall sheathing used in lieu of vertical straps: Nailing @ _N/A_ o.c. along top & bottom plates***
5. ***Provide detail for 2 story bldgs showing continuous load path between 2nd floor stud & 1st floor studs.***
6. ***Provide additional information for column base & column/beam connection if required for porches.***
7. ***Provide calculations or documentation to substantiate method used as an attachment to this form(SEE PLANS)***

Instructions:

1. The form should be completed & signed, sealed & dated by a Fla. licensed engineer or architect.
2. Since more than one methodology for determination of wind forces is permitted under Section 1609ASCE7-22, to comply with State Building Codes a space has been provided to indicate method used.
3. Wind Analysis Forms submitted & permitted to be used as Master Plans will be for identical plans only, minor deviations such as door swings. Any deviation from the exterior form, opening sizes or locations will not be permitted unless noted by the design professional.

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MecaWind v2502

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Calculations Prepared by:
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TALLAHASSEE, FL, 32312
Date: Apr 09, 2025
File Location: Current Project Not Saved

General:

Reference Abbreviations: T: Table, F: Figure, E: Equation, §: Section

Wind Load Standard	=	ASCE 7-22	Basic Wind Speed	=	120.0 mph
Exposure Classification	=	B	Risk Category	=	II
Structure Type	=	Building	Design Basis for Wind Pressures	=	ASD
MWFRS Analysis Method	=	Ch 27	C&C Analysis Method	=	Ch 30 Pt 1
Dynamic Type of Structure	=	Rigid	Show Advanced Options	=	False

Building:

Roof	=	Roof Type	=	Hipped	Encl	=	Enclosure Classification	=	Enclosed
Help	=	Help on Building Roof Type	=	Help	Pitch	=	Pitch of Roof	=	8.0 :12
θ	=	Slope of Roof	=	33.69 °	R_{Ht}	=	Ridge Height	=	31.333 ft
E_{Ht}	=	Eave Height	=	10.000 ft	W	=	Building Width	=	60.000 ft
L	=	Building Length	=	78.000 ft	L_{hip}	=	Ridge Hipped Length	=	38.000 ft
θ_{hip}	=	Hipped End Slope of Roof	=	45.0 °	Pitch $_{hip}$	=	Hipped End Slope of Roof	=	12.000 :12
OH	=	Overhang Configuration	=	All Soffit	Par	=	Parapet	=	None
z_i	=	Highest Opening Elevation	=	0.0000 ft	HT_{over}	=	Override Mean Roof Height	=	False
Ht_{man}	=	Mean Roof Height	=	20.667 ft	RA_{over}	=	Override Roof Area	=	False
GC_{pi_o}	=	Override GC_{pi} value	=	False	IsElev	=	Building is Elevated	=	False

Exposure Constants [T:26.11-1]:

α = 3-s Gust-speed exponent	=	7.500	Z_g = Nominal Ht of Boundary Layer	=	3280.000 ft
â = Reciprocal of α	=	0.133	b = 3 sec gust speed factor	=	0.840
α_m = Mean hourly Wind-Speed Exponent	=	0.222	b_m = Mean hourly Windspeed Exponent	=	0.470
c = Turbulence Intensity Factor	=	0.300	ε = Integral Length Scale Exponent	=	0.3333

Overhang Inputs:

Std	=	Overhangs on all sides are the same	=	True
OHType	=	Type of Roof Wall Intersections	=	Soffit
OH	=	Overhang of Roof Beyond Wall	=	2.000 ft

Main Wind Force Resisting System (MWFRS) Wind Calculations per Ch 27

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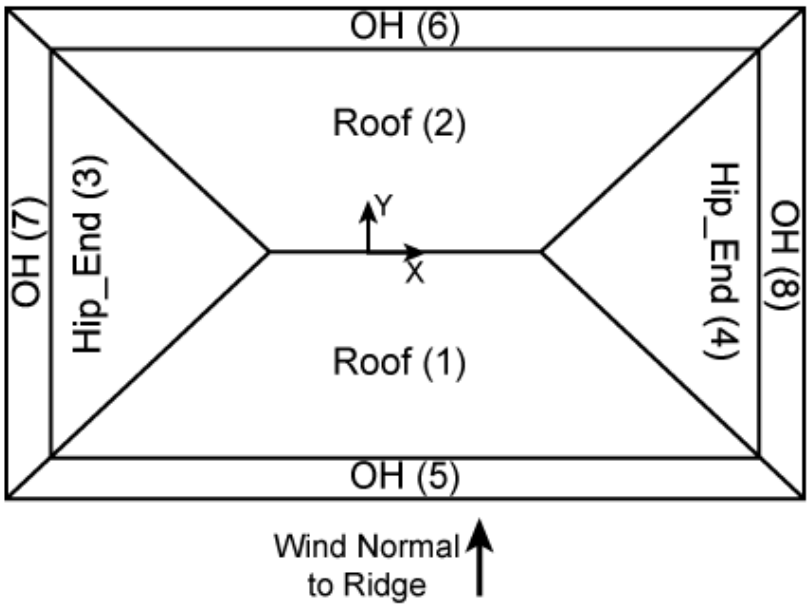

