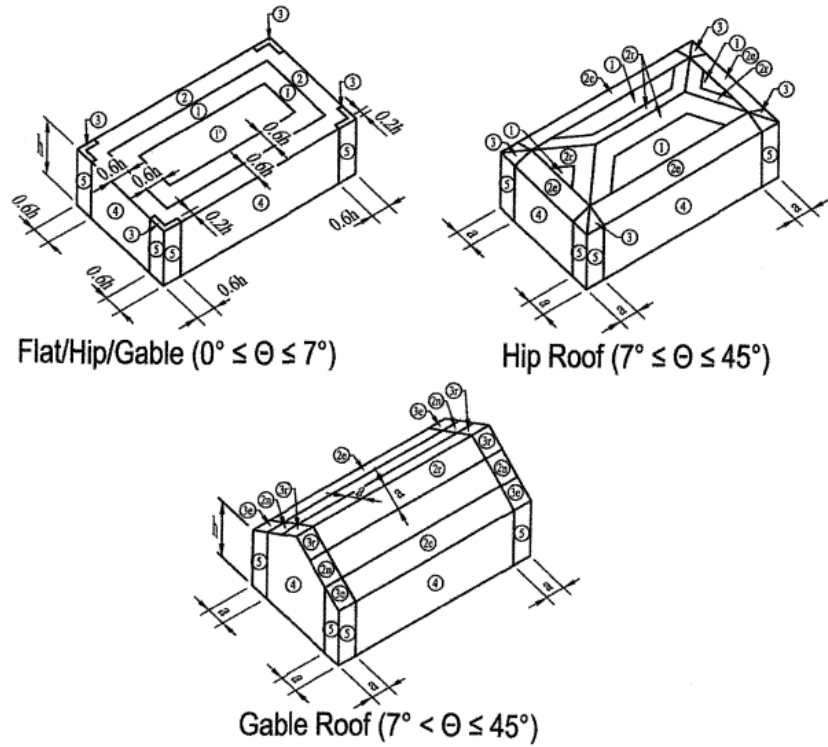
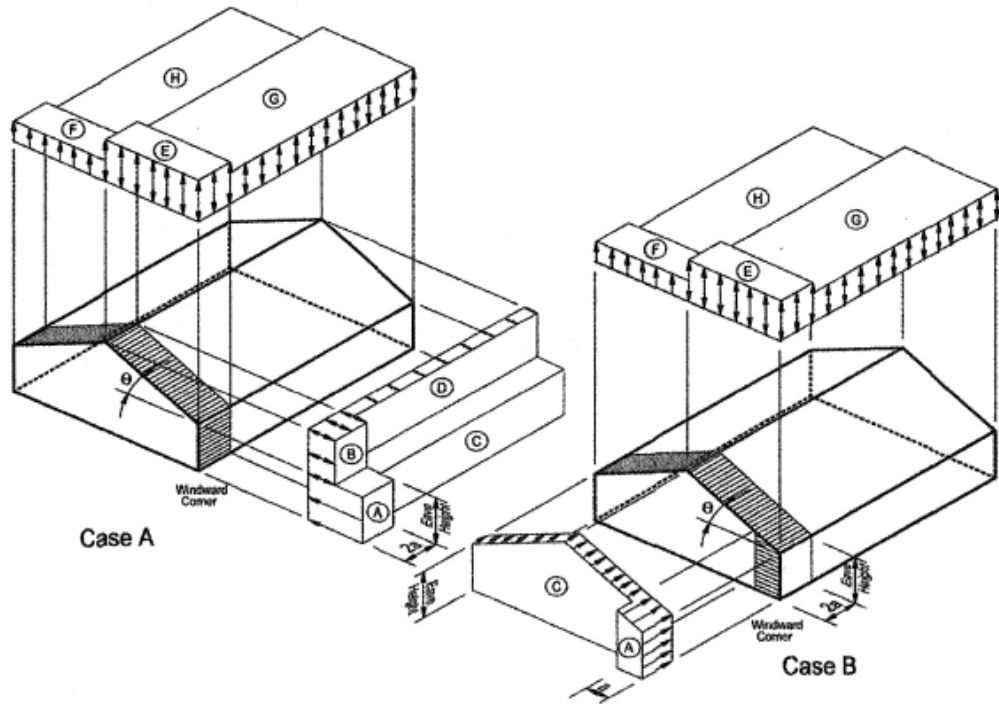




