RE: 210435
Lot 90 MN

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

Site Information:

Customer: Project Name: 210435
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: ASCE716LowRise Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 34 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I46220466	A1	5/20/2021	21	I46220486	D1	5/20/2021
2	I46220467	A2	5/20/2021	22	I46220487	D2	5/20/2021
3	I46220468	B1	5/20/2021	23	I46220488	J1	5/20/2021
4	I46220469	B2	5/20/2021	24	I46220489	J2	5/20/2021
5	I46220470	B3	5/20/2021	25	I46220490	J3	5/20/2021
6	I46220471	B4	5/20/2021	26	I46220491	P1	5/20/2021
7	I46220472	B4A	5/20/2021	27	I46220492	P2	5/20/2021
8	I46220473	B5	5/20/2021	28	I46220493	V1	5/20/2021
9	I46220474	B6	5/20/2021	29	I46220494	V2	5/20/2021
10	I46220475	B7	5/20/2021	30	I46220495	V3	5/20/2021
11	I46220476	B8	5/20/2021	31	I46220496	V4	5/20/2021
12	I46220477	B9	5/20/2021	32	I46220497	V5	5/20/2021
13	I46220478	B10	5/20/2021	33	I46220498	V6	5/20/2021
14	I46220479	B11	5/20/2021	34	I46220499	V7	5/20/2021
15	I46220480	B12	5/20/2021				
16	I46220481	C1	5/20/2021				
17	I46220482	C2	5/20/2021				
18	I46220483	C3	5/20/2021				
19	I46220484	C4	5/20/2021				
20	I46220485	C5	5/20/2021				

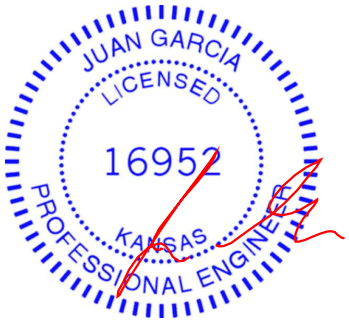
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

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.



May 20, 2021

Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/03/2021

RE: 210435
Lot 90 MN

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

Site Information:

Customer: Project Name: 210435
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: ASCE716LowRise Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 34 individual, dated Truss Design Drawings and 0 Additional Drawings.

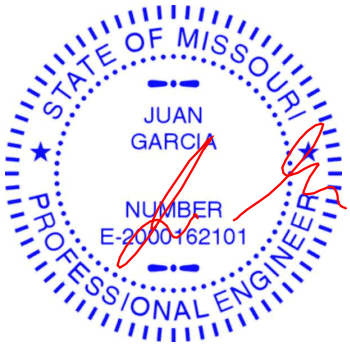
No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I46220466	A1	5/20/2021	21	I46220486	D1	5/20/2021
2	I46220467	A2	5/20/2021	22	I46220487	D2	5/20/2021
3	I46220468	B1	5/20/2021	23	I46220488	J1	5/20/2021
4	I46220469	B2	5/20/2021	24	I46220489	J2	5/20/2021
5	I46220470	B3	5/20/2021	25	I46220490	J3	5/20/2021
6	I46220471	B4	5/20/2021	26	I46220491	P1	5/20/2021
7	I46220472	B4A	5/20/2021	27	I46220492	P2	5/20/2021
8	I46220473	B5	5/20/2021	28	I46220493	V1	5/20/2021
9	I46220474	B6	5/20/2021	29	I46220494	V2	5/20/2021
10	I46220475	B7	5/20/2021	30	I46220495	V3	5/20/2021
11	I46220476	B8	5/20/2021	31	I46220496	V4	5/20/2021
12	I46220477	B9	5/20/2021	32	I46220497	V5	5/20/2021
13	I46220478	B10	5/20/2021	33	I46220498	V6	5/20/2021
14	I46220479	B11	5/20/2021	34	I46220499	V7	5/20/2021
15	I46220480	B12	5/20/2021				
16	I46220481	C1	5/20/2021				
17	I46220482	C2	5/20/2021				
18	I46220483	C3	5/20/2021				
19	I46220484	C4	5/20/2021				
20	I46220485	C5	5/20/2021				

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.

May 20, 2021

Garcia, Juan

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	A1	Hip Girder	1	1	Job Reference (optional) I46220466

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:15 Page: 1
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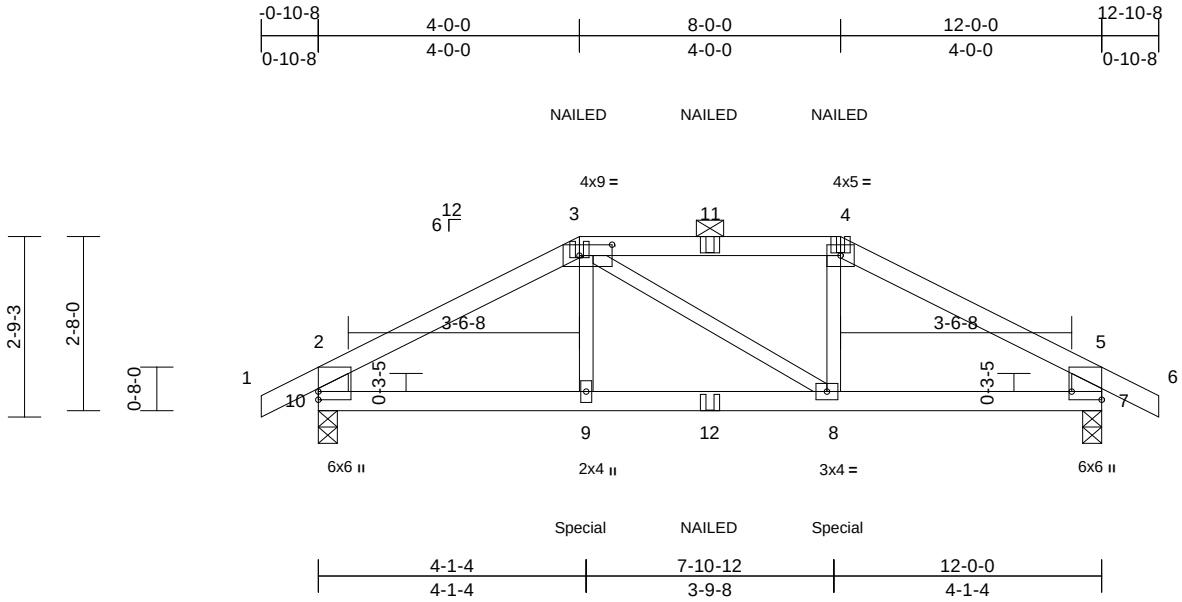

Scale = 1:35.3

Plate Offsets (X, Y): [3:0-6-0,0-2-0], [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	0.71	Vert(LL)	-0.07	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.13	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.10	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	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 DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals, and 2-0-0 oc purlins (5-0-4 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=50 (LC 7)
Max Uplift 7=-201 (LC 9), 10=-201 (LC 8)
Max Grav 7=899 (LC 1), 10=899 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-1231/277, 3-11=-1024/269, 4-11=-1024/269, 4-5=-1232/276, 5-6=0/35, 2-10=-806/214, 5-7=-806/213
BOT CHORD 9-10=-219/1012, 9-12=-219/1023, 8-12=-219/1023, 7-8=-196/1013
WEBS 3-9=0/271, 3-8=-50/52, 4-8=-5/279

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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 10 and 201 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 220 lb down and 57 lb up at 4-0-0, and 220 lb down and 57 lb up at 7-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) 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, 3-4=-70, 4-5=-70, 5-6=-70, 7-10=-20
Concentrated Loads (lb)
Vert: 3=-46 (F), 4=-46 (F), 9=-220 (F), 8=-220 (F), 11=-46 (F), 12=-25 (F)

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220467
210435	A2	Common	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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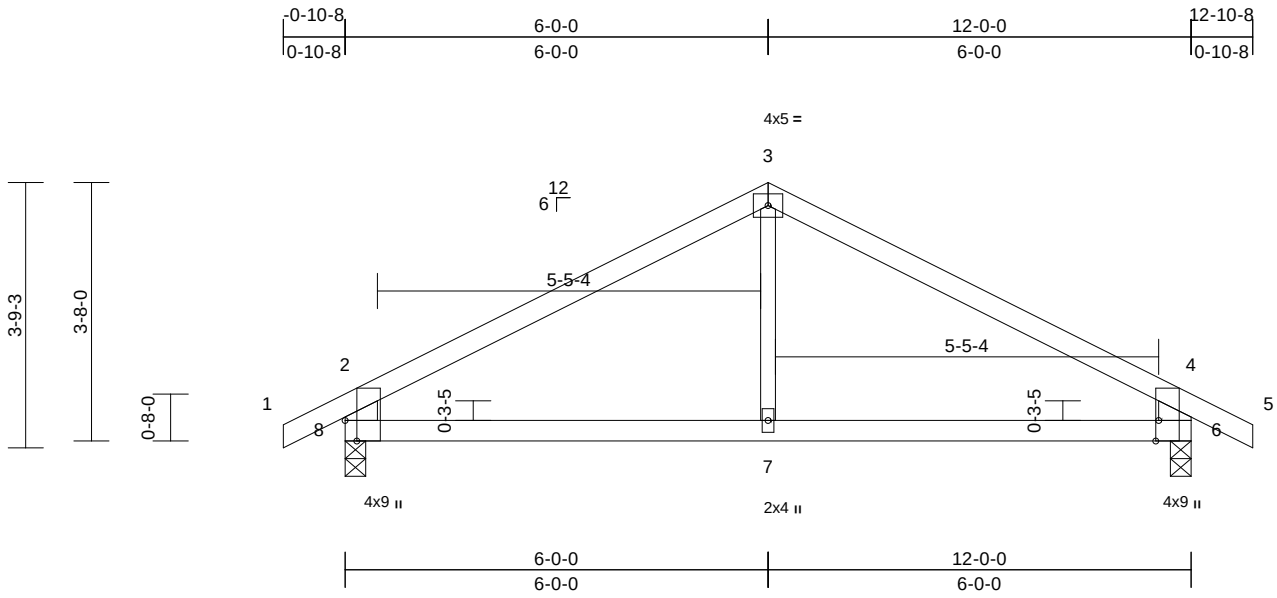

Scale = 1:32.7

Plate Offsets (X, Y): [6:0-3-8,Edge], [8:0-3-8,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	0.42	Vert(LL)	-0.02	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.05	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	7-8	>999	240	Weight: 35 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 7-3:2x3 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) 6=0-3-8, 8=0-3-8
Max Horiz 8=-62 (LC 6)
Max Uplift 6=-89 (LC 9), 8=-89 (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; 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 8 and 89 lb uplift at joint 6.
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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220468
210435	B1	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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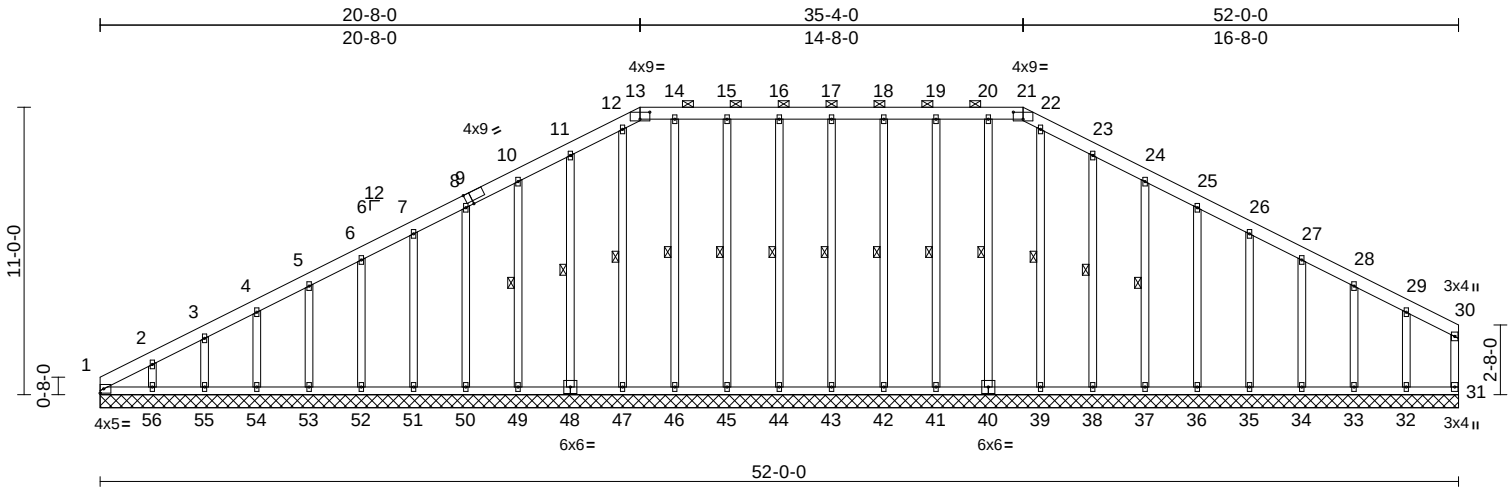

Scale = 1:88.2

Plate Offsets (X, Y): [9:0-2-12,Edge], [13:0-4-8,0-3-4], [21:0-4-8,0-3-4]

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	0.07	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	0.13	Horiz(TL)	0.00	31	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 366 lb	FT = 10%

LUMBER
TOP CHORD 2x6 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, and 2-0-0 oc purlins (6-0-0 max.): 13-21.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-49, 11-48, 12-47, 14-46, 15-45, 16-44, 17-43, 18-42, 19-41, 20-40, 22-39, 23-38, 24-37

REACTIONS (size) 1=52-0-0, 31=52-0-0, 32=52-0-0, 33=52-0-0, 34=52-0-0, 35=52-0-0, 36=52-0-0, 37=52-0-0, 38=52-0-0, 39=52-0-0, 40=52-0-0, 41=52-0-0, 42=52-0-0, 43=52-0-0, 44=52-0-0, 45=52-0-0, 46=52-0-0, 47=52-0-0, 48=52-0-0, 49=52-0-0, 50=52-0-0, 51=52-0-0, 52=52-0-0, 53=52-0-0, 54=52-0-0, 55=52-0-0, 56=52-0-0
Max Horiz 1=204 (LC 5)
Max Uplift 1=-54 (LC 4), 31=-7 (LC 8), 32=-85 (LC 9), 33=-49 (LC 9), 34=-55 (LC 9), 35=-54 (LC 9), 36=-53 (LC 9), 37=-58 (LC 9), 38=-60 (LC 9), 40=-13 (LC 5), 41=-39 (LC 4), 42=-35 (LC 4), 43=-33 (LC 5), 44=-36 (LC 4), 45=-40 (LC 4), 46=-16 (LC 5), 48=-59 (LC 8), 49=-57 (LC 8), 50=-54 (LC 8), 51=-54 (LC 8), 52=-54 (LC 8), 53=-54 (LC 8), 54=-54 (LC 8), 55=-53 (LC 8), 56=-90 (LC 8)
Max Grav 1=136 (LC 17), 31=75 (LC 1), 32=185 (LC 22), 33=180 (LC 1), 34=180 (LC 22), 35=180 (LC 1), 36=180 (LC 22), 37=180 (LC 1), 38=180 (LC 1), 39=179 (LC 22), 40=179 (LC 22), 41=183 (LC 21), 42=180 (LC 21), 43=180 (LC 1), 44=180 (LC 22), 45=183 (LC 22), 46=180 (LC 21), 47=185 (LC 18), 48=180 (LC 1), 49=180 (LC 1), 50=180 (LC 21), 51=180 (LC 21), 52=180 (LC 1), 53=180 (LC 21), 54=181 (LC 1), 55=175 (LC 21), 56=203 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-242/144, 2-3=-182/135, 3-4=-159/148, 4-5=-144/169, 5-6=-130/195, 6-7=-115/221, 7-8=-100/247, 8-9=-85/263, 9-10=-69/273, 10-11=-75/299, 11-12=-64/327, 12-13=-53/297, 13-14=-49/306, 14-15=-49/306, 15-16=-49/306, 16-17=-49/306, 17-18=-49/306, 18-19=-49/306, 19-20=-49/306, 20-21=-49/306, 21-22=-53/296, 22-23=-58/311, 23-24=-55/264, 24-25=-55/216, 25-26=-55/171, 26-27=-55/125, 27-28=-56/91, 28-29=-56/64, 29-30=-55/37, 30-31=-61/22
BOT CHORD 1-56=-33/34, 55-56=-33/34, 54-55=-33/34, 53-54=-33/34, 52-53=-33/34, 51-52=-33/34, 50-51=-33/34, 49-50=-33/34, 48-49=-33/34, 47-48=-33/34, 46-47=-33/34, 45-46=-33/34, 44-45=-33/34, 43-44=-33/34, 42-43=-33/34, 41-42=-33/34, 40-41=-33/34, 39-40=-33/34, 38-39=-33/34, 37-38=-33/34, 36-37=-33/34, 35-36=-33/34, 34-35=-33/34, 33-34=-33/34, 32-33=-33/34, 31-32=-33/34
WEBS 2-56=-157/113, 3-55=-136/77, 4-54=-141/78, 5-53=-140/78, 6-52=-140/78, 7-51=-140/78, 8-50=-140/78, 10-49=-140/81, 11-48=-140/83, 12-47=-145/17, 14-46=-140/40, 15-45=-143/64, 16-44=-140/60, 17-43=-140/57, 18-42=-140/59, 19-41=-143/63, 20-40=-139/37, 22-39=-139/0, 23-38=-140/84, 24-37=-140/82, 25-36=-140/77, 26-35=-140/78, 27-34=-140/78, 28-33=-140/76, 29-32=-144/99

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

JUAN GARCIA LICENSED 16952 PROFESSIONAL ENGINEER
May 20,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220468
210435	B1	Piggyback Base Supported Gable	1	1	Job Reference (optional)	

