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

Re: B210104
57 W2

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

Pages or sheets covered by this seal: I49493448 thru I49493481

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

Missouri COA: Engineering 001193

December 31,2021

Sevier, Scott ,Engineer

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

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	A1	Hip Girder	1	1	I49493448 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Fri Dec 31 14:12:32
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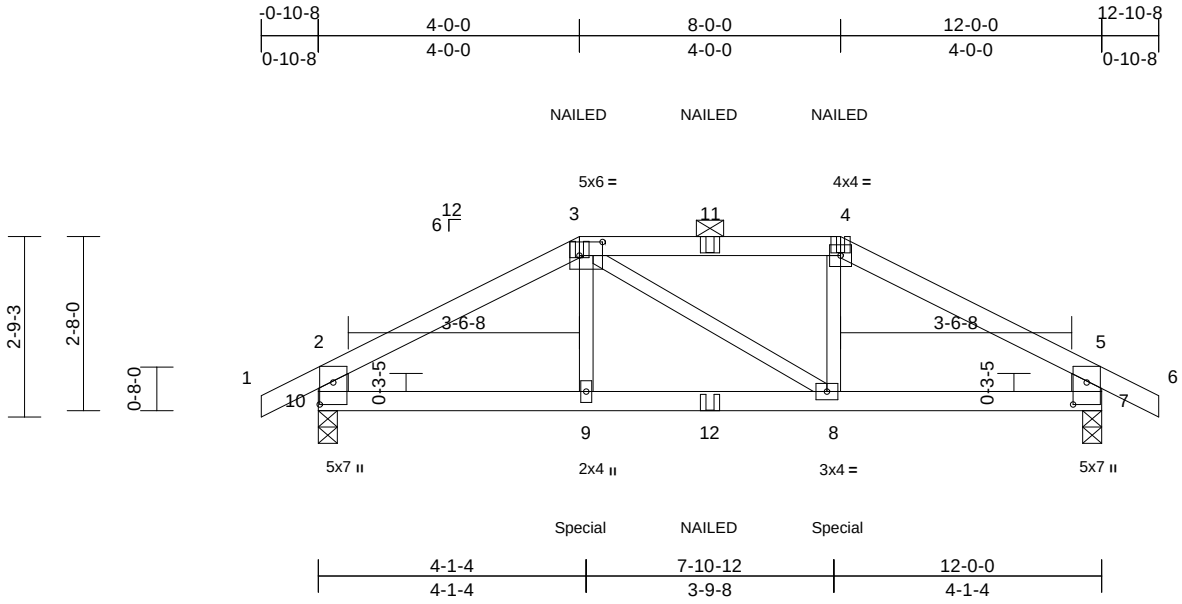

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Plate Offsets (X, Y): [3:0-4-4,0-2-8], [7:0-4-1,0-2-8], [10:0-4-1,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	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 (lb/size) 7=899/0-3-8, 10=899/0-3-8
Max Horiz 10=50 (LC 7)
Max Uplift 7=-201 (LC 9), 10=-201 (LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1231/277, 3-11=-1024/269, 4-11=-1024/269, 4-5=-1232/276, 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, 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)

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	A2	Common	4	1	I49493449
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:53 ID:HEDVssSlsPxPD0rorIkO2YyUre3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

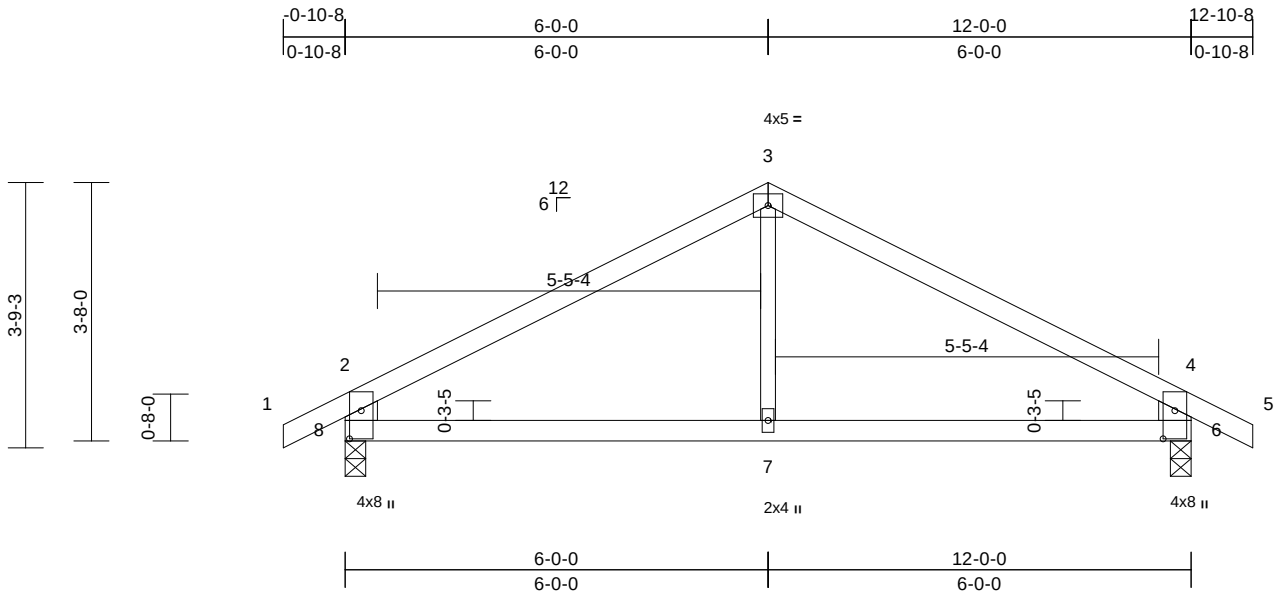

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Plate Offsets (X, Y): [6:0-4-13,0-2-0], [8:0-4-13,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	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 (lb/size) 6=597/0-3-8, 8=597/0-3-8
Max Horiz 8=62 (LC 7)
Max Uplift 6=-89 (LC 9), 8=-89 (LC 8)

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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B1	Piggyback Base Supported Gable	1	1	I49493450 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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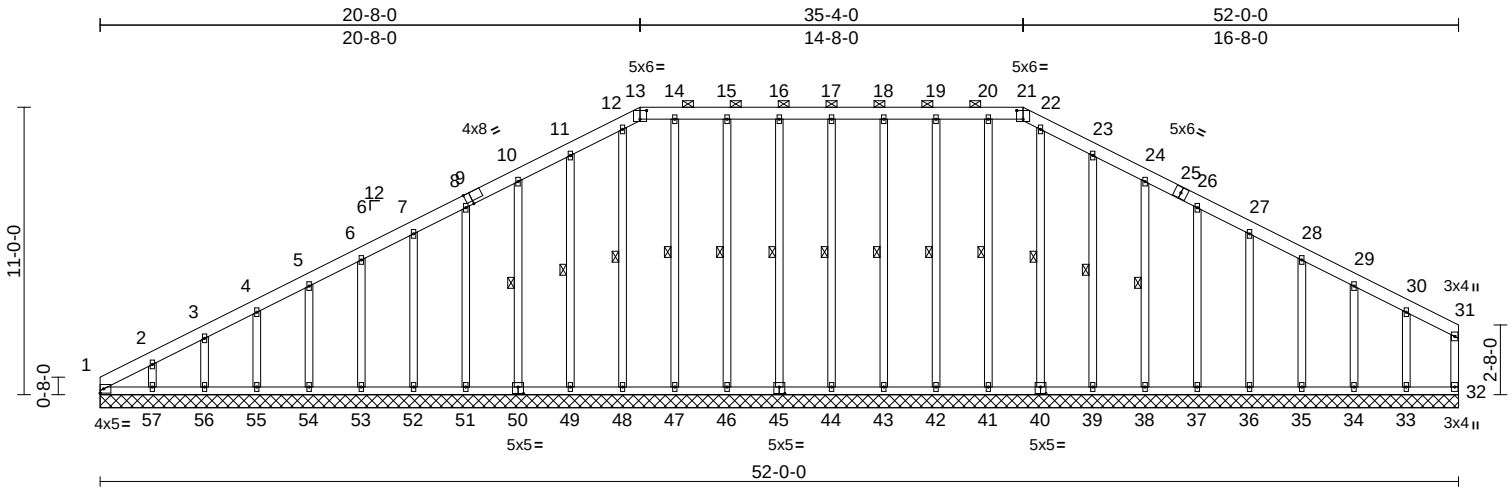

Scale = 1:88.2

Plate Offsets (X, Y): [9:0-2-12,Edge], [13:0-3-0,0-4-0], [21:0-3-0,0-4-0], [40:0-2-8,0-3-0], [45:0-2-8,0-3-0], [50:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	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	32	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 10-50, 11-49, 12-48, 14-47, 15-46, 16-45, 17-44, 18-43, 19-42, 20-41, 22-40, 23-39, 24-38

REACTIONS (lb/size) 1=74/52-0-0, 32=75/52-0-0, 33=184/52-0-0, 34=180/52-0-0, 35=180/52-0-0, 36=180/52-0-0, 37=180/52-0-0, 38=180/52-0-0, 39=180/52-0-0, 40=179/52-0-0, 41=179/52-0-0, 42=180/52-0-0, 43=180/52-0-0, 44=180/52-0-0, 45=180/52-0-0, 46=180/52-0-0, 47=179/52-0-0, 48=179/52-0-0, 49=180/52-0-0, 50=180/52-0-0, 51=180/52-0-0, 52=180/52-0-0, 53=180/52-0-0, 54=180/52-0-0, 55=181/52-0-0, 56=175/52-0-0, 57=202/52-0-0

Max Horiz 1=204 (LC 5)

Max Uplift 1=-54 (LC 4), 32=-7 (LC 8), 33=-85 (LC 9), 34=-49 (LC 9), 35=-55 (LC 9), 36=-54 (LC 9), 37=-53 (LC 9), 38=-58 (LC 9), 39=-60 (LC 9), 41=-13 (LC 5), 42=-39 (LC 4), 43=-35 (LC 4), 44=-33 (LC 5), 45=-36 (LC 4), 46=-40 (LC 4), 47=-16 (LC 5), 49=-59 (LC 8), 50=-57 (LC 8), 51=-54 (LC 8), 52=-54 (LC 8), 53=-54 (LC 8), 54=-54 (LC 8), 55=-54 (LC 8), 56=-53 (LC 8), 57=-90 (LC 8)

Max Grav 1=136 (LC 17), 32=75 (LC 1), 33=185 (LC 22), 34=180 (LC 1), 35=180 (LC 22), 36=180 (LC 1), 37=180 (LC 22), 38=180 (LC 1), 39=180 (LC 1), 40=179 (LC 22), 41=179 (LC 22), 42=183 (LC 21), 43=180 (LC 21), 44=180 (LC 1), 45=180 (LC 22), 46=183 (LC 22), 47=180 (LC 21), 48=185 (LC 18), 49=180 (LC 1), 50=180 (LC 1), 51=180 (LC 21), 52=180 (LC 21), 53=180 (LC 1), 54=180 (LC 21), 55=181 (LC 1), 56=175 (LC 21), 57=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, 8-10=-85/273, 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, 24-26=-55/216, 26-27=-55/171, 27-28=-55/125, 28-29=-56/91, 29-30=-56/64, 30-31=-55/37, 31-32=-61/22

BOT CHORD 1-57=-33/34, 56-57=-33/34, 55-56=-33/34, 54-55=-33/34, 53-54=-33/34, 52-53=-33/34, 51-52=-33/34, 49-51=-33/34, 48-49=-33/34, 47-48=-33/34, 46-47=-33/34, 44-46=-33/34, 43-44=-33/34, 42-43=-33/34, 41-42=-33/34, 39-41=-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

December 31,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

WEBS 2-57=-157/113, 3-56=-136/77, 4-55=-141/78, 5-54=-140/78, 6-53=-140/78, 7-52=-140/78, 8-51=-140/78, 10-50=-140/81, 11-49=-140/83, 12-48=-145/17, 14-47=-140/40, 15-46=-143/64, 16-45=-140/60, 17-44=-140/57, 18-43=-140/59, 19-42=-143/63, 20-41=-139/37, 22-40=-139/0, 23-39=-140/84, 24-38=-140/82, 26-37=-140/77, 27-36=-140/78, 28-35=-140/78, 29-34=-140/76, 30-33=-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
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 32, 54 lb uplift at joint 1, 90 lb uplift at joint 57, 53 lb uplift at joint 56, 54 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, 57 lb uplift at joint 50, 59 lb uplift at joint 49, 16 lb uplift at joint 47, 40 lb uplift at joint 46, 36 lb uplift at joint 45, 33 lb uplift at joint 44, 35 lb uplift at joint 43, 39 lb uplift at joint 42, 13 lb uplift at joint 41, 60 lb uplift at joint 39, 58 lb uplift at joint 38, 53 lb uplift at joint 37, 54 lb uplift at joint 36, 55 lb uplift at joint 35, 49 lb uplift at joint 34 and 85 lb uplift at joint 33.
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	57 W2
B210104	B2	Piggyback Base	2	1	I49493451
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:54 Page: 1
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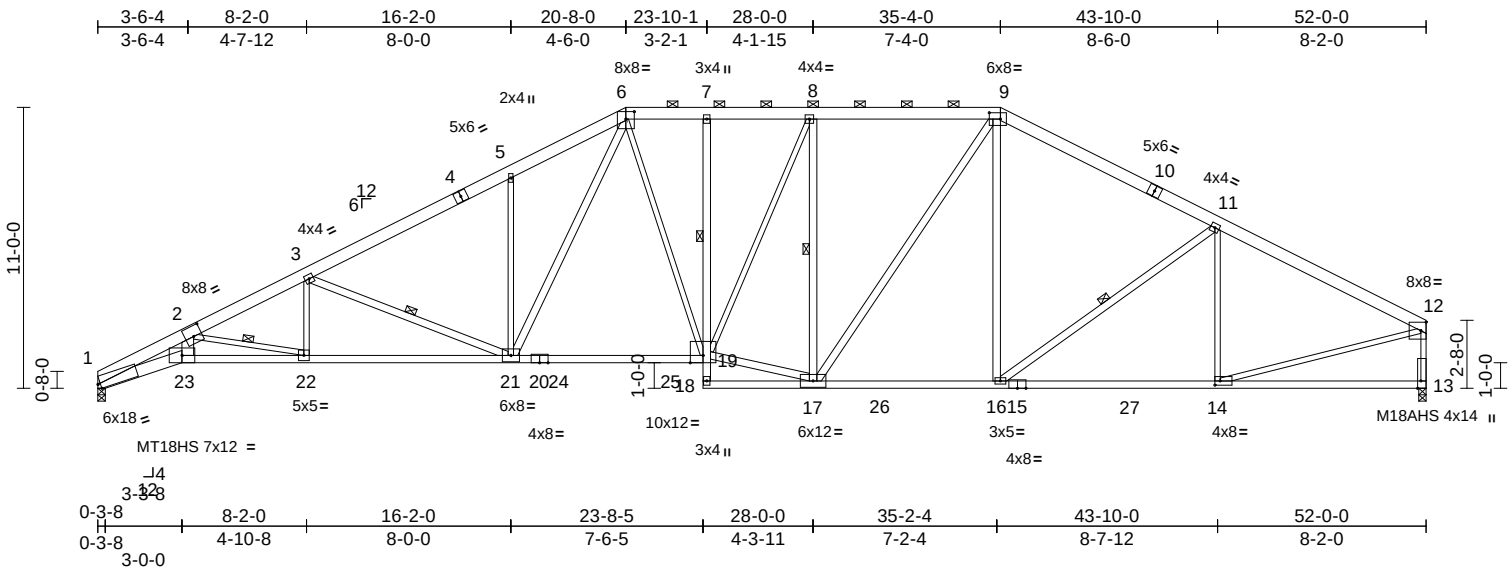

Scale = 1:90.2

Plate Offsets (X, Y): [1:0-1-3,Edge], [2:0-4-0,0-4-12], [6:0-4-0,0-3-8], [9:0-5-4,0-3-0], [13:0-3-8,Edge], [14:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.52	19-21	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.87	19-21	>712	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.41	13	n/a	n/a	M18AHS	142/136
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.27	21-22	>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* 1-23:2x6 SP DSS, 7-18:2x4 SPF No.2, 20-19:2x4 SPF 2400F 2.0E

WEBS 2x3 SPF No.2 *Except* 23-2:2x6 SPF No.2, 17-19,8-17,17-9,16-9,21-3,21-6,16-11:2x4 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 (3-10-7 max.): 6-9.

