



RE: P220523-P220523-02
Roof

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

Site Information:

Customer: Clover & Hive Project Name: P220523-P220523-02
Lot/Block: 51 Model:
Address: TBD Subdivision: Osage
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 25 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I55389392	A1	11/22/2022	21	I55389412	V4	11/22/2022
2	I55389393	A2	11/22/2022	22	I55389413	V5	11/22/2022
3	I55389394	A3	11/22/2022	23	I55389414	V6	11/22/2022
4	I55389395	A4	11/22/2022	24	I55389415	V7	11/22/2022
5	I55389396	A5	11/22/2022	25	I55389416	V8	11/22/2022
6	I55389397	A6	11/22/2022				
7	I55389398	B1	11/22/2022				
8	I55389399	B2	11/22/2022				
9	I55389400	B3	11/22/2022				
10	I55389401	C1	11/22/2022				
11	I55389402	C2	11/22/2022				
12	I55389403	C3	11/22/2022				
13	I55389404	C4	11/22/2022				
14	I55389405	D1	11/22/2022				
15	I55389406	D2	11/22/2022				
16	I55389407	PB1	11/22/2022				
17	I55389408	PB2	11/22/2022				
18	I55389409	V1	11/22/2022				
19	I55389410	V2	11/22/2022				
20	I55389411	V3	11/22/2022				

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

Truss Design Engineer's Name: Sevier, Scott

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

Missouri COA: 001193

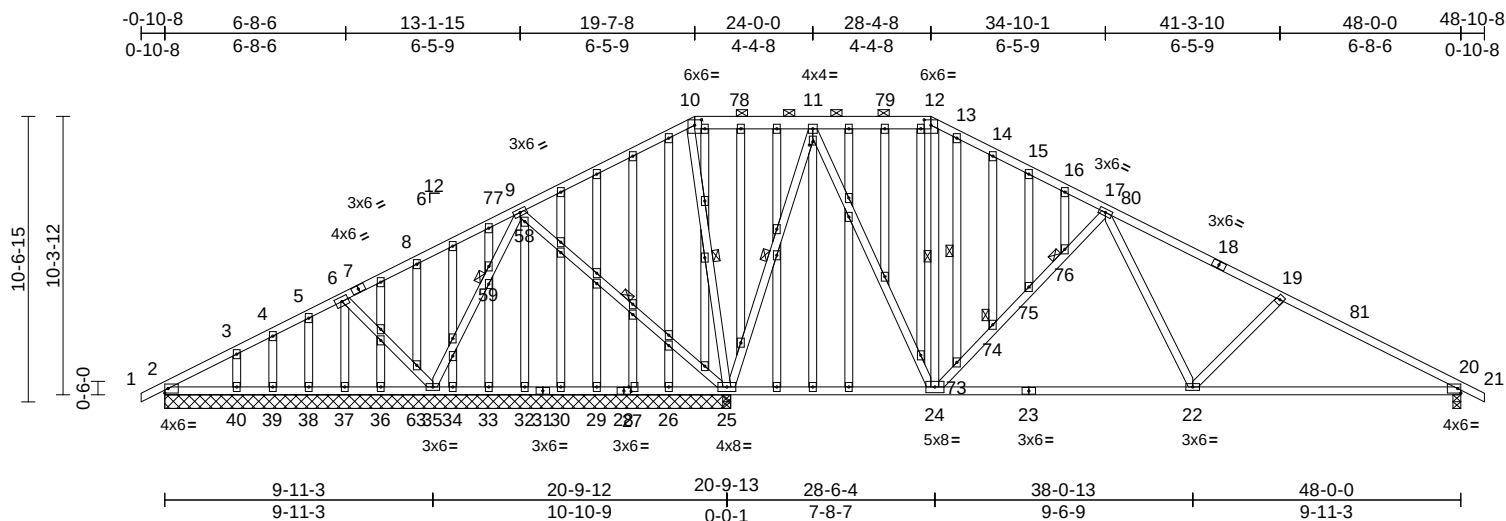
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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.



November 22, 2022

Truss Type	Qty	Ply	Roof	I55389392
Piggyback Base Structural Gable	2	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:41 Page: 1
ID:EmCXOIYXCMLE5Kd?OVTvI7yGxE5-RfC?PsB70Hq3NSgPqL8w3uITxbGKwRcd0i7J4zJC?f



Scale = 1:85.3

Plate Offsets (X, Y): [10:0-3-0,0-2-7], [11:0-1-7,0-1-8], [12:0-3-0,0-2-7], [27:0-2-0,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.23	20-22	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.49	20-22	>668	180	
BCLL	0.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.02	20	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 419 lb FT = 20%											

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 10-12:2x6 SPF No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3
OTHERS 2x4 SPF No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-2 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 10-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 22-24 2-2-0 oc bracing: 20-22.
WEBS 1 Row at midpt 9-25, 10-25, 11-25, 12-24, 13-73
JOINTS 1 Brace at Jt(s): 59, 74, 76

REACTIONS (size)
2=20-11-8, 20=0-3-8, 25=20-11-8, 26=20-11-8, 27=20-11-8, 29=20-11-8, 30=20-11-8, 32=20-11-8, 33=20-11-8, 34=20-11-8, 35=20-11-8, 36=20-11-8, 37=20-11-8, 38=20-11-8, 39=20-11-8, 40=20-11-8
Max Horiz 2=193 (LC 16)
Max Uplift 2=26 (LC 13), 20=229 (LC 13), 25=250 (LC 13), 26=51 (LC 3), 32=81 (LC 12), 35=210 (LC 12), 38=2 (LC 12), 39=35 (LC 12), 40=84 (LC 12)
Max Grav 2=187 (LC 25), 20=1063 (LC 26), 25=2315 (LC 1), 26=9 (LC 13), 27=99 (LC 3), 29=41 (LC 3), 30=57 (LC 3), 32=203 (LC 1), 33=50 (LC 3), 34=29 (LC 3), 35=369 (LC 25), 36=71 (LC 3), 37=46 (LC 3), 38=69 (LC 25), 39=97 (LC 1), 40=224 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-127/174, 3-4=-60/159, 4-5=-52/155, 5-6=-23/175, 6-8=-57/271, 8-9=0/334, 9-10=0/704, 10-11=0/627, 11-12=-264/243, 12-13=-232/221, 13-14=-273/216, 14-15=-305/204, 15-16=-317/181, 16-17=-413/196, 17-19=-1286/329, 19-20=-1595/367, 20-21=0/17
BOT CHORD 2-40=-139/182, 39-40=-139/182, 38-39=-139/182, 37-38=-139/182, 36-37=-139/182, 35-36=-139/182, 34-35=-340/254, 33-34=-340/254, 32-33=-340/254, 30-32=-340/254, 29-30=-340/254, 27-29=-340/254, 26-27=-340/254, 25-26=-340/254, 24-25=-220/281, 22-24=-26/808, 20-22=-226/1343
WEBS 6-63=-212/125, 35-63=-324/193, 35-59=-63/329, 9-59=-68/341, 9-58=-486/204, 25-58=-352/140, 10-25=-647/119, 11-25=-1377/253, 11-24=-193/1107, 12-24=-236/60, 24-73=-817/320, 73-74=-816/325, 74-75=-806/315, 75-76=-758/286, 17-76=-831/325, 17-22=-75/577, 19-22=-415/262, 32-58=-178/96, 33-59=-5/13, 8-63=-150/90, 5-38=-38/19, 4-39=-85/48, 3-40=-165/108, 13-73=-8/6, 14-74=-14/13, 15-75=-67/40, 16-76=-53/100

NOTES
1) 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-0-0, Interior (1) 4-0-0 to 19-7-8, Exterior(2R) 19-7-8 to 26-8-6, Interior (1) 26-8-6 to 28-4-8, Exterior(2R) 28-4-8 to 35-5-6, Interior (1) 35-5-6 to 48-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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.
- Provide adequate drainage to prevent water ponding.
- All plates are 3x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



November 22, 2022

Continued on page 2

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

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/22/2022 1:43:01

Truss	Truss Type	Qty	Ply	Roof
Piggyback Base Structural Gable	2	1		I55389392
				Job Reference (optional)

Premier Building Supply (Springhill, KS) Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:41 Page: 2
ID:EmCXOIYCYML5IKd?OVtvi7yGxE5-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?f

- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2, 210 lb uplift at joint 35, 250 lb uplift at joint 25, 51 lb uplift at joint 26, 81 lb uplift at joint 32, 2 lb uplift at joint 38, 35 lb uplift at joint 39, 84 lb uplift at joint 40 and 229 lb uplift at joint 20.
- 9) 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.
- 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

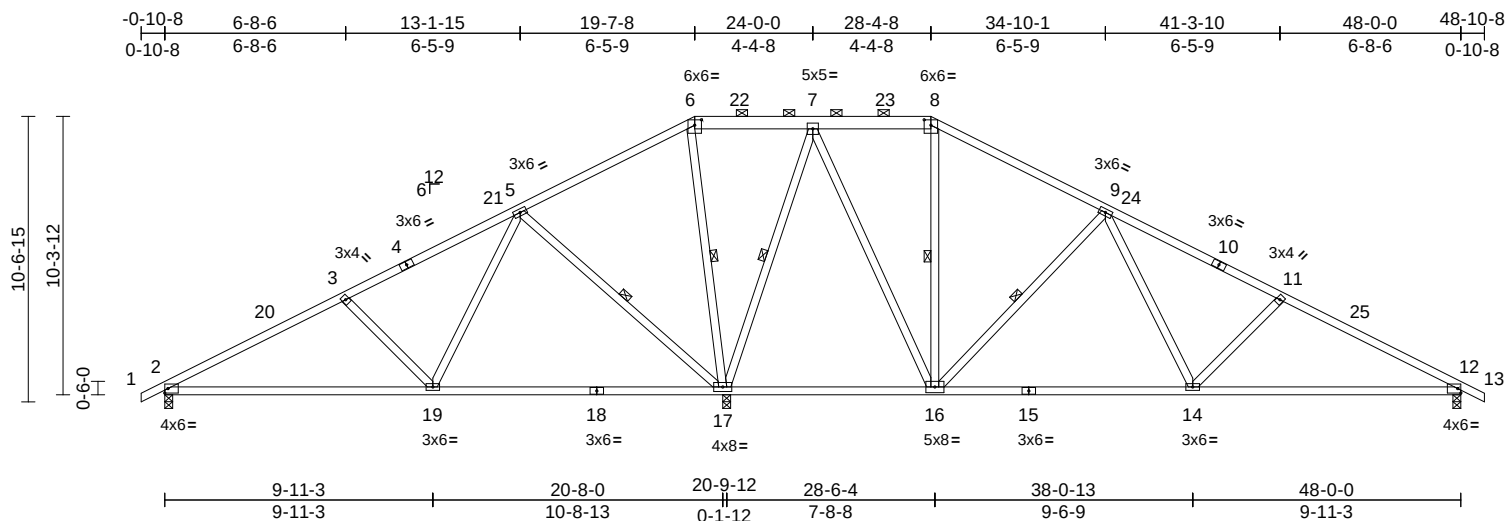
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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**
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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389393
Piggyback Base	6	1	Job Reference (optional)	

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Scale = 1:85.3

Plate Offsets (X, Y): [6:0-3-0,0-2-7], [8:0-3-0,0-2-7]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.22	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.47	12-14	>692	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.03	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 250 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 6-8:2x6 SPF No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or
3-4-7 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc
bracing.

