

Columbia County Building Permit Application

Revis

For Office Use Only Application # 0602-100 Date Received 2/28/06 By GT Permit # 24297
Application Approved by - Zoning Official BLK Date 08-03-06 Plans Examiner OK JTH Date 3-23-06
Flood Zone X Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3
Comments Accessory Use
NO - NOC

Applicants Name RONALD R & MARCIAA OLSZAK Phone 386 454-8
Address P.O. BOX 2277 HIGH SPRINGS, FL 32655
Owners Name RONALD R & MARCIAA OLSZAK Phone 386 454-
911 Address 200 SW BAY PL Fort White, FL 32038
Contractors Name OWNER/BUILDER Phone ABOVE
Address ABOVE
Fee Simple Owner Name & Address N/A
Bonding Co. Name & Address N/A
Architect/Engineer Name & Address RIVERA DESIGN GROUP, 1217 NW 16th A
Mortgage Lenders Name & Address N/A

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. Progress
Property ID Number 30-75-17-1005B-594 Estimated Cost of Construction UNDER 10,000
Subdivision Name SANTE FE RIVER PLANTATION Lot 4 Block Unit
Driving Directions FROM HIGH SPRINGS TAKE 27N TO CR 13E
TURN LEFT ON CR 13E TO 1ST ST. ON LEFT, HEELIN AVE. 6
LOT STON RT. SW BAY PL TURN RT ON BAY TO 4th LOT ON LE
Type of Construction SINGLE FAMILY STORAGE Number of Existing Dwellings on Property
Total Acreage 2.24 Lot Size 180'9" x 541'47" Do you need a - Culvert Permit or Drainage Permit or Have an Ex.
Actual Distance of Structure from Property Lines - Front 290' Side 165' Side 39' Rear 220'
Total Building Height 22' Number of Stories 1 Heated Floor Area 9087 Roof Pitch 7/12

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Marcia A. Olszak
Ronald R. Olszak
Owner Builder or Agent (Including Contractor)

STATE OF FLORIDA
COUNTY OF COLUMBIA Alachua

Sworn to (or affirmed) and subscribed before me
this 27th day of February 2006.
Personally known or Produced Identification ✓

FL Driver's License

Contractor Signature
Contractors License Number
Competency Card Number
NOTARY STAMP/SEAL

Carol D. Short
Notary Signature



CAROL D. SHORT
Notary Public, State of Florida
My comm. expires Nov. 19, 2007
No. DD 269014

OLSZAK STORAGE SHED

RON & MARCIA

02-28-2006

200 S.W. BAY PLACE

PARCEL ID: 30-7S-17-10058-594

PHONE # 386-454-8450

LOT 4, OF A REPLAT OF LOTS 38,45 AND 46, OF SANTA
FE RIVER PLANTATIONS, ACCORDING TO THE PLAT THERE AS RECORDED IN
PLAT BOOKS, PAGE(S) 13, OF PUBLIC RECORDS OF COLUMBIA COUNTY,
FLORIDA

Hold For 5012 Test

From: The Columbia County Building Department
Plans Review
135 NE Hernando Av.
P. O Box 1529
Lake City Florida, 32056-1529

0602-100

Reference to: Build permit application Number:

Ronald & Marcia Olszak Owner/Builders of lot 4 Santa Fe Plantations

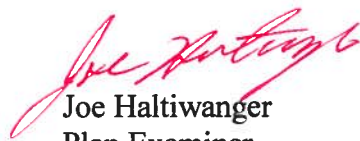
On the date of March 8, 2006 application 0602-100 and plans for construction of a storage shed were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

Please include application number 0602-100 when making reference to this application.

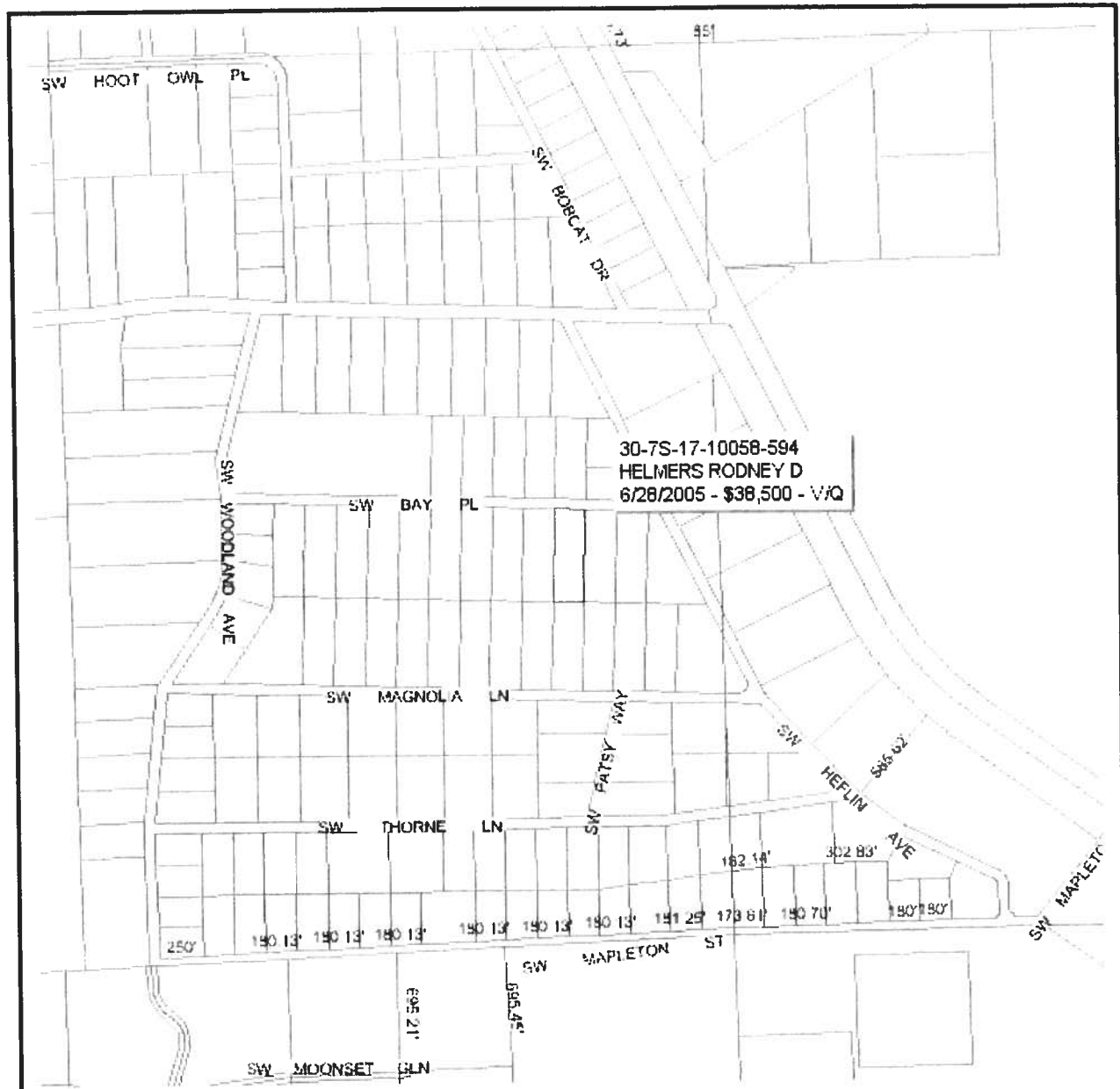
1. Please have Mr. Thomas Sputo the structural designer show on the plans the required load bearing capacities of the soils to provide adequate support for the foundations.
2. On the electrical plan show the location of the electrical sub- panel and include the total amperage rating of the electrical service panel. A panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground.
3. Please submit a separate Owner Builder Disclosure Statement for the storage shed. (Form Attached)
4. Please submit a recorded (with the Columbia County Clerk Office) a notice of commencement before any inspections can be preformed by the Columbia County Building Department on the storage shed.

5. On the floor plan please label the partition rooms.
6. If the storage shed will include plumbing, Please include a separate or joint copy of a signed released site plan from the Columbia County Environmental Health Department which confirms approval of the waste water disposal system for the storage shed.
7. Show all the electrical receptacles, which will be required to has GFCI protection with in the storage shed or on the exterior of the storage shed.

Thank you,



Joe Haltiwanger
Plan Examiner
Columbia County Building Department



Columbia County Property Appraiser

J Doyle Crews, CFA - Lake City, Florida - 386-758-1083

PARCEL: 30-7S-17-10058-594 - VACANT (000000)

LOT 4 SANTA FE RIVER PLANTATIONS REPLAT OF LOT 46. ORB 819-1287, 874-1287,

Name:	OLSZAK RONALD R & MARCIA A	LandVal	\$33,196.00
Site:		BldgVal	\$0.00
Mail:	P O BOX 2277	ApprVal	\$33,196.00
	HIGH SPRINGS, FL 32655	JustVal	\$33,196.00
Sales	11/30/2005 \$81,500.00V / Q	Assd	\$33,196.00
Info	6/28/2005 \$38,500.00V / Q	Exmpt	\$0.00
	5/10/2001 \$100.00V / U	Taxable	\$33,196.00

0 0.07 0.14 0.21 mi



This information, GIS Map Updated: 8/3/2005, was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.

GEO-TECH, INC.

ENGINEERING CONSULTANTS IN GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

March 17, 2006
Project No. 062726.01G

Mr. & Mrs. Olszak
P.O. Box 2277
High Springs, FL 32655

Attention: Mr. & Mrs. Olszak


Project: Proposed Residence and Shed, Santa Fe River Plantation, Columbia County, Florida
Soil Bearing Capacity

Dear Mr & Mrs. Olszak:

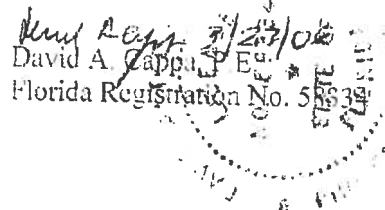
As requested, Geo-Technologies, Inc. (Geo-Tech) has visited the above referenced project site. The purpose of our visit was to perform penetrometer readings in the area that the proposed residence and shed will be placed based on Hand Penetrometer (HP) results in the native soils. Six (6) auger borings with penetrometer readings were performed to four (4) feet below site grade. Based on the results of the penetrometer readings, the maximum allowable soil bearing pressures found at these locations are approximately 2,000 pounds per square foot based

Geo-Technologies, Inc. (Geo-Tech) trust this report is sufficient to meet your immediate needs. Should you have any questions concerning this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely, w


Donald "Bubba" Youngblood
Branch Manager

DY/DC: kw


David A. Zappa, E.
Florida Registration No. 58839

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2004 and FLORIDA RESIDENTIAL CODE 2004 WITH AMENDMENTS ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE OCTOBER 1, 2005

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 16 OF THE FLORIDA BUILDING CODE 2004 BY PROVIDING CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS. FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEED AS PER FIGURE 1609 SHALL BE USED.

