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March 8, 2006

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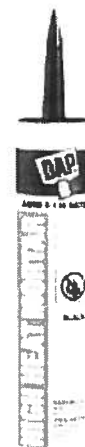
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DAP® High Heat Mortar

A non-combustible silicate cement used for patching and sealing around fireplaces and wood-burning stoves. Withstands temperatures up to 2000 degrees F. Sets rock hard when fired. Can also be used for applications in wood frame construction where and ASTM E 136 sealant is required. Water clean-up.



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PHENOSEAL®

DAP markets reliable, long-lasting products for contractors and do-it-yourselfers. Headquartered in Baltimore, MD, DAP is a leading marketer of caulks, sealants, adhesives, insulating foam, spackling, glazing, and other general patch and repair products.

An **RPIM** Company

Case Code	Product Code	Unit Size	Color	UPC #	Case Pack	Weight	Dimensions	Cases/Pallet	MSD
18854	18854	10 1 fl. oz	Black	7079818854	12	16 lbs.	8x6x12	102	7737

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M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

THIS MATERIAL SAFETY DATA SHEET IS AVAILABLE IN SPANISH UPON REQUEST.

LOS DATOS DE SEGURIDAD DEL PRODUCTO PUEDEN OBTENERSE EN ESPANOL SI LO REQUIERE.

PRODUCT NAME : HIGH HEAT MORTAR
 UPC NUMBER : 7079818854
 PRODUCT USE/CLASS : Colored gunnable mortar

MANUFACTURER: DAP INC.
 2400 BOSTON STREET
 BALTIMORE, MD 21224

24 HOUR EMERGENCY:
 TRANSPORTATION: 1-800-535-5053 (352-323-3500)
 MEDICAL : 1-800-327-3874 (513-558-5111)

PREPARE DATE : 10/29/1997 GENERAL INFORMATION:
 REVISION NO. : 2 DAP INC. : 1-888-DAP-TIPS (1-888-327-8477)
 REVISION DATE: 03/22/2000

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % RANGE
01	Sodium hydroxide	1310-73-2	0.8-1.2 %
02	Hydrous Aluminum Silicate	1332-58-7	40.0-50.0 %
03	Sodium Silicate	1344-09-8	40.0-50.0 %
04	Calcium Metasilicate	13983-17-0	3.0-6.0 %

EXPOSURE LIMITS						
ITEM	ACGIH		OSHA		COMPANY	SKIN
	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	
01	N.E.	2.0 mg/m3*	N.E.	2.0 mg/m3	N.E.	NO
02	10 mg/m3	N.E.	5 mg/m3	N.E.	N.E.	NO
03	N.E.	N.E.	N.E.	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend), * - TLV-Ceiling Value

Remaining ingredients are not considered hazardous per the OSHA Hazard Communication Standard.

Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); limits may vary between states.

(Continue on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Colored gunnable mortar with no odor. WARNING!
Injurious to eyes and skin.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause eye irritation and watering. Prolonged contact with eyes will cause alkaline burns.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated contact with skin will cause irritation and reddening.

EFFECTS OF OVEREXPOSURE - INHALATION: None known.

EFFECTS OF OVEREXPOSURE - INGESTION: May cause gastrointestinal upset.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: None known.

MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY CONTACT: Skin diseases may be aggravated by contact from product.

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT INGESTION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with large quantities of water until irritation subsides.

SKIN CONTACT: Wash with soap and water.

INHALATION: Remove to fresh air.

INGESTION: DO NOT INDUCE VOMITING.

COMMENTS: Call Medical in Section 1 if irritation or complications arise from any of the above routes of exposure.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: None

LOWER EXPLOSIVE LIMIT: N.A.
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.E.

EXTINGUISHING MEDIA: CO2 DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

SPECIAL FIREFIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Use absorbent material or scrape up dried material and place into containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING INFORMATION: KEEP OUT OF REACH OF CHILDREN. Avoid prolonged or repeated contact with skin. Avoid contact with eyes.

STORAGE INFORMATION: Store away from caustics and oxidizers. Keep containers tightly closed when not in use. Keep containers from excessive heat and freezing. Do not store at temperatures above 120 degrees F.

OTHER PRECAUTIONS: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Normal room ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Not required under normal usage and adequate ventilation.

EYE PROTECTION: Safety glasses with side shields recommended.

SKIN PROTECTION: Wear rubber gloves.

OTHER PROTECTIVE EQUIPMENT: Wear rubber apron.

HYGIENIC PRACTICES: Wash contaminated clothing before reuse.

(Continued on Page 4)

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE : N.A. VAPOR DENSITY : N.A.
ODOR : No odor
APPEARANCE : Colored mortar EVAPORATION RATE: N.A.
SOLUBILITY IN H2O : Partly until dry.
SPECIFIC GRAVITY : 1.8000
VAPOR PRESSURE : N.A.
PHYSICAL STATE : Liquid mortar

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and freezing.

INCOMPATIBILITY: Contact with acid will cause evolution of heat.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e. COx, NOx

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

SECTION 12 - ECOLOGICAL INFORMATION

No Information is available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT/DISPOSAL: Dispose of according to Federal, State, and Local Standards. This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulations, 40 CFR Section 261. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA WASTE CODE - If discarded (40 CFR 261): None.

(Continued on Page 5)

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Not Regulated by D.O.T.

DOT HAZARD CLASS: NONE

DOT UN/NA NUMBER: NONE PACKING GROUP: NONE

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

----- CHEMICAL NAME -----	CAS NUMBER	WT/WT % RANGE
Sodium hydroxide	1310-73-2	0.8-1.2 %

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

----- CHEMICAL NAME -----	CAS NUMBER
No information is available.	

NEW JERSEY RIGHT-TO-KNOW:

The following materials are non-hazardous, but are among the top five components in this product:

----- CHEMICAL NAME -----	CAS NUMBER
Water	7732-18-5

PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%:

----- CHEMICAL NAME -----	CAS NUMBER
No non-hazardous ingredients are present at greater than 3%.	

CALIFORNIA PROPOSITION 65:

WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

----- CHEMICAL NAME -----	CAS NUMBER
No Proposition 65 chemicals exist in this product.	

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: Not Regulated.

VOC less water, less exempt solvents: 0 gm/l(Calculated)
VOC material: 0 gm/l(Calculated)

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 01/10/2000

REASON FOR REVISION:

SECTION 1: Change to the product name

LEGEND: ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
N.A. - NOT APPLICABLE
N.E. - NOT ESTABLISHED
PEL - PERMISSIBLE EXPOSURE LIMIT
NTP - NATIONAL TOXICOLOGY PROGRAM
SARA - SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
STEL - SHORT TERM EXPOSURE LIMIT
TLV - THRESHOLD LIMIT VALUE(8 HR. TIME WEIGHTED AVERAGE OR TWA)
VOC - VOLATILE ORGANIC COMPOUND
NJRTK - NEW JERSEY RIGHT TO KNOW LAW
N.D. - NOT DETERMINED

MSDS#: 77370

This data is offered in good faith as typical values and not as a product specification. No warranty either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review the recommendations in specific context of the intended use and determine if they are appropriate.

< End OF MSDS >



RE: OLSZ -

MiTek Industries, Inc.

1801 Massaro Blvd.

Tampa, FL 33619

Phone: 813/675-1200

Fax: 813/675-1148

Site Information:

Project Customer: Project Name:

Lot/Block:

Subdivision:

Address:

City:

State:

Name Address and License # of Structural Engineer of Record, if there is one, for the building.

Name:

License #:

Address:

City:

State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: FBC2004/TPI200

Design Program: MiTek 20/20 6.2

Wind Code: ASCE 7/02 Wind Speed: 110 mph

Design Method: User defined

Roof Load: 40 psf, nonconcurrent BCLL=10 psf

Floor Load: N/A psf

This package includes 1 individual, dated Truss Design Drawings and 0 Additional Drawings.

With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Job ID#	Truss Name	Date
1	T2070897	OLSZ	C4A	3/9/06

The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Santa Fe Truss.

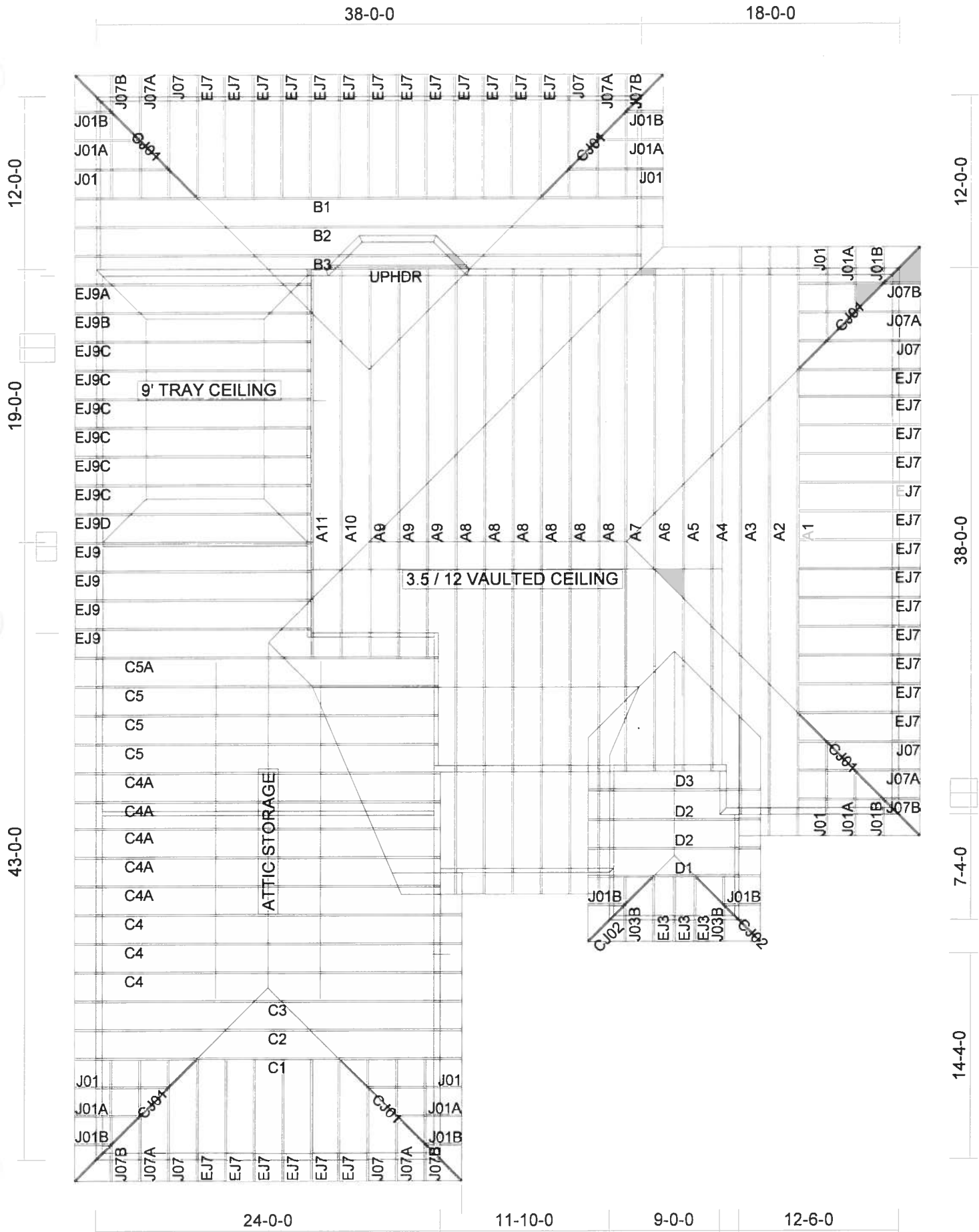
Truss Design Engineer's Name: Zhang, Guo-jie