WEBS 1 Row at midpt 5-17, 6-17, 7-17, 8-16,
9-16

REACTIONS

(size) 2=0-3-8, 12=0-3-8, 17=0-3-8
Max Horiz 2=193 (LC 12)
Max Uplift 2=-137 (LC 12), 12=-235 (LC 13),
17=-316 (LC 12)
Max Grav 2=674 (LC 25), 12=1050 (LC 26),
17=2915 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/17, 2-3=-782/171, 3-5=-466/218,
5-6=-43/993, 6-7=0/891, 7-8=-231/254,
8-9=-364/230, 9-11=-1258/342,
11-12=-1566/379, 12-13=0/17
BOT CHORD 2-19=-247/628, 17-19=-330/267,
16-17=-428/267, 14-16=-27/783,
12-14=-237/1318
WEBS 3-19=-449/267, 5-19=-69/622,
5-17=-870/326, 6-17=-767/144,
7-17=-1459/279, 7-16=-187/1185,
8-16=-322/71, 9-16=-820/318, 9-14=-71/584,
11-14=-419/259

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=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8,
Interior (1) 4-1-8 to 19-7-8, Exterior(2R) 19-7-8 to
26-8-6, Interior (1) 26-8-6 to 28-4-8, Exterior(2R) 28-4-8
to 35-5-6, Interior (1) 35-5-6 to 48-10-8 zone; cantilever
left and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 137 lb uplift at
joint 2, 316 lb uplift at joint 17 and 235 lb uplift at joint
12.
- 7) 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.
- 8) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.

LOAD CASE(S) Standard



November 22, 2022

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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

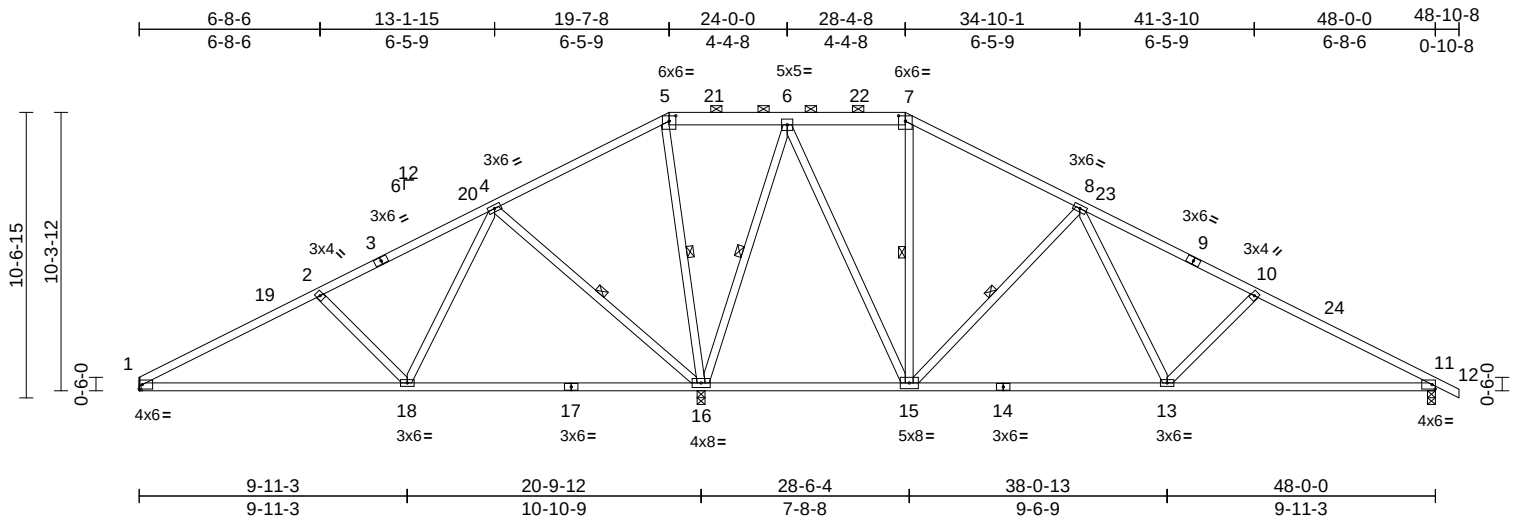


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389394
Piggyback Base	2	1	Job Reference (optional)	

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Page: 1



Scale = 1:85.3

Plate Offsets (X, Y): [5:0-3-0,0-2-7], [7:0-3-0,0-2-7]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.22	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.47	11-13	>692	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.03	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 248 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x6 SPF No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-4-13 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 4-16, 5-16, 6-16, 7-15, 8-15

REACTIONS

(size) 1= Mechanical, 11=0-3-8, 16=0-3-8
Max Horiz 1=-197 (LC 17)
Max Uplift 1=-112 (LC 12), 11=-235 (LC 13), 16=-319 (LC 12)
Max Grav 1=609 (LC 25), 11=1041 (LC 26), 16=2925 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-809/177, 2-4=-487/203, 4-5=-45/992, 5-6=0/901, 6-7=-215/253, 7-8=-345/228, 8-10=-1240/340, 10-11=-1549/378, 11-12=0/17
BOT CHORD 1-18=-254/656, 16-18=-318/267, 15-16=-455/269, 13-15=-25/767, 11-13=-235/1302
WEBS 2-18=-461/276, 4-18=-72/634, 4-16=-880/327, 5-16=-768/146, 6-16=-1462/282, 6-15=-190/1195, 7-15=-334/74, 8-15=-821/317, 8-13=-71/585, 10-13=-420/259

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=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 5-0-12, Interior (1) 5-0-12 to 19-7-8, Exterior(2R) 19-7-8 to 26-8-6, Interior (1) 26-8-6 to 28-4-8, Exterior(2R) 28-4-8 to 35-5-6, Interior (1) 35-5-6 to 48-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 1, 319 lb uplift at joint 16 and 235 lb uplift at joint 11.
- 8) 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.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 22, 2022

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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

Truss Type
Piggyback Base

Qty
2

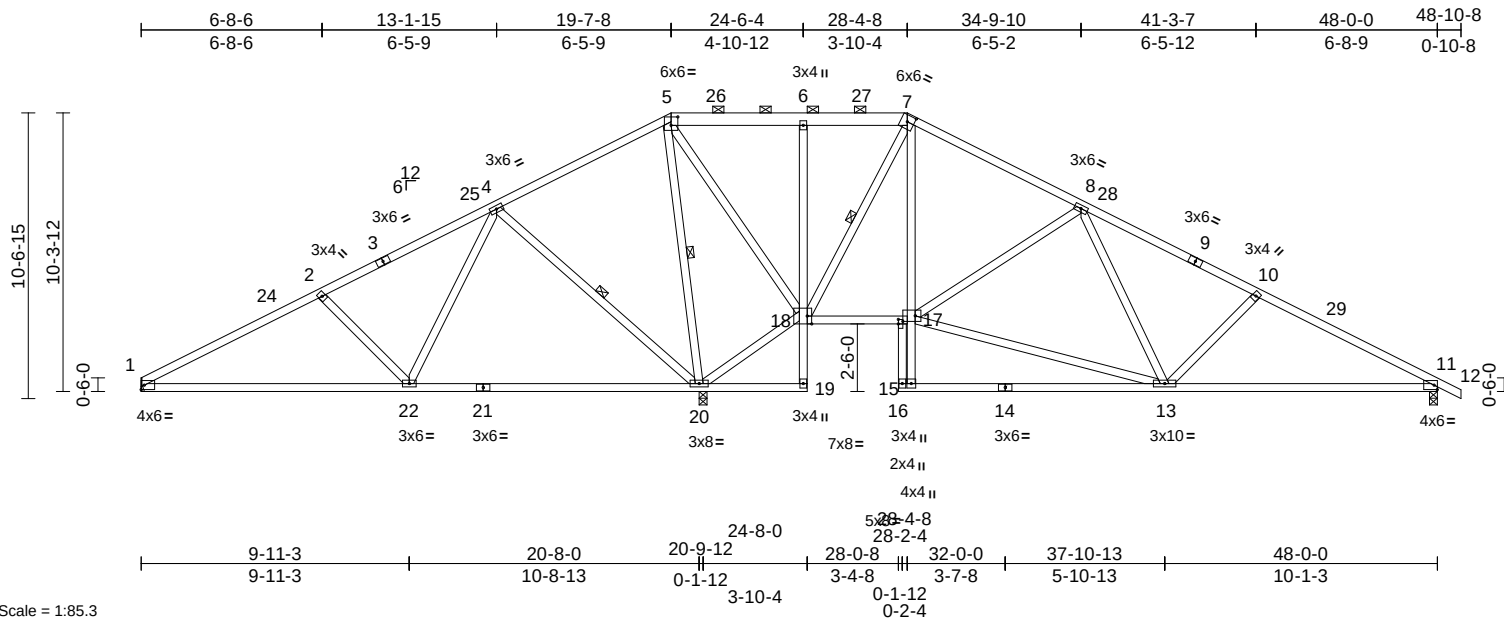
Ply
1

Roof
Job Reference (optional)

I55389395

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:46
ID:SN8pRd2hT7xgLSjSx71GYyGxNY-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDi7J4zJC?i

Page: 1



Scale = 1:85.3

Plate Offsets (X, Y): [5:0-3-0,0-3-12], [7:0-3-0,0-2-14], [17:0-5-8,0-2-8], [18:0-2-0,Edge], [23:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.23	11-13	>999	240	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.48	11-13	>676	180	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.04	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 271 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x6 SPF No.2
BOT CHORD 2x4 SP No.2 *Except* 19-6,7-15:2x4 SPF No.3
WEBS 2x4 SPF No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except: 10-0-0 oc bracing: 15-17

WEBS 1 Row at midpt 4-20, 5-20, 7-18

REACTIONS

(size) 1= Mechanical, 11=0-3-8, 20=0-3-8, (req. 0-3-9)
Max Horiz 1=-197 (LC 13)
Max Uplift 1=-120 (LC 12), 11=-237 (LC 13), 20=-299 (LC 12)
Max Grav 1=575 (LC 25), 11=1003 (LC 26), 20=3025 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-736/253, 2-4=-413/354, 4-5=-25/1116, 5-6=-3/615, 6-7=-4/612, 7-8=-295/207, 8-10=-1151/342, 10-11=-1467/382, 11-12=0/17
BOT CHORD 1-22=-270/591, 20-22=-454/260, 19-20=-25/0, 18-19=-9/0, 6-18=-326/157, 17-18=-146/248, 15-17=0/184, 7-17=-120/739, 15-16=0/0, 13-15=0/74, 11-13=-239/1230
WEBS 2-22=-465/275, 4-22=-73/634, 4-20=-878/326, 5-20=-1564/171, 18-20=-1277/395, 5-18=-69/947, 7-18=-1207/200, 8-17=-786/335, 8-13=-51/495, 10-13=-427/261, 13-17=-58/766

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 5-0-12, Interior (1) 5-0-12 to 19-7-8, Exterior(2R) 19-7-8 to 26-8-6, Interior (1) 26-8-6 to 28-4-8, Exterior(2R) 28-4-8 to 35-5-6, Interior (1) 35-5-6 to 48-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 1, 299 lb uplift at joint 20 and 237 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



November 22, 2022

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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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