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h = Mean structure height	= 20.667 ft	$K_h = 2.41 \cdot (Z/Z_g)^{2/\alpha}$ T:26.10-1	= 0.624
K_{zt} = No Topographic Feature	= 1.000	K_d = Directionality Factor T:26.6-1	= 0.85
GC_{pi} = ± Internal Press Coef T:26.13-1	= ±0.18	LF = ASD Load Factor	= 0.60
K_e = Ground Elev Factor T:26.10-1	= 1.000	$q_h = .00256 \cdot K_h \cdot K_{zt} \cdot K_e \cdot V^2 \cdot LF$ E:26.10-1	= 13.80 psf
q_{in} = Negative Internal Pressure: q_h	= 13.80 psf	q_{ip} = For +GC_{pi} use q_h	= 13.80 psf
A_{roof} = Roof Area	= 6,562.15 ft²		

MWFRS Wind Loads [Normal to Ridge]

h = Mean Roof Height of Building	= 20.6667 ft	R_{Ht} = Ridge Height Of Roof	= 31.3333 ft
B = Building Width Normal To Wind	= 78.0000 ft	L = Building Width Parallel To Wind	= 60.0000 ft
L/B = Ratio: L/B	= 0.769	h/L = Ratio: h/L	= 0.344
θ = Slope of Main Roof	= 33.69 °	θ_{Hip} = Slope of Hipped Roof Ends	= 45.00 °
G = Gust Factor: Min(G_1, G_2)	= 0.850	Cp_{WW} = Windward Wall Coefficient	= 0.800
Cp_{LW} = Leeward Wall Coefficient	= -0.500	Cp_{SW} = Side Wall Coefficient	= -0.700

Wall Wind Pressures [Normal to Ridge]
All wind pressures include a Load Factor (LF) of 0.6

Elev ft	GC_{pi}	q_i psf	K_z	K_{zt}	q_z psf	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
10.000	+0.18	13.80	0.573	1.000	12.67	5.21	-7.10	-9.09	12.31	9.60
10.000	-0.18	13.80	0.573	1.000	12.67	9.44	-2.87	-4.87	12.31	9.60

K_z	*= $2.41 \cdot (Z/Z_g)^{2/\alpha}$*	*K_{zt}*	*= No Topographic Feature*
GC_{pi}	*= +Internal Coef T:26.13-1*	*q_z*	*= $.00256 \cdot K_z \cdot K_{zt} \cdot K_e \cdot V^2 \cdot LF$ E:26.10-1*
q_{ip}	*= For +GC_{pi} use q_h*	*q_{in}*	*= Negative Internal Pressure: q_h*
Side	*= $q_h \cdot K_d \cdot G \cdot Cp_{SW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1*	*Leeward*	*= $q_h \cdot K_d \cdot G \cdot Cp_{LW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1*
Windward	*= $q_z \cdot K_d \cdot G \cdot Cp_{WW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1*	*Total*	*= Windward - Leeward*
+Press	*= Pressure Acting Toward Surface*	*-Press*	*= Pressure Acting Away from Surface*
§27.1.5	*= MWFRS Min Wall Pressure = 9.60 psf*		

Roof Wind Pressures [Normal to Ridge]
All wind pressures include a Load Factor (LF) of 0.6

Component	Description	Location	Start ft	End ft	θ °	Basis	GC_{pi}	C_{pMin}	C_{pMax}	P_{min} psf	P_{max} psf	P_{min} psf
Hip_End	Hipped End 0 to h	3,4	2.000	20.667	0.0	P	+0.18	-0.9	-0.18	-11.09	-3.91	4.80
Hip_End	Hipped End h to 2•h	3,4	20.667	41.333	0.0	P	+0.18	-0.5	-0.18	-7.10	-3.91	4.80
Hip_End	Hipped End ≥ 2•h	3,4	41.333	62.000	0.0	P	+0.18	-0.3	-0.18	-5.10	-3.91	4.80
OH_Top	Overhang Top	5	All	All	33.69	N	+0.18	0.336	-0.108	1.24	-3.19	4.80
OH_Top	Overhang Top 0 to h	7,8	0.000	20.667	0.0	P	+0.18	-0.9	-0.18	-11.09	-3.91	4.80
OH_Top	Overhang Top h to 2•h	7,8	20.667	41.333	0.0	P	+0.18	-0.5	-0.18	-7.10	-3.91	4.80
OH_Top	Overhang Top ≥ 2•h	7,8	41.333	64.000	0.0	P	+0.18	-0.3	-0.18	-5.10	-3.91	4.80
OH_Top	Overhang Leeward	7,8	All	All	33.69	N	+0.18	-0.6	-0.6	-8.09	-8.09	4.80

