



MiTek USA, Inc.

16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

Re: P220319-P220319-02
Roof - Osage Lot 72

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS) 20300 W 207th Street.

Pages or sheets covered by this seal: I57774753 thru I57774800

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

Missouri COA: Engineering 001193



April 14, 2023

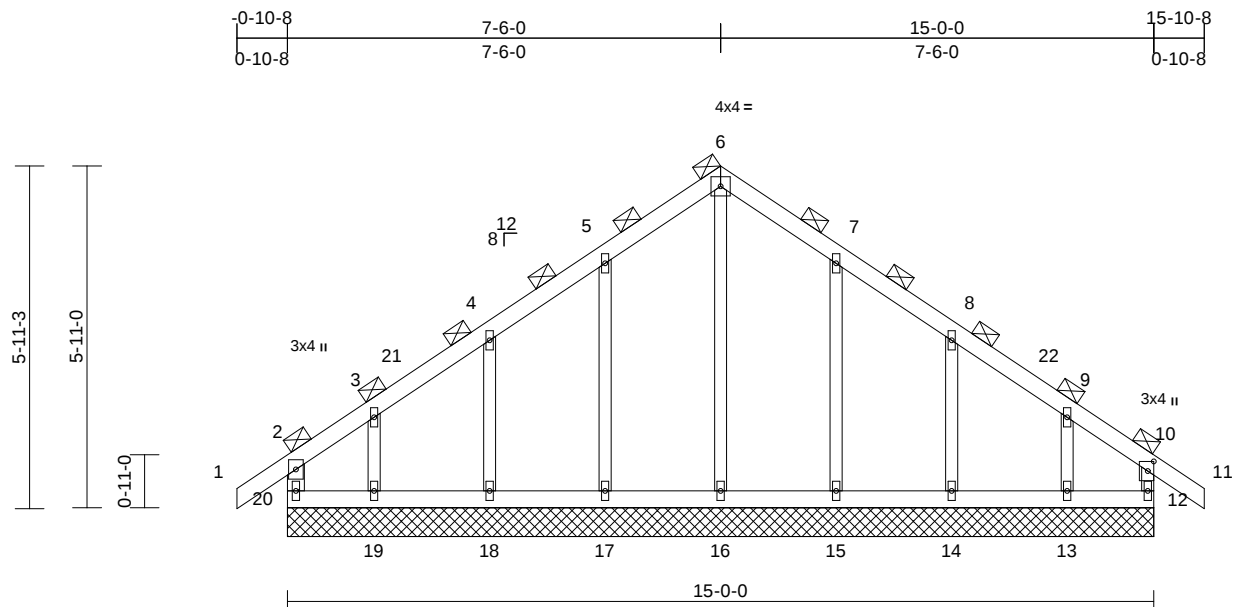
Sevier, Scott ,Engineer

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.

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774753
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. Thu Apr 13 16:38:13
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Page: 1



Scale = 1:39.9

Plate Offsets (X, Y): [10:0-2-0,0-1-4]

Loading	(psf)	Spacing	3-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 71 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 12-10:2x3 SPF No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	2-0-0 oc purlins (6-0-0 max.), except end verticals (Switched from sheeted: Spacing > 2-0-0).
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size)	12=15-0-0, 13=15-0-0, 14=15-0-0, 15=15-0-0, 16=15-0-0, 17=15-0-0, 18=15-0-0, 19=15-0-0, 20=15-0-0
Max Horiz	20=-249 (LC 8)
Max Uplift	12=-55 (LC 7), 13=-133 (LC 11), 14=-96 (LC 11), 15=-98 (LC 11), 17=-100 (LC 10), 18=-93 (LC 10), 19=-152 (LC 10), 20=-120 (LC 6)
Max Grav	12=211 (LC 24), 13=260 (LC 18), 14=281 (LC 18), 15=291 (LC 18), 16=292 (LC 20), 17=294 (LC 17), 18=280 (LC 1), 19=282 (LC 17), 20=265 (LC 18)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	2-20=-217/152, 1-2=0/59, 2-3=-170/163, 3-4=-126/138, 4-5=-122/260, 5-6=-177/368, 6-7=-177/368, 7-8=-122/260, 8-9=-80/138, 9-10=-101/93, 10-11=0/57, 10-12=-192/152
BOT CHORD	19-20=-102/136, 18-19=-102/136, 17-18=-102/136, 16-17=-102/136, 15-16=-102/136, 14-15=-102/136, 13-14=-102/136, 12-13=-102/136
WEBS	6-16=-285/52, 5-17=-233/159, 4-18=-220/182, 3-19=-200/164, 7-15=-230/159, 8-14=-223/182, 9-13=-186/162

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 4-6-0, Corner(3R) 4-6-0 to 10-6-0, Exterior(2N) 10-6-0 to 12-10-8, Corner(3E) 12-10-8 to 15-10-8 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 20, 55 lb uplift at joint 12, 100 lb uplift at joint 17, 93 lb uplift at joint 18, 152 lb uplift at joint 19, 98 lb uplift at joint 15, 96 lb uplift at joint 14 and 133 lb uplift at joint 13.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 14, 2023

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

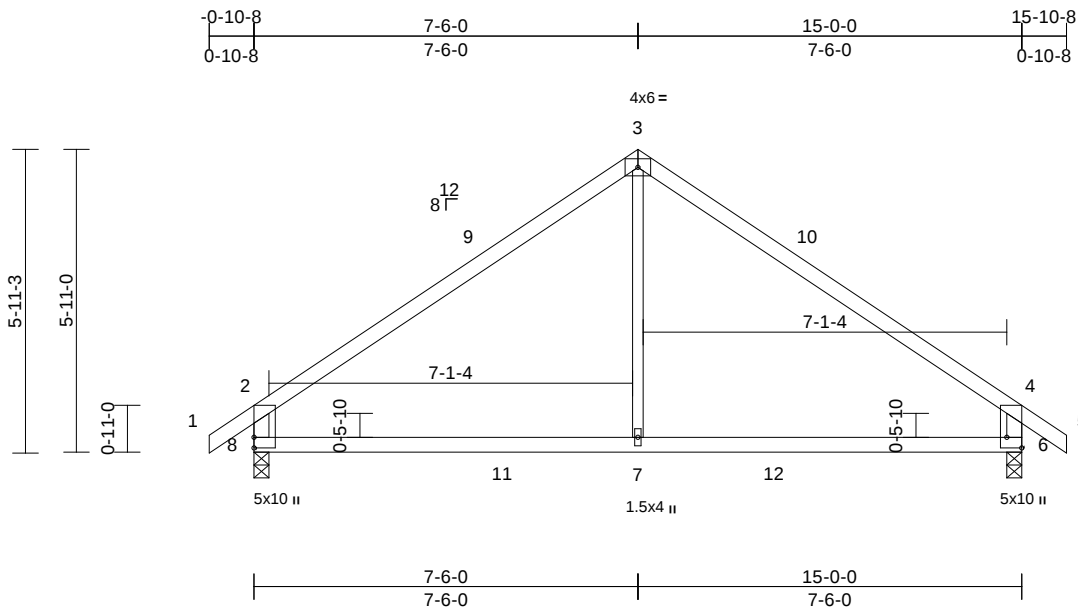
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:45
Plate Offsets (X, Y): [6:Edge,0-3-8]

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	0.97	Vert(LL)	-0.09	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.15	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 59 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 7-3:2x3 SPF No.2

BRACING

TOP CHORD Sheathed, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

6=0-3-8, 8=0-3-8
Max Horiz 8=-166 (LC 8)
Max Uplift 6=-87 (LC 11), 8=-87 (LC 10)
Max Grav 6=809 (LC 18), 8=809 (LC 17)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-823/140, 3-4=-823/140,
4-5=0/40, 2-8=-695/191, 4-6=-695/191
BOT CHORD 7-8=0/611, 6-7=0/611
WEBS 3-7=0/411

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-10-8 to 2-1-8,
Interior (1) 2-1-8 to 4-6-0, Exterior(2R) 4-6-0 to 10-6-0,
Interior (1) 10-6-0 to 12-10-8, Exterior(2E) 12-10-8 to
15-10-8 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
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members, with BCDL = 10.0psf.

- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 87 lb uplift at joint
8 and 87 lb uplift at joint 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.

LOAD CASE(S) Standard



April 14, 2023

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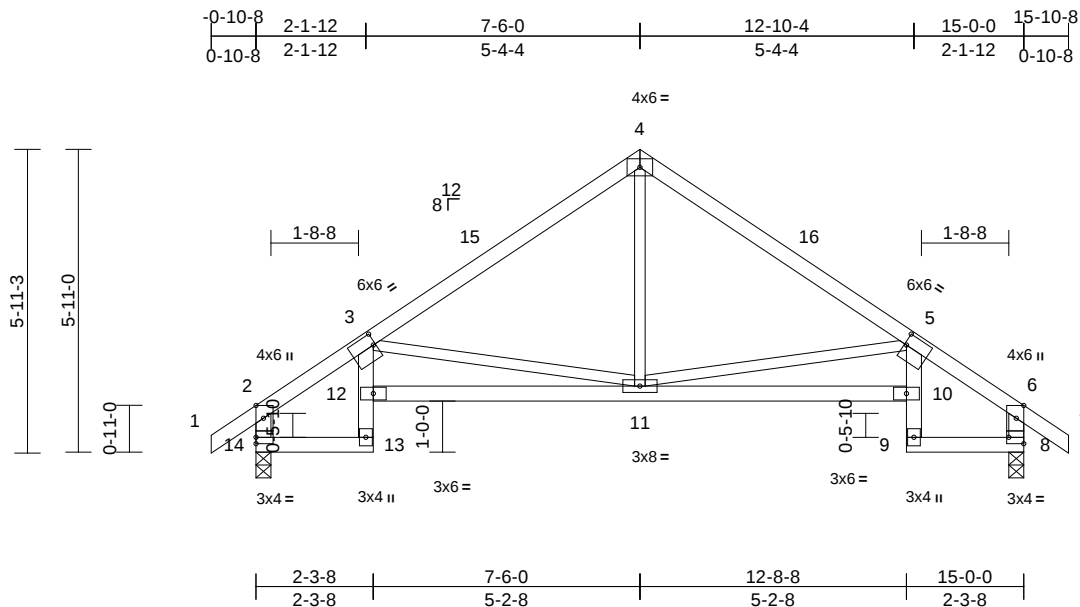
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Chesterfield, MO 63017



Scale = 1:45
Plate Offsets (X, Y): [2:0-3-0,Edge], [3:0-0-8,0-2-12], [5:0-0-8,0-2-12], [6:0-3-0,Edge], [8: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	0.66	Vert(LL)	-0.07	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.15	10-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.50	Horz(CT)	0.16	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 71 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 13-3,5-9:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 14-2,8-6:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 5-8-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=-166 (LC 8)
Max Uplift 8=-87 (LC 11), 14=-87 (LC 10)
Max Grav 8=733 (LC 1), 14=733 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-732/129, 3-4=-783/132, 4-5=-783/132, 5-6=-732/129, 6-7=0/40, 2-14=-673/136, 6-8=-673/136
BOT CHORD 13-14=-103/533, 12-13=-28/26, 3-12=0/102, 11-12=-253/1244, 10-11=-122/1154, 9-10=-20/25, 5-10=0/102, 8-9=-33/479
WEBS 4-11=0/400, 5-11=-616/232, 3-11=-689/275

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 14 and 87 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

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-12, Interior (1) 2-1-12 to 4-6-0, Exterior(2R) 4-6-0 to 10-6-0, Interior (1) 10-6-0 to 12-10-4, Exterior(2E) 12-10-4 to 15-10-8 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



April 14, 2023

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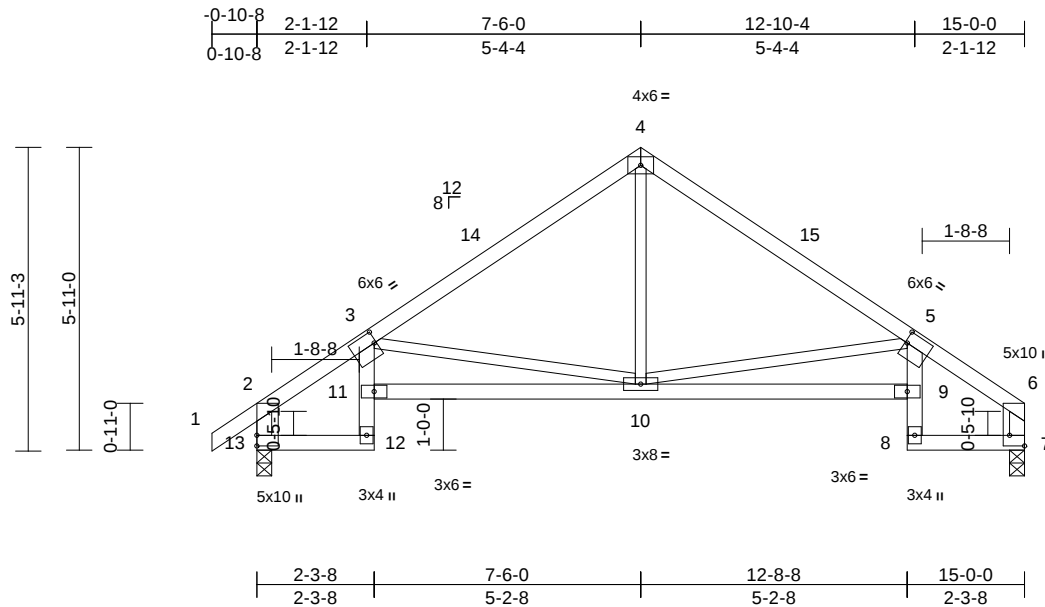
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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Chesterfield, MO 63017



Scale = 1:45

Plate Offsets (X, Y): [3:0-0-8,0-2-12], [5:0-0-8,0-2-12], [6:Edge,0-3-8]

[illegible]

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 12-3,5-8:2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2 *Except* 13-2,7-6:2x4 SP No.2

BRACING

TOP CHORD	Sheathed or 5-8-1 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size)	7=0-3-8, 13=0-3-8
Max Horiz	13=160 (LC 7)
Max Uplift	7=-64 (LC 11), 13=-87 (LC 10)
Max Grav	7=659 (LC 1), 13=736 (LC 1)

FORCES

STRINGS	1st-2nd Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/40, 2-3=-735/132, 3-4=-788/143, 4-5=-788/143, 5-6=-728/130, 2-13=-676/142, 6-7=-579/92
BOT CHORD	12-13=-114/526, 11-12=-27/24, 3-11=0/102, 10-11=-273/1231, 9-10=-166/1182, 8-9=-41/25, 5-9=-10/87, 7-8=-56/489
WEBS	4-10=-6/402, 5-10=-639/248, 3-10=-684/281

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=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
Interior zone and C-C Exterior(2E) -0-10-8 to 2-1-12,
Exterior (1) 2-1-12 to 4-6-0, Exterior(2R) 4-6-0 to 10-6-0,
Interior (1) 10-6-0 to 11-10-4, Exterior(2E) 11-10-4 to
14-10-4 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 13 and 64 lb uplift at joint 7.
- 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.

LOAD CASE(S) Standard



April 14, 2023

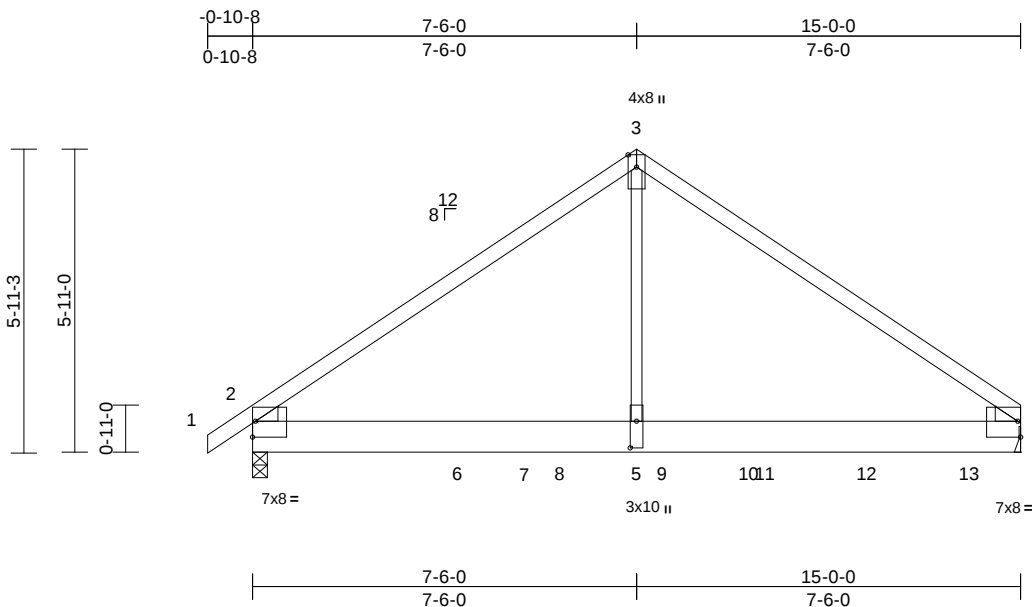


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Chesterfield, MO 63017



Scale = 1:45

Plate Offsets (X, Y): [2:Edge,0-3-12], [4:Edge,0-3-12], [5:0-6-4,0-1-8]

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	0.76	Vert(LL)	-0.10	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.18	4-5	>997	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 161 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2
Right: 2x4 SP No.2

BRACING

TOP CHORD Sheathed or 5-6-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 2=3771/0-3-8, 4=4833/ Mechanical
Max Horiz 2=139 (LC 7)
Max Uplift 2=-721 (LC 8), 4=-722 (LC 9)
Max Grav 2=3771 (LC 1), 4=4849 (LC 2)

FORCES

(lb) - Max. Comp./Max. Ten. - All forces 250
(lb) or less except when shown.
TOP CHORD 2-3=-4992/868, 3-4=-4968/864
BOT CHORD 2-6=-615/3888, 6-7=-615/3888,
7-8=-615/3888, 5-8=-615/3888,
5-9=-615/3888, 9-10=-615/3888,
10-11=-615/3888, 11-12=-615/3888,
12-13=-615/3888, 4-13=-615/3888
WEBS 3-5=-844/5203

NOTES

- 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-8-0 oc.
Web connected as follows: 2x3 - 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone; cantilever left and right exposed; end
vertical left and right exposed; 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.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members, with BCDL = 10.0psf.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 721 lb uplift at
joint 2 and 722 lb uplift at joint 4.
- 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.
- Hanger(s) or other connection device(s) shall be
provided sufficient to support concentrated load(s) 1575
lb down and 471 lb up at 4-0-0, 1134 lb down and 223
lb up at 6-0-0, 1159 lb down and 126 lb up at 8-0-0,
1158 lb down and 146 lb up at 10-0-0, and 1154 lb
down and 160 lb up at 12-0-0, and 1165 lb down and
165 lb up at 14-0-0 on bottom chord. The design/
selection of such connection device(s) is the
responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 2-4=-20
Concentrated Loads (lb)
Vert: 6=-1544 (F), 8=-1134 (F), 9=-1132 (F),
11=-1132 (F), 12=-1130 (F), 13=-1130 (F)



