STRUCTURAL CALCULATIONS

FOR

GAY RESIDENCE

LOCATION

Columbia County, Florida

w s e

WAYLAND

STRUCTURAL ENGINEERING

8200 SW 16th Place Gainesville, FL 32607

Phone/Fax 352-331-0727

FL COA #8236

Project Number
06171

November 21, 2006

Prepared For:
HOMES BY HOUSECRAFT, LLC
12523 NW US Highway 441
Alachua, Florida 32615

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GREGORY S. WAYLAND, PE
FL PE #54396

11/22/06

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Project Name: GAY RESIDENCE		For: Homes by Housecraft, LLC		
WSE Project Number: 06171		12523 NW US Hwy 441		
Project Location: Columbia County, Florida		Alachua, Florida 32615		

STRUCTURAL SPECIFICATION

A. GENERAL

1. This STRUCTURAL SPECIFICATION shall be considered part of the contract documents for this project and shall be attached to the drawings prepared by: HOMES BY HOUSECRAFT, LLC Date:
2. Roof truss layout, uplift loads and gravity loads relied upon for design of supporting walls, lintels, headers, footings, etc. prepared by: BUILDERS FIRST SOURCE Date: 10/27/2006
3. Information and materials specified in this STRUCTURAL SPECIFICATION shall take precedence over that shown on the drawings.
4. Signing and sealing this document and/or the construction drawings by Wayland Structural Engineering certifies only the structural systems for this building, and is not a certification of the site plan, architectural, electrical, mechanical, plumbing or other systems that may be shown on the same drawing. WSE is not responsible for changes made to this document by others without written consent.
5. It is assumed that this building site is not located within a 100 year floodplain and is not designed for hydrostatic or moving water loads.

B. GOVERNING CODE

FLORIDA BUILDING CODE, 2004, BUILDING

C. DESIGN LOADS

1. Dead Loads		(Section 1606)
Roof Top Chord	10	psf
Roof Bottom Chord	10	psf
Floor	10	psf
2. Live Loads		(Section 1607)
Floor Live Load	40	psf
Balconies	60	psf
Attics w/o storage	10	psf
Attics w storage	20	psf
3. Roof Live Loads		(Section 1607.11.2)
12:12 pitch	12	psf
10:12 pitch	14	psf
8:12 pitch	16	psf
6:12 pitch	18	psf
Flat to 4:12 pitch	20	psf

4. Wind Loads		(Section 1609)
Enclosure Classification	Enclosed	
Basic Wind Speed (3 sec. gust)	110	mph
Wind Importance Factor, Iw	1.0	
Exposure Category	B	
Internal Pressure Coefficients:	+0.18, -0.18	

Design Wind Pressures for Doors and Windows:

Opening Area (sf)	Inward Pressure (psf)	Outward Pressure (psf)
0-10	21.8	-29.1
11-20	20.8	-27.2
21-50	19.5	-24.6
51-100	18.5	-22.6

D. EARTHWORK

1. **General:**
   a. **OWNER/CONTRACTOR CAUTION**: A geotechnical or soil investigation has not been performed for this site. It is recommended that the Owner or Contractor employ the services of a geotechnical engineer to perform soil borings and provide recommendations for preparation of the soils specific to this building site, and confirm the soil type assumed in this specification. WSE has no knowledge of the on-site soils and therefore accepts no responsibility for their bearing capacity or performance.
   b. Bearing soil is therefore presumed to be sandy soil with no organics, peat, clay, expansive clays, or boulders.
   c. It is assumed that seasonal high groundwater table is well below footing bearing elevation.
   d. The allowable soil bearing pressure is assumed to be 1,000 pounds per square foot.
   e. If the Contractor or Building Inspector encounters organics, clays, silts, boulders or high grounwater levels during foundation excavation, engineer of record and/or geotechnical engineer shall be contacted and/or employed to assess conditions first hand and give direction for additional corrective work or modifications to the design that may need to be performed.
2. **Site Preparation:**
   a. Strip all trees, grasses, topsoil and other organics from building footprint. Use root rake or similar equipment to remove roots.
   b. Proofcompact existing grade with loaded dump truck or compactor to densify existing soils and identify soft or loose soils.
   c. If soft soils are encountered during proofcompaction, overcut unsuitable material and replace with well graded sand. (See 1e. above)
3. **Excavation:**
   a. Excavations are to be performed in accordance with current OSHA standards. Contractor is responsible for excavation safety.
   b. Compact all excavation bottoms to firm unyielding condition. See B.6.c. for compaction requirement.
4. **Footing Bearing:**
   a. All foundations are to bear on undisturbed sandy soil soil or compacted fill as described herein.
   b. Bottom of footings are to extend at least 12 inches below grade.
5. **Ground/Surface Water Control:**
   a. Excavation and backfill operations are to be maintained in a dry condition.
   b. Slope or crown building subgrades to promote run-off and prevent ponding.
   c. Surface and infiltrating water are to be removed by grading and pumping from sumps if required.
6. **Backfill and Compaction:**
   a. Use only clean, well graded sand with no more than 10% passing #200 sieve for fill and backfill within building footprint.
   b. Mechanically compact all backfill within building footprint in maximum 12" loose lifts to firm unyielding consistency.
   c. Suggest compact to 95% of maximum dry density per Modified Proctor Test, ASTM D-1557.
7. **Pest Control:**
   a. Treat all slab subgrades for termites in accordance with the Florida Building Code and local ordinances.
8. **Exterior Grading:**
   a. Exterior grade is to be kept at least 6 inches below wood siding and/or foam insulation.
   b. Slope exterior grade away from building to promote drainage.

STRUCTURAL SPECIFICATION (Continued)

E. CONCRETE

1. General: Comply with Florida Building Code, 2004 Chapter 19, and ACI 301-99 Specifications for Structural Concrete.

2. Concrete:
- a. Cement: ASTM C150, Type I Portland cement
- b. Aggregate: ASTM C33, maximum aggregate size = 1 inch
- c. Water/cement ratio: 0.50 maximum
- d. Slump: 4 inches +/- 1 inch
- e. Air entraining: ASTM C 260, concrete is to be air entrained for mild exposure, 3 - 6%

COMPRESSIVE STRENGTH, (psi) min. at 28 days	
Member	Strength
Footings, slabs-on-grade	2,500
Beams, columns, elevated slabs	3,000

3. Reinforcing: ASTM A615, Grade 40.

LAPS, BENDS, HOOKS			
Bar Size	Lap Length	Bend Diameter	Hook Length
#3	15"	2 1/4"	6"
#4	20"	3"	8"
#5	25"	3 3/4"	10"
#6	30"	4 1/2"	12"

BAR COVER	
Condition	Minimum Cover
Cast against and exposed to earth	3"
Exposed to earth or weather	1 1/2"
Not exposed to weather or earth	
Slabs, walls, joists	3/4"
Beams, columns (stirrups, ties)	1 1/2"

4. Footings:

BEARING WALL FOOTINGS			
Type	Width	Depth	Reinforcing
Stem wall	20"	10"	(3) #5
Monolithic	16"	20"	(3) #5

Corner bars: Provide 90 degree bend at all footing corners.

5. Slabs-On-Grade:
- a. Thickness: 4 in.
- b. Vapor retarder: 6 mil polyethylene, lap edges 6 inches.
- c. Reinforcing: Welded Wire Reinforcing (WWR): ASTM A185, 6x6-W1.4xW1.4 (6x6-10/10) sheets, lap edges minimum 10 inches, support on chairs @ 3'-0" o.c. each way. WWR need not be installed on chairs if used in conjunction with fiber reinforcement. (Optional) Fibrous Reinforcing: ASTM C 1116, Fibermesh "Stealth" or "Inforce e3" polypropylene fibers by SI Concrete Systems or equivalent. Add to concrete mix at rate of 1.5 lb/cy.
- d. Protection: Cure all slabs for 7 days using sprayed-on curing compound or continuous water sprinkling.
- e. Slab joints: As concrete slabs cure and dry out, they will shrink causing cracks to form in surface of slab. Slab reinforcement is placed in slab to help limit width of cracks that do form. All slabs left exposed should be saw-cut in roughly 10'-0" squares.

F. MASONRY

1. General: Comply with the Florida Building Code, 2004 Chapter 21 and ACI 530.1-02 Specifications for Masonry Structures.

2. Masonry: ASTM C90, Type 1, two core, normal weight units, 1,900 psi net area compressive strength.

3. Mortar: ASTM C270, Type M or S.

4. Grout: ASTM C476, fine or coarse grout, minimum 3,000 psi compressive strength at 28 days, 8-9 inch slump.

5. Joint Reinf.: (Optional) ASTM A951, truss type, hot-dip galvanized per ASTM A153, class B, 9 gauge wires spaced 16" o.c. vertically.

6. Reinforcing: ASTM A615, Grade 40. Provide clean-out at base of wall for pours over 5 feet high, lap bars 48 bar diameters.
- a. Vertical: Provide #5 bars @ 7'-0" o.c. and at all corners and ends of walls. Provide one vertical #5 bar in first cell at all window and door jambs.
- b. Horizontal: Provide one #5 bar continuous in bond beam at top of wall.
- c. Hooks: Provide standard 90 degree hook into footing at bottom and into bond beam at top of wall.
- d. Corners: Provide 90 degree bend corner bars at all wall corners and intersections.
- e. Lintels: Provide precast/pre-reinforced U-shaped concrete lintels over all openings sized for span and loading.

STRUCTURAL SPECIFICATION (Continued)

G. WOOD FRAMING

1. **General:** Comply with the Florida Building Code, 2004 Chapter 23

2. **Studs:**

Wall height	Member	Spacing	Grade	Species
Up to 10 ft	2x4	16" o.c.	No. 2	Spruce-Pine-Fir (SPF)

3. **Trusses:**
   a. Wayland Structural Engineering is not responsible for design and detailing or installation of engineered wood roof trusses.
   b. Truss engineering drawings to be signed and sealed by Professional Engineer registered in State of Florida.
   c. Truss manufacturer to Engineer trusses to support dead, live and wind loads per Florida Building Code, 2004 or ASCE 7-02.
   d. Engineer trusses to comply with ANSI/TPI 1 "National Design Standard for Metal Plate Connected Wood Truss Construction."
   e. Comply with TPI HIB "Commentary and Recommendations for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses."
   f. Comply with TPI DSB "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
   g. Truss spacing = 2'-0" o.c. maximum.

4. **Fascia Board:** No. 2, Spruce-Pine-Fir (SPF).

5. **Sheathing:**
   a. Roof Sheathing: 15/32" thick, Oriented Strand Board (OSB), Sheathing Grade, Exposure 1.
   Fasten with 8d common nails @ 6" o.c. at panel edges, 12" o.c. along intermediate supports.
   Lay panels perpendicular to supports, stagger joints one-half panel length. Provide "H" panel clips between panel supports.
   Nail panel edges to fascia board.

6. **Fasteners:**
   a. Nails: Comply with Florida Building Code, 2004, Table 2304.9.1, "Fastening Schedule."
   b. Anchor bolts: ASTM A307.
   c. Epoxy: Simpson "SET" or Hilti "HIT HY150" Epoxy Adhesive. Follow manufacturer's installation instructions exactly.
   d. Bolts: ASTM A307, hot-dip galvanized, see plan for size and quantity.
   e. Uplift Anchors & Ties: Simpson Strong-Tie.
   f. Corrosion Protection: All fasteners exposed to weather or in contact with preservative treated wood shall be hot-dip galvanized to G185. For Simpson connectors, provide "Z-Max" coating.

H. WINDOWS, DOORS, SKYLIGHTS

1. **Design:** Wayland Structural Engineering is not responsible for the design, construction, or attachment of windows, doors or skylights. The building envelope is designed assuming a fully enclosed condition, therefore windows, doors and skylights must be designed to support the same wind pressures that walls and roofs are designed for.

2. **Certification:** Window, door and skylight manufacturer shall submit certification indicating that window or door units can adequately support design wind pressures for the specified wind zone as shown in section C.4. above.

3. **Fastenings:** Window, door and skylight manufacturer is to provide fastening information for attachment to supporting construction.

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Project Name	GAY RESIDENCE	For:	Homes by Housecraft
WSE Project Number	06171		12523 NW US Highway 441
Project Location	Columbia County, Florida		Alachua, Florida 32615

A. UPLIFT CHECKS

1. BOND BEAM CHECK (upward bending)

Vertical bar spacing	s =	7.00 ft	
Gross uniform uplift load	ug =	-253 plf	(worst case from truss engineering)
Bond beam weight	wd =	42 plf	(one course high x 8 inches wide)
Calculated net uniform uplift load	un =	-211 plf	

		Calc'd	Supplied	
Maximum net shear (kips)	U =	**0.74**	**2.16**	OK
Maximum net moment (kip-in)	M =	**15.5**	**25.5**	OK

*** USE ONE COURSE HIGH x 8 INCH WIDE MASONRY BOND BEAM WITH (1) #5 CONTINUOUS TOP**

2. VERTICAL BAR CHECK (upward tension)

Allowable reinforcing tension	Fs =	20,000 psi
Stress increase for wind	Cw =	1.33

		* Calc'd Uplift (kips)	Vertical Reinforcing Quantity	Vertical Reinforcing Size (#)	**Supplied Uplift (kips)	
For typical common trusses,		1.477	1	5	8.161	OK
For girder trusses,	T01	0.779	1	5	8.161	OK
	T03	2.376	1	5	8.161	OK
	T04	0.491	1	5	8.161	OK
	T17	1.098	1	5	8.161	OK
	T18	3.657	1	5	8.161	OK

* uplift values taken from truss engineering

** includes stress increase for wind

USE (1) #5 VERTICAL BAR @ 7'-0" O.C. MAX.

3A. WALL + FOOTING + SOIL WEIGHT CHECK (uplift at common trusses)

				Resisting Weight Supplied
Wall height	hw =	9.33 ft		
Wall thickness	tw =	8 in		
Wall unit weight	ww =	52 psf		
Bond beam height	hbb =	8 in	Bond beam	58
Bond beam unit weight	wbb =	130 psf	Wall	450
Footing thickness	tf =	10 in	Footing	208
Footing width	bf =	20 in	Soil (inside)	67
Footing depth below slab	df1 =	26 in	Soil (outside)	33
Footing depth below grade	df2 =	18 in	**Wr =**	**817** plf
Soil unit weight	ws =	100 psf		

Safety Factor Against Uplift	SF =	1.00	
Gross uniform uplift load	ug =	253 plf	
Required Resisting Weight, Wr = SF*ug		**253 plf**	OK

USE MINIMUM 8" THICK MASONRY WALL WITH 10"X20" FOOTING WITH (3) #5 BARS CONTINUOUS.

3B. WALL + FOOTING + SOIL WEIGHT CHECK (uplift at girder truss bearing points and columns)

Girder Truss or Column	Downward Load (lb)	Uplift Load (lb)	Adjacent Uplift Load (plf)	*Required Uplift Load (lb)	**Resisting Weight (lb)	Rqd Footing ***Weight (lb)	Rqd Concrete Volume (cf)	Footing Thickness (in)	Min. Square Footing (ft)
T01	1,686	779	195	2,144	6,533	-4389	-28	10	**0.0**
T03 LEFT	3,754	1,467	195	2,832	6,533	-3701	-23	10	**0.0**
T03 RIGHT	6,160	2,376	195	3,741	6,533	-2792	-17	10	**0.0**
T04	1,454	491	253	2,262	6,533	-4271	-27	10	**0.0**
T17	2,537	1,098	195	2,463	6,533	-4070	-26	10	**0.0**
T18 LEFT	9,731	3,651	195	5,016	6,533	-1517	-9	10	**0.0**
T18 RIGHT	7,014	2,625	195	3,990	6,533	-2543	-16	10	**0.0**

** Resisting weight equals weight of wall, footing, soil for 4 feet each side of load point.

*** Required footing weight equals weight required in addition to 10" x 20" footing.

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WSE Project Number: 06171			12523 NW US Highway 441	
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B. LINTELS

1. TYPICAL LINTELS (with uniform load only)

	Unit Load (psf)	Trib. Width (ft)	Uniform Load (kips/ft)	Load Factor	Factored Uniform Load (kips/ft)
Roof Dead Load	15	18.00	0.270	1.40	0.378
Wall Dead Load	87	1.33	0.116	1.40	0.162
Roof Live Load	16	18.00	0.288	1.70	0.490
Roof Attic Load	10	18.00	0.180	1.70	0.306
		w =	**0.854**	**wu =**	**1.336**
*Uplift Load			0.253	1.60	0.405

(*from truss engineering)

Lintel Span	L =	**4.67**	**6.33**				ft
Unfactored Reaction	R =	1.99	2.70				kips
Unfactored Net Uplift Reaction	Unet =	0.43	0.58				kips
Factored Uplift Moment	Munet =	0.50	0.92				kip-ft
Factored Shear	Vu =	3.12	4.23				kips
Factored Design Shear	Vud =	**1.56**	**2.67**				kips
Factored Moment	Mu =	**3.64**	**6.69**				kip-ft
	Select Lintel	**TYPE A FILLED/ W 1 COURSE MASONRY**	**TYPE B FILLED/ W 1 COURSE MASONRY**				

2. 3'-4" WINDOW LINTEL (with girder truss T04 bearing)

Lintel Span, L = **3.33** **ft**

Uniform Load #1	Unit Load (psf)	Trib. Width (ft)	Uniform Load (kips/ft)	Load Factor	Factored Uniform Load (kips/ft)
Roof Dead Load	15	18.00	0.270	1.40	0.378
Wall Dead Load	87	1.33	0.116	1.40	0.162
Roof Live Load	16	18.00	0.288	1.70	0.490
Roof Attic Load	10	18.00	0.180	1.70	0.306
		w1 =	**0.854**	**wu1 =**	**1.336**
Uplift Load			0.253	1.60	0.405
Uniform Load #2					
Roof Dead Load	15	5.50	0.083	1.40	0.116
Wall Dead Load	87	1.33	0.116	1.40	0.162
Roof Live Load	16	5.50	0.088	1.70	0.150
Roof Attic Load	10	5.50	0.055	1.70	0.094
		w2 =	**0.341**	**wu2 =**	**0.521**
Uplift Load			0.097	1.60	0.155

Point Load		Point Load (kips)	Load Factor	Factored Uniform Load (kips)	Distance From Left (ft)	Distance From Right (ft)
Dead Load		0.727	1.40	1.02		
Live Load		0.727	1.70	1.24		
	P =	**1.454**	**Pu =**	**2.25**	1.67	1.66
Uplift Load		0.491	1.60	0.79	1.67	1.66

		Left End	Right End	
Unfactored Reaction	R =	1.93	1.51	kips
Unfactored Net Uplift Reaction	Unet =	0.49	0.36	kips
Factored Shear	Vu =	3.01	2.34	kips
Factored Design Shear	**Vud =**	**1.45**	**1.73**	**kips**

Factored Moment	(due to P)	Mu1 =	1.88	kip-ft @	1.67	ft
	(due to w1)	Mu2 =	1.05	kip-ft @	1.25	ft
	(due to w2)	Mu3 =	0.40	kip-ft @	2.08	ft
		Mu =	**3.04**	**kip-ft**		

USE TYPE A FILLED WITH ONE COURSE MASONRY

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C. HORIZONTAL FORCES ON WALLS & TRUSSES

1. TYPICAL WALL

Wall height	9.33	ft	
Wind pressure	22.6	psf	(Zone 5)
Uniform lateral load	105	plf	(Top & Bottom of Wall)
Lateral force on Truss	211	lb/truss	(Based on 2 ft. spacing, perpendicular to wall)

