MiTek®

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

RE: P230379-01 - Roof - Osage Lot 56

Site Information:

Project Customer: Clover & Hive Project Name: Twin Cobalt - Custom
Lot/Block: 56 Subdivision: Osage
Model:
Address: 2134/2136 SW Osage Dr
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Wind Speed: 115 mph Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16
Roof Load: 45.0 psf Floor Load: N/A psf

Mean Roof Height (feet): 35 Exposure Category: C

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I59477251	A1	7/12/23	35	I59477285	E7	7/12/23
2	I59477252	A2	7/12/23	36	I59477286	E8	7/12/23
3	I59477253	A3	7/12/23	37	I59477287	E9	7/12/23
4	I59477254	A4	7/12/23	38	I59477288	E10	7/12/23
5	I59477255	A5	7/12/23	39	I59477289	GR1	7/12/23
6	I59477256	A5A	7/12/23	40	I59477290	HG1	7/12/23
7	I59477257	A6	7/12/23	41	I59477291	HG2	7/12/23
8	I59477258	A7	7/12/23	42	I59477292	HG3	7/12/23
9	I59477259	A8	7/12/23	43	I59477293	HG4	7/12/23
10	I59477260	A9	7/12/23	44	I59477294	J1	7/12/23
11	I59477261	A10	7/12/23	45	I59477295	T1	7/12/23
12	I59477262	A11	7/12/23	46	I59477296	V1	7/12/23
13	I59477263	A12	7/12/23	47	I59477297	V2	7/12/23
14	I59477264	A13	7/12/23	48	I59477298	V3	7/12/23
15	I59477265	A14	7/12/23	49	I59477299	V4	7/12/23
16	I59477266	A15	7/12/23	50	I59477300	V5	7/12/23
17	I59477267	A16	7/12/23				
18	I59477268	A17	7/12/23				
19	I59477269	A18	7/12/23				
20	I59477270	A19	7/12/23				
21	I59477271	A20	7/12/23				
22	I59477272	A21	7/12/23				
23	I59477273	A22	7/12/23				
24	I59477274	A23	7/12/23				
25	I59477275	C1	7/12/23				
26	I59477276	C2	7/12/23				
27	I59477277	C3	7/12/23				
28	I59477278	C4	7/12/23				
29	I59477279	D1	7/12/23				
30	I59477280	D2	7/12/23				
31	I59477281	D3	7/12/23				
32	I59477282	D4	7/12/23				
33	I59477283	E5	7/12/23				
34	I59477284	E6	7/12/23				

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Premier Building Supply (Springhill, KS)20300 W 207th Street.

Truss Design Engineer's Name: Nathan Fox
My license renewal date for the state of Missouri is December 31, 2024.

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

July 12,2023
Nathan Fox

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P2363794-01	A1	Flat Girder	1	2	Job Reference (optional)	I59477251

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:30 Page: 1
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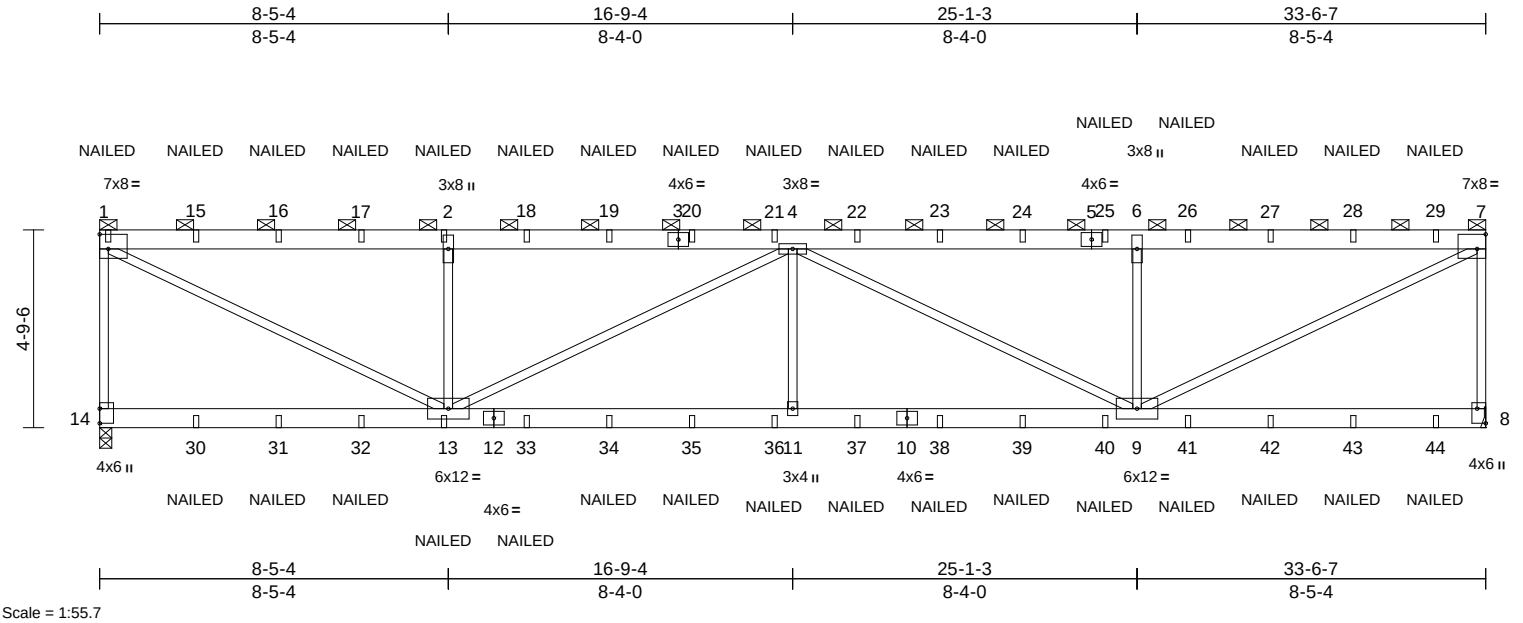

Scale = 1:55.7

Plate Offsets (X, Y): [1:Edge,0-4-4], [7:Edge,0-4-4], [8: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	0.50	Vert(LL)	0.20	11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.33	11-13	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 330 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 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.

REACTIONS (size) 8= Mechanical, 14=0-3-8
Max Horiz 14=-171 (LC 8)
Max Uplift 8=-1006 (LC 9), 14=-932 (LC 8)
Max Grav 8=2836 (LC 1), 14=2795 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-2668/1133, 1-2=-4341/1776, 2-4=-4341/1776, 4-6=-4350/1780, 6-7=-4350/1780, 7-8=-2690/1210
BOT CHORD 13-14=-227/261, 11-13=-2382/5655, 9-11=-2382/5655, 8-9=-74/110
WEBS 1-13=-1966/4851, 2-13=-1211/848, 4-13=-1481/636, 4-11=0/614, 4-9=-1470/629, 6-9=-1219/854, 7-9=-1971/4861

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 14 SPF No.2 crushing capacity of 425 psi, Joint 8 SPF No.3 crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-70, 8-14=-20
Concentrated Loads (lb)
Vert: 1=-47 (B), 13=-38 (B), 2=-124 (B), 15=-124 (B), 16=-124 (B), 17=-124 (B), 18=-124 (B), 19=-124 (B), 20=-124 (B), 21=-124 (B), 22=-124 (B), 23=-124 (B), 24=-124 (B), 25=-124 (B), 26=-124 (B), 27=-124 (B), 28=-124 (B), 29=-124 (B), 30=-38 (B), 31=-38 (B), 32=-38 (B), 33=-38 (B), 34=-38 (B), 35=-38 (B), 36=-38 (B), 37=-38 (B), 38=-38 (B), 39=-38 (B), 40=-38 (B), 41=-38 (B), 42=-38 (B), 43=-38 (B), 44=-38 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P23637901	A2	Roof Special	1	1	Job Reference (optional)	I59477252

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:33 Page: 1
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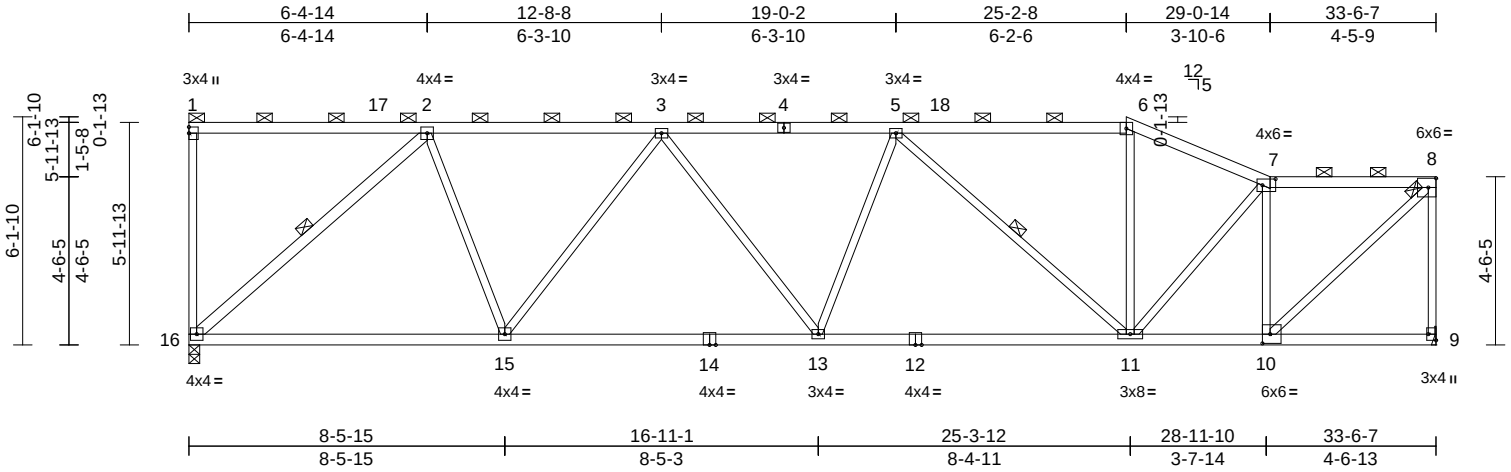

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Plate Offsets (X, Y): [7:0-4-4,0-2-0], [9:Edge,0-2-8], [10:0-2-8,0-3-0]

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	0.74	Vert(LL)	-0.15	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.32	15-16	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.90	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 164 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 2-16:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-2 max.): 1-6, 7-8.
BOT CHORD Rigid ceiling directly applied or 8-3-10 oc bracing.
WEBS 1 Row at midpt 2-16, 5-11

REACTIONS (size) 9= Mechanical, 16=0-3-8
Max Horiz 16=-232 (LC 8)
Max Uplift 9=-276 (LC 9), 16=-309 (LC 8)
Max Grav 9=1500 (LC 1), 16=1500 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-16=-183/84, 1-2=-123/123, 2-3=-1667/354, 3-5=-2202/438, 5-6=-1636/310, 6-7=-1809/317, 7-8=-1388/225, 8-9=-1451/295
BOT CHORD 15-16=-368/1391, 13-15=-493/2090, 11-13=-493/2195, 10-11=-281/1357, 9-10=-77/91
WEBS 7-10=-1252/284, 8-10=-343/1896, 6-11=0/353, 7-11=-86/493, 2-15=-57/803, 2-16=-1857/408, 3-15=-711/211, 3-13=-17/220, 5-13=0/171, 5-11=-834/208

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 5-1-4, Interior (1) 5-1-4 to 25-2-8, Exterior(2E) 25-2-8 to 29-0-14, Interior (1) 29-0-14 to 33-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 16 SP No.2 crushing capacity of 565 psi, Joint 9 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	A3	Roof Special	1	1	Job Reference (optional)	I59477253

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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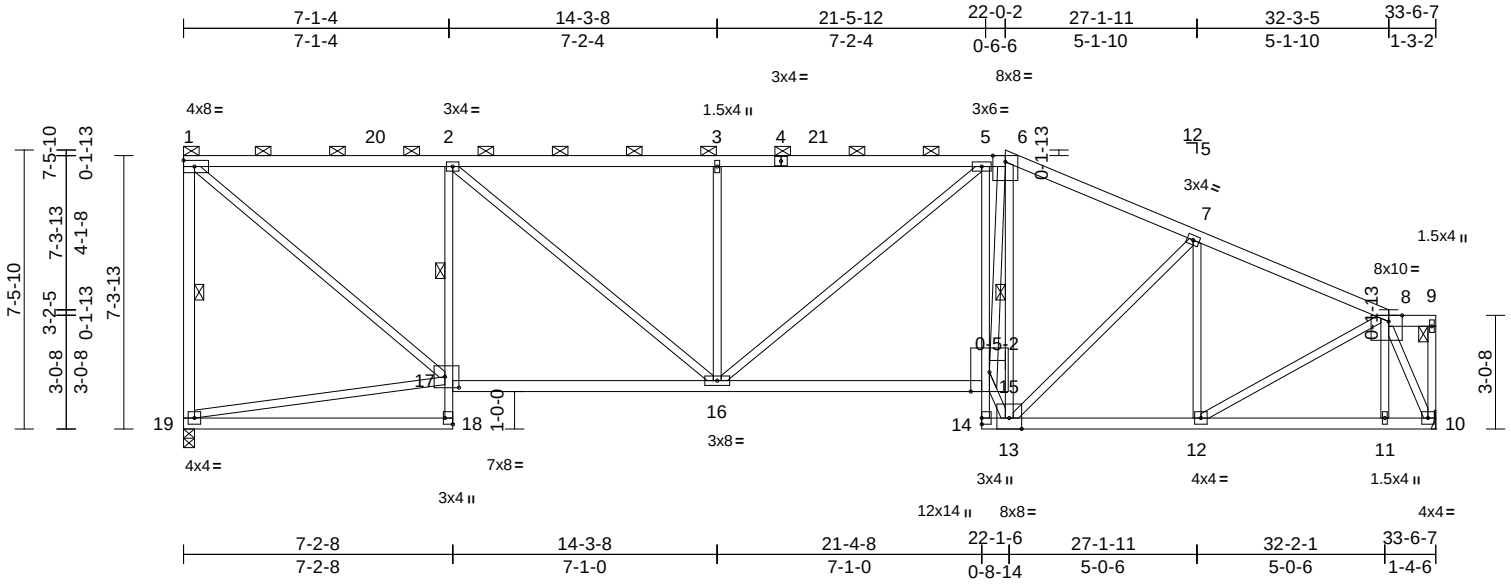

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Plate Offsets (X, Y): [8:0-4-5,Edge], [17:0-4-8,0-3-8], [18:Edge,0-2-8]

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)	-0.22	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.45	15-16	>896	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.21	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 186 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 18-2,5-14:2x3 SPF No.2, 14-10:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 19-1:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-4 oc purlins, except end verticals, and 2-0-0 oc purlins (2-10-4 max.): 1-6, 8-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15.
1 Row at midpt 2-17
WEBS 1 Row at midpt 1-19, 6-13

REACTIONS (size) 10= Mechanical, 19=0-3-8
Max Horiz 19=-302 (LC 10)
Max Uplift 10=-205 (LC 9), 19=-308 (LC 8)
Max Grav 10=1498 (LC 1), 19=1498 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-19=-1426/327, 1-2=-1462/356, 2-3=-2095/447, 3-5=-2095/447, 5-6=-1892/389, 6-7=-1847/347, 7-8=-1750/257, 8-9=-60/62, 9-10=-21/14
BOT CHORD 18-19=-8/41, 17-18=0/141, 2-17=-1060/344, 16-17=-273/1466, 15-16=-329/1919, 14-15=-332/16, 5-15=-315/230, 13-14=-72/218, 12-13=-265/1551, 11-12=-124/633, 10-11=-127/629
WEBS 17-19=-279/352, 1-17=-360/1888, 2-16=-175/824, 3-16=-526/224, 5-16=-70/230, 8-10=-1637/230, 6-13=-1969/348, 13-15=-390/2743, 7-13=-28/179, 6-15=-494/2356, 7-12=-476/155, 8-12=-160/1048, 8-11=0/182

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 22-0-2, Exterior(2R) 22-0-2 to 27-1-11, Interior (1) 27-1-11 to 33-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: Joint 19 SP No.2 crushing capacity of 565 psi, Joint 10 SPF No.3 crushing capacity of 425 psi.
5) Refer to girder(s) for truss to truss connections.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) 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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P236379-01	A4	Half Hip	1	1	I59477254
					Job Reference (optional)

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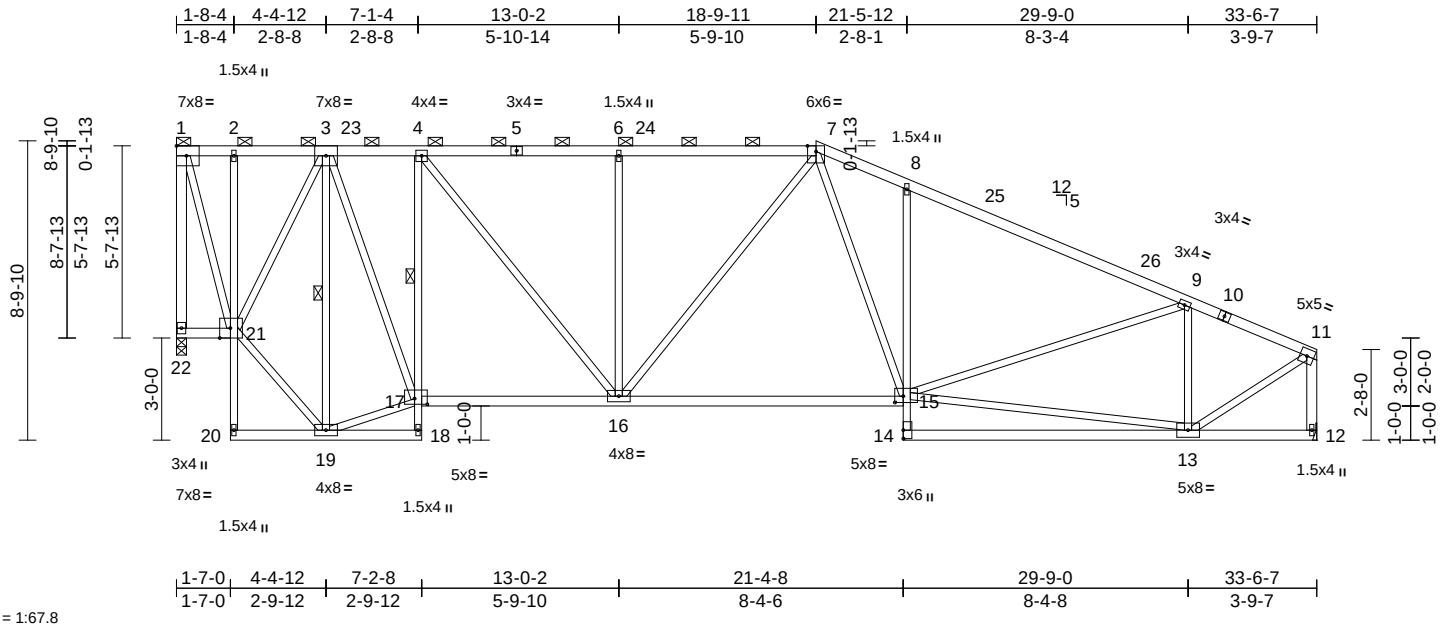

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Plate Offsets (X, Y): [15:0-3-0,0-2-4], [17:0-4-8,0-2-0], [21:0-3-12,Edge]

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	0.74	Vert(LL)	-0.17	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.40	15-16	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.09	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 205 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 7-10:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 2-20,18-4,8-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-11:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-4 max.): 1-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 12-13.
1 Row at midpt 4-17
WEBS 1 Row at midpt 3-19

REACTIONS (size) 12= Mechanical, 22=0-3-8
Max Horiz 22=-312 (LC 8)
Max Uplift 12=-196 (LC 13), 22=-274 (LC 8)
Max Grav 12=1496 (LC 1), 22=1496 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-399/166, 2-3=-403/167, 3-4=-1130/283, 4-6=-1653/354, 6-7=-1656/356, 7-8=-2046/431, 8-9=-2108/360, 9-11=-1453/220, 11-12=-1483/215, 1-22=-1428/292
BOT CHORD 21-22=-269/401, 20-21=0/38, 2-21=-113/92, 19-20=-1/15, 18-19=-11/29, 17-18=0/38, 4-17=-947/226, 16-17=-146/1135, 15-16=-225/1643, 14-15=0/153, 8-15=-427/255, 13-14=-6/61, 12-13=-49/52
WEBS 1-21=-267/1406, 4-16=-129/828, 6-16=-481/203, 7-16=-18/209, 7-15=-218/589, 13-15=-220/1286, 9-15=-61/537, 9-13=-898/252, 11-13=-226/1605, 3-19=-888/135, 3-17=-219/1316, 3-21=-603/395, 19-21=-103/986, 17-19=-63/689

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 18-9-11, Exterior(2R) 18-9-11 to 23-9-11, Interior (1) 23-9-11 to 33-4-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 22 SP No.2 crushing capacity of 565 psi, Joint 12 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P-23037901	A5	Half Hip Girder	1	2	Job Reference (optional)	I59477255

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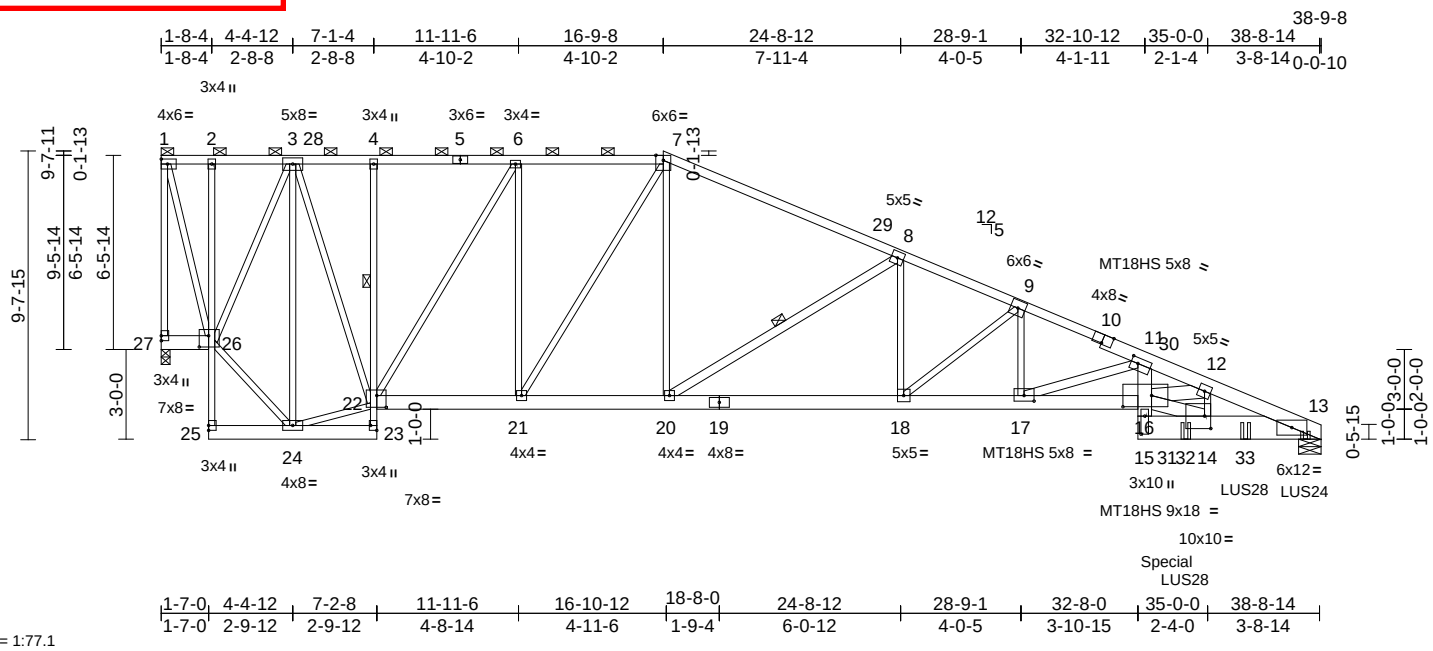

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Plate Offsets (X, Y): [10:0-4-0,Edge], [11:0-2-12,0-2-4], [14:0-2-8,0-5-0], [15:0-7-4,0-1-8], [16:0-11-8,0-4-8], [17:0-4-0,0-2-4], [22:0-3-12,0-4-12], [23:Edge,0-2-8], [26:0-3-12,0-4-8]

Loading	(psf)	Spacing	1-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.92	Vert(LL)	-0.29	16-17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.52	16-17	>886	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.14	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 551 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 10-13:2x6 SP 2400F 2.0E

BOT CHORD 2x6 SPF No.2 *Except* 2-25,23-4:2x3 SPF No.2, 15-13:1 1/2" x 9 1/4" 2.0E Microllam® LVL, 19-16:2x6 SP 2400F 2.0E

WEBS 2x3 SPF No.2 *Except* 20-8,11-17:2x4 SP No.2, 14-16:2x6 SP 2400F 2.0E, 16-12:2x6 SPF No.2

OTHERS 2x6 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-6-11 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 25-26,22-23.

1 Row at midpt 4-22

WEBS 1 Row at midpt 8-20

REACTIONS (size) 13=0-9-0, 27=0-3-8
Max Horiz 27=-190 (LC 34)
Max Uplift 13=-1284 (LC 13), 27=-289 (LC 9)
Max Grav 13=7019 (LC 1), 27=1598 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-27=-1529/285, 1-2=-387/71, 2-3=-393/72, 3-4=-1240/257, 4-6=-1243/257, 6-7=-1957/380, 7-8=-2783/497, 8-9=-5686/1040, 9-11=-8983/1667, 11-12=-19465/3708, 12-13=-14407/2725

BOT CHORD 26-27=-72/191, 25-26=-37/10, 2-26=-35/43, 24-25=-3/24, 23-24=-9/59, 22-23=-38/10, 4-22=-121/62, 21-22=-243/1955, 20-21=-332/2503, 18-20=-857/5227, 17-18=-1473/8331, 16-17=-3627/19225, 14-15=-416/2192, 13-14=-2486/13230

WEBS 15-16=-858/4341, 11-16=-1561/8187, 1-26=-280/1526, 7-20=-319/1766, 8-20=-3195/674, 8-18=-466/2626, 6-22=-1390/246, 7-21=-1076/241, 3-24=-898/67, 3-22=-262/1619, 3-26=-828/264, 24-26=-58/1050, 22-24=-34/713, 12-14=-3389/660, 9-18=-3999/794, 11-17=-11544/2282, 9-17=-676/3540, 14-16=-2249/11995, 12-16=-903/4737, 6-21=-180/991

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc, 2x10 - 5 rows staggered at 0-4-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 5-1-4, Interior (1) 5-1-4 to 16-9-8, Exterior(2R) 16-9-8 to 23-10-6, Interior (1) 23-10-6 to 38-4-14 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 27 SPF No.2 crushing capacity of 425 psi, Joint 13 Trus Joist® LVL 2.0 E crushing capacity of 750 psi.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie LUS28 (6-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 34-3-4 from the left end to 36-3-4 to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 38-3-4 from the left end to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.