My license renewal date for the state of is February 28, 2007.

NOTE: The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Sec. 2.

Guo-Jie Zhang, FL Lic #47744
MiTek Industries, Inc.
1801 Massaro Blvd
Tampa, FL 33619
FL Cert.#6634

March 9, 2006

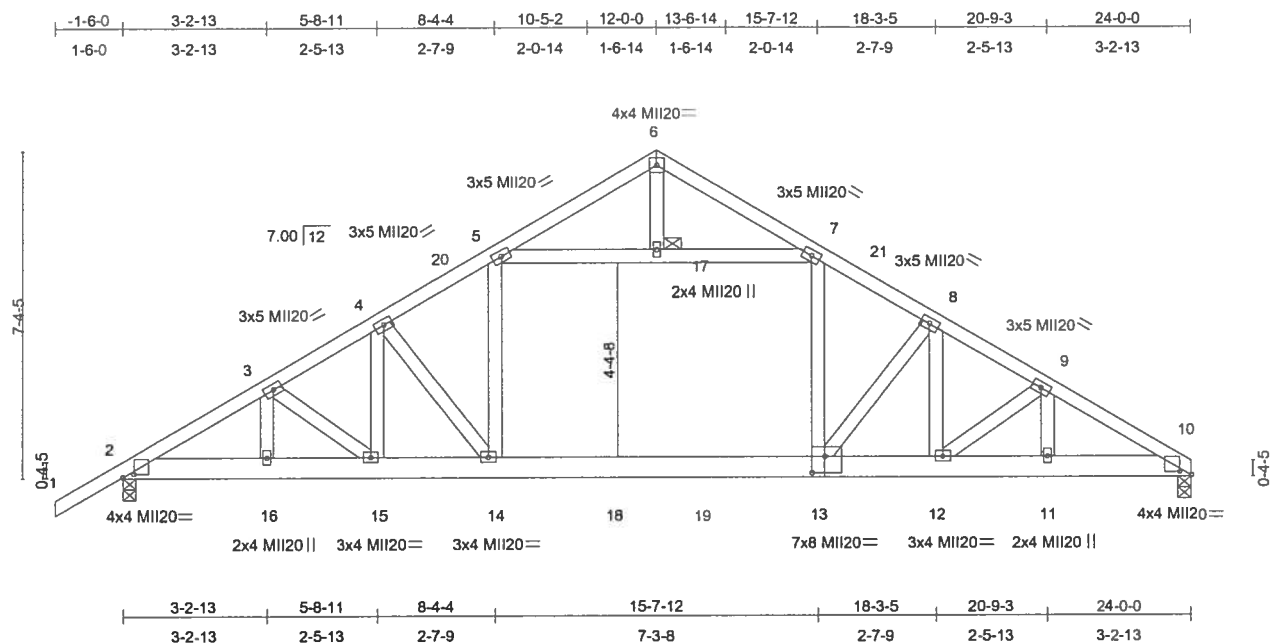


Job	Truss	Truss Type	Qty	Ply	
OLSZ	C4A	ROOF TRUSS	5	1	T2070897

SANTA FE TRUSS, HIGH SPRINGS FL., MARK CRAY

Job Reference (optional)

6 200 s Oct 18 2005 MiTek Industries, Inc. Wed Mar 08 15:17:22 2006 Page 1



Scale = 1:52.1

Plate Offsets (X,Y): [2:0-3-0,0-0-14], [10:0-3-0,0-0-14], [13:0-3-8,0-4-8]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.23	Vert(LL)	0.12 14	>999	240	MI20	249/190
TCDL 10.0	Lumber Increase	1.25	BC 0.41	Vert(TL)	-0.22 13-14	>999	180		
BCLL 10.0	Rep Stress Incr	NO	WB 0.21	Horz(TL)	0.04 10	n/a	n/a		
BCDL 10.0	Code FBC2004/TPI2002		(Matrix)						
								Weight: 160 lb	

LUMBER	BRACING
TOP CHORD 2 X 4 SYP No.2D	TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins.
BOT CHORD 2 X 6 SYP SS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2 X 4 SYP No.3	JOINTS 1 Brace at Jt(s): 17

REACTIONS (lb/size) 2=1344/0-3-8, 10=1239/0-3-8
Max Horz 2=331 (load case 4)
Max Uplift 2=496 (load case 5), 10=371 (load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2136/538, 3-4=-1980/571, 4-20=-1922/506, 5-20=-1850/514, 5-6=-361/149, 6-7=-360/148, 7-21=-1851/518, 8-21=-1923/512, 8-9=-1996/603, 9-10=-2182/620
BOT CHORD 2-16=-472/1788, 15-16=-472/1788, 14-15=-414/1678, 14-18=-272/1629, 18-19=-272/1629, 13-19=-272/1629, 12-13=-365/1692, 11-12=-470/1830, 10-11=-470/1830
WEBS 5-14=-97/644, 7-13=-105/647, 3-16=-6/106, 4-14=-265/344, 4-15=-252/220, 3-15=-137/72, 8-13=-258/353, 8-12=-263/212, 9-11=-6/116, 9-12=-172/130, 6-17=-20/68, 5-17=-1360/399, 7-17=-1360/399

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-02; 110mph (3-second gust); h=18ft; TCDL=5.0psf; BCDL=5.0psf; Category II; Exp C; enclosed; MWFRS gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
- 150.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 2-0-0 apart.
- *This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- This truss requires plate inspection per the Tooth Count Method when this truss is chosen for quality assurance inspection.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 496 lb uplift at joint 2 and 371 lb uplift at joint 10.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 75 lb down at 11-0-0, and 75 lb down at 13-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 2-14=-20, 13-14=-80(F=-60), 10-13=-20, 1-6=-60, 6-10=-60
Concentrated Loads (lb)
Vert: 18=-75 19=-75

Guo-Jie Zhang, FL Lic #47744
MiTek Industries, Inc.
1801 Massaro Blvd
Tampa FL 33619
FL Cert #6634

March 9, 2006

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

1801 Massaro Blvd.
Tampa, FL 33619



Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
OLSZ	C4A	ROOF TRUSS	5	1	6 200 s Oct 18 2005 MiTek Industries, Inc. Wed Mar 08 15 10 05 2006 Page 1