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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type
Flat Girder

Qty
1

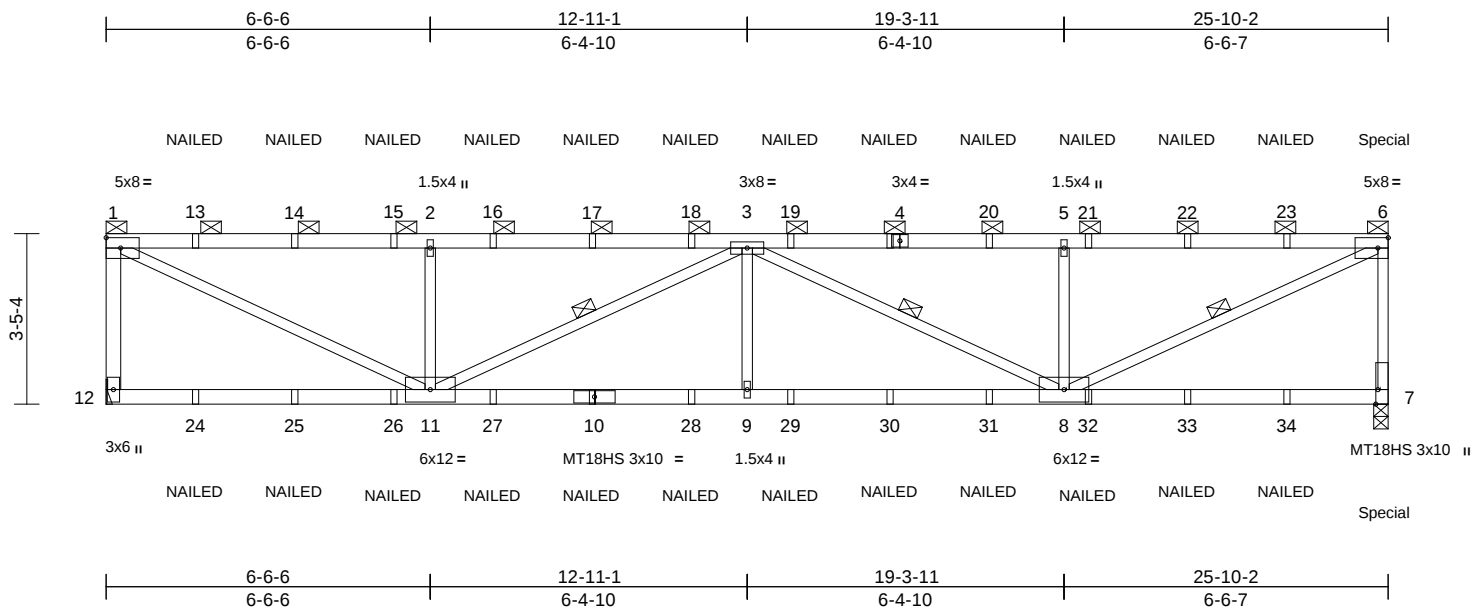
Ply
1

Roof - Osage Lot 72
Job Reference (optional)

I57774758

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:18
ID:TnC0JE71cPcQdLj6CNuNlZ0oS8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCD0i7J4zJC?f

Page: 1



Scale = 1:46.4

Plate Offsets (X, Y): [7:0-3-8,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	0.90	Vert(LL)	-0.25	9-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.57	9-11	>535	180	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.07	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH								
Weight: 113 lb											FT = 20%	

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 4-6:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 12-1:2x4 SP No.2

BRACING

TOP CHORD 2-0-0 oc purlins (3-3-3 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-11-0 oc bracing.

WEBS 1 Row at midpt 3-11, 3-8, 6-8

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=-116 (LC 4)
Max Uplift 7=-504 (LC 5), 12=-459 (LC 4)
Max Grav 7=1671 (LC 1), 12=1564 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1487/494, 1-2=-2566/755, 2-3=-2566/755, 3-5=-2625/809, 5-6=-2625/809, 6-7=-1550/559
BOT CHORD 11-12=-104/114, 9-11=-1052/3410, 8-9=-1052/3410, 7-8=-31/47
WEBS 1-11=-813/2791, 2-11=-595/350, 3-11=-941/309, 3-9=0/363, 3-8=-874/247, 5-8=-685/403, 6-8=-891/2885

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Provide adequate drainage to prevent water ponding.
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

6) Refer to girder(s) for truss to truss connections.

7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 459 lb uplift at joint 12 and 504 lb uplift at joint 7.

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.

10) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 106 lb down and 70 lb up at 25-8-14 on top chord, and 51 lb down at 25-8-14 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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 (lb/ft)

Vert: 1-6=-70, 7-12=-20

Concentrated Loads (lb)

Vert: 4=-44 (F), 6=-81 (F), 7=-34 (F), 10=-24 (F), 13=-44 (F), 14=-44 (F), 15=-44 (F), 16=-44 (F), 17=-44 (F), 18=-44 (F), 19=-44 (F), 20=-44 (F), 21=-44 (F), 22=-44 (F), 23=-44 (F), 24=-24 (F), 25=-24 (F), 26=-24 (F), 27=-24 (F), 28=-24 (F), 29=-24 (F), 30=-24 (F), 31=-24 (F), 32=-24 (F), 33=-24 (F), 34=-24 (F)



April 14, 2023

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type

Flat

Qty

1

Ply

1

Roof - Osage Lot 72

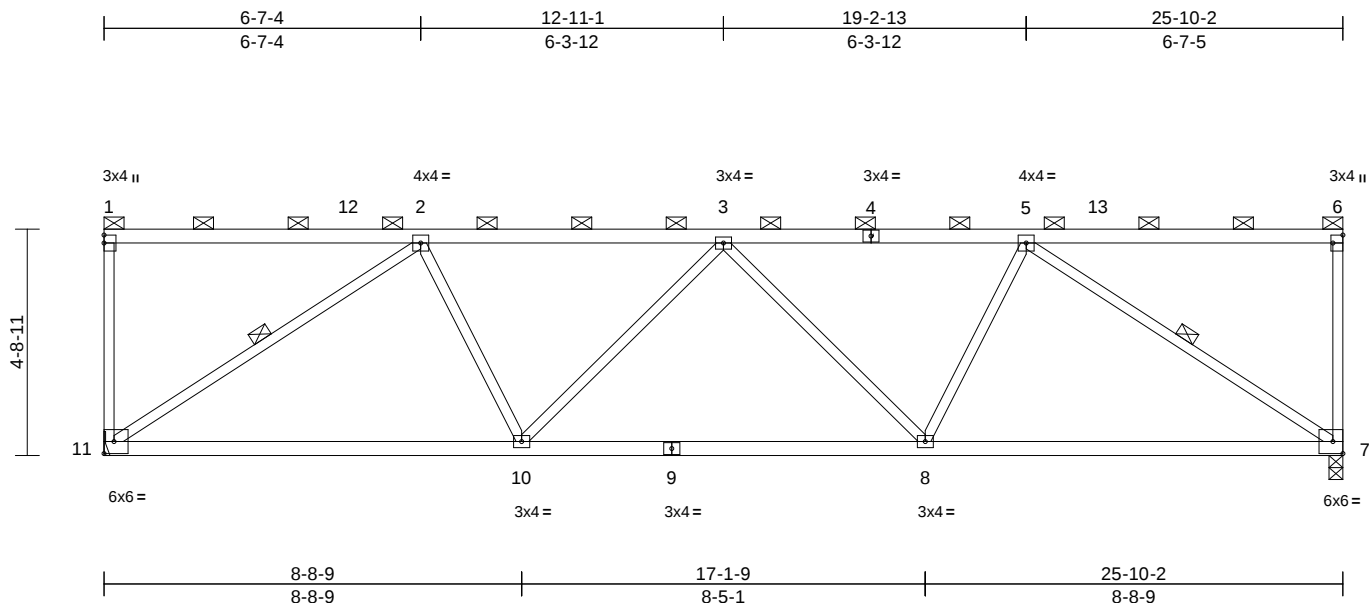
Job Reference (optional)

I57774759

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:19

Page: 1

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Scale = 1:48.1

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

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	0.84	Vert(LL)	-0.15	8-10	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.34	8-10	>907	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 113 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 4-6:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2

BRACING

TOP CHORD 2-0-0 oc purlins (3-6-14 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-3-9 oc bracing.

WEBS 1 Row at midpt 2-11, 5-7

REACTIONS

(size) 7=0-3-8, 11= Mechanical
Max Horiz 11=-163 (LC 6)
Max Uplift 7=-211 (LC 7), 11=-211 (LC 6)
Max Grav 7=1154 (LC 1), 11=1154 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-197/143, 1-2=-79/79, 2-3=-1519/584, 3-5=-1533/599, 5-6=-78/77, 6-7=-174/129
BOT CHORD 10-11=-425/1322, 8-10=-573/1734, 7-8=-445/1347
WEBS 2-11=-1575/595, 2-10=-32/490, 3-10=-311/195, 3-8=-291/174, 5-8=-20/476, 5-7=-1609/622

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) 0-1-4 to 5-1-4, Exterior (2) 5-1-4 to 20-8-14, Corner (3) 20-8-14 to 25-8-14 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) Provide adequate drainage to prevent water ponding.
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 11 and 211 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.
- 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



April 14, 2023

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

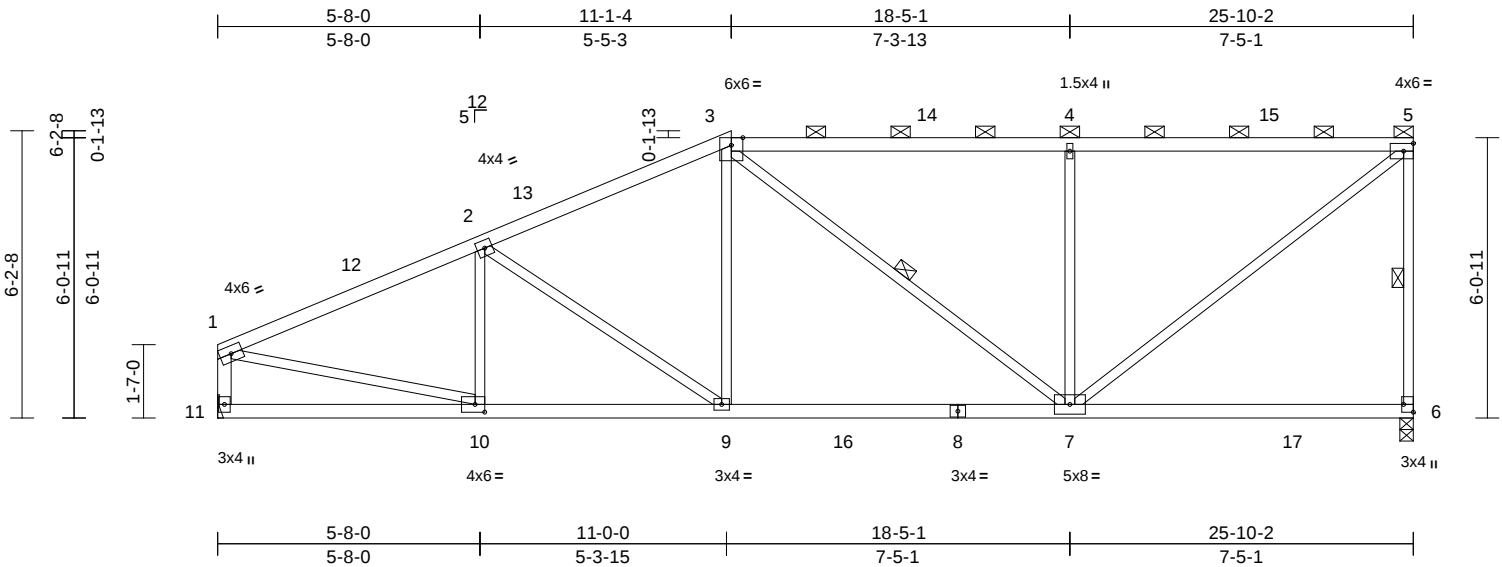
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:49.8

Plate Offsets (X, Y): [6:Edge,0-2-8], [10:0-2-8,0-2-0]

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	0.69	Vert(LL)	-0.14	7-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.28	7-9	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 120 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 8-6:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 11-1:2x4 SP No.2

BRACING

TOP CHORD Sheathed or 4-1-9 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-3 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-6, 3-7

REACTIONS

(size) 6=0-3-8, 11= Mechanical
Max Horiz 11=235 (LC 9)
Max Uplift 6=-192 (LC 7), 11=-114 (LC 10)
Max Grav 6=1237 (LC 2), 11=1206 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1680/220, 2-3=-1527/237, 3-4=-1208/224, 4-5=-1206/222, 5-6=-1110/221, 1-11=-1107/165
BOT CHORD 10-11=-225/113, 9-10=-274/1499, 7-9=-248/1352, 6-7=-77/93
WEBS 5-7=-235/1517, 1-10=-119/1427, 3-9=-4/352, 3-7=-187/81, 4-7=-617/244, 2-9=-189/138, 2-10=-227/94

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 2-4-2 to 5-4-2, Interior (1) 5-4-2 to 9-0-11, Exterior(2R) 9-0-11 to 17-6-8, Interior (1) 17-6-8 to 24-11-4, Exterior(2E) 24-11-4 to 27-11-4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 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



April 14, 2023

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

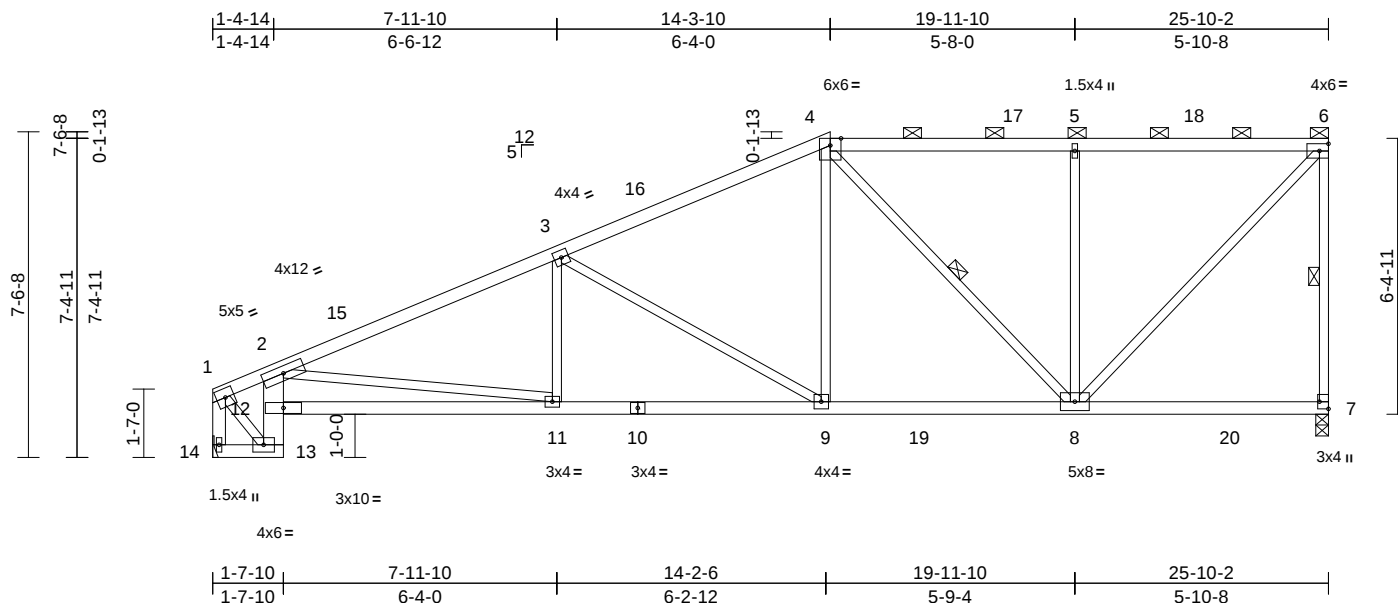
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:53.4

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

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	0.70	Vert(LL)	-0.12	9-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.22	9-11	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.11	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 126 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 13-2:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 14-1:2x4 SP No.2

BRACING

TOP CHORD Sheathed or 3-7-2 oc purlins, except end verticals, and 2-0-0 oc purlins (5-4-14 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 6-7, 4-8

REACTIONS (size) 7=0-3-8, 14= Mechanical
Max Horiz 14=275 (LC 7)
Max Uplift 7=185 (LC 7), 14=134 (LC 10)
Max Grav 7=1234 (LC 2), 14=1198 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-845/119, 2-3=-2153/261, 3-4=-1465/234, 4-5=-944/206, 5-6=-942/205, 6-7=-1123/207, 1-14=-1183/148
BOT CHORD 13-14=-260/43, 12-13=-694/88, 2-12=-631/124, 11-12=-580/1872, 9-11=-314/1924, 8-9=-230/1277, 7-8=-86/99
WEBS 6-8=-206/1358, 1-13=-120/992, 4-9=-38/594, 4-8=-496/108, 5-8=-482/192, 3-9=-736/216, 3-11=0/280, 2-11=-21/268

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 2-4-2 to 5-4-2, Interior (1) 5-4-2 to 12-3-1, Exterior(2R) 12-3-1 to 20-8-15, Interior (1) 20-8-15 to 24-11-4, Exterior(2E) 24-11-4 to 27-11-4 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 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