July 12,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	I59477255
P236379-01	A5	Half Hip Girder	1	2	Job Reference (optional)	

14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 5205 lb down and 1070 lb up at 33-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-7=-35, 7-13=-35, 26-27=-10, 23-25=-10, 16-22=-10, 13-15=-10
   Concentrated Loads (lb)
   Vert: 13=-564 (B), 31=-5205 (B), 32=-562 (B), 33=-562 (B)

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	A5A	Common Girder	1	2	Job Reference (optional)	I59477256

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:35 Page: 1
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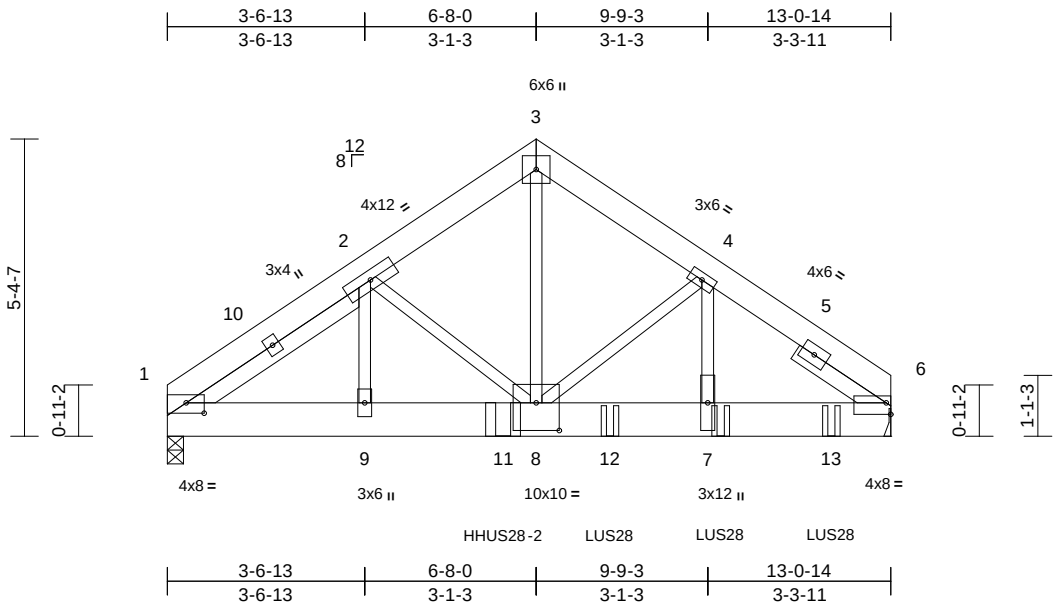

Scale = 1:41.6

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

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	0.30	Vert(LL)	-0.03	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 182 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-9-0, Right 2x4 SP No.2 -- 1-10-8

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

REACTIONS (size) 1=0-3-8, 6= Mechanical
Max Horiz 1=-130 (LC 10)
Max Uplift 1=-796 (LC 12), 6=-1051 (LC 13)
Max Grav 1=3160 (LC 1), 6=5246 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4809/1312, 2-3=-4497/1255, 3-4=-4460/1248, 4-6=-5813/1350
BOT CHORD 1-9=-976/3658, 8-9=-977/3660, 7-8=-981/4538, 6-7=-980/4523
WEBS 3-8=-1222/4434, 4-8=-1062/134, 2-8=-112/253, 2-9=-117/369, 4-7=-186/1791

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc,
Except member 4-7 2x3 - 1 row at 0-2-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 13-0-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 1 SP 2400F 2.0E crushing capacity of 805 psi, Joint 6 SPF No.3 crushing capacity of 425 psi.
7) Refer to girder(s) for truss to truss connections.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Use Simpson Strong-Tie HHUS28-2 (22-10d Girder, 8-10d Truss, Single Ply Girder) or equivalent at 6-0-13 from the left end to connect truss(es) to back face of bottom chord.
10) Use Simpson Strong-Tie LUS28 (6-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 8-0-0 from the left end to 12-0-0 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.
12) WARNING: The following hangers are manually applied but fail due to geometric and/or loading considerations: HHUS28-2 on back face at 6-0-13 from the left end.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-6=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 7=-1485 (B), 11=-2806 (B), 12=-1480 (B), 13=-1478 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER
July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P23037901	A6	Half Hip	1	1	Job Reference (optional)	I59477257

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:36 Page: 1
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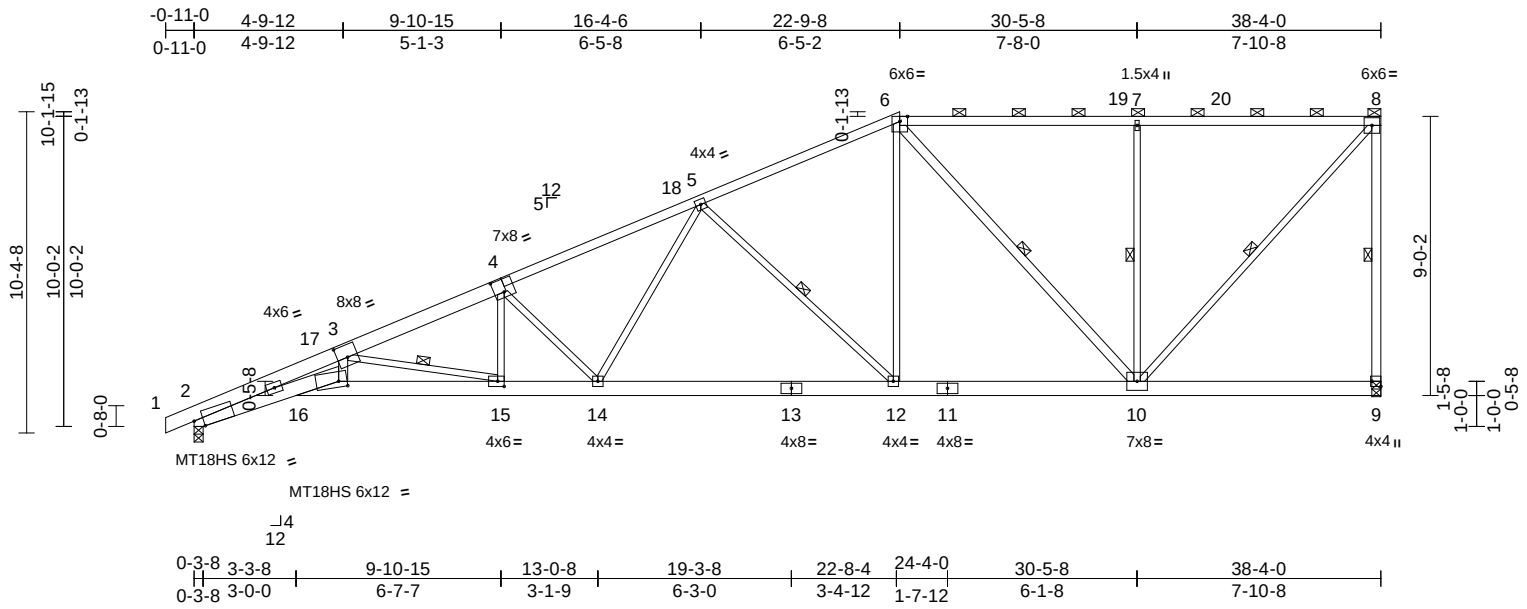

Scale = 1:74.4

Plate Offsets (X, Y): [2:0-3-9,Edge], [3:0-4-0,0-4-12], [4:0-3-12,0-5-0], [9:Edge,0-3-8], [15:0-2-8,0-2-0], [16:0-3-4,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.40	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.74	15-16	>621	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.85	Horz(CT)	0.31	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 230 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 6-8:2x4 SP 1650F 1.5E, 4-1:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 11-9,13-11:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-6,3-16:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-3 oc purlins, except 2-0-0 oc purlins (5-2-3 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 7-3-0 oc bracing.
WEBS 1 Row at midpt 6-10, 7-10, 8-10, 8-9, 5-12, 3-15

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=416 (LC 12)
Max Uplift 2=-264 (LC 12), 9=-304 (LC 8)
Max Grav 2=1787 (LC 1), 9=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8899/1774, 3-5=-4132/658, 5-6=-2079/299, 6-7=-1283/225, 7-8=-1280/223, 8-9=-1638/339
BOT CHORD 2-16=-2036/8290, 15-16=-1443/5626, 14-15=-882/3804, 12-14=-571/2625, 10-12=-308/1832, 9-10=-5/15
WEBS 6-12=-151/946, 6-10=-835/228, 7-10=-642/275, 8-10=-327/1897, 5-12=-1087/365, 4-15=-88/481, 4-14=-1060/347, 5-14=-162/976, 3-16=-756/3476, 3-15=-1861/574

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 22-9-8, Exterior(2R) 22-9-8 to 29-10-6, Interior (1) 29-10-6 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 9 SPF No.2 crushing capacity of 425 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P2303794-01	A7	Roof Special	1	1	Job Reference (optional)	I59477258

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:36 Page: 1
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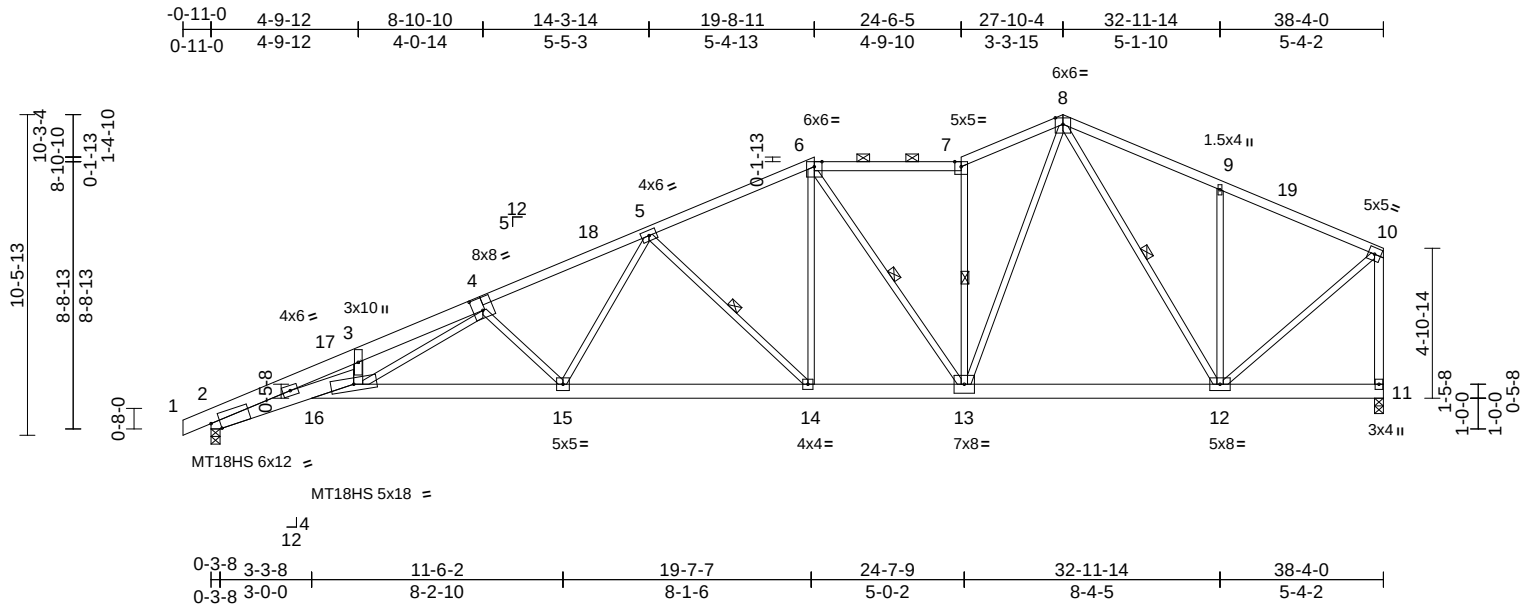

Scale = 1:75.3

Plate Offsets (X, Y): [2:0-3-9,Edge], [4:0-3-12,0-5-0]

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)	-0.46	15-16	>997	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.84	15-16	>543	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.79	Horz(CT)	0.33	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 237 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-1:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SP 2400F 2.0E *Except* 16-11:1 1/2" x 5 1/2" 2.0E Microllam® LVL
WEBS 2x3 SPF No.2 *Except* 11-10,3-16:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-10 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-1 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
7-7-7 oc bracing: 2-16.
WEBS 1 Row at midpt 6-13, 7-13, 8-12, 5-14

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=321 (LC 12)
Max Uplift 2=-314 (LC 12), 11=-217 (LC 12)
Max Grav 2=1787 (LC 1), 11=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8207/1683, 3-5=-6440/1487, 5-6=-2460/490, 6-7=-2023/406, 7-8=-2232/480, 8-9=-1356/318, 9-10=-1338/224, 10-11=-1671/275
BOT CHORD 2-16=-1835/7573, 15-16=-1008/4124, 14-15=-671/2927, 13-14=-442/2201, 12-13=-234/1446, 11-12=-7/18
WEBS 6-14=-145/801, 6-13=-407/141, 7-13=-1136/308, 8-13=-367/1643, 8-12=-614/156, 9-12=-417/226, 10-12=-204/1549, 4-15=-1030/366, 5-15=-187/1058, 5-14=-1006/320, 4-16=-660/2174, 3-16=-239/1793

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 19-8-11, Exterior(2E) 19-8-11 to 24-6-5, Interior (1) 24-6-5 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 11 Trus Joist® LVL 2.0 E crushing capacity of 750 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	A8	Roof Special	1	1	Job Reference (optional)	I59477259

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:37 Page: 1
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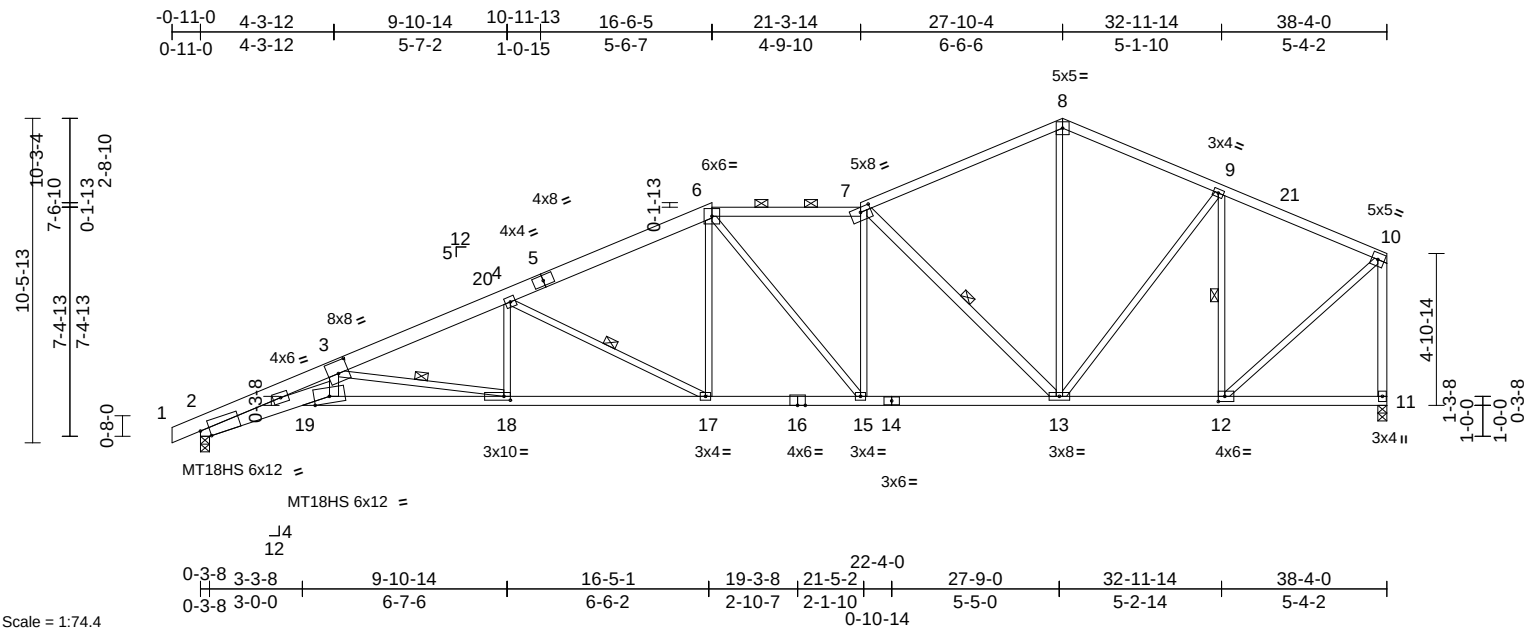


Scale = 1:74.4

Plate Offsets (X, Y): [2:0-3-9,Edge], [3:0-4-0,0-4-12], [7:0-4-0,0-1-13], [12:0-2-8,0-2-0], [18:0-2-8,0-1-8]

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	0.78	Vert(LL)	-0.44	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.82	18-19	>554	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.85	Horz(CT)	0.37	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 212 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-6:2x6 SPF No.2, 7-8:2x4 SP 1650F 1.5E, 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 2-19:2x6 SP 2400F 2.0E, 16-14:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-10,13-7,3-19:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-3-7 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 6-9-5 oc bracing.
WEBS 1 Row at midpt 4-17, 7-13, 9-12, 3-18

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=321 (LC 12)
Max Uplift 2=-314 (LC 12), 11=-217 (LC 12)
Max Grav 2=1787 (LC 1), 11=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8882/1897, 3-4=-4107/767, 4-6=-2958/554, 6-7=-2627/505, 7-8=-1689/333, 8-9=-1654/350, 9-10=-1313/235, 10-11=-1661/294
BOT CHORD 2-19=-2051/8236, 18-19=-1501/5827, 17-18=-906/3822, 15-17=-561/2617, 13-15=-520/2627, 12-13=-166/1155, 11-12=-5/19
WEBS 4-18=0/418, 4-17=-1346/388, 6-17=-109/724, 6-15=-73/88, 7-15=0/221, 10-12=-216/1527, 8-13=-112/835, 9-13=-118/573, 7-13=-1604/401, 9-12=-917/212, 3-19=-770/3459, 3-18=-2036/603

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-12, Interior (1) 4-3-12 to 16-6-5, Exterior(2E) 16-6-5 to 21-3-14, Interior (1) 21-3-14 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 11 SP 2400F 2.0E crushing capacity of 805 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

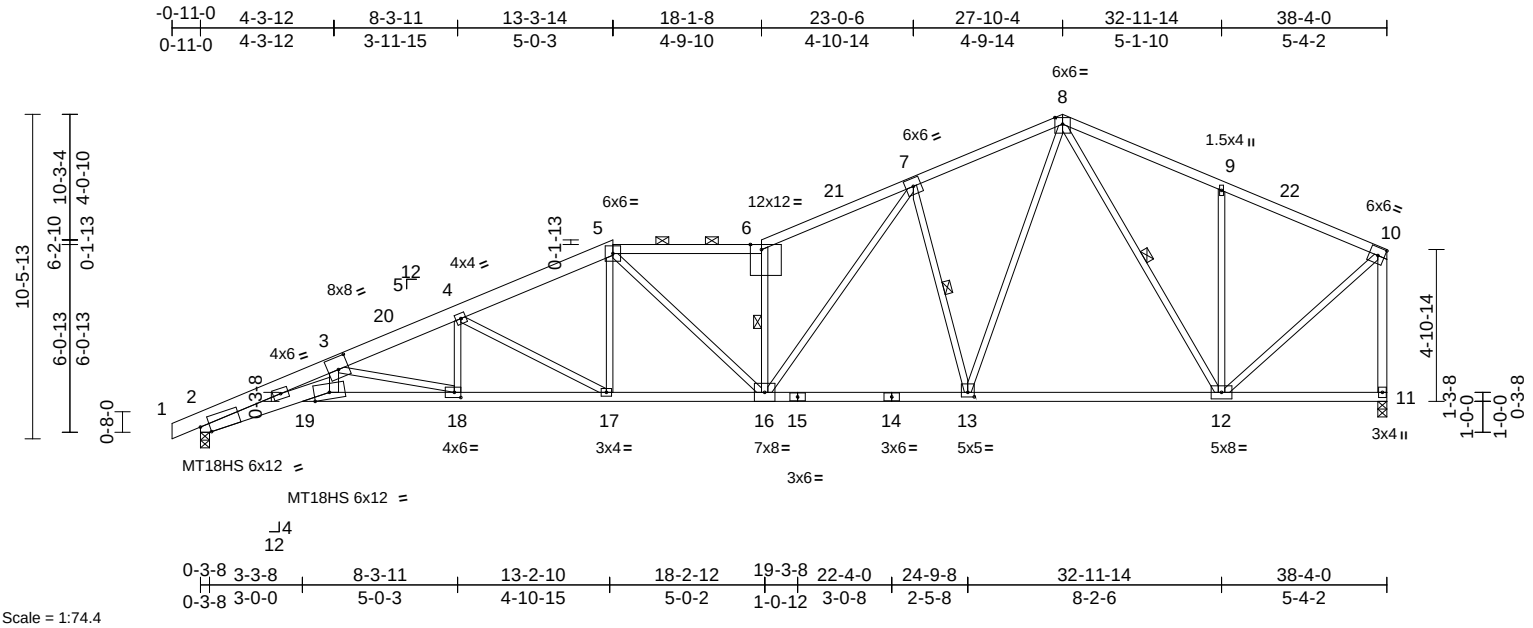
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P23037901	A9	Roof Special	1	1	I59477260
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:37 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.4

Plate Offsets (X, Y): [2:0-3-9,Edge], [3:0-4-0,0-4-12], [6:0-4-5,Edge], [13:0-2-8,0-1-12], [18:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.41	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.75	18-19	>606	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.91	Horz(CT)	0.34	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 208 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 2-19:2x6 SP 2400F 2.0E, 15-14:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-10,3-19:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-2 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 6-9-14 oc bracing.
WEBS 1 Row at midpt 6-16, 8-12, 7-13

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=321 (LC 12)
Max Uplift 2=-314 (LC 12), 11=-217 (LC 12)
Max Grav 2=1787 (LC 1), 11=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8771/1887, 3-4=-4400/836, 4-5=-3442/646, 5-6=-3365/616, 6-7=-3680/717, 7-8=-2171/450, 8-9=-1339/323, 9-10=-1321/229, 10-11=-1670/285
BOT CHORD 2-19=-2040/8126, 18-19=-1476/5732, 17-18=-991/4139, 16-17=-695/3092, 13-16=-441/2265, 12-13=-232/1438, 11-12=-6/16
WEBS 4-18=-11/334, 4-17=-1182/337, 5-17=-106/670, 5-16=-38/379, 6-16=-1708/408, 8-13=-330/1545, 8-12=-634/156, 9-12=-419/226, 10-12=-209/1543, 7-13=-1336/417, 7-16=-419/1868, 3-19=-795/3452, 3-18=-1642/499

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-12, Interior (1) 4-3-12 to 13-3-14, Exterior(2E) 13-3-14 to 18-1-8, Interior (1) 18-1-8 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 11 SP 2400F 2.0E crushing capacity of 805 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

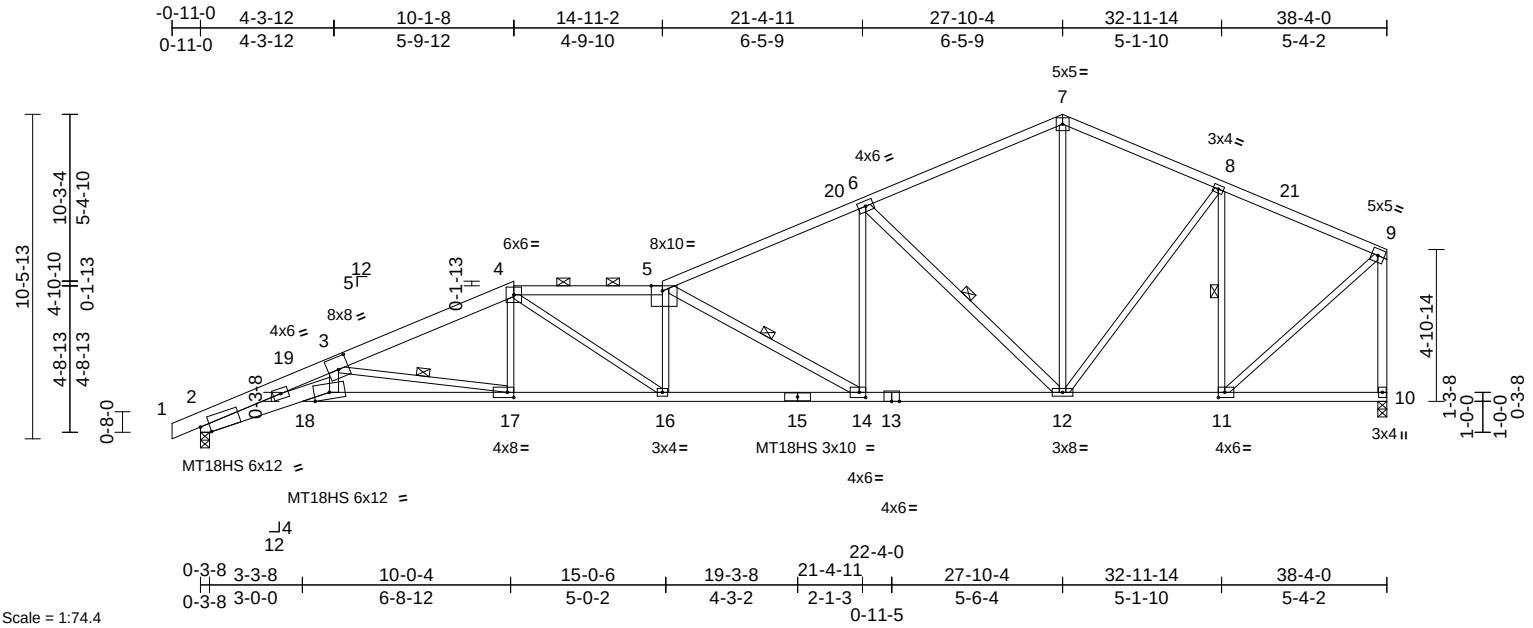
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	A10	Roof Special	1	1	Job Reference (optional)	I59477261

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:38 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:74.4