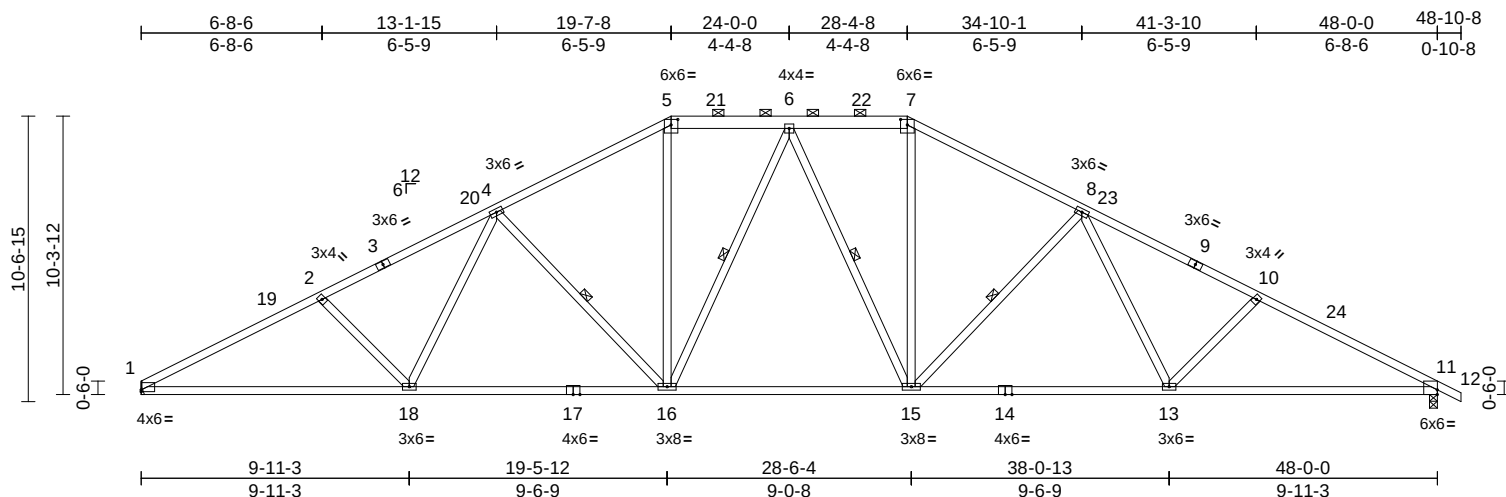
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389396
Piggyback Base	10	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:47 Page: 1
ID:waiCdBDgSnFoHVRv0eeGplyGxNX-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:85.3

Plate Offsets (X, Y): [1:Edge,0-0-13], [5:0-3-0,0-2-7], [7:0-3-0,0-2-7], [11:Edge,0-2-1]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.28	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.60	1-18	>959	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.23	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 248 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x6 SPF No.2,
1-3:2x4 SP 2400F 2.0E, 9-12:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x4 SPF No.3

BRACING

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

REACTIONS

(size) 1= Mechanical, 11=0-3-8
Max Horiz 1=-197 (LC 17)
Max Uplift 1=-292 (LC 12), 11=-318 (LC 13)
Max Grav 1=2150 (LC 1), 11=2223 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4065/639, 2-4=-3769/617,
4-5=-2928/574, 5-6=-2515/559,
6-7=-2511/561, 7-8=-2924/576,
8-10=-3738/608, 10-11=-4023/620,
11-12=0/17
BOT CHORD 1-18=-595/3528, 16-18=-380/3050,
15-16=-208/2579, 13-15=-347/3036,
11-13=-464/3477
WEBS 2-18=-374/265, 4-18=-75/540,
4-16=-775/316, 5-16=-114/884,
6-16=-401/165, 6-15=-408/165,
7-15=-113/883, 8-15=-762/315,
8-13=-69/519, 10-13=-341/253

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=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-0-12 to 5-0-12,
Interior (1) 5-0-12 to 19-7-8, Exterior(2R) 19-7-8 to
26-8-6, Interior (1) 26-8-6 to 28-4-8, Exterior(2R) 28-4-8
to 35-5-6, Interior (1) 35-5-6 to 48-10-8 zone; cantilever
left and right exposed ; end vertical left and right
exposed;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 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) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 292 lb uplift at
joint 1 and 318 lb uplift at joint 11.
- 7) 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.
- 8) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.

LOAD CASE(S) Standard



November 22, 2022

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

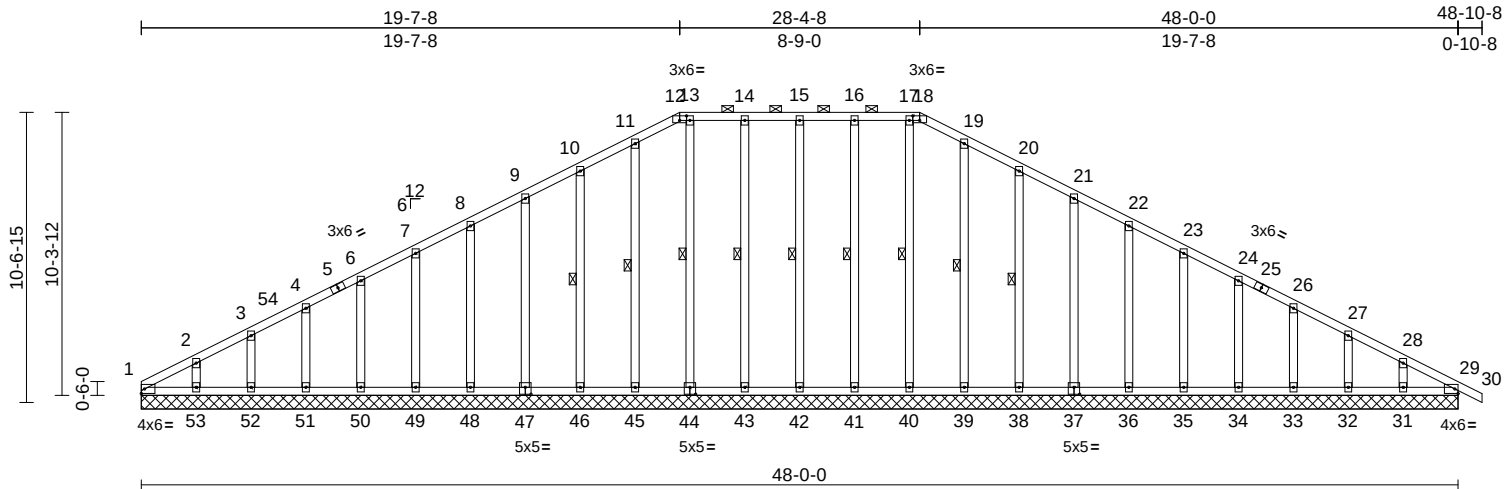
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389397
Piggyback Base Supported Gable	2	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:47 Page: 1
ID: JbPUB4NmDf0vUSJtFFiELayGxJT-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrcD0i7J4zJC?f



Scale = 1:84

Plate Offsets (X, Y): [12:0-3-0,0-2-0], [18:0-3-0,0-2-0], [37:0-2-8,0-3-0], [44:0-2-8,0-3-0], [47:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.15	Horz(CT)	0.01	29	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 309 lb FT = 20%											

LUMBER		Max Grav	1=136 (LC 21), 29=158 (LC 1), 31=181 (LC 26), 32=179 (LC 26), 33=180 (LC 1), 34=180 (LC 26), 35=180 (LC 26), 36=180 (LC 1), 37=180 (LC 26), 38=181 (LC 1), 39=179 (LC 26), 40=179 (LC 22), 41=186 (LC 25), 42=180 (LC 1), 43=186 (LC 26), 44=191 (LC 22), 45=179 (LC 25), 46=181 (LC 1), 47=180 (LC 25), 48=180 (LC 1), 49=180 (LC 25), 50=180 (LC 25), 51=182 (LC 1), 52=174 (LC 25), 53=203 (LC 25)	WEBS	15-42=-140/73, 14-43=-146/82, 13-44=-151/9, 11-45=-139/67, 10-46=-141/107, 9-47=-140/95, 8-48=-140/97, 7-49=-140/97, 6-50=-140/96, 4-51=-141/102, 3-52=-136/140, 2-53=-153/184, 16-41=-146/82, 17-40=-139/0, 19-39=-139/65, 20-38=-141/107, 21-37=-140/95, 22-36=-140/97, 23-35=-140/96, 24-34=-140/97, 26-33=-140/97, 27-32=-140/122, 28-31=-139/167
TOP CHORD		2x4 SP No.2			
BOT CHORD		2x4 SP No.2			
OTHERS		2x4 SPF No.3			
BRACING					
TOP CHORD		Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 12-18.			
BOT CHORD		Rigid ceiling directly applied or 10-0-0 oc bracing.			
WEBS		1 Row at midpt	15-42, 14-43, 13-44, 11-45, 10-46, 16-41, 17-40, 19-39, 20-38		
REACTIONS (size)		1=48-0-0, 29=48-0-0, 31=48-0-0, 32=48-0-0, 33=48-0-0, 34=48-0-0, 35=48-0-0, 36=48-0-0, 37=48-0-0, 38=48-0-0, 39=48-0-0, 40=48-0-0, 41=48-0-0, 42=48-0-0, 43=48-0-0, 44=48-0-0, 45=48-0-0, 46=48-0-0, 47=48-0-0, 48=48-0-0, 49=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0, 53=48-0-0			
Max Horiz		1=198 (LC 17)			
Max Uplift		1=-15 (LC 13), 31=-78 (LC 13), 32=-61 (LC 13), 33=-61 (LC 13), 34=-61 (LC 13), 35=-61 (LC 13), 36=-61 (LC 13), 37=-60 (LC 13), 38=-69 (LC 13), 39=-36 (LC 13), 41=-46 (LC 9), 42=-39 (LC 8), 43=-47 (LC 8), 45=-43 (LC 12), 46=-67 (LC 12), 47=-60 (LC 12), 48=-61 (LC 12), 49=-61 (LC 12), 50=-61 (LC 12), 51=-62 (LC 12), 52=-58 (LC 12), 53=-94 (LC 12)			
FORCES		(lb) - Maximum Compression/Maximum Tension			
TOP CHORD		1-2=-274/94, 2-3=-206/93, 3-4=-158/107, 4-6=-117/121, 6-7=-91/149, 7-8=-72/176, 8-9=-74/204, 9-10=-93/257, 10-11=-113/314, 11-12=-127/353, 12-13=-114/338, 13-14=-114/338, 14-15=-114/338, 15-16=-114/338, 16-17=-114/338, 17-18=-114/338, 18-19=-127/353, 19-20=-113/314, 20-21=-93/257, 21-22=-74/204, 22-23=-56/150, 23-24=-48/96, 24-26=-52/42, 26-27=-78/28, 27-28=-121/39, 28-29=-182/66, 29-30=0/17			
BOT CHORD		1-53=-57/211, 52-53=-57/211, 51-52=-57/211, 48-49=-57/211, 46-48=-57/211, 45-46=-57/211, 43-45=-57/211, 42-43=-57/211, 41-42=-57/211, 40-41=-57/211, 39-40=-57/211, 38-39=-57/211, 36-38=-57/211, 35-36=-57/211, 34-35=-57/211, 33-34=-57/211, 32-33=-57/211, 31-32=-57/211, 29-31=-57/211			

NOTES
1) Unbalanced roof live loads have been considered for this design.