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * 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 7 lb uplift at joint 31, 54 lb uplift at joint 1, 90 lb uplift at joint 56, 53 lb uplift at joint 55, 54 lb uplift at joint 54, 54 lb uplift at joint 53, 54 lb uplift at joint 52, 54 lb uplift at joint 51, 54 lb uplift at joint 50, 57 lb uplift at joint 49, 59 lb uplift at joint 48, 16 lb uplift at joint 46, 40 lb uplift at joint 45, 36 lb uplift at joint 44, 33 lb uplift at joint 43, 35 lb uplift at joint 42, 39 lb uplift at joint 41, 13 lb uplift at joint 40, 60 lb uplift at joint 38, 58 lb uplift at joint 37, 53 lb uplift at joint 36, 54 lb uplift at joint 35, 55 lb uplift at joint 34, 49 lb uplift at joint 33 and 85 lb uplift at joint 32.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220469
210435	B2	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:19 Page: 1
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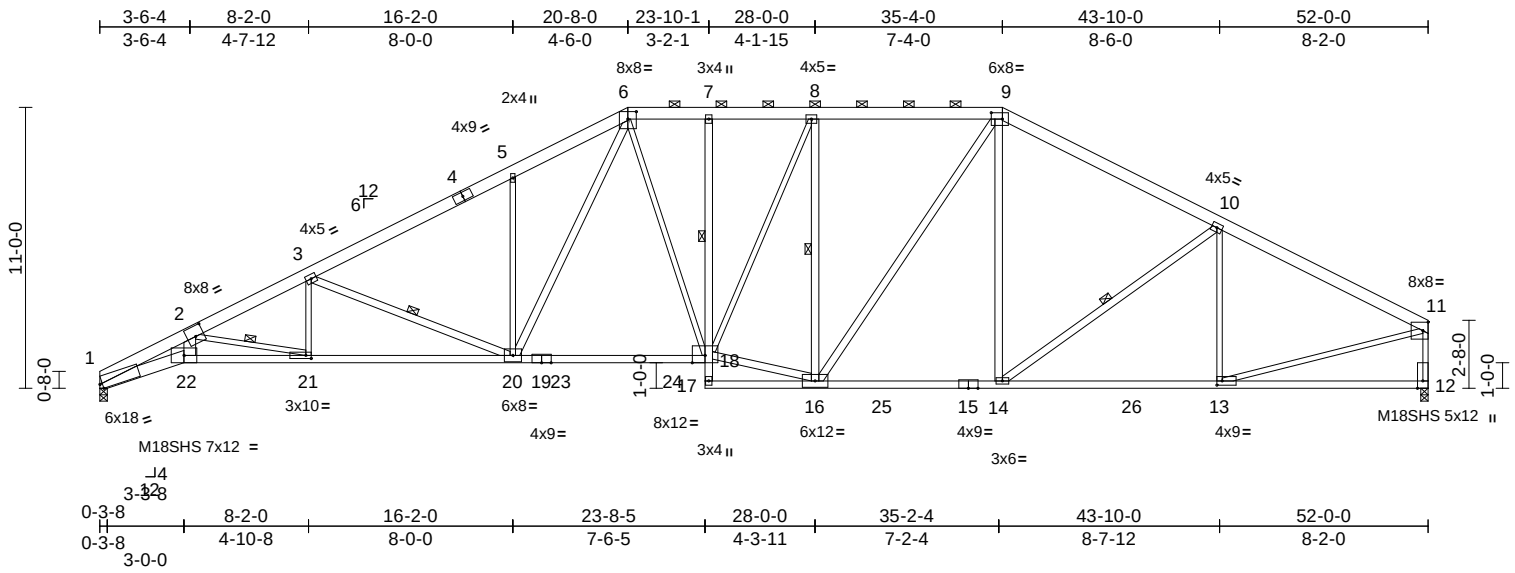

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Plate Offsets (X, Y): [1:0-1-3,Edge], [2:0-4-0,0-4-12], [6:0-4-0,0-3-8], [9:0-5-4,0-3-0], [13:0-2-8,0-2-0], [21:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.52	18-20	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.88	18-20	>709	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.42	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.27	20-21	>999	240	Weight: 295 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 1-4:2x6 SPF 1650F 1.4E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 1-22:2x6 SP DSS, 7-17,17-15:2x4 SPF No.2, 19-18:2x4 SPF 2400F 2.0E

WEBS 2x3 SPF No.2 *Except* 22-2:2x6 SPF No.2, 16-18,8-16,16-9,14-9,20-3,20-6,14-10:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-6 max.): 6-9.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:

1 Row at midpt 7-18

WEBS 1 Row at midpt 8-16, 2-21, 3-20, 10-14

REACTIONS (size) 1=0-3-8, 12=0-3-8
Max Horiz 1=202 (LC 7)
Max Uplift 1=-249 (LC 8), 12=-208 (LC 9)
Max Grav 1=2468 (LC 2), 12=2504 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-8955/1036, 2-3=-5736/601, 3-4=-4385/397, 4-5=-4229/417, 5-6=-4343/564, 6-7=-3358/344, 7-8=-3350/344, 8-9=-3080/301, 9-10=-3159/284, 10-11=-3221/270, 11-12=-2383/246

BOT CHORD 1-22=-1081/7954, 21-22=-959/6994, 20-21=-614/5170, 19-20=-238/3227, 19-23=-238/3227, 23-24=-238/3227, 18-24=-238/3227, 17-18=0/61, 7-18=-144/76, 16-17=-44/72, 16-25=-125/2722, 15-25=-125/2722, 14-15=-125/2722, 14-26=-186/2802, 13-26=-186/2802, 12-13=-22/67

WEBS 2-22=-294/2567, 6-18=-135/588, 16-18=-194/3151, 8-18=-108/719, 8-16=-1126/257, 9-16=-168/791, 9-14=-37/467, 3-21=0/621, 2-21=-1868/354, 3-20=-1462/353, 5-20=-461/273, 6-20=-337/1401, 11-13=-171/2848, 10-14=-197/226, 10-13=-553/160

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) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 1 and 208 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	B3	Piggyback Base	3	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I46220470
06/03/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:19 Page: 1
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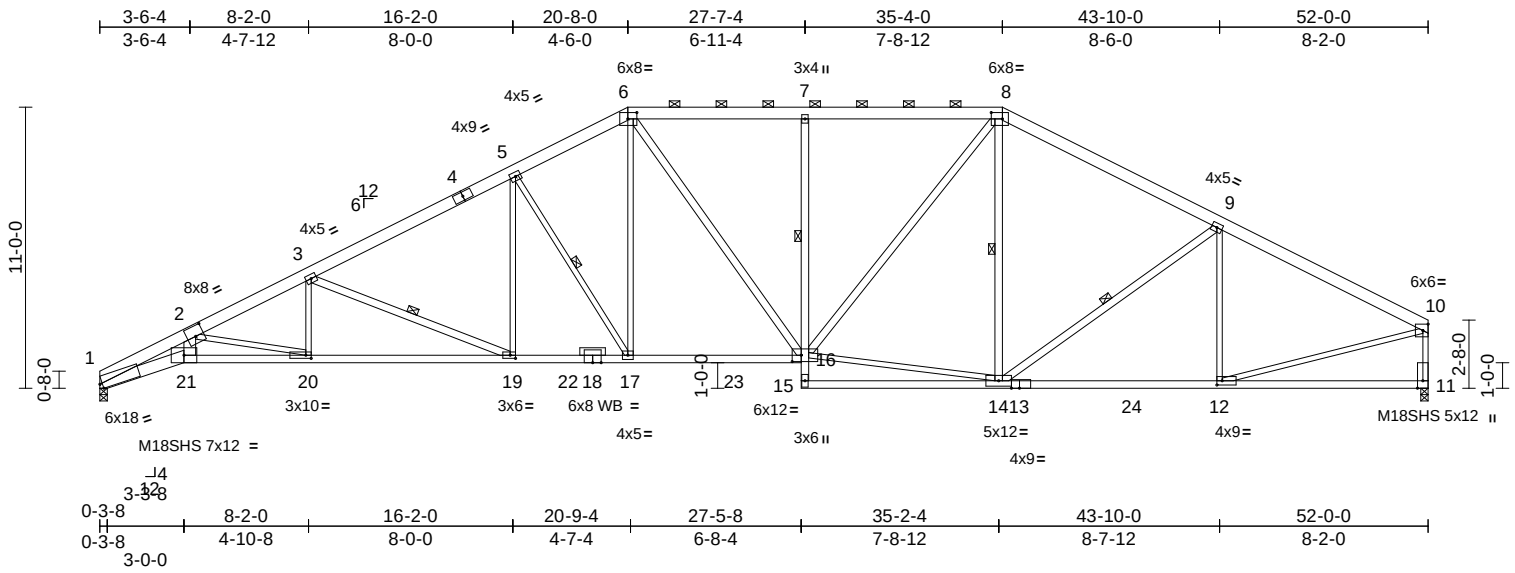

Scale = 1:90.2

Plate Offsets (X, Y): [1:0-1-3,Edge], [2:0-4-0,0-4-12], [6:0-4-4,0-3-0], [8:0-5-4,0-3-0], [12:0-2-8,0-2-0], [13:0-3-12,Edge], [16:0-4-4,0-3-0], [19:0-2-8,0-1-8], [20:0-2-8,0-1-8]

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	0.70	Vert(LL)	-0.49	19-20	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.87	19-20	>711	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.43	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.28	19-20	>999	240	Weight: 285 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 1-4:2x6 SPF 1650F 1.4E
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 1-21:2x6 SP DSS, 7-15:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-2:2x6 SPF No.2, 16-6,16-8,14-8,19-3,14-9:2x4 SPF No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-13 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-3-10 oc bracing: 1-21
2-2-0 oc bracing: 20-21.
1 Row at midpt 7-16
WEBS 1 Row at midpt 5-17, 8-14, 3-19, 9-14

REACTIONS (size) 1=0-3-8, 11=0-3-8
Max Horiz 1=202 (LC 7)
Max Uplift 1=-249 (LC 8), 11=-208 (LC 9)
Max Grav 1=2459 (LC 2), 11=2473 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-8912/1039, 2-3=-5723/597, 3-4=-4343/400, 4-5=-4188/421, 5-6=-3680/393, 6-7=-3361/314, 7-8=-3351/314, 8-9=-3101/283, 9-10=-3178/270, 10-11=-2353/246
BOT CHORD 1-21=-1084/7917, 20-21=-961/6964, 19-20=-610/5157, 19-22=-292/3784, 18-22=-292/3784, 17-18=-292/3784, 17-23=-232/3242, 16-23=-232/3242, 15-16=0/135, 7-16=-575/246, 14-15=-9/173, 13-14=-186/2764, 13-24=-186/2764, 12-24=-186/2764, 11-12=-21/66
WEBS 2-21=-297/2541, 5-17=-1044/295, 6-17=-183/1168, 6-16=-173/484, 14-16=-116/2520, 8-16=-202/1181, 8-14=-197/195, 3-20=0/648, 2-20=-1851/359, 3-19=-1488/345, 5-19=-55/799, 10-12=-172/2809, 9-14=-213/227, 9-12=-552/159

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) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 1 and 208 lb uplift at joint 11.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220471
210435	B4	Piggyback Base	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:20 Page: 1
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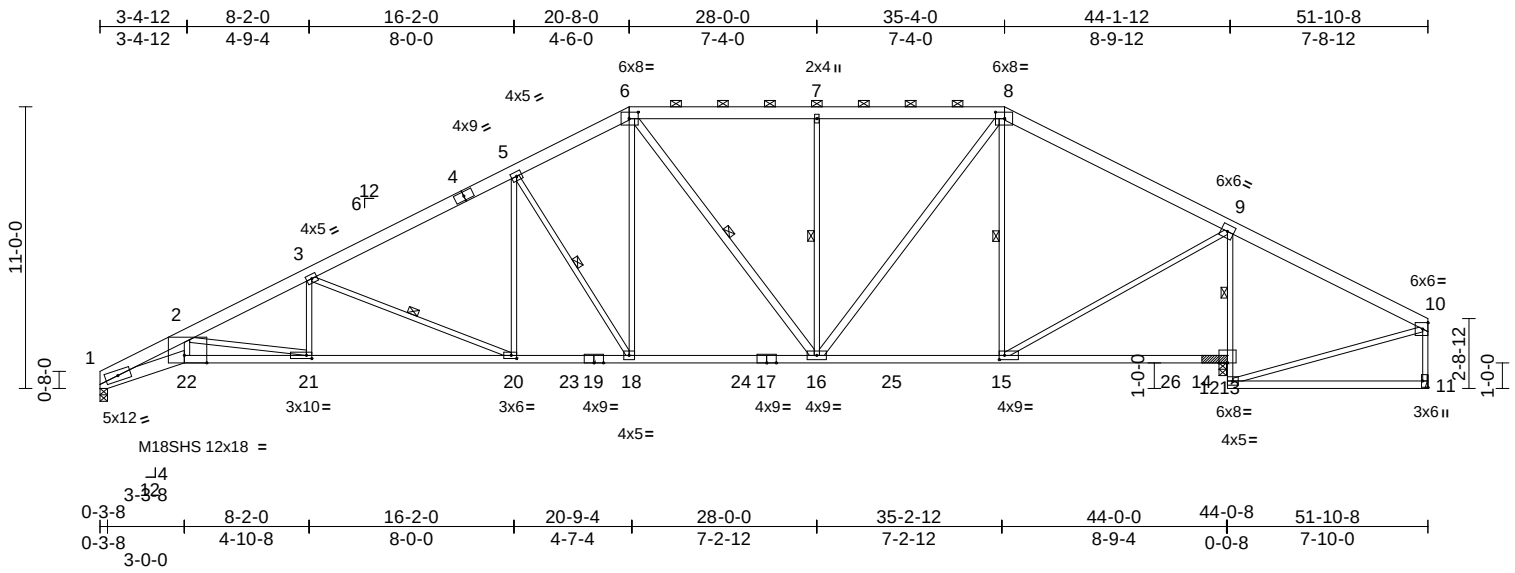

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Plate Offsets (X, Y): [6:0-4-4,0-3-0], [8:0-4-4,0-3-0], [11:Edge,0-2-8], [15:0-2-8,0-2-0], [20:0-2-8,0-1-8], [21:0-2-8,0-1-8], [22:0-10-8,Edge]

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	0.89	Vert(LL)	-0.40	20-21	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.71	20-21	>740	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.32	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	21-22	>999	240	Weight: 260 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 1-22:2x6 SPF 1650F 1.4E, 22-19:2x4 SPF 2100F 1.8E, 9-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 16-6,16-8:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-7-4 oc purlins, except end verticals, and 2-0-0 oc purlins (4-8-1 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt 9-13
WEBS 1 Row at midpt 5-18, 6-16, 7-16, 8-15, 3-20

REACTIONS (size) 1=0-3-8, 11= Mechanical, 13= (0-3-8 + bearing block), (req. 0-4-5)
Max Horiz 1=204 (LC 7)
Max Uplift 1=-239 (LC 8), 11=-48 (LC 4), 13=-191 (LC 9)
Max Grav 1=2069 (LC 2), 11=205 (LC 16), 13=2747 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-7224/979, 2-3=-4685/569, 3-4=-3393/375, 4-5=-3238/396, 5-6=-2745/368, 6-7=-2238/279, 7-8=-2238/279, 8-9=-1816/217, 9-10=-62/324, 10-11=-122/93
BOT CHORD 1-22=-1028/6396, 21-22=-946/5866, 20-21=-586/4219, 20-23=-270/2935, 19-23=-270/2935, 18-19=-270/2935, 18-24=-213/2407, 17-24=-213/2407, 16-17=-213/2407, 16-25=-101/1499, 15-25=-101/1499, 15-26=-166/37, 14-26=-166/37, 13-14=-166/37, 12-13=0/199, 9-13=-2376/282, 11-12=-14/55
WEBS 2-22=-272/2026, 5-18=-1018/294, 6-18=-183/1122, 6-16=-364/126, 7-16=-581/245, 8-16=-194/1266, 8-15=-717/176, 3-21=0/584, 2-21=-1679/366, 3-20=-1392/343, 5-20=-54/771, 9-15=-138/1928, 10-12=-216/23

NOTES

1) 2x4 SPF No.2 bearing block 12" long at jt. 13 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
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) Refer to girder(s) for truss to truss connections.
9) Bearing at joint(s) 1 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 239 lb uplift at joint 1, 48 lb uplift at joint 11 and 191 lb uplift at joint 13.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220472
210435	B4A	Piggyback Base	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:21 Page: 1
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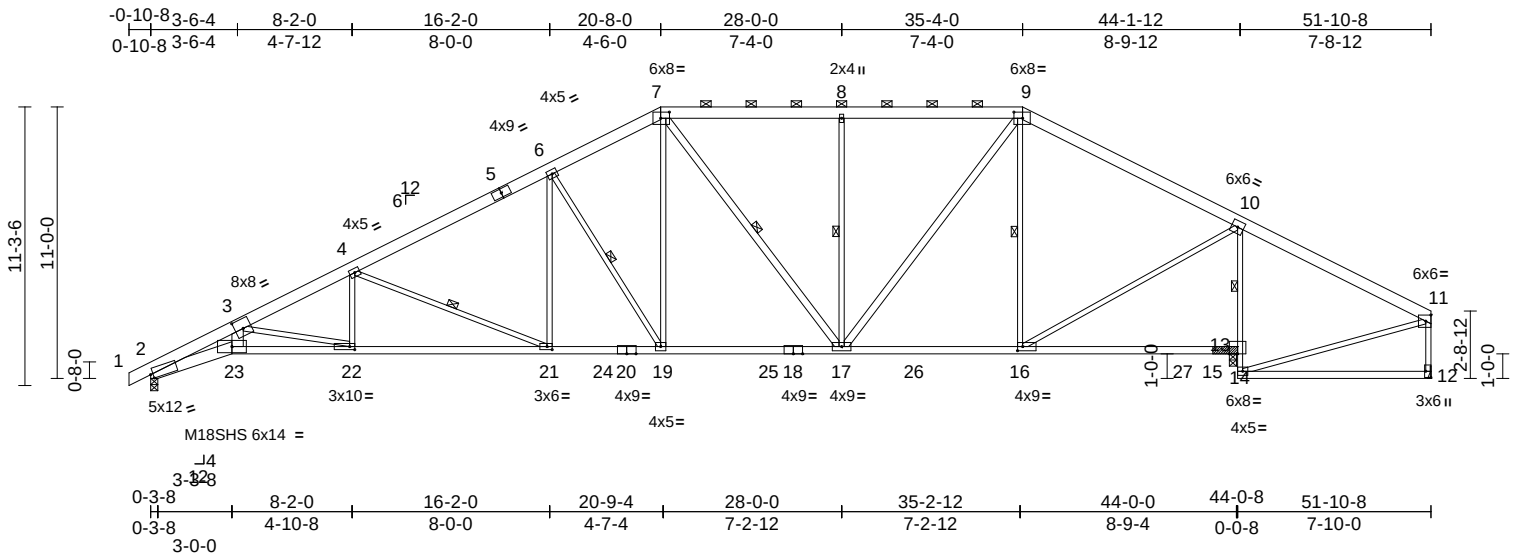