Plate Offsets (X, Y): [2:0-3-9,Edge], [3:0-4-0,0-4-12], [5:0-4-5,Edge], [11:0-2-8,0-2-0], [14:0-2-8,0-2-0], [17:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.48	17-18	>958	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.89	17-18	>515	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.86	Horz(CT)	0.39	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 211 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x6 SP 2400F 2.0E, 5-7:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 2-18:2x6 SP 2400F 2.0E, 15-13:2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2 *Except* 10-9,14-5,12-6,3-18:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-7 oc purlins, except end verticals, and 2-0-0 oc purlins (2-4-2 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 6-8-0 oc bracing.
WEBS 1 Row at midpt 5-14, 6-12, 8-11, 3-17

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=321 (LC 12)
Max Uplift 2=-314 (LC 12), 10=-217 (LC 12)
Max Grav 2=1787 (LC 1), 10=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8995/1941, 3-4=-4032/733, 4-5=-4429/798, 5-6=-2921/505, 6-7=-1673/326, 7-8=-1649/341, 8-9=-1313/229, 9-10=-1661/287
BOT CHORD 2-18=-2097/8351, 17-18=-1543/5924, 16-17=-860/3716, 14-16=-922/4414, 12-14=-526/2617, 11-12=-161/1156, 10-11=-5/18
WEBS 4-17=-20/411, 4-16=-91/872, 5-16=-438/124, 9-11=-210/1529, 6-14=-138/1122, 5-14=-2045/450, 6-12=-1623/418, 7-12=-131/852, 8-12=-113/564, 8-11=-919/208, 3-18=-774/3486, 3-17=-2230/692

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-12, Interior (1) 4-3-12 to 10-1-8, Exterior(2E) 10-1-8 to 14-11-2, Interior (1) 14-11-2 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 10 SP 2400F 2.0E crushing capacity of 805 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	A11	Roof Special Girder	1	2	Job Reference (optional)	I59477262

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:39 Page: 1
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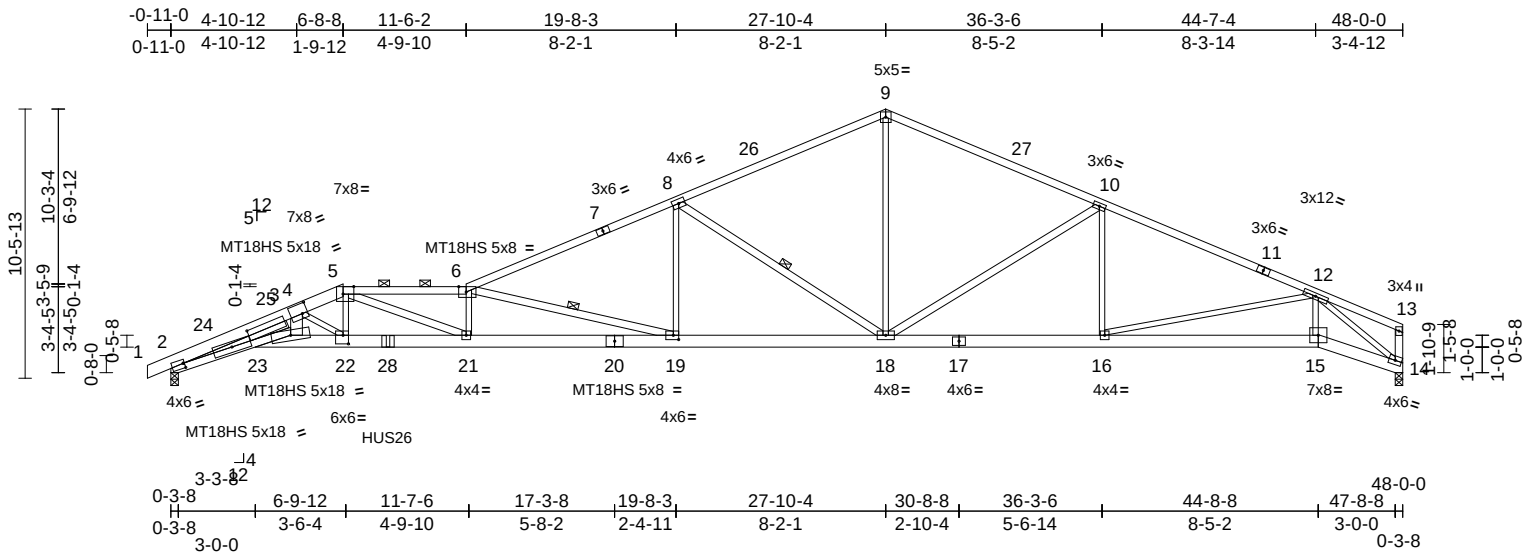

Scale = 1:89.8

Plate Offsets (X, Y): [2:1-3-0,0-2-8], [2:0-0-8,0-2-4], [2:2-9-5,0-2-8], [4:0-2-8,0-4-12], [5:0-5-0,Edge], [6:0-3-8,0-2-8], [19:0-2-8,0-2-0], [22:0-2-8,0-4-0]

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	0.96	Vert(LL)	-0.63	19-21	>912	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-1.13	19-21	>508	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.92	Horz(CT)	0.43	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 569 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-5:2x6 SP 2400F 2.0E, 9-11,11-13:2x4 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 2-23:2x4 SP 2400F 2.0E, 15-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-5,19-6,18-8,18-10,14-13:2x4 SP No.2, 4-23:2x6 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-4-1

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-8-13 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-19, 8-18

REACTIONS (size) 2=0-3-8, 14=0-3-8
Max Horiz 2=193 (LC 12)
Max Uplift 2=-554 (LC 12), 14=-310 (LC 13)
Max Grav 2=3231 (LC 1), 14=2359 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-4=-15647/2784, 4-5=-10234/1797, 5-6=-12740/2120, 6-8=-6293/981, 8-9=-3714/641, 9-10=-3718/657, 10-12=-4507/681, 12-13=-195/74, 13-14=-134/39
BOT CHORD 2-23=-2725/14454, 22-23=-1907/9968, 21-22=-1836/10021, 19-21=-2167/12689, 18-19=-878/5734, 16-18=-541/4069, 15-16=-598/3814, 14-15=-633/4068
WEBS 5-21=-377/2931, 6-21=-957/335, 6-19=-7166/1328, 8-19=-238/2005, 8-18=-2912/654, 9-18=-283/2247, 10-18=-953/321, 10-16=0/333, 12-16=-44/384, 12-15=-106/1271, 12-14=-5029/755, 4-23=-1050/5846, 4-22=-142/207, 5-22=-216/1172

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-8, Exterior(2E) 6-8-8 to 11-6-2, Interior (1) 11-6-2 to 27-10-4, Exterior(2R) 27-10-4 to 32-10-4, Interior (1) 32-10-4 to 47-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 14 SPF No.2 crushing capacity of 425 psi.
9) Bearing at joint(s) 2, 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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.
12) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 8-5-9 from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg.to the left, sloping 0.0 deg. down.
13) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-6=-70, 6-9=-70, 9-13=-70, 2-23=-20, 15-23=-20, 14-15=-20
Concentrated Loads (lb)
Vert: 28=-1222 (B)

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P236379-01	A12	Roof Special	1	1	I59477263
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:39 Page: 1
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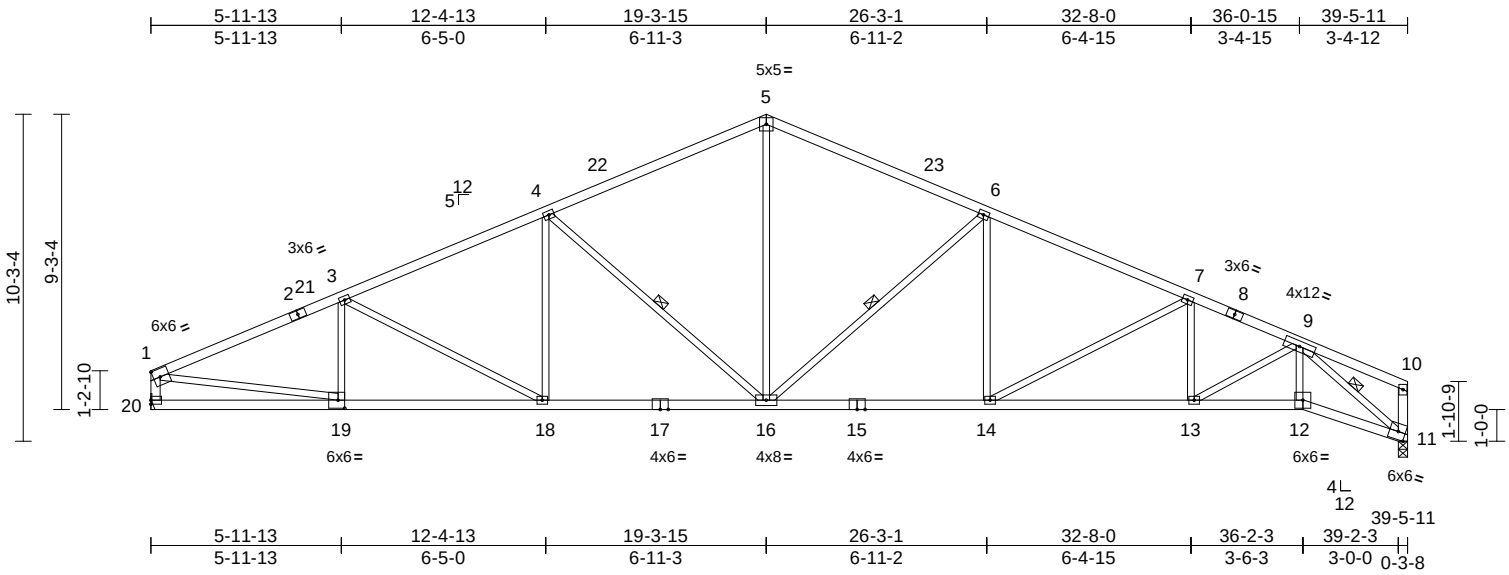


Scale = 1:72.4

Plate Offsets (X, Y): [11:0-2-11,Edge], [19:0-2-8,0-3-0]

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	0.74	Vert(LL)	-0.23	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.44	14-16	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.84	Horz(CT)	0.22	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 186 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-2,8-10:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-10,20-1:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-0-15 oc bracing.
WEBS 1 Row at midpt 9-11, 4-16, 6-16

REACTIONS (size) 11=0-3-8, 20= Mechanical
Max Horiz 20=-116 (LC 13)
Max Uplift 11=-253 (LC 13), 20=-246 (LC 12)
Max Grav 11=1763 (LC 1), 20=1763 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-3=-2931/409, 3-4=-2790/442, 4-5=-2215/428, 5-6=-2216/433, 6-7=-2878/457, 7-9=-3174/468, 9-10=-166/82, 10-11=-195/65, 1-20=-1697/274
BOT CHORD 19-20=-141/236, 18-19=-416/2637, 16-18=-318/2501, 14-16=-306/2585, 13-14=-393/2916, 12-13=-395/2602, 11-12=-424/2788
WEBS 9-12=-92/885, 9-11=-3486/493, 1-19=-289/2455, 4-18=0/319, 4-16=-784/261, 5-16=-137/1180, 6-16=-880/280, 6-14=0/392, 3-18=-240/129, 3-19=-297/129, 7-14=-422/157, 7-13=-65/95, 9-13=-23/364

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 3-0-13 to 8-0-13, Interior (1) 8-0-13 to 22-3-1, Exterior(2R) 22-3-1 to 27-3-1, Interior (1) 27-3-1 to 42-3-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 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) Bearings are assumed to be: Joint 20 SPF No.3 crushing capacity of 425 psi, Joint 11 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
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

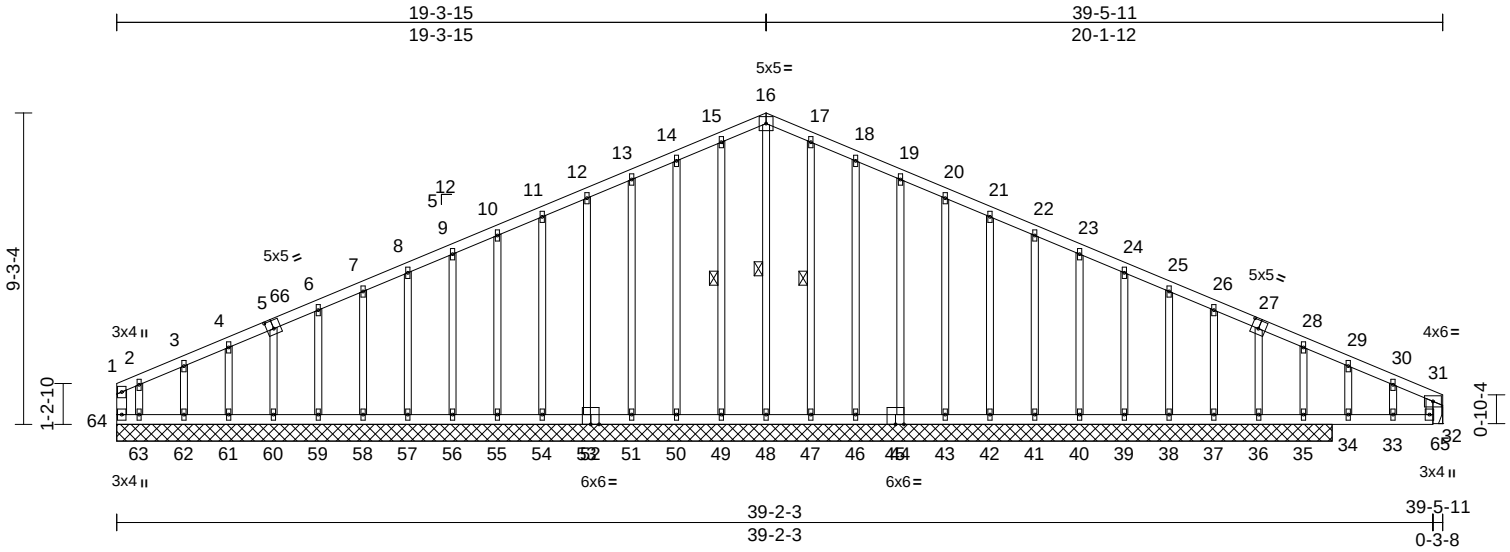
STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	A13	Common Supported Gable	1	1	Job Reference (optional)	I59477264

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:40 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:68.6

Plate Offsets (X, Y): [5:0-2-8,0-3-0], [27:0-2-8,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	0.02	33-34	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.02	33-34	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.01	65	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 235 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 64-1:2x4 SP No.2
OTHERS 2x3 SPF No.2 *Except* 32-31:2x4 SP 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 16-48, 15-49, 17-47

REACTIONS (size) 35=36-2-3, 36=36-2-3, 37=36-2-3, 38=36-2-3, 39=36-2-3, 40=36-2-3, 41=36-2-3, 42=36-2-3, 43=36-2-3, 44=36-2-3, 46=36-2-3, 47=36-2-3, 48=36-2-3, 49=36-2-3, 50=36-2-3, 51=36-2-3, 53=36-2-3, 54=36-2-3, 55=36-2-3, 56=36-2-3, 57=36-2-3, 58=36-2-3, 59=36-2-3, 60=36-2-3, 61=36-2-3, 62=36-2-3, 63=36-2-3, 64=36-2-3, 65= Mechanical
Max Horiz 64=-140 (LC 17)
Max Uplift 35=-146 (LC 13), 36=-15 (LC 21), 37=-46 (LC 13), 38=-31 (LC 13), 39=-34 (LC 13), 40=-33 (LC 13), 41=-33 (LC 13), 42=-33 (LC 13), 43=-33 (LC 13), 44=-34 (LC 13), 46=-42 (LC 13), 47=-6 (LC 13), 49=-11 (LC 12), 50=-40 (LC 12), 51=-34 (LC 12), 53=-33 (LC 12), 54=-33 (LC 12), 55=-33 (LC 12), 56=-33 (LC 12), 57=-33 (LC 12), 58=-33 (LC 12), 59=-32 (LC 12), 60=-35 (LC 12), 61=-31 (LC 12), 62=-27 (LC 12), 63=-262 (LC 12), 64=-143 (LC 17), 65=-15 (LC 12)
Max Grav 35=367 (LC 26), 36=30 (LC 13), 37=145 (LC 26), 38=110 (LC 1), 39=118 (LC 26), 40=116 (LC 1), 41=116 (LC 26), 42=116 (LC 26), 43=116 (LC 1), 44=116 (LC 1), 46=119 (LC 26), 47=114 (LC 1), 48=153 (LC 13), 49=116 (LC 25), 50=118 (LC 25), 51=116 (LC 1), 53=116 (LC 1), 54=116 (LC 25), 55=116 (LC 25), 56=116 (LC 1), 57=116 (LC 1), 58=116 (LC 25), 59=119 (LC 1), 60=116 (LC 25), 61=113 (LC 1), 62=125 (LC 1), 63=150 (LC 17), 64=277 (LC 12), 65=144 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-171/94, 2-3=-130/87, 3-4=-117/101, 4-6=-104/128, 6-7=-77/143, 7-8=-78/165, 8-9=-87/192, 9-10=-97/220, 10-11=-106/247, 11-12=-115/274, 12-13=-125/301, 13-14=-134/328, 14-15=-146/360, 15-16=-149/372, 16-17=-149/372, 17-18=-146/360, 18-19=-134/328, 19-20=-125/301, 20-21=-115/274, 21-22=-106/247, 22-23=-97/220, 23-24=-87/192, 24-25=-78/165, 25-26=-68/138, 26-28=-83/110, 28-29=-68/51, 29-30=-88/38, 30-31=-116/26, 31-32=-26/52, 1-64=-149/79
BOT CHORD 63-64=-15/89, 62-63=-15/89, 61-62=-15/89, 60-61=-15/89, 59-60=-15/88, 58-59=-15/88, 57-58=-15/88, 56-57=-15/88, 55-56=-15/88, 54-55=-15/88, 53-54=-15/88, 51-53=-15/88, 50-51=-15/88, 49-50=-15/88, 48-49=-15/88, 47-48=-15/88, 46-47=-15/88, 44-46=-15/88, 43-44=-15/88, 42-43=-15/88, 41-42=-15/88, 40-41=-15/88, 39-40=-15/88, 38-39=-15/88, 37-38=-15/88, 36-37=-15/88, 35-36=-15/88, 34-35=-15/88, 33-34=-15/88, 32-33=-17/87
WEBS 16-48=-193/51, 15-49=-91/27, 14-50=-92/67, 13-51=-90/56, 12-53=-90/55, 11-54=-90/55, 10-55=-90/55, 9-56=-90/55, 8-57=-90/55, 7-58=-90/55, 6-59=-93/57, 5-60=-90/81, 4-61=-89/83, 3-62=-94/92, 2-63=-64/136, 17-47=-88/21, 18-46=-93/67, 19-44=-90/56, 20-43=-90/55, 21-42=-90/55, 22-41=-90/55, 23-40=-90/55, 24-39=-90/55, 25-38=-90/55, 26-37=-98/58, 27-36=-40/33, 28-35=-197/165, 29-34=-43/57, 30-33=-30/62, 31-65=-153/33

NOTES

July 12,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

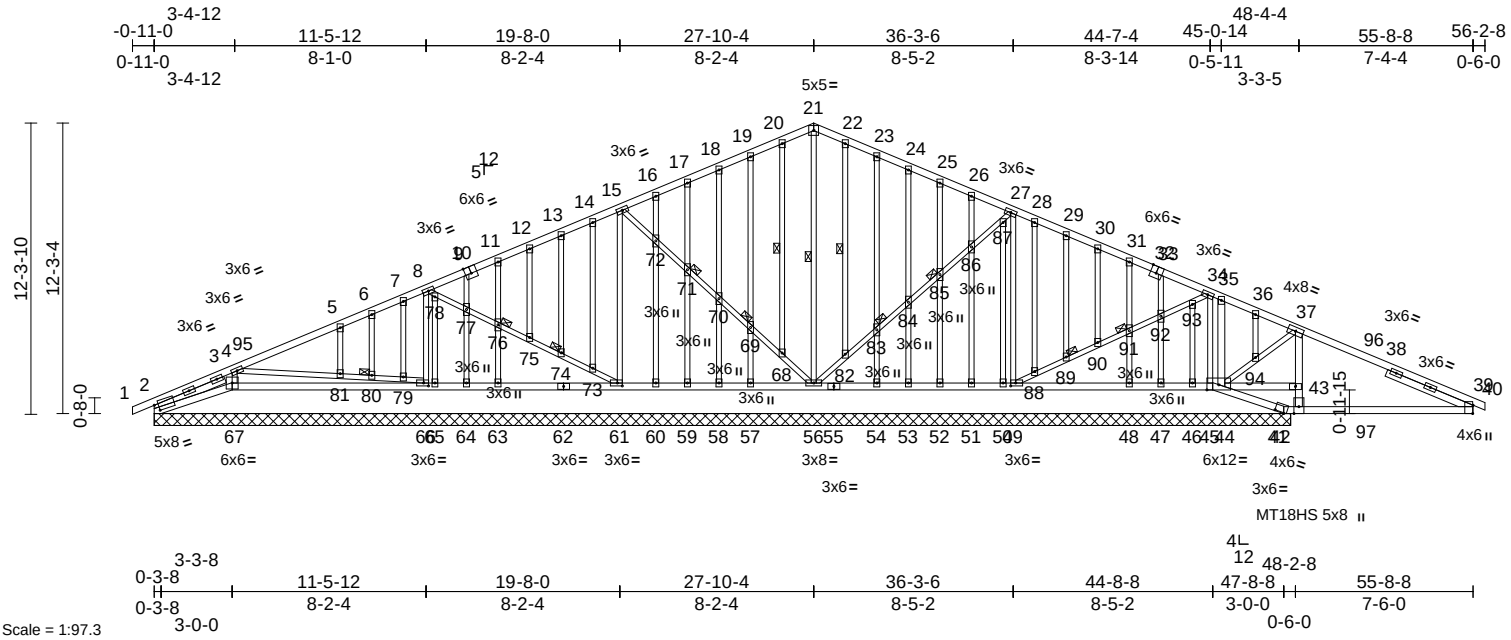
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P236379-01	A13	Common Supported Gable	1	1	I59477264 Job Reference (optional)

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 5-1-12, Exterior(2N) 5-1-12 to 19-3-15, Corner(3R) 19-3-15 to 24-3-15, Exterior(2N) 24-3-15 to 39-0-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 64 SP No.2 crushing capacity of 565 psi, Joint 65 SPF No.3 crushing capacity of 425 psi.
9) Refer to girder(s) for truss to truss connections.
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	Roof - Osage Lot 56
P236379-01	A14	Roof Special Structural Gable	1	1	I59477265
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:41 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.3

Plate Offsets (X, Y): [2:0-2-1,0-3-6], [10:0-3-0,Edge], [32:0-3-0,Edge], [39:0-4-3,Edge], [42:0-4-13,0-0-7], [49:0-2-8,0-1-8], [61:0-2-8,0-1-8], [66:0-2-8,0-1-8]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	n/a	-	n/a	999	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.49	Horz(CT)	0.02	42	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 401 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 32-40:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 67-62:2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-2-13, Right 2x4 SP No.2 -- 3-11-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 2-67,66-67
5-5-7 oc bracing: 42-44
5-8-7 oc bracing: 41-42.
WEBS 1 Row at midpt 21-56, 20-68, 22-82
JOINTS 1 Brace at Jt(s): 69, 71, 74, 76, 80, 83, 85, 89, 91

REACTIONS (size) 2=48-0-0, 42=48-0-0, 44=48-0-0, 45=48-0-0, 46=48-0-0, 47=48-0-0, 48=48-0-0, 49=48-0-0, 50=48-0-0, 51=48-0-0, 52=48-0-0, 53=48-0-0, 54=48-0-0, 56=48-0-0, 57=48-0-0, 58=48-0-0, 59=48-0-0, 60=48-0-0, 61=48-0-0, 63=48-0-0, 64=48-0-0, 65=48-0-0, 66=48-0-0, 67=48-0-0
Max Horiz 2=215 (LC 12)
Max Uplift 2=-101 (LC 13), 42=-200 (LC 9), 44=-7 (LC 13), 45=-41 (LC 9), 47=-19 (LC 13), 48=-108 (LC 13), 50=-143 (LC 3), 52=-36 (LC 13), 53=-34 (LC 13), 54=-49 (LC 13), 56=-33 (LC 12), 57=-51 (LC 12), 58=-35 (LC 12), 59=-27 (LC 12), 60=-16 (LC 12), 61=-64 (LC 12), 63=-132 (LC 12), 64=-240 (LC 25), 65=-745 (LC 3), 67=-167 (LC 12)
Max Grav 2=165 (LC 25), 42=873 (LC 26), 44=327 (LC 3), 45=138 (LC 26), 46=60 (LC 3), 47=22 (LC 1), 48=404 (LC 26), 49=279 (LC 3), 50=-16 (LC 26), 51=66 (LC 3), 52=118 (LC 1), 53=91 (LC 26), 54=213 (LC 26), 56=377 (LC 1), 57=207 (LC 25), 58=91 (LC 25), 59=127 (LC 1), 60=24 (LC 25), 61=343 (LC 25), 63=457 (LC 25), 64=121 (LC 12), 65=-241 (LC 13), 66=1087 (LC 3), 67=500 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3/0, 2-4=-242/162, 4-5=-209/106, 5-6=-182/133, 6-7=-167/156, 7-8=-166/186, 8-9=-169/111, 9-11=-206/190, 11-12=-132/143, 12-13=-119/161, 13-14=-107/184, 14-15=-101/211, 15-16=-148/197, 16-17=-138/223, 17-18=-110/228, 18-19=-84/236, 19-20=-50/225, 20-21=-48/247, 21-22=-48/241, 22-23=-50/216, 23-24=-84/218, 24-25=-110/215, 25-26=-136/214, 26-27=-154/192, 27-28=-316/339, 28-29=-306/298, 29-30=-314/269, 30-31=-330/251, 31-33=-391/307, 33-34=-426/305, 34-35=-999/781, 35-36=-1098/877, 36-37=-1111/833, 37-39=-881/796, 39-40=-10/0

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER
July 12,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P236374-01	A14	Roof Special Structural Gable	1	1	I59477265 Job Reference (optional)

BOT CHORD 2-67=-168/220, 66-67=-197/233, 65-66=-128/202, 64-65=-128/202, 63-64=-128/202, 61-63=-128/202, 60-61=-188/268, 59-60=-188/268, 58-59=-188/268, 57-58=-188/268, 56-57=-188/268, 54-56=-252/321, 53-54=-252/321, 52-53=-252/321, 51-52=-252/321, 50-51=-252/321, 49-50=-252/321, 48-49=-761/887, 47-48=-761/887, 46-47=-761/887, 45-46=-761/887, 44-45=-817/929, 42-44=-985/1343, 41-42=-903/1240, 39-41=-620/861, 35-44=-236/185, 41-43=-360/153, 37-43=-341/176, 43-44=-531/220