November 22, 2022

Continued on page 2

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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

Truss Type	Qty	Ply	Roof
Piggyback Base Supported Gable	2	1	I55389397
Job Reference (optional)			

Premier Building Supply (Springhill, KS) Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:47 Page: 2
ID:JbPUB4NmDf0vUSJtFFiELayGxJT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Corner(3E) 0-0-0 to 5-0-0,
Exterior(2N) 5-0-0 to 19-7-8, Corner(3R) 19-7-8 to
24-7-8, Exterior(2N) 24-7-8 to 28-4-8, Corner(3R) 28-4-8
to 33-4-8, Exterior(2N) 33-4-8 to 48-10-8 zone;
cantilever left and right exposed ; end vertical left and
right exposed;C-C for members and forces & MWFRS
for reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 3x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 9) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 15 lb uplift at joint
1, 39 lb uplift at joint 42, 47 lb uplift at joint 43, 43 lb
uplift at joint 45, 67 lb uplift at joint 46, 60 lb uplift at joint
47, 61 lb uplift at joint 48, 61 lb uplift at joint 49, 61 lb
uplift at joint 50, 62 lb uplift at joint 51, 58 lb uplift at joint
52, 94 lb uplift at joint 53, 46 lb uplift at joint 41, 36 lb
uplift at joint 39, 69 lb uplift at joint 38, 60 lb uplift at joint
37, 61 lb uplift at joint 36, 61 lb uplift at joint 35, 61 lb
uplift at joint 34, 61 lb uplift at joint 33, 61 lb uplift at joint
32 and 78 lb uplift at joint 31.
- 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.

LOAD CASE(S) Standard

Truss Type

Common Supported Gable

Qty

Ply

Roof

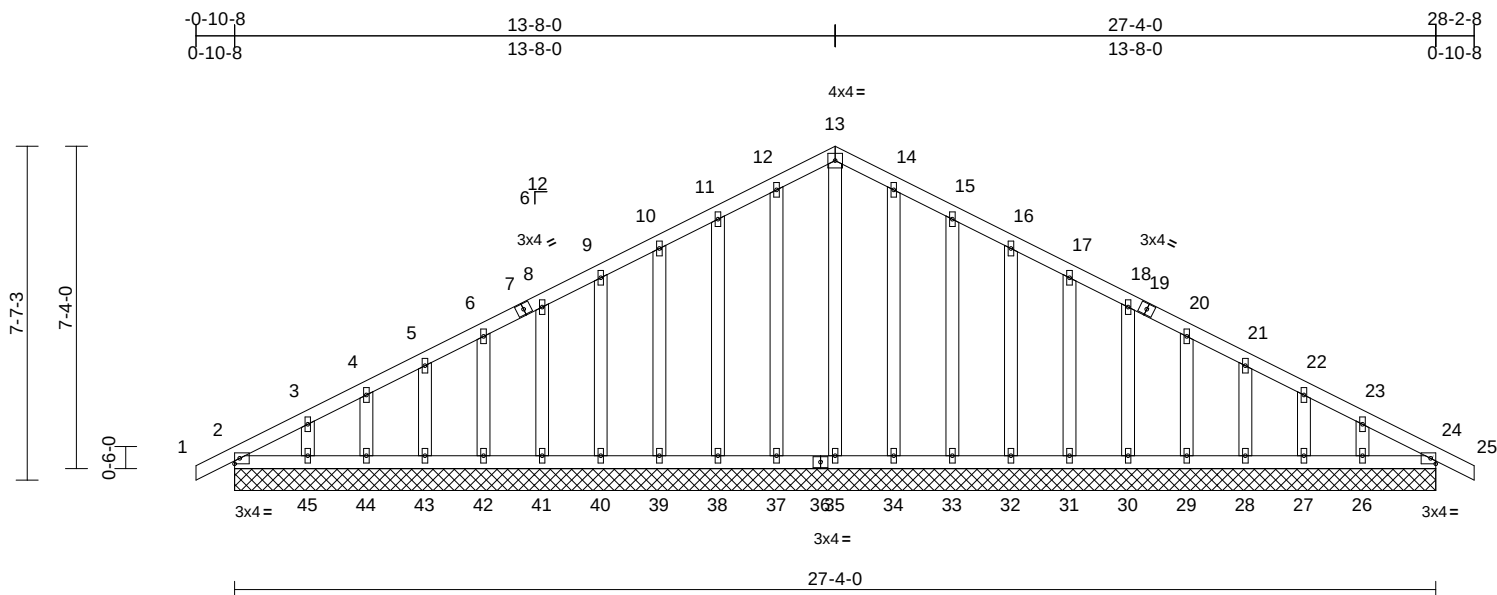
I55389398

Job Reference (optional)

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:48

Page: 1

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Scale = 1:52.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.01	24	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 168 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SPF 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.

REACTIONS

(size) 2=27-4-0, 24=27-4-0, 26=27-4-0, 27=27-4-0, 28=27-4-0, 29=27-4-0, 30=27-4-0, 31=27-4-0, 32=27-4-0, 33=27-4-0, 34=27-4-0, 35=27-4-0, 37=27-4-0, 38=27-4-0, 39=27-4-0, 40=27-4-0, 41=27-4-0, 42=27-4-0, 43=27-4-0, 44=27-4-0, 45=27-4-0
Max Horiz 2=137 (LC 13)
Max Uplift 2=27 (LC 8), 24=5 (LC 9), 26=57 (LC 13), 27=40 (LC 13), 28=41 (LC 13), 29=41 (LC 13), 30=41 (LC 13), 31=41 (LC 13), 32=40 (LC 13), 33=48 (LC 13), 34=23 (LC 13), 37=29 (LC 12), 38=46 (LC 12), 39=40 (LC 12), 40=41 (LC 12), 41=41 (LC 12), 42=41 (LC 12), 43=41 (LC 12), 44=40 (LC 12), 45=63 (LC 12)
Max Grav 2=149 (LC 1), 24=149 (LC 1), 26=130 (LC 26), 27=117 (LC 26), 28=121 (LC 1), 29=120 (LC 26), 30=120 (LC 26), 31=120 (LC 1), 32=120 (LC 1), 33=121 (LC 26), 34=124 (LC 26), 35=148 (LC 22), 37=124 (LC 25), 38=121 (LC 25), 39=120 (LC 1), 40=120 (LC 1), 41=120 (LC 25), 42=120 (LC 25), 43=121 (LC 1), 44=117 (LC 25), 45=130 (LC 25)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD

1-2=0/17, 2-3=-179/66, 3-4=-129/69, 4-5=-97/79, 5-6=-74/91, 6-8=-57/109, 8-9=-48/128, 9-10=-54/158, 10-11=-66/193, 11-12=-80/233, 12-13=-89/259, 13-14=-89/259, 14-15=-80/233, 15-16=-66/193, 16-17=-54/158, 17-18=-41/122, 18-20=-32/86, 20-21=-32/51, 21-22=-48/22, 22-23=-72/21, 23-24=-120/44, 24-25=0/17

BOT CHORD

2-45=-39/157, 44-45=-39/157, 43-44=-39/157, 42-43=-39/157, 41-42=-39/157, 40-41=-39/157, 39-40=-39/157, 38-39=-39/157, 37-38=-39/157, 35-37=-39/157, 34-35=-39/157, 33-34=-39/157, 32-33=-39/157, 31-32=-39/157, 30-31=-39/157, 29-30=-39/157, 28-29=-39/157, 27-28=-39/157, 26-27=-39/157, 24-26=-39/157

WEBS

13-35=-155/28, 12-37=-97/45, 11-38=-94/73, 10-39=-93/64, 9-40=-93/64, 8-41=-93/64, 6-42=-93/64, 5-43=-94/82, 4-44=-92/99, 3-45=-100/122, 14-34=-97/43, 15-33=-94/73, 16-32=-93/64, 17-31=-93/64, 18-30=-93/64, 20-29=-93/64, 21-28=-94/82, 22-27=-92/99, 23-26=-100/119

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-4-0, Exterior(2N) 4-4-0 to 13-8-0, Corner(3R) 13-8-0 to 18-8-0, Exterior(2N) 18-8-0 to 28-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 29 lb uplift at joint 37, 46 lb uplift at joint 38, 40 lb uplift at joint 39, 41 lb uplift at joint 40, 41 lb uplift at joint 41, 41 lb uplift at joint 42, 41 lb uplift at joint 43, 40 lb uplift at joint 44, 63 lb uplift at joint 45, 23 lb uplift at joint 34, 48 lb uplift at joint 33, 40 lb uplift at joint 32, 41 lb uplift at joint 31, 41 lb uplift at joint 30, 41 lb uplift at joint 29, 41 lb uplift at joint 28, 40 lb uplift at joint 27, 57 lb uplift at joint 26 and 5 lb uplift at joint 24.
- 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.

LOAD CASE(S) Standard



November 22, 2022

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type

Common

Qty

2

Ply

1

Roof

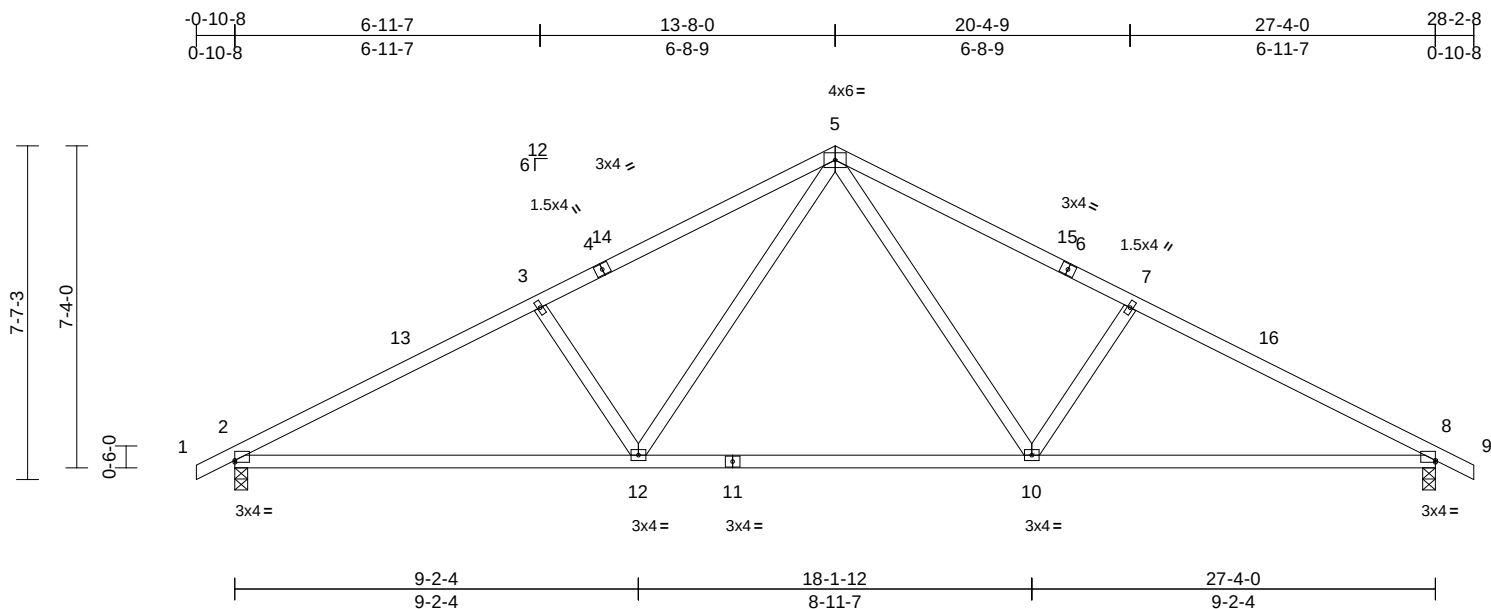
Job Reference (optional)

I55389399

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:49

Page: 1

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Scale = 1:52.5

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.18	8-10	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.41	8-10	>796	180	
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.07	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 117 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-137 (LC 17)
Max Uplift 2=-211 (LC 12), 8=-211 (LC 13)
Max Grav 2=1288 (LC 1), 8=1288 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-2075/390, 3-5=-1836/407,
5-7=-1836/407, 7-8=-2075/390, 8-9=0/17

BOT CHORD 2-12=-326/1765, 10-12=-87/1179,
8-10=-261/1765

WEBS 5-10=-158/686, 7-10=-449/287,
5-12=-158/686, 3-12=-449/287

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=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8,
Interior (1) 4-1-8 to 13-8-0, Exterior(2R) 13-8-0 to
18-8-0, Interior (1) 18-8-0 to 28-2-8 zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 211 lb uplift at joint
2 and 211 lb uplift at joint 8.
- 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.

