

RE: 4085614
EVANSTON - BULOCK RES.

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Customer: EVANSTON CONT. Project Name: 4085614
Lot/Block: N/A Model: Custom
Address: TBD SW Bishop Ave. Subdivision: N/A
City: Columbia Cty State: FL

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

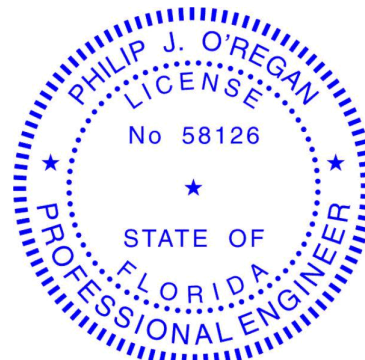
Design Code: FBC2023/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-22 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 3 individual, dated Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T34181896	T01	6/16/2024
2	T34181897	T01G	6/16/2024
3	T34181898	T02	6/16/2024

This item has been digitally signed and sealed by ORegan, Philip on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies
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-Lake City, FL.
Truss Design Engineer's Name: ORegan, Philip
My license renewal date for the state of Florida is February 28, 2025.
Florida COA: 6634

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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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.



Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

June 16, 2024

Job	Truss	Truss Type	Qty	Ply	EVANSTON - BULOCK RES.	T34181896
4085614	T01	Common	11	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.730 s Apr 25 2024 MiTek Industries, Inc. Fri Jun 14 09:53:35 2024 Page 1
ID:m2cxSGK0RnrsSxrPhqiuZgz6PX?-zbTHu2JSAL9JP?zg8YYCNg1vqXBOHqMiZheC8Kz6P8E 30-0-0 31-4-0 1-4-0

