

Re: 251276  
REUNION @ BLACKWELL

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

Pages or sheets covered by this seal: I77929696 thru I77929697

My license renewal date for the state of Missouri is December 31, 2026.

Missouri COA: Engineering 001193

**RELEASED FOR  
CONSTRUCTION**  
As Noted on Plans Review

Development Services Department  
Lee's Summit, Missouri  
12/03/2025

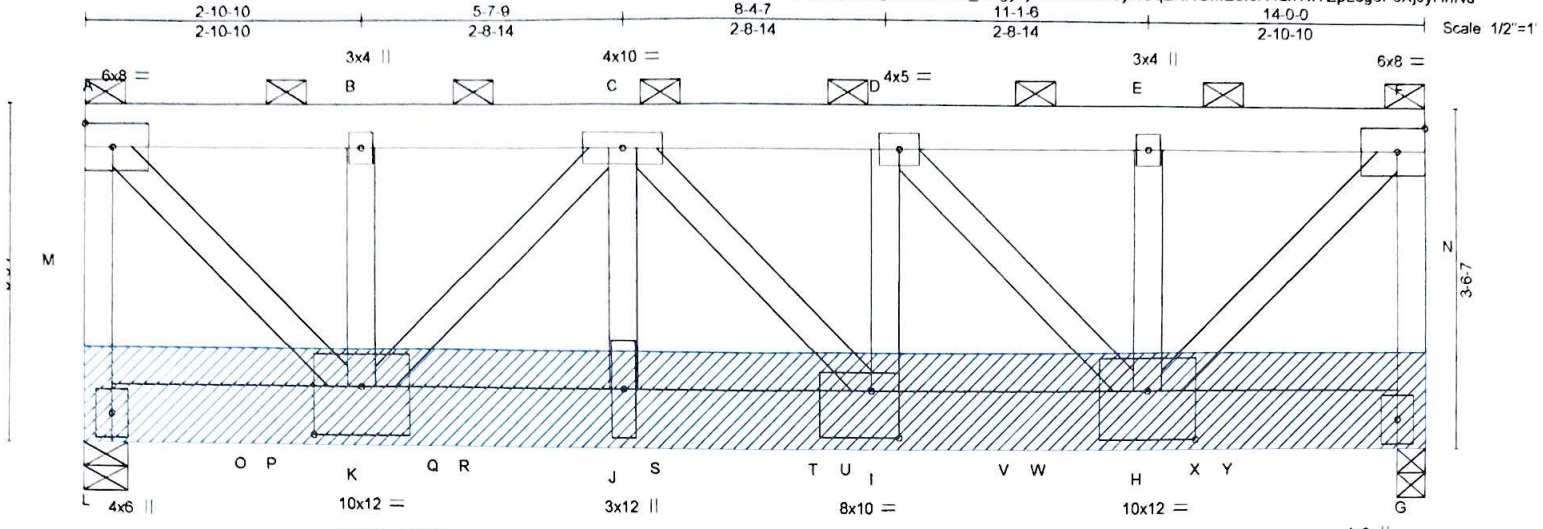


November 20, 2025

Lu, Jie , Engineer

**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.

Heartland Truss, LLC, Plattsburg, MO - 64477, 8 830 s Sep 3 2025 MiTek Industries, Inc. Wed Nov 19 07 28 54 2025 Page 1  
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APPLY 1 75" X 11 875" LVL SCAB TO ONE FACE OF TRUSS  
 ATTACH WITH MiTek Pro Series WS/WSWH45 WOOD SCREWS OR EQUIVALENT FASTENER PER THE FOLLOWING SCHEDULE 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS SPACED @ 4" O C FOR END VERTICALS AND BOTTOM CHORD, AND APPLY A MINIMUM OF (1) SCREW TO EACH INTERSECTING INTERIOR WEB USE 4" MEMBER END DISTANCE AND 1-1/4" EDGE DISTANCE DO NOT OVERDRIVE THE SCREWS OR DRILL THROUGH METAL CONNECTOR PLATES ALL SCREWS MUST BE INSTALLED FROM LVL FACE OF TRUSS MINIMUM LVL SPEC {FB=2650 PSI, FV=250 PSI, E=1,900,000 PSI}

2-10-10	5-7-9	8-4-7	11-1-6	14-0-0
2-10-10	2-8-14	2-8-14	2-8-14	2-10-10

Plate Offsets (X,Y)-- [H 0-6-0,0-6-0], [I 0-3-8,0-5-12], [K 0-6-0,0-6-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0 (Roof Snow=20.0)	Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO Code IRC2018/TPI2014	TC 0.77 BC 0.34 WB 0.70 Matrix-MS	Vert(LL) -0.06 Horz(CT) -0.11 Wind(LL) 0.05	I-J I-J G I-J	>999 >999 n/a >999	360 240 n/a 240	MT20	244/190
TCDL 10.0							Weight: 248 lb	FT = 20%
BCLL 10.0								
BCDL 10.0								

