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

Re: 210568
Boyer Res. - Roof

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

Pages or sheets covered by this seal: I53060685 thru I53060790

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

Missouri COA: Engineering 001193

July 14,2022

Sevier, Scott ,Engineer

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

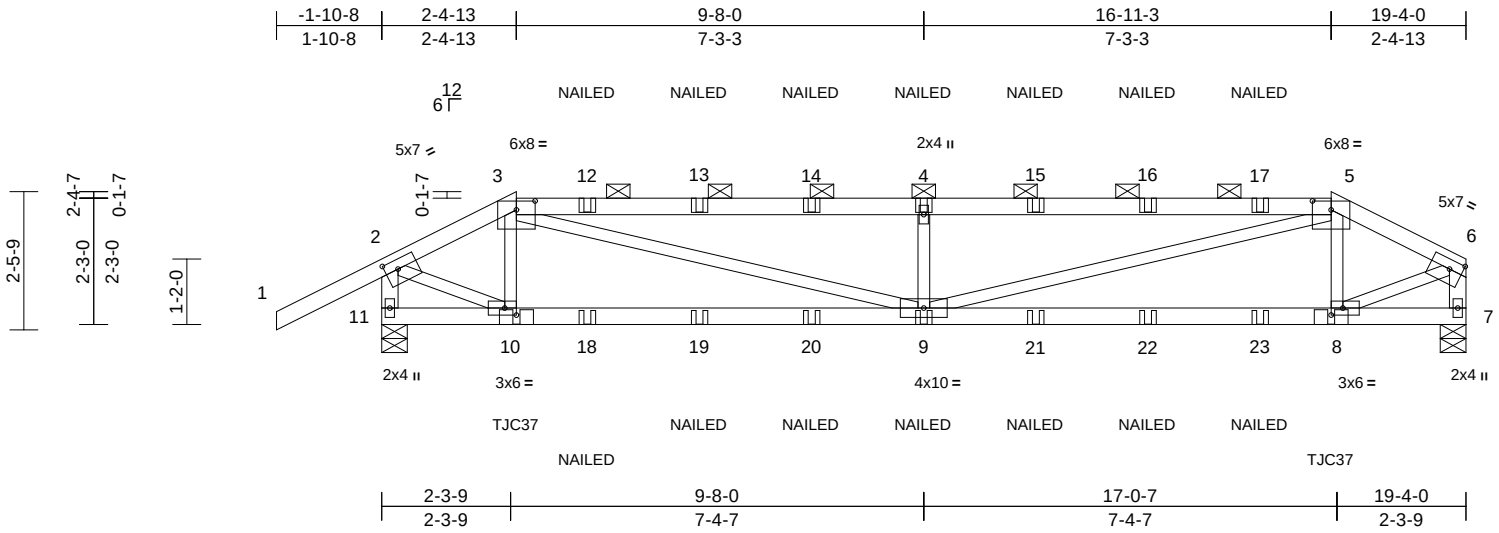
Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	A1	Hip Girder	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/20/2022

I53060685

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:12 Page: 1
ID:kdGU4717SGrLQ7RzXndILfyKZdq-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDol?34zJC?



Scale = 1:41.1

Plate Offsets (X, Y): [2:0-2-12,0-2-0], [3:0-4-0,0-1-15], [5:0-4-0,0-1-15], [6:0-2-12,0-2-0], [8:0-2-8,0-1-8], [10:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.17	9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.31	8-9	>735	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	9	>999	240	Weight: 69 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x4 SPF No.2

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

REACTIONS (lb/size) 7=1008/0-5-8, 11=1164/0-5-8
Max Horiz 11=69 (LC 7)
Max Uplift 7=-323 (LC 4), 11=-342 (LC 8)
Max Grav 7=1019 (LC 17), 11=1164 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1257/401, 3-4=-3036/803, 4-5=-3036/803, 5-6=-1299/402, 2-11=-1211/322, 6-7=-1061/303
BOT CHORD 10-11=-105/42, 9-10=-390/1151, 8-9=-366/1196, 7-8=-27/0
WEBS 3-10=-424/117, 3-9=-461/1993, 4-9=-831/384, 5-9=-457/1957, 5-8=-411/119, 2-10=-376/1323, 6-8=-377/1289

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 342 lb uplift at joint 11 and 323 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Use Simpson Strong-Tie TJC37 (6 nail, 30-90) or equivalent at 2-4-13 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
10) Use Simpson Strong-Tie TJC37 (6 nail 90-150) or equivalent at 16-11-3 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
11) Fill all nail holes where hanger is in contact with lumber.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 7-11=-20
Concentrated Loads (lb)
Vert: 10=105 (F), 9=-22 (F), 4=-53 (F), 8=105 (F), 12=-53 (F), 13=-53 (F), 14=-53 (F), 15=-53 (F), 16=-53 (F), 17=-53 (F), 18=-22 (F), 19=-22 (F), 20=-22 (F), 21=-22 (F), 22=-22 (F), 23=-22 (F)

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

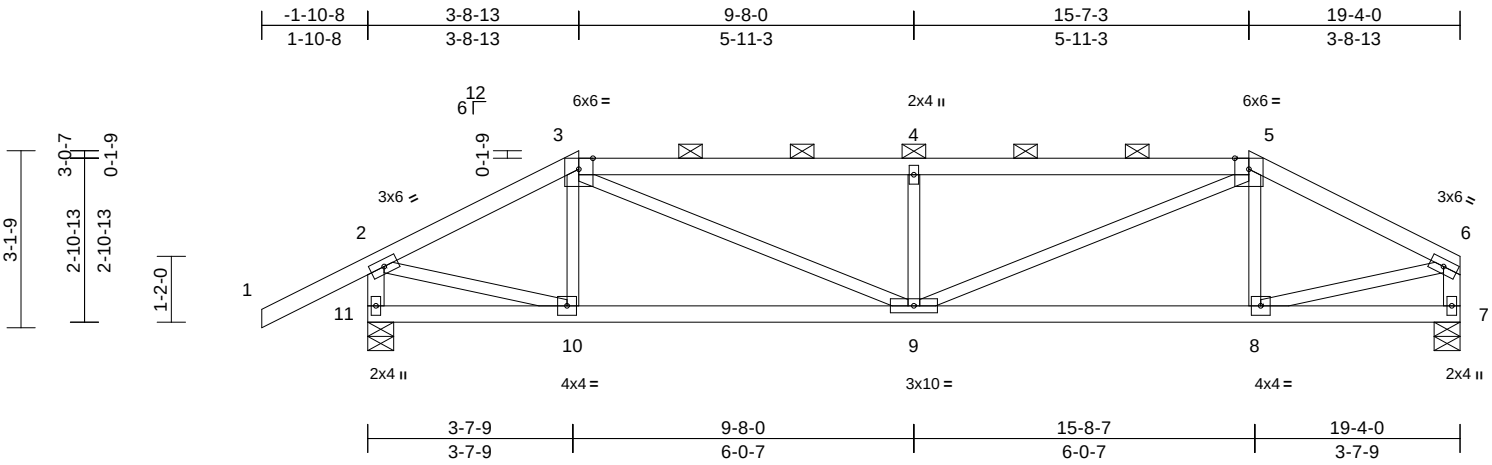
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060686
210568	A2	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:14 Page: 1
ID:Z29Bv_JY2Kk4gfiON6XhnVyKZdT-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7J4zJC?



Scale = 1:40.8

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	0.49	Vert(LL)	-0.07	9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.13	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9	>999	240	Weight: 71 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-2,7-6:2x4 SPF No.2

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

REACTIONS (lb/size) 7=849/0-5-8, 11=1006/0-5-8
Max Horiz 11=77 (LC 5)
Max Uplift 7=-95 (LC 4), 11=-110 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1091/158, 3-4=-1648/281, 4-5=-1648/281, 5-6=-1122/158, 2-11=-979/124, 6-7=-821/108
BOT CHORD 10-11=-60/60, 9-10=-154/934, 8-9=-122/970, 7-8=-30/71
WEBS 3-10=-148/92, 3-9=-173/811, 4-9=-506/203, 5-9=-169/787, 5-8=-137/92, 2-10=-119/971, 6-8=-117/925

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 11 and 95 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

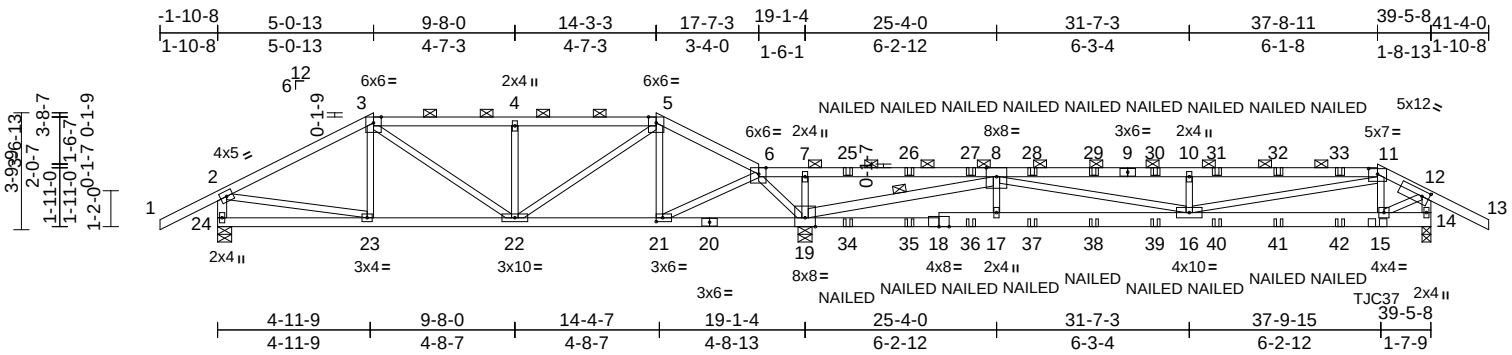
July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	A3	Roof Special Girder	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060687
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:14 Page: 1
ID:_ix1pGA4J8h?iZd11XJL9TyKZcM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J42JC?f



Scale = 1:74.9

Plate Offsets (X, Y): [6:0-2-14,Edge], [11:0-3-8,0-2-3], [12:0-2-13,0-2-4], [21:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.18	16-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.35	16-17	>700	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.72	Horz(CT)	0.03	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.18	16-17	>999	240	Weight: 155 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 18-14:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 24-2,14-12,19-8:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-11-9 max.): 3-5, 6-11.
BOT CHORD Rigid ceiling directly applied or 5-8-9 oc bracing.
WEBS 1 Row at midpt 8-19

REACTIONS (lb/size) 14=849/0-3-8, 19=2158/0-5-8, 24=838/0-5-8
Max Horiz 24=-79 (LC 6)
Max Uplift 14=-396 (LC 9), 19=-370 (LC 5), 24=-163 (LC 34)
Max Grav 14=867 (LC 17), 19=2158 (LC 1), 24=895 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-942/197, 3-4=-956/326, 4-5=-956/326, 5-6=-530/371, 6-7=-332/1665, 7-8=-335/1669, 8-10=-2293/657, 10-11=-2293/657, 11-12=-907/362, 12-13=0/63, 2-24=-847/188, 12-14=-962/384
BOT CHORD 23-24=-57/122, 22-23=-154/770, 21-22=-246/478, 19-21=-979/316, 17-19=-368/1507, 16-17=-368/1506, 15-16=-302/871, 14-15=-100/53
WEBS 3-23=-36/123, 3-22=-195/226, 4-22=-386/161, 5-22=-158/677, 5-21=-547/177, 6-21=-263/1347, 11-15=-442/67, 2-23=-158/699, 12-15=-367/1014, 7-19=-418/199, 6-19=-1040/108, 8-17=0/339, 8-19=-3266/750, 8-16=-249/817, 10-16=-502/241, 11-16=-317/1572

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 163 lb uplift at joint 24, 396 lb uplift at joint 14 and 370 lb uplift at joint 19.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Use Simpson Strong-Tie TJC37 (6 nail 90-150) or equivalent at 37-8-11 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
10) Fill all nail holes where hanger is in contact with lumber.
11) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-11=-70, 11-12=-70, 12-13=-70, 14-24=-20
Concentrated Loads (lb)
Vert: 15=157 (F), 25=-15 (F), 26=-15 (F), 27=-15 (F), 28=-15 (F), 29=-15 (F), 30=-15 (F), 31=-15 (F), 32=-15 (F), 33=-15 (F), 34=-6 (F), 35=-6 (F), 36=-6 (F), 37=-6 (F), 38=-6 (F), 39=-6 (F), 40=-6 (F), 41=-6 (F), 42=-6 (F)

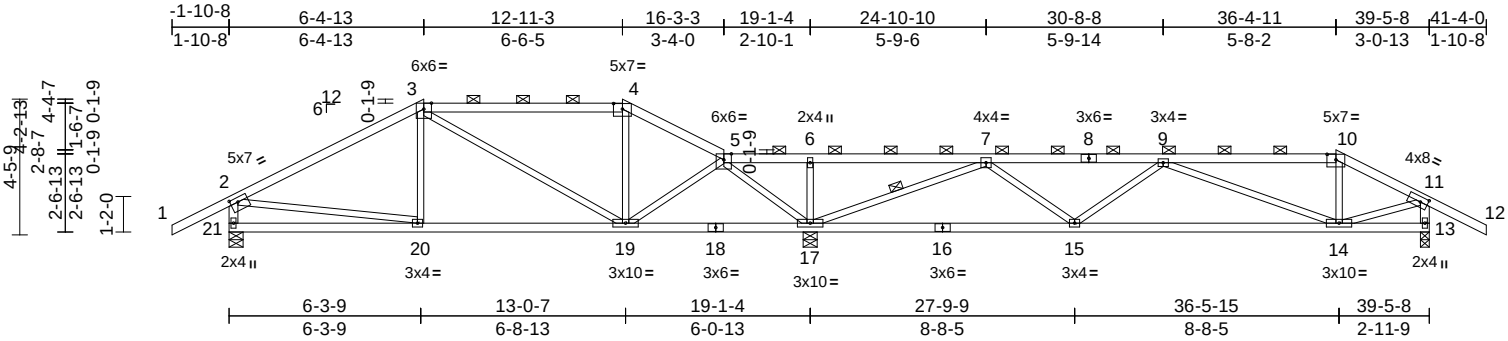
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER PE-2001018807
PROFESSIONAL ENGINEER
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060688
210568	A4	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:15 Page: 1
ID:iomDSBxfx?4HD?n5aBwa4GyKZa4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoIFJ4zJC?f



Scale = 1:75.8

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [4:0-3-8,0-2-3], [10:0-3-8,0-2-3], [11:0-2-15,0-2-0]

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	0.65	Vert(LL)	-0.11	14-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.26	14-15	>939	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.04	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	14-15	>999	240	Weight: 142 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-2,13-11:2x4 SPF No.2

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

REACTIONS (lb/size) 13=910/0-3-8, 17=2054/0-5-8, 21=844/0-5-8
Max Horiz 21=88 (LC 7)
Max Uplift 13=-196 (LC 9), 17=-290 (LC 9), 21=-128 (LC 8)
Max Grav 13=913 (LC 22), 17=2054 (LC 1), 21=865 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-895/78, 3-4=-476/110, 4-5=-528/99, 5-6=-164/1173, 6-7=-165/1172, 7-9=-1222/231, 9-10=-797/167, 10-11=-935/161, 11-12=0/63, 2-21=-809/159, 11-13=-918/190
BOT CHORD 20-21=-111/211, 19-20=-40/709, 17-19=-249/130, 15-17=-187/766, 14-15=-287/1454, 13-14=-56/19
WEBS 3-20=0/225, 3-19=-310/65, 4-19=-216/100, 5-19=-105/768, 10-14=0/217, 2-20=-67/551, 11-14=-102/901, 6-17=-353/148, 5-17=-1237/129, 7-17=-2060/427, 9-14=-709/231, 7-15=0/594, 9-15=-300/165

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 21, 196 lb uplift at joint 13 and 290 lb uplift at joint 17.
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

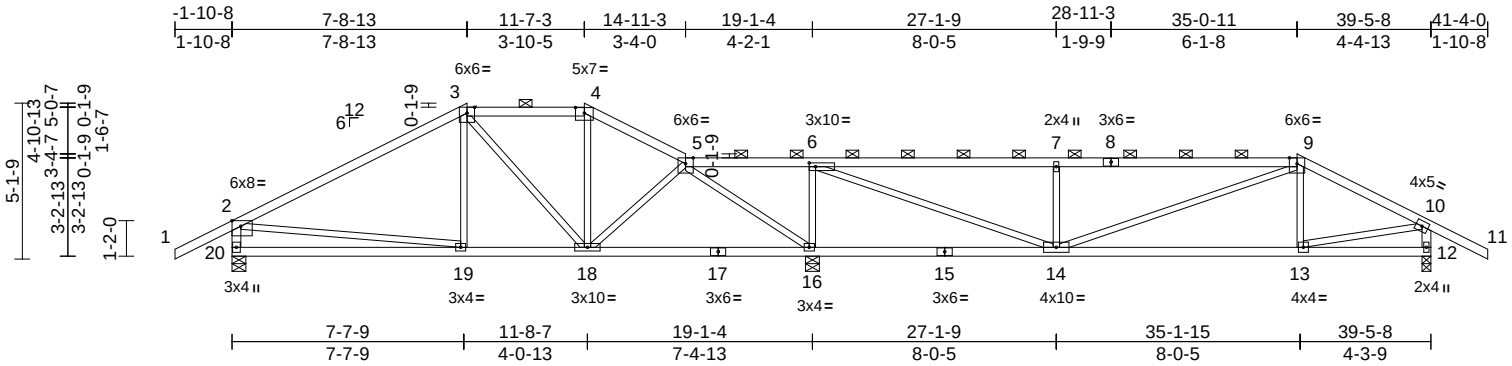
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060689
210568	A5	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:15 Page: 1
ID:E8FhNTKMA8Ecg4pR0c0JvDyKZZZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?r



Scale = 1:75.8

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

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	0.84	Vert(LL)	-0.10	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.22	13-14	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.01	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	13-14	>999	240	Weight: 147 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-2,12-10:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-5 oc purlins, except end verticals, and 2-0-0 oc purlins (3-5-10 max.): 3-4, 5-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 12=933/0-3-8, 16=2005/0-5-8, 20=869/0-5-8
Max Horiz 20=97 (LC 7)
Max Uplift 12=-200 (LC 9), 16=-295 (LC 9), 20=-140 (LC 8)
Max Grav 12=939 (LC 22), 16=2005 (LC 1), 20=869 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-849/94, 3-4=-505/97, 4-5=-613/95, 5-6=-69/706, 6-7=-1158/288, 7-9=-1158/290, 9-10=-1043/199, 10-11=0/63, 2-20=-796/182, 10-12=-914/213
BOT CHORD 19-20=-176/353, 18-19=-15/641, 16-18=-9/259, 14-16=-705/157, 13-14=-108/883, 12-13=-7/37
WEBS 3-19=0/219, 3-18=-235/63, 4-18=-59/108, 5-18=-13/349, 9-13=-61/140, 2-19=-28/325, 10-13=-114/910, 6-16=-1145/316, 7-14=-619/257, 6-14=-363/1959, 9-14=-128/294, 5-16=-1175/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 20, 200 lb uplift at joint 12 and 295 lb uplift at joint 16.
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

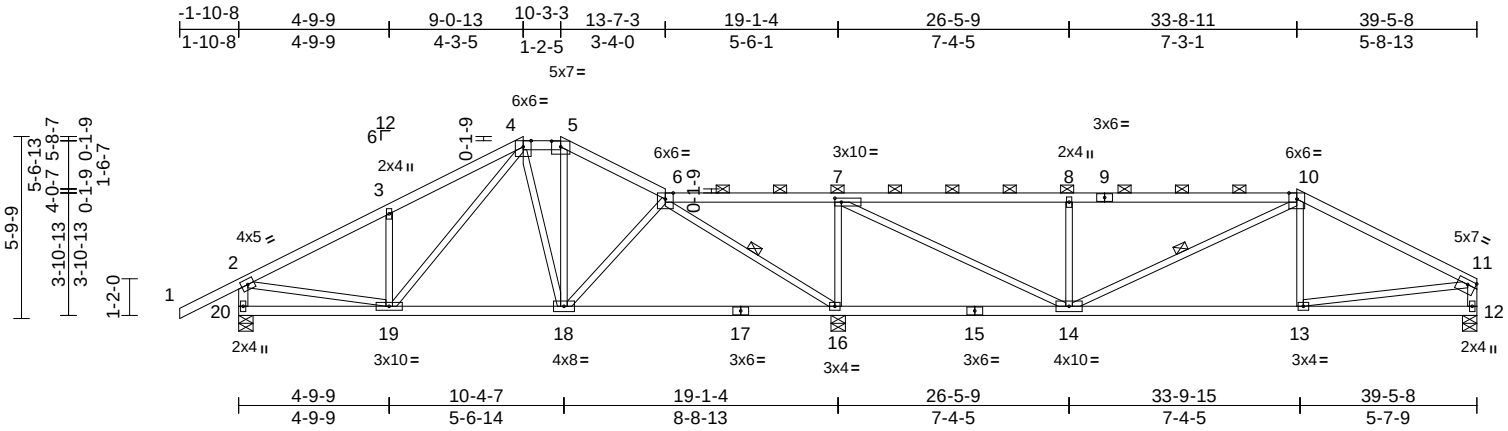
July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	A6	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060690
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:15 Page: 1
ID:46CFLy07kfPW0rgOs5YhjEyKZYg-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7S4zJC?