6031 Loop 1781, Rockport, TX
Site Data: Inland I Wind Zone V=140 mph Exposure Category C
Building Data: Roof slope = 5 V : 12 H h = 13 ft. b = 20.0 ft. Risk Category II
Wind Load Factors: $\phi = 22.6^\circ$ $\lambda = 1.178$ $a = 3.0$ ft. $K_{zt} = 1.0$

Components and Cladding Design Wind Pressures for Gable Roof Sections, psf

Pressure Zone	10 s.f.	20 s.f.	50 s.f.	100 s.f.
1 +	25.2	22.7	19.4	18.8
1 -	-59.1	-54.7	-50.2	-43.5
2e +	25.2	22.7	19.4	18.8
2e -	-59.1	-54.7	-50.2	-43.5
2n +	25.2	22.7	19.4	18.8
2n -	-94.4	-82.6	-67.1	-55.5
2r +	25.2	22.7	19.4	18.8
2r -	-94.4	-82.6	-67.1	-55.5
3e +	25.2	22.7	19.4	18.8
3e -	-94.4	-82.6	-67.1	-55.5
3r +	25.2	22.7	19.4	18.8
3r -	-121.6	-99.2	-85.1	-69.7

Components and Cladding Design Wind Pressures for Wall Sections, psf

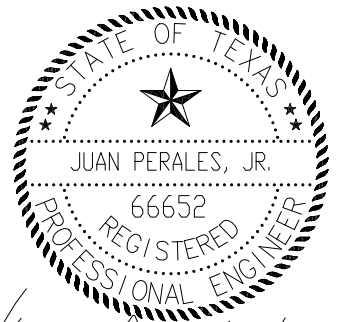
Pressure Zone	10 s.f.	20 s.f.	50 s.f.	100 s.f.
4 +	41.6	39.7	37.2	35.3
4 -	-45.0	-43.2	-40.8	-38.9
5 +	41.6	39.7	37.2	35.3
5 -	-55.6	-51.8	-46.9	-43.2

Main Wind Force Resisting Systems Wind Pressures, psf

Pressure Zone	A	B	C	D	E	F	G	H	EOH	GOH
Case 1	48.2	-2.6	33.5	0.4	-31.7	-29.2	-22.4	-22.8	-49.4	-40.0
Case 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