April 14, 2023

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

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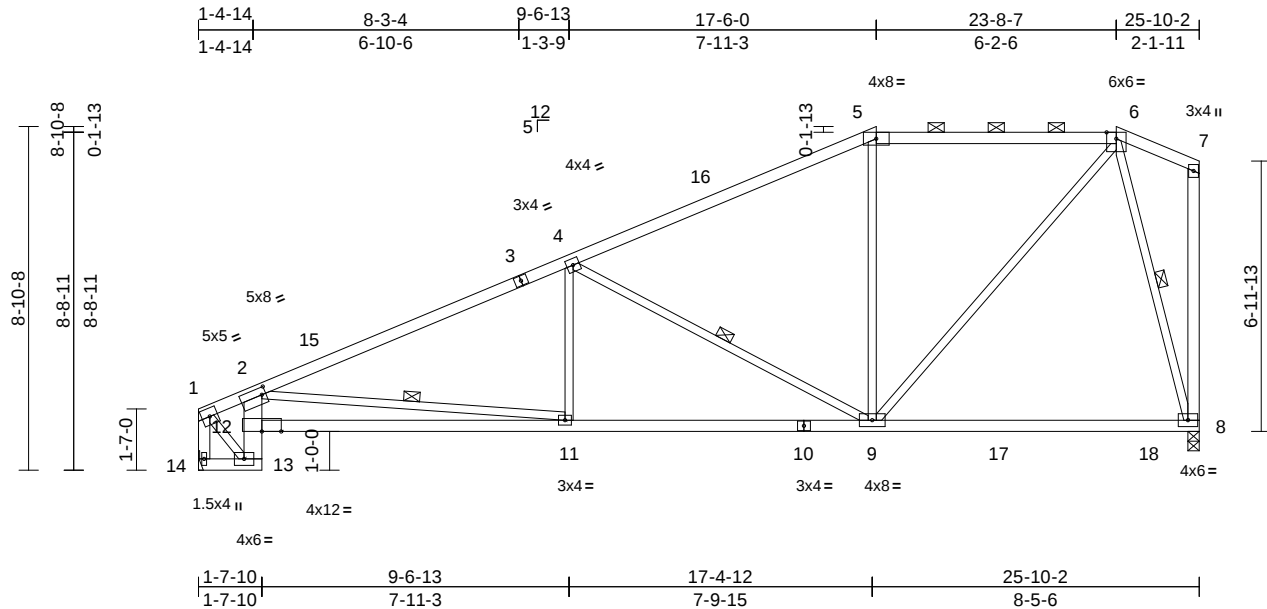


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774762
Hip	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:20
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Page: 1



Scale = 1:59.5

Plate Offsets (X, Y): [2:0-1-4,0-2-4]

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	0.82	Vert(LL)	-0.27	8-9	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.43	8-9	>721	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.69	Horz(CT)	0.11	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							
Weight: 132 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP 1650F 1.5E, 1-3:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 14-13:2x4 SP No.2, 13-2:1 1/2" x 5 1/2" 2.0E Microllam® LVL
WEBS 2x3 SPF No.2 *Except* 8-7,14-1:2x4 SP No.2

BRACING

TOP CHORD Sheathed or 4-5-7 oc purlins, except end verticals, and 2-0-0 oc purlins (4-9-8 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-11, 4-9, 6-8

REACTIONS

(size) 8=0-3-8, 14= Mechanical
Max Horiz 14=301 (LC 7)
Max Uplift 8=145 (LC 7), 14=148 (LC 10)
Max Grav 8=1233 (LC 2), 14=1189 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-834/118, 2-4=-2002/269, 4-5=-1114/208, 5-6=-948/234, 6-7=-139/145, 7-8=-96/91, 1-14=-1174/163
BOT CHORD 13-14=-285/44, 12-13=-678/100, 2-12=-607/148, 11-12=-605/2002, 9-11=-278/1765, 8-9=-110/291
WEBS 2-11=-270/340, 4-11=0/348, 4-9=-931/257, 5-9=-134/124, 6-9=-146/1026, 6-8=-1080/241, 1-13=-139/969

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 2-4-2 to 5-4-2, Interior (1) 5-4-2 to 15-5-8, Exterior(2R) 15-5-8 to 25-10-13, Exterior(2E) 25-10-13 to 27-10-12 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Refer to girder(s) for truss to truss connections.
- 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



April 14, 2023

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

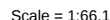
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16023 Swingley Ridge Rd
Chesterfield, MO 63017



- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 2-4-2 to 5-4-2,
Interior (1) 5-4-2 to 19-9-10, Exterior(2R) 19-9-10 to
24-10-12, Exterior(2E) 24-10-12 to 27-10-12 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members, with BCDL = 10.0psf.
- 5) Refer to girder(s) for truss to truss connections.
- 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.

LOAD CASE(S) Standard

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



April 14, 2023



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

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

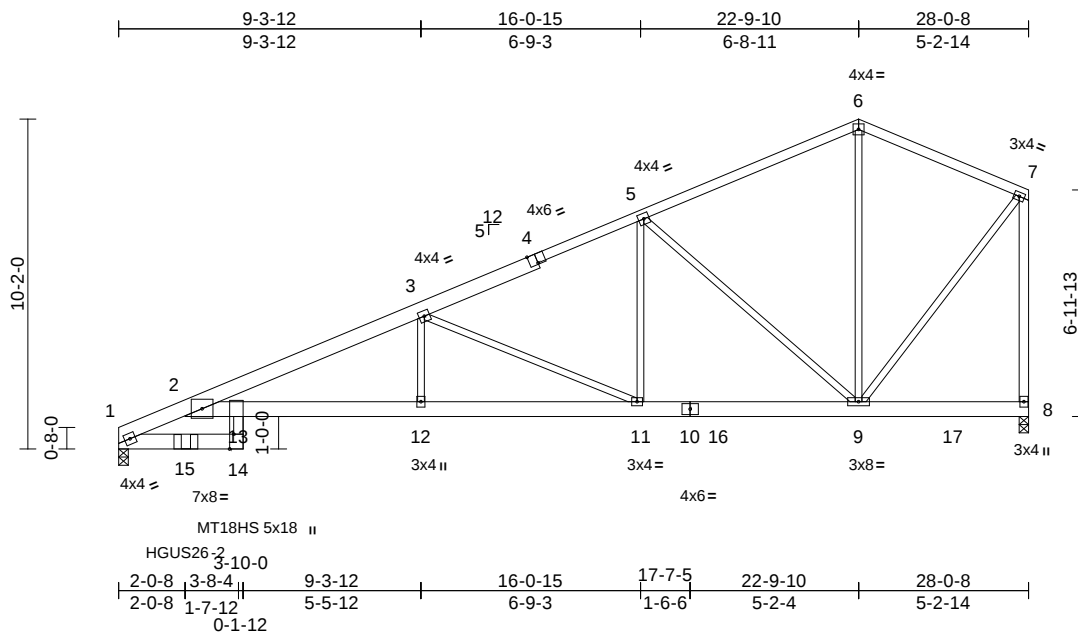


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774764
Roof Special Girder	1	3	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:21
ID: tNc0JE71cPcQdLj6CNuNlZ0oS8-RfC?Psb70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:71

Plate Offsets (X, Y): [4:0-3-0,Edge], [14:0-5-8,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	0.92	Vert(LL)	-0.37	12-13	>906	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.65	12-13	>516	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.59	Horz(CT)	0.23	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH								
Weight: 511 lb											FT = 20%	

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 1-4:2x6 SP 2400F 2.0E
BOT CHORD	2x6 SP 2400F 2.0E
WEBS	2x3 SPF No.2 *Except* 14-13,8-7:2x4 SP No.2

BRACING

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	1=0-3-8, 8=0-3-8
Max Horiz	1=337 (LC 8)
Max Uplift	1=-836 (LC 8), 8=-237 (LC 8)
Max Grav	1=5806 (LC 2), 8=1669 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-1742/55, 2-3=-5580/839, 12-13=-2476/354, 5-6=-987/160, 6-7=-983/184, 7-8=-1602/264
BOT CHORD	1-14=0/0, 2-13=-1040/5297, 12-13=-1040/5297, 11-12=-1040/5297, 9-11=-422/2175, 8-9=-5/10
WEBS	13-14=-440/2869, 3-12=-148/1596, 3-11=-3427/679, 5-11=-157/1450, 5-9=-1758/379, 6-9=-2/396, 7-9=-226/1407

NOTES

- 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.120"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with Simpson SDS 1/4 x 4-1/2 screws as follows: 2x6 - 2 rows staggered at 0-4-0 oc.
Web chords connected with 10d (0.120"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 836 lb uplift at joint 1 and 237 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.
- Use Simpson Strong-Tie HGUS26-2 (20-16d Girder, 8-16d Truss) or equivalent at 2-0-13 from the left end to connect truss(es) to front 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: 1-6=-70, 6-7=-70, 1-14=-20, 8-13=-20
Concentrated Loads (lb)
Vert: 15=-4813 (F)



April 14, 2023

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

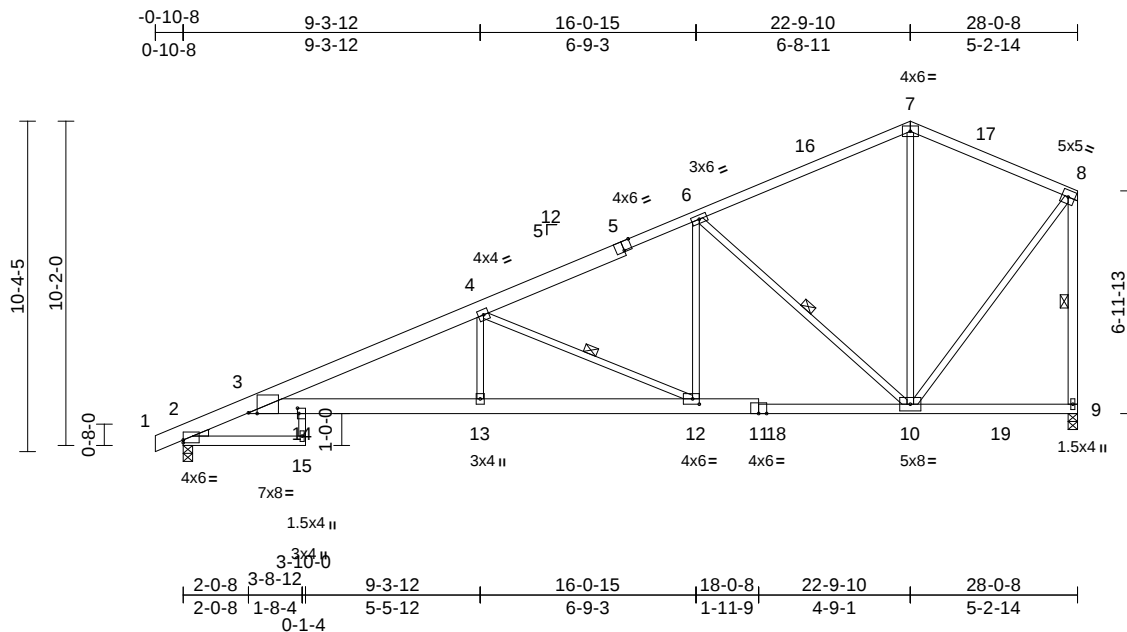
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774765
Roof Special	2	1	Job Reference (optional)	

Run: 8.63 E Feb 23 2023 Print: 8.630 E Feb 23 2023 MiTek Industries, Inc. Fri Apr 14 09:05:32
ID: tNc0JE71cPCqDLj6CNuNlZ0oS8-et4MZjTrkjXLPNM5vQ4ASdTD3a0FBxXfXA07zR0CH



Scale = 1:72.2

Plate Offsets (X, Y): [2:Edge,0-1-0], [3:0-3-5,Edge], [5:0-3-0,Edge], [12:0-2-8,0-2-0], [14:0-2-0,0-0-8]

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	0.97	Vert(LL)	-0.34	13-14	>980	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.59	13-14	>565	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.26	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH								
Weight: 162 lb											FT = 20%	

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 3-11:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 9-8:2x4 SP No.2
WEDGE Left: 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 3-4-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 8-9, 4-12, 6-10

REACTIONS

(lb/size) 2=1322/0-3-8, 9=1247/0-3-8
Max Horiz 2=307 (LC 7)
Max Uplift 2=-194 (LC 10), 9=-167 (LC 10)
Max Grav 2=1382 (LC 2), 9=1341 (LC 2)

FORCES

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-778/66, 3-4=-3127/478, 4-5=-1775/248, 5-6=-1637/277, 6-16=-778/203, 7-16=-696/217, 7-17=-684/224, 8-17=-751/213, 8-9=-1242/207
BOT CHORD 3-14=-551/2881, 13-14=-551/2881, 12-13=-551/2881, 11-12=-224/1553, 11-18=-226/1547, 10-18=-226/1547
WEBS 8-10=-132/1055, 7-10=-21/252, 4-13=0/526, 4-12=-1465/357, 6-12=-46/845, 6-10=-1216/284

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-0-8, Interior (1) 2-0-8 to 19-9-10, Exterior(2R) 19-9-10 to 24-10-12, Exterior(2E) 24-10-12 to 27-10-12 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 194 lb uplift at joint 2 and 167 lb uplift at joint 9.
- 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.

LOAD CASE(S) Standard



April 14, 2023

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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

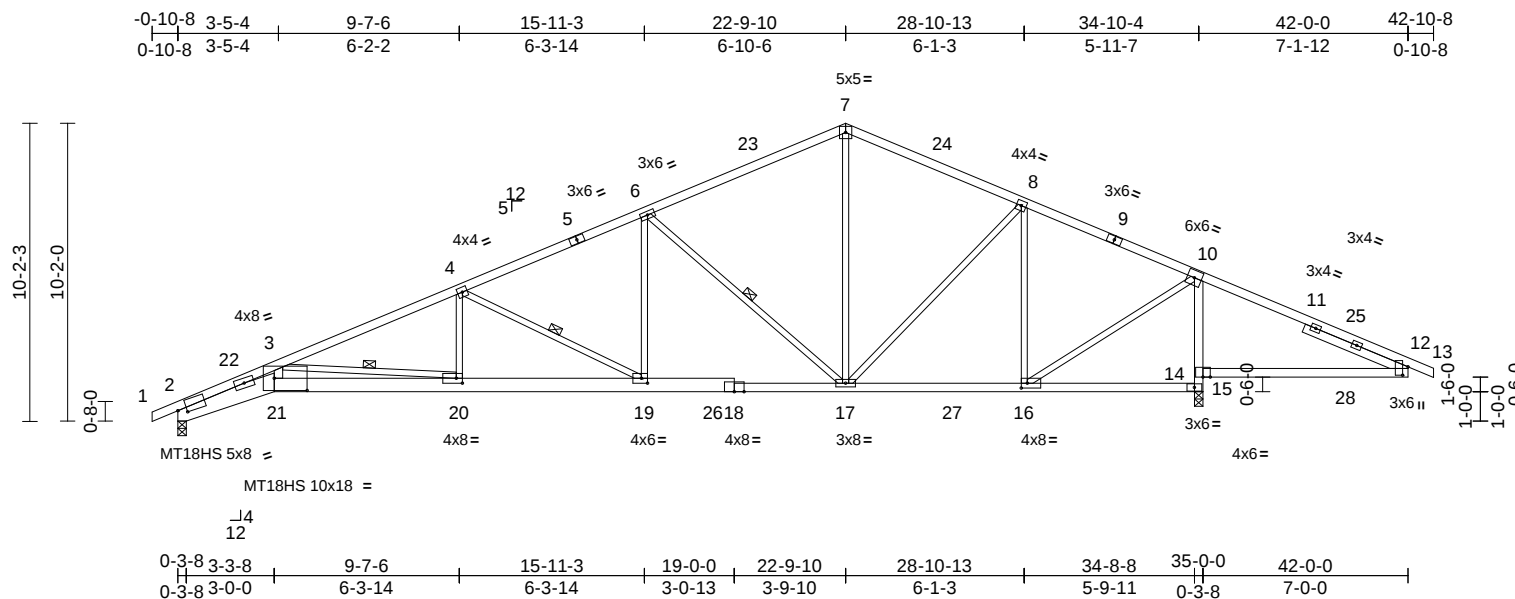


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774766
Roof Special	2	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:22
ID: tNc0JE71cPCqDLj6CNuNlZ0oS8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:78.7

Plate Offsets (X, Y): [2:0-3-11,0-1-11], [12:0-3-7,0-2-3], [16:0-2-8,0-2-0], [19:0-2-8,0-2-0], [20:0-2-8,0-2-0], [21:1-1-8,0-5-0]

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	0.96	Vert(LL)	-0.38	20-21	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.66	20-21	>627	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.25	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 213 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 7-9:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 2-21:2x8 SP 2400F 2.0E, 21-18:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 21-3:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 3-9-12

BRACING

TOP CHORD Sheathed or 2-3-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-9-7 oc bracing.

WEBS 1 Row at midpt 3-20, 4-19, 6-17

REACTIONS (size) 2=0-3-8, 15=0-3-8
Max Horiz 2=201 (LC 10)
Max Uplift 2=230 (LC 10), 15=269 (LC 7)
Max Grav 2=1611 (LC 2), 15=2441 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/9, 2-3=-6504/1056, 3-4=-3674/543, 4-6=-2514/371, 6-7=-1483/263, 7-8=-1469/285, 8-10=-1143/193, 10-12=-611/847, 12-13=0/0
BOT CHORD 2-21=-1139/5961, 20-21=-1054/5395, 19-20=-573/3362, 17-19=-308/2261, 16-17=-62/984, 15-16=-630/578, 14-15=-2359/794, 10-14=-2212/625, 12-14=-666/585
WEBS 3-21=-211/1623, 3-20=-2047/484, 7-17=-91/740, 8-17=-152/448, 8-16=-844/297, 10-16=-424/1916, 4-20=-25/618, 4-19=-1245/298, 6-19=-30/843, 6-17=-1283/289

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 19-9-10, Exterior(2R) 19-9-10 to 25-9-10, Interior (1) 25-9-10 to 39-10-8, Exterior(2E) 39-10-8 to 42-10-8 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) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 6) Bearing at joint(s) 2, 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 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



April 14, 2023

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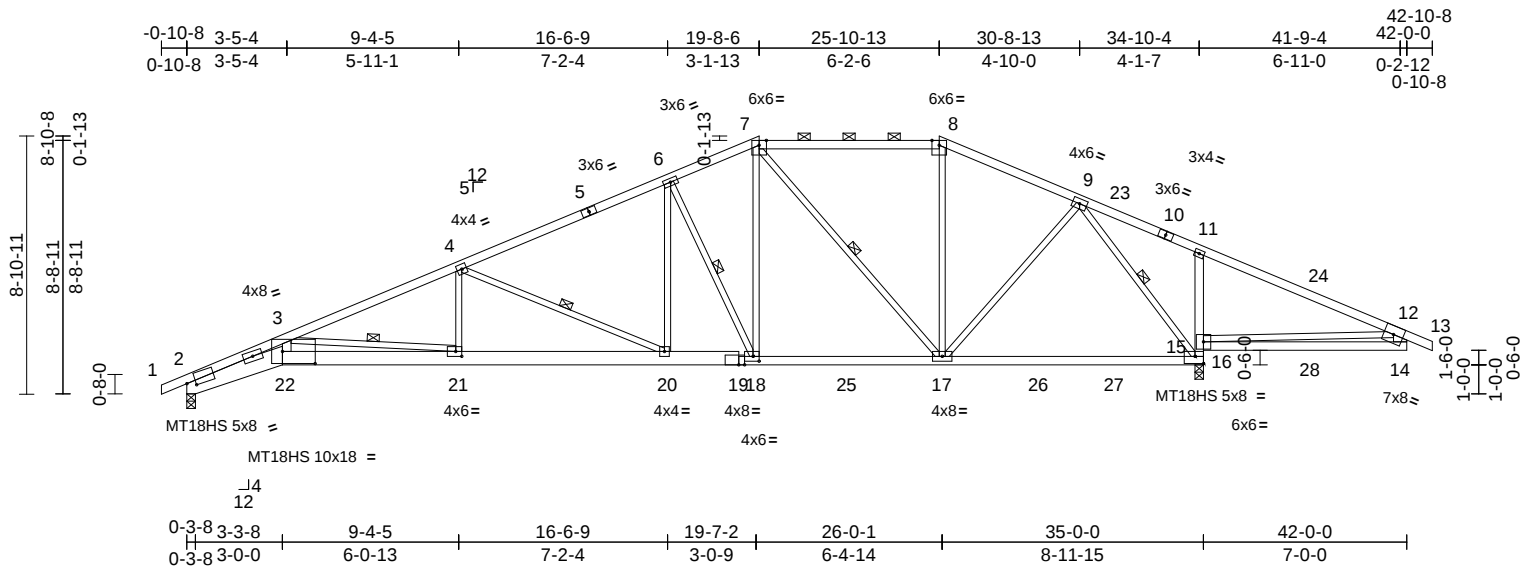