LOAD CASE(S) Standard



November 22, 2022

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

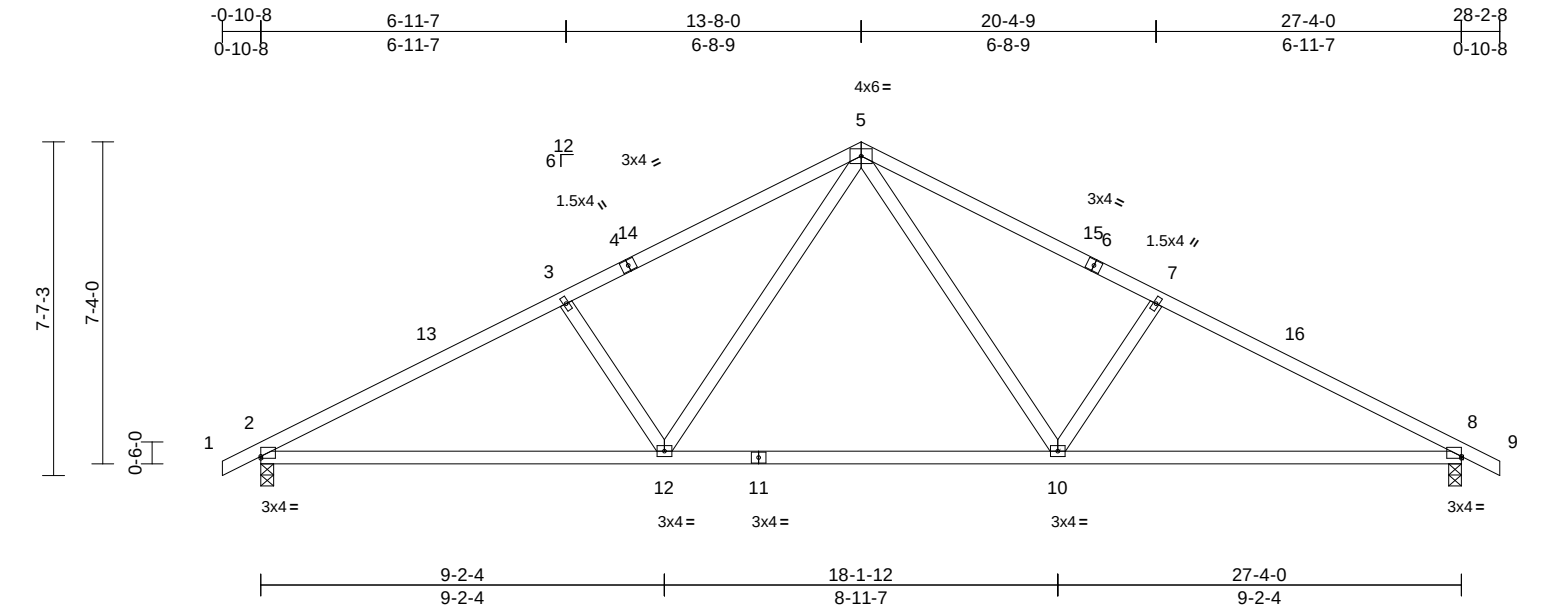
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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



Scale = 1:52.5									
Plate Offsets (X, Y): [2:Edge,0-0-9], [8:Edge,0-0-9]									
Loading (psf)		Spacing		CSI		DEFL		PLATES	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.18	MT20	GRIP
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.41		244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.07		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S					
								Weight: 117 lb FT = 20%	

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=-137 (LC 17)
Max Uplift 2=-211 (LC 12), 8=-211 (LC 13)
Max Grav 2=1288 (LC 1), 8=1288 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-0/17, 2-3=-2075/390, 3-5=-1836/407, 5-7=-1836/407, 7-8=-2075/390, 8-9=0/17
BOT CHORD 2-12=-326/1765, 10-12=-87/1179, 8-10=-261/1765
WEBS 5-10=-158/686, 7-10=-449/287, 5-12=-158/686, 3-12=-449/287

- 4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 211 lb uplift at joint 8.
- 5) 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.
- LOAD CASE(S)** Standard

- 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-8-0, Exterior(2R) 13-8-0 to 18-8-0, Interior (1) 18-8-0 to 28-2-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



November 22, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

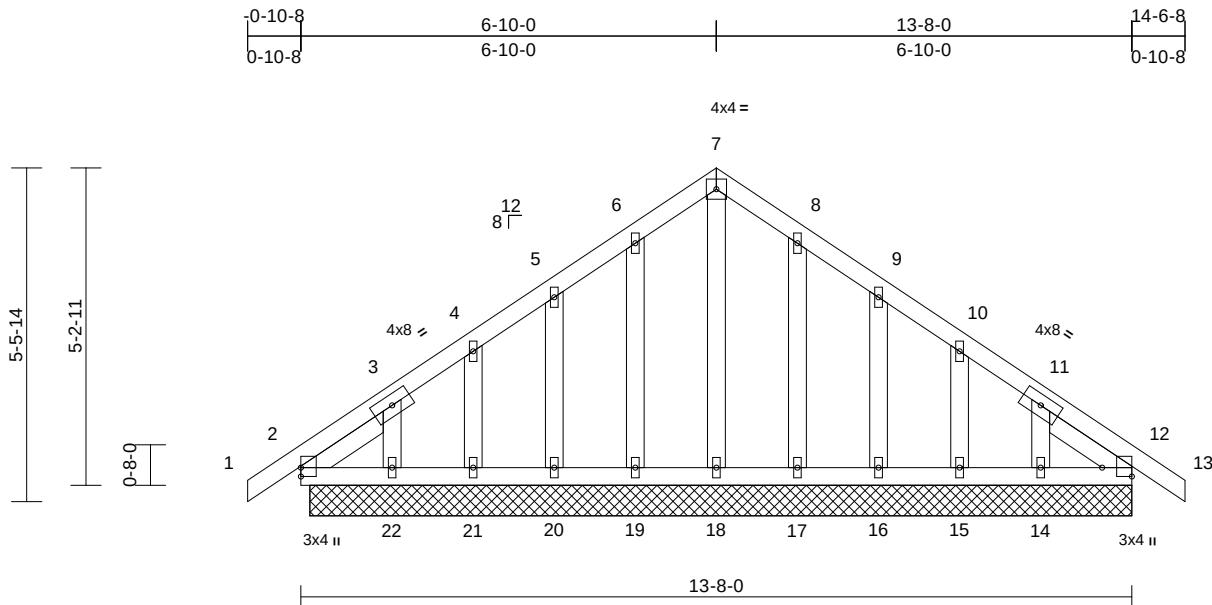
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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389401
Common Supported Gable	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:50 Page: 1
ID:pEeiREjqUZILYPLYj_L6lhyGxLc-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:37.9

Plate Offsets (X, Y): [12:Edge,0-5-14]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	12	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 81 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x4 SPF No.3
SLIDER	Left 2x4 SP No.2 -- 1-7-11, Right 2x4 SP No.2 -- 1-7-11

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.

REACTIONS

(size)	2=13-6-4, 12=13-6-4, 14=13-6-4, 15=13-6-4, 16=13-6-4, 17=13-6-4, 18=13-6-4, 19=13-6-4, 20=13-6-4, 21=13-6-4, 22=13-6-4
Max Horiz	2=144 (LC 11)
Max Uplift	2=-40 (LC 8), 12=-2 (LC 9), 14=-73 (LC 13), 15=-52 (LC 13), 16=-57 (LC 13), 17=-43 (LC 13), 19=-47 (LC 12), 20=-55 (LC 12), 21=-52 (LC 12), 22=-80 (LC 12)
Max Grav	2=158 (LC 20), 12=151 (LC 1), 14=133 (LC 20), 15=125 (LC 20), 16=127 (LC 20), 17=128 (LC 20), 18=124 (LC 22), 19=131 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=140 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/16, 2-3=-138/114, 3-4=-95/81, 4-5=-85/74, 5-6=-75/130, 6-7=-92/180, 7-8=-92/180, 8-9=-66/130, 9-10=-46/62, 10-11=-55/29, 11-12=-108/57, 12-13=0/16
BOT CHORD	2-22=-52/147, 21-22=-52/147, 20-21=-52/147, 19-20=-52/147, 18-19=-52/147, 17-18=-52/147, 16-17=-52/147, 15-16=-52/147, 14-15=-52/147, 12-14=-52/147

WEBS

7-18=-126/28, 6-19=-105/76, 5-20=-99/105, 4-21=-100/111, 3-22=-109/131, 8-17=-101/76, 9-16=-100/106, 10-15=-100/111, 11-14=-102/128

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-10-8 to 4-2-0, Exterior(2N) 4-2-0 to 6-10-0, Corner(3R) 6-10-0 to 11-10-0, Exterior(2N) 11-10-0 to 14-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 2, 2 lb uplift at joint 12, 47 lb uplift at joint 19, 55 lb uplift at joint 20, 52 lb uplift at joint 21, 80 lb uplift at joint 22, 43 lb uplift at joint 17, 57 lb uplift at joint 16, 52 lb uplift at joint 15 and 73 lb uplift at joint 14.
- N/A
- 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.

LOAD CASE(S) Standard



November 22,2022

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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



Truss Type	Qty	Ply	Roof	
Monopitch Girder	2	2	Job Reference (optional)	I55389403

Run: 8.62 E Oct 26 2022 Print: 8.620 E Oct 26 2022 MiTek Industries, Inc. Mon Nov 21 22:11:38
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Page: 1

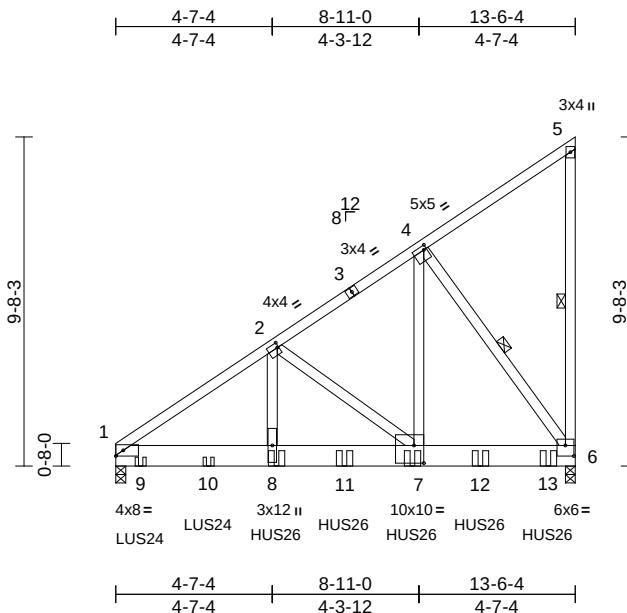


Plate Offsets (X, Y): [2:0-0-8,0-1-12], [4:0-1-0,0-1-8], [6:0-3-0,0-3-12], [7:0-3-8,0-6-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.08	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.14	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 203 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x4 SPF No.3 *Except* 4-7:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-6, 4-6

