## Point Load—Maximum Point Load Applied to Either Outside Member (lbs)

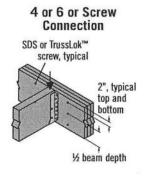
		Connector Pattern							
		Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F		
Connector Type	Number of Connectors	1 2" 13½"	-	134" 31/2"	134" 31/2" 134"	1 31/2"	134"		
		3½" 2-ply	51/4" 3-ply	5¼" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply		
	6	1,110	835	835	740				
10d (0.128" x 3")	12	2,225	1,670	1,670	1,485				
Nail	18	3,335	2,505	2,505	2,225				
	24	4,450	3,335	3,335	2,965				
SDS Screws	4	1,915	1,435(4)	1,435	1,275	1,860(2)	1,405(2)		
1/4" x 31/2" or WS35 1/4" x 6" or WS6(1)	6	2,870	2,150 (4)	2,150	1,915	2,785(2)	2,110(2)		
	8	3,825	2,870 (4)	2,870	2,550	3,715(2)	2,810(2)		
03/# 5#	4	2,545	1,910 (4)	1,910	1,695	1,925(3)	1,775(3)		
33/a" or 5" TrussLok™	6	3,815	2,860 (4)	2,860	2,545	2,890(3)	2,665(3)		
HRSSLOK	8	5,090	3,815 (4)	3,815	3,390	3,855(3)	3,550(3)		

(1) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

See General Notes on page 38

- (2) 6" long screws required.
- (3) 5" long screws required.
- (4) 3½" and 35%" long screws must be installed on both sides.

## **Connections**

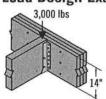


## 8 Screw Connection SDS or TrussLok\*\* screw, typical 2" Equal spacing 2"

# Nail Connection 10d (0.128" x 3") nails, typical. Stagger to prevent splitting. 8"-10" 2" spacing, typical 1½" minimum spacing, typical 2" typical

## There must be an equal number of nails on each side of the connection

## **Point Load Design Example**



First, verify that a 3-ply 1¾" x 14" beam is capable of supporting the 3,000 lb point load as well as all other loads applied. The 3,000 lb point load is being transferred to the beam with a face mount hanger. For a 3-ply 1¾" assembly, eight 3¾" TrussLok™ screws are good for 3,815 lbs with a face mount hanger.

## MULTIPLE-MEMBER CONNECTIONS FOR TOP-LOADED BEAMS

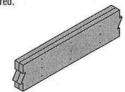
## 13/4" Wide Pieces

- Minimum of three rows of 10d (0.128" x 3") nails at 12" on-center.
- Minimum of four rows of 10d (0.128" x 3") nails at 12" on-center for 14" or deeper.
- If using 12d-16d (0.148"-0.162" diameter) nails, the number of nailing rows may be reduced by one.
- Minimum of two rows of SDS, WS, or TrussLok™ screws at 16" on-center. Use 3¾" minimum length with two or three plies; 5" minimum for 4-ply members. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. For 3- or 4-ply members, connectors must be installed
- on both sides. Stagger fasteners on opposite side of beam by ½ of the required connector spacing.
- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

## 31/2" Wide Pieces

■ Minimum of two rows of SDS, WS, or TrussLok™ screws, 5" minimum length, at 16" on-center. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. Connectors must be installed on both sides. Stagger fasteners on opposite side of beam by ½ of the required connector spacing.

- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded heams
- Minimum of two rows of ½" bolts at 24" on-center staggered.



Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"



## NO. 44889 By julius lee at 11:58 am, Jun 11, 2008 REVIEWED TO BEARING TO BEARING ADD 2x4 #2 SP ONE FACE 10'-0" 0/C MAX SYSTEM-42 STRONG BACK WITH VERTICAL NOT LINING UP STRONG ALTERNATE (3)10d-10'-0" O/C MAX OR FLAT TRUSS BACK DETAIL (3)10d DETAIL FOR 2x6 #2 SP 3 10d 3 #2 JULIUS LEE'S cons. ENGINEERS P.A. 1456 SM 4th Avenue

