RE: H4125
Lot 125 H4

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

Site Information:

Customer: Project Name: H4125
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I49051397	B1	12/2/2021
2	I49051398	C1	12/2/2021
3	I49051399	C2	12/2/2021
4	I49051400	C3	12/2/2021
5	I49051401	C4	12/2/2021
6	I49051402	C5	12/2/2021
7	I49051403	D1	12/2/2021
8	I49051404	D2	12/2/2021
9	I49051405	D3	12/2/2021
10	I49051406	D4	12/2/2021
11	I49051407	E1	12/2/2021
12	I49051408	E2	12/2/2021
13	I49051409	J4	12/2/2021
14	I49051410	J5	12/2/2021
15	I49051411	V1	12/2/2021
16	I49051412	V2	12/2/2021
17	I49051413	V3	12/2/2021
18	I49051414	V4	12/2/2021

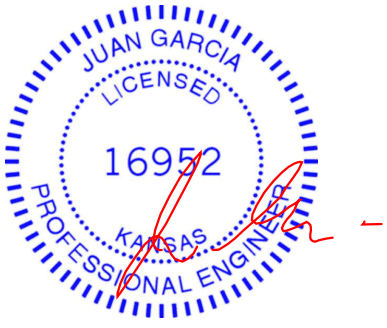
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

Kansas COA: E-943

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.



December 02, 2021

Garcia, Juan

RE: H4125
Lot 125 H4

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

Site Information:

Customer: Project Name: H4125
Lot/Block: Model:
Address: Subdivision:
City: State:

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 18 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I49051397	B1	12/2/2021
2	I49051398	C1	12/2/2021
3	I49051399	C2	12/2/2021
4	I49051400	C3	12/2/2021
5	I49051401	C4	12/2/2021
6	I49051402	C5	12/2/2021
7	I49051403	D1	12/2/2021
8	I49051404	D2	12/2/2021
9	I49051405	D3	12/2/2021
10	I49051406	D4	12/2/2021
11	I49051407	E1	12/2/2021
12	I49051408	E2	12/2/2021
13	I49051409	J4	12/2/2021
14	I49051410	J5	12/2/2021
15	I49051411	V1	12/2/2021
16	I49051412	V2	12/2/2021
17	I49051413	V3	12/2/2021
18	I49051414	V4	12/2/2021

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: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

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.

December 02, 2021

Garcia, Juan

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	B1	Monopitch	7	1	Job Reference (optional) I49051397

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:21 Page: 1
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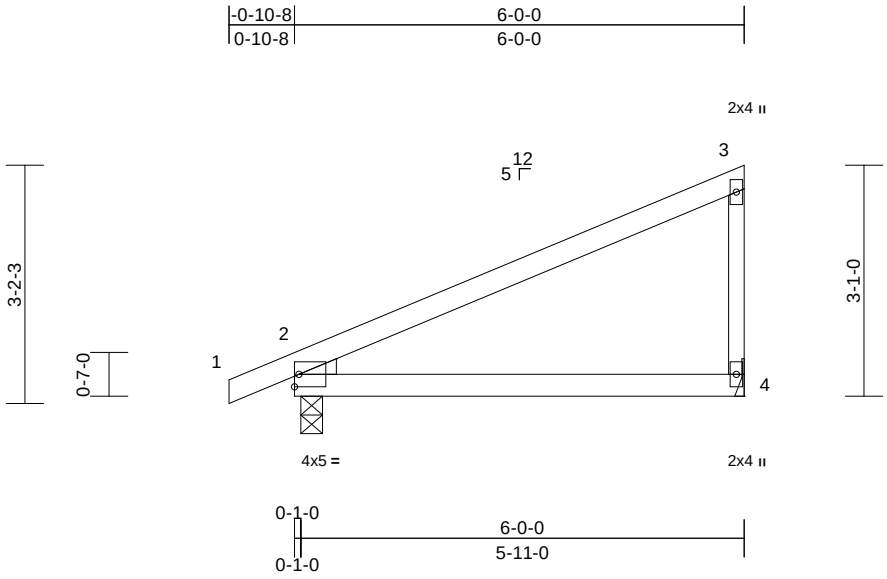


Scale = 1:30.7

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	0.61	Vert(LL)	-0.07	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2-4	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	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
WEBS 2x3 SPF No.2
WEDGE Left: 2x3 SPF No.2

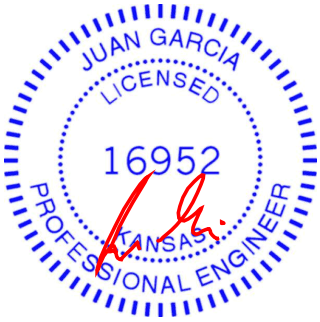
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=337/0-3-8, 4=252/ Mechanical
Max Horiz 2=121 (LC 5)
Max Uplift 2=-60 (LC 8), 4=-60 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-108/66, 3-4=-195/94
BOT CHORD 2-4=-39/29

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) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 4 and 60 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	C1	Common Supported Gable	1	1	Job Reference (optional) I49051398

Wheeler Lumber, Waverly, KS - 66871,

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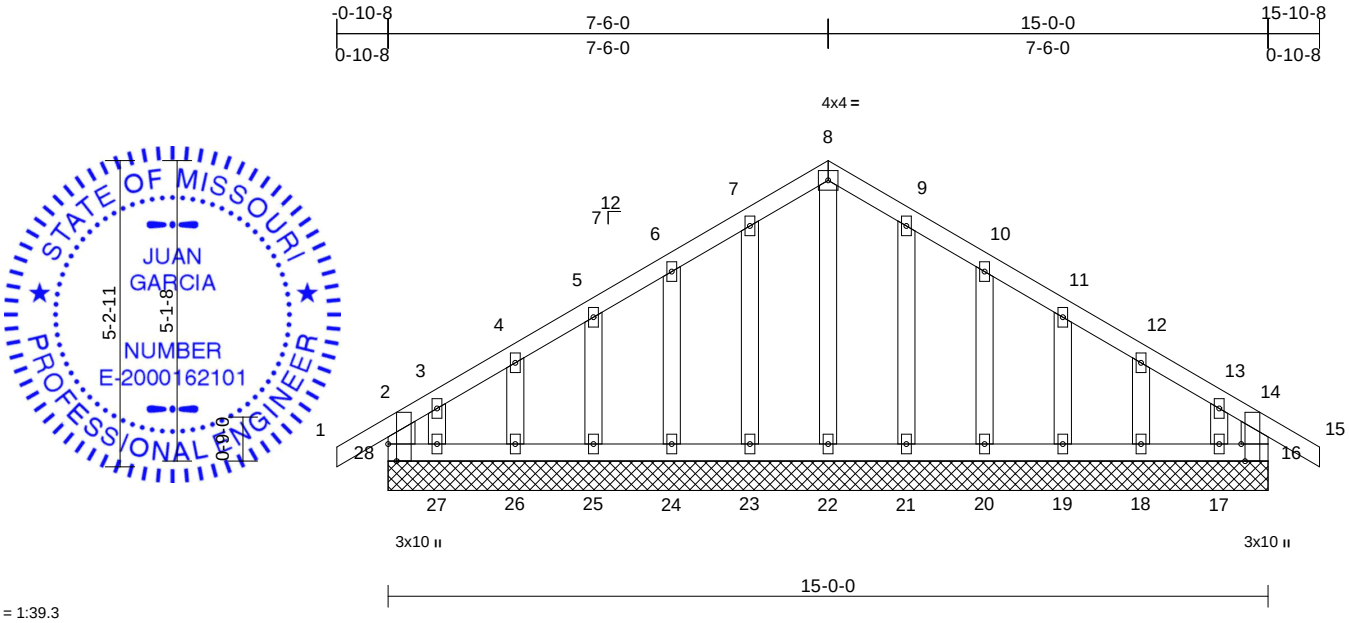

Scale = 1:39.3

Plate Offsets (X, Y): [16:0-3-8,Edge], [28:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 72 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 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 6-0-0 oc bracing.

