FORM R405-2017

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2017 Florida Building Code, Energy Conservation via the residential Simulated Performance Method shall include:

- ☐ *This checklist*
- ☐ *A Form R405 report that documents that the Proposed Design complies with Section R405.3 of the Florida Energy Code. This form shall include a summary page indicating home address, e-ratio and the pass or fail status along with summary areas and types of components, whether the home was simulated as a worst-case orientation, name and version of the compliance software tool, name of individual completing the compliance report (one page) and an input summary checklist that can be used for field verification (usually four pages/may be greater).*
- ☐ *Energy Performance Level (EPL) Display Card (one page)*
- ☐ *HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7*
- ☐ *Mandatory Requirements (five pages)*

Required prior to CO for the Performance Method:

- ☐ *Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- ☐ *A completed Envelope Leakage Test Report (usually one page)*
- ☐ *If Form R405 duct leakage type indicates anything other than "default leakage", then a completed Form R405 Duct Leakage Test Report (usually one page)*

20

FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Chrismill Homes (Richter Job)	Builder Name:	
Street:		Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:	Paul & Pam Richter	Jurisdiction:	
Design Location:	FL, Gainesville	County:: .	Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1920
Conditioned floor area below grade (ft²)	0

7. Windows(146.7 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.35	146.67 ft²
SHGC:	SHGC=0.29	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		0.000 ft.
Area Weighted Average SHGC:		0.290

8. Floor Types (1920.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1920.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1656.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1656.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1920.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	1920.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	8	384

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	36.0	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	36.0	HSPF:8.20

14. Hot water systems	
a. Electric	Cap: 40 gallons
	EF: 0.960
b. Conservation features	
None	
15. Credits	Pstat

Glass/Floor Area: 0.076

Total Proposed Modified Loads: 49.08

Total Baseline Loads: 49.17

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 02/25/20

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

- **Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.**
- **Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).**
- **Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.000 Qn for whole house.**

FORM R405-2017

PROJECT

Title:	Chrismill Homes (Richter Job)	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1920	Lot #	
Owner Name:	Paul & Pam Richter	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1920	17280

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1920	17280	Yes	5	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
____	1	Slab-On-Grade Edge Insulatio	Main	184 ft		1920 ft²	----	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
____	1	Hip	Composition shingles	2080 ft²	0 ft²	Medium	0.96	No	0.9	No	0	22.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
____	1	Full attic	Vented	300	1920 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
____	1	Under Attic (Vented)	Main	30	Blown	1920 ft²	0.11	Wood

FORM R405-2017

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor	Below Grade%
___	1	N	Exterior	Frame - Wood	Main	13	32		9		288.0 ft²		0.23	0.75	0
___	2	E	Exterior	Frame - Wood	Main	13	60		9		540.0 ft²		0.23	0.75	0
___	3	S	Exterior	Frame - Wood	Main	13	32		9		288.0 ft²		0.23	0.75	0
___	4	E	Exterior	Frame - Wood	Main	13	60		9		540.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___	1	E	Insulated	Main	None	.46	6		6	8	40 ft²
___	2	E	Insulated	Main	None	.46	6		6	8	40 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
___	1	E	2	Vinyl	Double (Tinted)	Yes	0.35	0.29	N	36.0 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
___	2	E	4	Vinyl	Double (Tinted)	Yes	0.35	0.29	N	110.7 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.0004	2016	110.68	208.14	.3082	7

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
___	1	Electric Heat Pump/	None	HSPF:8.2	36 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
___	1	Central Unit/	None	SEER: 14	36 kBtu/hr	1080 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
___	1	Electric	None	Attic	0.96	40 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
___	None	None			ft²		

FORM R405-2017

DUCTS

√	#	Supply Location	Supply R-Value	Supply Area	Return Location	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	8	384 ft²	Attic	96 ft²	Proposed Qn	Main	--- cfm	0.0 cfm	0.00	0.50	1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

FORM R405-2017

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 100

The lower the EnergyPerformance Index, the more efficient the home.

