RE: Lot 11 OS
Lot 11 OS

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

Site Information:

Customer: Project Name: Lot 11 OS
Lot/Block: Model:
Address: Subdivision:
City: State:

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

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

This package includes 27 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I47787250	A1	9/7/2021	21	I47787270	B1	9/7/2021
2	I47787251	A2	9/7/2021	22	I47787271	LAY1	9/7/2021
3	I47787252	A3	9/7/2021	23	I47787272	LAY2	9/7/2021
4	I47787253	A4	9/7/2021	24	I47787273	V1	9/7/2021
5	I47787254	A5	9/7/2021	25	I47787274	V2	9/7/2021
6	I47787255	A6	9/7/2021	26	I47787275	V3	9/7/2021
7	I47787256	A7	9/7/2021	27	I47787276	V4	9/7/2021
8	I47787257	A8	9/7/2021				
9	I47787258	A9	9/7/2021				
10	I47787259	A10	9/7/2021				
11	I47787260	A11	9/7/2021				
12	I47787261	A12	9/7/2021				
13	I47787262	A13	9/7/2021				
14	I47787263	A14	9/7/2021				
15	I47787264	A15	9/7/2021				
16	I47787265	A16	9/7/2021				
17	I47787266	A17	9/7/2021				
18	I47787267	A18	9/7/2021				
19	I47787268	A19	9/7/2021				
20	I47787269	A20	9/7/2021				

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

Truss Design Engineer's Name: Sevier, Scott

My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: 001193

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

September 07, 2021

Sevier, Scott

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	I47787250
Lot 11 OS	A1	Roof Special Supported Gable	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:48 Page: 1
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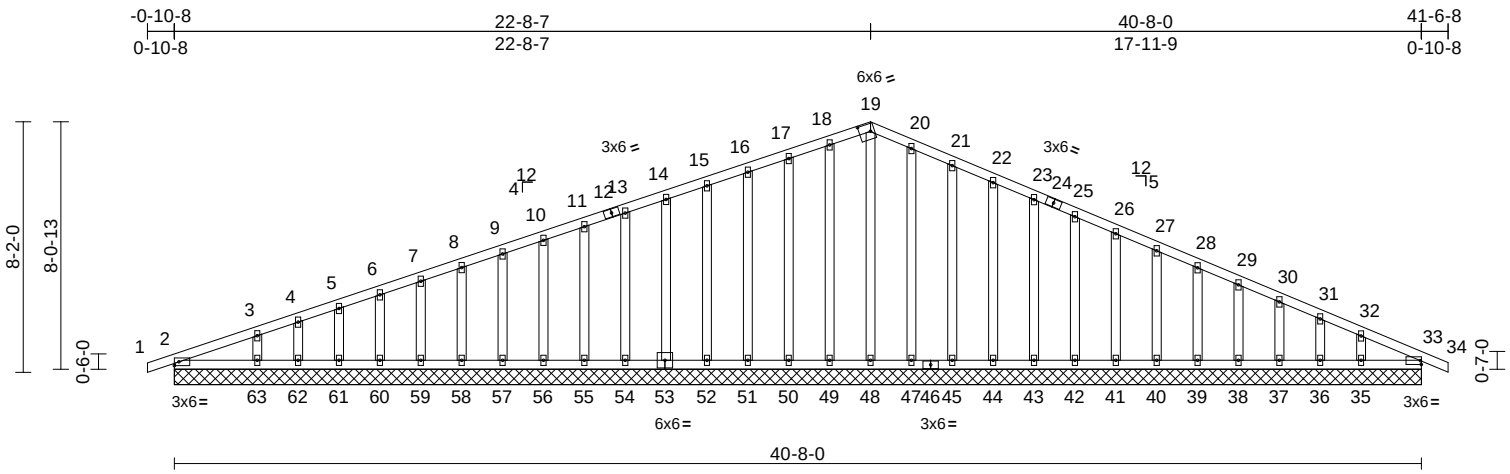

Scale = 1:75.1

Plate Offsets (X, Y): [19:0-4-7,0-3-0]

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	0.06	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	0.12	Horz(CT)	0.01	33	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 228 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=176/40-8-0, 33=154/40-8-0, 35=155/40-8-0, 36=108/40-8-0, 37=123/40-8-0, 38=119/40-8-0, 39=120/40-8-0, 40=120/40-8-0, 41=120/40-8-0, 42=120/40-8-0, 43=120/40-8-0, 44=120/40-8-0, 45=120/40-8-0, 47=123/40-8-0, 48=109/40-8-0, 49=123/40-8-0, 50=120/40-8-0, 51=120/40-8-0, 52=121/40-8-0, 53=120/40-8-0, 54=119/40-8-0, 55=120/40-8-0, 56=120/40-8-0, 57=120/40-8-0, 58=120/40-8-0, 59=120/40-8-0, 60=118/40-8-0, 61=130/40-8-0, 62=76/40-8-0, 63=226/40-8-0
Max Horiz 2=139 (LC 8)
Max Uplift 2=-19 (LC 9), 33=-9 (LC 5), 35=-57 (LC 9), 36=-28 (LC 9), 37=-32 (LC 9), 38=-32 (LC 9), 39=-32 (LC 9), 40=-32 (LC 9), 41=-32 (LC 9), 42=-32 (LC 9), 43=-32 (LC 9), 44=-32 (LC 9), 45=-38 (LC 9), 47=-18 (LC 9), 49=-19 (LC 8), 50=-33 (LC 4), 51=-28 (LC 4), 52=-28 (LC 8), 53=-28 (LC 4), 54=-29 (LC 8), 55=-28 (LC 4), 56=-28 (LC 4), 57=-28 (LC 8), 58=-28 (LC 4), 59=-28 (LC 8), 60=-28 (LC 4), 61=-30 (LC 8), 62=-22 (LC 4), 63=-65 (LC 8)
Max Grav 2=176 (LC 1), 33=154 (LC 1), 35=156 (LC 22), 36=108 (LC 22), 37=123 (LC 1), 38=119 (LC 22), 39=120 (LC 1), 40=120 (LC 1), 41=120 (LC 1), 42=120 (LC 22), 43=120 (LC 1), 44=120 (LC 1), 45=121 (LC 22), 47=124 (LC 22), 48=140 (LC 18), 49=124 (LC 21), 50=121 (LC 21), 51=120 (LC 1), 52=121 (LC 1), 53=120 (LC 1), 54=119 (LC 21), 55=120 (LC 1), 56=120 (LC 21), 57=120 (LC 21), 58=120 (LC 1), 59=120 (LC 1), 60=118 (LC 21), 61=130 (LC 1), 62=76 (LC 21), 63=226 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-166/72, 3-4=-122/71, 4-5=-107/78, 5-6=-89/83, 6-7=-75/92, 7-8=-61/103, 8-9=-48/114, 9-10=-38/124, 10-11=-28/135, 11-13=-20/146, 13-14=-20/157, 14-15=-21/168, 15-16=-21/179, 16-17=-21/190, 17-18=-21/202, 18-19=-22/208, 19-20=-25/208, 20-21=-24/188, 21-22=-24/162, 22-23=-24/137, 23-25=-24/113, 25-26=-24/90, 26-27=-24/74, 27-28=-24/58, 28-29=-24/43, 29-30=-31/29, 30-31=-44/23, 31-32=-64/16, 32-33=-109/28, 33-34=0/6

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A1	Roof Special Supported Gable	4	1	Job Reference (optional) I47787250

BOT CHORD 2-63=-10/117, 62-63=-10/117, 61-62=-10/117, 60-61=-10/117, 59-60=-10/117, 58-59=-10/117, 57-58=-10/117, 56-57=-10/117, 55-56=-10/117, 54-55=-10/117, 52-54=-10/117, 51-52=-10/117, 50-51=-10/117, 49-50=-10/117, 48-49=-10/117, 47-48=-10/117, 45-47=-10/117, 44-45=-10/117, 43-44=-10/117, 42-43=-10/117, 41-42=-10/117, 40-41=-10/117, 39-40=-10/117, 38-39=-10/117, 37-38=-10/117, 36-37=-10/117, 35-36=-10/117, 33-35=-10/117

WEBS 19-48=-114/0, 18-49=-97/35, 17-50=-94/49, 16-51=-93/44, 15-52=-93/45, 14-53=-94/44, 13-54=-93/45, 11-55=-93/44, 10-56=-93/44, 9-57=-93/44, 8-58=-93/44, 7-59=-93/45, 6-60=-92/44, 5-61=-99/47, 4-62=-64/32, 3-63=-167/91, 20-47=-97/34, 21-45=-94/54, 22-44=-93/48, 23-43=-93/48, 25-42=-93/48, 26-41=-93/48, 27-40=-93/48, 28-39=-93/48, 29-38=-93/48, 30-37=-95/49, 31-36=-86/43, 32-35=-118/77

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 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 2, 9 lb uplift at joint 33, 19 lb uplift at joint 49, 33 lb uplift at joint 50, 28 lb uplift at joint 51, 28 lb uplift at joint 52, 28 lb uplift at joint 53, 29 lb uplift at joint 54, 28 lb uplift at joint 55, 28 lb uplift at joint 56, 28 lb uplift at joint 57, 28 lb uplift at joint 58, 28 lb uplift at joint 59, 28 lb uplift at joint 60, 30 lb uplift at joint 61, 22 lb uplift at joint 62, 65 lb uplift at joint 63, 18 lb uplift at joint 47, 38 lb uplift at joint 45, 32 lb uplift at joint 44, 32 lb uplift at joint 43, 32 lb uplift at joint 42, 32 lb uplift at joint 41, 32 lb uplift at joint 40, 32 lb uplift at joint 39, 32 lb uplift at joint 38, 32 lb uplift at joint 37, 28 lb uplift at joint 36 and 57 lb uplift at joint 35.
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

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A2	Roof Special	8	1	Job Reference (optional) I47787251

Wheeler Lumber, Waverly, KS - 66871,

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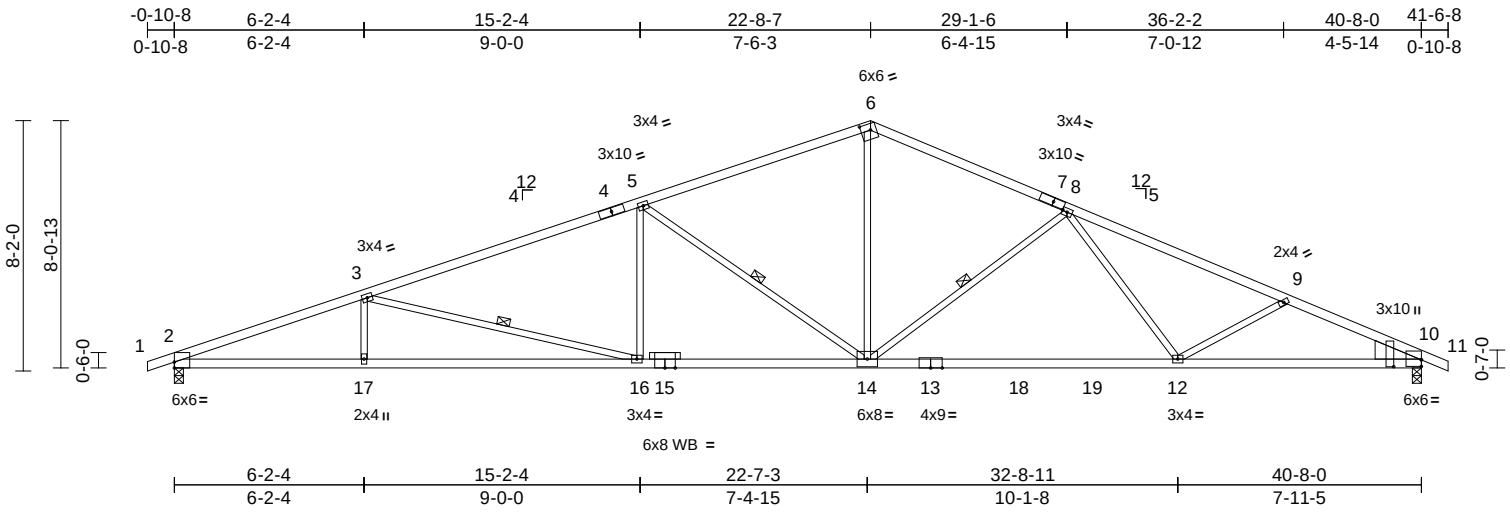

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Plate Offsets (X, Y): [2:Edge,0-2-5], [6:0-3-12,0-2-8], [7:0-4-7,0-1-8], [10:Edge,0-2-10], [10:0-2-11,0-10-13]

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	0.97	Vert(LL)	-0.46	12-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.82	12-14	>590	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.19	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	16-17	>999	240	Weight: 144 lb	FT = 10%

LUMBER

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

BRACING

TOP CHORD	Structural wood sheathing directly applied.
BOT CHORD	Rigid ceiling directly applied or 9-4-14 oc bracing.
WEBS	1 Row at midpt 3-16, 5-14, 8-14

REACTIONS (lb/size) 2=1888/0-3-8, 10=1888/0-3-8
Max Horiz 2=139 (LC 8)
Max Uplift 2=-318 (LC 4), 10=-239 (LC 9)
Max Grav 2=1937 (LC 2), 10=1951 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-4773/679, 3-5=-3747/541, 5-6=-2694/392, 6-8=-2745/412, 8-9=-3708/382, 9-10=-3857/475, 10-11=0/6
BOT CHORD	2-17=-690/4436, 16-17=-690/4436, 14-16=-450/3481, 12-14=-269/3059, 10-12=-377/3430
WEBS	3-17=0/331, 3-16=-1014/255, 5-16=0/527, 5-14=-1243/320, 6-14=-142/1510, 8-14=-798/278, 8-12=0/536, 9-12=-244/215

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 318 lb uplift at joint 2 and 239 lb uplift at joint 10.
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

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A3	Roof Special Structural Gable	4	1	Job Reference (optional) I47787252

Wheeler Lumber, Waverly, KS - 66871,

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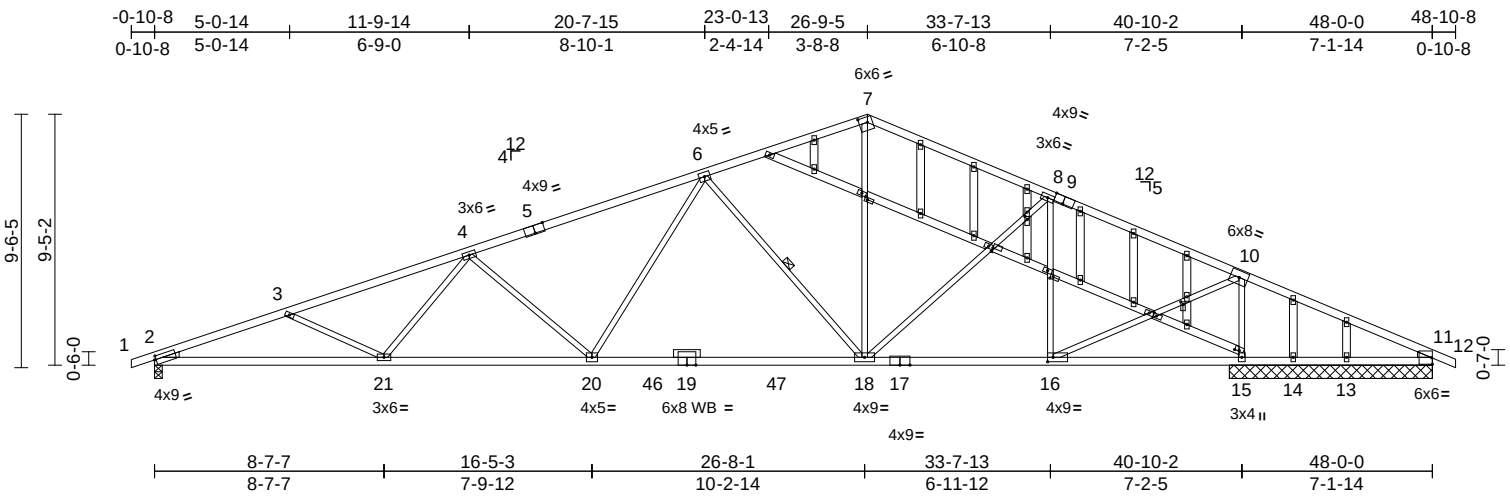

