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

Re: 2683768
SUMMIT/WOODSIDE RIDGE #38/MO

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

Pages or sheets covered by this seal: I49456060 thru I49456075

My license renewal date for the state of Missouri is December 31, 2023.

Missouri COA: Engineering 001193

December 29,2021

Sevier, Scott ,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.

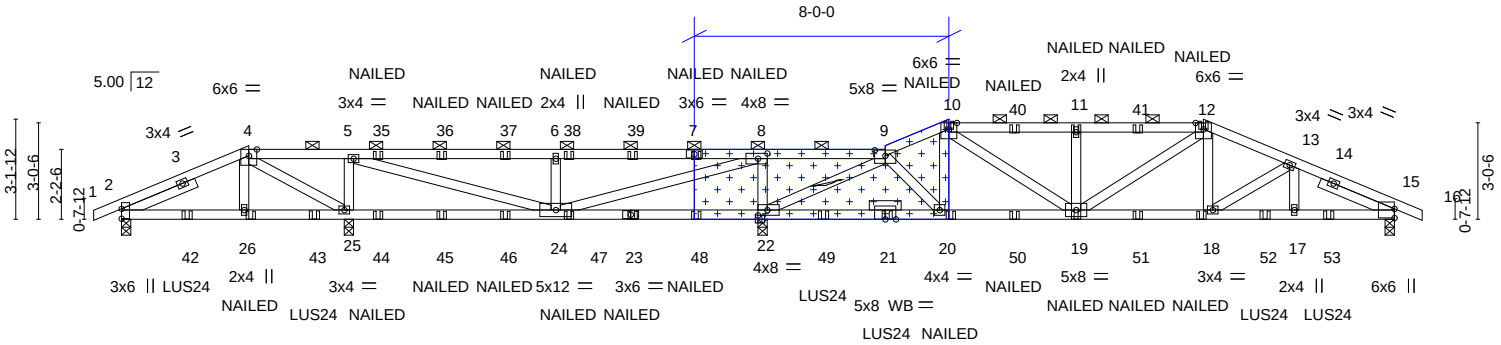
Job	Truss	Truss Type	Qty	Ply	SUMMIT/WOODSIDE RIDGE #38/MO I49456060
2683768	A1	ROOF SPECIAL GIRDER	1	1	Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Dec 28 13:20:09 2021 Page 1
ID:ggMHuYjvKTSNSqRK_pqYByzXhju-VW1uJAEKG_W3O7QiBXQS5PmHXo8urY_hH7jPcGy4QUK

-0-10-8 4-0-0 7-1-12 9-0-0 13-7-12 14-0-0 19-0-0 20-1-12 24-0-0 26-0-0 30-0-0 34-0-0 36-10-4 40-0-0 40-10-8
0-10-8 4-0-0 3-1-12 1-10-4 4-7-12 0-4-4 5-0-0 1-1-12 3-10-4 2-0-0 4-0-0 4-0-0 2-10-4 3-1-12 0-10-8

Scale = 1:72.4

REPAIR: MEMBER 9-22 HAS 12" BREAK AT MIDPOINT



ATTACH < 2 LAYERS > 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1)
TO ONE FACE OF TRUSS WITH (0.131" X 3.0") NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 2" O.C.
USE 2" MEMBER END DISTANCE. GLUE PLYWOOD LAYERS TOGETHER PRIOR TO ATTACHING TO TRUSS.

4-0-0 7-1-12 11-5-12 13-7-12 15-9-12 20-1-12 24-0-0 26-0-0 30-0-0 34-0-0 36-10-4 40-0-0
4-0-0 3-1-12 4-4-0 2-2-0 2-2-0 4-4-0 3-10-4 2-0-0 4-0-0 4-0-0 2-10-4 3-1-12

Plate Offsets (X,Y)-- [8:0-3-8,0-2-0], [9:0-4-0,0-2-2], [22:0-3-8,0-2-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.11	18-19	>999	240	MT20	197/144
TCDL	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.24	18-19	>986	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.62	Horz(CT)	0.04	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 162 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SPF No.2 *Except* 7-9: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF 1650F 1.5E *Except* 21-23: 2x4 SP 2400F 2.0E
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
SLIDER Left 2x4 SPF No.2 2-6-0, Right 2x4 SPF No.2 2-6-0

BRACING-
TOP CHORD Structural wood sheathing directly applied or 2-10-4 oc purlins, except 2-0-0 oc purlins (2-10-1 max.): 4-9, 10-12.
BOT CHORD Rigid ceiling directly applied or 4-10-5 oc bracing.