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

1 Row at midpt 7-19

WEBS 1 Row at midpt 8-17, 2-22, 3-21, 11-16

REACTIONS (lb/size) 1=2329/0-3-8, 13=2329/0-3-8
Max Horiz 1=202 (LC 7)
Max Uplift 1=-249 (LC 8), 13=-208 (LC 9)
Max Grav 1=2468 (LC 2), 13=2504 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-8955/1036, 2-3=-5736/601, 3-5=-4385/417, 5-6=-4343/564, 6-7=-3358/344, 7-8=-3350/344, 8-9=-3080/301, 9-11=-3158/284, 11-12=-3221/269, 12-13=-2383/246

BOT CHORD 1-23=-1081/7954, 22-23=-959/6994, 21-22=-614/5170, 19-21=-238/3227, 18-19=0/62, 7-19=-144/76, 17-18=-40/79, 16-17=-125/2721, 14-16=-186/2803, 13-14=-22/67

WEBS 2-23=-294/2567, 6-19=-135/588, 17-19=-193/3144, 8-19=-108/719, 8-17=-1125/257, 9-17=-168/791, 9-16=-38/465, 3-22=0/621, 2-22=-1868/354, 3-21=-1462/353, 5-21=-461/273, 6-21=-337/1401, 12-14=-171/2849, 11-16=-199/226, 11-14=-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 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B3	Piggyback Base	3	1	I49493452 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:55 Page: 1
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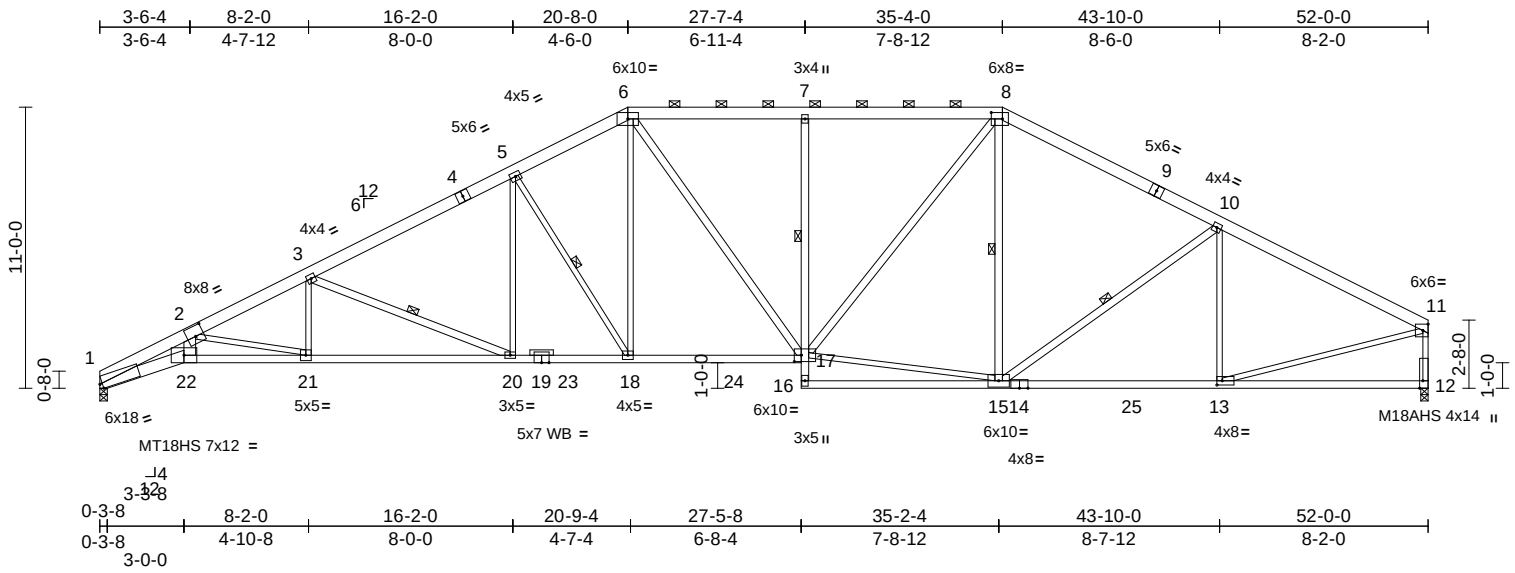

Scale = 1:90.2

Plate Offsets (X, Y): [1:0-1-3,Edge], [2:0-4-0,0-4-12], [8:0-5-4,0-3-0], [12:0-3-8,Edge], [13:0-2-8,0-2-0], [17:0-3-4,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.49	20-21	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.87	20-21	>711	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.43	12	n/a	n/a	M18AHS	142/136
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.28	20-21	>999	240	Weight: 284 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, 7-16:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 22-2:2x6 SPF No.2, 17-6,17-8,15-8,20-3,15-10:2x4 SPF No.2

OTHERS 2x3 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 (3-8-13 max.): 6-8.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-3-10 oc bracing: 1-22
2-2-0 oc bracing: 21-22.

1 Row at midpt 7-17

WEBS 1 Row at midpt 5-18, 8-15, 3-20, 10-15

REACTIONS (lb/size) 1=2329/0-3-8, 12=2329/0-3-8
Max Horiz 1=202 (LC 7)
Max Uplift 1=-249 (LC 8), 12=-208 (LC 9)
Max Grav 1=2459 (LC 2), 12=2473 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-8912/1039, 2-3=-5723/597, 3-5=-4343/421, 5-6=-3680/393, 6-7=-3361/314, 7-8=-3351/314, 8-10=-3101/283, 10-11=-3178/270, 11-12=-2353/246

BOT CHORD 1-22=-1084/7917, 21-22=-961/6964, 20-21=-610/5157, 18-20=-292/3784, 17-18=-232/3242, 16-17=0/135, 7-17=-575/246, 15-16=-9/173, 13-15=-186/2765, 12-13=-21/66

WEBS 2-22=-297/2541, 5-18=-1044/295, 6-18=-183/1168, 6-17=-173/484, 15-17=-116/2520, 8-17=-202/1181, 8-15=-197/195, 3-21=0/648, 2-21=-1851/359, 3-20=-1488/345, 5-20=-55/799, 11-13=-172/2810, 10-15=-214/227, 10-13=-553/159

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 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B4	Piggyback Base	1	1	I49493453 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:55 Page: 1
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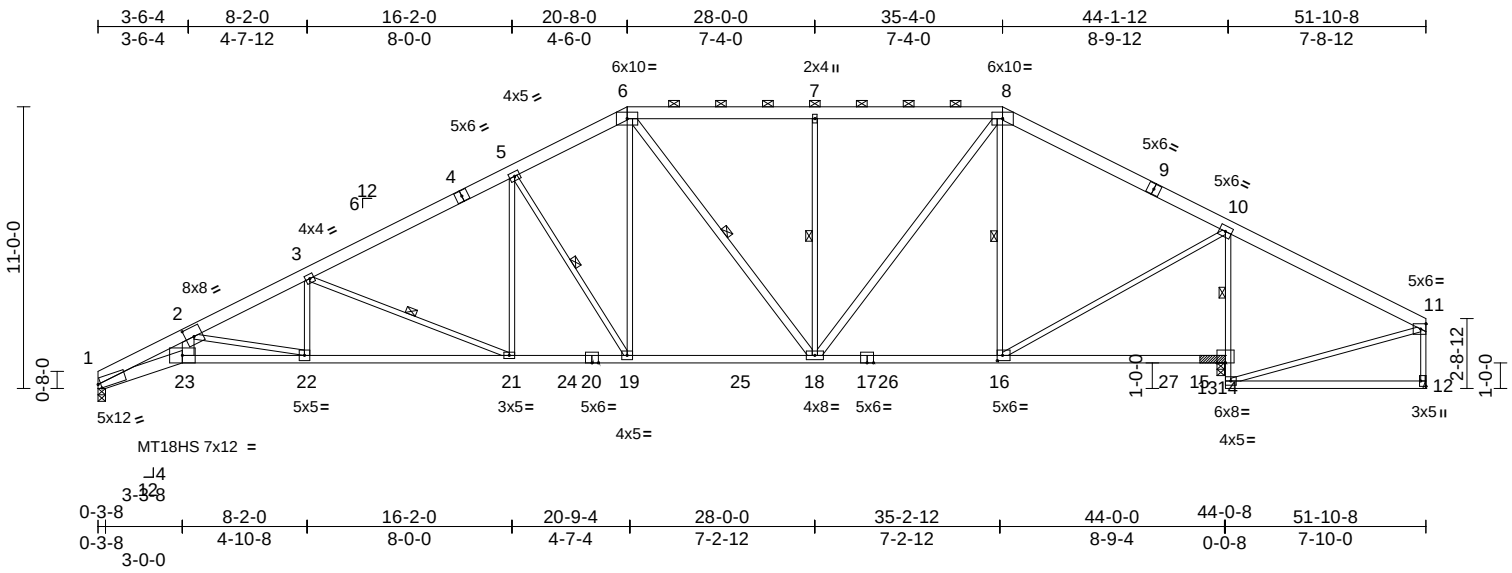

Scale = 1:90

Plate Offsets (X, Y): [1:0-1-4,0-2-2], [2:0-4-0,0-4-8], [12:Edge,0-2-8], [16:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	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	>740	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.31	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	22-23	>999	240	Weight: 261 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 1-23:2x6 SPF 1650F 1.4E, 23-20:2x4 SPF 2100F 1.8E, 10-13:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 23-2:2x6 SPF No.2, 18-6,18-8:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-7-12 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 10-14
WEBS 1 Row at midpt 5-19, 6-18, 7-18, 8-16, 3-21

REACTIONS (lb/size) 1=1947/0-3-8, 12=152/ Mechanical, 14=2547/(0-3-8 + bearing block), (req. 0-4-5)
Max Horiz 1=204 (LC 7)
Max Uplift 1=-239 (LC 8), 12=-47 (LC 4), 14=-191 (LC 9)
Max Grav 1=2069 (LC 2), 12=205 (LC 16), 14=2748 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7373/994, 2-3=-4682/569, 3-5=-3395/396, 5-6=-2747/368, 6-7=-2240/279, 7-8=-2240/279, 8-10=-1817/217, 10-11=-62/323, 11-12=-122/93
BOT CHORD 1-23=-1044/6548, 22-23=-926/5757, 21-22=-585/4216, 19-21=-270/2937, 18-19=-213/2408, 16-18=-101/1500, 14-16=-165/36, 13-14=0/199, 10-14=-2377/283, 12-13=-14/55
WEBS 2-23=-284/2117, 5-19=-1020/294, 6-19=-183/1123, 6-18=-364/126, 7-18=-581/245, 8-18=-194/1267, 8-16=-716/176, 3-22=0/589, 2-22=-1578/349, 3-21=-1386/341, 5-21=-54/769, 10-16=-138/1929, 11-13=-215/22

NOTES

1) 2x4 SPF No.2 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) 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, 47 lb uplift at joint 12 and 191 lb uplift at joint 14.
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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B4A	Piggyback Base	2	1	I49493454 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:56 Page: 1
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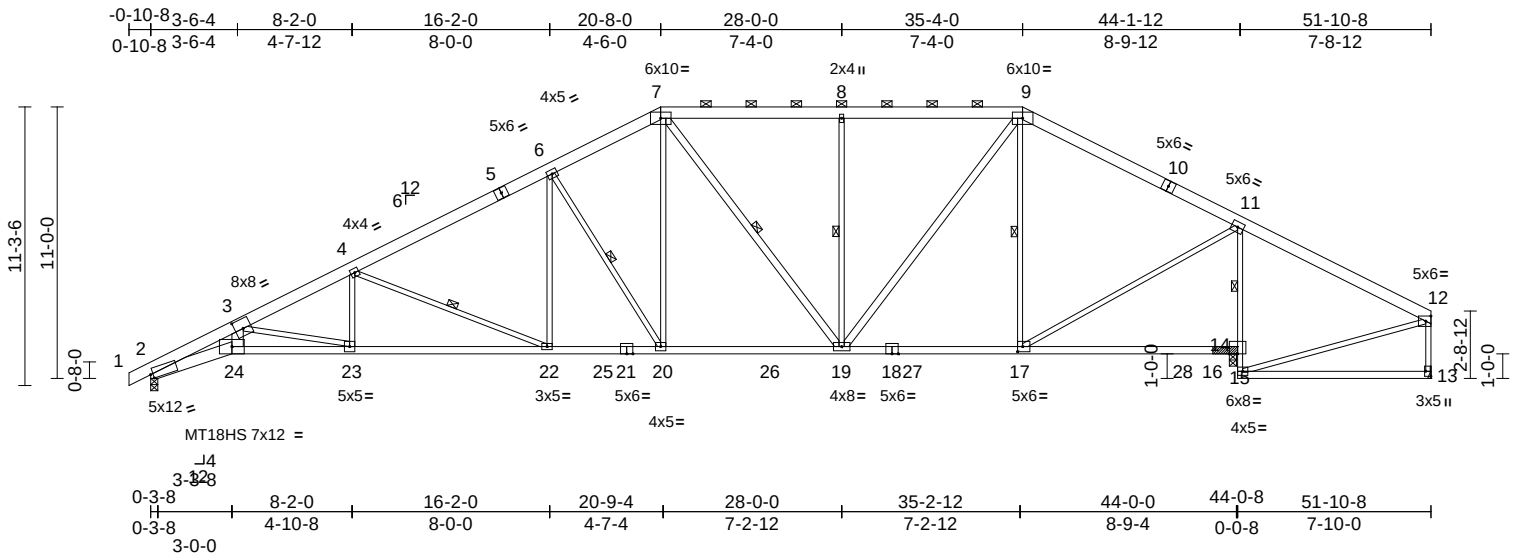