REACTIONS

(lb/size) 1=5483/0-3-8, 6=7683/0-3-8
Max Horiz 1=388 (LC 9)
Max Uplift 1=-906 (LC 12), 6=-1240 (LC 12)

FORCES

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-7602/1244, 2-3=-4536/752, 3-4=-4445/778

BOT CHORD 1-9=-1257/6081, 9-10=-1257/6081, 8-10=-1257/6081, 8-11=-1257/6081, 7-11=-1257/6081, 7-12=-745/3712, 12-13=-745/3712, 6-13=-745/3712
WEBS 2-8=-560/3462, 2-7=-2969/641, 4-7=-1119/7214, 4-6=-6291/1098

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.
Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-9-0 oc.
Web 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 13-4-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1240 lb uplift at joint 6 and 906 lb uplift at joint 1.
- 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.
- Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-8-12 from the left end to 2-8-12 to connect truss(es) to back face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 4-8-12 from the left end to 12-8-12 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 8=-2130 (B), 7=-2130 (B), 9=-620 (B), 10=-702 (B), 11=-2130 (B), 12=-2130 (B), 13=-2133 (B)



November 22, 2022

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

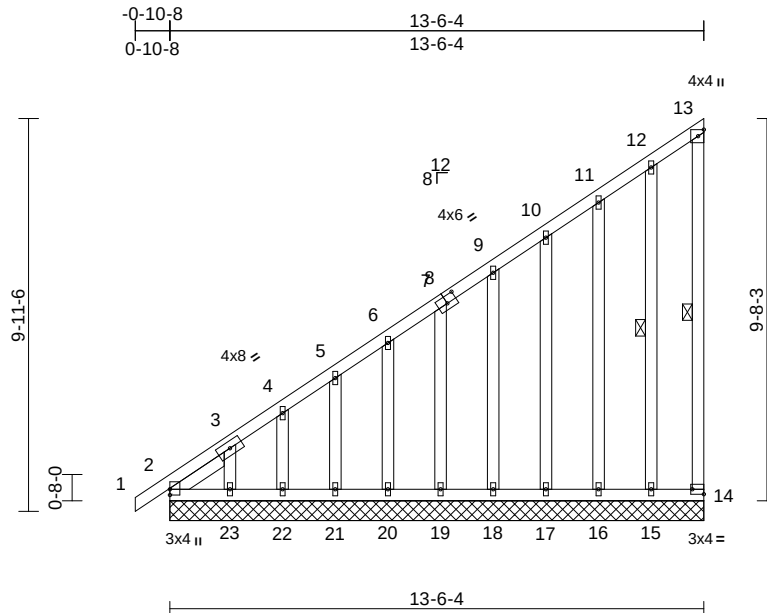
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:58.3

Plate Offsets (X, Y): [8:0-3-0-0-2-4], [14:Edge,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	14	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 110 lb FT = 20%											

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2
OTHERS 2x4 SPF No.3
SLIDER Left 2x4 SP No.2 -- 1-8-0

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 13-14, 12-15
REACTIONS (size) 2=13-6-4, 14=13-6-4, 15=13-6-4, 16=13-6-4, 17=13-6-4, 18=13-6-4, 19=13-6-4, 20=13-6-4, 21=13-6-4, 22=13-6-4, 23=13-6-4

Max Horiz 2=399 (LC 9)
Max Uplift 2=101 (LC 8), 14=106 (LC 11), 15=81 (LC 12), 16=38 (LC 9), 17=62 (LC 12), 18=50 (LC 12), 19=53 (LC 12), 20=52 (LC 12), 21=51 (LC 12), 22=53 (LC 12), 23=119 (LC 12)
Max Grav 2=258 (LC 20), 14=103 (LC 8), 15=121 (LC 20), 16=138 (LC 19), 17=122 (LC 19), 18=127 (LC 19), 19=126 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=126 (LC 19), 23=161 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/16, 2-3=-829/517, 3-4=-675/430, 4-5=-613/400, 5-6=-556/372, 6-7=-497/343, 7-9=-438/315, 9-10=-374/286, 10-11=-305/260, 11-12=-235/232, 12-13=-119/134, 13-14=-61/73

BOT CHORD 2-23=-169/211, 22-23=-169/211, 21-22=-169/211, 20-21=-169/211, 19-20=-169/211, 18-19=-169/211, 17-18=-169/211, 16-17=-169/211, 15-16=-169/211, 14-15=-169/211
WEBS 12-15=-212/205, 11-16=-101/110, 10-17=-98/108, 9-18=-99/101, 7-19=-99/90, 6-20=-99/90, 5-21=-99/99, 4-22=-101/114, 3-23=-165/231

- NOTES**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-2-4, Exterior(2N) 4-2-4 to 13-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) 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.
 - 3) All plates are 1.5x4 MT20 unless otherwise indicated.
 - 4) Gable requires continuous bottom chord bearing.
 - 5) Gable studs spaced at 1-4-0 oc.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 106 lb uplift at joint 14, 101 lb uplift at joint 2, 81 lb uplift at joint 15, 38 lb uplift at joint 16, 62 lb uplift at joint 17, 50 lb uplift at joint 18, 53 lb uplift at joint 19, 52 lb uplift at joint 20, 51 lb uplift at joint 21, 53 lb uplift at joint 22 and 119 lb uplift at joint 23.
 - 8) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2.
 - 9) 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.

LOAD CASE(S) Standard



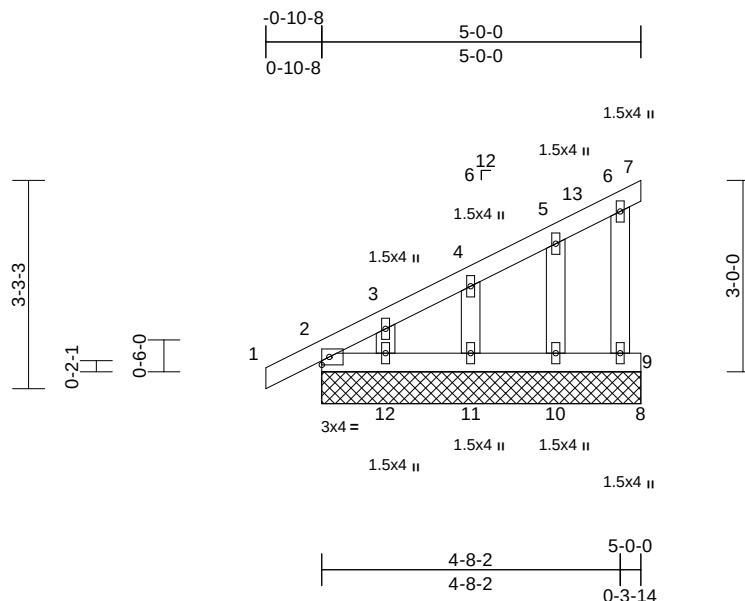
November 22,2022

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:36.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SPF No.3
OTHERS	2x4 SPF No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5'-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS

(size)	2=5-0-0, 8=5-0-0, 9=5-0-0, 10=5-0-0, 11=5-0-0, 12=5-0-0
Max Horiz	2=124 (LC 9)
Max Uplift	2=-17 (LC 8), 9=-25 (LC 9), 10=-36 (LC 12), 11=-45 (LC 12), 12=-40 (LC 12)
Max Grav	2=127 (LC 1), 9=69 (LC 1), 10=108 (LC 1), 11=130 (LC 1), 12=78 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/17, 2-3=-345/150, 3-4=-250/124, 4-5=-163/98, 5-6=-89/76, 6-7=-10/0, 6-9=-68/110
BOT CHORD	2-12=-52/70, 11-12=-52/70, 10-11=-52/70, 9-10=-52/70, 8-9=0/0
WEBS	5-10=-83/149, 4-11=-103/185, 3-12=-82/176

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 5-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.

- 3) All plates are 1.5x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 1'-4-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 9, 17 lb uplift at joint 2, 36 lb uplift at joint 10, 45 lb uplift at joint 11 and 40 lb uplift at joint 12.
- 8) 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.

LOAD CASE(S) Standard



November 22, 2022

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

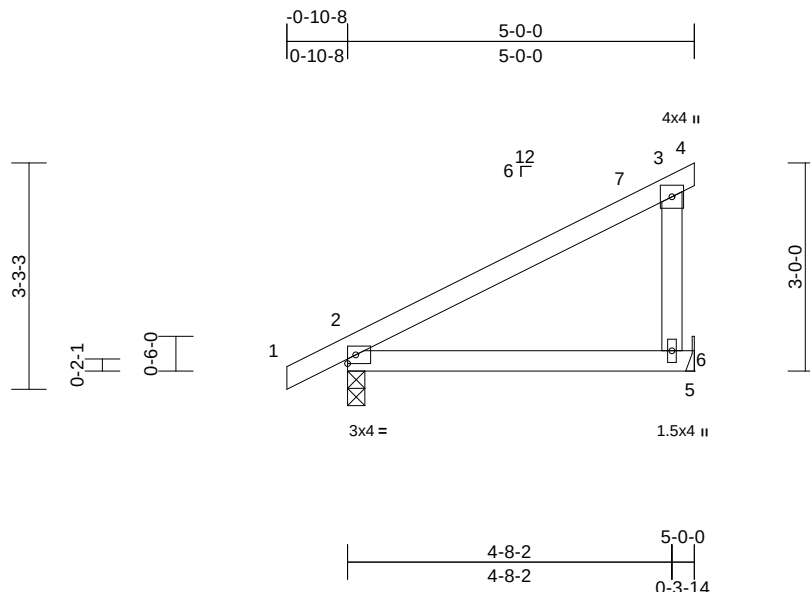
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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



Scale = 1:33.2

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.03	2-6	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	2-6	>841	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 5'-0" oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

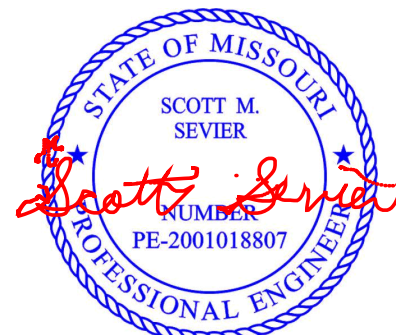
REACTIONS (lb/size) 2=294/0-3-0, 5=214/ Mechanical
Max Horiz 2=124 (LC 9)
Max Uplift 2=57 (LC 12), 5=63 (LC 12)

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

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8,
Interior (1) 4-1-8 to 5-0-0 zone; cantilever left and right
exposed ; end vertical left and right exposed;C-C for
members and forces & MWFRS for reactions shown;
Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 57 lb uplift at joint
2 and 63 lb uplift at joint 5.
- 5) 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.

