



MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

Re: 230580
Lot 10 TCR

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Wheeler - Waverly.

Pages or sheets covered by this seal: I59608219 thru I59608220

My license renewal date for the state of Kansas is April 30, 2024.

Kansas COA: E-943



July 19, 2023

Garcia, Juan

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.

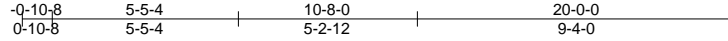
Job	Truss	Truss Type	Qty	Ply	Lot 10 TCR
230580	B2	Piggyback Base	6	1	

I59608219

Wheeler Lumber, Waverly, KS - 66871,

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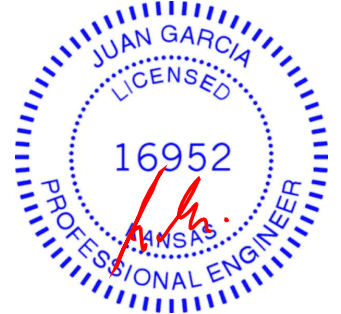
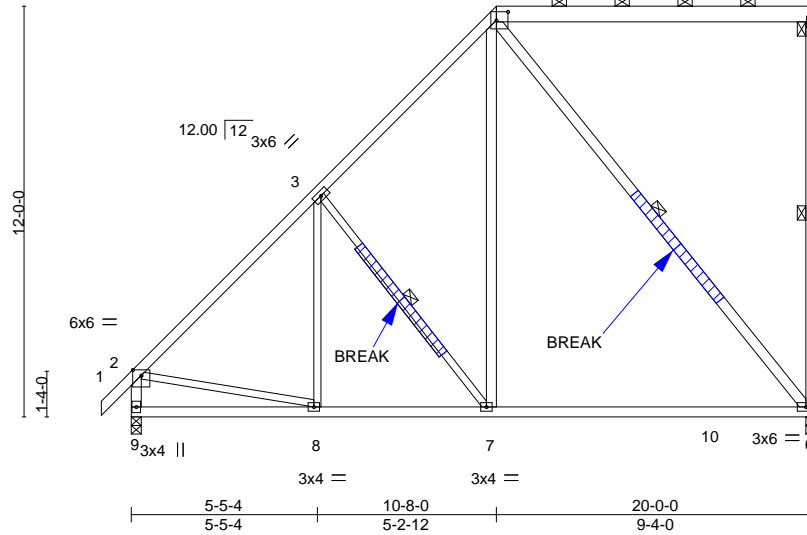
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REPAIR:
BREAK IN MEMBER 3-7 LOCATED 4-0-0 FROM JOINT 7.
BREAK IN MEMBER 4-6 LOCATED 6-0-0 FROM JOINT 6.

6x6 = 3x4 ||

Scale = 1:67.3



APPLY 2 X 4 X 4' SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS CENTERED ON DAMAGE/SPLICE OR AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X,Y)-- [4:0-4-1,0-3-0]

LOADING (psf)	SPACING-	CSL	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof) 25.0	2-0-0	TC 0.71	Vert(LL)	-0.30	6-7	>796	MT20	197/144
Snow (Pf/Pg) 20.4/20.0	Plate Grip DOL 1.15	BC 0.49	Vert(CT)	-0.46	6-7	>509		
TCDL 10.0	Lumber DOL 1.15	WB 0.71	Horz(CT)	0.01	6	n/a		
BCLL 0.0 *	Rep Stress Incr YES	Matrix-S	Wind(LL)	0.01	7-8	>999		
BCDL 10.0	Code IBC2018/TPI2014						Weight: 117 lb	FT = 10%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
4-5: 2x6 SPF No.2
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except*
3-8,3-7,2-8: 2x3 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 5-9-15 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-6, 3-7, 4-6

REACTIONS.