WEBS 4-67=-342/295, 4-81=-261/185, 80-81=-263/186, 79-80=-265/187, 66-79=-263/186, 8-66=-406/165, 8-78=-104/150, 77-78=-73/130, 76-77=-86/139, 75-76=-67/123, 74-75=-74/130, 73-74=-80/137, 61-73=-81/138, 15-61=-219/70, 15-72=-100/150, 71-72=-96/147, 70-71=-98/148, 69-70=-104/151, 68-69=-85/142, 56-68=-108/155, 21-56=-290/102, 56-82=-96/109, 82-83=-106/122, 83-84=-95/108, 84-85=-99/113, 85-86=-97/110, 86-87=-109/122, 27-87=-74/98, 27-49=-355/263, 49-88=-640/592, 88-89=-623/576, 89-90=-625/582, 90-91=-635/597, 91-92=-612/562, 92-93=-629/586, 34-93=-638/591, 34-45=-397/395, 44-94=-169/304, 37-94=-162/288, 20-68=-35/19, 19-69=-137/78, 57-69=-164/92, 18-70=-83/52, 58-70=-75/48, 17-71=-93/60, 59-71=-90/58, 16-72=-24/9, 60-72=-30/13, 14-73=-1/1, 13-74=-24/17, 12-75=-28/16, 11-76=-293/176, 63-76=-360/214, 9-77=-115/192, 64-77=-136/238, 65-78=-74/40, 7-79=-14/29, 6-80=-34/22, 5-81=-35/20, 22-82=-31/15, 23-83=-140/82, 54-83=-171/98, 24-84=-83/52, 53-84=-71/47, 25-85=-87/53, 52-85=-92/56, 26-86=-46/25, 51-86=-22/17, 50-87=-71/51, 28-88=-41/37, 29-89=-13/13, 30-90=-36/23, 31-91=-236/144, 48-91=-318/199, 33-92=-86/69, 47-92=-30/27, 46-93=-19/14, 36-94=-11/25

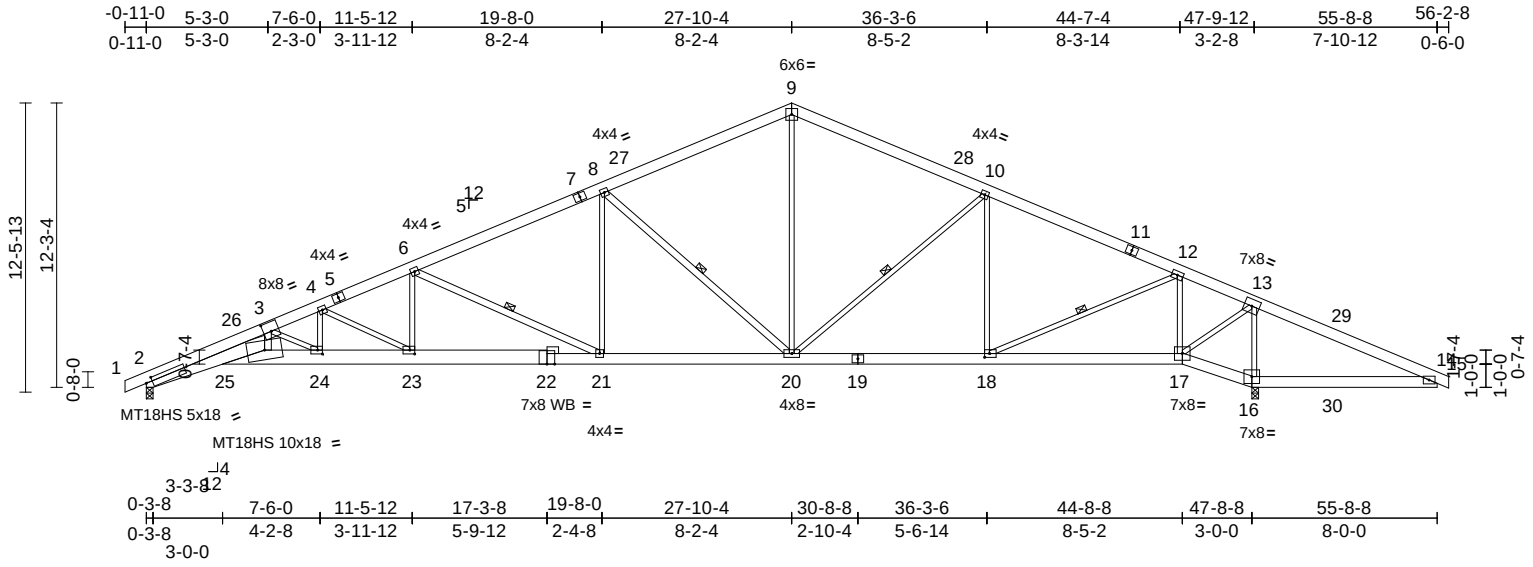
NOTES

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 27-10-4, Corner(3R) 27-10-4 to 32-10-4, Exterior(2N) 32-10-4 to 56-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 3x4 MT20 unless otherwise indicated.
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) N/A
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	Roof - Osage Lot 56
P236379-01	A15	Roof Special	2	1	I59477266
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 E Jun 15 2023 Print: 8.630 E Jun 15 2023 MiTek Industries, Inc. Wed Jul 12 13:30:53 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-MtIn9IaDd97K?3MrRP6RO2s6WPMKgT71FRYrqoyyoEX



Scale = 1:99.4

Plate Offsets (X, Y): [2:0-3-5,0-2-0], [3:0-4-0,0-4-12], [18:0-2-8,0-2-0], [23:0-2-8,0-2-0], [24:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.48	23	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.86	21-23	>660	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.91	Horz(CT)	0.41	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 335 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 5-1:2x6 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 2-25,25-22:2x8 SP 2400F 2.0E, 16-14:2x6 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 21-6,20-8,3-25:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 6-21, 8-20, 10-20, 12-18

REACTIONS (lb/size) 2=2149/0-3-8, 16=2961/0-3-8
Max Horiz 2=222 (LC 16)
Max Uplift 2=-357 (LC 12), 16=-432 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-26=-10173/1823, 3-26=-10054/1828, 3-4=-6113/1047, 4-5=-4969/813, 5-6=-4872/828, 6-7=-3594/575, 7-8=-3396/596, 8-27=-2453/399, 9-27=-2333/433, 9-28=-2333/459, 10-28=-2456/424, 10-11=-2487/359, 11-12=-2589/331, 12-13=-1010/188, 13-29=-764/937, 14-29=-782/817
BOT CHORD 2-25=-1877/9464, 24-25=-1302/6405, 23-24=-1081/5773, 22-23=-807/4556, 21-22=-807/4556, 20-21=-470/3225, 19-20=-158/2295, 18-19=-158/2295, 17-18=-72/921, 16-17=-886/840, 16-30=-748/759, 14-30=-748/759
WEBS 6-23=-56/747, 6-21=-1479/375, 8-21=-62/789, 8-20=-1442/413, 9-20=-174/1265, 10-20=-348/214, 10-18=-457/316, 12-18=-497/1512, 12-17=-1560/510, 13-17=-201/2170, 13-16=-2495/430, 4-23=-1397/315, 4-24=-116/580, 3-25=-679/3690, 3-24=-767/260

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 56-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 4x6 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) 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.

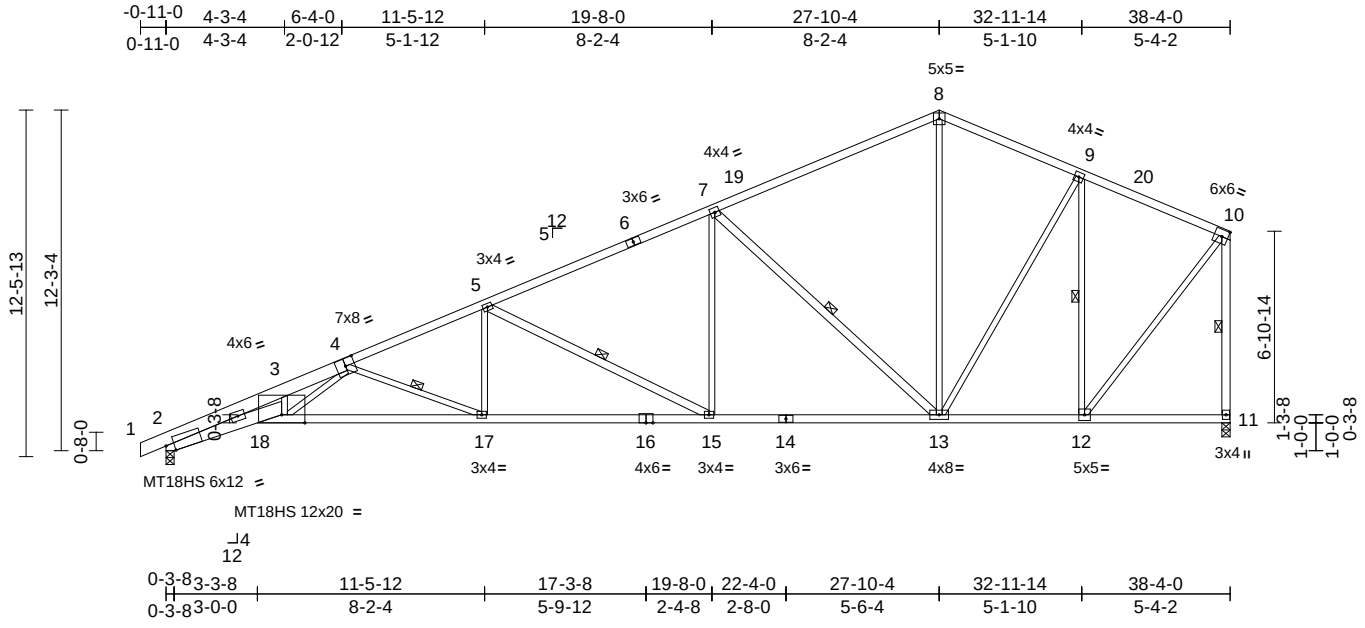
LOAD CASE(S) Standard

July 12,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P236379-01	A16	Roof Special	3	1	I59477267

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:43 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:83

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.43	17-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.83	17-18	>547	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.34	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 218 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP 1650F 1.5E *Except* 8-10:2x4 SP No.2, 1-4:2x6 SP 2400F 2.0E

BOT CHORD 2x6 SP 2400F 2.0E *Except* 18-16:2x4 SP 2400F 2.0E, 14-11:2x4 SP No.2, 16-14:2x4 SP 1650F 1.5E

WEBS 2x3 SPF No.2 *Except* 11-10,15-5,13-7:2x4 SP No.2

BRACING

TOP CHORD Sheathed or 2-2-1 oc purlins, except end verticals.

BOT CHORD Rigid ceiling directly applied or 7-3-1 oc bracing.

WEBS 1 Row at midpt 10-11, 4-17, 5-15, 7-13, 9-12

REACTIONS (size) 2=0-3-8, 11=0-3-8
Max Horiz 2=406 (LC 12)
Max Uplift 2=-295 (LC 12), 11=-236 (LC 12)
Max Grav 2=1787 (LC 1), 11=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/11, 2-3=-8611/1845, 3-5=-6535/1483, 5-7=-2512/441, 7-8=-1420/284, 8-9=-1365/314, 9-10=-1028/191, 10-11=-1661/290

BOT CHORD 2-18=-2080/7952, 17-18=-1312/4923, 15-17=-831/3377, 13-15=-507/2226, 12-13=-133/893, 11-12=-3/11

WEBS 10-12=-215/1433, 5-17=-52/648, 4-17=-1655/514, 5-15=-1290/363, 7-15=-62/744, 7-13=-1403/412, 8-13=-75/572, 9-13=-141/649, 9-12=-1034/231, 3-18=-441/2308, 4-18=-487/1570

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-4, Interior (1) 4-3-4 to 27-10-4, Exterior(2R) 27-10-4 to 34-11-2, Interior (1) 34-11-2 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 11 SP No.2 crushing capacity of 565 psi.
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) 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
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P2303794-01	A17	Hip	1	1	Job Reference (optional)	I59477268

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:44 Page: 1
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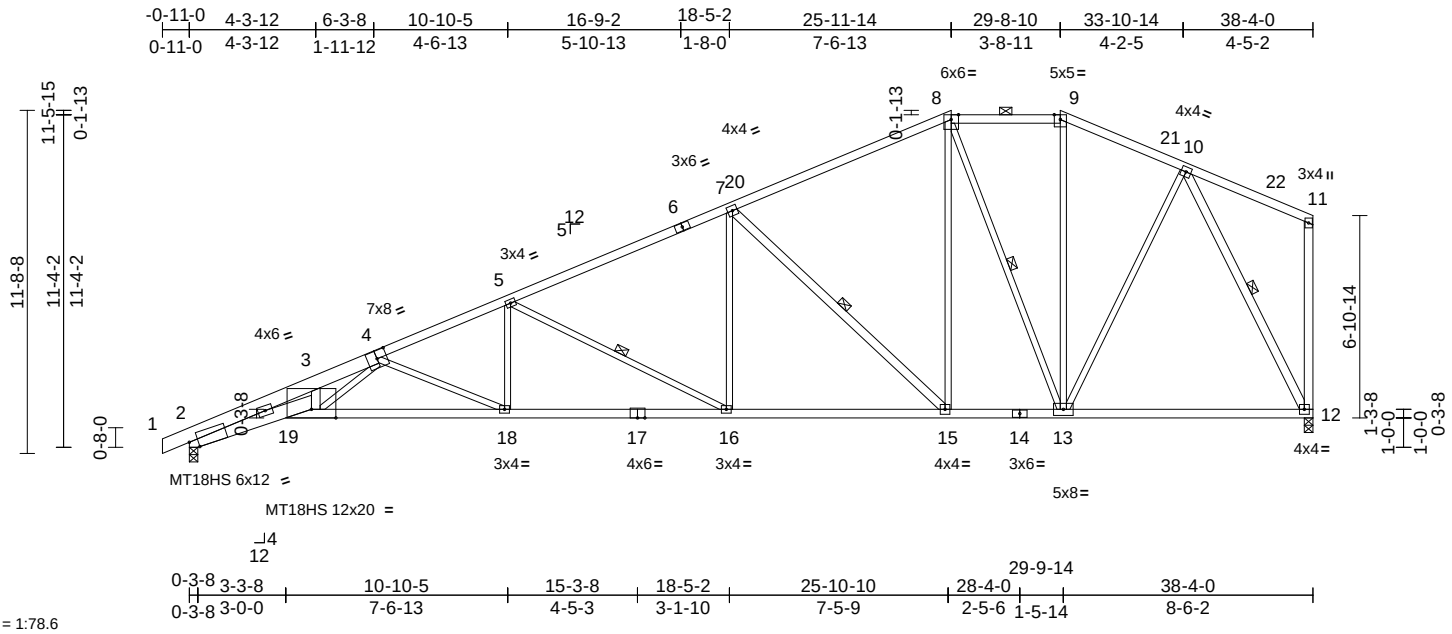

Scale = 1:78.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.43	18-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.82	18-19	>560	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.35	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 225 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x6 SP 2400F 2.0E, 6-8:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E *Except* 2-19:2x6 SP 2400F 2.0E, 19-17:2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 15-7,12-11,12-10,3-19:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-3-13 max.): 8-9.
BOT CHORD Rigid ceiling directly applied or 7-4-3 oc bracing.
WEBS 1 Row at midpt 5-16, 7-15, 8-13, 10-12

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=391 (LC 12)
Max Uplift 2=-290 (LC 12), 12=-207 (LC 12)
Max Grav 2=1787 (LC 1), 12=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8643/1801, 3-5=-6439/1429, 5-7=-2667/451, 7-8=-1655/325, 8-9=-1120/280, 9-10=-1271/285, 10-11=-61/61, 11-12=-130/62
BOT CHORD 2-19=-2025/7986, 18-19=-1266/4936, 16-18=-824/3468, 15-16=-518/2377, 13-15=-239/1417, 12-13=-130/766
WEBS 5-18=-62/654, 5-16=-1227/344, 7-16=-62/714, 7-15=-1306/381, 8-15=-205/986, 8-13=-894/246, 9-13=-60/248, 10-12=-1684/294, 10-13=-94/825, 4-18=-1594/479, 3-19=-447/2423, 4-19=-466/1466

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-12, Interior (1) 4-3-12 to 25-11-14, Exterior(2E) 25-11-14 to 29-8-10, Exterior(2R) 29-8-10 to 36-9-7, Interior (1) 36-9-7 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 12 SP 1650F 1.5E crushing capacity of 565 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P2363794-01	A18	Hip	1	1	Job Reference (optional)	I59477269

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:44 Page: 1
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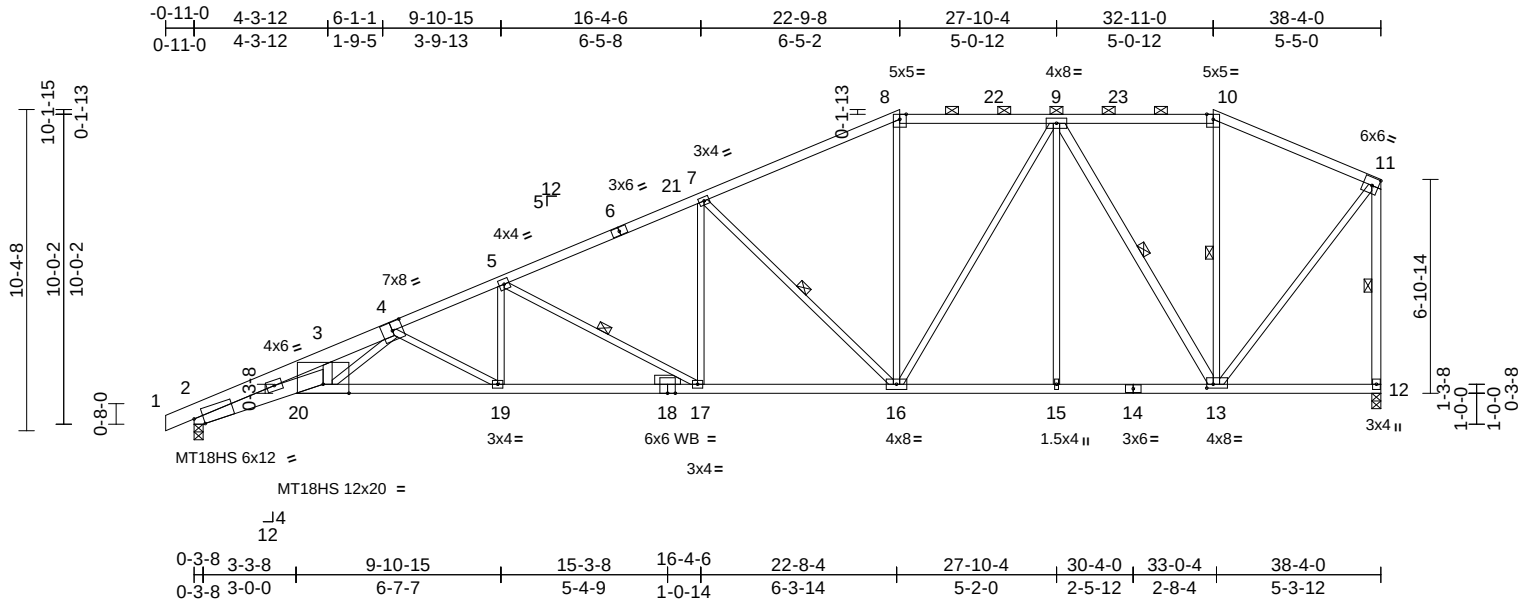

Scale = 1:74.4

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

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)	-0.41	19-20	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.77	19-20	>594	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.34	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 219 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 2-20:2x6 SP 2400F 2.0E, 20-18:2x4 SP 2400F 2.0E
WEBS 2x3 SPF No.2 *Except* 13-9,12-11,3-20:2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-5 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-15 max.): 8-10.
BOT CHORD Rigid ceiling directly applied or 6-7-8 oc bracing.
WEBS 1 Row at midpt 9-13, 10-13, 11-12, 7-16, 5-17

REACTIONS (size) 2=0-3-8, 12=0-3-8
Max Horiz 2=366 (LC 12)
Max Uplift 2=-275 (LC 12), 12=-221 (LC 8)
Max Grav 2=1787 (LC 1), 12=1711 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/11, 2-3=-8592/1676, 3-5=-6413/1344, 5-7=-2925/454, 7-8=-2051/374, 8-9=-1810/380, 9-10=-890/224, 10-11=-1023/206, 11-12=-1663/317
BOT CHORD 2-20=-1883/7935, 19-20=-1158/4900, 17-19=-798/3620, 16-17=-525/2627, 15-16=-245/1499, 13-15=-245/1499, 12-13=-4/13
WEBS 8-16=-8/404, 9-16=-188/625, 9-15=0/191, 9-13=-1232/205, 10-13=-66/147, 11-13=-221/1427, 7-16=-1139/337, 5-19=-80/688, 5-17=-1129/310, 7-17=-69/655, 4-19=-1454/408, 3-20=-400/2393, 4-20=-466/1476

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-3-12, Interior (1) 4-3-12 to 22-9-8, Exterior(2R) 22-9-8 to 29-10-6, Interior (1) 29-10-6 to 32-11-0, Exterior(2E) 32-11-0 to 38-2-4 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 2 SP 2400F 2.0E crushing capacity of 805 psi, Joint 12 SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P23637901	A19	Hip Girder	1	2	Job Reference (optional)	I59477270

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:45 Page: 1
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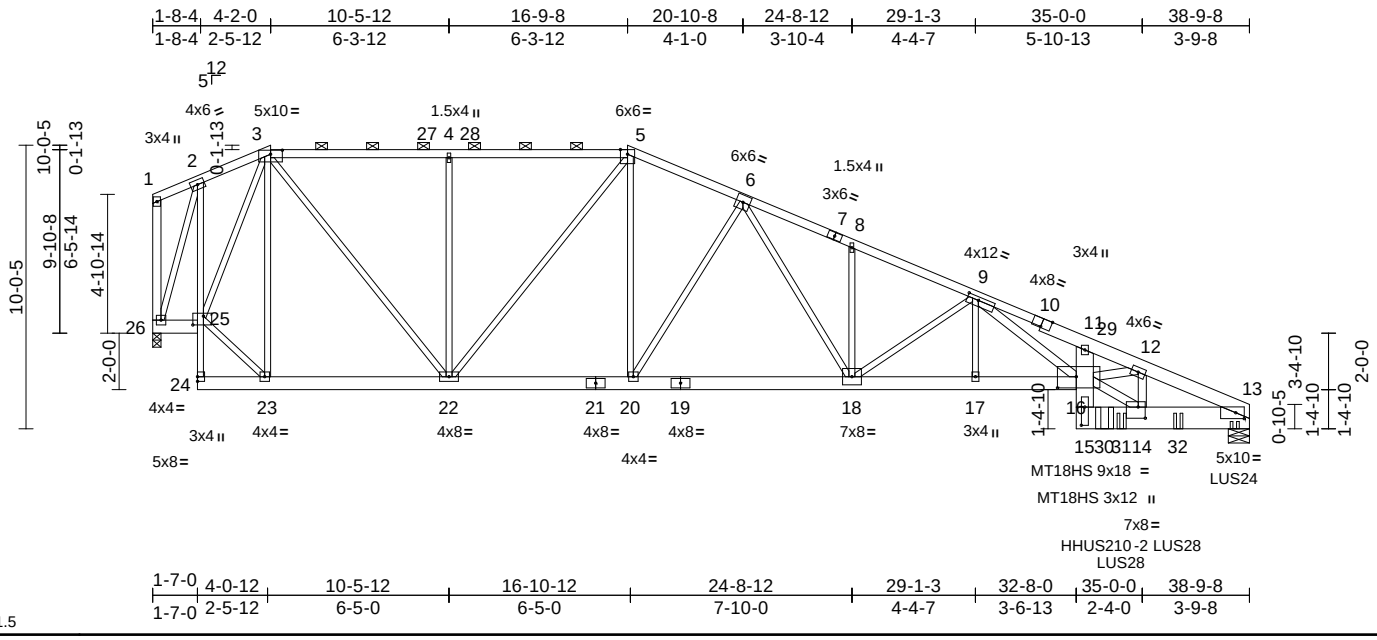

Scale = 1:81.5

Plate Offsets (X, Y): [3:0-5-0,0-1-11], [9:0-4-14,0-1-8], [10:0-4-0,Edge], [13:0-3-10,0-2-8], [14:0-3-0,0-4-12], [15:0-7-12,0-1-8], [16:0-8-0,0-4-12], [25:0-4-8,0-3-12]

Loading	(psf)	Spacing	1-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.29	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.52	16-17	>884	180	MT18HS	113/123
BCLL	0.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.16	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 505 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 10-13:2x6 SP 2400F 2.0E, 7-10:2x4 SP 2400F 2.0E
BOT CHORD 2x6 SPF No.2 *Except* 2-24:2x3 SPF No.2, 15-13:1 1/2" x 9 1/4" 2.0E Microllam® LVL
WEBS 2x3 SPF No.2 *Except* 26-1,12-14,14-16,16-12:2x4 SP No.2, 16-9:2x4 SP 1650F 1.5E
OTHERS 2x8 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-4 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 24-25.

REACTIONS (size) 13=0-9-0, 26=0-3-8
Max Horiz 26=-180 (LC 13)
Max Uplift 13=-1355 (LC 13), 26=-263 (LC 9)
Max Grav 13=7264 (LC 1), 26=1623 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-42/12, 2-3=-529/108, 3-4=-1790/374, 4-5=-1791/374, 5-6=-2799/540, 6-8=-5761/1096, 8-9=-5790/1062, 9-11=-18839/3606, 11-12=-16525/3147, 12-13=-12485/2377, 1-26=-66/16
BOT CHORD 25-26=0/472, 24-25=-13/2, 2-25=-197/1360, 23-24=-3/34, 22-23=-42/767, 20-22=-343/2551, 18-20=-569/3655, 17-18=-1614/9029, 16-17=-1614/9029, 14-15=-774/4067, 13-14=-2086/11061
WEBS 23-25=-53/1015, 3-25=-707/231, 3-23=-630/66, 3-22=-297/1681, 4-22=-290/117, 5-22=-1254/258, 5-20=-354/1870, 2-26=-1628/259, 6-20=-2083/463, 15-16=-1052/5390, 11-16=-84/519, 8-18=-91/94, 6-18=-648/3254, 9-18=-4578/924, 9-17=0/65, 9-16=-2190/11179, 12-14=-2477/485, 14-16=-1484/7906, 12-16=-726/3958

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc, 2x10 - 5 rows staggered at 0-4-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-2-0, Exterior(2R) 4-2-0 to 11-2-14, Interior (1) 11-2-14 to 16-9-8, Exterior(2R) 16-9-8 to 23-10-6, Interior (1) 23-10-6 to 38-5-8 zone; cantilever left and right exposed ; end vertical right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Bearings are assumed to be: Joint 26 SPF No.2 crushing capacity of 425 psi, Joint 13 Trus Joist® LVL 2.0 E crushing capacity of 750 psi.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Use Simpson Strong-Tie HHUS210-2 (30-10d Girder, 10-10d Truss) or equivalent at 33-8-0 from the left end to connect truss(es) to front face of bottom chord.
12) Use Simpson Strong-Tie LUS28 (6-10d Girder, 3-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 34-3-4 from the left end to 36-3-4 to connect truss(es) to front face of bottom chord.
13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 38-3-4 from the left end to connect truss(es) to front face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.