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Plate Offsets (X, Y): [2:0-1-4,0-2-2], [3:0-4-0,0-4-8], [7:0-4-4,0-3-0], [9:0-4-4,0-3-0], [12:Edge,0-2-8], [16:0-2-8,0-2-0], [21:0-2-8,0-1-8], [22:0-2-8,0-1-8]

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	0.87	Vert(LL)	-0.40	21-22	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.71	21-22	>745	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.31	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.17	22-23	>999	240	Weight: 263 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-23:2x6 SPF 1650F 1.4E, 10-13:2x3 SPF No.2, 13-12,18-20:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 23-3:2x6 SPF No.2, 17-7,17-9:2x4 SPF No.2

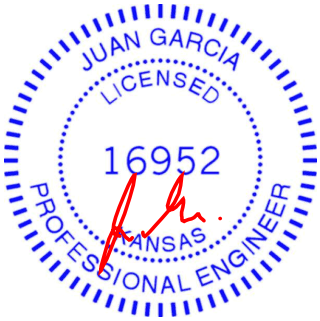
BRACING
TOP CHORD Structural wood sheathing directly applied or 1-8-5 oc purlins, except end verticals, and 2-0-0 oc purlins (4-8-1 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-16.
1 Row at midpt 10-14
WEBS 1 Row at midpt 8-17, 7-17, 9-16, 4-21, 6-19

REACTIONS (size) 2=0-3-8, 12= Mechanical, 14= (0-3-8 + bearing block), (req. 0-4-5)
Max Horiz 2=174 (LC 7)
Max Uplift 2=-33 (LC 8), 12=-33 (LC 4)
Max Grav 2=2128 (LC 2), 12=201 (LC 20), 14=2747 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-7348/161, 3-4=-4671/77, 4-5=-3390/44, 5-6=-3235/65, 6-7=-2743/90, 7-8=-2238/60, 8-9=-2238/60, 9-10=-1814/55, 10-11=-43/320, 11-12=-122/92
BOT CHORD 2-23=-232/6513, 22-23=-208/5725, 21-22=-94/4207, 21-24=-24/2933, 20-24=-24/2933, 19-20=-24/2933, 19-25=-11/2405, 18-25=-11/2405, 17-18=-11/2405, 17-26=0/1498, 16-26=0/1498, 16-27=-167/17, 15-27=-167/17, 14-15=-167/17, 13-14=0/199, 10-14=-2374/53, 12-13=-2/53
WEBS 3-23=-34/2107, 7-19=-40/1143, 8-17=-581/141, 7-17=-344/64, 9-16=-718/93, 9-17=-67/1268, 6-21=0/778, 4-22=0/589, 3-22=-1576/116, 4-21=-1404/129, 6-19=-1048/125, 10-16=0/1926, 11-13=-217/6

NOTES
1) 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 14 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
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) Refer to girder(s) for truss to truss connections.
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 2 and 33 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.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/03/2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220473
210435	B5	Piggyback Base	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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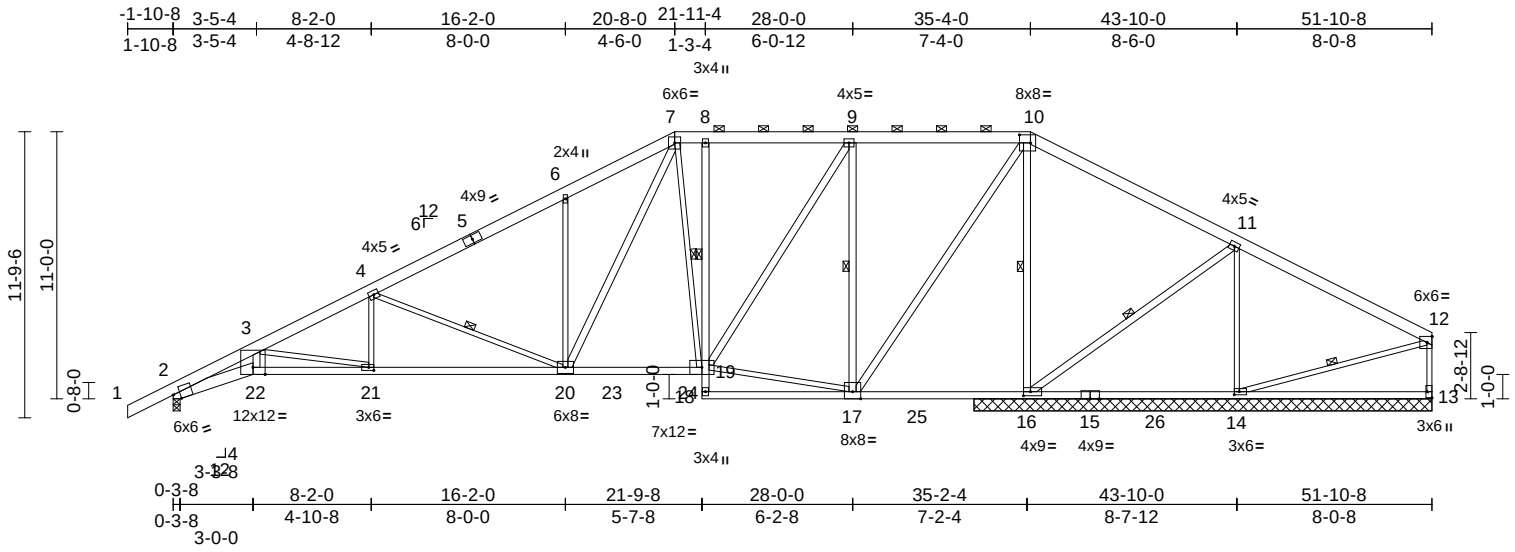

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Plate Offsets (X, Y): [2:0-3-8,Edge], [10:0-5-8,0-4-0], [13:Edge,0-2-8], [14:0-2-8,0-1-8], [16:0-3-8,0-2-0], [21:0-2-8,0-1-8]

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	0.64	Vert(LL)	-0.24	20-21	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.45	20-21	>934	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.16	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	21-22	>999	240	Weight: 297 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-22:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 22-3,19-9,17-10,20-7,16-11:2x4 SPF No.2, 9-17,16-10:2x4 SPF 2100F 1.8E

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing. Except:
1 Row at midpt 8-19
WEBS 1 Row at midpt 7-19, 9-17, 10-16, 4-20, 12-14, 11-16

REACTIONS (size) 2=0-3-8, 13=18-10-8, 14=18-10-8, 16=18-10-8
Max Horiz 2=219 (LC 12)
Max Uplift 2=-200 (LC 8), 13=-332 (LC 21), 14=-261 (LC 21), 16=-357 (LC 8)
Max Grav 2=1362 (LC 23), 13=94 (LC 22), 14=346 (LC 22), 16=3707 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-4046/595, 3-4=-2451/326, 4-5=-1381/158, 5-6=-1273/179, 6-7=-1354/324, 7-8=-534/204, 8-9=-532/205, 9-10=-95/282, 10-11=-161/1551, 11-12=-87/740, 12-13=-50/427
BOT CHORD 2-22=-679/3549, 21-22=-618/3195, 20-21=-366/2198, 20-23=-80/613, 23-24=-80/613, 19-24=-80/613, 18-19=0/105, 8-19=-338/108, 17-18=-4/25, 17-25=-1339/321, 16-25=-1339/321, 15-16=-602/147, 15-26=-602/147, 14-26=-602/147, 13-14=-21/42
WEBS 3-22=-165/1185, 7-19=-652/188, 17-19=-190/181, 9-19=-190/1235, 9-17=-1498/300, 10-17=-256/2115, 10-16=-2804/344, 4-21=0/449, 3-21=-1025/257, 4-20=-1148/316, 6-20=-488/276, 7-20=-336/1242, 12-14=-655/125, 11-16=-940/210, 11-14=-89/662

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) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 200 lb uplift at joint 2, 357 lb uplift at joint 16, 332 lb uplift at joint 13 and 261 lb uplift at joint 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.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220474
210435	B6	Piggyback Base	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:22 Page: 1
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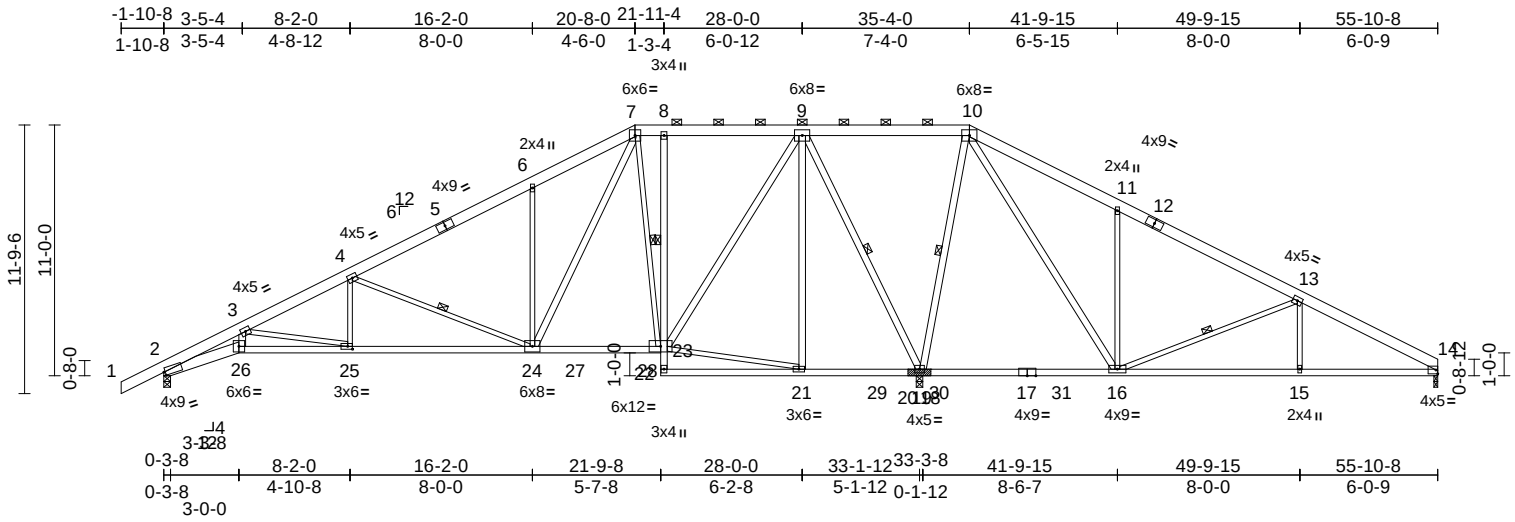

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Plate Offsets (X, Y): [2:0-0-12,0-1-14], [25:0-2-8,0-1-8]

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	0.56	Vert(LL)	-0.20	24-25	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.37	24-25	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.13	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	25-26	>999	240	Weight: 314 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-26:2x6 SPF No.2, 22-17,20-18:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 26-3,19-10,24-7,16-10,9-21,9-23:2x4 SPF No.2, 9-19:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-6 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 4-3-8 oc bracing. Except:
1 Row at midpt 8-23
WEBS 1 Row at midpt 7-23, 10-19, 13-16, 4-24, 9-19

REACTIONS (size) 2=0-3-8, 14=0-2-0, 19=(0-3-8 + bearing block), (req. 0-4-7)
Max Horiz 2=211 (LC 12)
Max Uplift 2=-191 (LC 8), 14=-213 (LC 21), 19=-274 (LC 8)
Max Grav 2=1182 (LC 21), 14=509 (LC 22), 19=4066 (LC 2)

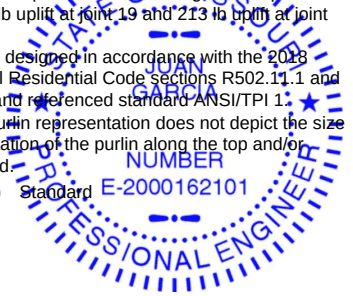
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/47, 2-3=-3348/550, 3-4=-1955/298, 4-5=-942/133, 5-6=-819/154, 6-7=-912/300, 7-8=-137/194, 8-9=-138/195, 9-10=-83/1701, 10-11=-89/1048, 11-12=-144/1050, 12-13=-182/1017, 13-14=-689/646
BOT CHORD 2-26=-631/2930, 25-26=-575/2632, 24-25=-333/1749, 24-27=-70/274, 27-28=-70/274, 23-28=-70/274, 22-23=0/113, 8-23=-345/104, 21-22=-27/23, 21-29=-738/224, 20-29=-738/224, 19-20=-738/224, 18-19=-1354/300, 18-30=-1354/300, 17-30=-1354/300, 17-31=-1354/300, 16-31=-1354/300, 15-16=-528/554, 14-15=-528/554
WEBS 3-26=-151/996, 7-23=-836/198, 21-23=-721/205, 10-19=-1813/217, 11-16=-534/305, 13-16=-831/234, 13-15=0/296, 4-25=0/427, 3-25=-902/247, 4-24=-1101/312, 6-24=-494/277, 7-24=-335/1226, 10-16=-341/1274, 9-21=0/322, 9-23=-191/1396, 9-19=-2167/238

NOTES

1) 2x4 SPF 2400F 2.0E bearing block 12" long at jt. 19 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 2, 274 lb uplift at joint 19 and 213 lb uplift at joint 14.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	B7	Piggyback Base	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I46220475
06/03/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:23 Page: 1
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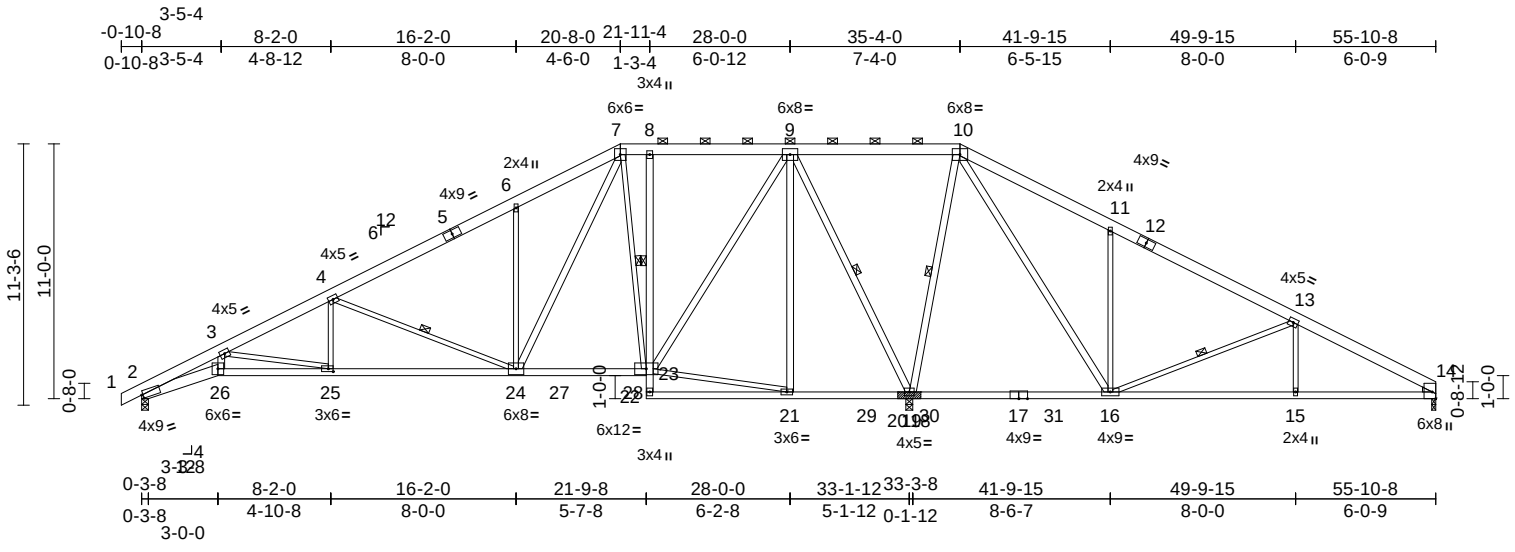

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Plate Offsets (X, Y): [2:0-0-12,0-1-14], [14:Edge,0-1-13], [25:0-2-8,0-1-8]

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	0.57	Vert(LL)	-0.20	24-25	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.38	24-25	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.13	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	25-26	>999	240	Weight: 312 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-26:2x6 SPF No.2, 22-17,20-18:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 26-3,9-21,19-10,24-7,16-10,9-23:2x4 SPF No.2, 9-19:2x4 SPF 2100F 1.8E
WEDGE Right: 2x3 SPF No.2

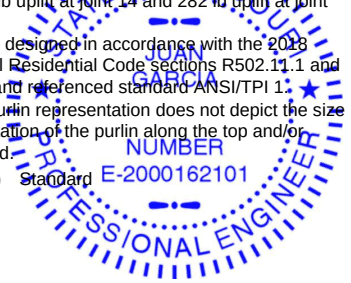
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-13 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 4-3-2 oc bracing. Except:
1 Row at midpt 8-23
WEBS 1 Row at midpt 7-23, 10-19, 13-16, 4-24, 9-19

REACTIONS (size) 2=0-3-8, 14=0-2-0, 19=(0-3-8 + bearing block), (req. 0-4-7)
Max Horiz 2=193 (LC 12)
Max Uplift 2=-164 (LC 8), 14=-224 (LC 21), 19=-282 (LC 8)
Max Grav 2=1110 (LC 23), 14=506 (LC 22), 19=4083 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-3419/585, 3-4=-1962/301, 4-5=-933/129, 5-6=-784/150, 6-7=-903/296, 7-8=-125/191, 8-9=-126/192, 9-10=-92/1719, 10-11=-92/1070, 11-12=-153/1072, 12-13=-191/1039, 13-14=-683/666
BOT CHORD 2-26=-668/3004, 25-26=-606/2696, 24-25=-336/1755, 24-27=-70/275, 27-28=-70/275, 23-28=-70/275, 22-23=0/113, 8-23=-346/104, 21-22=-28/23, 21-29=-752/231, 20-29=-752/231, 19-20=-752/231, 18-19=-1370/308, 18-30=-1370/308, 17-30=-1370/308, 17-31=-1370/308, 16-31=-1370/308, 15-16=-546/548, 14-15=-546/548
WEBS 3-26=-167/1029, 7-23=-843/202, 9-21=0/324, 10-19=-1822/219, 11-16=-534/305, 13-15=0/296, 13-16=-833/234, 4-25=0/438, 3-25=-960/275, 6-24=-494/277, 4-24=-1115/318, 7-24=-338/1232, 10-16=-341/1274, 21-23=-734/211, 9-23=-194/1403, 9-19=-2177/241