No: 34869 STATE OF FLORIDA

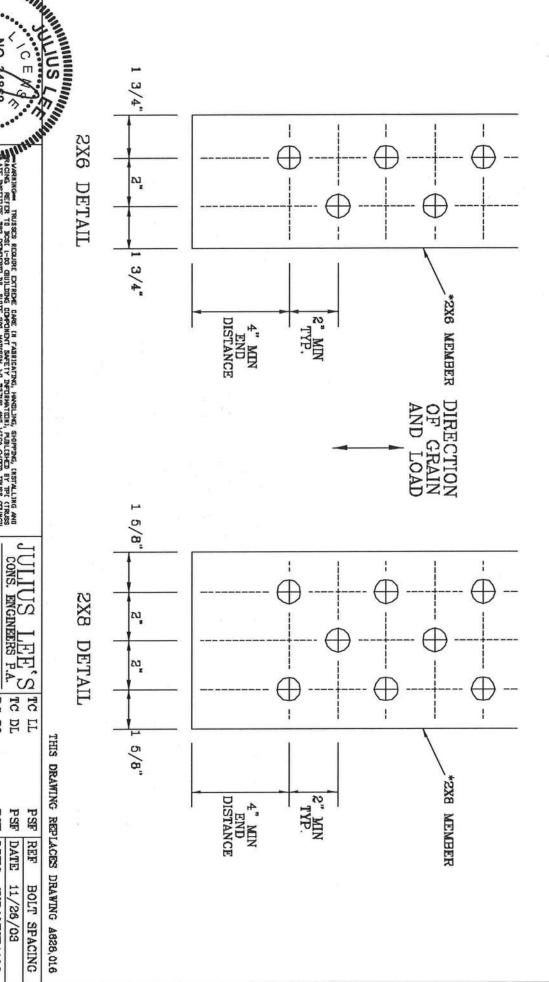
## 1/2" DIAMETER BOLT SPACING FOR LOAD APPLIED PARALLEL TO GRAIN

\* GRADE AND SPECIES AS SPECIFIED ON THE ALPINE DESIGN

BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN BOLT DIAMETER.

TYPICAL LOCATION OF 1/2" DIAMETER THRU BOLTS. QUANTITIES AS NOTED ON SEALED DESIGN MUST BE IN ONE OF THE PAITERNS SHOWN BELOW. APPLIED

WASHERS REQUIRED UNDER BOLT HEAD AND NUT



REVIEWED

DELEAT BEACH, FL 33444-2161

BC DL TC DL

TOT. BC LL

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PSF PSF PSF PSF

> -ENG DRWG DATE

H

CNBOLTSP1103 11/26/09

No: 34869 STATE OF FLORIDA

SPACING DUR. FAC.

By julius lee at 11:59 am, Jun 11, 2008

## VALLEYTRUSS DETAIL

TOP CHORD 2X4 SP #2 OR SPF #1/#2 OR BETTER. 2X3(\*) OR 2X4 SP #2N OR SPF #1/#2 OR BETTER. 2X4 SP #3 OR BETTER.

- ZX3 MAY BE RIPPED FROM A ZX6 (PITCHED OR SQUARE).
- ATTACH EACH VALLEY TO EVERY SUPPORTING TRUSS WITH: ASCE 7-02 130 MPH WIND. 15' MEAN HEIGHT, BUILDING, EXP. C. RESIDENTIAL, WIND TC DI=5 FHC 2004 110 MPH, ASCE 7-02 110 MPH WIND OR (3) 16d FOR ASCE 7-02 130 MPH WIND. 15' MEAN HEIGHT, ENCLOSED 16d BOX (0.135" X 3.5") NAILS TOE-NAILED FOR

UNLESS SPECIFIED ON ENGINEER'S SEALED DESIGN, APPLY 1X4 "T"-BRACE, 80% LENGTH OF WEB, VALLEY WEB, SAME SPECIES AND GRADE OR BETTER, ATTACHED WITH 8d BOX (0.113" X 2.5") NAILS AT 6" OC, OR CONTINUOUS LATERAL BRACING, EQUALLY SPACED, FOR VERTICAL VALLEY WEBS GREATER THAN 7'9"

MAXIMUM VALLEY VERTICAL HEIGHT MAY NOT EXCEED 12'0".

TOP CHORD OF TRUSS BENEATH VALLEY SET MUST BE BRACED WITH: PROPERLY ATTACHED, RATED SHEATHING APPLIED PRIOR TO VALLEY TRUSS INSTALLATION

ENGINEERS' SEALED DESIGN. PURLINS AT 24" OC OR AS OTHERWISE SPECIFIED ON ENGINEERS' BY VALLEY TRUSSES USED IN LIEU OF PURLIN SPACING AS SPECIFIED ON SEALED DESIGN

\*\*\* NOTE THAT THE PURLIN SPACING FOR BRACING THE TOP CHORD OF THE TRUSS BENEATH THE VALLEY IS MEASURED ALONG THE SLOPE OF THE TOP CHORD. ++ LARGER SPANS MAY BE BUILT AS LONG AS THE VERTICAL HEIGHT DOES NOT EXCEED 12'0".