LOAD CASE(S) Standard



November 22,2022

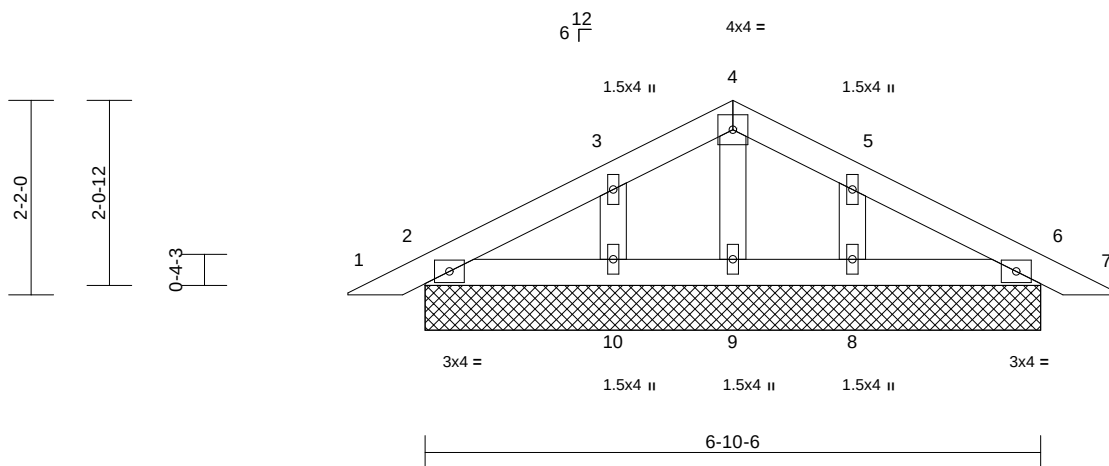
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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

-0-10-5	3-5-3	6-10-6	7-8-11
0-10-5	3-5-3	3-5-3	0-10-5



Scale = 1:25.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	6	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 28 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SPF 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.

REACTIONS (size) 2=6-10-6, 6=6-10-6, 8=6-10-6, 9=6-10-6, 10=6-10-6
Max Horiz 2=-38 (LC 17)
Max Uplift 2=-23 (LC 12), 6=-30 (LC 13), 8=-64 (LC 13), 10=-64 (LC 12)
Max Grav 2=125 (LC 1), 6=125 (LC 1), 8=191 (LC 1), 9=65 (LC 22), 10=191 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/15, 2-3=-45/42, 3-4=-45/90, 4-5=-44/93, 5-6=-37/33, 6-7=0/15
BOT CHORD 2-10=-17/50, 9-10=-17/50, 8-9=-17/50, 6-8=-17/50
WEBS 4-9=-51/0, 3-10=-146/201, 5-8=-146/161

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 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.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2, 30 lb uplift at joint 6, 64 lb uplift at joint 10 and 64 lb uplift at joint 8.
- 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard



November 22, 2022

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

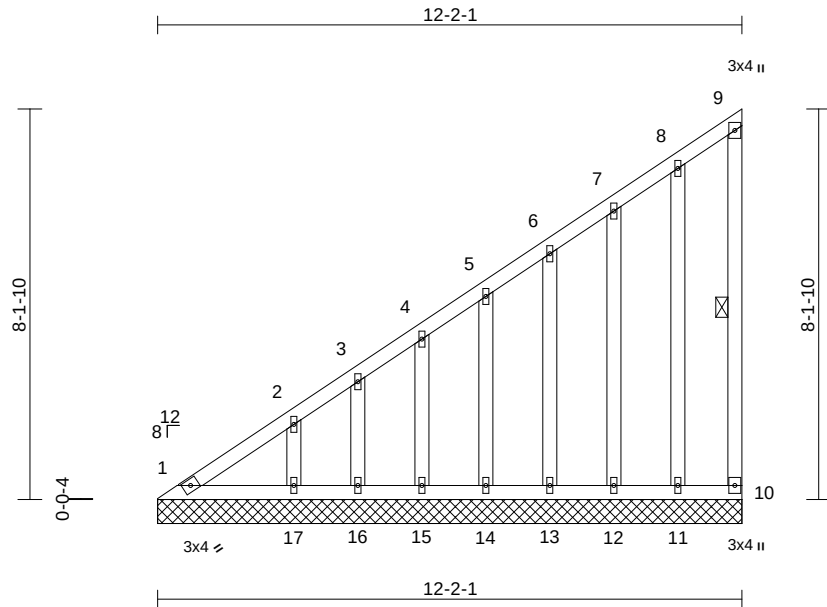
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:48

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	10	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 80 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SPF No.3
OTHERS	2x4 SPF 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	9-10
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REACTIONS	(size)	1=12-2-1, 10=12-2-1, 11=12-2-1, 12=12-2-1, 13=12-2-1, 14=12-2-1, 15=12-2-1, 16=12-2-1, 17=12-2-1
	Max Horiz	1=329 (LC 9)
	Max Uplift	1=-47 (LC 8), 10=-82 (LC 11), 11=-69 (LC 12), 12=-39 (LC 12), 13=-58 (LC 12), 14=-50 (LC 12), 15=-55 (LC 12), 16=-37 (LC 12), 17=-93 (LC 12)
	Max Grav	1=168 (LC 20), 10=84 (LC 8), 11=120 (LC 1), 12=134 (LC 19), 13=124 (LC 19), 14=125 (LC 19), 15=134 (LC 19), 16=88 (LC 19), 17=228 (LC 19)

FORCES	(lb) - Maximum Compression/Maximum Tension
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TOP CHORD	1-2=-496/379, 2-3=-415/317, 3-4=-376/299, 4-5=-327/267, 5-6=-279/237, 6-7=-232/208, 7-8=-186/180, 8-9=-110/110, 9-10=-39/36
BOT CHORD	1-17=-143/156, 16-17=-143/156, 15-16=-143/156, 14-15=-143/156, 13-14=-143/156, 12-13=-143/156, 11-12=-143/156, 10-11=-143/156
WEBS	8-11=-163/142, 7-12=-100/80, 6-13=-99/73, 5-14=-99/70, 4-15=-104/73, 3-16=-74/54, 2-17=-170/118

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-6-7, Interior (1) 5-6-7 to 12-0-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) All plates are 1.5x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 1-4-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1, 82 lb uplift at joint 10, 69 lb uplift at joint 11, 39 lb uplift at joint 12, 58 lb uplift at joint 13, 50 lb uplift at joint 14, 55 lb uplift at joint 15, 37 lb uplift at joint 16 and 93 lb uplift at joint 17.
- 8) 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.

LOAD CASE(S) Standard



November 22, 2022

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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

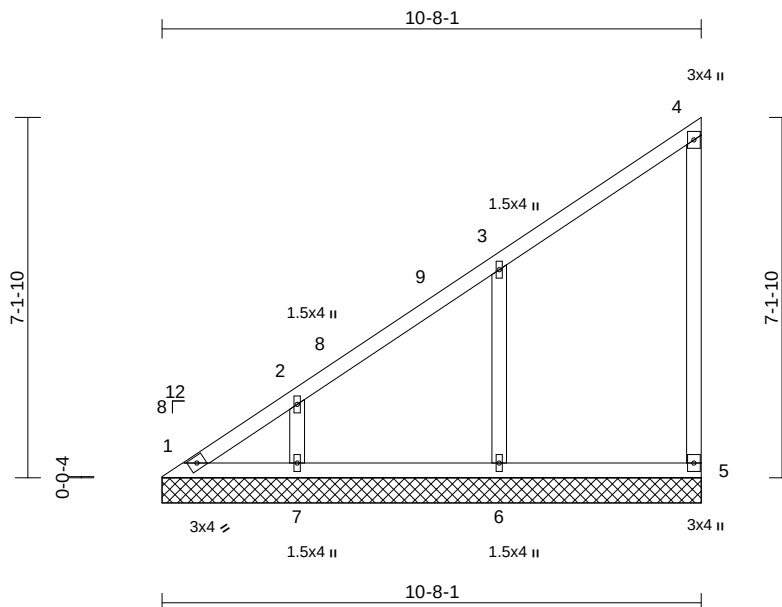


16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	
Valley	2	1	Job Reference (optional)	I55389410

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Scale = 1:45.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 47 lb FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SPF No.3
OTHERS	2x4 SPF 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.

REACTIONS	(size)	1=10-8-1, 5=10-8-1, 6=10-8-1, 7=10-8-1
	Max Horiz	1=286 (LC 9)
	Max Uplift	1=-50 (LC 10), 5=-59 (LC 9), 6=-173 (LC 12), 7=-133 (LC 12)
	Max Grav	1=143 (LC 9), 5=165 (LC 19), 6=417 (LC 19), 7=322 (LC 19)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-460/292, 2-3=-353/243, 3-4=-171/143, 4-5=-128/134
BOT CHORD	1-7=-124/137, 6-7=-124/137, 5-6=-124/137
WEBS	3-6=-336/285, 2-7=-250/195

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 10-6-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 1, 59 lb uplift at joint 5, 173 lb uplift at joint 6 and 133 lb uplift at joint 7.
- 7) 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.

LOAD CASE(S) Standard



November 22, 2022

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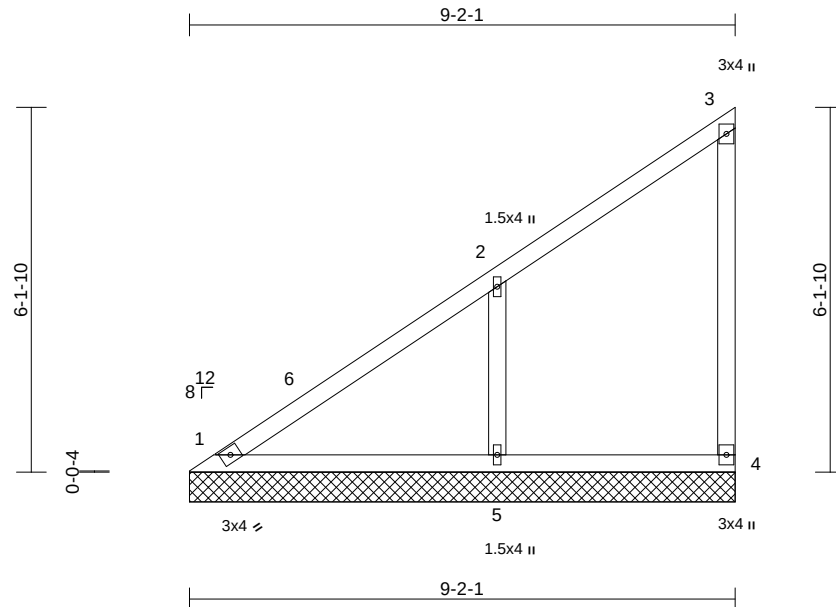
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

	Truss Type	Qty	Ply	Roof	I55389411
	Valley	2	1	Job Reference (optional)	



Scale = 1:38.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SPF No.3
OTHERS	2x4 SPF 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.

REACTIONS

(size)	1=9-2-1, 4=9-2-1, 5=9-2-1
Max Horiz	1=244 (LC 9)
Max Uplift	1=-1 (LC 8), 4=-51 (LC 9), 5=-208 (LC 12)
Max Grav	1=200 (LC 20), 4=143 (LC 19), 5=503 (LC 19)

FORCES

	(b) Maximum Compression/maximum Tension
TOP CHORD	1-2=-374/253, 2-3=-164/129, 3-4=-119/130
BOT CHORD	1-5=-108/119, 4-5=-108/119
WEBS	2-5=-390/334

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vsd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
 exterior zone and C-C Exterior(2E) 0-5-12 to 5-2-7,
 Interior (1) 5-2-7 to 9-0-11 zone; cantilever left and right
 exposed ; end vertical left and right exposed; C-C for
 members and forces & MWFRS for reactions shown;
 Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
 chord live load nonconcurrent with any other live loads.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1, 51 lb uplift at joint 4 and 208 lb uplift at joint 5.
- 7) 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.

LOAD CASE(S) Standard



November 22, 2022



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE (H-7473 (REV. 3/19/2020) BEFORE USE.