July 12,2023

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

15) N/A

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-3=-35, 3-5=-35, 5-13=-35, 25-26=-10, 16-24=-10, 13-15=-10
   Concentrated Loads (lb)
   Vert: 13=-645 (F), 30=-5236 (F), 31=-643 (F), 32=-643 (F)

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	A20	Hip	1	1	Job Reference (optional)	I59477271

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:46 Page: 1
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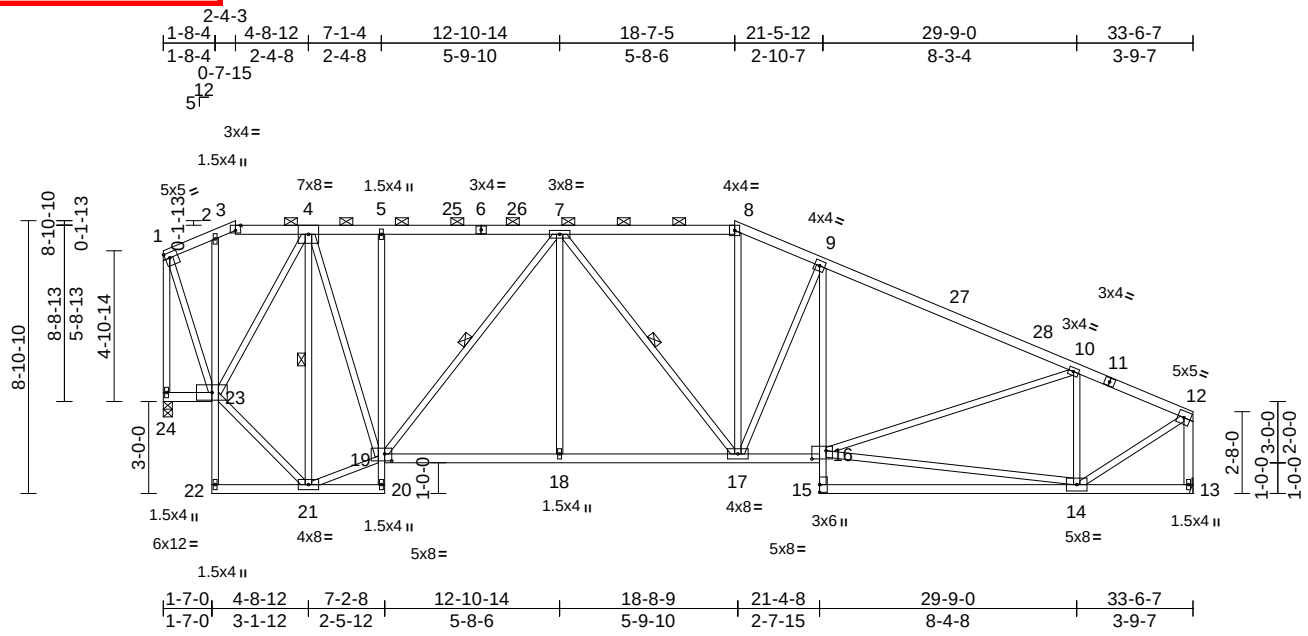


Scale = 1:75

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.15	14-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.34	14-15	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.09	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 206 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 8-11:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 2-22,20-5,9-15:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-12:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-11 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 20-21,13-14.
WEBS 1 Row at midpt 7-19, 7-17, 4-21

REACTIONS (size) 13= Mechanical, 24=0-3-8
Max Horiz 24=-201 (LC 13)
Max Uplift 13=-192 (LC 13), 24=-246 (LC 9)
Max Grav 13=1498 (LC 1), 24=1498 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-471/90, 2-3=-433/103, 3-4=-421/98, 4-5=-1125/275, 5-7=-1130/275, 7-8=-1655/347, 8-9=-1851/373, 9-10=-2149/355, 10-12=-1455/234, 12-13=-1485/192
BOT CHORD 23-24=-181/292, 22-23=0/45, 2-23=-9/83, 21-22=-1/13, 20-21=-19/19, 19-20=0/24, 5-19=-299/131, 18-19=-193/1625, 17-18=-193/1625, 16-17=-223/1878, 15-16=0/153, 9-16=0/219, 14-15=0/147, 13-14=-49/53
WEBS 7-19=-811/136, 7-18=0/254, 7-17=-157/69, 8-17=-89/490, 9-17=-547/237, 14-16=-223/1230, 10-16=-62/572, 10-14=-915/241, 12-14=-201/1606, 4-21=-899/97, 4-19=-214/1343, 21-23=-66/988, 19-21=-31/756, 4-23=-628/292, 1-24=-1456/252, 1-23=-221/1288

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 2-4-3, Exterior(2R) 2-4-3 to 9-5-1, Interior (1) 9-5-1 to 18-7-5, Exterior(2R) 18-7-5 to 25-8-2, Interior (1) 25-8-2 to 33-4-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 24 SP No.2 crushing capacity of 565 psi, Joint 13 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

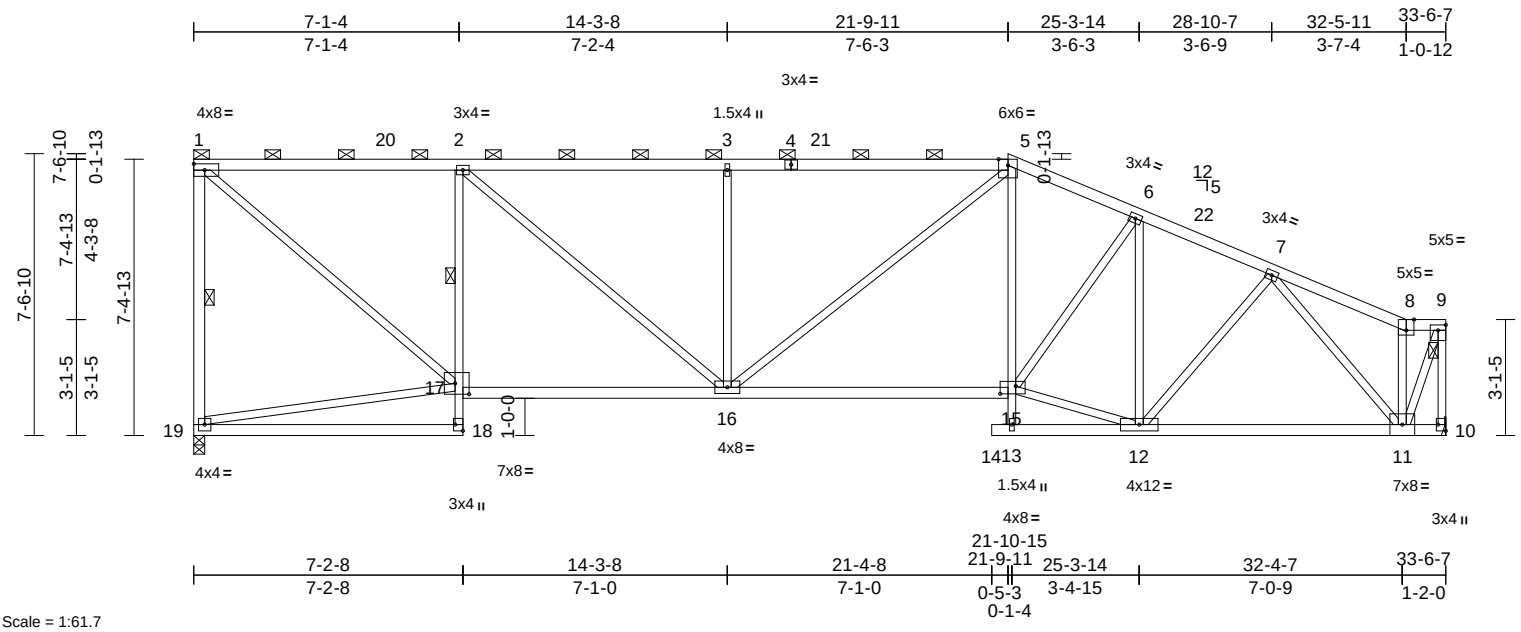
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P23037901	A21	Roof Special	1	1	I59477272 Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:47 Page: 1
ID:Ff01tfBvnU4mnDB0QsJEOiz_IVY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:61.7

Plate Offsets (X, Y): [8:0-2-8,Edge], [9:Edge,0-1-12], [10:Edge,0-2-8], [15:0-5-0,0-2-8], [17:0-4-8,0-3-8], [18: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	0.99	Vert(LL)	-0.15	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.35	15-16	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.99	Horz(CT)	0.11	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 182 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 4-5:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 18-2:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-1:2x4 SP No.2

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

REACTIONS (size) 10= Mechanical, 19=0-3-8
Max Horiz 19=-305 (LC 10)
Max Uplift 10=-197 (LC 9), 19=-306 (LC 8)
Max Grav 10=1505 (LC 1), 19=1502 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-19=-1430/325, 1-2=-1445/350, 2-3=-2081/436, 3-5=-2082/437, 5-6=-2080/388, 6-7=-1805/287, 7-8=-649/138, 8-9=-576/101, 9-10=-1521/151
BOT CHORD 18-19=-5/43, 17-18=0/141, 2-17=-1062/339, 16-17=-268/1448, 15-16=-317/1900, 13-14=0/0, 12-13=-2/12, 11-12=-250/1382, 10-11=-48/59
WEBS 17-19=-283/354, 1-17=-352/1877, 2-16=-174/833, 3-16=-569/243, 5-16=-80/402, 8-11=-377/105, 9-11=-170/1594, 7-11=-1301/241, 6-12=-675/167, 7-12=-20/371, 13-15=0/52, 5-15=-40/300, 12-15=-270/1686, 6-15=-98/537

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 21-9-11, Exterior(2R) 21-9-11 to 26-9-11, Interior (1) 26-9-11 to 33-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 19 SP No.2 crushing capacity of 565 psi, Joint 10 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

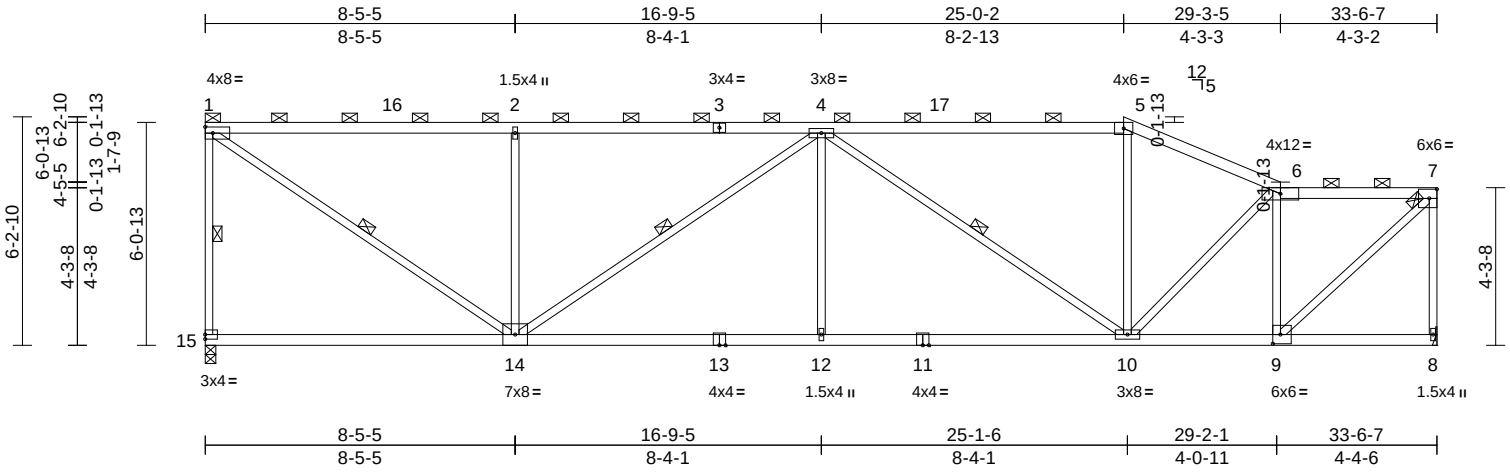
STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P230379-01	A22	Roof Special	1	1	I59477273
					Job Reference (optional)

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:47 Page: 1
ID:0?PEYEgUQ5Pu?ymPh0rLKaz_o82-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:62.7

Plate Offsets (X, Y): [9:0-2-8,0-3-0]

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	0.94	Vert(LL)	-0.15	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.33	10-12	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.78	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 158 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 3-5:2x4 SP 1650F 1.5E, 3-1:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-9 max.): 1-5, 6-7.
BOT CHORD Rigid ceiling directly applied or 8-10-5 oc bracing.
WEBS 1 Row at midpt 1-15, 4-10, 1-14, 4-14

REACTIONS (size) 8= Mechanical, 15=0-3-8
Max Horiz 15=-197 (LC 10)
Max Uplift 8=-266 (LC 9), 15=-303 (LC 8)
Max Grav 8=1500 (LC 1), 15=1500 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-1427/340, 1-2=-1726/395, 2-4=-1726/395, 4-5=-1652/340, 5-6=-1839/345, 6-7=-1389/243
BOT CHORD 14-15=-106/148, 12-14=-431/2254, 10-12=-431/2254, 9-10=-234/1355, 8-9=0/0
WEBS 5-10=0/347, 7-8=-1458/288, 6-9=-1238/271, 2-14=-637/281, 4-12=0/334, 6-10=-82/490, 4-10=-832/180, 1-14=-421/2077, 7-9=-331/1902, 4-14=-643/131

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 5-1-4, Interior (1) 5-1-4 to 25-0-2, Exterior(2E) 25-0-2 to 29-3-5, Interior (1) 29-3-5 to 33-5-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 15 SP No.2 crushing capacity of 565 psi, Joint 8 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

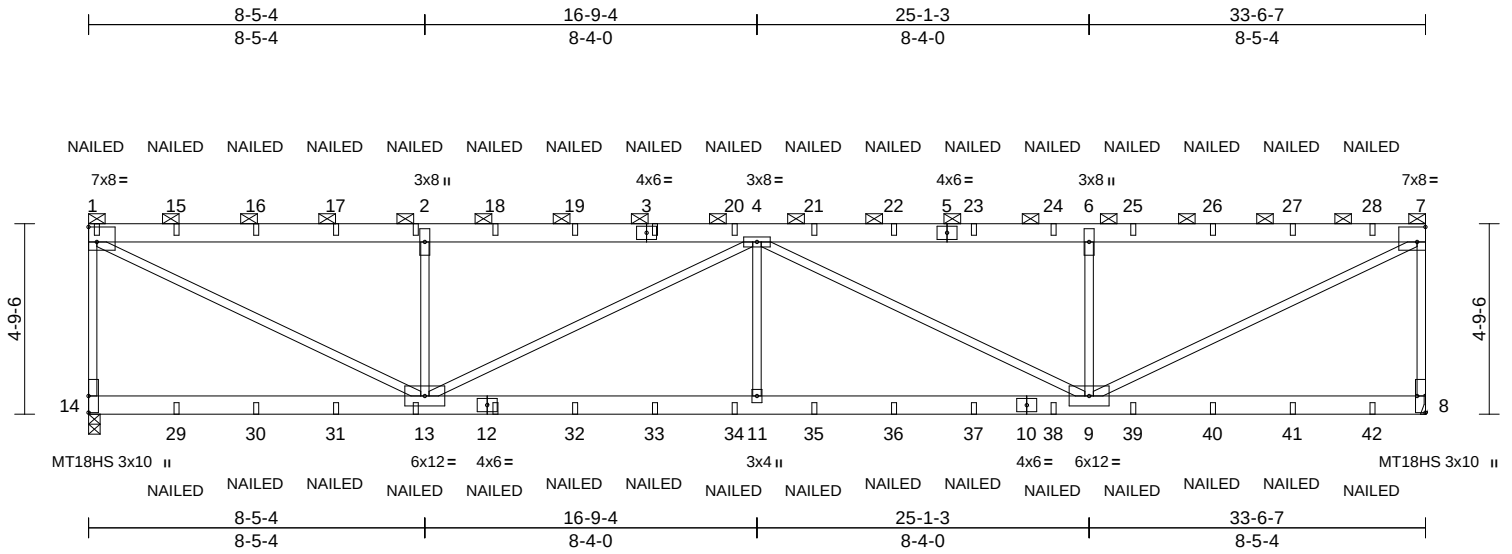
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	A23	Flat Girder	1	2	Job Reference (optional)	I59477274

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:49 Page: 1
ID:MzC7cxkdFe1A6jfNUaRW1dz_o7z-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:57.8

Plate Offsets (X, Y): [1:Edge,0-4-8], [7:Edge,0-4-8], [8: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	0.51	Vert(LL)	0.21	11	>999	240	MT18HS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.33	11-13	>999	180	MT20	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 330 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 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.

REACTIONS (size) 8= Mechanical, 14=0-3-8
Max Horiz 14=-171 (LC 8)
Max Uplift 8=-1000 (LC 9), 14=-1083 (LC 8)
Max Grav 8=2826 (LC 1), 14=2913 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-2784/1275, 1-2=-4347/1780, 2-4=-4347/1780, 4-6=-4350/1780, 6-7=-4350/1780, 7-8=-2682/1205
BOT CHORD 13-14=-227/261, 11-13=-2383/5655, 9-11=-2383/5655, 8-9=-74/110
WEBS 1-13=-1970/4858, 2-13=-1217/852, 4-13=-1474/633, 4-11=0/612, 4-9=-1471/630, 6-9=-1218/854, 7-9=-1971/4860

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x3 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 14 SPF No.2 crushing capacity of 425 psi, Joint 8 SPF No.3 crushing capacity of 425 psi.
8) Refer to girder(s) for truss to truss connections.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

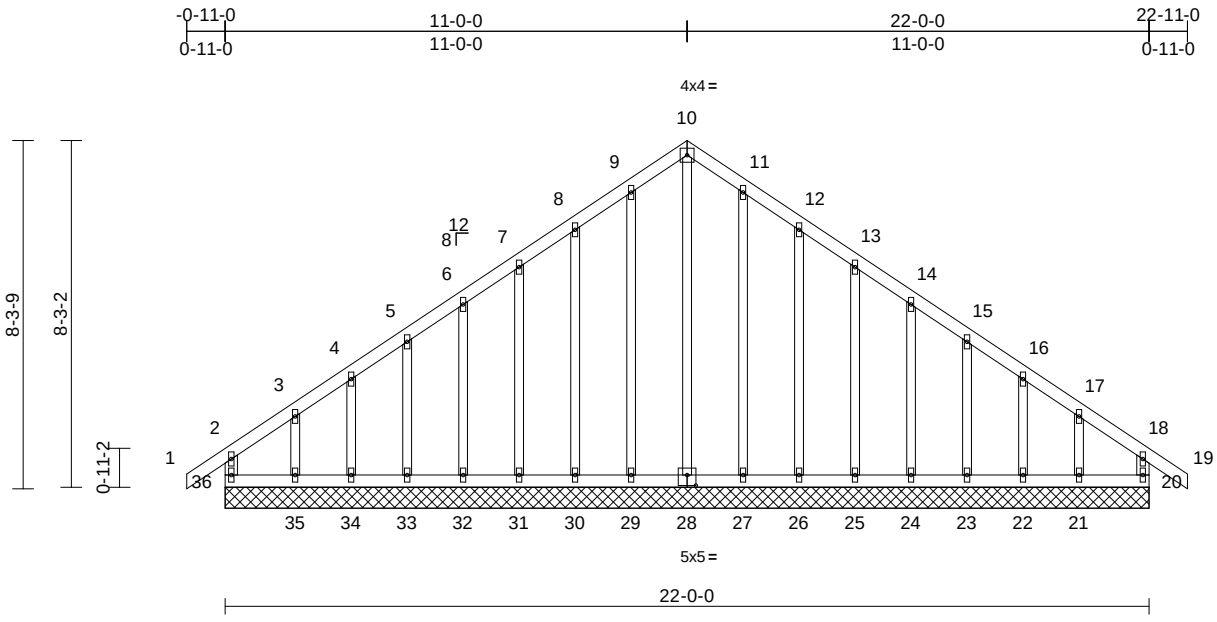
LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-70, 8-14=-20
Concentrated Loads (lb)
Vert: 1=-155 (F), 3=-124 (F), 12=-38 (F), 13=-38 (F), 2=-124 (F), 15=-124 (F), 16=-124 (F), 17=-124 (F), 18=-124 (F), 19=-124 (F), 20=-124 (F), 21=-124 (F), 22=-124 (F), 23=-124 (F), 24=-124 (F), 25=-124 (F), 26=-124 (F), 27=-124 (F), 28=-124 (F), 29=-38 (F), 30=-38 (F), 31=-38 (F), 32=-38 (F), 33=-38 (F), 34=-38 (F), 35=-38 (F), 36=-38 (F), 37=-38 (F), 38=-38 (F), 39=-38 (F), 40=-38 (F), 41=-38 (F), 42=-38 (F)

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	G1	Common Supported Gable	2	1	Job Reference (optional)	I59477275

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:50 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:54.9

Plate Offsets (X, Y): [28:0-2-8,0-3-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.00	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 131 lb	FT = 20%

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

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

REACTIONS (size) 20=22-0-0, 21=22-0-0, 22=22-0-0, 23=22-0-0, 24=22-0-0, 25=22-0-0, 26=22-0-0, 27=22-0-0, 28=22-0-0, 29=22-0-0, 30=22-0-0, 31=22-0-0, 32=22-0-0, 33=22-0-0, 34=22-0-0, 35=22-0-0, 36=22-0-0
Max Horiz 36=-235 (LC 10)
Max Uplift 20=-64 (LC 9), 21=-124 (LC 13), 22=-27 (LC 13), 23=-52 (LC 13), 24=-47 (LC 13), 25=-48 (LC 13), 26=-59 (LC 13), 27=-18 (LC 13), 29=-21 (LC 12), 30=-58 (LC 12), 31=-48 (LC 12), 32=-47 (LC 12), 33=-53 (LC 12), 34=-24 (LC 12), 35=-137 (LC 12), 36=-105 (LC 8)
Max Grav 20=179 (LC 19), 21=164 (LC 20), 22=120 (LC 26), 23=124 (LC 20), 24=121 (LC 20), 25=121 (LC 20), 26=123 (LC 20), 27=122 (LC 20), 28=192 (LC 13), 29=126 (LC 19), 30=122 (LC 19), 31=121 (LC 19), 32=121 (LC 19), 33=125 (LC 19), 34=120 (LC 25), 35=183 (LC 19), 36=212 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-36=-172/86, 1-2=0/40, 2-3=-164/152, 3-4=-117/112, 4-5=-111/115, 5-6=-98/130, 6-7=-86/154, 7-8=-106/198, 8-9=-133/248, 9-10=-145/271, 10-11=-145/271, 11-12=-133/248, 12-13=-106/198, 13-14=-82/154, 14-15=-58/111, 15-16=-68/84, 16-17=-76/74, 17-18=-118/104, 18-19=0/40, 18-20=-146/53
BOT CHORD 35-36=-103/119, 34-35=-103/119, 33-34=-103/119, 32-33=-103/119, 31-32=-103/119, 30-31=-103/119, 29-30=-103/119, 27-29=-103/119, 26-27=-103/119, 25-26=-103/119, 24-25=-103/119, 23-24=-103/119, 22-23=-103/119, 21-22=-103/119, 20-21=-103/119
WEBS 10-28=-221/83, 9-29=-100/36, 8-30=-96/77, 7-31=-95/63, 6-32=-96/63, 5-33=-96/70, 4-34=-94/73, 3-35=-123/111, 11-27=-96/33, 12-26=-97/77, 13-25=-95/63, 14-24=-95/63, 15-23=-96/70, 16-22=-94/73, 17-21=-112/104

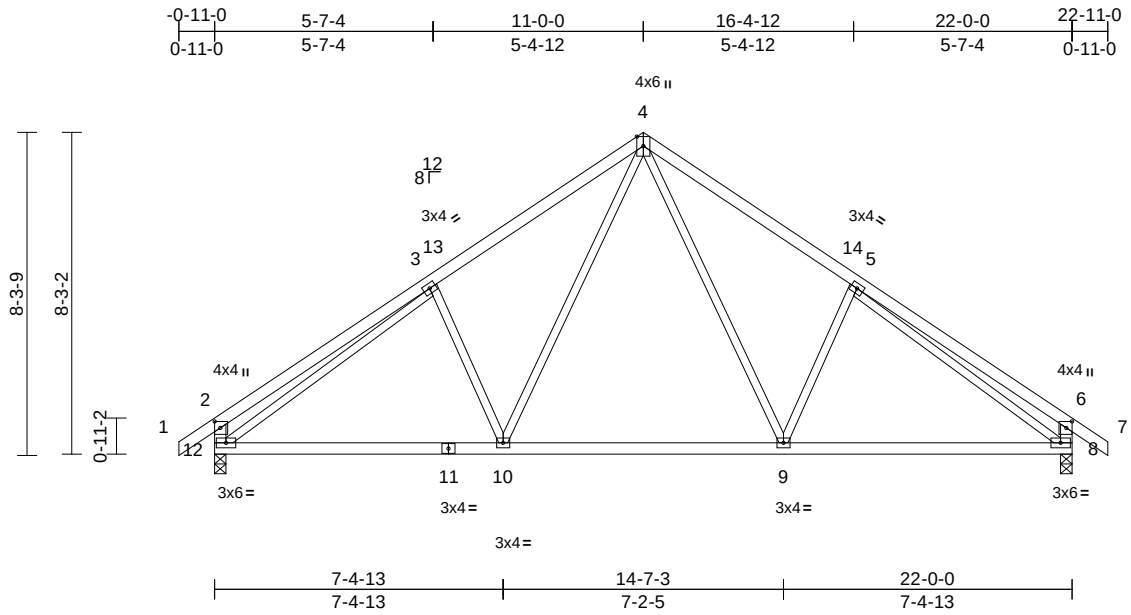
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-4-0, Exterior(2N) 4-4-0 to 11-0-0, Corner(3R) 11-0-0 to 16-0-0, Exterior(2N) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
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

July 12,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P-2303794-01	G2	Common	2	1	Job Reference (optional)	I59477276

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:50 Page: 1
ID:WcRfdZXs?bG3GRhQ2QHdPbz1SCN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.07	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.14	10-12	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 109 lb	FT = 20%