NOTES
1) 2x4 SPF 2400F 2.0E bearing block 12" long at jt. 19 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 14.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 164 lb uplift at joint 2, 224 lb uplift at joint 14 and 282 lb uplift at joint 19.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220476
210435	B8	Piggyback Base	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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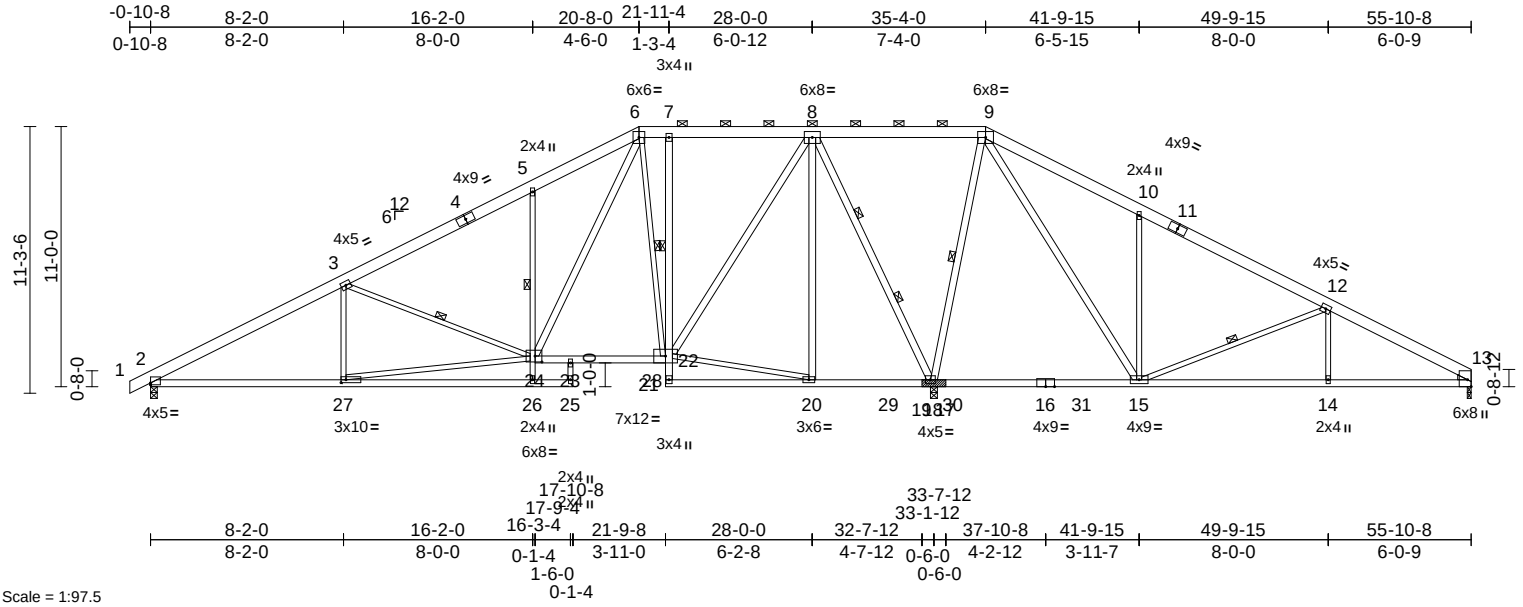

Scale = 1:97.5

Plate Offsets (X, Y): [2:Edge,0-0-15], [13:Edge,0-1-13], [24:0-3-8,0-3-0], [27:0-2-8,0-1-8]

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	0.48	Vert(LL)	-0.18	15-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	2-27	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.06	18	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	26-27	>999	240	Weight: 315 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 21-16,19-17:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 22-8,8-20,18-8,18-9,15-9,24-6:2x4 SPF No.2
WEDGE Right: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-8-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 5-3-6 oc bracing. Except:
1 Row at midpt 7-22
WEBS 1 Row at midpt 9-18, 12-15, 6-22, 3-24, 5-26
WEBS 2 Rows at 1/3 pts 8-18

REACTIONS (size) 2=0-3-8, 13=0-2-0, 18=(0-3-8 + bearing block), (req. 0-4-0)
Max Horiz 2=193 (LC 12)
Max Uplift 2=-198 (LC 8), 13=-177 (LC 9), 18=-197 (LC 8)
Max Grav 2=1275 (LC 23), 13=621 (LC 22), 18=3714 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-1982/282, 3-4=-1308/197, 4-5=-1175/236, 5-6=-1270/372, 6-7=-469/196, 7-8=-468/196, 8-9=0/1239, 9-10=-165/566, 10-11=-64/558, 11-12=-176/524, 12-13=-915/308
BOT CHORD 2-27=-336/1685, 26-27=0/45, 25-26=0/0, 23-24=-62/574, 23-28=-62/574, 22-28=-62/574, 21-22=0/116, 7-22=-323/101, 20-21=-24/23, 20-29=-396/256, 19-29=-396/256, 18-19=-396/256, 17-18=-912/208, 17-30=-912/208, 16-30=-912/208, 16-31=-912/208, 15-31=-912/208, 14-15=-197/750, 13-14=-197/750
WEBS 23-25=-92/0, 20-22=-377/237, 8-22=-170/1326, 8-20=0/265, 8-18=-2006/224, 9-18=-1591/237, 10-15=-534/305, 12-15=-796/237, 12-14=0/294, 9-15=-341/1264, 6-24=-331/1242, 6-22=-725/177, 3-27=-19/231, 3-24=-687/240, 24-26=0/314, 5-24=-464/257, 24-27=-344/1653

NOTES

1) 2x4 SPF 2400F 2.0E bearing block 12" long at jt. 18 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 13.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 2, 197 lb uplift at joint 18 and 177 lb uplift at joint 13.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220477
210435	B9	Piggyback Base	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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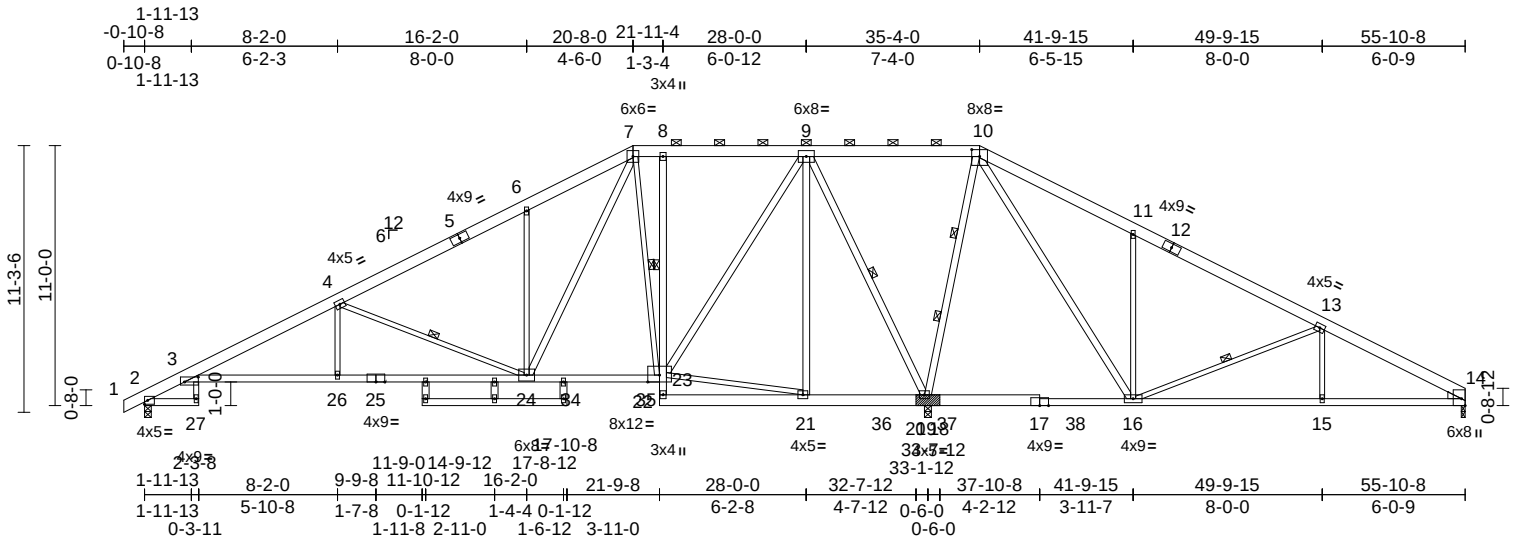


Scale = 1:97.5

Plate Offsets (X, Y): [3:0-7-0,0-2-8], [10:0-4-0,0-3-8], [14:Edge,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.28	3-26	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.49	3-26	>804	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.25	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	3-26	>999	240	Weight: 335 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 1-5:2x6 SPF 1650F 1.4E

BOT CHORD 2x4 SPF No.2 *Except* 22-17,20-18:2x6 SP DSS

WEBS 2x3 SPF No.2 *Except* 28-29,30-31,24-7,23-9,9-21,19-10,16-10,32-3 3:2x4 SPF No.2, 19-9:2x4 SPF 2100F 1.8E

WEDGE Right: 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-10.

BOT CHORD Rigid ceiling directly applied or 3-8-11 oc bracing. Except:

1 Row at midpt 8-23

WEBS 1 Row at midpt 4-24, 7-23, 9-19, 13-16

WEBS 2 Rows at 1/3 pts 10-19

REACTIONS (size) 2=0-3-8, 14=0-2-0, 19=(0-3-8 + bearing block), (req. 0-4-12)

Max Horiz 2=193 (LC 12)

Max Uplift 2=-112 (LC 8), 14=-435 (LC 21), 19=-391 (LC 8)

Max Grav 2=964 (LC 23), 14=422 (LC 22), 19=4447 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-509/192, 3-4=-1597/179, 4-5=-544/125, 5-6=-388/156, 6-7=-491/225, 7-8=0/466, 8-9=0/466, 9-10=-233/2184, 10-11=-223/1520, 11-12=-286/1522, 12-13=-324/1457, 13-14=-514/1095

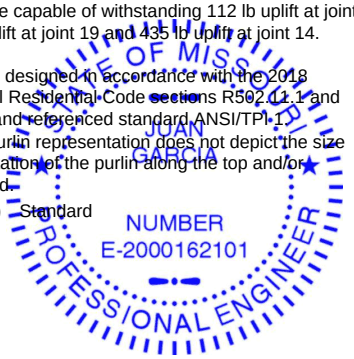
BOT CHORD 2-27=-36/0, 3-26=-250/1449, 25-26=-250/1449, 24-25=-250/1449, 24-34=-253/240, 34-35=-253/240, 23-35=-253/240, 22-23=0/112, 8-23=-357/106, 21-22=-123/39, 21-36=-1185/351, 20-36=-1185/351, 19-20=-1185/351, 18-19=-1761/432, 18-37=-1757/433, 17-37=-1757/432, 17-38=-1761/432, 16-38=-1761/432, 15-16=-919/401, 14-15=-919/401

WEBS 3-27=0/73, 4-24=-1185/335, 7-24=-325/1188, 7-23=-996/244, 21-23=-1075/316, 9-23=-230/1544, 9-21=0/318, 9-19=-2291/294, 10-19=-2029/224, 11-16=-533/305, 13-16=-868/229, 13-15=0/300, 10-16=-343/1280, 4-26=0/332, 6-24=-443/259

NOTES

1) 2x6 SP DSS bearing block 12" long at jt. 19 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 at joint(s) 14.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 112 lb uplift at joint 2, 391 lb uplift at joint 19 and 435 lb uplift at joint 14.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	B10	Piggyback Base	4	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I46220478
06/03/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:24 Page: 1
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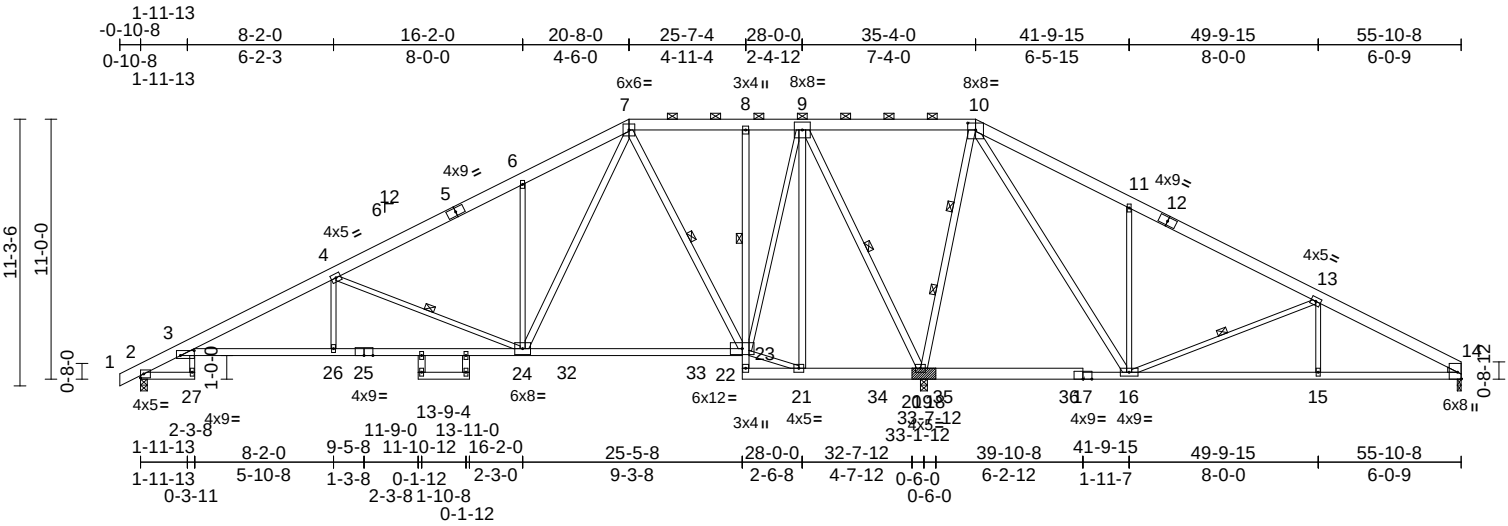

Scale = 1:97.5

Plate Offsets (X, Y): [3:0-7-0,0-2-8], [10:0-4-0,0-3-8], [14:Edge,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.34	23-24	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.56	23-24	>707	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.25	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.20	27	>999	240	Weight: 325 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 1-5:2x6 SPF 1650F 1.4E

BOT CHORD 2x4 SPF No.2 *Except* 25-23,17-14:2x4 SPF 2100F 1.8E, 22-17,20-18:2x6 SP DSS

WEBS 2x3 SPF No.2 *Except* 28-29,30-31,23-7,19-10,21-9,16-10,24-7:2x4 SPF No.2, 19-9:2x4 SPF 2100F 1.8E

WEDGE Right: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-10.

BOT CHORD Rigid ceiling directly applied or 5-7-1 oc bracing. Except:

1 Row at midpt 8-23

WEBS 1 Row at midpt 4-24, 7-23, 9-19, 13-16

WEBS 2 Rows at 1/3 pts 10-19

REACTIONS (size) 2=0-3-8, 14=0-2-0, 19=(0-3-8 + bearing block), (req. 0-4-13)

Max Horiz 2=193 (LC 12)

Max Uplift 2=-106 (LC 8), 14=-470 (LC 21), 19=-404 (LC 8)

Max Grav 2=942 (LC 23), 14=413 (LC 22), 19=4541 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-500/194, 3-4=-1526/169, 4-5=-495/130, 5-6=-358/162, 6-7=-431/226, 7-8=-98/1051, 8-9=-97/1056, 9-10=-249/2283, 10-11=-239/1594, 11-12=-302/1597, 12-13=-340/1533, 13-14=-498/1164

BOT CHORD 2-27=-35/0, 3-26=-240/1386, 25-26=-240/1385, 24-25=-240/1385, 24-32=-302/229, 32-33=-302/229, 23-33=-302/229, 22-23=0/28, 8-23=-127/72, 21-22=-283/0, 21-34=-1254/365, 20-34=-1254/365, 19-20=-1254/365, 18-19=-1851/447, 18-35=-1848/447, 35-36=-1848/447, 17-36=-1852/446, 16-17=-1851/447, 15-16=-980/387, 14-15=-980/387

WEBS 3-27=0/72, 4-24=-1147/342, 7-23=-1446/310, 9-23=-90/1225, 9-19=-2360/299, 10-19=-2074/231, 11-16=-533/304, 13-16=-879/228, 13-15=0/305, 9-21=-106/486, 21-23=-1125/419, 10-16=-341/1289, 4-26=0/304, 6-24=-419/256, 7-24=-299/1267

NOTES

1) 2x6 SP DSS bearing block 12" long at jt. 19 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
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 at joint(s) 14.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 106 lb uplift at joint 2, 404 lb uplift at joint 19 and 470 lb uplift at joint 14.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI JUAN GARCIA NUMBER E-2000162101 PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED 16952 KANSAS PROFESSIONAL ENGINEER

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	B11	Piggyback Base	1	1	I46220479

Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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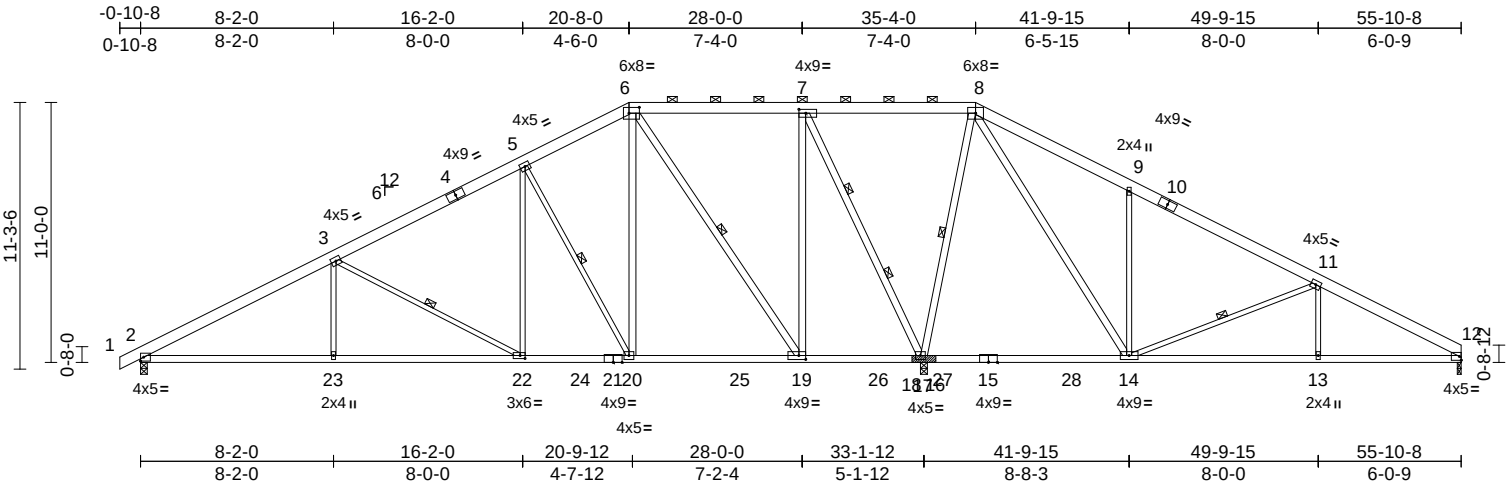

Scale = 1:97.5

Plate Offsets (X, Y): [6:0-5-4,0-3-0], [7:0-3-8,0-2-0], [19:0-3-8,0-2-0], [22:0-2-8,0-1-8]

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	0.53	Vert(LL)	-0.20	14-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.30	14-17	>916	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.06	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	22-23	>999	240	Weight: 292 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 21-15,18-16:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 20-6,19-6,7-19,17-7,17-8,14-8:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-4 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 5-9-4 oc bracing.
WEBS 1 Row at midpt 3-22, 5-20, 6-19, 8-17, 11-14
WEBS 2 Rows at 1/3 pts 7-17

REACTIONS (size) 2=0-3-8, 12=0-2-0, 17=(0-3-8 + bearing block), (req. 0-3-15)
Max Horiz 2=193 (LC 8)
Max Uplift 2=-201 (LC 8), 12=-160 (LC 9), 17=-188 (LC 8)
Max Grav 2=1331 (LC 23), 12=654 (LC 22), 17=3629 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-2101/288, 3-4=-1288/193, 4-5=-1156/231, 5-6=-764/220, 6-7=0/301, 7-8=0/1097, 8-9=-236/416, 9-10=-51/414, 10-11=-247/379, 11-12=-981/274
BOT CHORD 2-23=-341/1789, 22-23=-341/1789, 22-24=-110/1052, 21-24=-110/1052, 20-21=-110/1052, 20-25=-61/653, 19-25=-61/653, 19-26=-280/287, 18-26=-280/287, 17-18=-280/287, 16-17=-786/233, 16-27=-786/233, 15-27=-786/233, 15-28=-786/233, 14-28=-786/233, 13-14=-167/807, 12-13=-167/807
WEBS 3-23=0/357, 3-22=-845/263, 5-22=-52/629, 5-20=-894/277, 6-20=-172/1059, 6-19=-1312/192, 7-19=-88/1310, 7-17=-2004/222, 8-17=-1512/253, 9-14=-537/305, 11-14=-784/240, 11-13=0/293, 8-14=-342/1262

NOTES

1) 2x4 SPF 2400F 2.0E bearing block 12" long at jt. 17 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be DF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) 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
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 12.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 2, 188 lb uplift at joint 17 and 160 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/03/2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220480
210435	B12	Piggyback Base Structural Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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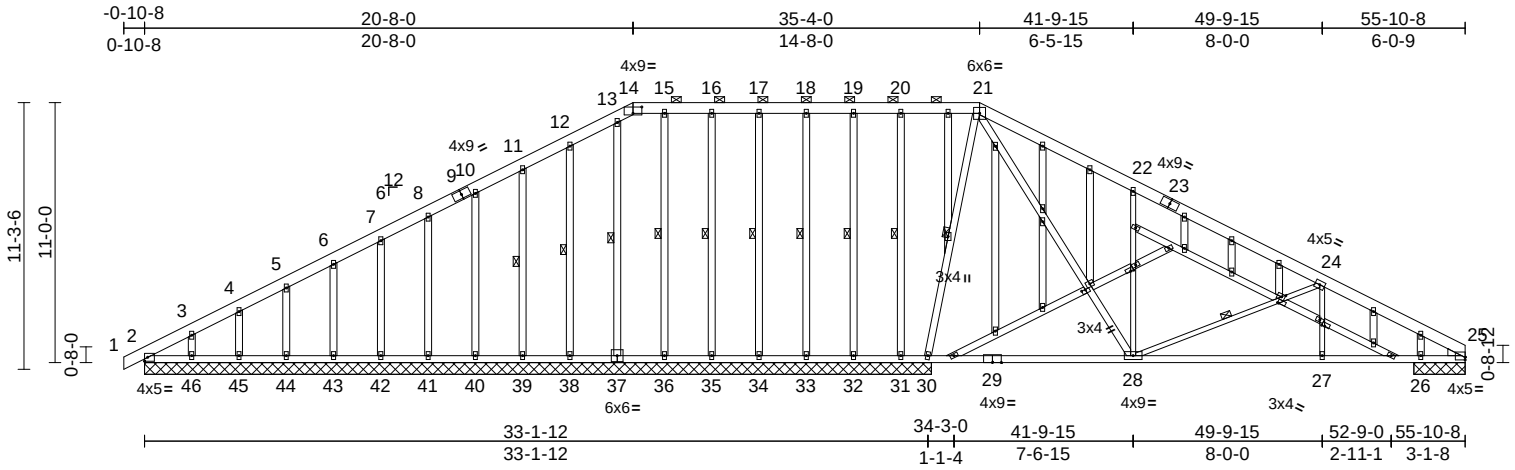

Scale = 1:97.5

Plate Offsets (X, Y): [14:0-4-8,0-3-4], [25:Edge,0-1-5], [48:0-0-10,Edge], [48:0-1-12,0-1-8], [49:0-1-10,0-0-4], [52:0-1-10,0-0-4], [53:0-2-0,0-0-4]

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	0.28	Vert(LL)	-0.09	28-30	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.19	27-28	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.02	30	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	27-28	>999	240	Weight: 412 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except*
22-28,24-27,28-24:2x3 SPF No.2
OTHERS 2x4 SPF No.2
WEDGE Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (10-0-0 max.): 14-21.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 27-28,26-27,25-26.
WEBS 1 Row at midpt 21-30, 24-28, 11-39, 12-38, 13-37, 15-36, 16-35, 17-34, 18-33, 19-32, 20-31

REACTIONS (size) 2=33-3-8, 25=2-2-0, 26=2-2-0, 30=33-3-8, 31=33-3-8, 32=33-3-8, 33=33-3-8, 34=33-3-8, 35=33-3-8, 36=33-3-8, 37=33-3-8, 38=33-3-8, 39=33-3-8, 40=33-3-8, 41=33-3-8, 42=33-3-8, 43=33-3-8, 44=33-3-8, 45=33-3-8, 46=33-3-8
Max Horiz 2=193 (LC 8)
Max Uplift 2=-123 (LC 22), 25=-176 (LC 9), 26=-9 (LC 9), 30=-93 (LC 9), 31=-139 (LC 5), 32=-21 (LC 5), 33=-36 (LC 4), 34=-34 (LC 4), 35=-39 (LC 4), 36=-4 (LC 5), 38=-58 (LC 8), 39=-57 (LC 8), 40=-54 (LC 8), 41=-54 (LC 8), 42=-54 (LC 8), 43=-54 (LC 8), 44=-54 (LC 8), 45=-54 (LC 8), 46=-87 (LC 8)
Max Grav 2=110 (LC 8), 25=748 (LC 1), 26=152 (LC 1), 30=1247 (LC 22), 31=115 (LC 21), 32=178 (LC 21), 33=172 (LC 1), 34=181 (LC 21), 35=177 (LC 21), 36=239 (LC 1), 37=276 (LC 1), 38=178 (LC 21), 39=179 (LC 21), 40=180 (LC 1), 41=180 (LC 21), 42=180 (LC 21), 43=180 (LC 21), 44=180 (LC 21), 45=181 (LC 1), 46=217 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-281/367, 3-4=-213/344, 4-5=-168/343, 5-6=-122/343, 6-7=-77/343, 7-8=-31/343, 8-9=0/315, 9-10=0/343, 10-11=0/343, 11-12=0/347, 12-13=0/359, 13-14=0/284, 14-15=0/302, 15-16=0/302, 16-17=0/302, 17-18=0/302, 18-19=0/302, 19-20=0/302, 20-21=0/303, 21-22=-722/425, 22-23=-500/254, 23-24=-725/232, 24-25=-1400/320
BOT CHORD 2-46=-282/234, 45-46=-282/234, 44-45=-282/234, 43-44=-282/234, 42-43=-282/234, 41-42=-282/234, 40-41=-282/234, 39-40=-282/234, 38-39=-282/234, 37-38=-282/234, 36-37=-282/234, 35-36=-282/234, 34-35=-282/234, 33-34=-282/234, 32-33=-282/234, 31-32=-282/234, 30-31=-282/234, 29-30=-74/189, 28-29=-74/189, 27-28=-207/1150, 26-27=-207/1150, 25-26=-207/1150
WEBS 21-30=-1044/222, 22-28=-552/305, 24-27=0/247, 24-28=-663/236, 21-28=-342/1157, 3-46=-174/111, 4-45=-142/78, 5-44=-140/78, 6-43=-140/78, 7-42=-140/78, 8-41=-140/78, 10-40=-140/78, 11-39=-139/81, 12-38=-138/82, 13-37=-236/4, 15-36=-199/28, 16-35=-137/63, 17-34=-140/59, 18-33=-138/57, 19-32=-119/57, 20-31=-223/78

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) Provide adequate drainage to prevent water ponding.

JUAN GARCIA NUMBER E-2000162101 LICENSED 16952 KANSAS PROFESSIONAL ENGINEER
May 20,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220480
210435	B12	Piggyback Base Structural Gable	1	1	Job Reference (optional)	

5) All plates are 2x4 MT20 unless otherwise indicated.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 25, 123 lb uplift at joint 2, 93 lb uplift at joint 30, 87 lb uplift at joint 46, 54 lb uplift at joint 45, 54 lb uplift at joint 44, 54 lb uplift at joint 43, 54 lb uplift at joint 42, 54 lb uplift at joint 41, 54 lb uplift at joint 40, 57 lb uplift at joint 39, 58 lb uplift at joint 38, 4 lb uplift at joint 36, 39 lb uplift at joint 35, 34 lb uplift at joint 34, 36 lb uplift at joint 33, 21 lb uplift at joint 32, 139 lb uplift at joint 31 and 9 lb uplift at joint 26.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220481
210435	C1	Common Structural Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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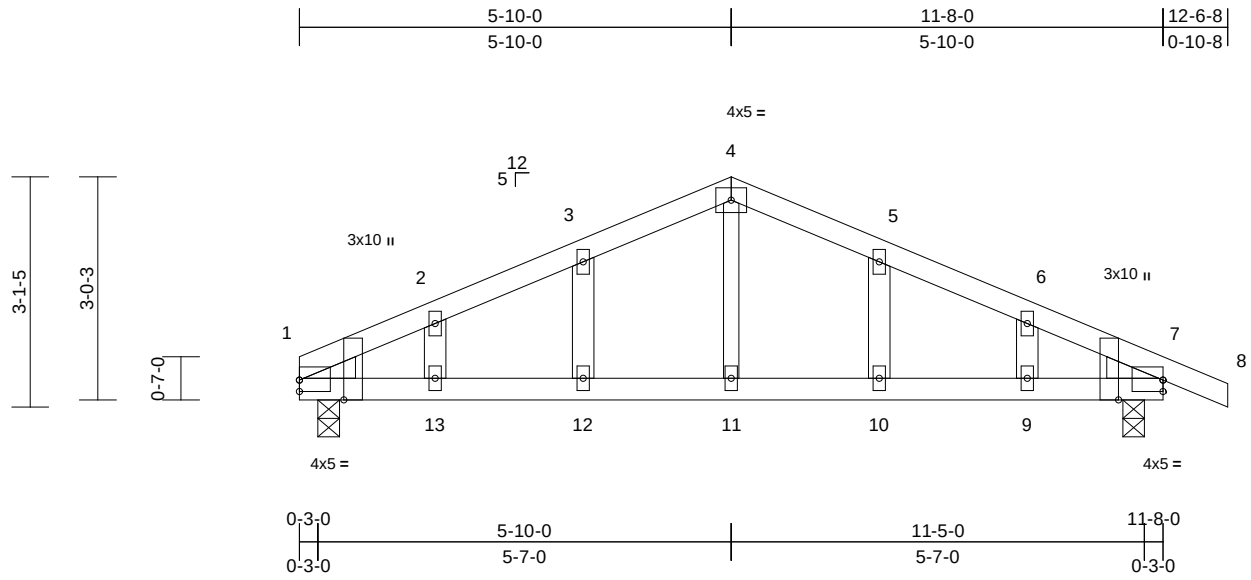

Scale = 1:31.1

Plate Offsets (X, Y): [1:Edge,0-1-14], [1:0-3-3,Edge], [7:Edge,0-1-14], [7:0-3-3,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	0.29	Vert(LL)	-0.06	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.08	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	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: 38 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	Left: 2x4 SPF No.2 Right: 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=0-3-8, 7=0-3-8
Max Horiz 1=-51 (LC 13)
Max Uplift 1=-65 (LC 8), 7=-89 (LC 9)
Max Grav 1=509 (LC 1), 7=587 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-758/67, 2-3=-688/86, 3-4=-666/108, 4-5=-666/110, 5-6=-689/88, 6-7=-769/70, 7-8=0/6
BOT CHORD	1-13=-43/614, 12-13=-43/614, 11-12=-43/614, 10-11=-43/614, 9-10=-43/614, 7-9=-43/614
WEBS	4-11=-18/252, 3-12=-77/56, 2-13=-4/61, 5-10=-78/56, 6-9=0/62

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 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 1 and 89 lb uplift at joint 7.
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

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220482
210435	C2	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:27 Page: 1
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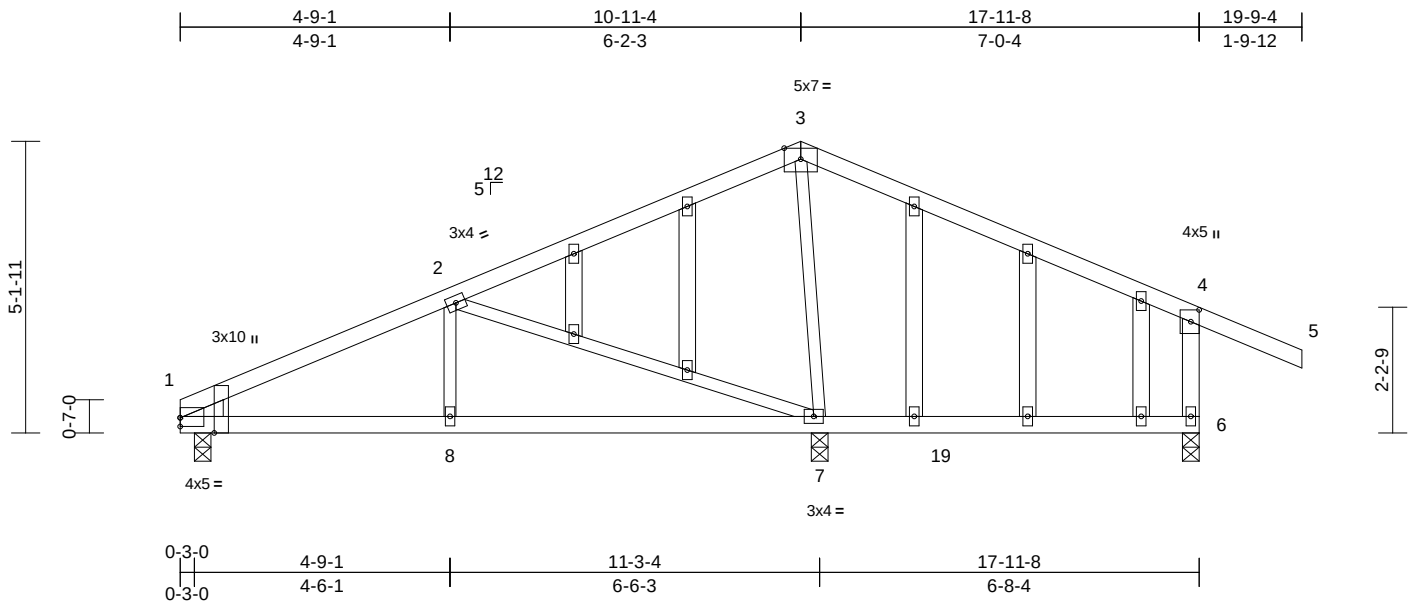

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Plate Offsets (X, Y): [1:Edge,0-1-14], [1:0-3-3,Edge], [4:0-2-8,0-1-12]

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	0.55	Vert(LL)	-0.05	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.09	6-7	>865	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	1-8	>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* 6-4:2x4 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	Left: 2x4 SPF No.2

BRACING

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

REACTIONS (size) 1=0-3-8, 6=0-3-8, 7=0-3-8
Max Horiz 1=78 (LC 12)
Max Uplift 1=-97 (LC 8), 6=-167 (LC 9), 7=-46 (LC 8)
Max Grav 1=528 (LC 2), 6=500 (LC 22), 7=793 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-871/174, 2-3=-201/163, 3-4=-204/137, 4-5=0/53, 4-6=-443/200
BOT CHORD	1-8=-186/753, 7-8=-186/753, 7-19=-48/94, 6-19=-48/94
WEBS	2-8=0/232, 2-7=-710/207, 3-7=-354/63