Scale = 1:73.4

Plate Offsets (X, Y): [5:0-3-8,0-2-3], [7:0-2-8,0-1-8], [11: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	0.67	Vert(LL)	-0.11	16-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.48	Vert(CT)	-0.22	16-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.01	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	13-14	>999	240	Weight: 151 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-2,12-11:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-2 oc purlins, except end verticals, and 2-0-0 oc purlins (5-1-5 max.): 4-5, 6-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-16.
WEBS 1 Row at midpt 10-14, 6-16

REACTIONS (lb/size) 12=779/0-5-8, 16=2025/0-5-8, 20=863/0-5-8
Max Horiz 20=112 (LC 5)
Max Uplift 12=-148 (LC 9), 16=-315 (LC 9), 20=-145 (LC 8)
Max Grav 12=791 (LC 22), 16=2025 (LC 1), 20=863 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-891/125, 3-4=-881/228, 4-5=-498/115, 5-6=-615/117, 6-7=-54/614, 7-8=-874/234, 8-10=-874/235, 10-11=-1064/203, 2-20=-814/170, 11-12=-744/173
BOT CHORD 19-20=-93/112, 18-19=-18/521, 16-18=-24/384, 14-16=-612/139, 13-14=-130/880, 12-13=-61/154
WEBS 5-18=-36/162, 6-18=0/208, 10-13=0/192, 2-19=-32/696, 11-13=-79/737, 7-16=-1186/332, 10-14=-96/3, 8-14=-555/233, 7-14=-308/1605, 6-16=-1196/146, 3-19=-310/182, 4-19=-151/346, 4-18=-155/98

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 20, 148 lb uplift at joint 12 and 315 lb uplift at joint 16.
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 14,2022

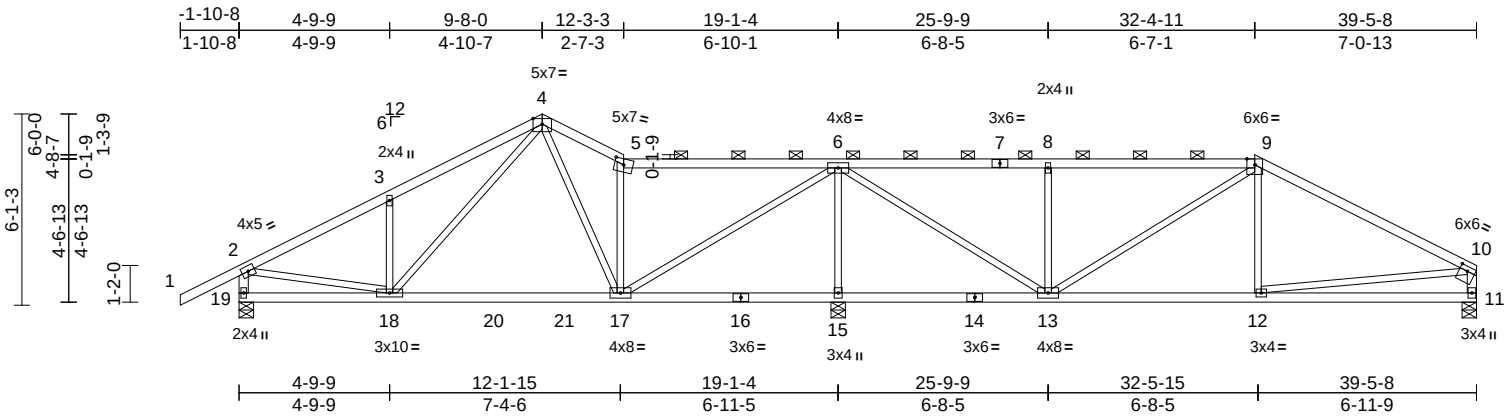
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	A7	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060691
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:17 Page: 1
ID:KTPCewMlblOmqufjsv1jjfyKZWx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J42JC?f



Scale = 1:73.5

Plate Offsets (X, Y): [5:0-3-8,0-2-4], [10: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	0.72	Vert(LL)	-0.11	17-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.20	17-18	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	12-13	>999	240	Weight: 151 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-2,11-10:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-13 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 11=791/0-5-8, 15=2000/0-5-8, 19=876/0-5-8
Max Horiz 19=116 (LC 7)
Max Uplift 11=-150 (LC 9), 15=-314 (LC 9), 19=-150 (LC 8)
Max Grav 11=819 (LC 24), 15=2081 (LC 2), 19=883 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-986/128, 3-4=-991/244, 4-5=-693/148, 5-6=-596/114, 6-8=-690/209, 8-9=-692/210, 9-10=-1049/204, 2-19=-838/168, 10-11=-739/186
BOT CHORD 18-19=-100/106, 17-18=-26/534, 15-17=-492/115, 13-15=-492/115, 12-13=-111/858, 11-12=-89/248
WEBS 4-18=-150/499, 4-17=-57/225, 5-17=-582/194, 6-17=-98/1275, 6-15=-1853/393, 6-13=-238/1361, 8-13=-473/204, 9-13=-247/31, 9-12=0/233, 2-18=-36/806, 10-12=-60/622, 3-18=-348/201

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 150 lb uplift at joint 19, 314 lb uplift at joint 15 and 150 lb uplift at joint 11.
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

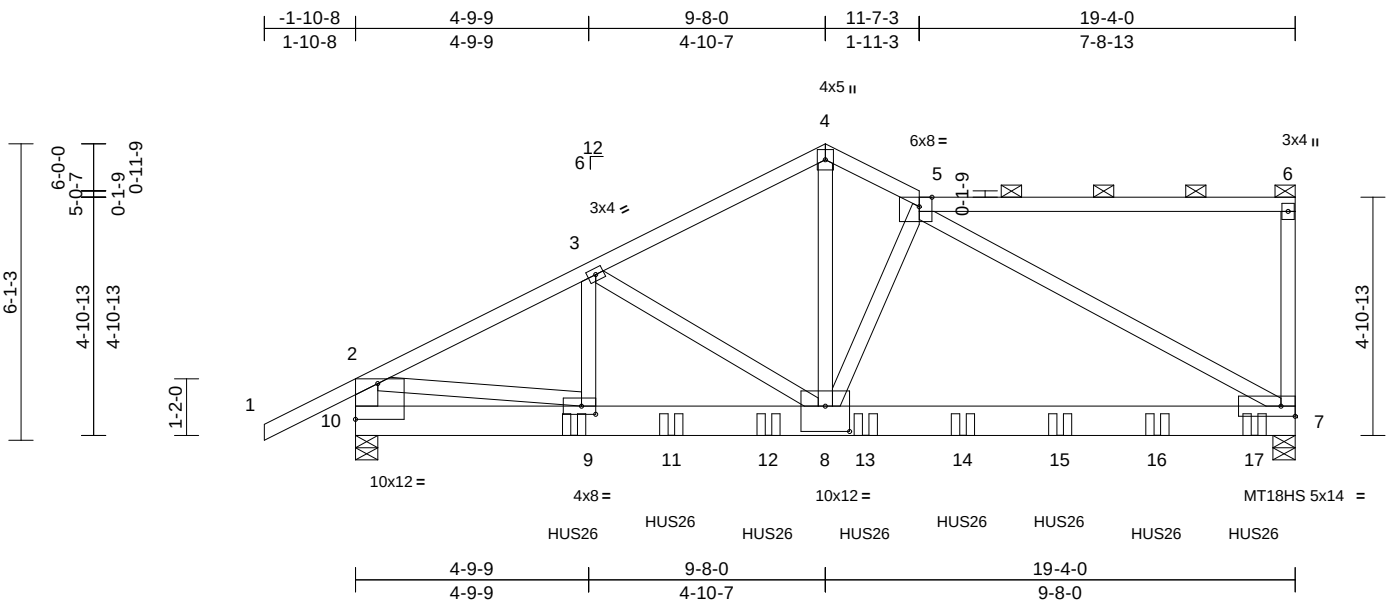
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	A8	Roof Special Girder	1	3	Job Reference (optional) I53060692

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:17 Page: 1
ID:W1LljrOUALB9gpirXIaqa2yKYyl-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J42JC?



Scale = 1:47.4

Plate Offsets (X, Y): [5:0-3-3,Edge], [8:0-6-0,0-6-4], [9:0-3-8,0-2-0], [10:Edge,0-8-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.22	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.37	7-8	>614	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.79	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	7-8	>999	240	Weight: 377 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x8 SP DSS
WEBS 2x4 SPF No.2 *Except* 10-2:2x6 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.): 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=7666/0-5-8, 10=5957/0-5-8
Max Horiz 10=215 (LC 5)
Max Uplift 7=-510 (LC 9), 10=-542 (LC 8)
Max Grav 7=8147 (LC 15), 10=5957 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/66, 2-3=-8761/744, 3-4=-8507/602, 4-5=-8588/638, 5-6=-224/57, 6-7=-285/107, 2-10=-5372/529
BOT CHORD 9-10=-281/1518, 8-9=-702/7746, 7-8=-594/7544
WEBS 2-9=-501/6410, 4-8=-494/7564, 5-8=-71/358, 5-7=-8539/626, 3-8=-482/421, 3-9=-446/368

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 510 lb uplift at joint 7 and 542 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) 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, 6-10d Truss) or equivalent at 4-6-0 from the left end to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 6-6-0 from the left end to 8-6-0 to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 10-6-0 from the left end to 18-6-0 to connect truss(es) to back face of bottom chord.
15) 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: 1-2=-70, 2-4=-70, 4-5=-70, 5-6=-70, 7-10=-20
Concentrated Loads (lb)
Vert: 9=-1960 (B), 11=-1401 (B), 12=-1401 (B), 13=-1401 (B), 14=-1401 (B), 15=-1401 (B), 16=-1401 (B), 17=-1402 (B)

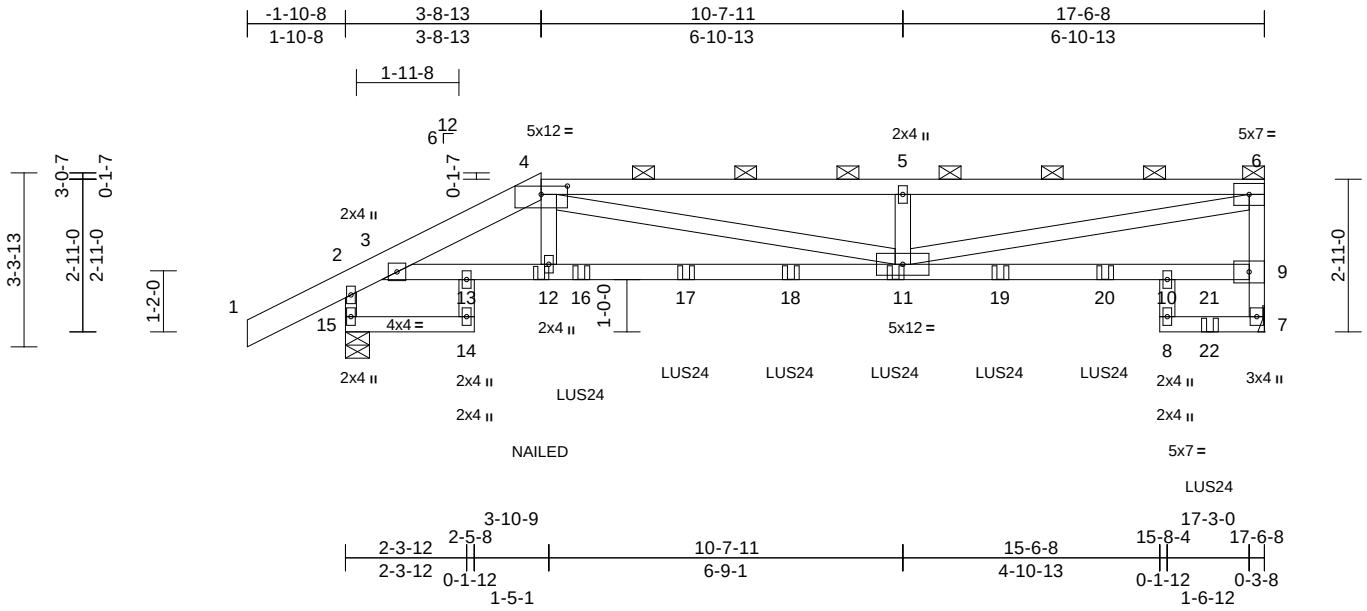
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	B1	Half Hip Girder	1	**2**	Job Reference (optional) I53060693

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:17 2022 Page: 1
ID:aRmO_Ev4yR2dJR__Rm2hshyKYdR-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDuI7J4zJC?f



Scale = 1:44

Plate Offsets (X, Y): [4:0-6-0,0-1-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.20	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.36	11-12	>580	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.57	Horz(CT)	0.14	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	11-12	>999	240	Weight: 148 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 15-2:2x3 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 (4-6-15 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=1845/ Mechanical, 15=1642/0-5-8
Max Horiz 15=68 (LC 8)
Max Uplift 7=-177 (LC 5), 15=-149 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/62, 2-3=-446/25, 3-4=-3616/427, 4-5=-4969/496, 5-6=-4969/496, 7-9=-1742/184, 6-9=-1319/161, 2-15=-1635/174
BOT CHORD 14-15=0/0, 3-13=-402/3232, 12-13=-402/3232, 11-12=-410/3303, 10-11=-34/454, 9-10=-34/454, 7-8=0/0
WEBS 13-14=0/54, 8-10=-69/14, 6-11=-475/4644, 4-12=-82/832, 5-11=-510/147, 4-11=-126/1772

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, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are 2x4 MT20 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Refer to girder(s) for truss to truss connections.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 177 lb uplift at joint 7 and 149 lb uplift at joint 15.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 4-6-0 from the left end to 16-6-0 to connect truss(es) to back face of bottom chord.
14) Fill all nail holes where hanger is in contact with lumber.
15) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.

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, 2-4=-70, 4-6=-70, 14-15=-20, 10-13=-20, 7-8=-20
Concentrated Loads (lb)
Vert: 11=-249 (B), 12=-31 (B), 16=-249 (B), 17=-249 (B), 18=-249 (B), 19=-249 (B), 20=-249 (B), 21=-269 (B)

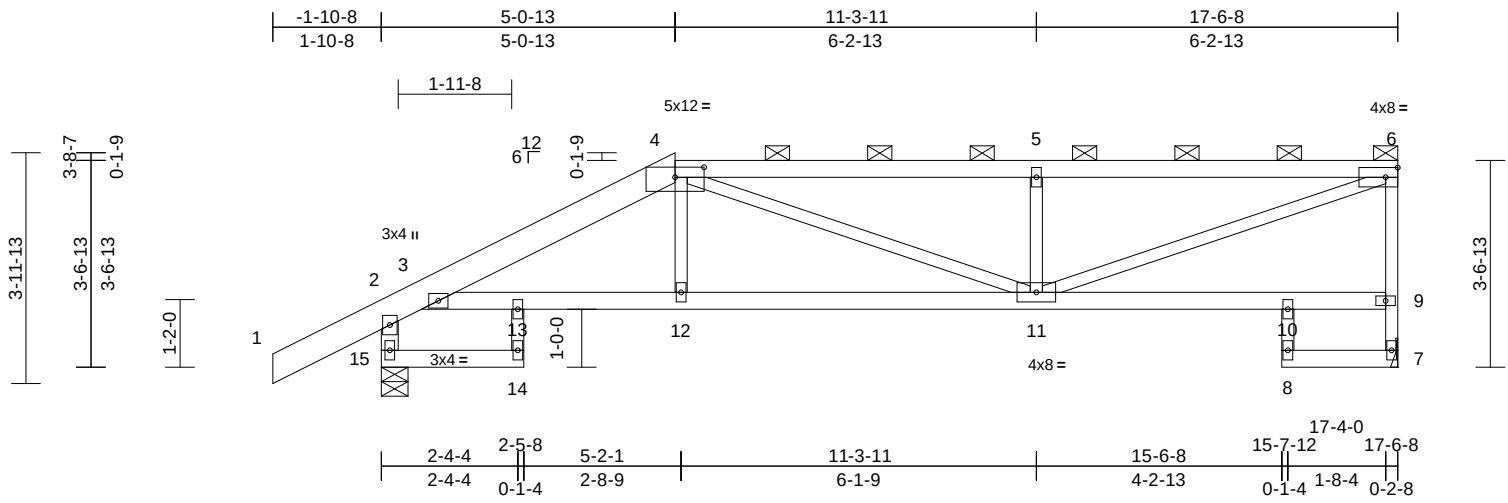
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060694
210568	B2	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:13 Page: 1
ID:YLlioUbyRy8_aiXr?5Y_PjyKYZy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4z3C?f



Scale = 1:39.8

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

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	0.51	Vert(LL)	-0.08	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.15	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.09	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	11-12	>999	240	Weight: 70 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-12 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=770/ Mechanical, 15=928/0-5-8
Max Horiz 15=120 (LC 5)
Max Uplift 7=-43 (LC 5), 15=-11 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-236/29, 3-4=-1409/61, 4-5=-1460/75, 5-6=-1459/75, 7-9=-745/54, 6-9=-704/73, 2-15=-913/30
BOT CHORD 14-15=0/0, 3-13=-115/1229, 12-13=-115/1229, 11-12=-112/1235, 10-11=-38/59, 9-10=-38/59, 7-8=0/0
WEBS 13-14=-3/47, 8-10=0/29, 6-11=-92/1494, 4-12=0/242, 5-11=-492/119, 4-11=-77/331

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 7 and 11 lb uplift at joint 15.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 14,2022

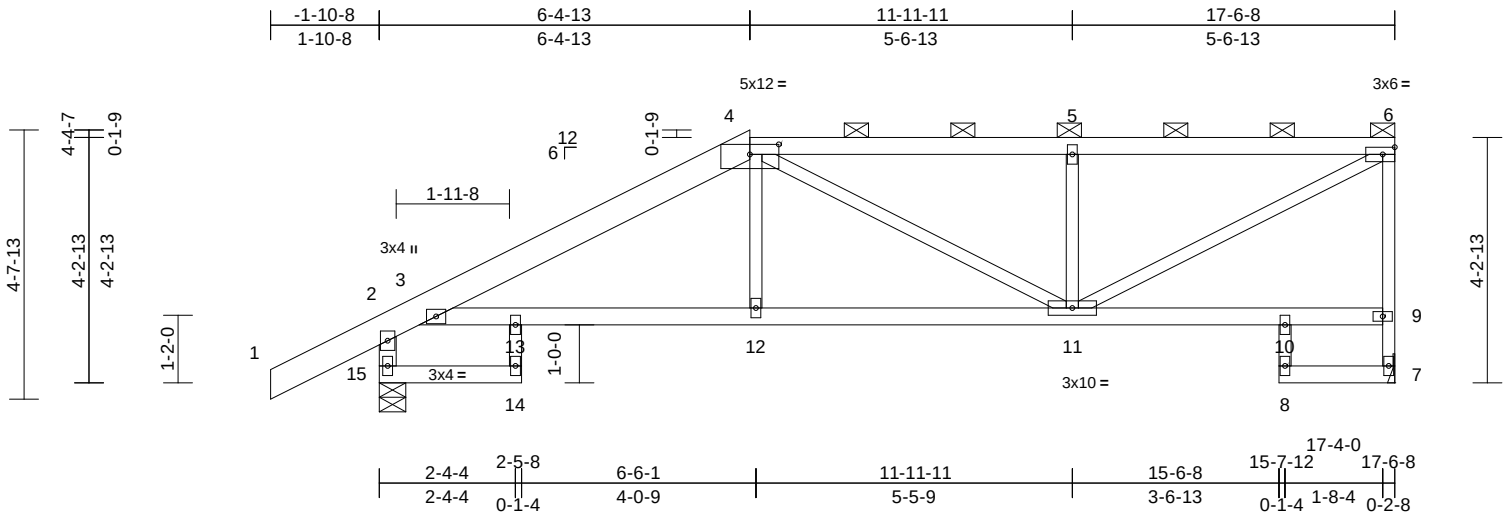
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	B3	Half Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060695
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:13 Page: 1
ID:HE8A8r_X2Uy1i_5i2zbBuFyKYWt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7542JC?f



Scale = 1:39.8

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

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	0.41	Vert(LL)	-0.06	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.13	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.10	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	12-13	>999	240	Weight: 72 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-8-12 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-15 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=770/ Mechanical, 15=928/0-5-8
Max Horiz 15=142 (LC 5)
Max Uplift 7=-44 (LC 5), 15=-18 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-254/30, 3-4=-1268/43, 4-5=-1054/48, 5-6=-1053/48, 7-9=-748/55, 6-9=-713/70, 2-15=-915/41
BOT CHORD 14-15=0/0, 3-13=-108/1083, 12-13=-108/1083, 11-12=-106/1089, 10-11=-55/48, 9-10=-55/48, 7-8=0/0
WEBS 13-14=-7/43, 8-10=0/32, 6-11=-72/1162, 4-12=0/252, 5-11=-442/107, 4-11=-89/86

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 7 and 18 lb uplift at joint 15.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

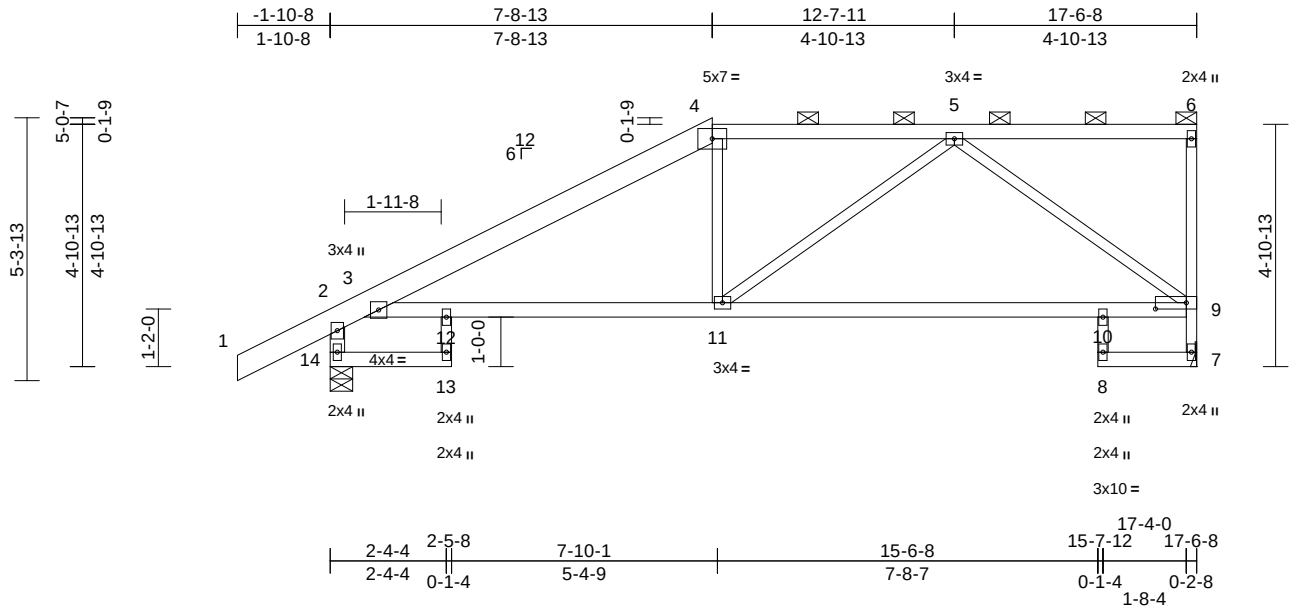
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060696
210568	B4	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:19 Page: 1
ID:WKqit_7VvMoh_QHnYjHDi4yKYVP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiYJ4z5C?f