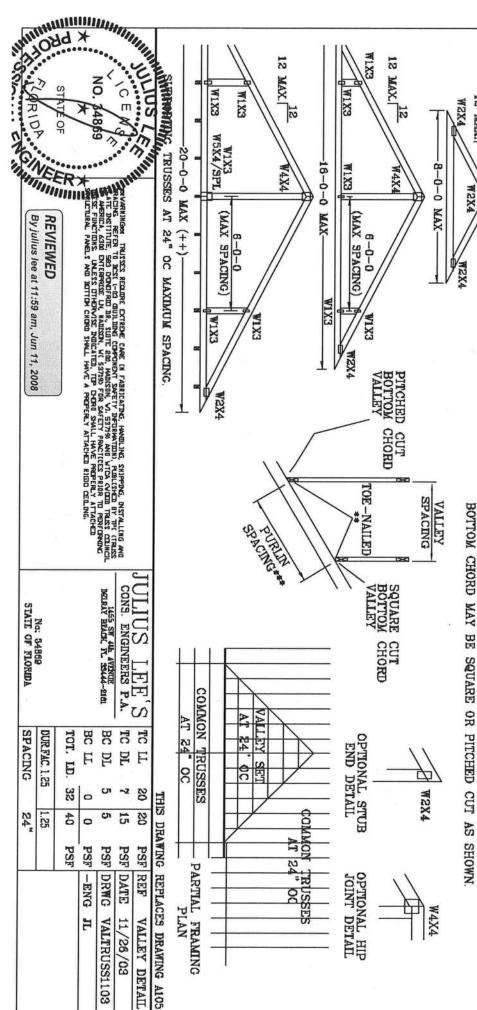
LARGER AS REQ'D

12 MAX.

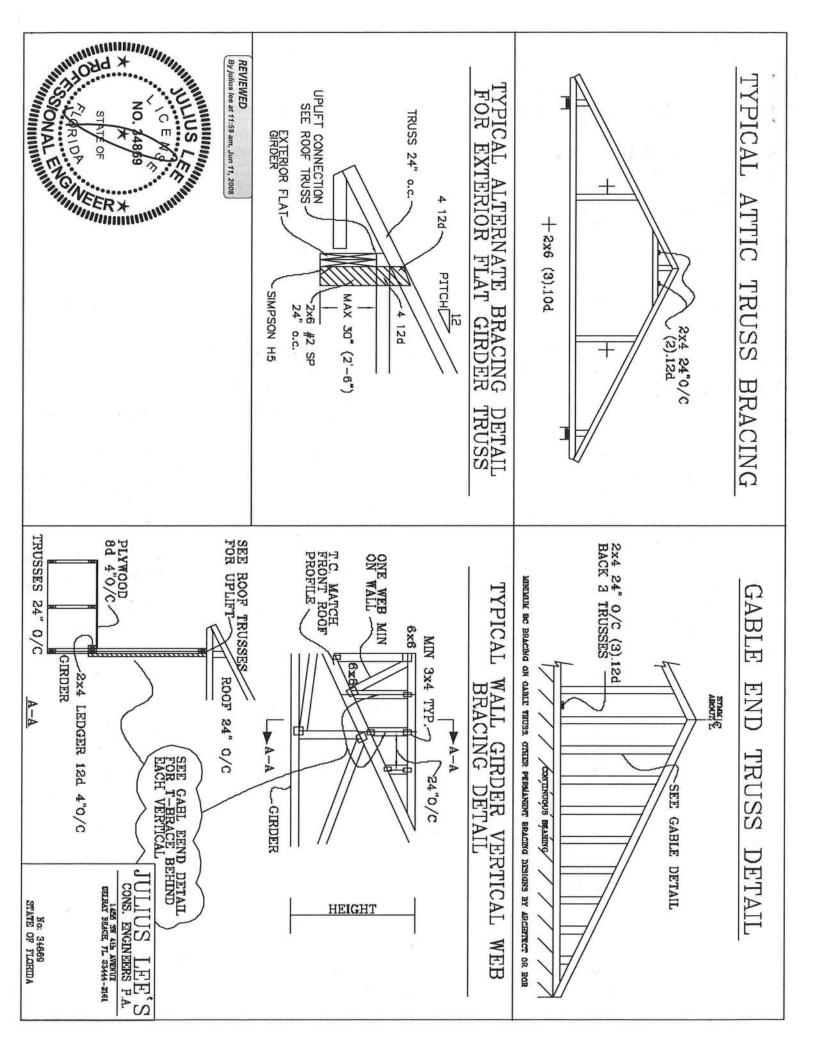
12

4-0-0

MAX



EN 113	-	VE	ATE OF	THE FUNCTIONAL PANELS	O No	E M G TRUIT	TENTIN
	By Julius lee at 11:59 am, Jun 11, 2008			AND SOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.	SAS DOMERTI DR. SUITE BUI MANISON, VI. 53799 MIN. VITA CYCLIN THANS CHICKON DITERRALSE LV. MANISON, VI. 53739) FOR SAFETY PRACTICES PRIOR TO PERFORMS	TRUSSES RECURRE EXTREME CARE (N FABRICATING, HAVOLING, SKIPPING, INSTALLING AND	
	STATE OF PLORIDA	No. SARRO	.0		DELRAY BEACH, IL SSA44-8161	CONS. ENGINEERS P.A.	JULIUS LEE'S
Ì	SPACING	DURF	TOT. LD.	BC L	BC D	TC	TC II
	NG	DUR.FAC. 1.25		F	DI I	DL	
	מז	1	32 40	0	5	7 15	20 20
	24"	1.25		0			
			PSF	PSF	PSF	PSF	PSF REF
				-ENG	DRWG	PSF DATE	REF
				JL.	VALTRUSS1103	11/26/09	VALLEY DETAIL



### NO. 4869 NO. 48 DIAGONAL BEACE OPTION: YMPICAL LENGTE MAY BE DOUBLED WITH DIAGONAL BRACE IS USED. CONNECT DIAGONAL BRACE TOR 840 AT EACH END. MAX WEB TOTAL LENGTH IS 14\*. MAX **GABLE** VERTICAL LENGTH VERTICAL LENGTH SPACING SPECIES 16 O.C. O.C. 0 GABLE VERTICAL SPF SPF SPF DFL DFL SP SP H 国 ASCE NACHE GRADE STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STUD ST COLS STUD STUD #3 BRACE 7-02: #2 SEDEL TERES BRACES 3, 8, 3. 