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 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 167 lb uplift at joint 6, 46 lb uplift at joint 7 and 97 lb uplift at joint 1.
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

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220483
210435	C3	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:28 Page: 1
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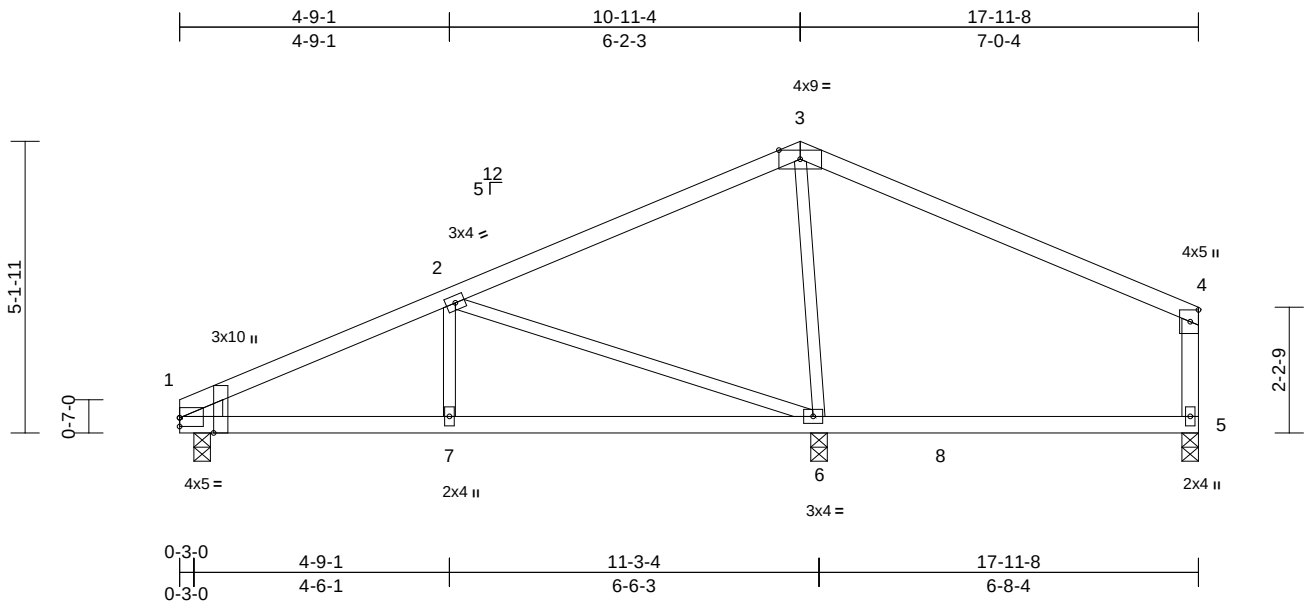

Scale = 1:40.6

Plate Offsets (X, Y): [1:Edge,0-1-14], [1:0-3-3,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	0.65	Vert(LL)	-0.05	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.09	5-6	>866	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	1-7	>999	240	Weight: 56 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 5-4:2x4 SPF No.2
WEDGE Left: 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-3-8, 6=0-3-8
Max Horiz 1=92 (LC 8)
Max Uplift 1=-90 (LC 8), 5=-100 (LC 9), 6=-62 (LC 8)
Max Grav 1=529 (LC 2), 5=343 (LC 22), 6=806 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-873/158, 2-3=-208/132, 3-4=-199/100, 4-5=-286/133
BOT CHORD 1-7=-186/754, 6-7=-186/754, 6-8=-47/96, 5-8=-47/96
WEBS 2-7=0/232, 2-6=-708/207, 3-6=-372/79

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 100 lb uplift at joint 5, 62 lb uplift at joint 6 and 90 lb uplift at joint 1.
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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220484
210435	C4	Roof Special Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:29 Page: 1
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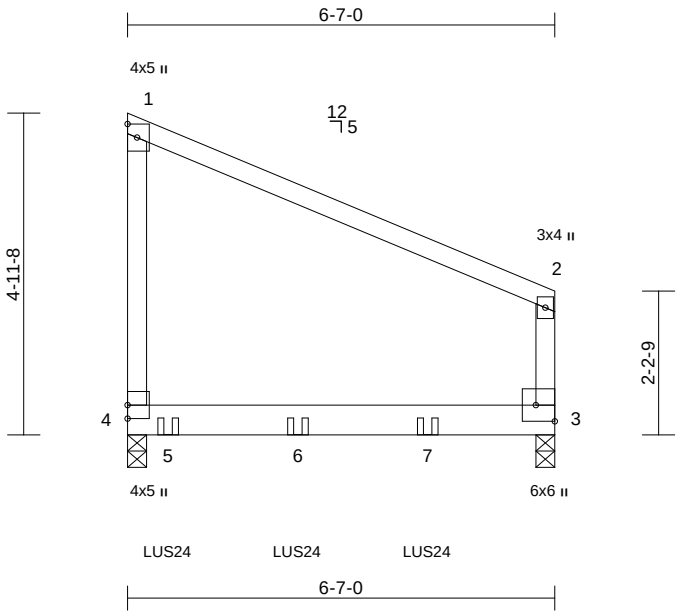

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Plate Offsets (X, Y): [3:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.06	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.11	3-4	>696	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	3-4	>999	240	Weight: 27 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 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) 3=0-3-8, 4=0-3-8
Max Horiz 4=-187 (LC 4)
Max Uplift 3=-89 (LC 9), 4=-171 (LC 4)
Max Grav 3=520 (LC 17), 4=617 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-203/96, 1-2=-178/38, 2-3=-237/88
BOT CHORD 4-5=-29/137, 5-6=-29/137, 6-7=-29/137, 3-7=-29/137

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 171 lb uplift at joint 4 and 89 lb uplift at joint 3.
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.
6) Use Simpson Strong-Tie LUS24 (4-10dx1 1/2 Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-7-8 from the left end to 4-7-8 to connect truss(es) to back face of bottom chord.
7) Fill all nail holes where hanger is in contact with lumber.
8) 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, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-186 (B), 6=-181 (B), 7=-181 (B)

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220485
210435	C5	Common Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:29 Page: 1
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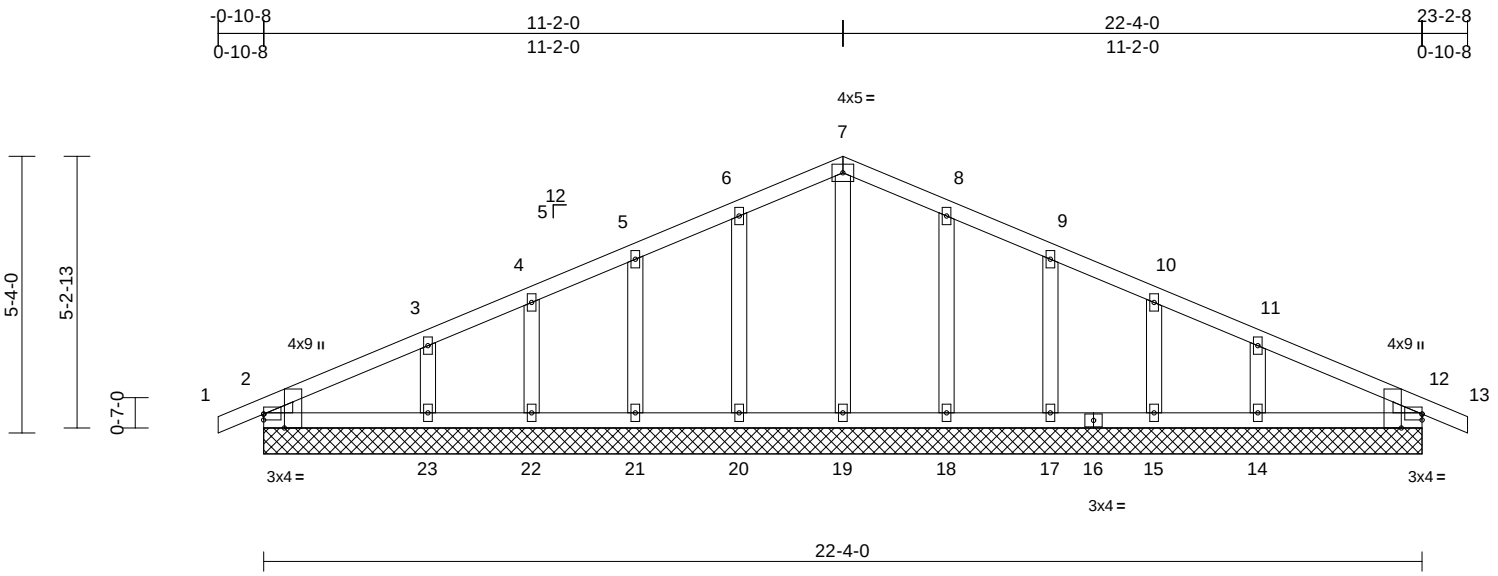

Scale = 1:44.4

Plate Offsets (X, Y): [2:Edge,0-1-6], [2:0-3-3,Edge], [12:Edge,0-1-6], [12:0-3-3,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	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	0.05	Horz(CT)	0.00	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 85 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
OTHERS	2x4 SPF No.2
WEDGE	Left: 2x3 SPF No.2 Right: 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) 2=22-4-0, 12=22-4-0, 14=22-4-0, 15=22-4-0, 17=22-4-0, 18=22-4-0, 19=22-4-0, 20=22-4-0, 21=22-4-0, 22=22-4-0, 23=22-4-0
Max Horiz 2=88 (LC 8)
Max Uplift 2=-23 (LC 4), 12=-26 (LC 5), 14=-80 (LC 9), 15=-37 (LC 9), 17=-51 (LC 9), 18=-49 (LC 9), 20=-50 (LC 8), 21=-50 (LC 8), 22=-37 (LC 8), 23=-83 (LC 8)
Max Grav 2=194 (LC 1), 12=194 (LC 1), 14=275 (LC 22), 15=146 (LC 22), 17=187 (LC 1), 18=189 (LC 22), 19=159 (LC 1), 20=189 (LC 21), 21=187 (LC 1), 22=146 (LC 21), 23=275 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-105/69, 3-4=-60/72, 4-5=-37/91, 5-6=-38/112, 6-7=-40/132, 7-8=-40/126, 8-9=-38/88, 9-10=-36/52, 10-11=-45/33, 11-12=-75/45, 12-13=0/6
BOT CHORD	2-23=-5/76, 22-23=-5/76, 21-22=-5/76, 20-21=-5/76, 19-20=-5/76, 18-19=-5/76, 17-18=-5/76, 16-17=-5/76, 15-16=-5/76, 14-15=-5/76, 12-14=-5/76
WEBS	7-19=-119/0, 6-20=-150/74, 5-21=-144/75, 4-22=-117/59, 3-23=-204/113, 8-18=-150/73, 9-17=-144/75, 10-15=-117/59, 11-14=-204/110

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) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2, 50 lb uplift at joint 20, 50 lb uplift at joint 21, 37 lb uplift at joint 22, 83 lb uplift at joint 23, 49 lb uplift at joint 18, 51 lb uplift at joint 17, 37 lb uplift at joint 15, 80 lb uplift at joint 14 and 26 lb uplift at joint 12.
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

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220486
210435	D1	Common Supported Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:29 Page: 1
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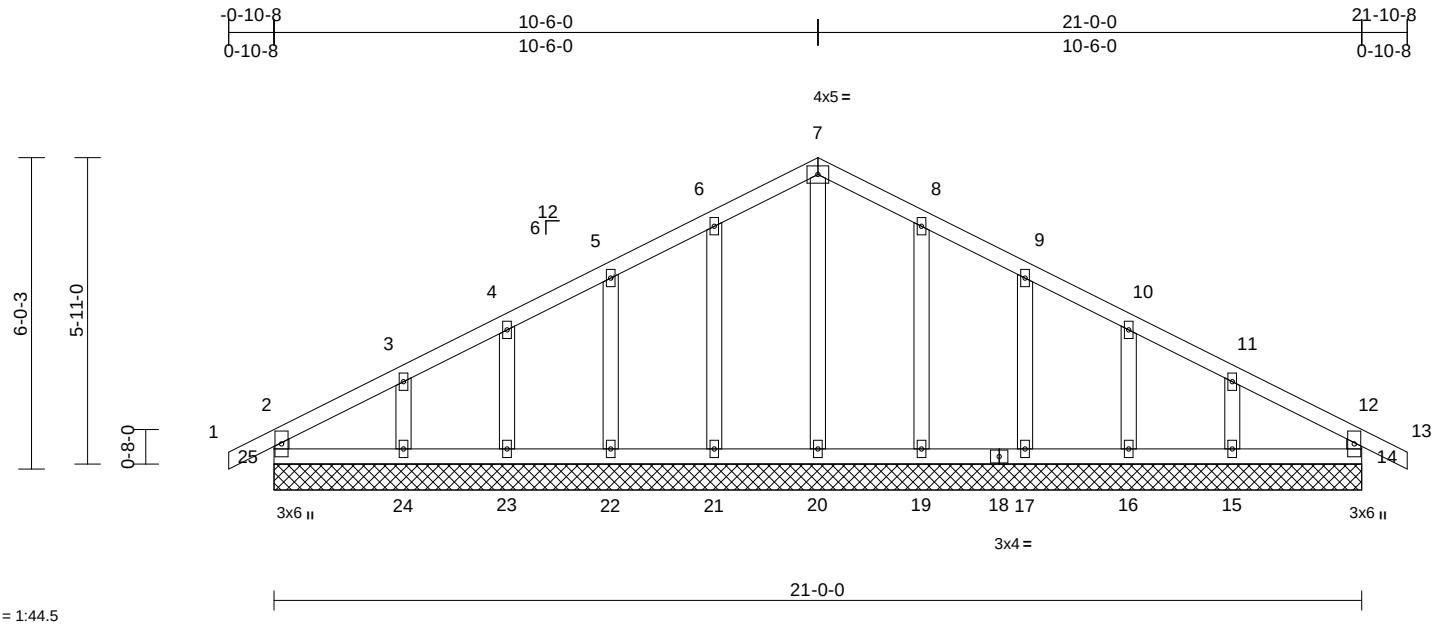

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 86 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) 14=21-0-0, 15=21-0-0, 16=21-0-0, 17=21-0-0, 19=21-0-0, 20=21-0-0, 21=21-0-0, 22=21-0-0, 23=21-0-0, 24=21-0-0, 25=21-0-0
Max Horiz 25=90 (LC 7)
Max Uplift 14=-16 (LC 8), 15=-80 (LC 9), 16=-46 (LC 9), 17=-57 (LC 9), 19=-54 (LC 9), 21=-55 (LC 8), 22=-57 (LC 8), 23=-44 (LC 8), 24=-87 (LC 8), 25=-31 (LC 9)
Max Grav 14=184 (LC 1), 15=199 (LC 22), 16=175 (LC 1), 17=180 (LC 1), 19=190 (LC 22), 20=171 (LC 18), 21=190 (LC 21), 22=180 (LC 1), 23=175 (LC 1), 24=199 (LC 21), 25=184 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-25=-163/42, 1-2=0/32, 2-3=-92/58, 3-4=-61/81, 4-5=-50/107, 5-6=-42/134, 6-7=-46/158, 7-8=-46/150, 8-9=-42/110, 9-10=-43/84, 10-11=-44/59, 11-12=-74/40, 12-13=0/32, 12-14=-163/29
BOT CHORD 24-25=-18/74, 23-24=-18/74, 22-23=-18/74, 21-22=-18/74, 20-21=-18/74, 19-20=-18/74, 18-19=-18/74, 17-18=-18/74, 16-17=-18/74, 15-16=-18/74, 14-15=-18/74
WEBS 7-20=-131/0, 6-21=-150/79, 5-22=-139/80, 4-23=-137/71, 3-24=-151/103, 8-19=-150/79, 9-17=-139/80, 10-16=-137/72, 11-15=-151/99

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 31 lb uplift at joint 25, 16 lb uplift at joint 14, 55 lb uplift at joint 21, 57 lb uplift at joint 22, 44 lb uplift at joint 23, 87 lb uplift at joint 24, 54 lb uplift at joint 19, 57 lb uplift at joint 17, 46 lb uplift at joint 16 and 80 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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220487
210435	D2	Common	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:30 Page: 1
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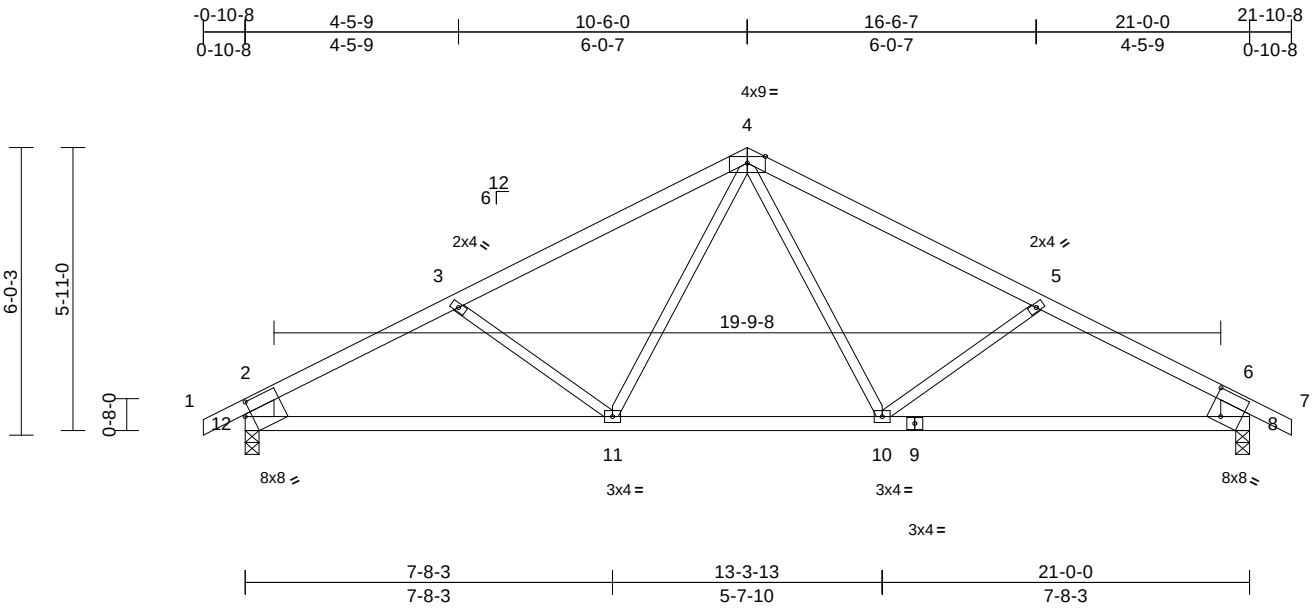