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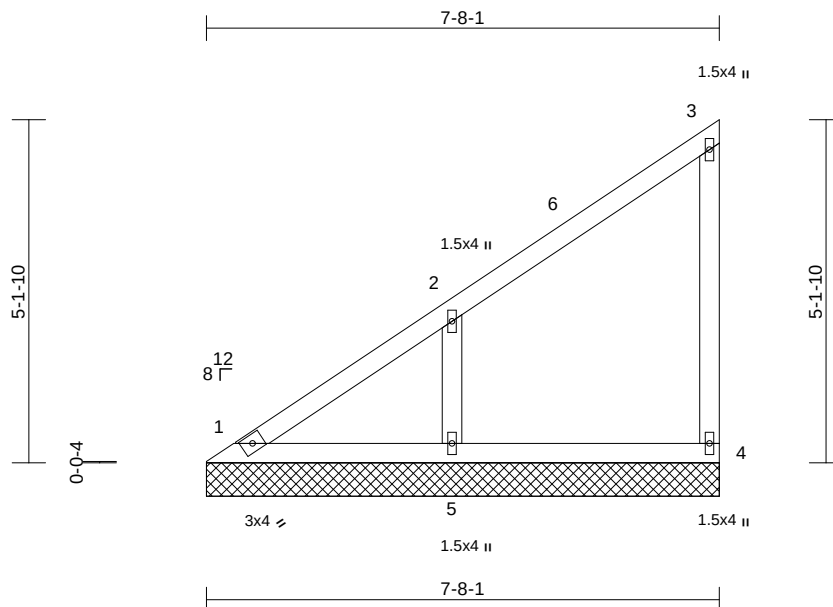


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389412
Valley	2	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Mon Nov 21 15:26:53
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Page: 1



Scale = 1:34.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 32 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SPF No.3
OTHERS	2x4 SPF 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.

REACTIONS

(size)	1=7-8-1, 4=7-8-1, 5=7-8-1
Max Horiz	1=201 (LC 11)
Max Uplift	1=-14 (LC 8), 4=-46 (LC 9), 5=-173 (LC 12)
Max Grav	1=136 (LC 20), 4=155 (LC 19), 5=420 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-348/231, 2-3=-159/129, 3-4=-134/146
BOT CHORD	1-5=-93/101, 4-5=-93/101
WEBS	2-5=-331/305

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12,
Interior (1) 5-5-12 to 7-6-11 zone; cantilever left and right
exposed; end vertical left and right exposed; C-C for
members and forces & MWFRS for reactions shown;
Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 14 lb uplift at joint
1, 46 lb uplift at joint 4 and 173 lb uplift at joint 5.
- 7) 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.

LOAD CASE(S) Standard



November 22, 2022

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

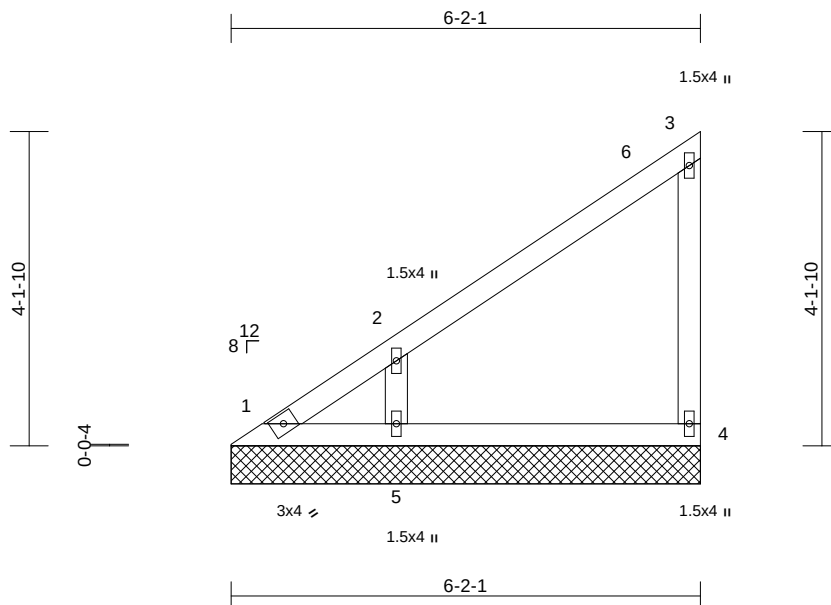
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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



Scale = 1:30.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SPF No.3
 OTHERS 2x4 SPF 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.

REACTIONS

(size) 1=6-2-1, 4=6-2-1, 5=6-2-1
 Max Horiz 1=158 (LC 9)
 Max Uplift 1=-49 (LC 10), 4=-41 (LC 9), 5=-154 (LC 12)
 Max Grav 1=83 (LC 9), 4=158 (LC 19), 5=374 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-325/212, 2-3=-153/118, 3-4=-133/151
 BOT CHORD 1-5=-75/82, 4-5=-75/82
 WEBS 2-5=-295/293

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-12 to 5-5-12, Interior (1) 5-5-12 to 6-0-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 1, 41 lb uplift at joint 4 and 154 lb uplift at joint 5.
- 7) 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.

LOAD CASE(S) Standard



November 22, 2022

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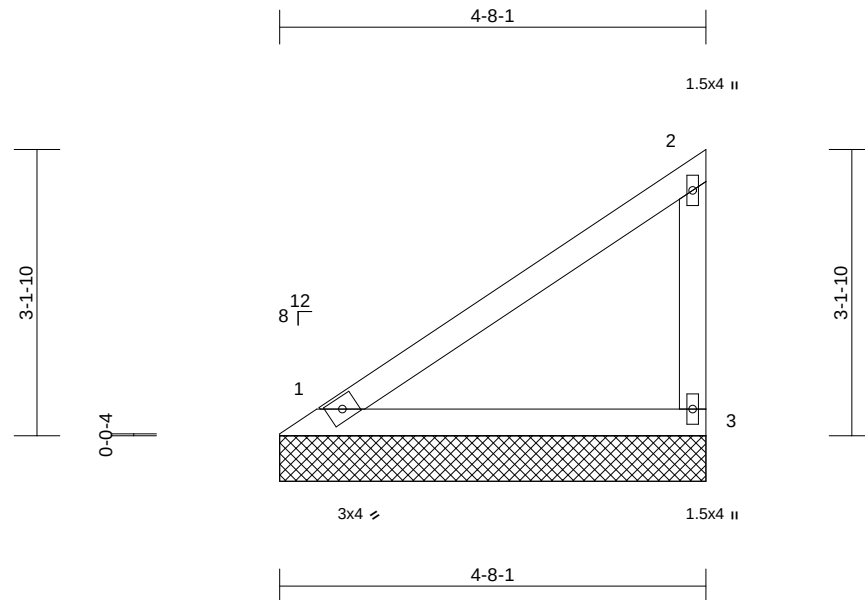
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall 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

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 Chesterfield, MO 63017



Scale = 1:25.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

7) 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.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

1=4-8-1, 3=4-8-1
Max Horiz 1=116 (LC 9)
Max Uplift 1=-20 (LC 12), 3=-60 (LC 12)
Max Grav 1=183 (LC 1), 3=200 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-159/119, 2-3=-159/185
BOT CHORD 1-3=-56/61

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1 and 60 lb uplift at joint 3.



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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

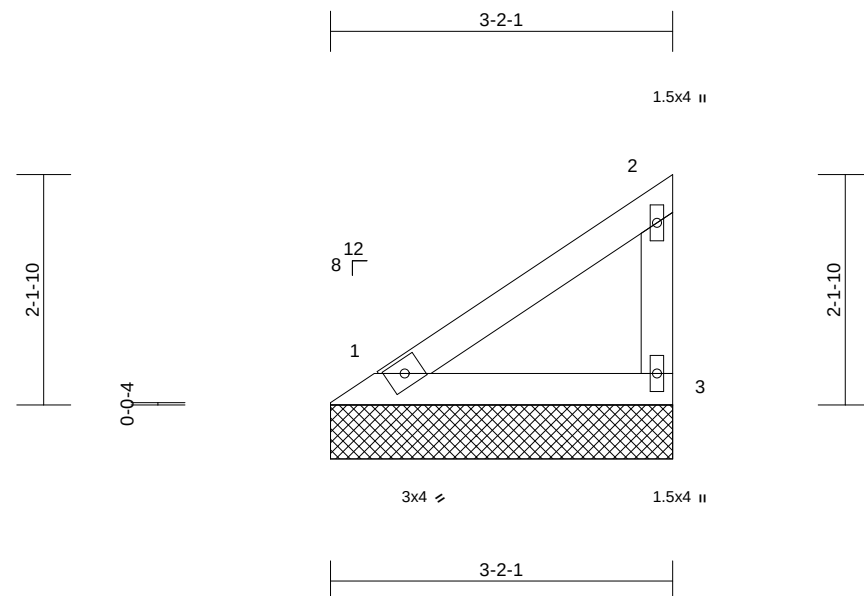


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof	I55389415
Valley	2	1	Job Reference (optional)	

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Page: 1



Scale = 1:21.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 11 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

7) 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.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

1=3-2-1, 3=3-2-1
Max Horiz 1=73 (LC 9)
Max Uplift 1=-13 (LC 12), 3=-38 (LC 12)
Max Grav 1=116 (LC 1), 3=126 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-104/77, 2-3=-103/123
BOT CHORD 1-3=-35/38

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1 and 38 lb uplift at joint 3.



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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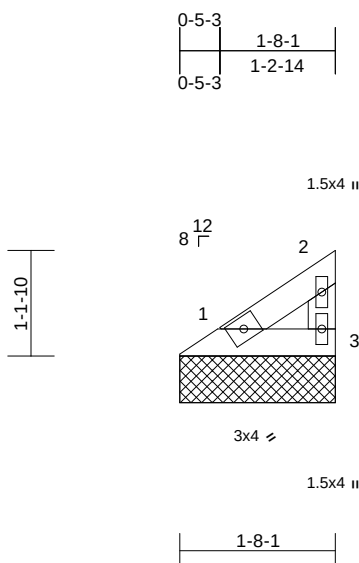


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof
Valley	2	1	Job Reference (optional)
I55389416			

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Page: 1



Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

7) 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.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=1-8-1, 3=1-8-1

Max Horiz 1=31 (LC 9)
Max Uplift 1=-5 (LC 12), 3=-16 (LC 12)
Max Grav 1=48 (LC 1), 3=53 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-44/34, 2-3=-46/53
BOT CHORD 1-3=-15/16

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) 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.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5 lb uplift at joint 1 and 16 lb uplift at joint 3.



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

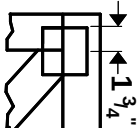
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



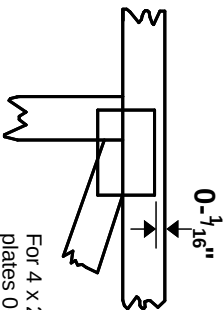
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{1}{16}$ " from outside edge of truss.

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

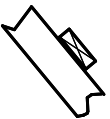
* Plate location details available in **Mittek 20120** software or upon request.

PLATE SIZE

4 X 4

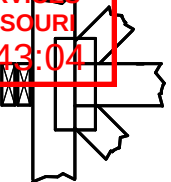
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



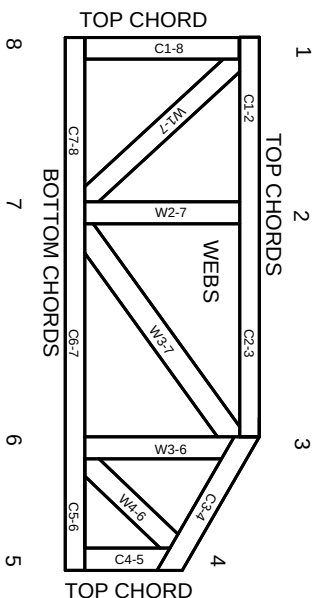
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Reference Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
BCS 199: 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)



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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Mittek 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 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.