

RE: B240025
Lot 142 HT

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Customer: Summit Homes Project Name: B240025
Lot/Block: 142 Model: Sheffield - Tuscan
Address: 3125 SW Arboridge Dr Subdivision: Hawthorn Ridge
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 38 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I63928344	A1	2/29/2024	21	I63928364	D3	2/29/2024
2	I63928345	A2	2/29/2024	22	I63928365	D4	2/29/2024
3	I63928346	A3	2/29/2024	23	I63928366	J1	2/29/2024
4	I63928347	B1	2/29/2024	24	I63928367	J2	2/29/2024
5	I63928348	B2	2/29/2024	25	I63928368	J3	2/29/2024
6	I63928349	B3	2/29/2024	26	I63928369	V1	2/29/2024
7	I63928350	B4	2/29/2024	27	I63928370	V2	2/29/2024
8	I63928351	B5	2/29/2024	28	I63928371	V3	2/29/2024
9	I63928352	B6	2/29/2024	29	I63928372	V4	2/29/2024
10	I63928353	B7	2/29/2024	30	I63928373	V5	2/29/2024
11	I63928354	B8	2/29/2024	31	I63928374	V6	2/29/2024
12	I63928355	B9	2/29/2024	32	I63928375	V7	2/29/2024
13	I63928356	B10	2/29/2024	33	I63928376	V8	2/29/2024
14	I63928357	B11	2/29/2024	34	I63928377	V9	2/29/2024
15	I63928358	B12	2/29/2024	35	I63928378	V10	2/29/2024
16	I63928359	C1	2/29/2024	36	I63928379	V11	2/29/2024
17	I63928360	C2	2/29/2024	37	I63928380	V12	2/29/2024
18	I63928361	C3	2/29/2024	38	I63928381	V13	2/29/2024
19	I63928362	D1	2/29/2024				
20	I63928363	D2	2/29/2024				

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

Truss Design Engineer's Name: Nathan Fox

My license renewal date for the state of Missouri is December 31, 2024.

Missouri COA: 001193

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.



February 29, 2024

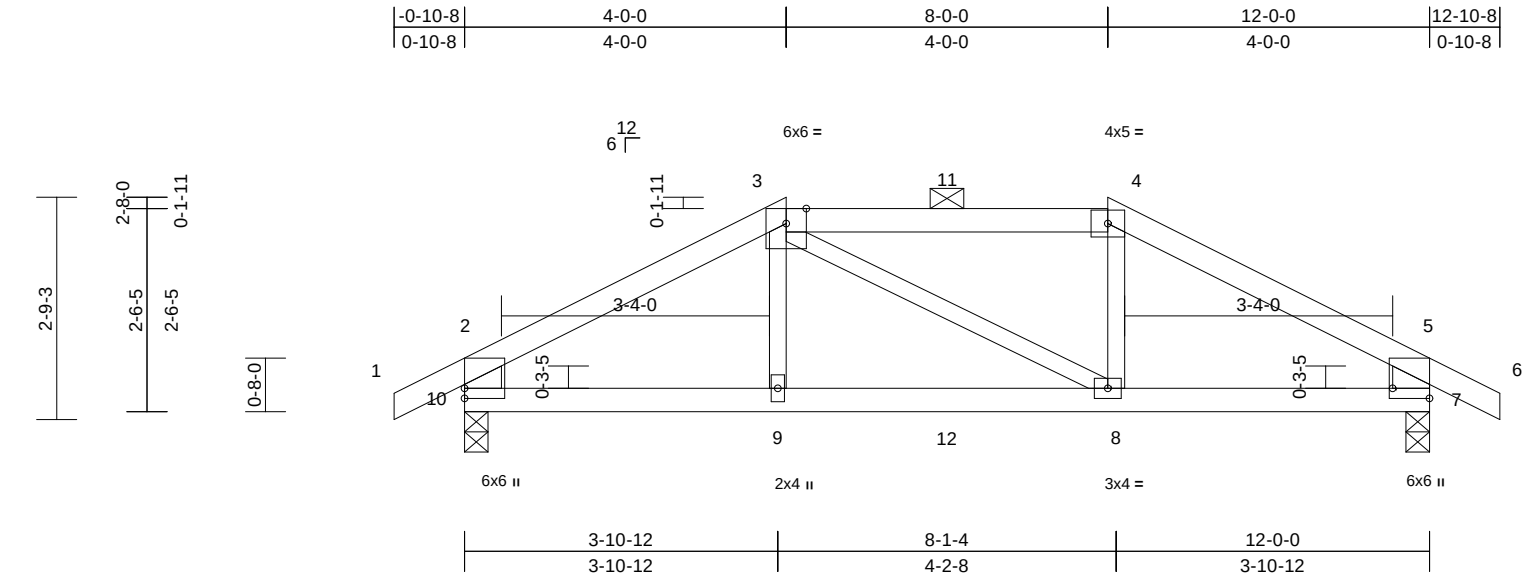
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	A1	Hip Girder	1	1	Job Reference (optional)	I63928344

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:28.7

Plate Offsets (X, Y): [7:Edge,0-5-8]

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	0.63	Vert(LL)	-0.06	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.12	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.07	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	8-9	>999	240	Weight: 39 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 10-2,7-5:2x6 SP
	2400F 2.0E

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-9-4 oc purlins, except end verticals, and 2-0-0 oc purlins (5-5-5 max.): 3-4.
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=-49 (LC 6)
Max Uplift	7=-173 (LC 9), 10=-173 (LC 8)
Max Grav	7=801 (LC 1), 10=801 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/35, 2-3=-1080/227, 3-4=-887/231, 4-5=-1081/227, 5-6=0/35, 2-10=-717/186, 5-7=-717/185
BOT CHORD	9-10=-174/891, 8-9=-178/886, 7-8=-155/891
WEBS	3-9=0/220, 3-8=-32/32, 4-8=0/221

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- All bearings are assumed to be SPF No.2 .

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 10 and 173 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.
- 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) 184 lb down and 147 lb up at 4-0-0, and 86 lb down and 65 lb up at 6-0-0, and 184 lb down and 147 lb up at 8-0-0 on top chord, and 74 lb down at 4-0-0, and 31 lb down at 6-0-0, and 74 lb down at 7-11-4 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, 2-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 7-10=-20
Concentrated Loads (lb)
Vert: 3=-111 (B), 4=-111 (B), 9=-58 (B), 8=-58 (B), 11=-46 (B), 12=-25 (B)



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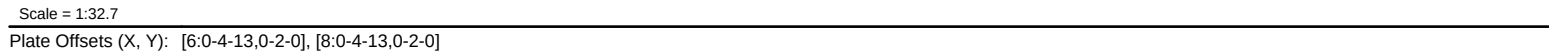
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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LUMBER		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.
TOP CHORD	2x4 SPF No.2	
BOT CHORD	2x4 SPF No.2	
WEBS	2x6 SPF No.2 *Except* 7-3:2x3 SPF No.2	LOAD CASE(S) Standard

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

REACTIONS	(size)	6=0-3-8, 8=0-3-8
	Max Horiz	8=-62 (LC 6)
	Max Uplift	6=-90 (LC 9), 8=-90 (LC 8)
	Max Grav	6=597 (LC 1), 8=597 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/35, 2-3=-638/89, 3-4=-638/89, 4-5=0/35, 2-8=-544/131, 4-6=-544/131
BOT CHORD	7-8=-14/480, 6-7=-14/480
WEBS	3-7=0/246

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=25ft; 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
- 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) All bearings are assumed to be SPF No.2 .
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 90 lb uplift at joint 8 and 90 lb uplift at joint 6.

A circular blue seal for the State of Missouri Professional Engineer. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The center of the seal contains the name "NATHANIEL FOX" in a serif font, with "NATHANIEL" on the top line and "FOX" on the bottom line. Below the name, the word "REGISTERED" is partially visible. At the very bottom of the center, the license number "PE-2022042259" is printed. A large, stylized red signature, which appears to read "Nathaniel Fox", is written across the seal, overlapping the central text and the outer ring.



February 29, 2024

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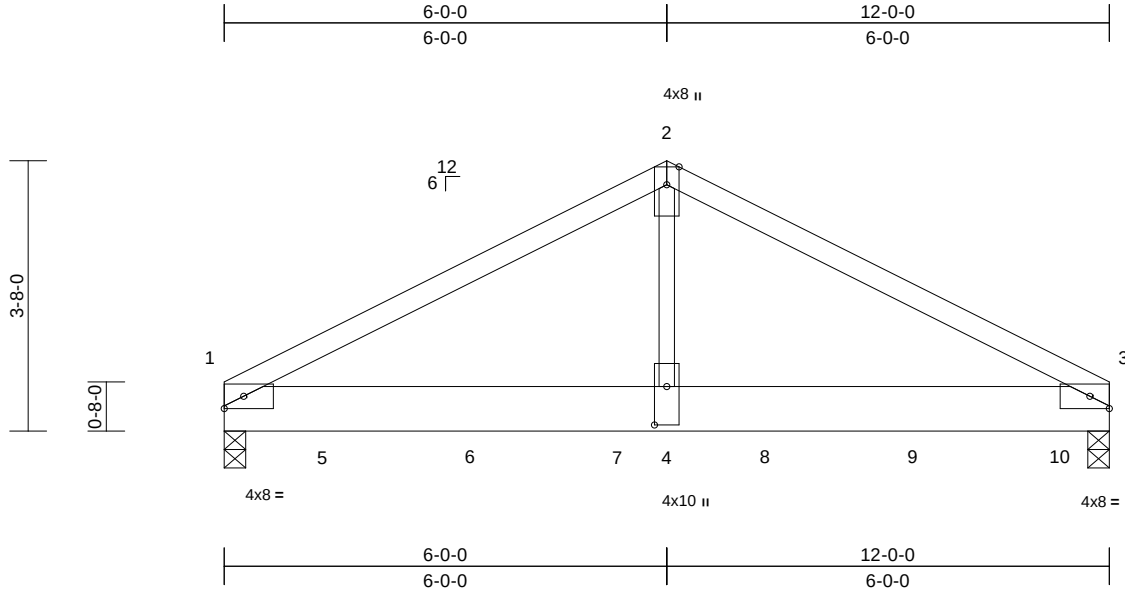
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	A3	Common Girder	1	2	Job Reference (optional)	I63928346

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:31.2

Plate Offsets (X, Y): [4:0-6-4,0-2-0]

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	0.66	Vert(LL)	-0.06	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.11	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	1-4	>999	240	Weight: 110 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-4 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 3=0-3-8
Max Horiz 1=56 (LC 27)
Max Uplift 1=-646 (LC 8), 3=-712 (LC 9)
Max Grav 1=4723 (LC 15), 3=5298 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6052/830, 2-3=-6052/830
BOT CHORD 1-4=-679/5278, 3-4=-679/5278
WEBS 2-4=-646/5404

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 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; 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.
- All bearings are assumed to be SP 2400F 2.0E .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 646 lb uplift at joint 1 and 712 lb uplift at joint 3.
- 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) 1513 lb down and 206 lb up at 1-4-0, 1513 lb down and 206 lb up at 3-4-0, 1513 lb down and 206 lb up at 5-4-0, 1513 lb down and 206 lb up at 7-4-0, and 1549 lb down and 204 lb up at 9-4-0, and 1554 lb down and 201 lb up at 11-4-0 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: 1-2=-70, 2-3=-70, 1-3=-20
Concentrated Loads (lb)
Vert: 5=-1373 (F), 6=-1373 (F), 7=-1373 (F), 8=-1373 (F), 9=-1366 (F), 10=-1370 (F)



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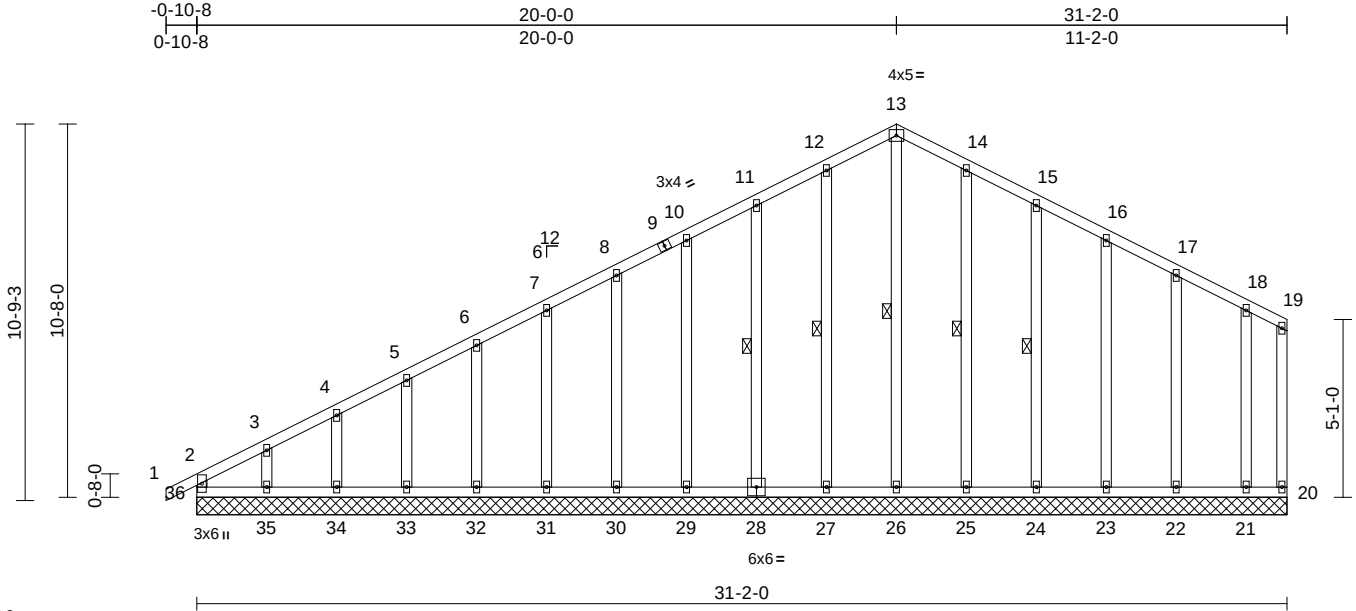
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	B1	Common Supported Gable	2	1	Job Reference (optional)	I63928347

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Scale = 1:65.9

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.00	20	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 187 lb FT = 10%											

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-26, 12-27, 11-28, 14-25, 15-24