Roof_LW	Roof Leeward	2	All	All	33.69	N	+0.18	-0.6	-0.6	-8.09	-8.09	4.80
Roof_WW	Roof Windward	1	All	All	33.69	N	+0.18	0.336	-0.108	1.24	-3.19	4.80
Soffit	Soffit Bottom	5	All	All	0.0	N	+0.18	0.8	0.8	5.87	5.87	4.80
Hip_End	Hipped End 0 to h	3,4	2.000	20.667	0.0	P	-0.18	-0.9	-0.18	-6.86	0.32	4.80
Hip_End	Hipped End h to 2•h	3,4	20.667	41.333	0.0	P	-0.18	-0.5	-0.18	-2.87	0.32	4.80
Hip_End	Hipped End ≥ 2•h	3,4	41.333	62.000	0.0	P	-0.18	-0.3	-0.18	-0.88	0.32	4.80
OH_Top	Overhang Top	5	All	All	33.69	N	-0.18	0.336	-0.108	5.46	1.03	4.80
OH_Top	Overhang Top 0 to h	7,8	0.000	20.667	0.0	P	-0.18	-0.9	-0.18	-6.86	0.32	4.80
OH_Top	Overhang Top h to 2•h	7,8	20.667	41.333	0.0	P	-0.18	-0.5	-0.18	-2.87	0.32	4.80
OH_Top	Overhang Top ≥ 2•h	7,8	41.333	64.000	0.0	P	-0.18	-0.3	-0.18	-0.88	0.32	4.80
OH_Top	Overhang Leeward	7,8	All	All	33.69	N	-0.18	-0.6	-0.6	-3.87	-3.87	4.80
Roof_LW	Roof Leeward	2	All	All	33.69	N	-0.18	-0.6	-0.6	-3.87	-3.87	4.80
Roof_WW	Roof Windward	1	All	All	33.69	N	-0.18	0.336	-0.108	5.46	1.03	4.80
Soffit	Soffit Bottom	5	All	All	0.0	N	-0.18	0.8	0.8	10.09	10.09	4.80

Roof Pressures based upon Ch 27:

Component = The building component for pressures
Start = Start Dist from Windward Edge
C_{pMin} = Smallest Coefficient Magnitude
P_{min} = $q_h \cdot K_d \cdot G \cdot C_{pMin} - q_{ip} \cdot K_d \cdot GC_{piE:27.3-1}$
GC_{pi} = +Internal Coef T:26.13-1
P_{min} = Min Press projected on vertical plane §27.1.5
§27.1.5 = MWFRS Min Wall Pressure = 9.60 psf
-Press = Pressure Acting Away from Surface

Location = Reference Graphic in Output for Values
End = End Dist from Windward Edge
C_{pMax} = Largest Coefficient Magnitude
P_{max} = $q_h \cdot K_d \cdot G \cdot C_{pMax} - q_{in} \cdot K_d \cdot GC_{piE:27.3-1}$
Basis = P=Parallel to Ridge: N=Normal to Ridge
θ = Roof Slope Relative to Wind
+Press = Pressure Acting Toward Surface

• The smaller uplift pressures due to C_{pMin} can become critical when wind is combined with roof live load or snow load; load combinations are given in ASCE 7

MWFRS Wind Loads [Parallel to Ridge]

h = Mean Roof Height of Building = 20.6667 ft
B = Building Width Normal To Wind = 60.0000 ft
L/B = Ratio: L/B = 1.300
θ = Slope of Main Roof = 33.69 °
G = Gust Factor: Min(G_1, G_2) = 0.850
Cp_{LW} = Leeward Wall Coefficient = -0.440

R_{Ht} = Ridge Height Of Roof = 31.3333 ft
L = Building Width Parallel To Wind = 78.0000 ft
h/L = Ratio: h/L = 0.265
θ_{Hip} = Slope of Hipped Roof Ends = 45.00 °
Cp_{WW} = Windward Wall Coefficient = 0.800
Cp_{SW} = Side Wall Coefficient = -0.700

Wall Wind Pressures [Parallel to Ridge]
All wind pressures include a Load Factor (LF) of 0.6

Elev ft	GC_{pi}	q_i psf	K_z	K_{zt}	q_z psf	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
31.333	+0.18	13.80	0.697	1.000	15.42	6.80	-6.50	-9.09	13.30	9.60
20.667	+0.18	13.80	0.624	1.000	13.80	5.87	-6.50	-9.09	12.37	9.60
10.000	+0.18	13.80	0.573	1.000	12.67	5.21	-6.50	-9.09	11.71	9.60
31.333	-0.18	13.80	0.697	1.000	15.42	11.03	-2.28	-4.87	13.30	9.60
20.667	-0.18	13.80	0.624	1.000	13.80	10.09	-2.28	-4.87	12.37	9.60
10.000	-0.18	13.80	0.573	1.000	12.67	9.44	-2.28	-4.87	11.71	9.60

K_z = $2.41 \cdot (Z/Z_g)^{2/\alpha}$
GC_{pi} = +Internal Coef T:26.13-1
q_{ip} = For +GC_{pi} use q_h
Side = $q_h \cdot K_d \cdot G \cdot Cp_{SW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1
Windward = $q_z \cdot K_d \cdot G \cdot Cp_{WW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1
+Press = Pressure Acting Toward Surface
§27.1.5 = MWFRS Min Wall Pressure = 9.60 psf