SANTA FE TRUSS, HIGH SPRINGS FL, MARK CRAY

6 200 s Oct 18 2005 MiTek Industries, Inc. Wed Mar 08 15 10 05 2006 Page 1

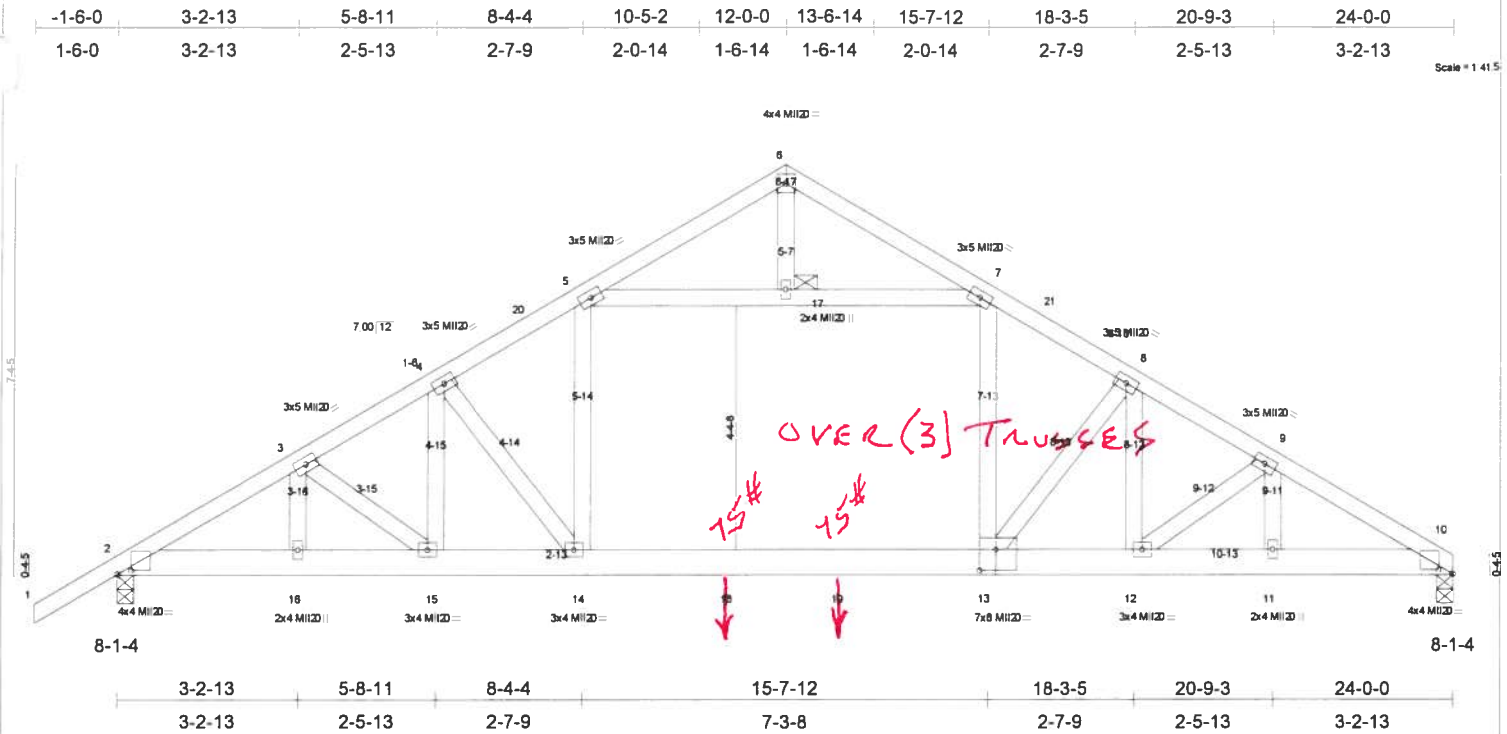


Plate Offsets (X,Y): [2:0-3-0,0-0-14], [10:0-3-0,0-0-14], [13:0-3-8,0-4-8]					
LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc) l/defl L/d
TCLL 20.0	Plates Increase	1.25	TC 0.23	Vert(LL)	0.12 14 >999 240
TCDL 10.0	Lumber Increase	1.25	BC 0.41	Vert(TL)	-0.22 13-14 >999 180
BCLL 0.0	Rep Stress Incr	NO	WB 0.21	Horz(TL)	0.04 10 n/a n/a
BCDL 10.0	Code FBC2004/TPI2002		(Matrix)		
Weight: 160 lb					

LUMBER	BRACING
TOP CHORD 2 X 4 SYP No 2D	TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins.
BOT CHORD 2 X 6 SYP SS	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2 X 4 SYP No.3	JOINTS 1 Brace at Jt(s): 17

REACTIONS (lb/size) 2=1344/0-3-8, 10=1239/0-3-8
Max Horz 2=331(load case 4)
Max Uplift 2=496(load case 5), 10=371(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
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WEBS 5-14=-97/644, 7-13=-105/647, 3-16=-6/106, 4-14=-265/344, 4-15=-252/220, 3-15=-137/72, 8-13=-258/353, 8-12=-263/212, 9-11=-6/116, 9-12=-172/130, 6-17=-20/68, 5-17=-1360/399, 7-17=-1360/399

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-02; 110mph (3-second gust); h=18ft; TCDL=5.0psf, BCDL=5.0psf; Category II; Exp C; enclosed, MWFRS gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
 - 150.0lb AC unit load placed on the bottom chord, 12-0-0 from left end, supported at two points, 2-0-0 apart.
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1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 2-14=-20, 13-14=-80(F=-60), 10-13=-20, 1-6=-60, 6-10=-60
Concentrated Loads (lb)
Vert: 18=-75 19=-75

ORDERED NEW EWL TO SHOW SUPPORT OF 300# OVER
"3" (MIN.) TRUSSES. PLEASE CALL IF QUESTIONS.
MARK CRAY 386-454-7711

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

HOUSE

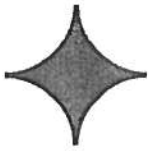
**DESIGNED IN ACCORDANCE WITH
REQUIREMENTS OF 2004 FLORIDA BUILDING CODE,
SECTION 1609 FOR 110 MPH WIND SPEED**



6 Feb 06

**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

HOUSE

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: 1/2" 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: 1/2" 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 4" o.c. at vertical sheet edges, 4" 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 2x6 at 16" o.c.

ANCHOR BOLTS: 1/2" with 3" SQUARE 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 3" SQUARE WASHERS AT EACH END OF ALL SHEARWALLS.**

HURRICANE CLIPS: Sized as follows.

TRUSS	BEARING	HARDWARE
A1	2, 10	(1) Simpson H10 and (1) Simpson LSTA21
B1	2, 10	(1) Simpson H10 and (1) Simpson LSTA21
C1	2, 8	(2) Simpson H10

One Ply Truss (except trusses above): (1) 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.

POSTS: Shall be 6x6 PT #2 Southern Pine. Post cap shall be Simpson CCQ46SDS2.5-HDG with Simpson ECCQ46SDS2.5-HDG for end conditions. Post base shall be Simpson ABU66Z. Alternate products with uplift capacity of 1225# may be substituted.

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

2004 Florida Building Code Section 1603.1.4 Information

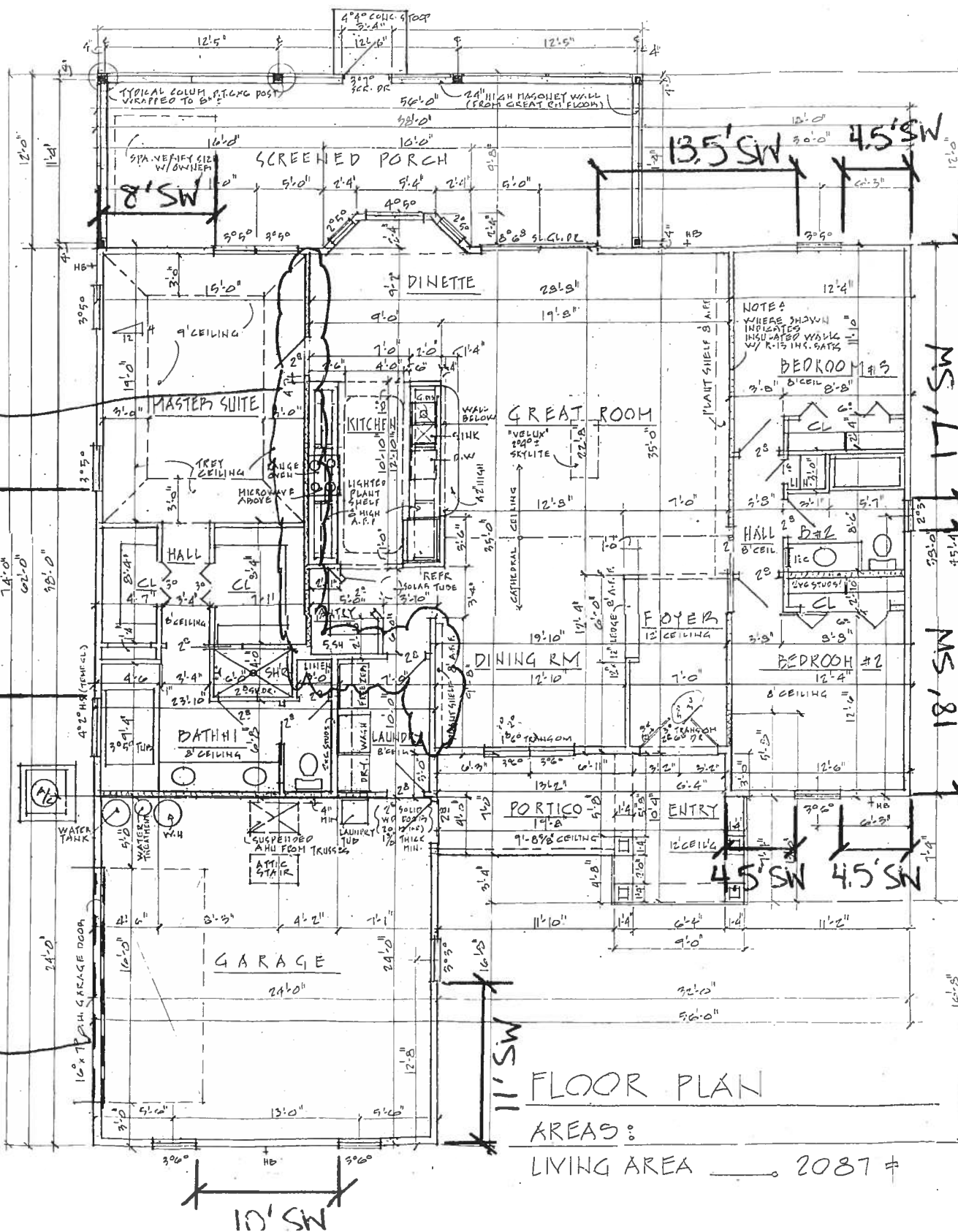
Basic Wind Speed	=	110 mph
Importance Factor	=	1.00
Building Category	=	II
Wind Exposure	=	B
Internal Pressure Coefficient	=	+ - 0.18
C & C Pressures	=	Zone 4 = 22.6 psf Zone 5 = 27.2 psf