REACTIONS

(size)	20=31-2-0, 21=31-2-0, 22=31-2-0, 23=31-2-0, 24=31-2-0, 25=31-2-0, 26=31-2-0, 27=31-2-0, 28=31-2-0, 29=31-2-0, 30=31-2-0, 31=31-2-0, 32=31-2-0, 33=31-2-0, 34=31-2-0, 35=31-2-0, 36=31-2-0
Max Horiz	36=281 (LC 5)
Max Uplift	20=24 (LC 8), 21=45 (LC 9), 22=58 (LC 9), 23=52 (LC 9), 24=58 (LC 9), 25=49 (LC 9), 26=5 (LC 20), 27=50 (LC 8), 28=57 (LC 8), 29=53 (LC 8), 30=54 (LC 8), 31=54 (LC 8), 32=53 (LC 8), 33=59 (LC 8), 34=36 (LC 8), 35=132 (LC 8), 36=65 (LC 4)
Max Grav	20=39 (LC 16), 21=148 (LC 22), 22=187 (LC 1), 23=179 (LC 1), 24=179 (LC 22), 25=189 (LC 22), 26=200 (LC 15), 27=190 (LC 21), 28=179 (LC 21), 29=180 (LC 1), 30=180 (LC 21), 31=180 (LC 1), 32=180 (LC 1), 33=179 (LC 21), 34=184 (LC 1), 35=170 (LC 15), 36=224 (LC 16)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	2-36=-188/66, 1-2=0/32, 2-3=-257/118, 3-4=-208/110, 4-5=-193/114, 5-6=-178/128, 6-7=-163/141, 7-8=-148/155, 8-10=-134/168, 10-11=-119/182, 11-12=-104/197, 12-13=-87/206, 13-14=-83/200, 14-15=-83/174, 15-16=-83/146, 16-17=-83/118, 17-18=-83/89, 18-19=-90/73, 19-20=-67/52
BOT CHORD	35-36=-71/54, 34-35=-71/54, 33-34=-71/54, 32-33=-71/54, 31-32=-71/54, 30-31=-71/54, 29-30=-71/54, 27-29=-71/54, 26-27=-71/54, 25-26=-71/54, 24-25=-71/54, 23-24=-71/54, 22-23=-71/54, 21-22=-71/54, 20-21=-71/54
WEBS	11-28=-139/81, 10-29=-140/77, 8-30=-140/78, 7-31=-140/78, 6-32=-140/77, 5-33=-139/80, 4-34=-143/68, 3-35=-126/121, 14-25=-149/73, 15-24=-139/82, 16-23=-139/77, 17-22=-145/81, 18-21=-115/83

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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
- 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 2x4 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 36, 24 lb uplift at joint 20, 5 lb uplift at joint 26, 50 lb uplift at joint 27, 57 lb uplift at joint 28, 53 lb uplift at joint 29, 54 lb uplift at joint 30, 54 lb uplift at joint 31, 53 lb uplift at joint 32, 59 lb uplift at joint 33, 36 lb uplift at joint 34, 132 lb uplift at joint 35, 49 lb uplift at joint 25, 58 lb uplift at joint 24, 52 lb uplift at joint 23, 58 lb uplift at joint 22 and 45 lb uplift at joint 21.
- 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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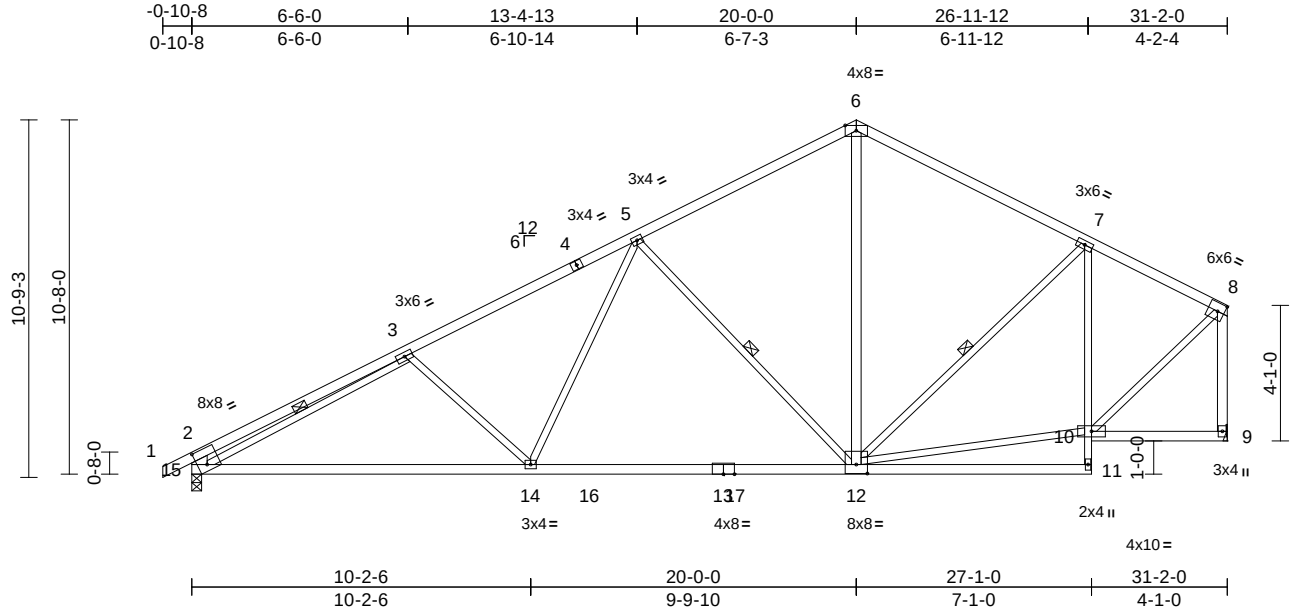
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	B2	Roof Special	5	1	Job Reference (optional)	I63928348

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:22
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Page: 1



Scale = 1:69.4

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

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	0.59	Vert(LL)	-0.28	12-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.45	12-14	>817	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	12-14	>999	240	Weight: 139 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 15-13:2x4 SPF 2100F 1.8E, 11-7:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-6,9-8:2x4 SPF No.2, 15-2:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-5-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-12, 7-12, 3-15

REACTIONS (size) 9= Mechanical, 15=0-3-8
Max Horiz 15=265 (LC 5)
Max Uplift 9=137 (LC 9), 15=218 (LC 8)
Max Grav 9=1453 (LC 2), 15=1525 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-974/206, 3-5=-2167/311, 5-6=-1256/238, 6-7=-1260/262, 7-8=-1043/162, 2-15=-673/196, 8-9=-1372/157
BOT CHORD 14-15=-437/2060, 12-14=-252/1610, 11-12=0/56, 10-11=0/110, 7-10=-612/129, 9-10=-50/44
WEBS 3-14=-341/234, 5-14=-33/647, 5-12=-829/291, 6-12=-88/683, 10-12=-124/860, 7-12=-38/276, 3-15=-1442/150, 8-10=-123/1233

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- Bearings are assumed to be: Joint 15 SPF 2100F 1.8E, Joint 9 SPF No.2.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 137 lb uplift at joint 9 and 218 lb uplift at joint 15.
- 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



February 29, 2024

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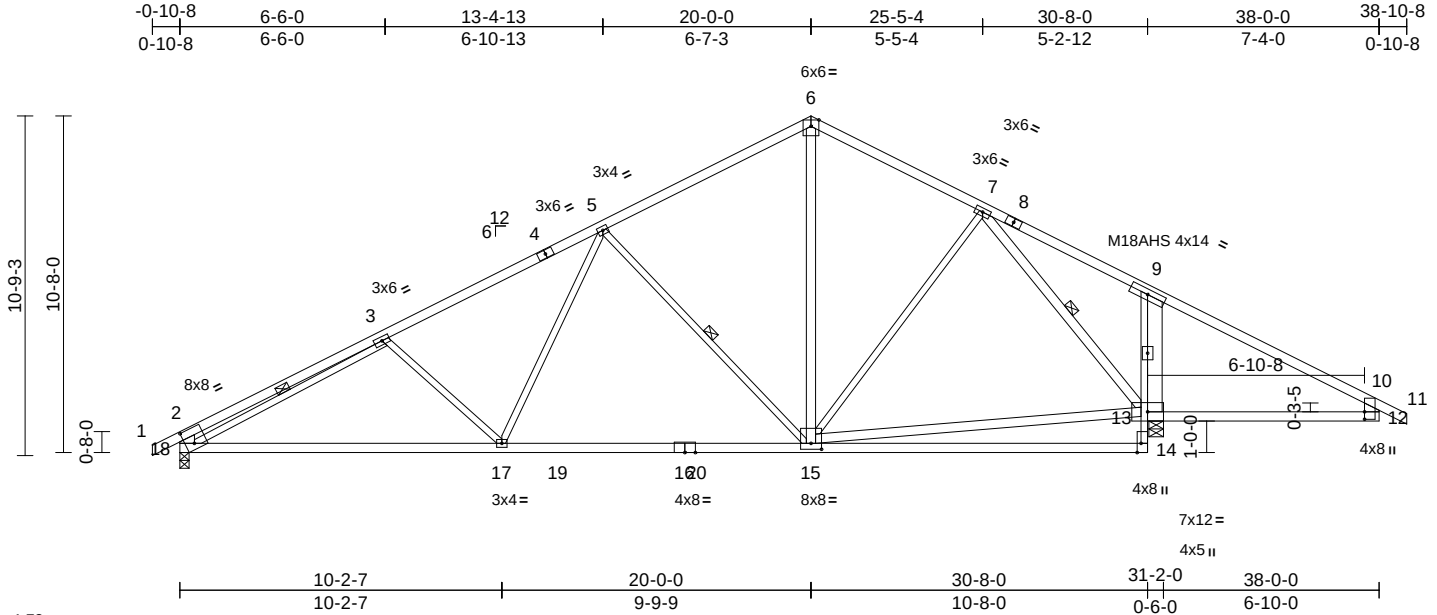
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	B3	Roof Special	1	1	Job Reference (optional)	I63928349

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:23
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Scale = 1:73

Plate Offsets (X, Y): [2:0-3-5,0-5-12], [12:0-2-13,Edge], [14:0-3-8,Edge], [15:0-4-0,0-2-4]

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	0.63	Vert(LL)	-0.25	14-15	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.51	14-15	>723	240	M18AHS 142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.04	13	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	15-17	>999	240	Weight: 169 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-4,8-11:2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF 2100F 1.8E *Except* 14-9:2x3 SPF No.2, 13-12:2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 15-6,15-13,13-7:2x4 SPF No.2, 18-2,13-9,12-10:2x6 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
	6-0-0 oc bracing: 12-13.
WEBS	1 Row at midpt 5-15, 7-13, 3-18

REACTIONS

(size)	13=0-5-8, 18=0-3-8
Max Horiz	18=191 (LC 8)
Max Uplift	13=279 (LC 9), 18=217 (LC 8)
Max Grav	13=2233 (LC 2), 18=1425 (LC 2)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/35, 2-3=-1004/207, 3-5=-1955/313, 5-6=-1056/233, 6-7=-1032/260, 7-9=-41/787, 9-10=-129/771, 10-11=0/35, 2-18=-684/196, 10-12=-22/120
BOT CHORD	17-18=-418/1916, 15-17=-230/1463, 14-15=0/218, 13-14=0/232, 9-13=-491/262, 12-13=-555/176
WEBS	3-17=-348/234, 5-17=-40/631, 5-15=-817/296, 6-15=-92/571, 7-15=0/549, 13-15=-98/401, 7-13=-1889/135, 3-18=-1204/151

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; 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
- 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) Bearings are assumed to be: Joint 18 SPF 2100F 1.8E, Joint 13 SPF No.2.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 279 lb uplift at joint 13 and 217 lb uplift at joint 18.
- 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



February 29,2024

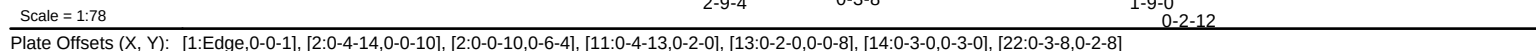
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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:23 Page: 1
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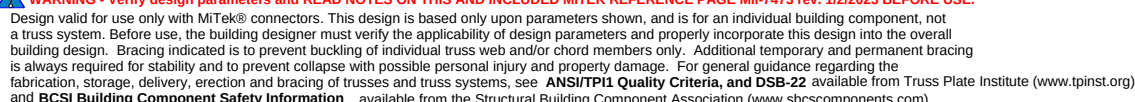
LUMBER		2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
TOP CHORD	2x4 SPF No.2 *Except* 5-6:2x4 SPF 2100F 1.8E, 3-1:2x8 SP 2400F 2.0E	Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
BOT CHORD	2x4 SPF No.2 *Except* 25-2,4-23,20-18,7-16,15-13:2x3 SPF No.2	3) All plates are 2x4 MT20 unless otherwise indicated.
WEBS	2x3 SPF No.2 *Except* 11-9:2x6 SPF No.2	4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
BRACING		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.
TOP CHORD	Structural wood sheathing directly applied, except end verticals.	6) All bearings are assumed to be SPF No.2 .
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except:	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 1 and 275 lb uplift at joint 12.
1 Row at midpt	7-14	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
WEBS	1 Row at midpt 3-22, 4-17	
JOINTS	1 Brace at Jt(s): 19	
REACTIONS		
	(size) 1=0-3-8, 12=0-5-8	
	Max Horiz 1=198 (LC 8)	
	Max Uplift 1=-193 (LC 8), 12=-275 (LC 9)	
	Max Grav 1=1299 (LC 1), 12=2165 (LC 1)	

FORCES	(lb) - Maximum Compression/Maximum Tension	LOAD CASE(S)	Standard
TOP CHORD	9-11=-23/99, 5-7=-1149/263, 7-8=-243/119, 8-9=-136/738, 9-10=0/35, 1-2=-692/150, 2-4=-2624/421, 4-5=-1097/247		
BOT CHORD	1-25=-1/4, 2-25=0/59, 2-24=-501/2451, 22-24=-496/2449, 22-23=0/55, 4-22=-63/552, 21-23=-11/16, 20-21=-11/16, 18-20=0/61, 19-22=-234/1506, 18-19=-234/1506, 17-18=-245/1522, 14-17=0/209, 14-16=0/38, 7-14=-1208/182, 15-16=-70/0, 13-15=0/32, 13-14=-499/196, 12-13=-543/182, 11-12=-543/182		
WEBS	3-24=0/205, 3-22=-1032/280, 4-17=-916/294, 7-17=-47/860, 5-17=-84/505, 8-12=-1915/286, 19-21=0/114, 8-14=-108/1378		

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

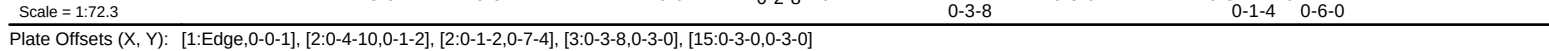


February 29.2024



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Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:24 Page: 1
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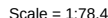