Scale = 1:48.2

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	0.83	Vert(LL)	-0.13	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.21	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	10-11	>999	240	Weight: 72 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 2-8-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=93 (LC 7)
Max Uplift 8=-141 (LC 9), 12=-141 (LC 8)
Max Grav 8=1000 (LC 1), 12=1000 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-1415/220, 3-4=-1181/162, 4-5=-1181/162, 5-6=-1415/220, 6-7=0/37, 2-12=-906/178, 6-8=-906/178
BOT CHORD 11-12=-216/1170, 10-11=-33/847, 9-10=-133/1170, 8-9=-133/1170
WEBS 4-10=-42/315, 5-10=-288/206, 4-11=-42/315, 3-11=-288/205

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 12 and 141 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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	J1	Diagonal Hip Girder	2	1	Job Reference (optional) I46220488

Wheeler Lumber, Waverly, KS - 66871,

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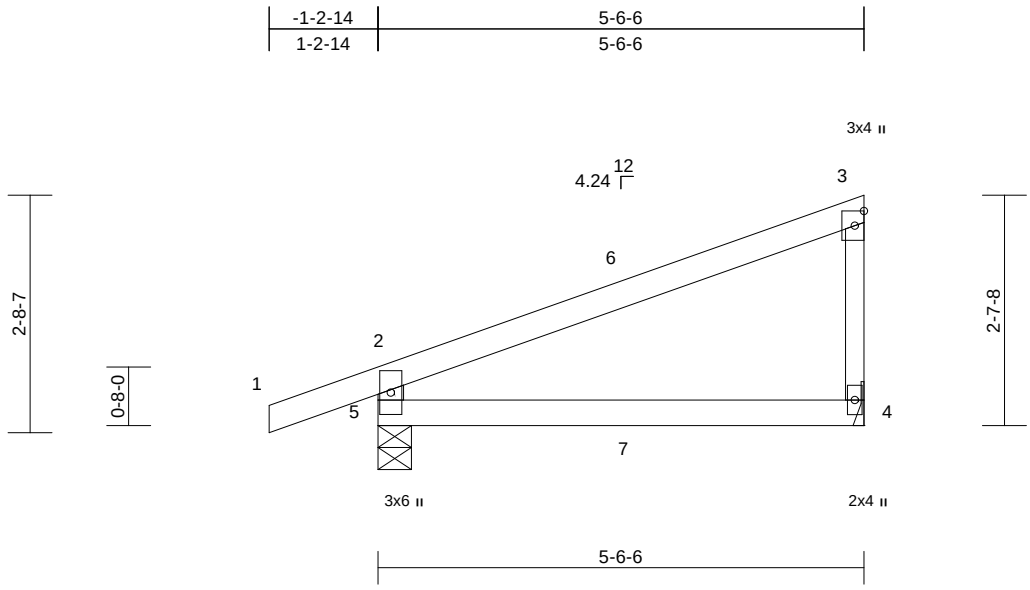

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.07	4-5	>967	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 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) 4= Mechanical, 5=0-4-9
Max Horiz 5=111 (LC 7)
Max Uplift 4=-50 (LC 8), 5=-101 (LC 4)
Max Grav 4=224 (LC 1), 5=346 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-306/140, 1-2=0/32, 2-6=-139/13, 3-6=-70/14, 3-4=-160/73
BOT CHORD 5-7=-26/45, 4-7=-26/45

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 101 lb uplift at joint 5 and 50 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) 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 1 lb up at 2-9-8, and 3 lb down and 1 lb up at 2-9-8 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
8) 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=2 (F=1, B=1)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN
210435	J2	Jack-Open	3	1	Job Reference (optional)

I46220489

06/03/2021

Wheeler Lumber, Waverly, KS - 66871,

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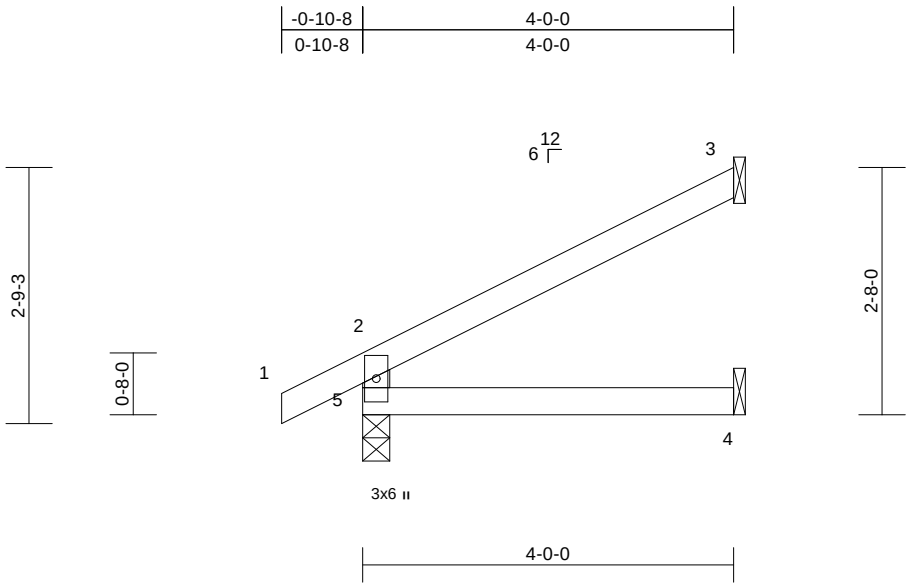

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	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

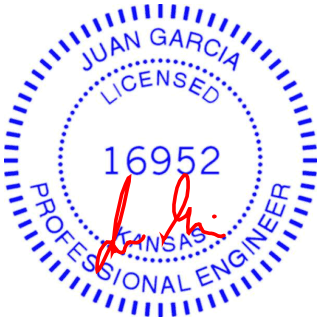
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

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) Refer to girder(s) for truss to truss connections.
5) 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.
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



May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220490
210435	J3	Jack-Open	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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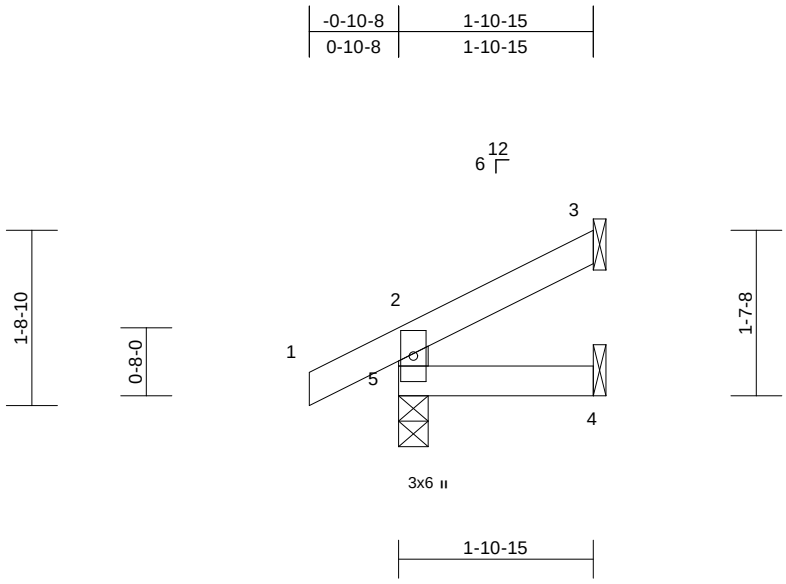

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	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

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) Refer to girder(s) for truss to truss connections.
5) 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.
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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220491
210435	P1	Piggyback	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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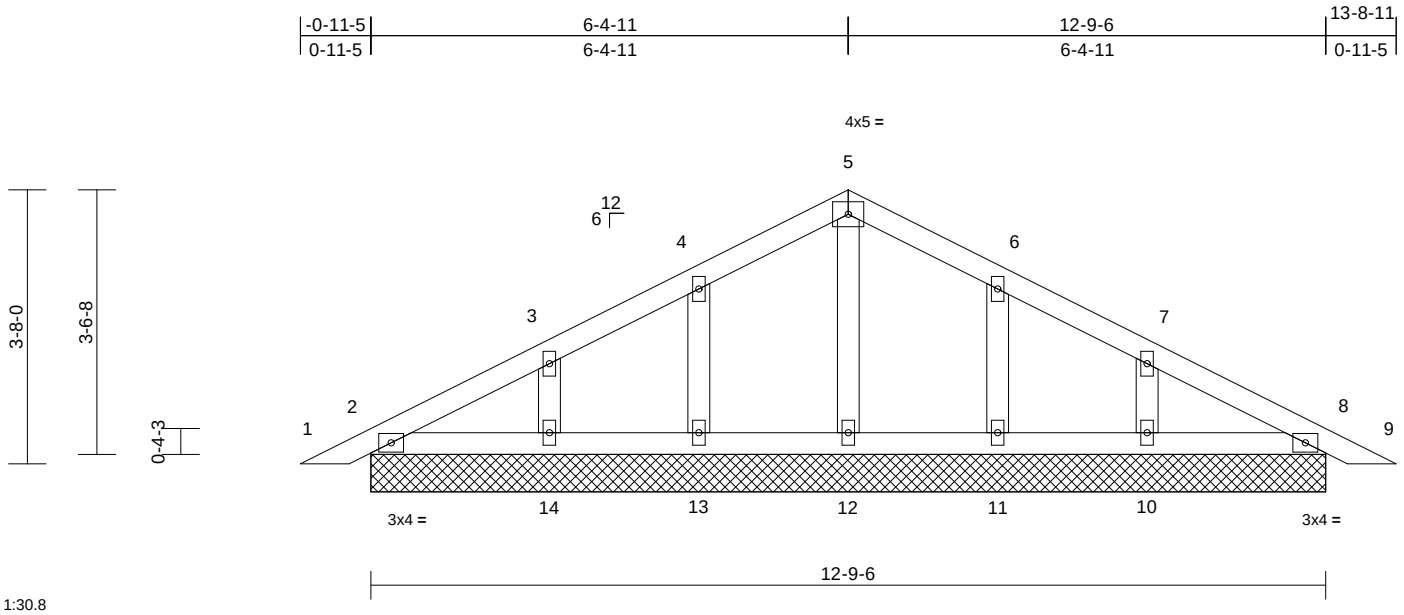

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 43 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=12-9-6, 8=12-9-6, 10=12-9-6, 11=12-9-6, 12=12-9-6, 13=12-9-6, 14=12-9-6
Max Horiz 2=62 (LC 12)
Max Uplift 2=-15 (LC 9), 8=-20 (LC 9), 10=-65 (LC 9), 11=-55 (LC 9), 13=-55 (LC 8), 14=-66 (LC 8)
Max Grav 2=144 (LC 1), 8=144 (LC 1), 10=219 (LC 1), 11=179 (LC 22), 12=160 (LC 1), 13=179 (LC 21), 14=219 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-74/48, 3-4=-48/63, 4-5=-47/88, 5-6=-47/80, 6-7=-47/37, 7-8=-54/32, 8-9=0/17
BOT CHORD 2-14=-3/56, 13-14=-3/56, 12-13=-3/56, 11-12=-3/56, 10-11=-3/56, 8-10=-3/56
WEBS 5-12=-117/0, 4-13=-144/79, 3-14=-164/91, 6-11=-144/79, 7-10=-164/91

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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 2, 20 lb uplift at joint 8, 55 lb uplift at joint 13, 66 lb uplift at joint 14, 55 lb uplift at joint 11 and 65 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220492
210435	P2	Piggyback	19	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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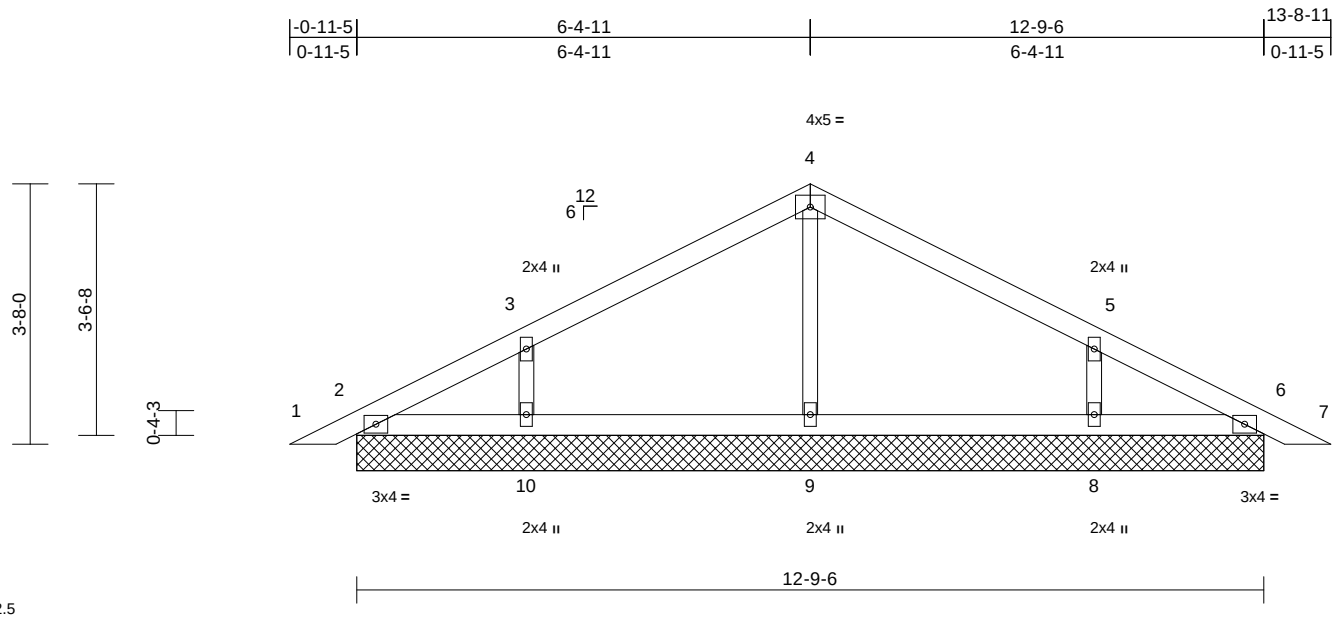

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 37 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) 2=12-9-6, 6=12-9-6, 8=12-9-6, 9=12-9-6, 10=12-9-6
Max Horiz 2=-62 (LC 9)
Max Uplift 2=-17 (LC 9), 6=-13 (LC 9), 8=-109 (LC 9), 10=-109 (LC 8)
Max Grav 2=130 (LC 1), 6=130 (LC 1), 8=341 (LC 22), 9=313 (LC 1), 10=341 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-85/44, 3-4=-106/87, 4-5=-106/71, 5-6=-66/29, 6-7=0/17
BOT CHORD 2-10=0/57, 9-10=0/57, 8-9=0/57, 6-8=0/57
WEBS 4-9=-228/36, 3-10=-273/152, 5-8=-273/151

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) 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 17 lb uplift at joint 2, 13 lb uplift at joint 6, 109 lb uplift at joint 10 and 109 lb uplift at joint 8.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220493
210435	V1	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Apr 20 2021 Print: 8.430 S Apr 20 2021 MiTek Industries, Inc. Thu May 20 12:46:32 Page: 1
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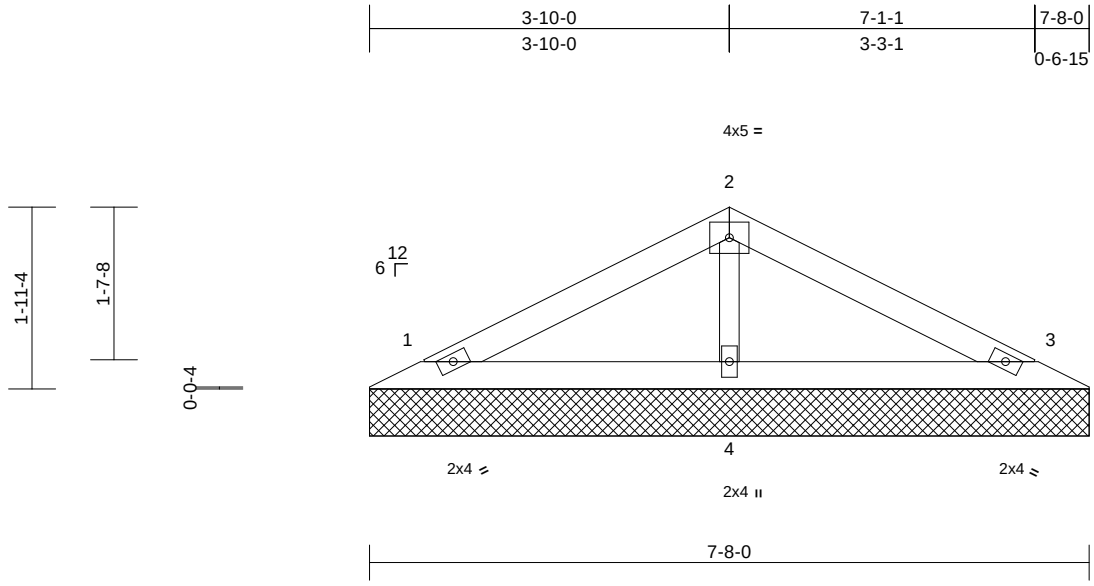

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	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
OTHERS 2x3 SPF No.2

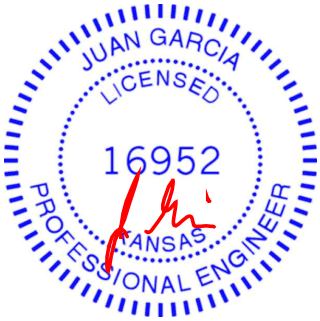
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-8-0, 3=7-8-0, 4=7-8-0
Max Horiz 1=29 (LC 12)
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
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 35 lb uplift at joint 1, 40 lb uplift at joint 3 and 4 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