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

1. ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE ——— 100 MPH
2. ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE ——— 110 MPH
3. NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS: Two (2) complete sets of plans containing the following:

Applicant

Plans Examiner

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All drawings must be clear, concise and drawn to scale ("Optional" details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.

Designers name and signature on document (FBC 106.1). If licensed architect or engineer, official seal shall be affixed.

Site Plan including:

- a) Dimensions of lot
- b) Dimensions of building set backs
- c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements.
- d) Provide a full legal description of property.

Wind-load Engineering Summary, calculations and any details required

Plans or specifications must state compliance with FBC Section 1609.

The following information must be shown as per section 1603.1.4 FBC

- a. Basic wind speed (3-second gust), miles per hour (km/hr).
- b. Wind importance factor, I_w , and building classification from Table 1604.5 or Table 6-1, ASCE 7 and building classification in Table 1-1, ASCE 7.
- c. Wind exposure, if more than one wind exposure is utilized the wind exposure and applicable wind direction shall be indicated.
- d. The applicable enclosure classifications and, if designed with ASCE 7, internal pressure coefficient.
- e. Components and Cladding. The design wind pressures in terms of psf (kN/m^2) to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional.

Elevations including:

- a) All sides
- b) Roof pitch
- c) Overhang dimensions and detail with attic ventilation

- a. Attic space
- b. Exterior wall cavity
- c. Crawl space (if applicable)

b) Wood frame wall

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers) shall be designed by a Windload engineer using the engineered roof truss plans.
7. Roof assembly shown here or on roof system detail (FBC 106.1.1.2) Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termiticide or alternative method)
11. Slab on grade
 - a. Vapor retarder (6Mil Polyethylene with joints lapped 6 inches and sealed
 - b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
 - a. Attic space
 - b. Exterior wall cavity
 - c. Crawl space (if applicable)

c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

- a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer
- b) Floor joist size and spacing
- c) Girder size and spacing
- d) Attachment of joist to girder
- e) Wind load requirements where applicable

Plumbing Fixture layout

Electrical layout including:

- a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified
- b) Ceiling fans
- c) Smoke detectors
- d) Service panel and sub-panel size and location(s)
- e) Meter location with type of service entrance (overhead or underground)
- f) Appliances and HVAC equipment
- g) Arc Fault Circuits (AFCI) in bedrooms
- h) Exhaust fans in bathroom

HVAC information

- a) Energy Calculations (dimensions shall match plans)
- b) Manual J sizing equipment or equivalent computation
- c) Gas System Type (LP or Natural) Location and BTU demand of equipment

Disclosure Statement for Owner Builders

*****Notice Of Commencement Required Before Any Inspections Will Be Done**

Private Potable Water

HAH PORTA SERVICE LINE OR SANITARY
6" MONTHLY MONTHLY

Location: 2000 S.W. 10th PLACE

Project Name: OLSHAK, Lot 4

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit on or after April 1, 2004. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at www.floridabuilding.org

SANTA FE RIVER PLANTATIONS

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
A. EXTERIOR DOORS			
1. Swinging	MASONITE INTERNATIONAL		FL 1
2. Sliding			
3. Sectional			
4. Roll up	CLOPAY	TA	
5. Automatic			
6. Other			
B. WINDOWS			
1. Single hung	ALENCO	Window	FL
2. Horizontal Slider			
3. Casement			
4. Double Hung			
5. Fixed			
6. Awning			
7. Pass-through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11. Dual Action			
12. Other			
C. PANEL WALL			
1. Siding	JAMES HARDIE	HARD	FL 889
2. Soffits	CAMELON ASHLEY	SoF	FL 4968.2
3. EIFS			
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block			
8. Membrane	Dupont	TYVEK	
9. Greenhouse			
10. Other	Simpson Strong-Tie	Anchor Bolt 5/8x10	
D. ROOFING PRODUCTS			
1. Asphalt Shingles	TAMKO	SHingles	FL 1956 R1
2. Underlayments	WARRIOR	30# FELT	FL 2346 R1
3. Roofing Fasteners	SIMPSON	TIES & STRAPS	*
4. Non-structural Metal Rf			
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
1. Wood shingles /shakes			
2. Roofing Slate			

* MSTAR 21 FL 190151 *

* MSTAR 4 FL 190151

SHed *

14. Cements-Adhesives - Coatings			
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
E. SHUTTERS			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
F. SKYLIGHTS			
1. Skylight			
2. Other			
G. STRUCTURAL COMPONENTS			
1. Wood connector/anchor	SIMPSON	STRONG TIE STRAP & TIE	*
2. Truss plates	MITER	M1120 M1120H & M1118H	SEE TRUSS PKG
3. Engineered lumber			
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			
12. Sheds			
13. Other			
H. NEW EXTERIOR ENVELOPE PRODUCTS			
1.			
2.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspection

Contractor or Contractor's Authorized Agent Signature

Print Name

Date

Location

Permit # (FOR STAFF USE ONLY)

* MSTA 21 FL 1901.56
* MSTA 24 FL 1901.57

* Stud Plates SP4 / FL 474.386
* Hurricane Ties H10 / FL 474.109

**Columbia County Building Department
Culvert Waiver Permit / Application**

Waiver No.

APPLICANT RONALD R. & MARCIA A. OLSZAK PHONE 386-454-845

ADDRESS P.O. BOX 2277 HIGH SPRINGS, FL 32655

OWNER RONALD R. & MARCIA A. OLSZAK PHONE 386-454-845

ADDRESS P.O. BOX 2277 HIGH SPRINGS, FL 32655

CONTRACTOR OWNER/BUILDER PHONE ABOVE

LOCATION OF PROPERTY 200 SW BAY PL

PARCEL ID # 32-75-17-10058-594

SUBDIVISION (Lot/Block/Phase/Unit) SANTA FE RIVER PLANTATION, LD

I HEREBY CERTIFY THAT I UNDERSTAND AND WILL FULLY COMPLY WITH THE DECISION OF COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT IN CONNECTION WITH THE HEREIN PROJECT APPLICATION.

SIGNED: Ronald R. Olszak DATE: Jul 23, 2006

FEE: \$ 50.00 A SEPARATE CHECK IS REQUIRED.
MAKE CHECKS PAYABLE TO BCC.

Public Works Department Use Only

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS APPLICATION AND DETERMINE THAT THE CULVERT WAIVER IS:

_____APPROVED _____NOT APPROVED - NEEDS A CULVERT PERMIT

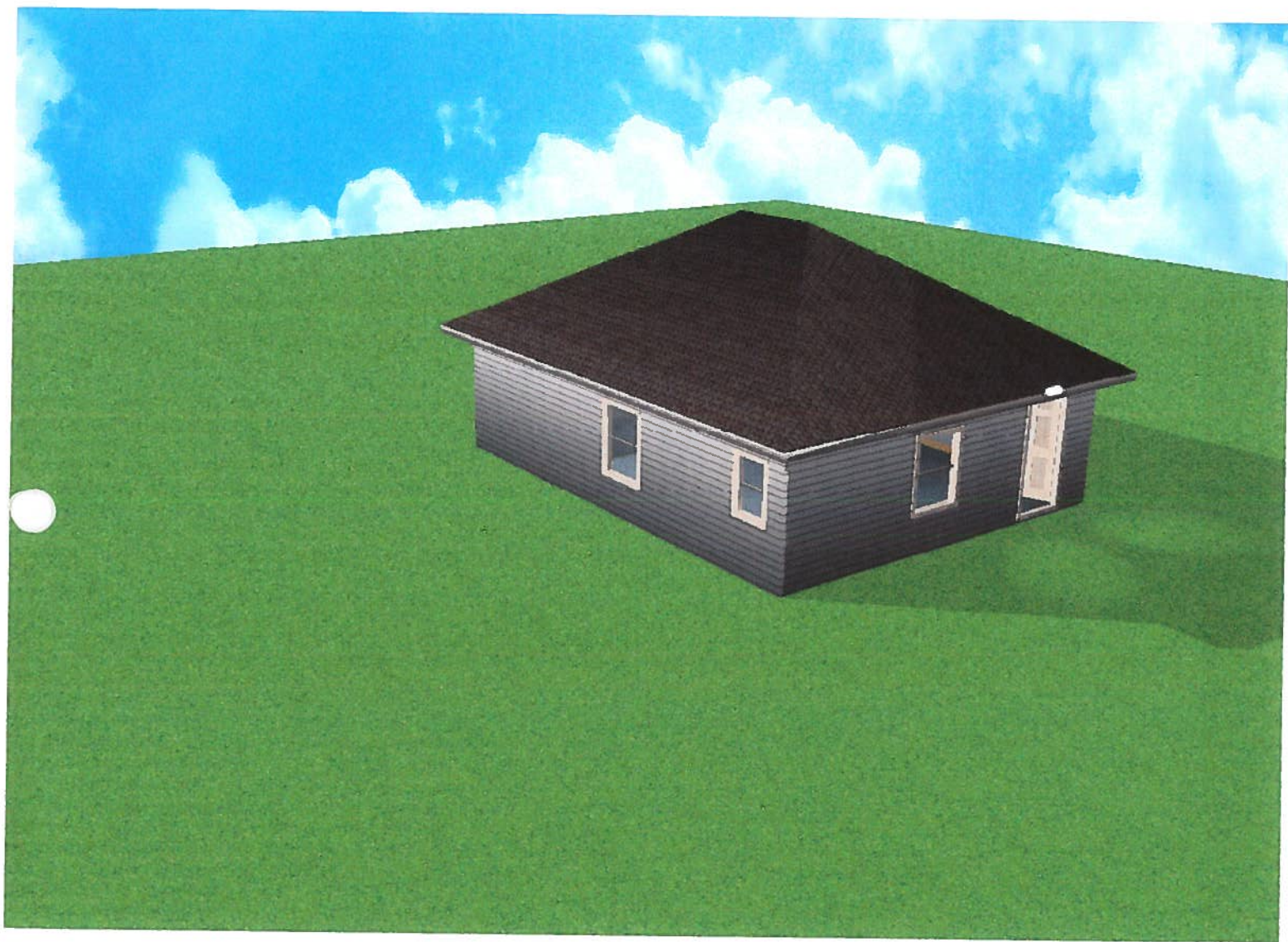
COMMENTS _____

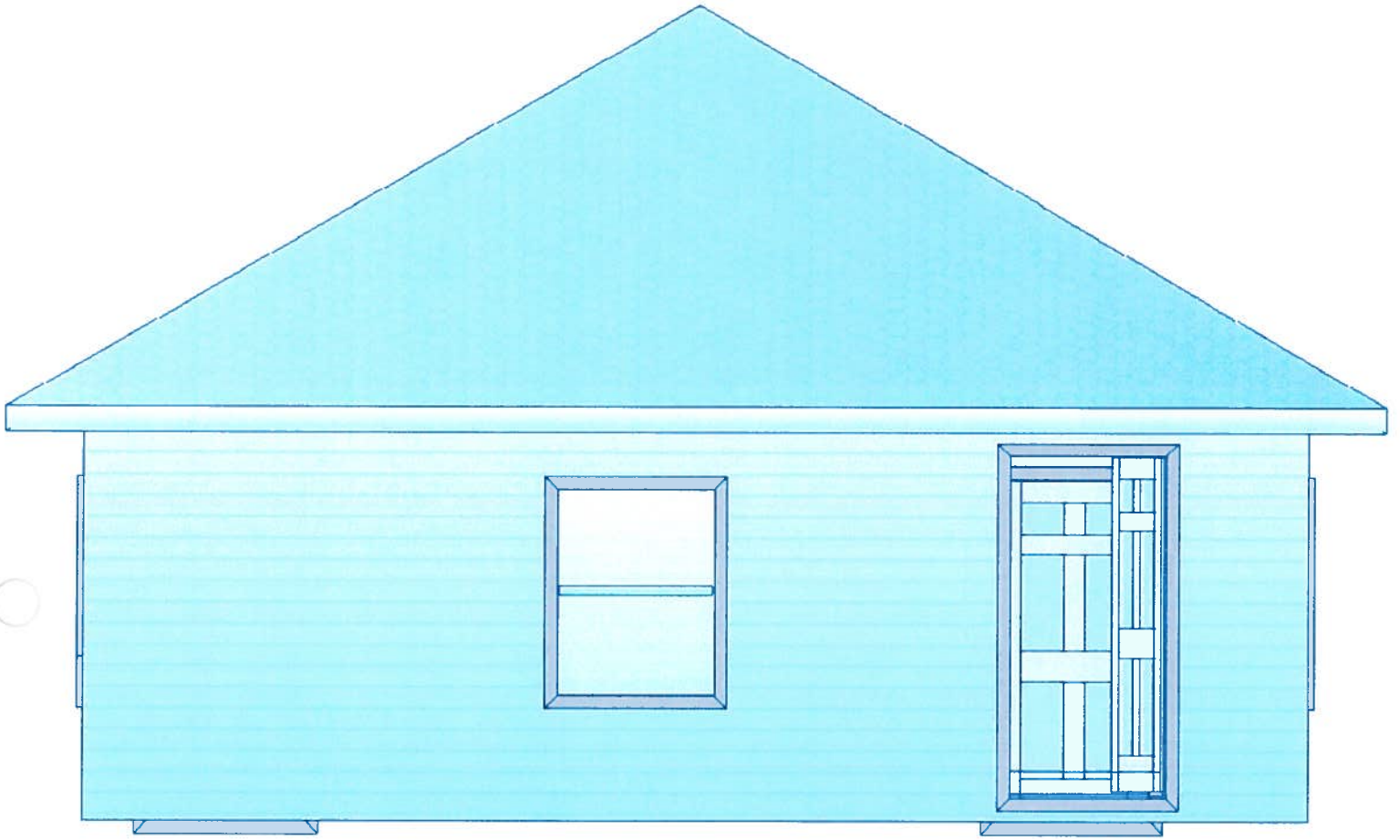
SIGNED: _____ DATE: _____

ANY QUESTIONS PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT 386-752-5955.

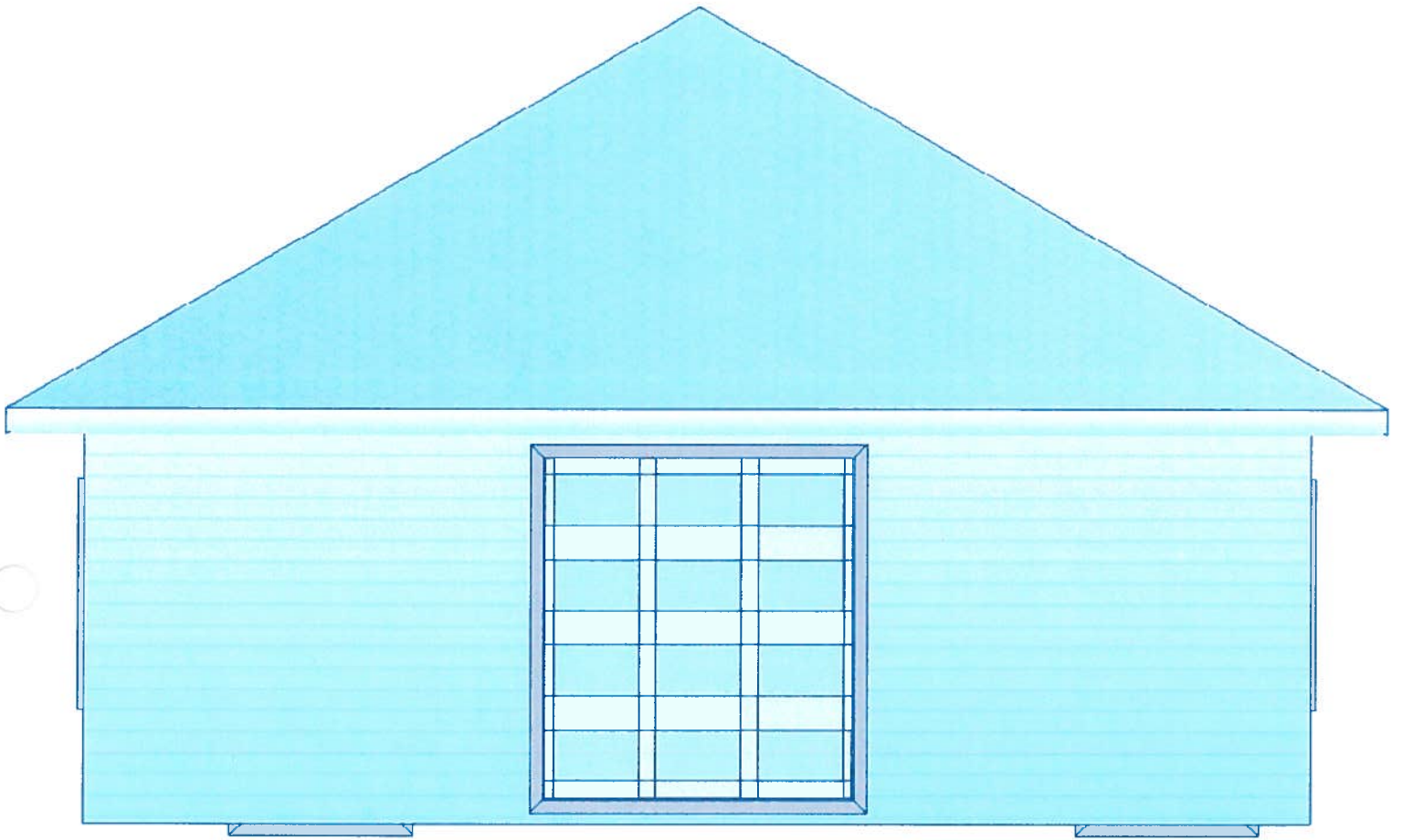
135 NE Hernando Ave., Suite B-21, Lake City, FL 32055
Phone: 386-758-1008 Fax: 386-758-2160