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774767
Hip	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:23
ID: tNc0JE71cPCqdlj6CNuNizOoS8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCdoi7J4zJC?f

Page: 1



Scale = 1:79.3

Plate Offsets (X, Y): [2:0-3-11,0-1-11], [16:Edge,0-3-0], [18:0-2-8,0-2-0], [19:0-2-7,Edge], [21:0-2-8,0-2-0], [22:1-1-8,0-5-0]

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	0.96	Vert(LL)	-0.37	21-22	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.64	21-22	>649	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.26	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 218 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 5-7:2x4 SP 2400F
2.0E, 1-5,10-13:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 2-22:2x8 SP 2400F
2.0E, 22-19:2x6 SP 2400F 2.0E, 19-16:2x4
SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 22-3:2x4 SP No.2,
12-14:2x6 SPF No.2

BRACING

TOP CHORD Sheathed, except
2-0-0 oc purlins (3-3-12 max.): 7-8.
Rigid ceiling directly applied or 10-0-0 oc
bracing, Except:
4-4-5 oc bracing: 15-16.
WEBS 1 Row at midpt 7-17, 9-16, 3-21, 6-18,
4-20

REACTIONS

(size) 2=0-3-8, 16=0-3-8
Max Horiz 2=180 (LC 10)
Max Uplift 2=-215 (LC 10), 16=-320 (LC 7)
Max Grav 2=1611 (LC 2), 16=2448 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/9, 2-3=-6441/953, 3-4=-3757/496,
4-6=-2407/330, 6-7=-1903/305,
7-8=-1250/195, 8-9=-1395/190,
9-11=-520/773, 11-12=-614/858, 12-13=0/30
BOT CHORD 2-22=-1021/5897, 21-22=-941/5340,
20-21=-515/3447, 18-20=-246/2153,
17-18=-122/1693, 16-17=-28/655,
15-16=-590/382, 11-15=-453/209, 14-15=0/0
WEBS 3-22=-196/1587, 7-18=-211/1032,
7-17=-708/161, 8-17=-79/240,
9-17=-189/960, 9-16=-2142/572,
3-21=-1907/429, 6-18=-1013/277,
4-21=0/667, 4-20=-1416/294, 6-20=-48/735,
12-15=-696/630, 12-14=-142/113

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-5-4, Interior (1) 3-5-4 to 13-9-2, Exterior(2R) 13-9-2 to 31-10-1, Interior (1) 31-10-1 to 38-8-2, Exterior(2E) 38-8-2 to 42-10-8 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.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 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.
- 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



April 14, 2023

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

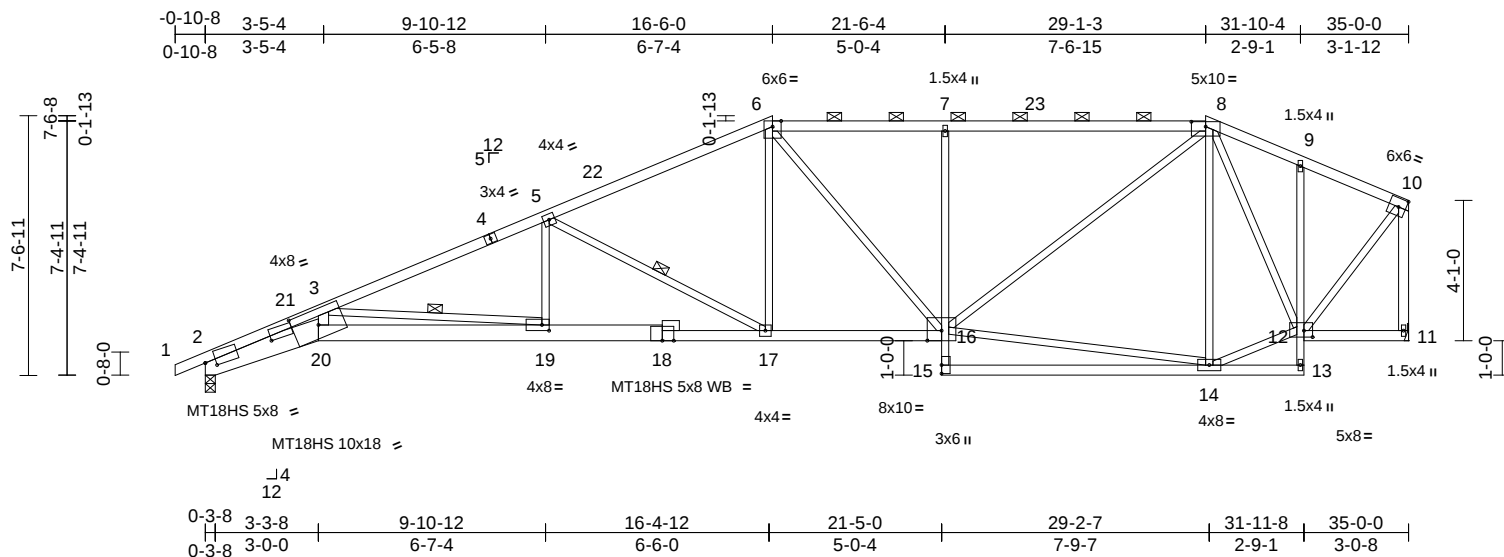
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:67

Plate Offsets (X, Y): [2:0-3-11,0-1-15], [2:2-0-6,0-0-1], [8:0-5-0,0-1-11], [12:0-3-0,0-2-4], [19:0-2-8,0-2-0], [20:0-9-0,0-5-7]

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	0.87	Vert(LL)	-0.37	19-20	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.66	19-20	>631	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.28	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH								
											Weight: 195 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 6-8:2x4 SP 1650F 1.5E, 8-10:2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 2-20:2x8 SP 2400F 2.0E, 7-15,13-9:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 20-3,11-10:2x4 SP No.2
OTHERS	2x4 SP No.2

BRACING

TOP CHORD	Sheathed or 2-9-4 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-15 max.): 6-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 3-19, 5-17

REACTIONS

(size)	2-0-3-8, 11= Mechanical
Max Horiz	2=182 (LC 7)
Max Uplift	2=-193 (LC 10), 11=-169 (LC 7)
Max Grav	2=1634 (LC 1), 11=1561 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/9, 2-3=-6724/864, 3-5=-3632/427, 5-6=-2487/372, 6-7=-2153/384, 7-8=-2152/386, 8-9=-920/233, 9-10=-952/196, 10-11=-1516/227
BOT CHORD	2-20=-918/6156, 19-20=-843/5557, 17-19=-373/3320, 16-17=-271/2195, 15-16=0/140, 7-16=-562/209, 14-15=0/95, 13-14=-21/30, 12-13=-24/0, 9-12=-138/105, 11-12=-50/58
WEBS	3-20=-186/1717, 3-19=-2252/473, 5-19=0/539, 5-17=-1262/273, 6-17=-55/671, 6-16=-103/174, 14-16=-168/1014, 8-16=-198/1399, 8-14=-383/163, 12-14=-137/1116, 8-12=-628/67, 10-12=-157/1345

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-7-8, Interior (1) 2-7-8 to 11-6-10, Exterior(2R) 11-6-10 to 21-6-4, Interior (1) 21-6-4 to 24-1-13, Exterior(2R) 24-1-13 to 31-4-4, Exterior(2E) 31-4-4 to 34-10-4 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.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- 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.
- 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



April 14, 2023

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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

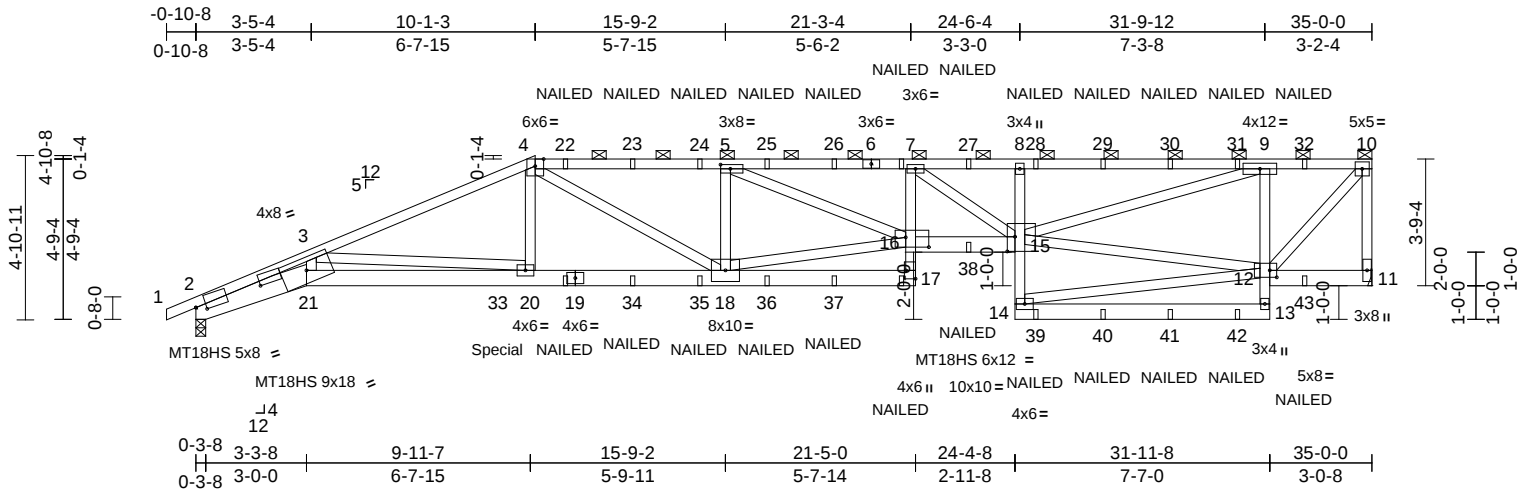


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774770
Half Hip Girder	1	2	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:25
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Page: 1



Scale = 1:68.6

Plate Offsets (X, Y): [2:0-3-11,0-1-11], [2:2-0-6,0-0-1], [5:0-3-8,0-1-8], [12:0-2-8,0-2-8], [15:0-2-12,0-5-4], [16:0-8-4,0-3-8], [17:Edge,0-3-8]

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	0.99	Vert(LL)	-0.49	17	>852	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.88	17	>473	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.38	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 475 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 2400F 2.0E *Except* 6-10:2x4 SP 1650F 1.5E
BOT CHORD 2x6 SPF No.2 *Except* 2-21:2x8 SP 2400F 2.0E, 21-19,16-15:2x6 SP 2400F 2.0E, 17-7:2x4 SP 1650F 1.5E, 8-14,13-9:2x4 SP No.2
WEBS 2x4 SP No.2

BRACING

TOP CHORD Sheathed or 4-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-8 max.): 4-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 11= Mechanical
Max Horiz 2=170 (LC 26)
Max Uplift 2=-724 (LC 8), 11=-851 (LC 5)
Max Grav 2=2955 (LC 1), 11=3010 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/9, 2-3=-13289/3426, 3-4=-7589/2037, 4-5=-8088/2292, 5-7=-10965/3127, 7-8=-9405/2697, 8-9=-9388/2731, 9-10=-2601/799, 10-11=-2914/860, 2-21=-3271/12227, 20-21=-2954/11016, 18-20=-1940/6920, 17-18=-314/1176, 16-17=0/284, 7-16=-50/673, 15-16=-3175/11027, 14-15=0/276, 8-15=-615/373, 13-14=0/128, 12-13=0/273, 9-12=-2992/1090, 11-12=-38/45, 3-21=-877/3472, 7-15=-2011/539, 10-12=-1147/3872, 4-20=-311/1565, 16-18=-2040/7042, 4-18=-451/1535, 5-18=-2009/824, 5-16=-938/3124, 3-20=-4054/1167, 9-15=-2032/7037, 12-15=-796/2396, 12-14=-130/293

NOTES

- 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-6-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- 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.
- 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.

- "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 794 lb down and 281 lb up at 9-0-0, and 69 lb down at 21-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-10=-70, 2-21=-20, 17-21=-20, 15-16=-20, 13-14=-20, 11-12=-20
Concentrated Loads (lb)
Vert: 19=-52 (B), 17=-52 (B), 7=-110 (B), 22=-110 (B), 23=-110 (B), 24=-110 (B), 25=-110 (B), 26=-110 (B), 27=-81 (B), 28=-109 (B), 29=-109 (B), 30=-109 (B), 31=-109 (B), 32=-110 (B), 33=-794 (B), 34=-52 (B), 35=-52 (B), 36=-52 (B), 37=-52 (B), 38=-118 (B), 39=-52 (B), 40=-52 (B), 41=-52 (B), 42=-52 (B), 43=-52 (B)



April 14, 2023

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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

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



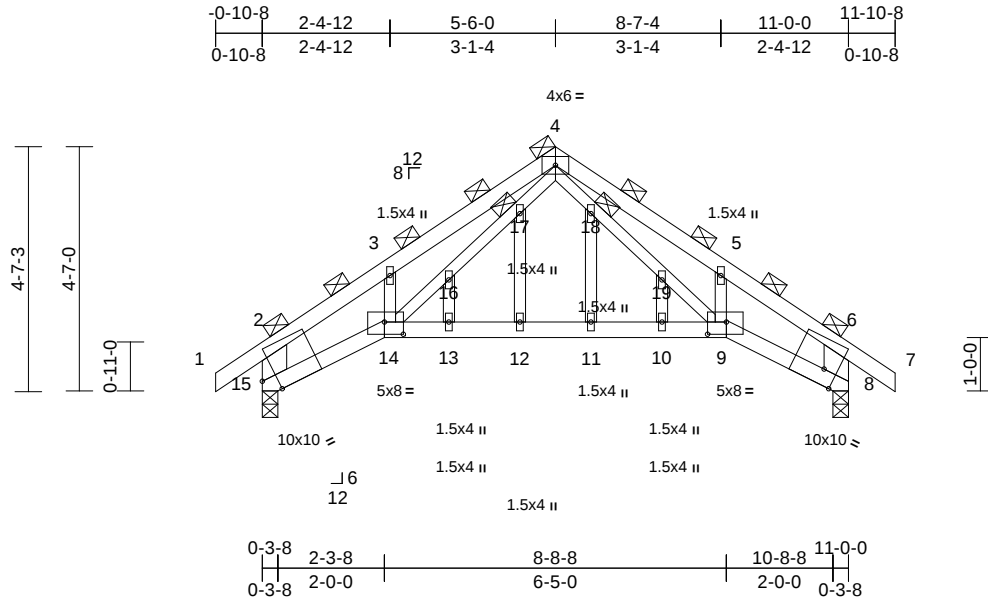
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72
Roof Special	1	1	Job Reference (optional)

I57774771

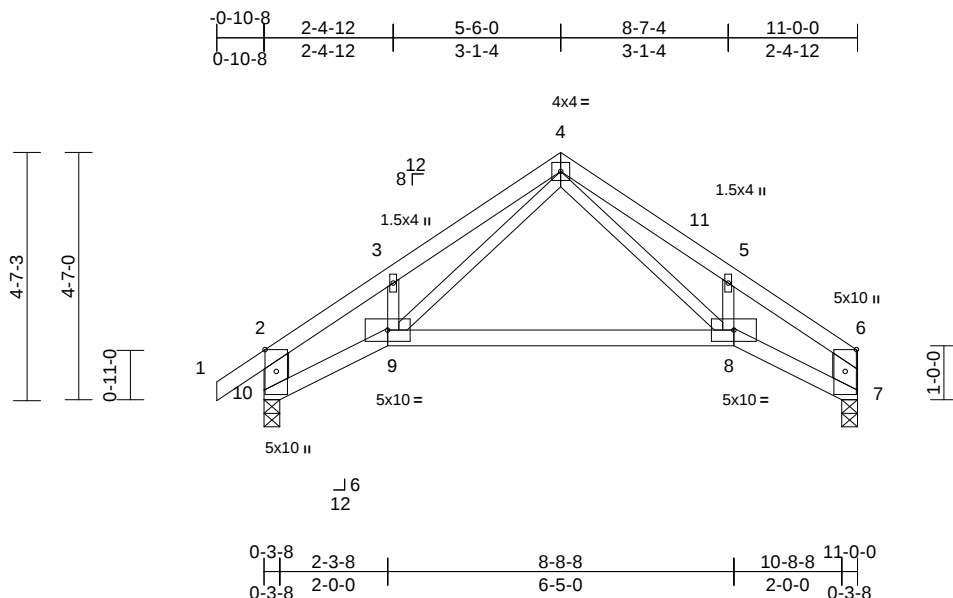
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Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774772
Roof Special	3	1	Job Reference (optional)	

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Scale = 1:42.7

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	0.85	Vert(LL)	-0.10	8-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.24	8-9	>531	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 50 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x3 SPF No.2 *Except* 10-2,7-6:2x6 SPF No.2

BRACING

TOP CHORD Sheathed or 4-8-11 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 7=0-3-8, 10=0-3-8
 Max Horiz 10=129 (LC 7)
 Max Uplift 7=-45 (LC 11), 10=-69 (LC 10)
 Max Grav 7=470 (LC 1), 10=556 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/43, 2-3=-843/150, 3-4=-700/248, 4-5=-701/252, 5-6=-826/150, 2-10=-736/179, 6-7=-622/118
 BOT CHORD 9-10=-97/673, 8-9=-8/368, 7-8=-57/604
 WEBS 4-8=-115/327, 5-8=-14/137, 4-9=-131/362, 3-9=0/158

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-4-12, Exterior(2R) 2-4-12 to 7-9-4, Exterior(2E) 7-9-4 to 10-9-4 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.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 10, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 10 and 45 lb uplift at joint 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