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D. LATERAL ANALYSIS

1. Building Data

Building Length	L =	56.33	ft
Building Width	B =	51.33	ft
Eave Height	he =	8.00	ft
Peak ht above eave	hp =	10.00	ft
Roof Slope		6	/12

2. Edge Zone

a = 0.10*B	5.13	ft
a = 0.40*h	3.20	ft
a =	3.20	ft
a = 0.04*B	2.05	ft
a = 3.00	3.00	ft
a =	**3.20**	**ft**

3. End Zone

z = 2*a = 6.40 **ft**

4. LONGITUDINAL DIRECTION

Exposure Category: B
Adjustment Coefficient: 1.00

MWFRS Wind Pressures

Wall Interior Zone	12.7	psf
Wall End Zone	19.2	psf
Roof Interior Zone	-5.9	psf
Roof End Zone	-10.0	psf

Wall Shear Force

Interior	1.96	kips
End	0.98	kips
Total	2.94	kips

Roof Shear Force

Interior	-1.50	kips
End	-0.20	kips
Total	-1.71	kips
Use	0.00	kips

Total Shear Force

V = 2.94 **kips**

Roof Diaphragm Check

Diaphragm shear	v =	26	plf
Allowable shear	v =	240	plf
	check	OK	

Roof Truss Lateral Load (perpendicular to truss)

Load per truss: v = 52 lb/truss

Shear Wall Check

Shear wall length	d =	8.67	ft
Shear wall height	h =	9.33	ft
Shear wall effective thickness	be =	2.50	in
Masonry strength	f'm =	1500	psi
Actual Shear	V =	1.47	kips
Overturning moment	M =	13.72	kip-ft
Actual shear stress	fv =	5.7	psi
	check	OK	

Allowable shear stress

M/V*d		1.08
M/V*d >= 1.0		YES
Allowable shear stress	Fv1 =	38.73 psi
	Fv2 =	35.00 psi
	Fv =	**35.00 psi**

5. TRANSVERSE DIRECTION

MWFRS Wind Pressures

Wall Interior Zone	17.7	psf
Wall End Zone	26.6	psf
Roof Interior Zone	-3.9	psf
Roof End Zone	-7.0	psf

Wall Shear Force

Interior	3.08	kips
End	1.36	kips
Total	4.44	kips

Roof Shear Force

Interior	-1.12	kips
End	-0.14	kips
Total	-1.26	kips
Use	0.00	kips

Total Shear Force

V = 4.44 **kips**

Roof Diaphragm Check

Diaphragm shear	v =	43	plf
Allowable shear	v =	240	plf
	check	OK	

Roof Truss Lateral Load (perpendicular to truss)

Load per truss: v = 87 lb/truss

USE 15/32" OSB SHEATHING GRADE W/ 8d NAILS @ 6" O.C. EDGE, 12" O.C. FIELD

Shear Wall Check

Shear wall length	d =	13.33	ft
Shear wall height	h =	9.33	ft
Shear wall effective thickness	be =	2.50	in
Masonry strength	f'm =	1500	psi
Actual Shear	V =	2.22	kips
Overturning moment	M =	20.73	kip-ft
Actual shear stress	fv =	5.6	psi
	check	OK	

Allowable shear stress

M/V*d		0.70
M/V*d >= 1.0		NO
Allowable shear stress	Fv1 =	42.60 psi
	Fv2 =	48.50 psi
	Fv =	**42.60 psi**

USE 8" CMU W/ TYPE S MORTAR, FACE SHELL BEDDING, GROUT ONLY AT REINFORCED CELLS.

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Truss Engineering Notes: BUILDIERS FIRST SOURCE, BUNNELL, FL — Date: 10/27/2006

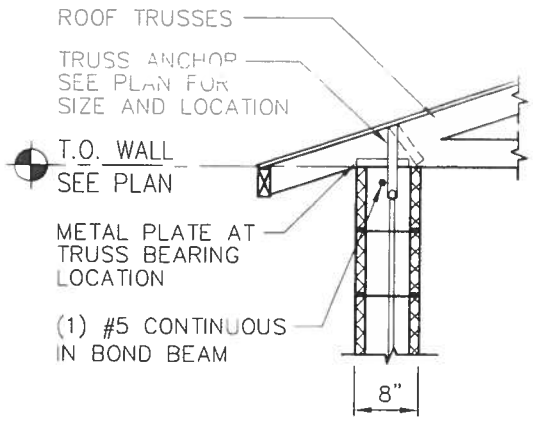
1. ALL ANCHOR ARE BY SIMPSON STRONG-TIE. ALTERNATE MANUFACTURERS ARE ALLOWED PROVIDED THE UPLIFT, LATERAL AND DOWNWARD LOADS SPECIFIED BELOW ARE EQUALED OR EXCEEDED.
2. TRUSS TO TRUSS CONNECTIONS ARE TO BE SPECIFIED AND SUPPLIED BY TRUSS MANUFACTURER.
3. USE "META16" FOR ALL TRUSSES BEARING ON MASONRY UNLESS OTHERWISE NOTED BELOW (U = 1450 lb)

ROOF TRUSS ANCHOR SCHEDULE

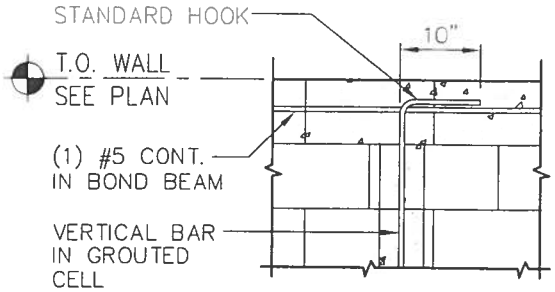
Truss Designation	Bearing Point #1		Bearing Point #2		Bearing Point #3		Bearing Point #4	
	Uplift (lb)	Anchor	Uplift (lb)	Anchor	Uplift (lb)	Anchor	Uplift (lb)	Anchor
T03	1467	HETA16	2376	MGT				
T18	3651	MGT	2625	MGT				

ANCHOR ALLOWABLE LOAD TABLE

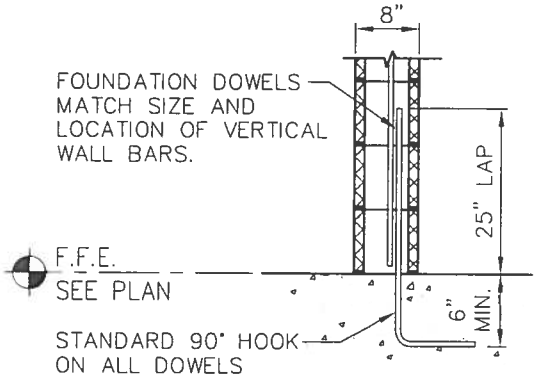
Simpson Anchor	Upward Loads		Lateral Loads		Downward Loads
	(133)	(160)	F1	F2	
META16	1450	1450	335	635	
HETA16	1805	1810	335	730	
MGT	3965	3965			



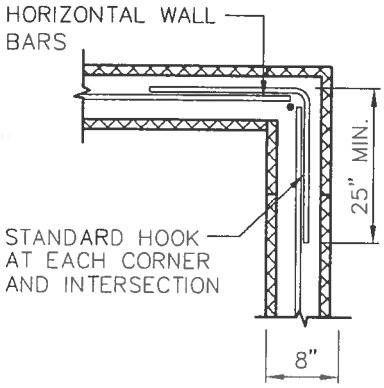
1 EXTERIOR TRUSS BEARING
1/2" = 1'-0"



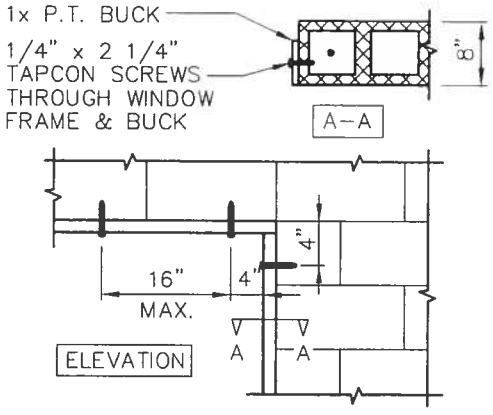
2 HOOK TO BOND BEAM
1/2" = 1'-0"



3 WALL BASE
1/2" = 1'-0"



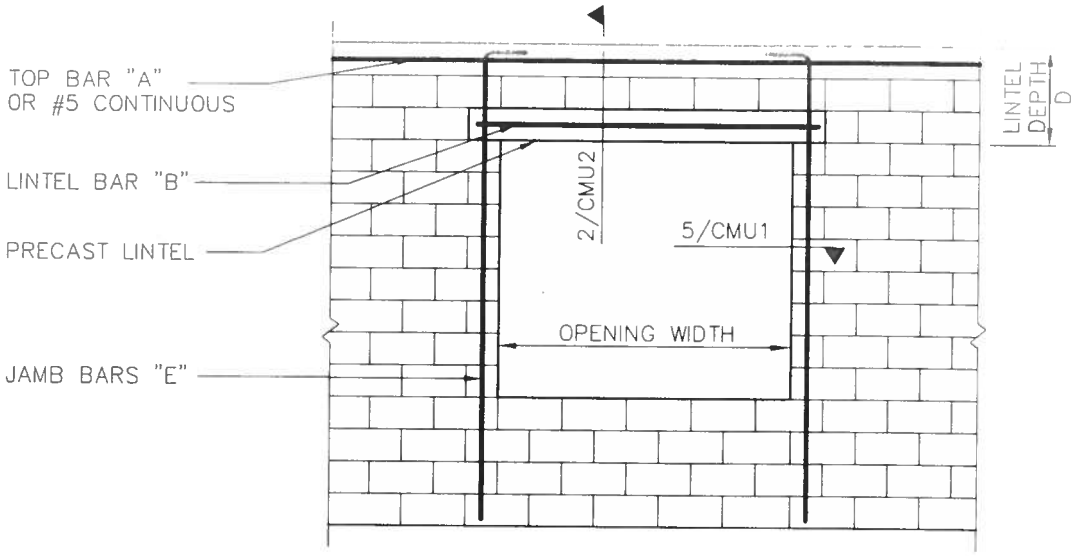
4 WALL CORNER REINFORCING
1/2" = 1'-0"



5 DOOR/WINDOW BUCK
1/2" = 1'-0"

wse
WAYLAND
STRUCTURAL ENGINEERING
Gregory S. Wayland, PE
Florida PE #54396
COA #8236
8200 SW 16th Place
Gainesville, FL 32607
Phone (352) 331-0727
Fax (352) 331-0727

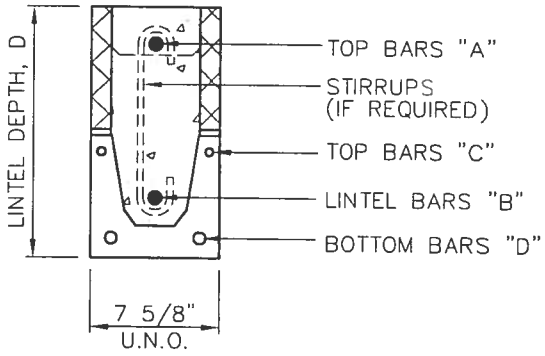
DWG. NAME:	TYPICAL CMU WALL DETAILS
SCALE:	VARIES
PROJECT NAME:	GAY RESIDENCE COLUMBIA COUNTY, FLORIDA
PROJECT NO:	06171
DRAWN BY:	GSW
DATE:	11/21/2006
DWG NO.	CMU1



1 OPENING ELEVATION
1/4" = 1'-0"

MASONRY OPENING	LINTEL MARK	LINTEL DEPTH D (IN)	MASONRY REINFORCING			PRECAST LINTEL REINFORCING		JAMB BARS "E"
			TOP BARS "A"	LINTEL BARS "B"	STIRRUPS	TOP BARS "C"	BOTTOM BARS "D"	
4'-8"	A	16	(1) #5	(1) #5	NONE	NONE	(2) #3	(1) #5
6'-4"	B	16	(1) #5	(1) #5	NONE	(2) #2	(2) #4	(1) #5

1. PRECAST U-SHAPED LINTELS BY CEMENT PRECAST OR EQUAL.
2. PRECAST CONCRETE: 4,000 PSI COMPRESSIVE STRENGTH.
3. PRECAST REINFORCING: ASTM A615, GRADE 60.
4. PROVIDE MINIMUM 8" BEARING BOTH ENDS.
5. POUR PRECAST LINTEL AND MASONRY ABOVE MONOLITHICALLY.
6. LINTEL WIDTH IS 7 5/8" UNLESS OTHERWISE NOTED.
7. E+CIP = TYPE E PRECAST LINTEL WITH CAST-IN-PLACE CONCRETE ABOVE INSTEAD OF FILLED MASONRY. CONCRETE TO BE 3,000 PSI.
8. SHORE LINTELS OVER 12 FEET LONG FOR 14 DAYS.



2 TYPICAL MASONRY LINTELS
1" = 1'-0"

WSE
WAYLAND
STRUCTURAL ENGINEERING
Gregory S. Wayland, PE
Florida PE #54396
COA #8236
8200 SW 16th Place
Gainesville, FL 32607
Phone (352) 331-0727
Fax (352) 331-0727

DWG. NAME: TYPICAL CMU WALL DETAILS
SCALE: VARIES
PROJECT NAME:
GAY RESIDENCE
COLUMBIA COUNTY, FLORIDA
PROJECT NO: 06171
DRAWN BY: GSW
DATE: 11/21/2006
DWG NO. CMU2

Project Information for:	L215196		
Builder:	HOMES BY HOUSECRAFT	Date:	11/6/2006
Lot:	LOT 111 HAWK RIDGE ACRES	Start Number:	**1193**
Subdivision:	N/A	SEI Ref:	L215196
County or City:	COLUMBIA COUNTY		
Truss Page Count:	24		

Truss Design Load Information (UNO) Design Program: MiTek

Gravity		Wind		Building Code:	FBC2004
Roof (psf):	**42**	Wind Standard:	**ASCE 7-02**		
Floor (psf):	55	Wind Speed (mph):	**120**		

Note: See individual truss drawings for special loading conditions

Building Designer, responsible for Structural Engineering: (See attached)

HARRINGTON,JOHN D. CGC038861
Address: 24113 NW OLD BELLAMY ROAD
HIGH SPRINGS, FL. 32643 Designer: **54**

Truss Design Engineer: Thomas, E. Miller, P.E., 56877 - Byron K. Anderson, PE FL 60987
Company: Structural Engineering and Inspections, Inc. EB 9196
Address 16105 N. Florida Ave, Ste B, Lutz, FL 33549 Phone: 813-849-5769

Notes:

1. Truss Design Engineer is responsible for the individual trusses as components only.
2. Determination as to the suitability and use of these truss components for the structure is the responsibility of the Building Designer of Record, as defined in ANSI/TPI
3. The seal date shown on the individual truss component drawings must match the seal date on this index sheet.
4. Trusses designed for veritcal loads only, unless noted otherwise.
5. Where hangers are shown, Carried Member hanger capacity per Simpson C-2006 (SYP/Full Nailing Value) as an individual component. Building Designer shall verify the suitablity and use of Carrying Member hanger capacity.

#	Truss ID	Dwg. #	Seal Date	#	Truss ID	Dwg. #	Seal Date
1	CJ1	1106061193	11/6/2006				
2	CJ3	1106061194	11/6/2006				
3	CJ5	1106061195	11/6/2006				
4	EJ7	1106061196	11/6/2006				
5	HJ9	1106061197	11/6/2006				
6	T01	1106061198	11/6/2006				
7	T02	1106061199	11/6/2006				
8	T03	1106061200	11/6/2006				
9	T04	1106061201	11/6/2006				
10	T05	1106061202	11/6/2006				
11	T06	1106061203	11/6/2006				
12	T07	1106061204	11/6/2006				
13	T08	1106061205	11/6/2006				
14	T09	1106061206	11/6/2006				
15	T10	1106061207	11/6/2006				
16	T11	1106061208	11/6/2006				
17	T11A	1106061209	11/6/2006				
18	T12	1106061210	11/6/2006				
19	T13	1106061211	11/6/2006				
20	T14	1106061212	11/6/2006				
21	T15	1106061213	11/6/2006				
22	T16	1106061214	11/6/2006				
23	T17	1106061215	11/6/2006				
24	T18	1106061216	11/6/2006				

NOV 0 6 2006

Licensee Details

Licensee Information

Name:	**HARRINGTON, JOHN D (Primary Name)** **HOMES BY HOUSE CRAFT, L.L.C. (DBA Name)**
Main Address:	**24113 NW OLD BELLAMY RD** **HIGH SPRINGS Florida 32643**
County:	**ALACHUA**
License Mailing:	
LicenseLocation:	**24113 NW OLD BELLAMY RD** **HIGH SPRINGS FL 32643**
County:	**ALACHUA**

License Information

License Type:	**Certified General Contractor**
Rank:	**Cert General**
License Number:	**CGC038861**
Status:	**Current,Active**
Licensure Date:	**12/05/1986**
Expires:	**08/31/2006**

Special Qualifications	Qualification Effective
Bldg Code Core Course Credit	
Qualified Business License Required	02/20/2004

View Related License Information

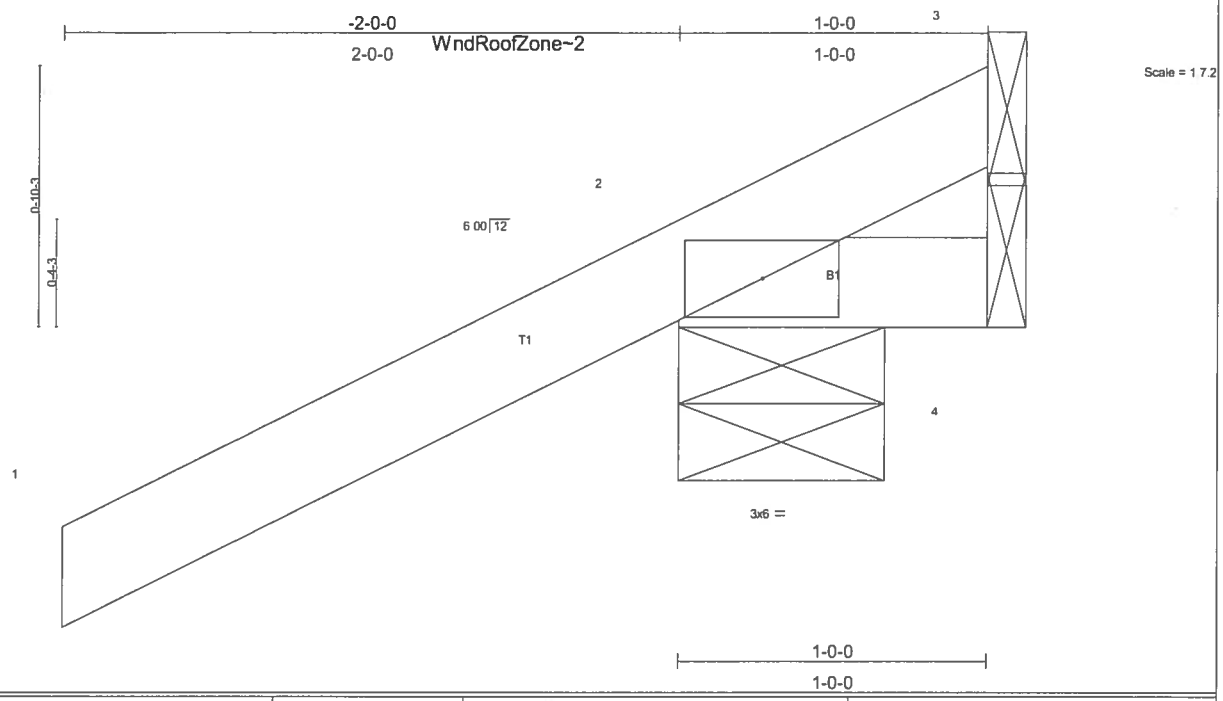
View License Complaint

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061193

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	CJ1	JACK	12	1	Job Reference (optional)

Builders FirstSource, Lake City, FI 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:51:17 2006 Page 1



LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.34	Vert(LL)	-0.00	2	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.01	Vert(TL)	-0.00	2	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(TL)	0.00	3	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 7 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=276/0-8-0, 4=14/Mechanical, 3=-100/Mechanical
Max Horz 2=103(load case 5)
Max Uplift2=-349(load case 5), 3=-100(load case 1)
Max Grav 2=276(load case 1), 4=14(load case 1), 3=167(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-75/103
BOT CHORD 2-4=0/0

JOINT STRESS INDEX
2 = 0.18

NOTES
1) Wind: ASCE 7-02; 120mph (3-second gust); h=20ft; 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.
2) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 2 and 100 lb uplift at joint 3.