SEALED

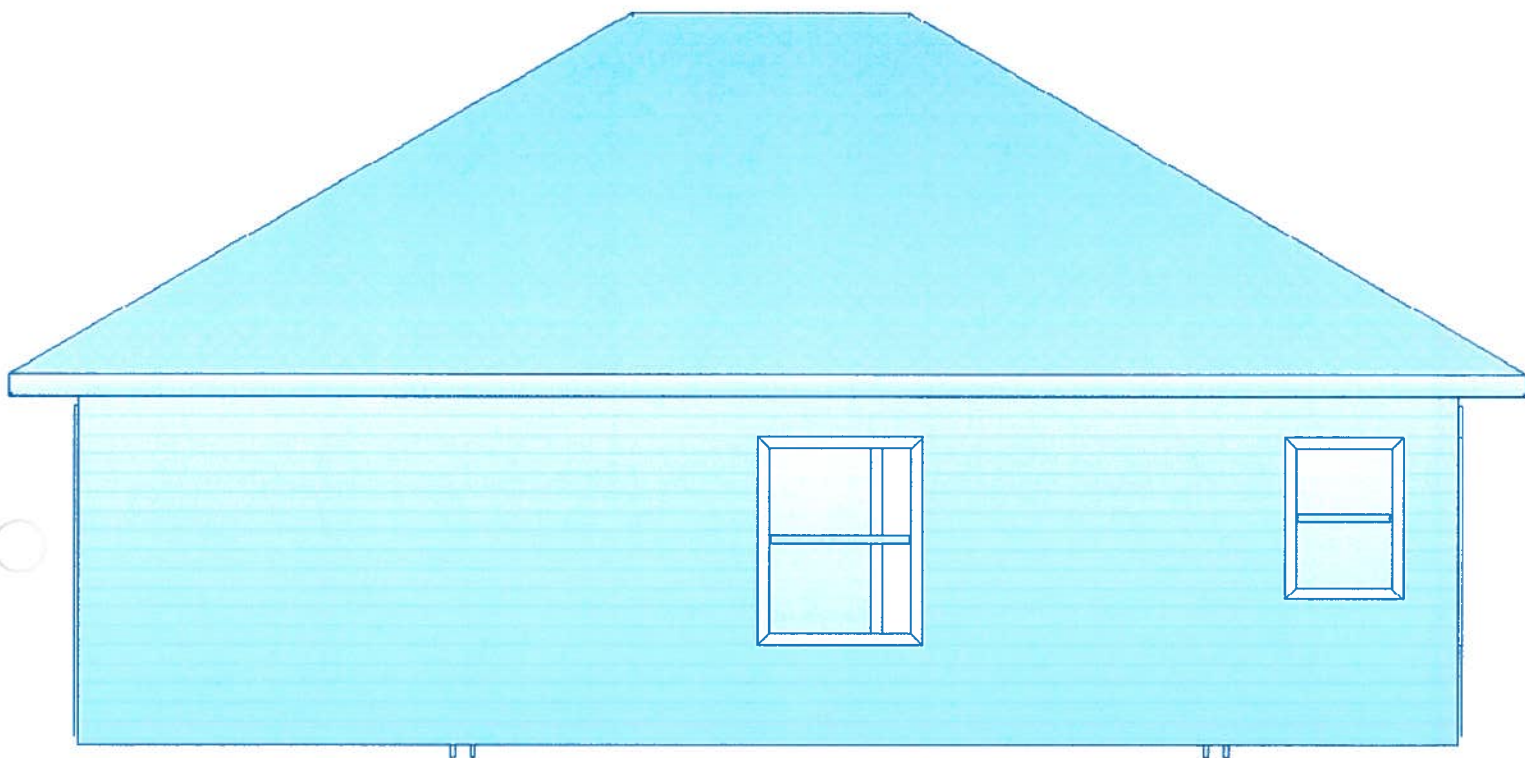




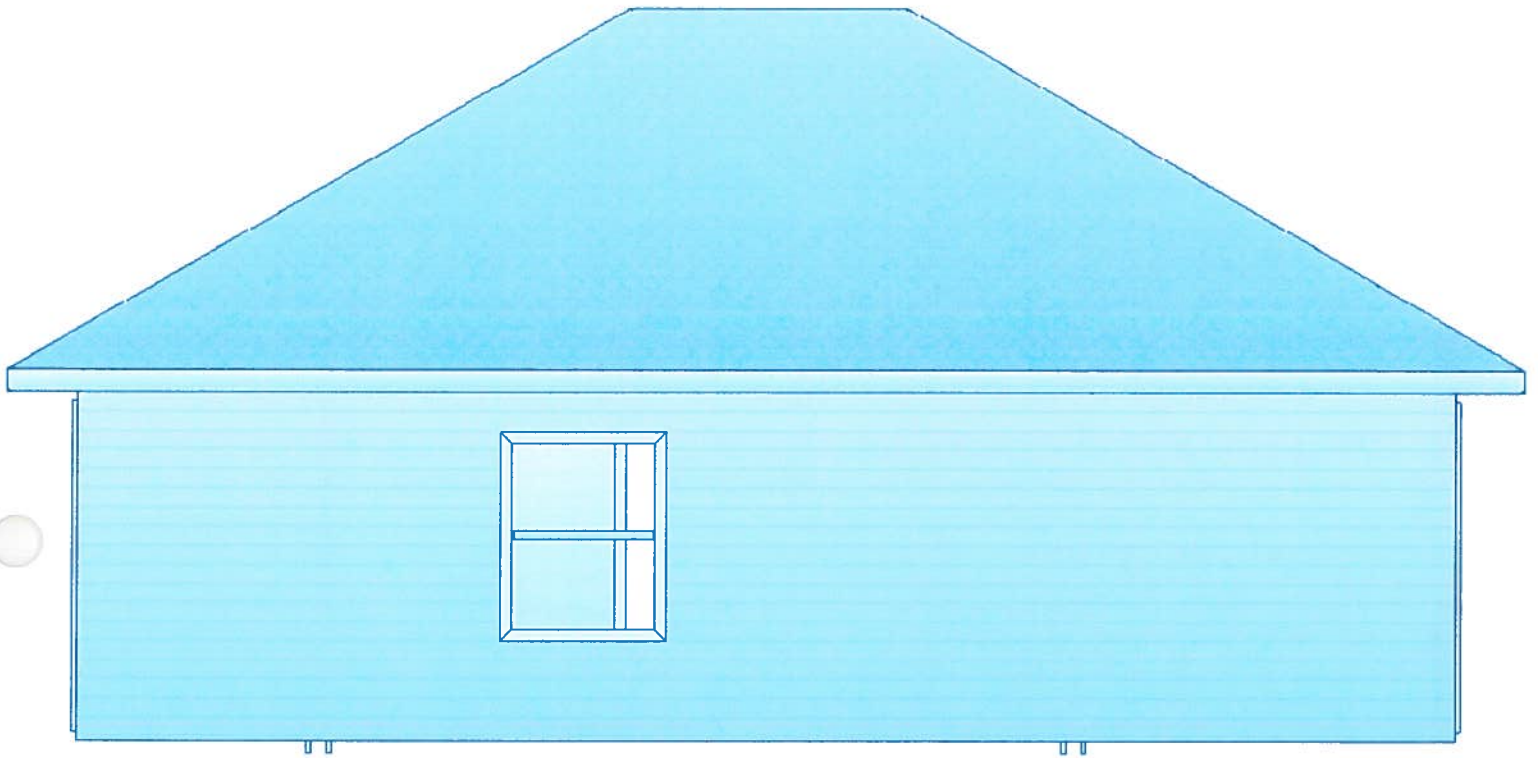
*OLSZAK STORAGE SHED
FRONT ELEVATION*



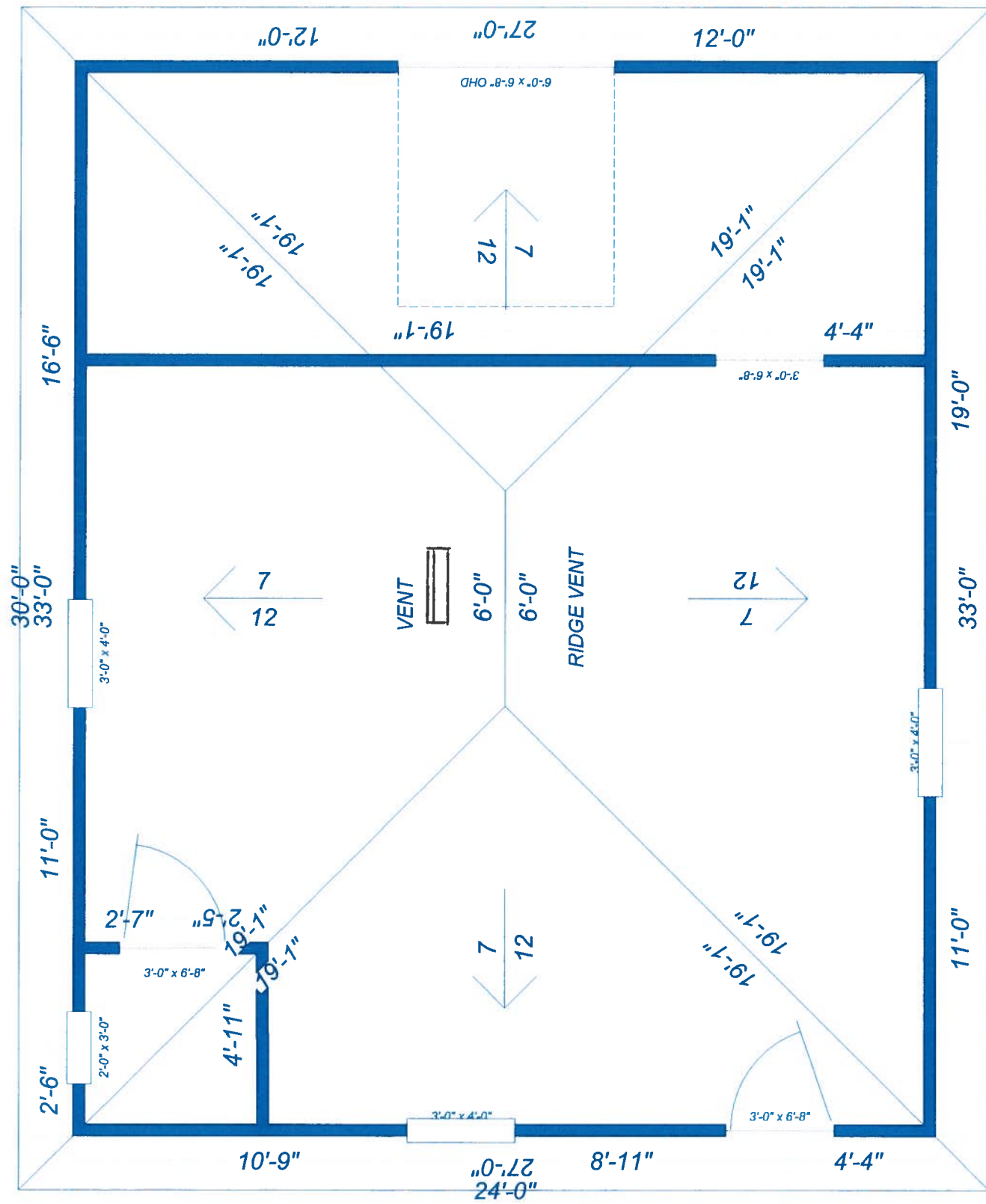
*OLSZAK STORAGE SHED
REAR ELEVATION*



OLSZAK STORAGE SHED
LEFT ELEVATION



*OLSZAK STORAGE SHED
RIGHT ELEVATION*



OLSZAK STORAGE SHED ROOF LAYOUT
scale 1/4 inch = 1 foot

24'-0"

30'-0"

30'-0"

24'-0"

OLSZAK STORAGE SHED

scale: 1/4 in = 1 ft

foundation: Mono 4 inch slab, details attached

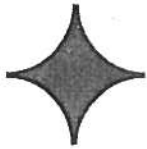
**WIND RESISTANCE ENGINEERING
CALCULATIONS FOR
OLSZAK RESIDENCE
200 SW Bay PI
Ft. White, FL
STORAGE SHED**

**DESIGNED IN ACCORDANCE WITH
REQUIREMENTS OF 2004 FLORIDA BUILDING CODE,
SECTION 1609 FOR 110 MPH WIND SPEED**



**THOMAS SPUTO, PH.D., P.E.
PE 39142**

**SPUTO AND LAMMERT ENGINEERING, LLC
STRUCTURAL ENGINEERS
10 SW 1st AVENUE, GAINESVILLE, FLORIDA 32601
(352) 378-0448
CA 6855**



SPUTO AND LAMMERT ENGINEERING, LLC
STRUCTURAL ENGINEERS
10 SW 1ST AVENUE, GAINESVILLE, FL 32601
PHONE: 352-378-0448 FAX: 352-373-1331
E-MAIL: sputoandlammert@mindspring.com

STORAGE SHED

Wind resistance of the referenced building has been designed using a wind speed of 110 mph as required by Section 1609, 2004 Florida Building Code.

ROOF SHEATHING: ½" Plywood or 7/16" OSB, installed without blocking. Use 8d common or 10-1/4 gage x 2" minimum length power nails at 6" o.c. at sheet edges and 12" o.c. in the sheet field. The roof acts as a structural diaphragm.

WALL SHEATHING: ½" Plywood or 7/16" OSB, installed with blocking at all horizontal sheet edges. Sheathing is installed from bottom to top plate to provide a continuous load path. Use 8d common or 10-1/4 gage x 2" minimum length power nails at 6" o.c. at vertical sheet edges, 6" o.c. at horizontal sheet edges, and 12" o.c. in the sheet field.

SHEARWALLS: See plan sheet for locations.

WALL STUDS: #2 Spruce or better 2x4 at 16" o.c.

ANCHOR BOLTS: ½" with 2" washer at maximum spacing of 48" o.c. Install one bolt within 6" of all corners, and within 6" of the ends of all windows and doors. (Anchor bolt alternate - 5/8" wedge anchor with 4" embed into concrete.) **USE 2" ROUND OR SQUARE WASHERS AT EACH END OF ALL SHEARWALLS.**

HURRICANE CLIPS: Sized as follows. Subject to revision by the engineer after review of engineering from truss manufacturer.

One Ply Truss (except Truss A1):	Simpson H10
Truss A1:	(2) Simpson H10
Truss to Truss:	Specified by truss manufacturer, IAW Wood Truss Council of America Standard WTCA 1-1995.