Scale = 1:46.6

Plate Offsets (X, Y): [9:0-7-8,0-1-8]

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	0.68	Vert(LL)	-0.21	10-11	>996	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.42	10-11	>497	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.18	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	11-12	>999	240	Weight: 72 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-5-5 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-14 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=770/ Mechanical, 14=928/0-5-8
Max Horiz 14=164 (LC 5)
Max Uplift 7=-45 (LC 5), 14=-24 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-272/31, 3-4=-1167/5, 4-5=-977/26, 5-6=-66/17, 7-9=-744/60, 6-9=-144/31, 2-14=-920/50
BOT CHORD 13-14=0/0, 3-12=-86/975, 11-12=-86/975, 10-11=-115/750, 9-10=-115/750, 7-8=0/0
WEBS 12-13=-10/46, 8-10=0/22, 4-11=0/201, 5-11=0/332, 5-9=-899/115

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 7 and 24 lb uplift at joint 14.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

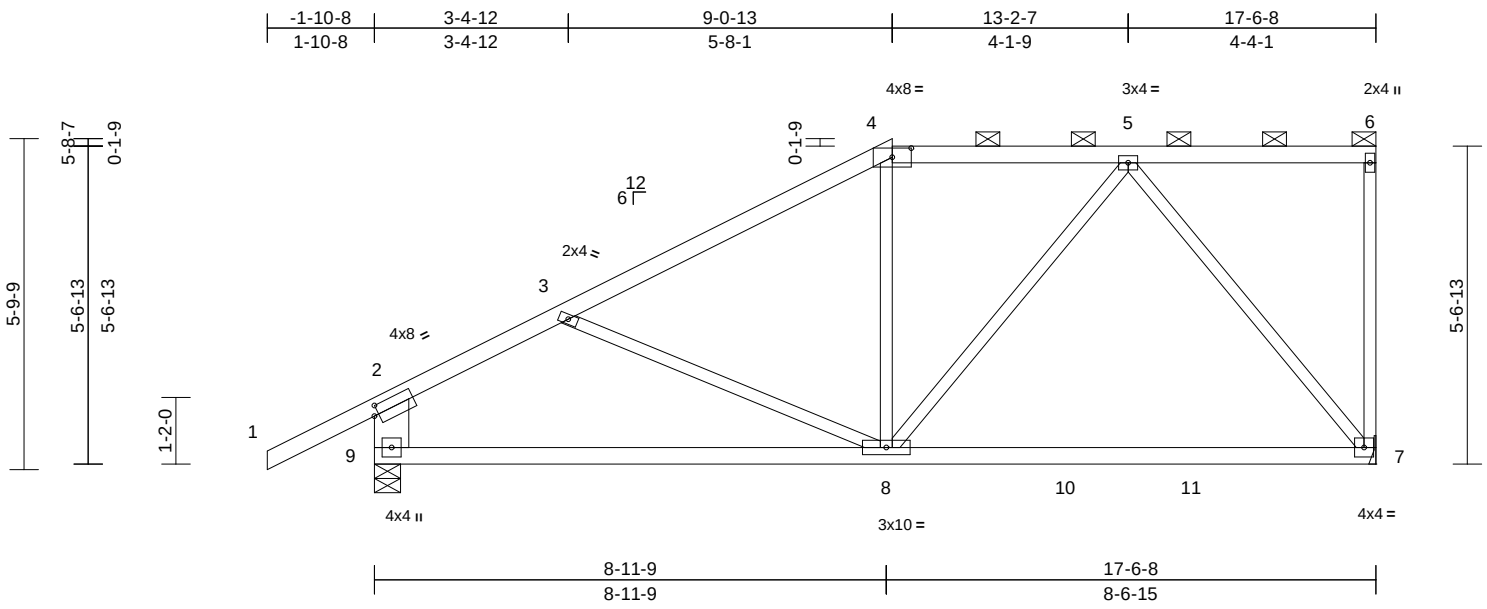
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060697
210568	B5	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:19 Page: 1
ID:bUmpaxWZNBq9qLjwQRrk?qyKYUv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?f



Scale = 1:40.4

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [4:0-4-0,0-1-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.21	7-8	>972	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.36	7-8	>566	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	7-8	>999	240	Weight: 70 lb	FT = 10%

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

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

REACTIONS (lb/size) 7=761/ Mechanical, 9=933/0-5-8
Max Horiz 9=186 (LC 5)
Max Uplift 7=-46 (LC 5), 9=-30 (LC 8)
Max Grav 7=809 (LC 2), 9=934 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-914/56, 3-4=-838/12, 4-5=-711/38, 5-6=-71/46, 6-7=-126/34, 2-9=-843/74
BOT CHORD 8-9=-137/706, 7-8=-80/467
WEBS 3-8=-29/115, 4-8=-48/133, 5-8=0/406, 5-7=-723/80

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 7 and 30 lb uplift at joint 9.
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

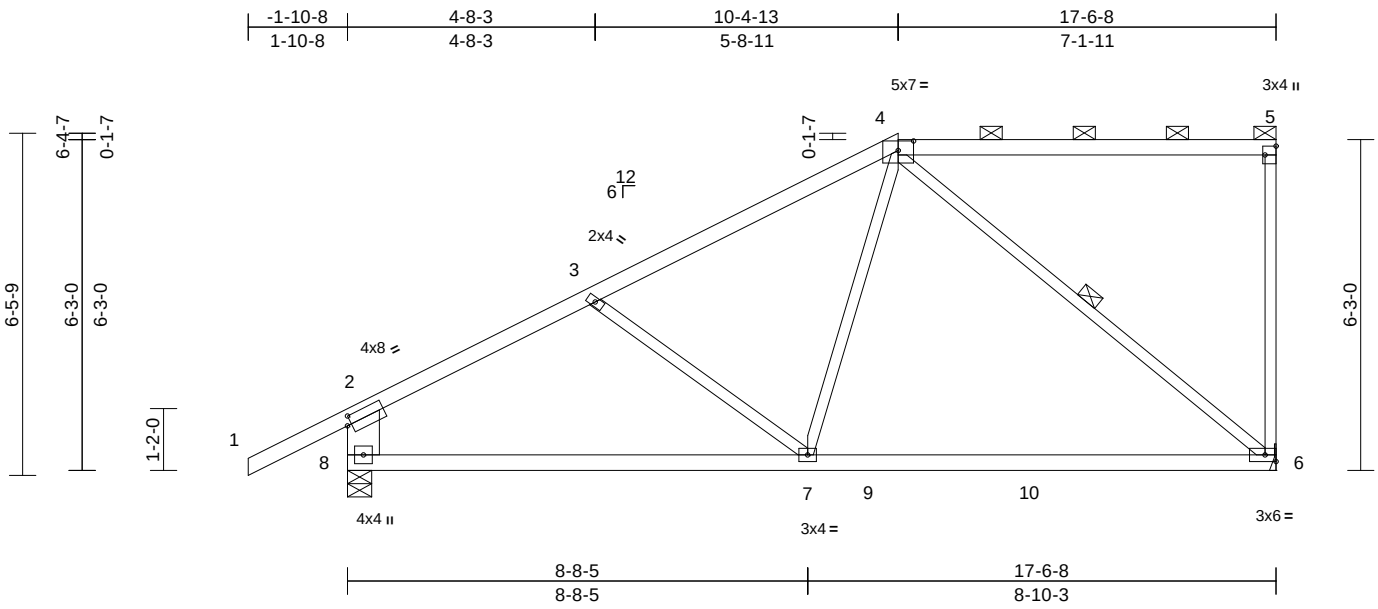
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060698
210568	B6	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:19 Page: 1
ID:jod?0pHiIsu3VAcEAt?kbKyKYTv-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J42JC?f



Scale = 1:43.5

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [4:0-3-8,0-2-3], [5: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	0.96	Vert(LL)	-0.26	6-7	>795	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.45	6-7	>456	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	6-7	>999	240	Weight: 67 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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

REACTIONS (lb/size) 6=761/ Mechanical, 8=933/0-5-8
Max Horiz 8=209 (LC 5)
Max Uplift 6=-48 (LC 5), 8=-34 (LC 8)
Max Grav 6=814 (LC 2), 8=942 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-973/54, 3-4=-820/29, 4-5=-78/55, 5-6=-233/60, 2-8=-840/76
BOT CHORD 7-8=-127/775, 6-7=-81/587
WEBS 3-7=-124/124, 4-7=0/434, 4-6=-745/58

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 6 and 34 lb uplift at joint 8.
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

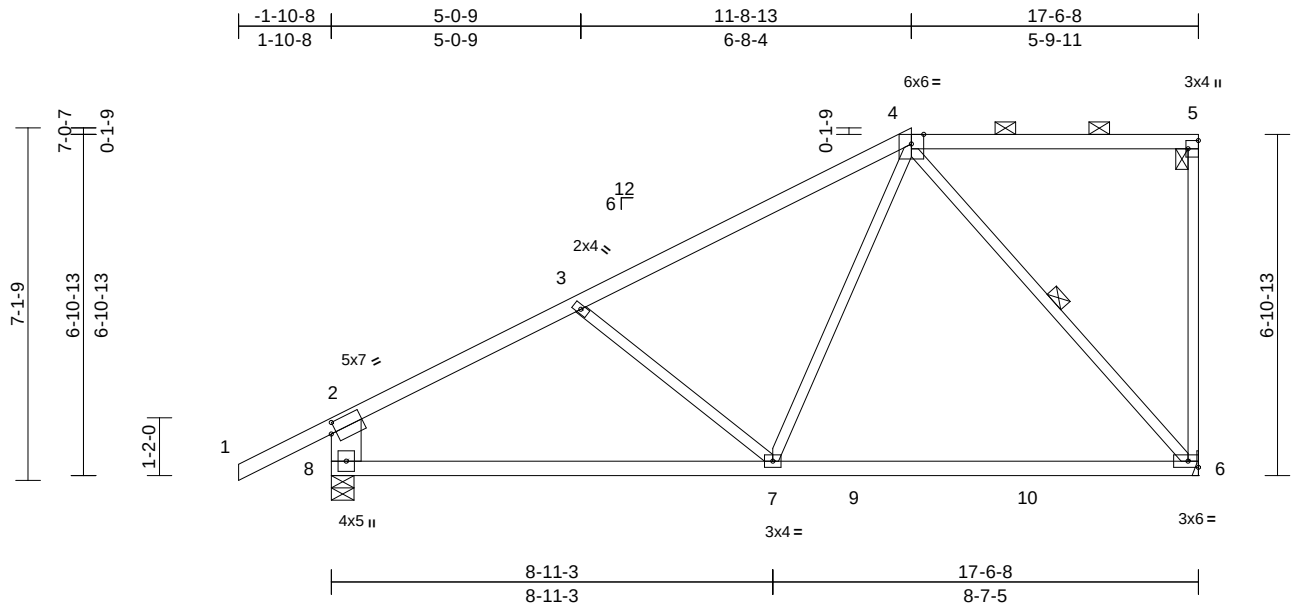
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060699
210568	B7	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:20 Page: 1
ID:Q_mCh2cex9IEEKAQF2_3B0yKYTU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?Y



Scale = 1:46.6

Plate Offsets (X, Y): [2:0-1-4,0-2-8], [5: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	0.94	Vert(LL)	-0.26	6-7	>779	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.44	6-7	>468	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	6-7	>999	240	Weight: 69 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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

REACTIONS (lb/size) 6=761/ Mechanical, 8=933/0-5-8
Max Horiz 8=230 (LC 5)
Max Uplift 6=-49 (LC 5), 8=-36 (LC 8)
Max Grav 6=822 (LC 2), 8=941 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-991/62, 3-4=-797/41, 4-5=-85/60, 5-6=-187/53, 2-8=-834/80
BOT CHORD 7-8=-134/809, 6-7=-83/478
WEBS 3-7=-222/142, 4-7=0/509, 4-6=-702/66

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 6 and 36 lb uplift at joint 8.
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

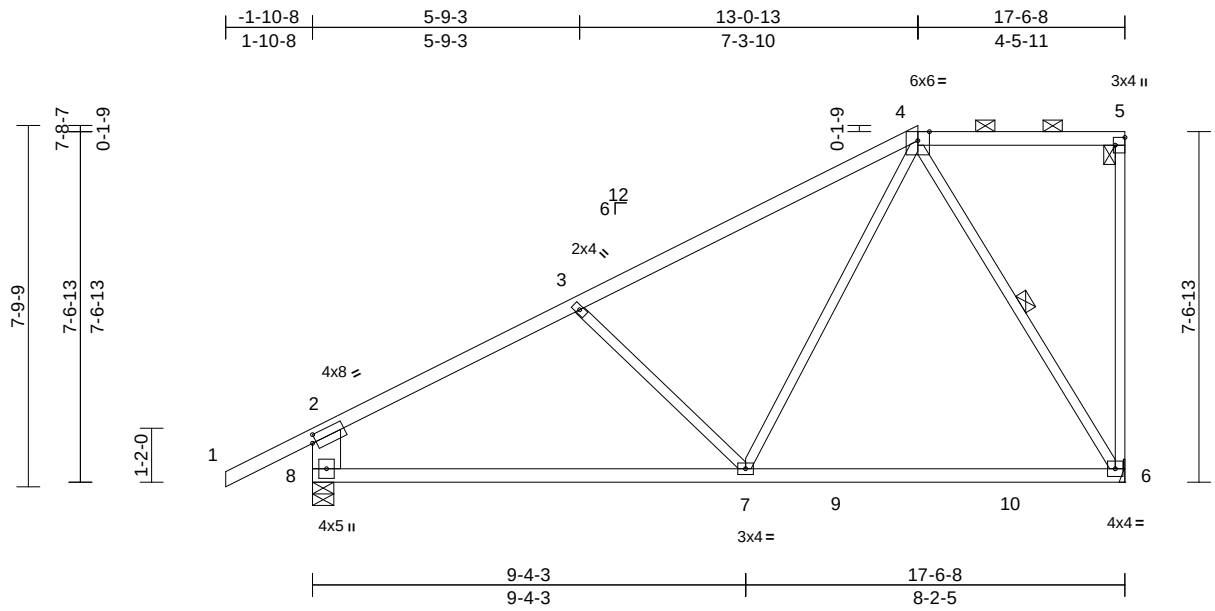
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060700
210568	B8	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:20 Page: 1
ID:f_K18xwyp8ZYMKAPnVSAEVyKYT4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?f



Scale = 1:49.7

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [5: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	0.77	Vert(LL)	-0.24	6-7	>863	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.38	6-7	>540	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.46	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	6-7	>999	240	Weight: 70 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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

REACTIONS (lb/size) 6=761/ Mechanical, 8=933/0-5-8
Max Horiz 8=252 (LC 5)
Max Uplift 6=-51 (LC 5), 8=-36 (LC 8)
Max Grav 6=827 (LC 2), 8=940 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-990/65, 3-4=-773/55, 4-5=-92/67, 5-6=-138/47, 2-8=-828/84
BOT CHORD 7-8=-135/822, 6-7=-81/377
WEBS 3-7=-306/155, 4-7=0/594, 4-6=-689/74

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 6 and 36 lb uplift at joint 8.
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

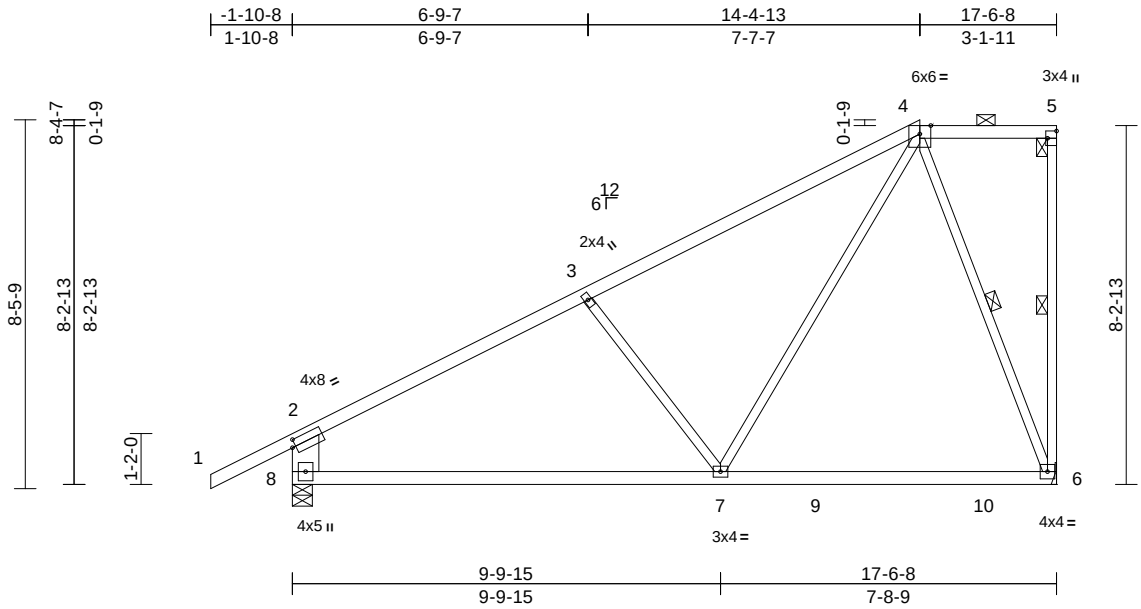
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060701
210568	B9	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:20 Page: 1
ID:JZa?DsH8_2DRLnt__5TzvcyKYSd-RfC?PsB70Hq3NSgPqnL8w3uITXbGhWrCDoi794zJC?1



Scale = 1:52.9

Plate Offsets (X, Y): [2:0-1-0,0-2-0], [5: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	0.76	Vert(LL)	-0.20	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.34	7-8	>603	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	6-7	>999	240	Weight: 71 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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

REACTIONS (lb/size) 6=761/ Mechanical, 8=933/0-5-8
Max Horiz 8=274 (LC 5)
Max Uplift 6=-52 (LC 5), 8=-35 (LC 8)
Max Grav 6=831 (LC 2), 8=937 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-981/62, 3-4=-772/73, 4-5=-100/73, 5-6=-87/47, 2-8=-823/88
BOT CHORD 7-8=-131/809, 6-7=-78/277
WEBS 3-7=-376/167, 4-7=-25/694, 4-6=-715/86

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 6 and 35 lb uplift at joint 8.
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

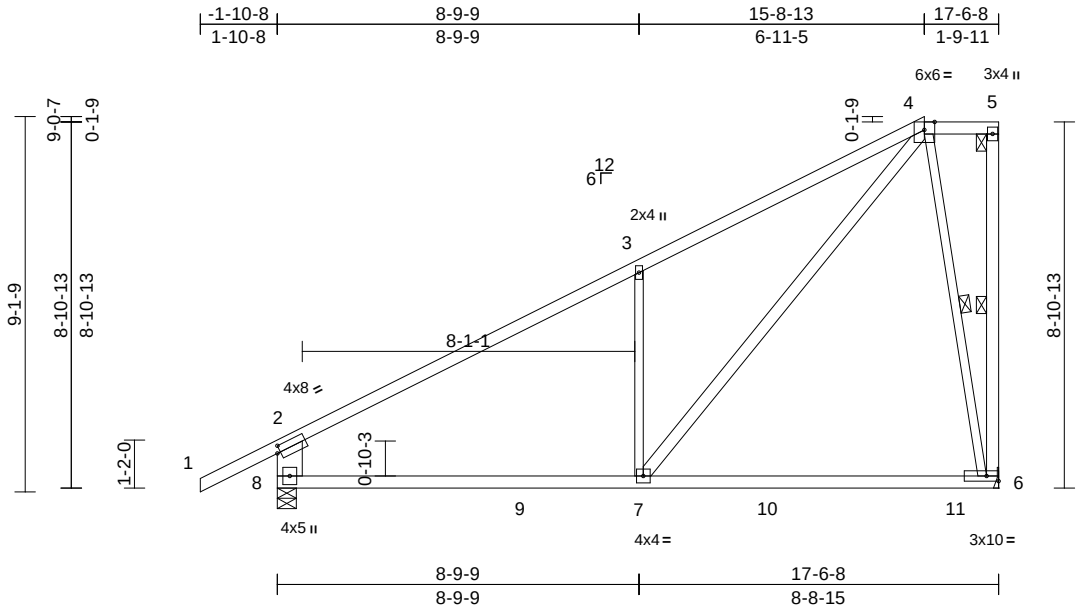
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060702
210568	B10	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:21 2022 Page: 1
ID:gLzA_?yGoGHU3O9lGsT5BQyKYRI-RfC?PsB70Hq3NSgPqnL8w3uITXb0KWrCDofJ42JC?P



Scale = 1:56

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

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	0.76	Vert(LL)	-0.29	6-7	>705	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.47	6-7	>434	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.06	6-7	>999	240	Weight: 80 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-3,6-4:2x3 SPF No.2, 8-2:2x8 SP DSS

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.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-6, 4-6

REACTIONS (lb/size) 6=760/ Mechanical, 8=931/0-5-8
Max Horiz 8=296 (LC 5)
Max Uplift 6=-54 (LC 5), 8=-33 (LC 8)
Max Grav 6=865 (LC 13), 8=962 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-1027/31, 3-4=-951/162, 4-5=-114/78, 5-6=-50/56, 2-8=-838/85
BOT CHORD 7-8=-102/815, 6-7=-81/170
WEBS 3-7=-507/213, 4-7=-141/1027, 4-6=-731/121

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 54 lb uplift at joint 6 and 33 lb uplift at joint 8.
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