, , FL,

1. New construction or existing		New (From Plans)
2. Single family or multiple family		Single-family
3. Number of units, if multiple family		1
4. Number of Bedrooms		3
5. Is this a worst case?		No
6. Conditioned floor area (ft²)		1920
7. Windows**	Description	Area
a. U-Factor: SHGC:	Dbl, U=0.35 SHGC=0.29	146.67 ft²
b. U-Factor: SHGC:	N/A	ft²
c. U-Factor: SHGC:	N/A	ft²
d. U-Factor: SHGC:	N/A	ft²
Area Weighted Average Overhang Depth:		0.000 ft.
Area Weighted Average SHGC:		0.280

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1920.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1656.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	1920.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	8	384

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	36.0	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	36.0	HSPF:8.20

14. Hot water systems	
a. Electric	Cap: 40 gallons EF: 0.96
b. Conservation features None	
15. Credits	Pstat

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida EnergyGauge Rating. Email EnergyGauge tech support at techsupport@energygauge.com or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: 2258671 - CHRISMILL HOMES - RICHTER RES.

MiTek USA, Inc.
6904 Parke East Blvd.
Tampa, FL 33610-4115

Site Information:
Customer Info: Chrismill Homes Project Name: Richter Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: 249 SW Grassland Way, N/A
City: Columbia Cty State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2017/TPI2014 Design Program: MiTek 20/20 8.2
Wind Code: ASCE 7-10 Wind Speed: 130 mph
Roof Load: 37.0 psf Floor Load: N/A psf

This package includes 4 individual, Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T19483895	T01	2/21/20
2	T19483896	T01G	2/21/20
3	T19483897	T02	2/21/20
4	T19483898	T03	2/21/20

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource-Jacksonville.

Truss Design Engineer's Name: Velez, Joaquin
My license renewal date for the state of Florida is February 28, 2021.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date: February 21,2020

Job	Truss	Truss Type	Qty	Ply	CHRISMILL HOMES - RICHTER RES.	T19483895
2258671	T01	Roof Special	17	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Feb 7 2020 MiTek Industries, Inc. Fri Feb 21 11:40:45 2020 Page 1

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1-4-0	6-6-1	3-5-14	5-3-2	5-4-7	5-4-8	5-4-8	5-4-7	5-3-2	3-5-14	6-6-1	1-4-0

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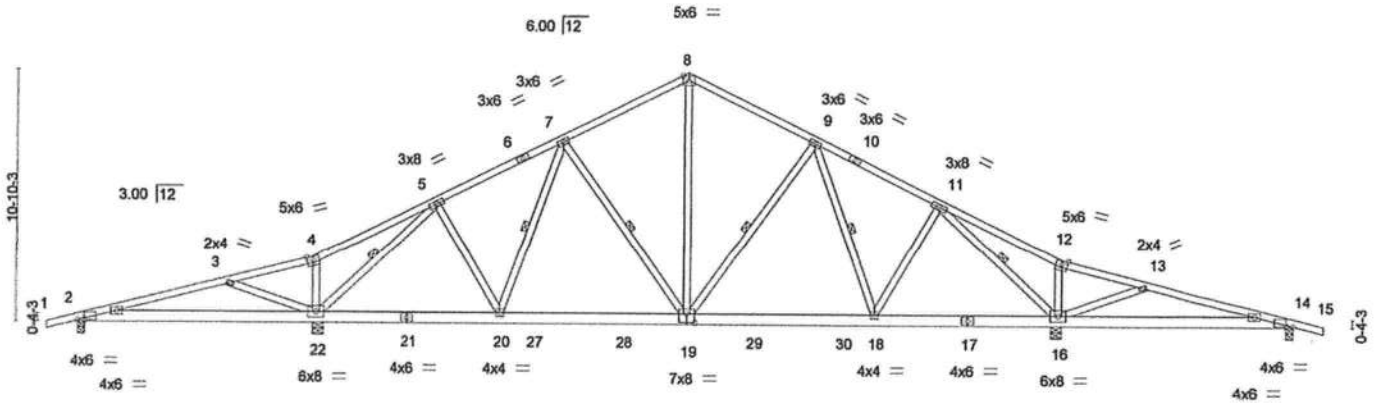


9-11-15	10-2-12	17-11-15	26-0-0	34-0-1	41-9-4	42-0-1	52-0-0
9-11-15	0-2-13	7-9-3	8-0-1	8-0-1	7-9-3	0-2-13	9-11-15

Plate Offsets (X,Y)— [2:0-3-6,0-0-1], [14:0-3-6,0-0-1], [19:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.34	Vert(LL)	0.15	16-26	>806	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.41	Vert(CT)	-0.14	22-24	>893	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.04	14	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 330 lb	FT = 20%