1. TRANSVERSE $\leftrightarrow$ LONGITUDINAL

INTERIOR BEARING
SEE DETAIL

MS. H. 1. 3

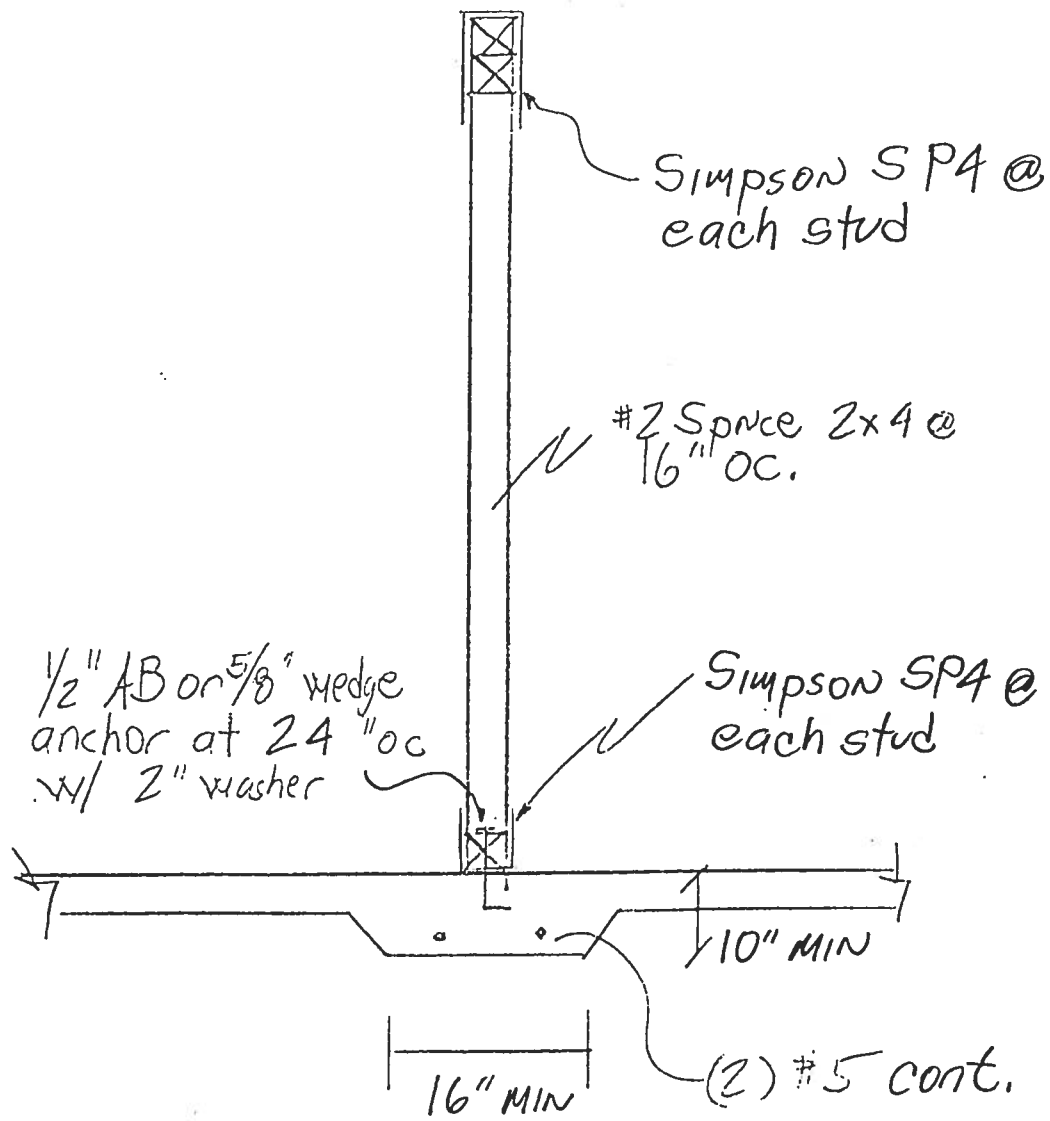
(3) 2×12



FLOOR PLAN

AREAS:

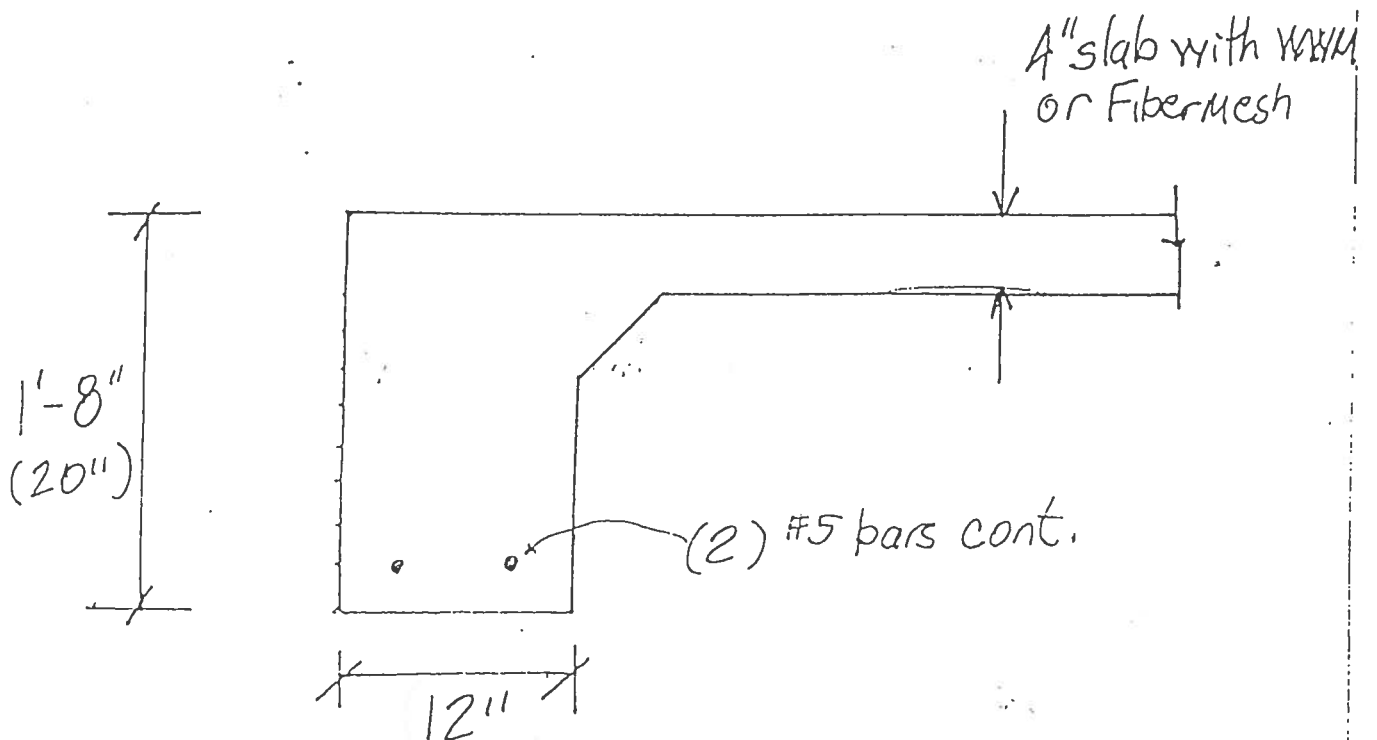
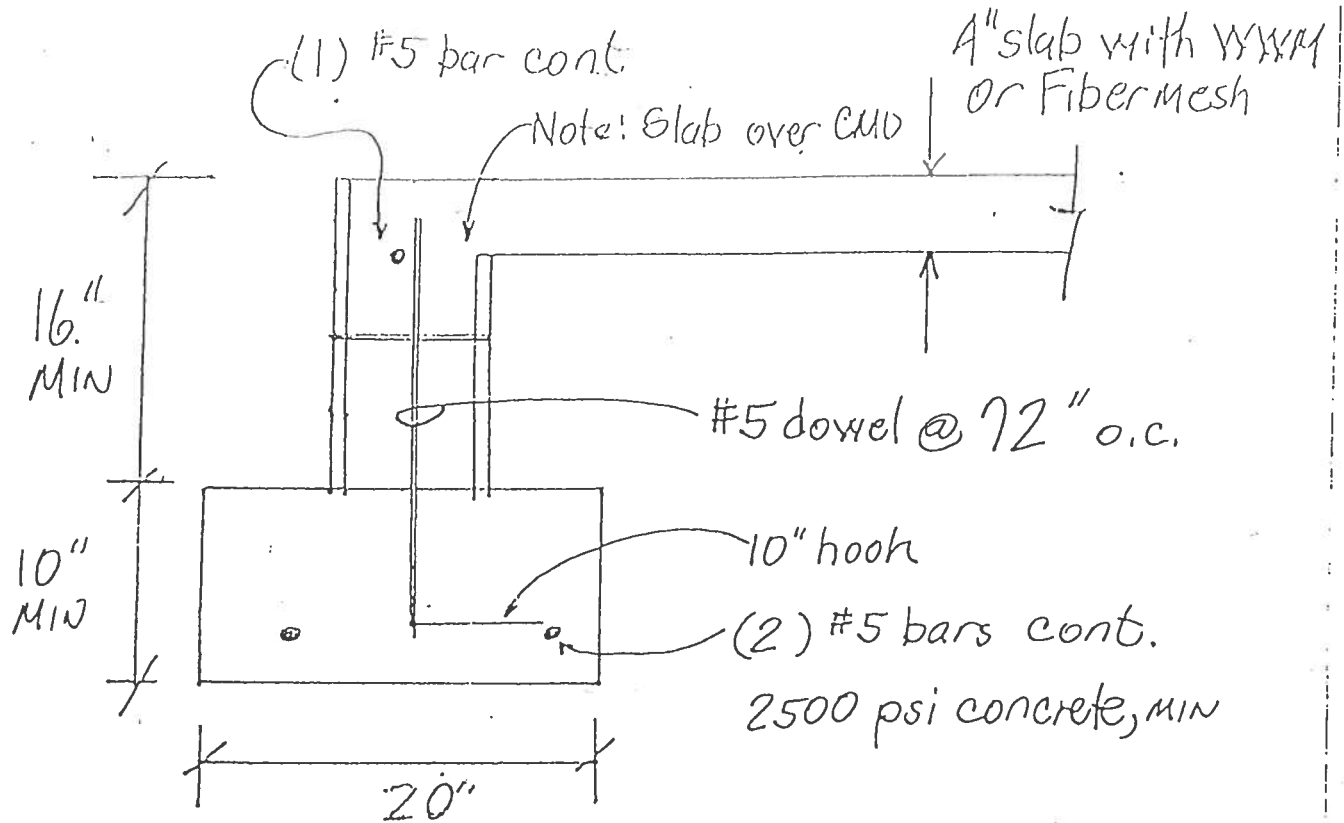
LIVING AREA ____ 2087 #



