32-00-00

26-00-00

CT2GE

CT2(12)

CT3(3)

CT3GE

18-00-00

8-00-00

25-01-00

6-11-00

Trenco
818 Soundside Rd
Edenton, NC 27932

Re: DO210421
FERGUTI

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Truss Builders, Inc..

Pages or sheets covered by this seal: I46776579 thru I46776582

My license renewal date for the state of North Carolina is December 31, 2021.

North Carolina COA: C-0844

June 28,2021

Galinski, John

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.

Job	Truss	Truss Type	Qty	Ply	FERGUTI	
DO210421	CT2	Common	12	1		I46776579
					Job Reference (optional)	

Scale = 1:61.2

LOADING (psf)
TCLL (roof) 20.0
Snow (Pf) 15.0
TCDL 10.0
BCLL 0.0 *
BCDL 10.0

SPACING- 2-0-0
Plate Grip DOL 1.15
Lumber DOL 1.15
Rep Stress Incr NO
Code IBC2015/TPI2014

CSI.
TC 0.60
BC 0.69
WB 0.35
Matrix-MR

DEFL.	in	(loc)	l/defl	L/d
Vert(LL)	-0.12	8-12	>999	240
Vert(CT)	-0.23	8-12	>999	180
Horz(CT)	0.04	6	n/a	n/a

PLATES GRIP
MT20 244/190

Weight: 150 lb FT = 6%
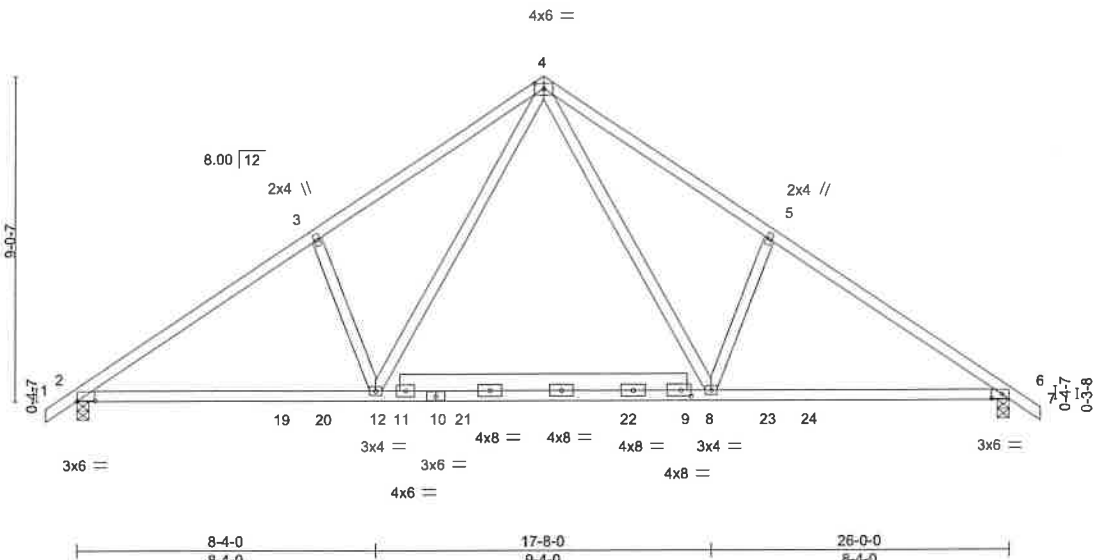
Plate Offsets (X,Y)-- [2:0-6-0,0-0-2], [4:0-3-0,0-1-12], [6:0-3-9,0-1-8], [9:0-3-4,0-2-0]

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.1D *Except*
9-11: 2x6 SP No.2
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-7-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 2=0-4-0, 6=0-4-0
Max Horz 2=-179(LC 8)
Max Uplift 2=-46(LC 10), 6=-46(LC 11)
Max Grav 2=1279(LC 22), 6=1279(LC 23)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1869/78, 3-4=-1778/162, 4-5=-1777/162, 5-6=-1868/78
BOT CHORD 2-12=-85/1607, 8-12=0/1040, 6-8=0/1486
WEBS 4-8=-99/940, 5-8=-363/182, 4-12=-99/941, 3-12=-363/182