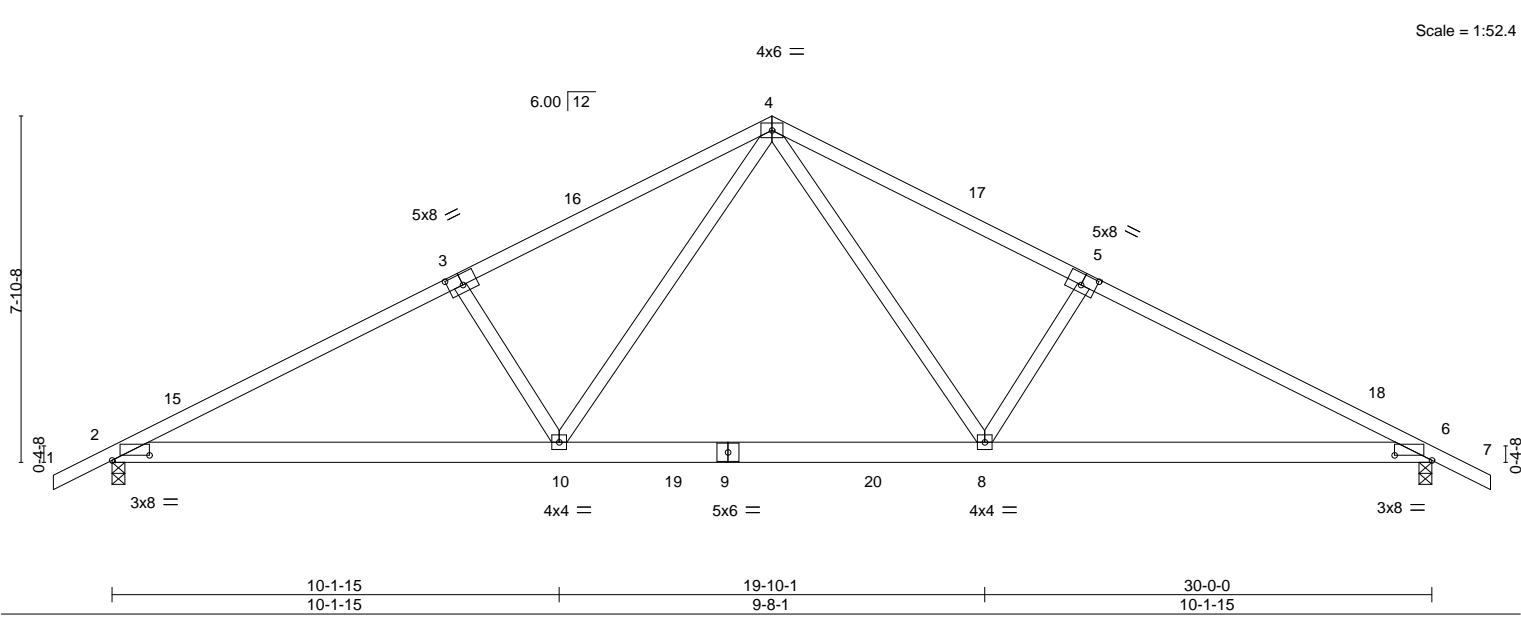


Plate Offsets (X,Y)--		[2:0-10-3,0-1-6], [3:0-4-0,0-3-0], [5:0-4-0,0-3-0], [6:0-10-3,0-1-6]																	
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		I/defl		L/d		PLATES		GRIP	
TCLL 20.0		Plate Grip DOL		1.25		TC 0.98		Vert(LL)		-0.22 8-10		>999		240		MT20		244/190	
TCDL 10.0		Lumber DOL		1.25		BC 0.91		Vert(CT)		-0.40 8-10		>889		180					
BCLL 0.0 *		Rep Stress Incr		NO		WB 0.71		Horz(CT)		0.07 6		n/a		n/a					
BCDL 10.0		Code FBC2023/TPI2014				Matrix-MS										Weight: 163 lb		FT = 20%	

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 7-6-1 oc bracing.
WEBS 2x4 SP No.3	

REACTIONS. (size) 2=0-3-8, 6=0-3-8
Max Horz 2=176(LC 16)
Max Uplift 2=-562(LC 12), 6=-562(LC 13)
Max Grav 2=1545(LC 2), 6=1545(LC 2)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2713/1035, 3-4=-2534/1046, 4-5=-2534/1046, 5-6=-2713/1035
BOT CHORD 2-10=-876/2381, 8-10=-431/1585, 6-8=-813/2366
WEBS 4-8=-469/1136, 5-8=-434/381, 4-10=-470/1136, 3-10=-434/381

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -1-4-0 to 1-8-0, Zone1 1-8-0 to 15-0-0, Zone2 15-0-0 to 19-2-15, Zone1 19-2-15 to 31-4-0 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * 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.
 - 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.
 - 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) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-60, 4-7=-60, 2-10=-20, 8-10=-60(F=-40), 6-8=-20

Job	Truss	Truss Type	Qty	Ply	EVANSTON - BULOCK RES.	T34181897
4085614	T01G	Common Supported Gable	2	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL),	Lake City, FL - 32055,	8.730 s Apr 25 2024 MiTek Industries, Inc. Fri Jun 14 09:53:36 2024 Page 1
		ID:m2cxSGK0RnrsSxrPhqiuZgz6PX?-Sn1f5OK4xeHA19YsiG3RvuaHoxl00Q_roLNlgmz6P8D
		30-0-0
		15-0-0
		31-4-0
		1-4-0