Interior Bearing Wall

Foundation Alternatives

All rebar - Grade 40
All concrete - 3000 psi min



CONNECTOR SELECTION

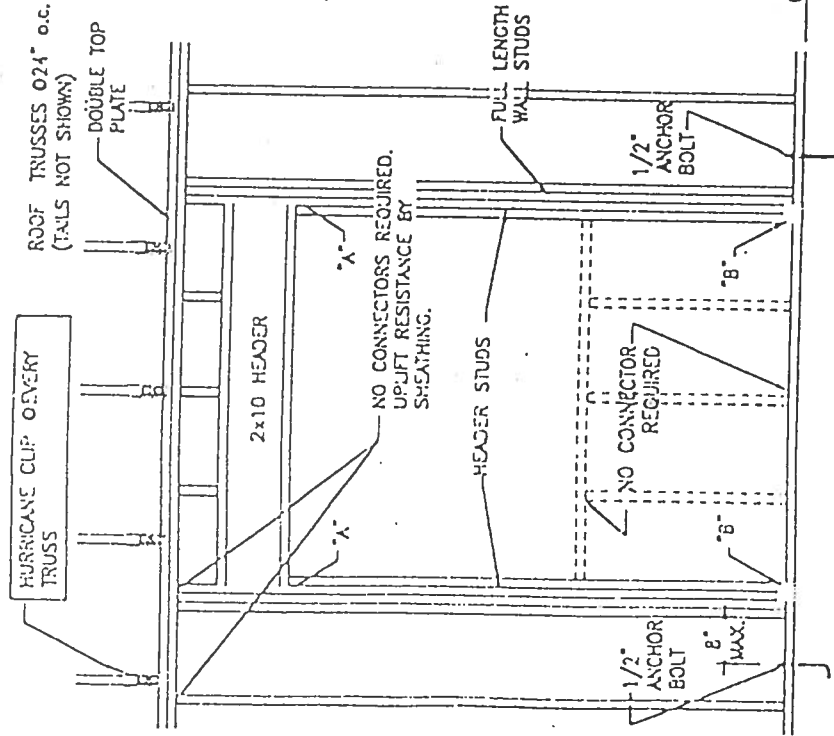
SPAN	'A'	'B'	ANCHOR BOLTS
9'-0" AND UNDER	(1) LSTA24	(1) SP4	(1) EACH END
OVER 9'-0"	(2) LSTA24	(2) SP4	(1) EACH END
• USE SP6 ON 2X6 WALLS			

NOTES:

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

HEADER HOLD DOWNS

MAXIMUM HEADER SPAN (1L)							
3	6	9	12	15	18		
NUMBER OF HEADER STUDS SUPPORTING END OF HEADER							
1	1	2	2	2	2		
		NUMBER OF FULL-LENGTH STUDS AT EACH END OF HEADER					
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
GREATER THAN 10'-0"	12 in.	2	2	3	4	5	5
	16 in.	2	2	3	3	4	4
	24 in.	1	2	2	2	3	3



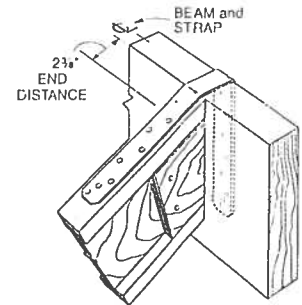
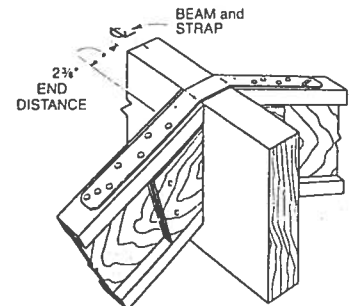
OPENING FRAMING DETAIL

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

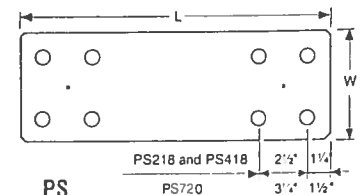
CODES: See page 12 for Code Listing Key Chart.

Available with additional corrosion protection. Check with factory.

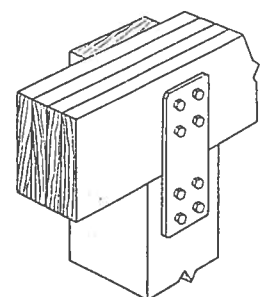
Model No.	Ga	Dimensions		Fasteners (Total)	Allowable Tension Loads (DF/SP)		Allowable Tension Loads (SPF/HF)		Code Ref.
		W	L		(133)	(160)	(133)	(160)	
LSTA9		1 1/4	9	8-10d	645	775	555	665	7, 62, 90, 128
LSTA12		1 1/4	12	10-10d	805	970	695	830	
LSTA15		1 1/4	15	12-10d	970	1160	830	1000	
LSTA18		1 1/4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

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 ⁵	171 mil (7 ga)	2	18	4	180
PS418 ⁵		4	18	4	
PS720 ⁵		6 3/4	20	8 1/2	



PS



Typical PS720 Installation

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.

DSR/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" = 0.148" 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 ¹	Plate	DF/SP		SPF		
							(133) ²	(160) ²	(133)	(160)	
SP1	3½	5¹⁄₁₆	2x	—	6-10d	4-10d	585	585	535	535	6, 121
SP2	3½	6⁵⁄₈	2x	—	6-10d	6-10d	890	1065	605	605	
SP3	4½	6⁵⁄₈	3x	—	6-10d	6-10d	890	1065	605	605	160
SP4	3⁹⁄₁₆	7¼	2x	4x	6-10dx1½	—	735	885	630	760	7, 121
SP5	4½	5¹⁄₁₆	3x	—	6-10d	4-10d	585	585	535	535	160
SP6	5¹⁄₁₆	7¾	2x	6x	6-10dx1½	—	735	885	630	760	7, 121
SP8	7¹⁄₁₆	8⁵⁄₁₆	2x	8x	6-10dx1½	—	735	885	630	760	
SPH4	3⁹⁄₁₆	8¾	2x	4x	10-10dx1½	—	1240	1240	1065	1065	62, 123
					12-10dx1½	—	1360	1360	1170	1170	
SPH6	5¹⁄₁₆	9¼	2x	6x	10-10dx1½	—	1240	1240	1065	1065	
					12-10dx1½	—	1360	1360	1170	1170	
SPH8	7¹⁄₁₆	8¾	2x	8x	10-10dx1½	—	1240	1240	1065	1065	
					12-10dx1½	—	1360	1360	1170	1170	
RSP4(1)	2½	4½	2x	—	4-8dx1½	4-8dx1½	315	315	285	285	6, 30,
RSP4(2)	2½	4½	2x	—	4-8dx1½	4-8dx1½	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 SP 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.

10d x 1 1/2" = 0.143" dia x 1 1/2" long

10d x 1 1/4" = 0.143" dia x 1 1/4" long

10d x 1 1/8" = 0.143" dia x 1 1/8" long

10d x 1 1/16" = 0.143" dia x 1 1/16" long

10d x 1 1/32" = 0.143" dia x 1 1/32" long

10d x 1 1/64" = 0.143" dia x 1 1/64" long

10d x 1 1/128" = 0.143" dia x 1 1/128" long

10d x 1 1/256" = 0.143" dia x 1 1/256" long

10d x 1 1/512" = 0.143" dia x 1 1/512" long

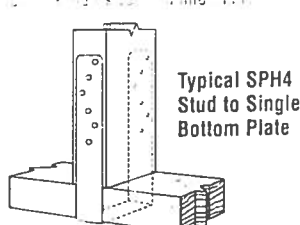
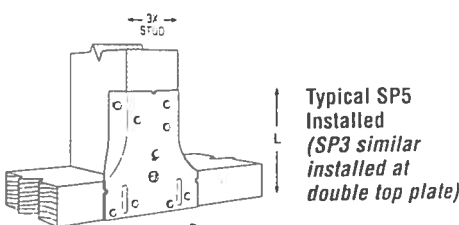
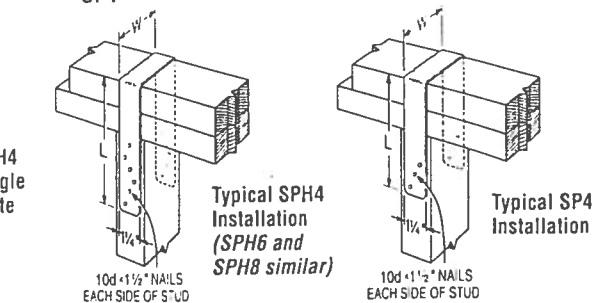
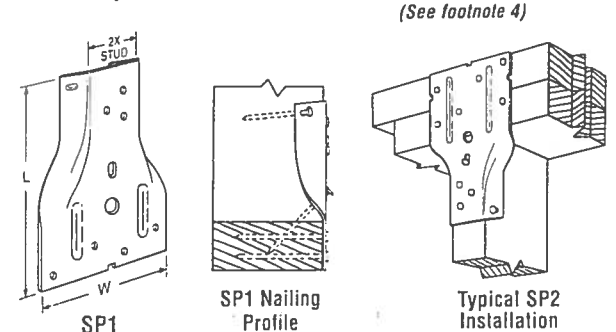
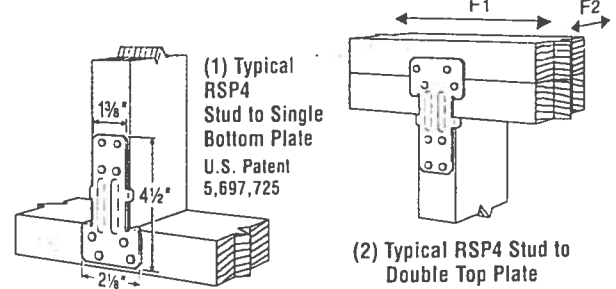
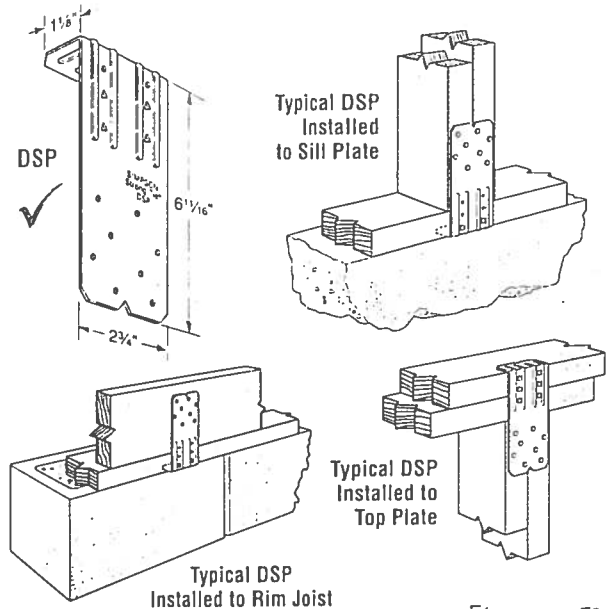
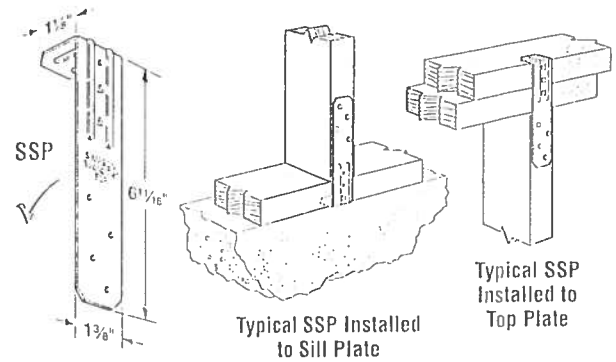
10d x 1 1/1024" = 0.143" dia x 1 1/1024" long