LUMBER		2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
TOP CHORD	2x4 SPF No.2 *Except* 1-3:2x8 SP 2400F 2.0E	Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
BOT CHORD	2x4 SPF No.2 *Except* 18-2,4-16,13-11:2x3 SPF No.2	3) All plates are 2x4 MT20 unless otherwise indicated.
WEBS	2x3 SPF No.2 *Except* 8-7:2x4 SPF No.2	4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
BRACING		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.
TOP CHORD	Structural wood sheathing directly applied or 3-6-3 oc purlins, except end verticals.	6) All bearings are assumed to be SPF No.2 .
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 2-17 8-1-14 oc bracing: 15-17.	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 1 and 137 lb uplift at joint 8.
WEBS	1 Row at midpt 3-15, 4-10, 6-10	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.
JOINTS	1 Brace at Jt(s): 12	
REACTIONS		LOAD CASE(S) Standard
	(size) 1=0-3-8, 8=0-5-8	
	Max Horiz 1=256 (LC 5)	
	Max Uplift 1=-192 (LC 8), 8=-137 (LC 9)	
	Max Grav 1=1507 (LC 2), 8=1531 (LC 2)	
FORCES		
	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-895/23, 2-4=-3139/426, 4-5=-1445/253, 5-6=-1447/276, 6-7=-1228/172, 7-8=-1473/156	
BOT CHORD	1-18=-1/5, 2-18=0/70, 2-17=-527/2967, 15-17=-522/2966, 15-16=0/124, 4-15=-58/785, 14-16=0/106, 13-14=0/106, 11-13=0/95, 12-15=-271/1867, 11-12=-271/1867, 10-11=-269/1965, 9-10=-109/1056, 8-9=-49/41	
WEBS	3-17=0/201, 3-15=-1116/283, 4-10=-1051/294, 6-10=-32/302, 5-10=-110/884, 6-9=-631/139, 7-9=-101/1337, 12-14=0/89	

STATE OF MISSOURI
NATHANIEL
FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

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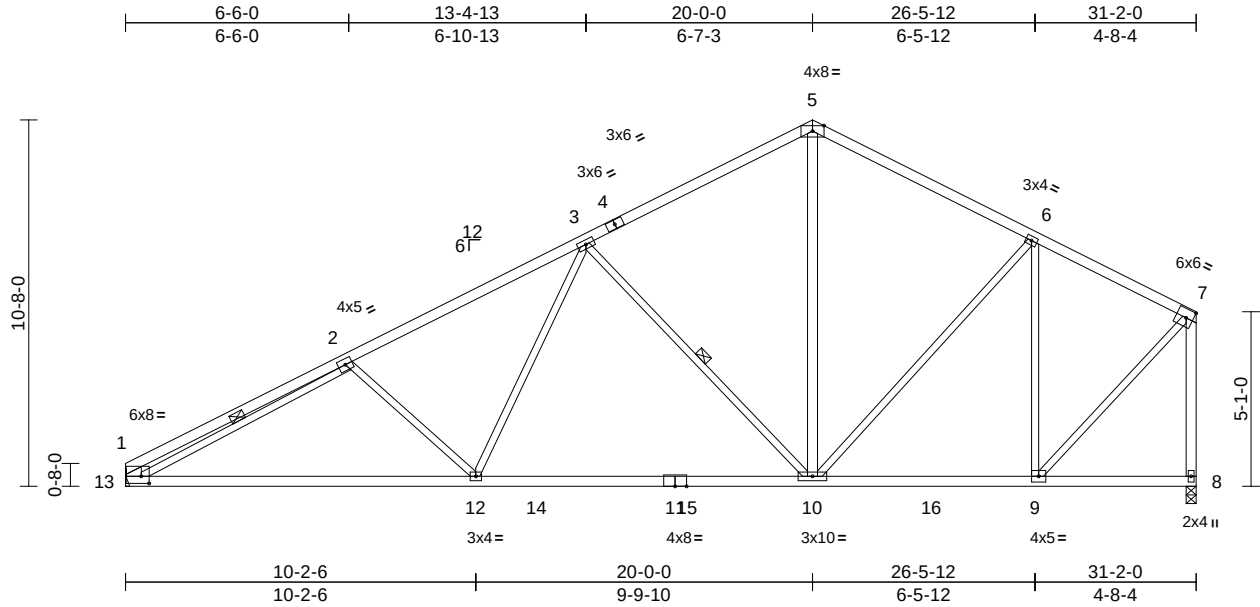
Page: 1

Job B240025	Truss B7	Truss Type Common	Qty 2	Ply 1	Lot 142 HT Job Reference (optional)	I63928353
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Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:67.1									
Plate Offsets (X, Y): [1:0-2-12,0-2-8]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.28 10-12	>999	360
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.46 10-12	>798	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.06 8	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08 10-12	>999	240
					Weight: 134 lb FT = 10%				

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 11-8:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-5,8-7:2x4 SPF No.2, 13-1:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-10, 2-13

REACTIONS (size) 8=0-3-8, 13= Mechanical
Max Horiz 13=271 (LC 5)
Max Uplift 8=-137 (LC 9), 13=-192 (LC 8)
Max Grav 8=1490 (LC 2), 13=1469 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-839/132, 2-3=-2193/314, 3-5=-1277/240, 5-6=-1271/265, 6-7=-998/164, 1-13=-510/130, 7-8=-1423/157
BOT CHORD 12-13=-423/2097, 10-12=-233/1635, 9-10=-109/855, 8-9=-65/53
WEBS 2-12=-357/240, 3-12=-35/655, 3-10=-829/291, 5-10=-93/714, 6-10=-28/356, 6-9=-734/148, 2-13=-1606/229, 7-9=-107/1236

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
 - All bearings are assumed to be SPF No.2 .
 - Refer to girder(s) for truss to truss connections.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 192 lb uplift at joint 13 and 137 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



February 29,2024

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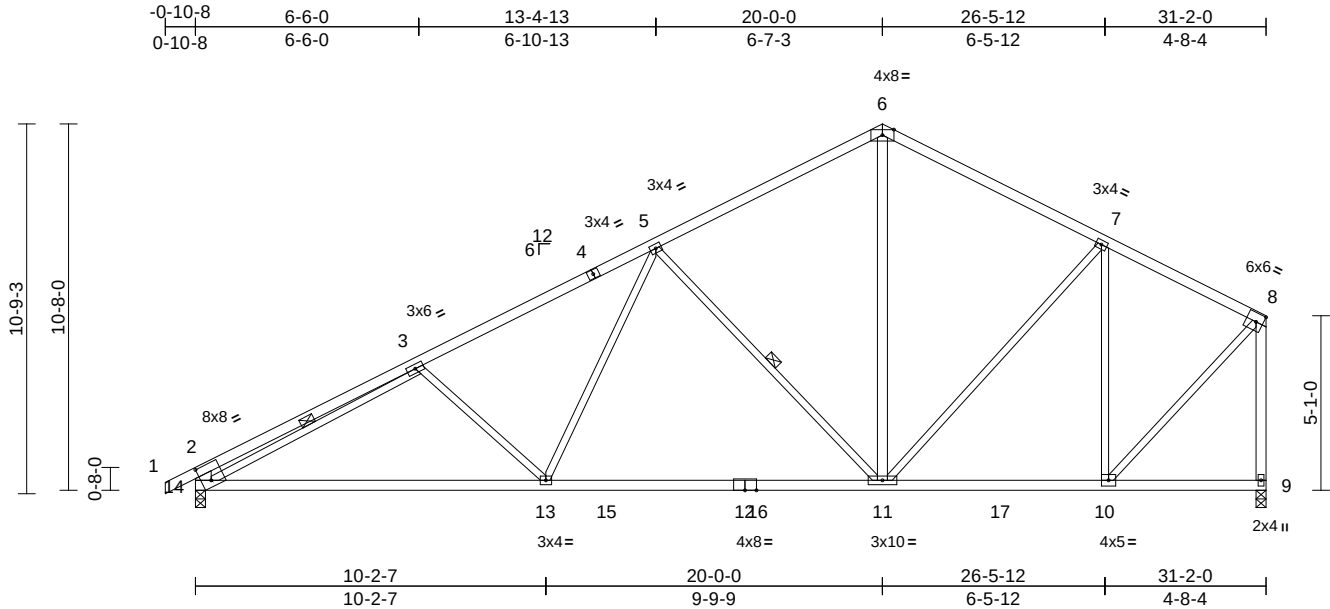
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	B8	Common	1	1	Job Reference (optional)	I63928354

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:25

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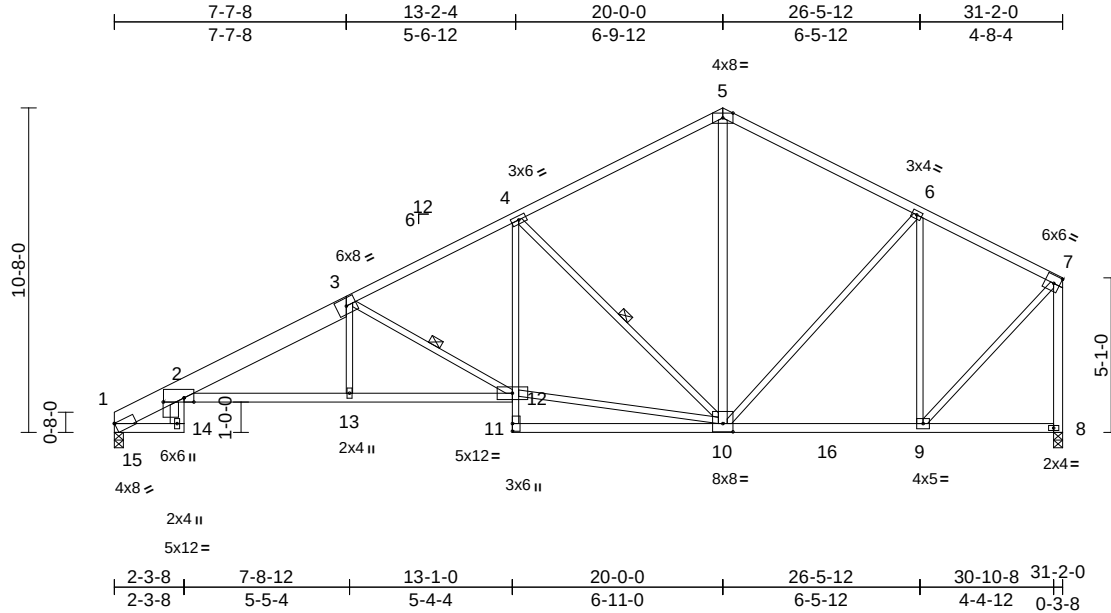
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928355
B240025	B9	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:25

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Plate Offsets (X, Y): [1:Edge,0-0-1], [2:0-3-14,Edge], [2:0-1-10,0-8-4], [10:0-4-0,0-3-4]

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	0.65	Vert(LL)	-0.25	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.45	12-13	>829	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.29	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.19	2-13	>999	240	Weight: 155 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-3:2x8 SP 2400F 2.0E
BOT CHORD	2x4 SPF No.2 *Except* 14-2:2x6 SPF No.2, 4-11:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 10-5,8-7:2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-7-9 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS	1 Row at midpt 3-12, 4-10

REACTIONS

(size)	1=0-3-8, 8=0-3-8
Max Horiz	1=273 (LC 5)
Max Uplift	1=-193 (LC 8), 8=-137 (LC 9)
Max Grav	1=1430 (LC 2), 8=1465 (LC 2)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-888/37, 2-4=-2939/414, 4-5=-1236/240, 5-6=-1230/267, 6-7=-984/164, 7-8=-1405/156
BOT CHORD	1-14=-2/16, 2-14=0/75, 2-13=-490/2770, 12-13=-486/2772, 11-12=0/121, 4-12=-95/927, 10-11=-4/120, 9-10=-108/842, 8-9=-65/53
WEBS	3-13=0/212, 3-12=-1021/246, 10-12=-271/1774, 4-10=-1193/335, 5-10=-86/660, 6-10=-33/337, 6-9=-727/151, 7-9=-106/1219

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- All bearings are assumed to be SPF No.2 .
- 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 193 lb uplift at joint 1 and 137 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



February 29,2024

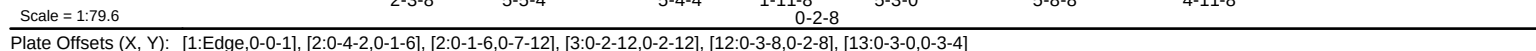
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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314.434.1200 / MiTek-US.com

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:25 Page: 1
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LUMBER		2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
TOP CHORD	2x4 SPF No.2 *Except* 1-3:2x8 SP 2400F 2.0E	Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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
BOT CHORD	2x4 SPF No.2 *Except* 16-15,14-4,6-11:2x3 SPF No.2	3) All plates are 2x4 MT20 unless otherwise indicated.
WEBS	2x3 SPF No.2 *Except* 9-8:2x4 SPF No.2	4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
BRACING		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.
TOP CHORD	Structural wood sheathing directly applied or 3-4-13 oc purlins, except end verticals.	6) All bearings are assumed to be SPF No.2 .
BOT CHORD	Rigid ceiling directly applied or 2-2-0 oc bracing. Except:	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 1 and 137 lb uplift at joint 9.
1 Row at midpt	6-12	8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
WEBS	1 Row at midpt 3-13, 4-12, 7-10	
REACTIONS	(size) 1=0-3-8, 9=0-3-8	
	Max Horiz 1=273 (LC 7)	
	Max Uplift 1=-193 (LC 8), 9=-137 (LC 9)	
	Max Grav 1=1455 (LC 2), 9=1461 (LC 2)	
FORCES		
	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-892/40, 2-4=-3046/438, 4-5=-1274/253, 5-6=-1238/285, 6-7=-1349/270, 7-8=-1009/168, 8-9=-1392/157	
BOT CHORD	1-18=-1/12, 2-18=0/73, 2-17=-522/2891, 16-17=-516/2892, 13-16=-506/2894, 15-16=0/26, 14-15=-12/6, 13-14=0/54, 4-13=-49/766, 12-13=-201/1719, 11-12=0/98, 6-12=-233/156, 10-11=-3/27, 9-10=-64/52	
WEBS	3-17=0/225, 3-13=-1261/340, 4-12=-1004/276, 5-12=-208/887, 10-12=-101/849, 7-12=-38/453, 7-10=-833/164. 8-10=-94/1201	
LOAD CASE(S)		Standard

A circular professional engineer seal for the State of Missouri. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by a rope-like border. The center of the seal contains the name "NATHANIEL FOX" in blue capital letters, followed by "NUMBER" and the license number "PE-2022042259" in blue capital letters. A large, stylized red signature "Nathaniel Fox" is written across the seal, with a red dotted line tracing the path of the signature.