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Plate Offsets (X, Y): [2:0-0-12,0-1-11], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [9:0-4-4,Edge], [16:0-2-8,0-2-0], [23:0-1-4,0-1-0], [24:0-0-2,0-1-12], [25:0-1-4,0-1-0], [26:0-1-8,0-1-0], [27:0-2-0,0-0-7], [36:0-1-6,0-1-0], [43:0-1-4,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.51	18-20	>967	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.86	18-20	>565	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.12	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.22	20-21	>999	240	Weight: 217 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 5-7:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 22-23,23-24,24-25,25-26,26-27:2x4 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.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-18

REACTIONS All bearings 7-7-8. except 2=0-3-8
(lb) - Max Horiz 2=163 (LC 8)
Max Uplift All uplift 100 (lb) or less at joint(s) 13 except 2=-324 (LC 4), 11=-348 (LC 23), 14=-147 (LC 2), 15=-311 (LC 4)
Max Grav All reactions 250 (lb) or less at joint (s) 11, 13, 14 except 2=1880 (LC 2), 15=2889 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-4417/738, 3-4=-4209/624, 4-5=-3315/500, 5-6=-3235/525, 6-7=-1893/341, 7-8=-1949/351, 8-9=-1396/225, 9-10=-1555/223, 10-11=-196/1234
BOT CHORD 2-21=-776/4095, 20-21=-597/3670, 20-46=-326/2524, 19-46=-326/2524, 19-47=-326/2524, 18-47=-326/2524, 17-18=-55/1359, 16-17=-55/1359, 15-16=-1037/206, 14-15=-1037/206, 13-14=-1037/206, 11-13=-1037/206
WEBS 3-21=-289/206, 4-21=0/453, 4-20=-870/296, 6-20=-101/1067, 6-18=-1236/353, 7-18=-121/976, 8-18=-77/598, 8-16=-921/199, 10-16=-287/2632, 10-15=-2565/383

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 100 lb uplift at joint(s) 13 except (jt=lb) 2=324, 15=310, 11=347, 14=147.
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

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A4	Roof Special	4	1	Job Reference (optional) I47787253

Wheeler Lumber, Waverly, KS - 66871,

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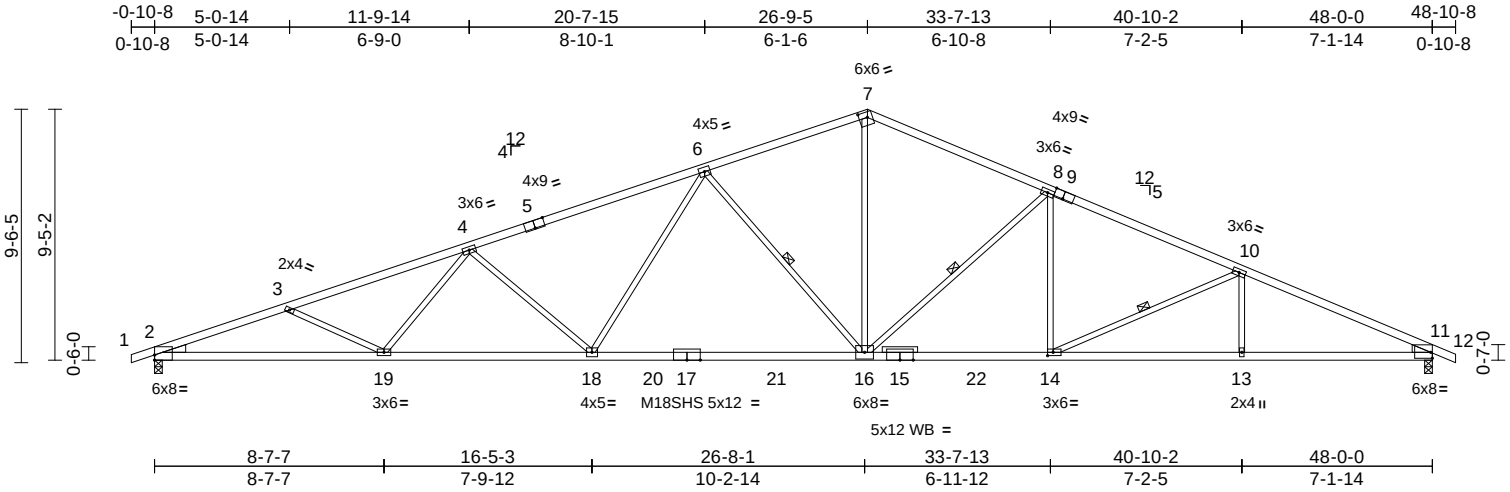

Scale = 1:86.6

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [9:0-4-4,Edge], [11:Edge,0-2-10], [14:0-2-8,0-1-8]

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	0.95	Vert(LL)	-0.68	16-18	>840	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-1.17	16-18	>489	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.26	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.30	18	>999	240	Weight: 173 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF 2100F 1.8E
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2
WEDGE	Left: 2x4 SP No.3 Right: 2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 8-4-4 oc bracing.
WEBS	1 Row at midpt 6-16, 8-16, 10-14

REACTIONS (lb/size) 2=2218/0-3-8, (req. 0-3-10), 11=2218/0-3-8, (req. 0-3-10)
Max Horiz 2=163 (LC 8)
Max Uplift 2=-368 (LC 4), 11=-278 (LC 9)
Max Grav 2=2318 (LC 2), 11=2324 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/6, 2-3=-5618/858, 3-4=-5477/754, 4-6=-4640/660, 6-7=-3241/478, 7-8=-3324/490, 8-10=-4088/477, 10-11=-4797/510, 11-12=0/6
BOT CHORD	2-19=-878/5214, 18-19=-723/4908, 16-18=-453/3790, 14-16=-294/3701, 13-14=-381/4282, 11-13=-381/4282
WEBS	6-16=-1218/351, 7-16=-217/1929, 8-16=-974/284, 8-14=-8/521, 10-14=-677/205, 10-13=0/315, 3-19=-223/194, 4-19=0/410, 4-18=-858/296, 6-18=-102/1051

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) WARNING: Required bearing size at joint(s) 2, 11 greater than input bearing size.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 2 and 278 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A5	Roof Special	4	1	Job Reference (optional)

I47787254

09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:52 Page: 1
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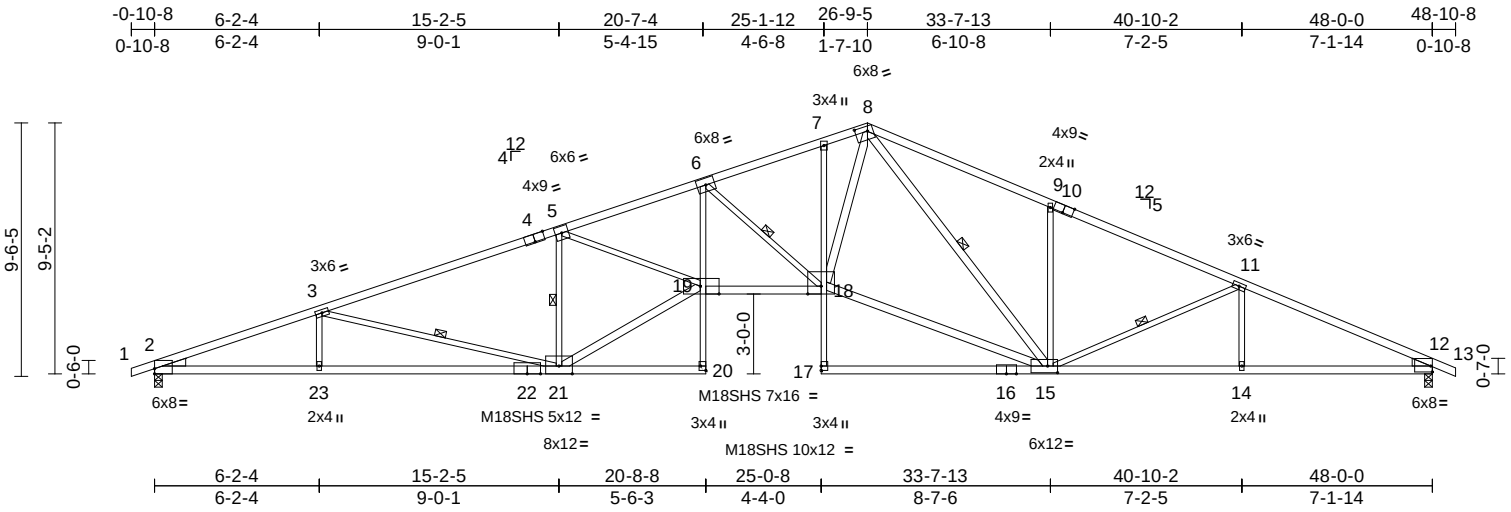

Scale = 1:86.6

Plate Offsets (X, Y): [2:Edge,0-2-5], [4:0-4-8,Edge], [8:0-5-8,0-2-4], [10:0-4-8,Edge], [12:Edge,0-2-10], [15:0-4-8,0-3-0], [19:0-8-8,Edge], [20:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.67	20	>849	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-1.21	18-19	>472	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.53	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.48	20	>999	240	Weight: 202 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 1-4:2x4 SPF 2400F 2.0E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 20-6,7-17:2x3 SPF No.2, 17-16:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 21-19:2x4 SPF 2100F 1.8E, 15-18,18-8,15-8:2x4 SPF No.2

WEDGE Left: 2x4 SP No.3
Right: 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied.

BOT CHORD Rigid ceiling directly applied or 8-6-0 oc bracing.

WEBS 1 Row at midpt 3-21, 5-21, 6-18, 8-15, 11-15

REACTIONS (lb/size) 2=2218/0-3-8, 12=2218/0-3-8
Max Horiz 2=163 (LC 12)
Max Uplift 2=-368 (LC 4), 12=-278 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5568/825, 3-5=-4624/683, 5-6=-6933/973, 6-7=-4877/677, 7-8=-4807/714, 8-9=-3856/558, 9-11=-3864/470, 11-12=-4542/514, 12-13=0/6

BOT CHORD 2-23=-846/5161, 21-23=-846/5161, 20-21=-5/26, 19-20=0/66, 6-19=-276/2088, 18-19=-779/6516, 17-18=0/143, 7-18=-212/106, 15-17=0/33, 14-15=-385/4036, 12-14=-385/4036

WEBS 3-23=0/322, 3-21=-947/260, 5-21=-2147/391, 19-21=-694/4966, 5-19=-187/2359, 6-18=-2587/454, 15-18=-352/3966, 8-18=-433/3133, 8-15=-741/115, 9-15=-516/263, 11-15=-664/218, 11-14=0/287

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 2 and 278 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A6	Roof Special	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I47787255
09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 11:30:12 Page: 1
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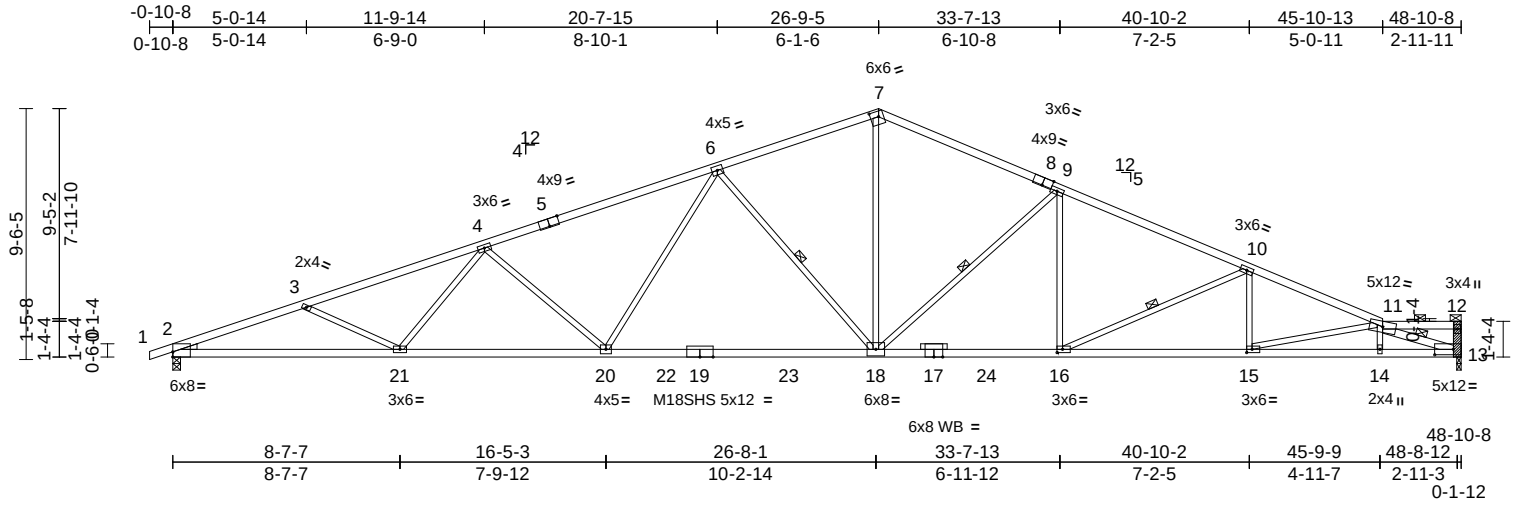

Scale = 1:87.4

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS
AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER
THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS,
2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [8:0-4-7,Edge], [13:0-8-8,0-2-8], [15:0-2-8,0-1-8], [16:0-2-8,0-1-8]

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	0.90	Vert(LL)	-0.74	18-20	>793	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-1.26	18-20	>461	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.29	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.33	18-20	>999	240	Weight: 182 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 11-12:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 12-13,13-11:2x4 SPF No.2
OTHERS 2x3 SPF No.2
LBR SCAB 12-13 SPF No.2 one side
WEDGE Left: 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 11-12.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-3-6 oc bracing: 2-21
9-1-1 oc bracing: 20-21.
WEBS 1 Row at midpt 6-18, 9-18, 11-13, 10-16

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)
Max Horiz 2=167 (LC 8)
Max Uplift 2=-371 (LC 4), 13=-265 (LC 9)
Max Grav 2=2360 (LC 2), 13=2304 (LC 2)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-5734/867, 3-4=-5598/762, 4-5=-4767/639, 5-6=-4686/669, 6-7=-3370/487, 7-8=-3443/500, 8-9=-3457/468, 9-10=-4332/494, 10-11=-5232/566
BOT CHORD 2-21=-894/5322, 20-21=-740/5027, 20-22=-470/3912, 19-22=-470/3912, 19-23=-470/3912, 18-23=-470/3912, 17-18=-319/3928, 17-24=-319/3928, 16-24=-319/3928, 15-16=-487/4790, 14-15=-600/5359, 13-14=-606/5360
WEBS 4-21=0/406, 4-20=-856/296, 6-20=-102/1050, 6-18=-1217/351, 7-18=-225/2023, 9-18=-1101/300, 11-13=-5549/617, 9-16=-15/635, 10-16=-946/228, 10-15=0/401, 11-15=-582/115

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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 371 lb uplift at joint 2 and 265 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	
Lot 11 OS	A7	Roof Special	2	1	Job Reference (optional)	I47787256