Scale = 1:93.4

Plate Offsets (X, Y): [2:0-1-4,0-2-2], [3:0-4-0,0-4-8], [13:Edge,0-2-8], [17:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.40	22-23	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.71	22-23	>742	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.31	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.17	23-24	>999	240	Weight: 263 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-24:2x6 SPF 1650F 1.4E, 11-14:2x3 SPF No.2, 14-13,18-21:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 24-3:2x6 SPF No.2, 19-7,19-9:2x4 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 (4-8-2 max.): 7-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 20-22
6-0-0 oc bracing: 15-17.
1 Row at midpt 11-15
WEBS 1 Row at midpt 8-19, 7-19, 9-17, 4-22, 6-20

REACTIONS (lb/size) 2=2019/0-3-8, 13=149/ Mechanical, 15=2550/(0-3-8 + bearing block), (req. 0-4-5)
Max Horiz 2=174 (LC 7)
Max Uplift 2=-33 (LC 8), 13=-33 (LC 4)
Max Grav 2=2128 (LC 2), 13=200 (LC 20), 15=2750 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-7349/161, 3-4=-4672/77, 4-6=-3391/65, 6-7=-2745/90, 7-8=-2237/60, 8-9=-2237/60, 9-11=-1814/55, 11-12=-43/322, 12-13=-121/93
BOT CHORD 2-24=-232/6513, 23-24=-208/5726, 22-23=-94/4207, 20-22=-24/2934, 19-20=-11/2406, 17-19=0/1498, 15-17=-168/17, 14-15=0/199, 11-15=-2377/52, 13-14=-2/53
WEBS 3-24=-34/2107, 7-20=-39/1146, 8-19=-581/141, 7-19=-347/63, 9-17=-718/94, 9-19=-68/1266, 6-22=0/777, 4-23=0/589, 3-23=-1576/116, 4-22=-1405/128, 6-20=-1047/125, 11-17=0/1929, 12-14=-219/6

NOTES
1) 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 15 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 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B5	Piggyback Base	1	1	I49493455 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:56 Page: 1
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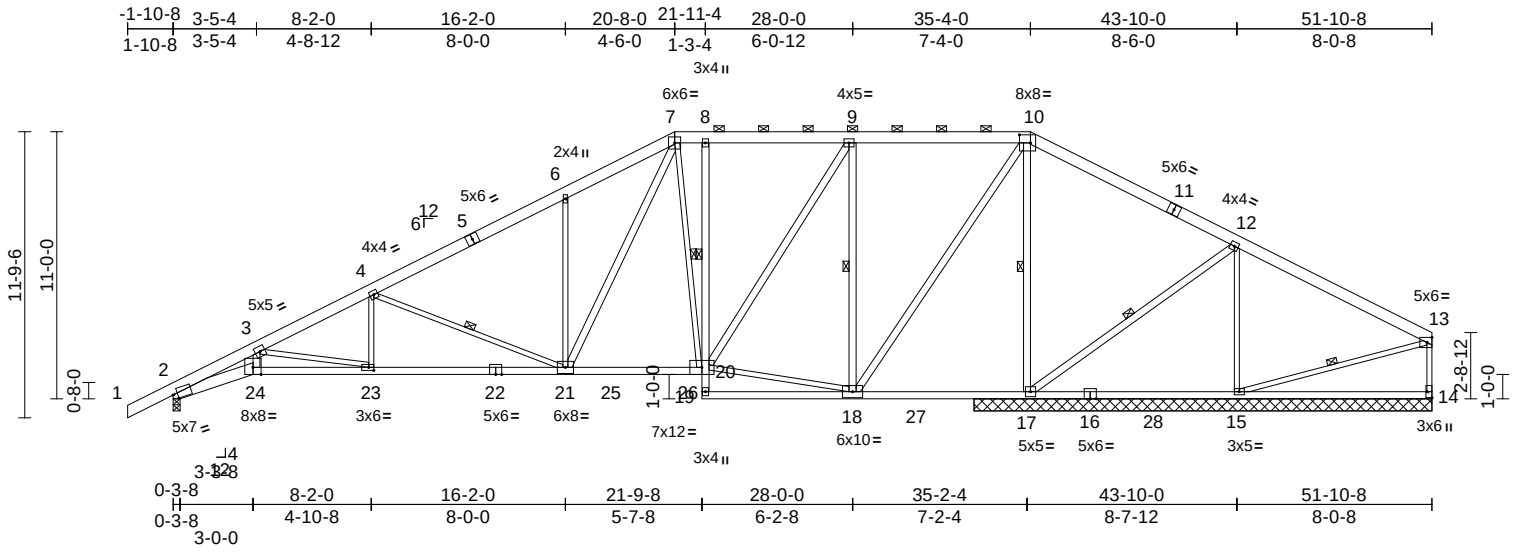

Scale = 1:94.9

Plate Offsets (X, Y): [2:0-2-4,0-2-6], [10:0-5-8,0-4-0], [14:Edge,0-2-8], [23:0-2-8,0-1-8]

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	21-23	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.45	21-23	>934	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.16	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	23-24	>999	240	Weight: 297 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-24:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 24-3,20-9,18-10,21-7,17-12:2x4 SPF No.2, 9-18,17-10:2x4 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 8-20
WEBS 1 Row at midpt 7-20, 9-18, 10-17, 4-21, 13-15, 12-17

REACTIONS (lb/size) 2=1335/0-3-8, 14=-120/18-10-8, 15=91/18-10-8, 17=3482/18-10-8
Max Horiz 2=219 (LC 12)
Max Uplift 2=-200 (LC 8), 14=-332 (LC 21), 15=-262 (LC 21), 17=-357 (LC 8)
Max Grav 2=1362 (LC 23), 14=94 (LC 22), 15=346 (LC 22), 17=3710 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-4047/594, 3-4=-2452/325, 4-6=-1382/178, 6-7=-1354/324, 7-8=-535/204, 8-9=-533/205, 9-10=-94/282, 10-12=-161/1552, 12-13=-87/741, 13-14=-50/427
BOT CHORD 2-24=-679/3550, 23-24=-618/3195, 21-23=-366/2198, 20-21=-80/613, 19-20=0/105, 8-20=-338/108, 18-19=-4/25, 17-18=-1340/321, 15-17=-602/147, 14-15=-21/42
WEBS 3-24=-165/1186, 7-20=-652/188, 18-20=-190/181, 9-20=-191/1236, 9-18=-1498/300, 10-18=-256/2116, 10-17=-2806/344, 4-23=0/449, 3-23=-1025/257, 4-21=-1148/315, 6-21=-488/276, 7-21=-336/1243, 13-15=-656/125, 12-17=-941/210, 12-15=-88/662

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 17, 332 lb uplift at joint 14 and 262 lb uplift at joint 15.
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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B6	Piggyback Base	1	1	I49493456 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:57 Page: 1
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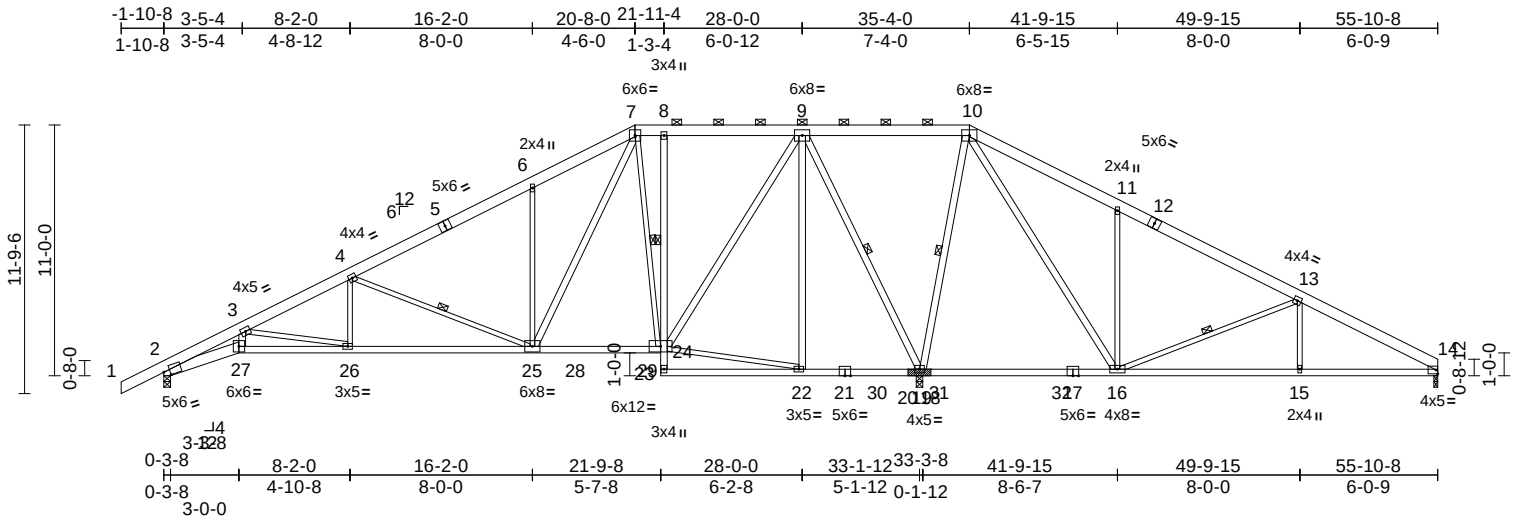

Scale = 1:101.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.20	25-26	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.37	25-26	>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	26-27	>999	240	Weight: 314 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-27:2x6 SPF No.2, 21-17,20-18:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 27-3,19-10,25-7,16-10,9-22,9-24:2x4 SPF No.2, 9-19:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 4-8-12 oc bracing. Except:
1 Row at midpt 8-24
WEBS 1 Row at midpt 7-24, 10-19, 13-16, 4-25, 9-19

REACTIONS (lb/size) 2=1117/0-3-8, 14=250/0-2-0, 19=3783/(0-3-8 + bearing block), (req. 0-4-7)
Max Horiz 2=211 (LC 12)
Max Uplift 2=-191 (LC 8), 14=-215 (LC 21), 19=-275 (LC 8)
Max Grav 2=1180 (LC 21), 14=508 (LC 22), 19=4069 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/47, 2-3=-3343/550, 3-4=-1951/297, 4-6=-938/153, 6-7=-908/299, 7-8=-134/194, 8-9=-134/195, 9-10=-84/1706, 10-11=-90/1053, 11-13=-183/1055, 13-14=-687/650
BOT CHORD 2-27=-631/2925, 26-27=-574/2628, 25-26=-332/1745, 24-25=-71/274, 23-24=0/114, 8-24=-345/104, 22-23=-20/22, 19-22=-741/225, 16-19=-1358/301, 15-16=-531/552, 14-15=-531/552
WEBS 3-27=-150/995, 7-24=-837/198, 22-24=-730/206, 10-19=-1815/217, 11-16=-534/305, 13-16=-834/234, 13-15=0/298, 4-26=0/427, 3-26=-901/247, 4-25=-1101/312, 6-25=-494/277, 7-25=-335/1226, 10-16=-341/1273, 9-22=0/326, 9-24=-191/1395, 9-19=-2171/237

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, 275 lb uplift at joint 19 and 215 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B7	Piggyback Base	2	1	I49493457 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:16:57 Page: 1
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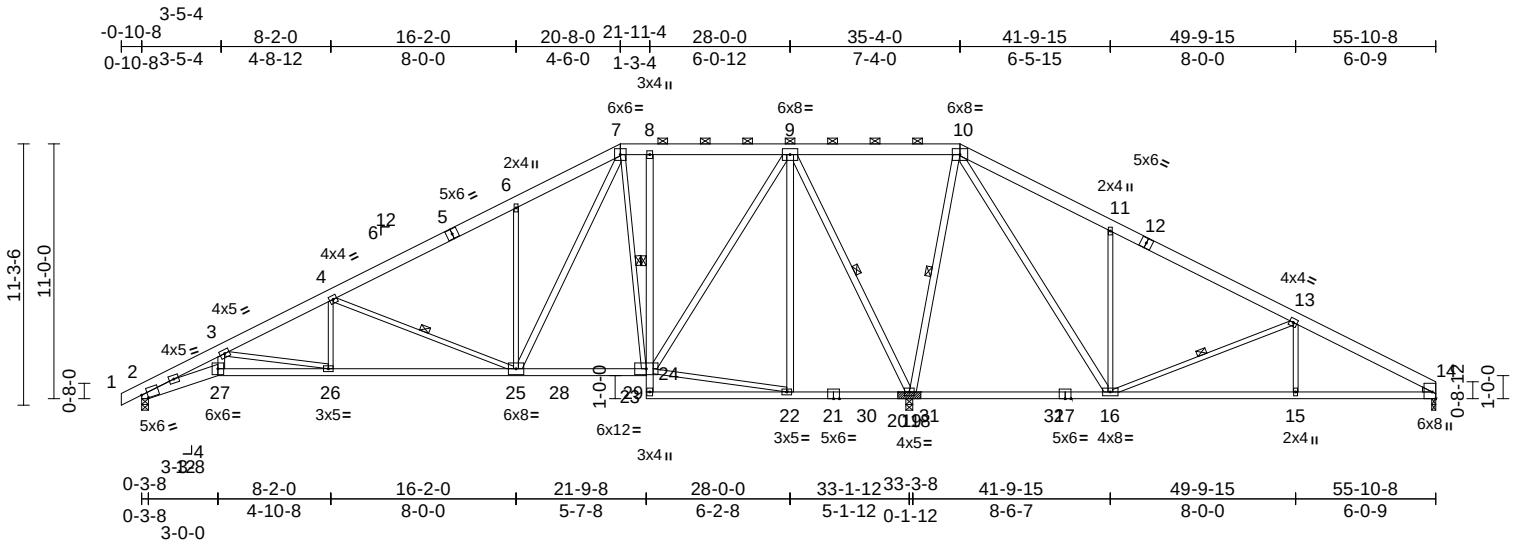