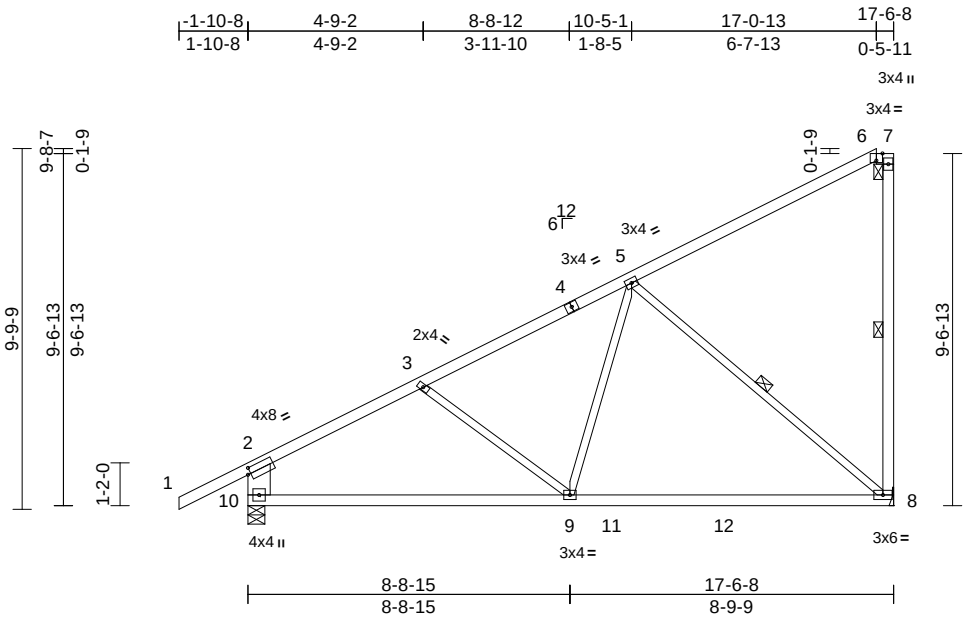
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060703
210568	B11	Half Hip	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:21 2022 Page: 1
ID:DmZMAXAd0I?9gvO9gannnjyKYQA-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDon7J42JC?f



Scale = 1:62.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.24	8-9	>859	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.41	8-9	>496	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.06	8-9	>999	240	Weight: 74 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-8:2x4 SPF No.2, 10-2:2x8 SP DSS

BRACING

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

REACTIONS (lb/size) 8=760/ Mechanical, 10=931/0-5-8
Max Horiz 10=318 (LC 5)
Max Uplift 8=-66 (LC 8), 10=-29 (LC 8)
Max Grav 8=842 (LC 13), 10=940 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-992/43, 3-5=-865/26, 5-6=-216/87, 6-7=-114/77, 7-8=-200/61, 2-10=-838/73
BOT CHORD 9-10=-156/794, 8-9=-95/640
WEBS 3-9=-96/109, 5-9=0/426, 5-8=-796/114

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 8 and 29 lb uplift at joint 10.
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

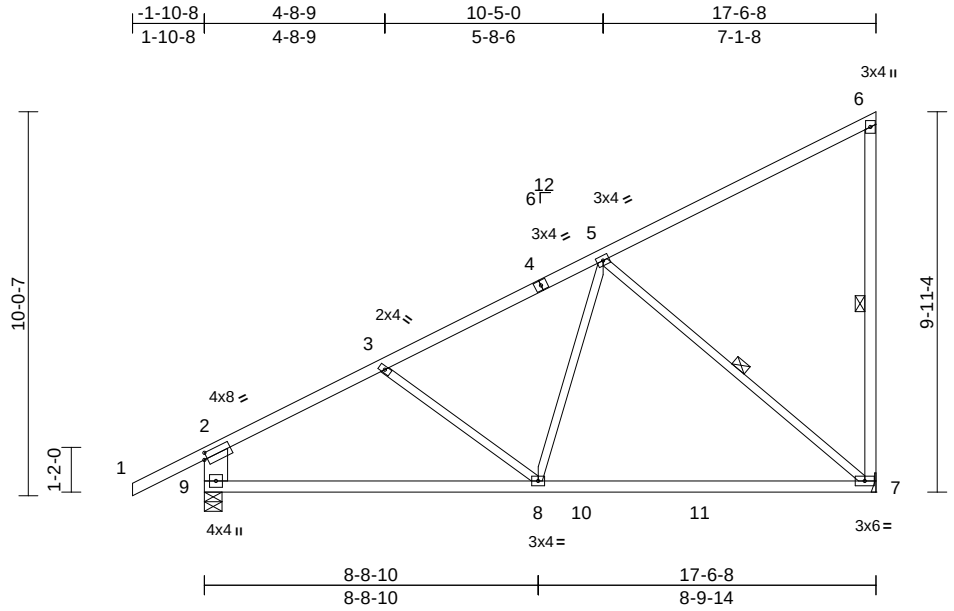
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060704
210568	B12	Monopitch	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:21 2022 Page: 1
ID:O49EnshXR?zqtlKTKA3P9HyKYQo-RfC?PsB70Hq3NSgPqnL8w3uITXbCXWrCDonJ42JC?f



Scale = 1:60.2

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

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	0.94	Vert(LL)	-0.24	7-8	>845	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.42	7-8	>488	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.62	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.07	7-8	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-4:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-2:2x8 SP DSS, 6-7:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 5-7

REACTIONS (lb/size) 7=760/ Mechanical, 9=931/0-5-8
Max Horiz 9=328 (LC 5)
Max Uplift 7=-71 (LC 8), 9=-27 (LC 8)
Max Grav 7=848 (LC 13), 9=940 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-9=-838/72, 1-2=0/68, 2-3=-998/40, 3-5=-875/24, 5-6=-224/90, 6-7=-198/64
BOT CHORD 8-9=-160/794, 7-8=-95/641
WEBS 3-8=-93/108, 5-8=0/426, 5-7=-799/119

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 9 and 71 lb uplift at joint 7.
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

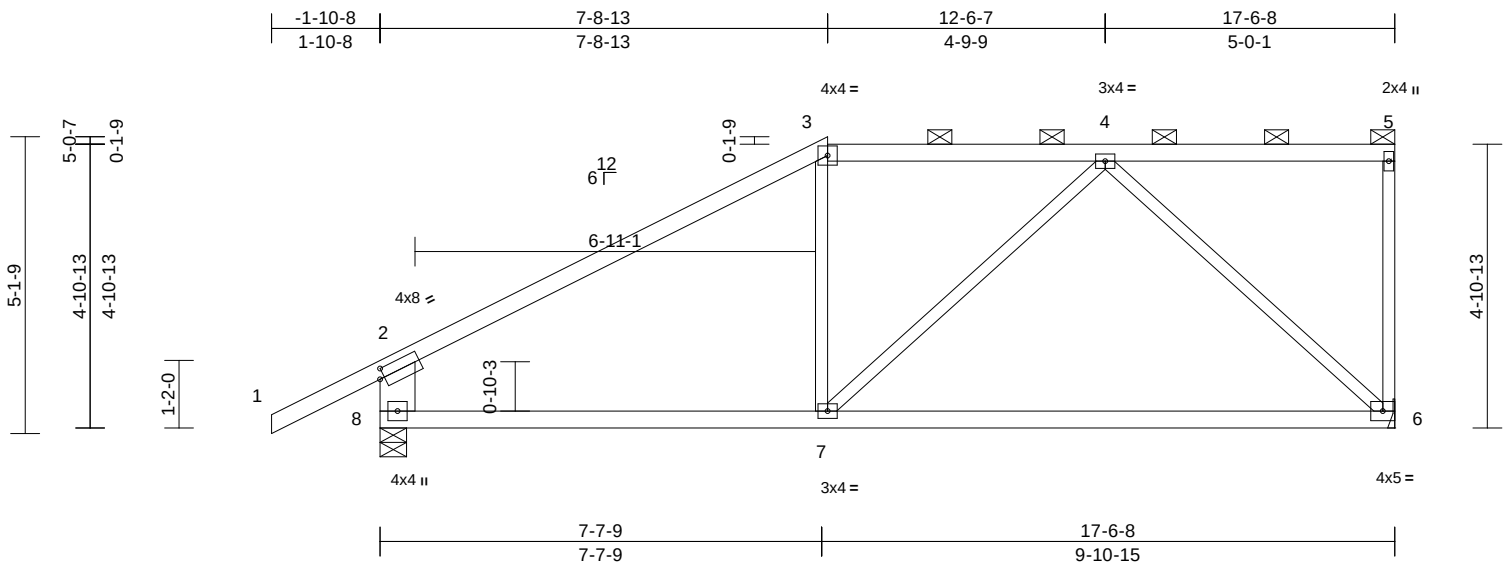
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060705
210568	B13	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:21 2022 Page: 1
ID:lf6hES_fEtSfDC?158UV_syKYP7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4ZJC?f



Scale = 1:39.8

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

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	0.75	Vert(LL)	-0.25	6-7	>822	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.53	6-7	>391	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	6-7	>999	240	Weight: 64 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 3-5:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 6=761/ Mechanical, 8=933/0-5-8
Max Horiz 8=165 (LC 5)
Max Uplift 6=-45 (LC 5), 8=-26 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-944/0, 3-4=-712/34, 4-5=-67/38, 5-6=-141/35, 2-8=-847/71
BOT CHORD 7-8=-67/711, 6-7=-94/578
WEBS 3-7=0/208, 4-7=0/246, 4-6=-771/96

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 6 and 26 lb uplift at joint 8.
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

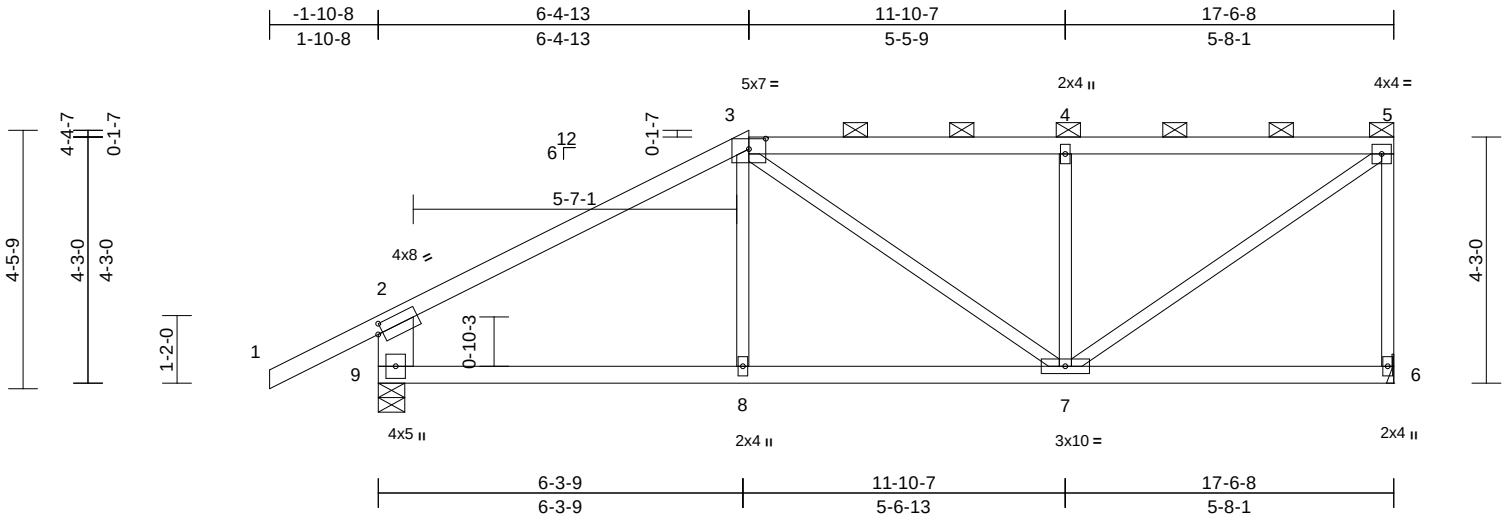
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060706
210568	B14	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:22 Page: 1
ID:ibIIolQElx_YXkmyCi7xSRyKYOZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVfrCDoi7J42JC?I



Scale = 1:39.8

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

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	0.72	Vert(LL)	-0.11	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.20	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	7-8	>999	240	Weight: 66 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 3-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-2:2x8 SP DSS

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.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 6=761/ Mechanical, 9=933/0-5-8
Max Horiz 9=143 (LC 5)
Max Uplift 6=-44 (LC 5), 9=-19 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/68, 2-3=-945/16, 3-4=-800/40, 4-5=-798/39, 5-6=-716/69, 2-9=-826/63
BOT CHORD 8-9=-80/722, 7-8=-81/721, 6-7=-44/35
WEBS 5-7=-58/963, 3-8=0/190, 3-7=-58/183, 4-7=-481/106

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 44 lb uplift at joint 6 and 19 lb uplift at joint 9.
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.

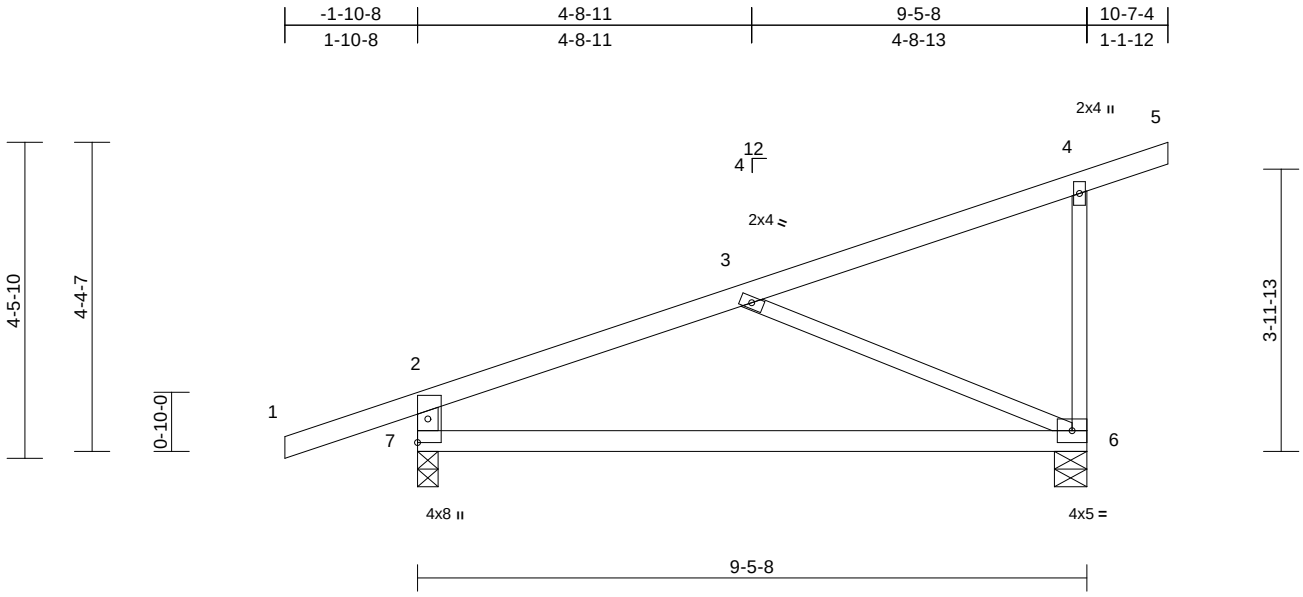
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060707
210568	C1	Monopitch	6	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:22 Page: 1
ID:uZAMr1QZCumVB?PgEizMabyKZLE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:32.6

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	0.42	Vert(LL)	-0.22	6-7	>507	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.42	6-7	>261	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.02	6-7	>999	240	Weight: 33 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 SPF No.2

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

REACTIONS (lb/size) 6=492/0-5-8, 7=565/0-3-8
Max Horiz 7=191 (LC 5)
Max Uplift 6=-124 (LC 8), 7=-150 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-478/119, 3-4=-120/34, 4-5=-28/0, 4-6=-251/105, 2-7=-462/205
BOT CHORD 6-7=-136/397
WEBS 3-6=-411/192

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 6 and 150 lb uplift at joint 7.
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

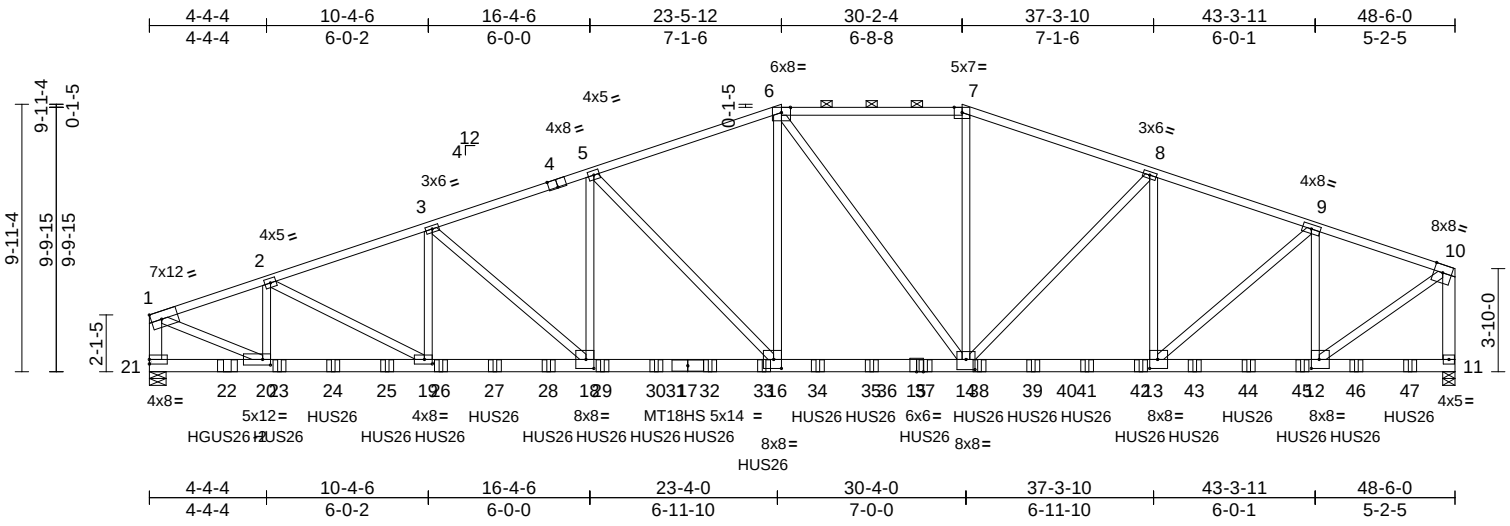
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060708
210568	D1	Hip Girder	1	3	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:23 Page: 1
ID:dyV3lxz1lzuzBmfGtkueqEyKYK_-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVfrCDoi7J4zJC?f



Scale = 1:85.6

Plate Offsets (X, Y): [4:0-4-0,Edge], [12:0-3-8,0-4-0], [13:0-3-8,0-4-0], [14:0-4-0,0-4-8], [16:0-3-8,0-4-0], [18:0-3-8,0-4-0], [19:0-3-8,0-2-0], [20:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.36	16-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.62	16-18	>924	240	MT18HS	244/190
BCLL	0.0*	Rep Stress Incr	NO	WB	1.00	Horz(CT)	0.14	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.20	16-18	>999	240	Weight: 902 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 21-1,11-10:2x6 SPF No.2, 1-20:2x4 SPF 2100F 1.8E

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.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 11=10953/0-5-8, (req. 0-6-2), 21=11519/0-7-8
Max Horiz 21=73 (LC 18)
Max Uplift 11=-840 (LC 5), 21=-915 (LC 4)
Max Grav 11=11736 (LC 15), 21=11997 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-15635/1186, 2-3=-19974/1496, 3-5=-19461/1481, 5-6=-16567/1308, 6-7=-14631/1161, 7-8=-15536/1213, 8-9=-15413/1148, 9-10=-11175/803, 1-21=-11345/869, 10-11=-11053/811
BOT CHORD 20-21=-91/451, 19-20=-1129/14778, 18-19=-1370/18912, 16-18=-1300/18423, 14-16=-1073/15615, 13-14=-1048/14598, 12-13=-775/10566, 11-12=-38/176
WEBS 6-16=-434/6090, 6-14=-1738/176, 7-14=-298/4461, 8-14=-59/433, 8-13=-553/118, 9-13=-365/5338, 9-12=-5069/433, 10-12=-904/12749, 1-20=-1167/15643, 5-16=-3898/343, 2-20=-3778/311, 2-19=-273/4677, 3-19=-26/562, 3-18=-1030/109, 5-18=-194/3458

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 2 rows staggered at 0-4-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) WARNING: Required bearing size at joint(s) 11 greater than input bearing size.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 915 lb uplift at joint 21 and 840 lb uplift at joint 11.
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.
13) Use Simpson Strong-Tie HGUS26-2 (20-10d Girder, 6-10d Truss) or equivalent at 6-8-13 from the left end to connect truss(es) to front face of bottom chord.
14) Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 8-8-0 from the left end to 50-8-0 to connect truss(es) to front face of bottom chord.
15) 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: 1-6=-70, 6-7=-70, 7-10=-70, 11-21=-20
Concentrated Loads (lb)
Vert: 22=-1825 (F), 23=-750 (F), 24=-750 (F), 25=-750 (F), 26=-741 (F), 27=-741 (F), 28=-741 (F), 29=-741 (F), 30=-741 (F), 32=-740 (F), 33=-740 (F), 34=-740 (F), 35=-740 (F), 37=-740 (F), 38=-740 (F), 39=-740 (F), 41=-741 (F), 42=-741 (F), 43=-741 (F), 44=-741 (F), 45=-741 (F), 46=-741 (F), 47=-741 (F)

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

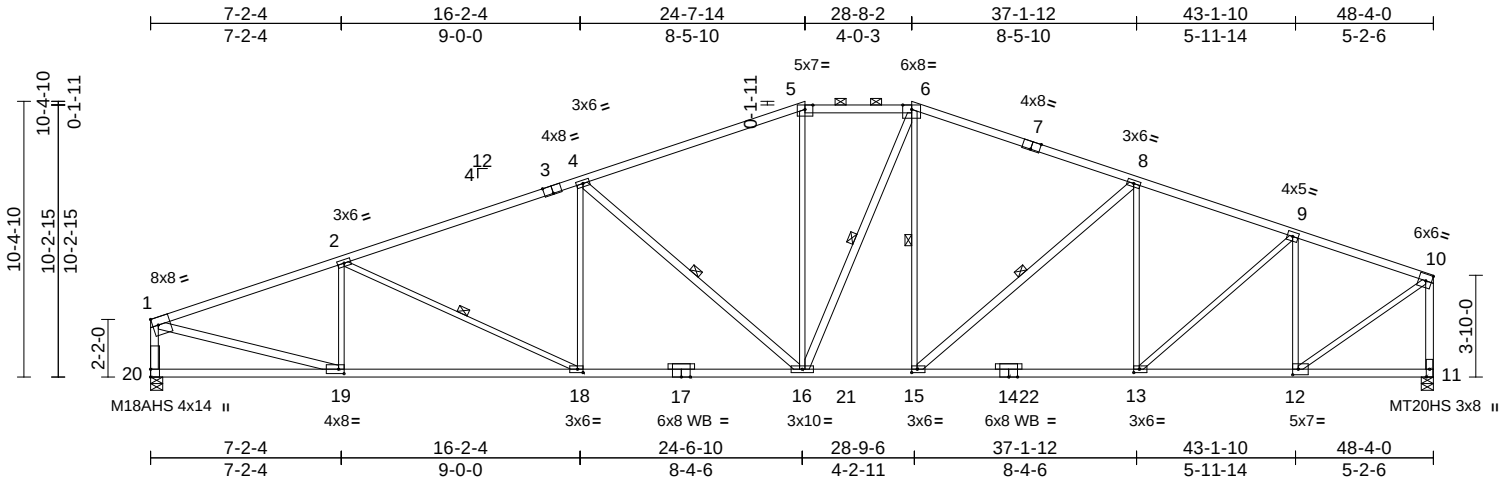
July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	D2	Hip	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060709
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:24 Page: 1
ID:XOuY7us?CH2SPyVa3gaYFjyKY9o-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDoh7J42JC?f