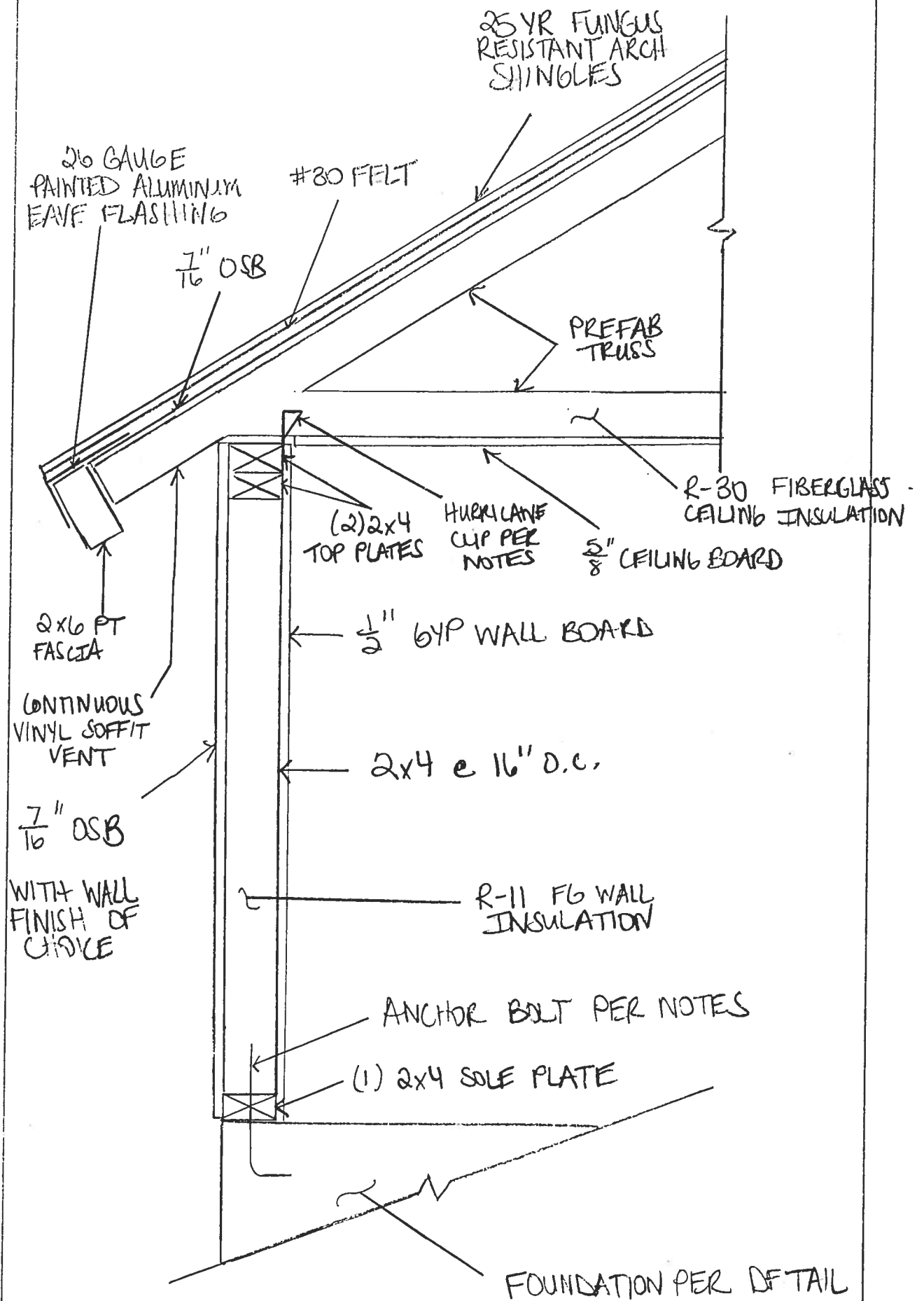
CONCRETE: All concrete shall have a 28 day compressive strength of 3000 psi.

REINFORCING STEEL: Grade 40 - #5 bars. All lap splices to be a minimum of 25 inches.

NOTE: 10-1/4 GAGE NAILS HAVE A DIAMETER OF 0.131 INCHES.

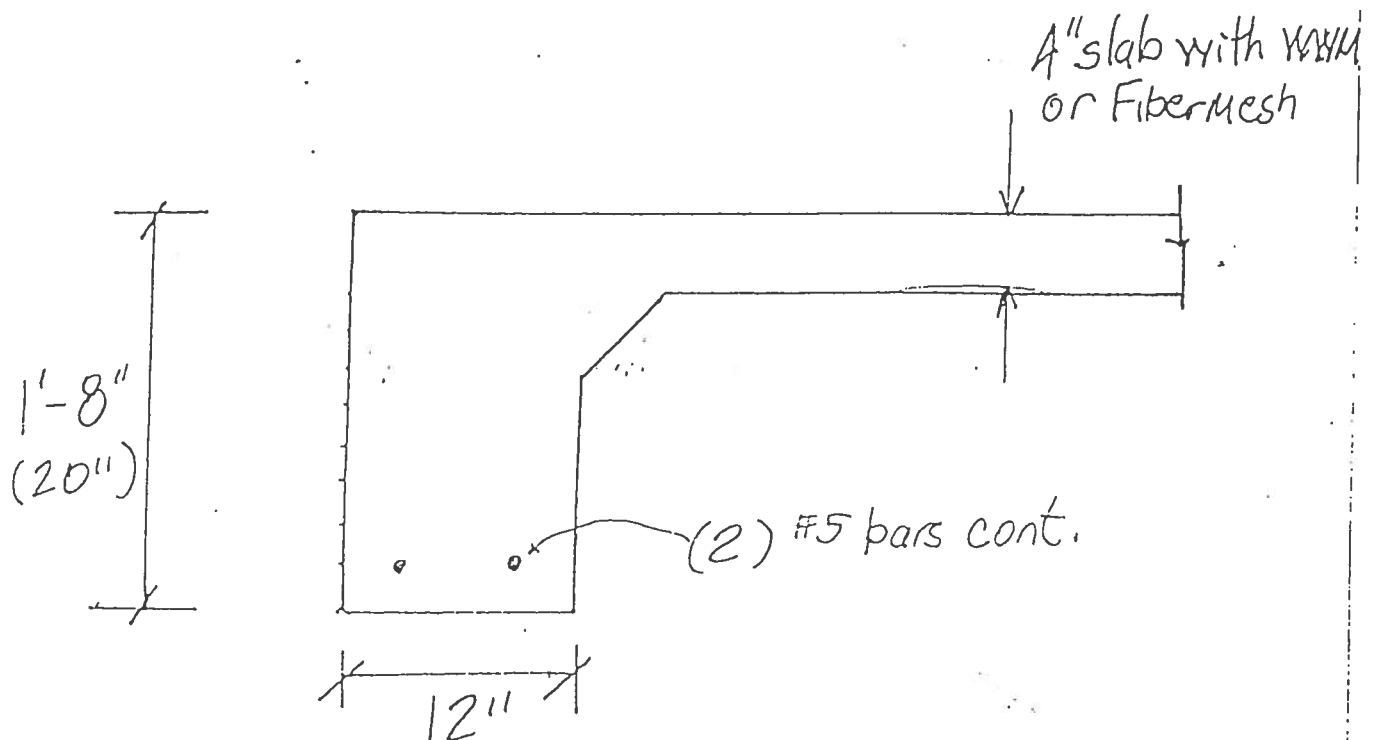
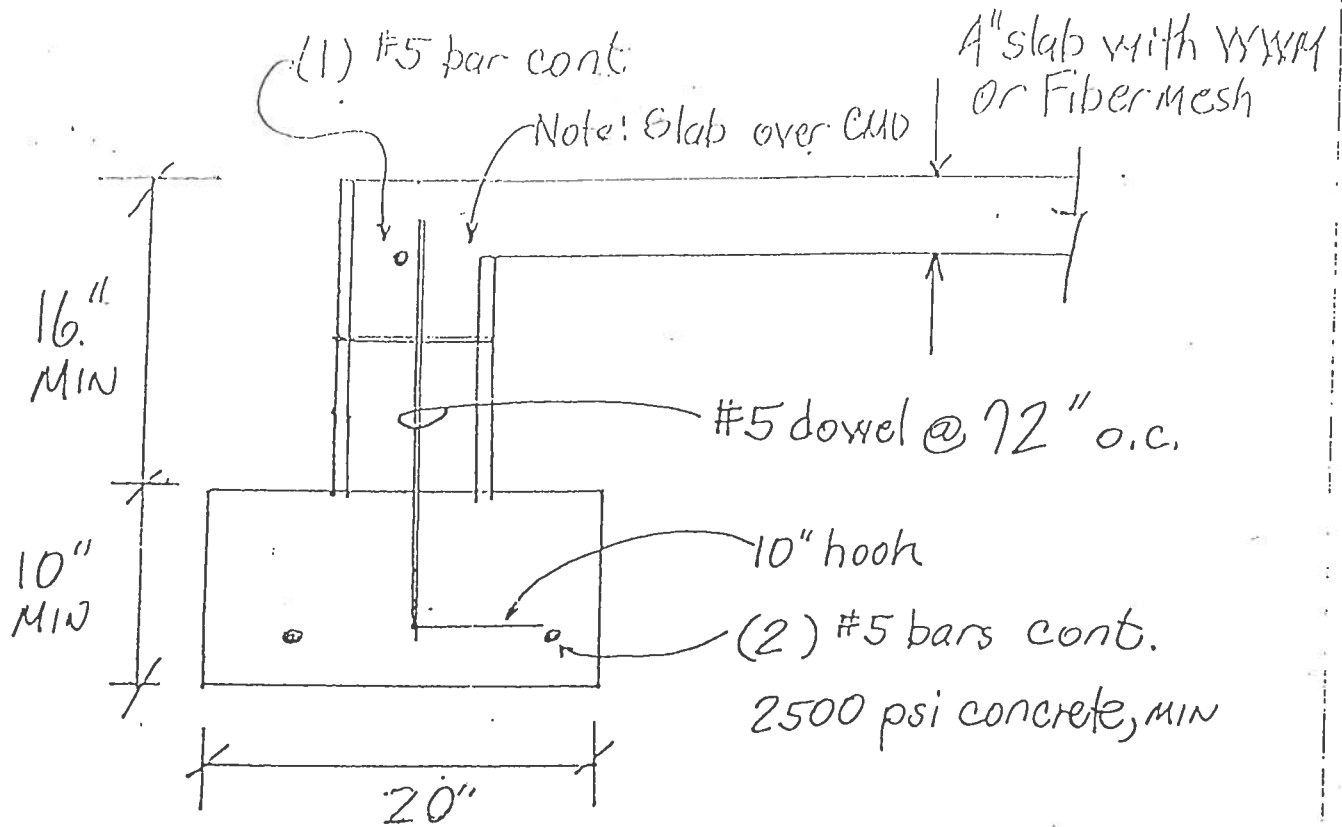
2004 Florida Building Code Section 1603.1.4 Information

Basic Wind Speed	=	110 mph
Importance Factor	=	1.00
Building Category	=	II
Wind Exposure	=	B
Internal Pressure Coefficient	=	+ - 0.18
C & C Pressures	=	Zone 4 = 22.6 psf
		Zone 5 = 27.2 psf