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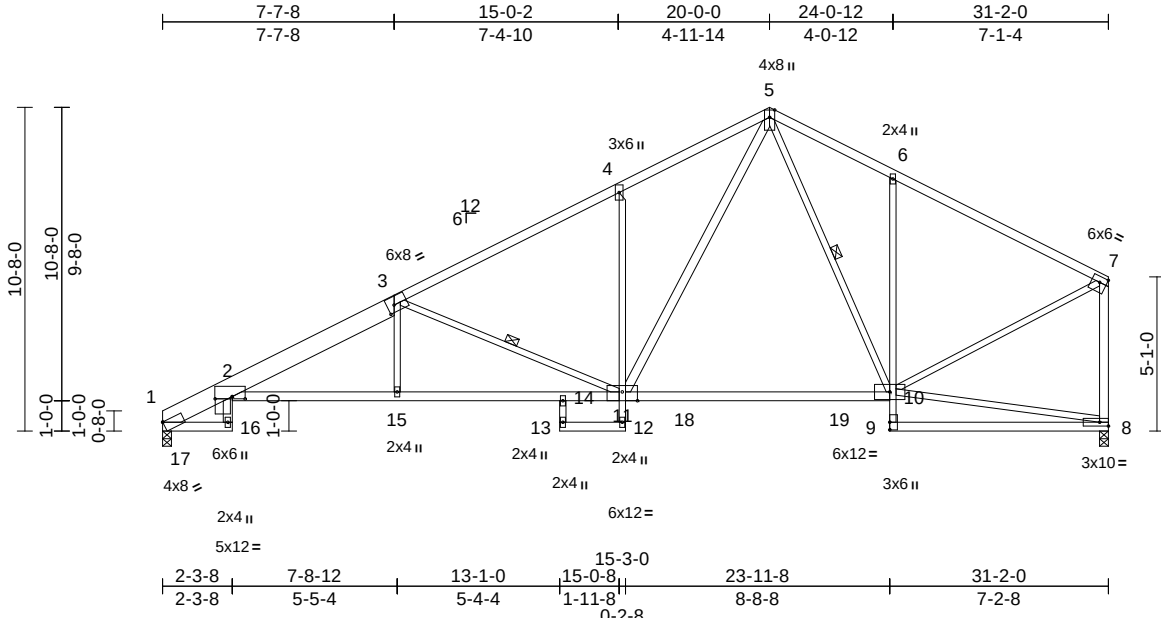
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928357
B240025	B11	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:75.9

Plate Offsets (X, Y): [1:Edge,0-0-1], [2:0-5-2,0-0-14], [2:0-0-14,0-6-12], [3:0-2-12,0-2-12], [7:Edge,0-2-4], [11:0-6-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.37	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.63	10-11	>587	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.28	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.19	2-15	>999	240	Weight: 155 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-3:2x8 SP 2400F 2.0E
BOT CHORD	2x4 SPF No.2 *Except* 2-11,11-10:2x4 SPF 2100F 1.8E, 14-13,12-4,6-9:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 5-11,8-7:2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-5-1 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 12-13,8-9.
WEBS	1 Row at midpt 3-11, 5-10

REACTIONS

(size)	1=0-3-8, 8=0-3-8
Max Horiz	1=273 (LC 5)
Max Uplift	1=-193 (LC 8), 8=-137 (LC 9)
Max Grav	1=1465 (LC 2), 8=1490 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-898/40, 2-4=-3068/439, 4-5=-2014/437, 5-6=-1368/278, 6-7=-1376/209, 7-8=-1382/181
BOT CHORD	1-16=-1/12, 2-16=0/73, 2-15=-521/2910, 14-15=-516/2911, 11-14=-500/2946, 13-14=0/25, 12-13=-51/0, 11-12=0/57, 4-11=-433/252, 10-11=-54/1145, 9-10=0/139, 6-10=-469/264, 8-9=-86/0
WEBS	3-15=0/216, 3-11=-1242/339, 5-11=-315/1323, 5-10=-148/246, 8-10=-46/122, 7-10=-94/1282

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; 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
- 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) All bearings are assumed to be SPF No.2 .
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 193 lb uplift at joint 1 and 137 lb uplift at joint 8.
- 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



February 29,2024

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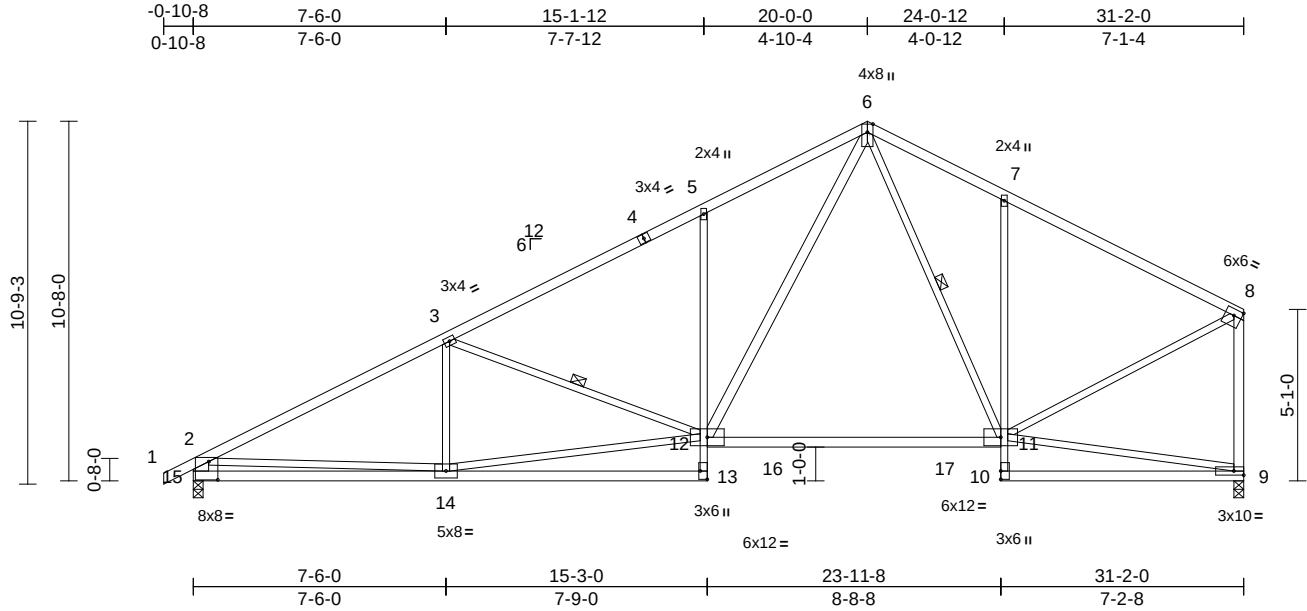
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	B12	Roof Special	1	1	Job Reference (optional)	I63928358

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:26
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Page: 1



Scale = 1:68.4

Plate Offsets (X, Y): [8:Edge,0-2-4], [13:Edge,0-2-8], [15:0-3-4,0-6-8]

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)	-0.32	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.55	11-12	>678	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.08	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	11-12	>999	240	Weight: 148 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2 *Except* 13-5,7-10:2x3 SPF No.2, 12-11:2x4 SPF 2400F 2.0E
WEBS	2x3 SPF No.2 *Except* 12-6,9-8:2x4 SPF No.2, 15-2:2x6 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-2-4 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 3-12, 6-11

REACTIONS

(size)	9=0-3-8, 15=0-3-8
Max Horiz	15=282 (LC 5)
Max Uplift	9=-137 (LC 9), 15=-218 (LC 8)
Max Grav	9=1472 (LC 2), 15=1517 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/35, 2-3=-2412/315, 3-5=-1981/300, 5-6=-1968/441, 6-7=-1352/278, 7-8=-1358/208, 2-15=-1398/256, 8-9=-1365/181
BOT CHORD	14-15=-382/840, 13-14=-40/61, 12-13=0/136, 5-12=-483/264, 11-12=-54/1120, 10-11=0/139, 7-11=-471/265, 9-10=-97/0
WEBS	3-14=-174/147, 12-14=-345/2102, 3-12=-460/186, 6-12=-322/1283, 6-11=-144/255, 9-11=-42/134, 8-11=-93/1264, 2-14=0/1308

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 218 lb uplift at joint 15 and 137 lb uplift at joint 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



February 29,2024

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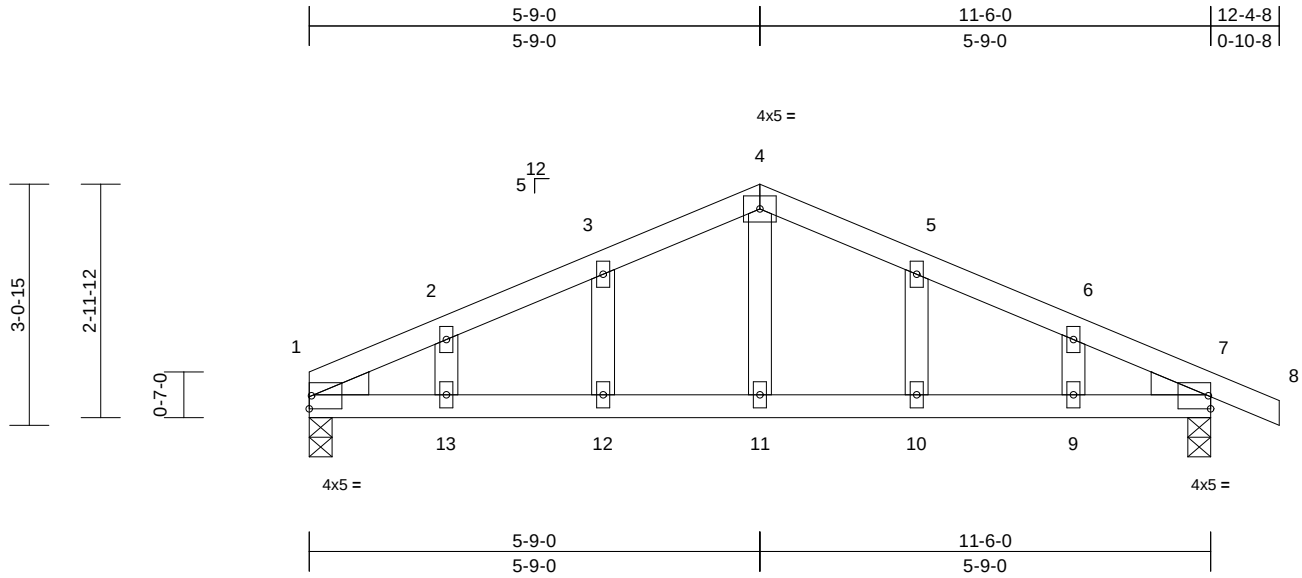
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928359
B240025	C1	Common Structural Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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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)	-0.05	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.07	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	12-13	>999	240	Weight: 39 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6'-0" oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10'-0" oc bracing.

REACTIONS

(size)	1=0-3-8, 7=0-3-8
Max Horiz	1=-50 (LC 9)
Max Uplift	1=-64 (LC 8), 7=-88 (LC 9)
Max Grav	1=501 (LC 1), 7=579 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-747/65, 2-3=-676/84, 3-4=-653/106, 4-5=-653/108, 5-6=-677/87, 6-7=-757/68, 7-8=0/6
BOT CHORD	1-13=-42/603, 12-13=-42/603, 11-12=-42/603, 10-11=-42/603, 9-10=-42/603, 7-9=-42/603
WEBS	4-11=-18/247, 3-12=-77/56, 2-13=-1/63, 5-10=-78/57, 6-9=0/64

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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
- 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 2x4 MT20 unless otherwise indicated.

- Gable studs spaced at 2'-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.
 - All bearings are assumed to be SPF No.2 .
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 1 and 88 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



February 29,2024

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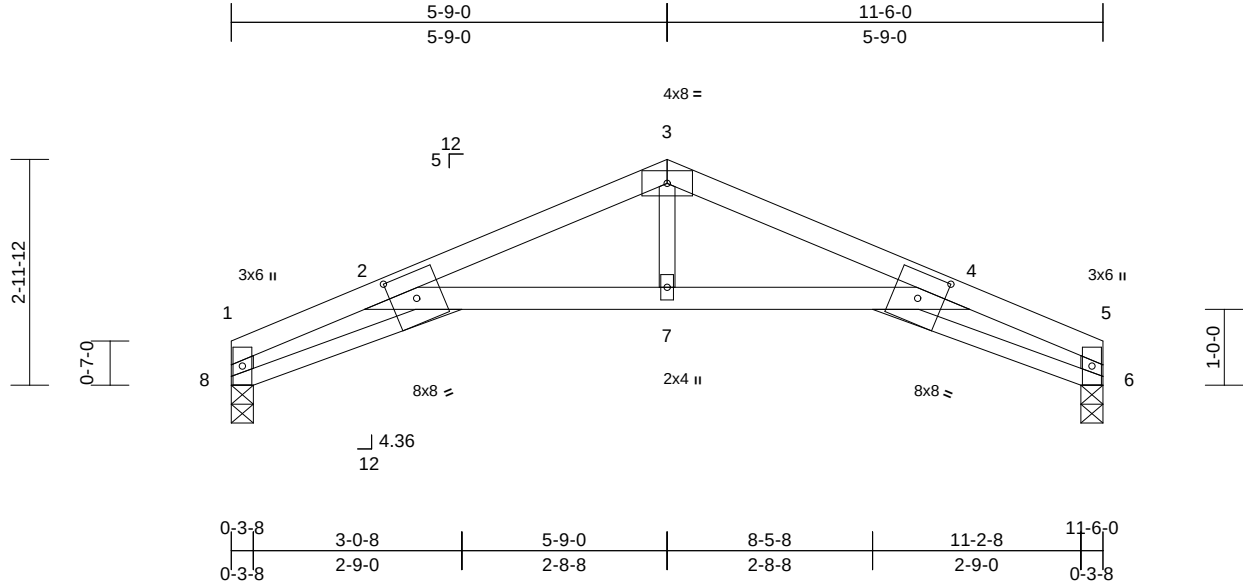
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job B240025	Truss C2	Truss Type Roof Special	Qty 4	Ply 1	Lot 142 HT Job Reference (optional)	I63928360
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:27
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Page: 1



Scale = 1:30.4

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

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	0.68	Vert(LL)	-0.20	2-7	>666	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.36	2-7	>371	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.43	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.15	2-7	>905	240	Weight: 31 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x3 SPF No.2 *Except* 2-4:2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-3:2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-6-15 oc purlins, 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=-27 (LC 13)
Max Uplift 6=-64 (LC 9), 8=-64 (LC 8)
Max Grav 6=504 (LC 1), 8=504 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-516/87, 2-3=-1120/98, 3-4=-1120/118,
4-5=-516/72, 1-8=-627/112, 5-6=-627/91
BOT CHORD 2-8=-87/333, 2-7=-61/1039, 4-7=-61/1039,
4-6=-46/333
WEBS 3-7=0/295

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- All bearings are assumed to be SPF No.2.
- Bearing at joint(s) 8, 6 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 64 lb uplift at joint 8 and 64 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



February 29, 2024

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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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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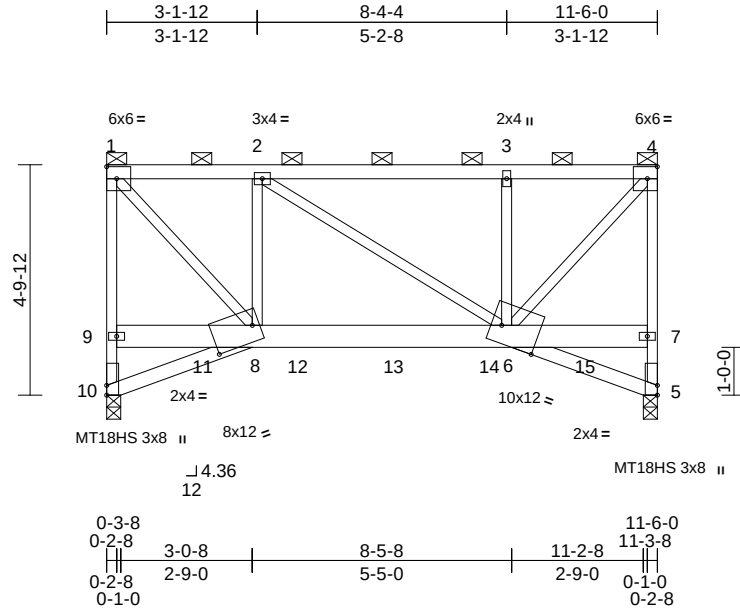
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	C3	Roof Special Girder	1	2	Job Reference (optional)	I63928361