K_{zt} = No Topographic Feature
q_z = $.00256 \cdot K_z \cdot K_{zt} \cdot K_e \cdot V^2 \cdot LF_{E:26.10-1}$
q_{in} = Negative Internal Pressure: q_h
Leeward = $q_h \cdot K_d \cdot G \cdot Cp_{LW} - q_{ip} \cdot K_d \cdot (GC_{pi+})$ E:27.3-1
Total = Windward - Leeward
-Press = Pressure Acting Away from Surface

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Roof Wind Pressures [Parallel to Ridge]
All wind pressures include a Load Factor (LF) of 0.6

Component	Description	Location	Start ft	End ft	θ °	Basis	GC_{pi}	C_{pMin}	C_{pMax}	P_{min} psf	P_{max} psf	P_{min} psf
Hip_End	Hipped End 0 to h	3	2.000	20.667	45.0	P	+0.18	-0.9	-0.18	-11.09	-3.91	4.80
Hip_End	Hipped End h to 2•h	3	20.667	22.000	45.0	P	+0.18	-0.5	-0.18	-7.10	-3.91	4.80
Hip_End	Hipped End ≥ 2•h	4	60.000	80.000	45.0	P	+0.18	-0.3	-0.18	-5.10	-3.91	4.80
OH_Top	Overhang Top 0 to h	5,6,7	0.000	20.667	33.69	P	+0.18	-0.9	-0.18	-11.09	-3.91	4.80
OH_Top	Overhang Top h to 2•h	5,6	20.667	41.333	0.0	P	+0.18	-0.5	-0.18	-7.10	-3.91	4.80

OH_Top	Overhang Top ≥ 2•h	5,6,8	41.333	82.000	0.0	P	+0.18	-0.3	-0.18	-5.10	-3.91	4.80
Roof	Roof 0 to h	1,2	2.000	20.667	0.0	P	+0.18	-0.9	-0.18	-11.09	-3.91	4.80
Roof	Roof h to 2•h	1,2	20.667	41.333	0.0	P	+0.18	-0.5	-0.18	-7.10	-3.91	4.80
Roof	Roof ≥ 2•h	1,2	41.333	80.000	0.0	P	+0.18	-0.3	-0.18	-5.10	-3.91	4.80
Soffit	Soffit Bottom	7	All	All	0.0	N	+0.18	0.8	0.8	5.87	5.87	4.80
Hip_End	Hipped End 0 to h	3	2.000	20.667	45.0	P	-0.18	-0.9	-0.18	-6.86	0.32	4.80
Hip_End	Hipped End h to 2•h	3	20.667	22.000	45.0	P	-0.18	-0.5	-0.18	-2.87	0.32	4.80
Hip_End	Hipped End ≥ 2•h	4	60.000	80.000	45.0	P	-0.18	-0.3	-0.18	-0.88	0.32	4.80
OH_Top	Overhang Top 0 to h	5,6,7	0.000	20.667	33.69	P	-0.18	-0.9	-0.18	-6.86	0.32	4.80
OH_Top	Overhang Top h to 2•h	5,6	20.667	41.333	0.0	P	-0.18	-0.5	-0.18	-2.87	0.32	4.80
OH_Top	Overhang Top ≥ 2•h	5,6,8	41.333	82.000	0.0	P	-0.18	-0.3	-0.18	-0.88	0.32	4.80
Roof	Roof 0 to h	1,2	2.000	20.667	0.0	P	-0.18	-0.9	-0.18	-6.86	0.32	4.80
Roof	Roof h to 2•h	1,2	20.667	41.333	0.0	P	-0.18	-0.5	-0.18	-2.87	0.32	4.80
Roof	Roof ≥ 2•h	1,2	41.333	80.000	0.0	P	-0.18	-0.3	-0.18	-0.88	0.32	4.80
Soffit	Soffit Bottom	7	All	All	0.0	N	-0.18	0.8	0.8	10.09	10.09	4.80

Roof Pressures based upon Ch 27:

Component = *The building component for pressures*
Start = *Start Dist from Windward Edge*
C_{pMin} = *Smallest Coefficient Magnitude*
P_{min} = $q_h \cdot K_d \cdot G \cdot C_{pMin} - q_{ip} \cdot K_d \cdot GC_{piE:27.3-1}$
GC_{pi} = *+Internal Coef* $_{T:26.13-1}$
P_{min} = *Min Press projected on vertical plane* $_{§27.1.5}$
§27.1.5 = *MWFRS Min Wall Pressure = 9.60 psf*
-Press = *Pressure Acting Away from Surface*

Location = *Reference Graphic in Output for Values*
End = *End Dist from Windward Edge*
C_{pMax} = *Largest Coefficient Magnitude*
P_{max} = $q_h \cdot K_d \cdot G \cdot C_{pMax} - q_{in} \cdot K_d \cdot GC_{piE:27.3-1}$
Basis = *P=Parallel to Ridge: N=Normal to Ridge*
θ = *Roof Slope Relative to Wind*
+Press = *Pressure Acting Toward Surface*

• The smaller uplift pressures due to C_{pMin} can become critical when wind is combined with roof live load or snow load; load combinations are given in ASCE 7