REACTIONS. All bearings 0-3-8.
(lb) - Max Horz 2=-49(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-131(LC 8), 15=-449(LC 9), 25=-359(LC 8), 22=-809(LC 4)
Max Grav All reactions 250 lb or less at joint(s) except 2=621(LC 21), 15=2034(LC 1), 25=1733(LC 21), 22=3695(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-4=-640/145, 4-5=-83/532, 5-6=-307/82, 6-8=-307/82, 8-9=-467/2165, 9-10=-2319/561, 10-11=-3161/778, 11-12=-3161/778, 12-13=-3143/734, 13-15=-3473/790
BOT CHORD 2-26=-93/425, 25-26=-86/387, 24-25=-532/132, 22-24=-2164/515, 20-22=-298/1390, 19-20=-461/2143, 18-19=-613/2878, 17-18=-662/3128, 15-17=-662/3128
WEBS 4-26=-94/514, 9-20=-239/1121, 10-19=-298/1262, 11-19=-668/212, 12-19=-109/420, 12-18=-114/526, 13-18=-267/106, 13-17=-70/347, 5-25=-847/265, 8-22=-1428/383, 9-22=-3984/911, 4-25=-1080/231, 6-24=-797/305, 5-24=-172/852, 8-24=-558/2522

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; 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
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 131 lb uplift at joint 2, 449 lb uplift at joint 15, 359 lb uplift at joint 25 and 809 lb uplift at joint 22.
6) 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.
7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
8) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 16-0-0 oc max. starting at 2-0-12 from the left end to 37-11-4 to connect truss(es) to front face of bottom chord.
9) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 11-10-8 oc max. starting at 24-0-12 from the left end to 35-11-4 to connect truss(es) to front face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

(continued on page 2)

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

December 29,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

NOTES-

11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) 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=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-90, 4-9=-90, 9-10=-90, 10-12=-90, 12-16=-90, 27-31=-20
   Concentrated Loads (lb)
   Vert: 7=-60(F) 10=-90(F) 12=-90(F) 23=-27(F) 26=-207(F) 20=-111(F) 11=-90(F) 19=-111(F) 18=-111(F) 8=-107(F) 21=-306(F) 35=-60(F) 36=-60(F) 37=-60(F) 38=-60(F) 39=-60(F) 40=-90(F) 41=-90(F) 42=-319(F) 43=-216(F) 44=-27(F) 45=-27(F) 46=-27(F) 47=-27(F) 48=-27(F) 49=-216(F) 50=-111(F) 51=-111(F) 52=-306(F) 53=-319(F)

Job	Truss	Truss Type	Qty	Ply	SUMMIT/WOODSIDE RIDGE #38/MO
2683768	A18	HIP GIRDER	1	2	I49456061

Job Reference (optional)