April 14, 2023

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

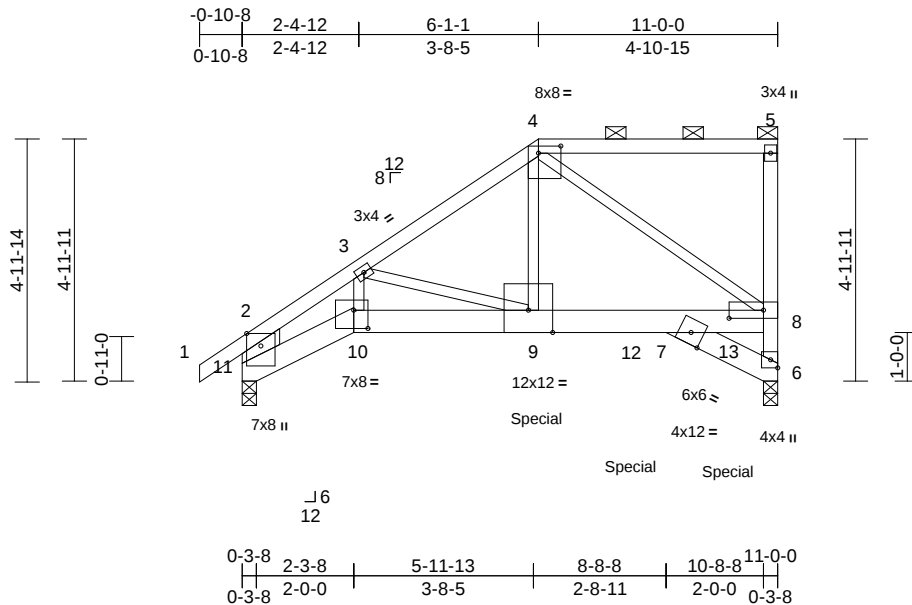
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
 Chesterfield, MO 63017



Scale = 1:47.3

Plate Offsets (X, Y): [4:0-5-8,0-1-12], [8:0-8-8,0-2-0], [10:0-3-8,0-4-8]

[illegible]

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x6 SP 2400F 2.0E *Except* 7-6:2x6 SPF No.2
WEBS	2x3 SPF No.2 *Except* 5-6:2x4 SP No.2, 11-2:2x10 HF No.2

BRACING

TOP CHORD	Sheathed or 4-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 6=0-3-8, 11=0-3-8
 Max Horiz 11=190 (LC 7)
 Max Uplift 6=-848 (LC 5), 11=-549 (LC 8)
 Max Grav 6=4620 (LC 1), 11=2504 (LC 1)

FORCES

Tension

TOP CHORD 1-2=409, 2-3=-4094/960, 3-4=-4448/993,
4-5=-147/58, 6-8=-4406/836, 5-8=-175/70,
2-11=-2665/631

BOT CHORD 10-11=-862/2961, 9-10=-888/3223,
7-9=-871/3547, 7-8=-855/3321, 6-7=-16/125

WEBS 3-10=-228/87, 3-9=-241/491,
4-9=-1056/4663, 4-8=-4255/993

NOTES

- 1) 2-ply truss to be connected together with 10d (0.120"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, Except member 4-9 2x3 - 1 row at 0-2-0 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) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; and vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 4) Provide adequate drainage to prevent water ponding.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Bearing at joint(s) 6, 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 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.
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 3019 lb down and 863 lb up at 6-0-13, and 1543 lb down and 231 lb up at 8-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 11) Special hanger(s) or other connection device(s) shall be provided at 10-0-0 from the left end sufficient to connect truss(es) to front face of bottom chord. The design/selection of such special 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 (lb/ft)
Vert: 1-2=-70, 2-4=-70, 4-5=-70, 10-11=-20,
7-10=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 9=-2990 (F), 12=-1543 (F), 13=-1561 (F)



April 14, 2023



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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

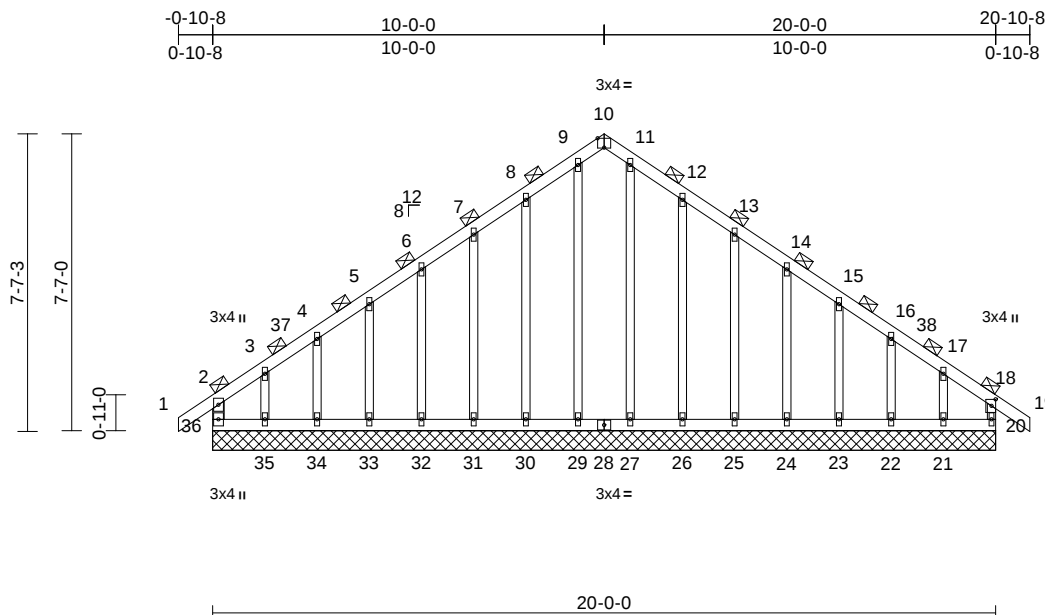


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	157774774
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. Thu Apr 13 16:38:28
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Page: 1



Scale = 1:58.9

Plate Offsets (X, Y): [10:0-2-0,Edge], [18:0-2-0,0-1-4]

Loading	(psf)	Spacing	3-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.01	10	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 115 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 20-18:2x3 SPF No.2
OTHERS 2x3 SPF No.2

BRACING

TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end
verticals
(Switched from sheathed: Spacing > 2-0-0).
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc
bracing.

REACTIONS (size)
10=20-0-0, 20=20-0-0, 21=20-0-0,
22=20-0-0, 23=20-0-0, 24=20-0-0,
25=20-0-0, 26=20-0-0, 27=20-0-0,
29=20-0-0, 30=20-0-0, 31=20-0-0,
32=20-0-0, 33=20-0-0, 34=20-0-0,
35=20-0-0, 36=20-0-0

Max Horiz 36=312 (LC 8)

Max Uplift 10=33 (LC 9), 20=87 (LC 7),
21=133 (LC 11), 22=51 (LC 11),
23=69 (LC 11), 24=65 (LC 11),
25=66 (LC 11), 26=72 (LC 11),
27=23 (LC 11), 29=23 (LC 10),
30=72 (LC 10), 31=66 (LC 10),
32=64 (LC 10), 33=70 (LC 10),
34=44 (LC 10), 35=172 (LC 7),
36=195 (LC 6)

Max Grav 10=337 (LC 11), 20=220 (LC 17),
21=217 (LC 18), 22=187 (LC 24),
23=188 (LC 18), 24=185 (LC 18),
25=188 (LC 18), 26=191 (LC 18),
27=125 (LC 24), 29=125 (LC 23),
30=191 (LC 17), 31=188 (LC 17),
32=184 (LC 17), 33=190 (LC 17),
34=189 (LC 23), 35=263 (LC 17),
36=311 (LC 18)

FORCES

(lb) - Maximum Compression/Maximum
Tension

TOP CHORD
2-36=249/150, 1-2=0/59, 2-3=232/233,
3-4=174/183, 4-5=164/186, 5-6=145/229,
6-7=137/296, 7-8=172/362, 8-9=209/431,
9-10=216/464, 10-11=216/464,
11-12=209/431, 12-13=172/362,
13-14=137/296, 14-15=103/229,
15-16=69/163, 16-17=81/104,
17-18=120/120, 18-19=0/57,
18-20=189/133

BOT CHORD
35-36=123/129, 34-35=123/129,
33-34=123/129, 32-33=123/129,
31-32=123/129, 30-31=123/129,
29-30=123/129, 27-29=123/129,
26-27=123/129, 25-26=123/129,
24-25=123/129, 23-24=123/129,
22-23=123/129, 21-22=123/129,
20-21=123/129

WEBS
3-35=168/135, 4-34=148/102,
5-33=146/95, 6-32=145/95, 7-31=147/97,
8-30=154/100, 9-29=83/49, 11-27=83/48,
12-26=154/100, 13-25=147/97,
14-24=145/95, 15-23=146/95,
16-22=147/102, 17-21=142/115

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8,
Exterior(2N) 2-1-8 to 7-0-0, Corner(3R) 7-0-0 to 13-0-0,
Exterior(2N) 13-0-0 to 17-10-8, Corner(3E) 17-10-8 to
20-10-8 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 14, 2023

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 - Osage Lot 72
Common Supported Gable	1	1	I57774774
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. Thu Apr 13 16:38:28 Page: 2
ID:tNc0JE71cPCqDLj6CNuNlzOoS8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 195 lb uplift at joint 36, 33 lb uplift at joint 10, 87 lb uplift at joint 20, 172 lb uplift at joint 35, 44 lb uplift at joint 34, 70 lb uplift at joint 33, 64 lb uplift at joint 32, 66 lb uplift at joint 31, 72 lb uplift at joint 30, 23 lb uplift at joint 29, 23 lb uplift at joint 27, 72 lb uplift at joint 26, 66 lb uplift at joint 25, 65 lb uplift at joint 24, 69 lb uplift at joint 23, 51 lb uplift at joint 22 and 133 lb uplift at joint 21.
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

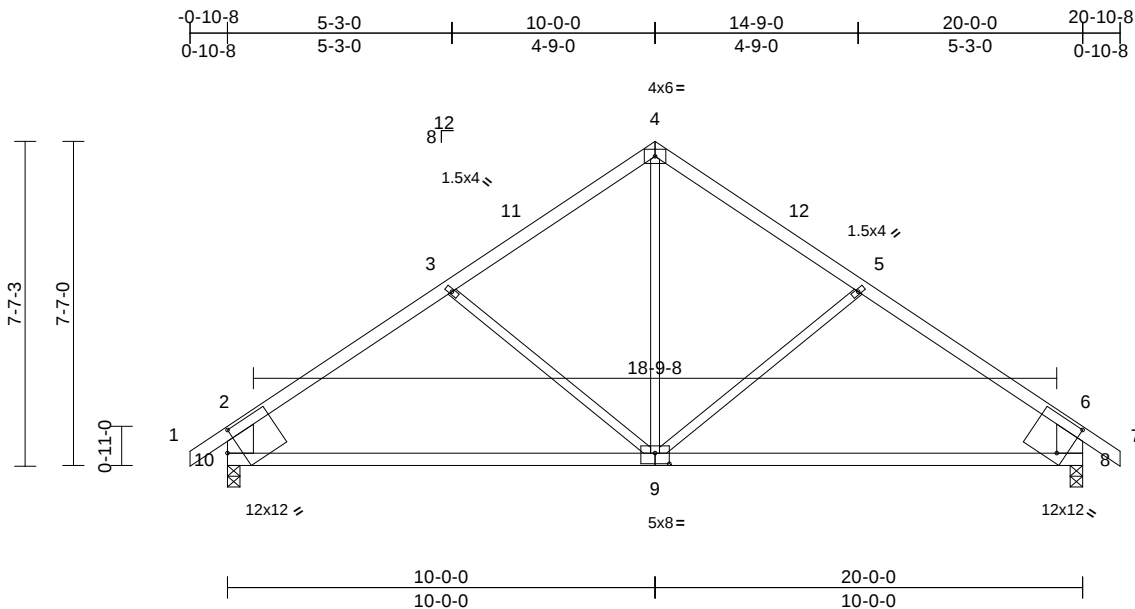
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:53.9

Plate Offsets (X, Y): [8:0-2-7,0-9-7], [9:0-4-0,0-3-0], [10:0-3-10,0-5-6]

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	0.70	Vert(LL)	-0.34	8-9	>690	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.67	8-9	>349	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.24	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 88 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 10-2,8-6:2x8 SPF No.2

BRACING

TOP CHORD Sheathed or 5-9-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 8=0-3-8, 10=0-3-8
Max Horiz 10=212 (LC 9)
Max Uplift 8=-111 (LC 11), 10=-111 (LC 10)
Max Grav 8=955 (LC 1), 10=955 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-1044/185, 3-4=-797/179,
4-5=-797/179, 5-6=-1044/185, 6-7=0/46,
2-10=-836/195, 6-8=-836/195
BOT CHORD 8-10=-135/785
WEBS 4-9=-63/419, 5-9=-252/191, 3-9=-252/191

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8,
Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0,
Interior (1) 13-0-0 to 17-10-8, Exterior(2E) 17-10-8 to 20-10-8 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
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 10 and 111 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



April 14, 2023

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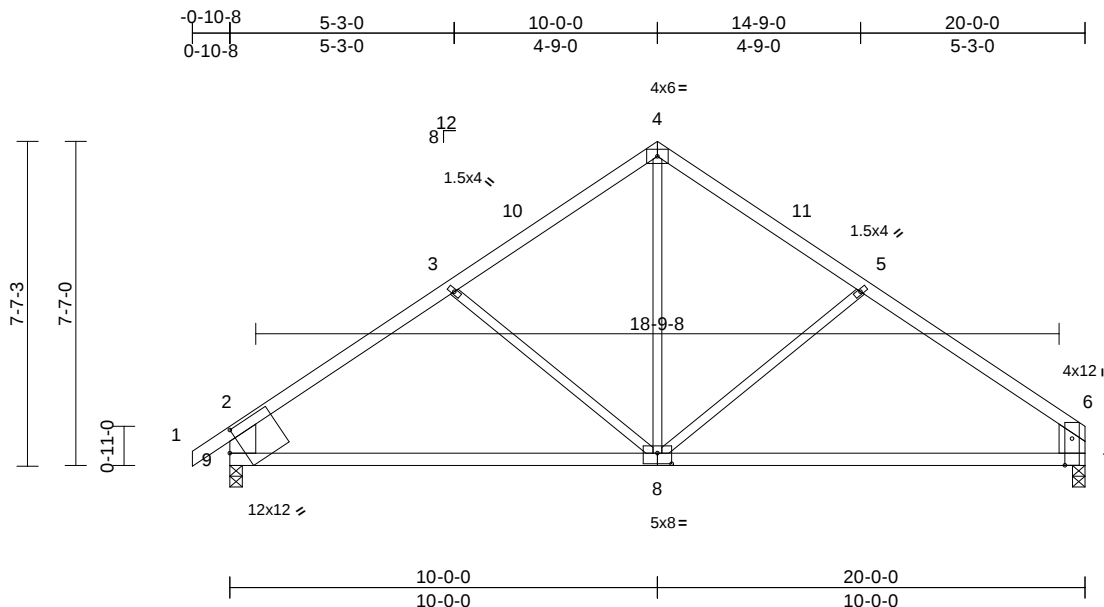
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774776
COMMON	7	1	Job Reference (optional)	

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Scale = 1:53.9

Plate Offsets (X, Y): [6:0-7-8,0-2-0], [8:0-4-0,0-3-0], [9:0-3-10,0-5-6]

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	0.83	Vert(LL)	-0.34	7-8	>683	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.67	8-9	>347	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.26	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 86 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 1650F 1.5E *Except* 4-6:2x4 SP No.2
BOT CHORD	2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2 *Except* 9-2,7-6:2x8 SPF No.2

BRACING

TOP CHORD	Sheathed or 4-5-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	7=0-3-8, 9=0-3-8
Max Horiz	9=205 (LC 9)
Max Uplift	7=-85 (LC 11), 9=-111 (LC 10)
Max Grav	7=870 (LC 1), 9=958 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/46, 2-3=-1048/185, 3-4=-800/180, 4-5=-801/180, 5-6=-1055/187, 2-9=-839/196, 6-7=-745/149
BOT CHORD	7-9=-148/777
WEBS	4-8=-64/423, 5-8=-269/194, 3-8=-252/191

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=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 13-0-0, Interior (1) 13-0-0 to 16-8-6, Exterior(2E) 16-8-6 to 19-8-6 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 9 and 85 lb uplift at joint 7.
- 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.