Scale = 1:99.5

Plate Offsets (X, Y): [2:0-3-0,0-2-6], [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	0.57	Vert(LL)	-0.20	25-26	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.38	25-26	>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	26-27	>999	240	Weight: 312 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-27:2x6 SPF No.2, 21-17,20-18:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 27-3,9-22,19-10,25-7,16-10,9-24:2x4 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 4-8-7 oc bracing. Except:
1 Row at midpt 8-24
WEBS 1 Row at midpt 7-24, 10-19, 13-16, 4-25, 9-19

REACTIONS (lb/size) 2=1037/0-3-8, 14=239/0-2-0, 19=3804/(0-3-8 + bearing block), (req. 0-4-7)
Max Horiz 2=193 (LC 12)
Max Uplift 2=-163 (LC 8), 14=-226 (LC 21), 19=-283 (LC 8)
Max Grav 2=1108 (LC 23), 14=505 (LC 22), 19=4086 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/15, 2-3=-3414/584, 3-4=-1958/300, 4-6=-929/150, 6-7=-900/296, 7-8=-122/191, 8-9=-122/192, 9-10=-93/1724, 10-11=-93/1075, 11-13=-192/1077, 13-14=-681/670
BOT CHORD 2-27=-668/3000, 26-27=-605/2691, 25-26=-335/1752, 24-25=-70/275, 23-24=0/114, 8-24=-346/104, 22-23=-21/22, 19-22=-755/231, 16-19=-1374/309, 15-16=-549/547, 14-15=-549/547
WEBS 3-27=-167/1027, 7-24=-844/202, 9-22=0/328, 10-19=-1823/219, 11-16=-534/305, 13-15=0/298, 13-16=-835/234, 4-26=0/438, 3-26=-960/275, 6-25=-494/277, 4-25=-1114/318, 7-25=-338/1232, 10-16=-341/1274, 22-24=-744/213, 9-24=-195/1403, 9-19=-2181/241

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 163 lb uplift at joint 2, 226 lb uplift at joint 14 and 283 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B8	Piggyback Base	1	1	I49493458
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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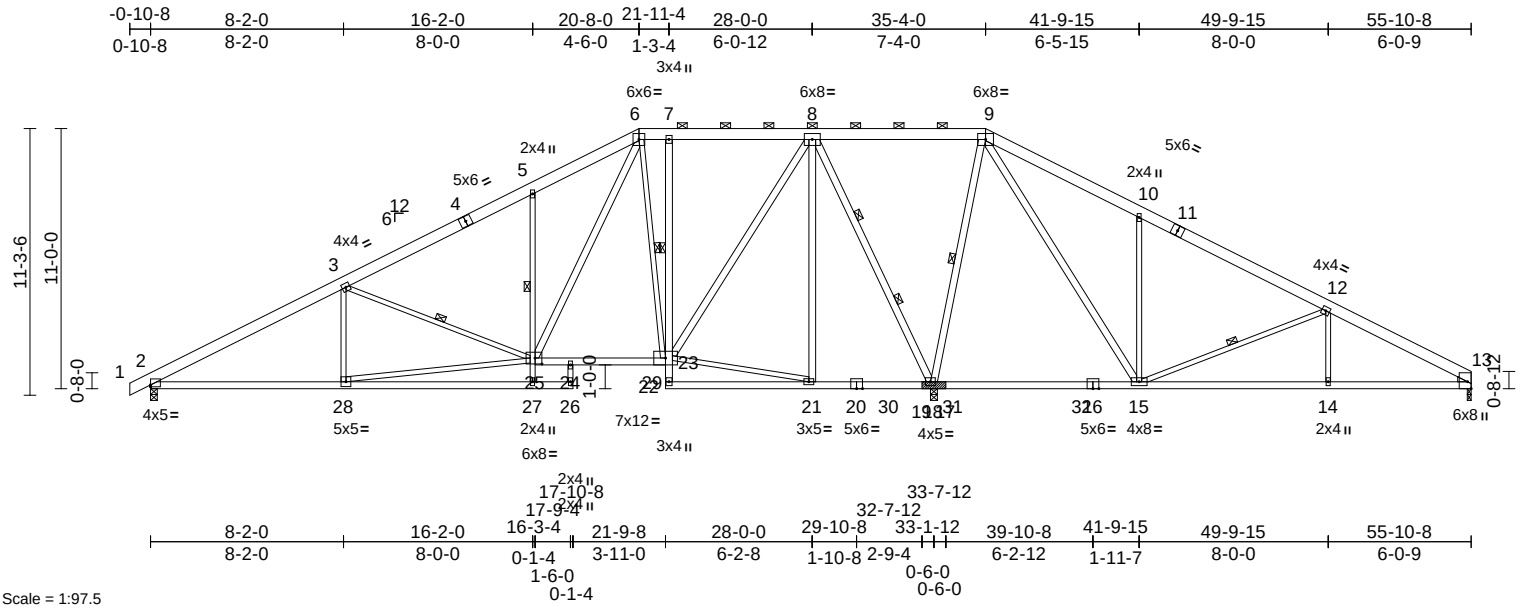

Scale = 1:97.5

Plate Offsets (X, Y): [2:Edge,0-0-15], [13:Edge,0-1-13], [25:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.16	15-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	2-28	>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	27-28	>999	240	Weight: 315 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 20-16,19-17:2x4 SPF 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 23-8,8-21,18-8,18-9,15-9,25-6:2x4 SPF No.2
WEDGE Right: 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-1 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 6-9.
BOT CHORD Rigid ceiling directly applied or 5-9-9 oc bracing. Except:
1 Row at midpt 7-23
WEBS 1 Row at midpt 9-18, 12-15, 6-23, 3-25, 5-27
WEBS 2 Rows at 1/3 pts 8-18

REACTIONS (lb/size) 2=1178/0-3-8, 13=471/0-2-0, 18=3430/(0-3-8 + bearing block), (req. 0-4-0)
Max Horiz 2=193 (LC 8)
Max Uplift 2=-197 (LC 8), 13=-177 (LC 9), 18=-197 (LC 8)
Max Grav 2=1274 (LC 23), 13=620 (LC 22), 18=3717 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-1979/281, 3-5=-1305/235, 5-6=-1266/372, 6-7=-466/195, 7-8=-465/196, 8-9=0/1244, 9-10=-162/571, 10-12=-174/563, 12-13=-913/308
BOT CHORD 2-28=-335/1682, 27-28=0/45, 26-27=0/0, 24-25=-61/571, 23-24=-61/571, 22-23=0/116, 7-23=-323/101, 21-22=-19/22, 18-21=-397/256, 15-18=-917/208, 14-15=-197/748, 13-14=-197/748
WEBS 24-26=-92/0, 21-23=-384/237, 8-23=-171/1325, 8-21=0/270, 8-18=-2011/224, 9-18=-1592/237, 10-15=-534/305, 12-15=-798/237, 12-14=0/296, 9-15=-341/1263, 6-25=-331/1242, 6-23=-726/177, 3-28=-18/231, 3-25=-687/240, 25-27=0/314, 5-25=-464/257, 25-28=-344/1650

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 197 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B9	Piggyback Base	1	1	I49493459
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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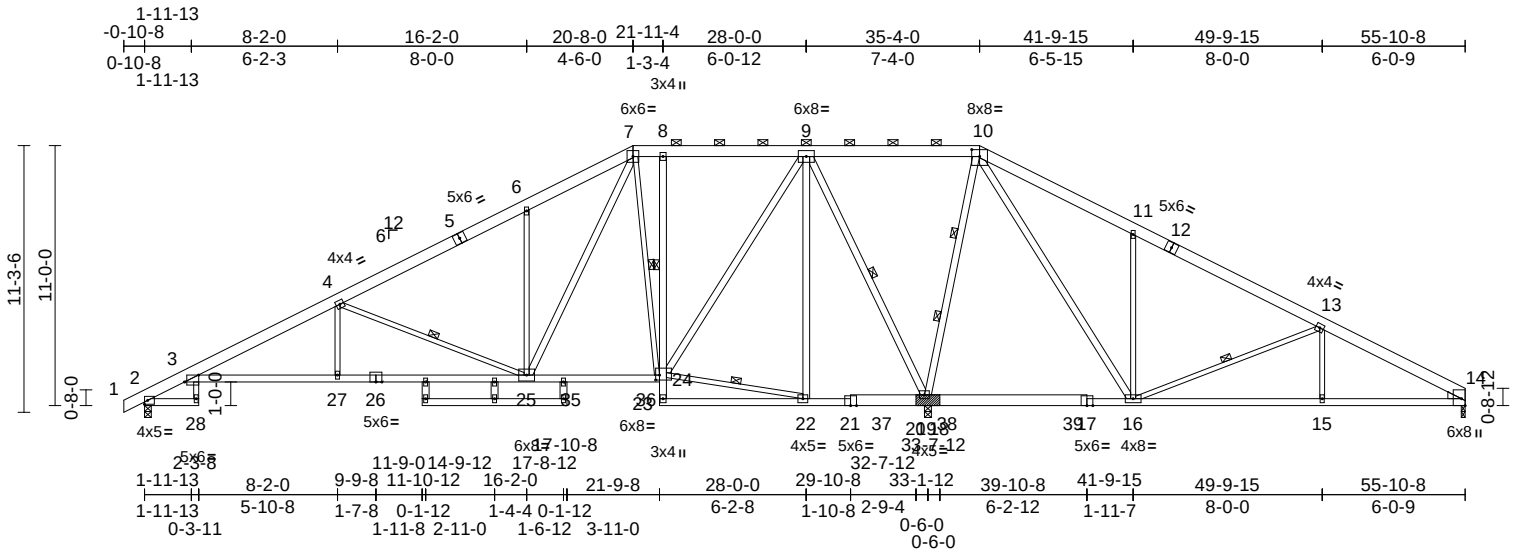

Scale = 1:97.5

Plate Offsets (X, Y): [3:0-7-3,Edge], [10:0-4-0,0-3-8], [14:Edge,0-1-13], [24:0-2-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.28	3-27	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.49	3-27	>806	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)	0.21	3-27	>999	240	Weight: 329 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* 21-17,20-18:2x6 SP DSS

WEBS 2x3 SPF No.2 *Except* 29-30,31-32,25-7,24-9,9-22,19-10,16-10,33-34:2x4 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 4-2-11 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-10.

BOT CHORD Rigid ceiling directly applied or 4-0-10 oc bracing. Except:

1 Row at midpt 8-24

WEBS 1 Row at midpt 4-25, 7-24, 22-24, 9-19, 13-16

WEBS 2 Rows at 1/3 pts 10-19

REACTIONS (lb/size) 2=893/0-3-8, 14=42/0-2-0, 19=4156/(0-3-8 + bearing block), (req. 0-4-12)

Max Horiz 2=193 (LC 8)

Max Uplift 2=-112 (LC 8), 14=-438 (LC 21), 19=-389 (LC 8)

Max Grav 2=960 (LC 23), 14=420 (LC 22), 19=4452 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-507/193, 3-4=-1589/181, 4-6=-539/158, 6-7=-486/228, 7-8=0/472, 8-9=0/473, 9-10=-230/2202, 10-11=-221/1528, 11-13=-322/1529, 13-14=-511/1099

BOT CHORD 2-28=-36/0, 3-27=-251/1441, 25-27=-251/1441, 24-25=-259/238, 23-24=0/112, 8-24=-358/106, 22-23=-46/28, 19-22=-1178/348, 16-19=-1778/430, 15-16=-922/399, 14-15=-922/399

WEBS 3-28=0/73, 4-25=-1184/335, 7-25=-325/1189, 7-24=-998/243, 22-24=-1147/324, 9-24=-226/1518, 9-22=0/392, 9-19=-2350/295, 10-19=-2042/222, 11-16=-534/305, 13-16=-875/227, 13-15=0/305, 10-16=-341/1288, 4-27=0/332, 6-25=-444/259

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, 389 lb uplift at joint 19 and 438 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B10	Piggyback Base	4	1	I49493460 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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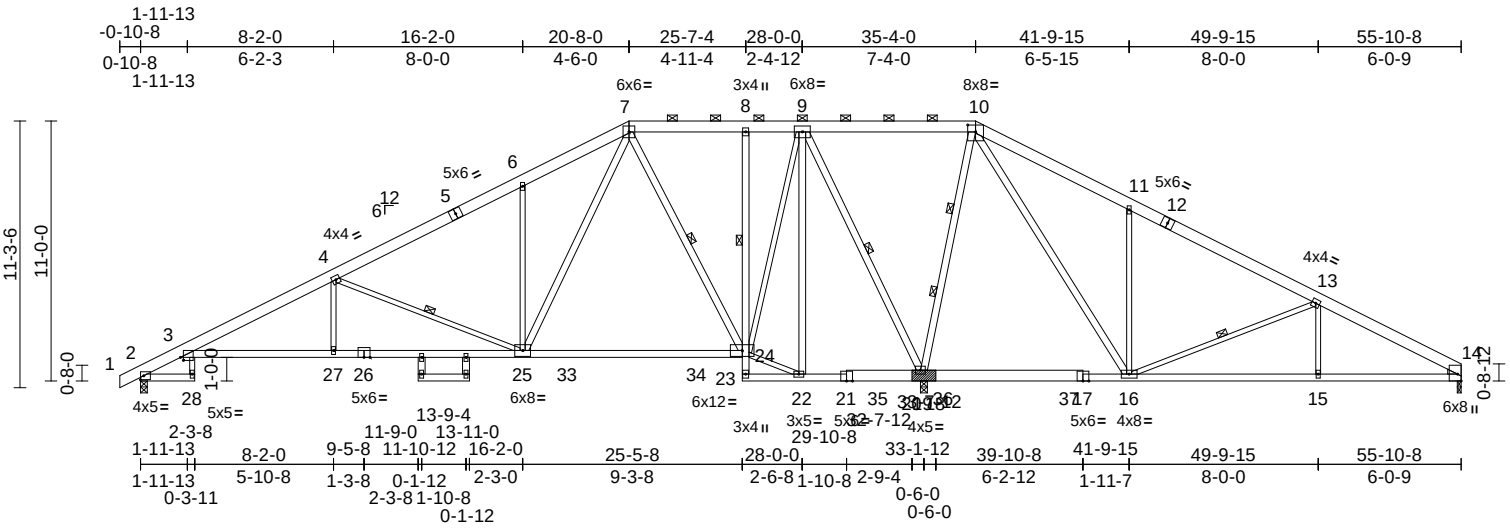

Scale = 1:97.5

Plate Offsets (X, Y): [3:0-1-8,0-1-8], [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	24-25	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.56	24-25	>706	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)	0.21	28	>999	240	Weight: 320 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* 26-24,17-14:2x4 SPF 2100F 1.8E, 21-17,20-18:2x6 SP DSS

WEBS 2x3 SPF No.2 *Except* 29-30,31-32,24-7,19-10,22-9,16-10,25-7:2x4 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 4-3-12 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-10.