10d x 1 1/2048" = 0.143" dia x 1 1/2048" long

10d x 1 1/4096" = 0.143" dia x 1 1/4096" long

10d x 1 1/8192" = 0.143" dia x 1 1/8192" long

10d x 1 1/16384" = 0.143" dia x 1 1/16384" long

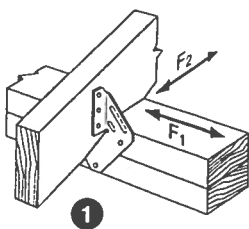


Available with additional corrosion protection. Check with factory.

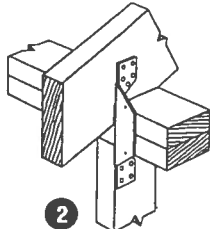
Model No.	Ga	Fasteners			DF/SP Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	SPF/HF Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	Code Ref.
		To Rafters/ Truss	To Plates	To Studs	Uplift		Lateral (133/160)			Uplift		Lateral (133/160)			
					(133)	(160)	F ₁	F ₂		(133)	(160)	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	4, 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	—	
H11Z	18	6-16dx2½	6-16dx2½	—	830	830	525	760	—	715	715	450	655	—	
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 3, page 142).
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

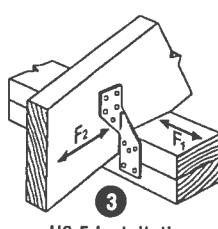
5. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a Continuous Load Path, connections must be on same side of the wall.
6. Southern Pine allowable loads for H14: 1465 lbs (133/160), 560 lbs (F₁ Lateral 133/160) and 285 lbs (F₂ Lateral 133/160).
7. Refer to HHTIE&E&A&I&G for selected hurricane ties allowable bearing enhancement loads.
8. H14 L₁ to L₂ = 0 162" dia x 2½" long, 10d = 0 143" dia x 3" long, 16dx1½" = 0 143" dia x 1½" long, 3L = 0 131" dia x 2" long, 8dx1½" = 0 131" dia x 1½" long. See page 16-17 for other nail sizes and information.



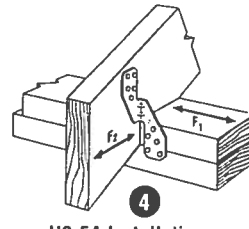
H1 Installation



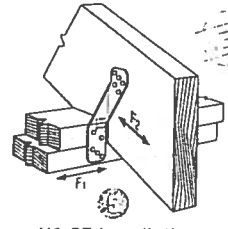
H2 Installation



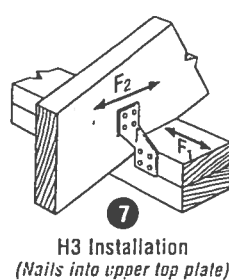
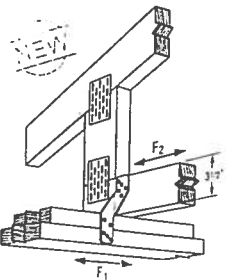
H2.5 Installation
(Nails into both top plates)



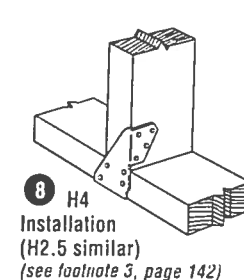
H2.5A Installation
(Nails into both top plates)



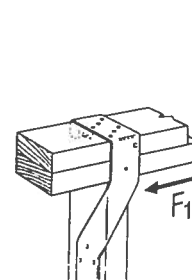
H2.5T Installation
(Nails into both top plates)



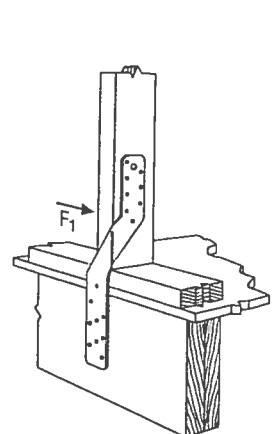
H3 Installation
(Nails into upper top plate)



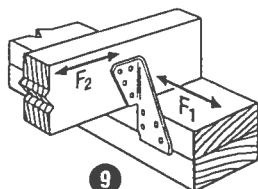
H4 Installation
(H2.5 similar)
(see footnote 3, page 142)



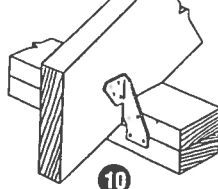
H6 Stud to Top Plate Installation



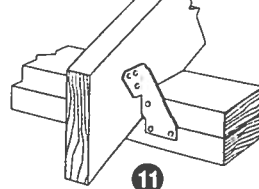
H6 Stud to Band Joist Installation



H4 Installation
(Nails into upper top plate)



H5 Installation
(Nails into both top plates)



H5A Installation
(Nails into both top plates)

AB/ABA/ABE/ABU Adjustable and Standoff Post Bases**SIMPSON****Strong-Tie**

Additional standoff bases are on page 187.

The AB is an adjustable post base which offers moisture protection and finished hardware appearance.

Post Bases provide tested capacity. They feature 1" standoff height above concrete floors, code-required when supporting permanent structures that are exposed to the weather or water splash, or in basements. They reduce the potential for decay at post and column ends.

MATERIAL: AB—12 ga plates; 16 ga base cover; all others—see table.

FINISH: Galvanized. Some products available in Z-MAX; see Corrosion-Resistance, page 6-7.

INSTALLATION: • Use all specified fasteners. See General Notes.

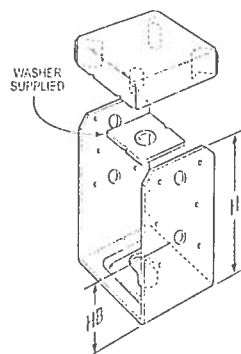
- Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non top-supported installations (such as fences or unbraced carports).
- AB supplied as shown; position the post, secure the easy-access nut, then bend up the fourth side.
- AB, ABA, ABE and ABU—for pre-pour installed anchors. For epoxy or wedge anchors, select and install according to anchor manufacturer's recommendations; anchor diameter shown in table. Install required washer, which is not included for ABAs.
- See Simpson Anchor Systems for tested, load-rated anchors and request T-ANCHORSPEC for more information.

CODES: See page 12 for Code Listing Key Chart

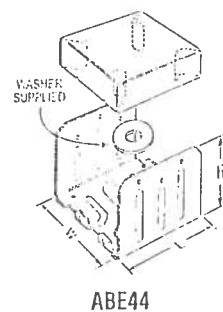
Available with additional corrosion protection. Check with factory.

Model No.	Dimensions			Anchor Dia.	Fasteners	Allowable Download (100)	Code Ref.
	W	L	H				
AB44	3 $\frac{3}{16}$	3 $\frac{3}{16}$	2 $\frac{1}{4}$	$\frac{1}{2}$	8-10d	4065	2, 40, 82, 121
AB44R	4	4 $\frac{1}{16}$	2 $\frac{3}{16}$	$\frac{1}{2}$	8-10d	4065	
AB46	3 $\frac{3}{16}$	5 $\frac{3}{16}$	3	$\frac{1}{2}$	8-10d	4165	
AB46R	4	6	2 $\frac{1}{16}$	$\frac{1}{2}$	8-10d	4165	
AB66	5 $\frac{1}{2}$	5 $\frac{1}{16}$	3	$\frac{1}{2}$	8-10d	5335	
AB66R	6	6	2 $\frac{1}{16}$	$\frac{1}{2}$	8-10d	5335	

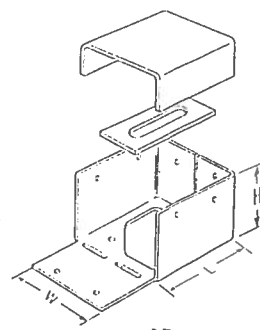
1. Loads may not be increased for short-term loading



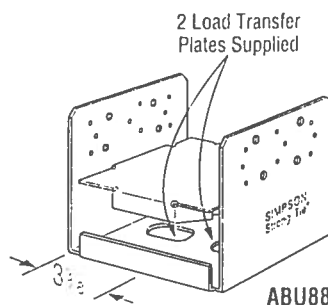
ABU44
(other sizes similar)



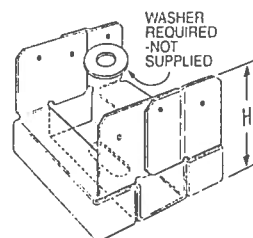
ABE44
ABE46, 46R, 66 and 66R
supplied with washer.