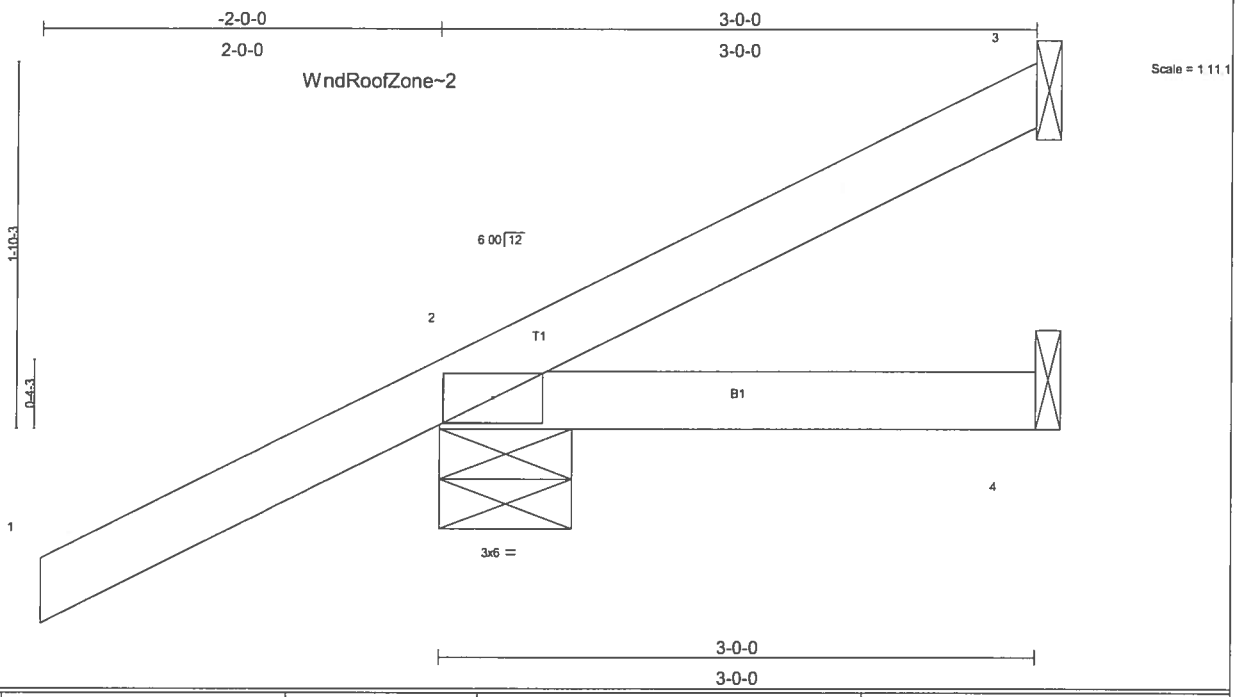
LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061194

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	CJ3	JACK	12	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:51:31 2006 Page 1



LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.40	Vert(LL)	0.01	2-4	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.09	Vert(TL)	0.01	2-4	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(TL)	-0.00	3	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 13 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=14/Mechanical, 2=292/0-8-0, 4=39/Mechanical
Max Horz 2=157(load case 5)
Max Uplift3=-27(load case 6), 2=-312(load case 5), 4=-31(load case 3)
Max Grav 3=21(load case 3), 2=292(load case 1), 4=39(load case 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-64/9
BOT CHORD 2-4=0/0

JOINT STRESS INDEX
2 = 0.17

NOTES
1) Wind: ASCE 7-02; 120mph (3-second gust); h=20ft; 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.
2) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 3, 312 lb uplift at joint 2 and 31 lb uplift at joint 4.

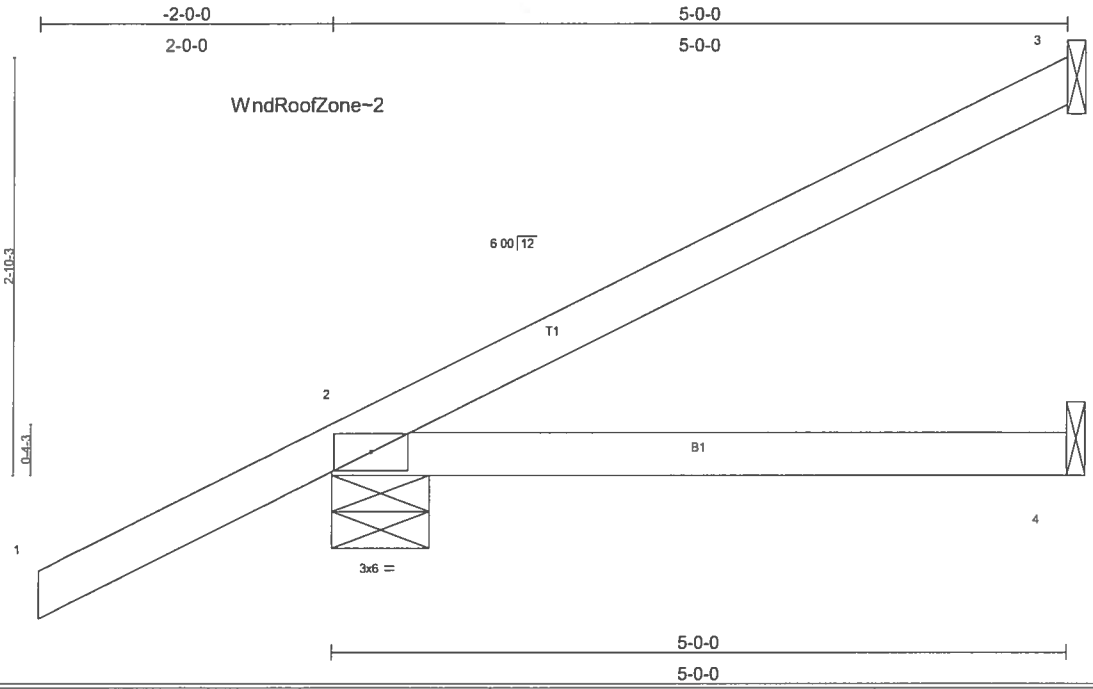
LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061195

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	CJ5	JACK	12	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:51:44 2006 Page 1



LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.40	Vert(LL)	0.09	2-4	>628	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.27	Vert(TL)	0.08	2-4	>714	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(TL)	-0.00	3	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 19 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=92/Mechanical, 2=351/0-8-0, 4=69/Mechanical
Max Horz 2=211(load case 5)
Max Uplift3=-96(load case 5), 2=-332(load case 5), 4=-55(load case 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-98/32
BOT CHORD 2-4=0/0

JOINT STRESS INDEX
2 = 0.19

NOTES
1) Wind: ASCE 7-02; 120mph (3-second gust); h=20ft; 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.
2) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 3, 332 lb uplift at joint 2 and 55 lb uplift at joint 4.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061196

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	EJ7	MONO TRUSS	39	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:51:57 2006 Page 1

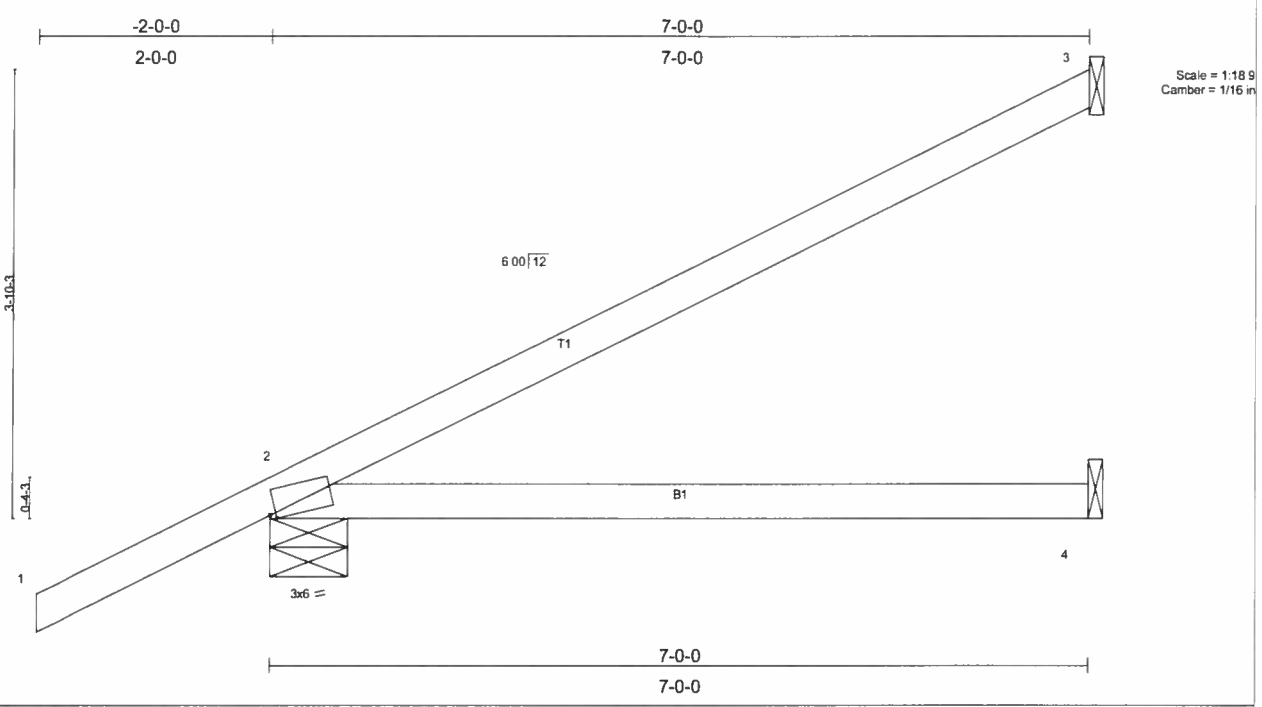


Plate Offsets (X,Y): [2:0-0-10,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.40	Vert(LL)	0.25	2-4	>322	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.32	Vert(TL)	0.21	2-4	>382	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(TL)	-0.00	3	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 26 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.1D

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=154/Mechanical, 2=426/0-8-0, 4=101/Mechanical
Max Horz 2=266(load case 5)
Max Uplift3=-170(load case 5), 2=-374(load case 5), 4=-83(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-106/56
BOT CHORD 2-4=0/0

JOINT STRESS INDEX
2 = 0.92

NOTES
1) Wind: ASCE 7-02; 120mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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.
2) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 170 lb uplift at joint 3, 374 lb uplift at joint 2 and 83 lb uplift at joint 4.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061197

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	HJ9	MONO TRUSS	6	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:52:22 2006 Page 1

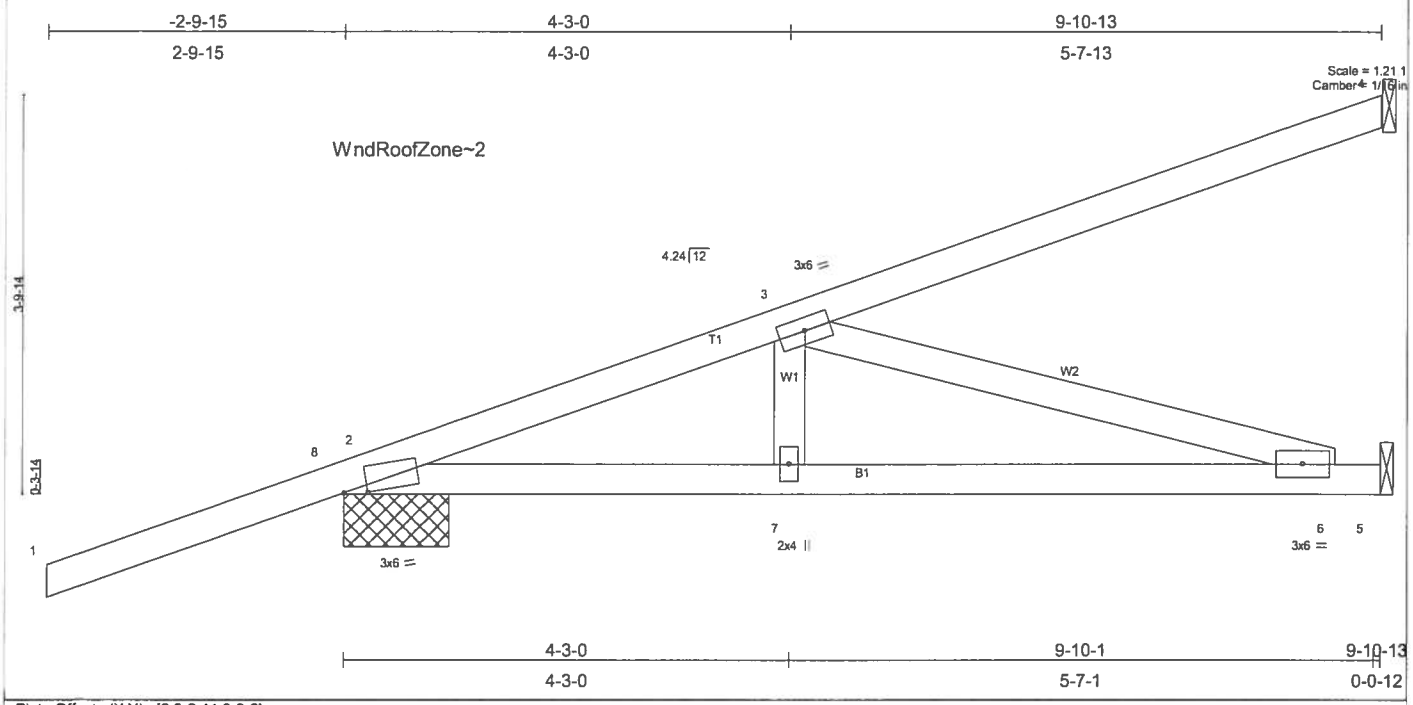


Plate Offsets (X,Y): [2:0-2-11,0-0-6]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.62	Vert(LL)	0.12	6-7	>961	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.61	Vert(TL)	-0.18	6-7	>619	180		
BCLL	10.0	Rep Stress Incr	NO	WB	0.46	Horz(TL)	0.01	5	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 45 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-1-0 oc bracing.

REACTIONS (lb/size) 4=270/Mechanical, 2=533/1-0-1, 5=372/Mechanical
Max Horz 2=315(load case 2)
Max Uplift4=-285(load case 2), 2=-485(load case 2), 5=-223(load case 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=0/45, 2-8=0/45, 2-3=-876/440, 3-4=-123/66
BOT CHORD 2-7=-644/807, 6-7=-644/807, 5-6=0/0
WEBS 3-7=-117/190, 3-6=-841/671

JOINT STRESS INDEX
2 = 0.93, 3 = 0.28, 6 = 0.24 and 7 = 0.14

NOTES
1) Wind: ASCE 7-02; 120mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60.
2) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
3) Refer to girder(s) for truss to truss connections.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 285 lb uplift at joint 4, 485 lb uplift at joint 2 and 223 lb uplift at joint 5.
5) 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=-54
Trapezoidal Loads (plf)
Vert: 8=0(F=27, B=27)-to-4=-134(F=-40, B=-40), 2=-3(F=14, B=14)-to-5=-74(F=-22, B=-22)

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061198

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	T01	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:52:47 2006 Page 1

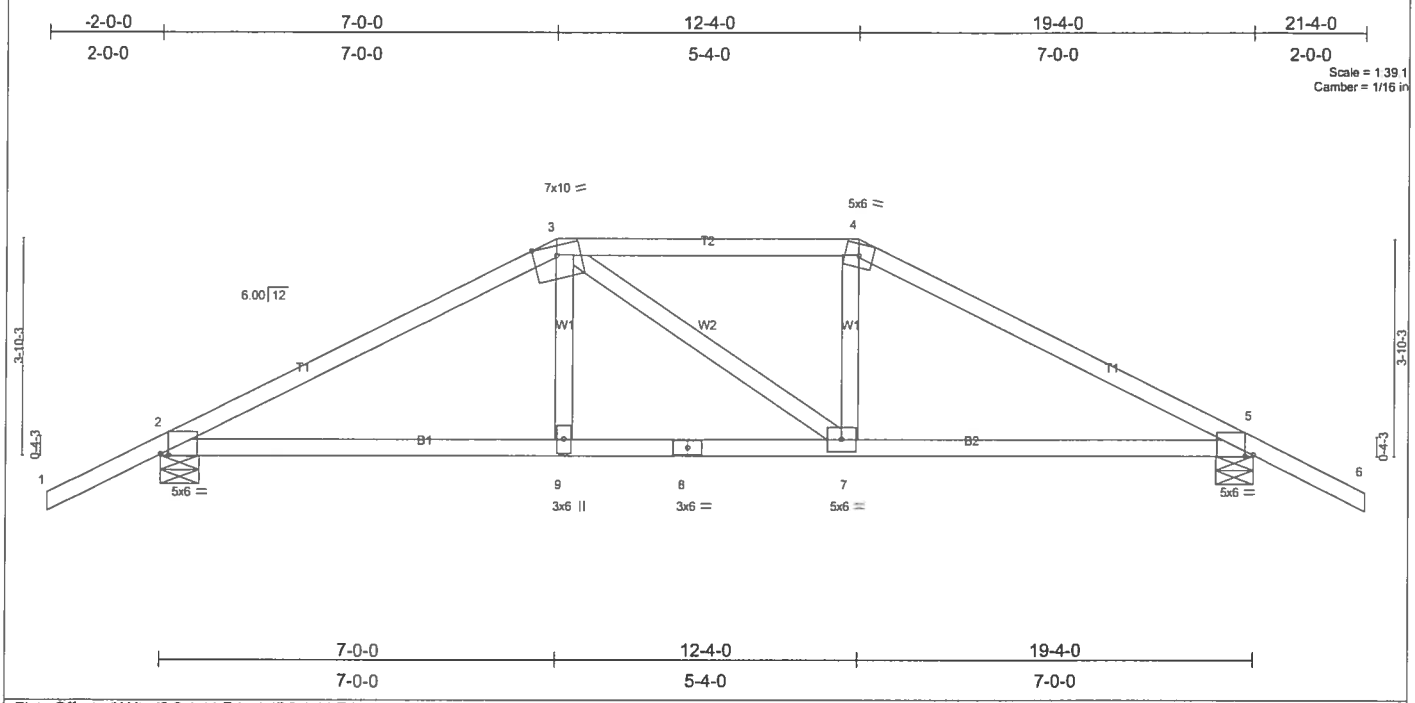


Plate Offsets (X,Y): [2:0-1-11,Edge], [5:0-1-11,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.45	Vert(LL)	-0.13	7-9	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.64	Vert(TL)	-0.20	7-9	>999	180		
BCLL	10.0	Rep Stress Incr	NO	WB	0.28	Horz(TL)	0.08	5	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 85 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-4-13 oc bracing.