(size) 6=0-3-8, 9=0-3-8
Max Horz 9=315(LC 10)
Max Uplift 6=68(LC 7)
Max Grav 6=975(LC 3), 9=1006(LC 22)

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

TOP CHORD 2-3=-944/0, 3-4=-747/26, 5-6=-317/77, 2-9=-903/0
BOT CHORD 8-9=-354/250, 7-8=-182/649, 6-7=-70/455
WEBS 3-7=-299/181, 4-7=-32/642, 4-6=-716/115, 2-8=0/496

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=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 exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCCL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- 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 100 lb uplift at joint(s) 6.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

July 19,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



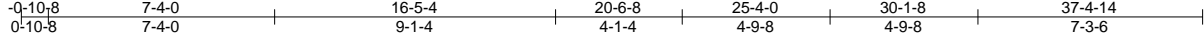
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 10 TCR	
230580	E5	Hip	1	1		I59608220

Wheeler Lumber, Waverly, KS - 66871,

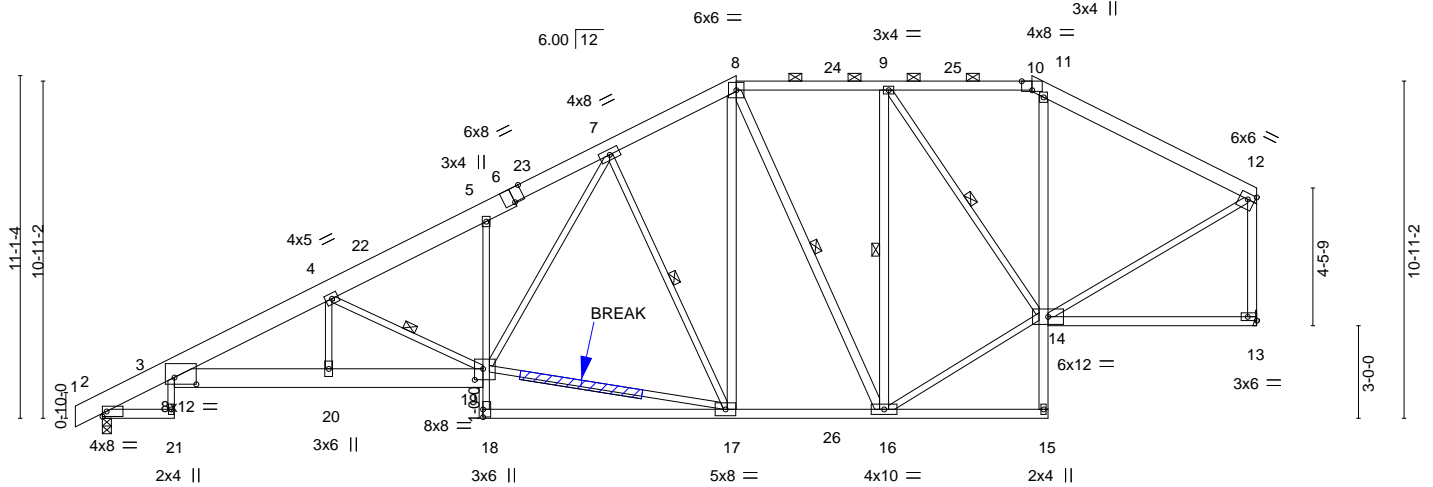
8.430 s Jan 6 2022 MiTek Industries, Inc. Tue Jul 18 15:58:01 2023 Page 1

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REPAIR: BREAK IN MEMBER 17-19 LOCATED 3-0-0 FROM JOINT 19.

Scale = 1:74.7



APPLY 2 X 4 X 5' SPF/DF/SP NO.2 SCAB(S) TO EACH FACE OF TRUSS CENTERED ON BREAK. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 ROWS, SPACED @ 4" O.C. STAGGER NAIL SPACING FROM FRONT FACE AND BACK FACE FOR A NET 2" O.C SPACING IN THE TRUSS. USE 2" MEMBER END DISTANCE.