Builders FirstSource (Valley Center), Valley Center, KS - 67147, 8.430 s Aug 16 2021 MiTek Industries, Inc. Tue Dec 28 13:20:12 2021 Page 1
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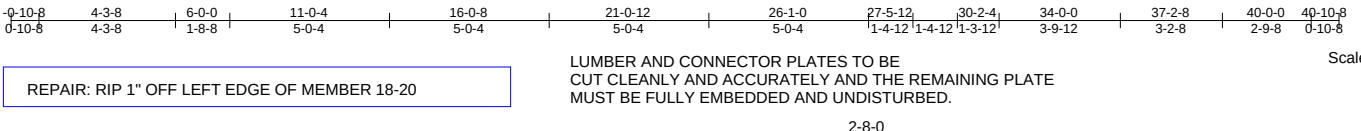
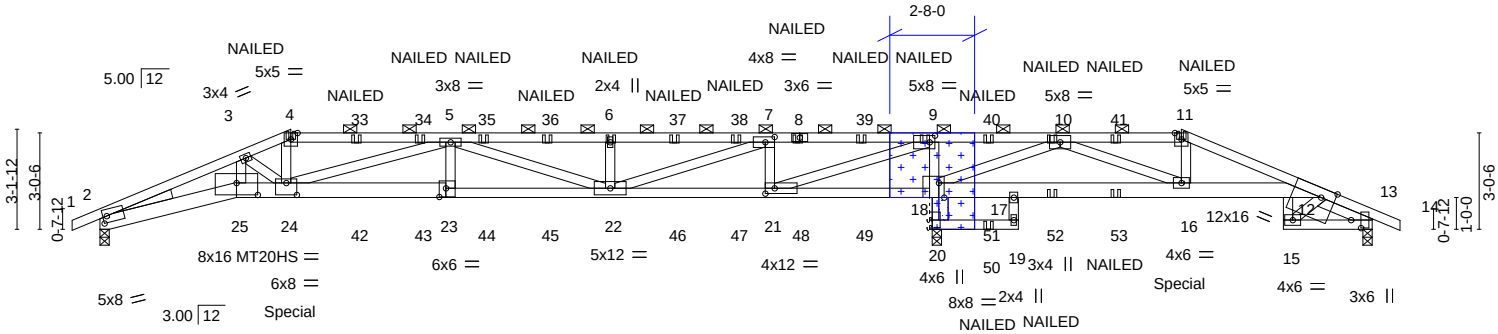


Scale = 1:72.4

REPAIR: RIP 1" OFF LEFT EDGE OF MEMBER 18-20

LUMBER AND CONNECTOR PLATES TO BE CUT CLEANLY AND ACCURATELY AND THE REMAINING PLATE MUST BE FULLY EMBEDDED AND UNDISTURBED.



INSTALL (2 PLY) 2 X 4 SPF NO.2
CUT TO FIT TIGHT. ATTACH PLIES WITH ONE ROW OF (0.131 X 3") NAILS SPACED 9" O.C.

ATTACH < 2 LAYERS > 3/4" PLYWOOD OR OSB GUSSET (23/32" RATED SHEATHING 48/24 EXP 1) TO EACH FACE OF TRUSS WITH (0.131" X 3.0") NAILS PER THE FOLLOWING NAIL SCHEDULE:
2 X 3'S - 2 ROWS, 2 X 4'S - 3 ROWS, 2 X 6'S AND LARGER - 4 ROWS: SPACED @ 3" O.C.
USE 2" MEMBER END DISTANCE. GLUE PLYWOOD LAYERS TOGETHER PRIOR TO ATTACHING TO TRUSS.

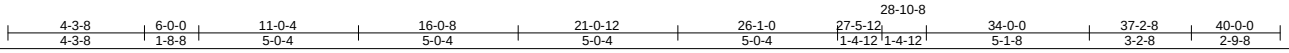


Plate Offsets (X,Y)-- [2:0-1-7,0-2-8], [7:0-3-8,0-2-0], [9:0-2-0,0-2-8], [12:0-5-4,Edge], [13:0-3-0,0-3-12], [18:0-2-0,Edge], [21:0-3-8,0-2-0], [23:0-2-8,0-3-4], [24:0-4-0,0-4-8], [25:0-8-0,0-4-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.29	22-23	>999	240	MT20	197/144
TCDL	20.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.64	22-23	>492	180	MT20HS	148/108
BCLL	0.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 339 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SPF No.2 *Except*
8-11: 2x4 SPF 1650F 1.5E
BOT CHORD 2x4 SPF No.2 *Except*
2-25,23-25: 2x6 SPF 2100F 1.8E, 19-20,13-15: 2x4 SP 2400F 2.0E
12-18: 2x6 SPF No.2, 18-23: 2x4 SPF 1650F 1.5E
WEBS 2x4 SPF No.2 *Except*
9-21: 2x4 SPF 1650F 1.5E
WEDGE
Left: 2x4 SP No.3
SLIDER Right 2x4 SPF No.2 1-9-0

BRACING-

TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins, except
2-0-0 oc purlins (4-1-5 max.): 4-11.
BOT CHORD Rigid ceiling directly applied or 4-11-7 oc bracing. Except:
10-0-0 oc bracing: 12-16