REACTIONS (lb/size) 2=1687/0-8-0, 5=1687/0-8-0
Max Horz 2=-87(load case 5)
Max Uplift2=-778(load case 4), 5=-778(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2864/1155, 3-4=-2497/1098, 4-5=-2866/1156, 5-6=0/48
BOT CHORD 2-9=-957/2462, 8-9=-967/2495, 7-8=-967/2495, 5-7=-922/2463
WEBS 3-9=-229/812, 3-7=-112/116, 4-7=-249/867

JOINT STRESS INDEX
2 = 0.73, 3 = 0.81, 4 = 0.85, 5 = 0.73, 7 = 0.30, 8 = 0.98 and 9 = 0.26

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; Lumber DOL=1.60 plate grip DOL=1.60.
3) Provide adequate drainage to prevent water ponding.
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 778 lb uplift at joint 2 and 778 lb uplift at joint 5.
6) Girder carries hip end with 7-0-0 end setback.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 539 lb down and 277 lb up at 12-4-0, and 539 lb down and 277 lb up at 7-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
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
1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-3=-54, 3-4=-113(F=-59), 4-6=-54, 2-9=-30, 7-9=-62(F=-33), 5-7=-30
Concentrated Loads (lb)
Vert: 9=-539(F) 7=-539(F)

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061199

Job	Truss	Truss Type	Qty	Ply	GAY RESIDENCE
L215196	T02	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, FI 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 07:53:01 2006 Page 1

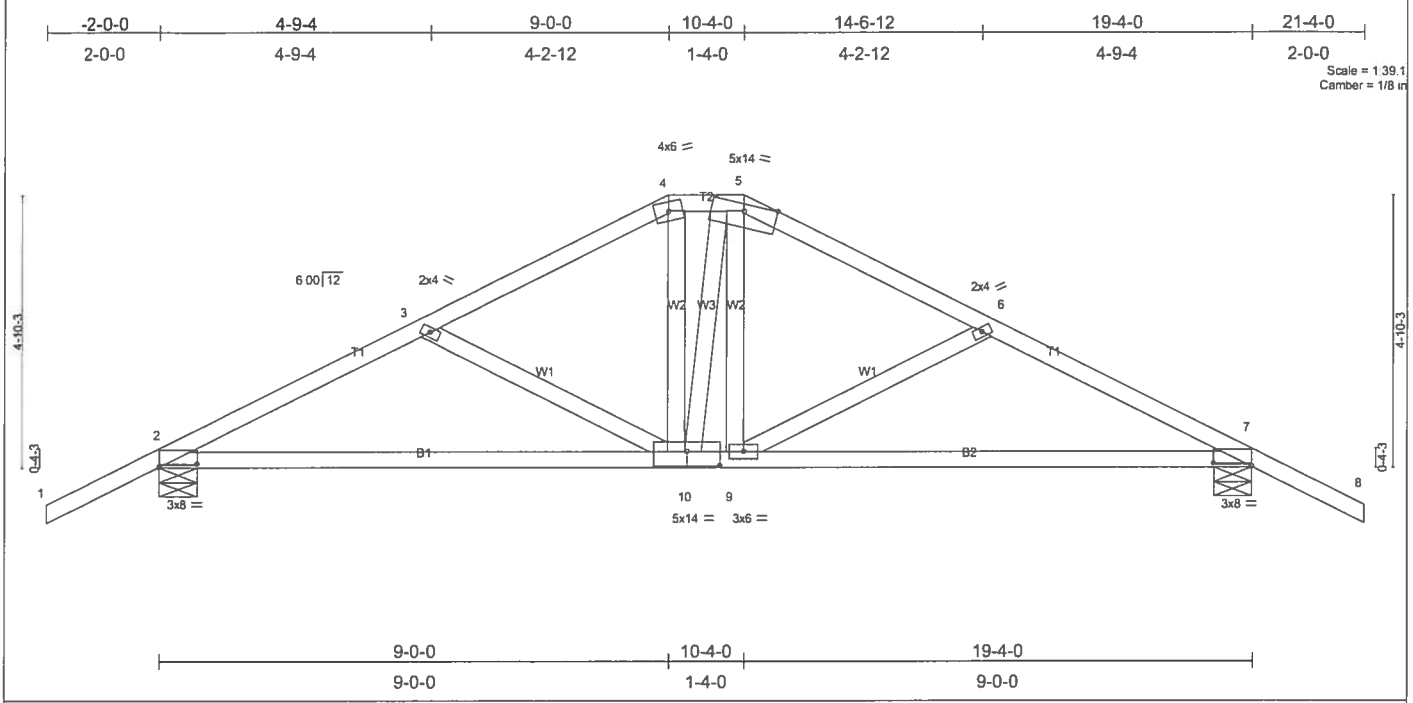


Plate Offsets (X,Y): [2:0-8-0,0-0-10], [7:0-8-0,0-0-10], [10:0-7-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.34	Vert(LL)	-0.13	2-10	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.50	Vert(TL)	-0.22	2-10	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(TL)	0.03	7	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 101 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=910/0-8-0, 7=910/0-8-0
Max Horz 2=-101(load case 6)
Max Uplift2=-388(load case 5), 7=-388(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-1203/371, 3-4=-959/284, 4-5=-825/291, 5-6=-964/285, 6-7=-1205/371, 7-8=0/48
BOT CHORD 2-10=-292/1026, 9-10=-113/817, 7-9=-228/1028
WEBS 3-10=-253/191, 4-10=-77/296, 5-10=-72/134, 5-9=-51/240, 6-9=-252/191

JOINT STRESS INDEX
2 = 0.77, 3 = 0.34, 4 = 0.35, 5 = 0.29, 6 = 0.34, 7 = 0.76, 9 = 0.35 and 10 = 0.32

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
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 388 lb uplift at joint 2 and 388 lb uplift at joint 7.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

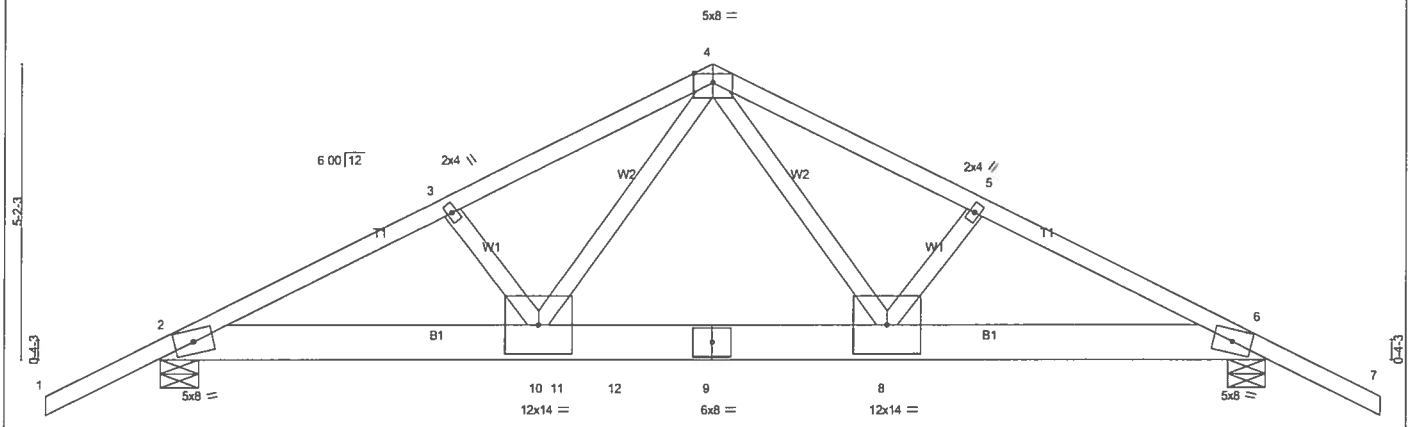
Dwg.#1106061200

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T03	COMMON	1	2	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industnes, Inc. Fri Oct 27 08:01:54 2006 Page 1

-2-0-0 | 5-1-4 | 9-8-0 | 14-2-12 | 19-4-0 | 21-4-0
2-0-0 | 5-1-4 | 4-6-12 | 4-6-12 | 5-1-4 | 2-0-0

Scale = 1:38.6
Camber = 1/8 in



6-7-8 | 7-0-0 | 12-8-8 | 19-4-0
6-7-8 | 0-4-8 | 5-8-8 | 6-7-8

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.43	Vert(LL)	-0.17	8-10	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.44	Vert(TL)	-0.28	8-10	>805	180		
BCLL	10.0	Rep Stress Incr	NO	WB	0.88	Horz(TL)	0.04	6	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 244 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 8 SYP 2400F 2.0E
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=3754/0-8-0, 6=6161/0-8-0
Max Horz 2=-110(load case 5)
Max Uplift2=-1467(load case 4), 6=-2375(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-7636/2768, 3-4=-7499/2766, 4-5=-9079/3363, 5-6=-9210/3367, 6-7=0/54
BOT CHORD 2-10=-2433/6734, 10-11=-1773/5109, 11-12=-1773/5109, 9-12=-1773/5109, 8-9=-1773/5109, 6-8=-2907/8169
WEBS 3-10=-107/159, 4-10=-1054/2907, 4-8=-2037/5510, 5-8=-151/175

JOINT STRESS INDEX
2 = 0.96, 3 = 0.34, 4 = 0.89, 5 = 0.34, 6 = 0.96, 8 = 0.47, 9 = 0.85 and 10 = 0.47

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2 X 8 - 2 rows at 0-7-0 oc.
Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; Lumber DOL=1.60 plate grip DOL=1.60.
5) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1467 lb uplift at joint 2 and 2375 lb uplift at joint 6.
7) Girder carries tie-in span(s): 32-0-0 from 8-0-0 to 19-4-0
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1319 lb down and 498 lb up at 7-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-7=-54, 2-12=-30, 6-12=-646(F=-616)
Concentrated Loads (lb)
Vert: 11=-1319(F)

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061201

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T04	MONO HIP	2	1	Job Reference (optional)

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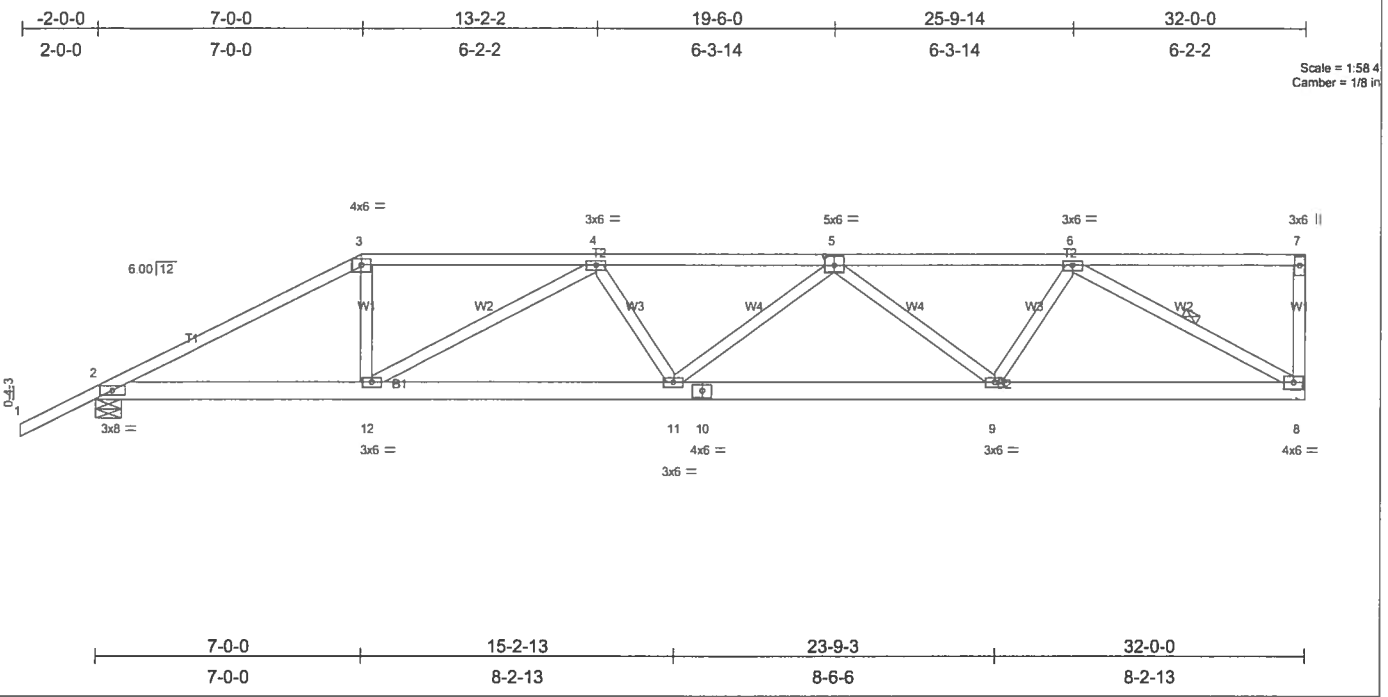


Plate Offsets (X,Y): [5:0-3-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.50	Vert(LL)	-0.20	9-11	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.37	Vert(TL)	-0.32	9-11	>999	180		
BCLL	10.0	Rep Stress Incr	NO	WB	0.81	Horz(TL)	0.07	8	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 183 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 6 SYP No.1D
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-0-12 oc bracing.
WEBS 1 Row at midpt 6-8

REACTIONS (lb/size) 8=1319/Mechanical, 2=1455/0-8-0
Max Horz 2=227(load case 4)
Max Uplift8=-491(load case 3), 2=-491(load case 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/52, 2-3=-2402/764, 3-4=-2089/723, 4-5=-2987/1062, 5-6=-2301/814, 6-7=-72/29, 7-8=-157/105
BOT CHORD 2-12=-717/2059, 11-12=-1080/2903, 10-11=-1084/2857, 9-10=-1084/2857, 8-9=-721/1883
WEBS 3-12=-167/713, 4-12=-939/463, 4-11=0/165, 5-11=0/168, 5-9=-716/349, 6-9=-182/820, 6-8=-2090/798

JOINT STRESS INDEX
2 = 0.79, 3 = 0.75, 4 = 0.43, 5 = 0.52, 6 = 0.65, 7 = 0.39, 8 = 0.55, 9 = 0.63, 10 = 0.73, 11 = 0.43 and 12 = 0.47

NOTES
1) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; Lumber DOL=1.60 plate grip DOL=1.60.
2) Provide adequate drainage to prevent water ponding.
3) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 491 lb uplift at joint 8 and 491 lb uplift at joint 2.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

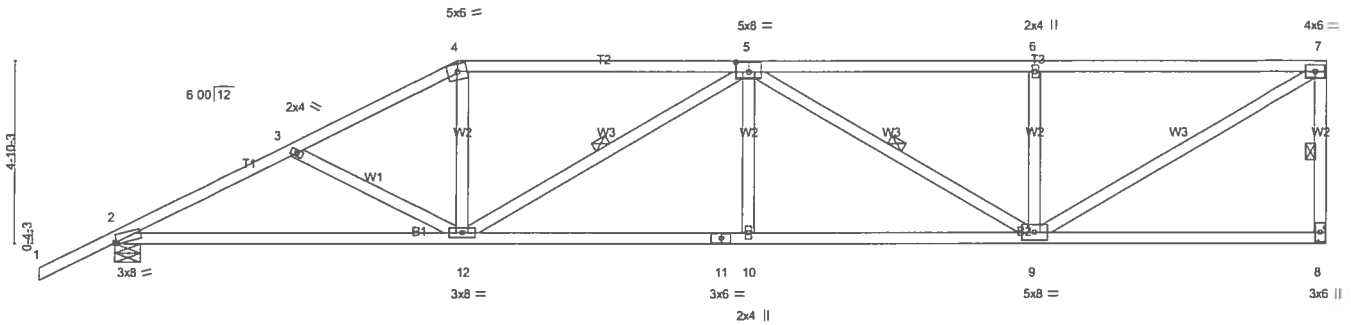
Dwg.#1106061202

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T05	MONO HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:03:45 2006 Page 1

-2-0-0 | 4-9-4 | 9-0-0 | 16-8-9 | 24-3-7 | 32-0-0
2-0-0 | 4-9-4 | 4-2-12 | 7-8-9 | 7-6-13 | 7-8-9

Scale = 1:58.4
Camber = 1/8 in



9-0-0 | 16-8-9 | 24-3-7 | 32-0-0
9-0-0 | 7-8-9 | 7-6-13 | 7-8-9

Plate Offsets (X,Y): [2:0-0-10,Edge], [5:0-4-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.73	Vert(LL)	-0.20	9-10	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.64	Vert(TL)	-0.33	9-10	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.97	Horz(TL)	0.09	8	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 170 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-9-14 oc bracing.
WEBS 1 Row at midpt 7-8, 5-12, 5-9

REACTIONS (lb/size) 8=1319/Mechanical, 2=1455/0-8-0
Max Horz 2=272(load case 5)
Max Uplift8=-486(load case 4), 2=-505(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2316/688, 3-4=-2145/681, 4-5=-1903/648, 5-6=-1751/641, 6-7=-1751/641, 7-8=-1206/501
BOT CHORD 2-12=-685/1996, 11-12=-854/2355, 10-11=-854/2355, 9-10=-854/2355, 8-9=-27/71
WEBS 3-12=-126/158, 4-12=-93/588, 5-12=-528/291, 5-10=0/217, 5-9=-705/249, 6-9=-418/296, 7-9=-716/1961

JOINT STRESS INDEX
2 = 0.84, 3 = 0.34, 4 = 0.67, 5 = 0.41, 6 = 0.34, 7 = 0.80, 8 = 0.44, 9 = 0.90, 10 = 0.34, 11 = 0.88 and 12 = 0.57

NOTES
1) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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.
2) Provide adequate drainage to prevent water ponding.
3) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 486 lb uplift at joint 8 and 505 lb uplift at joint 2.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061203

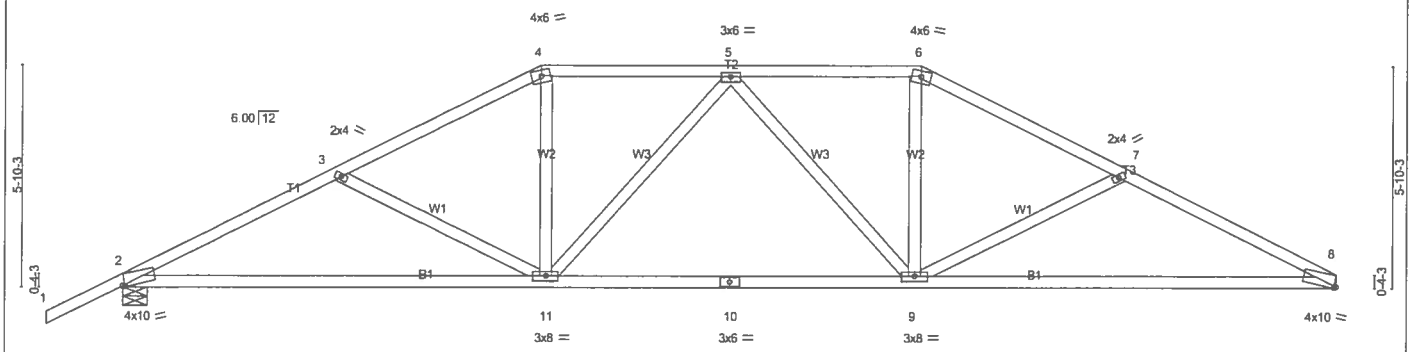
Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T06	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:03:32 2006 Page 1

-2-0-0 | 5-9-4 | 11-0-0 | 16-0-0 | 21-0-0 | 26-2-12 | 32-0-0

2-0-0 | 5-9-4 | 5-2-12 | 5-0-0 | 5-0-0 | 5-2-12 | 5-9-4

Scale = 1:58.1
Camber = 5/16 in



11-0-0 | 21-0-0 | 32-0-0

11-0-0 | 10-0-0 | 11-0-0

Plate Offsets (X,Y): [2:0-0-13,Edge], [8:0-0-13,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.53	Vert(LL)	-0.41	8-9	>930	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.76	Vert(TL)	-0.69	8-9	>549	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.30	Horz(TL)	0.10	8	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 157 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-4 oc bracing.