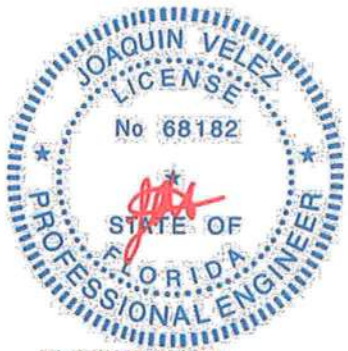
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-5-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-19, 9-18, 11-16, 7-19, 7-20, 5-22

REACTIONS. All bearings 0-3-8 except (jt=length) 16=0-5-8, 22=0-5-8.
(lb) - Max Horz 2=227(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-315(LC 8), 16=-663(LC 13), 22=-682(LC 12), 14=-309(LC 9)
Max Grav All reactions 250 lb or less at joint(s) except 2=360(LC 23), 16=1644(LC 1), 22=1644(LC 1), 14=360(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 3-4=-259/298, 4-5=-204/380, 5-7=-1097/621, 7-8=-990/673, 8-9=-990/673, 9-11=-1097/623, 11-12=-209/380, 12-13=-263/298
BOT CHORD 20-22=-324/937, 19-20=-294/1031, 18-19=-210/982, 16-18=-198/891
WEBS 8-19=-370/616, 9-19=-276/279, 11-18=-9/280, 11-16=-1539/831, 13-16=-477/489, 7-19=-276/268, 5-20=-4/276, 5-22=-1539/828, 3-22=-477/489

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 315 lb uplift at joint 2, 663 lb uplift at joint 16, 682 lb uplift at joint 22 and 309 lb uplift at joint 14.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
February 21,2020

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	CHRISMILL HOMES - RICHTER RES.	T19483896
2258671	T01G	Roof Special Supported Gable	2	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Feb 7 2020 MiTek Industries, Inc. Fri Feb 21 11:40:48 2020 Page 1
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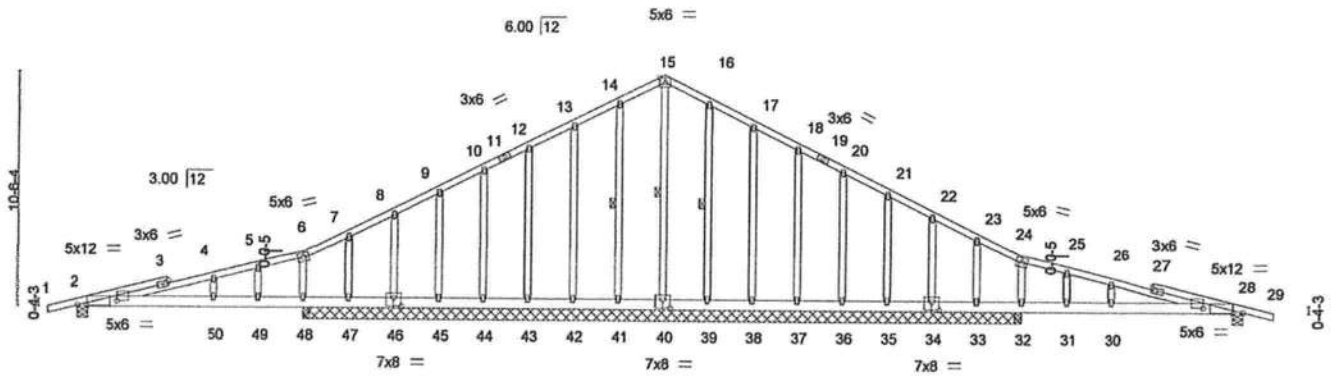
1-4-0	9-11-15	16-0-1	16-0-1	9-11-15	1-4-0

Scale: 1/8"=1'



10-0-0	42-0-0	52-0-0
10-0-0	32-0-0	10-0-0

Plate Offsets (X,Y)-- [2:0-5-4,0-0-3], [2:1-9-0,0-2-7], [28:0-5-4,0-0-3], [28:1-9-0,0-2-7], [34:0-4-0,0-4-8], [40:0-4-0,0-4-8], [46:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.51	Vert(LL)	0.18	2-50	>664	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.51	Vert(CT)	-0.18	2-50	>659	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	28	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-S							Weight: 364 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 8-10-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 15-40, 14-41, 16-39