LOAD CASE(S) Standard



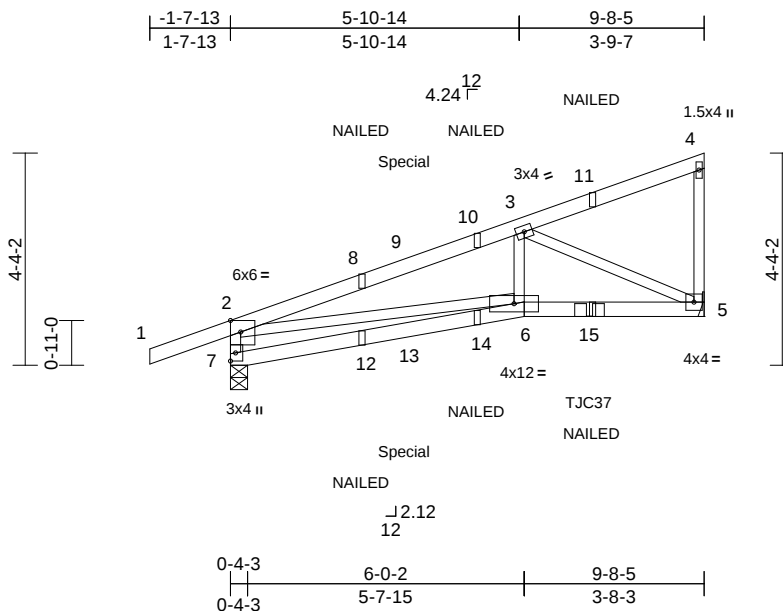
April 14, 2023

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16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:47.1

Plate Offsets (X, Y): [2:0-2-8,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	0.49	Vert(LL)	-0.05	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.09	6-7	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.42	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 44 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 5-4-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-9-7 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-4-3
Max Horiz 7=167 (LC 5)
Max Uplift 5=-220 (LC 8), 7=-193 (LC 4)
Max Grav 5=649 (LC 1), 7=634 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-610/240, 1-2=-0/41, 2-3=-1018/302, 3-4=-115/23, 4-5=-103/48
BOT CHORD 6-7=-200/211, 5-6=-342/914
WEBS 3-6=-58/348, 3-5=-987/375, 2-6=-191/697

NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 7 and 220 lb uplift at joint 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.
- Use Simpson Strong-Tie TJC37 (6 nail, 30-90) or equivalent at 7-4-3 from the left end to connect truss(es) to front face of bottom chord, skewed 58.0 deg.to the left, sloping 0.0 deg. down.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 31 lb down and 65 lb up at 3-6-14 on top chord, and 7 lb down and 3 lb up at 3-6-14 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 6-7=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 11=-34 (B), 12=4 (B), 13=-6 (F), 14=-2 (B), 15=-269 (F=-251, B=-18)



April 14, 2023

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

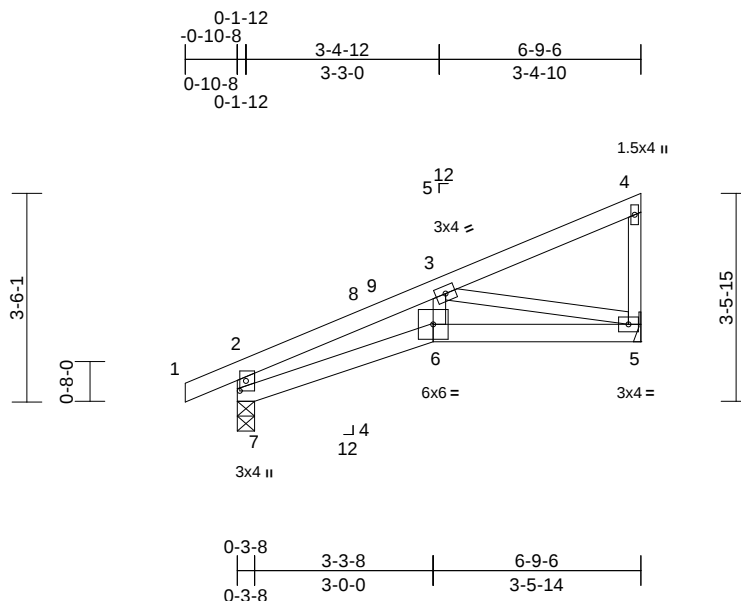


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774778
Jack-Partial	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:30

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Scale = 1:38.7

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

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	0.76	Vert(LL)	-0.17	6	>448	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.31	6	>249	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.05	Horz(CT)	0.10	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							
Weight: 28 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 SP No.2

BRACING

TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=121 (LC 10)
Max Uplift 5=-79 (LC 10), 7=-44 (LC 10)
Max Grav 5=288 (LC 1), 7=371 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/28, 2-3=-79/98, 3-4=-60/66
BOT CHORD 6-7=-212/59, 5-6=-208/61
WEBS 3-6=-57/62, 4-5=-194/119, 3-5=-63/214, 2-7=-276/208

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8,
Interior (1) 2-1-8 to 2-5-4, Exterior(2R) 2-5-4 to 6-8-2
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) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 7 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 44 lb uplift at joint
7 and 79 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



April 14, 2023

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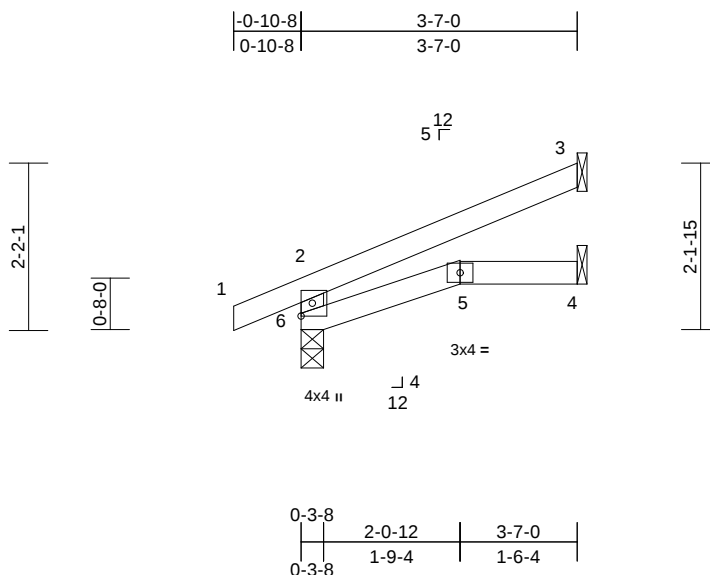


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774779
Jack-Open	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:30 Page: 1

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Scale = 1:29.9

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	0.21	Vert(LL)	0.01	5-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	5-6	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 13 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Sheathed or 3-7-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
6=0-3-8
Max Horiz 6=63 (LC 10)
Max Uplift 3=-52 (LC 10), 6=-32 (LC 10)
Max Grav 3=103 (LC 1), 4=63 (LC 3), 6=234 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-6=-205/156, 1-2=0/27, 2-3=-56/30
BOT CHORD 5-6=-23/3, 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 6 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 32 lb uplift at joint
6 and 52 lb uplift at joint 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



April 14, 2023

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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

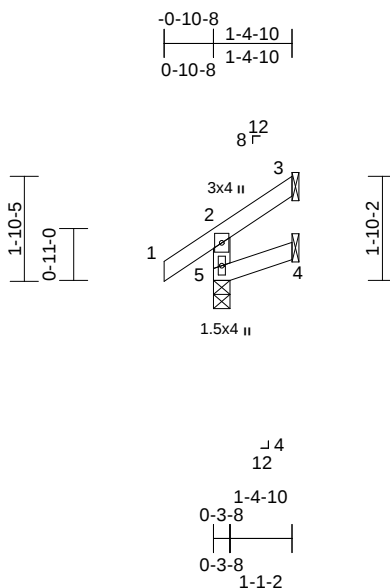


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774780
Jack-Open	1	1	Job Reference (optional)	

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:30
ID: tNc0JE71cPqdlJ6CNuNlzOoS8-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?c

Page: 1



Scale = 1:40.8

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	0.11	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 7 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Sheathed or 1-4-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
5=0-3-8
Max Horiz 5=45 (LC 10)
Max Uplift 3=-29 (LC 10), 4=-6 (LC 10), 5=-6 (LC 10)
Max Grav 3=28 (LC 17), 4=21 (LC 3), 5=156 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-137/93, 1-2=0/40, 2-3=-38/26
BOT CHORD 4-5=-12/7

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 6 lb uplift at joint
5, 6 lb uplift at joint 4 and 29 lb uplift at joint 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



April 14, 2023

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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



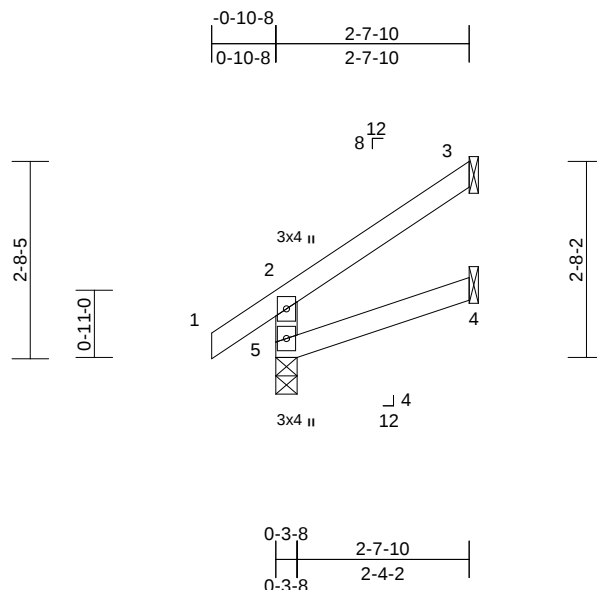
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774781
Jack-Open	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS) Spring Hill, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:31
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Page: 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	0.13	Vert(LL)	0.00	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 12 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Sheathed or 2-7-10 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
 5=0-3-8
 Max Horiz 5=77 (LC 10)
 Max Uplift 3=-55 (LC 10), 4=-2 (LC 10), 5=-3 (LC 10)
 Max Grav 3=77 (LC 17), 4=45 (LC 3), 5=196 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-172/96, 1-2=0/40, 2-3=-66/41
 BOT CHORD 4-5=-16/11

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom
 chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
 on the bottom chord in all areas where a rectangle
 3-06-00 tall by 2-00-00 wide will fit between the bottom
 chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 5 considers parallel to grain value
 using ANSI/TPI 1 angle to grain formula. Building
 designer should verify capacity of bearing surface.

- 6) Provide mechanical connection (by others) of truss to
 bearing plate capable of withstanding 3 lb uplift at joint
 5, 55 lb uplift at joint 3 and 2 lb uplift at joint 4.
- 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



April 14, 2023

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

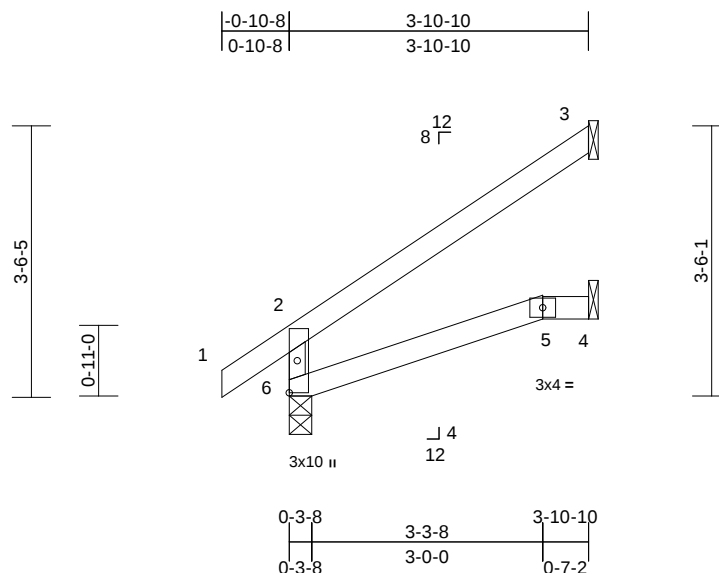
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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16023 Swingley Ridge Rd
 Chesterfield, MO 63017



Scale = 1:29.9

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	0.33	0.02	5-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.02	5-6	>999	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 15 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 3-10-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
6=0-3-8
Max Horiz 6=110 (LC 10)
Max Uplift 3=-83 (LC 10)
Max Grav 3=125 (LC 17), 4=71 (LC 3), 6=245 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-6=-212/101, 1-2=0/38, 2-3=-96/58
BOT CHORD 5-6=-20/12, 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Bearing at joint(s) 6 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 83 lb uplift at joint
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



April 14, 2023

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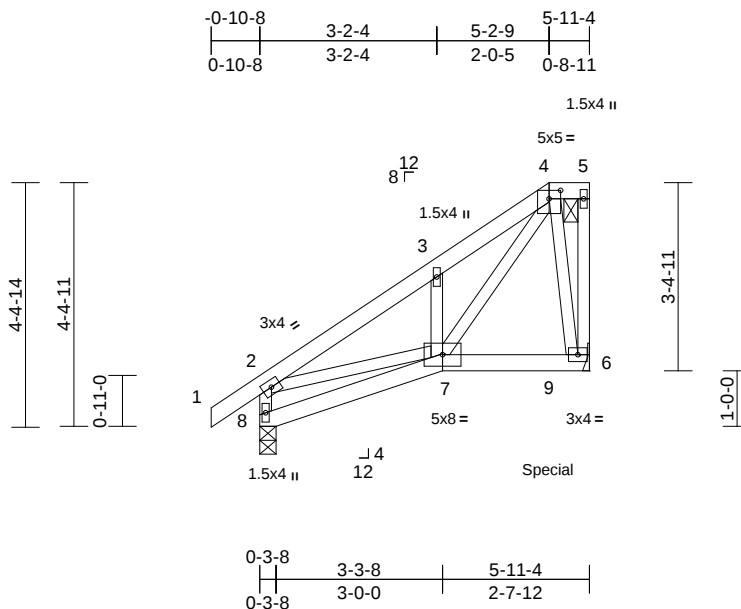


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72
Half Hip Girder	1	1	Job Reference (optional)
			I57774783

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:31
ID: tNc0JE71cPCqdlJ6CNuNlZ0oS8-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:41.5

Plate Offsets (X, Y): [4:0-2-8,0-1-13]

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)	0.02	6-7	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.04	6-7	>999	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.18	Horz(CT)	0.00	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							
										Weight: 33 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 5-11-4 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=152 (LC 5)
Max Uplift 6=-269 (LC 8), 8=-60 (LC 8)
Max Grav 6=814 (LC 1), 8=401 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/38, 2-3=-472/103, 3-4=-451/181, 4-5=-42/32, 5-6=-22/9, 2-8=-369/110
BOT CHORD 7-8=-157/106, 6-7=-45/70
WEBS 3-7=-204/133, 4-6=-302/109, 4-7=-218/535, 2-7=-22/345

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.

- Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 269 lb uplift at joint 6 and 60 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 631 lb down and 231 lb up at 5-2-9 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 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)

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 4-5=-70, 7-8=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 9=-631 (F)



April 14, 2023

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

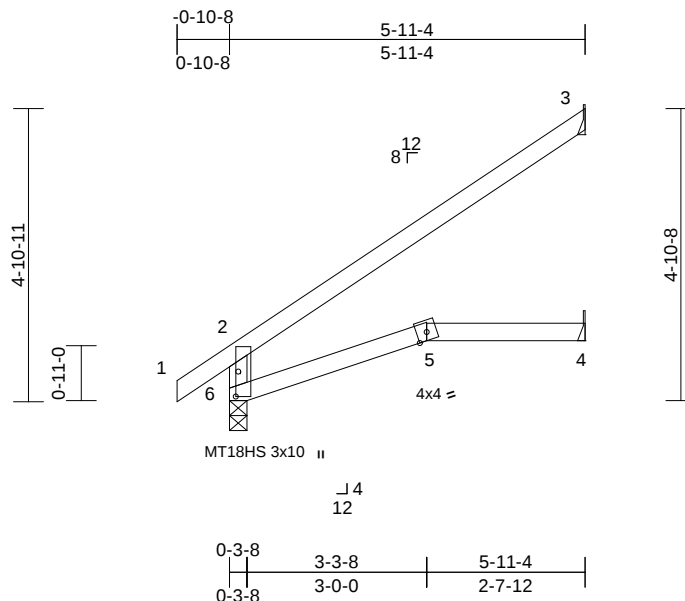
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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017



Scale = 1:38.5

Plate Offsets (X, Y): [6:0-5-0,0-0-8]

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	0.73	Vert(LL)	0.08	5-6	>849	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.12	5-6	>584	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.06	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 22 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Sheathed or 5-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
6=0-3-8
Max Horiz 6=163 (LC 10)
Max Uplift 3=-119 (LC 10)
Max Grav 3=190 (LC 17), 4=109 (LC 3),
6=336 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-293/125, 1-2=0/40, 2-3=-145/87
BOT CHORD 5-6=-38/6, 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) All plates are MT20 plates unless otherwise indicated.
- 3) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 6 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 119 lb uplift at joint
3.
- 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



April 14, 2023

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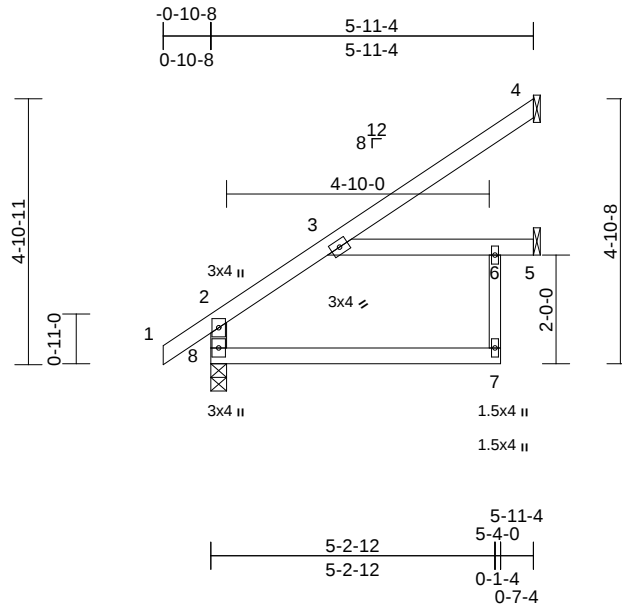


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774785
Jack-Open	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:42.4

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	0.69	0.12	3-6	>553	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.16	3-6	>431	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.03	Horz(CT)	0.15	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							
										Weight: 28 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2 *Except* 7-6:2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 5-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5= Mechanical,
8=0-3-8
Max Horiz 8=164 (LC 10)
Max Uplift 4=-86 (LC 10), 5=-2 (LC 10)
Max Grav 4=159 (LC 17), 5=180 (LC 3),
8=359 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-319/95, 1-2=0/40, 2-3=-162/31,
3-4=-94/77
BOT CHORD 7-8=0/0, 3-6=0/0, 5-6=0/0
WEBS 6-7=0/104

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 86 lb uplift at joint
4 and 2 lb uplift at joint 5.
- 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.

LOAD CASE(S) Standard



April 14, 2023

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

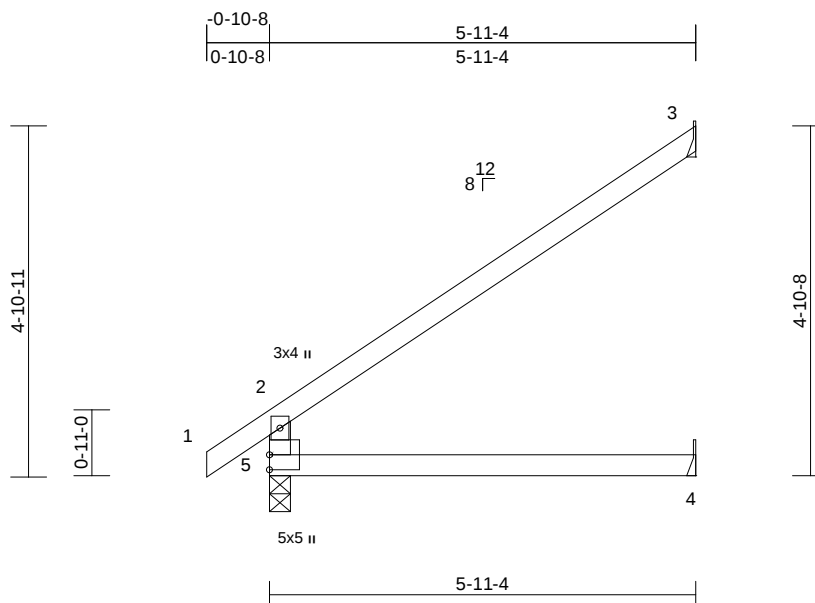
Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774786
Jack-Open	4	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS) - Spring Hill, KS - 66083,

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:32

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Scale = 1:32.1

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	0.72	Vert(LL)	0.08	4-5	>884	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.11	4-5	>598	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.06	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 22 lb	FT = 20%

LUMBER

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

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.

LOAD CASE(S) Standard

BRACING

TOP CHORD Sheathed or 5-11-4 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
 Max Horiz 5=164 (LC 10)
 Max Uplift 3=-118 (LC 10)
 Max Grav 3=189 (LC 17), 4=109 (LC 3), 5=336 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-293/126, 1-2=0/40, 2-3=-145/87
 BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 118 lb uplift at joint 3.