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:54 Page: 1
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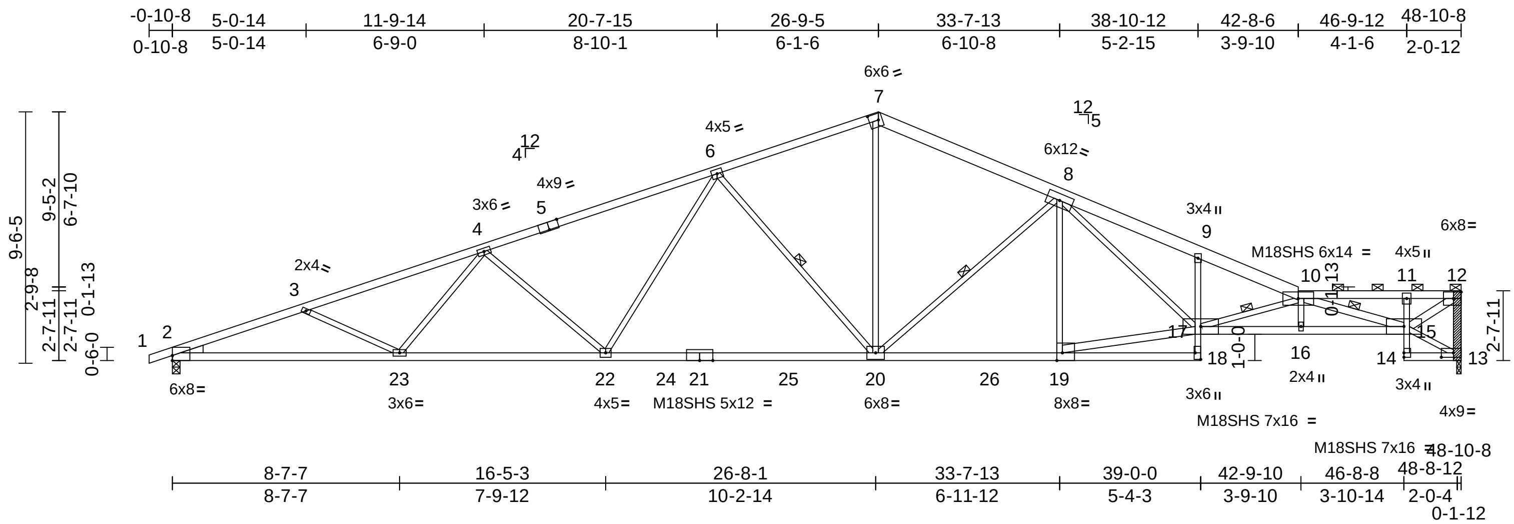

Scale = 1:87.4

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-4-4,0-3-0], [13:0-5-8,0-2-0], [18:Edge,0-2-8], [19:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.84	20-22	>692	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-1.45	20-22	>403	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.46	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.39	20-22	>999	240	Weight: 208 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-10:2x6 SPF No.2, 10-12:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 18-9,11-14:2x3 SPF No.2, 17-15:2x4 SPF 2400F 2.0E, 14-13:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-13,19-17,15-10,15-12:2x4 SPF No.2
LBR SCAB 12-13 SPF No.2 one side
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-7-15 max.): 10-12.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 6-20, 8-20, 10-17, 10-15

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)
Max Horiz 2=171 (LC 12)
Max Uplift 2=-370 (LC 4), 13=-268 (LC 9)
Max Grav 2=2359 (LC 2), 13=2303 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-5732/863, 3-4=-5596/759, 4-6=-4765/666, 6-7=-3376/483, 7-8=-3478/496, 8-9=-6533/764, 9-10=-6606/691, 10-11=-3314/387, 11-12=-3166/369, 12-13=-2251/281
BOT CHORD 2-23=-897/5320, 22-23=-743/5024, 20-22=-473/3910, 19-20=-343/3974, 18-19=-15/224, 17-18=0/99, 9-17=-221/137, 16-17=-953/8651, 15-16=-948/8654, 14-15=0/32, 11-15=-322/115, 13-14=-10/35
WEBS 3-23=-218/194, 4-23=0/406, 4-22=-857/296, 6-22=-102/1050, 6-20=-1195/347, 7-20=-220/2028, 8-20=-1133/297, 8-19=-573/133, 17-19=-334/3818, 8-17=-395/2858, 10-17=-2756/344, 10-15=-5630/557, 13-15=-39/34, 12-15=-470/3853, 10-16=-32/101

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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 370 lb uplift at joint 2 and 268 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A8	Roof Special	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I47787257
09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 11:33:38 Page: 1
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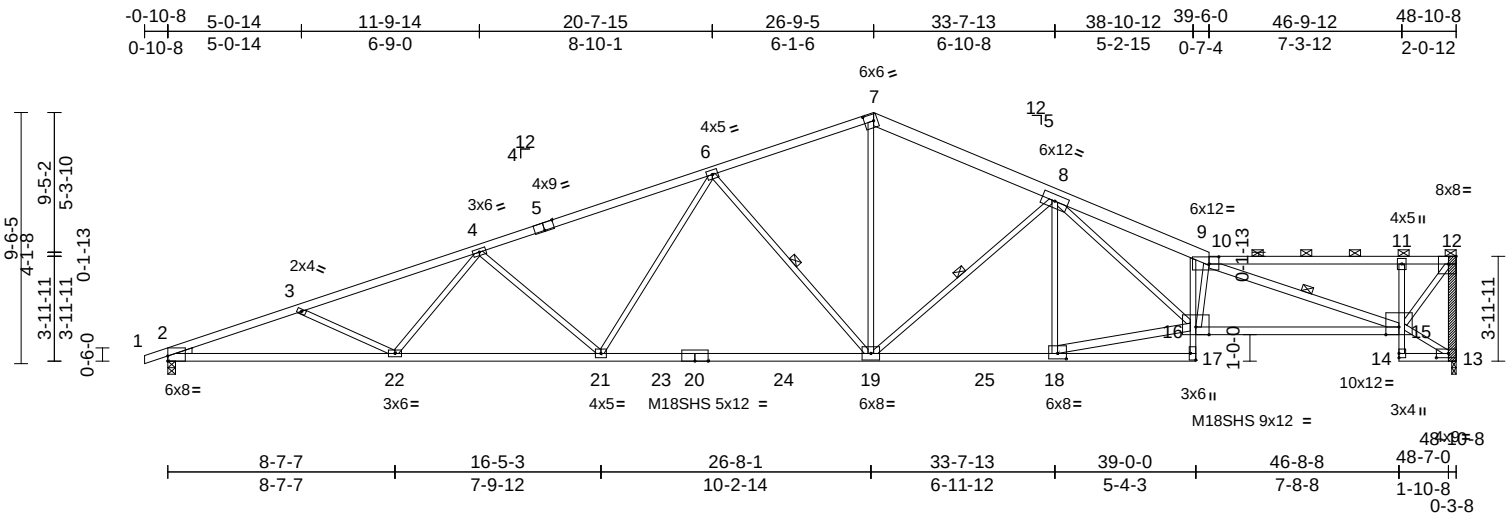

Scale = 1:87.4

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-4-4,0-3-0], [10:0-4-8,0-3-4], [12:0-3-8,Edge], [13:0-5-8,0-2-0], [17:Edge,0-2-8], [18:0-4-0,0-2-8]

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	0.89	Vert(LL)	-0.79	19-21	>742	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-1.35	19-21	>432	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.39	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.35	19-21	>999	240	Weight: 211 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-10:2x6 SPF No.2, 10-12:2x4 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-9,11-14:2x3 SPF No.2, 14-13:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 12-13,18-16:2x4 SPF No.2, 15-10:2x4 SPF 2100F 1.8E

LBR SCAB 13-12 SPF No.2 one side

WEDGE Left: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-1-9 max.): 10-12.

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

WEBS 1 Row at midpt 6-19, 8-19, 10-15

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)

Max Horiz 2=175 (LC 8)
Max Uplift 2=-368 (LC 4), 13=-272 (LC 9)
Max Grav 2=2359 (LC 2), 13=2303 (LC 2)

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

TOP CHORD 2-3=-5732/857, 3-4=-5596/752, 4-5=-4765/628, 5-6=-4684/659, 6-7=-3376/476, 7-8=-3478/489, 8-9=-6564/718, 9-10=-6856/706, 10-11=-1738/203, 11-12=-1677/197, 12-13=-2280/274

BOT CHORD 2-22=-898/5320, 21-22=-743/5024, 21-23=-473/3910, 20-23=-473/3910, 20-24=-473/3910, 19-24=-473/3910, 19-25=-391/3973, 18-25=-391/3973, 9-16=-47/503, 15-16=-721/6451, 11-15=-501/211

WEBS 4-22=0/406, 4-21=-857/296, 6-21=-102/1050, 6-19=-1194/347, 7-19=-214/2026, 8-19=-1131/281, 8-18=-573/138, 16-18=-352/3851, 8-16=-371/2895, 10-16=-1640/298, 10-15=-5020/496, 12-15=-386/2874

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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 2 and 272 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A9	Roof Special	2	1	Job Reference (optional) I47787258

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 E Aug 16 2021 Print: 8.430 E Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 11:34:25 Page: 1
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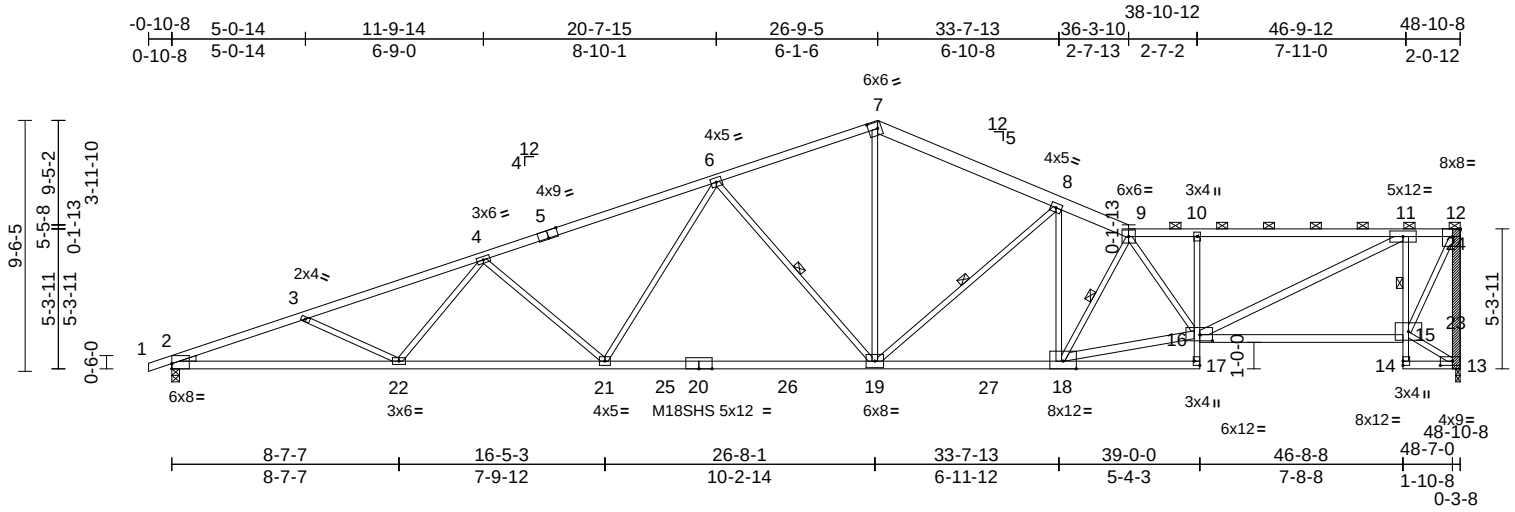

Scale = 1:87.4

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-4-4,0-3-0], [12:0-3-8,Edge], [13:0-5-8,0-2-0], [16:0-5-12,0-2-12], [17:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.72	19-21	>813	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-1.23	19-21	>474	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.30	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	19-21	>999	240	Weight: 215 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9:2x6 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-10,11-14:2x3 SPF No.2, 16-15,14-13:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 12-13,16-11:2x4 SPF No.2, 18-16:2x4 SPF 2100F 1.8E

LBR SCAB 13-12 SPF No.2 one side

WEDGE Left: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-11-8 max.): 9-12.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing. Except:

1 Row at midpt 11-15

WEBS 1 Row at midpt 6-19, 8-19, 9-18

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)

Max Horiz 2=219 (LC 7)

Max Uplift 2=-364 (LC 4), 13=-279 (LC 9)

Max Grav 2=2360 (LC 2), 13=2304 (LC 2)

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

TOP CHORD 2-3=-5734/847, 3-4=-5599/742, 4-5=-4766/618, 5-6=-4685/648, 6-7=-3379/465, 7-8=-3480/478, 8-9=-4319/461, 9-10=-4571/473, 10-11=-4595/474, 11-12=-1183/131, 13-23=-2286/288, 23-24=-2286/288, 12-24=-2286/288

BOT CHORD 2-22=-897/5322, 21-22=-741/5026, 21-25=-470/3912, 20-25=-470/3912, 20-26=-470/3912, 19-26=-470/3912, 19-27=-428/3967, 18-27=-428/3967, 10-16=-528/208, 15-16=-206/1221, 11-15=-2105/387

WEBS 4-22=0/407, 4-21=-857/296, 6-21=-102/1048, 6-19=-1193/347, 7-19=-206/2024, 8-19=-1119/258, 8-18=-3/721, 9-18=-1580/186, 16-18=-476/4692, 9-16=-298/90, 11-16=-381/3788, 12-15=-371/2613

NOTES

1) Attached 5-3-11 scab 12 to 13, front face(s) 2x4 SPF No.2 with 1 row(s) of 10d (0.131"x3") nails spaced 9" o.c..
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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
9) Bearing at joint(s) 13 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 364 lb uplift at joint 2 and 279 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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A10	Roof Special	2	1	Job Reference (optional) I47787259

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:55 Page: 1
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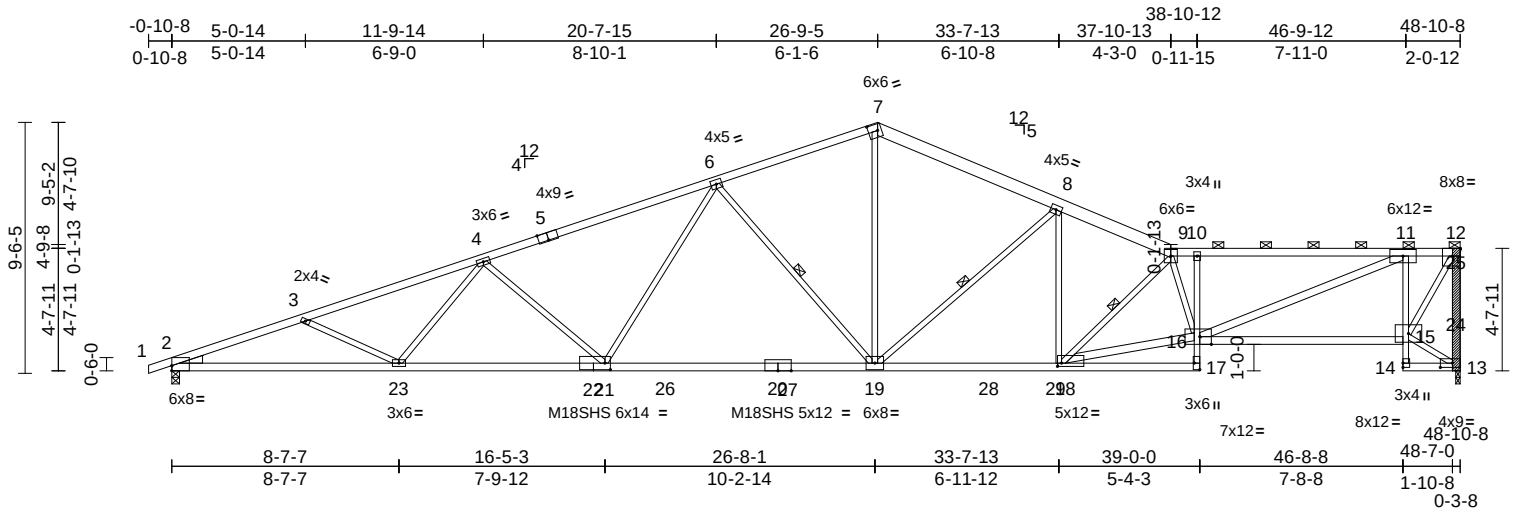

Scale = 1:87.4

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-4-4,0-3-0], [12:0-3-8,Edge], [13:0-5-8,0-2-0], [16:0-5-4,Edge], [17:Edge,0-2-8], [18:0-1-14,0-1-8], [22:0-2-8,0-3-0]

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	0.90	Vert(LL)	-0.74	19-21	>791	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-1.26	19-21	>461	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.32	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.33	19-21	>999	240	Weight: 213 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9:2x6 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-10,11-14:2x3 SPF No.2, 16-15,14-13:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 12-13:2x4 SPF No.2, 18-16,16-11:2x4 SPF 2100F 1.8E

LBR SCAB 13-12 SPF No.2 one side

WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-5-6 max.): 9-12.