Foundation Alternatives

All rebar - Grade 40
All concrete - 3000 psi MIN



CONNECTOR SELECTION

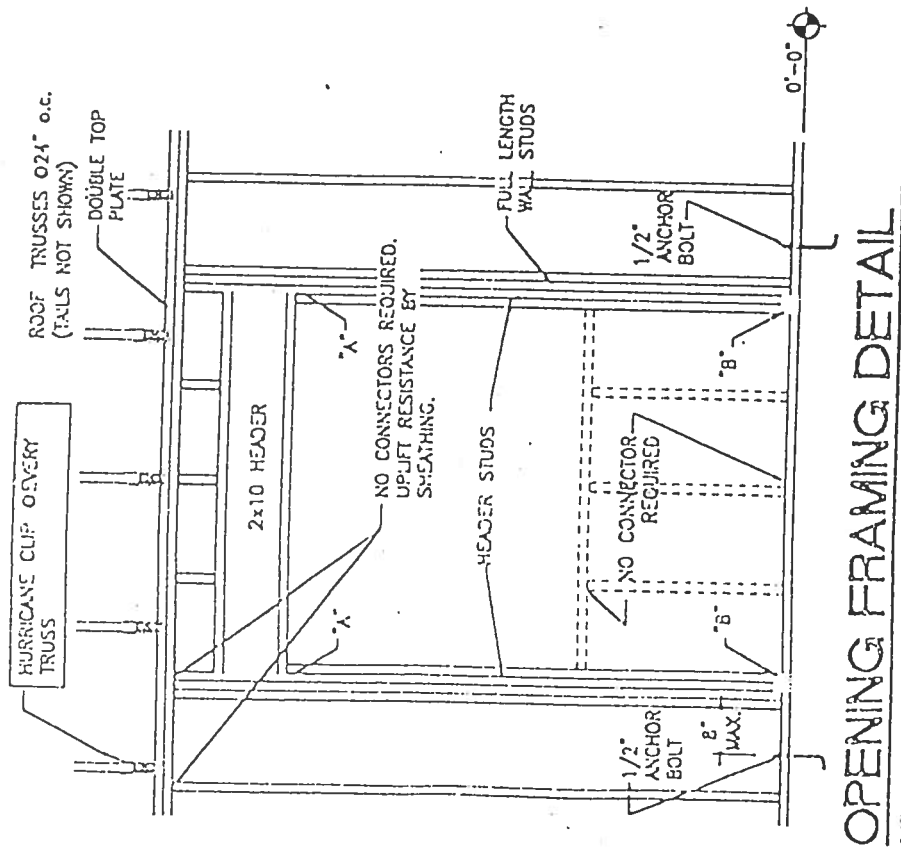
SPAN	WALL	ANCHOR BOLTS
9'-0" AND UNDER	(1) LSTA24	(1) EACH END
OVER 9'-0"	(2) LSTA24	(2) EACH END
• USE SP6 ON 2X6 WALLS		

NOTES:

- CONNECTORS INDICATED ARE BY SIMPSON STRONG TIE CO., INC. PRE-APPROVED EQUAL MAY BE USED.
- STANDARD WALL HEIGHT SHOWN. WALL HEIGHT MAY VARY. ADJUST HEAD AND SILL HEIGHT WITH CRIPPLES AS REQUIRED.
- REFER TO HEADER HOLD DOWN CHART FOR NUMBER OF FULL-LENGTH AND HEADER STUDS REQUIRED FOR DIFFERENT OPENING WIDTHS.
- SHEAR AND UPLIFT RESISTANCE PROVIDED BY SHEATHING. REFER TO STRUCTURAL ENGINEER'S NOTES ON THIS SHEET.

HEADER HOLD DOWNS

UNSUPPORTED WALL HEIGHT	STUD SPACING	MAXIMUM HEADER SPAN (1L)					
		3	6	9	12	15	18
10'-0" OR LESS	12 in.	2	2	3	3	3	3
	16 in.	2	2	3	3	3	3
	24 in.	1	2	2	2	2	2
	12 in.	2	2	3	4	5	5
	16 in.	2	2	3	3	4	4
GREATER THAN 10'-0"	24 in.	1	2	2	2	3	3



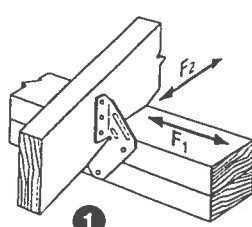
OPENING FRAMING DETAIL

Available with additional corrosion protection. Check with factory.

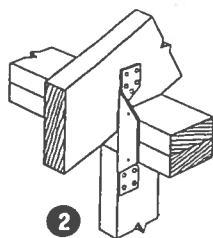
Model No.	Ga	Fasteners			DF/SP Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	SPF/HF Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	Code Ref.
		To Rafter/Truss	To Plates	To Studs	Uplift		Lateral (133/160)			Uplift		Lateral (133/160)			
					(133)	(160)	F ₁	F ₂		(133)	(160)	F ₁	F ₂		
H1	18	6-8dx1½	4-8d	---	490	585	485	165	455	400	400	415	140	370	2, 40, 82, 121, 140
H2	18	5-8d	---	5-8d	335	335	---	---	335	230	230	---	---	230	
H2.5	18	5-8d	5-8d	---	415	415	150	150	415	365	365	130	130	365	
H2.5A	18	5-8d	5-8d	---	600	600	110	110	480	520	535	110	110	480	
H2.5T	18	5-8d	5-8d	---	545	545	135	145	425	515	515	135	145	425	122
H3	18	4-8d	4-8d	---	455	455	125	160	415	320	320	105	140	290	2, 40, 82, 121, 140
H4	20	4-8d	4-8d	---	360	360	165	160	360	235	235	140	135	235	2, 40, 121, 140
H5	18	4-8d	4-8d	---	455	465	115	200	455	265	265	100	170	265	2, 40, 82, 121, 140
H5A	18	3-8d	3-8d	---	350	420	115	180	290	245	245	100	120	170	10
H6	16	---	8-8d	8-8d	915	950	650	---	---	785	820	560	---	---	5, 41, 121, 140
H7Z	16	4-8d	2-8d	8-8d	930	985	400	---	---	800	845	345	---	---	125
H8	18	5-10dx1½	5-10dx1½	---	620	745	75	---	---	530	565	75	---	---	170
H9KT	18	4-SDS¼x1½	5-SDS¼x1½	---	875	875	680	125	---	755	755	680	125	---	9, 121
H10	18	8-8dx1½	8-8dx1½	---	905	990	585	525	---	780	850	505	450	---	6, 121
H10R	18	8-8dx1½	8-8dx1½	---	905	990	585	525	---	780	850	505	450	---	170
H10-2	18	6-10d	6-10d	---	760	760	455	395	---	655	655	390	340	---	125
H11Z	18	6-16dx2½	6-16dx2½	---	830	830	525	760	---	715	715	450	655	---	125
H14	18	1 12-8dx1½	13-8d	---	1350	1350	515	265	---	1050	1050	480	245	---	125
		2 12-8dx1½	15-8d	---	1350	1350	515	265	---	1050	1050	480	245	---	

1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed, reduce where other loads govern.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate (see footnote 5).
3. Allowable uplift load for stud to bottom plate installation is 400 lbs (H2.5); 390 lbs (H2.5A); 360 lbs (H4) and 310 lbs (H8).
4. Allowable loads in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members. Additional shear transfer elements

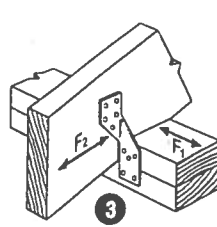
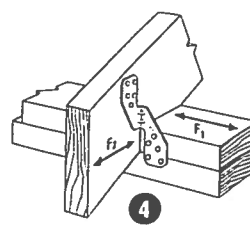
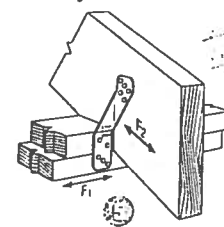
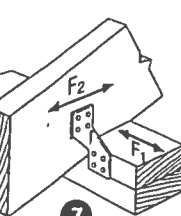
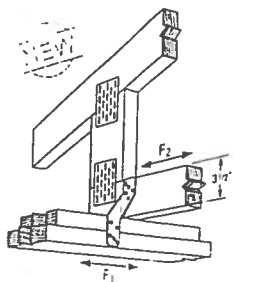
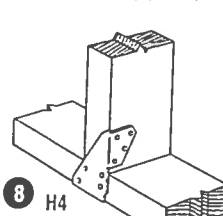
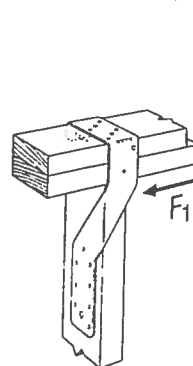
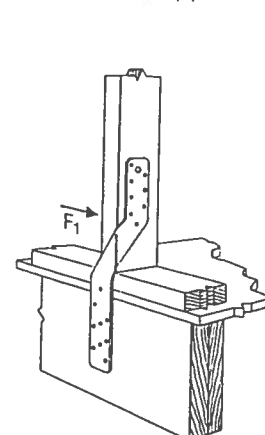
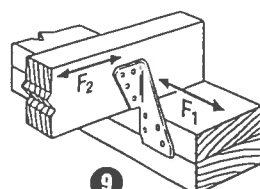
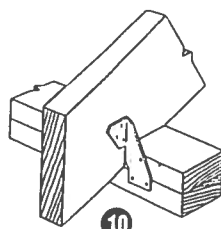
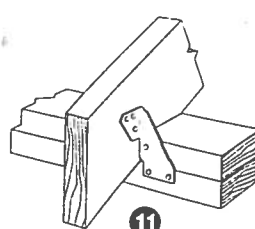
5. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a Continuous Load Path, connections must be made from the tie to the plate. All connections must be on same side of the wall.
6. Southern Pine allowable loads for H14: 1465 lbs (133/160), 560 lbs (F₁ Lateral 133/160) and 285 lbs (F₂ Lateral 133/160).
7. Refer to NAILING for selected hurricane tie allowable bearing enhancement loads.
8. NAILS: 16x12 = 0 162" dia. x 2½" long; 12x = 0 143" dia. x 3" long; 10dx1½ = 0 148" dia. x 1½" long; 8x = 0 131" dia. x 2" long; 8dx1 = 0 131" dia. x 1" long. See page 16-17 for other nail sizes and installation.