REACTIONS (lb/size) 16=152/15-0-0, 17=27/15-0-0, 18=128/15-0-0, 19=118/15-0-0, 20=119/15-0-0, 21=125/15-0-0, 22=121/15-0-0, 23=125/15-0-0, 24=119/15-0-0, 25=118/15-0-0, 26=128/15-0-0, 27=27/15-0-0, 28=152/15-0-0
Max Horiz 28=149 (LC 7)
Max Uplift 16=-46 (LC 5), 17=-81 (LC 9), 18=-39 (LC 9), 19=-41 (LC 9), 20=-44 (LC 9), 21=-34 (LC 9), 23=-36 (LC 8), 24=-44 (LC 8), 25=-41 (LC 8), 26=-37 (LC 8), 27=-105 (LC 5), 28=-100 (LC 4)
Max Grav 16=158 (LC 22), 17=89 (LC 7), 18=129 (LC 22), 19=122 (LC 16), 20=123 (LC 16), 21=127 (LC 16), 22=136 (LC 18), 23=130 (LC 15), 24=122 (LC 15), 25=123 (LC 15), 26=129 (LC 21), 27=130 (LC 6), 28=192 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-28=-146/68, 1-2=0/39, 2-3=-114/103, 3-4=-77/83, 4-5=-69/72, 5-6=-59/82, 6-7=-49/104, 7-8=-37/121, 8-9=-30/115, 9-10=-18/85, 10-11=-21/64, 11-12=-29/48, 12-13=-39/53, 13-14=-75/52, 14-15=0/39, 14-16=-133/31
BOT CHORD 27-28=-62/75, 26-27=-62/75, 25-26=-62/75, 24-25=-62/75, 23-24=-62/75, 22-23=-62/75, 21-22=-62/75, 20-21=-62/75, 19-20=-62/75, 18-19=-62/75, 17-18=-62/75, 16-17=-62/75
WEBS 8-22=-109/0, 7-23=-103/52, 6-24=-95/60, 5-25=-96/56, 4-26=-100/58, 3-27=-70/74, 9-21=-101/50, 10-20=-96/61, 11-19=-96/56, 12-18=-101/58, 13-17=-53/65

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 28, 46 lb uplift at joint 16, 36 lb uplift at joint 23, 44 lb uplift at joint 24, 41 lb uplift at joint 25, 37 lb uplift at joint 26, 105 lb uplift at joint 27, 34 lb uplift at joint 21, 44 lb uplift at joint 20, 41 lb uplift at joint 19, 39 lb uplift at joint 18 and 81 lb uplift at joint 17.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	C2	GABLE	1	1	Job Reference (optional) I49051399

Wheeler Lumber, Waverly, KS - 66871,

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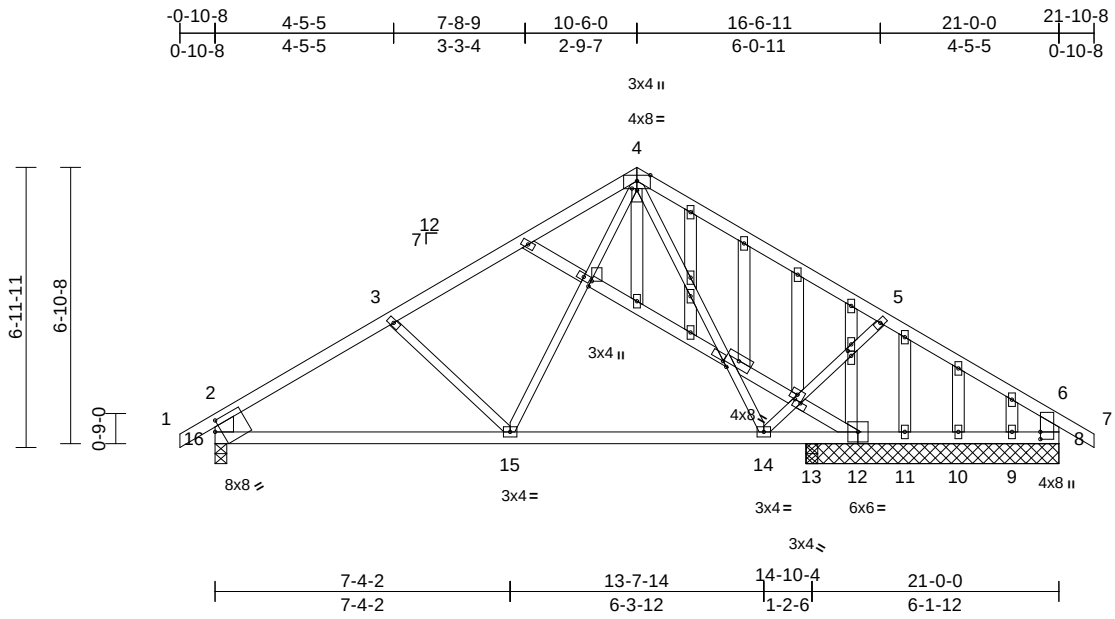

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Plate Offsets (X, Y): [4:0-0-8,0-1-8], [8:0-2-3,Edge], [16:0-1-11,0-2-15], [18:0-1-9,0-1-1], [19:0-1-11,0-1-0], [20:0-2-0,0-0-4], [28:0-1-7,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.12	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.21	14-15	>817	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	14-15	>999	240	Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 16-2,8-6:2x6 SPF No.2, 17-18,18-19,19-20,20-12:2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 8=948/6-3-8, 9=-364/6-3-8, 10=220/6-3-8, 11=-276/6-3-8, 13=607/0-3-8, 16=868/0-3-8
Max Horiz 16=-195 (LC 6)
Max Uplift 8=-176 (LC 9), 9=-364 (LC 1), 10=-13 (LC 9), 11=-276 (LC 1), 13=-83 (LC 9), 16=-125 (LC 8)
Max Grav 8=948 (LC 1), 9=58 (LC 9), 10=220 (LC 1), 11=69 (LC 9), 13=607 (LC 1), 16=868 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-1095/179, 3-4=-884/160, 4-5=-643/147, 5-6=-869/169, 6-7=0/39, 2-16=-786/161, 6-8=-631/147
BOT CHORD 15-16=-183/893, 14-15=-2/517, 13-14=-81/684, 11-13=-81/684, 10-11=-81/684, 9-10=-81/684, 8-9=-81/684
WEBS 4-14=-151/72, 5-14=-339/225, 4-15=-66/392, 3-15=-289/213

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 125 lb uplift at joint 16, 176 lb uplift at joint 8, 276 lb uplift at joint 11, 13 lb uplift at joint 10, 364 lb uplift at joint 9 and 83 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4	I49051400
H4125	C3	Roof Special	5	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Thu Dec 02 14:09:15 Page: 1
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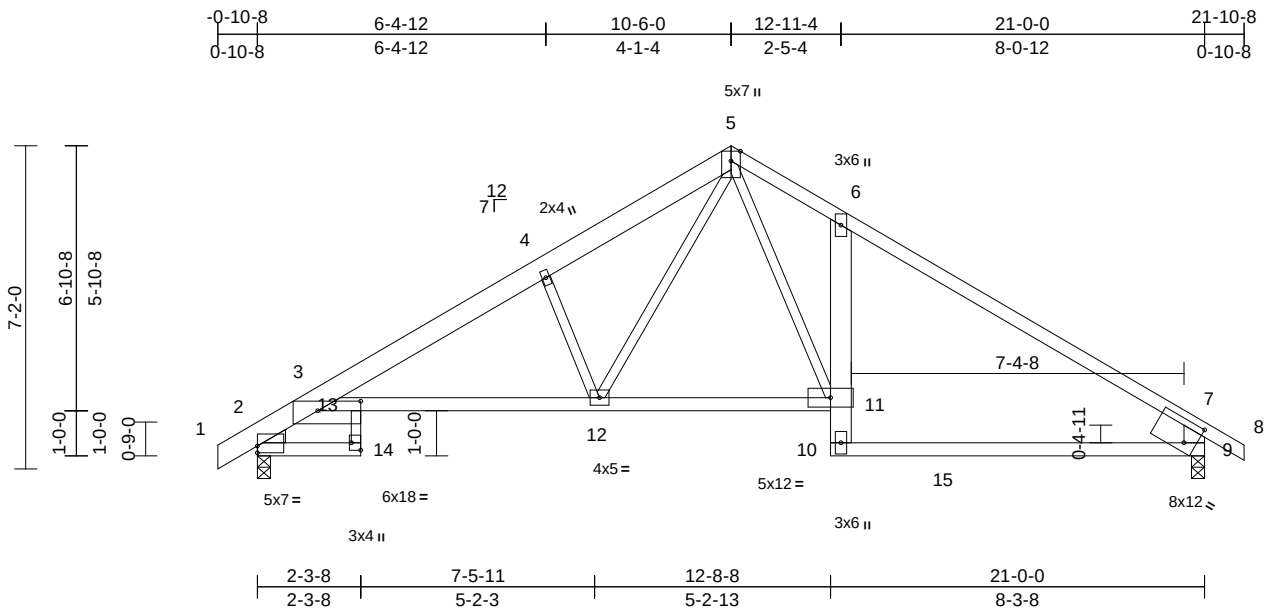


Scale = 1:51.1

Plate Offsets (X, Y): [2:Edge,0-1-13], [9:0-3-1,0-5-11], [13:0-11-7,0-2-9], [14:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.20	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.36	12-13	>694	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.24	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	12-13	>999	240	Weight: 90 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 5-8:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 14-13:2x3 SPF No.2, 6-10:2x6 SP DSS
WEBS 2x3 SPF No.2 *Except* 9-7:2x6 SP DSS
WEDGE Left: 2x4 SPF No.2