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

WEBS 1 Row at midpt 6-19, 8-19, 9-18

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)

Max Horiz 2=188 (LC 5)

Max Uplift 2=-366 (LC 4), 13=-275 (LC 9)

Max Grav 2=2359 (LC 2), 13=2302 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5731/852, 3-4=-5595/747, 4-6=-4763/654, 6-7=-3376/471, 7-8=-3476/483, 8-9=-4343/470, 9-10=-5466/571, 10-11=-5496/570, 11-12=-1431/166, 12-13=-2282/283

BOT CHORD 2-23=-898/5319, 21-23=-743/5023, 19-21=-472/3909, 18-19=-411/3959, 17-18=-47/142, 16-17=0/91, 10-16=-740/273, 15-16=-232/1481, 14-15=0/24, 11-15=-2095/379, 13-14=-64/0

WEBS 3-23=-218/194, 4-23=0/407, 4-21=-857/296, 6-21=-102/1048, 6-19=-1193/347, 7-19=-210/2021, 8-19=-1113/271, 8-18=-11/702, 9-18=-2105/263, 16-18=-552/5392, 9-16=-156/358, 11-16=-434/4365, 13-15=-24/87, 12-15=-379/2730

NOTES

1) Attached 4-7-11 scab 12 to 13, front face(s) 2x4 SPF No.2 with 1 row(s) of 10d (0.131"x3") nails spaced 9" o.c..
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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
9) Bearing at joint(s) 13 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 366 lb uplift at joint 2 and 275 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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A11	Roof Special	2	1	Job Reference (optional) I47787260

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:56 Page: 1
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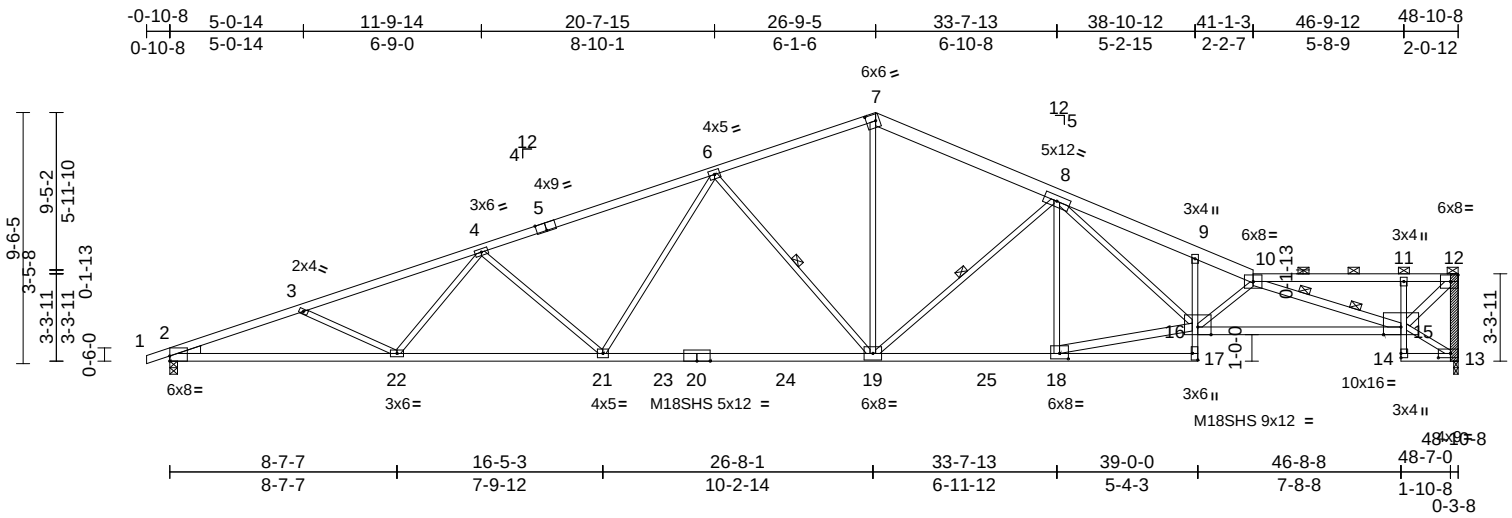

Scale = 1:87.4

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS
AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER
THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS,
2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-4-4,0-3-0], [13:0-5-8,0-2-0], [17:Edge,0-2-8], [18:0-4-0,0-2-8]

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	0.90	Vert(LL)	-0.80	19-21	>727	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-1.38	19-21	>423	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.40	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.36	19-21	>999	240	Weight: 209 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-10:2x6 SPF No.2, 10-12:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-9,11-14:2x3 SPF No.2, 16-15:2x4 SPF 2400F 2.0E, 14-13:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-13,18-16,15-10,15-12:2x4 SPF No.2
LBR SCAB 12-13 SPF No.2 one side
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-4-14 max.): 10-12.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-19, 8-19
WEBS 2 Rows at 1/3 pts 10-15

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)
Max Horiz 2=173 (LC 8)
Max Uplift 2=-369 (LC 4), 13=-270 (LC 9)
Max Grav 2=2359 (LC 2), 13=2303 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-5732/860, 3-4=-5596/756, 4-6=-4765/663, 6-7=-3376/480, 7-8=-3479/493, 8-9=-6505/730, 9-10=-6612/672, 10-11=-2269/255, 11-12=-2187/250, 12-13=-2278/273
BOT CHORD 2-22=-898/5320, 21-22=-743/5024, 19-21=-473/3910, 18-19=-369/3977, 17-18=-45/207, 16-17=0/98, 9-16=-56/86, 15-16=-831/7191, 14-15=0/27, 11-15=-402/161, 13-14=-61/0
WEBS 3-22=-218/194, 4-22=0/406, 4-21=-857/296, 6-21=-102/1050, 6-19=-1195/347, 7-19=-218/2031, 8-19=-1137/291, 8-18=-573/134, 16-18=-330/3847, 8-16=-369/2828, 10-16=-1569/273, 10-15=-5227/567, 13-15=-8/77, 12-15=-395/3162

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) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
8) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 369 lb uplift at joint 2 and 270 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A12	Roof Special	2	1	I47787261 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:56 Page: 1
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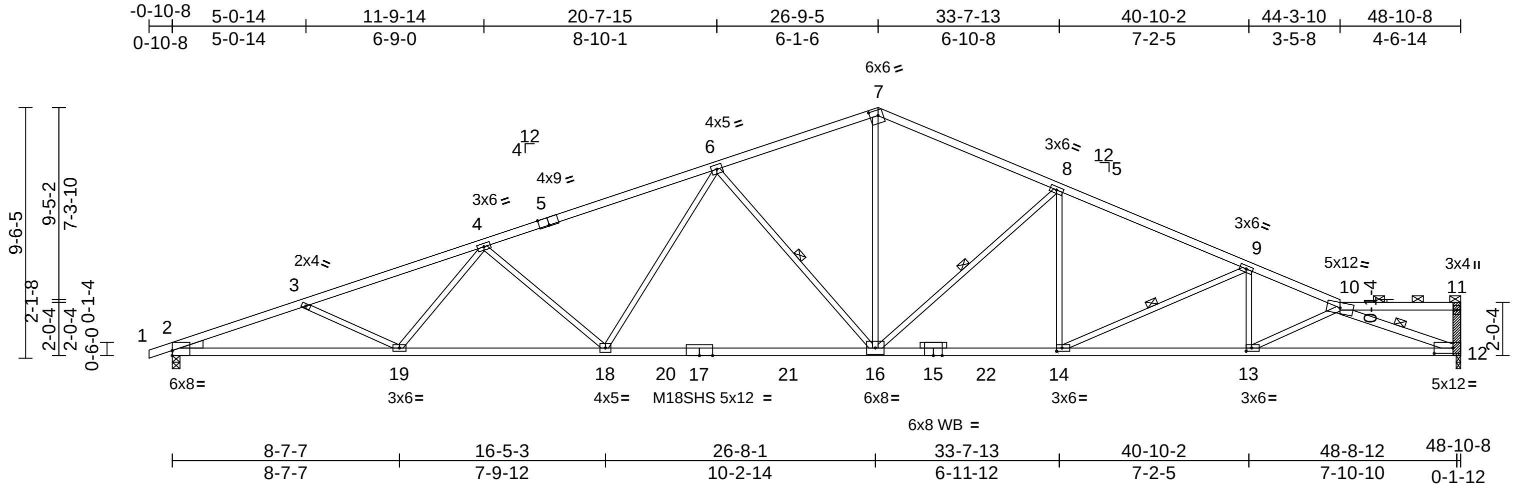

Scale = 1:87.4

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS, 2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [12:0-8-8,0-2-8], [13:0-2-8,0-1-8], [14:0-2-8,0-1-8]

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	0.90	Vert(LL)	-0.74	16-18	>792	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-1.26	16-18	>461	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.29	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.33	16-18	>999	240	Weight: 184 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 10-11:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-12,12-10:2x4 SPF No.2
OTHERS 2x3 SPF No.2
LBR SCAB 12-11 SPF No.2 one side
WEDGE Left: 2x4 SP No.3

BRACING

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

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)
Max Horiz 2=170 (LC 8)
Max Uplift 2=-371 (LC 4), 12=-266 (LC 9)
Max Grav 2=2360 (LC 2), 12=2304 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5734/865, 3-4=-5598/761, 4-6=-4767/668, 6-7=-3370/485, 7-8=-3457/498, 8-9=-4331/492, 9-10=-5210/544, 10-11=-119/13, 11-12=-184/67
BOT CHORD 2-19=-896/5322, 18-19=-742/5027, 16-18=-472/3912, 14-16=-321/3930, 13-14=-495/4777, 12-13=-612/5137
WEBS 3-19=-218/194, 4-19=0/406, 4-18=-856/296, 6-18=-102/1050, 6-16=-1217/351, 7-16=-224/2025, 10-13=-439/132, 10-12=-5409/642, 8-16=-1103/300, 8-14=-11/629, 9-13=0/457, 9-14=-930/199

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) WARNING: Required bearing size at joint(s) 2, 12 greater than input bearing size.
8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 371 lb uplift at joint 2 and 266 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A13	Roof Special Supported Gable	2	1	Job Reference (optional) I47787262

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:56 Page: 1
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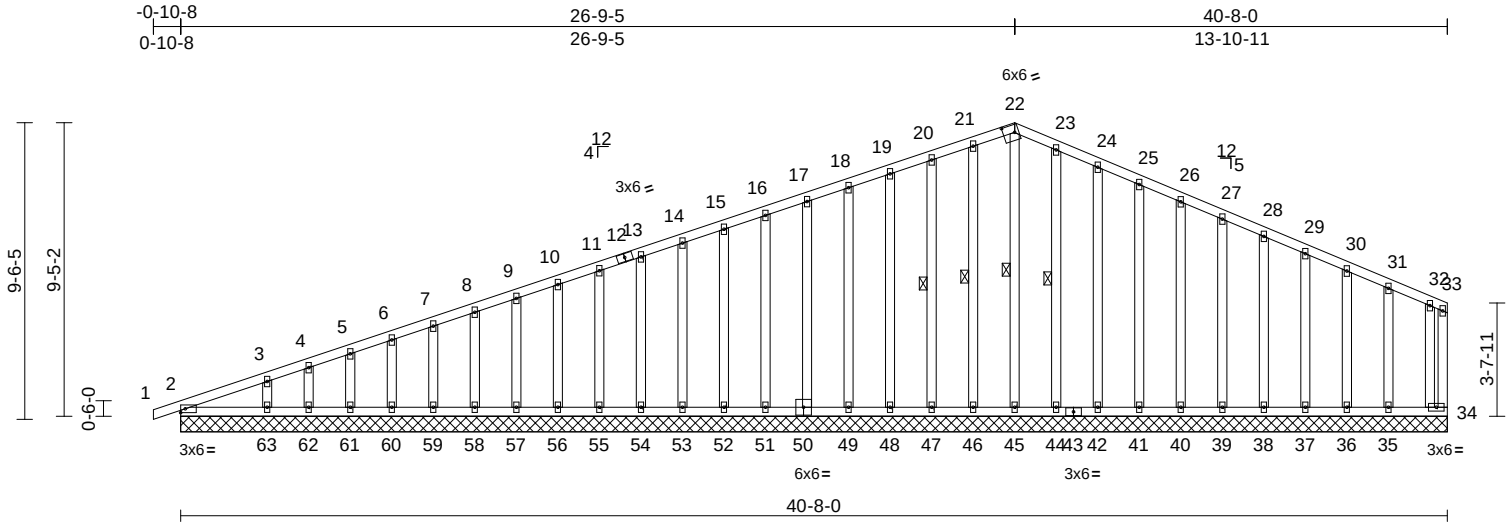

Scale = 1:74

Plate Offsets (X, Y): [22:0-4-7,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	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	0.11	Horz(CT)	0.00	34	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 273 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 22-45, 21-46, 20-47, 23-44

REACTIONS (lb/size) 2=177/40-8-0, 34=86/40-8-0, 35=131/40-8-0, 36=118/40-8-0, 37=120/40-8-0, 38=120/40-8-0, 39=120/40-8-0, 40=120/40-8-0, 41=120/40-8-0, 42=120/40-8-0, 44=123/40-8-0, 45=111/40-8-0, 46=123/40-8-0, 47=120/40-8-0, 48=119/40-8-0, 49=122/40-8-0, 50=120/40-8-0, 51=118/40-8-0, 52=120/40-8-0, 53=120/40-8-0, 54=120/40-8-0, 55=120/40-8-0, 56=120/40-8-0, 57=120/40-8-0, 58=120/40-8-0, 59=120/40-8-0, 60=118/40-8-0, 61=131/40-8-0, 62=73/40-8-0, 63=234/40-8-0
Max Horiz 2=175 (LC 8)
Max Uplift 2=-7 (LC 9), 34=-14 (LC 4), 35=-50 (LC 9), 36=-29 (LC 9), 37=-32 (LC 9), 38=-32 (LC 9), 39=-32 (LC 9), 40=-32 (LC 9), 41=-32 (LC 9), 42=-38 (LC 9), 44=-16 (LC 9), 46=-16 (LC 8), 47=-34 (LC 4), 48=-29 (LC 4), 49=-28 (LC 8), 50=-28 (LC 4), 51=-30 (LC 8), 52=-28 (LC 4), 53=-29 (LC 8), 54=-28 (LC 8), 55=-28 (LC 4), 56=-28 (LC 4), 57=-28 (LC 8), 58=-28 (LC 4), 59=-28 (LC 8), 60=-28 (LC 4), 61=-30 (LC 8), 62=-21 (LC 4), 63=-69 (LC 8)
Max Grav 2=177 (LC 1), 34=86 (LC 1), 35=131 (LC 22), 36=118 (LC 1), 37=120 (LC 22), 38=120 (LC 1), 39=120 (LC 22), 40=120 (LC 1), 41=120 (LC 1), 42=121 (LC 22), 44=123 (LC 22), 45=132 (LC 18), 46=123 (LC 21), 47=121 (LC 21), 48=119 (LC 1), 49=122 (LC 21), 50=120 (LC 1), 51=118 (LC 21), 52=120 (LC 1), 53=120 (LC 21), 54=120 (LC 21), 55=120 (LC 1), 56=120 (LC 1), 57=120 (LC 1), 58=120 (LC 1), 59=120 (LC 1), 60=118 (LC 21), 61=131 (LC 1), 62=73 (LC 21), 63=234 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-206/48, 3-4=-160/37, 4-5=-146/43, 5-6=-132/52, 6-7=-118/62, 7-8=-105/73, 8-9=-91/84, 9-10=-78/95, 10-11=-64/106, 11-13=-50/117, 13-14=-49/128, 14-15=-49/138, 15-16=-49/149, 16-17=-48/160, 17-18=-49/171, 18-19=-49/182, 19-20=-49/193, 20-21=-49/205, 21-22=-48/211, 22-23=-49/211, 23-24=-48/191, 24-25=-46/167, 25-26=-44/151, 26-27=-42/134, 27-28=-40/118, 28-29=-38/102, 29-30=-36/86, 30-31=-41/69, 31-32=-51/53, 32-33=-58/49, 33-34=-34/39