Scale = 1:86.8

Plate Offsets (X, Y): [1:Edge,0-3-8], [3:0-4-0,Edge], [7:0-4-0,Edge], [12:0-2-8,0-2-8], [13:0-2-8,0-1-8], [15:0-2-8,0-1-8], [18:0-2-8,0-1-8], [19:0-2-8,0-2-0]

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	0.78	Vert(LL)	-0.32	16-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.56	16-18	>999	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.14	11	n/a	n/a	MT20HS	148/108
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	16-18	>999	240	Weight: 218 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF 2100F 1.8E *Except* 5-6:2x4 SPF No.2
BOT CHORD	2x4 SPF 2100F 1.8E
WEBS	2x3 SPF No.2 *Except* 16-6,15-8,20-1,19-1,11-10,4-16:2x4 SPF No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-3-4 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-16, 6-15, 8-15, 4-16, 2-18

REACTIONS (lb/size) 11=2162/0-5-8, 20=2162/0-5-8
Max Horiz 20=83 (LC 8)
Max Uplift 11=-317 (LC 5), 20=-340 (LC 4)
Max Grav 11=2309 (LC 2), 20=2291 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-3597/540, 2-4=-3784/594, 4-5=-3060/516, 5-6=-2821/526, 6-8=-2956/481, 8-9=-3000/442, 9-10=-2175/295, 1-20=-2180/372, 10-11=-2223/340
BOT CHORD	19-20=-117/103, 18-19=-532/3360, 16-18=-466/3516, 15-16=-265/2728, 13-15=-364/2804, 12-13=-299/2023, 11-12=-48/38
WEBS	5-16=-35/596, 6-16=-147/483, 6-15=-39/410, 8-15=-270/204, 10-12=-322/2444, 1-19=-469/3375, 4-16=-957/279, 2-19=-673/229, 2-18=-12/254, 4-18=0/372, 8-13=-466/160, 9-12=-1244/255, 9-13=-100/1039

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 340 lb uplift at joint 20 and 317 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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 14,2022

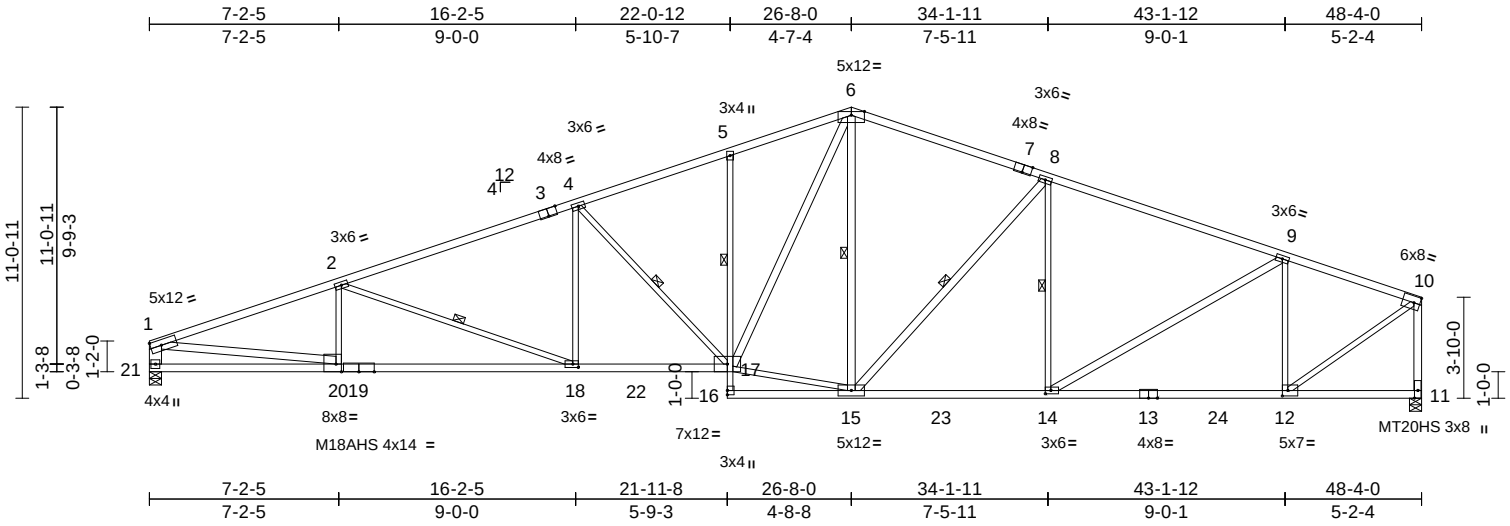
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	D3	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060710
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:24 Page: 1
ID:vWvrj5ZR?cpSqdngqnccTSyKY7b-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7547JC?P



Scale = 1:87.5

Plate Offsets (X, Y): [3:0-4-0,Edge], [7:0-4-0,Edge], [12:0-2-8,0-2-8], [14:0-2-8,0-1-8], [18:0-2-8,0-1-8], [20:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.37	18-20	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.69	18-20	>837	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.18	11	n/a	n/a	MT20HS	148/108
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.22	17-18	>999	240	Weight: 222 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 5-16:2x3 SPF No.2, 13-11:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-6,11-10,15-6,15-8,1-20,14-9:2x4 SPF No.2, 21-1:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-7-15 oc bracing. Except:
1 Row at midpt 5-17
WEBS 1 Row at midpt 6-15, 8-15, 4-17, 2-18, 8-14

REACTIONS (lb/size) 11=2158/0-5-8, 21=2158/0-5-8
Max Horiz 21=120 (LC 12)
Max Uplift 11=-299 (LC 5), 21=-327 (LC 4)
Max Grav 11=2304 (LC 2), 21=2266 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4575/662, 2-4=-4276/623, 4-5=-3569/558, 5-6=-3537/625, 6-8=-2774/469, 8-9=-3087/425, 9-10=-2217/283, 10-11=-2249/315, 1-21=-2146/358
BOT CHORD 20-21=-168/320, 18-20=-657/4287, 17-18=-501/3980, 16-17=0/73, 5-17=-328/158, 15-16=-13/99, 14-15=-319/2854, 12-14=-296/2075, 11-12=-49/37
WEBS 6-17=-355/1787, 10-12=-324/2529, 6-15=-251/233, 15-17=-183/2522, 8-15=-571/210, 4-18=0/475, 4-17=-986/242, 2-20=-364/180, 1-20=-531/4003, 2-18=-454/179, 8-14=-249/148, 9-14=-82/902, 9-12=-1215/285

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 327 lb uplift at joint 21 and 299 lb uplift at joint 11.
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

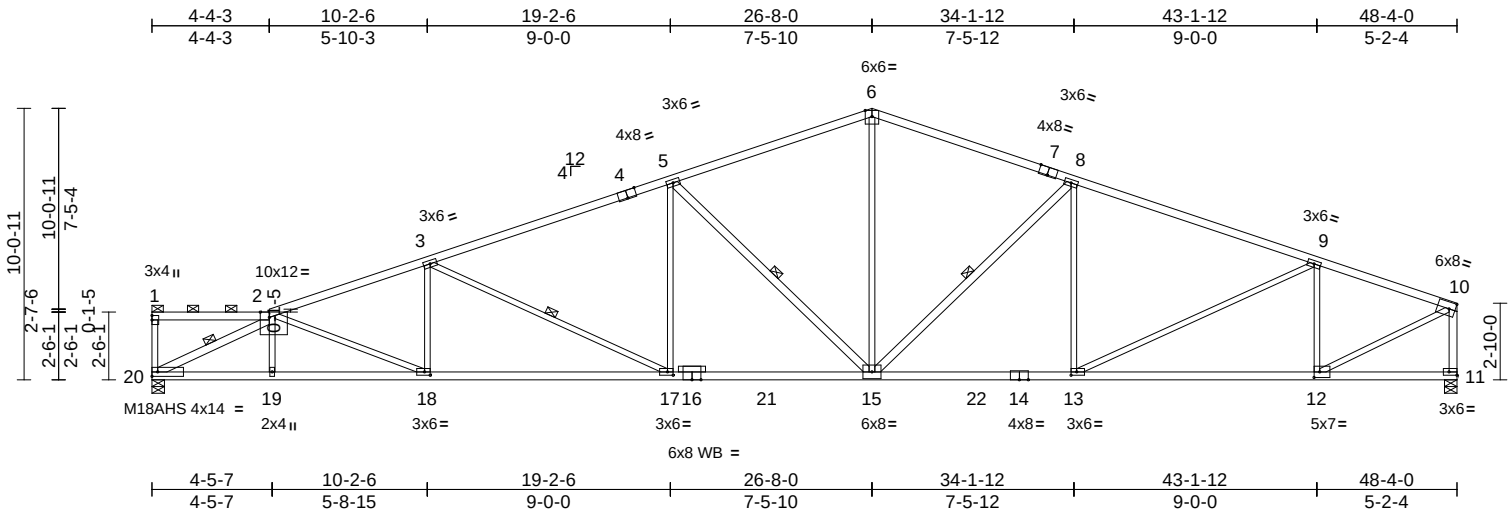
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060711
210568	D4	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:25 Page: 1
ID:zCswZJHinwoV?ss5EJuSxhyKXo0-RfC?PsB70Hq3NSgPqnL8w3uITXbGhWrCDoi794zJC?1



Scale = 1:85.3

Plate Offsets (X, Y): [2:0-4-0,Edge], [4:0-4-0,Edge], [7:0-4-0,Edge], [11:Edge,0-1-8], [12:0-2-8,0-2-8], [13:0-2-8,0-1-8], [17:0-2-8,0-1-8], [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	0.77	Vert(LL)	-0.38	17-18	>999	360	M18AHS	142/136
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.71	17-18	>809	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.20	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.22	17-18	>999	240	Weight: 199 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 1-2:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 20-2,11-10,15-8,5-15:2x4 SPF No.2
OTHERS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 9-9-15 oc bracing.
WEBS 1 Row at midpt 2-20, 8-15, 5-15, 3-17

REACTIONS (lb/size) 11=2164/0-5-8, 20=2164/0-5-8
Max Horiz 20=61 (LC 20)
Max Uplift 11=-299 (LC 5), 20=-331 (LC 4)
Max Grav 11=2283 (LC 2), 20=2272 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-20=-151/57, 1-2=-54/26, 2-3=-4660/661, 3-5=-4014/582, 5-6=-3072/474, 6-8=-3072/486, 8-9=-3496/470, 9-10=-2699/353, 10-11=-2222/314
BOT CHORD 19-20=-588/3899, 18-19=-586/3905, 17-18=-633/4382, 15-17=-444/3732, 13-15=-344/3242, 12-13=-345/2533, 11-12=-33/32
WEBS 2-20=-4376/620, 10-12=-358/2816, 2-19=0/172, 6-15=-156/1529, 8-15=-681/230, 5-15=-1277/312, 3-18=-7/211, 2-18=-54/511, 3-17=-784/216, 5-17=0/673, 8-13=-132/169, 9-13=-75/785, 9-12=-1065/262

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 331 lb uplift at joint 20 and 299 lb uplift at joint 11.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

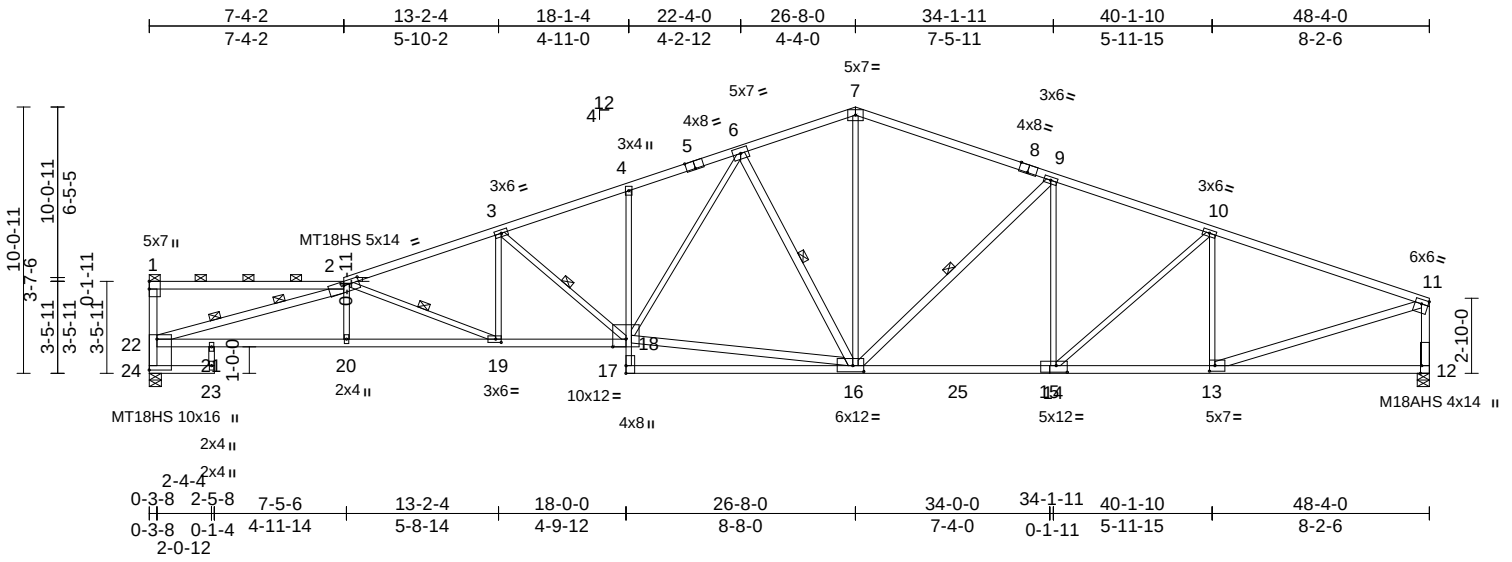
July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	D5	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060712
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:25 Page: 1
ID:0z1bmdQHhVLCUArnd407fJyKXhN-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonTJ4zJC?f



Scale = 1:87

Plate Offsets (X, Y): [2:0-7-0,0-1-15], [5:0-4-0,Edge], [8:0-4-0,Edge], [11:Edge,0-2-0], [12:0-3-8,Edge], [13:0-2-8,0-2-8], [15:0-5-0,0-3-0], [16:0-5-0,0-2-12], [19:0-2-8,0-1-8], [24:Edge,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.52	18-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.96	16-17	>599	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.36	12	n/a	n/a	M18AHS	142/136
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.36	18-19	>999	240	Weight: 221 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF 2100F 1.8E *Except* 1-2,5-7:2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 22-18,17-15:2x4 SPF 2100F 1.8E, 4-17:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 24-1,16-18,16-6,16-9,12-11,13-11:2x4 SPF No.2, 22-2:2x4 SPF 2100F 1.8E

BRACING

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

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

WEBS 1 Row at midpt 3-18, 6-16, 9-16, 2-19

WEBS 2 Rows at 1/3 pts 2-22

REACTIONS (lb/size) 12=2162/0-5-8, 24=2162/0-5-8
Max Horiz 24=-140 (LC 9)
Max Uplift 12=-293 (LC 5), 24=-331 (LC 4)
Max Grav 12=2257 (LC 2), 24=2271 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 22-24=-2202/353, 1-22=-266/105, 1-2=-207/59, 2-3=-5415/783, 3-4=-4572/681, 4-6=-4548/741, 6-7=-2984/471, 7-9=-3012/471, 9-10=-3383/479, 10-11=-3190/423, 11-12=-2122/336

BOT CHORD 23-24=0/0, 21-22=-965/6150, 20-21=-965/6150, 19-20=-961/6159, 18-19=-756/5071, 17-18=0/153, 4-18=-296/141, 16-17=-2/238, 14-16=-294/3156, 13-14=-335/2961, 12-13=-22/105

WEBS 21-23=-3/27, 2-22=-6241/890, 3-18=-1033/229, 16-18=-429/3209, 6-18=-311/1706, 6-16=-1372/349, 7-16=-174/1522, 9-16=-623/228, 9-14=-77/178, 10-14=-52/307, 2-20=0/245, 3-19=-22/658, 2-19=-1165/226, 10-13=-729/196, 11-13=-329/2999

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 331 lb uplift at joint 24 and 293 lb uplift at joint 12.
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 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060713
210568	D6	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:26 Page: 1
ID:vMZY5kJStShSM5gLrHYrSjyKXvj-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKVrCDoi7J42JC?f

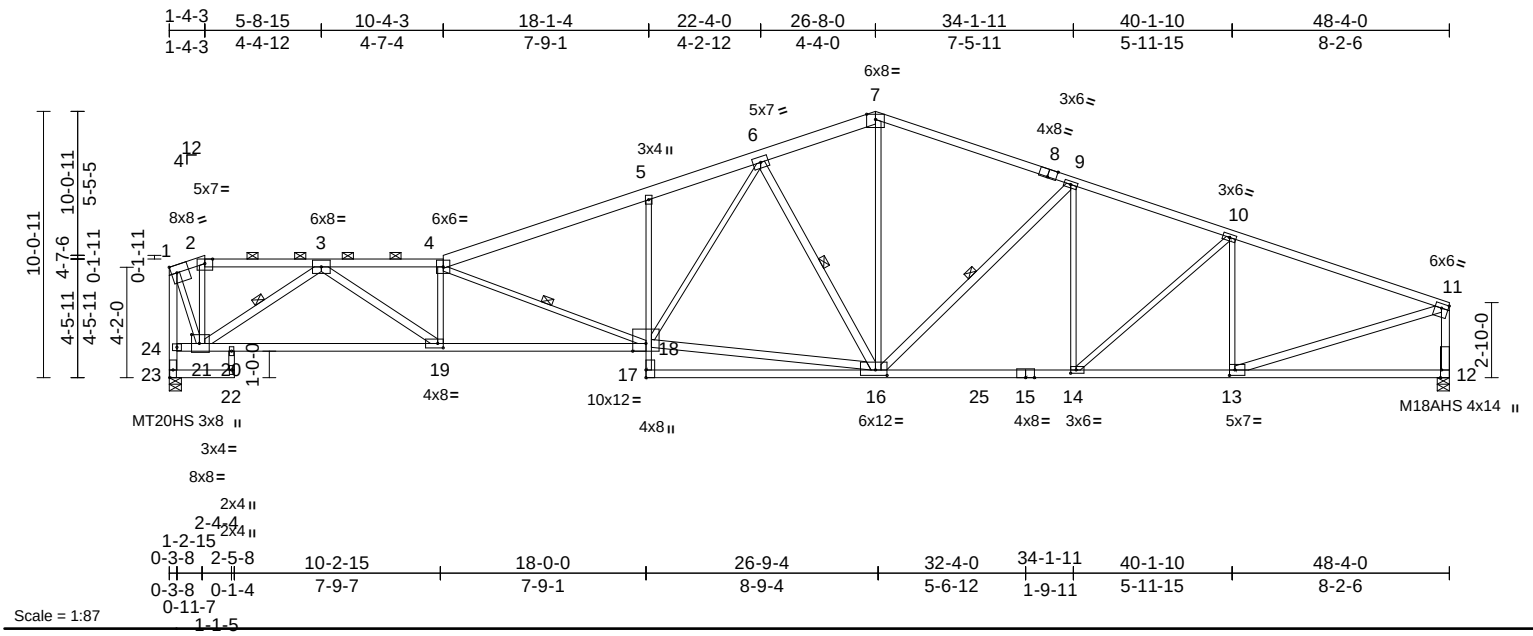


Plate Offsets (X, Y): [1:Edge,0-3-8], [8:0-4-0,Edge], [11:Edge,0-2-0], [12:0-3-8,Edge], [13:0-2-8,0-2-8], [14:0-2-8,0-1-8], [16:0-5-4,0-2-8], [19:0-2-8,0-2-0], [21:0-3-8,0-4-0]

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)	-0.49	18-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.87	18-19	>661	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.30	12	n/a	n/a	M18AHS	142/136
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.31	18-19	>999	240	Weight: 236 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 4-7:2x6 SPF No.2, 7-8,8-11:2x4 SPF 2100F 1.8E

BOT CHORD 2x4 SPF No.2 *Except* 24-18,17-15:2x4 SPF 2100F 1.8E, 5-17:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 19-3,16-18,16-6,16-9,23-1,12-11,13-11,21-3: 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-0-13 max.): 2-4.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-7-8 oc bracing: 18-19
2-2-0 oc bracing: 13-14.