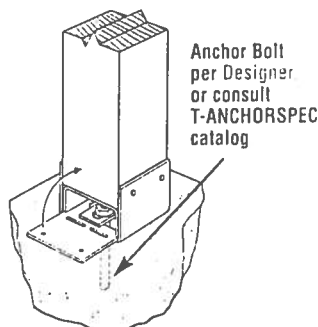
AB



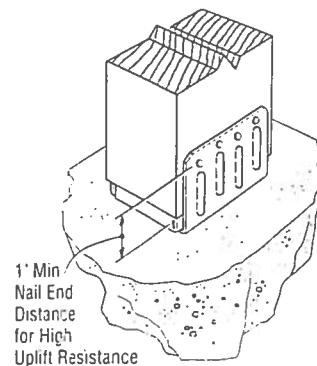
ABU88



ABA44
(other sizes similar)
U.S. Patent
5,333,435



Typical AB Installation



Typical ABE46R Installation for rough lumber (ABE similar)

Model No.	Nominal Post Size	Material		Dimensions				Anch. Dia	Fasteners			Allowable Loads (DF/SP)					Code Ref.
		Base (Ga)	Strap (Ga)	W	L	H	HB ⁵		Post		Uplift (133)		Uplift (160)		Down (100)		
									Nails	Machine Bolts	Nails	Bolts	Nails	Bolts			
										Qty	Dia						
ABA44	4x4	16	16	3 ³ / ₁₆	3 ¹ / ₈	3 ¹ / ₁₆	—	½	6-10d	—	—	555	—	555	—	6000	5, 41, 121
ABE44	4x4	16	16	3 ³ / ₁₆	3 ¹ / ₂	2 ³ / ₄	—	½	6-10d	—	—	520	—	520	—	6665	6, 86, 121
ABU44	4x4	16	12	3 ³ / ₁₆	3	5 ¹ / ₂	1 ³ / ₄	5 ⁸ / ₁₆	12-16d	2	½	2200	1800	2200	2160	6665	8, 36, 91, 121
ABA44R	RGH 4x4	16	16	4 ¹ / ₁₆	3 ³ / ₈	2 ¹ / ₁₆	—	½	6-10d	—	—	555	—	555	—	8000	5, 41, 121
ABE44R	RGH 4x4	16	16	4	3 ¹ / ₂	2 ⁹ / ₁₆	—	½	6-10d	—	—	400	—	400	—	6665	6, 86
ABE46	4x6	12	16	3 ³ / ₁₆	5 ⁷ / ₁₆	4 ¹ / ₁₆	—	5 ⁸ / ₁₆	8-16d	—	—	810	—	810	—	7335	9, 121
ABA46	4x6	14	14	3 ³ / ₁₆	5 ³ / ₁₆	3 ³ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	700	—	700	—	9435	5, 41, 121
ABU46	4x6	12	12	3 ³ / ₁₆	5	7	2 ⁵ / ₈	5 ⁸ / ₁₆	12-16d	2	½	2255	2300	2300	2300	10335	8, 36, 91, 121
ABE46R	RGH 4x6	12	16	4 ¹ / ₁₆	5 ⁷ / ₁₆	3 ³ / ₁₆	—	5 ⁸ / ₁₆	8-16d	—	—	810	—	810	—	7335	9
ABA46R	RGH 4x6	14	14	4 ¹ / ₁₆	5 ³ / ₁₆	2 ⁷ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	700	—	700	—	12000	5, 41, 121
ABE66	6x6	14	14	5 ¹ / ₂	5 ¹ / ₄	3 ³ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	720	—	720	—	10665	—
ABE66	6x6	12	14	5 ¹ / ₂	5 ⁷ / ₁₆	3 ³ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	900	—	900	—	12000	9, 121
ABU66	6x6	12	10	5 ¹ / ₂	5	6 ¹ / ₁₆	1 ³ / ₄	5 ⁸ / ₁₆	12-16d	2	½	2300	2300	2300	2300	12000	8, 36, 91, 127
ABA66R	RGH 6x6	14	14	6	5 ³ / ₁₆	2 ⁷ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	720	—	720	—	12665	5, 41, 121
ABE66R	RGH 6x6	12	14	6 ¹ / ₁₆	5 ⁷ / ₁₆	2 ⁷ / ₈	—	5 ⁸ / ₁₆	8-16d	—	—	900	—	900	—	12000	9
ABU88	8x8	14	12	7 ¹ / ₂	7	7	—	2 ⁵ / ₈	18-16d	—	—	2320	—	2320	—	24335	8, 36, 127
ABU88R	RGH 8x8	14	12	8	7	7	—	2 ⁵ / ₈	18-16d	—	—	2320	—	2320	—	24335	8, 36

1 Uplift loads have been increased for earthquake or wind load durations with no further increase allowed; reduce where other load durations govern.

2 Downloads may not be increased for short-term loading

3 Specifier to design concrete for shear capacity

4 ABU88 and ABU88R may be installed with 8-SDS $\frac{1}{4}$ x 3 wood screws for the same table load

5 For higher downloads, solidly pack grout under 1" standoff plate before installing into concrete. Base download on column or concrete, according to the code

6 HB dimension is the distance from the bottom of the post up to the first bolt hole

7 NAILS 16d = 0.162" dia x 3" long.
10d = 0.148" dia x 3" long
See page 16-17 for other nail sizes and information.

CCQ/ECCQ Column Caps**SIMPSON****Strong-Tie**

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.

This design uses SDS screws to provide faster installation and a lower profile compared to standard through bolts. The SDS screws provide for a lower profile compared to standard through bolts.

MATERIAL: CCQ3, ECCQ3, CCQ4, ECCQ4, CCQ6, ECCQ6—7 gauge; all others—3 gauge.

FINISH: Simpson gray paint, available in HDG with HDG screws.

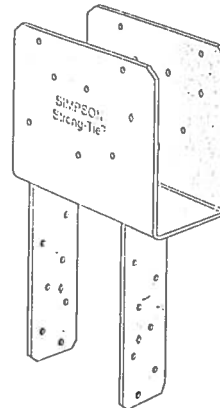
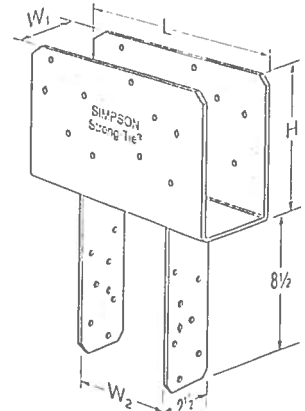
INSTALLATION: * Fasteners provided. See General Notes.

- Install Simpson's SDS $\frac{1}{4}$ "x2 $\frac{1}{2}$ " wood screws, which are provided with the column cap. (Lag screws will not achieve the same load.)

OPTIONS:

- Straps may be rotated 90° where $W_1 \geq W_2$. For end conditions, specify ECCQ. Loads do not apply to CCQ and ECCQ.

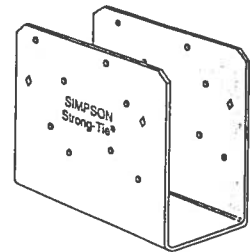
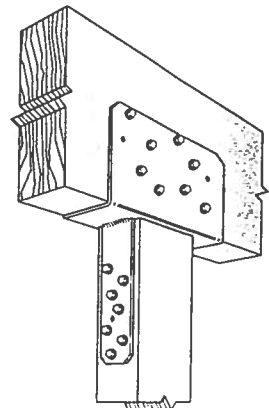
CODES: See page 12 for Code Listing Key Chart.

**ECCQ46SDS2.5****CCQ46SDS2.5**

Caps & Bases

Available with additional corrosion protection. Check with factory.