April 14, 2023

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

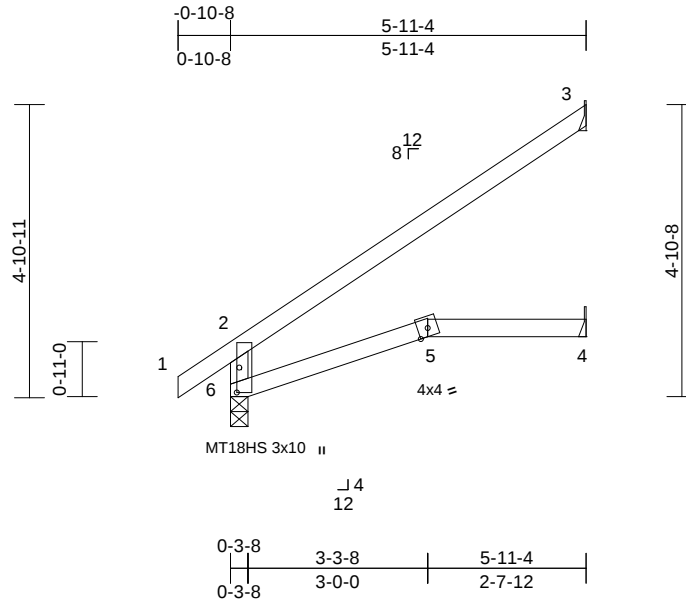
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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

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



16023 Swingley Ridge Rd
 Chesterfield, MO 63017



Scale = 1:38.5

Plate Offsets (X, Y): [6:0-5-0,0-0-8]

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	0.73	Vert(LL)	0.08	5-6	>849	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.12	5-6	>584	180	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.06	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 22 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Sheathed or 5-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical,
6=0-3-8
Max Horiz 6=163 (LC 10)
Max Uplift 3=-119 (LC 10)
Max Grav 3=190 (LC 17), 4=109 (LC 3),
6=336 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-6=-293/125, 1-2=0/40, 2-3=-145/87
BOT CHORD 5-6=-38/6, 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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) All plates are MT20 plates unless otherwise indicated.
- 3) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Bearing at joint(s) 6 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- 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



April 14, 2023

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

Truss Type

Jack-Open

Qty

13

Ply

1

Roof - Osage Lot 72

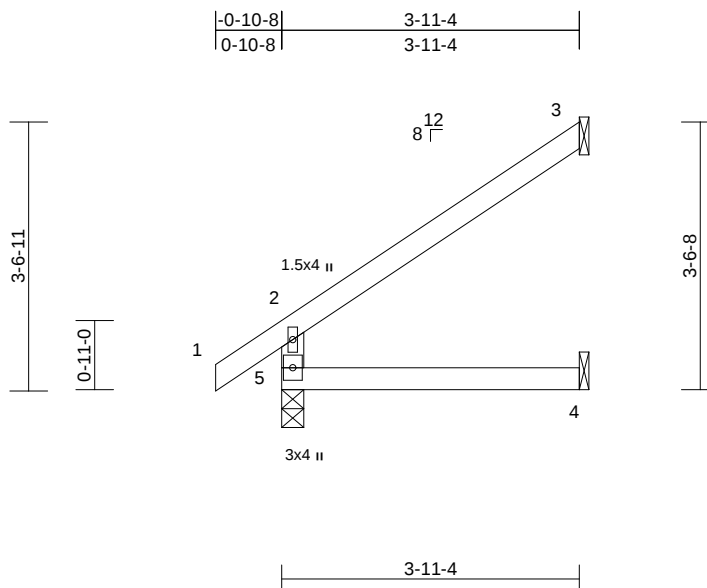
Job Reference (optional)

I57774788

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Thu Apr 13 16:38:33

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Scale = 1:30.5

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	0.27	Vert(LL)	0.02	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.02	4-5	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 15 lb	FT = 20%

LUMBER

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

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.

LOAD CASE(S) Standard

BRACING

TOP CHORD Sheathed or 3-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=111 (LC 10)
Max Uplift 3=-80 (LC 10), 5=-2 (LC 10)
Max Grav 3=122 (LC 17), 4=71 (LC 3), 5=249 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-218/109, 1-2=0/40, 2-3=-96/56
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; 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) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 5 and 80 lb uplift at joint 3.



April 14, 2023

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

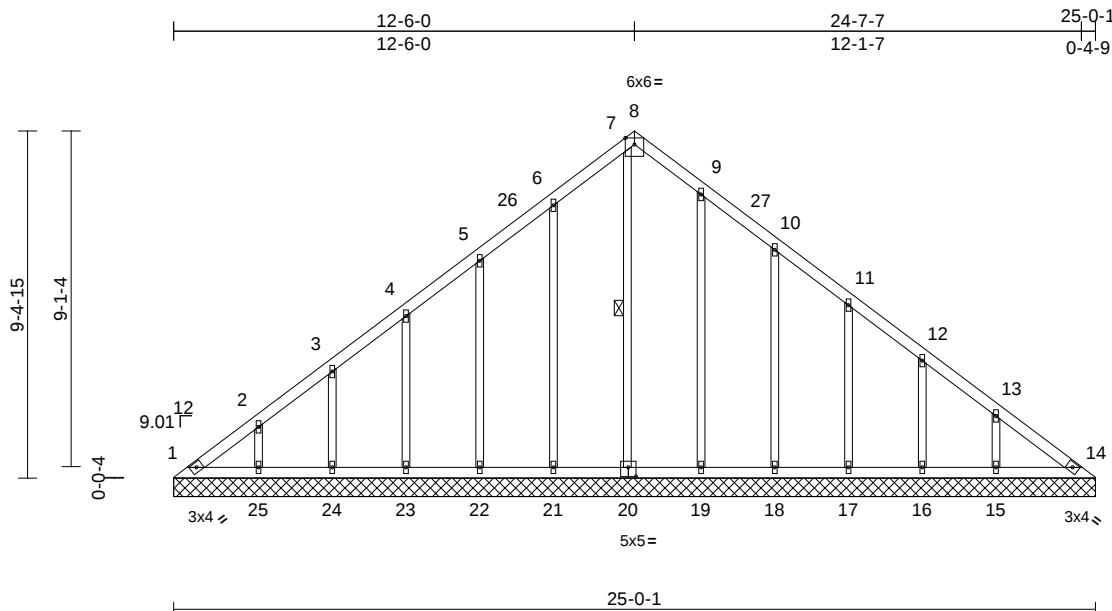
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774789
Lay-In Gable	1	1	Job Reference (optional)	

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Scale = 1:62.5

Plate Offsets (X, Y): [20:0-2-8,0-3-0]

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	0.08	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.21	Horiz(TL)	0.01	14	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							
Weight: 125 lb FT = 20%											

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 7-20

REACTIONS (size) 1=25-0-1, 14=25-0-1, 15=25-0-1, 16=25-0-1, 17=25-0-1, 18=25-0-1, 19=25-0-1, 20=25-0-1, 21=25-0-1, 22=25-0-1, 23=25-0-1, 24=25-0-1, 25=25-0-1

Max Horiz 1=-229 (LC 6)

Max Uplift 1=-61 (LC 8), 14=-7 (LC 9), 15=-93 (LC 11), 16=-70 (LC 11), 17=-74 (LC 11), 18=-85 (LC 11), 19=-42 (LC 11), 21=-79 (LC 10), 22=-77 (LC 10), 23=-75 (LC 10), 24=-73 (LC 10), 25=-82 (LC 10)

Max Grav 1=150 (LC 19), 14=136 (LC 20), 15=233 (LC 18), 16=175 (LC 18), 17=191 (LC 18), 18=189 (LC 18), 19=187 (LC 18), 20=190 (LC 20), 21=200 (LC 17), 22=186 (LC 17), 23=190 (LC 17), 24=184 (LC 17), 25=206 (LC 17)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-266/180, 2-3=-193/151, 3-4=-150/125, 4-5=-134/109, 5-6=-119/143, 6-7=-127/185, 7-8=-75/93, 8-9=-123/166, 9-10=-95/110, 10-11=-77/60, 11-12=-92/49, 12-13=-130/73, 13-14=-211/109

BOT CHORD 1-25=-86/196, 24-25=-86/196, 23-24=-86/196, 22-23=-86/196, 21-22=-86/196, 19-21=-86/196, 18-19=-86/195, 17-18=-86/195, 16-17=-86/195, 15-16=-86/195, 14-15=-86/195
WEBS 2-25=-153/99, 3-24=-147/99, 4-23=-149/99, 5-22=-148/100, 6-21=-154/106, 7-20=-159/47, 9-19=-142/69, 10-18=-151/109, 11-17=-149/98, 12-16=-142/96, 13-15=-172/110

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-4 to 3-5-4, Interior (1) 3-5-4 to 9-6-6, Exterior(2R) 9-6-6 to 15-6-6, Interior (1) 15-6-6 to 21-7-8, Exterior(2E) 21-7-8 to 24-7-8 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 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

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



April 14, 2023

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

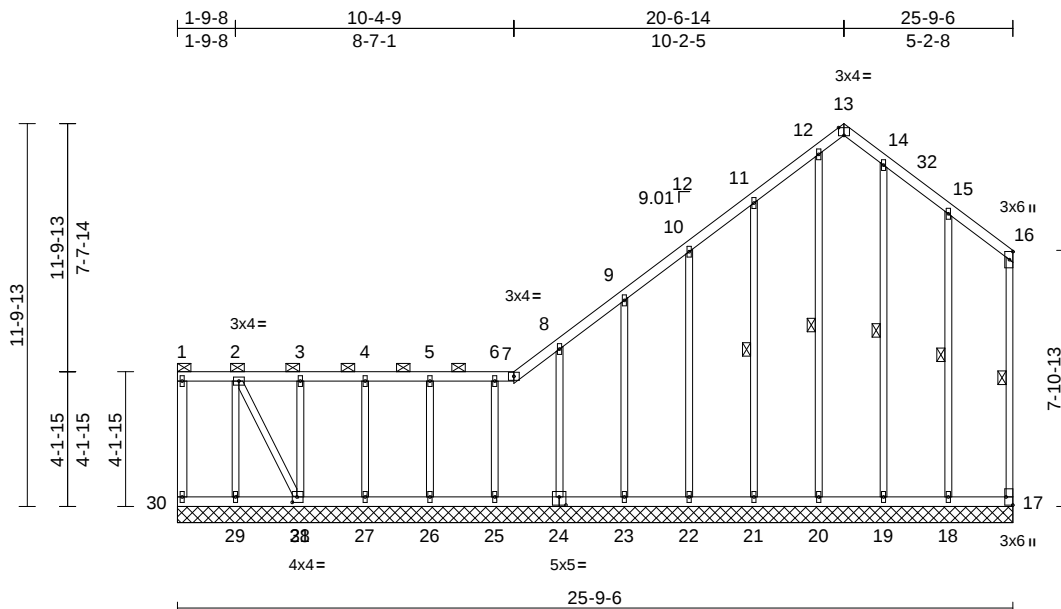
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774790
Lay-In Gable	1	1	Job Reference (optional)	

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Scale = 1:71.1

Plate Offsets (X, Y): [13:0-2-0,Edge], [17:Edge,0-2-8], [24:0-2-8,0-3-0], [28:0-1-12,0-2-0]

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	0.61	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.26	Horiz(TL)	-0.01	17	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							
Weight: 159 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 30-1:2x4 SP No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-7.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 16-17, 11-21, 12-20, 14-19, 15-18

REACTIONS (size)	17=25-9-6, 18=25-9-6, 19=25-9-6, 20=25-9-6, 21=25-9-6, 22=25-9-6, 23=25-9-6, 24=25-9-6, 25=25-9-6, 26=25-9-6, 27=25-9-6, 28=25-9-6, 29=25-9-6, 30=25-9-6
------------------	--

Max Horiz	30=384 (LC 7)
Max Uplift	17=57 (LC 10), 18=88 (LC 11), 19=8 (LC 11), 20=107 (LC 9), 21=102 (LC 10), 22=73 (LC 10), 23=80 (LC 10), 24=45 (LC 10), 25=125 (LC 6), 26=43 (LC 10), 27=32 (LC 10), 28=495 (LC 7), 29=388 (LC 6), 30=40 (LC 6)
Max Grav	17=121 (LC 18), 18=232 (LC 18), 19=179 (LC 1), 20=240 (LC 17), 21=184 (LC 23), 22=186 (LC 17), 23=201 (LC 17), 24=171 (LC 1), 25=260 (LC 18), 26=177 (LC 23), 27=180 (LC 23), 28=445 (LC 8), 29=490 (LC 9), 30=73 (LC 18)

FORCES	(lb) - Maximum Compression/Maximum Tension
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TOP CHORD	1-30=-48/31, 1-2=-58/62, 2-3=-254/196, 3-4=-242/186, 4-5=-242/186, 5-6=-242/186, 6-7=-242/186, 7-8=-275/217, 8-9=-297/238, 9-10=-266/227, 10-11=-248/222, 11-12=-241/283, 12-13=-150/180, 13-14=-186/225, 14-15=-222/261, 15-16=-196/218, 16-17=-176/176
BOT CHORD	29-30=-358/290, 28-29=-358/290, 27-28=-114/127, 26-27=-114/127, 25-26=-114/127, 23-25=-114/127, 22-23=-114/126, 21-22=-114/126, 20-21=-114/126, 19-20=-114/126, 18-19=-114/126, 17-18=-114/126
WEBS	2-29=-474/439, 28-31=-411/525, 3-31=-142/75, 4-27=-140/57, 5-26=-138/66, 6-25=-215/152, 8-24=-139/73, 9-23=-156/107, 10-22=-148/95, 11-21=-144/127, 12-20=-201/152, 14-19=-140/28, 15-18=-150/149, 2-31=-508/601

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior (1) 3-1-12 to 17-6-14, Exterior(2R) 17-6-14 to 22-8-2, Exterior(2E) 22-8-2 to 25-8-2 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.
- Plates are 1.5x4 MT20 unless otherwise indicated.

- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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



April 14, 2023

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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

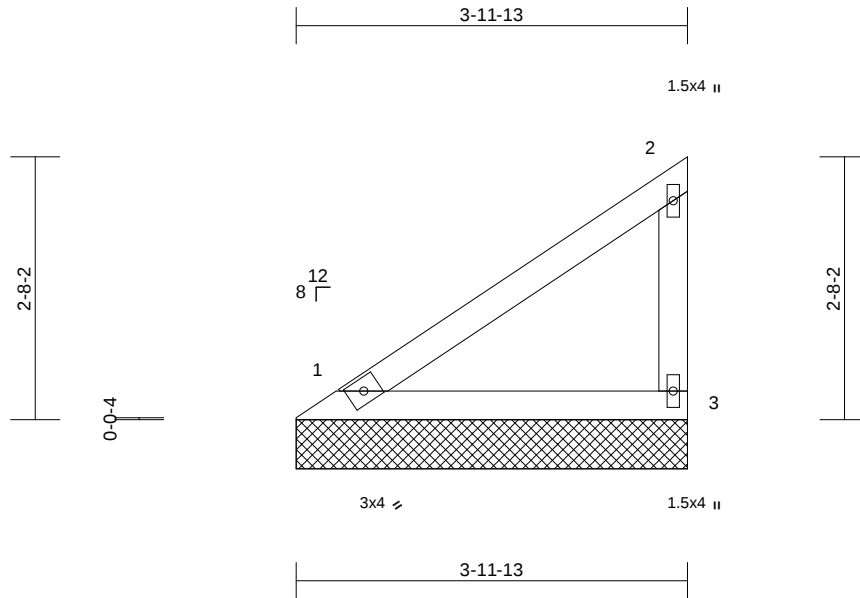
Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774792
Valley	1	1	Job Reference (optional)	

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. Thu Apr 13 16:38:35

Page: 1

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Scale = 1:23.5

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	0.29	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb FT = 20%

LUMBER

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

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 Sheathed or 4-0-3 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=3-11-13, 3=3-11-13
 Max Horiz 1=87 (LC 7)
 Max Uplift 1=-11 (LC 10), 3=-41 (LC 10)
 Max Grav 1=153 (LC 1), 3=163 (LC 17)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-82/67, 2-3=-129/88
 BOT CHORD 1-3=-42/46

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Ke=0.96; 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 14, 2023

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

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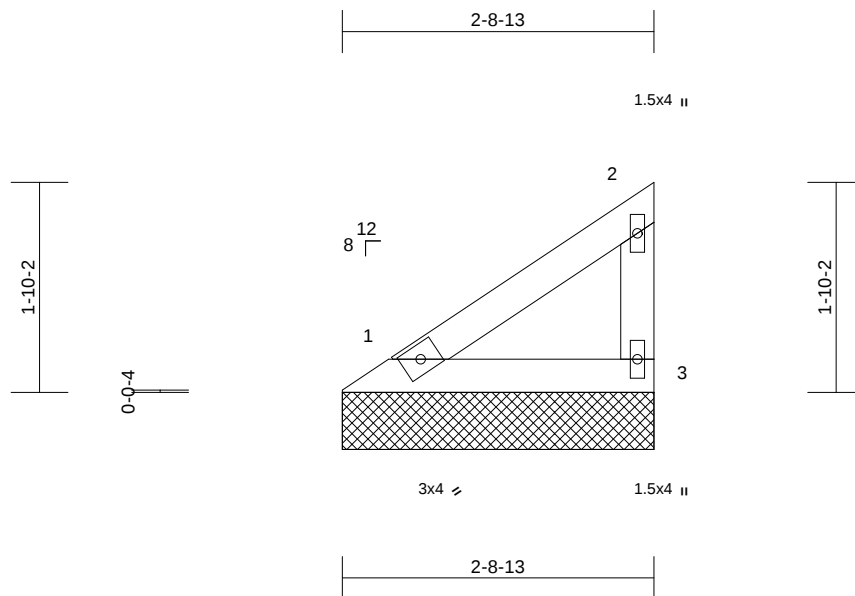


16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774793
Valley	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:20.2

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb FT = 20%

LUMBER

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

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 Sheathed or 2-9-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

1=2-8-13, 3=2-8-13
Max Horiz 1=55 (LC 7)
Max Uplift 1=-7 (LC 10), 3=-26 (LC 10)
Max Grav 1=96 (LC 1), 3=103 (LC 17)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-52/42, 2-3=-81/62
BOT CHORD 1-3=-27/29

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 14, 2023

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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