REACTIONS. All bearings 32-0-0 except (jt=length) 2=0-5-8, 28=0-5-8.
(lb) - Max Horz 48=221(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 41, 42, 43, 44, 45, 39, 38, 37, 36, 35 except 2=-302(LC 8), 28=-299(LC 9), 46=-154(LC 12), 47=-365(LC 23), 48=-664(LC 8), 34=-155(LC 13), 33=-365(LC 24), 32=-659(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 41, 42, 43, 44, 45, 39, 38, 37, 36, 35 except 2=363(LC 23), 28=363(LC 24), 40=281(LC 22), 46=283(LC 23), 47=413(LC 8), 48=875(LC 23), 48=863(LC 1), 34=283(LC 24), 33=413(LC 9), 32=875(LC 24), 32=863(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-320/162, 4-5=-285/156, 5-6=-256/157, 24-25=-257/157, 25-26=-285/156, 26-28=-321/162
BOT CHORD 2-50=-159/372, 49-50=-159/372, 48-49=-159/372, 47-48=-157/370, 46-47=-157/370, 45-46=-157/370, 44-45=-157/370, 43-44=-157/370, 42-43=-157/370, 41-42=-157/370, 40-41=-157/370, 39-40=-157/370, 38-39=-157/370, 37-38=-157/370, 36-37=-157/370, 35-36=-157/370, 34-35=-157/370, 33-34=-157/370, 32-33=-157/370, 31-32=-157/370, 30-31=-157/370, 28-30=-157/370

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 41, 42, 43, 44, 45, 39, 38, 37, 36, 35 except (jt=lb) 2=302, 28=299, 46=154, 47=365, 48=664, 34=155, 33=365, 32=659.

Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:
February 21,2020

Job	Truss	Truss Type	Qty	Ply	CHRISMILL HOMES - RICHTER RES.	
2258671	T02	ROOF SPECIAL	2	1	Job Reference (optional)	T19483897

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Feb 7 2020 MiTek Industries, Inc. Fri Feb 21 11:40:50 2020 Page 1
ID:GjsENh3AN7JWL7eGMO7rqozizFI-48Y1wr4rWxh?r19JCP3yHXFwj0Hq6VDs7mLz9ZziwfR

-1-4-0	6-6-1	9-11-15	15-3-1	20-7-8	26-0-0	31-4-8	36-8-15	42-0-1	45-5-15	52-0-0	53-4-0
1-4-0	6-6-1	3-5-14	5-3-2	5-4-7	5-4-8	5-4-8	5-4-7	5-3-2	3-5-14	6-6-1	1-4-0

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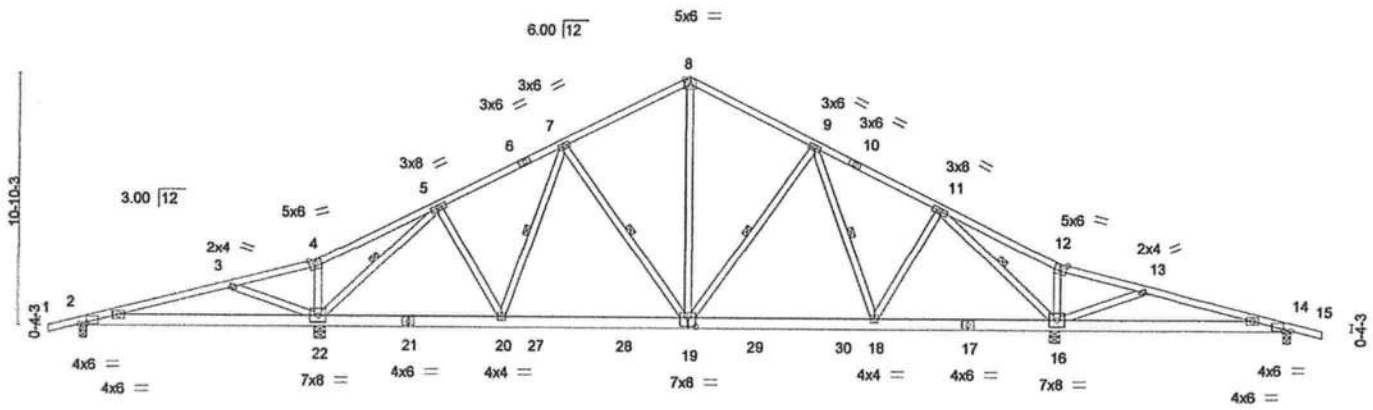