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
8) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
9) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-50, 4-7=-50, 11-13=-20, 9-11=-60(F=-40), 9-16=-20

June 28,2021

Truss Builders, Inc.,   Morrisville, NC - 27560,

8.430 s Jun 2 2021 MiTek Industries, Inc. Mon Jun 28 15:17:29 2021 Page 1
ID:JOL_CeDKJpEy7uAnDyOYj?zP6id-__GyfRESwPxn_DQuIcFqW5vl_cxQ0aaIVD_Wrez1j4a

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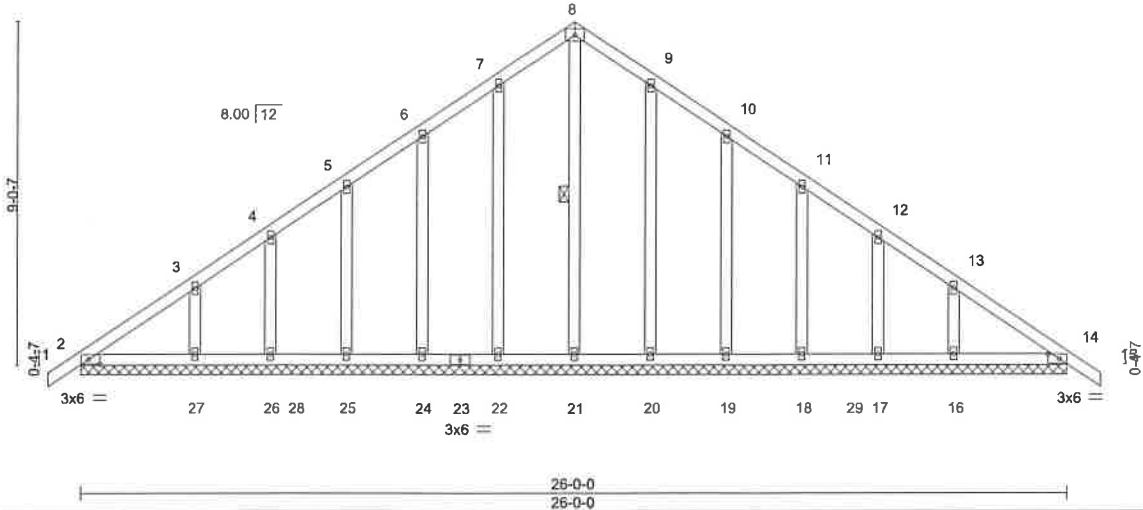
Plate Offsets (X,Y)—	[2:0-3-9,0-1-8], [14:0-3-9,0-1-8]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	14	n/r	120	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	15	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	14	n/a	n/a		
BCLL	0.0 *	Code IBC2015/TPI2014		Matrix-R								
BCDL	10.0										Weight: 168 lb	FT = 6%

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

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.
WEBS   1 Row at midpt   8-21

REACTIONS.   All bearings 26-0-0.
(lb) -   Max Horz 2=-179(LC 8)
Max Uplift   All uplift 100 lb or less at joint(s) 2, 22, 24, 25, 26, 27, 20, 19, 18, 17, 16
Max Grav   All reactions 250 lb or less at joint(s) 2, 21, 22, 24, 25, 26, 27, 20, 19, 18, 17, 16, 14

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 22, 24, 25, 26, 27, 20, 19, 18, 17, 16.
12) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

NORTH CAROLINA
PROFESSIONAL
SEAL
28677
JOHN L. GALINSKI
ENGINEER

June 28,2021

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FERGUTI	
DO210421	CT3	Common	3	1		I46776581
					Job Reference (optional)	