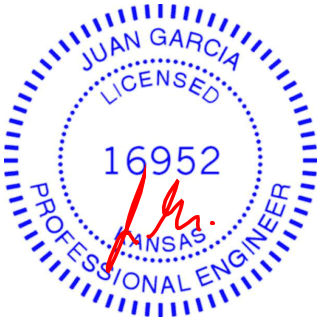
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=999/0-3-8, 9=1006/0-3-8
Max Horiz 2=186 (LC 7)
Max Uplift 2=-134 (LC 8), 9=-135 (LC 9)
Max Grav 2=1086 (LC 15), 9=1092 (LC 16)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-846/138, 3-4=-1772/210, 4-5=-1715/270, 5-6=-1442/263, 6-7=-1294/156, 7-9=-953/193
BOT CHORD 3-13=-134/1472, 12-13=-189/1680, 11-12=-15/990, 6-11=-477/247, 10-15=-32/1023, 9-15=-32/1023
WEBS 4-12=-585/234, 5-12=-182/991, 5-11=-198/761

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 2 and 135 lb uplift at joint 9.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	C4	Common	2	1	Job Reference (optional) I49051401

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:24 Page: 1
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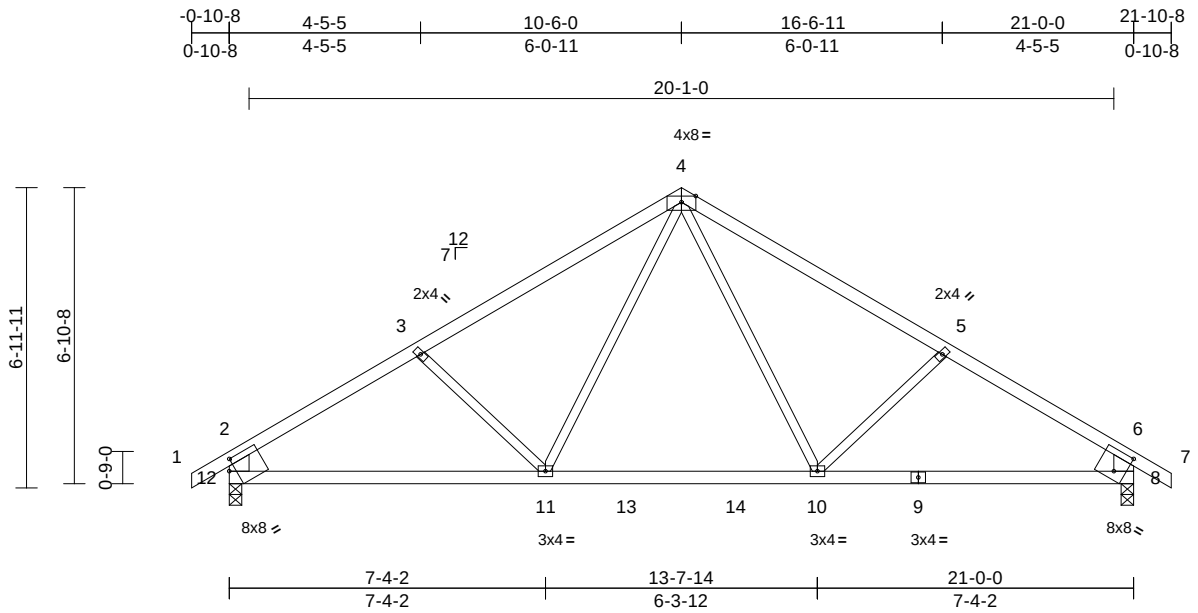

Scale = 1:53.5

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

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)	-0.16	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.24	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	10-11	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x6 SP DSS

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

REACTIONS (lb/size) 8=1002/0-3-8, 12=1002/0-3-8
Max Horiz 12=-195 (LC 6)
Max Uplift 8=-135 (LC 9), 12=-135 (LC 8)
Max Grav 8=1083 (LC 16), 12=1083 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-1386/195, 3-4=-1202/177, 4-5=-1203/178, 5-6=-1386/196, 6-7=0/39, 2-12=-944/171, 6-8=-944/171
BOT CHORD 11-12=-196/1225, 10-11=-17/850, 8-10=-98/1079
WEBS 4-10=-66/458, 5-10=-268/211, 4-11=-66/458, 3-11=-268/211

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 12 and 135 lb uplift at joint 8.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	C5	COMMON GIRDER	1	3	Job Reference (optional) I49051402

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:25 Page: 1
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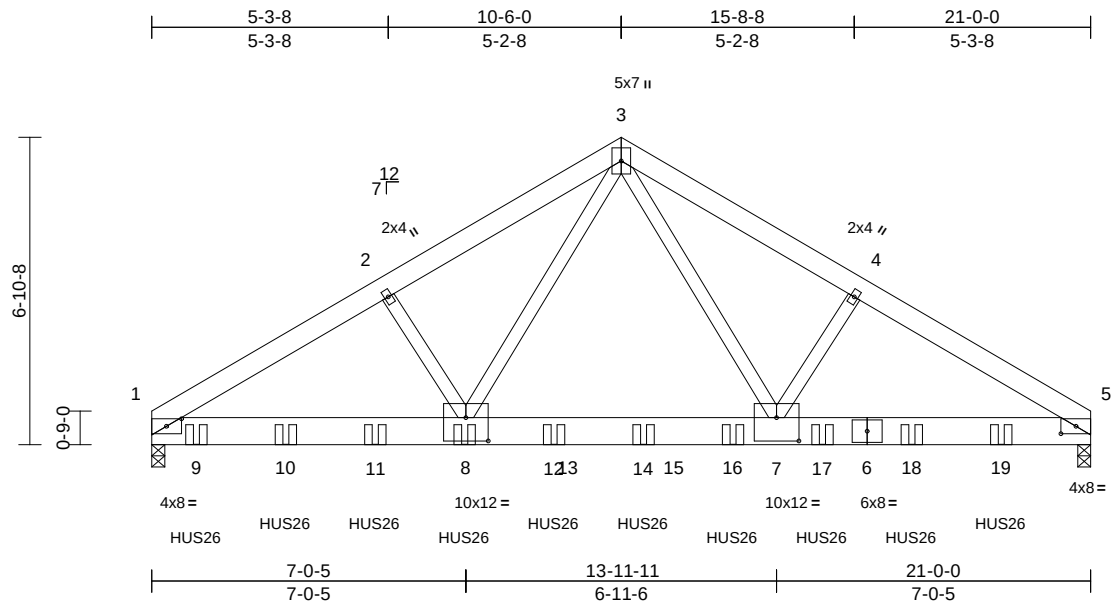

Scale = 1:51.5

Plate Offsets (X, Y): [1:0-4-1,0-2-0], [5:0-4-1,0-2-0], [7:0-6-0,0-6-4], [8:0-6-0,0-6-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.08	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.14	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	7-8	>999	240	Weight: 396 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SP DSS
WEBS 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 (lb/size) 1=6807/0-3-8, (req. 0-4-0), 5=6267/0-3-8, (req. 0-3-10)
Max Horiz 1=-132 (LC 6)
Max Uplift 1=-780 (LC 8), 5=-710 (LC 9)
Max Grav 1=7592 (LC 13), 5=6987 (LC 14)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-10209/1062, 2-3=-10054/1096, 3-4=-10019/1092, 4-5=-10174/1058
BOT CHORD 1-8=-909/8671, 7-8=-564/5998, 5-7=-839/8540
WEBS 3-7=-612/5537, 4-7=-104/305, 3-8=-618/5599, 2-8=-103/302

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) WARNING: Required bearing size at joint(s) 1, 5 greater than input bearing size.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 780 lb uplift at joint 1 and 710 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.
10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-0-0 from the left end to 19-0-0 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 8=-1121 (B), 9=-1122 (B), 10=-1121 (B), 11=-1121 (B), 12=-1121 (B), 14=-1121 (B), 16=-1121 (B), 17=-1121 (B), 18=-1121 (B), 19=-1121 (B)

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	D1	Common Supported Gable	1	1	Job Reference (optional) I49051403