September 7,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A13	Roof Special Supported Gable	2	1	Job Reference (optional) I47787262

BOT CHORD 2-63=-49/40, 62-63=-49/40, 61-62=-49/40, 60-61=-49/40, 59-60=-49/40, 58-59=-49/40, 57-58=-49/40, 56-57=-49/40, 55-56=-49/40, 54-55=-49/40, 53-54=-49/40, 52-53=-49/40, 51-52=-49/40, 49-51=-49/40, 48-49=-49/39, 47-48=-49/39, 46-47=-49/39, 45-46=-49/39, 44-45=-49/39, 42-44=-49/39, 41-42=-49/39, 40-41=-49/39, 39-40=-49/39, 38-39=-49/39, 37-38=-49/39, 36-37=-49/39, 35-36=-49/39, 34-35=-49/39

WEBS 22-45=-105/11, 21-46=-97/32, 20-47=-94/50, 19-48=-93/44, 18-49=-93/45, 17-50=-94/44, 16-51=-93/45, 15-52=-93/44, 14-53=-93/44, 13-54=-93/44, 11-55=-93/44, 10-56=-93/44, 9-57=-93/44, 8-58=-93/44, 7-59=-94/45, 6-60=-92/44, 5-61=-100/47, 4-62=-62/31, 3-63=-173/96, 23-44=-97/32, 24-42=-94/54, 25-41=-93/48, 26-40=-93/48, 27-39=-93/48, 28-38=-93/48, 29-37=-93/48, 30-36=-93/43, 31-35=-99/72, 32-34=-64/11

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 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 34, 16 lb uplift at joint 46, 34 lb uplift at joint 47, 29 lb uplift at joint 48, 28 lb uplift at joint 49, 28 lb uplift at joint 50, 30 lb uplift at joint 51, 28 lb uplift at joint 52, 29 lb uplift at joint 53, 28 lb uplift at joint 54, 28 lb uplift at joint 55, 28 lb uplift at joint 56, 28 lb uplift at joint 57, 28 lb uplift at joint 58, 28 lb uplift at joint 59, 28 lb uplift at joint 60, 30 lb uplift at joint 61, 21 lb uplift at joint 62, 69 lb uplift at joint 63, 16 lb uplift at joint 44, 38 lb uplift at joint 42, 32 lb uplift at joint 41, 32 lb uplift at joint 40, 32 lb uplift at joint 39, 32 lb uplift at joint 38, 32 lb uplift at joint 37, 29 lb uplift at joint 36, 50 lb uplift at joint 35 and 7 lb uplift at joint 2.
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

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A14	Roof Special Structural Gable	2	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I47787263
09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

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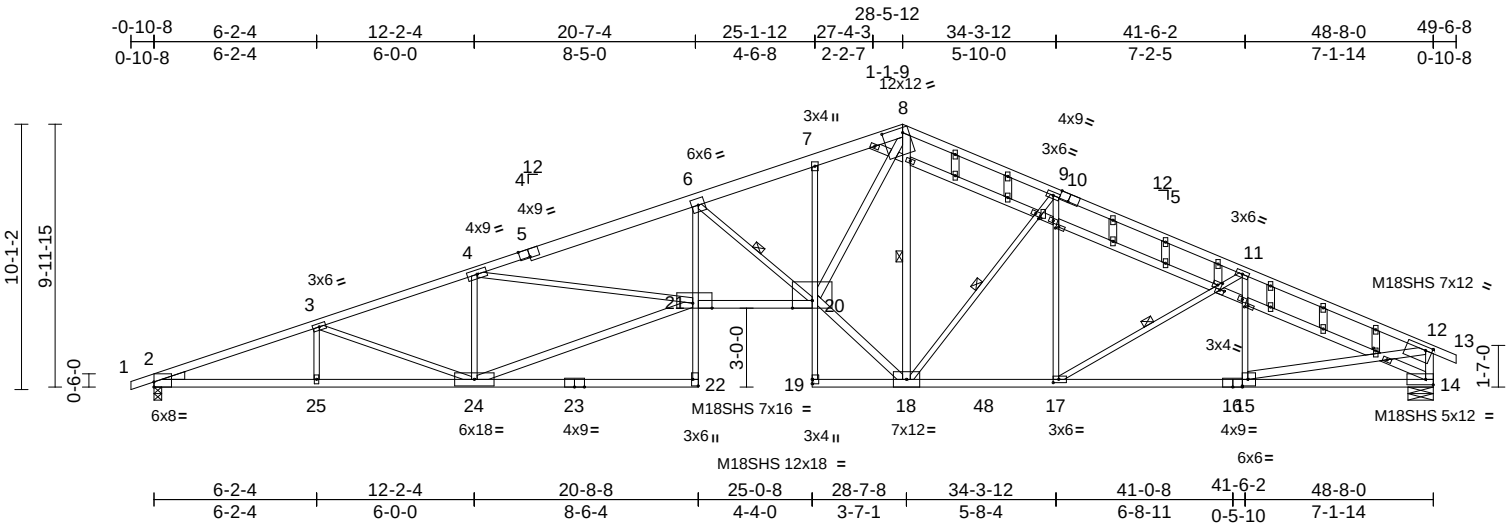

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Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [8:0-9-4,0-2-4], [10:0-4-5,Edge], [12:0-3-0,0-1-12], [15:0-2-8,0-3-0], [16:0-4-6,Edge], [17:0-2-8,0-1-8], [21:0-8-12,Edge], [22:Edge,0-2-8], [29:0-0-3,0-1-2], [30:0-1-4,0-1-0], [31:0-2-0,0-0-4], [31:0-1-12,0-1-8], [32:0-1-4,0-1-0], [33:0-1-4,0-1-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.75	22-24	>770	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-1.37	22-24	>424	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.53	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.50	22	>999	240	Weight: 260 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 5-8:2x6 SPF No.2, 1-5:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 22-6,7-19:2x3 SPF No.2, 23-22,16-14:2x4 SPF No.2

WEBS 2x4 SPF No.2 *Except* 3-25,24-3,4-24,21-4,20-6,18-9,17-9,17-11,15-11:2x3 SPF No.2, 24-21,20-8:2x4 SPF 2100F 1.8E

OTHERS 2x4 SPF No.2

WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-1-9 oc purlins, except end verticals.

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

WEBS 1 Row at midpt 6-20, 8-18, 9-18, 11-17

REACTIONS (lb/size) 2=2248/0-3-8, (req. 0-3-10), 14=2248/0-11-8
Max Horiz 2=170 (LC 12)
Max Uplift 2=-380 (LC 4), 14=-267 (LC 9)
Max Grav 2=2309 (LC 2), 14=2324 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5719/842, 3-4=-5187/764, 4-6=-7360/1050, 6-7=-5289/744, 7-8=-5262/793, 8-9=-3084/505, 9-11=-3537/464, 11-12=-3620/386, 12-13=0/27, 12-14=-2205/302

BOT CHORD 2-25=-863/5315, 24-25=-863/5315, 22-24=0/51, 21-22=0/148, 6-21=-197/1916, 20-21=-883/6938, 19-20=0/45, 7-20=-265/106, 18-19=-4/14, 17-18=-255/3191, 15-17=-289/3270, 14-15=-70/227

WEBS 3-25=0/212, 3-24=-515/167, 4-24=-1390/311, 21-24=-764/5144, 4-21=-175/2075, 6-20=-2609/500, 18-20=-292/3696, 8-20=-626/4790, 8-18=-1716/220, 9-18=-719/232, 9-17=0/365, 11-17=-252/148, 11-15=-415/141, 12-15=-248/3099

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 MT20 plates unless otherwise indicated.
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, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 2 greater than input bearing size.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 380 lb uplift at joint 2 and 267 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.

LOAD CASE(S) Standard

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	I47787264
Lot 11 OS	A15	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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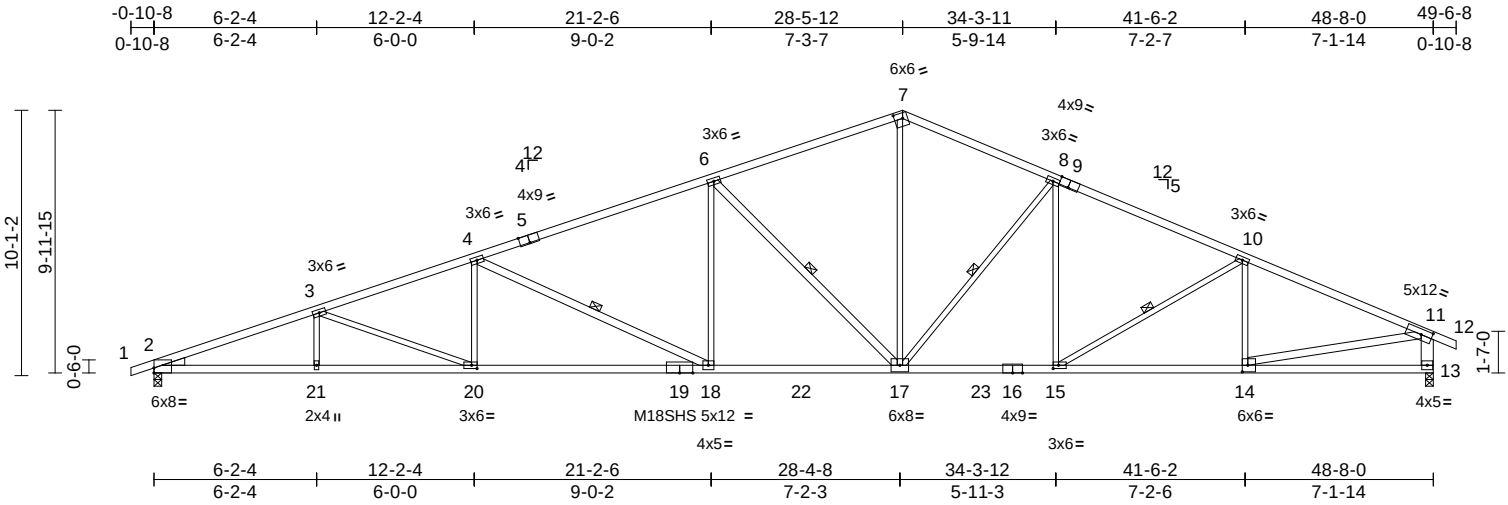

Scale = 1:87.6

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [9:0-4-7,Edge], [11:0-4-15,0-2-8], [14:0-2-8,0-3-0], [15:0-2-8,0-1-8], [20:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.51	18-20	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.94	18-20	>619	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.24	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.31	18-20	>999	240	Weight: 196 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9,9-12:2x4 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 16-13:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 17-6,14-11,18-4:2x4 SPF No.2, 13-11:2x6 SPF No.2

WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.

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

WEBS 1 Row at midpt 6-17, 8-17, 10-15, 4-18

REACTIONS (lb/size) 2=2244/0-3-8, (req. 0-3-11), 13=2251/0-3-8, (req. 0-3-11)
Max Horiz 2=171 (LC 8)
Max Uplift 2=-379 (LC 4), 13=-268 (LC 9)
Max Grav 2=2333 (LC 2), 13=2350 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5793/834, 3-4=-5265/775, 4-6=-4134/611, 6-7=-3052/481, 7-8=-3109/503, 8-10=-3568/462, 10-11=-3622/382, 11-12=0/30, 11-13=-2233/304

BOT CHORD 2-21=-855/5370, 20-21=-855/5370, 18-20=-728/4953, 17-18=-461/3847, 15-17=-253/3220, 14-15=-283/3271, 13-14=-78/243

WEBS 6-17=-1469/344, 7-17=-213/1789, 8-17=-724/237, 8-15=0/348, 10-15=-230/142, 10-14=-426/140, 11-14=-241/3088, 3-21=0/225, 3-20=-479/144, 4-20=0/446, 4-18=-1234/297, 6-18=-23/870

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 379 lb uplift at joint 2 and 268 lb uplift at joint 13.
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

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A16	Roof Special	5	1	Job Reference (optional) I47787265

Wheeler Lumber, Waverly, KS - 66871,

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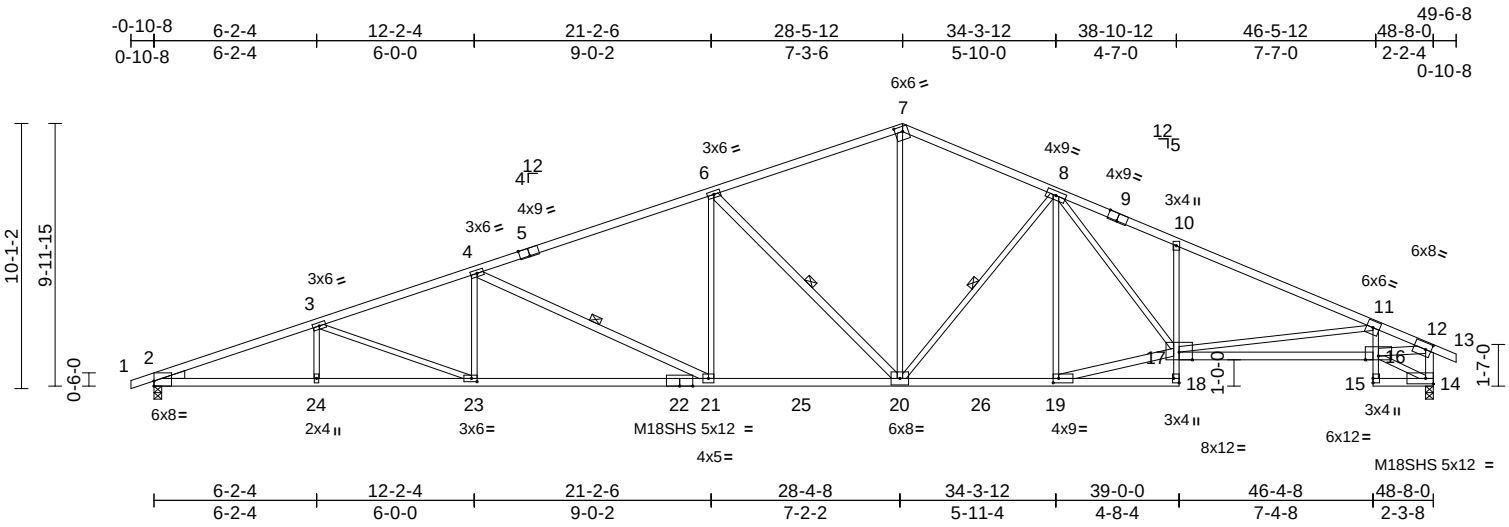

Scale = 1:87.6

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-8,0-2-4], [9:0-4-8,Edge], [12:0-2-9,0-3-0], [18:Edge,0-2-8], [19:0-2-8,0-2-0], [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	0.81	Vert(LL)	-0.53	21-23	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.96	21-23	>602	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.35	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	21-23	>999	240	Weight: 205 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9:2x4 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 18-10,11-15:2x3 SPF No.2, 15-14:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 20-6,19-17,14-12,21-4,16-12:2x4 SPF No.2

WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

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

WEBS 1 Row at midpt 6-20, 8-20, 4-21

REACTIONS (lb/size) 2=2248/0-3-8, (req. 0-3-11), 14=2248/0-3-8, (req. 0-3-11)
Max Horiz 2=171 (LC 8)
Max Uplift 2=-380 (LC 4), 14=-267 (LC 9)
Max Grav 2=2337 (LC 2), 14=2349 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5804/835, 3-4=-5277/776, 4-6=-4146/612, 6-7=-3066/482, 7-8=-3117/502, 8-10=-4503/560, 10-11=-4562/487, 11-12=-4108/477, 12-13=0/27, 12-14=-2293/259

BOT CHORD 2-24=-856/5381, 23-24=-856/5381, 21-23=-729/4965, 20-21=-463/3858, 19-20=-252/3223, 18-19=-38/95, 17-18=0/77, 10-17=-427/220, 16-17=-467/3956, 15-16=0/30, 11-16=-535/155, 14-15=-41/69

WEBS 6-20=-1467/344, 7-20=-207/1779, 8-20=-706/228, 8-19=-538/116, 17-19=-220/3227, 8-17=-255/1497, 11-17=-76/291, 3-24=0/225, 3-23=-479/143, 4-23=0/446, 4-21=-1235/297, 6-21=-24/869, 14-16=-61/60, 12-16=-457/3804

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) WARNING: Required bearing size at joint(s) 2, 14 greater than input bearing size.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 380 lb uplift at joint 2 and 267 lb uplift at joint 14.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	I47787266
Lot 11 OS	A17	Roof Special Supported Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:59 Page: 1
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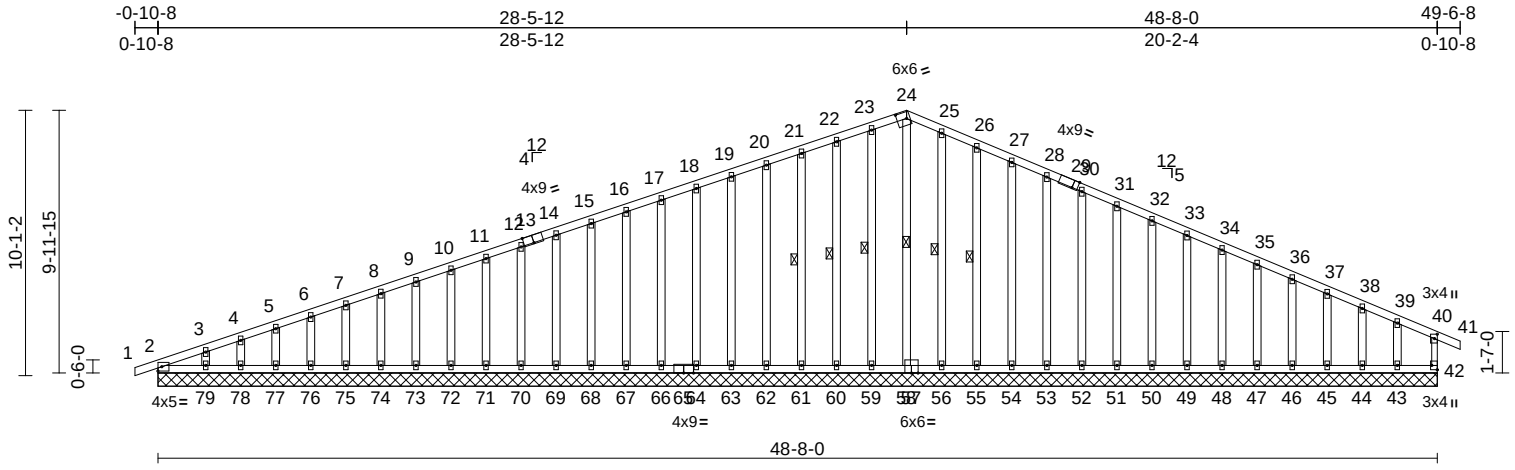

Scale = 1:87.6

Plate Offsets (X, Y): [13:0-4-8,Edge], [24:0-4-7,0-3-0], [29:0-2-6,Edge], [40:0-2-0,0-1-4], [42:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	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	0.11	Horz(CT)	0.00	42	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 322 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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 24-58, 23-59, 22-60, 21-61, 25-56, 26-55

REACTIONS (lb/size) 2=147/48-8-0, 42=147/48-8-0, 43=106/48-8-0, 44=123/48-8-0, 45=120/48-8-0, 46=120/48-8-0, 47=120/48-8-0, 48=120/48-8-0, 49=120/48-8-0, 50=120/48-8-0, 51=120/48-8-0, 52=120/48-8-0, 53=120/48-8-0, 54=120/48-8-0, 55=120/48-8-0, 56=124/48-8-0, 58=114/48-8-0, 59=124/48-8-0, 60=120/48-8-0, 61=120/48-8-0, 62=120/48-8-0, 63=120/48-8-0, 64=120/48-8-0, 66=120/48-8-0, 67=120/48-8-0, 68=120/48-8-0, 69=120/48-8-0, 70=120/48-8-0, 71=120/48-8-0, 72=120/48-8-0, 73=120/48-8-0, 74=120/48-8-0, 75=120/48-8-0, 76=120/48-8-0, 77=122/48-8-0, 78=113/48-8-0, 79=143/48-8-0
Max Horiz 2=171 (LC 8)

Max Uplift 2=-46 (LC 9), 42=-14 (LC 5), 43=-80 (LC 9), 44=-20 (LC 9), 45=-35 (LC 9), 46=-31 (LC 9), 47=-32 (LC 9), 48=-32 (LC 9), 49=-32 (LC 9), 50=-32 (LC 9), 51=-32 (LC 9), 52=-32 (LC 9), 53=-32 (LC 9), 54=-32 (LC 9), 55=-41 (LC 9), 56=-7 (LC 9), 59=-12 (LC 8), 60=-35 (LC 4), 61=-29 (LC 4), 62=-28 (LC 8), 63=-28 (LC 4), 64=-28 (LC 4), 66=-28 (LC 8), 67=-28 (LC 8), 68=-28 (LC 4), 69=-28 (LC 8), 70=-28 (LC 4), 71=-28 (LC 8), 72=-28 (LC 4), 73=-28 (LC 8), 74=-28 (LC 4), 75=-28 (LC 8), 76=-29 (LC 4), 77=-29 (LC 8), 78=-30 (LC 4), 79=-53 (LC 8)

Max Grav 2=147 (LC 21), 42=147 (LC 1), 43=107 (LC 22), 44=123 (LC 1), 45=120 (LC 22), 46=120 (LC 1), 47=120 (LC 22), 48=120 (LC 1), 49=120 (LC 22), 50=120 (LC 1), 51=120 (LC 22), 52=120 (LC 22), 53=120 (LC 1), 54=120 (LC 1), 55=121 (LC 22), 56=124 (LC 1), 58=178 (LC 9), 59=124 (LC 1), 60=121 (LC 21), 61=120 (LC 1), 62=120 (LC 1), 63=120 (LC 21), 64=120 (LC 21), 66=120 (LC 1), 67=120 (LC 21), 68=120 (LC 1), 69=120 (LC 1), 70=120 (LC 1), 71=120 (LC 1), 72=120 (LC 1), 73=120 (LC 21), 74=120 (LC 1), 75=120 (LC 21), 76=120 (LC 1), 77=122 (LC 21), 78=113 (LC 1), 79=143 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-195/121, 3-4=-160/120, 4-5=-144/126, 5-6=-131/137, 6-7=-117/147, 7-8=-104/158, 8-9=-90/169, 9-10=-76/180, 10-11=-63/191, 11-12=-49/202, 12-14=-38/213, 14-15=-38/223, 15-16=-38/234, 16-17=-38/245, 17-18=-38/256, 18-19=-38/267, 19-20=-38/278, 20-21=-38/288, 21-22=-38/299, 22-23=-38/312, 23-24=-37/315, 24-25=-38/317, 25-26=-37/302, 26-27=-34/274, 27-28=-32/250, 28-30=-31/225, 30-31=-29/201, 31-32=-27/176, 32-33=-25/152, 33-34=-23/127, 34-35=-21/103, 35-36=-19/86, 36-37=-17/69, 37-38=-17/53, 38-39=-20/37, 39-40=-44/23, 40-41=0/26, 40-42=-135/34

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A17	Roof Special Supported Gable	2	1	Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:52:59 Page: 2
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BOT CHORD 2-79=-15/30, 78-79=-15/30, 77-78=-15/30, 76-77=-15/30, 75-76=-15/30, 74-75=-15/30, 73-74=-15/30, 72-73=-15/30, 71-72=-15/30, 70-71=-15/30, 69-70=-15/30, 68-69=-15/30, 67-68=-15/30, 66-67=-15/30, 64-66=-15/30, 63-64=-15/30, 62-63=-15/30, 61-62=-15/30, 60-61=-15/30, 59-60=-15/30, 58-59=-15/30, 56-58=-15/30, 55-56=-15/30, 54-55=-15/30, 53-54=-15/30, 52-53=-15/30, 51-52=-15/30, 50-51=-15/30, 49-50=-15/30, 48-49=-15/30, 47-48=-15/30, 46-47=-15/30, 45-46=-15/30, 44-45=-15/30, 43-44=-15/30, 42-43=-15/30

WEBS 24-58=-162/4, 23-59=-97/28, 22-60=-94/51, 21-61=-93/45, 20-62=-93/44, 19-63=-93/44, 18-64=-93/44, 17-66=-93/44, 16-67=-93/44, 15-68=-93/44, 14-69=-93/44, 12-70=-93/44, 11-71=-93/44, 10-72=-93/44, 9-73=-93/44, 8-74=-93/44, 7-75=-93/44, 6-76=-93/44, 5-77=-94/45, 4-78=-89/44, 3-79=-109/73, 25-56=-97/23, 26-55=-94/57, 27-54=-93/48, 28-53=-93/48, 30-52=-93/48, 31-51=-93/48, 32-50=-93/48, 33-49=-93/48, 34-48=-93/48, 35-47=-93/48, 36-46=-93/48, 37-45=-93/49, 38-44=-97/43, 39-43=-77/71

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 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 42, 46 lb uplift at joint 2, 12 lb uplift at joint 59, 35 lb uplift at joint 60, 29 lb uplift at joint 61, 28 lb uplift at joint 62, 28 lb uplift at joint 63, 28 lb uplift at joint 64, 28 lb uplift at joint 66, 28 lb uplift at joint 67, 28 lb uplift at joint 68, 28 lb uplift at joint 69, 28 lb uplift at joint 70, 28 lb uplift at joint 71, 28 lb uplift at joint 72, 28 lb uplift at joint 73, 28 lb uplift at joint 74, 28 lb uplift at joint 75, 29 lb uplift at joint 76, 29 lb uplift at joint 77, 30 lb uplift at joint 78, 53 lb uplift at joint 79, 7 lb uplift at joint 56, 41 lb uplift at joint 55, 32 lb uplift at joint 54, 32 lb uplift at joint 53, 32 lb uplift at joint 52, 32 lb uplift at joint 51, 32 lb uplift at joint 50, 32 lb uplift at joint 49, 32 lb uplift at joint 48, 32 lb uplift at joint 47, 31 lb uplift at joint 46, 35 lb uplift at joint 45, 20 lb uplift at joint 44 and 80 lb uplift at joint 43.
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

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A18	Roof Special	2	1	Job Reference (optional) I47787267

Wheeler Lumber, Waverly, KS - 66871,

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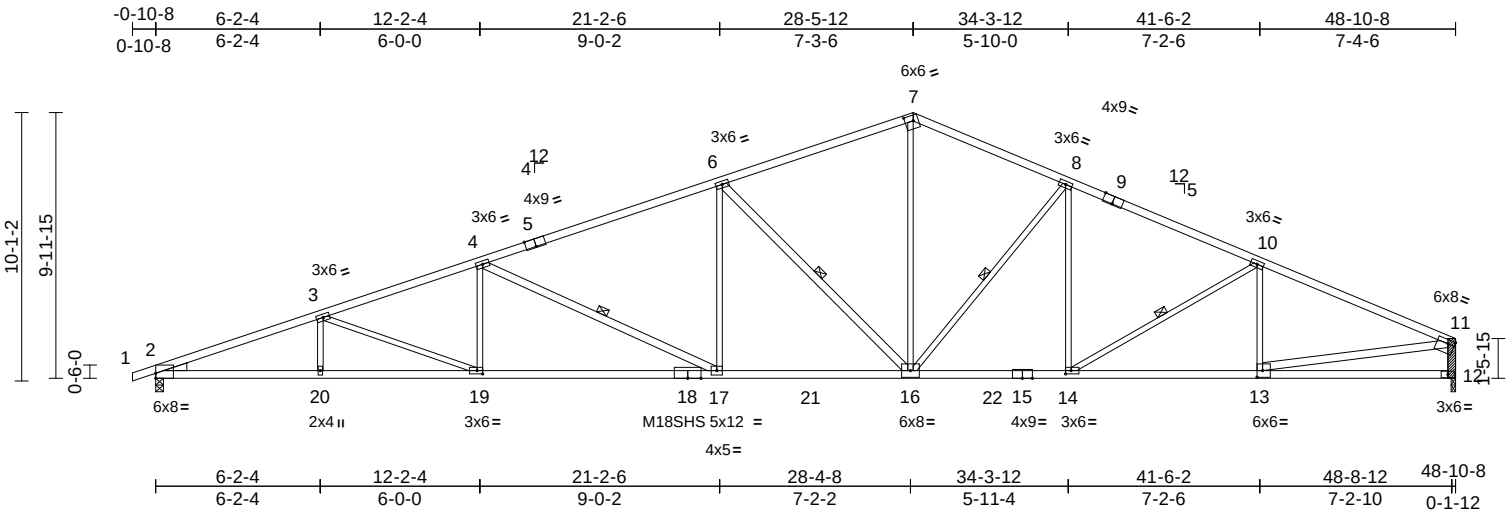

Scale = 1:86.6

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS
AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER
THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS,
2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-12,0-2-8], [9:0-4-8,Edge], [11:0-3-0,0-1-12], [13:0-2-8,0-3-0], [14:0-2-8,0-1-8], [19:0-2-8,0-1-8]

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	0.81	Vert(LL)	-0.51	17-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.94	17-19	>623	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.23	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.31	17-19	>999	240	Weight: 197 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 12-11,13-11,4-17,6-16:2x4 SPF No.2
LBR SCAB 12-11 SPF No.2 one side
WEDGE Left: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-5-2 oc bracing.
WEBS 1 Row at midpt 8-16, 10-14, 4-17, 6-16

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)
Max Horiz 2=178 (LC 8)
Max Uplift 2=-380 (LC 4), 12=-246 (LC 9)
Max Grav 2=2348 (LC 2), 12=2299 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-5833/837, 3-4=-5308/779, 4-6=-4178/615, 6-7=-3097/484, 7-8=-3153/506, 8-10=-3642/468, 10-11=-3781/397, 11-12=-2176/282
BOT CHORD 2-20=-867/5408, 19-20=-867/5408, 17-19=-740/4994, 16-17=-474/3889, 14-16=-266/3285, 13-14=-312/3422, 12-13=-53/213
WEBS 7-16=-214/1815, 8-16=-755/239, 8-14=-5/393, 10-14=-314/159, 10-13=-387/144, 11-13=-276/3257, 3-20=0/225, 3-19=-478/143, 4-19=0/446, 4-17=-1234/297, 6-17=-23/870, 6-16=-1469/344

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 3x6 MT20 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) WARNING: Required bearing size at joint(s) 2, 12 greater than input bearing size.
8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 380 lb uplift at joint 2 and 246 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A19	Roof Special	5	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I47787268
09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