Truss Builders, Inc.,   Morrisville, NC - 27560,
8.430 s Jun 2 2021 MiTek Industries, Inc. Mon Jun 28 15:17:30 2021 Page 1
ID:JOL_CeDKJpEy7uAnDyOYj?zP6id-SAqKtnF4hj3ecM?4rJm32JRJZ07rl_Jvktj3N5z1j4Z
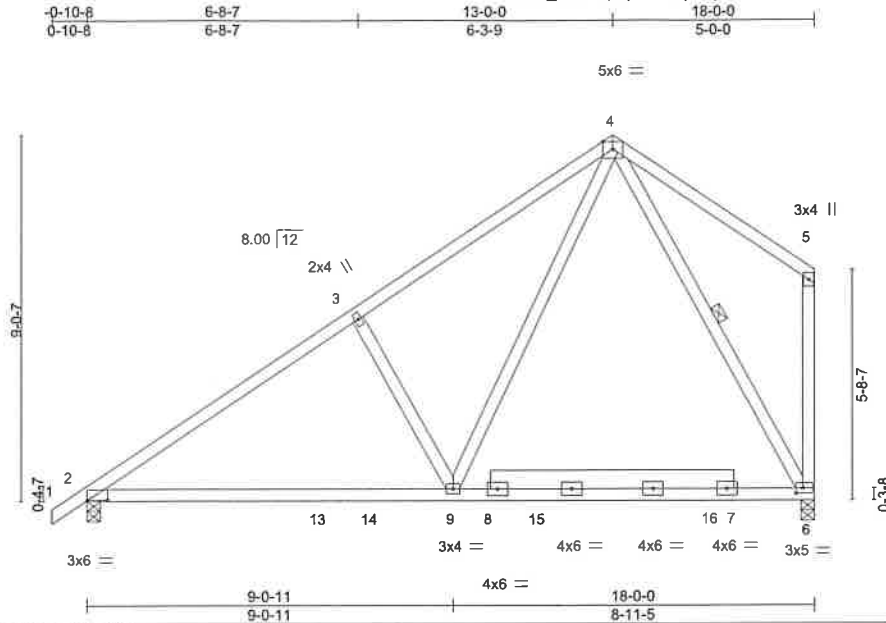
Scale = 1:54.3

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

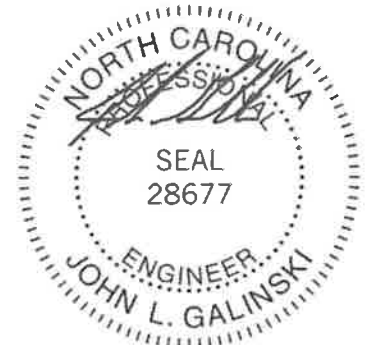| LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d		PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.11	9-12	>999	240		MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.24	9-12	>899	180			
TCDL	10.0	Rep Stress Incr	NO	WB	0.36	Horz(CT)	0.01	6	n/a	n/a			
BCLL	0.0 *	Code IBC2015/TPI2014		Matrix-MR								Weight: 118 lb	FT = 6%
BCDL	10.0												

LUMBER-		BRACING-	
TOP CHORD	2x4 SP No.2	TOP CHORD	Structural wood sheathing directly applied or 4-11-9 oc purlins, except end verticals.
BOT CHORD	2x4 SP No.1D *Except*		
	7-8: 2x6 SP No.2	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	2x4 SP No.3	WEBS	1 Row at midpt 4-6

REACTIONS.   (size)   2=0-4-0, 6=0-4-0
Max Horz 2=231(LC 9)
Max Uplift 2=-36(LC 10), 6=-46(LC 10)
Max Grav 2=843(LC 2), 6=979(LC 22)

FORCES.   (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD   2-3=-1056/64, 3-4=-934/123
BOT CHORD   2-9=-93/940, 6-9=-40/400
WEBS   3-9=-371/178, 4-9=-72/881, 4-6=-711/49

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
4) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 6.
8) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
9) 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 + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 1-4=-50, 4-5=-50, 8-10=-20, 7-8=-60(F=-40), 6-7=-20

NORTH CAROLINA
PROFESSIONAL
SEAL
28677
ENGINEER
JOHN L. GALINSKI

June 28,2021

ENGINEERING BY
TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	FERGUTI	
DO210421	CT3GE	Common Supported Gable	1	1		I46776582
					Job Reference (optional)	