REACTIONS (lb/size) 8=1323/Mechanical, 2=1458/0-8-0
Max Horz 2=140(load case 5)
Max Uplift8=-398(load case 6), 2=-534(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2296/677, 3-4=-2008/565, 4-5=-1750/551, 5-6=-1782/577, 6-7=-2048/593, 7-8=-2396/748
BOT CHORD 2-11=-590/1990, 10-11=-443/1879, 9-10=-443/1879, 8-9=-593/2109
WEBS 3-11=-295/247, 4-11=-98/589, 5-11=-307/185, 5-9=-267/173, 6-9=-103/615, 7-9=-389/309

JOINT STRESS INDEX
2 = 0.66, 3 = 0.34, 4 = 0.59, 5 = 0.38, 6 = 0.59, 7 = 0.34, 8 = 0.66, 9 = 0.57, 10 = 0.78 and 11 = 0.57

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 398 lb uplift at joint 8 and 534 lb uplift at joint 2.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061204

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T07	SPECIAL	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:19:40 2006 Page 1

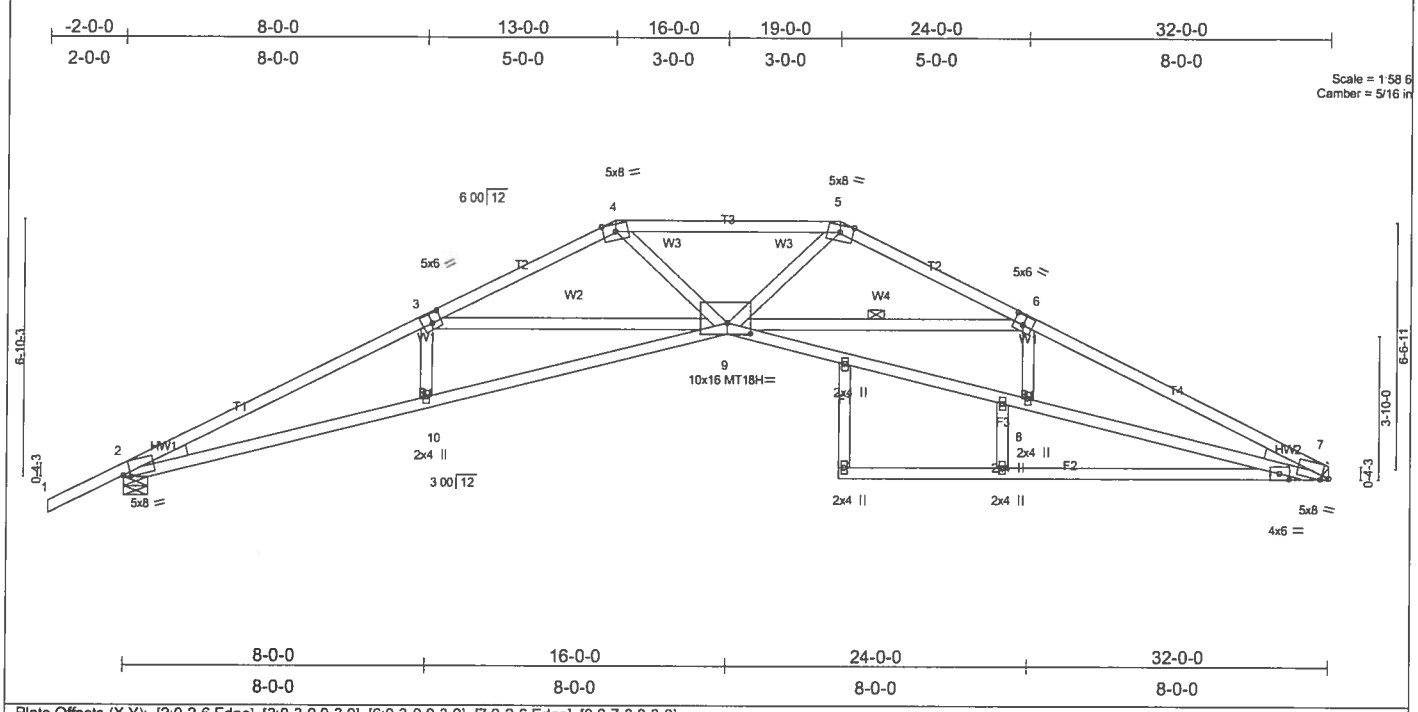


Plate Offsets (X,Y): [2:0-2-6,Edge], [3:0-3-0,0-3-0], [6:0-3-0,0-3-0], [7:0-2-6,Edge], [9:0-7-8,0-3-8]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.85	Vert(LL)	-0.52	9-10	>728	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.87	Vert(TL)	-0.84	9-10	>452	180	MT18H	244/190
BCLL	10.0	Rep Stress Incr	YES	WB	0.98	Horz(TL)	0.57	7	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 174 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2 *Except*
T1 2 X 4 SYP No.1D, T4 2 X 4 SYP No.1D
BOT CHORD 2 X 4 SYP No.1D *Except*
F2 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3, Right: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 6-6-6 oc bracing. Except:
1 Row at midpt 8-9, 7-8
WEBS 1 Row at midpt 6-9
JOINTS 1 Brace at Jt(s): 8

REACTIONS (lb/size) 2=1455/0-8-0, 7=1319/Mechanical
Max Horz 2=148(load case 5)
Max Uplift2=-548(load case 5), 7=-411(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-4148/1157, 3-4=-3047/787, 5-6=-3041/768, 6-7=-4262/1168, 4-5=-3828/963
BOT CHORD 2-10=-1034/3710, 9-10=-1036/3698, 8-9=-957/3814, 7-8=-961/3832
WEBS 3-10=0/256, 3-9=-918/470, 6-9=-1035/569, 6-8=0/275, 4-9=-296/1565, 5-9=-339/1576

JOINT STRESS INDEX
2 = 0.80, 3 = 0.62, 4 = 0.79, 5 = 0.79, 6 = 0.73, 7 = 0.82, 8 = 0.34, 9 = 0.58, 10 = 0.34, 11 = 0.34, 12 = 0.12, 13 = 0.34, 14 = 0.34 and 15 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 548 lb uplift at joint 2 and 411 lb uplift at joint 7.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061205

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T08	SPECIAL	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:18:23 2006 Page 1

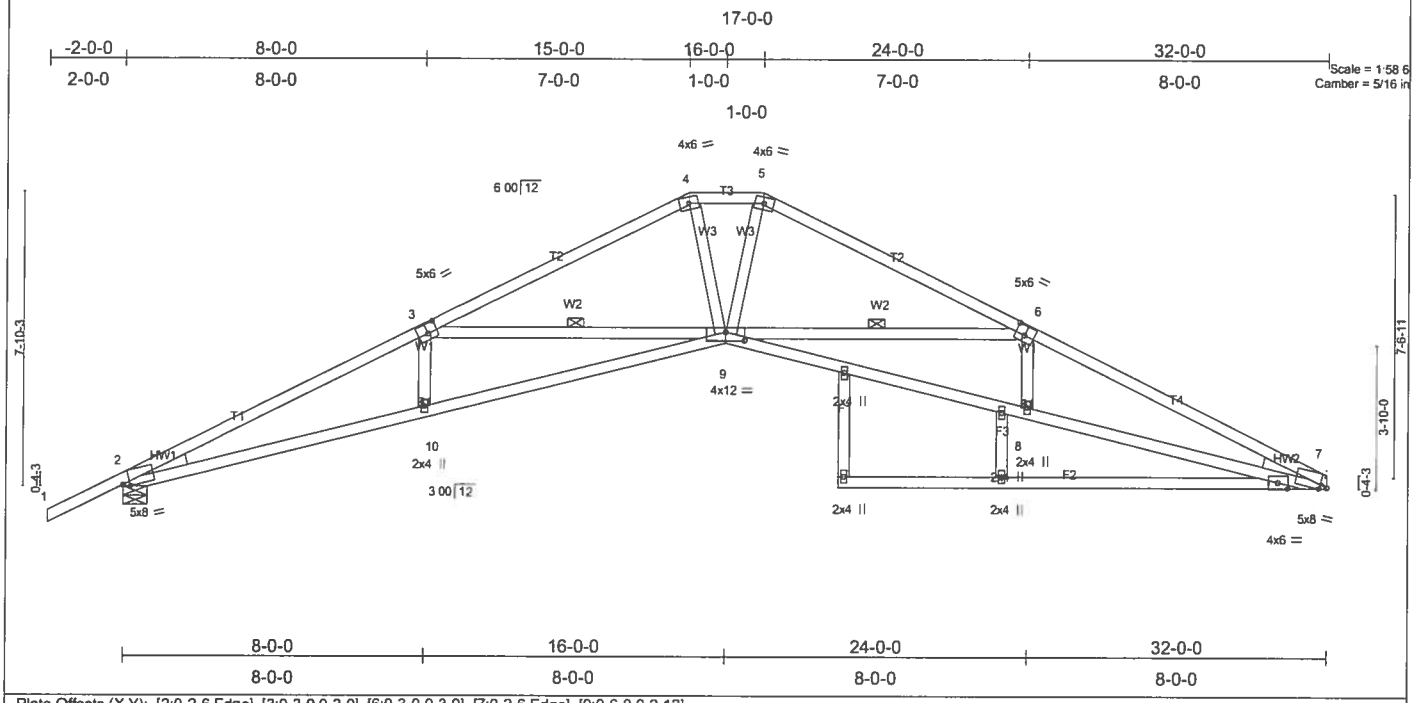


Plate Offsets (X,Y): [2:0-2-6,Edge], [3:0-3-0,0-3-0], [6:0-3-0,0-3-0], [7:0-2-6,Edge], [9:0-6-0,0-2-12]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.95	Vert(LL)	-0.50	9-10	>759	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.86	Vert(TL)	-0.80	9-10	>470	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(TL)	0.55	7	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 174 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2 *Except*
T4 2 X 4 SYP No.1D
BOT CHORD 2 X 4 SYP No.1D *Except*
F2 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3, Right: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 6-3-8 oc bracing. Except:
1 Row at midpt 8-9, 7-8
WEBS 1 Row at midpt 3-9, 6-9
JOINTS 1 Brace at Jt(s): 8

REACTIONS (lb/size) 2=1455/0-8-0, 7=1319/Mechanical
Max Horz 2=162(load case 5)
Max Uplift2=-560(load case 5), 7=-423(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-4175/1242, 3-4=-2977/811, 5-6=-2975/804, 6-7=-4287/1238, 4-5=-2866/837
BOT CHORD 2-10=-1129/3738, 9-10=-1131/3735, 8-9=-1025/3851, 7-8=-1029/3859
WEBS 3-10=0/248, 3-9=-1048/548, 6-9=-1159/644, 6-8=0/267, 4-9=-248/1095, 5-9=-302/1109

JOINT STRESS INDEX
2 = 0.81, 3 = 0.77, 4 = 0.82, 5 = 0.82, 6 = 0.85, 7 = 0.82, 8 = 0.34, 9 = 0.93, 10 = 0.34, 11 = 0.34, 12 = 0.12, 13 = 0.34, 14 = 0.34 and 15 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 560 lb uplift at joint 2 and 423 lb uplift at joint 7.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061206

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T09	SPECIAL	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 09:27:58 2006 Page 1

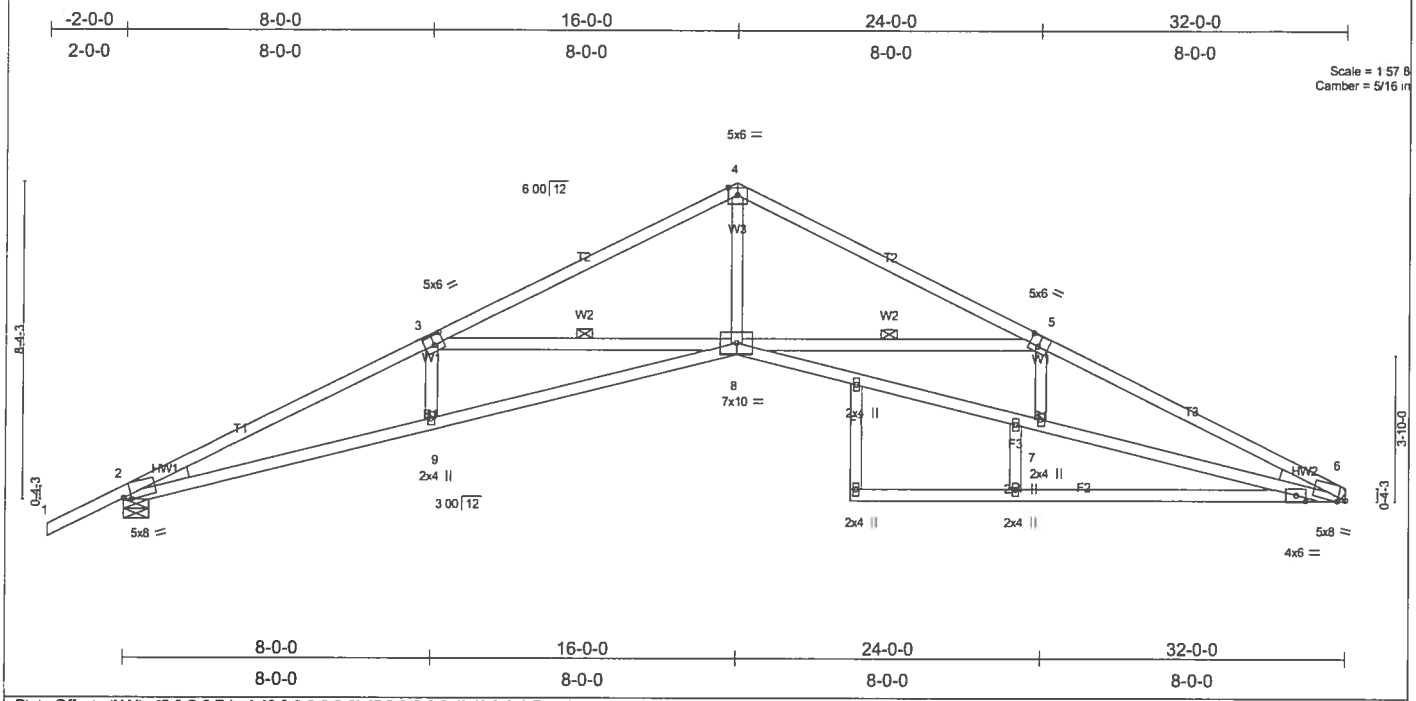


Plate Offsets (X,Y): [2:0-2-6,Edge], [3:0-3-0,0-3-0], [5:0-3-0,0-3-4], [6:0-2-6,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.94	Vert(LL)	-0.50	8-9	>759	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.85	Vert(TL)	-0.80	8-9	>471	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(TL)	0.55	6	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 170 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.1D *Except*
T1 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.1D *Except*
F2 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3, Right: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 6-2-4 oc bracing. Except:
1 Row at midpt 7-8, 6-7
WEBS 1 Row at midpt 3-8, 5-8
JOINTS 1 Brace at Jt(s): 7

REACTIONS (lb/size) 2=1455/0-8-0, 6=1319/Mechanical
Max Horz 2=169(load case 5)
Max Uplift2=-566(load case 5), 6=-429(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-4180/1281, 3-4=-2970/825, 4-5=-2971/851, 5-6=-4292/1270
BOT CHORD 2-9=-1173/3744, 8-9=-1175/3741, 7-8=-1057/3856, 6-7=-1060/3863
WEBS 3-9=0/246, 3-8=-1110/581, 4-8=-488/2132, 5-8=-1219/674, 5-7=0/264

JOINT STRESS INDEX
2 = 0.81, 3 = 0.85, 4 = 0.75, 5 = 0.80, 6 = 0.82, 7 = 0.34, 8 = 0.73, 9 = 0.34, 10 = 0.34, 11 = 0.12, 12 = 0.34, 13 = 0.34 and 14 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 566 lb uplift at joint 2 and 429 lb uplift at joint 6.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061207

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T10	SPECIAL	4	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:05:31 2006 Page 1

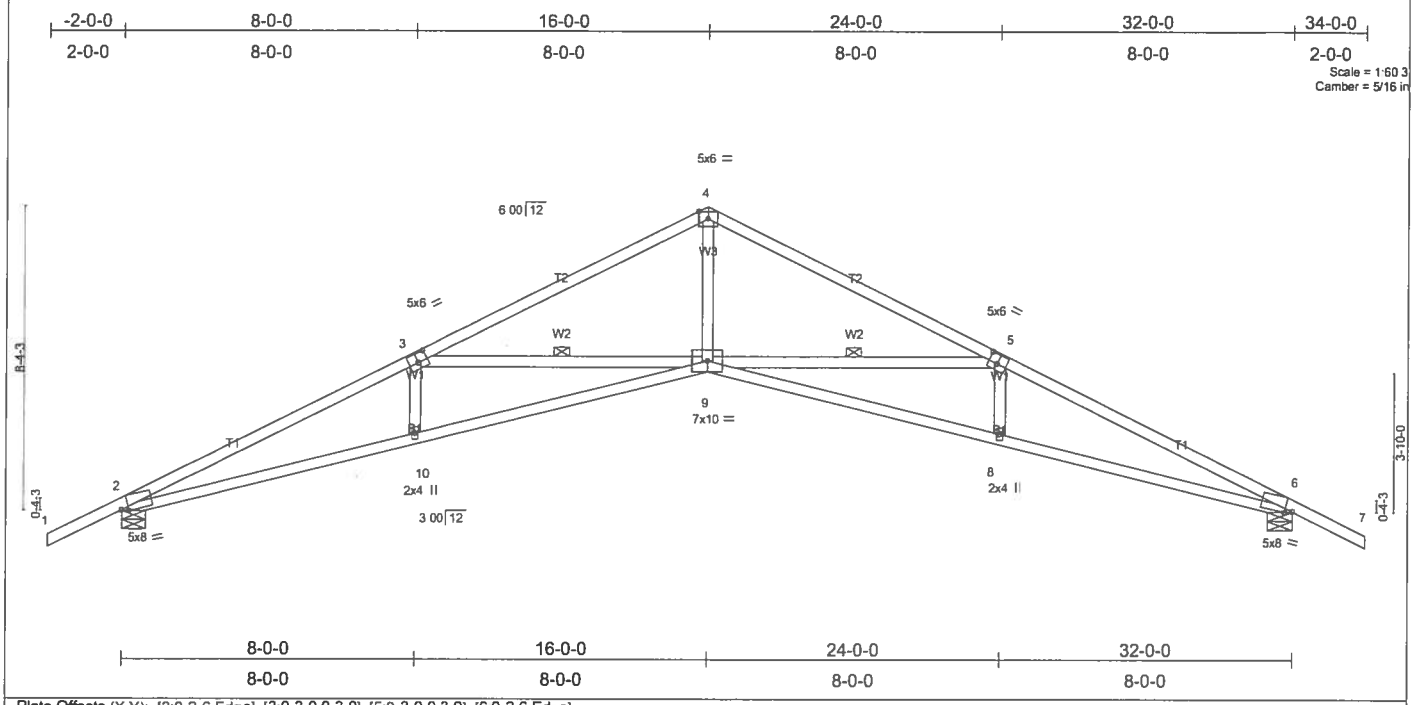


Plate Offsets (X,Y): [2:0-2-6,Edge], [3:0-3-0,0-3-0], [5:0-3-0,0-3-0], [6.0-2-6,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.94	Vert(LL)	-0.53	9-10	>715	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.84	Vert(TL)	-0.85	9-10	>443	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.67	Horz(TL)	0.59	6	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 144 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 5-11-6 oc bracing.
WEBS 1 Row at midpt 3-9, 5-9