Scale = 1:56.9

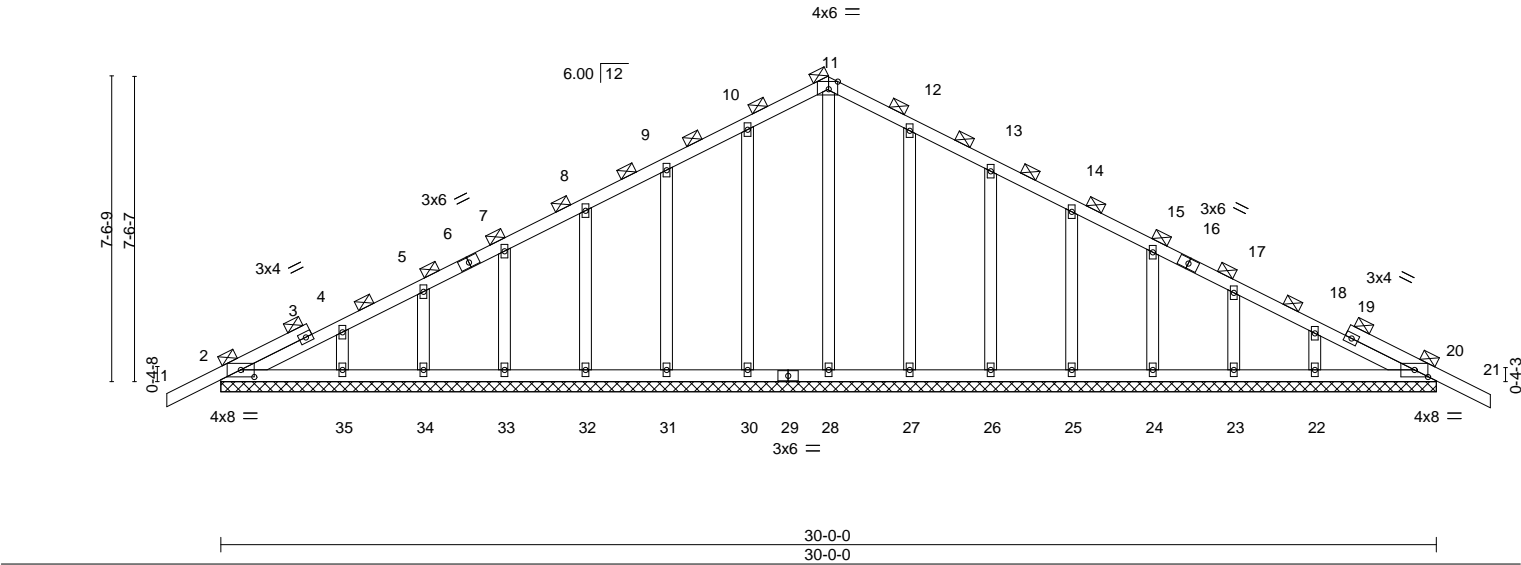


Plate Offsets (X,Y)--		[2:0-4-0,0-2-1], [11:0-2-11,Edge], [20:0-4-0,0-2-1]		30-0-0		30-0-0	
LOADING (psf)		SPACING-		CSI.		DEFL.	
TCLL	20.0	Plate Grip DOL	1.25	TC	0.14	in (loc)	I/defl
TCDL	10.0	Lumber DOL	1.25	BC	0.06	21	n/r
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.18	21	n/r
BCDL	10.0	Code	FBC2023/TPI2014	Matrix-S		20	n/a
						PLATES	
						GRIP	
						MT20	
						244/190	
						Weight: 177 lb	
						FT = 20%	

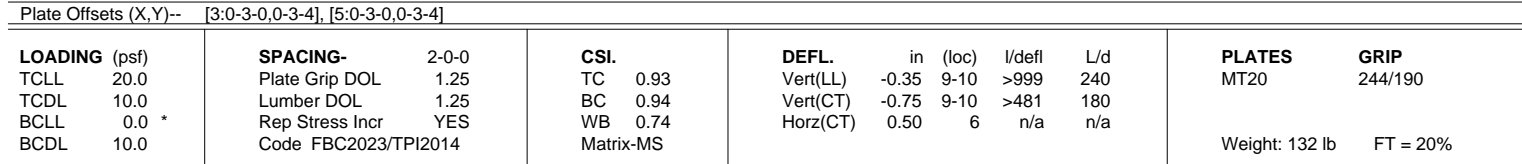
LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	2-0-0 oc purlins (6-0-0 max.).
BOT CHORD	2x4 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
OTHERS	2x4 SP No.3		