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:26 Page: 1
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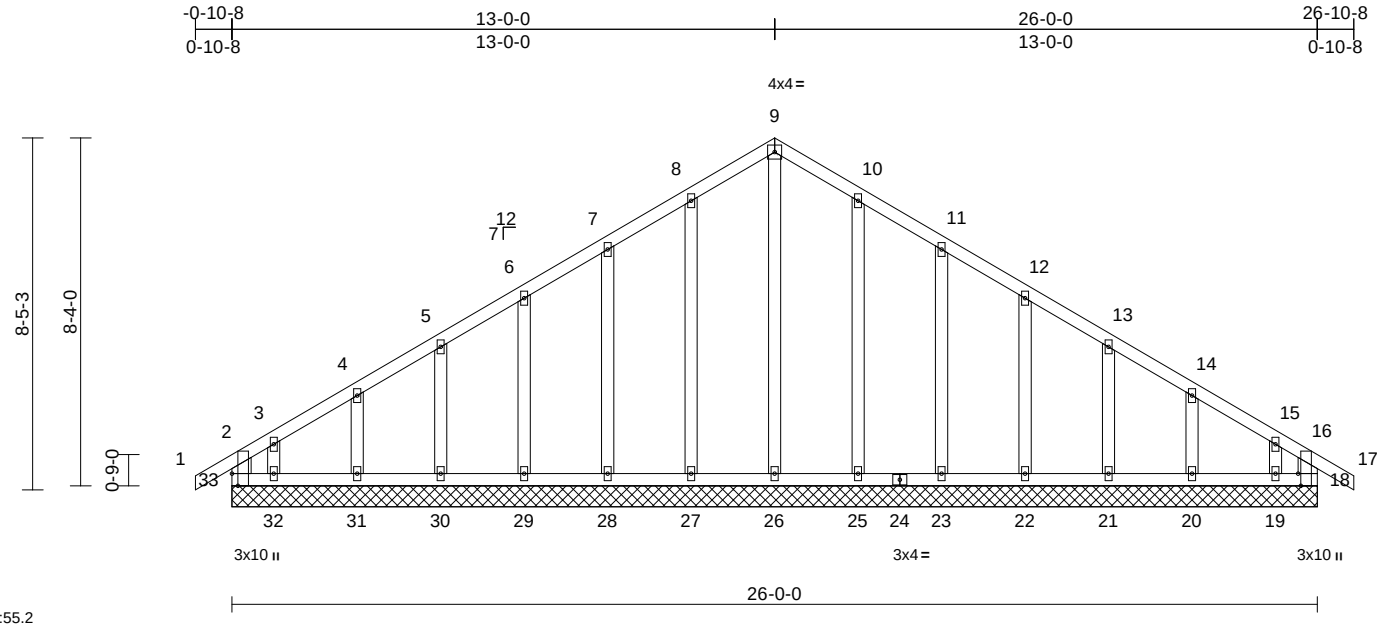

Scale = 1:55.2

Plate Offsets (X, Y): [18:0-3-8,Edge], [33:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.01	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 128 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x6 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 6-0-0 oc bracing.

REACTIONS (lb/size) 18=144/26-0-0, 19=84/26-0-0, 20=190/26-0-0, 21=178/26-0-0, 22=181/26-0-0, 23=178/26-0-0, 25=188/26-0-0, 26=168/26-0-0, 27=188/26-0-0, 28=178/26-0-0, 29=181/26-0-0, 30=178/26-0-0, 31=190/26-0-0, 32=84/26-0-0, 33=144/26-0-0
Max Horiz 33=233 (LC 7)
Max Uplift 18=-65 (LC 5), 19=-135 (LC 9), 20=-58 (LC 9), 21=-62 (LC 9), 22=-60 (LC 9), 23=-64 (LC 9), 25=-58 (LC 9), 27=-60 (LC 8), 28=-64 (LC 8), 29=-60 (LC 8), 30=-63 (LC 8), 31=-56 (LC 8), 32=-164 (LC 8), 33=-149 (LC 4)
Max Grav 18=165 (LC 15), 19=145 (LC 16), 20=191 (LC 16), 21=183 (LC 16), 22=185 (LC 16), 23=183 (LC 16), 25=192 (LC 16), 26=211 (LC 18), 27=195 (LC 15), 28=182 (LC 15), 29=185 (LC 15), 30=184 (LC 15), 31=190 (LC 21), 32=196 (LC 6), 33=231 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-33=-179/109, 1-2=0/39, 2-3=-203/181, 3-4=-147/143, 4-5=-127/124, 5-6=-112/118, 6-7=-96/147, 7-8=-81/179, 8-9=-71/208, 9-10=-60/198, 10-11=-41/144, 11-12=-39/109, 12-13=-51/78, 13-14=-63/60, 14-15=-89/78, 15-16=-151/95, 16-17=0/39, 16-18=-131/48

BOT CHORD 32-33=-90/129, 31-32=-90/129, 30-31=-90/129, 29-30=-90/129, 28-29=-90/129, 27-28=-90/129, 26-27=-90/129, 25-26=-90/129, 23-25=-90/129, 22-23=-90/129, 21-22=-90/129, 20-21=-90/129, 19-20=-90/129, 18-19=-90/129

WEBS 9-26=-171/5, 8-27=-155/84, 7-28=-142/88, 6-29=-145/85, 5-30=-143/86, 4-31=-149/85, 3-32=-130/128, 10-25=-152/82, 11-23=-143/88, 12-22=-145/85, 13-21=-143/85, 14-20=-150/86, 15-19=-107/113

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 149 lb uplift at joint 33, 65 lb uplift at joint 18, 60 lb uplift at joint 27, 64 lb uplift at joint 28, 60 lb uplift at joint 29, 63 lb uplift at joint 30, 56 lb uplift at joint 31, 164 lb uplift at joint 32, 58 lb uplift at joint 25, 64 lb uplift at joint 23, 60 lb uplift at joint 22, 62 lb uplift at joint 21, 58 lb uplift at joint 20 and 135 lb uplift at joint 19.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4	I49051404
H4125	D2	Common	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:26 Page: 1
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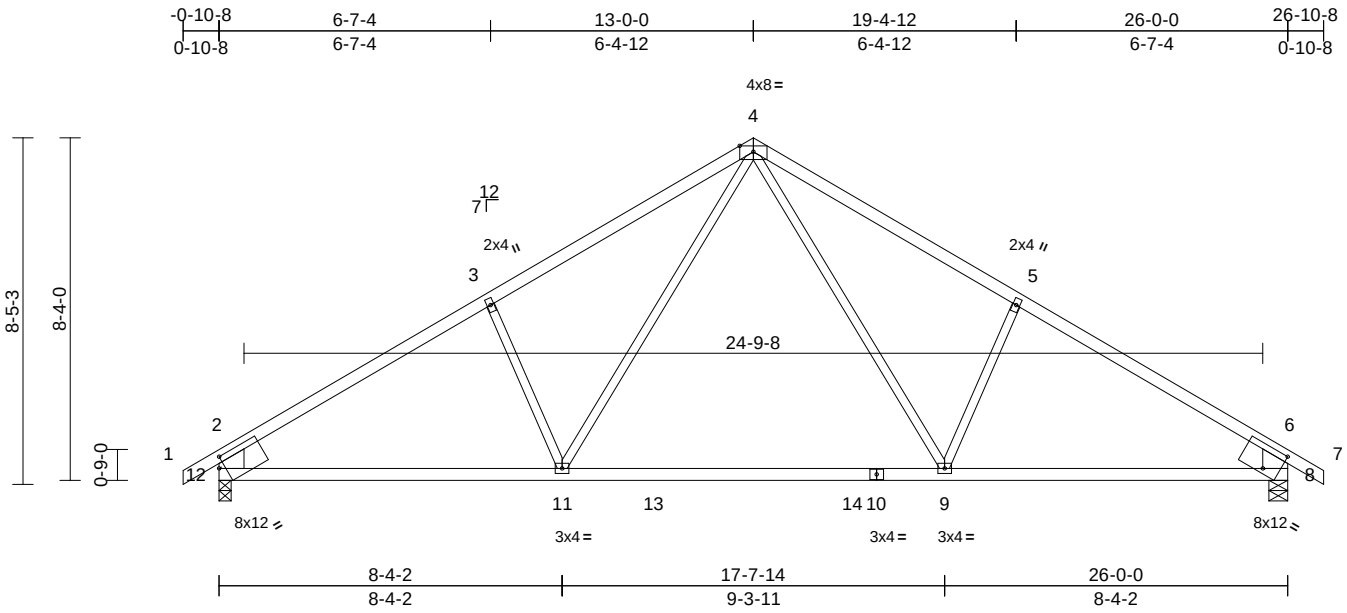

Scale = 1:56.1

Plate Offsets (X, Y): [8:0-4-9,0-6-10], [12:0-1-11,0-2-15]

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)	-0.41	9-11	>735	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.66	9-11	>461	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	9-11	>999	240	Weight: 91 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x8 SP DSS

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

REACTIONS (lb/size) 8=1225/0-5-8, 12=1225/0-3-8
Max Horiz 12=-235 (LC 6)
Max Uplift 8=-163 (LC 9), 12=-163 (LC 8)
Max Grav 8=1340 (LC 16), 12=1340 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/42, 2-3=-1771/209, 3-4=-1631/282, 4-5=-1631/282, 5-6=-1772/210, 6-7=0/42, 2-12=-1201/205, 6-8=-1201/205
BOT CHORD 11-12=-201/1552, 9-11=-24/1060, 8-9=-80/1389
WEBS 4-9=-150/735, 5-9=-341/260, 4-11=-150/734, 3-11=-341/260