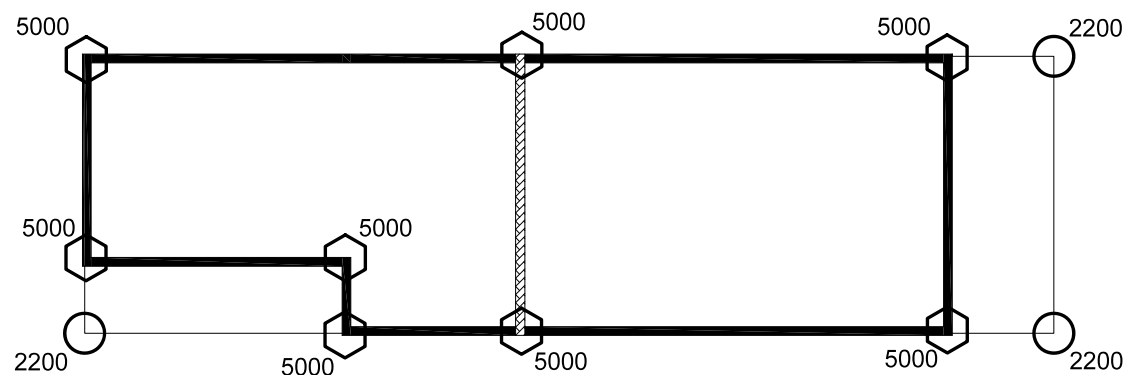
General Windstorm Considerations

This project consists of the construction of a new house and a guest cabin at 6031 Loop 1781, Rockport, Texas. The buildings are considered to have a Category II Risk factor and are to be single story wood frame construction on a concrete slab on grade foundation, with a metal panel exterior and a metal panel roof system. The structures are considered simple diaphragm, low rise, enclosed, regular shaped buildings in accordance with ASCE 7-16, Section 26.2, and conforms to the wind-borne debris provisions of ASCE 7-16 Section 26.12.3. They are not classified as a flexible buildings as defined in Section 26.2, do not have response characteristics that make them subject to across-wind loading, vortex shedding, or instability caused by galloping or flutter, and are not exposed to any extraordinary wind flow conditions. The buildings' height is less than 60 feet and is less than the buildings' minimum nominal width. The buildings have an approximately symmetrical cross section in each direction and roof slopes of less than 45 degrees. The buildings are exempted from torsional load cases as indicated in Note 5 of ASCE 7-16, Figure 28.3-1. The buildings, therefore, meet the conditions of ASCE 7-16, Section 28.5.2 for the use of the Simplified Method for determination of Main Wind Force Resisting Systems (MWFRS) wind loads as included in Part 2 of Chapter 28 of ASCE 7-16, and the conditions of ASCE 7-16, Section 30.4.1 for the use of the Simplified Method for determination of Components and Cladding wind loads as included in Part 2 of Chapter 30 of ASCE 7-16. The property is located in the TDI Inland I wind zone (140 mph 3 second gust design wind speed), with a Category C exposure. The buildings have a 13 foot mean roof height and gable and hip roof slopes of 5 vertical to 12 horizontal (22.6').

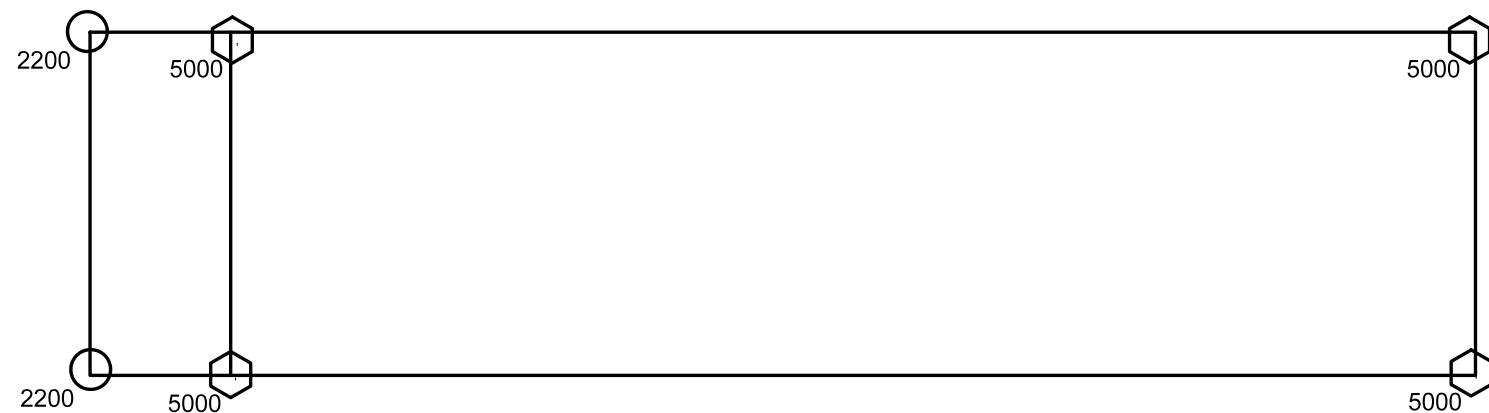


Juan Perales Jr., P.E.
04/22/2021

NO.	REVISION	CKD	APPD
TAFELBURG BUNKHOUSE 6031 FM 1781 ROCKPORT, TX 78382			
J. Perales Civil Engineering and Planning Services TBPE FIRM No. F-14207 jpcivilengrandplan@gmail.com P.O. BOX 260547 Corpus Christi, Texas 78426 Tel: (361) 728-7188			
Completion Date:	04-22-21	Checked by:	JP
Scale:	NONE	File Name:	
Drawn by:	RT	By:	JP