Model No.	Beam Width	Dimensions					No. of ⁹ SDS ¼"x 2½" Screws		Allowable Loads					Code Ref.
		W ₁	W ₂	L		H			CCQ		ECCQ			
				CCQ	ECCQ		Beam	Post	(133)	(160)	(100)	(133/160)	(100)	
CCQ3-4SDS2.5	3⅝	3¼	3⅝	11	8½	7	16	14	5680	5680	19250	3695	6125	46, 107, 124
CCQ3-6SDS2.5	3⅝	3¼	5½	11	8½	7	16	14	5680	5680	19250	3695	9625	
CCQ44SDS2.5	4x	3⅝	3⅝	11	8½	7	16	14	5680	5680	24065	4040	7655	
CCQ46SDS2.5	4x	3⅝	5½	11	8½	7	16	14	5955	7145	24065	4040	12030	
CCQ48SDS2.5	4x	3⅝	7½	11	8½	7	16	14	5955	7145	24065	4040	16405	
CCQ5-4SDS2.5	5⅝	5¼	3⅝	11	8½	7	16	14	5680	5680	31570	4040	10045	
CCQ5-6SDS2.5	5⅝	5¼	5½	11	8½	7	16	14	6270	7245	31570	5535	15785	
CCQ5-8SDS2.5	5⅝	5¼	7½	11	8½	7	16	14	6270	7245	31570	5535	21525	
CCQ64SDS2.5	6x	5½	3⅝	11	8½	7	16	14	5680	5680	37815	4040	12030	
CCQ66SDS2.5	6x	5½	5½	11	8½	7	16	14	5955	7145	37815	4040	18905	
CCQ68SDS2.5	6x	5½	7½	11	8½	7	16	14	5955	7145	37815	4040	25780	160
CCQ6-7.13SDS2.5	6x	5½	7⅞	11	8½	7	16	14	5955	7145	37815	4040	24490	
CCQ74SDS2.5	6¾	6⅞	3⅝	11	8½	7	16	14	5680	5680	41580	4040	13230	46, 107, 124
CCQ76SDS2.5	6¾	6⅞	5½	11	8½	7	16	14	6270	7245	41580	5535	20790	
CCQ77SDS2.5	6¾	6⅞	6⅞	11	8½	7	16	14	6270	7245	41580	5535	25515	
CCQ78SDS2.5	6¾	6⅞	7½	11	8½	7	16	14	6270	7245	41580	5535	28350	
CCQ7-1-4SDS2.5	7	7⅞	3⅝	11	8½	7	16	14	5680	5680	57750	4040	19030	160
CCQ7-1-6SDS2.5	7	7⅞	5½	11	8½	7	16	14	6270	7245	57750	5535	28875	
CCQ7-1-7.1SDS2.5	7	7⅞	7⅞	11	8½	7	16	14	6270	7245	57750	5535	37405	
CCQ7-1-8SDS2.5	7	7⅞	7½	11	8½	7	16	14	6270	7245	57750	5535	39375	
CCQ86SDS2.5	8x	7½	5½	11	8½	7	16	14	6270	7245	51565	5535	25780	
CCQ88SDS2.5	8x	7½	7½	11	8½	7	16	14	6270	7245	51565	5535	35155	
CCQ96SDS2.5	8¾	8⅞	5½	11	8½	7	16	14	6270	7245	53900	5535	26950	
CCQ98SDS2.5	8¾	8⅞	7½	11	8½	7	16	14	6270	7245	53900	5535	36750	
CCQ106SDS2.5	10x	9½	5½	11	8½	7	16	14	6270	7245	65315	5535	32655	

**CCQ4-SDS2.5****Typical CCQ46SDS2.5 Installation**

- 1 Downloads are determined using F_c equal to: 560 psi for glulam sizes and 625 psi for all others. reduce where end bearing or other criteria are limiting
- 2 Spliced conditions must be detailed by the members by means other than the column cap. to transfer tension loads between spliced
- 3 Uplift loads do not apply to splice conditions.
- 4 Post sides are assumed to lie in the same vertical plane as the beam sides
- 5 Loads may not be increased for short-term loading
- 6 Uplift loads have been increased for earthquake or wind reduce where other govern no further increase allowed
- 7 ECCQ downloads assume a post of $W_1 \times W_2$
- 8 When using structural composite lumber columns screws must be applied to the wide face of the column
- 9 ECCQ uses 14-SDS screws into the beam and 14-SDS screws into the post
- 10 Beam depth must be greater than 7".

WIND LOAD DESIGN PER 2004 FBC (1609.6)

SINGLE STORY BUILDING

BUILDING DIMENSIONS:

L = 56 FEET
W = 74 FEET
EAVE = 8.08 FEET
PITCH = 7 /12 = 30.3 DEG.
O'HANG = 1.5 FEET
RIDGE = 29.66333 FEET
MEAN RF = 18.87167 FEET

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:

7.4 FEET	(10% OF LEAST DIM)	
3.232 FEET	(40% OF EAVE)	
		Least = 3.232 FEET
2.96 FEET	(4% OF LEAST DIM)	
3 FEET	(3 FEET)	
		Max = 3 FEET

A = 3.232 FEET
2A = 6.464 FEET

HORIZONTAL TRANSVERSE LOAD

ROOF 15099 LBS.

WALL 8242 LBS.

LONGITUDINAL TRANSVERSE LOAD

ROOF 10300 LBS.

WALL 8273 LBS.

ROOF DIAPHRAM

TRANSVERSE

TOTAL DRAGSTRUT LENGTH = 124 FEET

LOAD RESISTED = 15099 ROOF
4121 WALL
19220 TOTAL
155.0 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 = 112 FEET

LOAD RESISTED = 10300 ROOF
4136 WALL
14437 TOTAL
128.9 PLF

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

SHEARWALLS

TRANSVERSE

TOTAL SHEARWALL LENGTH = 60 FEET

LOAD RESISTED = 15099 ROOF
4121 WALL
19220 TOTAL
320.3 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
N.G.	OK	OK	

LONGITUDINAL

TOTAL SHEARWALL LENGTH = 45 FEET

LOAD RESISTED = 10300 ROOF
4136 WALL
14437 TOTAL
320.8 PLF

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

WALL TENSION TIE USING SHEATHING

WALL TO
WALL O'HANG
35 1.5

UPLIFT
LOAD
213 PLF

3/8" MINIMUM SHEATHING
8d COMMON NAIL SPACING
SPRUCE PINE
5.3 6.6 INCHES

ANCHOR BOLT SPACING

WALL TO
WALL
35

UPLIFT
LOAD
213

1634
2" ROUND
WASHER
92.1 IN.
MAX

3173
3" SQ
WASHER
178.8 IN.
MAX

SHEARWALL ANCHORAGE

TRANSVERSE

CHORD FORCE = 2588 LBS
ANCHOR BOLT = 48 INCHES O.C.
REQUIRED FORCE = 3014 LBS

1634
2" ROUND
WASHER

3173
3" SQ
WASHER

NO GOOD

OK

LONGITUDINAL

CHORD FORCE = 2592 LBS
REQUIRED FORCE = 2592 LBS

NO GOOD

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 3.232 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

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

1.00 = Pine, 0.82 = SPF

1.4	1.4	1.4	Increase per para 2313.2.5
364	532	686	

[illegible]

Sputo and Lammert Engineering, LLC
 10 SW 1st Avenue
 Gainesville, FL 32601
 Phone 352-378-0448
 CA 6855

Title :
 Dsgnr:
 Description :

Job #
 Date: 1:14PM, 6 FEB 06

Scope :

Rev. 580004
 User: K\W.0602180, Ver 5.8.0, 1-Dec-2003
 (c)1983-2003 ENERCALC Engineering Software

General Timber Beam

Page 1

Description Garage Beam

General Information

Code Ref: 1997/2001 NDS, 2000/2003 IBC, 2003 NFPA 5000. Base allowables are user defined

Section Name	3-2x12	Center Span	16.33 ft	Lu	0.00 ft
Beam Width	4.500 in	Left Cantilever	ft	Lu	0.00 ft
Beam Depth	11.250 in	Right Cantilever	ft	Lu	0.00 ft
Member Type	Sawn	Southern Pine, No.2 2 -4 Thick, 12 Wid			
Load Dur. Factor	1.250	Fb Base Allow	975.0 psi		
Beam End Fixity	Pin-Pin	Fv Allow	175.0 psi		
		Fc Allow	565.0 psi		
		E	1,600.0 ksi		

Full Length Uniform Loads

Center	DL	234.00 #/ft	LL	#/ft
Left Cantilever	DL	#/ft	LL	#/ft
Right Cantilever	DL	#/ft	LL	#/ft

Summary

Beam Design OK

Span= 16.33ft, Beam Width = 4.500in x Depth = 11.25in, Ends are Pin-Pin

Max Stress Ratio 0.809 : 1

Maximum Moment Allowable 7.8 k-ft at 8.165 ft Maximum Shear * 1.5 Allowable 2.5 k 11.1 k

Max. Positive Moment	7.80 k-ft	at	8.165 ft	Shear:	@ Left	1.91 k
Max. Negative Moment	0.00 k-ft	at	0.000 ft		@ Right	1.91 k
Max @ Left Support	0.00 k-ft			Camber:	@ Left	0.000 in
Max @ Right Support	0.00 k-ft				@ Center	0.657 in
Max. M allow	9.64				@ Right	0.000 in
fb	986.08 psi	f _v	50.27 psi	Reactions...		
Fb	1,218.75 psi	Fv	218.75 psi	Left DL	1.91 k	Max 1.91 k
				Right DL	1.91 k	Max 1.91 k

Deflections

Center Span...	Dead Load	Total Load	Left Cantilever...	Dead Load	Total Load
Deflection	-0.438 in	-0.438 in	Deflection	0.000 in	0.000 in
...Location	8.165 ft	8.165 ft	...Length/Defl	0.0	0.0
...Length/Defl	447.1	447.14	Right Cantilever...		
Camber (using 1.5 * D.L. Defl) ...			Deflection	0.000 in	0.000 in
@ Center	0.657 in		...Length/Defl	0.0	0.0
@ Left	0.000 in				
@ Right	0.000 in				

Stress Calcs

Bending Analysis

Ck	29.385	Le	0.000 ft	Sxx	94.922 in3	Area	50.625 in2
Cf	1.000	Rb	0.000	Cl	0.000		

	Max Moment	Sxx Req'd	Allowable fb
@ Center	7.80 k-ft	76.80 in3	1,218.75 psi
@ Left Support	0.00 k-ft	0.00 in3	1,218.75 psi
@ Right Support	0.00 k-ft	0.00 in3	1,218.75 psi

Shear Analysis

	@ Left Support	@ Right Support
Design Shear	2.54 k	2.54 k
Area Required	11.634 in2	11.634 in2
Fv: Allowable	218.75 psi	218.75 psi

Bearing @ Supports

Max. Left Reaction	1.91 k	Bearing Length Req'd	0.751 in
Max. Right Reaction	1.91 k	Bearing Length Req'd	0.751 in

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10 SW 1st Avenue
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Phone 352-378-0448
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Title :
Dsgnr:
Description :

Job #
Date: 1:14PM, 6 FEB 06

Scope :

Rev: 580004
User: KW-0602180, Ver 5.8.0, 1-Dec-2003
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General Timber Beam

Page 2

Description Garage Beam

Query Values

M, V, & D @ Specified Locations		Moment	Shear	Deflection
@ Center Span Location =	0.00 ft	0.00 k-ft	1.91 k	0.0000 in
@ Right Cant. Location =	0.00 ft	0.00 k-ft	0.00 k	0.0000 in
@ Left Cant. Location =	0.00 ft	0.00 k-ft	0.00 k	0.0000 in