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 12 and 163 lb uplift at joint 8.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4	I49051405
H4125	D3	Common	10	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:26 Page: 1
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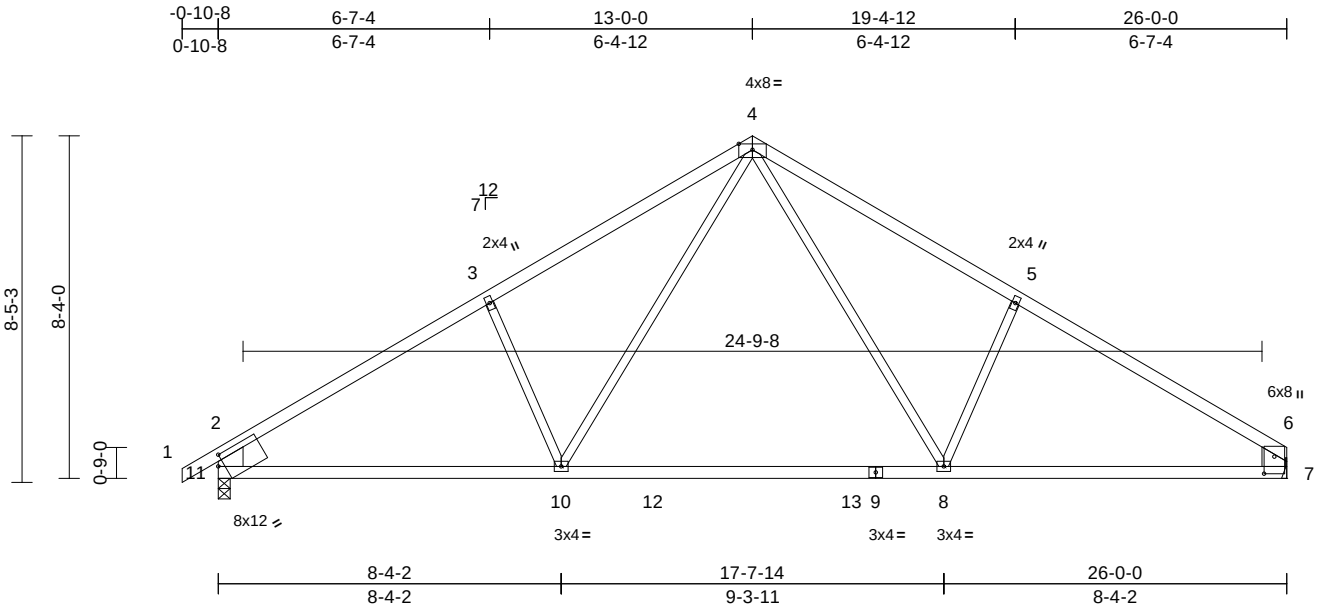

Scale = 1:56.1

Plate Offsets (X, Y): [6:0-5-0,0-3-0], [11:0-1-11,0-2-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.47	8-10	>647	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.75	8-10	>404	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	8-10	>999	240	Weight: 90 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x8 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=1141/ Mechanical, 11=1227/0-3-8
Max Horiz 11=229 (LC 5)
Max Uplift 7=-135 (LC 9), 11=-163 (LC 8)
Max Grav 7=1262 (LC 16), 11=1341 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/42, 2-3=-1776/210, 3-4=-1636/282, 4-5=-1641/282, 5-6=-1775/209, 2-11=-1204/206, 6-7=-1096/174
BOT CHORD 10-11=-214/1548, 8-10=-36/1050, 7-8=-105/1403
WEBS 4-8=-150/743, 5-8=-377/265, 4-10=-153/744, 3-10=-343/261

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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 11 and 135 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	D4	Common Supported Gable	1	1	Job Reference (optional) I49051406

Wheeler Lumber, Waverly, KS - 66871,

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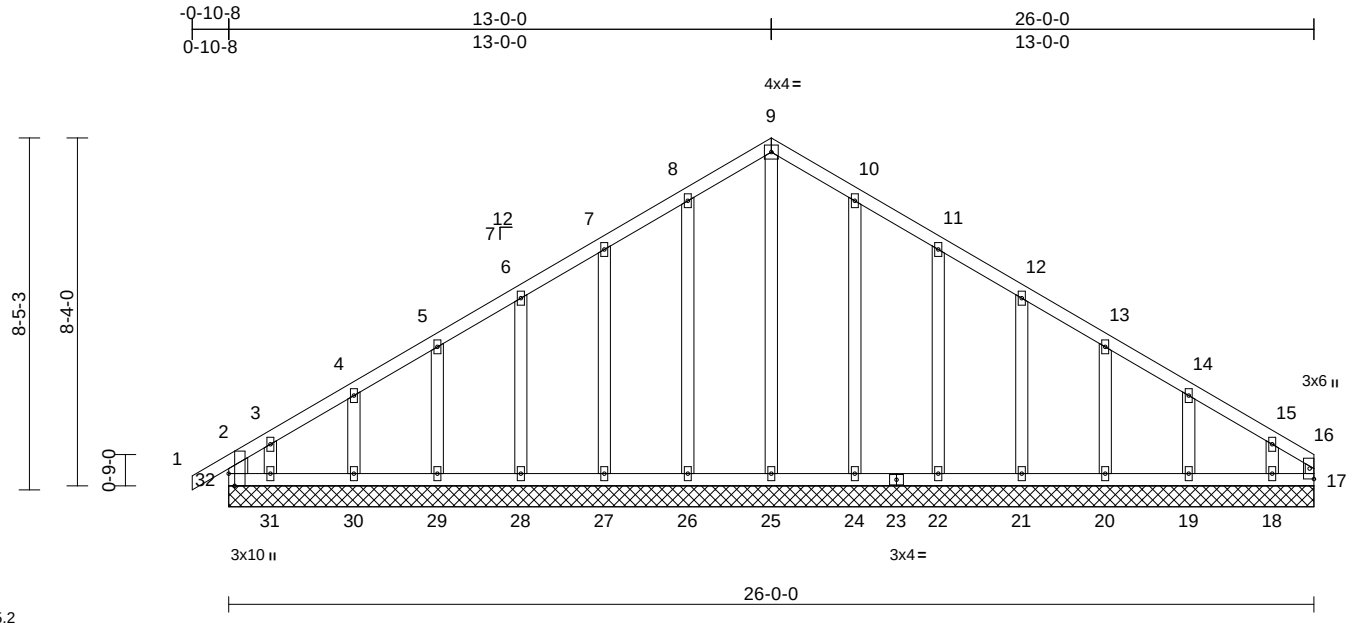

Scale = 1:55.2

Plate Offsets (X, Y): [32:0-3-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.19	Horz(CT)	0.00	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 126 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 16-17:2x3 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 (lb/size) 17=21/26-0-0, 18=147/26-0-0, 19=186/26-0-0, 20=178/26-0-0, 21=181/26-0-0, 22=178/26-0-0, 24=188/26-0-0, 25=161/26-0-0, 26=188/26-0-0, 27=178/26-0-0, 28=181/26-0-0, 29=177/26-0-0, 30=190/26-0-0, 31=79/26-0-0, 32=153/26-0-0
Max Horiz 32=226 (LC 5)
Max Uplift 17=-70 (LC 7), 18=-124 (LC 9), 19=-57 (LC 9), 20=-63 (LC 9), 21=-60 (LC 9), 22=-65 (LC 9), 24=-58 (LC 9), 26=-60 (LC 8), 27=-64 (LC 8), 28=-60 (LC 8), 29=-63 (LC 8), 30=-56 (LC 8), 31=-164 (LC 8), 32=-158 (LC 4)
Max Grav 17=126 (LC 9), 18=188 (LC 16), 19=188 (LC 16), 20=184 (LC 16), 21=185 (LC 16), 22=184 (LC 16), 24=192 (LC 16), 25=211 (LC 18), 26=195 (LC 15), 27=182 (LC 15), 28=185 (LC 15), 29=184 (LC 15), 30=190 (LC 1), 31=199 (LC 6), 32=245 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-32=-189/115, 1-2=0/39, 2-3=-213/185, 3-4=-154/147, 4-5=-137/130, 5-6=-121/126, 6-7=-105/156, 7-8=-93/188, 8-9=-82/216, 9-10=-71/207, 10-11=-53/153, 11-12=-42/109, 12-13=-52/78, 13-14=-64/49, 14-15=-81/66, 15-16=-139/87, 16-17=-88/49
BOT CHORD 31-32=-76/102, 30-31=-76/102, 29-30=-76/102, 28-29=-76/102, 27-28=-76/102, 26-27=-76/102, 25-26=-76/102, 24-25=-76/102, 22-24=-76/102, 21-22=-76/102, 20-21=-76/102, 19-20=-76/102, 18-19=-76/102, 17-18=-76/102
WEBS 9-25=-171/14, 8-26=-155/84, 7-27=-142/88, 6-28=-145/85, 5-29=-143/86, 4-30=-149/85, 3-31=-129/129, 10-24=-152/82, 11-22=-144/88, 12-21=-145/85, 13-20=-144/85, 14-19=-148/86, 15-18=-136/105