WEBS 1 Row at midpt 4-18, 6-16, 9-16, 3-21

REACTIONS (lb/size) 12=2162/0-5-8, 23=2162/0-5-8
Max Horiz 23=-157 (LC 9)
Max Uplift 12=-290 (LC 5), 23=-333 (LC 4)
Max Grav 12=2258 (LC 2), 23=2272 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-864/115, 2-3=-821/119, 3-4=-5665/788, 4-5=-4690/672, 5-6=-4676/763, 6-7=-2985/464, 7-9=-3028/467, 9-10=-3382/471, 10-11=-3193/417, 23-24=-2211/356, 1-24=-2338/285, 11-12=-2123/332

BOT CHORD 22-23=0/0, 21-24=-90/172, 20-21=-582/3475, 19-20=-582/3475, 18-19=-823/5704, 17-18=0/154, 5-18=-501/242, 16-17=-11/177, 14-16=-289/3154, 13-14=-330/2963, 12-13=-22/105

WEBS 20-22=0/30, 3-19=-285/2682, 4-19=-1272/276, 4-18=-1411/244, 16-18=-415/3305, 6-18=-347/1828, 6-16=-1394/339, 7-16=-163/1509, 9-16=-596/222, 9-14=-77/179, 11-13=-324/3002, 10-13=-728/195, 10-14=-51/304, 1-21=-263/2211, 2-21=0/135, 3-21=-3255/537

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=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 333 lb uplift at joint 23 and 290 lb uplift at joint 12.
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

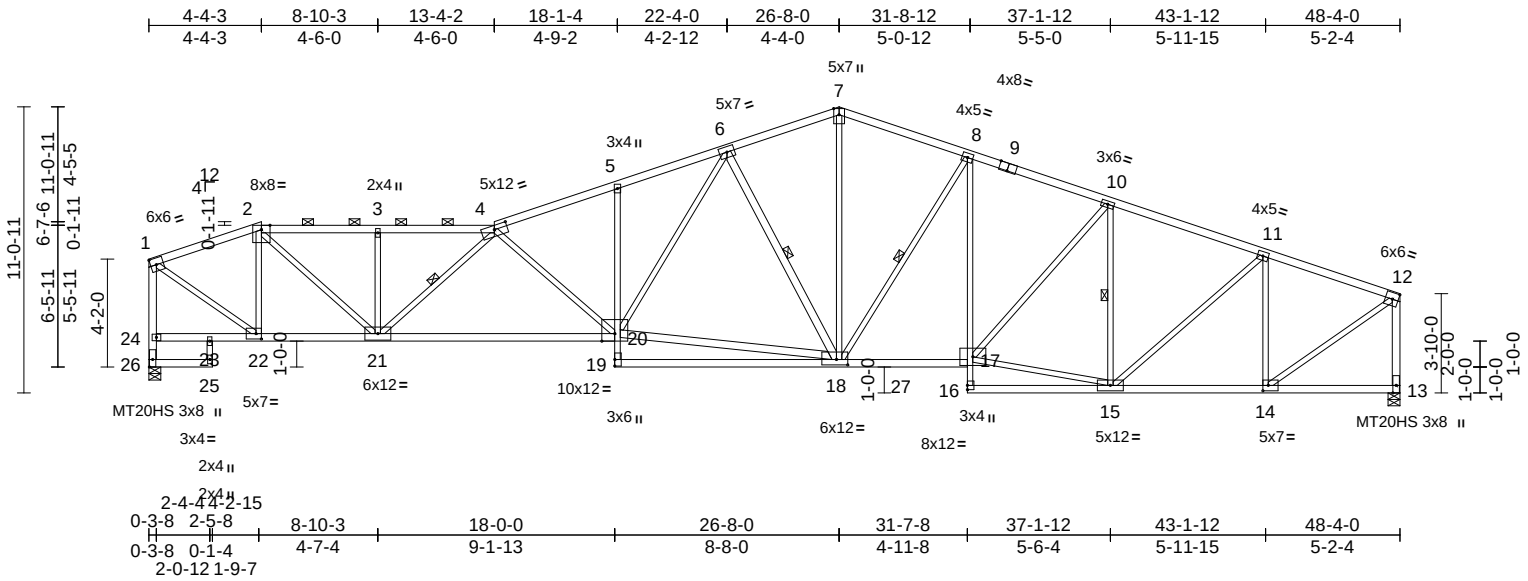
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060714
210568	D7	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:27 2022 Page: 1
ID:pDql7sf4S95XaRQFWn7U4XyKXz8-RfC?PsB70Hq3NSgPqnL8w3uITXbCXWrCDonJ4zJC?f



Scale = 1:89

Plate Offsets (X, Y): [4:0-6-0,0-1-15], [9:0-4-0,Edge], [14:0-2-8,0-2-8], [18:0-5-4,0-2-8], [22:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.53	20-21	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.98	20-21	>588	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horz(CT)	0.29	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.29	20-21	>999	240	Weight: 234 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 24-20,19-17:2x4 SPF 2100F 1.8E, 5-19,8-16:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 18-20,18-6,26-1,13-12:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-8 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 9-8-11 oc bracing.
WEBS 1 Row at midpt 6-18, 8-18, 10-15, 4-21

REACTIONS (lb/size) 13=2162/0-5-8, 26=2162/0-5-8
Max Horiz 26=-104 (LC 4)
Max Uplift 13=-291 (LC 5), 26=-337 (LC 4)
Max Grav 13=2248 (LC 2), 26=2269 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2145/295, 2-3=-3898/547, 3-4=-3898/547, 4-5=-4603/640, 5-6=-4562/704, 6-7=-2979/465, 7-8=-2971/470, 8-10=-3321/466, 10-11=-2875/397, 11-12=-2123/271, 24-26=-2220/335, 1-24=-2157/342, 12-13=-2169/313
BOT CHORD 25-26=0/0, 23-24=-79/86, 22-23=-79/86, 21-22=-243/2041, 20-21=-637/5012, 19-20=0/154, 5-20=-274/151, 18-19=-24/137, 17-18=-306/3108, 16-17=0/96, 8-17=-51/392, 15-16=-4/108, 14-15=-279/1977, 13-14=-48/37
WEBS 23-25=-1/40, 1-22=-342/2410, 2-22=-1300/256, 2-21=-330/2552, 4-20=-946/226, 18-20=-311/3314, 6-20=-276/1734, 6-18=-1401/327, 7-18=-196/1593, 8-18=-694/231, 15-17=-318/2625, 10-17=-64/642, 10-15=-996/174, 11-15=-76/928, 12-14=-299/2394, 3-21=-451/156, 4-21=-1535/250, 11-14=-1220/247

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 337 lb uplift at joint 26 and 291 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

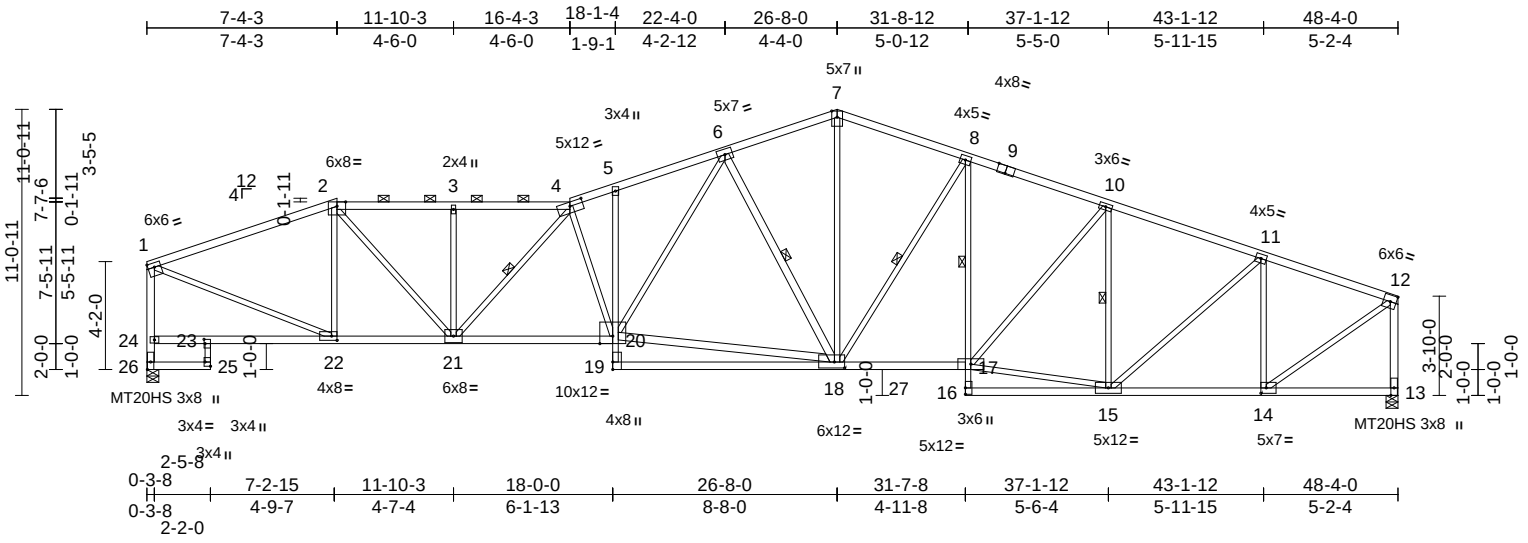
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060715
210568	D8	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:27 2022 Page: 1
ID:yk1fnoliwl3zEjAqEP7IpvyKY1U-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4z3C?I



Scale = 1:89

Plate Offsets (X, Y): [1:Edge,0-2-0], [4:0-6-0,0-1-15], [9:0-4-0,Edge], [14:0-2-8,0-2-8], [18:0-4-12,0-2-12], [22:0-2-8,0-2-0], [23:0-2-0,0-0-8], [25: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	0.84	Vert(LL)	-0.43	18-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.65	Vert(CT)	-0.79	18-19	>727	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.27	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.27	20-21	>999	240	Weight: 239 lb	FT = 10%

LUMBER

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

BOT CHORD 2x3 SPF No.2 *Except* 26-25,16-13:2x4 SPF No.2, 24-20,19-17:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 18-20,18-6,26-1,13-12:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-5-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-6 max.): 2-4.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 25-26
9-10-3 oc bracing: 20-21.

1 Row at midpt 8-17

WEBS 1 Row at midpt 6-18, 8-18, 10-15, 4-21

REACTIONS (lb/size) 13=2162/0-5-8, 26=2162/0-5-8
Max Horiz 26=-157 (LC 9)
Max Uplift 13=-284 (LC 5), 26=-333 (LC 4)
Max Grav 13=2248 (LC 2), 26=2269 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-2839/443, 2-3=-3869/613, 3-4=-3870/613, 4-5=-4582/682, 5-6=-4539/723, 6-7=-2980/468, 7-8=-2970/472, 8-10=-3243/450, 10-11=-2874/401, 11-12=-2123/286, 24-26=-2205/353, 1-24=-2104/374, 12-13=-2169/308

BOT CHORD 25-26=-58/58, 23-25=0/32, 23-24=-86/229, 22-23=-103/228, 21-22=-408/2655, 20-21=-639/4572, 19-20=0/155, 5-20=-74/76, 18-19=-6/209, 17-18=-286/3032, 16-17=0/98, 8-17=-44/279, 15-16=-4/144, 14-15=-232/1977, 13-14=-5/26

WEBS 1-22=-362/2726, 2-22=-899/211, 2-21=-236/1862, 4-20=-904/222, 18-20=-419/3234, 6-20=-293/1703, 6-18=-1398/348, 7-18=-199/1596, 8-18=-598/224, 15-17=-259/2571, 10-17=-78/541, 10-15=-905/176, 12-14=-279/2394, 11-15=-88/928, 11-14=-1219/234, 3-21=-436/149, 4-21=-1083/159

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 333 lb uplift at joint 26 and 284 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

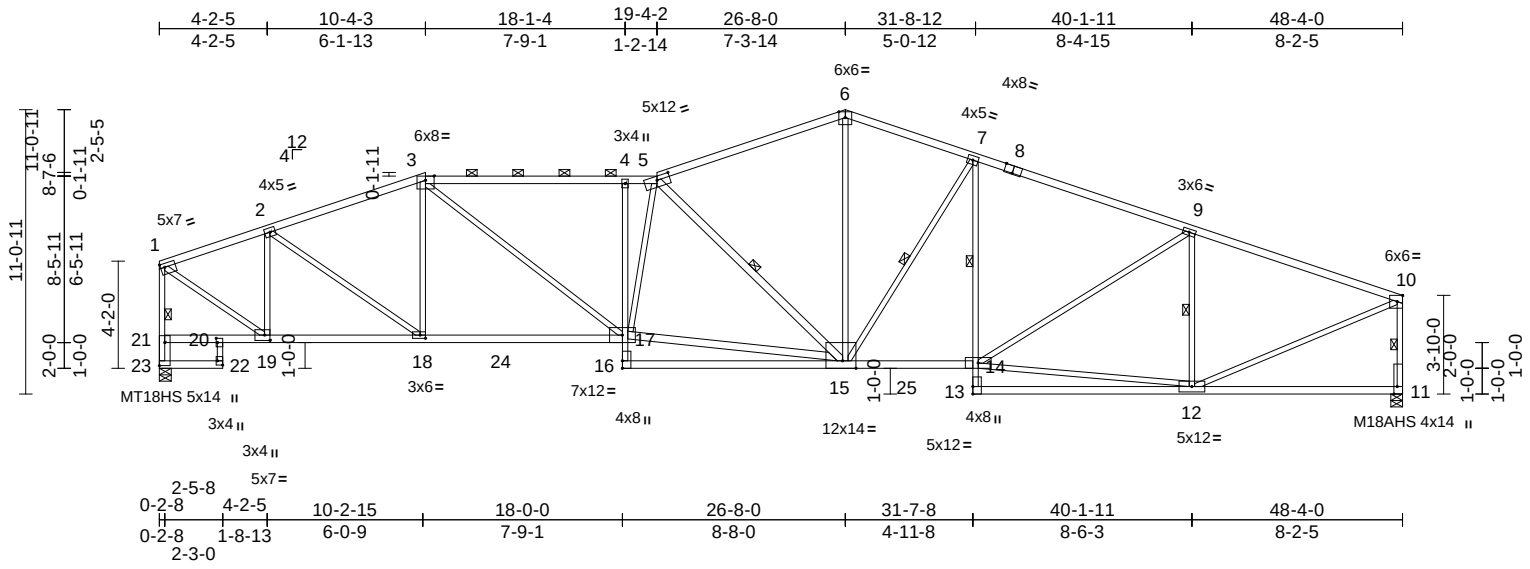
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060716
210568	D9	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:28 Page: 1
ID:D5DPnQek3P7VQF5EZdJfaOyKZNY-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDo77J4zJC?f



Scale = 1:89.6

Plate Offsets (X, Y): [1:0-2-0,0-1-12], [5:0-6-0,0-1-15], [8:0-4-0,Edge], [10:0-2-8,Edge], [11:0-3-8,Edge], [15:0-6-4,Edge], [18:0-2-8,0-1-8], [19:0-2-8,0-2-8], [20:0-2-0,0-0-8], [22:Edge,0-2-8], [23: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	0.81	Vert(LL)	-0.39	17-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.70	15-16	>829	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.24	11	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.22	4-17	>999	240	Weight: 227 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2400F 2.0E, 5-6,8-10:2x4 SPF 2100F 1.8E
BOT CHORD 2x3 SPF No.2 *Except* 23-22,13-11:2x4 SPF No.2, 21-17,16-14:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 15-17,15-5:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-5 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 22-23.
1 Row at midpt 7-14
WEBS 1 Row at midpt 5-15, 7-15, 1-23, 10-11, 9-12

REACTIONS (lb/size) 11=2166/0-5-8, 23=2166/0-5-8
Max Horiz 23=-103 (LC 4)
Max Uplift 11=-287 (LC 5), 23=-337 (LC 4)
Max Grav 11=2263 (LC 2), 23=2308 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-2190/301, 2-3=-3214/481, 3-4=-4203/633, 4-5=-4184/629, 5-6=-3079/456, 6-7=-3006/474, 7-9=-3318/444, 9-10=-2738/343, 21-23=-2263/333, 1-21=-2211/328, 10-11=-2143/323
BOT CHORD 22-23=-38/60, 20-22=-1/46, 20-21=-50/63, 19-20=-75/83, 18-19=-247/2052, 17-18=-317/3012, 16-17=0/153, 4-17=-475/179, 15-16=-19/189, 14-15=-292/3071, 13-14=0/148, 7-14=-54/209, 12-13=0/217, 11-12=-46/48
WEBS 3-18=-445/155, 3-17=-186/1526, 15-17=-436/3992, 5-17=-81/291, 5-15=-1867/372, 6-15=-151/1591, 7-15=-621/228, 12-14=-334/2338, 10-12=-312/2731, 2-18=-112/1168, 2-19=-1290/289, 1-19=-343/2489, 9-12=-1131/285, 9-14=-70/625

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 337 lb uplift at joint 23 and 287 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

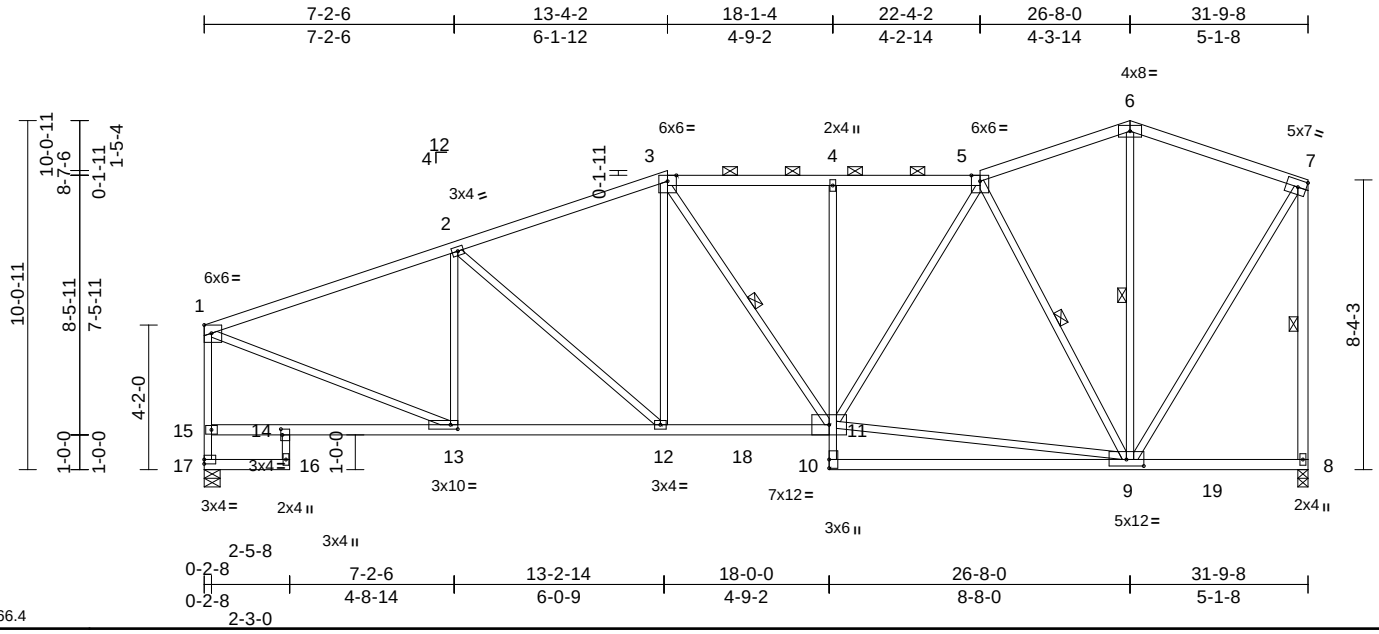
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060717
210568	E1	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:29 Page: 1
ID:3eL6Y5y_CVMPVn0sOrtvOnyKZTb-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoiTJ4z5C?f



Scale = 1:66.4

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

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	0.84	Vert(LL)	-0.17	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.36	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.11	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	11-12	>999	240	Weight: 160 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 16-14,4-10:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-7:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-5-3 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-11, 7-8, 6-9, 5-9

REACTIONS (lb/size) 8=1419/0-3-8, 17=1419/0-5-8
Max Horiz 17=200 (LC 8)
Max Uplift 8=-244 (LC 4), 17=-221 (LC 4)
Max Grav 8=1513 (LC 2), 17=1512 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1777/332, 2-3=-1757/345, 3-4=-1620/333, 4-5=-1615/332, 5-6=-753/144, 6-7=-753/151, 15-17=-1460/268, 1-15=-1363/281, 7-8=-1432/259
BOT CHORD 16-17=-92/8, 14-16=-21/34, 14-15=-138/73, 13-14=-230/65, 12-13=-455/1632, 11-12=-369/1608, 10-11=0/156, 4-11=-387/149, 9-10=0/145, 8-9=-3/7
WEBS 1-13=-248/1693, 2-13=-483/153, 2-12=-55/114, 3-12=-2/268, 3-11=-5/41, 9-11=-279/1097, 5-11=-167/759, 7-9=-211/1263, 6-9=-1/250, 5-9=-1222/334

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 17 and 244 lb uplift at joint 8.
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

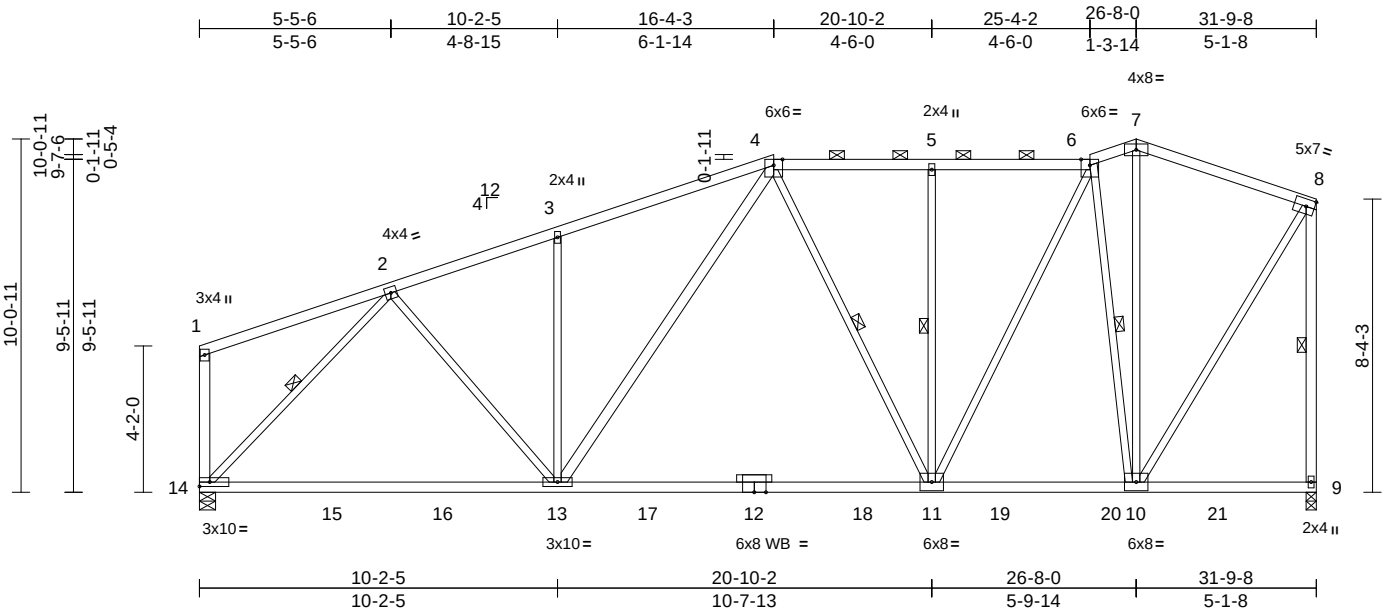
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060718
210568	E2	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:29 Page: 1
ID:0SCi45qCi7uPbcMe_u9FATyKZRA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiY34zJC?f