REACTIONS (lb/size) 2=1442/0-8-0, 6=1442/0-8-0
Max Horz 2=148(load case 5)
Max Uplift2=-562(load case 5), 6=-562(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-4130/1246, 3-4=-2920/788, 4-5=-2920/814, 5-6=-4130/1103, 6-7=0/45
BOT CHORD 2-10=-1120/3699, 9-10=-1122/3696, 8-9=-847/3696, 6-8=-846/3699
WEBS 3-10=0/245, 3-9=-1113/583, 4-9=-453/2083, 5-9=-1113/596, 5-8=0/245

JOINT STRESS INDEX
2 = 0.80, 3 = 0.85, 4 = 0.73, 5 = 0.85, 6 = 0.80, 8 = 0.34, 9 = 0.70 and 10 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Bearing at joint(s) 2, 6 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 562 lb uplift at joint 2 and 562 lb uplift at joint 6.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061208

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T11	SPECIAL	6	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:20:31 2006 Page 1

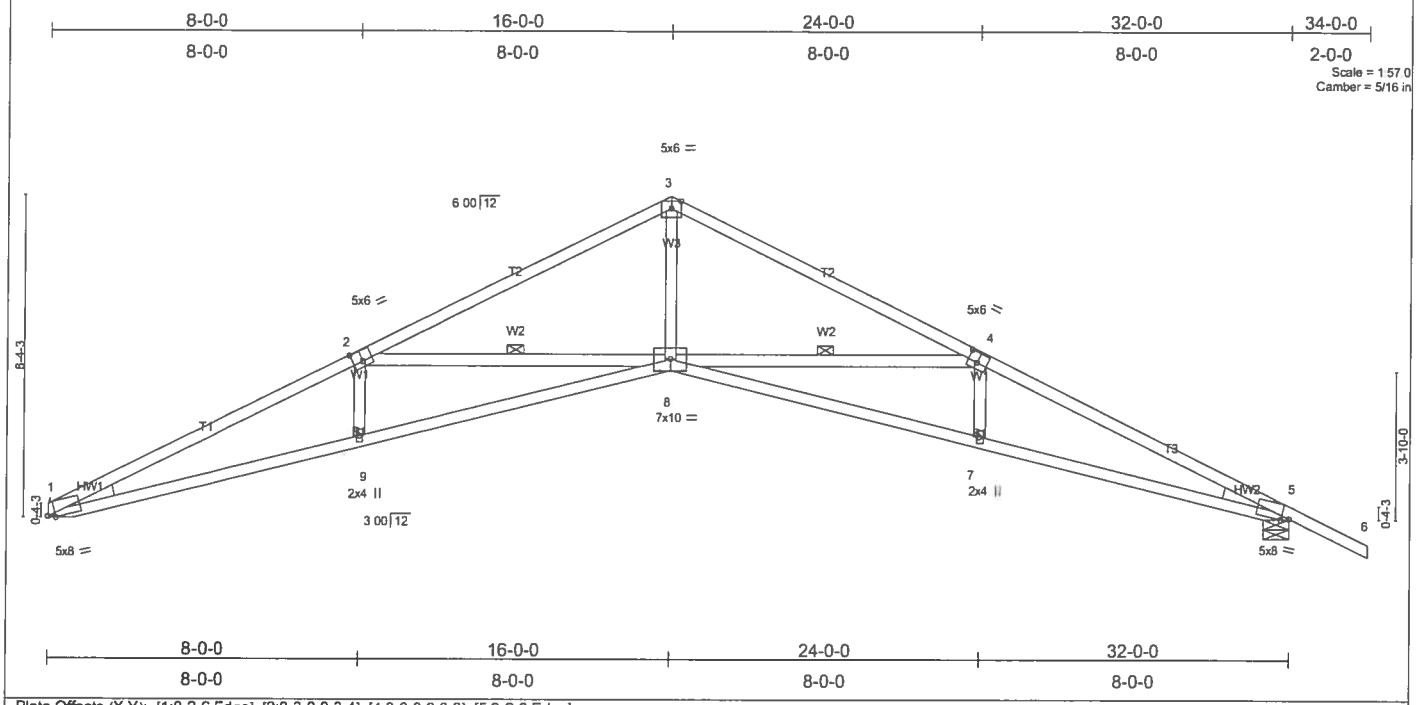


Plate Offsets (X,Y): [1:0-2-6,Edge], [2:0-3-0,0-3-4], [4:0-3-0,0-3-0], [5:0-2-6,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.94	Vert(LL)	-0.50	7-8	>759	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.78	Vert(TL)	-0.80	7-8	>471	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(TL)	0.55	5	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 145 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.1D *Except*
T3 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.1D
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3, Right: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 5-9-10 oc bracing.
WEBS 1 Row at midpt 2-8, 4-8

REACTIONS (lb/size) 1=1319/Mechanical, 5=1455/0-8-0
Max Horz 1=-169(load case 6)
Max Uplift1=-429(load case 5), 5=-566(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4292/1362, 2-3=-2971/822, 3-4=-2970/846, 4-5=-4180/1117, 5-6=0/45
BOT CHORD 1-9=-1239/3863, 8-9=-1236/3856, 7-8=-878/3741, 5-7=-877/3744
WEBS 2-9=0/264, 2-8=-1219/667, 3-8=-487/2132, 4-8=-1110/595, 4-7=0/246

JOINT STRESS INDEX
1 = 0.82, 2 = 0.80, 3 = 0.75, 4 = 0.84, 5 = 0.81, 7 = 0.34, 8 = 0.73 and 9 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 429 lb uplift at joint 1 and 566 lb uplift at joint 5.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061209

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T11A	SPECIAL	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 09:33:31 2006 Page 1

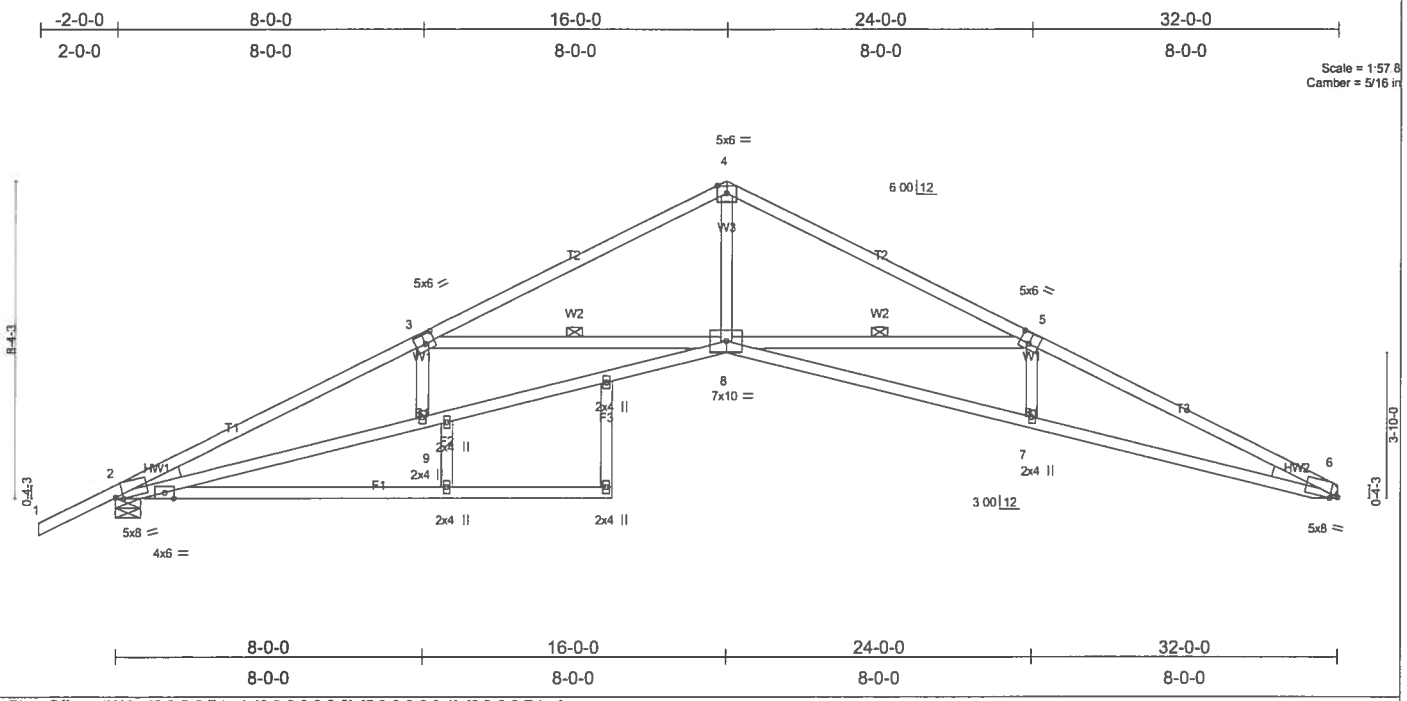


Plate Offsets (X,Y): [2:0-2-6,Edge], [3:0-3-0,0-3-0], [5:0-3-0,0-3-4], [6:0-2-6,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.79	Vert(LL)	-0.49	8-9	>775	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.78	Vert(TL)	-0.79	8-9	>481	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(TL)	-0.54	2	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 170 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.1D
BOT CHORD 2 X 4 SYP No.1D *Except*
F1 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3, Right: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-9-10 oc bracing. Except:
1 Row at midpt 2-9, 8-9
WEBS 1 Row at midpt 5-8, 3-8
JOINTS 1 Brace at Jt(s): 9

REACTIONS (lb/size) 6=1319/Mechanical, 2=1455/0-8-0
Max Horz 6=169(load case 5)
Max Uplift6=-429(load case 6), 2=-566(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 4-5=-2971/822, 5-6=-4292/1362, 1-2=0/44, 2-3=-4180/1117, 3-4=-2970/846
BOT CHORD 7-8=-1236/3856, 6-7=-1239/3863, 2-9=-877/3744, 8-9=-877/3741
WEBS 5-7=0/264, 5-8=-1218/667, 4-8=-487/2132, 3-8=-1111/596, 3-9=0/245

JOINT STRESS INDEX
2 = 0.81, 3 = 0.84, 4 = 0.75, 5 = 0.80, 6 = 0.82, 7 = 0.34, 8 = 0.73, 9 = 0.34, 10 = 0.34, 11 = 0.12, 12 = 0.34, 13 = 0.34 and 14 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 429 lb uplift at joint 6 and 566 lb uplift at joint 2.

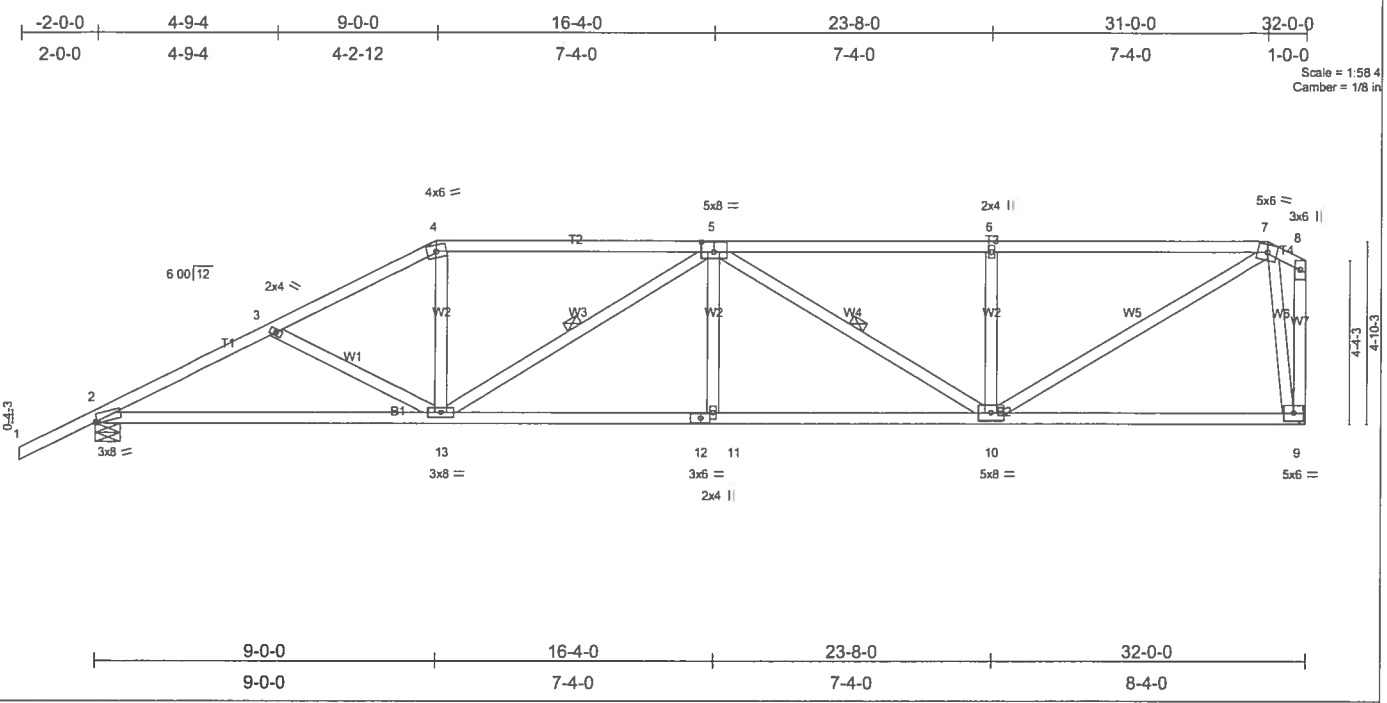
LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061210

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T12	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:23:47 2006 Page 1



9-0-0	16-4-0	23-8-0	32-0-0
9-0-0	7-4-0	7-4-0	8-4-0

Plate Offsets (X,Y): [2:0-0-10,Edge], [5:0-4-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.53	Vert(LL)	-0.19	10-11	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.63	Vert(TL)	-0.32	2-13	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.85	Horz(TL)	0.09	9	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 176 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-10-5 oc bracing.
WEBS 1 Row at midpt 5-13, 5-10

REACTIONS (lb/size) 2=1455/0-8-0, 9=1319/Mechanical
Max Horz 2=258(load case 5)
Max Uplift2=-507(load case 5), 9=-458(load case 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2318/691, 3-4=-2141/680, 4-5=-1898/646, 5-6=-1840/671, 6-7=-1840/671, 7-8=-75/23, 8-9=-159/114
BOT CHORD 2-13=-682/1998, 12-13=-847/2349, 11-12=-847/2349, 10-11=-847/2349, 9-10=-117/294
WEBS 3-13=-135/161, 4-13=-104/602, 5-13=-625/296, 5-11=0/200, 5-10=-600/214, 6-10=-401/280, 7-10=-646/1821, 7-9=-1318/649

JOINT STRESS INDEX
2 = 0.84, 3 = 0.34, 4 = 0.84, 5 = 0.39, 6 = 0.34, 7 = 0.69, 8 = 0.33, 9 = 0.59, 10 = 0.84, 11 = 0.34, 12 = 0.92 and 13 = 0.57

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 507 lb uplift at joint 2 and 458 lb uplift at joint 9.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

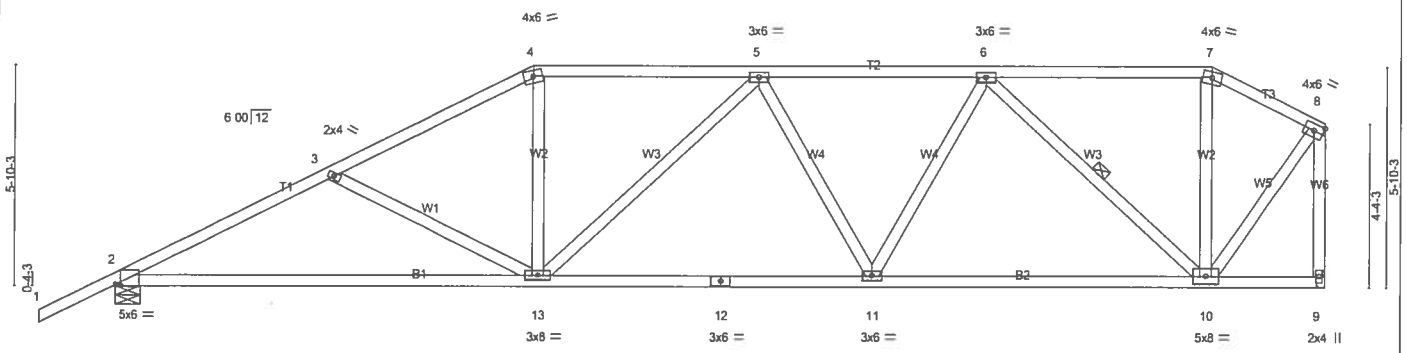
Dwg.#1106061211

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T13	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:28:22 2006 Page 1

-2-0-0 | 5-9-4 | 11-0-0 | 17-0-0 | 23-0-0 | 29-0-0 | 32-0-0
2-0-0 | 5-9-4 | 5-2-12 | 6-0-0 | 6-0-0 | 6-0-0 | 3-0-0

Scale = 1:58.4
Camber = 1/4 in



11-0-0 | 20-0-0 | 29-0-0 | 32-0-0
11-0-0 | 9-0-0 | 9-0-0 | 3-0-0

Plate Offsets (X,Y): [2:0-1-11,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.51	Vert(LL)	-0.32	2-13	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.69	Vert(TL)	-0.55	2-13	>684	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.38	Horz(TL)	0.08	9	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 180 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-10

REACTIONS (lb/size) 2=1455/0-8-0, 9=1319/Mechanical
Max Horz 2=272(load case 5)
Max Uplift2=-525(load case 5), 9=-391(load case 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2287/656, 3-4=-2004/595, 4-5=-1747/568, 5-6=-1770/602, 6-7=-692/241, 7-8=-781/243, 8-9=-1326/385
BOT CHORD 2-13=-704/1981, 12-13=-652/1877, 11-12=-652/1877, 10-11=-541/1523, 9-10=-6/1
WEBS 3-13=-280/246, 4-13=-90/562, 5-13=-295/208, 5-11=-231/146, 6-11=-87/525, 6-10=-1157/452, 7-10=0/115, 8-10=-364/1169