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 32, 70 lb uplift at joint 17, 60 lb uplift at joint 26, 64 lb uplift at joint 27, 60 lb uplift at joint 28, 63 lb uplift at joint 29, 56 lb uplift at joint 30, 164 lb uplift at joint 31, 58 lb uplift at joint 24, 65 lb uplift at joint 22, 60 lb uplift at joint 21, 63 lb uplift at joint 20, 57 lb uplift at joint 19 and 124 lb uplift at joint 18.
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

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	E1	Common Supported Gable	1	1	Job Reference (optional) I49051407

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:27 Page: 1
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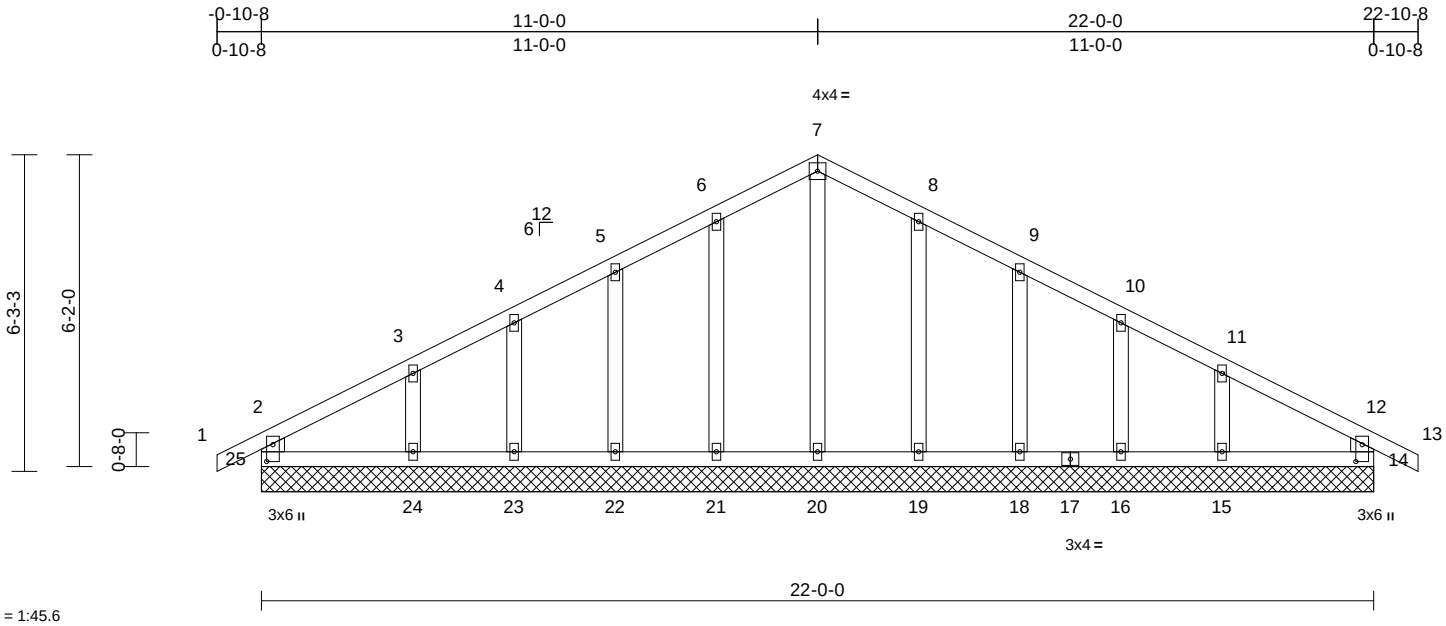

Scale = 1:45.6

Plate Offsets (X, Y): [14:0-4-0,0-1-8], [25:0-4-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 92 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 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 (lb/size) 14=213/22-0-0, 15=225/22-0-0, 16=166/22-0-0, 18=182/22-0-0, 19=187/22-0-0, 20=149/22-0-0, 21=187/22-0-0, 22=182/22-0-0, 23=166/22-0-0, 24=225/22-0-0, 25=213/22-0-0
Max Horiz 25=-94 (LC 6)
Max Uplift 14=-21 (LC 8), 15=-89 (LC 9), 16=-42 (LC 9), 18=-58 (LC 9), 19=-54 (LC 9), 21=-54 (LC 8), 22=-58 (LC 8), 23=-40 (LC 8), 24=-95 (LC 8), 25=-36 (LC 9)
Max Grav 14=213 (LC 1), 15=226 (LC 22), 16=166 (LC 1), 18=182 (LC 1), 19=189 (LC 22), 20=168 (LC 18), 21=189 (LC 21), 22=182 (LC 1), 23=166 (LC 1), 24=226 (LC 21), 25=213 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-25=-188/50, 1-2=0/35, 2-3=-103/66, 3-4=-69/93, 4-5=-57/118, 5-6=-52/145, 6-7=-55/169, 7-8=-55/161, 8-9=-52/123, 9-10=-52/96, 10-11=-56/71, 11-12=-85/42, 12-13=0/35, 12-14=-188/41
BOT CHORD 24-25=-17/73, 23-24=-17/73, 22-23=-17/73, 21-22=-17/73, 20-21=-17/73, 19-20=-17/73, 18-19=-17/73, 16-18=-17/73, 15-16=-17/73, 14-15=-17/73
WEBS 7-20=-128/0, 6-21=-150/78, 5-22=-141/82, 4-23=-131/66, 3-24=-171/114, 8-19=-150/78, 9-18=-141/82, 10-16=-131/67, 11-15=-171/110

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 25, 21 lb uplift at joint 14, 54 lb uplift at joint 21, 58 lb uplift at joint 22, 40 lb uplift at joint 23, 95 lb uplift at joint 24, 54 lb uplift at joint 19, 58 lb uplift at joint 18, 42 lb uplift at joint 16 and 89 lb uplift at joint 15.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	E2	Common	5	1	Job Reference (optional) I49051408

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:28 Page: 1
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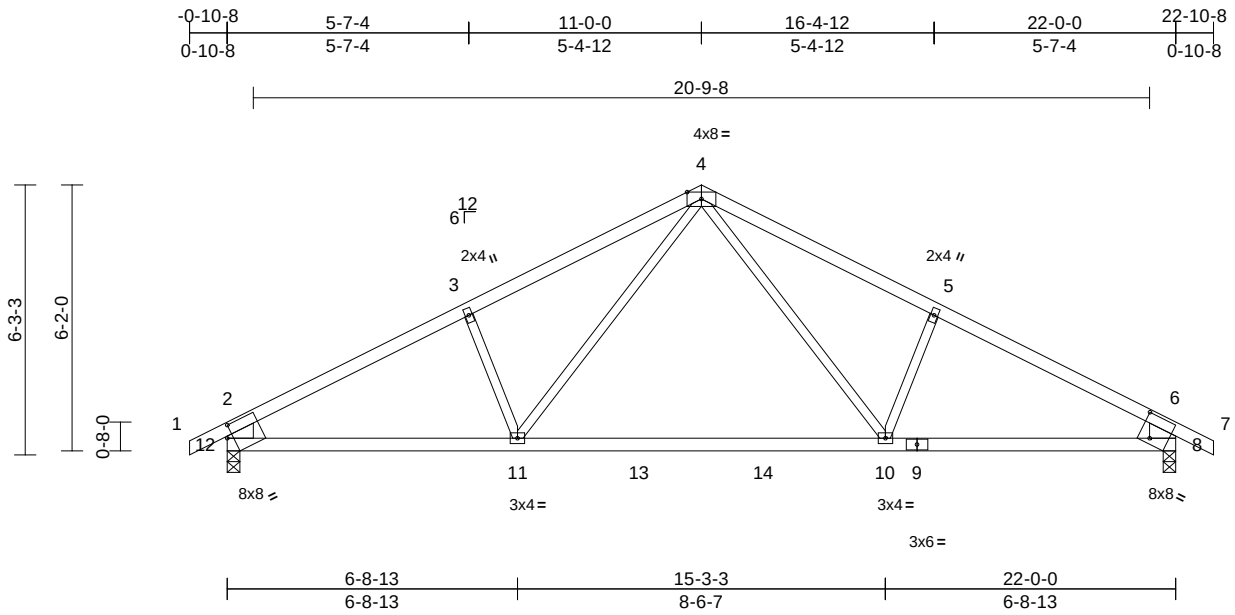

Scale = 1:53.4

Plate Offsets (X, Y): [8:0-3-2,0-6-8], [12:0-1-10,0-3-4]

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	0.89	Vert(LL)	-0.31	10-11	>833	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.53	10-11	>489	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	10-11	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x8 SP DSS