REACTIONS.		PER ICC CODES (IRC/IBC), TPI 1 AND REFERENCED BCSI, FLAT BOTTOM CHORD GABLE TRUSSES ARE NOT TO BE INSTALLED ADJACENT TO SCISSOR TRUSSES UNLESS SPECIAL OUT OF PLANE WALL BRACING IS SPECIFIED BY THE ENGINEER OF RECORD.	
(lb) -	Max Horz 2=169(LC 17)		
Max Uplift	All uplift 100 lb or less at joint(s) 2, 30, 31, 32, 33, 34, 35, 27, 26, 25, 24, 23, 22, 20		
Max Grav	All reactions 250 lb or less at joint(s) 2, 28, 30, 31, 32, 33, 34, 35, 27, 26, 25, 24, 23, 22, 20		

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
TOP CHORD	9-10=86/261, 10-11=107/328, 11-12=108/329, 12-13=86/260

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 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.
 - Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * 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.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 30, 31, 32, 33, 34, 35, 27, 26, 25, 24, 23, 22, 20.
 - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Builders FirstSource (Lake City, FL) Lake City, FL - 32055, 8.730 s Apr 25 2024 MiTek Industries, Inc. Fri Jun 14 09:53:36 2024 Page 1
ID:m2cxSGK0RnrsSxrPhqiuZgz6PX?-Sn1f5OK4xeHA19YsiG3Rvua5QxXG0H6rolNlmgz6P8D
-1-4-0 7-11-0 15-0-0 22-1-0 30-0-0 31-4-0
1-4-0 7-11-0 7-1-0 7-11-0 1-4-0



REACTIONS. (size) 2=0-3-8, 6=0-3-8
 Max Horz 2=176(LC 16)
 Max Uplift 2=-476(LC 12), 6=-476(LC 13)
 Max Grav 2=1280(LC 1), 6=1280(LC 1)

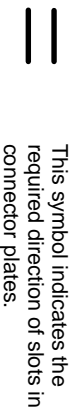
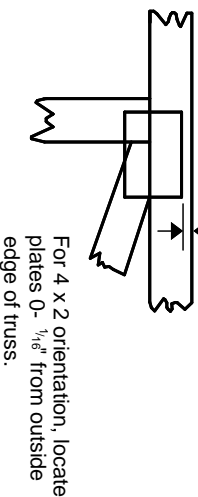
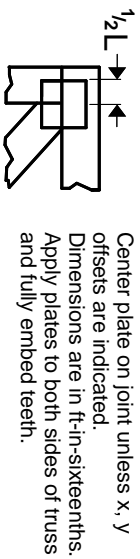
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-3=-3912/1391, 3-4=-2734/868, 4-5=-2734/855, 5-6=-3912/1265
BOT CHORD	2-10=-1325/3535, 9-10=-1323/3536, 8-9=-1057/3536, 6-8=-1056/3535
WEBS	4-9=-542/1954, 5-9=-1112/716, 5-8=0/296, 3-9=-1112/703, 3-10=0/296

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -1-4-0 to 1-8-0, Zone1 1-8-0 to 15-0-0, Zone2 15-0-0 to 19-2-15, Zone1 19-2-15 to 31-4-0 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * 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.
- 6) 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.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=476. 6=476.

Symbols

PLATE LOCATION AND ORIENTATION



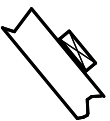
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

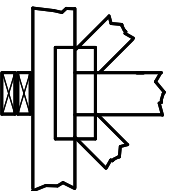
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

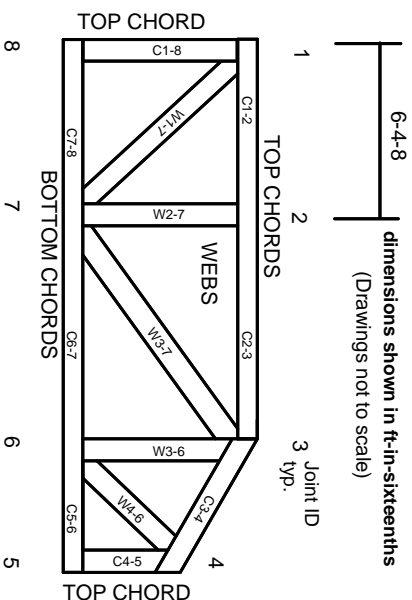


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.