Scale = 1:65.6

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	0.51	Vert(LL)	-0.34	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.54	11-13	>697	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	11-13	>999	240	Weight: 164 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2400F 2.0E *Except* 12-9:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 9-8,14-1,13-4:2x4 SPF No.2
OTHERS 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 (4-11-11 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11, 8-9, 5-11, 6-10, 2-14

REACTIONS (lb/size) 9=1418/0-3-8, 14=1418/0-5-8
Max Horiz 14=321 (LC 5)
Max Uplift 9=-251 (LC 5), 14=-247 (LC 4)
Max Grav 9=1585 (LC 2), 14=1555 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-116/75, 2-3=-1689/298, 3-4=-1702/379, 4-5=-1265/304, 5-6=-1265/304, 6-7=-732/228, 7-8=-772/222, 8-9=-1476/265, 1-14=-183/68
BOT CHORD 13-14=-330/1198, 11-13=-286/1325, 10-11=-209/859, 9-10=-116/87
WEBS 4-11=-208/133, 8-10=-213/1306, 5-11=-388/150, 6-11=-146/939, 7-10=-94/345, 6-10=-1208/281, 2-14=-1686/315, 3-13=-393/192, 2-13=0/571, 4-13=-118/443

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 251 lb uplift at joint 9 and 247 lb uplift at joint 14.
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

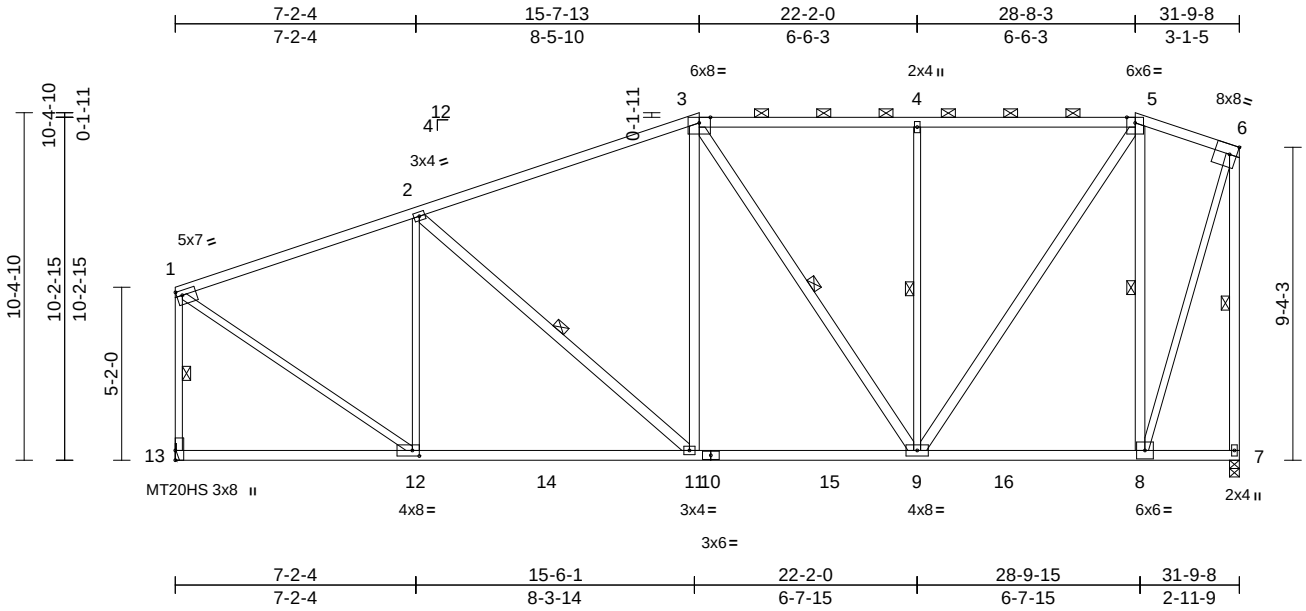
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060719
210568	E3	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:30 Page: 1
ID:zcoRXfFHfHn3oCSiawAmBRyKZIt-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7S4zJC?f



Scale = 1:68.8

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

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	0.90	Vert(LL)	-0.17	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.29	11-12	>999	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	11	>999	240	Weight: 177 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 4-9,8-6,13-1,12-1,12-2:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (5-0-10 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-9, 4-9, 6-7, 1-13, 2-11, 5-8

REACTIONS (lb/size) 7=1419/0-3-8, 13=1419/ Mechanical
Max Horiz 13=129 (LC 8)
Max Uplift 7=-77 (LC 4), 13=-40 (LC 4)
Max Grav 7=1561 (LC 2), 13=1537 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1369/65, 2-3=-1419/100, 3-4=-1083/92, 4-5=-1083/92, 5-6=-462/35, 6-7=-1548/81, 1-13=-1441/73
BOT CHORD 12-13=-130/18, 11-12=-147/1264, 9-11=-97/1265, 8-9=-23/438, 7-8=0/3
WEBS 3-11=0/366, 3-9=-344/63, 4-9=-542/121, 6-8=-68/1414, 1-12=-25/1519, 2-11=-16/161, 2-12=-620/118, 5-8=-1112/134, 5-9=-92/1186

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 13 and 77 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

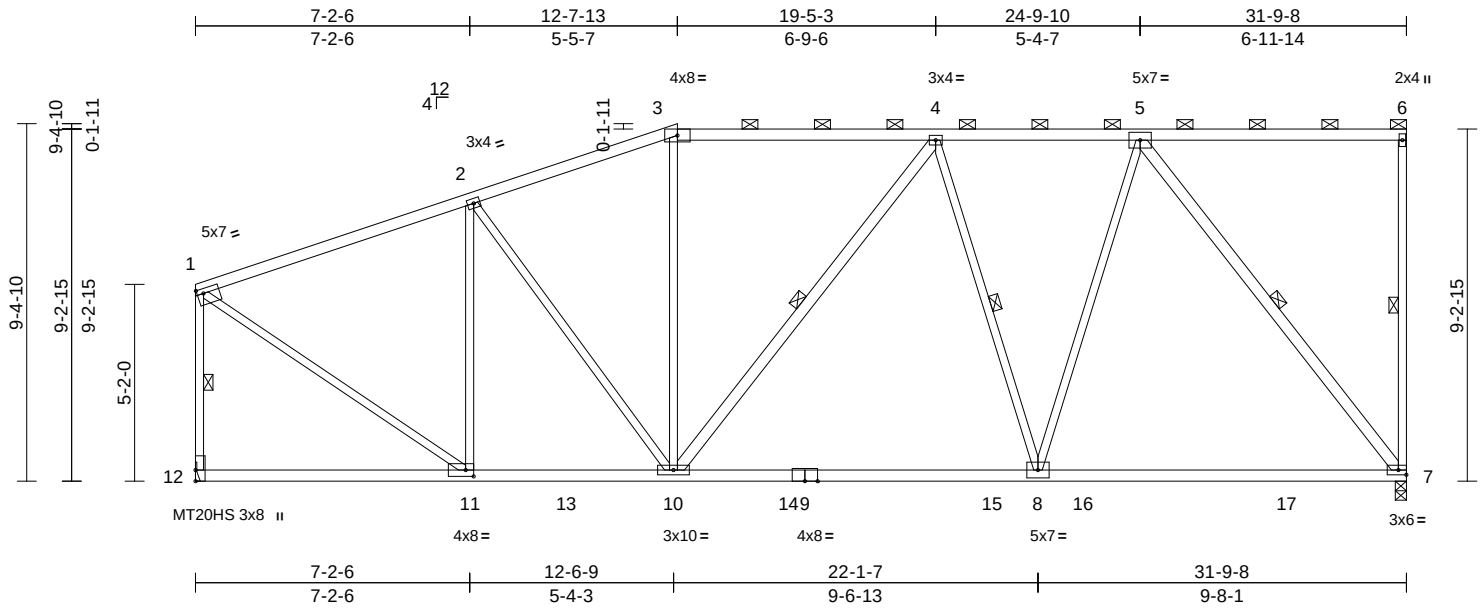
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	E4	Half Hip	1	1	Job Reference (optional) I53060720

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:30 Page: 1
ID:nC3_ejqaZjxSi_L2UimasryKZ_m-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:60.5

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

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	0.73	Vert(LL)	-0.30	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.49	7-8	>773	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	8-10	>999	240	Weight: 151 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 10-4,7-5:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-3 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-8 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-7, 4-10, 4-8, 5-7, 1-12

REACTIONS (lb/size) 7=1421/0-3-8, 12=1421/ Mechanical
Max Horiz 12=116 (LC 8)
Max Uplift 7=-95 (LC 4), 12=-44 (LC 4)
Max Grav 7=1583 (LC 2), 12=1537 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1355/70, 2-3=-1470/104, 3-4=-1346/111, 4-5=-1236/65, 5-6=-10/0, 6-7=-207/48, 1-12=-1425/81
BOT CHORD 11-12=-117/21, 10-11=-138/1233, 8-10=-100/1346, 7-8=-71/975
WEBS 2-11=-640/94, 2-10=0/296, 3-10=0/203, 4-10=-161/31, 4-8=-464/120, 5-8=0/907, 5-7=-1584/117, 1-11=-26/1473

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 7 and 44 lb uplift at joint 12.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

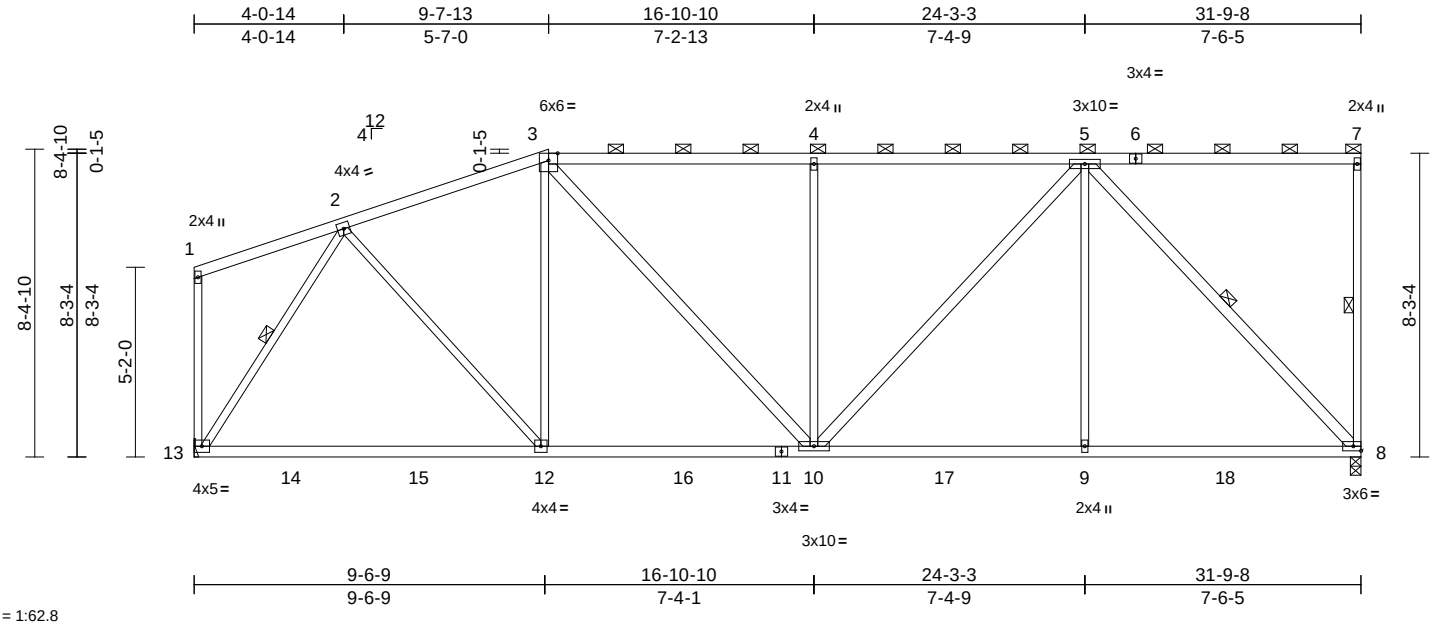
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060721
210568	E5	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:30 Page: 1
ID:A4TrbdppuPu9AK4yB8GPbdyKZ1N-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ42JC?f



Scale = 1:62.8

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	0.75	Vert(LL)	-0.30	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.50	12-13	>759	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10	>999	240	Weight: 150 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 11-8:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 3-10,5-8,10-5:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-1 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-5 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-8, 2-13, 5-8

REACTIONS (lb/size) 8=1421/0-3-8, 13=1421/ Mechanical
Max Horiz 13=88 (LC 8)
Max Uplift 8=-87 (LC 4), 13=-52 (LC 4)
Max Grav 8=1576 (LC 2), 13=1569 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-48/44, 2-3=-1478/89, 3-4=-1598/107, 4-5=-1597/106, 5-7=-10/0, 7-8=-215/50, 1-13=-106/25
BOT CHORD 12-13=-132/855, 10-12=-99/1360, 9-10=-69/1203, 8-9=-69/1203
WEBS 3-12=-293/89, 2-12=0/780, 2-13=-1554/89, 3-10=-31/454, 5-8=-1752/100, 4-10=-547/125, 5-10=-55/580, 5-9=0/466

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 8 and 52 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

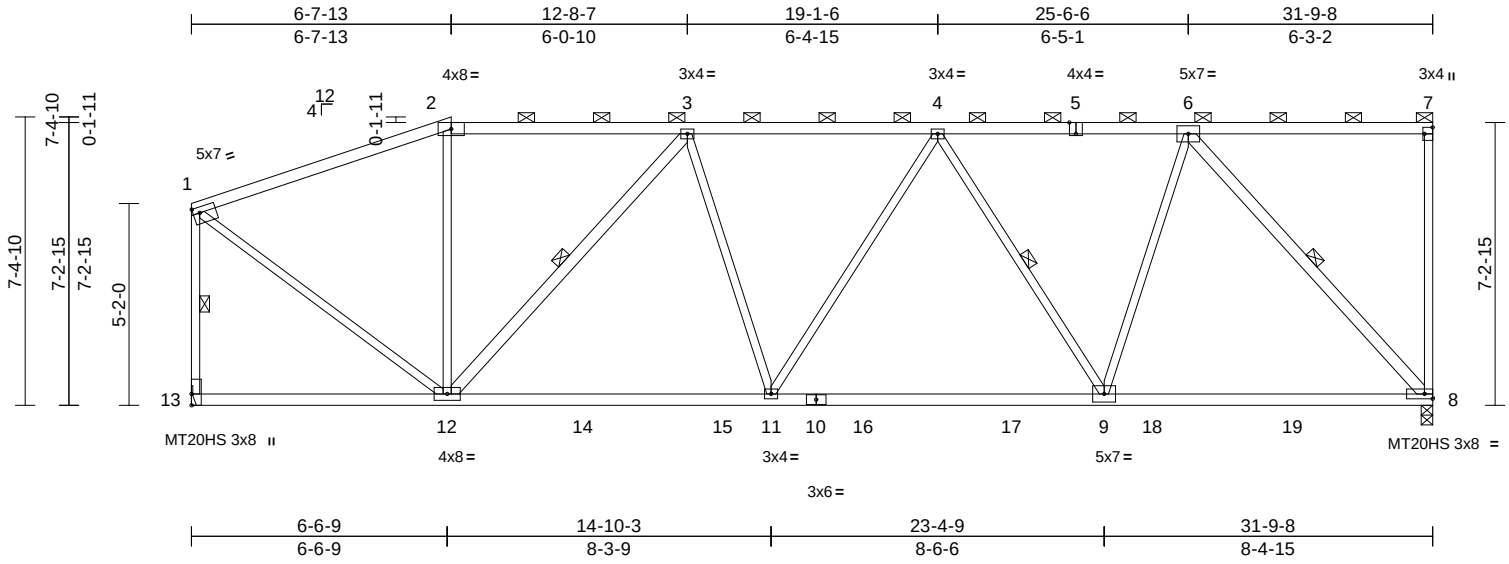
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060722
210568	E6	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:31 2022 Page: 1
ID:8KCAKo8iVPhlGILLFmQWZeyKZCZ-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?f



Scale = 1:59

Plate Offsets (X, Y): [1:0-2-0,0-1-12], [5:0-2-0,Edge], [7: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	0.79	Vert(LL)	-0.22	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.37	8-9	>999	240	MT20HS	148/108
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	9-11	>999	240	Weight: 139 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-3,8-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-15 max.): 2-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 9-11.
WEBS 1 Row at midpt 3-12, 6-8, 1-13, 4-9

REACTIONS (lb/size) 8=1421/0-3-8, 13=1421/ Mechanical
Max Horiz 13=217 (LC 5)
Max Uplift 8=-89 (LC 5), 13=-77 (LC 4)
Max Grav 8=1560 (LC 2), 13=1526 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1292/67, 2-3=-1179/84, 3-4=-1793/110, 4-6=-1418/101, 6-7=-88/62, 7-8=-176/49, 1-13=-1440/103
BOT CHORD 12-13=-197/94, 11-12=-182/1722, 9-11=-165/1716, 8-9=-123/1145
WEBS 2-12=-81/147, 3-12=-870/66, 6-8=-1710/121, 1-12=-64/1457, 3-11=0/289, 4-11=0/169, 4-9=-590/100, 6-9=0/922

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 8 and 77 lb uplift at joint 13.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

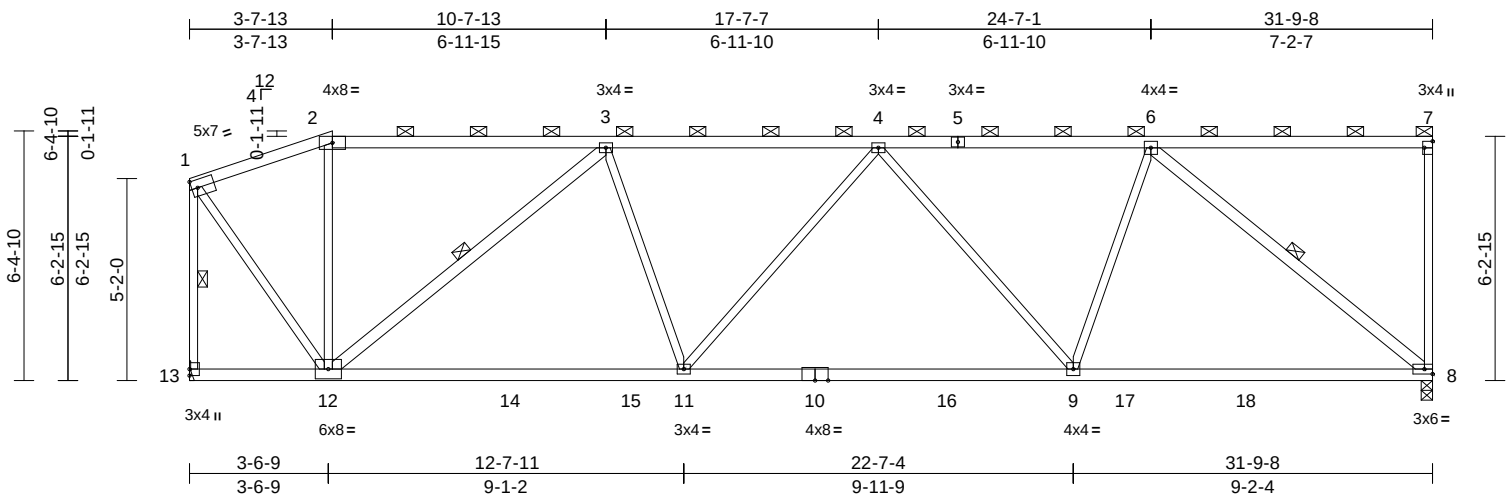
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060723
210568	E7	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:31 2022 Page: 1
ID:rAiF8zRJAbNzJNvBsaOvDPyKZDT-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoiYJ4z5C?f



Scale = 1:58.9

Plate Offsets (X, Y): [7: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	0.68	Vert(LL)	-0.21	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.36	9-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	9-11	>999	240	Weight: 133 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 12-3,8-6:2x4 SPF No.2

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

REACTIONS (lb/size) 8=1421/0-3-8, 13=1421/ Mechanical
Max Horiz 13=184 (LC 5)
Max Uplift 8=-86 (LC 5), 13=-79 (LC 4)
Max Grav 8=1540 (LC 2), 13=1524 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-888/67, 2-3=-834/71, 3-4=-2016/93, 4-6=-1746/95, 6-7=-77/53, 7-8=-207/52, 1-13=-1517/77
BOT CHORD 12-13=-168/106, 11-12=-189/1872, 9-11=-183/2039, 8-9=-135/1485
WEBS 2-12=-122/83, 3-12=-1372/98, 3-11=0/460, 4-11=-115/73, 4-9=-498/102, 6-9=0/823, 6-8=-1916/128, 1-12=-63/1440

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 8 and 79 lb uplift at joint 13.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