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

REACTIONS (lb/size) 8=1045/0-3-8, 12=1045/0-3-8
Max Horiz 12=-96 (LC 6)
Max Uplift 8=-146 (LC 9), 12=-146 (LC 8)
Max Grav 8=1079 (LC 2), 12=1079 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-1564/188, 3-4=-1433/238, 4-5=-1433/238, 5-6=-1564/188, 6-7=0/37, 2-12=-963/177, 6-8=-963/177
BOT CHORD 11-12=-178/1311, 10-11=-39/917, 8-10=-91/1301
WEBS 4-10=-114/580, 5-10=-283/203, 4-11=-113/580, 3-11=-283/203

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 12 and 146 lb uplift at joint 8.
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

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	J4	Jack-Closed Supported Gable	2	1	Job Reference (optional) I49051409

Wheeler Lumber, Waverly, KS - 66871,

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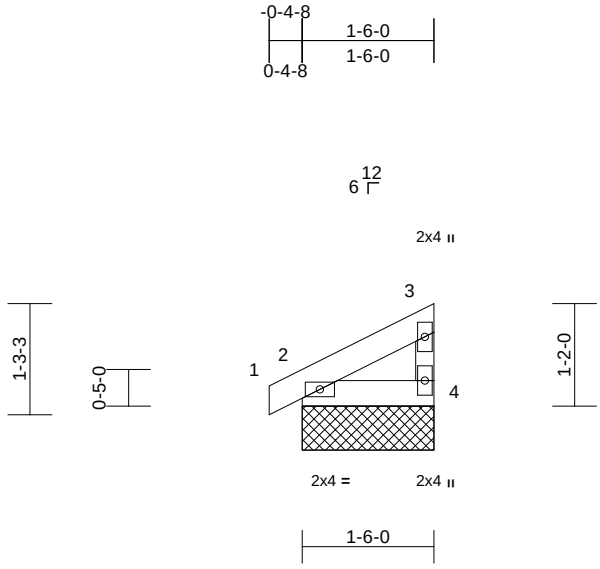

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=93/1-6-0, 4=59/1-6-0
Max Horiz 2=35 (LC 5)
Max Uplift 2=-17 (LC 8), 4=-15 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-3=-36/18, 3-4=-45/24
BOT CHORD 2-4=-11/9

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 4 and 17 lb uplift at joint 2.
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

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
12/10/2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	J5	Jack-Closed	2	1	Job Reference (optional) I49051410

Wheeler Lumber, Waverly, KS - 66871,

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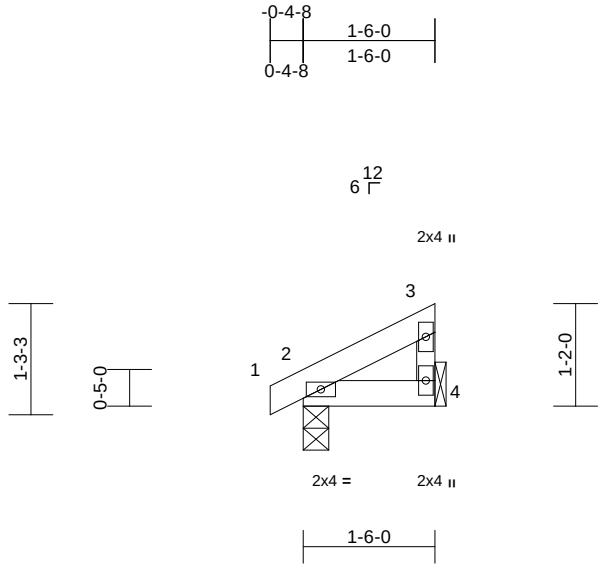

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	0.00	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=94/0-3-8, 4=57/ Mechanical
Max Horiz 2=35 (LC 5)
Max Uplift 2=-17 (LC 8), 4=-15 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-3=-36/18, 3-4=-44/23
BOT CHORD 2-4=-11/9

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) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 4 and 17 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	V1	Valley	1	1	Job Reference (optional) I49051411

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:29 Page: 1
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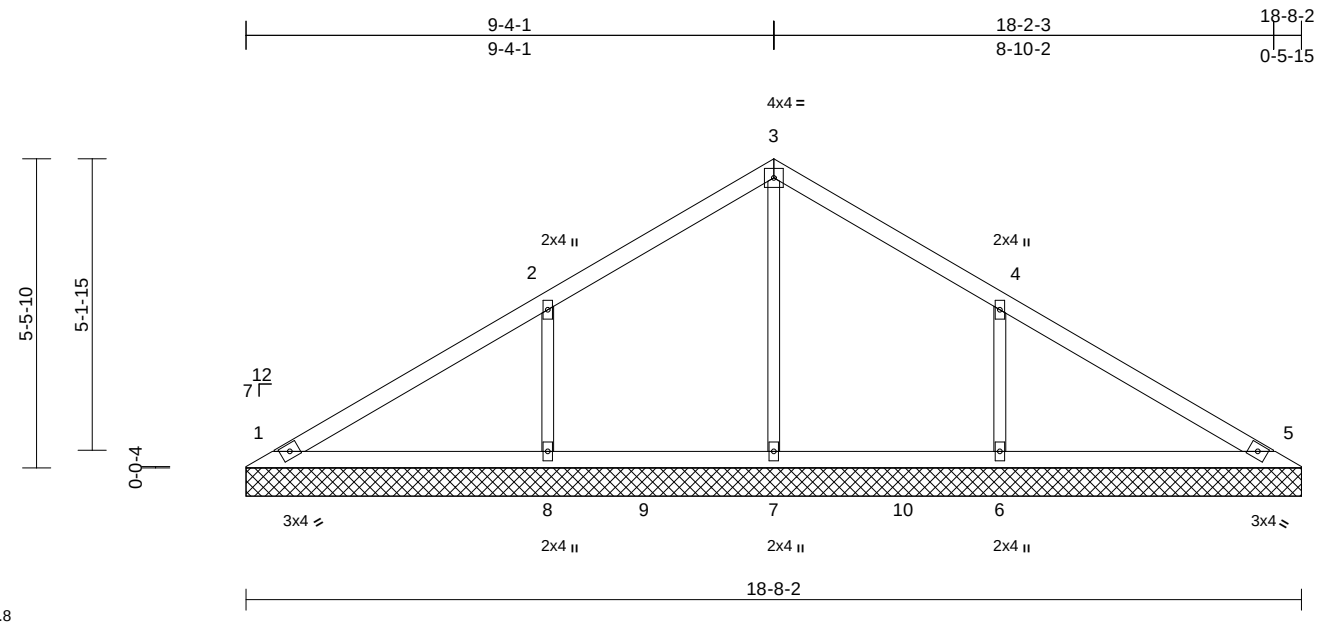

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 53 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 (lb/size) 1=193/18-8-2, 5=193/18-8-2, 6=483/18-8-2, 7=237/18-8-2, 8=483/18-8-2
Max Horiz 1=-135 (LC 4)
Max Uplift 1=-16 (LC 9), 5=-8 (LC 9), 6=-169 (LC 9), 8=-169 (LC 8)
Max Grav 1=210 (LC 16), 5=201 (LC 16), 6=583 (LC 16), 7=331 (LC 15), 8=583 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-139/114, 2-3=-135/127, 3-4=-125/110, 4-5=-111/77
BOT CHORD 1-8=-39/86, 7-8=-39/86, 6-7=-39/86, 5-6=-39/86
WEBS 3-7=-179/0, 2-8=-383/221, 4-6=-383/220

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 4-0-0 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 8 lb uplift at joint 5, 169 lb uplift at joint 8 and 169 lb uplift at joint 6.
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

December 2,2021

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	V2	Valley	1	1	Job Reference (optional) I49051412

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:29 Page: 1
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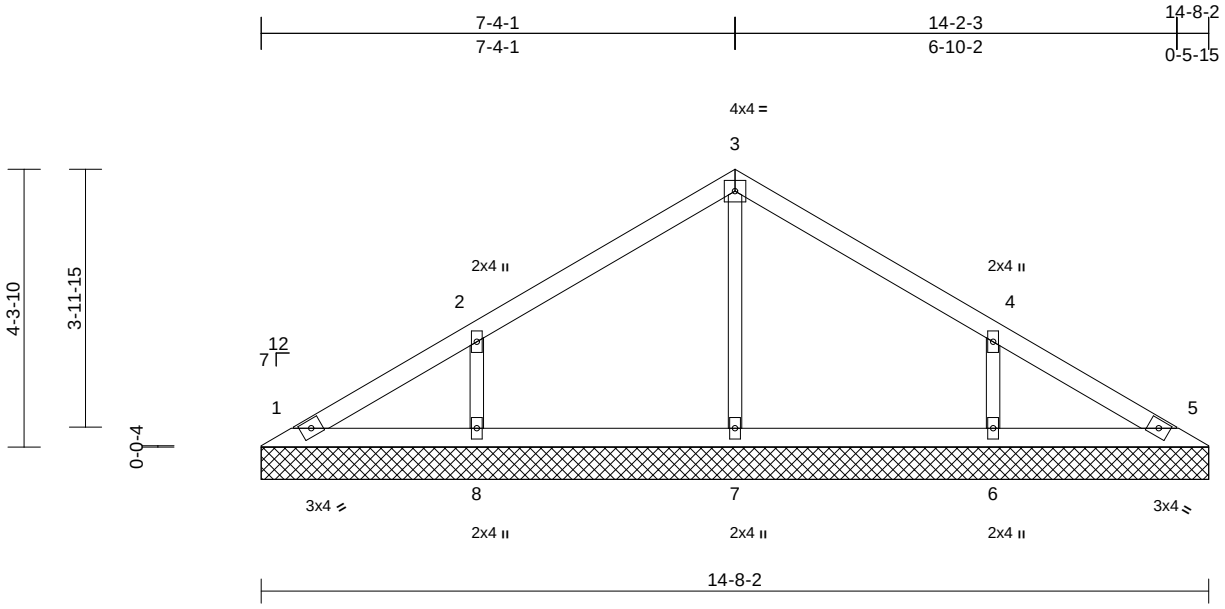