Components and Cladding (C&C) Wind Loads per Ch 30 Pt 1 Roof & Wall

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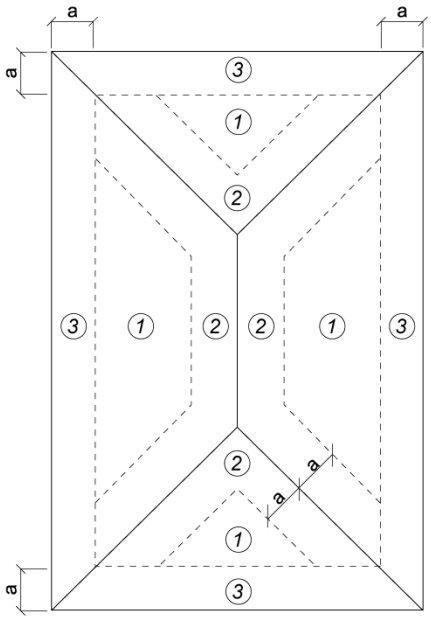

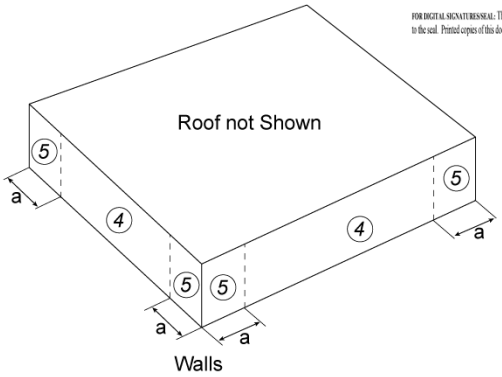

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h = Mean structure height = 20.667 ft
K_{zt} = No Topographic Feature = 1.000
GC_{pi} = ± Internal Press Coef $_{T:26.13-1}$ = ±0.18
K_e = Ground Elev Factor $_{T:26.10-1}$ = 1.000
θ = Slope of Roof = 33.69 °
a = Max(a_1, 0.04•B, 3 ft [0.9 m]) = 6.000 ft

$K_h = 2.41 \cdot (Z/Z_g)^{2/\alpha}$ = 0.624
K_d = Directionality Factor $_{T:26.6-1}$ = 0.85
LF = ASD Load Factor = 0.60
$q_h = .00256 \cdot K_h \cdot K_{zt} \cdot K_e \cdot V^2 \cdot LF_{E:26.10-1}$ = 13.80 psf
a_1 = Min(0.1•B, 0.4•h) = 6.000 ft

C&C Wind Roof & Wall Detailed per Ch 30 Pt 1
All wind pressures include a Load Factor (LF) of 0.6

Description	Zone	Width ft	Span ft	Area ft^2	1/3 Rule	Reference	GC_{pi}	GC_{pd}	GC_{pu}	P_{down} psf	P_{uplift} psf
Zone 1	1	1.0000	1.0000	1.00	No	F:30.3-2G	±0.18	0.70	-1.44	10.32	-18.97
Zone 2	2	1.0000	1.0000	1.00	No	F:30.3-2G	±0.18	0.70	-1.93	10.32	-24.70
Zone 3	3	1.0000	1.0000	1.00	No	F:30.3-2G	±0.18	0.70	-2.15	10.32	-27.32
Zone 4	4	1.0000	1.0000	1.00	No	F:30.3-1	±0.18	1.00	-1.10	13.84	-15.02
Zone 5	5	1.0000	1.0000	1.00	No	F:30.3-1	±0.18	1.00	-1.40	13.84	-18.54

GC_{pd} = Down (+) External Coefficient
P_{down} = $q_h \cdot K_d \cdot [GC_{pd}-GC_{pi}]$ [E:30.3-1]
+Press = Pressure Acting Toward Surface
§30.2.2 = C&C Min Pressure = 9.60 psf
Width = Width of Component
Area = Span • Width
GC_{pi} = Internal Coef T:26.13-1

GC_{pu} = Uplift (-) External Coefficient
P_{uplift} = $q_h \cdot K_d \cdot [GC_{pu}-GC_{pi}]$ [E:30.3-1]
-Press = Pressure Acting Away from Surface
Zone = Applicable Zone per Figure
Span = Span of Component
1/3 Rule = Width limited to Span/3
Reference = Applicable Reference from Standard

C&C Wind Roof & Wall Overhangs Detailed per Ch 30 Pt 4
All wind pressures include a Load Factor (LF) of 0.6

Description	Zone	Width ft	Span ft	Area ft^2	1/3 Rule	Reference	GC_{pi}	GC_{pd}	GC_{pu}	P_{down} psf	P_{uplift} psf
Zone 1_OHS	1_OHS	1.0000	1.0000	1.00	No	F:30.3-2G/F:30.3-1	±0.18	0.00	-2.44	9.60	-30.70
Zone 2_OHS	2_OHS	1.0000	1.0000	1.00	No	F:30.3-2G/F:30.3-1	±0.18	0.00	-2.93	9.60	-36.43
Zone 3_OHS	3_OHS	1.0000	1.0000	1.00	No	F:30.3-2G/F:30.3-1	±0.18	0.00	-3.15	9.60	-39.05