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:27
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Page: 1



Scale = 1:48.1

Plate Offsets (X, Y): [6:0-9-7,Edge], [8:0-10-4,0-4-0], [10:0-2-7,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	0.53	Vert(LL)	-0.09	6-8	>999	360	MT18HS 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.16	6-8	>834	240	MT20 197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.06	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	6-8	>999	240	Weight: 140 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x6 SP 2400F 2.OE
WEBS 2x3 SPF No.2

BRACING

TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-4, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(size) 5=0-3-8, 10=0-3-8
Max Horiz 10=-175 (LC 4)
Max Uplift 5=-470 (LC 5), 10=-441 (LC 4)
Max Grav 5=4366 (LC 15), 10=4024 (LC 16)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 9-10=-4002/448, 1-9=-3930/457,
1-2=-3480/411, 2-3=-3116/337,
3-4=-3094/317, 5-7=-4356/485,
4-7=-4262/480

BOT CHORD 8-10=-196/193, 8-9=-56/81, 6-8=-487/3514,
6-7=-59/92, 5-6=-51/19

WEBS 1-8=-567/5166, 2-8=-133/279, 2-6=-429/92,
3-6=-316/151, 4-6=-563/5212

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-5-0 oc, 2x6 - 2 rows staggered at 0-7-0 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.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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.
- All bearings are assumed to be SPF No.2 .
- Bearing at joint(s) 10, 5 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 441 lb uplift at joint 10 and 470 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.
- 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) 1523 lb down and 149 lb up at 4-0-0, and 1523 lb down and 149 lb up at 6-0-0, and 1523 lb down and 149 lb up at 8-0-0 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: 1-4=-70, 8-10=-20, 6-8=-20, 5-6=-20
Concentrated Loads (lb)

Vert: 11=-1384 (B), 12=-1364 (B), 13=-1364 (B), 14=-1364 (B), 15=-1384 (B)



February 29,2024

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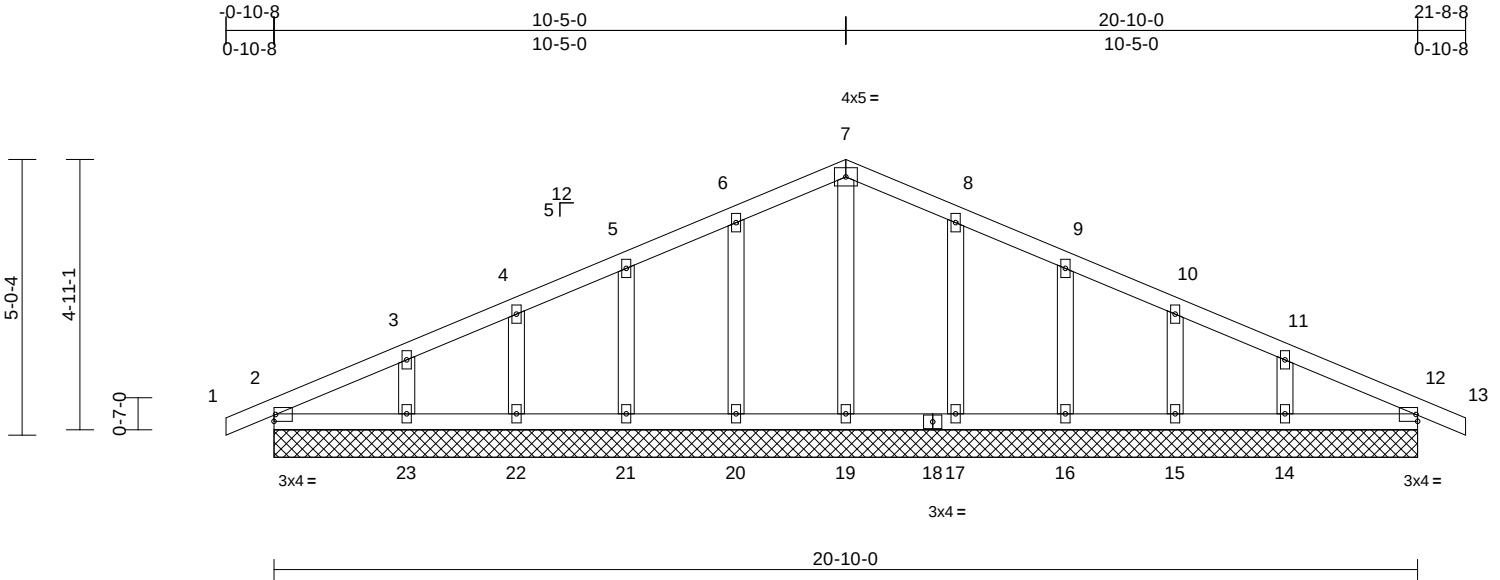
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928362
B240025	D1	Common Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:42

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	0.05	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 78 lb FT = 10%

LUMBER

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

BRACING

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

REACTIONS

(size)	2=20-10-0, 12=20-10-0, 14=20-10-0, 15=20-10-0, 16=20-10-0, 17=20-10-0, 19=20-10-0, 20=20-10-0, 21=20-10-0, 22=20-10-0, 23=20-10-0
Max Horiz	2=83 (LC 12)
Max Uplift	2=-22 (LC 4), 12=-25 (LC 5), 14=-64 (LC 9), 15=-44 (LC 9), 16=-49 (LC 9), 17=-50 (LC 9), 20=-51 (LC 8), 21=-48 (LC 8), 22=-44 (LC 8), 23=-68 (LC 8)
Max Grav	2=169 (LC 1), 12=169 (LC 1), 14=213 (LC 22), 15=170 (LC 22), 16=181 (LC 1), 17=190 (LC 22), 19=159 (LC 1), 20=190 (LC 21), 21=181 (LC 1), 22=170 (LC 21), 23=213 (LC 21)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/6, 2-3=-97/56, 3-4=-60/62, 4-5=-40/82, 5-6=-38/104, 6-7=-40/124, 7-8=-40/117, 8-9=-38/80, 9-10=-38/46, 10-11=-40/26, 11-12=-68/33, 12-13=0/6
BOT CHORD	2-23=-5/71, 22-23=-5/71, 21-22=-5/71, 20-21=-5/71, 19-20=-5/71, 17-19=-5/71, 16-17=-5/71, 15-16=-5/71, 14-15=-5/71, 12-14=-5/71
WEBS	7-19=-119/0, 6-20=-151/75, 5-21=-140/73, 4-22=-134/68, 3-23=-160/94, 8-17=-151/74, 9-16=-140/73, 10-15=-134/68, 11-14=-160/90

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; 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
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * 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) All bearings are assumed to be SPF No.2 .
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2, 51 lb uplift at joint 20, 48 lb uplift at joint 21, 44 lb uplift at joint 22, 68 lb uplift at joint 23, 50 lb uplift at joint 17, 49 lb uplift at joint 16, 44 lb uplift at joint 15, 64 lb uplift at joint 14 and 25 lb uplift at joint 12.
- 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.

LOAD CASE(S) Standard



February 29, 2024

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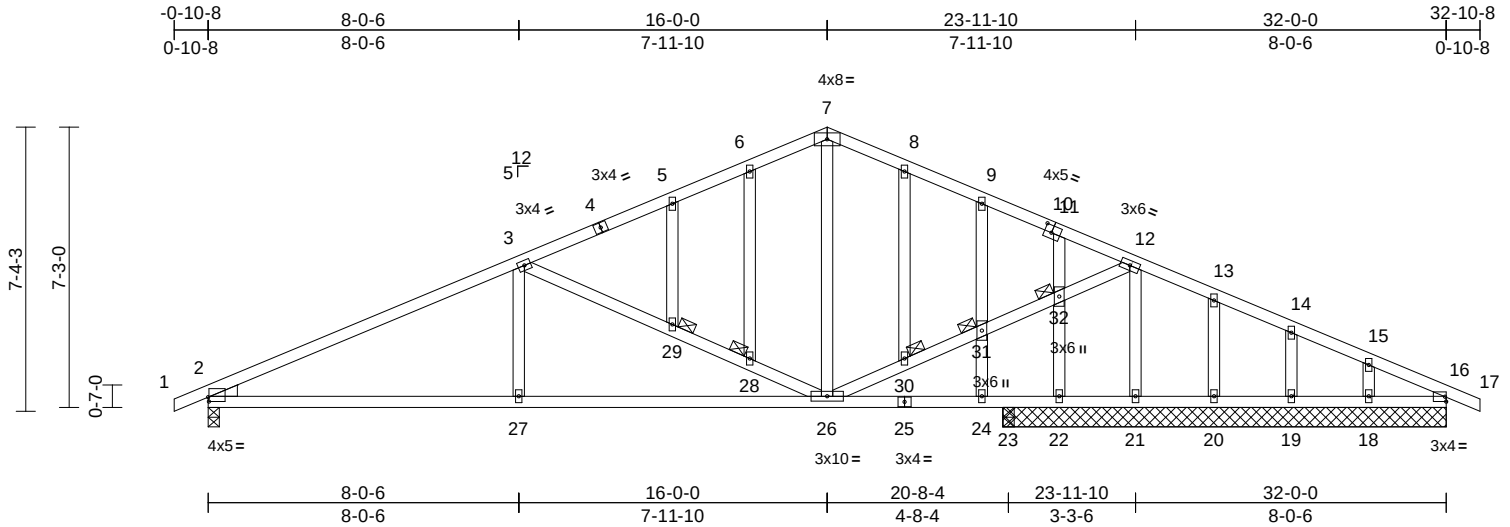
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	D2	Common Structural Gable	1	1	Job Reference (optional)	I63928363

Wheeler Lumber, Waverly, KS - 66671,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:28

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Scale = 1:59.6

Plate Offsets (X, Y): [2:0-0-4,0-1-6], [10:0-2-4,0-2-4]

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	0.80	Vert(LL)	-0.10	2-27	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.25	2-27	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.04	23	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	2-27	>999	240	Weight: 145 lb FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 2-27,26-27.

JOINTS
1 Brace at Jt(s): 28,
29, 30, 31, 32

REACTIONS (size)
2=0-3-8, 16=11-5-8, 18=11-5-8,
19=11-5-8, 20=11-5-8, 21=11-5-8,
22=11-5-8, 23=0-3-8
Max Horiz 2=-124 (LC 13)
Max Uplift 2=-172 (LC 8), 16=-131 (LC 21),
18=-55 (LC 9), 19=-48 (LC 9),
20=-45 (LC 9), 21=-98 (LC 8),
22=-11 (LC 9), 23=-107 (LC 9)
Max Grav 2=1035 (LC 1), 16=64 (LC 22),
18=230 (LC 1), 19=175 (LC 22),
20=202 (LC 1), 21=962 (LC 1),
22=27 (LC 22), 23=421 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-1715/255, 3-5=-751/120,
5-6=-651/135, 6-7=-628/157, 7-8=-637/173,
8-9=-688/167, 9-11=-667/145,
11-12=-654/123, 12-13=-25/375,
13-14=-47/391, 14-15=-67/387,
15-16=-98/414, 16-17=0/6

BOT CHORD 2-27=-266/1468, 26-27=-266/1468,
24-26=-333/95, 23-24=-333/95,
22-23=-333/95, 21-22=-333/95,
20-21=-333/95, 19-20=-333/95,
18-19=-333/95, 16-18=-333/95
WEBS 7-26=-5/251, 26-30=-124/1021,
30-31=-119/1024, 31-32=-121/1009,
12-32=-120/1014, 12-21=-894/120,
3-29=-956/269, 28-29=-969/276,
26-28=-1000/289, 3-27=0/360, 6-28=-73/32,
5-29=-34/17, 8-30=-48/41, 9-31=-195/91,
24-31=-245/105, 11-32=-158/70,
22-32=-146/71, 13-20=-168/71,
14-19=-134/71, 15-18=-187/79

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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
- 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 2x4 MT20 unless otherwise indicated.
- 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.
- All bearings are assumed to be SPF No.2.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 2, 98 lb uplift at joint 21, 11 lb uplift at joint 22, 45 lb uplift at joint 20, 48 lb uplift at joint 19, 55 lb uplift at joint 18, 131 lb uplift at joint 16 and 107 lb uplift at joint 23.
- 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



February 29, 2024

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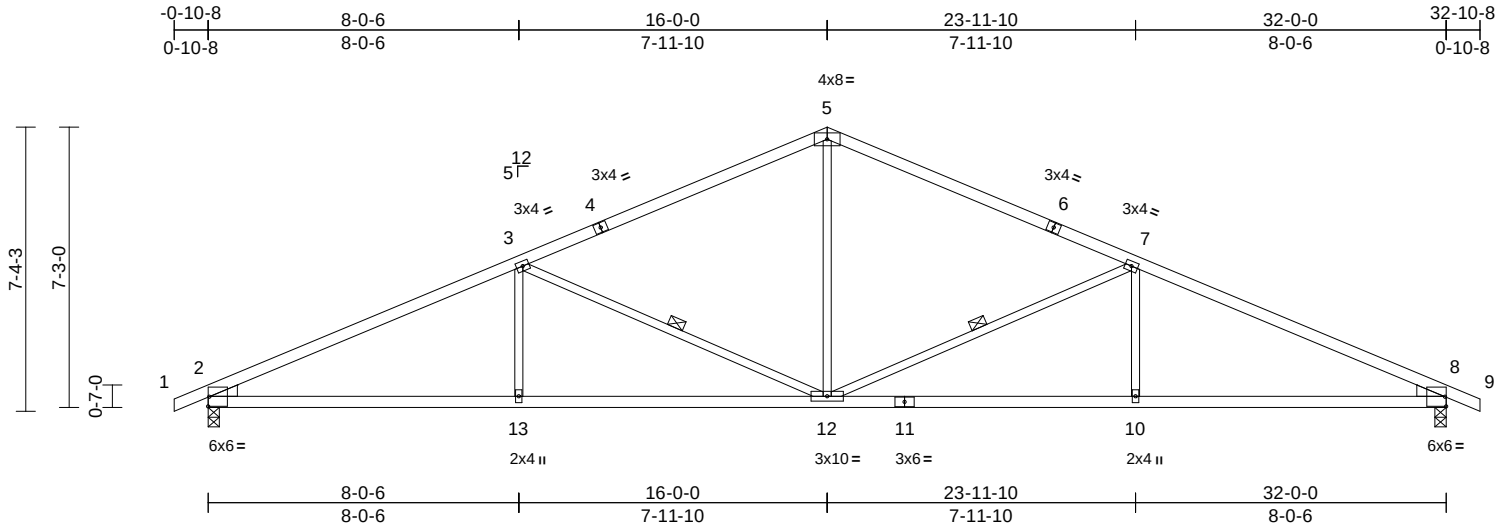
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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928364
B240025	D3	Common	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:28
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Page: 1



Scale = 1:59.6

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	0.89	Vert(LL)	-0.16	12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.32	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.13	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	2-13	>999	240	Weight: 105 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-4,6-9:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied or 9-10-1 oc bracing.