BOT CHORD Rigid ceiling directly applied or 5-3-11 oc bracing. Except:

1 Row at midpt 8-24

WEBS 1 Row at midpt 4-25, 7-24, 9-19, 13-16

WEBS 2 Rows at 1/3 pts 10-19

REACTIONS (lb/size) 2=882/0-3-8, 14=26/0-2-0, 19=4183/(0-3-8 + bearing block), (req. 0-4-13)

Max Horiz 2=193 (LC 12)

Max Uplift 2=-108 (LC 8), 14=-462 (LC 21), 19=-399 (LC 8)

Max Grav 2=948 (LC 23), 14=419 (LC 22), 19=4524 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-504/194, 3-4=-1543/174, 4-6=-509/160, 6-7=-446/228, 7-8=-93/1033, 8-9=-92/1038, 9-10=-243/2260, 10-11=-234/1577, 11-13=-335/1579, 13-14=-508/1148

BOT CHORD 2-28=-35/0, 3-27=-245/1401, 25-27=-245/1401, 24-25=-289/227, 23-24=0/30, 8-24=-128/72, 22-23=-221/0, 19-22=-1223/357, 16-19=-1832/442, 15-16=-965/396, 14-15=-965/396

WEBS 3-28=0/72, 4-25=-1149/343, 7-24=-1437/307, 9-24=-75/1170, 9-19=-2381/305, 10-19=-2063/228, 11-16=-533/304, 13-16=-878/228, 13-15=0/305, 9-22=-127/562, 22-24=-1156/417, 10-16=-341/1287, 4-27=0/304, 6-25=-418/256, 7-25=-299/1268

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 108 lb uplift at joint 2, 399 lb uplift at joint 19 and 462 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B11	Piggyback Base	1	1	I49493461
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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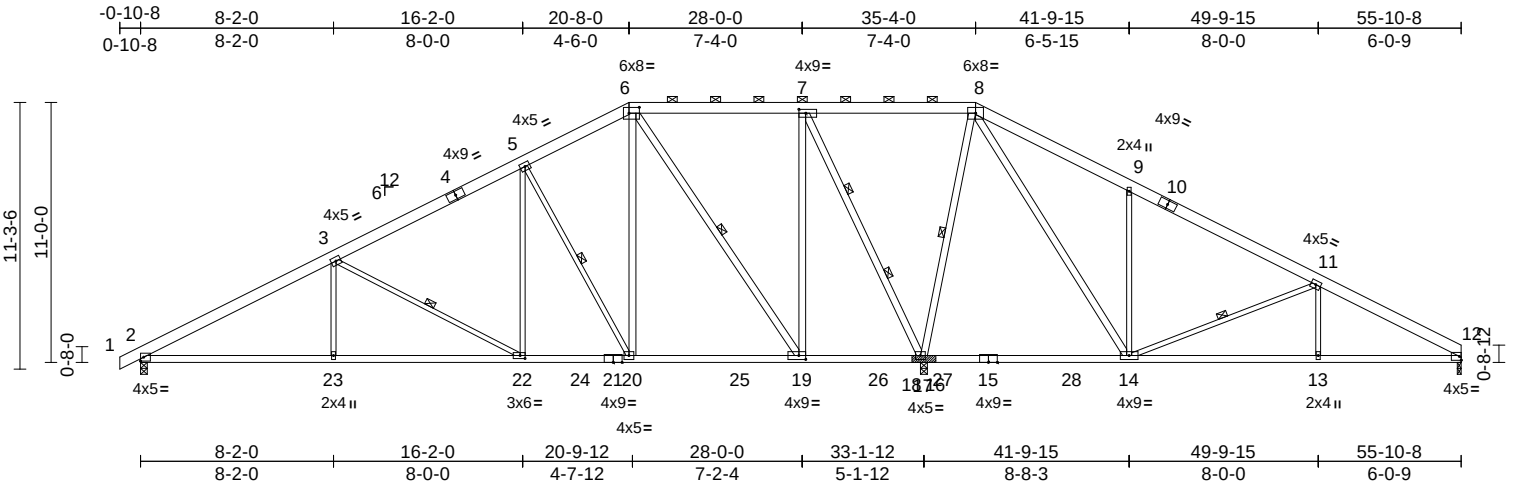
Page: 1



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 (lb/size) 2=1220/0-3-8, 12=532/0-2-0, 17=3328/(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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	B12	Piggyback Base Structural Gable	1	1	I49493462 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Fri Dec 31 14:14:10 Page: 1
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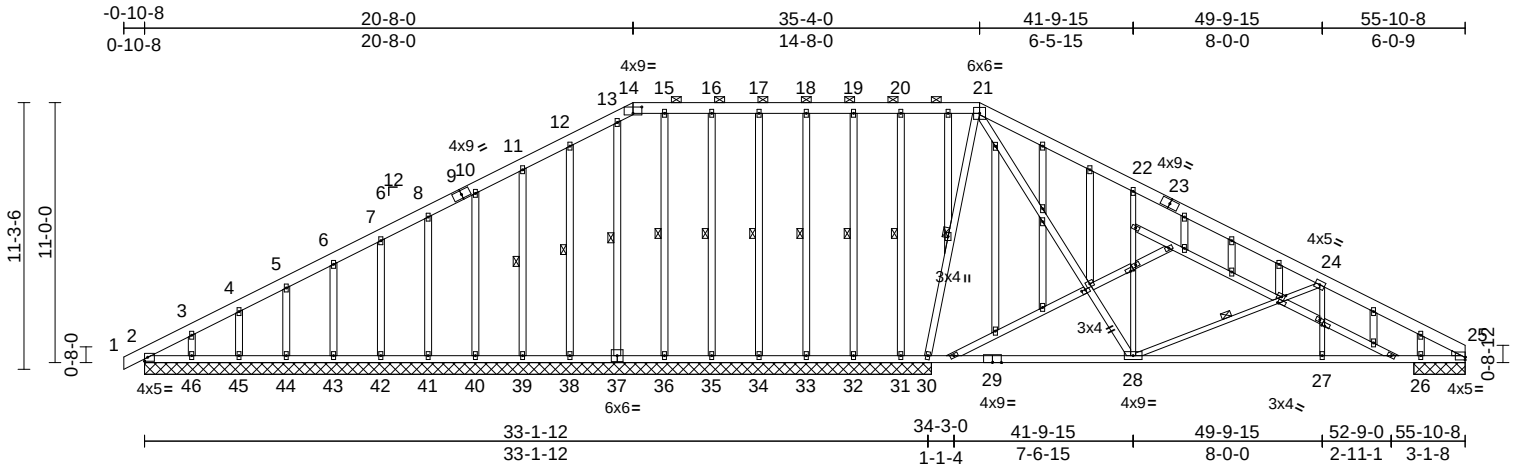

Scale = 1:97.5

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: 411 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: 2x3 SPF No.2

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 All bearings 33-3-8. except 25=2-2-0, 26=2-2-0

(lb) - Max Horiz 2=193 (LC 8)
Max Uplift All uplift 100 (lb) or less at joint(s) 26, 30, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46 except 2=-124 (LC 22), 25=-176 (LC 9), 31=-140 (LC 5)
Max Grav All reactions 250 (lb) or less at joint (s) 2, 26, 31, 32, 33, 34, 35, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46 except 25=749 (LC 1), 30=1248 (LC 22), 37=276 (LC 1)

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

TOP CHORD 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, 27-28=-207/1150, 26-27=-207/1150, 25-26=-207/1150
WEBS 21-30=-1044/222, 22-28=-552/305, 24-28=-663/236, 21-28=-342/1157

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.
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 100 lb uplift at joint(s) 30, 46, 45, 44, 43, 42, 41, 40, 39, 38, 36, 35, 34, 33, 32, 26 except (jt=lb) 25=176, 2=123, 31=139.
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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	C1	Common Structural Gable	1	1	I49493463 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Fri Dec 31 14:14:03 Page: 1
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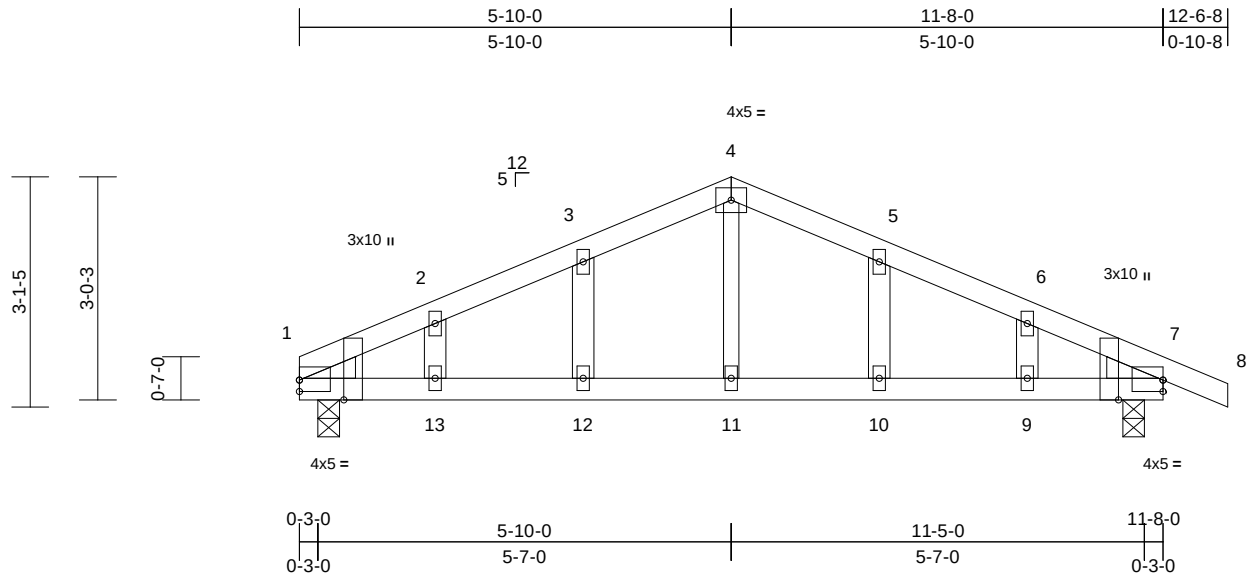

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Plate Offsets (X, Y): [1:Edge,0-1-14], [1:0-3-3,Edge], [7:Edge,0-1-14], [7:0-3-3,Edge]

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 (lb/size) 1=509/0-3-8, 7=587/0-3-8
Max Horiz 1=-51 (LC 13)
Max Uplift 1=-65 (LC 8), 7=-89 (LC 9)

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

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
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

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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	C2	GABLE	1	1	I49493464 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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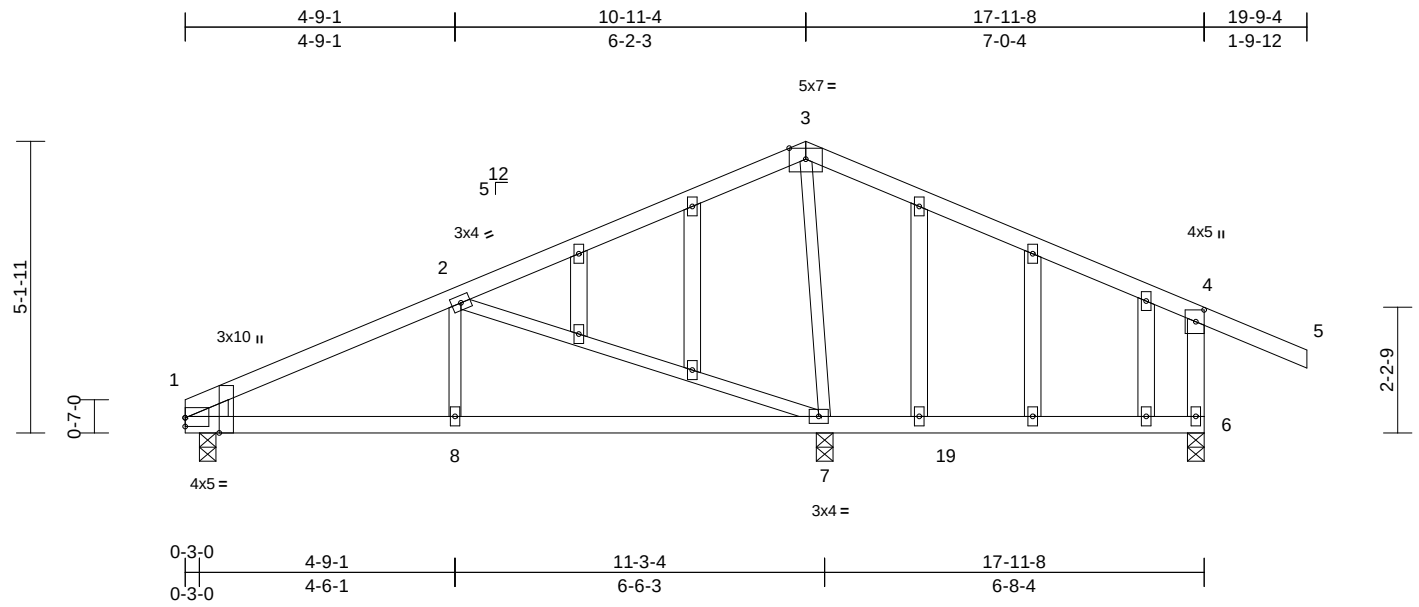