GC_{pd} = Down (+) External Coefficient
P_{down} = $q_h \cdot K_d \cdot [GC_{pd}-GC_{pi}]$ E:30.7-1
+Press = Pressure Acting Toward Surface
§30.2.2 = C&C Min Pressure = 9.60 psf
Width = Width of Component
Area = Span • Width
GC_{pi} = Internal Coef T:26.13-1
#_OHS = Roof Zone # on Overhang Soffit

GC_{pu} = Uplift (-) External Coefficient
P_{uplift} = $q_h \cdot K_d \cdot [GC_{pu}-GC_{pi}]$ E:30.7-1
-Press = Pressure Acting Away from Surface
Zone = Applicable Zone per Figure
Span = Span of Component
1/3 Rule = Width limited to Span/3
Reference = Applicable Reference from Standard
Soffit = Soffit present so use building GC_{pi}

Warnings & Notes:
Overhang GCp determined from adding applicable roof GCp on top to applicable Wall GCp on bottom

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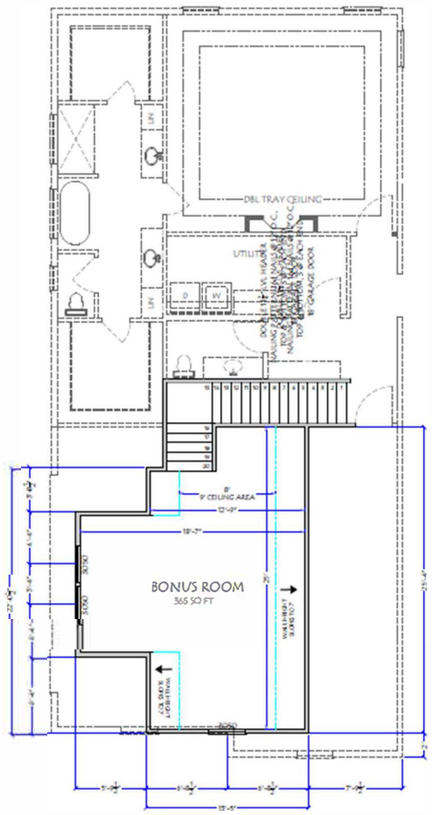
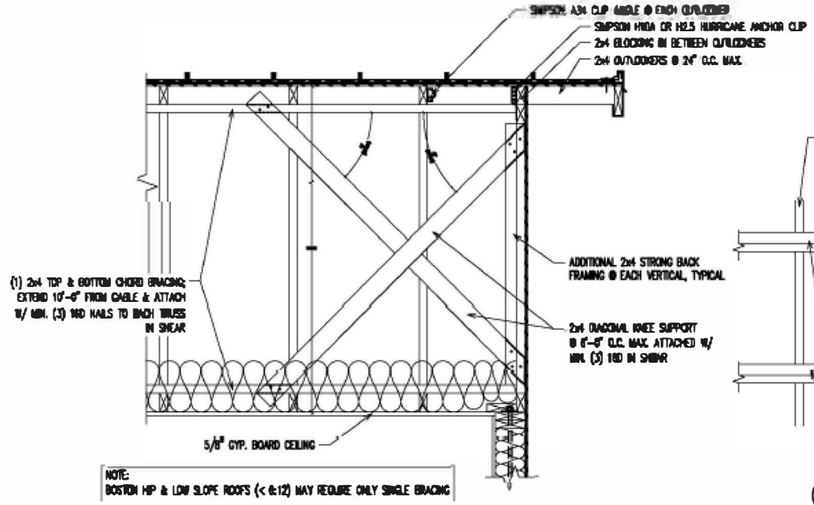
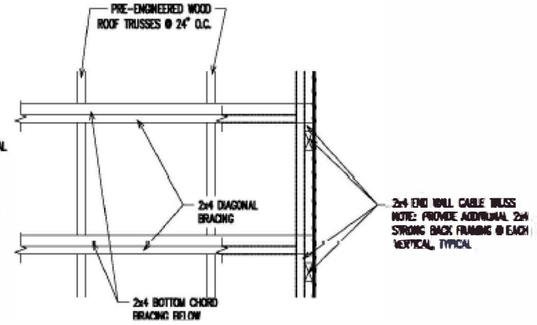


ATTIC ROOM
FLOOR PLAN
SCALE 1/4"=1'-0"