9-11-15	10-2-12	17-11-15	26-0-0	34-0-1	41-9-4	42-0-1	52-0-0
9-11-15	0-2-13	7-9-3	8-0-1	8-0-1	7-9-3	0-2-13	9-11-15

Plate Offsets (X,Y)— [2:0-3-6,0-0-1], [14:0-3-6,0-0-1], [19:0-4-0,0-4-8]

LOADING (psf)		SPACING-	2-4-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.45	Vert(LL)	0.18	16-26	>691	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.53	Vert(CT)	-0.16	22-24	>766	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.04	14	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 330 lb	FT = 20%

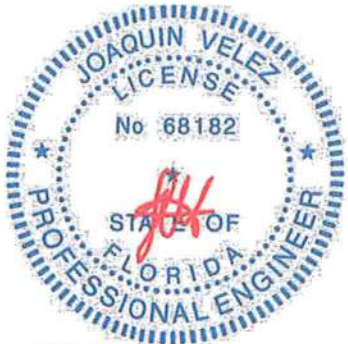
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-0-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-19, 9-18, 11-16, 7-19, 7-20, 5-22

REACTIONS. All bearings 0-3-8 except (jt=length) 16=0-5-8, 22=0-5-8.
(lb) - Max Horz 2=265(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-367(LC 8), 16=-773(LC 13), 22=-795(LC 12), 14=-361(LC 9)
Max Grav All reactions 250 lb or less at joint(s) except 2=420(LC 23), 16=1918(LC 1), 22=1918(LC 1), 14=420(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-259/237, 3-4=-302/347, 4-5=-238/443, 5-7=-1280/724, 7-8=-1155/785, 8-9=-1155/785, 9-11=-1280/726, 11-12=-243/443, 12-13=-306/347, 13-14=-259/212
BOT CHORD 2-22=-229/283, 20-22=-378/1094, 19-20=-343/1203, 18-19=-245/1145, 16-18=-230/1040
WEBS 8-19=-432/719, 9-19=-321/326, 11-18=-11/326, 11-16=-1795/970, 13-16=-556/571, 7-19=-321/313, 5-20=-4/322, 5-22=-1795/966, 3-22=-556/571

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 367 lb uplift at joint 2, 773 lb uplift at joint 16, 795 lb uplift at joint 22 and 361 lb uplift at joint 14.



Joaquin Velez PE No.68182
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
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February 21,2020

MiTek
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	CHRISMILL HOMES - RICHTER RES.	T19483898
2258671	T03	Roof Special	11	1	Job Reference (optional)	

Builders FirstSource, Jacksonville, FL - 32244, 8.240 s Feb 7 2020 MiTek Industries, Inc. Fri Feb 21 11:40:52 2020 Page 1
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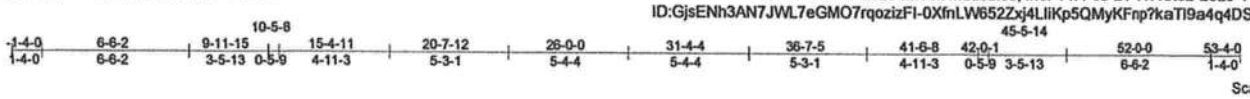
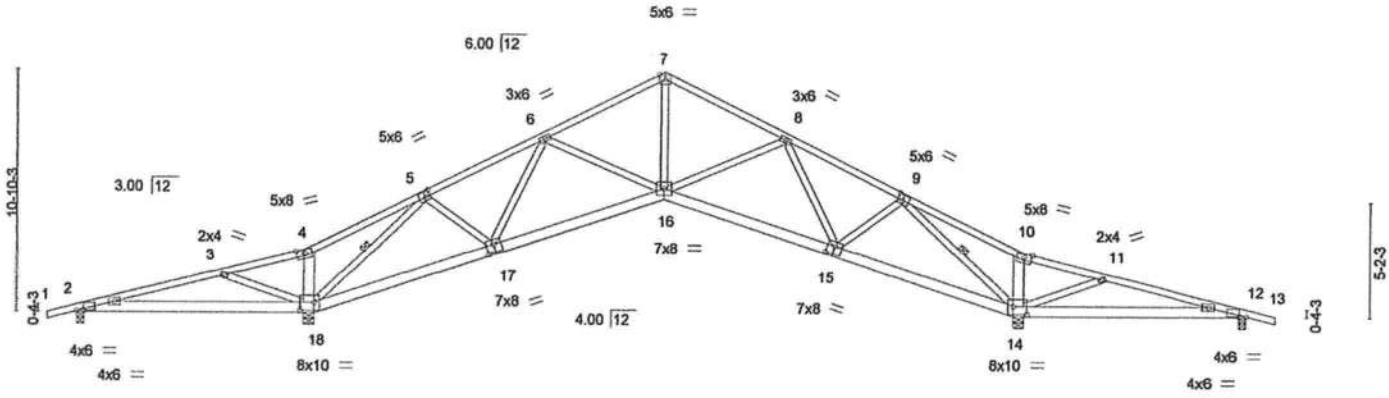