Scale = 1:40.6

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 (lb/size) 1=520/0-3-8, 6=483/0-3-8, 7=724/0-3-8
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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-871/174, 4-6=-443/200
BOT CHORD 1-8=-186/753, 7-8=-186/753
WEBS 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	C3	Common	1	1	I49493465
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Fri Dec 31 14:13:53 Page: 1
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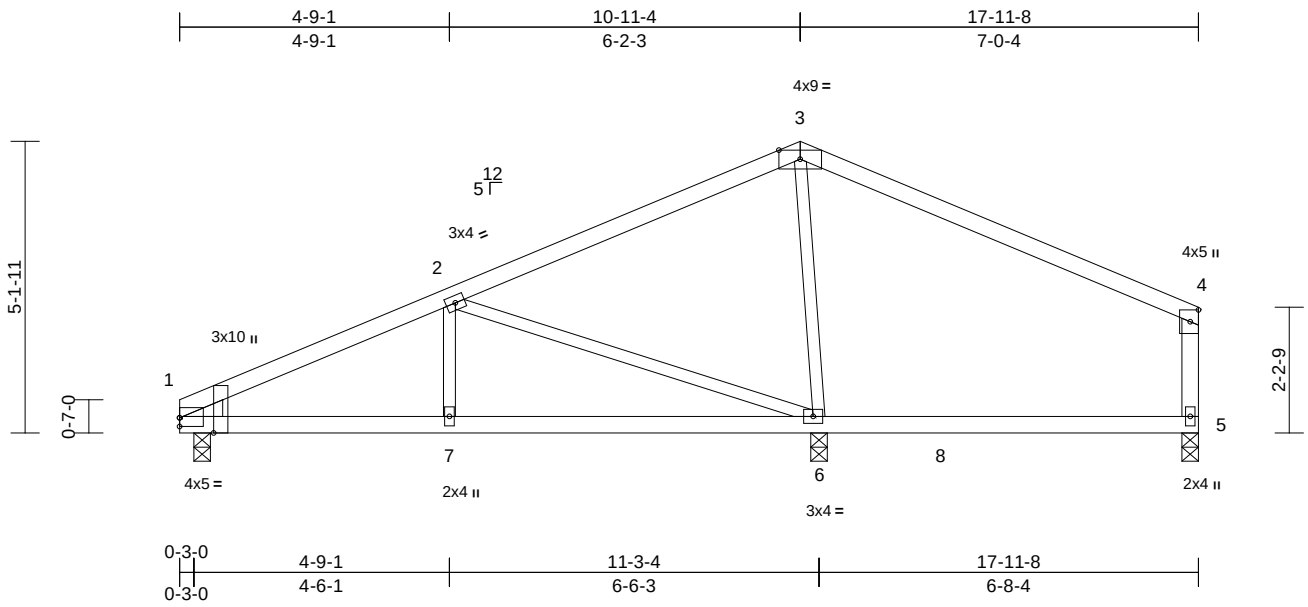

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Plate Offsets (X, Y): [1:Edge,0-1-14], [1:0-3-3,Edge]

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 (lb/size) 1=521/0-3-8, 5=328/0-3-8, 6=740/0-3-8
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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-873/158, 4-5=-286/133
BOT CHORD 1-7=-186/754, 6-7=-186/754
WEBS 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	C4	Roof Special Girder	1	1	I49493466
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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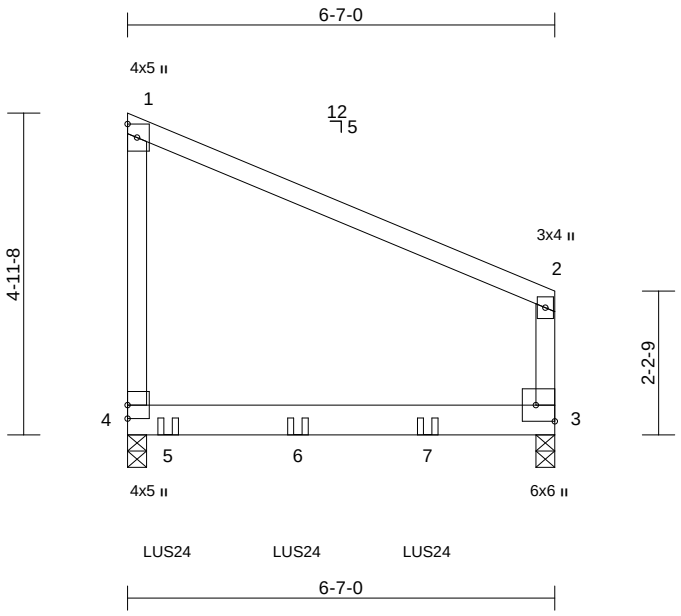

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Plate Offsets (X, Y): [3:Edge,0-3-8]

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 (lb/size) 3=498/0-3-8, 4=617/0-3-8
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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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)

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	C5	Common Supported Gable	1	1	I49493467
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Fri Dec 31 14:13:45 Page: 1
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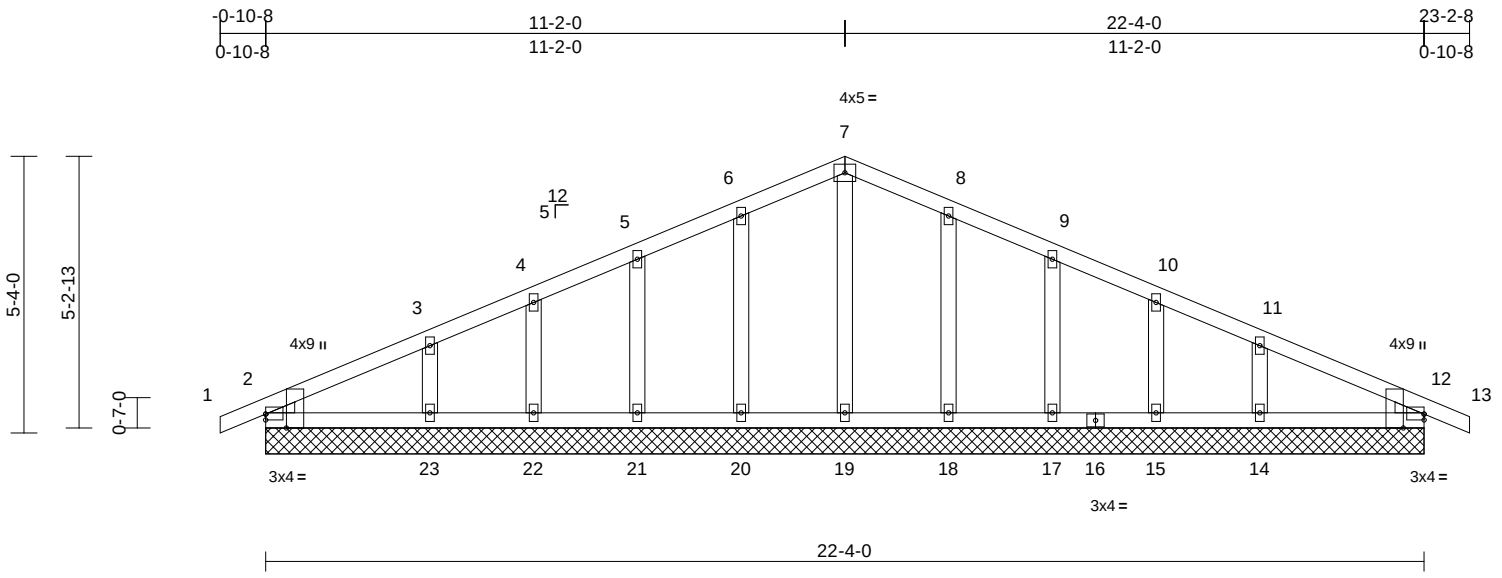

Scale = 1:44.4

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 All bearings 22-4-0.
(lb) - Max Horiz 2=88 (LC 8)
Max Uplift All uplift 100 (lb) or less at joint(s) 2, 12, 14, 15, 17, 18, 20, 21, 22, 23
Max Grav All reactions 250 (lb) or less at joint (s) 2, 12, 15, 17, 18, 19, 20, 21, 22 except 14=275 (LC 22), 23=275 (LC 21)

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

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 100 lb uplift at joint(s) 2, 20, 21, 22, 23, 18, 17, 15, 14, 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	D1	Common Supported Gable	1	1	I49493468 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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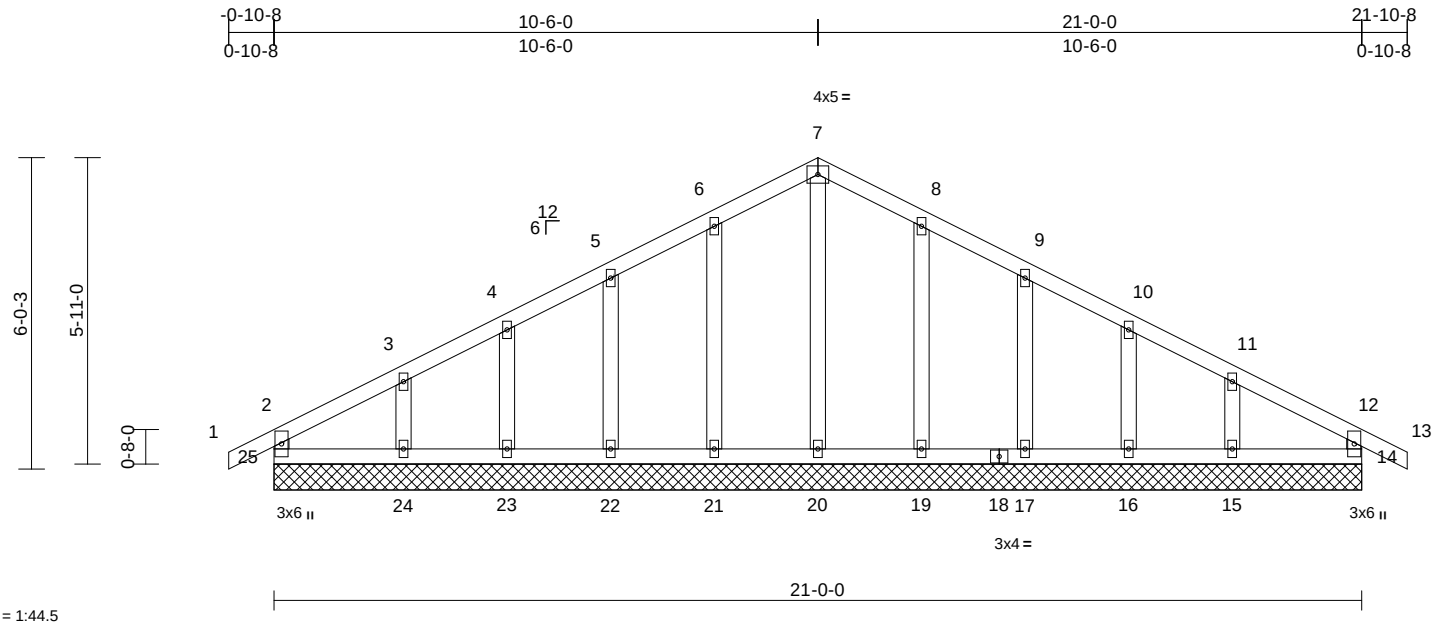

Scale = 1:44.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	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 All bearings 21-0-0.
(lb) - Max Horiz 25=90 (LC 7)
Max Uplift All uplift 100 (lb) or less at joint(s) 14, 15, 16, 17, 19, 21, 22, 23, 24, 25
Max Grav All reactions 250 (lb) or less at joint (s) 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25

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

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 100 lb uplift at joint(s) 25, 14, 21, 22, 23, 24, 19, 17, 16, 15.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	D2	Common	4	1	I49493469 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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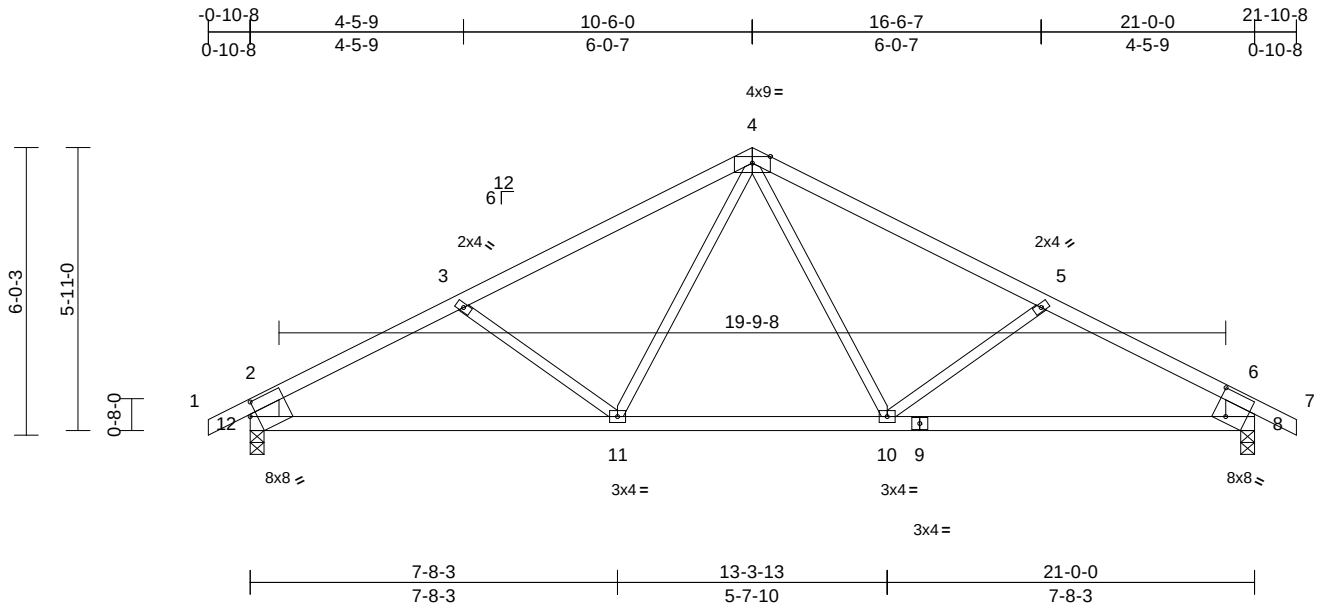

Scale = 1:48.2

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 (lb/size) 8=1000/0-3-8, 12=1000/0-3-8
Max Horiz 12=93 (LC 7)
Max Uplift 8=-141 (LC 9), 12=-141 (LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1415/220, 3-4=-1181/162, 4-5=-1181/162, 5-6=-1415/220, 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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	J1	Diagonal Hip Girder	2	1	I49493470 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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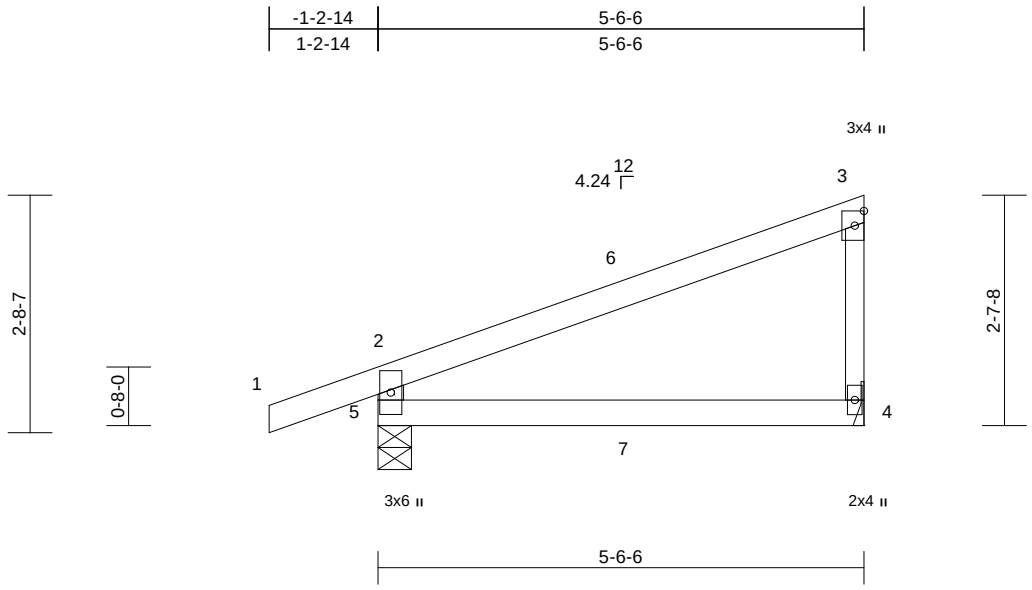