JOINT STRESS INDEX
2 = 0.77, 3 = 0.34, 4 = 0.67, 5 = 0.45, 6 = 0.45, 7 = 0.49, 8 = 0.65, 9 = 0.48, 10 = 0.58, 11 = 0.45, 12 = 0.77 and 13 = 0.57

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 525 lb uplift at joint 2 and 391 lb uplift at joint 9.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061212

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T14	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:29:01 2006 Page 1

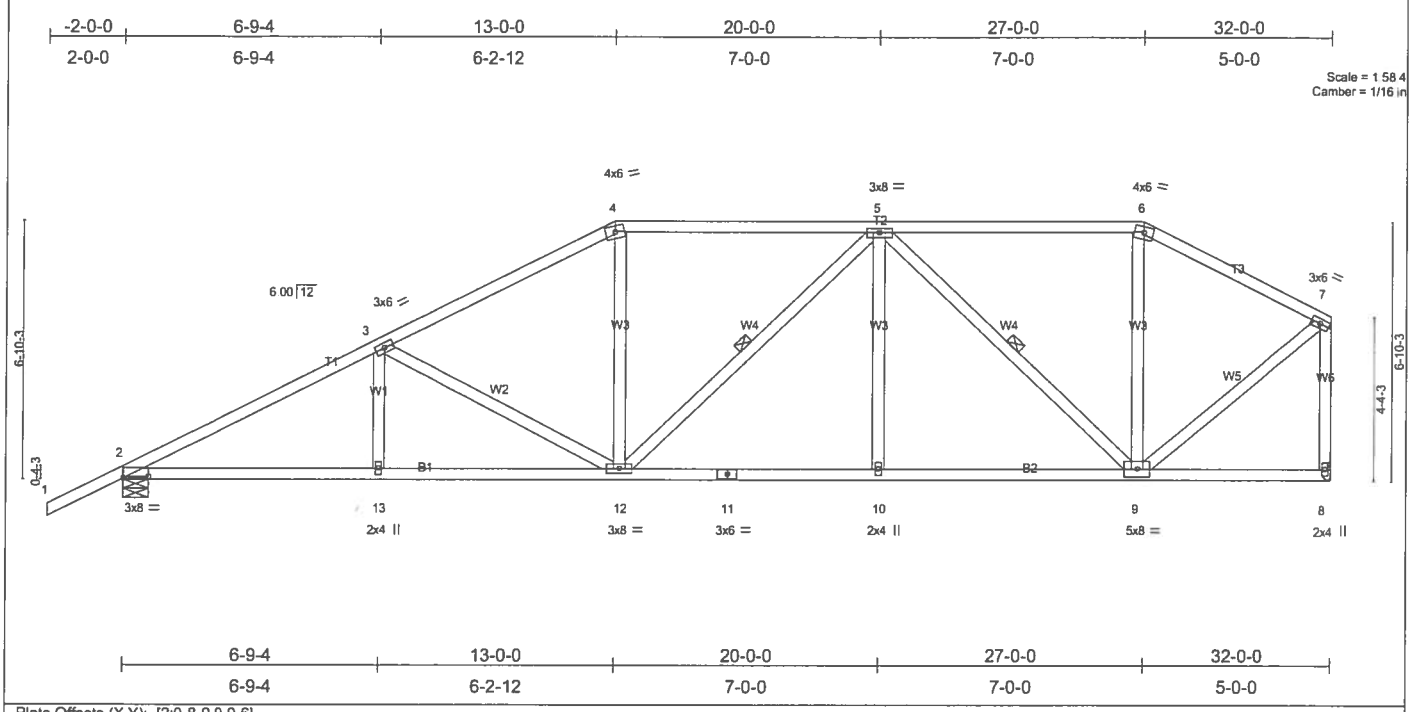


Plate Offsets (X,Y): [2:0-8-0,0-6]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.61	Vert(LL)	-0.14	10-12	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.48	Vert(TL)	-0.22	10-12	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.49	Horz(TL)	0.08	8	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 187 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-6-4 oc bracing.
WEBS 1 Row at midpt 5-12, 5-9

REACTIONS (lb/size) 2=1455/0-8-0, 8=1319/Mechanical
Max Horz 2=286(load case 5)
Max Uplift2=-540(load case 5), 8=-343(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2371/650, 3-4=-1815/537, 4-5=-1567/540, 5-6=-885/330, 6-7=-1034/322, 7-8=-1254/386
BOT CHORD 2-13=-706/2025, 12-13=-706/2025, 11-12=-484/1538, 10-11=-484/1538, 9-10=-484/1538, 8-9=-16/24
WEBS 3-13=0/201, 3-12=-533/279, 4-12=-37/423, 5-12=-121/114, 5-10=0/211, 5-9=-936/325, 6-9=0/171, 7-9=-328/1112

JOINT STRESS INDEX
2 = 0.75, 3 = 0.41, 4 = 0.83, 5 = 0.57, 6 = 0.71, 7 = 0.80, 8 = 0.60, 9 = 0.52, 10 = 0.34, 11 = 0.63, 12 = 0.57 and 13 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 540 lb uplift at joint 2 and 343 lb uplift at joint 8.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

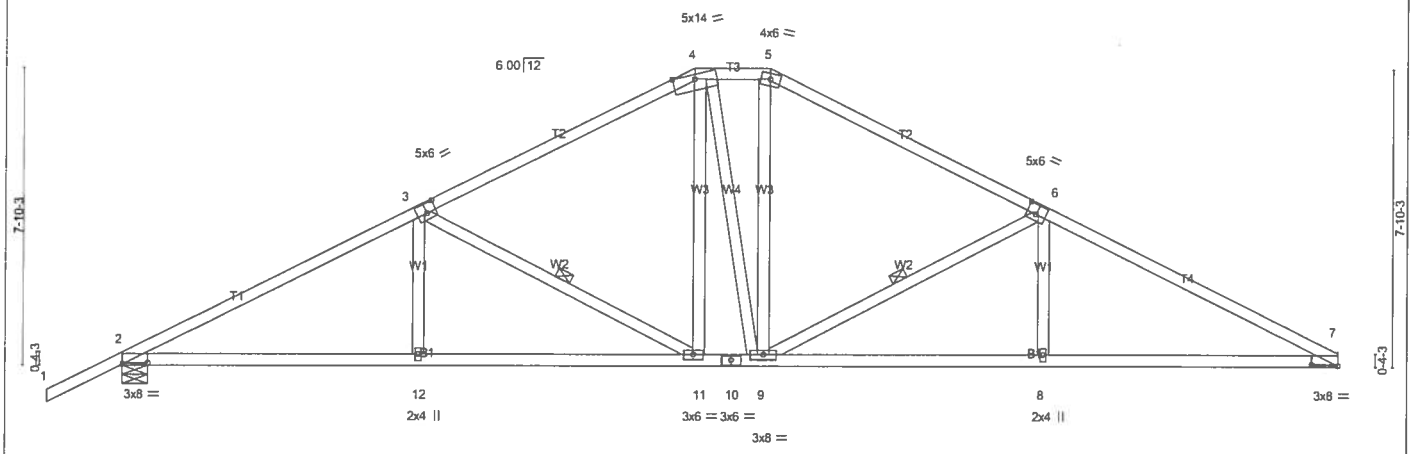
Dwg.#1106061213

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T15	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 08:29:42 2006 Page 1

-2-0-0	7-9-4	15-0-0	17-0-0	24-2-12	32-0-0
2-0-0	7-9-4	7-2-12	2-0-0	7-2-12	7-9-4

Scale = 1:58.1
Camber = 1/8 in



7-9-4	15-0-0	17-0-0	24-2-12	32-0-0
7-9-4	7-2-12	2-0-0	7-2-12	7-9-4

Plate Offsets (X,Y): [2:0-8-0,0-0-6], [3:0-3-0,0-3-0], [6:0-3-0,0-3-0], [7:0-8-0,0-0-6]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.51	Vert(LL)	-0.20	7-8	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.71	Vert(TL)	-0.33	7-8	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(TL)	0.10	7	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 171 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-10-14 oc bracing.
WEBS 1 Row at midpt 3-11, 6-9

REACTIONS (lb/size) 2=1458/0-8-0, 7=1323/Mechanical
Max Horz 2=168(load case 5)
Max Uplift2=-562(load case 5), 7=-425(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2352/689, 3-4=-1656/553, 4-5=-1409/560, 5-6=-1662/552, 6-7=-2423/750
BOT CHORD 2-12=-613/2005, 11-12=-613/2005, 10-11=-310/1404, 9-10=-310/1404, 8-9=-571/2087, 7-8=-571/2087
WEBS 3-12=0/253, 3-11=-698/347, 4-11=-138/452, 4-9=-186/219, 5-9=-170/506, 6-9=-782/409, 6-8=0/275

JOINT STRESS INDEX
2 = 0.75, 3 = 0.74, 4 = 0.82, 5 = 0.72, 6 = 0.84, 7 = 0.74, 8 = 0.34, 9 = 0.60, 10 = 0.62, 11 = 0.35 and 12 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) Provide adequate drainage to prevent water ponding.
4) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 562 lb uplift at joint 2 and 425 lb uplift at joint 7.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061214

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T16	COMMON	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 09:15:08 2006 Page 1

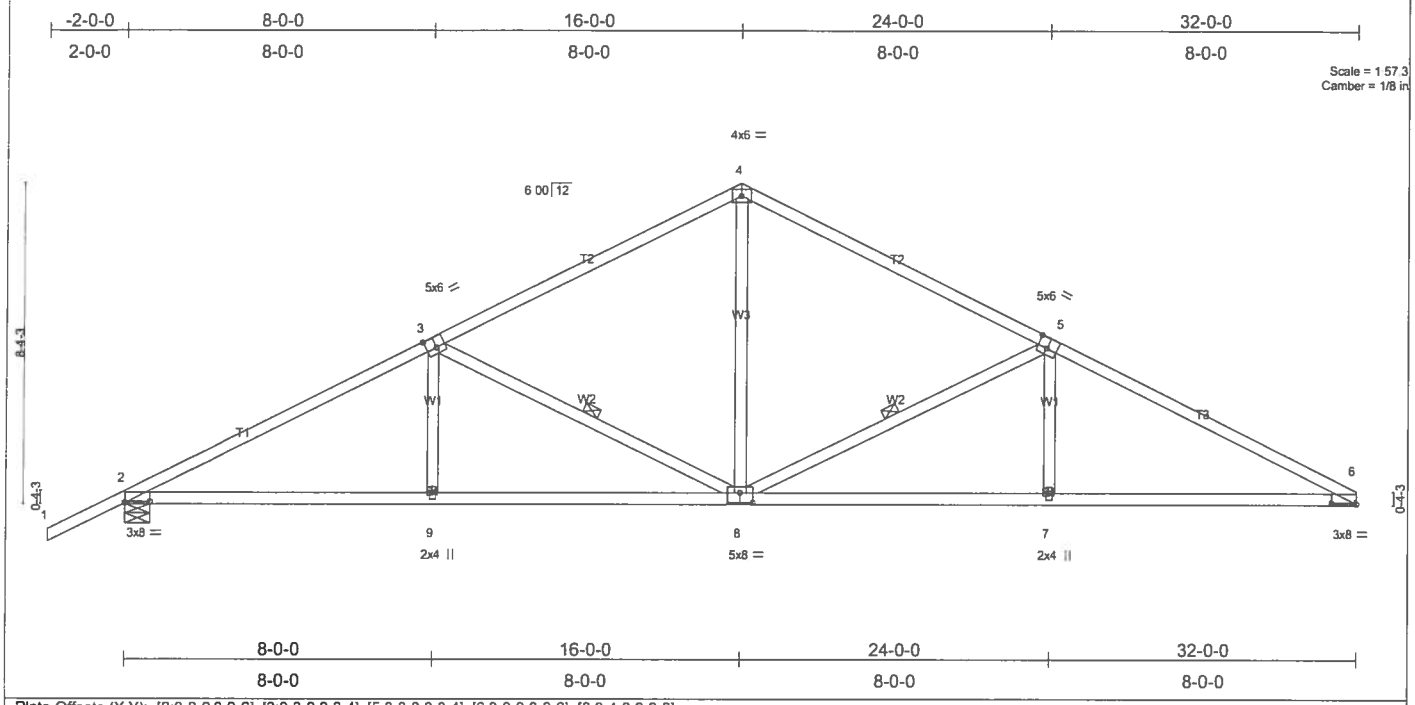


Plate Offsets (X,Y): [2:0-8-0,0-0-6], [3:0-3-0,0-3-4], [5:0-3-0,0-3-4], [6:0-8-0,0-0-6], [8:0-4-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.55	Vert(LL)	-0.22	6-7	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.72	Vert(TL)	-0.36	6-7	>999	180		
BCLL	10.0	Rep Stress Incr	YES	WB	0.33	Horz(TL)	0.10	6	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 153 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-10-3 oc bracing.
WEBS 1 Row at midpt 3-8, 5-8

REACTIONS (lb/size) 2=1458/0-8-0, 6=1323/Mechanical
Max Horz 2=175(load case 5)
Max Uplift2=-567(load case 5), 6=-431(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-2342/701, 3-4=-1604/565, 4-5=-1606/557, 5-6=-2408/758
BOT CHORD 2-9=-629/1995, 8-9=-629/1994, 7-8=-577/2071, 6-7=-577/2072
WEBS 3-9=0/259, 3-8=-754/377, 4-8=-240/924, 5-8=-837/436, 5-7=0/280

JOINT STRESS INDEX
2 = 0.75, 3 = 0.79, 4 = 0.86, 5 = 0.79, 6 = 0.74, 7 = 0.34, 8 = 0.55 and 9 = 0.34

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone and C-C Interior(1) 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) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 567 lb uplift at joint 2 and 431 lb uplift at joint 6.

LOAD CASE(S) Standard

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Dwg.#1106061215

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T17	HIP	1	1	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 09:18:02 2006 Page 1

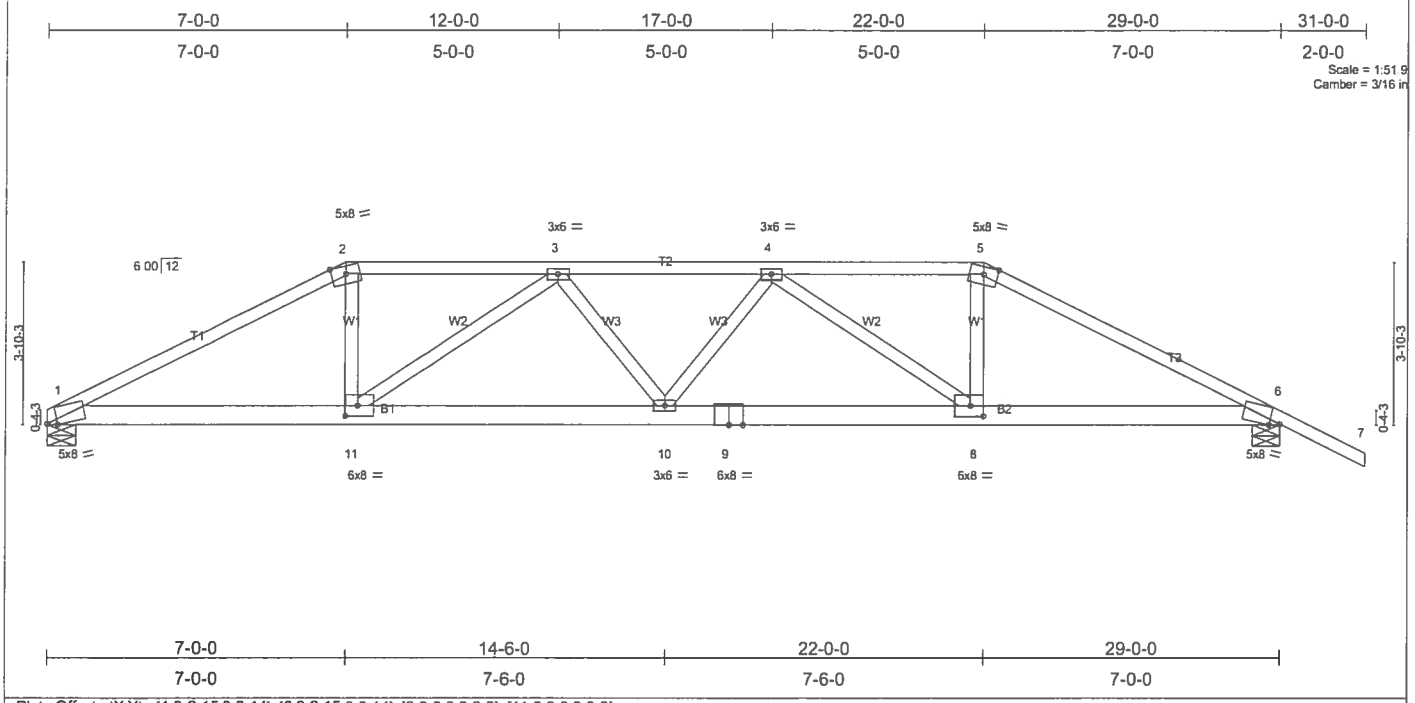


Plate Offsets (X,Y): [1:0-2-15,0-0-14], [6:0-2-15,0-0-14], [8:0-3-8,0-3-0], [11:0-3-8,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.67	Vert(LL)	-0.32	8-10	>999	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.68	Vert(TL)	-0.51	8-10	>667	180		
BCLL	10.0	Rep Stress Incr	NO	WB	0.93	Horz(TL)	0.13	6	n/a	n/a		
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 155 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 6 SYP No.1D
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-3-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-6-12 oc bracing.