May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220494
210435	V2	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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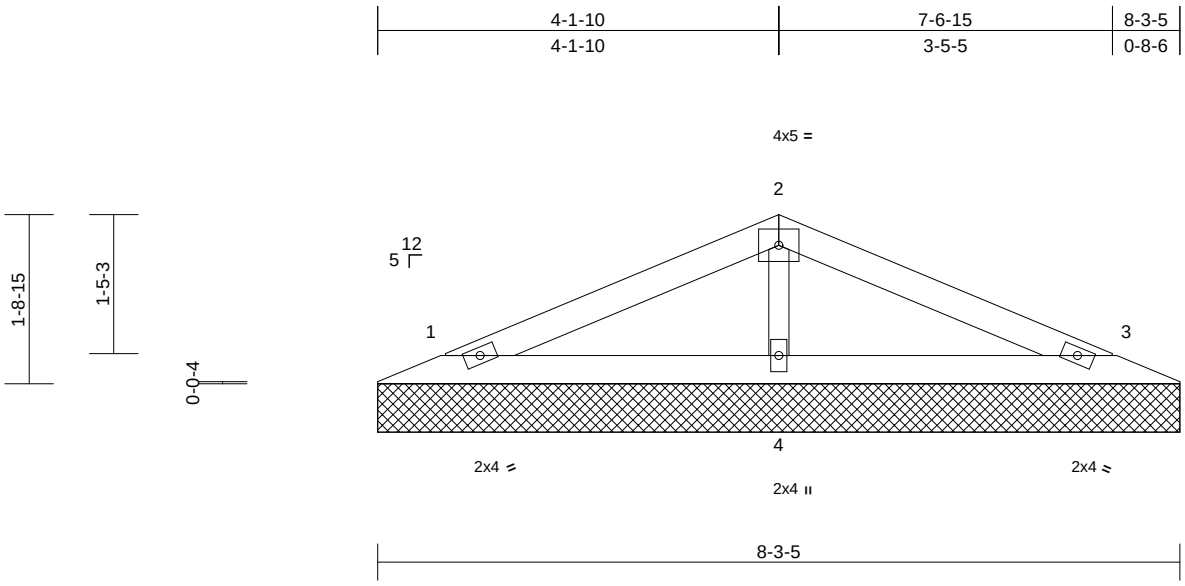

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	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
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=8-3-5, 3=8-3-5, 4=8-3-5
Max Horiz 1=25 (LC 8)
Max Uplift 1=-36 (LC 8), 3=-40 (LC 9), 4=-8 (LC 8)
Max Grav 1=156 (LC 1), 3=156 (LC 1), 4=306 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-63/36, 2-3=-63/25
BOT CHORD 1-4=-1/27, 3-4=-1/27
WEBS 2-4=-220/59

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 36 lb uplift at joint 1, 40 lb uplift at joint 3 and 8 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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220495
210435	V3	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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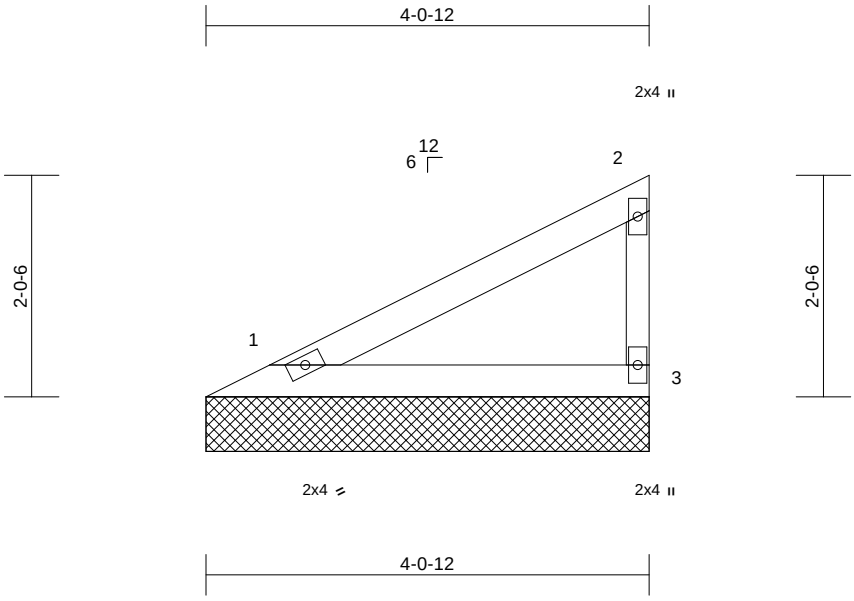

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-0-12, 3=4-0-12
Max Horiz 1=70 (LC 5)
Max Uplift 1=-19 (LC 8), 3=-37 (LC 8)
Max Grav 1=150 (LC 1), 3=150 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-64/42, 2-3=-117/57
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) 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.
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

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220496
210435	V4	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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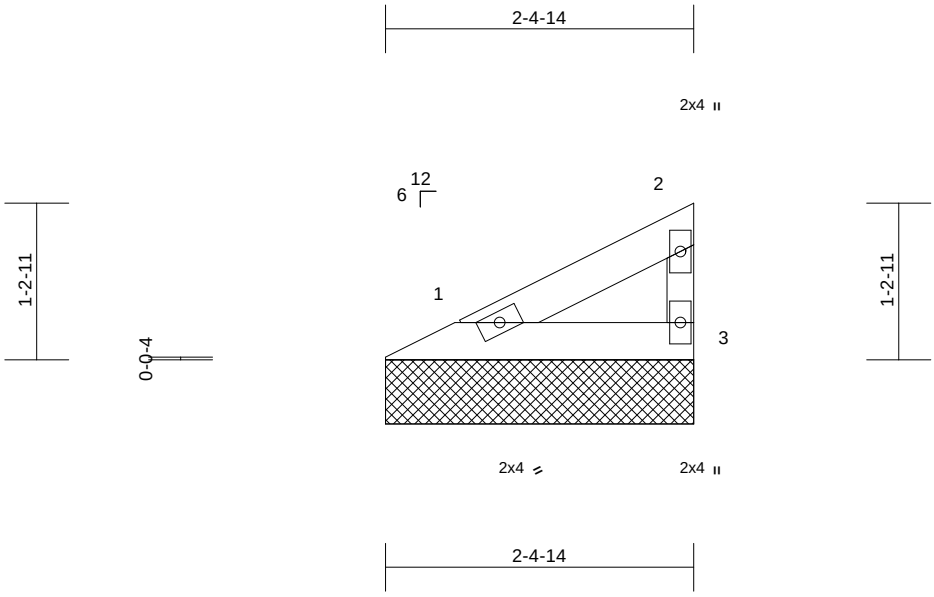

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 6 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 2-5-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-4-14, 3=2-4-14
Max Horiz 1=36 (LC 5)
Max Uplift 1=-10 (LC 8), 3=-19 (LC 8)
Max Grav 1=77 (LC 1), 3=77 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-33/22, 2-3=-60/29
BOT CHORD 1-3=-12/9

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 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 19 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

May 20,2021

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220497
210435	V5	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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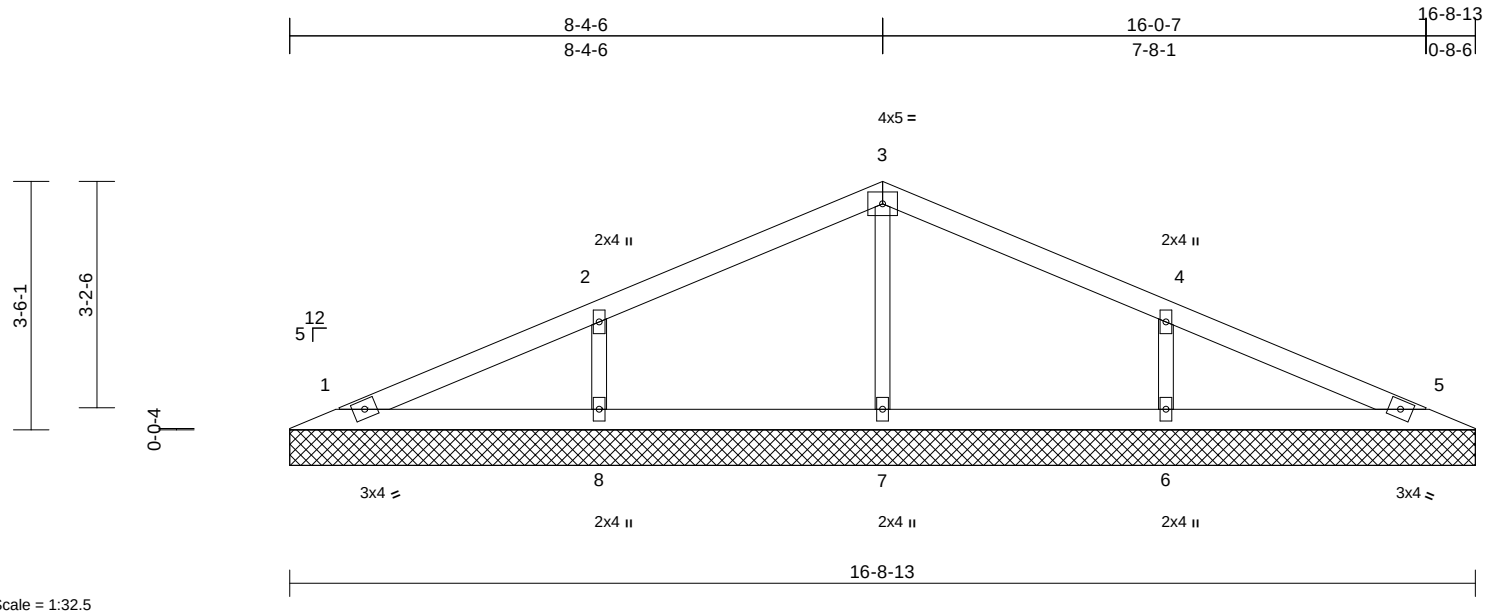

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 42 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=16-8-13, 5=16-8-13, 6=16-8-13, 7=16-8-13, 8=16-8-13
Max Horiz 1=56 (LC 12)
Max Uplift 1=-10 (LC 9), 5=-14 (LC 9), 6=-114 (LC 9), 8=-114 (LC 8)
Max Grav 1=135 (LC 1), 5=135 (LC 1), 6=410 (LC 22), 7=300 (LC 1), 8=410 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-75/54, 2-3=-88/84, 3-4=-88/72, 4-5=-57/43
BOT CHORD 1-8=0/43, 7-8=0/43, 6-7=0/43, 5-6=0/43
WEBS 3-7=-226/37, 2-8=-318/160, 4-6=-318/160

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 10 lb uplift at joint 1, 14 lb uplift at joint 5, 114 lb uplift at joint 8 and 114 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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220498
210435	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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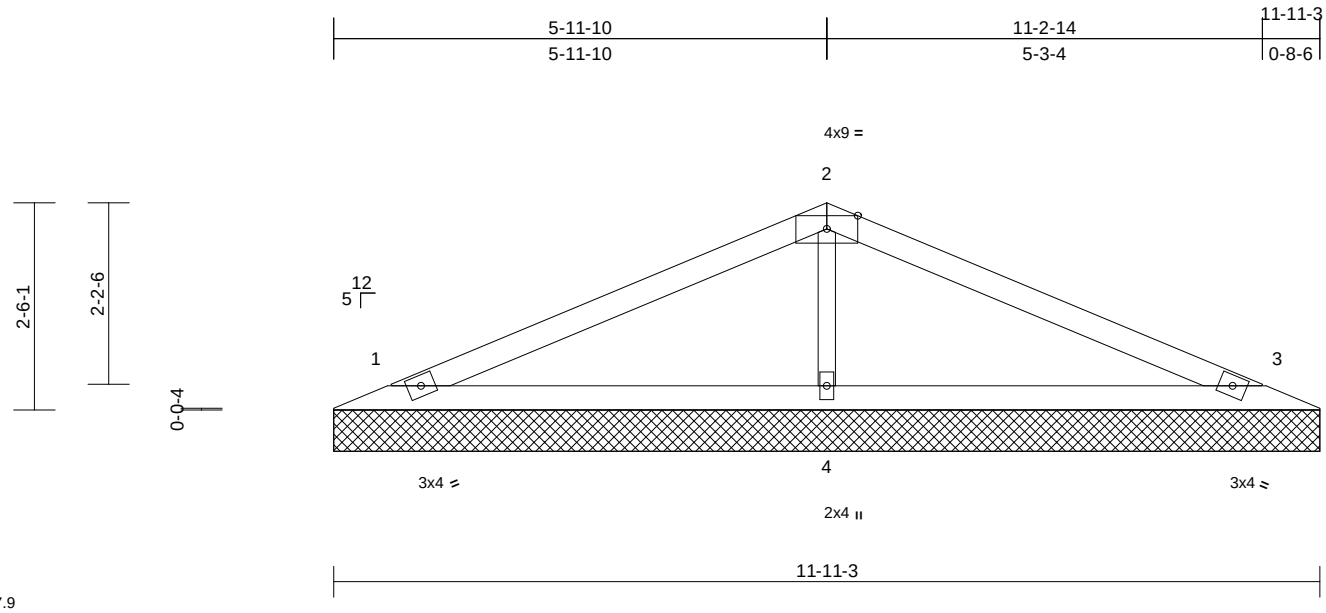

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 28 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=11-11-3, 3=11-11-3, 4=11-11-3
Max Horiz 1=39 (LC 8)
Max Uplift 1=-45 (LC 8), 3=-51 (LC 9), 4=-33 (LC 8)
Max Grav 1=217 (LC 21), 3=217 (LC 22), 4=521 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-111/57, 2-3=-111/44
BOT CHORD 1-4=-2/44, 3-4=-2/44
WEBS 2-4=-362/96

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 45 lb uplift at joint 1, 51 lb uplift at joint 3 and 33 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

May 20,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 90 MN	I46220499
210435	V7	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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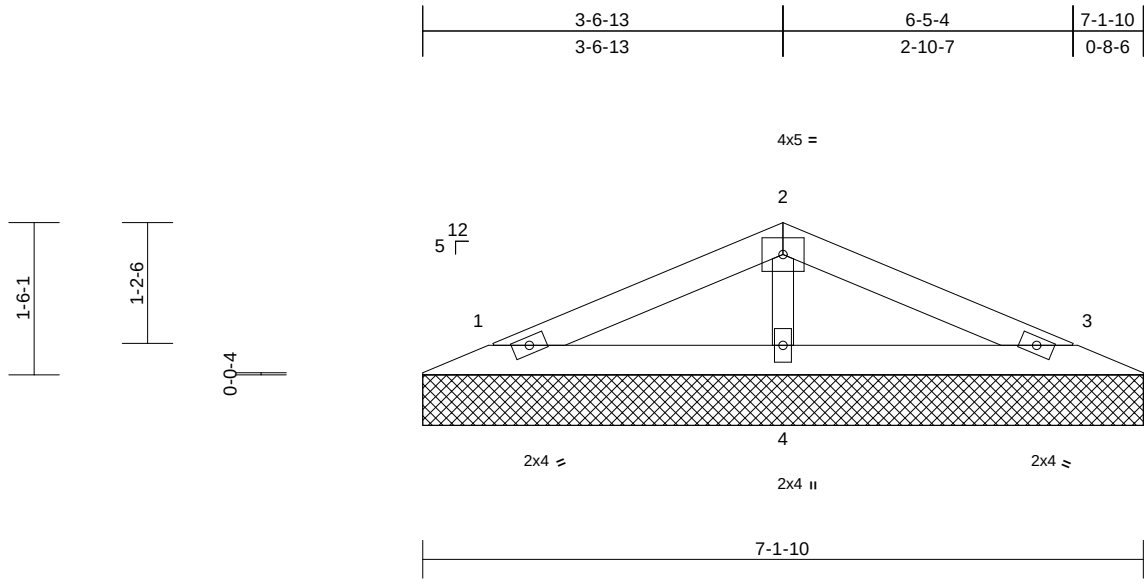

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	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

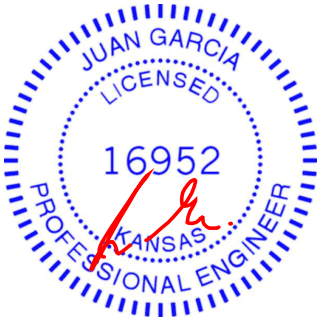
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-1-10, 3=7-1-10, 4=7-1-10
Max Horiz 1=21 (LC 8)
Max Uplift 1=-30 (LC 8), 3=-34 (LC 9), 4=-7 (LC 8)
Max Grav 1=130 (LC 1), 3=130 (LC 1), 4=255 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-53/30, 2-3=-53/21
BOT CHORD 1-4=-1/22, 3-4=-1/22
WEBS 2-4=-184/50

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 30 lb uplift at joint 1, 34 lb uplift at joint 3 and 7 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

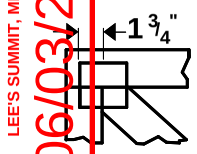


May 20,2021

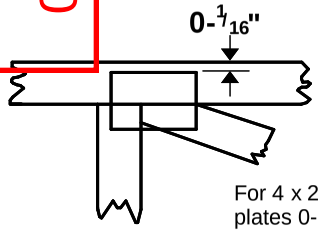
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

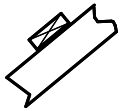
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

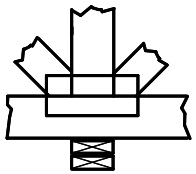
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

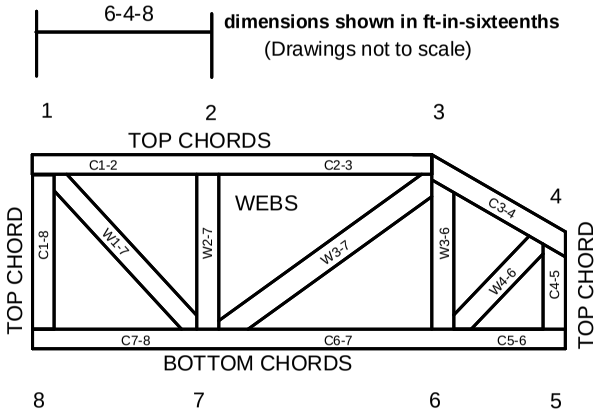


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.