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.07	4-5	>967	240		
BCLL	0.0*	Rep Stress Incr	NO	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 (lb/size) 4=224/ Mechanical, 5=346/0-4-9
Max Horiz 5=111 (LC 7)
Max Uplift 4=-50 (LC 8), 5=-101 (LC 4)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-306/140

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)

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	J2	Jack-Open	3	1	I49493471
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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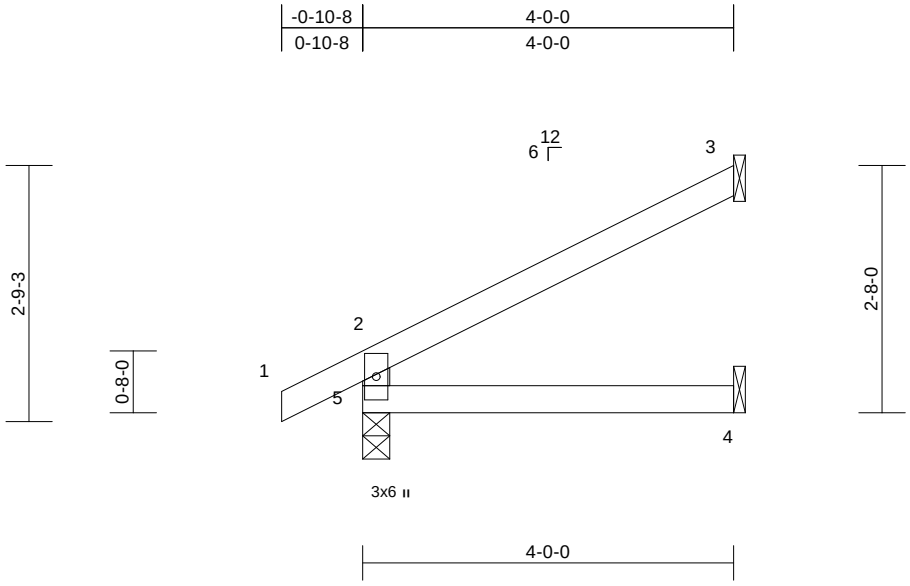

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	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 (lb/size) 3=116/ Mechanical, 4=45/ Mechanical, 5=252/0-3-8
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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	J3	Jack-Open	4	1	I49493472
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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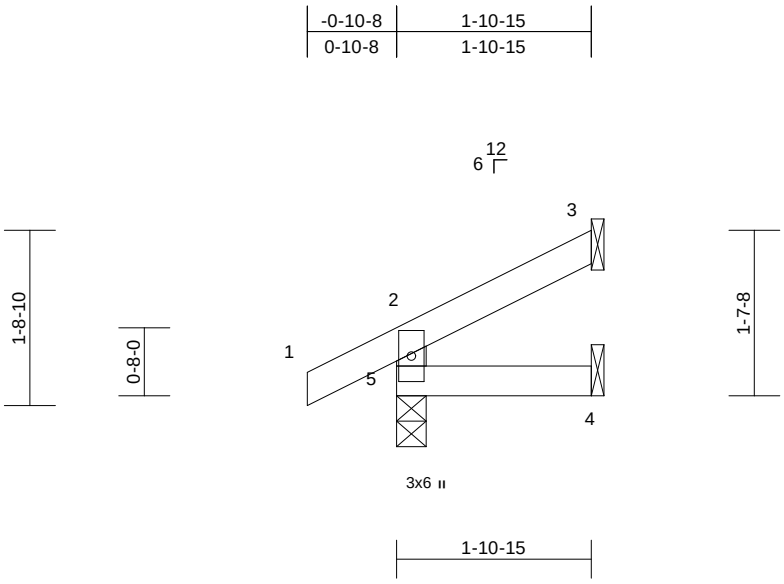

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	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 (lb/size) 3=44/ Mechanical, 4=14/ Mechanical, 5=171/0-3-8
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) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	P1	Piggyback	2	1	I49493473
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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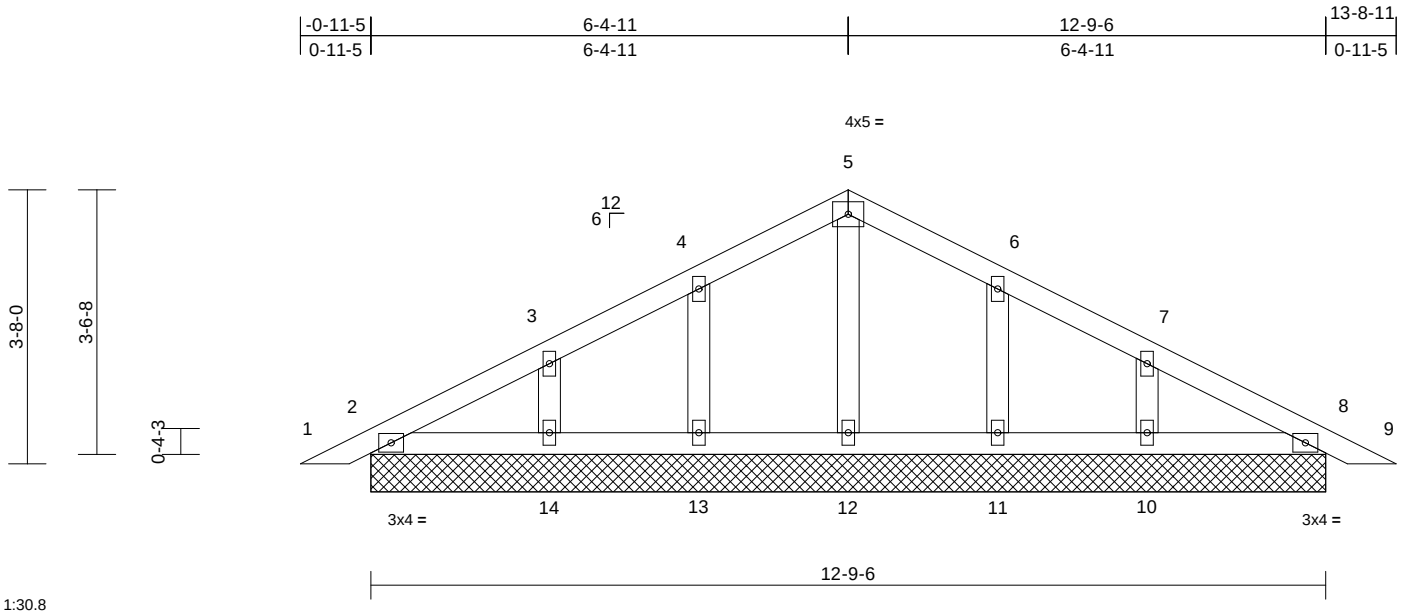

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	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 (lb/size) 2=144/12-9-6, 8=144/12-9-6, 10=219/12-9-6, 11=175/12-9-6, 12=160/12-9-6, 13=175/12-9-6, 14=219/12-9-6
Max Horiz 2=62 (LC 8)
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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	P2	Piggyback	19	1	I49493474 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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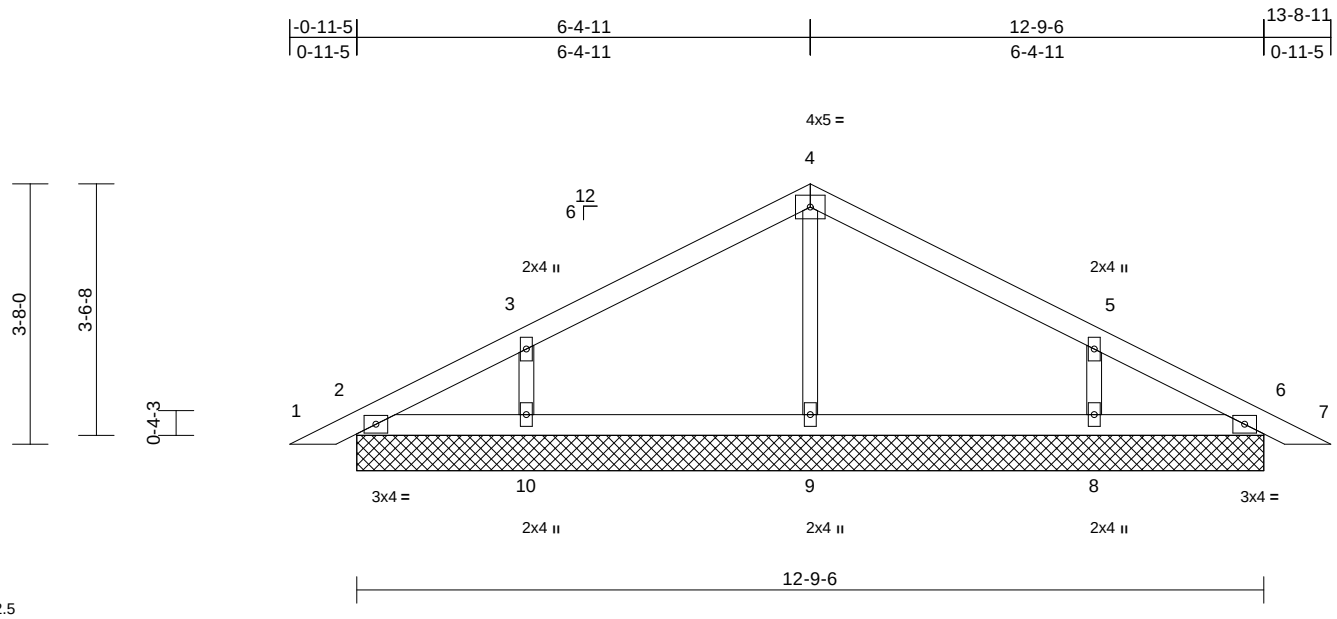

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	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 (lb/size) 2=130/12-9-6, 6=130/12-9-6, 8=332/12-9-6, 9=313/12-9-6, 10=332/12-9-6
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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V1	Valley	1	1	I49493475
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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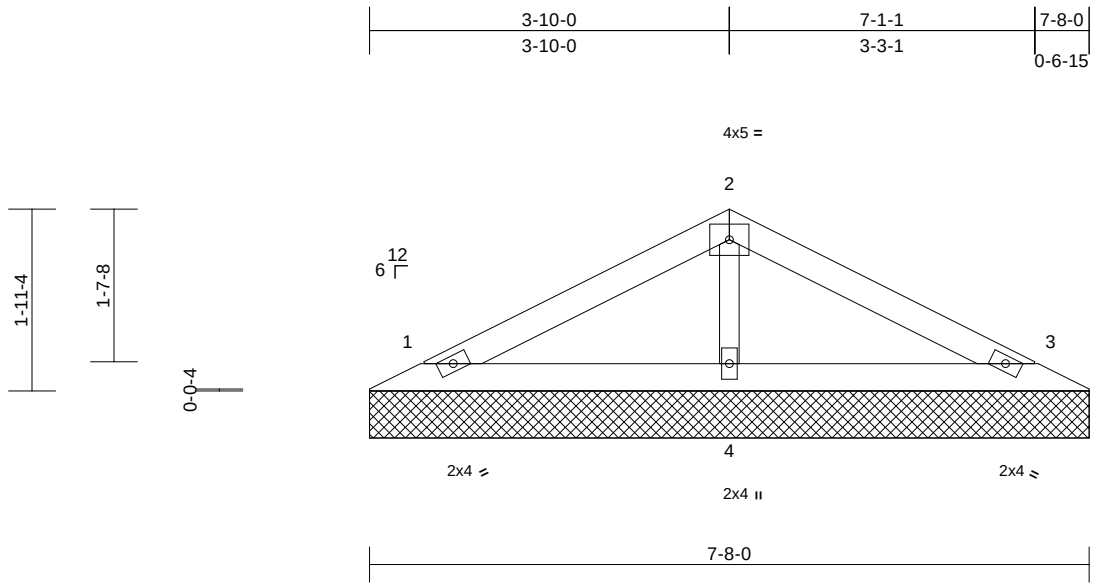

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	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 (lb/size) 1=153/7-8-0, 3=153/7-8-0, 4=279/7-8-0
Max Horiz 1=29 (LC 12)
Max Uplift 1=-35 (LC 8), 3=-40 (LC 9), 4=-4 (LC 8)

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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V2	Valley	1	1	I49493476
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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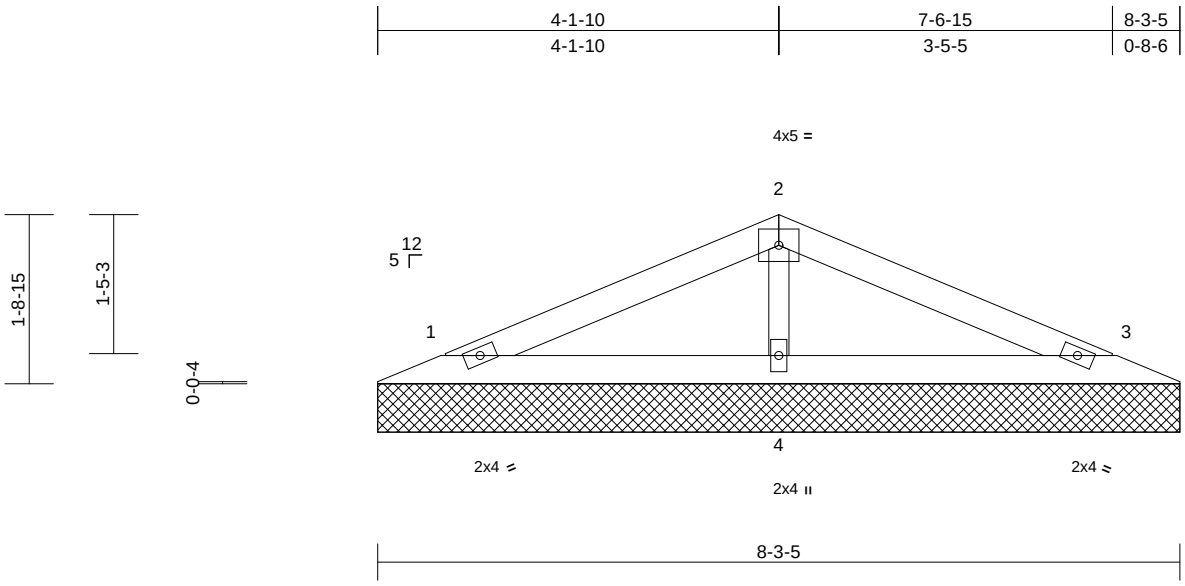