10 130 GROUP A Ξ SPF #1/#2, DR BETTER DIAGONAL BRACE: SINGLE OR DOUBLE MPH 1X4 °L" UPPER END. CROUP BRACE + B. 10 WIND B, 0 o. H CROUP (1) 2X4 SPEED A "L" BRACE . GROUP B REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH 15 9 (2) 2X4 "L" GROUP A 10 10 MEAN EX4 #EN OR BETTER CONLINUOUS GROUP B BRACE \*\* 10 HEIGHT, c SNEWER CONS. ENGINEERS P.A. GROUP A (1) 2XB DELEVAN HEYCH, I'L STA44-2161 13' A" 13 18 ō 12' 4 Z, 12 6 12 10 12 0 No: 34869 STATE OF FLORIDA A ENCLOSED, "L" BRACE \* GROUP B 12 13 15 12 12 12 10 0 (Z) ZXB CROUP S Н "L" BRACE A NAX. MAX. TOT. GROUP B 11 14' 0" Ŋ 13 13 1.00, SPACING Ē ATTAGE EAGH "L" BRAGE WITH 104 NAILS. \$ POR. (1) "L" BRAGE, SPACE WITH S AT 8" O.C. \$ POR. (2) "L" BRAGES, SPACE WAILS AT 3" O.C. EN 18" END ZONES AND 4" O.C. BETWEEN ZONES, IN 18" END ZONES AND 4" O.C. BETWEEN ZONES, CABLE KND SUPPORTS LOAD FROM 4' 0" PROVIDE UPLATT CONNECTIONS FOR 136 FLA T." BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LENGTH. LIVE LOAD DEPLECTION CHITERIA IS L/240. DOUGLAS FIR-LARCE PLYWOOD OVERHANG. BRACING 18 DUTILDONGERS WITH E' O' DVERHANG, OR 12" EXPOSURE CABLE TRUSS PEAK, SPLICE, AND HEEL PLATES. SOUTHIAM PIN SPRUCE-PINE-INB 60 GREATES THAN 11' 8' GREATES THAN 11' 8' TESS THAN 4' 0" 24.0" STANDARD STUD GABLE VERTICAL PLATE SIZES PSF 西西 GROUP SPECIES REF DRWG DATE GROUP GROUP H & BIR HEM-PIR DETAIL NOTES 0 MITER SID GABLE 15 E HI DOUGLAS FIR-LARCE 11/26/09 ASCE7-02-CAB13015 Ä A: DULHERN PON 1X4 OR EXS B Sta 2.5X4 12 77 STANDARD GRADES OVER