Scale = 1:35.7

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	0.17	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	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 40 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 (lb/size) 1=110/14-8-2, 5=110/14-8-2, 6=359/14-8-2, 7=293/14-8-2, 8=359/14-8-2
Max Horiz 1=-104 (LC 4)
Max Uplift 1=-13 (LC 9), 6=-131 (LC 9), 8=-131 (LC 8)
Max Grav 1=113 (LC 16), 5=110 (LC 1), 6=372 (LC 16), 7=293 (LC 1), 8=372 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-112/78, 2-3=-130/99, 3-4=-124/80, 4-5=-83/40
BOT CHORD 1-8=-25/66, 7-8=-25/66, 6-7=-25/66, 5-6=-25/66
WEBS 3-7=-211/22, 2-8=-294/173, 4-6=-294/173

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 4-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 131 lb uplift at joint 8 and 131 lb uplift at joint 6.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4
H4125	V3	Valley	1	1	Job Reference (optional) I49051413

Wheeler Lumber, Waverly, KS - 66871,

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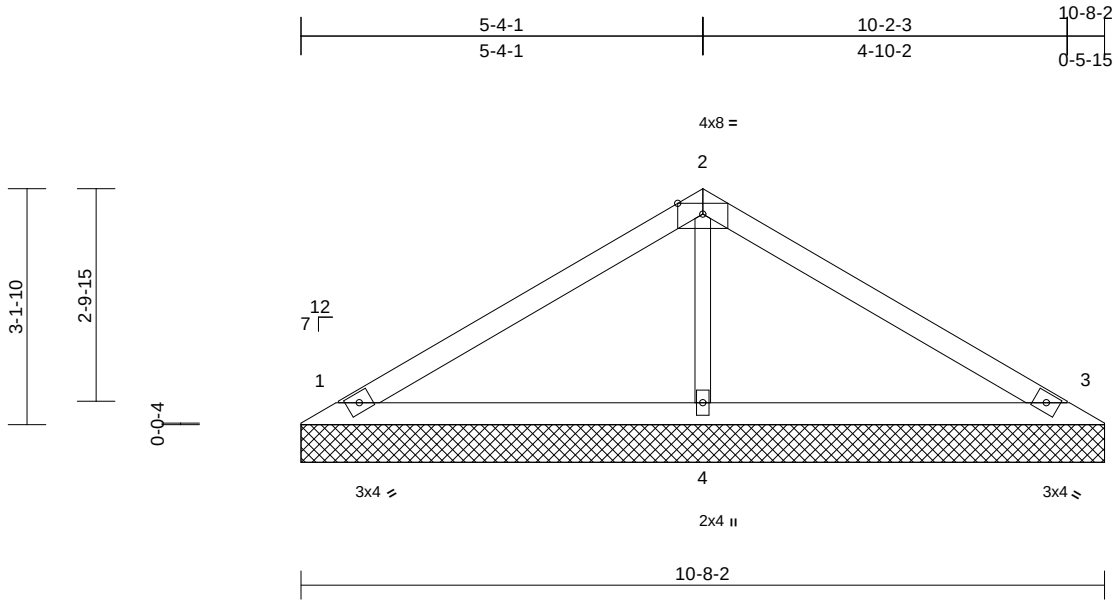

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 27 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 (lb/size) 1=214/10-8-2, 3=214/10-8-2, 4=443/10-8-2
Max Horiz 1=-74 (LC 4)
Max Uplift 1=-42 (LC 8), 3=-52 (LC 9), 4=-21 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-147/71, 2-3=-147/53
BOT CHORD 1-4=-13/67, 3-4=-13/67
WEBS 2-4=-296/76

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 4-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 1, 52 lb uplift at joint 3 and 21 lb uplift at joint 4.
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

December 2,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 125 H4	I49051414
H4125	V4	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Dec 01 16:53:30 Page: 1
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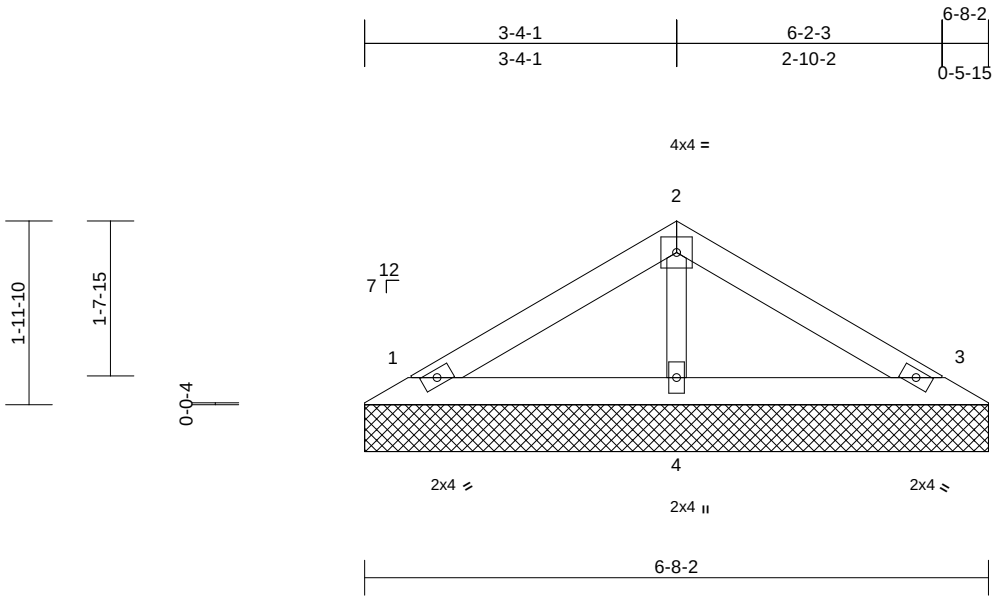

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 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 (lb/size) 1=138/6-8-2, 3=138/6-8-2, 4=234/6-8-2
Max Horiz 1=-43 (LC 4)
Max Uplift 1=-31 (LC 8), 3=-37 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-78/41, 2-3=-75/30
BOT CHORD 1-4=-8/36, 3-4=-8/36
WEBS 2-4=-163/42

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 4-0-0 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 1 and 37 lb uplift at joint 3.
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.

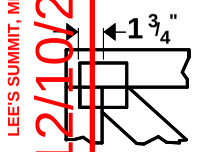
LOAD CASE(S) Standard

December 2,2021

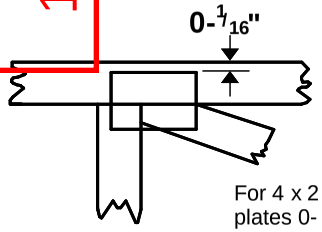
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

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

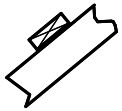
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

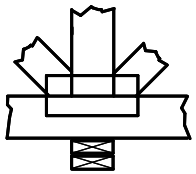
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

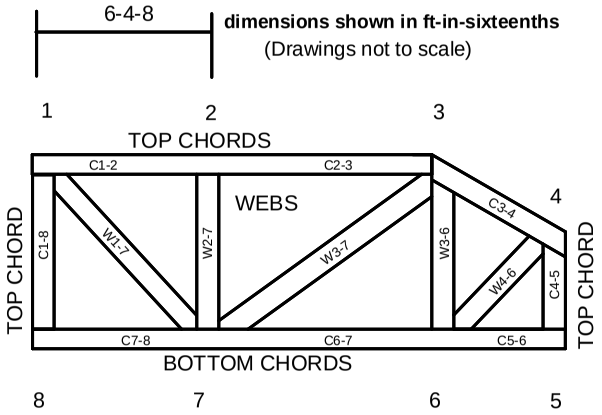


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

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

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

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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