Truss Builders, Inc.,   Morrisville, NC - 27560,
8.430 s Jun 2 2021 MiTek Industries, Inc. Mon Jun 28 15:17:32 2021 Page 1
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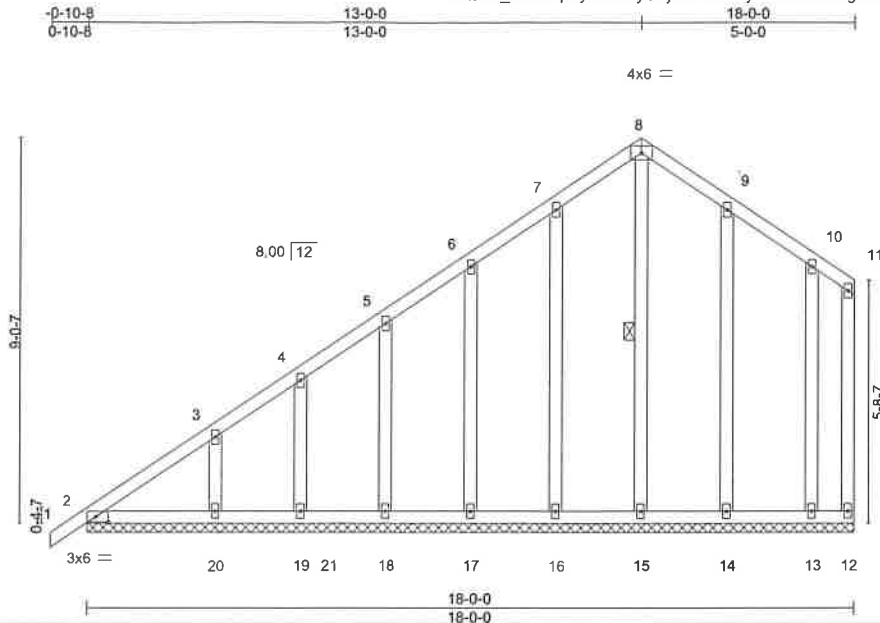
Scale = 1:51.5

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	0.00	1	n/r	120	MT20	244/190
Snow (Pf)	15.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	1	n/r	120		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horz(CT)	-0.00	12	n/a	n/a		
BCLL	0.0 *	Code IBC2015/TPI2014		Matrix-R							Weight: 134 lb	FT = 6%
BCDL	10.0											

Plate Offsets (X,Y)-- [2:0-3-9,0-1-8]

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

BRACING-
TOP CHORD   Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD   Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS   1 Row at midpt   8-15

REACTIONS.   All bearings 18-0-0.
   (lb) - Max Horz 2=231(LC 7)
           Max Uplift All uplift 100 lb or less at joint(s) 12, 2, 15, 16, 17, 18, 19, 20, 14, 13
           Max Grav   All reactions 250 lb or less at joint(s) 12, 2, 15, 16, 17, 18, 19, 20, 14, 13

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

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-10; Pr=20.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pf=15.0 psf (flat roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Fully Exp.; Ct=1.10
5) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 15.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 2, 15, 16, 17, 18, 19, 20, 14, 13.
12) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
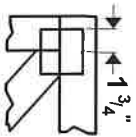

June 28,2021

ENGINEERING BY
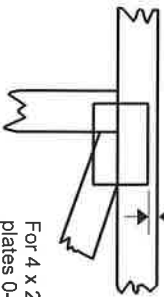**TRENCO**
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

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.

↑1 ¾"↓

0-¹⁄₁₆"

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.
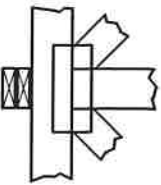
PLATE SIZE

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.
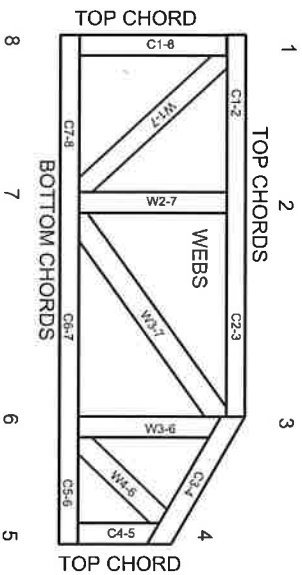
BEARING

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

6-4-8

dimensions shown in ft-in-sixteenths
(Drawings not to scale)

TOP CHORD

1

2

TOP CHORDS

3

C1-8

C1-2

C7-8

W1-7

BOTTOM CHORDS

WEBS

C2-3

W2-7

C6-7

W3-7

W3-6

C2-4

8

7

6

C5-6

W4-6

C4-5

5

4

TOP CHORD

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.

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⚠ 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 T or 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.

21. The design does not take into account any dynamic or other loads other than those expressly stated.