GABLE BRACING SECTION



GABLE BRACING SECTION
NTS

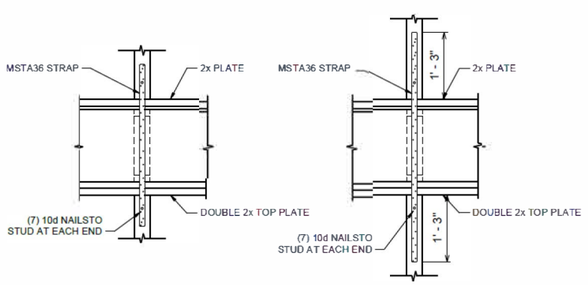
ALL FLOOR TRUSS AND /O R ROOFFRAMING S TO BE DETERMINED BY THE TRUSS MANUFACTURER AND TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY THE SAME. FRAMING LAYOUTS CONTAINED IN TIHESE DRAWINGS ARE TO BE CONSIDERED A PROPOSED SCHEMATIC REPRESENTATION ONLY AND FINAL MANUFACTURER DESIGN MAY VARY FROM THAT SHOWN. THE TRUSS MANUFACTURER'S CALCULATED SIZE AND SPACING OF PRE- ENGINEERED TRUSSES SHALL TAKE PRECEDENCE OVER WHAT HAS BEEN PROPOSED. THE OWNERAND / OR GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF AIL TRAY, CATHEDRAL, AND OTHER DIMENSIONAL CEILING ASPECTS OF THIS PROJECT TH AT MAY OR MAY NOT BE SHOWN ON PLANS PRIOR TO FABRICATION. IT IS RECOMMENDEDTHAT THE OWNER AND /OR GENERAL. CONIRACTOR COORDINATE AND UNDERSTAND ALL ASPECTS OF THE SPECIFIED TRUSS PACKAGE LAYOUT BEFO RE COMMENCING WITH INSTALLATION.

DESIGN OF WOOD FLOOR TRUSSES (IF APPLICABLE) & ROOF TRUSSES SHALL BE THE SOLE RESPONSIBILITY OFTHE CONTRACTOR. SUBMIT SHOP DRAWINGS, DESIGN LOAD DATA, AND SUPPORT REACTIONS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECTSTATE AND SUBMITTED TO BUILDING DEPARTMENT FOR PERMITTING. ANY REVIEW OF SHOP DRAWINGS SHALL. BEFOR CONFORMANCE WITH THE CONTRACT DOCUMENTS WITH REGARD TO TRUSS CONFIGURATION ONLY.

HEADER SIZE AND STRAPPING CHART

SPAN	HEADER SIZE	QUANTITY OF JACK STUDS AT EACH END	QUANTITY OF KING STUDS AT EACH END	STRAPPING TO JACK STUDS AT EACH END TOP AND BOTTOM	STRAPPING TO KING STUDS AT EACH END TOP AND BOTTOM
0'-0" TO 7'-6"	2 - 2X10" WITH ½" PLATE	1	1	1 SIMPSON MSTA24	1 SIMPSON SPH4
7'-6" – 11'-3"	2 -2X12" WITH ½" PLATE OR 4-2 X 10" WITH ½" PLATE	3	2	2 SIMPSON MSTA24	2 SIMPSON SPH4
11'-3" – 14'-0"	2- 1 ½" X 9 ½" LVL	3	2	2 SIMPSON MSTA24	2 SIMPSON SPH4

IN LIEU OF STRAPPING USE A SDWC15600 AT THE TOP OF EACH JACK AND KING STUD AND ONE SDWC15450 AT THE BASE OF EACH JACK AND KING STUD



SIMPSON MSTA36 SIMPSON CS16

WHERE REQUIRED FOR CONTINUOUS LOAD PATH FROM 1ST FLOOR TO 2ND FLOOR - @ EACH CORNER AND @ 32" o.c.

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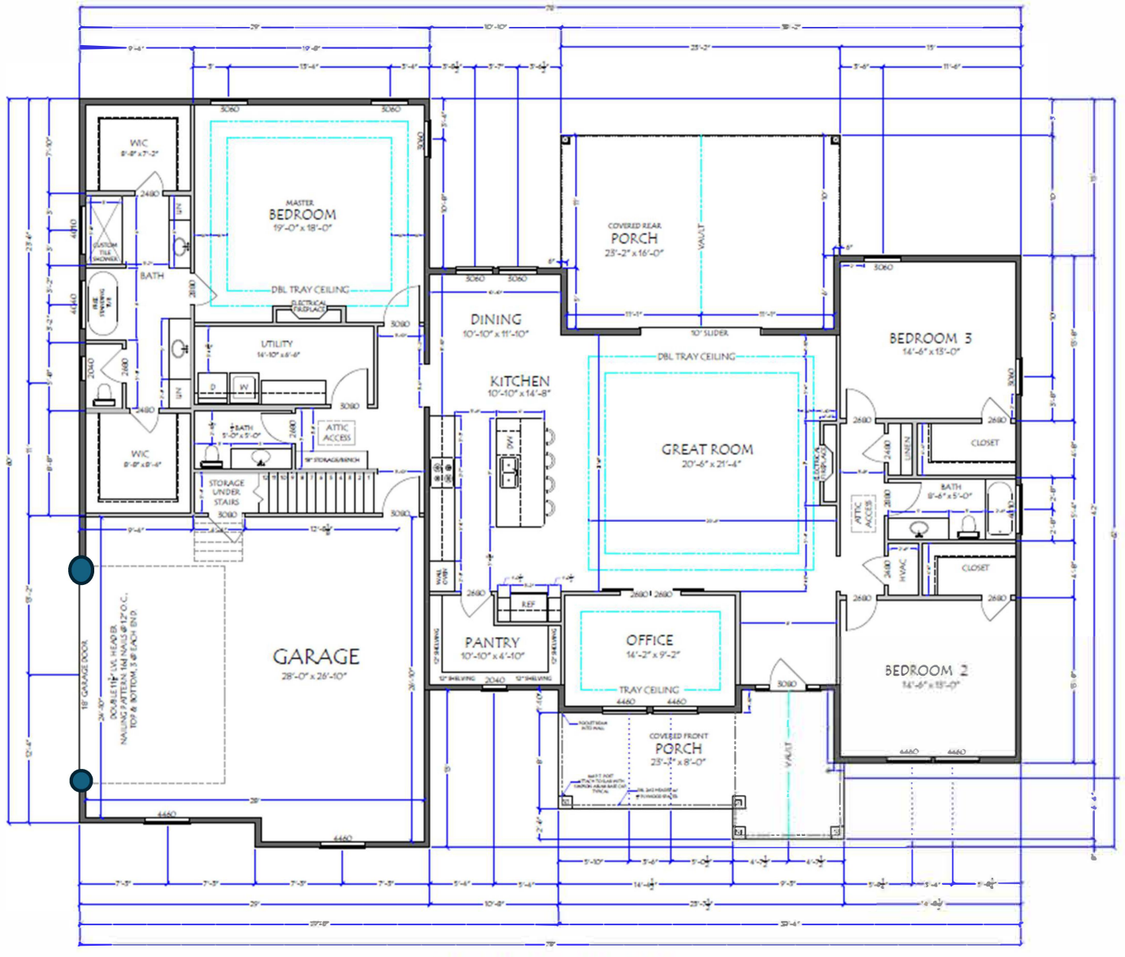
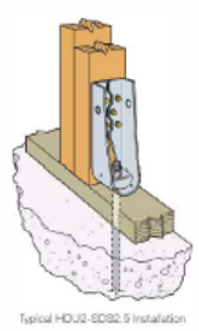