Scale: 1/8"=1'



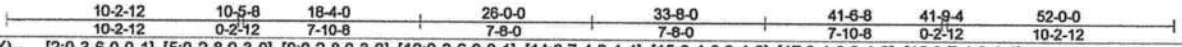


Plate Offsets (X,Y)-- [2:0-3-6,0-0-1], [5:0-2-8,0-3-0], [9:0-2-8,0-3-0], [12:0-3-6,0-0-1], [14:0-7-4,0-4-4], [15:0-4-0,0-4-8], [17:0-4-0,0-4-8], [18:0-7-4,0-4-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.47	Vert(LL)	0.20	18-20	>642	240	MT20	244/190
TCDL	7.0	Lumber DOL	1.25	BC	0.38	Vert(CT)	0.16	18-20	>783	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.16	14	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-MS							Weight: 308 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
4-18,10-14: 2x6 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-6-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 9-14, 5-18

REACTIONS. All bearings 0-3-8 except (jt=length) 18=0-5-8, 14=0-5-8.
(lb) - Max Horz 2=227(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-333(LC 8), 18=-719(LC 12), 14=-679(LC 13), 12=-321(LC 9)
Max Grav All reactions 250 lb or less at joint(s) except 2=275(LC 23), 18=1760(LC 1), 14=1760(LC 1), 12=275(LC 24)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-120/501, 3-4=-458/862, 4-5=-428/985, 5-6=-1310/599, 6-7=-1486/623, 7-8=-1486/623, 8-9=-1310/596, 9-10=-434/985, 10-11=-463/862, 11-12=-117/461
BOT CHORD 2-18=-368/214, 17-18=-336/844, 16-17=-425/1365, 15-16=-255/1365, 14-15=-116/789, 12-14=-385/143
WEBS 7-16=-327/1001, 8-16=-130/306, 8-15=-406/184, 9-15=-71/533, 9-14=-2194/1026, 11-14=-520/537, 6-17=-406/182, 5-17=-58/533, 5-18=-2194/1023, 3-18=-520/537

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 333 lb uplift at joint 2, 719 lb uplift at joint 18, 679 lb uplift at joint 14 and 321 lb uplift at joint 12.

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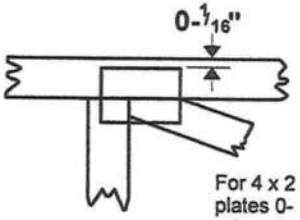
Date:
February 21,2020

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 fully embed teeth.



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 plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION

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

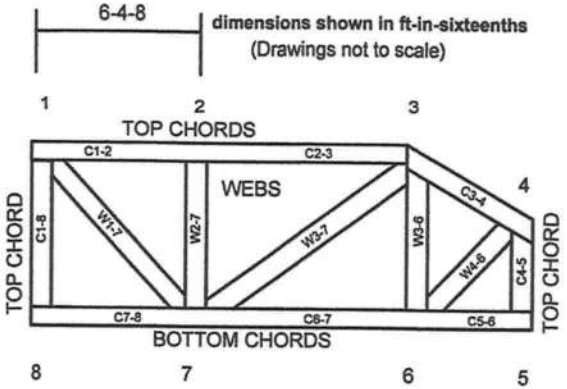
BEARING

Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

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 BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.