Job	Truss	Truss Type	Qty	Ply	NORTON HOMES - NEWSOME RES.	J
				0.		J1976481
L281329	T02G	GABLE	2	1		
					Job Reference (optional)	

6.300 s Feb 15 2006 MiTek Industries, Inc. Tue Jun 24 11:53:51 2008 Page 2

## NOTES

- 2) Wind: ASCE 7-02; 110mph (3-second gust); h=12ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Exterior(2) zone; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see MiTek "Standard Gable End Detail"
- 4) \*This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 970 lb uplift at joint 2 and 970 lb uplift at joint 6.
- 8) 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: 1-4=-114(F=-60), 4-7=-114(F=-60), 2-6=-10

Julius Lee Truss Cesign Engineer Florida PE No. 24869 1109 Crastal Ray 894 000000 Beech E. 23401



Job	Truss	Truss Type	Qty	Ply	NORTON HOMES - NEWSOME RES.	
L281329	T02	COMMON	6	1		J1976480
L201020	102	COMMON	o l		Job Reference (optional)	

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## **NOTES**

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 367 lb uplift at joint 2 and 367 lb uplift at joint 4.

LOAD CASE(S) Standard

Julius Lee Truss Cesion Engineer Florida PE No. 24869 1100 Cestal Bay Blvd Downton Basco El 22425



Job	Truss	Truss Type	Qty	Ply	NORTON HOMES - NEWSOME RES.
L281329	T01G	GABLE	2	1	J1976479
2201020	1010	ONDEE			Job Reference (optional)

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FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-19/85, 2-3=-124/133, 3-4=-158/255, 4-5=-56/141, 5-6=-41/194, 6-7=0/184, 7-8=0/184, 8-9=0/184,

9-10=0/184, 10-11=-8/194, 11-12=-14/141, 12-13=-111/255, 13-14=-77/133, 14-15=-19/85

**BOT CHORD** 2-25=-131/197, 24-25=-131/197, 23-24=-131/197, 22-23=-131/197, 21-22=-131/197, 20-21=-131/197,

19-20=-131/197, 18-19=-131/197, 17-18=-131/197, 16-17=-131/197, 14-16=-131/197

WEBS 8-20=-330/80, 7-21=-231/162, 6-23=-255/191, 5-24=-103/94, 4-25=-512/348, 9-19=-231/162, 10-18=-255/191,

11-17=-103/94, 12-16=-512/348

## JOINT STRESS INDEX

2 = 0.71, 2 = 0.21, 2 = 0.29, 3 = 0.00, 3 = 0.59, 3 = 0.60, 4 = 0.33, 5 = 0.33, 6 = 0.33, 7 = 0.33, 8 = 0.23, 9 = 0.33, 10 = 0.33,11 = 0.33, 12 = 0.33, 13 = 0.00, 13 = 0.60, 13 = 0.59, 14 = 0.71, 14 = 0.21, 14 = 0.29, 16 = 0.33, 17 = 0.33, 18 = 0.33, 190.33, 20 = 0.33, 21 = 0.33, 22 = 0.18, 23 = 0.33, 24 = 0.33 and 25 = 0.33

## NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-02; 110mph (3-second gust); h=12ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Exterior(2) zone; Lumber DOL=1.60 plate grip DOL=1.60. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
- 3) Truss designed for wind loads in the plane of the truss only. For stude exposed to wind (normal to the face), see MiTek "Standard Gable End Detail"
- 4) \*This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 308 lb uplift at joint 2, 324 lb uplift at joint 14, 68 lb uplift at joint 20, 135 lb uplift at joint 21, 155 lb uplift at joint 23, 72 lb uplift at joint 24, 290 lb uplift at joint 25. 133 lb uplift at joint 19, 156 lb uplift at joint 18, 69 lb uplift at joint 17 and 295 lb uplift at joint 16,
- 10) 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

1) Regular: Lumber Increase=1.25, Plate Increase=1.25 Uniform Loads (plf)

Vert: 1-8=-114(F=-60), 8-15=-114(F=-60), 2-14=-10



Job	Truss	Truss Type	Qty	Ply	NORTON HOMES - NEWSOME RES.
			Labor		J1976478
L281329	T01	COMMON	32	1	
					Job Reference (optional)

6.300 s Feb 15 2006 MiTek Industries, Inc. Tue Jun 24 11:53:47 2008 Page 2

### NOTES

- 4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 353 lb uplift at joint 2 and 360 lb uplift at joint 6.
- 6) 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: 1-4=-54, 4-7=-54, 2-10=-10, 10-11=-70(F=-60), 6-11=-10

Julius Lee Truss Design Engineer Flonde ME No. 24899 1100 Coastal Bay Blyd