FLOOR PLAN

PORCH FRAMING NOTES: (IF APPLICABLE)

1. PORCH COLUMN – P.T. AS NOTED ON PLAN AND/ OR SECTIONS. CONNECT TO SLAB W/ SIMPSON ABU___ OREQUAL. CONTRACTOR OPTION TO USE KDAT COLUMN. PROVIDE 5/8"ø x10" LONG A.B. @ CENTER OF KDATLOCATION.
2. COLUMN TO BEAM CONNECTION – THRU–BOLT WITH (2) 5/8"ø BOLTS SPACED @ 2.5" FROM EDGES) WITH COLUMN NOTCHED NO MORE THAN 3".
3. PORCH BEAMS – (2) 2x12 P.T. SYP FLITCHED W/ 1/2" PLYWOOD U.N.O. ON PLAN & SECTIONS. BEAMS SHALL NOT HAVE MID– SPAN SPLICES.
4. COLUMN TO BEAM CONNECTION– THRU BOLTS WITH (2) 5/8"ø BOLTS WITH COLUMN NOTCHED NOT MORE THAN 3"
5. CORNER COLUMN TO BEAM CONNECTION – THRU BOLT WITH (2) 5/8"ø SPACED AT 2.5" FROM THE EDGE, NOTCH COLUMN NO MORE THAN 3", STRAP WITH CS16 STRAP LAP 12" ON COLUMN AND COLUMN
6. BEAM TO WALL/CORNER CONNECTION – POCKET AND NAIL INTO WALL W/ (10) 16 PENNY NAILS, STRAP W/ SIMPSON H7Z.

● INDICATES SIMPSON HDU2 HOLD DOWN



Typical HDU2-SDS2.5 Installation

FOR HDU2-SDS2.5 – USE 8" LONG ANCHOR BOLT

Fasteners (in.)	
Anchor Bolt Dia. (in.)	Wood Fasteners
⅝	(3) ⅛ x 2½ SDS

ATTACH TO DOUBLE STUD

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EXTERIOR NON-SHEAR WALLS – 2x6 STUDS WITH 1/2" EXTERIOR SHEATHING.
PROVIDE MID-SPAN BLOCKING @ WALLS 10'-0"+
USE (3) 2xHEADERS WITH 2x6 WALLS AND (2) 2x HEADERS WITH 2x4 WALLS.
VERIFY HEADER SIZE W/ OPENING FRAMING & HEADER SCHEDULE ON THIS SHEET
ASSEMBLE ALL HEADERS WITH 16D NAILS STAGGERED 6" O.C. W/ 2" EDGE DISTANCE
ALL HEADERS SHALL BE 2x12 U.O.N.
ATTACH ALL LVL BEAMS W/ SIMPSON SDWS 0.220 SCREWS (OREQUAL) STAGGERED W/ 1-1/2" MIN. EDGE DISTANCE.

- (2) ROWS @ 24" O.C. < 10" LVL
- (3) ROWS @ 24" O.C. > 10" LVL
- 2 & 3 PLY – 3-1/2" LONG STAGGER INSTALLED FROM BOTH OUTER PLIES
- 4 PLY – 6" LONG STAGGER INSTALLED FROM BOTH OUTERPLIES

FOR WINDOWS PLACED WITHIN 3'-0" OF EXTERIOR CORNERS, WALL STUDS SHALL BE SPACED @ 8" O.C.

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