REACTIONS (lb/size) 1=2402/0-8-0, 6=2538/0-8-0
Max Horz 1=-116(load case 5)
Max Uplift1=-958(load case 4), 6=-1098(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4783/1972, 2-3=-4248/1818, 3-4=-5530/2333, 4-5=-4215/1810, 5-6=-4750/1964, 6-7=0/52
BOT CHORD 1-11=-1710/4176, 10-11=-2291/5357, 9-10=-2267/5348, 8-9=-2267/5348, 6-8=-1663/4144
WEBS 2-11=-637/1720, 3-11=-1468/756, 3-10=0/332, 4-10=0/340, 4-8=-1481/770, 5-8=-631/1722

JOINT STRESS INDEX
1 = 0.92, 2 = 0.91, 3 = 0.43, 4 = 0.43, 5 = 0.91, 6 = 0.92, 8 = 0.47, 9 = 1.00, 10 = 0.40 and 11 = 0.47

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; Lumber DOL=1.60 plate grip DOL=1.60.
3) Provide adequate drainage to prevent water ponding.
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 958 lb uplift at joint 1 and 1098 lb uplift at joint 6.
6) Girder carries hip end with 7-0-0 end setback.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 539 lb down and 277 lb up at 22-0-0, and 539 lb down and 277 lb up at 7-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
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
1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-54, 2-5=-112(F=-58), 5-7=-54, 1-11=-30, 8-11=-63(F=-33), 6-8=-30
Concentrated Loads (lb)
Vert: 11=-539(F) 8=-539(F)

NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

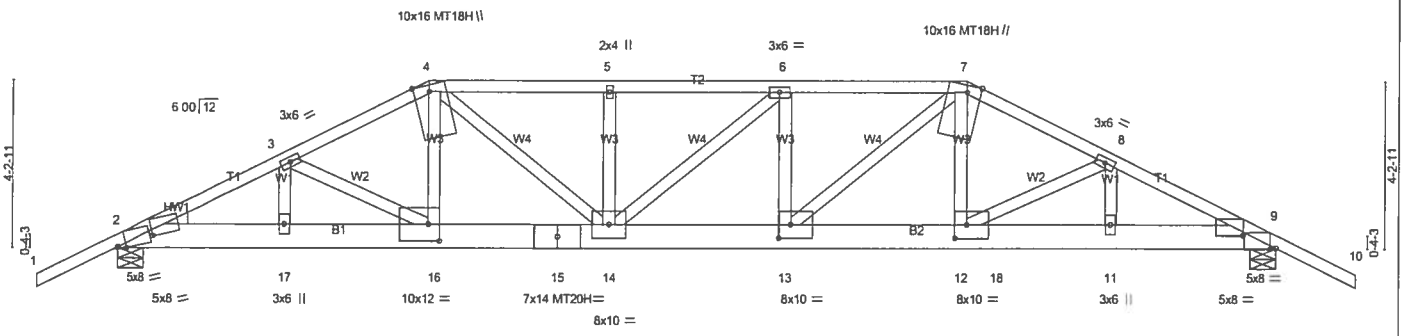
Dwg.#1106061216

Job	Truss	Truss Type	Qty	Ply	0 0
L215196	T18	HIP	1	2	Job Reference (optional)

Builders FirstSource, Lake City, Fl 32055 — 6.300 s Apr 19 2006 MiTek Industries, Inc. Fri Oct 27 09:21:41 2006 Page 1

-2-0-0	4-1-12	7-9-0	12-3-9	16-8-7	21-3-0	24-10-4	29-0-0	31-0-0
2-0-0	4-1-12	3-7-4	4-6-9	4-4-13	4-6-9	3-7-4	4-1-12	2-0-0

Scale = 1:55.3
Camber = 1/4 in



4-1-12	7-9-0	12-3-9	16-8-7	21-3-0	22-0-0	24-10-4	29-0-0
4-1-12	3-7-4	4-6-9	4-4-13	4-6-9	0-9-0	2-10-4	4-1-12

Plate Offsets (X,Y): [2:0-11-4,0-0-14], [2:0-2-7,Edge], [4:0-2-0,0-4-12], [7:0-2-4,Edge], [9:0-10-0,0-3-15], [9:0-1-11,Edge], [12:0-3-8,0-4-0], [13:0-3-8,0-4-0], [16:0-3-8,0-5-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.97	Vert(LL)	-0.46	13-14	>743	240	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.58	Vert(TL)	-0.73	13-14	>464	180	MT20H	187/143
BCLL	10.0	Rep Stress Incr	NO	WB	0.82	Horz(TL)	0.13	9	n/a	n/a	MT18H	244/190
BCDL	5.0	Code FBC2004/TPI2002		(Matrix)							Weight: 405 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 8 SYP 2400F 2.0E
WEBS 2 X 4 SYP No.3
WEDGE
Left: 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=9731/0-8-0, 9=7015/0-8-0
Max Horz 2=-97(load case 5)
Max Uplift2=-3651(load case 4), 9=-2625(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-17229/6254, 3-4=-15681/5758, 4-5=-17115/6327, 5-6=-17115/6327, 6-7=-16878/6239, 7-8=-14438/5289, 8-9=-13825/4967, 9-10=0/54
BOT CHORD 2-17=-5547/15288, 16-17=-5547/15288, 15-16=-5148/14174, 14-15=-5148/14174, 13-14=-6129/16877, 12-13=-4664/13007, 12-18=-4357/12246, 11-18=-4357/12246, 9-11=-4357/12246
WEBS 3-17=-511/1412, 3-16=-1449/572, 4-16=-1539/4246, 4-14=-1479/3885, 5-14=-171/145, 6-14=-240/365, 6-13=-441/252, 7-13=-1936/5090, 7-12=-1048/2944, 8-12=-393/844, 8-11=-643/346

JOINT STRESS INDEX
2 = 0.87, 2 = 0.86, 3 = 0.52, 4 = 0.91, 5 = 0.34, 6 = 0.35, 7 = 0.82, 8 = 0.41, 9 = 0.82, 9 = 0.72, 11 = 0.16, 12 = 0.31, 13 = 0.43, 14 = 0.43, 15 = 0.78, 16 = 0.43 and 17 = 0.23

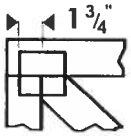
NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2 X 8 - 2 rows at 0-7-0 oc.
Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-02; 110mph (3-second gust); h=20ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; Lumber DOL=1.60 plate grip DOL=1.60.
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All bearings are assumed to be SYP No.2 crushing capacity of 565.00 psi
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3651 lb uplift at joint 2 and 2625 lb uplift at joint 9.
9) Girder carries tie-in span(s): 32-0-0 from 0-0-0 to 21-0-0
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1319 lb down and 498 lb up at 22-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-7=-54, 7-10=-54, 2-12=-646(F=-616), 9-12=-30
Concentrated Loads (lb)
Vert: 18=-1319(F)

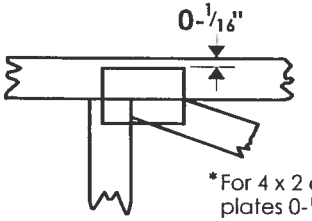
NOVEMBER 06, 2006 TRUSS DESIGN ENGINEER:
THOMAS E. MILLER PE 56877, BYRON K. ANDERSON PE 60987
STRUCTURAL ENGINEERING AND INSPECTIONS, INC. EB 9196
16105 N. FLORIDA AVE. STE B, LUTZ, FL 33549

Symbols

PLATE LOCATION AND ORIENTATION



*Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and securely seat.



*For 4 x 2 orientation, locate plates 0-1/16" from outside edge of truss.

*This symbol indicates the required direction of slots in connector plates.

***Plate location details available in MiTek 20/20 software or upon request.**

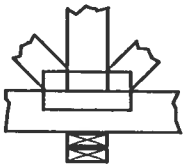
PLATE SIZE

4 x 4 — The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING

Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

BEARING

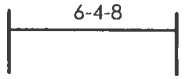


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

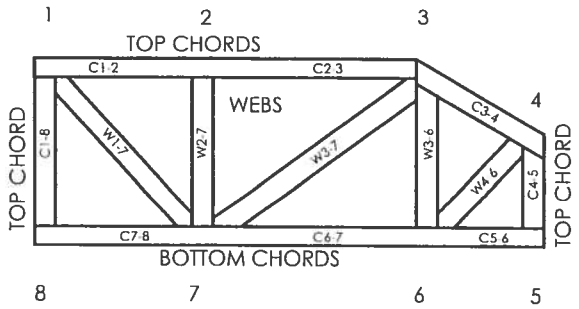
Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI1: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



dimensions shown in ft-in-sixteenths



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A

MiTek®

TEE-LOK®

MiTek Engineering Reference Sheet: MII-7473

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI1.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Gay
HVAC Load Calculations

for

House Craft Homes
12532 NW Hwy 441
Alachua Fl 32615

Elite Software

RHVAC RESIDENTIAL HVAC LOADS

Prepared By:
Chuck Fischer
North Central Florida Air Conditioning
P.O Box 700
High Springs Fl 32655-0700
386-454-4767
Tuesday, January 02, 2007

Project Report

General Project Information

Project Filename:	C:\Documents and Settings\Heat\My Documents\Projects\AutoLoad MJ8.rhv
Project Title:	Gay
Designed By:	Chuck Fischer
Project Date:	January 2 2007
Client Name:	House Craft Homes
Client Address:	12532 NW Hwy 441
Client City:	Alachua Fl 32615
Client Phone:	386-462-5323
Client Fax:	386-462-1509
Client Comment:	
Company Name:	North Central Florida Air Conditioning
Company Representative:	Chuck Fischer
Company Address:	P.O Box 700
Company City:	High Springs Fl 32655-0700
Company Phone:	386-454-4767
Company Fax:	386-454-4854
Company Comment:	Bedroom 2,3 & 4 R/A are 10x10x8 Master bedroom R/A is 12x12x9 Main R/A is 20x20x18

Design Data

Reference City:	Gainesville, Florida	
Daily Temperature Range:	Medium	
Latitude:	29	Degrees
Elevation:	152	ft.
Altitude Factor:	0.995	
Elevation Sensible Adj. Factor:	1.000	
Elevation Total Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	31	0	0	68	0
Summer:	93	77	50	75	50

Check Figures

Total Building Supply CFM:	1,669	CFM Per Square ft.:	0.742
Square ft. of Room Area:	2,250	Square ft. Per Ton:	569
Volume (ft³) of Cond. Space:	19,777	Air Turnover Rate (per hour):	5.1

Building Loads

Total Heating Required With Outside Air:	45,680 Btuh	45.680	MBH
Total Sensible Gain:	36,507 Btuh	86	%
Total Latent Gain:	6,073 Btuh	14	%
Total Cooling Required With Outside Air:	42,580 Btuh	3.55	Tons (Based On Sensible + Latent)
		3.95	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

Miscellaneous Report

System 1 Main Floor Input Data	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	31	0	50	68	30.84
Summer:	93	77	50	75	50.06

Duct Sizing Inputs

	Main Trunk		Runouts	
Calculate:	Yes		Yes	
Use Schedule:	No		No	
Roughness Factor:	0.00300		0.01000	
Pressure Drop:	0.1000	in.wg./100 ft.	0.1000	in.wg./100 ft.
Minimum Velocity:	650	ft./min	450	ft./min
Maximum Velocity:	900	ft./min	750	ft./min
Minimum Height:	0	in.	0	in.
Maximum Height:	0	in.	0	in.

Outside Air Data

	Winter		Summer	
Infiltration:	0.900	AC/hr	0.400	AC/hr
Volume of Conditioned Space:	X 19777	Cu.ft.	X 19777	Cu.ft.
	17,799	Cu.ft./hr	7,911	Cu.ft./hr
	X 0.0167		X 0.0167	
Total Building Infiltration:	297	CFM	132	CFM
Total Building Ventilation:	0	CFM	0	CFM

—System 1—

Infiltration & Ventilation Sensible Gain Multiplier:	19.69	= (1.10 X 0.995 X 18.00 Summer Temp. Difference)
Infiltration & Ventilation Latent Gain Multiplier:	33.85	= (0.68 X 0.995 X 50.06 Grains Difference)
Infiltration & Ventilation Sensible Loss Multiplier:	40.48	= (1.10 X 0.995 X 37.00 Winter Temp. Difference)

Load Preview Report

Scope	Area	Sens Gain	Lat Gain	Net Gain	Sens Loss	Win CFM	Sum CFM	Sys CFM	Duct Size
Building: 3.55 Net Tons, 3.95 Recommended Tons, 569 ft²/Ton, 45.68 MBH Heating									
Building	2,250	36,507	6,073	42,580	45,680	597	1,669	1,669	
System 1: 3.55 Net Tons, 3.95 Recommended Tons, 569 ft²/Ton, 45.68 MBH Heating									
System 1	2,250	36,507	6,073	42,580	45,680	597	1,669	1,669	18x17
Zone 1	2,250	36,507	6,073	42,580	45,680	597	1,669	1,669	
1-Study	134	3,698	683	4,381	4,264	56	169	169	1-8
2-Utility Room	85	1,558	156	1,714	1,548	20	71	71	1-5
3-Bedroom 3	298	2,902	542	3,444	3,505	46	133	133	1-7
4-Bedroom 2 Sinks	44	798	129	927	1,139	15	36	36	1-3
5-Bedroom 2 Tolit	44	1,121	258	1,379	2,274	30	51	51	1-4
6-Bedroom 2	163	2,440	464	2,904	2,525	33	112	112	1-6
7-Breakfast	136	2,276	367	2,643	3,586	47	104	104	1-6
8-Kitchen	139	3,011	230	3,241	251	3	138	138	1-7
9-Dining Room	154	2,467	293	2,760	3,210	42	113	113	1-6
10-Foyer	48	899	98	997	966	13	41	41	1-4
11-Great Room	280	5,058	433	5,491	5,969	78	231	231	2-6
12-Bedroom 4	235	3,982	1,081	5,063	8,074	105	182	182	1-8
13-Bath 2	54	580	0	580	130	2	27	27	1-3
14-Master W.I.C	71	623	109	732	1,016	13	28	28	1-3
15-Master Bath	148	1,632	223	1,855	2,011	26	75	75	1-5
16-Master Bedroom	195	3,421	1,007	4,428	5,128	67	156	156	1-7
17-Hall	22	36	0	36	84	1	2	2	1-1

Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	149.9	3,606	0	3,165	3,165
10B-m: Glazing-French door, double pane clear glass, metal frame no break, ground reflectance = 0.23	40.8	2,189	0	2,447	2,447
11P: Door-Polyurethane Core	61.2	657	0	516	516
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1576.9	7,293	0	3,610	3,610
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	2247.2	2,661	0	3,092	3,092
22A-pm: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy dry or light wet soil	221	9,651	0	0	0
Subtotals for structure:		26,057	0	12,830	12,830
People:	7		1,610	2,100	3,710
Equipment:			0	2,001	2,001
Lighting:	3195			10,895	10,895
Ductwork:		7,615	0	6,085	6,085
Infiltration: Winter CFM: 297, Summer CFM: 132		12,008	4,463	2,596	7,059
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Total Building Load Totals:		45,680	6,073	36,507	42,580

Check Figures

Total Building Supply CFM:	1,669	CFM Per Square ft.:	0.742
Square ft. of Room Area:	2,250	Square ft. Per Ton:	569
Volume (ft³) of Cond. Space:	19,777	Air Turnover Rate (per hour):	5.1

Building Loads

Total Heating Required With Outside Air:	45,680 Btuh	45.680 MBH	
Total Sensible Gain:	36,507 Btuh	86 %	
Total Latent Gain:	6,073 Btuh	14 %	
Total Cooling Required With Outside Air:	42,580 Btuh	3.55 Tons (Based On Sensible + Latent)	
		3.95 Tons (Based On 77% Sensible Capacity)	

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Main Floor Summary Loads (Average Method)

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	149.9	3,606	0	3,165	3,165
10B-m: Glazing-French door, double pane clear glass, metal frame no break, ground reflectance = 0.23	40.8	2,189	0	2,447	2,447
11P: Door-Polyurethane Core	61.2	657	0	516	516
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1576.9	7,293	0	3,610	3,610
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	2247.2	2,661	0	3,092	3,092
22A-pm: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy dry or light wet soil	221	9,651	0	0	0
Subtotals for structure:		26,057	0	12,830	12,830
People:	7		1,610	2,100	3,710
Equipment:			0	2,001	2,001
Lighting:	3195			10,895	10,895
Ductwork:		7,615	0	6,085	6,085
Infiltration: Winter CFM: 297, Summer CFM: 132		12,008	4,463	2,596	7,059
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
System 1 Main Floor Load Totals:		45,680	6,073	36,507	42,580

Check Figures

Supply CFM:	1,669	CFM Per Square ft.:	0.742
Square ft. of Room Area:	2,250	Square ft. Per Ton:	569
Volume (ft³) of Cond. Space:	19,777	Air Turnover Rate (per hour):	5.1

System Loads

Total Heating Required With Outside Air:	45,680 Btuh	45.680 MBH	
Total Sensible Gain:	36,507 Btuh	86 %	
Total Latent Gain:	6,073 Btuh	14 %	
Total Cooling Required With Outside Air:	42,580 Btuh	3.55 Tons (Based On Sensible + Latent)	
		3.95 Tons (Based On 77% Sensible Capacity)	

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1, Zone 1 Summary Loads (Average Method)

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	149.9	3,606	0	3,165	3,165
10B-m: Glazing-French door, double pane clear glass, metal frame no break, ground reflectance = 0.23	40.8	2,189	0	2,447	2,447
11P: Door-Polyurethane Core	61.2	657	0	516	516
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1576.9	7,293	0	3,610	3,610
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	2247.2	2,661	0	3,092	3,092
22A-pm: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy dry or light wet soil	221	9,651	0	0	0
Subtotals for structure:		26,057	0	12,830	12,830
People:	7		1,610	2,100	3,710
Equipment:			0	2,001	2,001
Lighting:	3195			10,895	10,895
Ductwork:		7,615	0	6,085	6,085
Infiltration: Winter CFM: 297, Summer CFM: 132		12,008	4,463	2,596	7,059
System 1, Zone 1 Load Totals:		45,680	6,073	36,507	42,580

Check Figures

Supply CFM:	1,669	CFM Per Square ft.:	0.742
Square ft. of Room Area:	2,250	Square ft. Per Ton:	569
Volume (ft³) of Cond. Space:	19,777	Air Turnover Rate (per hour):	5.1

Zone Loads

Total Heating Required:	45,680 Btuh	45.680 MBH	
Total Sensible Gain:	36,507 Btuh	86 %	
Total Latent Gain:	6,073 Btuh	14 %	
Total Cooling Required:	42,580 Btuh	3.55 Tons (Based On Sensible + Latent)	
		3.95 Tons (Based On 77% Sensible Capacity)	

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Room Load Summary

No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Air Sys CFM
—Zone 1—										
1	Study	134	4,264	56	1-8	484	3,698	683	169	169
2	Utility Room	85	1,548	20	1-5	522	1,558	156	71	71
3	Bedroom 3	298	3,505	46	1-7	496	2,902	542	133	133
4	Bedroom 2 Sinks	44	1,139	15	1-3	743	798	129	36	36
5	Bedroom 2 Tolit	44	2,274	30	1-4	587	1,121	258	51	51
6	Bedroom 2	163	2,525	33	1-6	568	2,440	464	112	112
7	Breakfast	136	3,586	47	1-6	530	2,276	367	104	104
8	Kitchen	139	251	3	1-7	515	3,011	230	138	138
9	Dining Room	154	3,210	42	1-6	574	2,467	293	113	113
10	Foyer	48	966	13	1-4	471	899	98	41	41
11	Great Room	280	5,969	78	2-6	589	5,058	433	231	231
12	Bedroom 4	235	8,074	105	1-8	521	3,982	1,081	182	182
13	Bath 2	54	130	2	1-3	540	580	0	27	27
14	Master W.I.C	71	1,016	13	1-3	580	623	109	28	28
15	Master Bath	148	2,011	26	1-5	547	1,632	223	75	75
16	Master Bedroom	195	5,128	67	1-7	585	3,421	1,007	156	156
17	Hall	22	84	1	1-1	302	36	0	2	2
	System 1 total	2,250	45,680	597			36,507	6,073	1,669	1,669

System 1 Main Trunk Size: 18x17 in.
Velocity: 847 ft/min
Loss per 100 ft.: 0.070 in.wg

Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	3.55	86% / 14%	36,507	6,073	42,580
Recommended:	3.95	77% / 23%	36,507	10,905	47,412
Actual:	4.63	72% / 28%	40,000	15,500	55,500

Equipment Data

	Heating System	Cooling System
Type:	Air Cooled Condensor	Air Cooled Condensor
Model:	GSH130601+ARUF486016+HKR-10	GSH130601+ARUF486016
Brand:	Goodman	Goodman
Efficiency:	8.5 HSPF	Seer 13
Sound:		
Capacity:	55.500	55.500
Sensible Capacity:	n/a	40,000 Btuh
Latent Capacity:	n/a	15,500 Btuh