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

BRACING
TOP CHORD Sheathed or 5-0-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-243 (LC 10)
Max Uplift 8=-149 (LC 13), 12=-149 (LC 12)
Max Grav 8=1051 (LC 1), 12=1051 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-455/187, 3-4=-1129/268, 4-5=-1129/268, 5-6=-454/186, 6-7=0/41, 2-12=-456/193, 6-8=-456/193
BOT CHORD 10-12=-168/982, 9-10=-6/670, 8-9=-72/948
WEBS 4-9=-152/467, 5-9=-302/250, 4-10=-152/467, 3-10=-302/250, 3-12=-844/63, 5-8=-844/63

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 11-0-0, Exterior(2R) 11-0-0 to 16-0-0, Interior (1) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

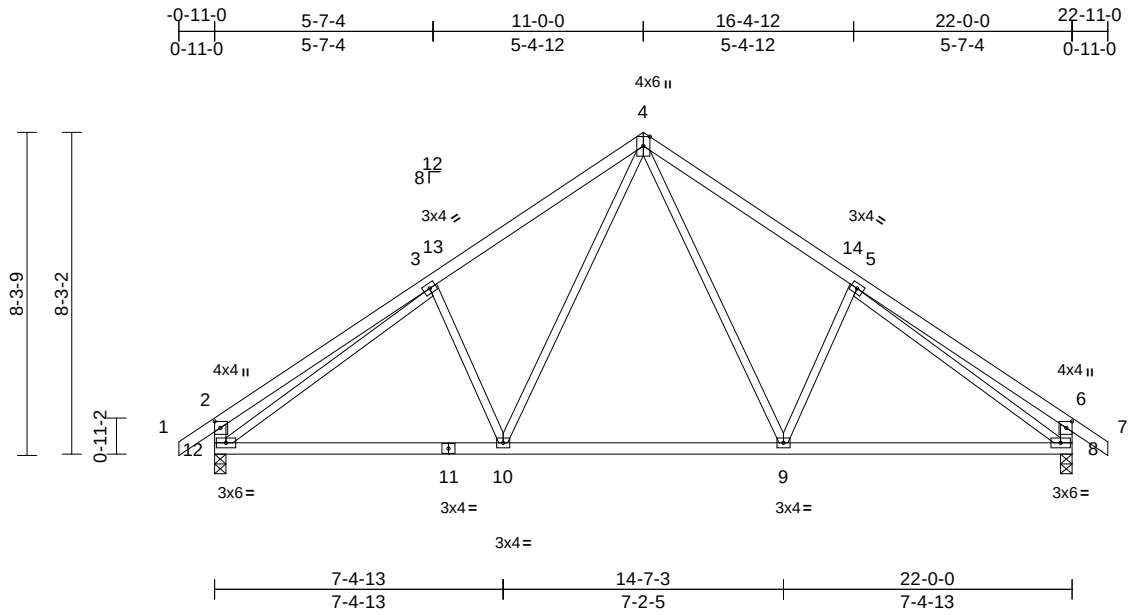
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	V3	Common	1	1	Job Reference (optional)	I59477277

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:51 Page: 1
ID:XMqbMqWzQVeI6df4r3DX6Dz_m_6-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:59.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.07	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.14	10-12	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 109 lb	FT = 20%

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

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

REACTIONS (size) 8=0-3-8, 12=0-3-8
Max Horiz 12=-243 (LC 10)
Max Uplift 8=-149 (LC 13), 12=-149 (LC 12)
Max Grav 8=1051 (LC 1), 12=1051 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-455/187, 3-4=-1129/268, 4-5=-1129/268, 5-6=-454/186, 6-7=0/41, 2-12=-456/193, 6-8=-456/193
BOT CHORD 10-12=-168/982, 9-10=-6/670, 8-9=-72/948
WEBS 4-9=-152/467, 5-9=-302/250, 4-10=-152/467, 3-10=-302/250, 3-12=-844/63, 5-8=-844/63

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 11-0-0, Exterior(2R) 11-0-0 to 16-0-0, Interior (1) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	C4	Common	8	1	Job Reference (optional)	I59477278

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:51 Page: 1
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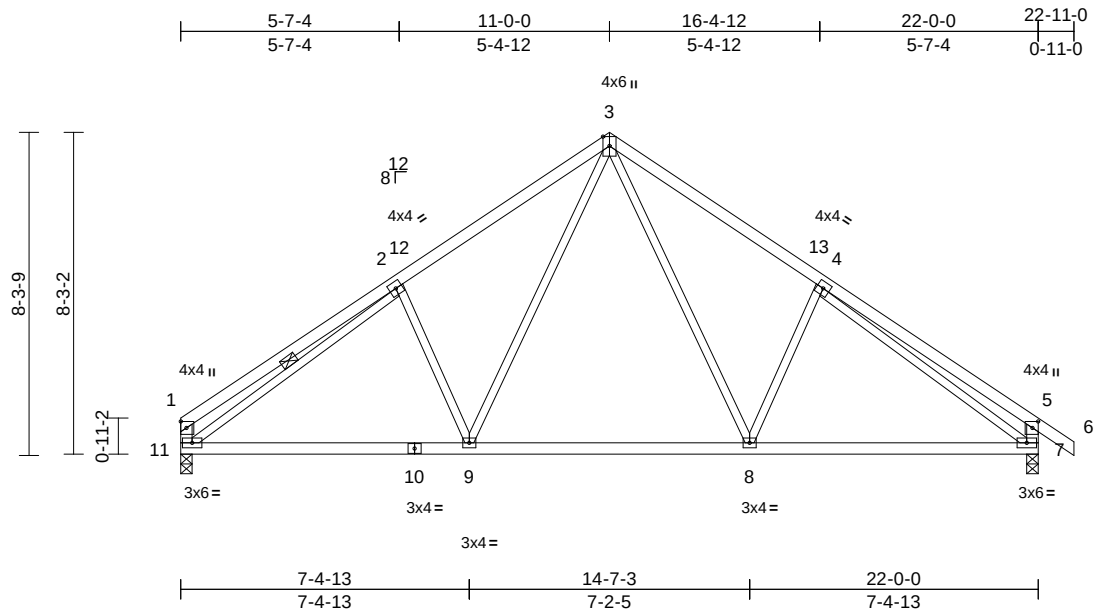

Scale = 1:59.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	-0.07	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.14	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.98	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 107 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-1,7-5:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-11

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=-236 (LC 8)
Max Uplift 7=-148 (LC 13), 11=-123 (LC 12)
Max Grav 7=1053 (LC 1), 11=975 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-388/135, 2-3=-1139/270, 3-4=-1132/269, 4-5=-454/186, 5-6=0/41, 1-11=-339/133, 5-7=-456/193
BOT CHORD 9-11=-170/993, 8-9=-6/672, 7-8=-72/950
WEBS 3-8=-153/468, 4-8=-302/250, 3-9=-155/477, 2-9=-313/254, 2-11=-916/103, 4-7=-847/64

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 11-0-0, Exterior(2R) 11-0-0 to 16-0-0, Interior (1) 16-0-0 to 22-11-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	D1	Common Structural Gable	1	1	Job Reference (optional)	I59477279

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:51 Page: 1
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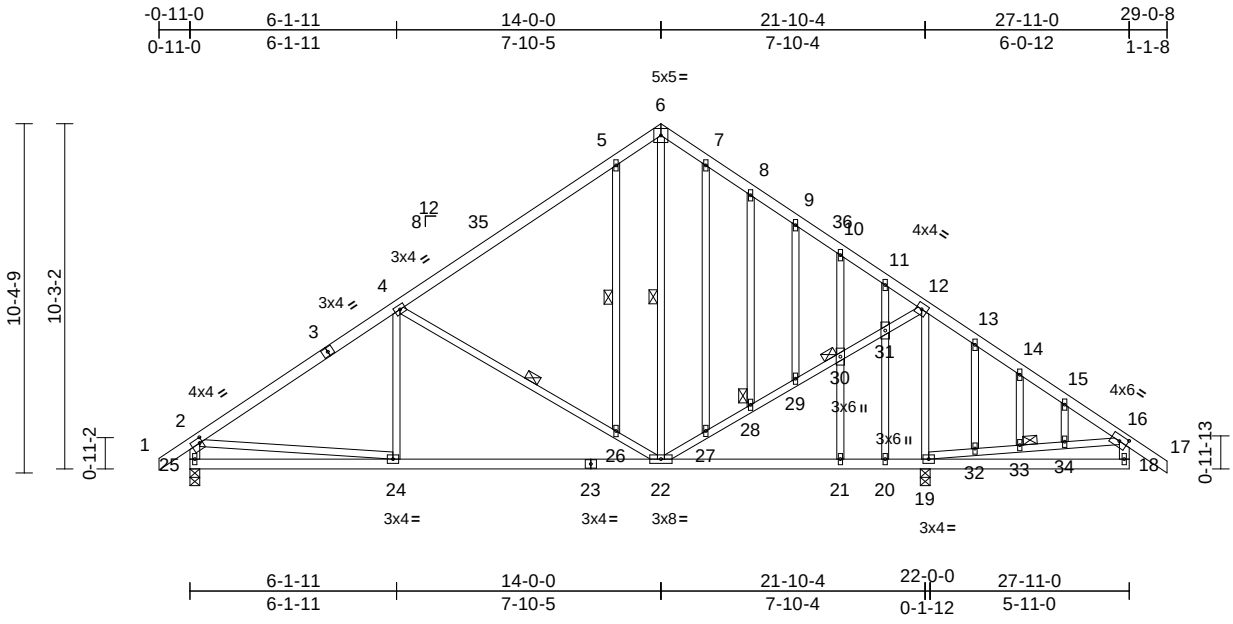

Scale = 1:68.5

Plate Offsets (X, Y): [2:0-1-0,0-1-12], [16:0-2-14,0-2-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	0.11	21-22	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.17	21-22	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.71	Horz(CT)	0.01	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 172 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 25-2,18-16:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Sheathed or 5-4-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-22, 6-22, 5-26
JOINTS 1 Brace at Jt(s): 28, 30, 33

REACTIONS (size) 19=0-3-8, 25=0-3-8
Max Horiz 25=-290 (LC 10)
Max Uplift 19=-231 (LC 13), 25=-150 (LC 12)
Max Grav 19=1643 (LC 1), 25=924 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-4=-1086/172, 4-5=-604/162, 5-6=-435/183, 6-7=-409/202, 7-8=-460/213, 8-9=-478/194, 9-10=-517/182, 10-11=-525/148, 11-12=-564/152, 12-13=-262/532, 13-14=-302/493, 14-15=-322/461, 15-16=-326/410, 16-17=0/48, 2-25=-870/178, 16-18=-107/88
BOT CHORD 24-25=-258/422, 22-24=-191/939, 21-22=-363/339, 20-21=-363/339, 19-20=-363/339, 18-19=-104/77
WEBS 19-32=-450/455, 32-33=-443/445, 33-34=-440/444, 16-34=-441/445, 4-26=-553/252, 22-26=-592/277, 4-24=0/234, 6-22=-49/196, 22-27=-202/890, 27-28=-185/844, 28-29=-194/864, 29-30=-201/875, 30-31=-197/881, 12-31=-190/866, 12-19=-1297/274, 5-26=-76/48, 7-27=-36/89, 8-28=-39/24, 9-29=-23/17, 10-30=-130/124, 21-30=-128/139, 11-31=-80/62, 20-31=-77/69, 13-32=-30/55, 14-33=-48/36, 15-34=-15/11, 2-24=0/605

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 29-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 MT20 unless otherwise indicated.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	D2	Common	2	1	Job Reference (optional)	I59477280

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:52 Page: 1
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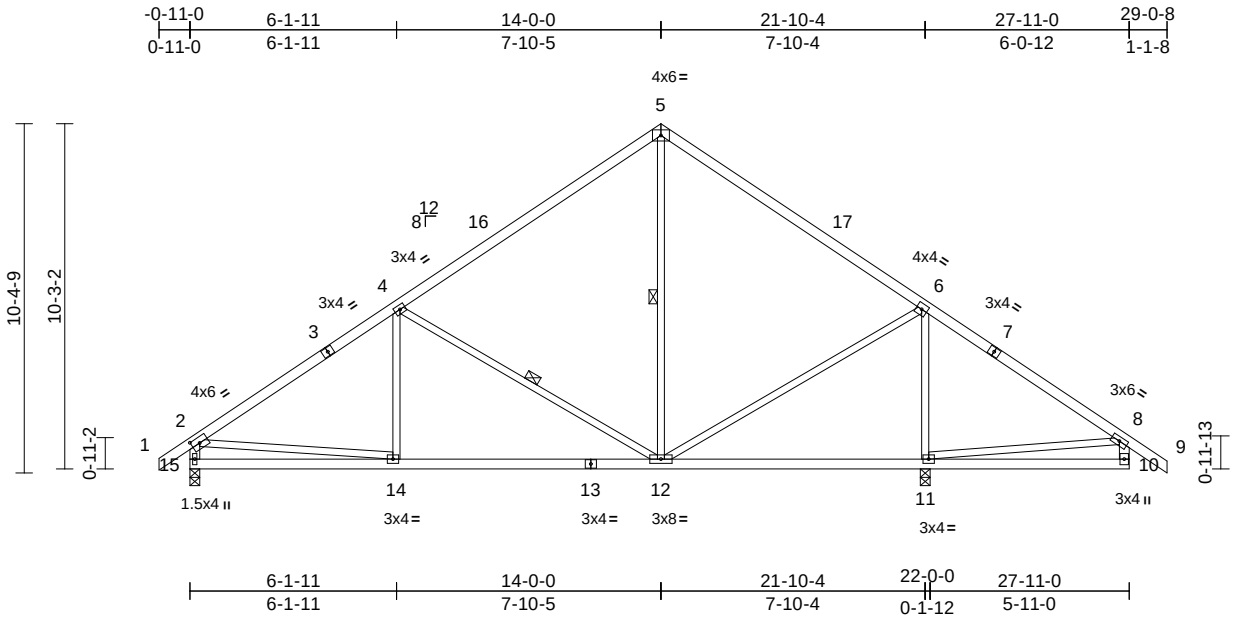

Scale = 1:68.5

Plate Offsets (X, Y): [2:0-2-14,0-2-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.07	12-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.14	12-14	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.79	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 136 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-3,7-9:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-2,10-8:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-4-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 11-12.
WEBS 1 Row at midpt 4-12, 5-12

REACTIONS (size) 11=0-3-8, 15=0-3-8
Max Horiz 15=-290 (LC 10)
Max Uplift 11=-231 (LC 13), 15=-150 (LC 12)
Max Grav 11=1643 (LC 1), 15=924 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-4=-1095/177, 4-5=-604/165, 5-6=-606/204, 6-8=-321/553, 8-9=0/48, 2-15=-872/178, 8-10=-126/89
BOT CHORD 14-15=-251/394, 12-14=-198/951, 11-12=-348/329, 10-11=-103/75
WEBS 4-14=0/231, 4-12=-584/270, 5-12=-56/216, 2-14=0/640, 8-11=-426/435, 6-11=-1440/458, 6-12=-175/839

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 29-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	D3	Common	2	1	Job Reference (optional)	I59477281

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:52 Page: 1
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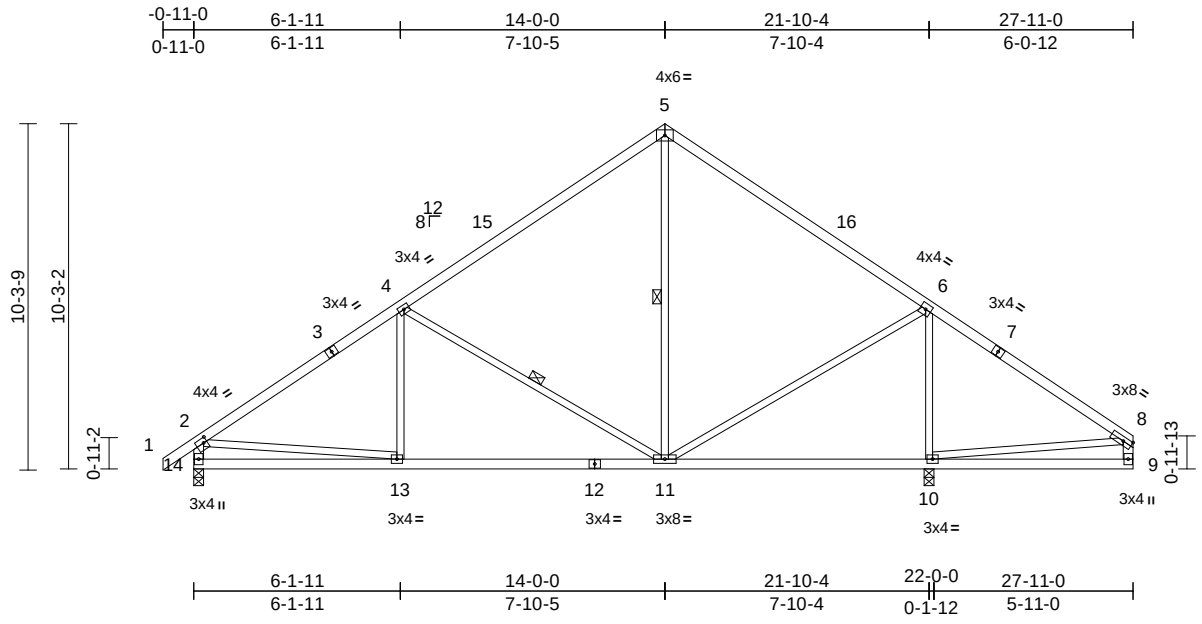

Scale = 1:68.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.07	11-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.15	11-13	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.76	Horz(CT)	0.01	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 134 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-3,7-8:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-8:2x4 SP No.2

BRACING
TOP CHORD Sheathed or 5-2-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 4-11, 5-11

REACTIONS (size) 10=0-3-8, 14=0-3-8
Max Horiz 14=291 (LC 9)
Max Uplift 10=-199 (LC 13), 14=-157 (LC 12)
Max Grav 10=1580 (LC 1), 14=981 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-4=-1171/186, 4-5=-669/186, 5-6=-671/214, 6-8=-248/425, 2-14=-927/186, 8-9=-130/93
BOT CHORD 13-14=-268/397, 11-13=-222/991, 10-11=-234/265, 9-10=-145/93
WEBS 4-13=0/237, 4-11=-601/279, 5-11=-31/238, 2-13=0/691, 8-10=-329/377, 6-10=-1386/416, 6-11=-122/763

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 27-9-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are 3x4 MT20 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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	D4	Common	4	1	Job Reference (optional)	I59477282

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:53 Page: 1
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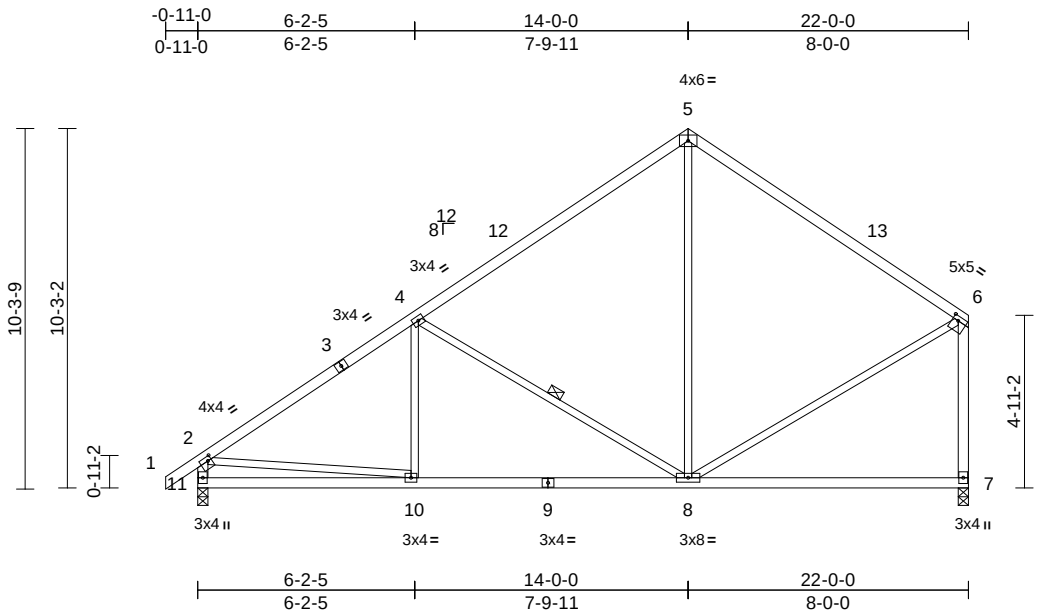

Scale = 1:65.8

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

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	1.00	Vert(LL)	-0.10	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.19	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.44	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 112 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-6:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x4 SP No.2

BRACING
TOP CHORD Sheathed, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-8

REACTIONS (size) 7=0-3-8, 11=0-3-8
Max Horiz 11=347 (LC 9)
Max Uplift 7=-123 (LC 12), 11=-155 (LC 12)
Max Grav 7=975 (LC 1), 11=1053 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-4=-1278/194, 4-5=-792/226, 5-6=-781/207, 2-11=-997/196, 6-7=-905/192
BOT CHORD 10-11=-337/436, 8-10=-324/1052, 7-8=-80/110
WEBS 4-10=0/224, 4-8=-584/277, 5-8=-23/324, 2-10=-23/755, 6-8=-87/587

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 21-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	E5	Common Girder	1	2	Job Reference (optional)	I59477283

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:53 Page: 1
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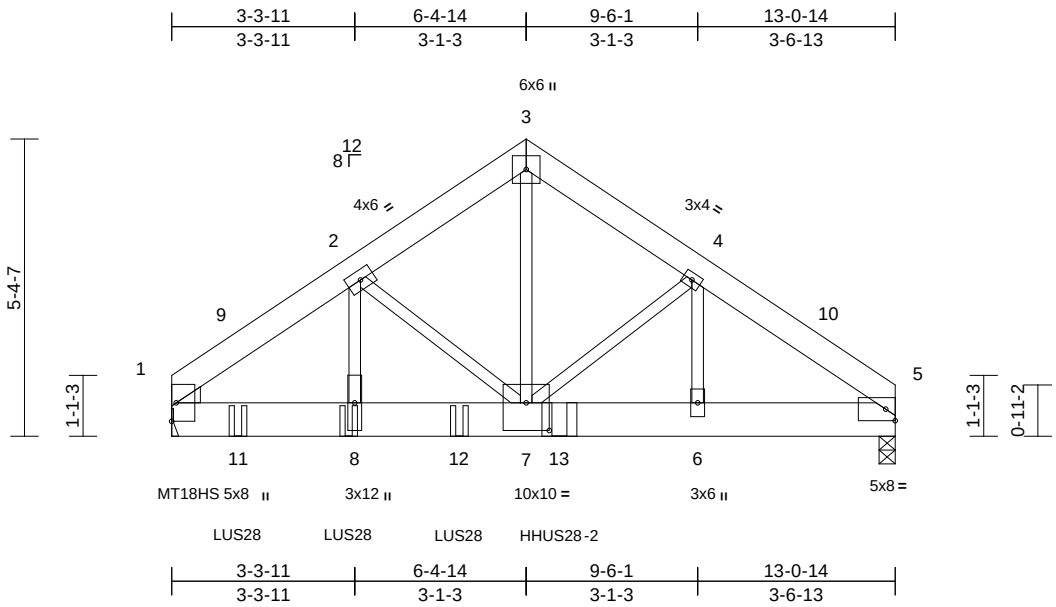

Scale = 1:41.6

Plate Offsets (X, Y): [7:0-5-0,0-6-0]

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	0.60	Vert(LL)	-0.04	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.07	7-8	>999	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 166 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SP 2400F 2.0E
WEBS 2x3 SPF No.2
WEDGE Left: 2x4 SP No.2

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

REACTIONS (size) 1= Mechanical, 5=0-3-8
Max Horiz 1=-130 (LC 31)
Max Uplift 1=-1064 (LC 12), 5=-810 (LC 13)
Max Grav 1=5215 (LC 1), 5=3193 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6210/1443, 2-3=-4557/1283, 3-4=-4557/1282, 4-5=-4848/1331
BOT CHORD 1-8=-1064/4707, 7-8=-1066/4725, 6-7=-967/3700, 5-6=-966/3697
WEBS 2-8=-255/2131, 2-7=-1262/183, 3-7=-1283/4633, 4-7=-115/245, 4-6=-102/326

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 3 rows staggered at 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc,
Except member 2-8 2x3 - 1 row at 0-2-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-12 to 5-0-12, Interior (1) 5-0-12 to 6-4-14, Exterior(2R) 6-4-14 to 11-4-14, Interior (1) 11-4-14 to 12-11-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) Bearings are assumed to be: Joint 1 SPF No.3 crushing capacity of 425 psi, Joint 5 SP 2400F 2.0E crushing capacity of 805 psi.
8) Refer to girder(s) for truss to truss connections.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie LUS28 (6-SD9112 Girder, 4-SD9212 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 1-2-6 from the left end to 5-2-6 to connect truss(es) to back face of bottom chord.
11) Use Simpson Strong-Tie HHUS28-2 (22-10d Girder, 8-10d Truss, Single Ply Girder) or equivalent at 7-0-1 from the left end to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) N/A

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 8=-1478 (B), 11=-1476 (B), 12=-1480 (B), 13=-2816 (B)

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	E6	Common Supported Gable	2	1	Job Reference (optional)	I59477284

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:53 Page: 1
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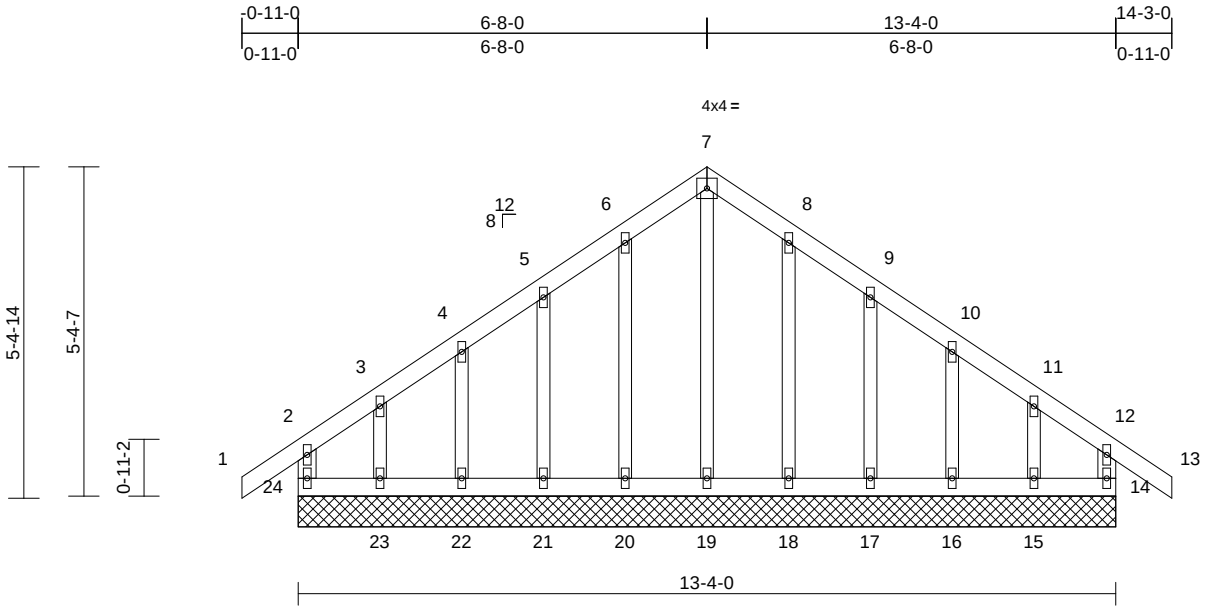