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04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

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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V3	Valley	1	1	I49493477
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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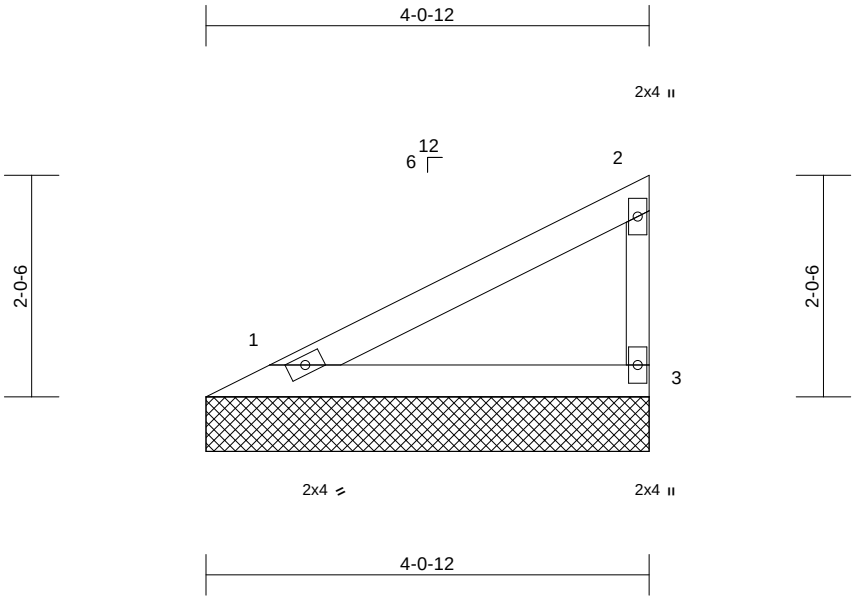

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	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 (lb/size) 1=150/4-0-12, 3=150/4-0-12
Max Horiz 1=70 (LC 5)
Max Uplift 1=-19 (LC 8), 3=-37 (LC 8)

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

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V4	Valley	1	1	I49493478
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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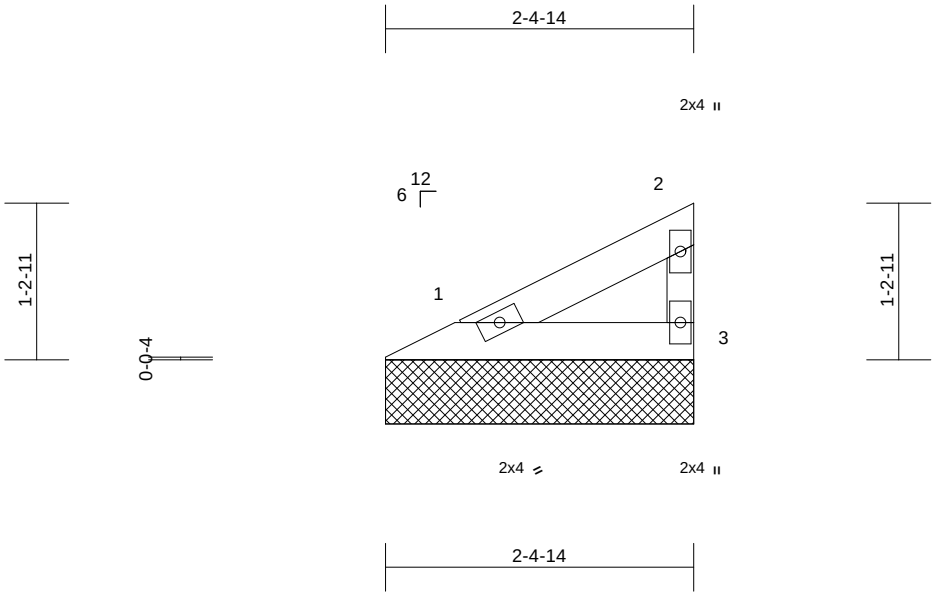

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	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 (lb/size) 1=77/2-4-14, 3=77/2-4-14
Max Horiz 1=36 (LC 5)
Max Uplift 1=-10 (LC 8), 3=-19 (LC 8)

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

December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V5	Valley	1	1	I49493479
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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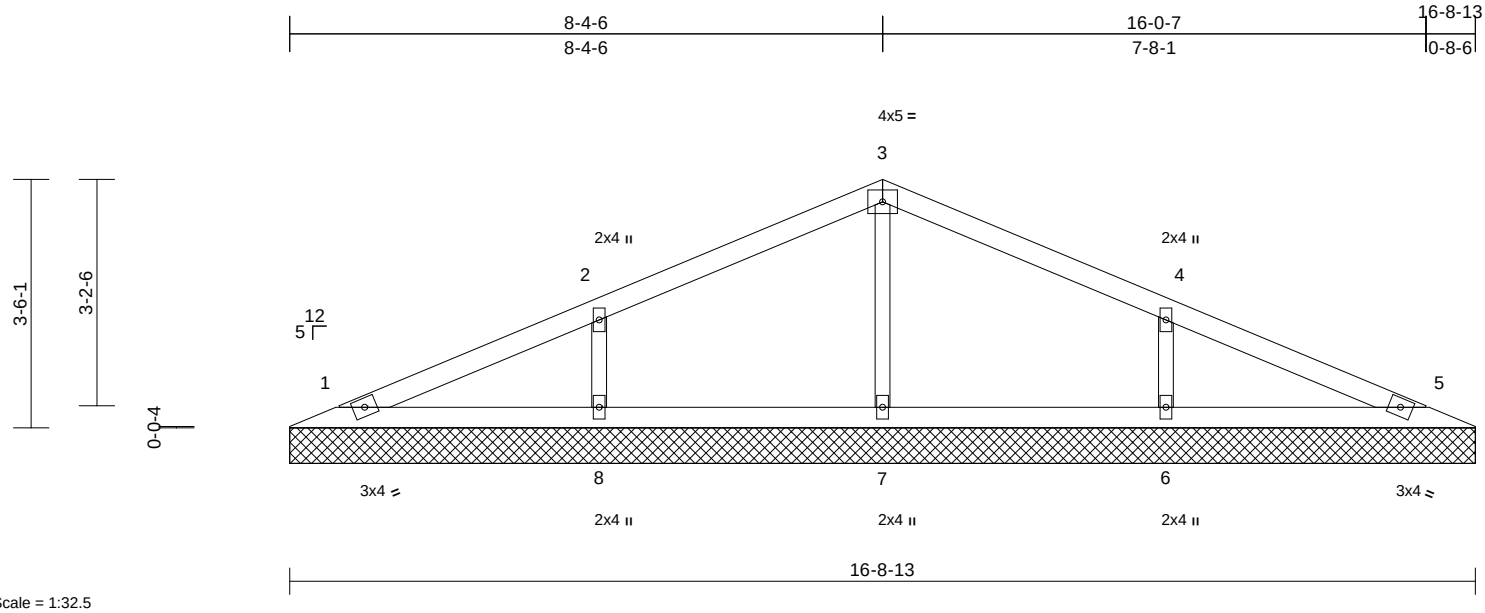

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	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 (lb/size) 1=135/16-8-13, 5=135/16-8-13, 6=404/16-8-13, 7=300/16-8-13, 8=404/16-8-13
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

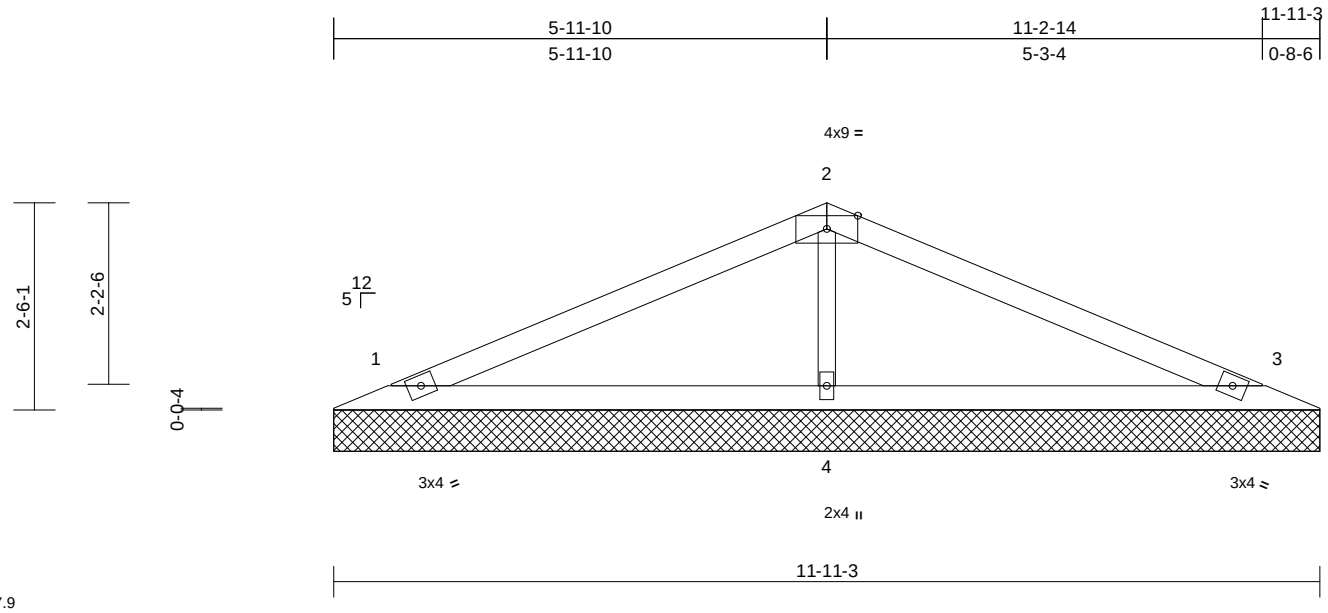
December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V6	Valley	1	1	I49493480
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:17:03 ID:HEDVssSlsPxPD0rorIkO2YyUre3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.39	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 (lb/size) 1=213/11-11-3, 3=213/11-11-3, 4=521/11-11-3
Max Horiz 1=39 (LC 12)
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

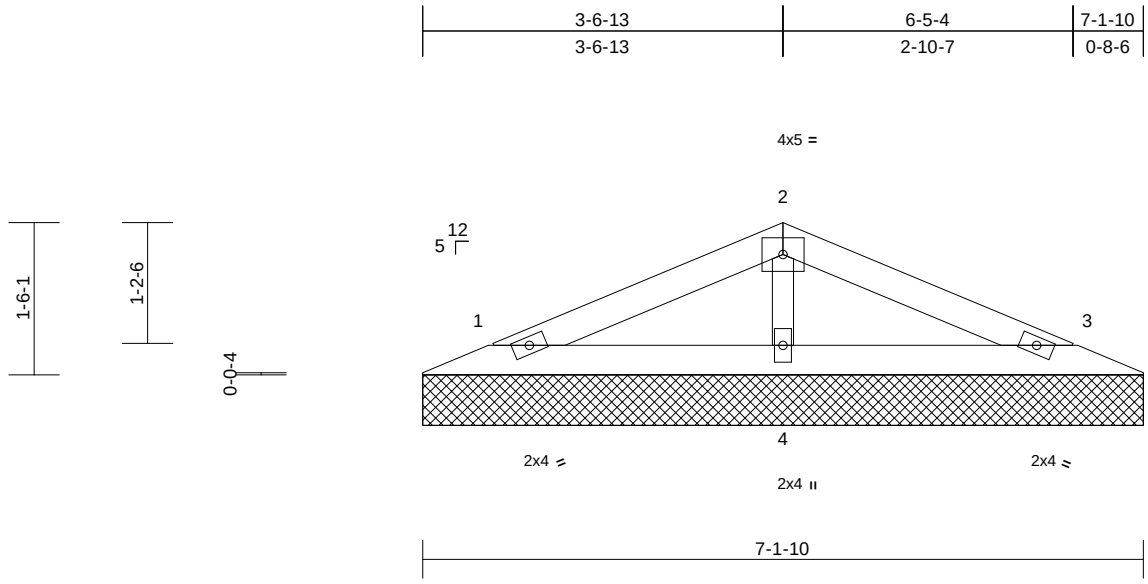
December 31,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	57 W2
B210104	V7	Valley	1	1	I49493481
					Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Dec 30 14:17:03 ID:HEDVssSlsPxPD0rorIkO2YyUre3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:22.8

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 lb	FT = 10%

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

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

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

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.

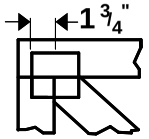
LOAD CASE(S) Standard

December 31,2021

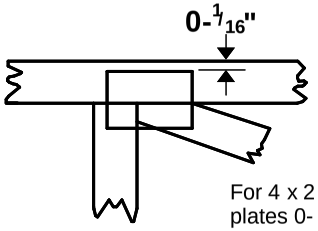
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

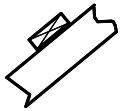
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

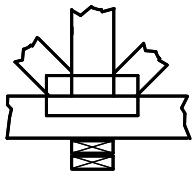
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

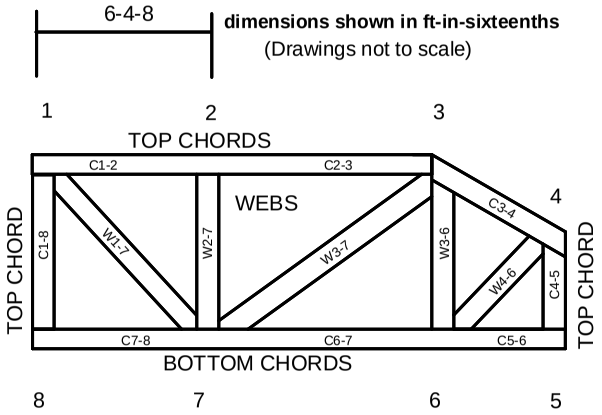


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.