WEBS 1 Row at midpt 7-12, 3-12

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=124 (LC 8)
Max Uplift 2=-207 (LC 8), 8=-207 (LC 9)
Max Grav 2=1498 (LC 1), 8=1498 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-2828/345, 3-5=-1923/255,
5-7=-1923/255, 7-8=-2828/346, 8-9=0/6

BOT CHORD 2-13=-351/2483, 12-13=-351/2483,
10-12=-228/2483, 8-10=-228/2483

WEBS 5-12=-37/899, 7-12=-942/284, 7-10=0/345,
3-12=-942/284, 3-13=0/345

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; 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
- 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) All bearings are assumed to be SPF No.2 .

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 207 lb uplift at joint 2 and 207 lb uplift at joint 8.
- 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



February 29,2024

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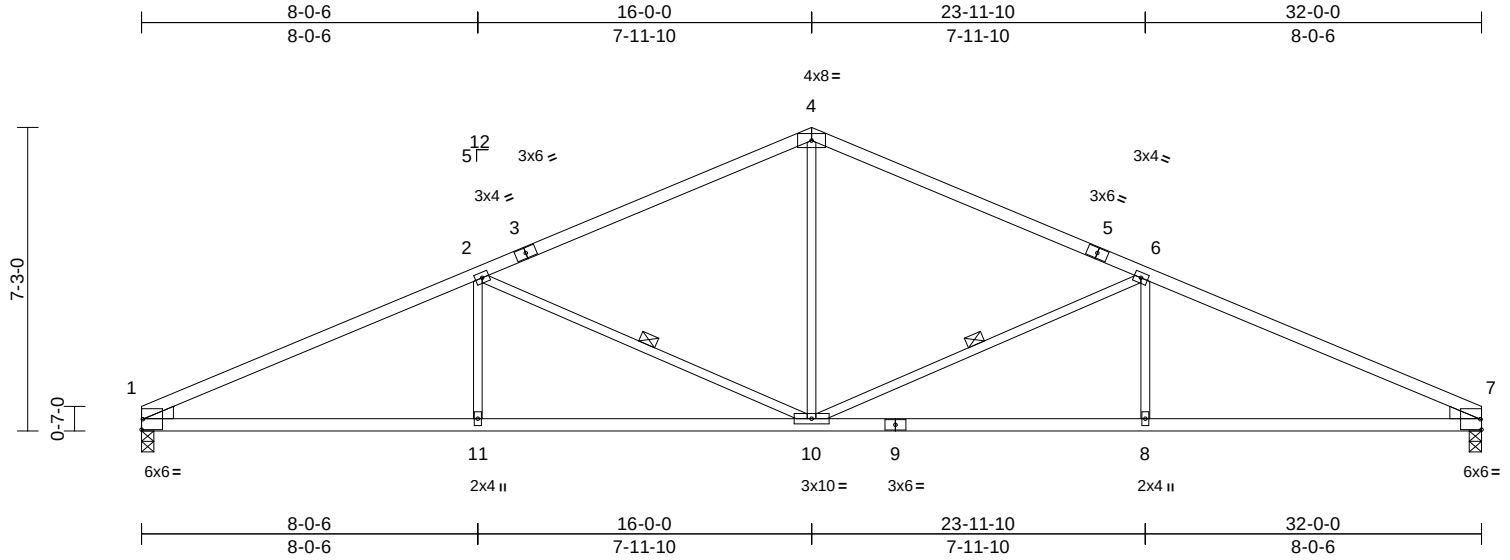
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928365
B240025	D4	Common	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:28

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Scale = 1:55

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	0.89	Vert(LL)	-0.16	10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.32	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.13	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	1-11	>999	240	Weight: 103 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 1-3,5-7:2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SP No.3

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 1 and 183 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

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied or 9-9-9 oc bracing.

WEBS 1 Row at midpt 6-10, 2-10

REACTIONS (size)	1=0-3-8, 7=0-3-8
Max Horiz	1=-122 (LC 13)
Max Uplift	1=-183 (LC 8), 7=-183 (LC 9)
Max Grav	1=1427 (LC 1), 7=1427 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-2816/347, 2-4=-1929/256, 4-6=-1929/256, 6-7=-2816/348
BOT CHORD	1-11=-356/2495, 10-11=-356/2495, 8-10=-234/2495, 7-8=-234/2495
WEBS	4-10=-39/906, 6-10=-950/287, 6-8=0/348, 2-10=-950/286, 2-11=0/348

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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.
- All bearings are assumed to be SPF No.2 .



February 29,2024

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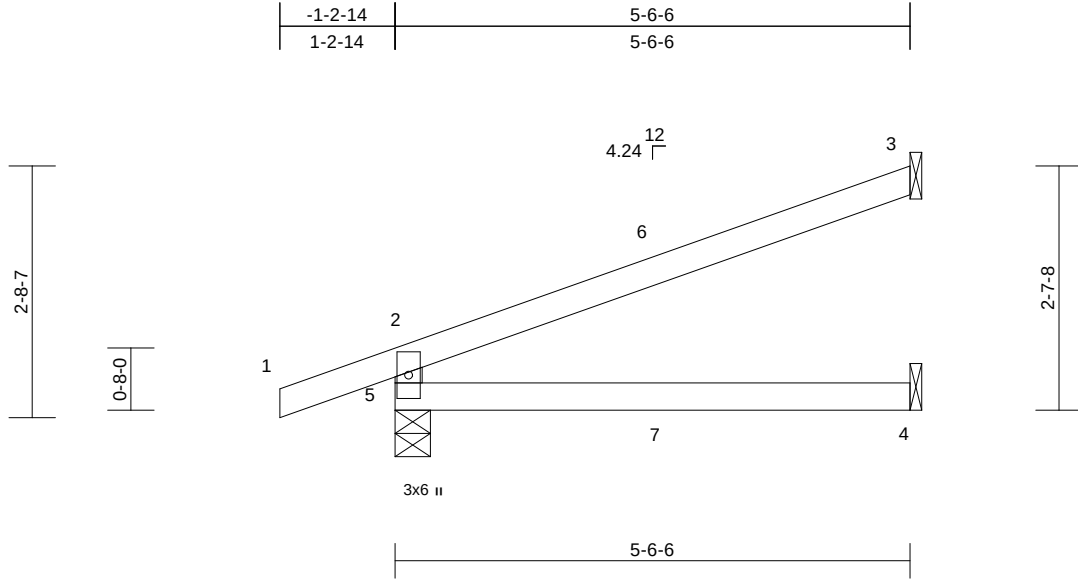
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	J1	Diagonal Hip Girder	2	1	Job Reference (optional)	I63928366

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:28
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Scale = 1:24.7

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)	-0.04	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.08	4-5	>783	240		
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		Wind(LL)	0.03	4-5	>999	240	Weight: 15 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-4-9
Max Horiz 5=96 (LC 4)
Max Uplift 3=-77 (LC 8), 5=-91 (LC 4)
Max Grav 3=164 (LC 1), 4=100 (LC 3), 5=347 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-306/137, 1-2=0/32, 2-3=-92/42
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; 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) 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) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 91 lb uplift at joint 5 and 77 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.

- 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 69 lb down and 36 lb up at 2-9-8, and 69 lb down and 36 lb up at 2-9-8 on top chord, and 3 lb down and 2 lb up at 2-9-8, and 3 lb down and 2 lb up at 2-9-8 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
- 9) 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: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=3 (F=2, B=2)



February 29, 2024

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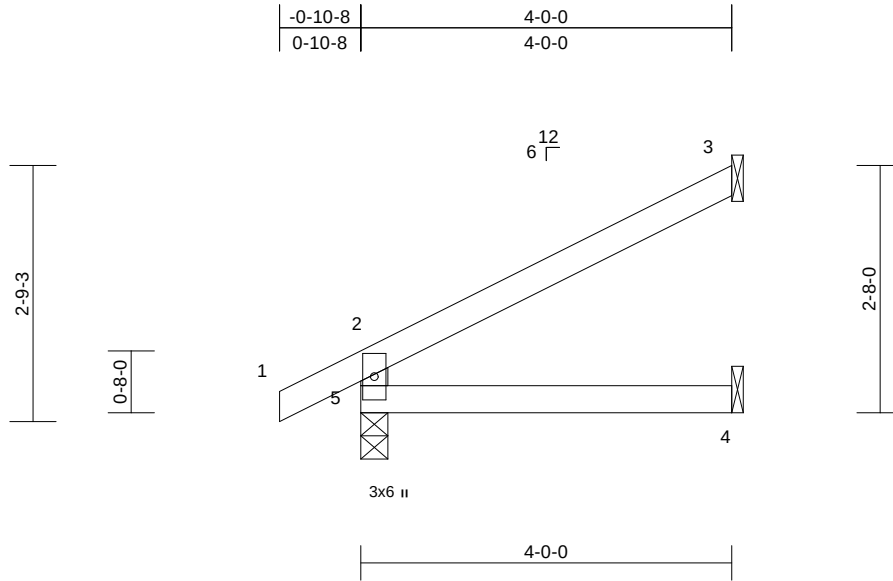
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314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	J2	Jack-Open	3	1	Job Reference (optional)	I63928367

Wheeler Lumber, Waverly, KS - 66871,

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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	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

LUMBER

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

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-0 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=89 (LC 8)
Max Uplift 3=-66 (LC 8), 5=-30 (LC 8)
Max Grav 3=116 (LC 1), 4=71 (LC 3), 5=252 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-221/67, 1-2=0/32, 2-3=-75/40
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; 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) 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) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 5 and 66 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.



February 29, 2024

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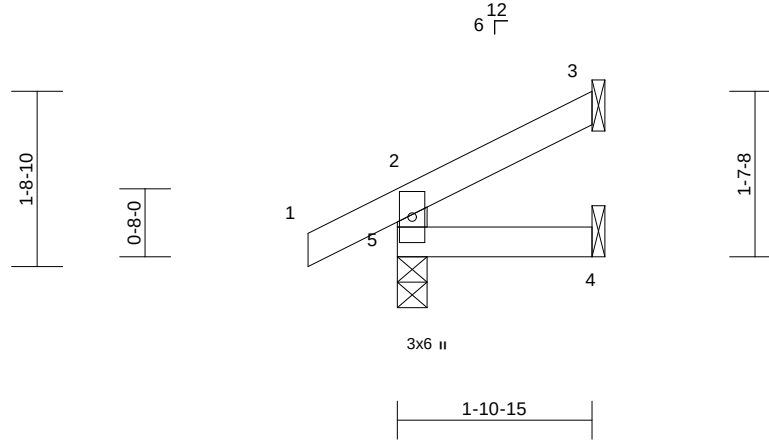
Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	J3	Jack-Open	4	1	Job Reference (optional)	I63928368

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1

-0-10-8	1-10-15
0-10-8	1-10-15



Scale = 1:22.6

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	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

LUMBER

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

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-10-15 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=48 (LC 8)
Max Uplift 3=-30 (LC 8), 5=-26 (LC 8)
Max Grav 3=44 (LC 1), 4=31 (LC 3), 5=171
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-150/44, 1-2=0/32, 2-3=-37/14
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; 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) 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) All bearings are assumed to be SPF No.2 .
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 26 lb uplift at joint
5 and 30 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.



February 29, 2024

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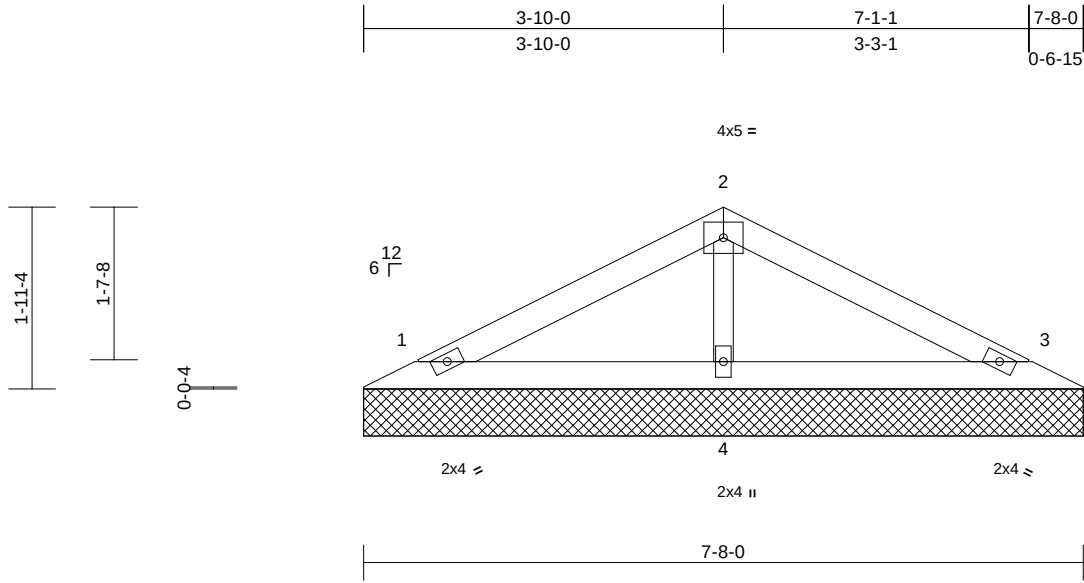
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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V1	Valley	1	1	Job Reference (optional)	I63928369

Wheeler Lumber, Waverly, KS - 66871,

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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	0.19	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 18 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=7-8-0, 3=7-8-0, 4=7-8-0
Max Horiz	1=-29 (LC 13)
Max Uplift	1=-35 (LC 8), 3=-40 (LC 9), 4=-4 (LC 8)
Max Grav	1=153 (LC 1), 3=153 (LC 1), 4=279 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-73/41, 2-3=-73/29
BOT CHORD	1-4=-1/32, 3-4=-1/32
WEBS	2-4=-198/52

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp 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
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 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.
- All bearings are assumed to be SPF No.2 .
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 1, 40 lb uplift at joint 3 and 4 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.