GUEST CABIN



MAIN HOUSE

General Construction Requirements

All construction shall be in accordance with the 2018 International Residential Code, with local amendments by the City of Corpus Christi; the American Wood Council 2018 Wood Frame Construction Manual, and the applicable sections of the American Society of Civil Engineers Standard 7-16 for windstorm design. In the event of disparity between the referenced codes, standards, and guidelines, the more stringent requirement shall apply.

Fenestration systems design, materials, and construction shall meet the windborne debris protection requirements of the 2018 International Residential Code. The Contractor and/or Owner's representative shall provide all related documentation to the Engineer for review and approval prior to installation of said systems. Submittal of the Engineer's Inspection Certification (TDI Form WPI-2) to TDI is contingent upon the Contractor's/Owner's proof of compliance with the windborne debris protection requirements.

The Contractor shall submit proposed prescriptive code construction detail alternatives to the Engineer for approval prior to ordering of materials. Required windstorm inspections will generally include:

- Site/pre-pour foundation inspection
- Foundation concrete placement inspection
- Rough framing inspection
- Final framing inspection (roof decking, wall sheathing, and fenestration)
- Weather envelope inspection (roofing and wall veneer systems)

The Contractor shall provide minimum 48 hours notice to the Engineer for all required windstorm inspections.

Materials of Construction

Foundation concrete shall be designed for minimum 3,000 psi compressive strength.

Reinforcing steel for foundation construction shall be 60,000 psi yield strength, unless specified otherwise.

Foundation post tensioning systems materials and installation shall meet the applicable Post Tensioning Institute specifications and installation requirements.

Wall sill plates shall be treated Southern Yellow pine.

Wall studs may be either No. 2 grade or stud grade Southern Yellow Pine, as allowed by the referenced building codes and construction guidelines. With the exception of pre-engineered laminated wood products, all other framing members shall be minimum No. 2 grade Southern Yellow Pine.

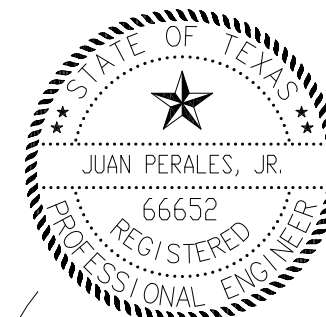
All Southern Yellow Pine members shall be appropriately stamped to show S.P.I.B. inspection.

Wall sheathing shall be minimum 7/16" thick plywood or oriented strand board, and shall be stamped to show certification of meeting DDC PS 1 or DDC PS 2 requirements.

Roof decking shall be minimum 1/2" thick structural rated sheathing panels, and shall be stamped to show certification of meeting DDC PS 1 or DDC PS 2 requirements.

All pre-engineered laminated wood structural members shall be certified by APA as meeting the requirements of ASTM D5456, and shall bear a stamp indicating APA certification.

All framing, sheathing, and decking fasteners, sill plate anchors and hardware, wind uplift and shear connectors, and all other fasteners and hardware required for the complete construction of the building shall be galvanized, in conformance with the 2018 International Residential Code with State of Texas Revisions.



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SCHEDULE OF WIND RESISTANT WOOD FRAME CONSTRUCTION CONNECTORS

ESTIMATED CONNECTOR LOADS ARE BASED ON, OR EXTRAPOLATED FROM, INFORMATION INCLUDED IN THE 2018 WOOD FRAME CONSTRUCTION MANUAL FOR 140 MPH, 3 SECOND WIND GUST DESIGN WIND SPEED.