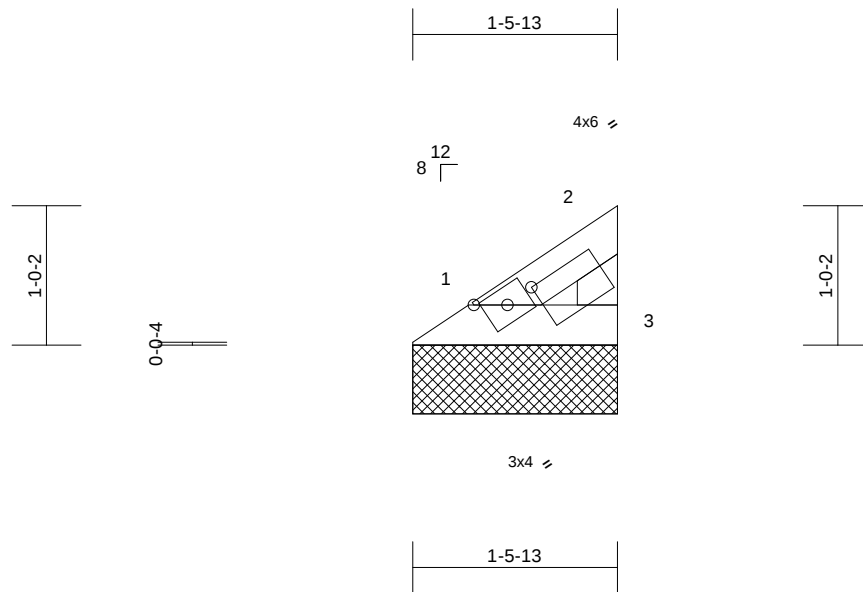
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774794
Valley	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:16.7

Plate Offsets (X, Y): [2:0-5-0,0-1-8]

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	0.02	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(TL)	n/a	-	n/a	999	
BCLL	0.0*	Rep Stress Incr	NO	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 SP No.2

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 Sheathed or 1-6-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=1-5-13, 3=1-5-13
Max Horiz 1=23 (LC 7)
Max Uplift 1=-3 (LC 10), 3=-11 (LC 10)
Max Grav 1=40 (LC 1), 3=43 (LC 17)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-22/18, 2-3=-34/29
BOT CHORD 1-3=-11/12

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; 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 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 14, 2023

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

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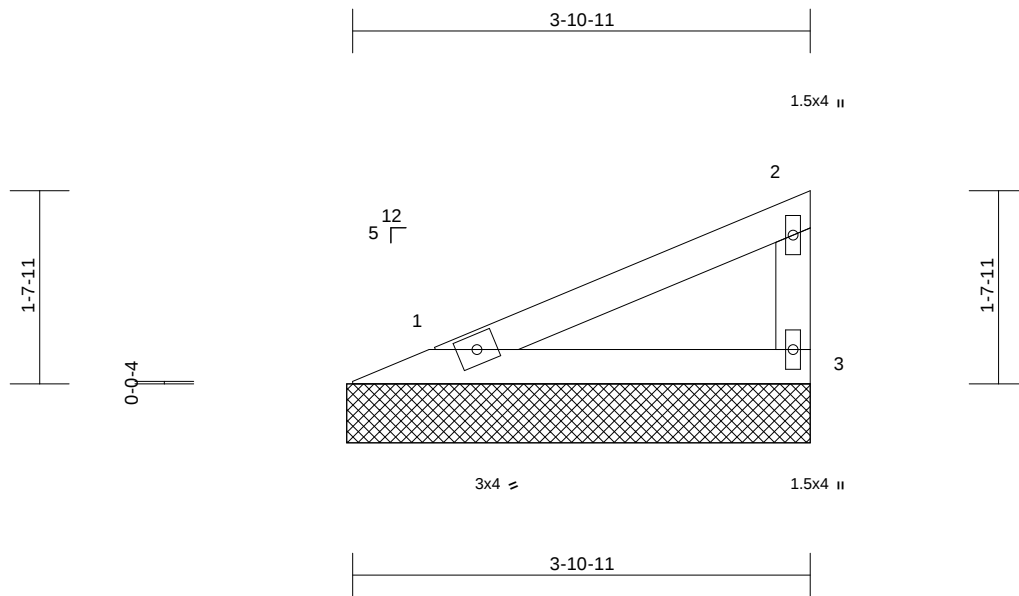


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774795
Valley	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:19.6

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	0.22	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	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 12 lb	FT = 20%

LUMBER

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

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 Sheathed or 3-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=3-11-4, 3=3-11-4
Max Horiz 1=54 (LC 7)
Max Uplift 1=-18 (LC 10), 3=-29 (LC 10)
Max Grav 1=137 (LC 1), 3=137 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-49/33, 2-3=-106/94
BOT CHORD 1-3=-24/26

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



April 14, 2023

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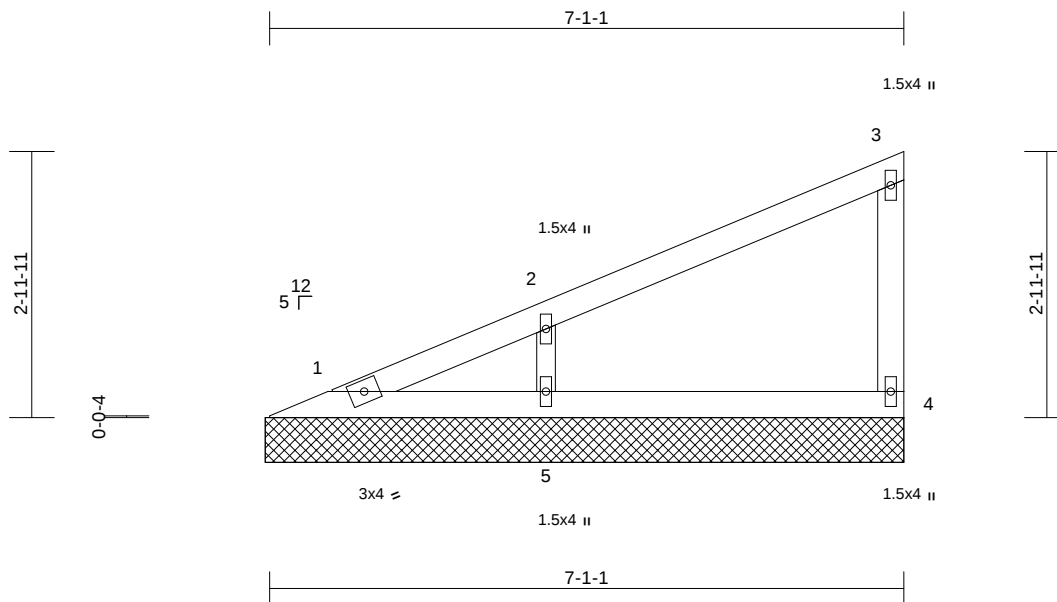
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774796
Valley	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS) Spring Hills, KS - 66083,

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Page: 1



Scale = 1:25.8

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	0.25	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.06	Vert(TL)	n/a	-	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Horiz(TL)	0.00	4	n/a		
										Weight: 25 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size) 1=7-1-11, 4=7-1-11, 5=7-1-11
	Max Horiz 1=110 (LC 7)
	Max Uplift 4=-24 (LC 10), 5=-91 (LC 10)
	Max Grav 1=62 (LC 18), 4=140 (LC 1), 5=367 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-108/48, 2-3=-88/32, 3-4=-109/76
BOT CHORD	1-5=-47/51, 4-5=-47/51
WEBS	2-5=-285/254

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Ke=0.96; 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) * This truss has been designed for a live load of 20.0psf
 on the bottom chord in all areas where a rectangle
 3-06-00 tall by 2-00-00 wide will fit between the bottom
 chord and any other members.
- 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



April 14, 2023

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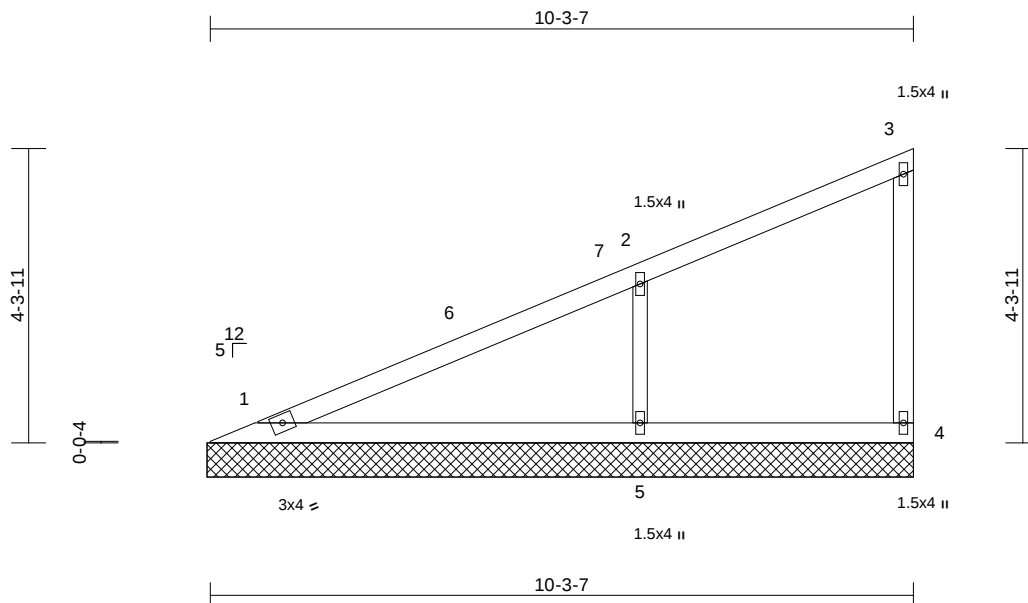


16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774797
Valley	1	1	Job Reference (optional)	

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Page: 1



Scale = 1:33.7

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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 38 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size)	1=10-4-1, 4=10-4-1, 5=10-4-1
Max Horiz	1=166 (LC 7)
Max Uplift	1=-1 (LC 10), 4=-21 (LC 7), 5=-133 (LC 10)
Max Grav	1=204 (LC 1), 4=104 (LC 1), 5=541 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-135/80, 2-3=-108/51, 3-4=-88/50
BOT CHORD	1-5=-65/71, 4-5=-65/71
WEBS	2-5=-397/244

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-9-1 to 3-9-1,
Interior (1) 3-9-1 to 5-11-6, Exterior(2R) 5-11-6 to 10-2-5
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) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 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



April 14, 2023

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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

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

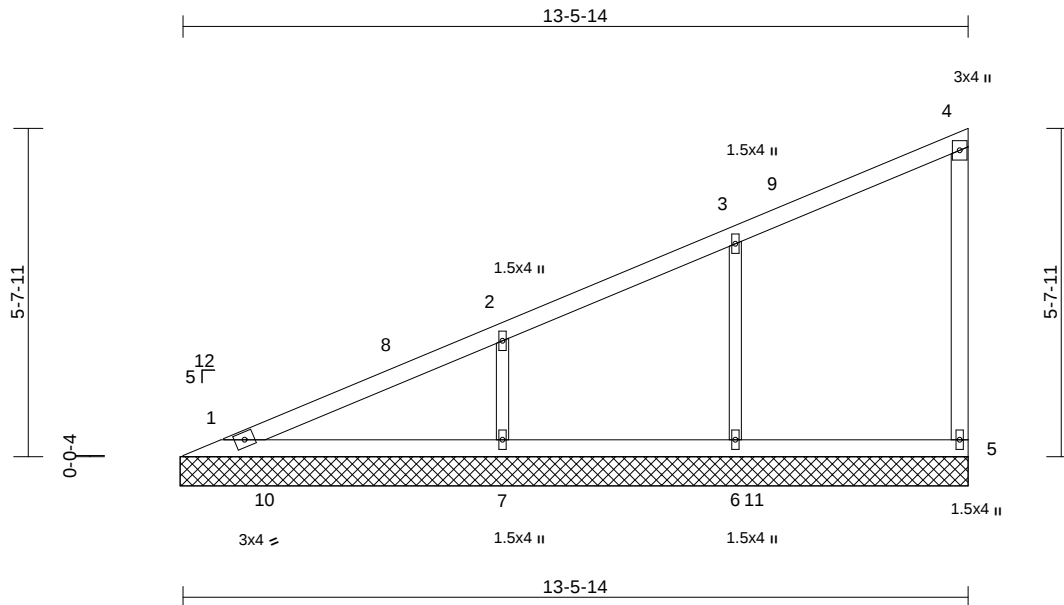
Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774798
Valley	1	1	Job Reference (optional)	

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. Thu Apr 13 16:38:37

Page: 1

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Scale = 1:39.6

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.10	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 52 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x4 SP No.2
 OTHERS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=13-6-7, 5=13-6-7, 6=13-6-7, 7=13-6-7
 Max Horiz 1=222 (LC 7)
 Max Uplift 5=-29 (LC 7), 6=-87 (LC 10), 7=-113 (LC 10)
 Max Grav 1=195 (LC 18), 5=180 (LC 2), 6=395 (LC 2), 7=463 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-177/64, 2-3=-143/43, 3-4=-119/71, 4-5=-114/48
 BOT CHORD 1-7=-82/92, 6-7=-82/92, 5-6=-82/92
 WEBS 3-6=-283/156, 2-7=-335/190

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 3-9-1, Interior (1) 3-9-1 to 10-4-11, Exterior(2E) 10-4-11 to 13-4-11 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 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



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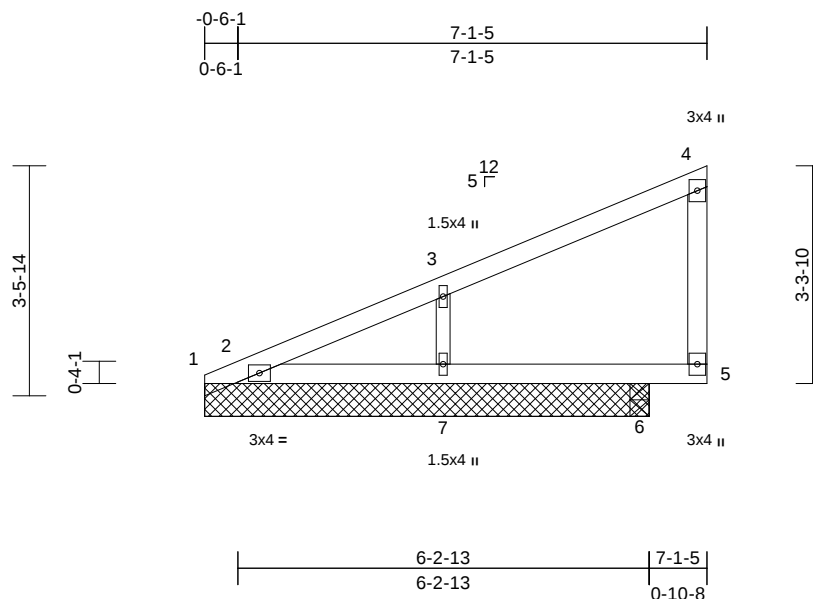
16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774799
Valley	1	1	Job Reference (optional)	

Run: 8.63 E Feb 23 2023 Print: 8.630 E Feb 23 2023 MiTek Industries, Inc. Fri Apr 14 09:06:24

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Page: 1



Scale = 1:34.9

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	0.28	Vert(LL)	-0.01	6-7	>999	240	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	0.01	6-7	>999	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.00	6	n/a	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
 WEBS 2x4 SP No.2
 OTHERS 2x3 SPF No.2

BRACING

TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

All bearings 6-8-14, except 6=0-3-8
 (lb) - Max Horiz 1=128 (LC 7)
 Max Uplift All uplift 100 (lb) or less at joint(s)
 1, 2, 6, 7
 Max Grav All reactions 250 (lb) or less at joint
 (s) 1, 2, 6 except 7=328 (LC 1)

FORCES

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

WEBS 3-7=-301/275

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
 Ke=0.96; 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 studs spaced at 4-0-0 oc.
- 4) This truss has been designed for a 10.0 psf bottom
 chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf
 on the bottom chord in all areas where a rectangle
 3-06-00 tall by 2-00-00 wide will fit between the bottom
 chord and any other members.

- 6) Provide mechanical connection (by others) of truss to
 bearing plate capable of withstanding 100 lb uplift at
 joint(s) 1, 2, 7, 6.
- 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



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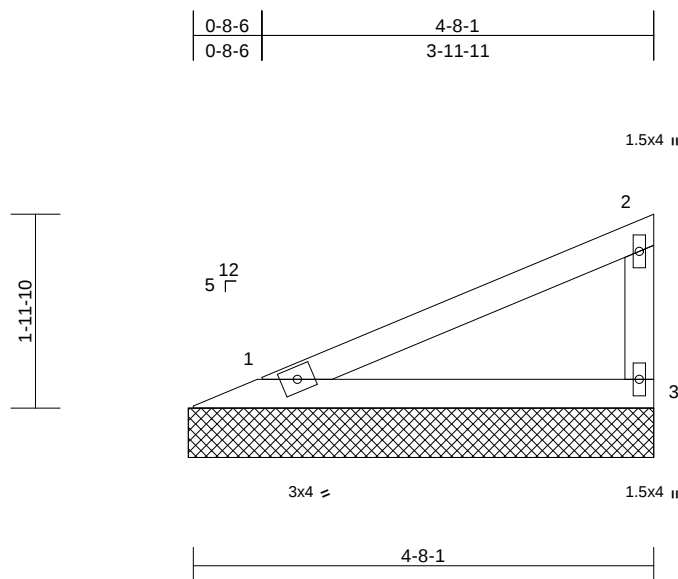
16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Truss Type	Qty	Ply	Roof - Osage Lot 72	I57774800
Valley	1	1	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. Thu Apr 13 16:38:37
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Page: 1



Scale = 1:23.4

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	0.37	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb FT = 20%

LUMBER

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

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 Sheathed or 4-8-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=4-8-10, 3=4-8-10
Max Horiz 1=67 (LC 7)
Max Uplift 1=-23 (LC 10), 3=-36 (LC 10)
Max Grav 1=172 (LC 1), 3=172 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-61/41, 2-3=-134/118
BOT CHORD 1-3=-30/32

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft;
Ke=0.96; 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 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.



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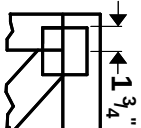
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



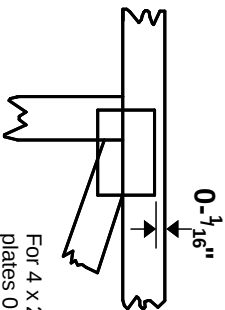
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{3}{16}$ " from outside edge of truss.



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

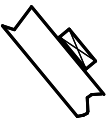
*** Plate location details available in MITek 20120 software or upon request.**

PLATE SIZE

4 X 4

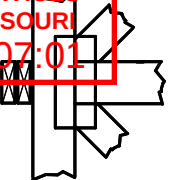
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



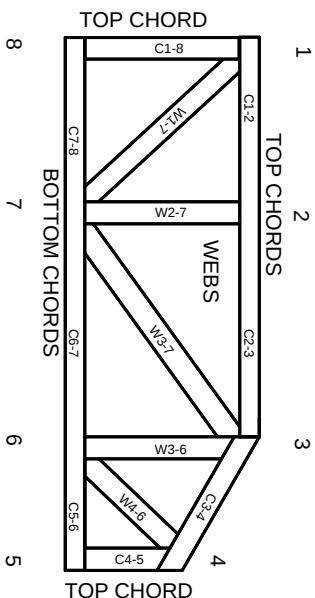
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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