LOAD CASE(S) Standard



February 29, 2024

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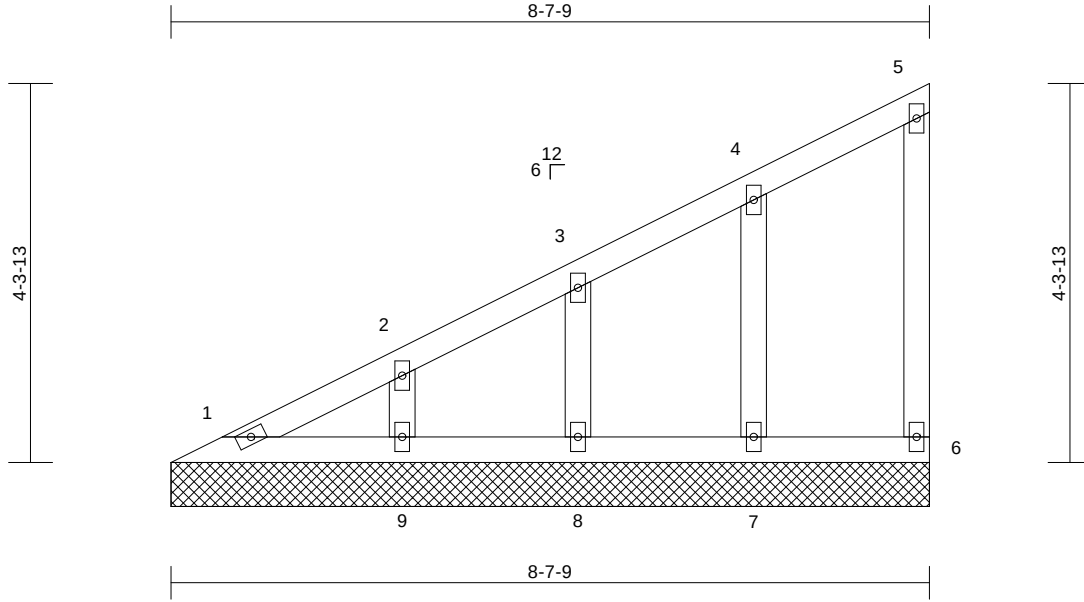
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Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V2	Valley	1	1	Job Reference (optional)	I63928370

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:26.2

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	0.10	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 30 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size)	1=8-7-9, 6=8-7-9, 7=8-7-9, 8=8-7-9, 9=8-7-9
Max Horiz	1=164 (LC 5)
Max Uplift	6=-22 (LC 5), 7=-58 (LC 8), 8=-52 (LC 8), 9=-61 (LC 8)
Max Grav	1=92 (LC 16), 6=65 (LC 1), 7=195 (LC 1), 8=171 (LC 1), 9=205 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-139/46, 2-3=-109/40, 3-4=-93/42, 4-5=-80/45, 5-6=-51/30
BOT CHORD	1-9=-56/42, 8-9=-56/42, 7-8=-56/42, 6-7=-56/42
WEBS	4-7=-151/84, 3-8=-133/75, 2-9=-159/89

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 7) * 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.
- 8) All bearings are assumed to be SPF No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 6, 58 lb uplift at joint 7, 52 lb uplift at joint 8 and 61 lb uplift at joint 9.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 29,2024

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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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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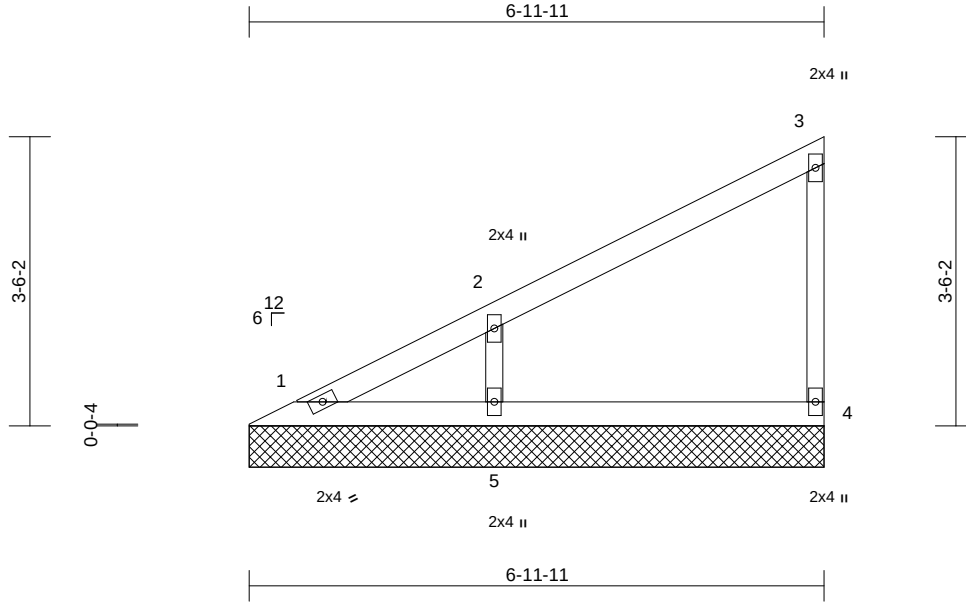
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V3	Valley	1	1	Job Reference (optional)	I63928371

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:29
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Page: 1



Scale = 1:27.9

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	0.19	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 19 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=6-11-11, 4=6-11-11, 5=6-11-11
	Max Horiz	1=131 (LC 5)
	Max Uplift	4=-27 (LC 8), 5=-111 (LC 8)
	Max Grav	1=71 (LC 16), 4=142 (LC 1), 5=370 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-111/58, 2-3=-106/43, 3-4=-111/46
BOT CHORD	1-5=-45/34, 4-5=-45/34
WEBS	2-5=-288/161

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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) All bearings are assumed to be SPF No.2 .

- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 111 lb uplift at joint 5.
- 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



February 29,2024

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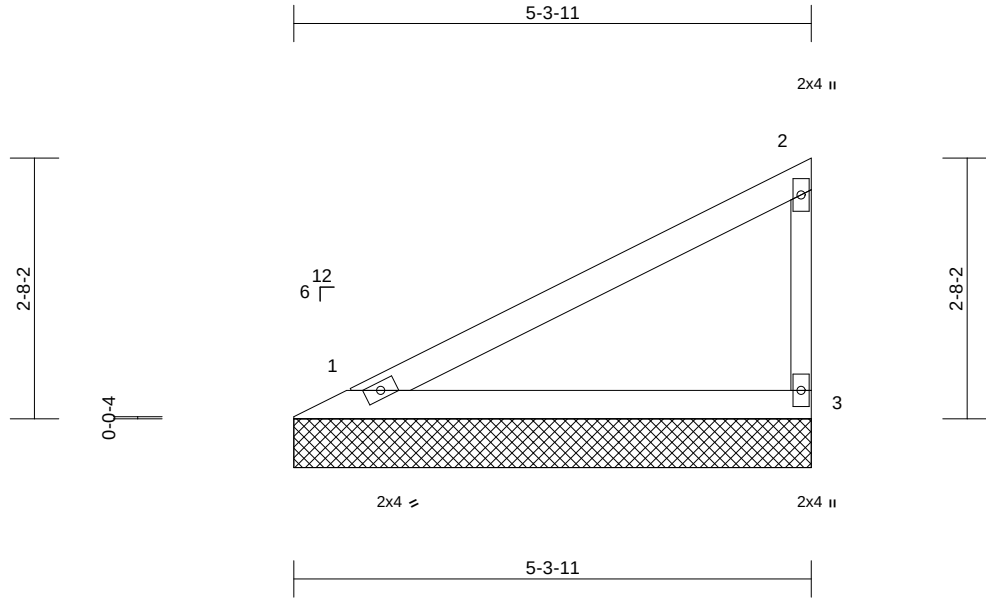
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V4	Valley	1	1	Job Reference (optional)	I63928372

Wheeler Lumber, Waverly, KS - 66871,

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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	0.41	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-4-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-3-11, 3=5-3-11

Max Horiz 1=96 (LC 5)
Max Uplift 1=-27 (LC 8), 3=-51 (LC 8)
Max Grav 1=208 (LC 1), 3=208 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-88/58, 2-3=-162/79
BOT CHORD 1-3=-33/25

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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) All bearings are assumed to be SPF No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 51 lb uplift at joint 3.



February 29, 2024

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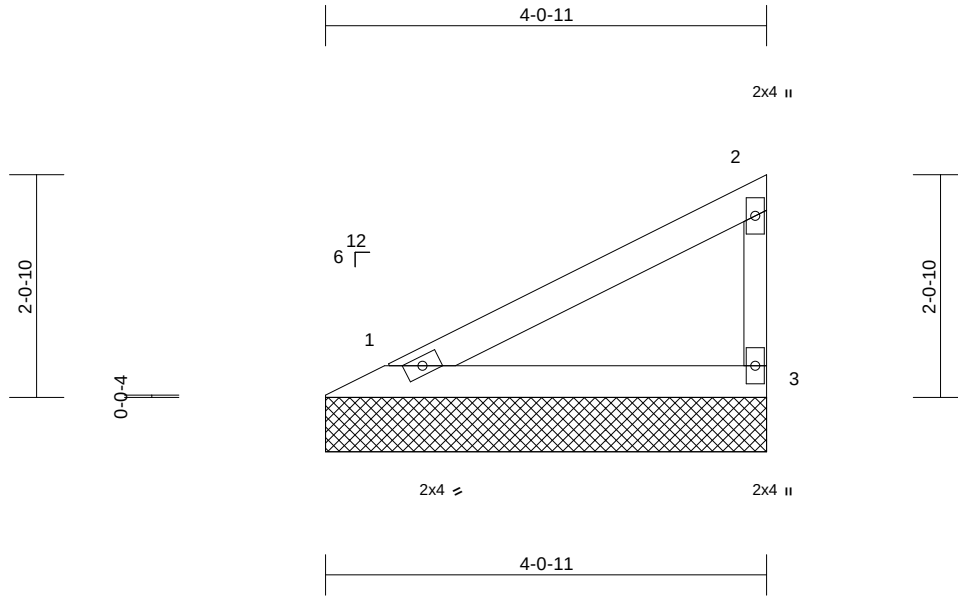
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928373
B240025	V5	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:30
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Page: 1



Scale = 1:21.2

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-0-11, 3=4-0-11

Max Horiz 1=70 (LC 5)
Max Uplift 1=-19 (LC 8), 3=-37 (LC 8)
Max Grav 1=151 (LC 1), 3=151 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-64/42, 2-3=-118/57
BOT CHORD 1-3=-24/18

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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.
- 7) All bearings are assumed to be SPF No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1 and 37 lb uplift at joint 3.



February 29, 2024

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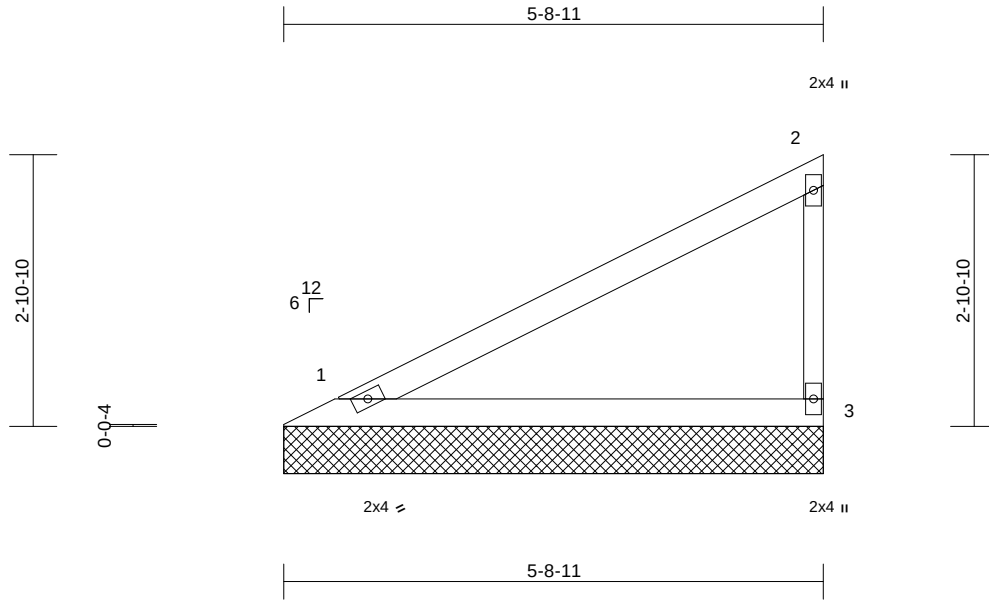
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928374
B240025	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:30
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Page: 1



Scale = 1:24.4

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	0.49	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-9-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-8-11, 3=5-8-11
Max Horiz 1=105 (LC 7)
Max Uplift 1=-29 (LC 8), 3=-55 (LC 8)
Max Grav 1=226 (LC 1), 3=226 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-96/63, 2-3=-176/86
BOT CHORD 1-3=-36/27

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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) All bearings are assumed to be SPF No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 1 and 55 lb uplift at joint 3.



February 29, 2024

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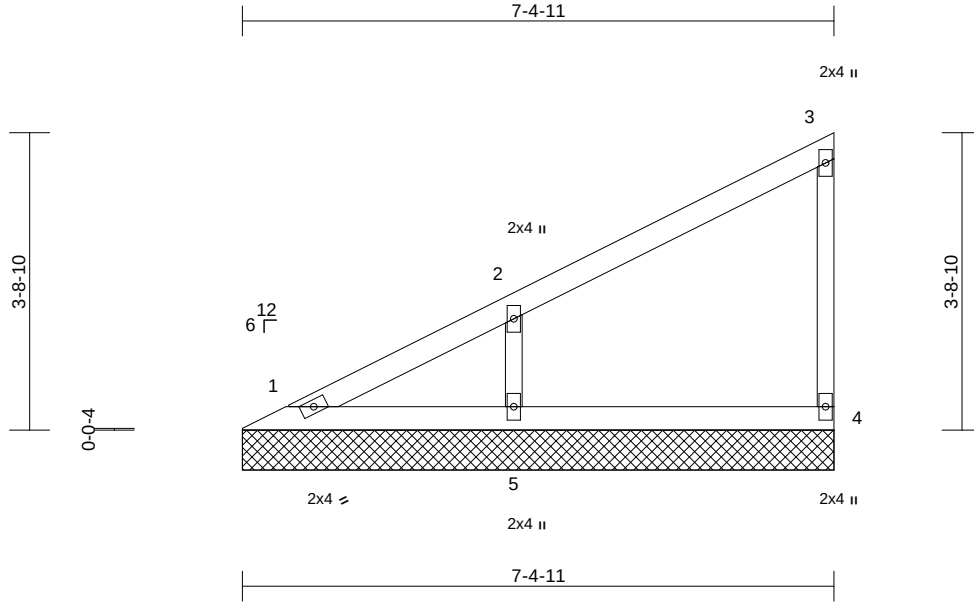
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job B240025	Truss V7	Truss Type Valley	Qty 1	Ply 1	Lot 142 HT Job Reference (optional)	I63928375
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:30
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Page: 1



Scale = 1:28.8

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	0.20	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	4	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P						Weight: 21 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=7-4-11, 4=7-4-11, 5=7-4-11
	Max Horiz	1=140 (LC 5)
	Max Uplift	4=-26 (LC 8), 5=-115 (LC 8)
	Max Grav	1=91 (LC 16), 4=141 (LC 1), 5=385 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-116/63, 2-3=-109/44, 3-4=-109/44
BOT CHORD	1-5=-48/36, 4-5=-48/36
WEBS	2-5=-299/167

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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) All bearings are assumed to be SPF No.2 .

- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 115 lb uplift at joint 5.
- 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



February 29, 2024

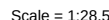
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

MiTek®

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

Wheeler Lumber, Waverly, KS - 66871, Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:30 Page: 1
ID:klW5i9AO8AClChXG2?opRzqayf-RfC?PsB70Ha3NSqPanL8w3ulTXbGKWrCdoi7J4zJC?f



LUMBER		8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 114 lb uplift at joint 5.
TOP CHORD	2x4 SPF No.2	
BOT CHORD	2x4 SPF No.2	
WEBS	2x3 SPF No.2	9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
OTHERS	2x3 SPF No.2	
BRACING		

REACTIONS	(size)	1=7-3-6, 4=7-3-6, 5=7-3-6
	Max Horiz	1=137 (LC 5)
	Max Uplift	4=-26 (LC 8), 5=-114 (LC 8)
	Max Grav	1=84 (LC 16), 4=141 (LC 1), 5=379 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-114/61, 2-3=-108/44, 3-4=-110/45
BOT CHORD	1-5=-47/35, 4-5=-47/35
WEBS	2-5=-295/164

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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 gird 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" 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'-0"-0" tall by 2'-0"-0" wide will fit between the bottom
chord and any other members.
- 7) All bearings are assumed to be SPF No.2 .