CONNECTORS LISTED ARE SIMPSON STRONG TIE PRODUCTS AND ARE NOT ALL INCLUSIVE. OTHER SIMPSON CONNECTORS OR MANUFACTURER’S PRODUCTS WITH EQUAL STRUCTURAL RATING MAY BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.

CONCRETE FLOOR SLAB TO SILL PLATE CONNECTION:
5/8” DIAMETER X 10” GALVANIZED ”L” BOLTS, WITH SQUARE PLATE WASHER AND HEX NUT, TO BE PLACED AT 6” FROM EACH EXTERIOR WALL CORNER OR END OF INTERIOR SHEAR WALL SECTION, THEN SPACED AT APPROXIMATELY 30” ALONG SINGLE STORY WALL SECTIONS, AND AT APPROXIMATELY 24” ALONG TWO STORY WALL SECTIONS.

SILL PLATE TO WALL STUD CONNECTION (BASED ON 16” O.C. STUD SPACING):

ROOF SPAN, FT.	36	40	44	48	52
UPLIFT, LBS.	488	534	582	632	680
CONNECTORS	SP1 OR SP4	SP1 OR SP4	SP1 OR SP4	SP4	SP4

WALL STUD TO TOP PLATE CONNECTION (BASED ON 16” O.C. STUD SPACING):

ROOF SPAN, FT.	36	40	44	48	52
UPLIFT, LBS.	488	534	582	632	680
CONNECTORS	SP2 OR SP4	SP2 OR SP4	SP2 OR SP4	SP2 OR SP4	SP2 OR SP4

FIRST FLOOR WALL STUD TO SECOND FLOOR WALL STUD CONNECTION (BASED ON 16” O.C. STUD SPACING):

ROOF SPAN, FT.	36	40	44	48	52
UPLIFT, LBS.	488	534	582	632	680
CONNECTORS	LSTA 12 (2 OVERLAPPED) OR 1 LSTA 24	LSTA 12 (2 OVERLAPPED) OR 1 LSTA 24	1 – LSTA 24	1 – LSTA 24	1 – LSTA 24

TOP PLATE TO RAFTER CONNECTION (BASED ON 24” O.C. RAFTER SPACING):

ROOF SPAN, FT.	36	40	44	48	52
UPLIFT, LBS.	728	798	868	942	1016
CONNECTORS	H8	2 – H2.5A, OR H10A, OR MTS12	2 – H2.5A, OR H10A, OR MTS12	2 – H2.5A, OR H10A, OR MTS12	2 – H2.5A, OR H10A

WINDOW OR DOOR WALL OPENING CONNECTIONS, ROOF SPAN = 36 FEET:

HEADER SPAN, FT.	3	4	5	6
UPLIFT @ EACH END OF HEADER, LBS.	546	728	910	1092
LATERAL LOAD, LBS.	236	314	393	471
CONNECTORS	LSTA 12	LSTA 12	LSTA 12	CS16 OR LSTA 18

WINDOW OR DOOR WALL OPENING CONNECTIONS, ROOF SPAN = 44 FEET:

HEADER SPAN, FT.	3	4	5	6
UPLIFT @ EACH END OF HEADER, LBS.	656	874	1092	1310
LATERAL LOAD, LBS.	284	376	472	566
CONNECTORS	LSTA 12	LSTA 12	CS16 OR LSTA 18	2 – LSTA 12

WINDOW OR DOOR WALL OPENING CONNECTIONS, ROOF SPAN = 52 FEET:

HEADER SPAN, FT.	3	4	5	6
UPLIFT @ EACH END OF HEADER, LBS.	764	1020	1274	1528
LATERAL LOAD, LBS.	330	440	550	660
CONNECTORS	LSTA 12	CS16 OR LSTA 18	2 – LSTA 12	2 – LSTA 12



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