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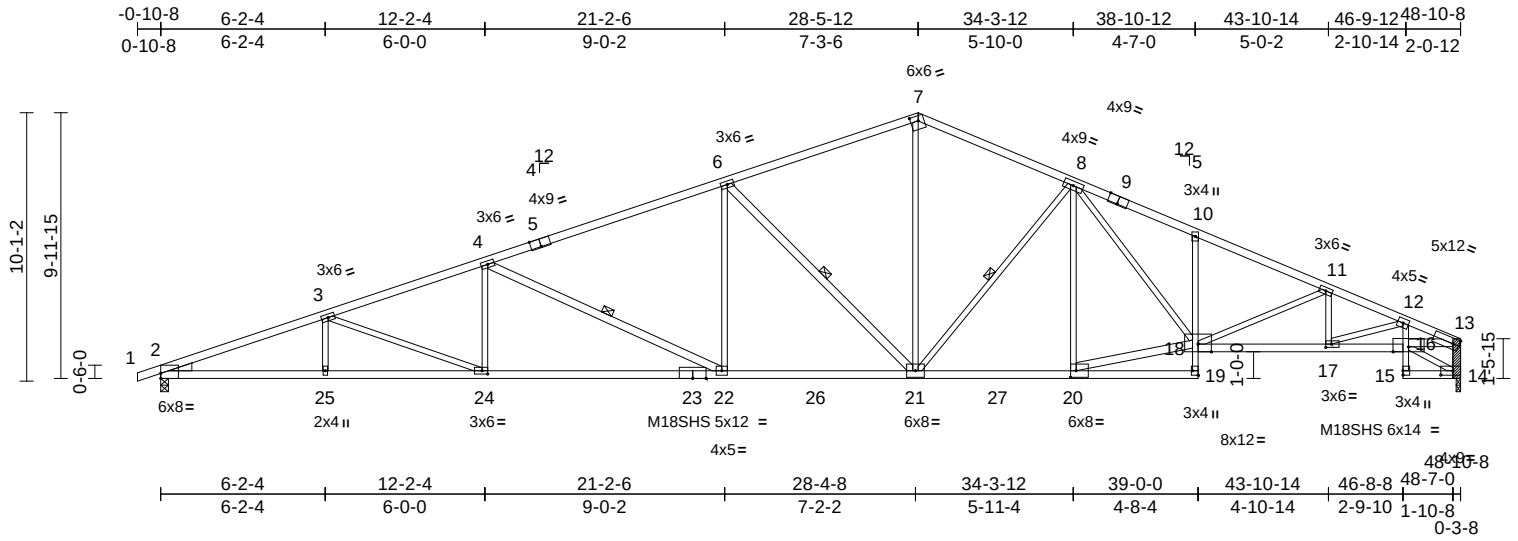

Scale = 1:86.6

APPLY 2 X 4 SPF/DF/SP NO.2 SCAB TO ONE FACE OF TRUSS
AS SHOWN. ATTACH WITH (0.131" X 3") NAILS PER
THE FOLLOWING NAIL SCHEDULE: 2 x 3'S - 1 ROW, 2 x 4'S - 2 ROWS,
2 x 6'S AND LARGER - 3 ROWS: SPACED @ 2" O.C. USE 2" MEMBER END DISTANCE.

Plate Offsets (X, Y): [2:Edge,0-2-5], [5:0-4-8,Edge], [7:0-3-8,0-2-4], [9:0-4-8,Edge], [14:0-5-8,0-2-0], [17:0-2-8,0-1-8], [19:Edge,0-2-8], [20:0-2-8,0-3-0], [24:0-2-8,0-1-8]

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	0.81	Vert(LL)	-0.55	22-24	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-1.01	22-24	>579	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.40	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.34	22-24	>999	240	Weight: 207 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 7-9,9-13:2x4 SPF No.2

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 19-10,12-15:2x3 SPF No.2, 15-14:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 21-6,20-18,14-13,22-4:2x4 SPF No.2, 13-16:2x4 SPF 2100F 1.8E

LBR SCAB 14-13 SPF No.2 one side

WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-5-11 oc bracing: 2-25
8-5-2 oc bracing: 24-25
9-1-3 oc bracing: 22-24.

WEBS 1 Row at midpt 6-21, 8-21, 4-22

REACTIONS (lb/size) 2=2258/0-3-8, (req. 0-3-11), 13=2185/(0-2-0 + bearing block), (req.0-3-10)

Max Horiz 2=178 (LC 12)
Max Uplift 2=-380 (LC 4), 14=-246 (LC 9)
Max Grav 2=2348 (LC 2), 14=2299 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-5833/837, 3-4=-5308/779, 4-6=-4178/615, 6-7=-3098/484, 7-8=-3151/504, 8-10=-4553/556, 10-11=-4584/501, 11-12=-4865/515, 12-13=-5014/546, 13-14=-2219/260

BOT CHORD 2-25=-867/5408, 24-25=-867/5408, 22-24=-740/4994, 21-22=-474/3888, 20-21=-265/3275, 19-20=-18/137, 18-19=0/79, 10-18=-305/160, 17-18=-438/4491, 16-17=-507/4674, 15-16=0/36, 12-16=0/132, 14-15=-13/131

WEBS 6-21=-1467/344, 7-21=-210/1806, 8-21=-737/234, 8-20=-542/123, 18-20=-253/3212, 8-18=-247/1503, 11-18=-390/129, 12-17=-195/71, 11-17=-92/76, 13-16=-483/4515, 14-16=-87/21, 3-25=0/225, 3-24=-477/143, 4-24=0/446, 4-22=-1234/297, 6-22=-24/869

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) WARNING: Required bearing size at joint(s) 2, 14 greater than input bearing size.
7) Bearing at joint(s) 14 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 380 lb uplift at joint 2 and 246 lb uplift at joint 14.
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

SUPPLEMENTARY BEARING PLATES, SPECIAL ANCHORAGE, OR OTHER MEANS TO ALLOW FOR THE MINIMUM REQUIRED SUPPORT WIDTH (SUCH AS COLUMN CAPS, BEARING BLOCKS, ETC.) ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER OR THE BUILDING DESIGNER.

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	A20	Monopitch Supported Gable	2	1	Job Reference (optional) I47787269

Wheeler Lumber, Waverly, KS - 66871,

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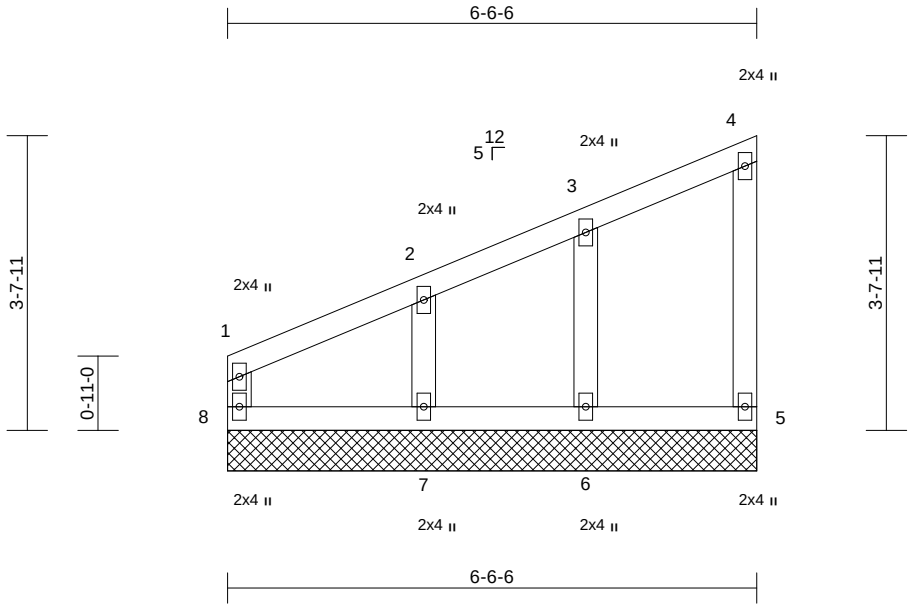

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 24 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 (lb/size) 5=77/6-6-6, 6=181/6-6-6, 7=218/6-6-6, 8=85/6-6-6
Max Horiz 8=139 (LC 5)
Max Uplift 5=-26 (LC 5), 6=-33 (LC 8), 7=-92 (LC 8)
Max Grav 5=77 (LC 1), 6=181 (LC 1), 7=218 (LC 1), 8=112 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-101/32, 2-3=-76/22, 3-4=-66/30, 4-5=-59/26, 1-8=-81/0
BOT CHORD 7-8=-48/34, 6-7=-48/34, 5-6=-48/34
WEBS 2-7=-166/102, 3-6=-143/61

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 26 lb uplift at joint 5, 92 lb uplift at joint 7 and 33 lb uplift at joint 6.
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

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	B1	Common Supported Gable	3	1	Job Reference (optional) I47787270

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 09:53:01 Page: 1
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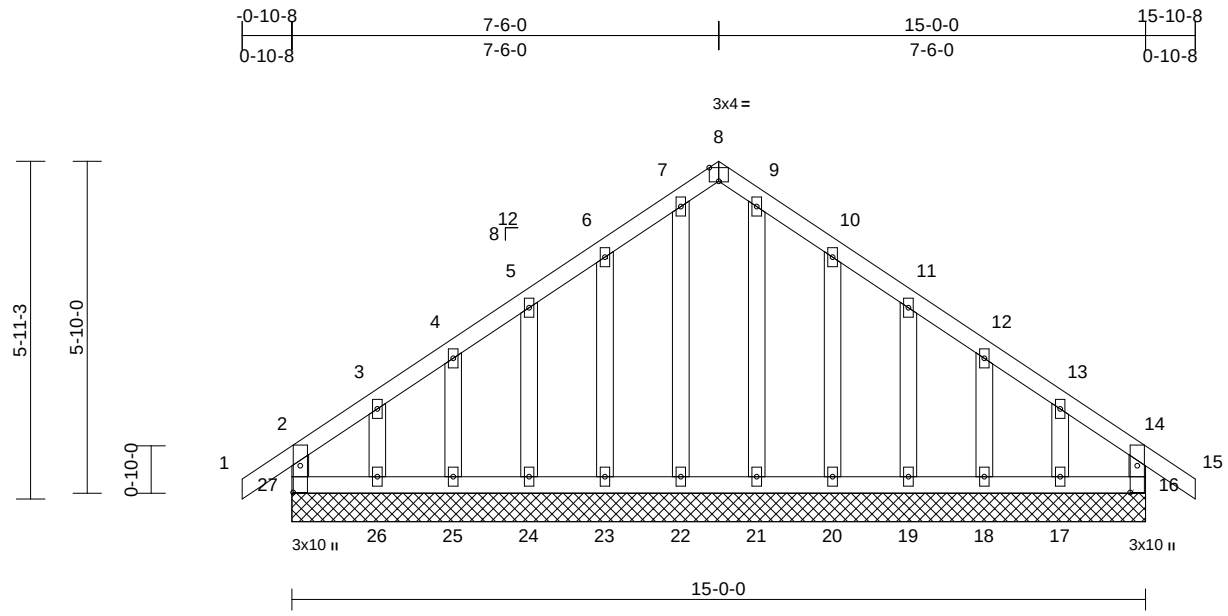

Scale = 1:40.5

Plate Offsets (X, Y): [8:0-2-0,Edge], [16:0-5-10,0-1-8], [27:0-5-10,0-1-8]

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	0.07	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	0.05	Horz(CT)	0.00	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 76 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 6-0-0 oc bracing.

REACTIONS (lb/size) 16=149/15-0-0, 17=98/15-0-0, 18=125/15-0-0, 19=119/15-0-0, 20=119/15-0-0, 21=123/15-0-0, 22=123/15-0-0, 23=119/15-0-0, 24=119/15-0-0, 25=125/15-0-0, 26=98/15-0-0, 27=149/15-0-0
Max Horiz 27=-169 (LC 6)
Max Uplift 16=-36 (LC 5), 17=-96 (LC 9), 18=-34 (LC 9), 19=-48 (LC 9), 20=-64 (LC 9), 23=-63 (LC 8), 24=-49 (LC 8), 25=-33 (LC 8), 26=-103 (LC 8), 27=-62 (LC 4)
Max Grav 16=151 (LC 22), 17=139 (LC 16), 18=125 (LC 22), 19=125 (LC 16), 20=127 (LC 16), 21=127 (LC 17), 22=133 (LC 18), 23=124 (LC 15), 24=126 (LC 15), 25=125 (LC 21), 26=152 (LC 15), 27=172 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-27=-141/52, 1-2=0/40, 2-3=-111/102, 3-4=-76/74, 4-5=-68/81, 5-6=-55/106, 6-7=-45/139, 7-8=-33/107, 8-9=-29/103, 9-10=-25/125, 10-11=-33/93, 11-12=-42/68, 12-13=-49/54, 13-14=-81/70, 14-15=0/40, 14-16=-135/31
BOT CHORD 26-27=-76/89, 25-26=-76/89, 24-25=-76/89, 23-24=-76/89, 22-23=-76/89, 21-22=-76/89, 20-21=-76/89, 19-20=-76/89, 18-19=-76/89, 17-18=-76/89, 16-17=-76/89
WEBS 3-26=-105/91, 4-25=-98/56, 5-24=-98/62, 6-23=-98/79, 7-22=-107/4, 9-21=-100/0, 10-20=-100/81, 11-19=-98/62, 12-18=-98/57, 13-17=-98/87

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 62 lb uplift at joint 27, 36 lb uplift at joint 16, 103 lb uplift at joint 26, 33 lb uplift at joint 25, 49 lb uplift at joint 24, 63 lb uplift at joint 23, 64 lb uplift at joint 20, 48 lb uplift at joint 19, 34 lb uplift at joint 18 and 96 lb uplift at joint 17.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	LAY1	Lay-In Gable	2	1	Job Reference (optional) I47787271

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 09:53:01 Page: 1
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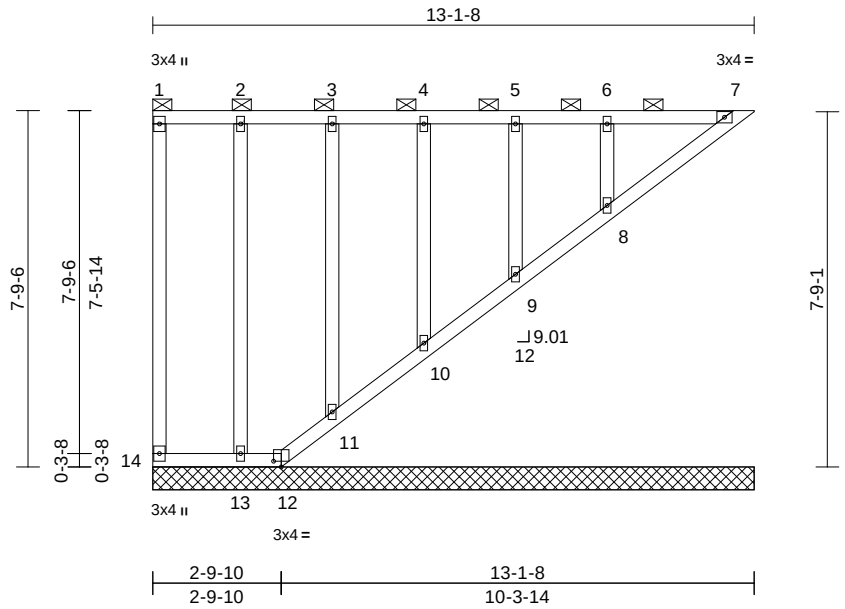

Scale = 1:50.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 68 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 2-0-0 oc purlins (6-0-0 max.): 1-7, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-10,7-8.