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.11	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 70 lb	FT = 20%

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

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

REACTIONS (size) 14=13-4-0, 15=13-4-0, 16=13-4-0, 17=13-4-0, 18=13-4-0, 19=13-4-0, 20=13-4-0, 21=13-4-0, 22=13-4-0, 23=13-4-0, 24=13-4-0
Max Horiz 24=-164 (LC 10)
Max Uplift 14=-50 (LC 9), 15=-88 (LC 13), 16=-41 (LC 13), 17=-57 (LC 13), 18=-36 (LC 13), 20=-37 (LC 12), 21=-57 (LC 12), 22=-39 (LC 12), 23=-96 (LC 12), 24=-76 (LC 8)
Max Grav 14=151 (LC 19), 15=133 (LC 20), 16=127 (LC 26), 17=126 (LC 20), 18=129 (LC 20), 19=146 (LC 22), 20=131 (LC 19), 21=126 (LC 19), 22=127 (LC 25), 23=146 (LC 19), 24=172 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-24=-139/103, 1-2=0/41, 2-3=-99/95, 3-4=-69/74, 4-5=-60/122, 5-6=-83/185, 6-7=-106/230, 7-8=-106/230, 8-9=-83/184, 9-10=-53/122, 10-11=-46/66, 11-12=-71/68, 12-13=0/41, 12-14=-135/103
BOT CHORD 23-24=-76/86, 22-23=-76/86, 21-22=-76/86, 20-21=-76/86, 19-20=-76/86, 18-19=-76/86, 17-18=-76/86, 16-17=-76/86, 15-16=-76/86, 14-15=-76/86
WEBS 7-19=-174/42, 6-20=-105/64, 5-21=-98/106, 4-22=-99/110, 3-23=-96/93, 8-18=-103/64, 9-17=-99/106, 10-16=-100/110, 11-15=-90/93

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-0-0, Exterior(2N) 4-0-0 to 6-8-0, Corner(3R) 6-8-0 to 11-8-0, Exterior(2N) 11-8-0 to 14-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	E7	Common	2	1	Job Reference (optional)	I59477285

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:54 Page: 1
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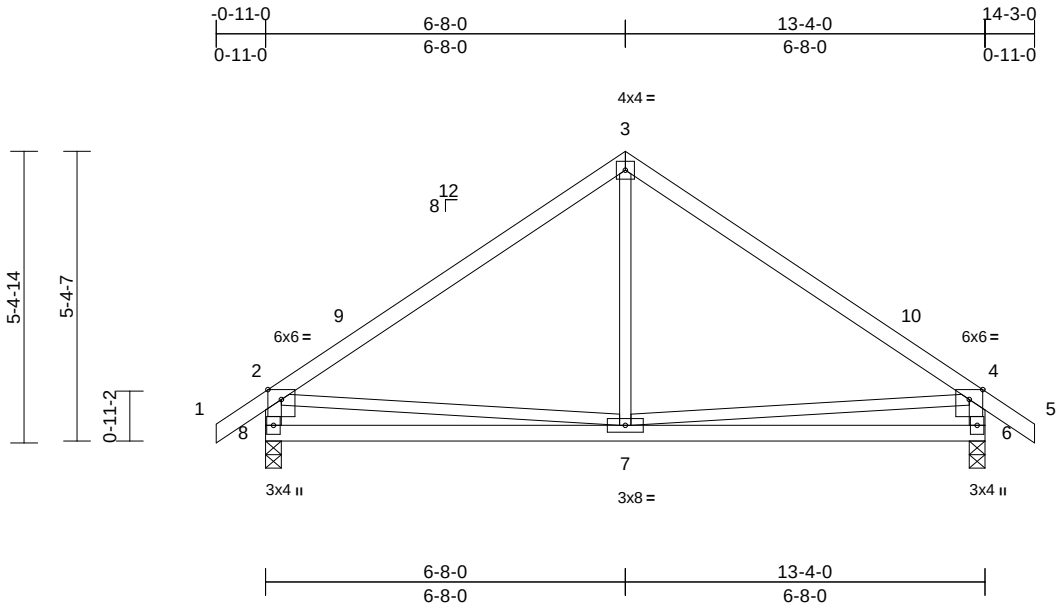

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.04	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.08	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 63 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 8-2,6-4:2x4 SP No.2

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

REACTIONS (size) 6=0-3-8, 8=0-3-8
Max Horiz 8=-164 (LC 10)
Max Uplift 6=-98 (LC 13), 8=-98 (LC 12)
Max Grav 6=661 (LC 1), 8=661 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-636/151, 3-4=-636/151, 4-5=0/41, 2-8=-604/208, 4-6=-604/208
BOT CHORD 7-8=-263/504, 6-7=-199/387
WEBS 3-7=0/272, 2-7=-125/271, 4-7=-134/275

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 14-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	E8	Roof Special	4	1	Job Reference (optional)	I59477286

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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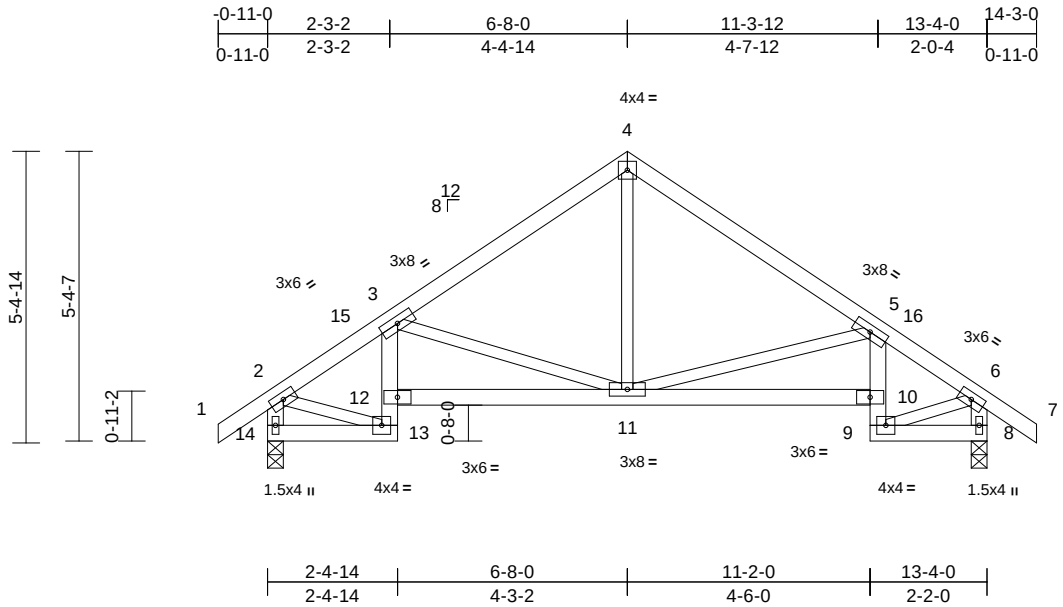

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.03	11-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.06	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.20	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 68 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 14-2,8-6:2x4 SP 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 (size) 8=0-3-8, 14=0-3-8
Max Horiz 14=-164 (LC 10)
Max Uplift 8=-98 (LC 13), 14=-98 (LC 12)
Max Grav 8=661 (LC 1), 14=661 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-662/162, 3-4=-640/163, 4-5=-646/166, 5-6=-646/158, 6-7=0/41, 2-14=-673/185, 6-8=-679/188
BOT CHORD 13-14=-122/160, 12-13=-105/44, 3-12=-83/67, 11-12=-164/805, 10-11=-127/767, 9-10=-125/45, 5-10=-97/72, 8-9=-5/36
WEBS 5-11=-356/183, 2-13=-96/507, 6-9=-107/512, 4-11=-37/331, 3-11=-353/184

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 14-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	E9	Roof Special	4	1	Job Reference (optional)	I59477287

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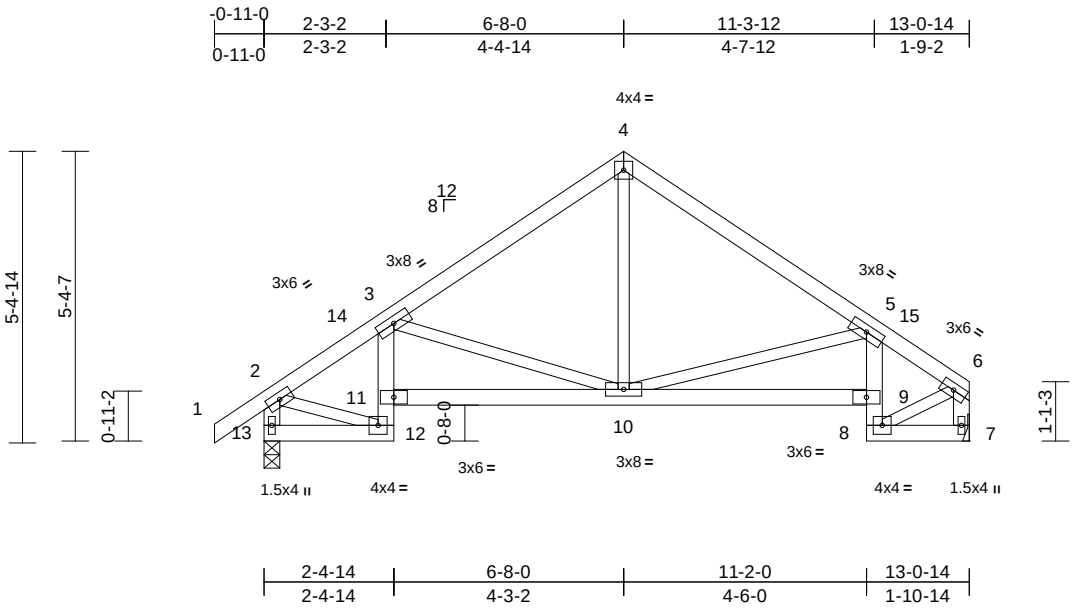

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.03	10-11	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.06	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.18	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 65 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 13-2,7-6:2x4 SP 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 (size) 7= Mechanical, 13=0-3-8
Max Horiz 13=160 (LC 11)
Max Uplift 7=-70 (LC 13), 13=-97 (LC 12)
Max Grav 7=572 (LC 1), 13=653 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-651/166, 3-4=-624/173, 4-5=-630/176, 5-6=-575/147, 2-13=-664/189, 6-7=-598/140
BOT CHORD 12-13=-128/147, 11-12=-103/42, 3-11=-81/66, 10-11=-225/781, 9-10=-194/699, 8-9=-177/61, 5-9=-148/89, 7-8=-11/26
WEBS 5-10=-306/182, 2-12=-98/499, 6-8=-126/492, 4-10=-46/317, 3-10=-353/189

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 12-11-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 13 SP No.2 crushing capacity of 565 psi, Joint 7 SPF No.3 crushing capacity of 425 psi.
5) Refer to girder(s) for truss to truss connections.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	E10	Common	2	1	Job Reference (optional)	I59477288

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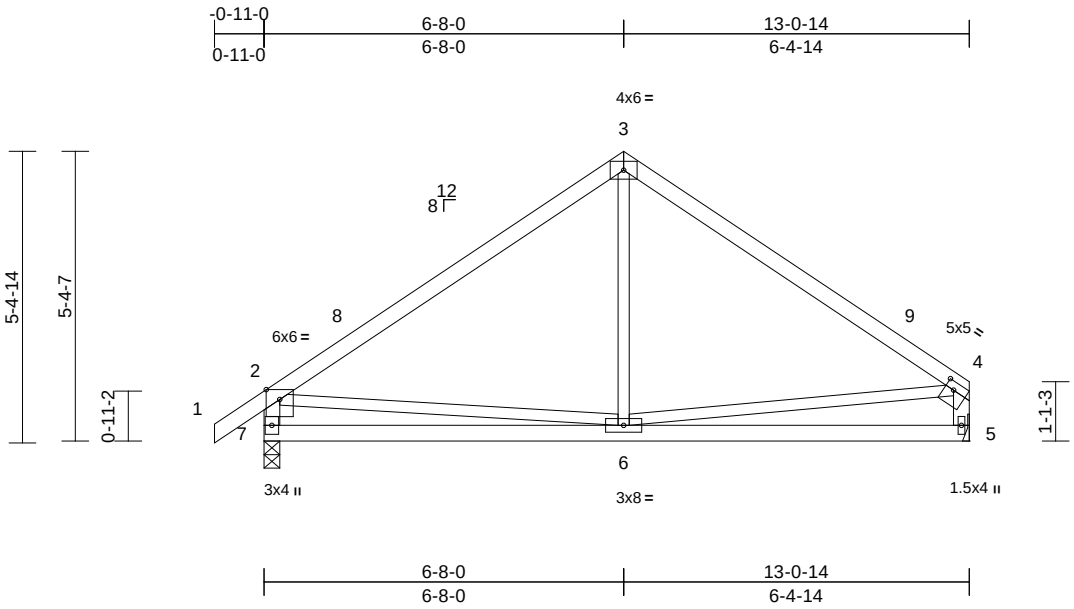


Scale = 1:42.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.04	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(CT)	-0.08	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.14	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 61 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 7-2,5-4:2x4 SP No.2

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=160 (LC 9)
Max Uplift 5=-70 (LC 13), 7=-97 (LC 12)
Max Grav 5=572 (LC 1), 7=653 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/41, 2-3=-623/151, 3-4=-607/148, 2-7=-594/210, 4-5=-517/153
BOT CHORD 6-7=-274/492, 5-6=-101/209
WEBS 3-6=0/255, 2-6=-132/269, 4-6=-51/268

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 12-11-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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) Bearings are assumed to be: Joint 7 SP No.2 crushing capacity of 565 psi, Joint 5 SPF No.3 crushing capacity of 425 psi.
5) Refer to girder(s) for truss to truss connections.
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.

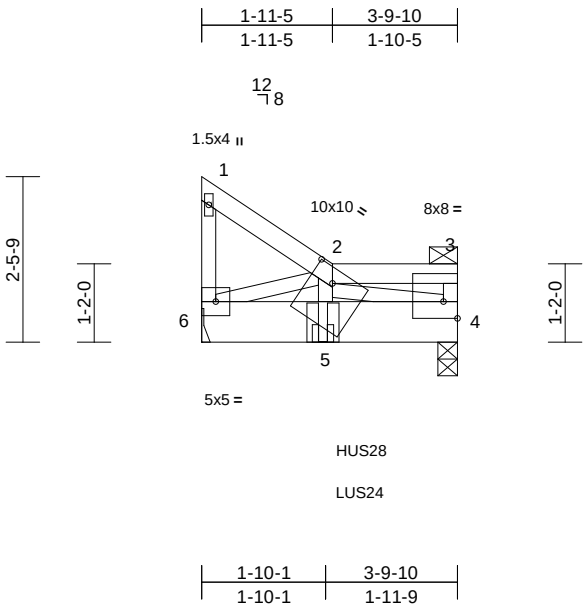
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	I59477289
P236379-01	GR1	Roof Special Girder	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:55 Page: 1
ID:NiV?miVKh1pEzSCcKIa8o3yzVx0-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:34.3

Plate Offsets (X, Y): [2:0-4-0,0-2-8], [3:Edge,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)	-0.01	5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.03	5	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.37	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x8 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-10 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-3.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 4=0-3-8, 6= Mechanical
Max Horiz 6=-78 (LC 27)
Max Uplift 4=-190 (LC 13), 6=-216 (LC 13)
Max Grav 4=1170 (LC 1), 6=1242 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-76/87, 1-2=-80/65, 2-3=-14/16, 3-4=-61/43
BOT CHORD 5-6=-283/1578, 4-5=-264/1423
WEBS 2-6=-1694/332, 2-5=-169/1084, 2-4=-1537/275

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 1-11-5, Interior (1) 1-11-5 to 3-8-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: Joint 6 SPF No.3 crushing capacity of 425 psi, Joint 4 SPF No.2 crushing capacity of 425 psi.
5) Refer to girder(s) for truss to truss connections.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
8) Use Simpson Strong-Tie HUS28 (22-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent at 1-9-10 from the left end to connect truss(es) to front face of bottom chord.
9) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent at 1-9-10 from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg.to the right, sloping 0.0 deg. down.
10) Fill all nail holes where hanger is in contact with lumber.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

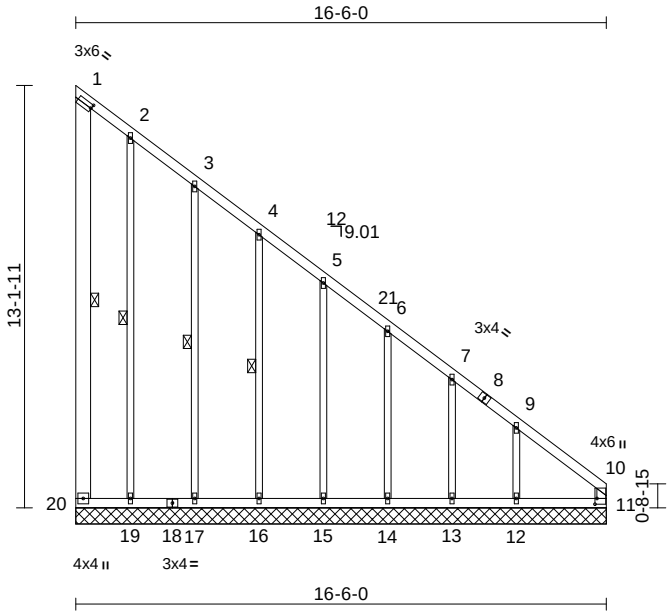
LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-6=-20
Concentrated Loads (lb)
Vert: 5=-2088 (F=-1743, B=-345)

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	H31	Lay-In Gable	1	1	Job Reference (optional)	I59477290

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:56 Page: 1
ID:6n9QJPZ5TYuebLgCPhfu05yzVKB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:71.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.54	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.25	Horiz(TL)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 117 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x6 SPF No.2 *Except* 10-11:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-7-12 oc bracing.
WEBS 1 Row at midpt 1-20, 2-19, 3-17, 4-16

REACTIONS (size) 11=16-6-0, 12=16-6-0, 13=16-6-0, 14=16-6-0, 15=16-6-0, 16=16-6-0, 17=16-6-0, 19=16-6-0, 20=16-6-0
Max Horiz 20=-520 (LC 8)
Max Uplift 11=-182 (LC 11), 12=-250 (LC 13), 13=-29 (LC 13), 14=-98 (LC 13), 15=-79 (LC 13), 16=-91 (LC 13), 17=-72 (LC 13), 19=-95 (LC 13), 20=-167 (LC 10)
Max Grav 11=387 (LC 8), 12=332 (LC 20), 13=158 (LC 1), 14=201 (LC 20), 15=189 (LC 20), 16=187 (LC 20), 17=205 (LC 20), 19=159 (LC 1), 20=152 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-20=-51/42, 1-2=-180/176, 2-3=-285/262, 3-4=-360/290, 4-5=-437/321, 5-6=-513/352, 6-7=-596/387, 7-9=-647/401, 9-10=-811/487, 10-11=-496/267
BOT CHORD 19-20=-389/665, 17-19=-389/665, 16-17=-389/665, 15-16=-389/665, 14-15=-389/665, 13-14=-389/665, 12-13=-389/665, 11-12=-389/665
WEBS 2-19=-209/200, 3-17=-154/124, 4-16=-150/108, 5-15=-150/107, 6-14=-156/114, 7-13=-126/79, 9-12=-232/240

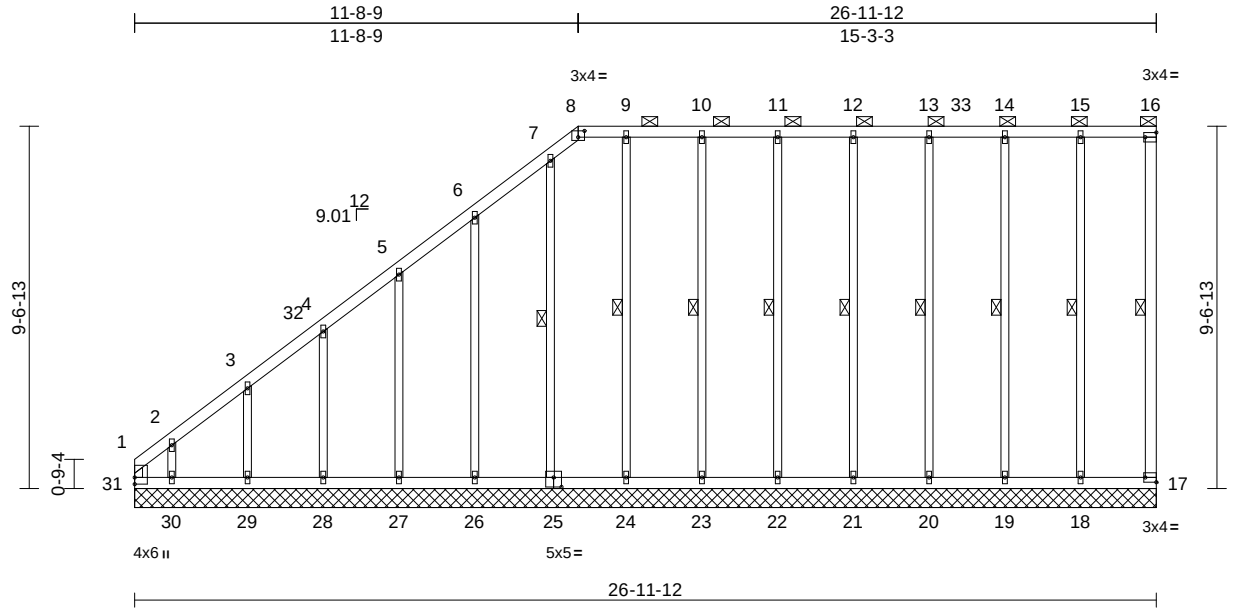
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2R) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	I59477291
P236379-01	H32	Lay-In Gable	1	1	Job Reference (optional)	

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:56 Page: 1
ID:TrE8VV5_F7zAy79gpOJQecz_nNk-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:60.8

Plate Offsets (X, Y): [8:0-2-0,0-2-0], [16:Edge,0-1-8], [17:Edge,0-1-8], [25:0-2-8,0-3-0]

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	0.65	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.19	Horiz(TL)	-0.01	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 173 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 16-17:2x4 SP No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-16.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 16-17, 15-18, 14-19, 13-20, 12-21, 11-22, 10-23, 9-24, 7-25

REACTIONS (size) 17=26-11-12, 18=26-11-12, 19=26-11-12, 20=26-11-12, 21=26-11-12, 22=26-11-12, 23=26-11-12, 24=26-11-12, 25=26-11-12, 26=26-11-12, 27=26-11-12, 28=26-11-12, 29=26-11-12, 30=26-11-12, 31=26-11-12
Max Horiz 31=382 (LC 9)
Max Uplift 17=-22 (LC 9), 18=-50 (LC 8), 19=-46 (LC 9), 20=-41 (LC 8), 21=-38 (LC 9), 22=-37 (LC 9), 23=-45 (LC 8), 24=-64 (LC 9), 25=-73 (LC 9), 26=-95 (LC 12), 27=-82 (LC 12), 28=-88 (LC 12), 29=-71 (LC 12), 30=-266 (LC 12), 31=-252 (LC 10)
Max Grav 17=70 (LC 1), 18=186 (LC 1), 19=181 (LC 1), 20=180 (LC 1), 21=180 (LC 1), 22=180 (LC 1), 23=180 (LC 1), 24=179 (LC 1), 25=193 (LC 19), 26=192 (LC 19), 27=190 (LC 19), 28=191 (LC 19), 29=189 (LC 19), 30=261 (LC 19), 31=415 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-31=-440/284, 1-2=-597/398, 2-3=-478/321, 3-4=-434/292, 4-5=-367/262, 5-6=-290/230, 6-7=-221/207, 7-8=-179/184, 8-9=-172/188, 9-10=-172/188, 10-11=-172/188, 11-12=-172/188, 12-13=-172/188, 13-14=-172/188, 14-15=-172/188, 15-16=-172/188, 16-17=-125/116
BOT CHORD 30-31=-173/189, 29-30=-173/189, 28-29=-173/189, 27-28=-173/189, 26-27=-173/189, 24-26=-173/189, 23-24=-172/188, 22-23=-172/188, 21-22=-172/188, 20-21=-172/188, 19-20=-172/188, 18-19=-172/188, 17-18=-172/188
WEBS 15-18=-157/116, 14-19=-141/70, 13-20=-140/61, 12-21=-140/61, 11-22=-140/61, 10-23=-140/70, 9-24=-140/88, 7-25=-159/151, 6-26=-150/120, 5-27=-151/107, 4-28=-150/109, 3-29=-153/106, 2-30=-171/188

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-4 to 4-11-12, Interior (1) 4-11-12 to 11-8-9, Exterior(2R) 11-8-9 to 18-11-12, Interior (1) 18-11-12 to 26-10-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	HG3	Lay-In Gable	1	1	Job Reference (optional)	I59477292

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:57 Page: 1
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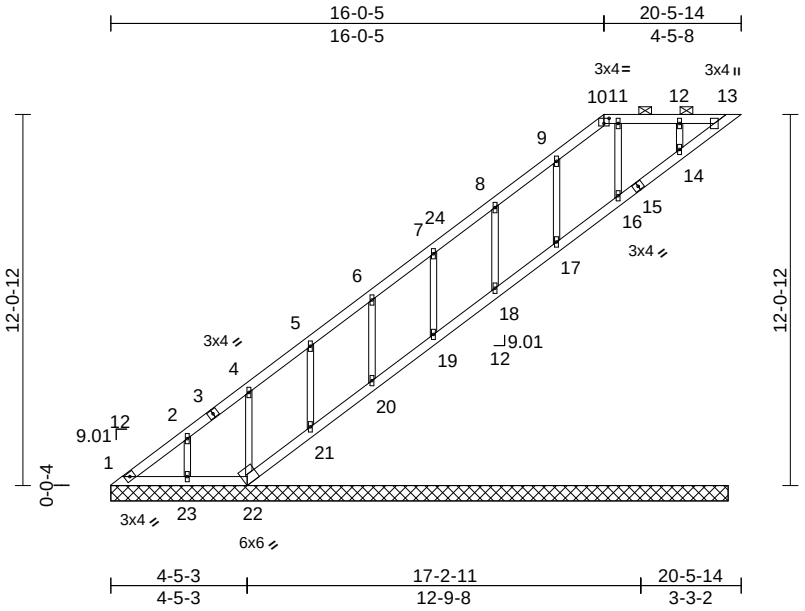


Scale = 1:74.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.04	Horiz(TL)	-0.01	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 89 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 10-13.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 14-16,13-14.