WARNING - verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-1473 Rev. 1/2/2023 BEFORE USE.

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BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbscomponents.com)

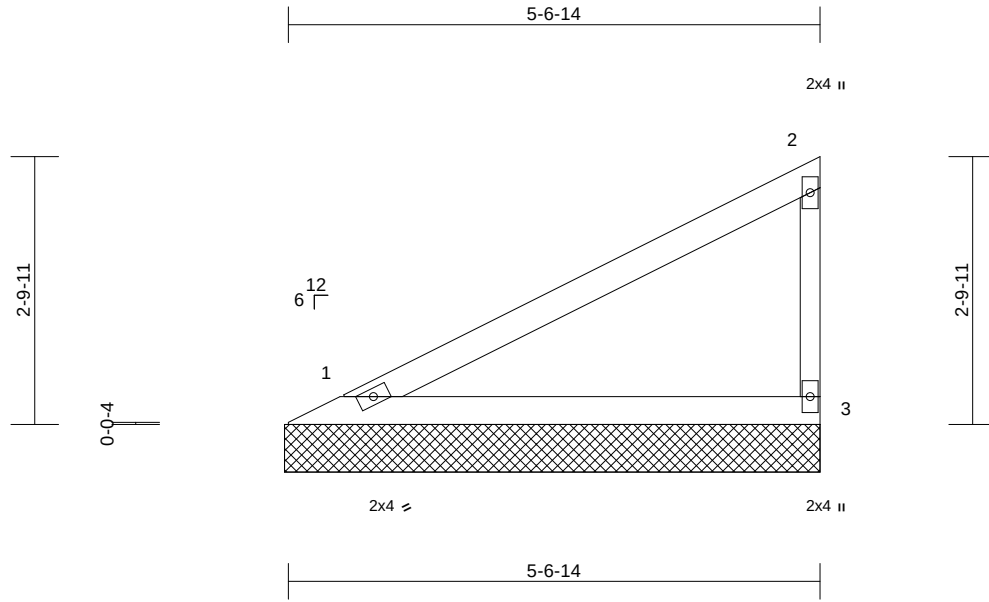
MiTek[®]
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V9	Valley	2	1	Job Reference (optional)	I63928377

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:31
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Page: 1



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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	0.46	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-7-6, 3=5-7-6

Max Horiz 1=102 (LC 7)
Max Uplift 1=-28 (LC 8), 3=-54 (LC 8)
Max Grav 1=220 (LC 1), 3=220 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-93/61, 2-3=-171/83
BOT CHORD 1-3=-35/26

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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) All bearings are assumed to be SPF No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1 and 54 lb uplift at joint 3.



February 29, 2024

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

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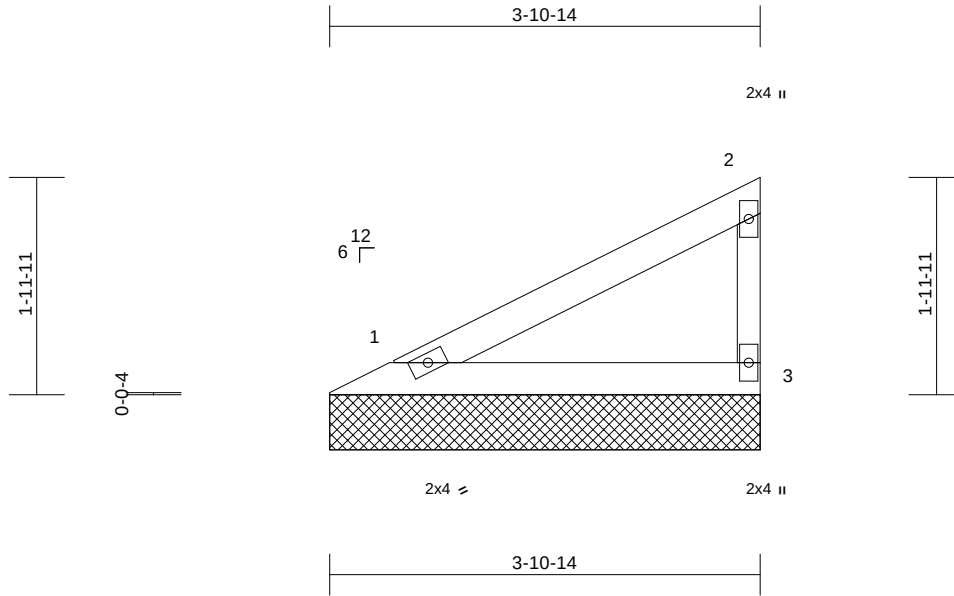
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	I63928378
B240025	V10	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-11-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-10-14, 3=3-10-14

Max Horiz 1=67 (LC 5)
Max Uplift 1=-19 (LC 8), 3=-35 (LC 8)
Max Grav 1=145 (LC 1), 3=145 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-61/40, 2-3=-112/55
BOT CHORD 1-3=-23/17

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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.
- 7) All bearings are assumed to be SPF No.2.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1 and 35 lb uplift at joint 3.



February 29, 2024

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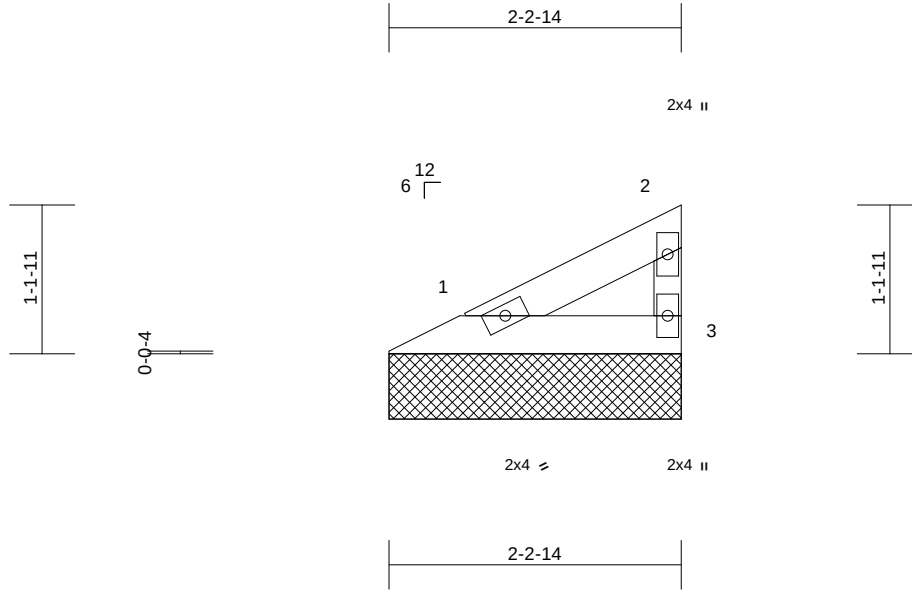
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V11	Valley	2	1	Job Reference (optional)	I63928379

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:31
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Scale = 1:17.7

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb FT = 10%

LUMBER

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

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-3-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-2-14, 3=2-2-14

Max Horiz 1=32 (LC 5)
Max Uplift 1=-9 (LC 8), 3=-17 (LC 8)
Max Grav 1=70 (LC 1), 3=70 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-30/19, 2-3=-54/26
BOT CHORD 1-3=-11/8

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) 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.
- 7) All bearings are assumed to be SPF No.2 .
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 1 and 17 lb uplift at joint 3.



February 29, 2024

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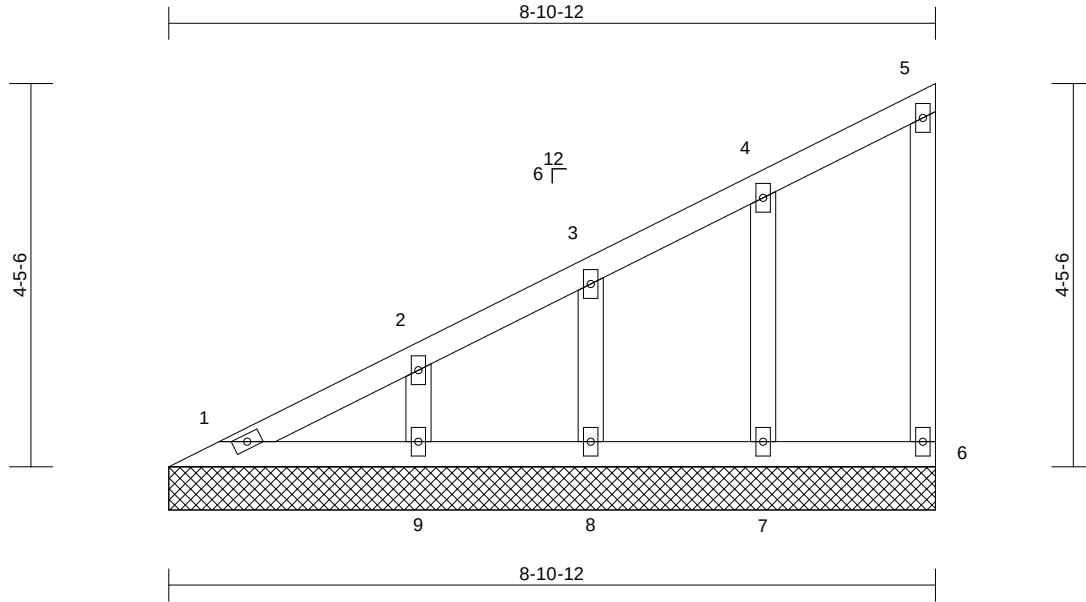
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V12	Valley	1	1	Job Reference (optional)	I63928380

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.73 S Feb 6 2024 Print: 8.730 S Feb 6 2024 MiTek Industries, Inc. Wed Feb 28 15:40:31
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Scale = 1:26.7

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	0.11	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 32 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size)	1=8-10-12, 6=8-10-12, 7=8-10-12, 8=8-10-12, 9=8-10-12
Max Horiz	1=169 (LC 5)
Max Uplift	6=-22 (LC 5), 7=-58 (LC 8), 8=-50 (LC 8), 9=-67 (LC 8)
Max Grav	1=101 (LC 16), 6=65 (LC 1), 7=196 (LC 1), 8=165 (LC 1), 9=223 (LC 1)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-142/51, 2-3=-110/39, 3-4=-95/43, 4-5=-81/47, 5-6=-51/31
BOT CHORD	1-9=-58/44, 8-9=-58/44, 7-8=-58/44, 6-7=-58/44
WEBS	4-7=-152/85, 3-8=-129/72, 2-9=-173/96

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) All plates are 2x4 MT20 unless otherwise indicated.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 7) * 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.
- 8) All bearings are assumed to be SPF No.2 .
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 6, 58 lb uplift at joint 7, 50 lb uplift at joint 8 and 67 lb uplift at joint 9.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 29, 2024

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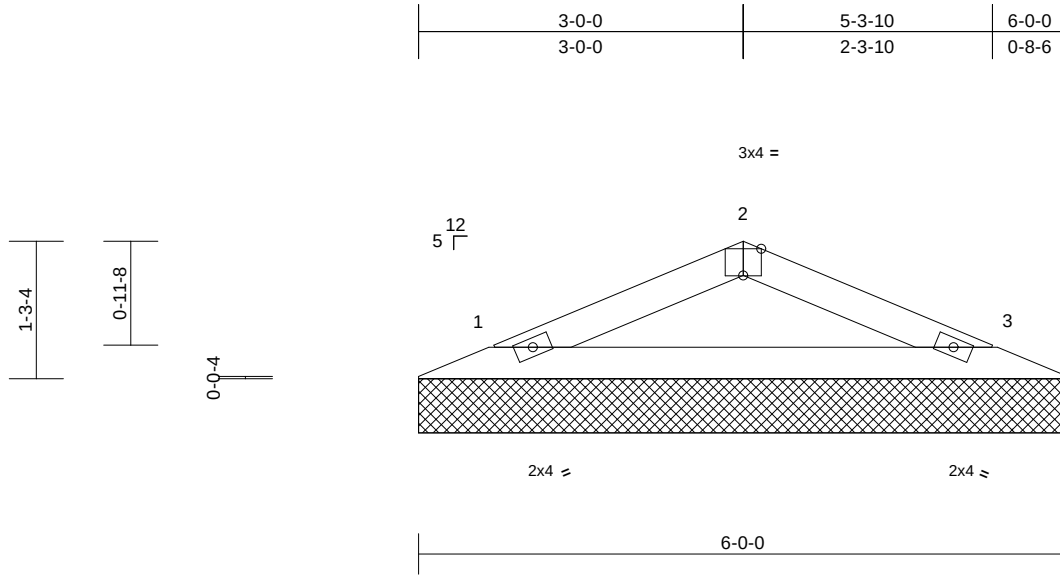
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 142 HT	
B240025	V13	Valley	1	1	Job Reference (optional)	I63928381

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:21.3

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	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	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb FT = 10%

LUMBER

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

BRACING

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

REACTIONS (size)

1=6-0-0, 3=6-0-0
Max Horiz 1=-17 (LC 13)
Max Uplift 1=-27 (LC 8), 3=-27 (LC 9)
Max Grav 1=207 (LC 1), 3=207 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-232/68, 2-3=-232/68
BOT CHORD 1-3=-48/191

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; 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
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * 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.
- 8) All bearings are assumed to be SPF No.2 .

- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 27 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



February 29, 2024

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

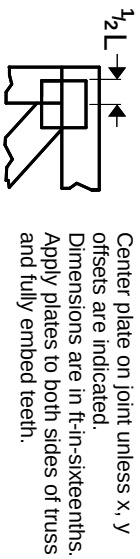
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

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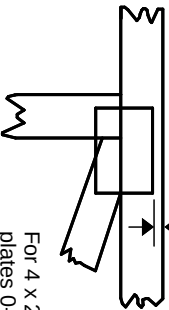
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Symbols

PLATE LOCATION AND ORIENTATION



0- $\frac{1}{16}$ "



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.

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

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

PLATE SIZE

4 X 4

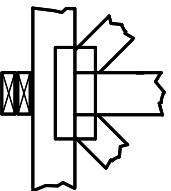
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING



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

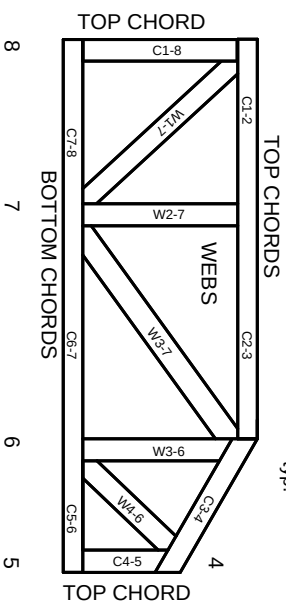
Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)

1 2 3 Joint ID typ.



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.