H1 Installation



H2 Installation

H2.5 Installation
(Nails into both top plates)H2.5A Installation
(Nails into both top plates)H2.5T Installation
(Nails into both top plates)H3 Installation
(Nails into upper top plate)H4 Installation
(H2.5 similar)
(see footnote 3, page 142)H6 Stud
to Top Plate
InstallationH6 Stud to Band
Joist InstallationH4 Installation
(Nails into upper top plate)H5 Installation
(Nails into both top plates)H5A Installation
(Nails into both top plates)

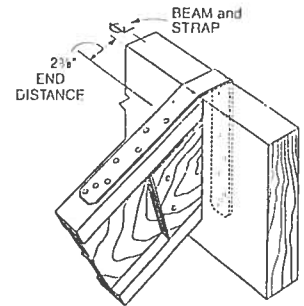
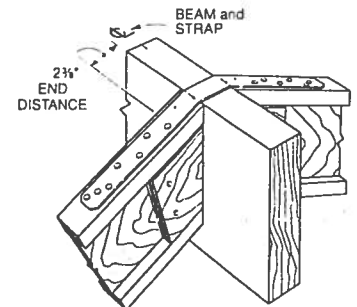
HRS/ST/FHA/PS/HST/LSTA/LSTI/MST/MSTA/MSTC/MSTI Strap Ties

CODES: See page 12 for Code Listing Key Chart.

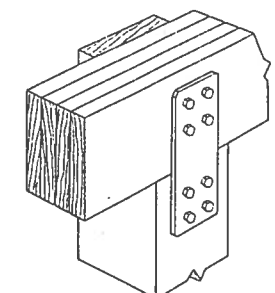
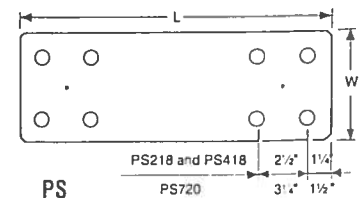
Available with additional corrosion protection. Check with factory.

Model No.	Ga	Dimensions		Fasteners (Total)	Allowable Tension Loads (DF/SP)		Allowable Tension Loads (SPF/HF)		Code Ref.
		W	L		(133)	(160)	(133)	(160)	
LSTA9	20	1 1/4	9	8-10d	645	775	555	665	7, 62, 90, 128
LSTA12		1 1/4	12	10-10d	805	970	695	830	
LSTA15		1 1/4	15	12-10d	970	1160	830	1000	
LSTA18		1 1/4	18	14-10d	1130	1235	970	1165	
LSTA21		1 1/4	21	16-10d	1235	1235	1110	1235	
LSTA24		1 1/4	24	18-10d	1235	1235	1235	1235	
ST292	18	2 1/16	9 1/16	12-16d	1120	1265	970	1160	3, 39, 88, 104, 121, 128
ST2122		2 1/16	12 1/16	16-16d	1505	1535	1290	1535	
ST2115		3/4	16 5/16	8-16d	665	665	665	665	
ST2215		2 1/16	16 5/16	20-16d	1880	1880	1625	1880	
LSTA30		1 1/4	30	22-10d	1640	1640	1555	1640	
LSTA36	16	1 1/4	36	24-10d	1640	1640	1640	1640	7, 62, 90, 128
LSTI49		3 3/4	49	32-10dx1 1/2	2580	3100	2220	2660	
LSTI73		3 3/4	73	48-10dx1 1/2	3870	4215	3330	3995	
MSTA9		1 1/4	9	8-10d	650	780	565	680	
MSTA12		1 1/4	12	10-10d	815	975	705	850	
MSTA15	14	1 1/4	15	12-10d	975	1170	850	1020	7, 62, 90, 123, 128
MSTA18		1 1/4	18	14-10d	1140	1365	990	1185	
MSTA21		1 1/4	21	16-10d	1300	1560	1130	1355	
MSTA24		1 1/4	24	18-10d	1465	1640	1270	1525	
MSTA30		1 1/4	30	22-10d	1835	2050	1585	1900	
MSTA36	12	1 1/4	36	26-10d	2050	2050	1870	2050	3, 39, 88, 104, 121, 128
ST6215		2 1/16	16 5/16	20-16d	1895	2095	1640	1970	
ST6224		2 1/16	23 5/16	28-16d	2540	2540	2315	2540	
ST9		1 1/4	9	8-16d	755	910	655	785	
ST12		1 1/4	11 5/8	10-16d	945	1135	820	985	
ST18	10	1 1/4	17 3/4	14-16d	1325	1420	1150	1380	3, 39, 88, 121, 128
ST22		1 1/4	21 5/8	18-16d	1420	1420	1420	1420	
MSTC28		3	28 1/4	36-16d sinkers	3000	3600	2590	3110	
MSTC40		3	40 1/4	52-16d sinkers	4335	4585	3745	4495	
MSTC52		3	52 1/4	62-16d sinkers	4585	4585	4465	4585	
MSTC66	8	3	65 3/4	76-16d sinkers	5660	5660	5660	5660	9, 23, 128
MSTC78		3	77 3/4	76-16d sinkers	5660	5660	5660	5660	
ST6236		2 1/16	33 1/16	40-16d	3845	3845	3465	3845	
HRS6		1 3/8	6	6-10d	525	630	455	545	
HRS8		1 3/8	8	10-10d	875	1050	760	910	
HRS12	6	1 3/8	12	14-10d	1225	1465	1065	1275	128
FHA6		1 1/8	6 3/8	8-16d	810	975	705	845	
FHA9		1 1/8	9	8-16d	810	975	705	845	
FHA12		1 1/8	11 5/8	8-16d	810	975	705	845	
FHA18		1 1/8	17 3/4	8-16d	810	975	705	845	
FHA24	4	1 1/8	23 5/8	8-16d	810	975	705	845	3, 39, 88, 121, 128
FHA30		1 1/8	30	8-16d	810	975	705	845	
MSTI26		2 1/16	26	26-10dx1 1/2	2355	2830	2045	2455	
MSTI36		2 1/16	36	36-10dx1 1/2	3265	3915	2830	3400	
MSTI48		2 1/16	48	48-10dx1 1/2	4350	5080	3775	4530	
MSTI60	3	2 1/16	60	60-10dx1 1/2	5080	5080	4720	5080	3, 39, 121, 128
MSTI72		2 1/16	72	64-10dx1 1/2	5080	5080	5080	5080	

1. Loads include a 33% or 60% load duration increase on the fasteners for earthquake or wind loading, but DO NOT include a 33% stress increase on the steel capacity. Refer to page 13 for further explanation.
2. 10dx1 1/2 nails may be substituted where 16d sinkers are specified at 100% of the table loads.
3. 10d commons may be substituted where 16d sinkers are specified at 100% of table loads.
4. 16d sinkers or 10d commons may be substituted where 16d commons are specified at 85% of the table loads.
5. Use half of the nails in each member being connected to achieve the listed loads.
6. PS strap design loads must be determined by the designer for each installation. Bolts are installed both perpendicular and parallel-to-grain. Hole diameter in the part may be oversized to accommodate the HDG. Designer must determine if the oversize creates an unacceptable installation.
7. For overlap splice details, refer to T-CMST.

Typical LSTA Installation
(hanger not shown)Typical LSTA Installation
(hanger not shown)

Model No.	Material Thickness mil (ga)	Dim.		Bolts Qty Dia	Code Ref.
		W	L		
PS218 ^a	171 mil (7 ga)	2	18	4	180
PS418 ^a		4	18	4	
PS720 ^a		6 3/4	20	8 1/2	



Typical PS720 Installation

DSP/SSP/SP/SPH/RSP4 Stud Plate Ties

This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

DSP and SSP provide flexibility in the field – can be used as a plate to stud connection AND top plate to stud connection.

The RSP4 is a reversible stud plate tie with locating tabs, which aid placement on double top plates or a single bottom plate.

MATERIAL: DSP/SSP/SPH–18 gauge, all others–20 gauge
FINISH: Galvanized. Some products available in Z-MAX;
see Corrosion-Resistance, page 6-7.

INSTALLATION: • Use all specified fasteners; see General Notes.

- DSP/SSP–sill plate installation–fill all round holes.
- DSP/SSP–top plate installation–fill all round and triangle holes
- SP–one of the 10d common stud nails is driven at a 45° angle through the stud into the plate.

CODES: See page 12 for Code Listing Key Chart.

Available with additional corrosion protection. Check with factory.

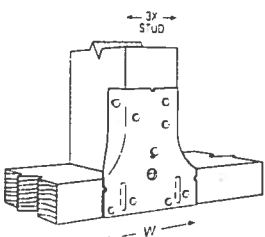
Model No.	Dim.		Fasteners			Allowable Uplift Loads (133/160)			Code Ref.
	W	L	Studs	Double Top Plate	Single Sill Plate	Double Top Plate DF/SP/SPF	Single Sill Plate DF/SP	SPF/HF	
SSP	1 3/8	6 1/16	4-10dx1 1/2	3-10dx1 1/2	—	350	—	—	62, 125
			—	—	1-10dx1 1/2	—	420	325	
			4-10d	3-10d	—	435	—	—	
			—	—	1-10d	—	455	420	
DSP	2 3/4	6 1/16	8-10dx1 1/2	6-10dx1 1/2	—	775	—	—	62, 125
			—	—	2-10dx1 1/2	—	660	545	
			8-10d	6-10d	—	825	—	—	
			—	—	2-10d	—	825	600	

1. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed.
2. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
3. Allowable loads for DSP installed to a rim joist are 660 lbs. (DF/SP), 545 lbs. (SPF/HF).
4. NAILS: 10d = 0.143" dia. x 3" long. 10dx1 1/2 = 0.143" dia. x 1 1/2" long. See page 16-17 for other nail sizes and information.

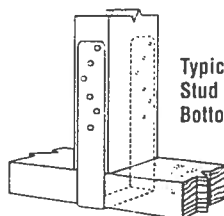
Model No.	Dim.		Stud	Plate Width	Fasteners		Allowable Uplift Loads				Code Ref.
	W	L			Stud	Plate	DF/SP	SPF	(133) ²	(160) ²	
SP1	3 1/2	5 1/16	2x	—	6-10d	4-10d	585	585	535	535	6, 121
SP2	3 1/2	6 3/8	2x	—	6-10d	6-10d	890	1065	605	605	160
SP3	4 1/2	6 3/8	3x	—	6-10d	6-10d	890	1065	605	605	160
SP4	3 1/16	7 1/4	2x	4x	6-10dx1 1/2	—	735	885	630	760	7, 121
SP5	4 1/2	5 1/16	3x	—	6-10d	4-10d	585	585	535	535	160
SP6	5 9/16	7 3/4	2x	6x	6-10dx1 1/2	—	735	885	630	760	7, 121
SP8	7 1/16	8 1/16	2x	8x	6-10dx1 1/2	—	735	885	630	760	7, 121
SPH4	3 1/16	8 3/4	2x	4x	10-10dx1 1/2	—	1240	1240	1065	1065	62, 123
SPH6	5 9/16	9 1/4	2x	6x	12-10dx1 1/2	—	1360	1360	1170	1170	
SPH8	7 1/16	8 3/8	2x	8x	10-10dx1 1/2	—	1240	1240	1065	1065	
SPH8	7 1/16	8 3/8	2x	8x	12-10dx1 1/2	—	1360	1360	1170	1170	
RSP4(1)	2 1/8	4 1/2	2x	—	4-8dx1 1/2	4-8dx1 1/2	315	315	285	285	6, 30,
RSP4(2)	2 1/8	4 1/2	2x	—	4-8dx1 1/2	4-8dx1 1/2	450	450	370	370	99, 121

1. SP1, 2, 3 and SP5: drive one stud nail at an angle through the stud into the plate to achieve the table load (see illustration).
2. Allowable loads have been increased for earthquake or wind loading; no further increase allowed. Reduce where other loads govern.
3. RSP4–see installation details (1) and (2) for reference.
4. RSP4 F2 is 280 lbs (installation 1) and 305 lbs (installation 2). F1 load is 210 lbs for both installations.