**LUMBER-**  
 TOP CHORD 2x6 SP No.1  
 BOT CHORD 2x8 SP 2400F 2.0E  
 WEBS 2x4 SP No.3 \*Except\*  
 A-K,C-K,C-I,D-H,F-H: 2x4 SP 1650F 1.5E

**BRACING-**  
 TOP CHORD 2-0-0 oc purlins (6-0-0 max.); A-F, except end verticals.  
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS.** (size) L=0-5-8, G=0-3-8  
 Max Horz L=69(LC 8)  
 Max Uplift L=889(LC 8), G=1046(LC 9)  
 Max Grav L=6278(LC 2), G=7437(LC 2)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD A-L=5538/1059, A-B=4981/882, B-C=4981/882, C-D=7480/1357, D-E=4866/890, E-F=4866/890, F-G=5416/1036  
 BOT CHORD J-K=1269/7420, I-J=1269/7420, H-I=1282/7480  
 WEBS A-K=1310/7291, C-K=3618/687, C-J=315/2505, D-I=328/2661, D-H=3878/693, F-H=1268/7126

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.  
 Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-5-0 oc.  
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
  - 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.
  - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
  - TCLL: ASCE 7-16; Pf=20.0 psf (Lum DOL = 1.15 Plate DOL = 1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
  - Unbalanced snow loads have been considered for this design.
  - 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.
  - Bearing at joint(s) L, G considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide metal plate or equivalent at bearing(s) G to support reaction shown.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (it=lb) L=889, G=1046.



November 20, 2025

Job 251276	Truss FL	Truss Type Flat Girder	Qty 1	Ply 2	REUNION @ BLACKWELL Job Reference (optional)	177929697
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Heartland Truss, LLC, Plattsburg, MO - 64477,

8 830 s Sep 3 2025 MiTek Industries, Inc Wed Nov 19 07 28 54 2025 Page 2  
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**NOTES-**

- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1508 lb down and 220 lb up at 1-8-12, 335 lb down and 48 lb up at 2-0-12, 1508 lb down and 220 lb up at 3-8-12, 335 lb down and 48 lb up at 4-0-12, 1508 lb down and 220 lb up at 5-8-12, 335 lb down and 48 lb up at 6-0-12, 1508 lb down and 220 lb up at 7-8-12, 335 lb down and 48 lb up at 8-0-12, 1508 lb down and 220 lb up at 9-8-12, 335 lb down and 48 lb up at 10-0-12, 1508 lb down and 220 lb up at 11-8-12, and 335 lb down and 48 lb up at 12-0-12, and 1521 lb down and 213 lb up at 13-10-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert. A-F=60, G-L=20

Concentrated Loads (lb)

Vert. J=-1446(B) G=-1453(B) O=-1446(B) P=-335(F) Q=-1446(B) R=-335(F) S=-335(F) T=-1446(B) U=-335(F) V=-1446(B) W=-335(F) X=-1446(B) Y=-335(F)

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MI-7473 rev. 1/2/2023 BEFORE USE.**

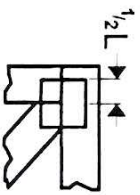
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com).

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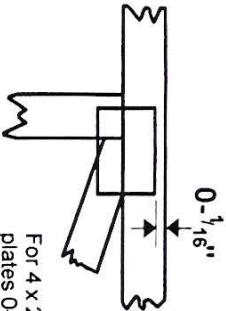
16023 Swingley Ridge Rd  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

# 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-<sup>1</sup>/<sub>16</sub>\" from outside edge of truss.



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

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

## PLATE SIZE

4 X 4

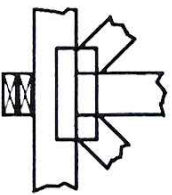
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## 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.

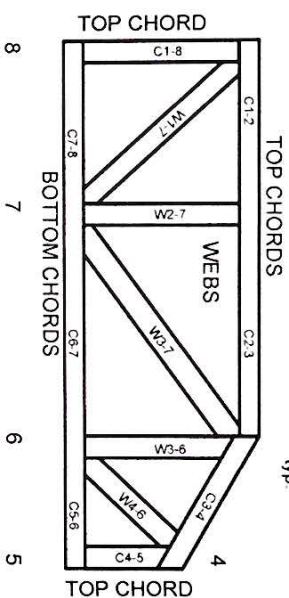
## BEARING



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/TPI1: 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, Restraint & 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/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

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

# MITek®

MITek Engineering Reference Sheet: Mill-7473 rev. 1/22/2023