REACTIONS (size) 1=20-0-13, 13=20-0-13, 14=20-0-13, 16=20-0-13, 17=20-0-13, 18=20-0-13, 19=20-0-13, 20=20-0-13, 21=20-0-13, 22=20-0-13, 23=20-0-13
Max Horiz 1=497 (LC 12)
Max Uplift 1=-53 (LC 10), 13=-78 (LC 12), 14=-43 (LC 9), 16=-14 (LC 8), 17=-70 (LC 12), 18=-89 (LC 12), 19=-83 (LC 12), 20=-85 (LC 12), 21=-84 (LC 12), 22=-5 (LC 12), 23=-96 (LC 12)
Max Grav 1=261 (LC 12), 13=59 (LC 19), 14=185 (LC 26), 16=175 (LC 1), 17=186 (LC 19), 18=192 (LC 19), 19=191 (LC 19), 20=189 (LC 19), 21=196 (LC 19), 22=164 (LC 1), 23=223 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-460/259, 2-4=-377/209, 4-5=-296/166, 5-6=-216/122, 6-7=-137/79, 7-8=-69/39, 8-9=-53/43, 9-10=-72/107, 10-11=-61/105, 11-12=-61/105, 12-13=-61/105
BOT CHORD 1-23=-103/58, 22-23=-103/59, 21-22=-139/90, 20-21=-139/87, 19-20=-139/88, 18-19=-139/88, 17-18=-139/88, 16-17=-139/88, 14-16=-139/88, 13-14=-138/80
WEBS 12-14=-143/65, 11-16=-136/39, 9-17=-146/94, 8-18=-152/113, 7-19=-150/107, 6-20=-150/108, 5-21=-152/109, 4-22=-148/107, 2-23=-165/114

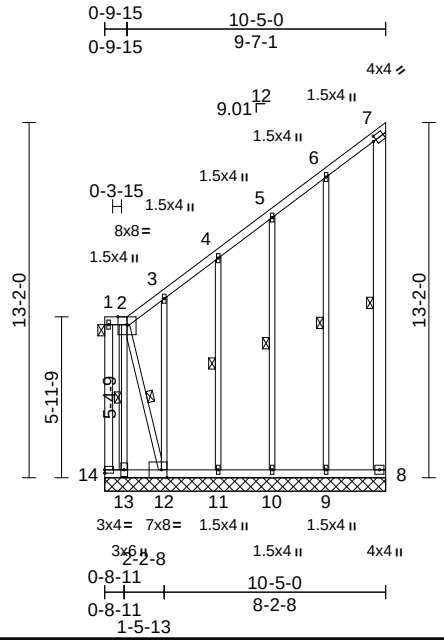
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-5-4 to 5-5-4, Interior (1) 5-5-4 to 16-0-11, Exterior(2E) 16-0-11 to 20-0-15 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Bearing at joint(s) 13, 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) N/A
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56
P230379-01	H34	Lay-In Gable	1	1	I59477293
					Job Reference (optional)



Scale = 1:85.4

Plate Offsets (X, Y): [7:0-1-6,0-2-0], [12:0-2-8,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	0.56	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.63	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 102 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 14-1:2x4 SP No.2, 7-8:2x6 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 6-7-0 oc bracing.
WEBS 1 Row at midpt 7-8, 6-9, 5-10, 4-11, 2-13, 2-12

REACTIONS (size) 8=10-5-0, 9=10-5-0, 10=10-5-0, 11=10-5-0, 12=10-5-0, 13=10-5-0, 14=10-5-0
Max Horiz 14=513 (LC 9)
Max Uplift 8=-158 (LC 11), 9=-98 (LC 12), 10=-73 (LC 12), 11=-102 (LC 12), 12=-1113 (LC 9), 13=-661 (LC 10), 14=-254 (LC 10)
Max Grav 8=157 (LC 8), 9=189 (LC 1), 10=196 (LC 19), 11=209 (LC 19), 12=927 (LC 10), 13=996 (LC 9), 14=315 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-270/197, 1-2=-93/98, 2-3=-476/372, 3-4=-523/427, 4-5=-403/347, 5-6=-324/305, 6-7=-197/193, 7-8=-104/101
BOT CHORD 13-14=-722/628, 12-13=-684/598, 11-12=-227/248, 10-11=-227/248, 9-10=-227/248, 8-9=-227/248
WEBS 6-9=-227/204, 5-10=-156/153, 4-11=-173/178, 3-12=-157/106, 2-13=-2030/1605, 2-12=-1783/2234

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 0-9-15, Interior (1) 0-9-15 to 10-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	J1	Jack-Open	34	1	Job Reference (optional)	I59477294

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:58 Page: 1
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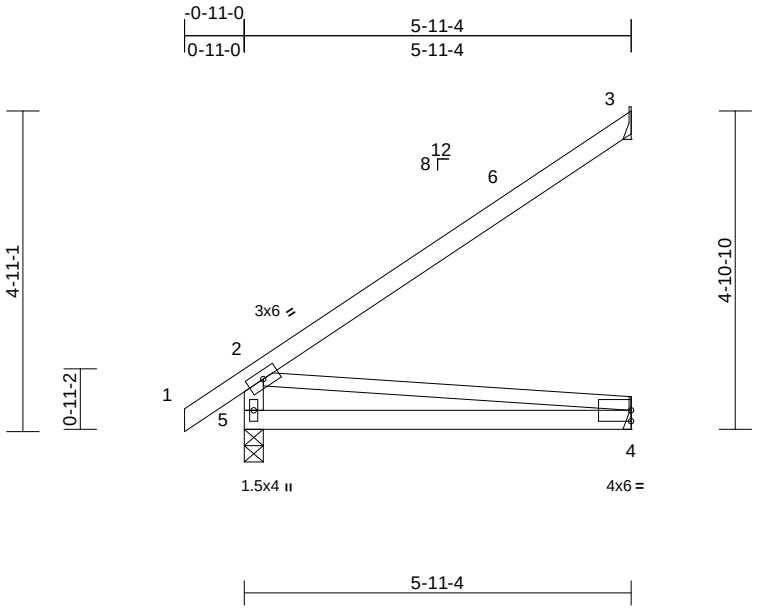


Scale = 1:35.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.07	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.13	4-5	>515	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.09	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 27 lb	FT = 20%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=177 (LC 12)
Max Uplift 3=-136 (LC 12), 5=-6 (LC 12)
Max Grav 3=205 (LC 19), 4=116 (LC 3), 5=340 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-282/108, 1-2=0/41, 2-3=-146/96
BOT CHORD 4-5=-275/108
WEBS 2-4=-109/277

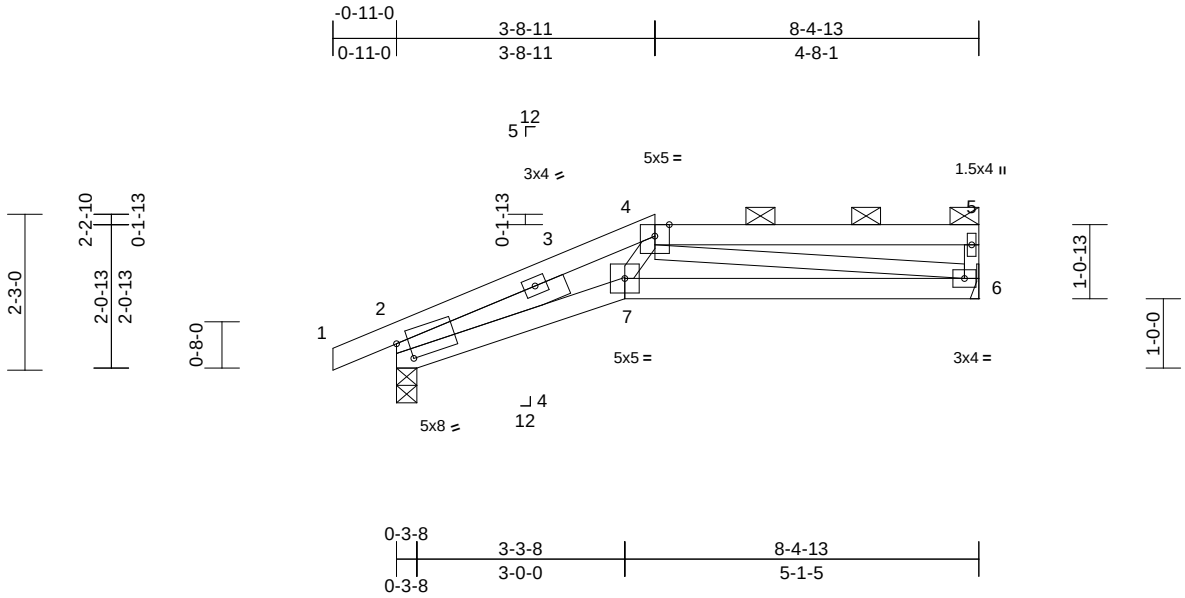
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 5-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 3 SPF No.3 crushing capacity of 425 psi, Joint 5 SP No.2 crushing capacity of 565 psi, Joint 4 SPF No.3 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	I59477295
P230379-01	T1	Half Hip	1	1	Job Reference (optional)	



Scale = 1:33.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.06	7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.12	6-7	>788	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.53	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 36 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-7-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-6 oc purlins, except end verticals, and 2-0-0 oc purlins: 4-5.
BOT CHORD Rigid ceiling directly applied or 7-2-15 oc bracing.

REACTIONS (size) 2=0-3-8, 6= Mechanical
Max Horiz 2=64 (LC 9)
Max Uplift 2=-73 (LC 8), 6=-71 (LC 9)
Max Grav 2=444 (LC 1), 6=365 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3/0, 2-4=-1378/635, 4-5=-15/17, 5-6=-160/119
BOT CHORD 2-7=-667/1253, 6-7=-539/915
WEBS 4-7=-183/545, 4-6=-928/536

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=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 6 SPF No.3 crushing capacity of 425 psi.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	V1	Valley	1	1	Job Reference (optional)	I59477296

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:58 Page: 1
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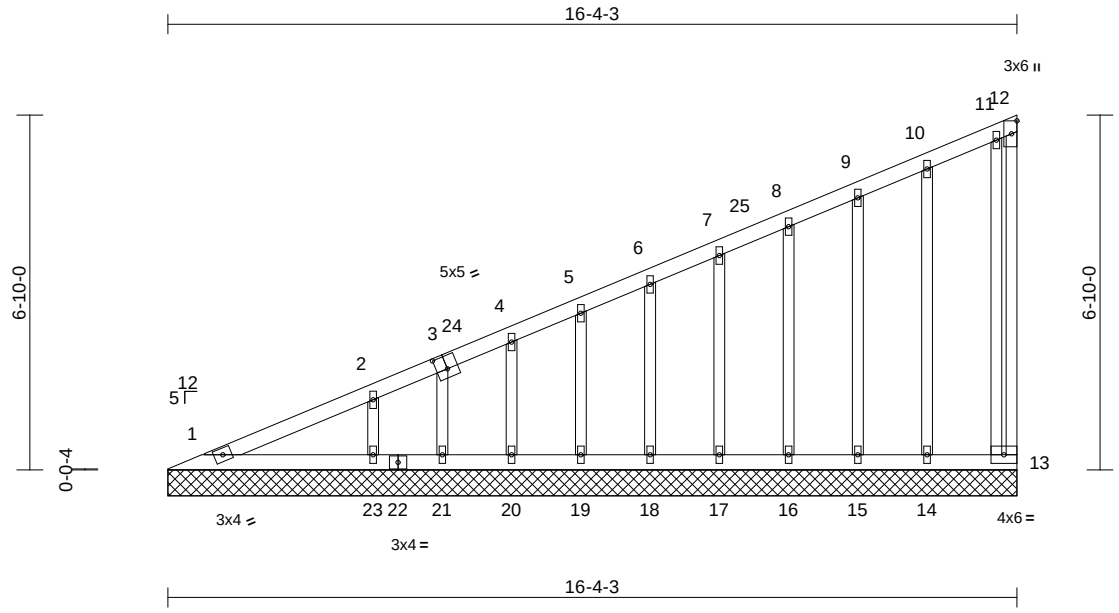

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Plate Offsets (X, Y): [3:0-2-8,0-3-0]

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	0.52	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	NO	WB	0.09	Horiz(TL)	0.00	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 84 lb	FT = 20%

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

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

REACTIONS (size) 1=16-4-3, 13=16-4-3, 14=16-4-3, 15=16-4-3, 16=16-4-3, 17=16-4-3, 18=16-4-3, 19=16-4-3, 20=16-4-3, 21=16-4-3, 23=16-4-3
Max Horiz 1=293 (LC 9)
Max Uplift 13=-51 (LC 11), 14=-54 (LC 12), 15=-25 (LC 12), 16=-38 (LC 12), 17=-33 (LC 12), 18=-34 (LC 12), 19=-34 (LC 12), 20=-38 (LC 12), 21=-12 (LC 12), 23=-87 (LC 12)
Max Grav 1=145 (LC 20), 13=71 (LC 1), 14=132 (LC 1), 15=119 (LC 1), 16=120 (LC 1), 17=120 (LC 1), 18=121 (LC 1), 19=117 (LC 1), 20=136 (LC 1), 21=37 (LC 1), 23=303 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-387/225, 2-4=-328/188, 4-5=-283/176, 5-6=-256/166, 6-7=-230/156, 7-8=-203/146, 8-9=-175/136, 9-10=-147/128, 10-11=-116/112, 11-12=-88/95, 12-13=-74/77
BOT CHORD 1-23=-129/140, 21-23=-129/140, 20-21=-129/140, 19-20=-129/140, 18-19=-129/140, 17-18=-129/140, 16-17=-129/140, 15-16=-129/140, 14-15=-129/140, 13-14=-129/140
WEBS 2-23=-213/131, 3-21=-44/30, 4-20=-101/57, 5-19=-93/52, 6-18=-93/52, 7-17=-93/54, 8-16=-93/59, 9-15=-94/61, 10-14=-100/101, 11-13=-88/89

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 16-3-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; 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 1.5x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	V2	Valley	1	1	Job Reference (optional)	I59477297

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:59 Page: 1
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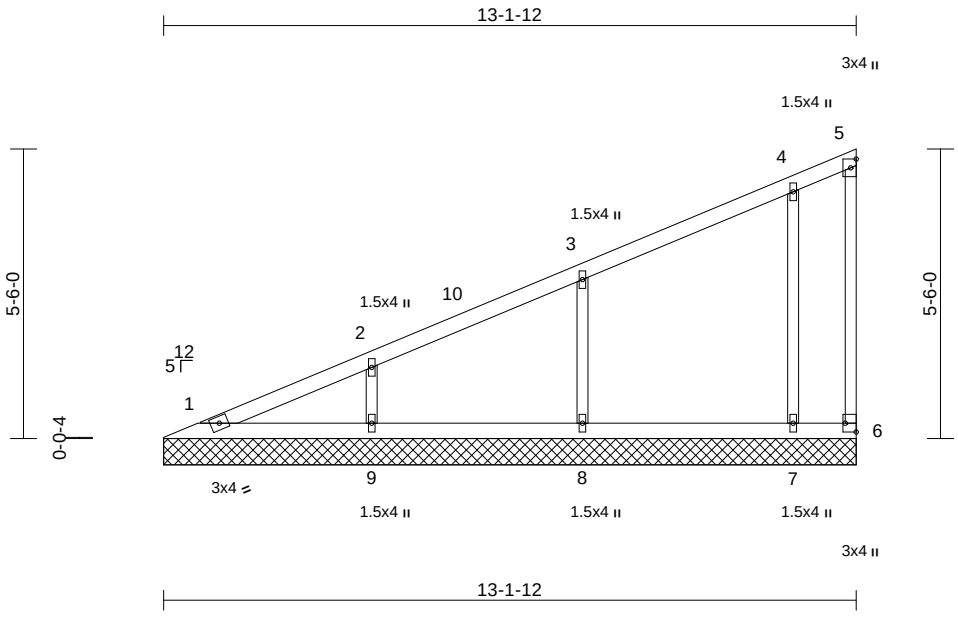

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Plate Offsets (X, Y): [6:Edge,0-2-8]

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	0.32	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.13	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 50 lb	FT = 20%

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

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

REACTIONS (size) 1=13-1-12, 6=13-1-12, 7=13-1-12, 8=13-1-12, 9=13-1-12
Max Horiz 1=233 (LC 9)
Max Uplift 6=-48 (LC 20), 7=-84 (LC 12), 8=-106 (LC 12), 9=-103 (LC 12)
Max Grav 1=127 (LC 20), 6=30 (LC 12), 7=299 (LC 1), 8=373 (LC 1), 9=359 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-333/198, 2-3=-255/165, 3-4=-160/127, 4-5=-104/103, 5-6=-25/22
BOT CHORD 1-9=-103/111, 8-9=-103/111, 7-8=-103/111, 6-7=-103/111
WEBS 2-9=-270/190, 3-8=-293/199, 4-7=-230/209

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 13-1-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P236379-01	V3	Valley	1	1	Job Reference (optional)	I59477298

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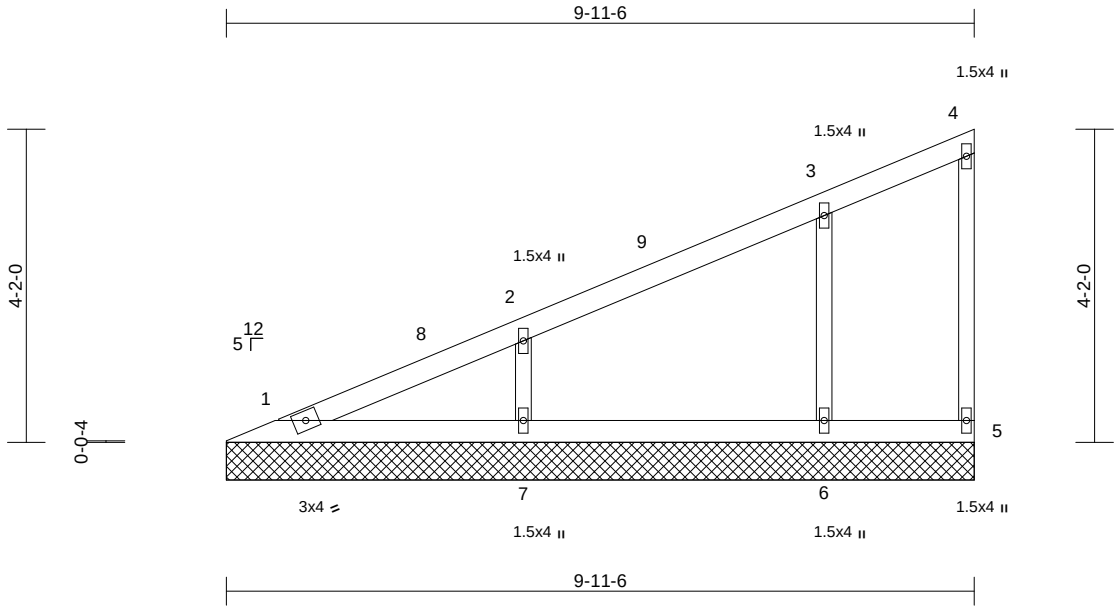

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-SH							Weight: 36 lb	FT = 20%

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

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

REACTIONS (size) 1=9-11-6, 5=9-11-6, 6=9-11-6, 7=9-11-6
Max Horiz 1=173 (LC 9)
Max Uplift 5=-18 (LC 9), 6=-85 (LC 12), 7=-107 (LC 12)
Max Grav 1=112 (LC 20), 5=38 (LC 1), 6=303 (LC 1), 7=375 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-270/160, 2-3=-172/118, 3-4=-83/77, 4-5=-30/33
BOT CHORD 1-7=-76/83, 6-7=-76/83, 5-6=-76/83
WEBS 2-7=-283/222, 3-6=-238/217

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 9-10-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	V4	Valley	1	1	Job Reference (optional)	I59477299

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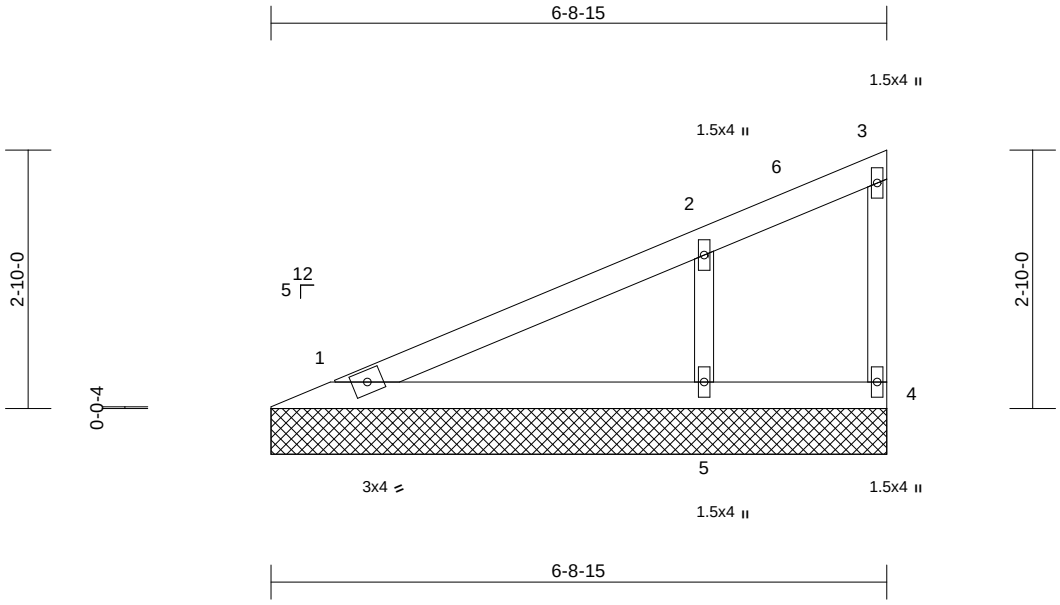

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

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

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

REACTIONS (size) 1=6-8-15, 4=6-8-15, 5=6-8-15
Max Horiz 1=112 (LC 9)
Max Uplift 1=-9 (LC 12), 4=-12 (LC 11), 5=-106 (LC 12)
Max Grav 1=148 (LC 1), 4=13 (LC 1), 5=373 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-177/113, 2-3=-69/59, 3-4=-27/25
BOT CHORD 1-5=-50/54, 4-5=-50/54
WEBS 2-5=-290/286

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 6-8-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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.

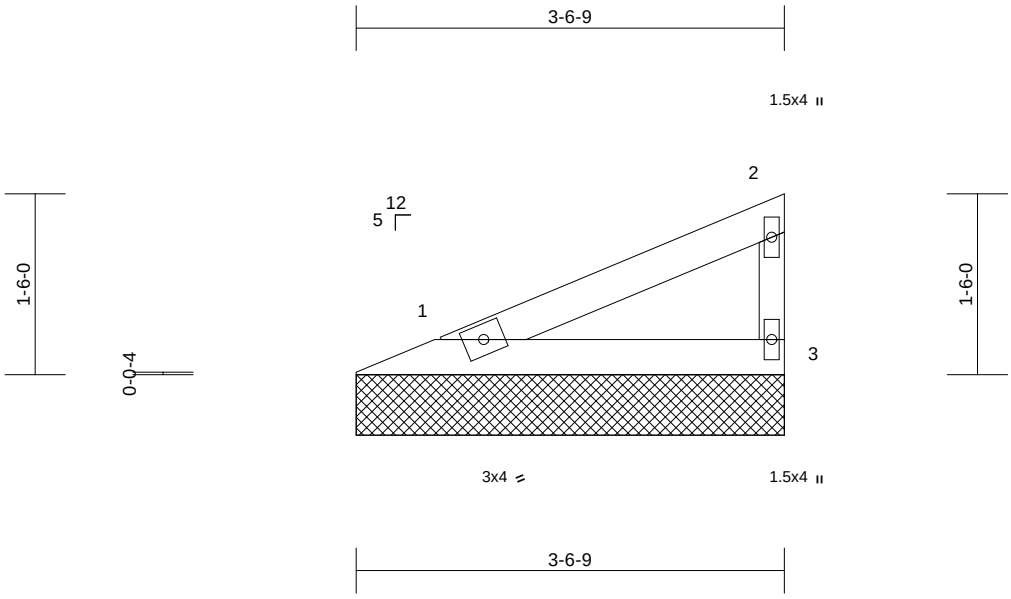
LOAD CASE(S) Standard

July 12,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 56	
P230379-01	V5	Valley	1	1	Job Reference (optional)	I59477300

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Wed Jul 12 07:06:59 Page: 1
ID:osD5BxPmZQRgVg3HL6FqQcz_lbi-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:19.1

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	0.18	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 11 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-6-9, 3=3-6-9
Max Horiz 1=52 (LC 9)
Max Uplift 1=-20 (LC 12), 3=-30 (LC 12)
Max Grav 1=123 (LC 1), 3=123 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-68/46, 2-3=-96/109
BOT CHORD 1-3=-23/25

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=0.96; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
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.

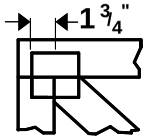
LOAD CASE(S) Standard

July 12,2023

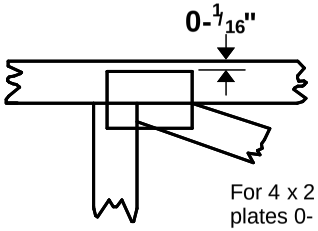
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

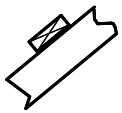
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

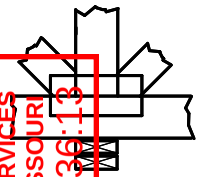
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

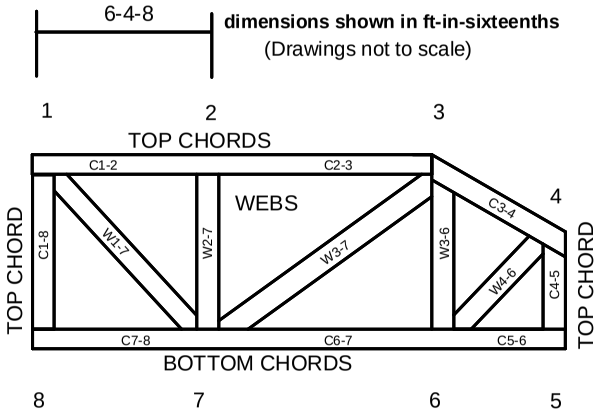


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.