REACTIONS (lb/size) 7=103/13-1-8, 8=262/13-1-8, 9=152/13-1-8, 10=188/13-1-8, 11=174/13-1-8, 12=9/13-1-8, 13=178/13-1-8, 14=66/13-1-8
Max Horiz 14=-213 (LC 6)
Max Uplift 7=-80 (LC 5), 8=-49 (LC 4), 9=-29 (LC 5), 10=-35 (LC 4), 11=-49 (LC 5), 12=-109 (LC 6), 13=-62 (LC 5), 14=-17 (LC 4)
Max Grav 7=124 (LC 15), 8=262 (LC 1), 9=152 (LC 1), 10=188 (LC 1), 11=174 (LC 1), 12=95 (LC 5), 13=178 (LC 1), 14=66 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-63/58, 1-2=-106/80, 2-3=-106/80, 3-4=-106/80, 4-5=-106/80, 5-6=-106/80, 6-7=-106/80
BOT CHORD 13-14=-80/106, 12-13=-80/106, 11-12=-106/146, 10-11=-107/145, 9-10=-108/144, 8-9=-107/147, 7-8=-110/148
WEBS 2-13=-142/92, 3-11=-140/65, 4-10=-144/60, 5-9=-121/51, 6-8=-198/79

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) Provide adequate drainage to prevent water ponding.
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 17 lb uplift at joint 14, 80 lb uplift at joint 7, 109 lb uplift at joint 12, 62 lb uplift at joint 13, 49 lb uplift at joint 11, 35 lb uplift at joint 10, 29 lb uplift at joint 9 and 49 lb uplift at joint 8.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 7, 11, 10, 9, 8.
12) 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.
13) 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

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	LAY2	Lay-In Gable	2	1	Job Reference (optional) I47787272

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:53:02 Page: 1
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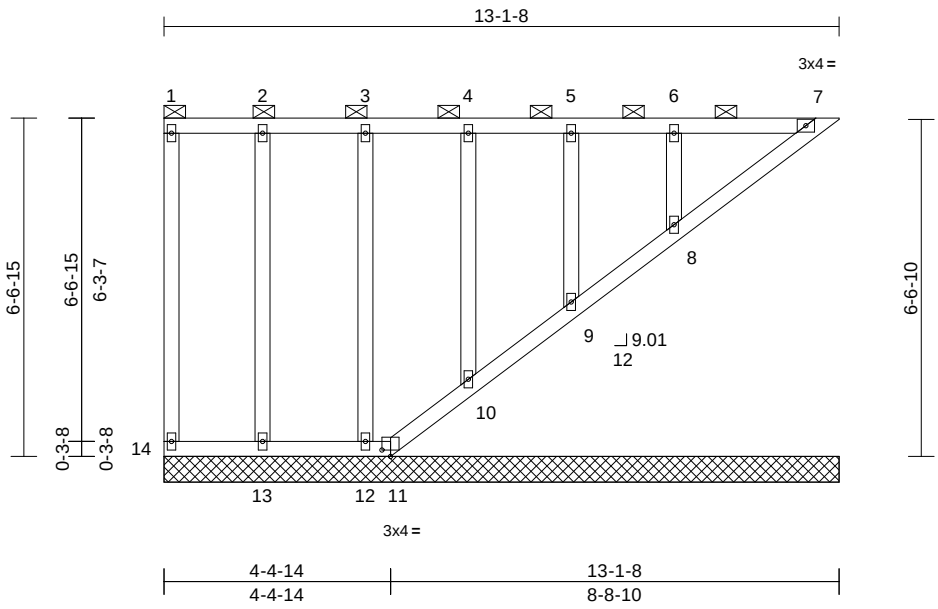

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Plate Offsets (X, Y): [11:0-2-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.18	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	0.10	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 64 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 2-0-0 oc purlins (6-0-0 max.): 1-7, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 9-10,7-8.

REACTIONS (lb/size) 7=103/13-1-8, 8=261/13-1-8, 9=153/13-1-8, 10=185/13-1-8, 11=7/13-1-8, 12=172/13-1-8, 13=186/13-1-8, 14=65/13-1-8
Max Horiz 14=-178 (LC 6)
Max Uplift 7=-70 (LC 5), 8=-49 (LC 4), 9=-29 (LC 5), 10=-36 (LC 5), 11=-47 (LC 6), 12=-48 (LC 4), 13=-39 (LC 5), 14=-15 (LC 4)
Max Grav 7=114 (LC 15), 8=261 (LC 1), 9=153 (LC 1), 10=185 (LC 1), 11=47 (LC 5), 12=172 (LC 1), 13=186 (LC 1), 14=65 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-51/47, 1-2=-89/68, 2-3=-89/68, 3-4=-89/68, 4-5=-89/68, 5-6=-89/68, 6-7=-89/68
BOT CHORD 13-14=-68/89, 12-13=-68/89, 11-12=-68/89, 10-11=-88/124, 9-10=-92/123, 8-9=-91/125, 7-8=-94/126
WEBS 2-13=-143/82, 3-12=-139/62, 4-10=-144/60, 5-9=-121/51, 6-8=-198/79

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) Provide adequate drainage to prevent water ponding.
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 15 lb uplift at joint 14, 70 lb uplift at joint 7, 47 lb uplift at joint 11, 39 lb uplift at joint 13, 48 lb uplift at joint 12, 36 lb uplift at joint 10, 29 lb uplift at joint 9 and 49 lb uplift at joint 8.
11) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 7, 10, 9, 8.
12) 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.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

September 7,2021

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	
Lot 11 OS	V1	Valley	1	1	Job Reference (optional)	I47787273

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:53:02 Page: 1
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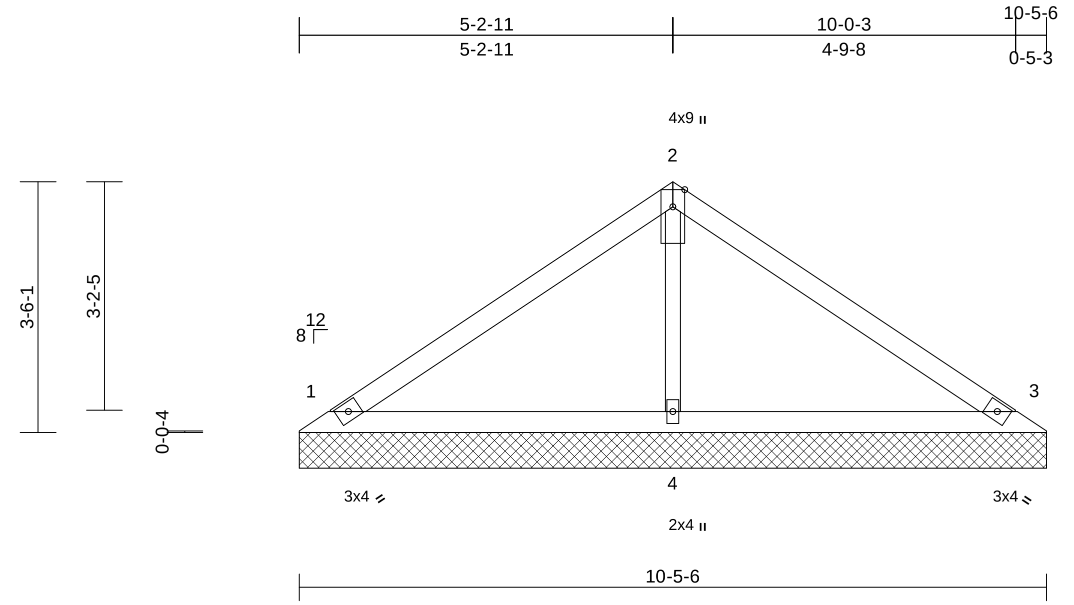

Scale = 1:32.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 27 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=221/10-5-6, 3=221/10-5-6, 4=418/10-5-6
Max Horiz 1=-83 (LC 4)
Max Uplift 1=-42 (LC 8), 3=-52 (LC 9), 4=-16 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-165/79, 2-3=-164/60
BOT CHORD 1-4=-16/76, 3-4=-16/76
WEBS 2-4=-272/69

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 1, 52 lb uplift at joint 3 and 16 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

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS	
Lot 11 OS	V2	Valley	1	1	Job Reference (optional)	I47787274

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/28/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:53:02 Page: 1
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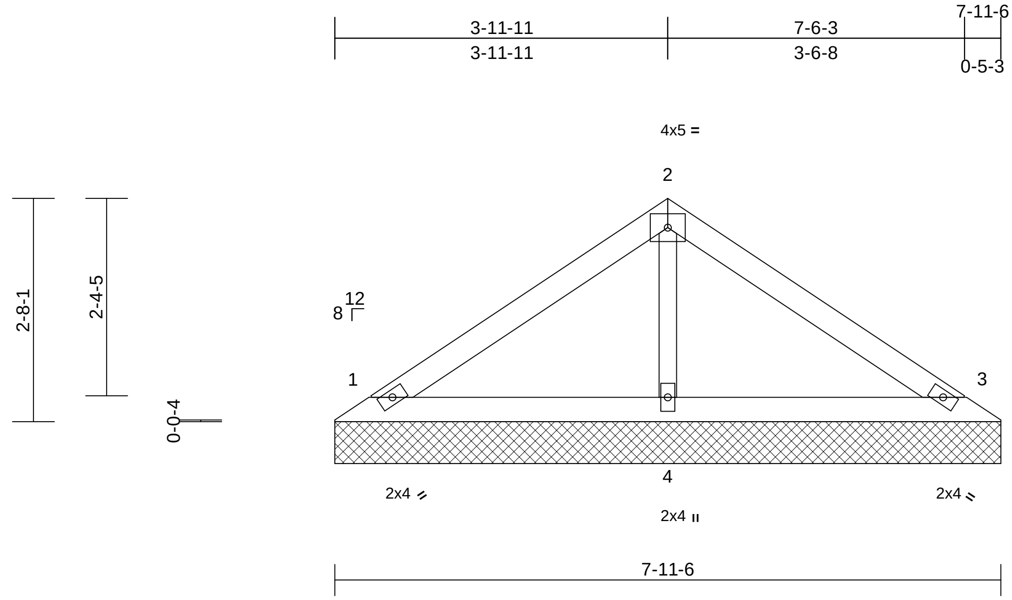

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 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=178/7-11-6, 3=178/7-11-6, 4=277/7-11-6
Max Horiz 1=61 (LC 7)
Max Uplift 1=-39 (LC 8), 3=-47 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-110/56, 2-3=-106/42
BOT CHORD 1-4=-12/52, 3-4=-12/52
WEBS 2-4=-189/48

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 39 lb uplift at joint 1 and 47 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 7,2021

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	V3	Valley	1	1	Job Reference (optional) I47787275

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:53:02 Page: 1
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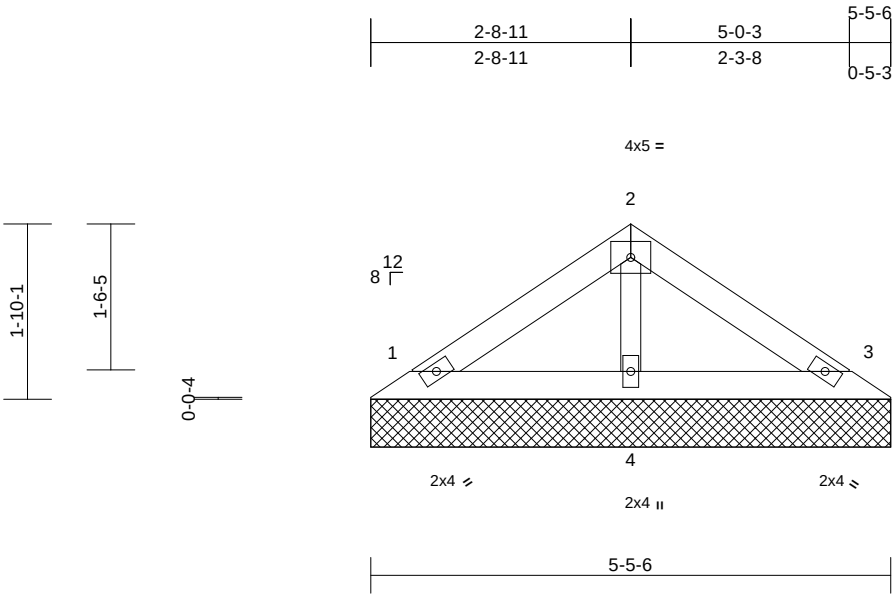

Scale = 1:24.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=115/5-5-6, 3=115/5-5-6, 4=179/5-5-6
Max Horiz 1=-40 (LC 4)
Max Uplift 1=-25 (LC 8), 3=-30 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-71/36, 2-3=-69/27
BOT CHORD 1-4=-8/33, 3-4=-8/33
WEBS 2-4=-122/31

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 25 lb uplift at joint 1 and 30 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

September 7,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 11 OS
Lot 11 OS	V4	Valley	1	1	Job Reference (optional) I47787276

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Aug 16 2021 Print: 8.430 S Aug 16 2021 MiTek Industries, Inc. Tue Sep 07 08:53:02 Page: 1
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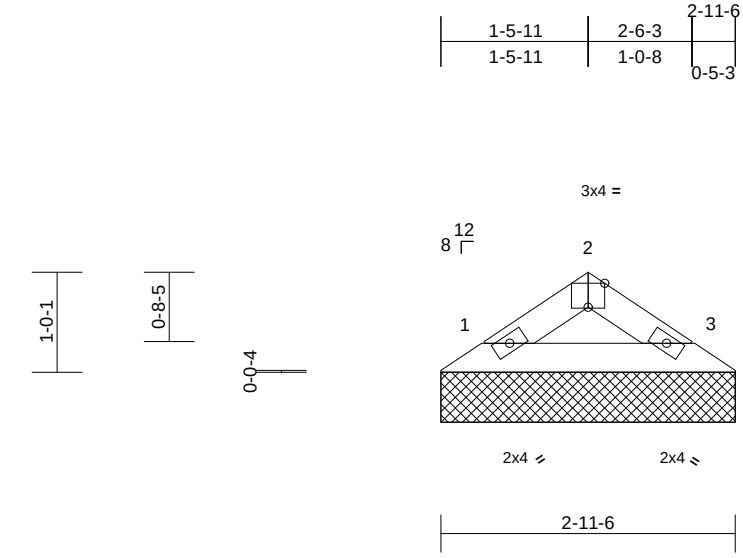


Scale = 1:23.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=92/2-11-6, 3=92/2-11-6
Max Horiz 1=-18 (LC 4)
Max Uplift 1=-11 (LC 8), 3=-11 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-80/25, 2-3=-80/25
BOT CHORD 1-3=-10/54

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 11 lb uplift at joint 1 and 11 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

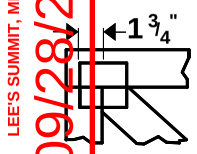
LOAD CASE(S) Standard

September 7,2021

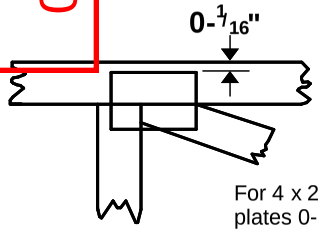
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

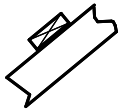
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

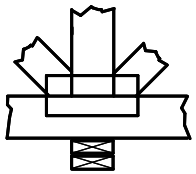
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

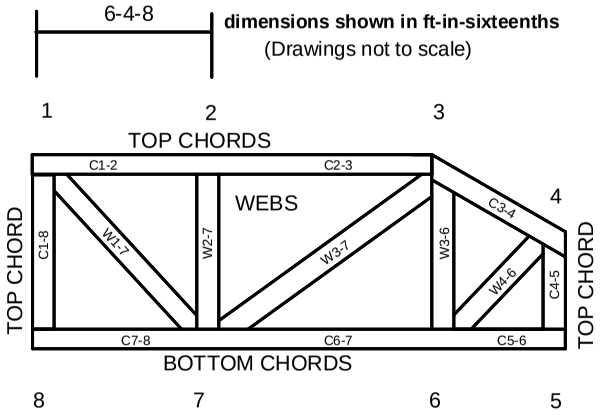


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.