REACTIONS. (size) 2=0-3-8, 20=0-3-8, 13=0-3-8
Max Horz 2=-49(LC 34)
Max Uplift 2=-548(LC 8), 20=-1419(LC 4), 13=-133(LC 9)
Max Grav 2=2284(LC 21), 20=5844(LC 1), 13=502(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-7515/1861, 3-4=-7061/1791, 4-5=-6504/1661, 5-6=-6000/1549, 6-7=-6000/1549, 7-9=-1135/349, 9-10=-1684/7257, 10-11=-497/231, 11-12=-561/226
BOT CHORD 2-25=-1709/6876, 24-25=-1673/6732, 23-24=-1939/7824, 22-23=-1935/7797, 21-22=-272/1135, 18-21=-7391/1770, 18-20=-5752/1413, 9-18=-3536/898, 17-18=-2644/662, 16-17=-2795/697, 12-16=-117/482
WEBS 3-25=-117/561, 3-24=-304/249, 4-24=-477/1909, 5-24=-1453/404, 5-23=-50/291, 5-22=-1947/474, 6-22=-655/196, 7-22=-1293/5194, 7-21=-2326/597, 9-21=-2153/8803, 11-16=-334/134, 10-18=-4837/1197, 10-16=-723/3507

NOTES-

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-7-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-7-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) 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.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=4.2psf; h=25ft; Cat. II; Exp C; 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
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

Continued on page 2

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

December 29,2021

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NOTES-

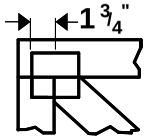
8) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 548 lb uplift at joint 2, 1419 lb uplift at joint 20 and 133 lb uplift at joint 13.
10) 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.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 473 lb down and 145 lb up at 6-0-0, 120 lb down and 57 lb up at 6-0-12, 120 lb down and 57 lb up at 8-0-12, 120 lb down and 57 lb up at 10-0-12, 116 lb down and 56 lb up at 12-0-12, 116 lb down and 56 lb up at 14-0-12, 116 lb down and 56 lb up at 16-0-12, 116 lb down and 56 lb up at 18-0-12, 116 lb down and 56 lb up at 20-0-0, 116 lb down and 56 lb up at 21-11-4, 116 lb down and 56 lb up at 23-11-4, and 116 lb down and 56 lb up at 26-2-12, and 611 lb down and 203 lb up at 33-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

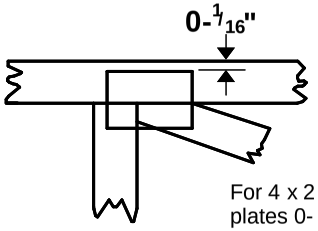
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-4=-90, 4-11=-90, 11-12=-90, 12-14=-90, 25-26=-20, 18-25=-20, 19-20=-20, 12-17=-20, 15-29=-20
   Concentrated Loads (lb)
   Vert: 4=-89(B) 8=-84(B) 9=-84(B) 18=-116 24=-593(B=-473) 22=-116 6=-84(B) 11=-116(B) 16=-611(B) 10=-116(B) 33=-89(B) 34=-89(B) 35=-84(B) 36=-84(B) 37=-84(B) 38=-84(B) 39=-84(B) 40=-90(B) 41=-116(B) 42=-120 43=-120 44=-116 45=-116 46=-116 47=-116 48=-116 49=-116 50=-111(B) 52=-85(B) 53=-85(B)

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.

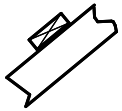
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

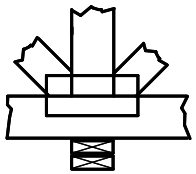
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

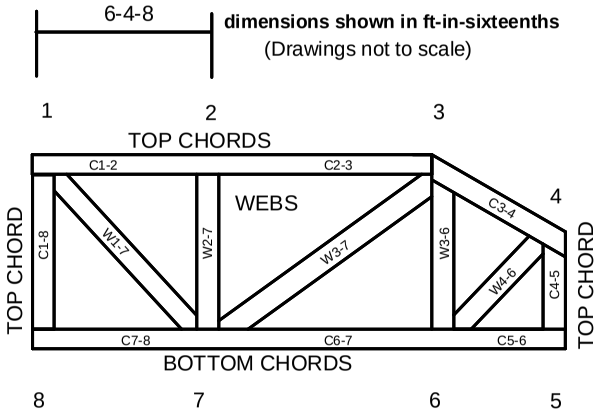


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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 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.