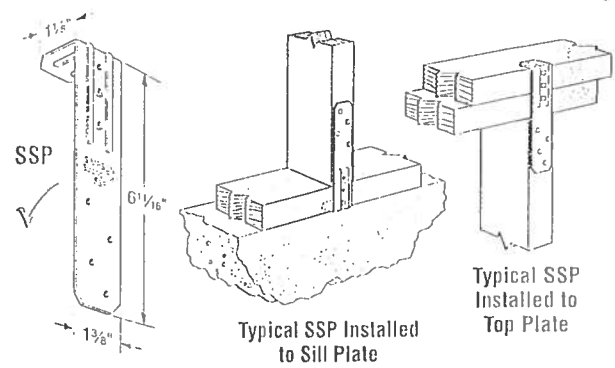
5. Maximum load for SPH in Southern Yellow Pine is 1490 lbs.
6. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
7. For retrofit application see T-STRAP.



Typical SP5 Installed (SP3 similar installed at double top plate)

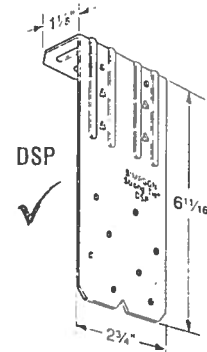


Typical SPH4 Stud to Single Bottom Plate

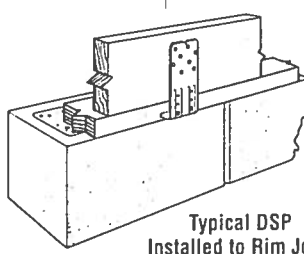


Typical SSP Installed to Sill Plate

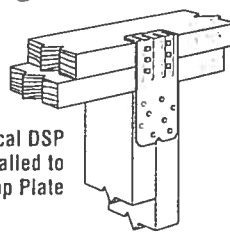
Typical SSP Installed to Top Plate



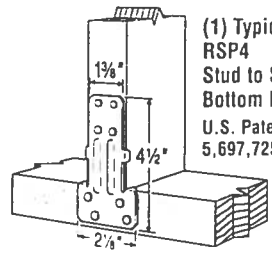
Typical DSP Installed to Sill Plate



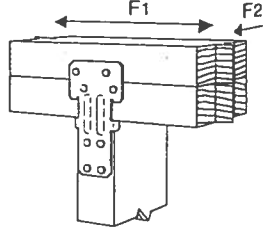
Typical DSP Installed to Rim Joist



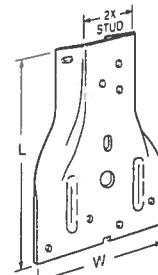
Typical DSP Installed to Top Plate



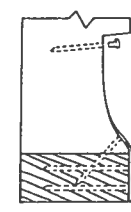
(1) Typical RSP4 Stud to Single Bottom Plate
U.S. Patent 5,697,725



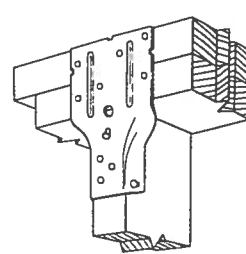
(2) Typical RSP4 Stud to Double Top Plate (See footnote 4)



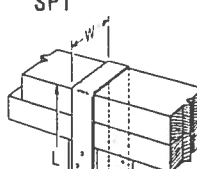
SP1



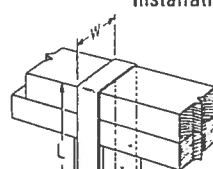
SP1 Nailing Profile



Typical SP2 Installation



Typical SPH4 Installation (SPH6 and SPH8 similar)



Typical SP4 Installation

WIND LOAD DESIGN PER 2004 FBC (1609.6)

SINGLE STORY BUILDING

BUILDING DIMENSIONS:

L = 30 FEET
W = 24 FEET
EAVE = 8.08 FEET
PITCH = 7 /12 = 30.3 DEG.
O'HANG = 1.5 FEET
RIDGE = 15.08 FEET
MEAN RF = 11.58 FEET

STORAGE SHED

WIND EXPOSURE:

VELOCITY = 110 MPH
I = 1.00 (IMPORTANCE FACTOR)
EXPOSURE = B
ADJUSTMENT 1.00 (PER TABLE 1609.6D)

MWFRS PRESSURE PER TABLE 1609.6A

(BASE PRESSURE W/O ADJUSTMENT)
(PRESSURES IN PSF)

TRANSVERSE WIND DIRECTION

	END ZONE		INTERIOR ZONE	
HORIZONTAL LOADS	WALL	ROOF	WALL	ROOF
	21.6	14.8	17.2	11.8
VERTICAL LOADS	WINDWD	LEEWD	WINDWD	LEEWD
	8.3	-13.1	7.2	-11.3
O'HANG	-7.6		-8.7	

LONGITUDINAL WIND DIRECTION

	END ZONE		INTERIOR ZONE	
HORIZONTAL LOADS	WALL	ROOF	WALL	ROOF
	19.2	-10.0	12.7	-5.9
VERTICAL LOADS	WINDWD	LEEWD	WINDWD	LEEWD
	-23.1	-13.1	-16.0	-10.1
O'HANG	-32.3		-25.3	

CALCULATE EDGE STRIPS:

2.4 FEET (10% OF LEAST DIM)
3.232 FEET (40% OF EAVE)

Least = 2.4 FEET

0.96 FEET (4% OF LEAST DIM)
3 FEET (3 FEET)

Max = 3 FEET

A = 3 FEET
2A = 6 FEET

HORIZONTAL TRANSVERSE LOAD

ROOF 2730 LBS.

WALL 4596 LBS.

LONGITUDINAL TRANSVERSE LOAD

ROOF 1203 LBS.

WALL 3093 LBS.

ROOF DIAPHRAM

TRANSVERSE

TOTAL DRAGSTRUT LENGTH = 48 FEET

LOAD RESISTED = 2730 ROOF
2298 WALL
5028 TOTAL
104.7 PLF

7/16" OSB

8d COMMON OR 0.131" DIA. P-NAIL

6"/12"	4"/12"	3"/12"	
357	476	707	PINE
OK	OK	OK	

LONGITUDINAL

TOTAL DRAGSTRUT LENGTH = 60 FEET

LOAD RESISTED = 1203 ROOF
1547 WALL
2750 TOTAL
45.8 PLF

6"/12"	4"/12"	3"/12"	
357	476	707	PINE
OK	OK	OK	

SHEARWALLS

TRANSVERSE

TOTAL SHEARWALL LENGTH = 32 FEET

LOAD RESISTED = 2730 ROOF
2298 WALL
5028 TOTAL
157.1 PLF

7/16" OSB

8d COMMON OR 0.131" DIA. P-NAIL

6"/12"	4"/12"	3"/12"	
364	532	686	PINE
OK	OK	OK	
298	436	563	SPRUCE
OK	OK	OK	

LONGITUDINAL

TOTAL SHEARWALL LENGTH = 17 FEET

LOAD RESISTED = 1203 ROOF
1547 WALL
2750 TOTAL
161.8 PLF

6"/12"	4"/12"	3"/12"	
364	532	686	PINE
OK	OK	OK	
298	436	563	SPRUCE
OK	OK	OK	

WALL TENSION TIE USING SHEATHING

WALL TO
WALL O'HANG
24 1.5

UPLIFT
LOAD
158 PLF

3/8" MINIMUM SHEATHING
8d COMMON NAIL SPACING
SPRUCE PINE
7.1 8.9 INCHES

ANCHOR BOLT SPACING

WALL TO
WALL
24

UPLIFT
LOAD
158

1634
2" ROUND
WASHER
124.1 IN.
MAX

3173
3" SQ
WASHER
241.1 IN.
MAX

SHEARWALL ANCHORAGE

TRANSVERSE

CHORD FORCE = 1270 LBS
ANCHOR BOLT = 48 INCHES O.C.
REQUIRED FORCE = 1585 LBS

1634
2" ROUND
WASHER

3173
3" SQ
WASHER

OK

OK

LONGITUDINAL

CHORD FORCE = 1307 LBS
REQUIRED FORCE = 1307 LBS

OK

OK

WALL STUD DESIGN

DESIGN PRESSURES: 22.6 PSF
27.2 PSF

INTERIOR ZONE
END ZONE

INTERIOR ZONE STUDS

STUD LENGTH FEET	SPACING INCHES	INTERIOR MOMENT IN-#	Sx Fb allow	#2 SPF 2X4 3.06 2415	#2 PINE 2X4 3.06 2760	#2 SPF 2X6 7.56 2093	#2 PINE 2X6 7.56 2300	#2 PINE 3X4 5.11 2760
8	16	2893		945 OK	945 OK	383 OK	383 OK	566 OK
0	0	0		0 OK	0 OK	0 OK	0 OK	0 OK
0	0	0		0 OK	0 OK	0 OK	0 OK	0 OK
0	0	0		0 OK	0 OK	0 OK	0 OK	0 OK

END ZONE STUDS WITHIN 3		FEET OF CORNERS	END ZONE MOMENT IN-#					
8	16		3482	1138 OK	1138 OK	461 OK	461 OK	681 OK
0	0		0	0 OK	0 OK	0 OK	0 OK	0 OK
0	0		0	0 OK	0 OK	0 OK	0 OK	0 OK
0	0		0	0 OK	0 OK	0 OK	0 OK	0 OK

SHEARWALL CAPACITIES PER 2004 FBC

NAIL = 8d COMMON OR 0.131" POWER NAIL
SHEATHING = 7/16" OSB

6"/12"	4"/12"	3"/12"
260	380	490
0.82	0.82	0.82
1.4	1.4	1.4
298	436	563

Per Table 2306.4.1, using 15/32" sheathing
as allowed by para 2306.4.1

1.00 = Pine, 0.82 = SPF

Increase per para 2306.4.1

SHEARWALL CAPACITIES PER 2001 SBC

NAIL = 8d COMMON OR 0.131" POWER NAIL
SHEATHING = 7/16" OSB

6"/12"	4"/12"	3"/12"
260	380	490
1	1	1
1.4	1.4	1.4
364	532	686

Per Table 2310.2B, using 15/32" sheathing
as allowed by para 2310.4.6

1.00 = Pine, 0.82 = SPF

Increase per para 2313.2.5