Plate Offsets (X,Y)-- [3:0-8-8,0-2-10], [6:0-4-0,Edge], [10:0-4-0,Edge], [12:Edge,0-2-4], [13:Edge,0-1-8], [19:0-3-4,0-4-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	2-0-0	TC	0.81			MT20	197/144
Snow (Pf/Pg)	20.4/20.0	Plate Grip DOL 1.15	BC	0.65				
TCDL	10.0	Lumber DOL 1.15	WB	0.88				
BCLL	0.0 *	Rep Stress Incr YES	Matrix-S					
BCDL	10.0	Code IBC2018/TPI2014						
							Weight: 255 lb	FT = 10%

LUMBER-

TOP CHORD 2x6 SPF No.2 *Except*
8-10: 2x4 SPF No.2, 1-6: 2x8 SP DSS
BOT CHORD 2x4 SPF No.2 *Except*
3-19: 2x8 SP DSS, 5-18: 2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except*
8-17,9-16,8-16,12-13: 2x4 SPF No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied or 2-10-13 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-5 max.): 8-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 2-21,15-16.
WEBS 1 Row at midpt 7-17, 9-16, 8-16, 9-14, 4-19

REACTIONS.

(size) 2=0-3-8, 13=Mechanical
Max Horz 2=206(LC 9)
Max Uplift 2=31(LC 12)
Max Grav 2=1797(LC 3), 13=1744(LC 3)

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

TOP CHORD 2-3=-1026/0, 3-4=-4032/106, 4-5=-3018/83, 5-7=-2933/148, 7-8=-1786/86,
8-9=-1357/68, 9-10=-1291/37, 10-11=-1277/39, 11-12=-1546/26, 12-13=-1625/0
BOT CHORD 3-20=-215/3746, 19-20=-213/3753, 5-19=-259/92, 16-17=-9/1534, 11-14=0/400
WEBS 8-17=-47/1002, 17-19=-64/1739, 7-19=-112/1348, 7-17=-1083/160, 9-16=-384/86,
8-16=-544/58, 14-16=-14/1560, 4-19=-1333/135, 4-20=0/295, 12-14=0/1485

NOTES-

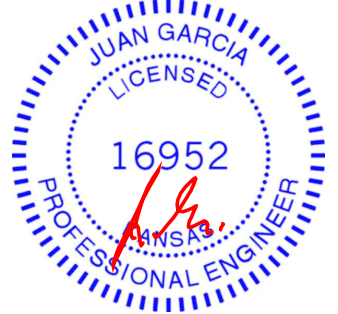
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=25.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=20.0 psf; Pf=20.4 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10, Lu=50-0-0; Min. flat roof snow load governs. Rain surcharge applied to all exposed surfaces with slopes less than 0.500/12 in accordance with IBC 1608.3.4.
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 15.4 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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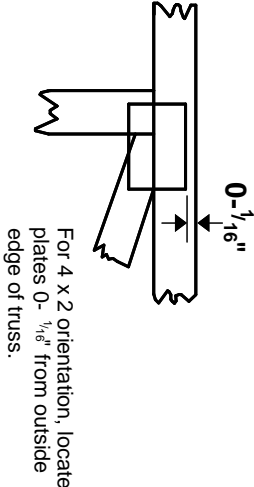
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Symbols

PLATE LOCATION AND ORIENTATION



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

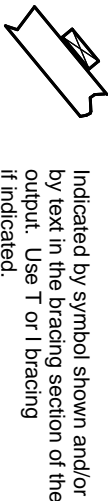
This symbol indicates the required direction of slots in connector plates.

PLATE SIZE

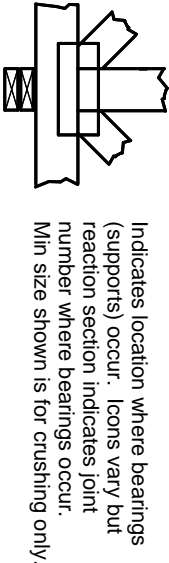
4 X 4

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

LATERAL BRACING LOCATION



BEARING



Industry Standards:
ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: 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.

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Mitek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

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