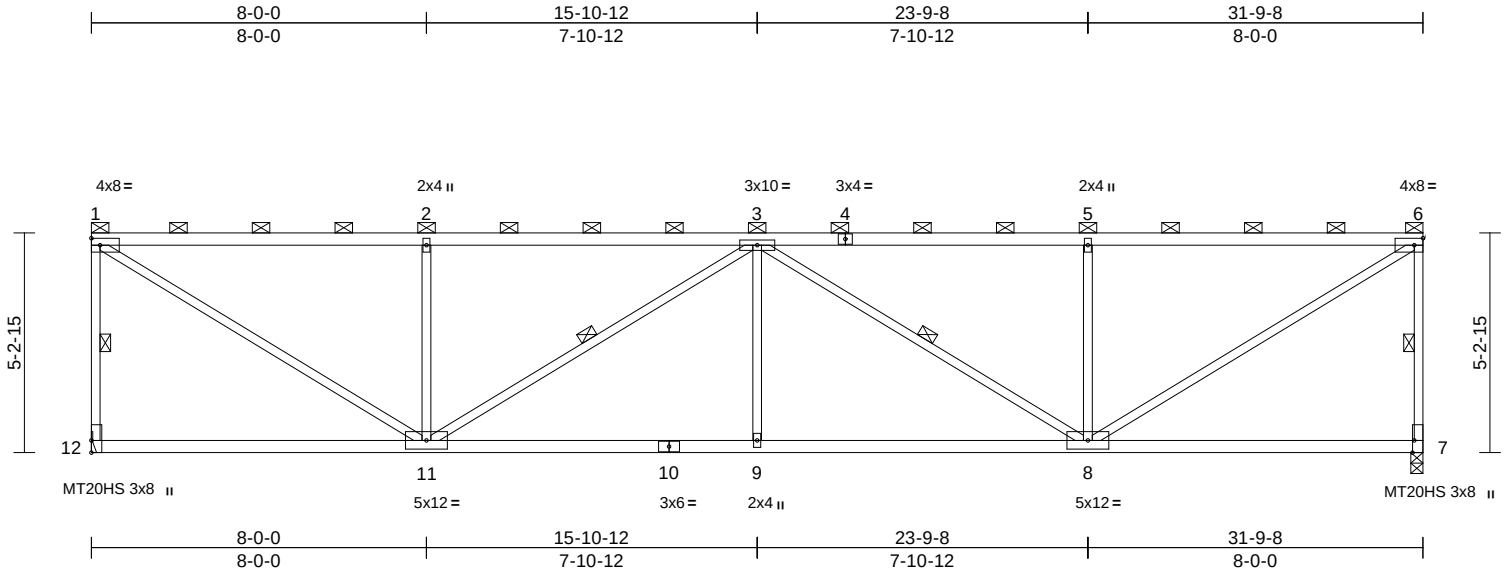
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060724
210568	E8	Flat	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:32 Page: 1
ID:fWUEiav5mmjMPTzYjd4MuwyKZEA-RfC?PsB70Hq3NSgPqnL8w3ulTXbOKWrCDon7J42JC?f



Scale = 1:55

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.16	9	>999	360	MT20HS	148/108
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.31	9-11	>999	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.06	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	8-9	>999	240	Weight: 121 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD 2-0-0 oc purlins (4-8-11 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 1-12, 6-7, 3-11, 3-8

REACTIONS (lb/size) 7=1421/0-3-8, 12=1421/ Mechanical
Max Horiz 12=-150 (LC 4)
Max Uplift 7=-81 (LC 5), 12=-81 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1352/118, 1-2=-1809/114, 2-3=-1809/114, 3-5=-1809/114, 5-6=-1809/114, 6-7=-1352/118
BOT CHORD 11-12=-129/119, 9-11=-183/2346, 8-9=-183/2346, 7-8=-53/44
WEBS 1-11=-126/2110, 2-11=-614/147, 3-11=-633/54, 3-9=0/298, 3-8=-633/53, 5-8=-614/148, 6-8=-126/2110

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 12 and 81 lb uplift at joint 7.
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

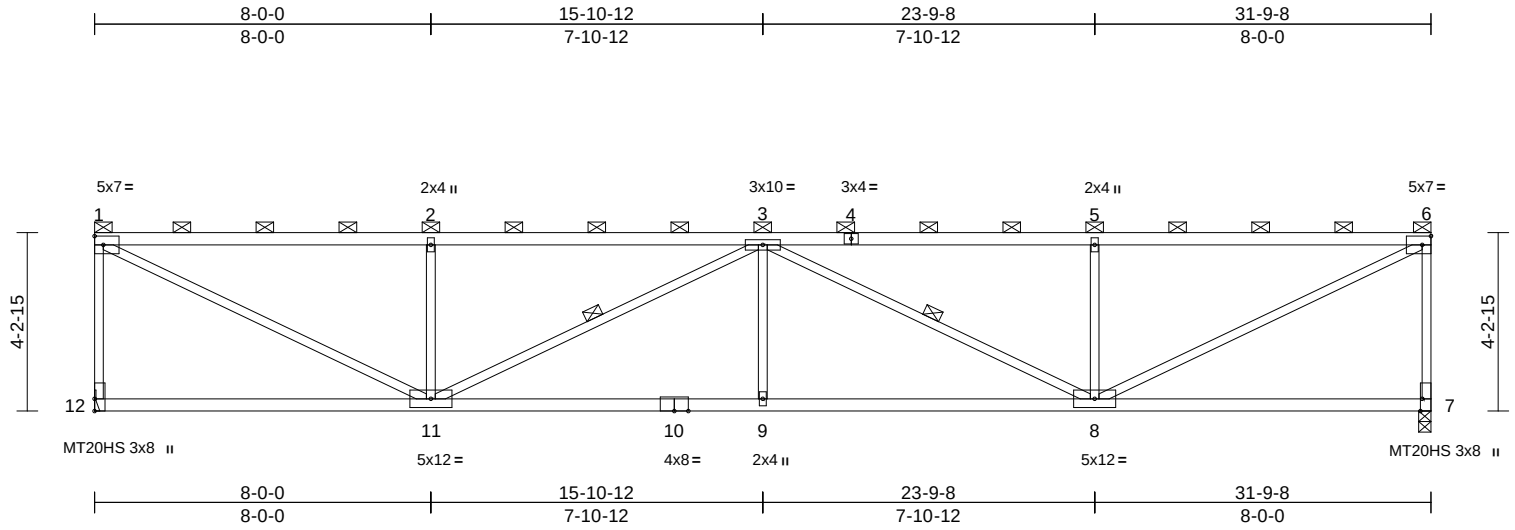
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060725
210568	E9	Flat	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:32 Page: 1
ID:be4ZZSjhI9qU69JfL_JrnlyKZEP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4z3C?f



Scale = 1:54.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.22	9	>999	360	MT20HS	148/108
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.42	9-11	>898	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.08	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	8-9	>999	240	Weight: 115 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (lb/size) 7=1421/0-3-8, 12=1421/ Mechanical
Max Horiz 12=-120 (LC 6)
Max Uplift 7=-77 (LC 5), 12=-77 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1350/115, 1-2=-2263/131, 2-3=-2263/131, 3-5=-2263/131, 5-6=-2263/131, 6-7=-1350/115
BOT CHORD 11-12=-99/95, 9-11=-198/2936, 8-9=-198/2936, 7-8=-38/34
WEBS 1-11=-140/2495, 2-11=-611/146, 3-11=-753/54, 3-9=0/299, 3-8=-753/53, 5-8=-611/146, 6-8=-140/2495

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 12 and 77 lb uplift at joint 7.
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

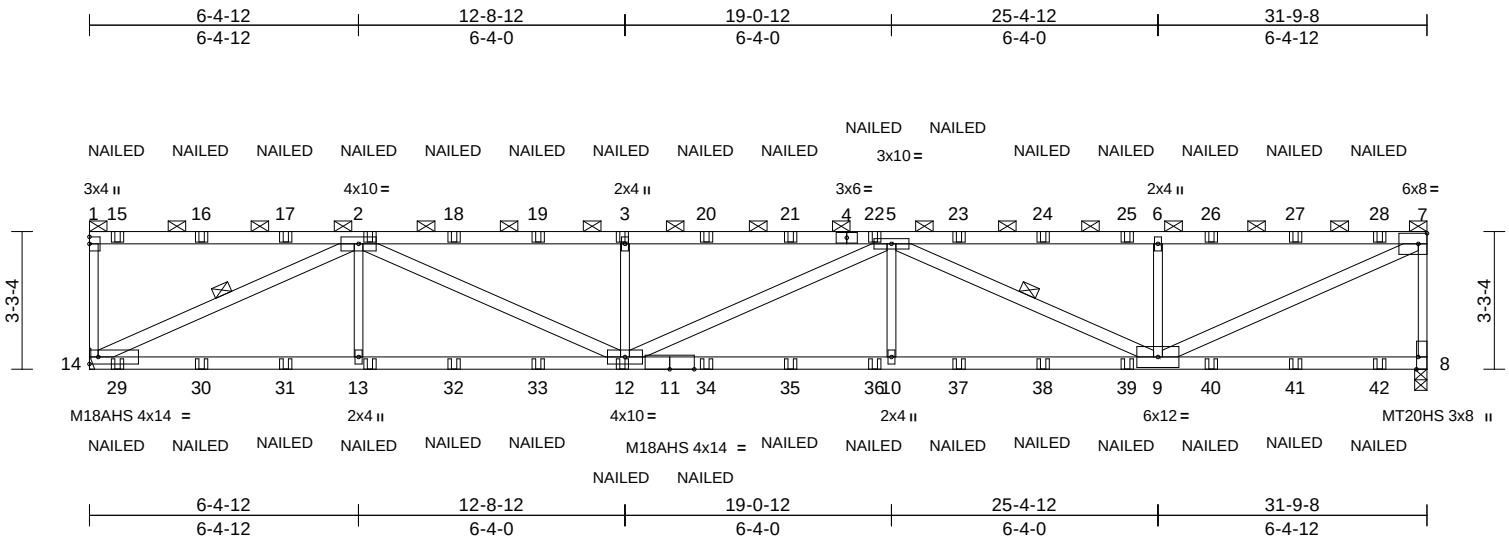
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060726
210568	E10	Flat Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:38 Page: 1
ID:A9iRykE91gSoTP?DBM7Er1yKZGJ-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ4zJC?f



Scale = 1:54.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.34	10-12	>999	360	M18AHS	142/136
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.67	10-12	>567	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.93	Horz(CT)	0.14	8	n/a	n/a	MT20HS	148/108
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.25	10-12	>999	240	Weight: 124 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 7-9,14-2,12-2,12-5,9-5:2x4 SPF No.2

BRACING
TOP CHORD 2-0-0 oc purlins (2-11-6 max.): 1-7, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-14, 5-9

REACTIONS (lb/size) 8=1945/0-3-8, 14=1980/ Mechanical
Max Horiz 14=90 (LC 20)
Max Uplift 8=-219 (LC 5), 14=-223 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-276/92, 1-2=-67/31, 2-3=-5057/567, 3-5=-5057/567, 5-6=-3432/397, 6-7=-3432/397, 7-8=-1857/262
BOT CHORD 13-14=-434/3435, 12-13=-434/3435, 10-12=-596/5061, 9-10=-596/5061, 8-9=-23/47
WEBS 7-9=-424/3750, 2-13=0/403, 2-14=-3754/425, 2-12=-206/1792, 3-12=-576/193, 5-12=-16/13, 5-10=0/364, 5-9=-1801/209, 6-9=-642/219

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 14 and 219 lb uplift at joint 8.
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 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
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: 1-7=-70, 8-14=-20
Concentrated Loads (lb)
Vert: 13=-20 (B), 2=-47 (B), 12=-20 (B), 3=-47 (B), 15=-62 (B), 16=-47 (B), 17=-47 (B), 18=-47 (B), 19=-47 (B), 20=-47 (B), 21=-47 (B), 22=-47 (B), 23=-47 (B), 24=-47 (B), 25=-47 (B), 26=-47 (B), 27=-47 (B), 28=-47 (B), 29=-24 (B), 30=-20 (B), 31=-20 (B), 32=-20 (B), 33=-20 (B), 34=-20 (B), 35=-20 (B), 36=-20 (B), 37=-20 (B), 38=-20 (B), 39=-20 (B), 40=-20 (B), 41=-20 (B), 42=-20 (B)

July 14,2022

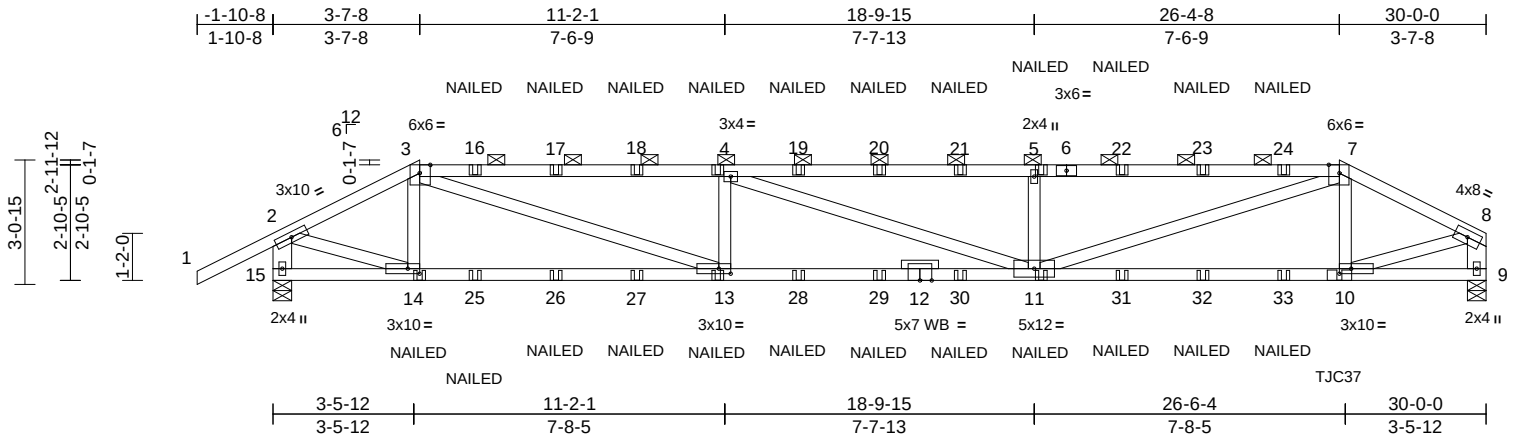
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	G1	Hip Girder	1	2	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060727
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:34 Page: 1
ID:6vUtsKLbkcY6bVfXs5nH5ByKYjK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J42JC?f



Scale = 1:57

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

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	0.98	Vert(LL)	-0.26	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.50	11-13	>708	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.22	11-13	>999	240	Weight: 239 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 3-6:2x4 SPF 2100F 1.8E, 6-7:2x4 SPF 2400F 2.0E
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x4 SPF No.2 *Except* 15-2,9-8:2x6 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 (4-6-8 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15.

REACTIONS (lb/size) 9=2526/0-5-8, 15=2511/0-5-8
Max Horiz 15=78 (LC 5)
Max Uplift 9=-480 (LC 4), 15=-490 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/66, 2-3=-3268/679, 3-4=-7146/1478, 4-5=-7233/1477, 5-7=-7236/1478, 7-8=-3560/689, 2-15=-2526/476, 8-9=-2538/466
BOT CHORD 14-15=-97/68, 13-14=-644/2945, 11-13=-1475/7142, 10-11=-612/3201, 9-10=-42/50
WEBS 3-14=-572/221, 3-13=-909/4463, 4-13=-1120/489, 4-11=-16/114, 5-11=-1086/483, 7-11=-902/4302, 7-10=-395/210, 2-14=-624/3126, 8-10=-611/3267

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 490 lb uplift at joint 15 and 480 lb uplift at joint 9.
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 TJC37 (6 nail, 30-90) or equivalent at 26-4-8 from the left end to connect truss (es) to back face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
12) Fill all nail holes where hanger is in contact with lumber.
13) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-7=-70, 7-8=-70, 9-15=-20
Concentrated Loads (lb)
Vert: 14=-84 (B), 13=-50 (B), 4=-118 (B), 5=-118 (B), 11=-50 (B), 10=-306 (B), 16=-118 (B), 17=-118 (B), 18=-118 (B), 19=-118 (B), 20=-118 (B), 21=-118 (B), 22=-118 (B), 23=-118 (B), 24=-118 (B), 25=-50 (B), 26=-50 (B), 27=-50 (B), 28=-50 (B), 29=-50 (B), 30=-50 (B), 31=-50 (B), 32=-50 (B), 33=-50 (B)

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

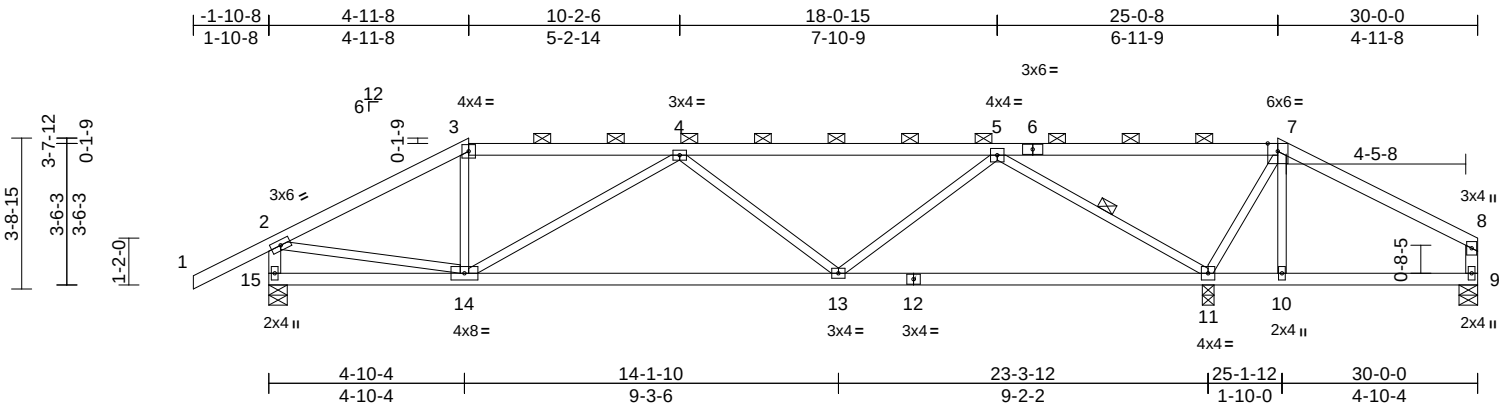
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060728
210568	G2	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:35 Page: 1
ID:SF7CW99laoJtSblugDYXfkyKYkr-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J4ZJC?f



Scale = 1:57.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.76	Vert(LL)	-0.15	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.33	13-14	>843	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.04	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	13-14	>999	240	Weight: 103 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-8:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-1 max.): 3-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 5-11

REACTIONS (lb/size) 9=138/0-5-8, 11=1531/0-3-8, 15=1146/0-5-8
Max Horiz 15=85 (LC 7)
Max Uplift 9=-75 (LC 9), 11=-231 (LC 5), 15=-129 (LC 5)
Max Grav 9=158 (LC 16), 11=1531 (LC 1), 15=1146 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1371/191, 3-4=-1148/188, 4-5=-1560/252, 5-7=-83/337, 7-8=-68/166, 2-15=-1115/143, 8-9=-127/104
BOT CHORD 14-15=-93/100, 13-14=-352/1739, 11-13=-256/1147, 10-11=-119/36, 9-10=-117/36
WEBS 3-14=-9/341, 4-14=-744/247, 4-13=-232/155, 5-13=0/571, 5-11=-1728/411, 7-11=-559/131, 7-10=0/66, 2-14=-122/1101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 15, 231 lb uplift at joint 11 and 75 lb uplift at joint 9.
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

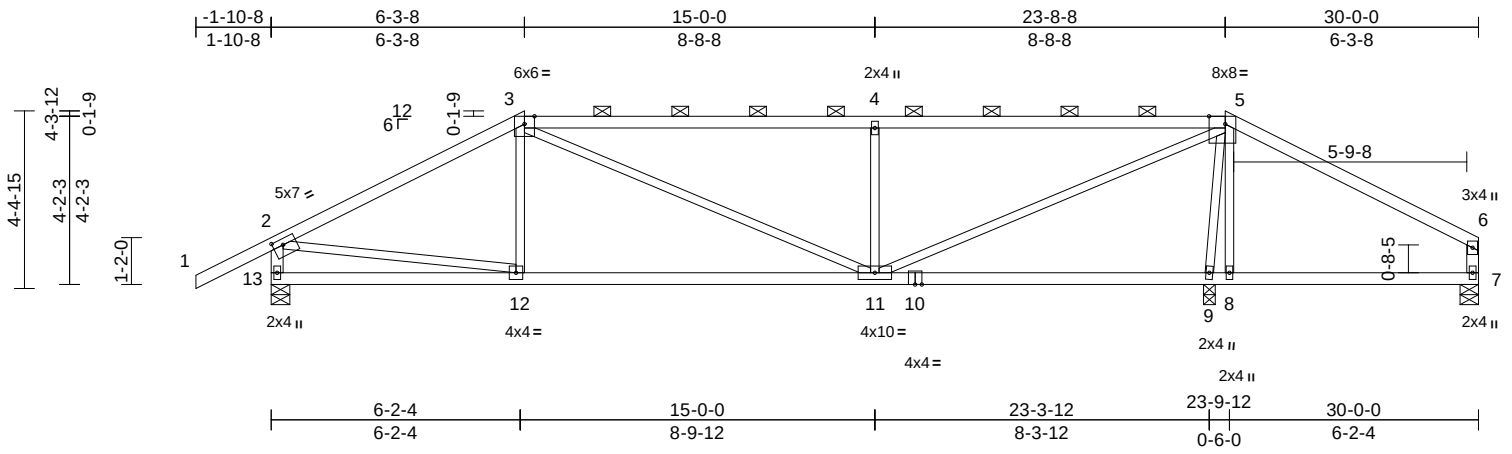
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060729
210568	G3	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:35 Page: 1
ID:KOC9xe_HfhzniXF3xeoYh3yKYmN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiYJ4z5C?f



Scale = 1:57.3

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [5:0-4-13,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	0.68	Vert(LL)	-0.13	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.61	Vert(CT)	-0.29	11-12	>949	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.80	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	11-12	>999	240	Weight: 106 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-2,7-6:2x4 SPF No.2

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

REACTIONS (lb/size) 7=306/0-5-8, 9=1316/0-3-8, 13=1193/0-5-8
Max Horiz 13=92 (LC 5)
Max Uplift 7=-108 (LC 9), 9=-171 (LC 5), 13=-135 (LC 8)
Max Grav 7=308 (LC 22), 9=1316 (LC 1), 13=1193 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1478/197, 3-4=-1595/316, 4-5=-1593/314, 5-6=-214/135, 2-13=-1143/163, 6-7=-254/141
BOT CHORD 12-13=-126/190, 11-12=-181/1236, 9-11=-86/44, 8-9=-59/119, 7-8=-59/115
WEBS 3-12=-6/205, 5-8=-129/42, 2-12=-146/1090, 4-11=-714/295, 5-11=-348/1787, 3-11=-180/493, 5-9=-1026/223

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 13, 108 lb uplift at joint 7 and 171 lb uplift at joint 9.
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.

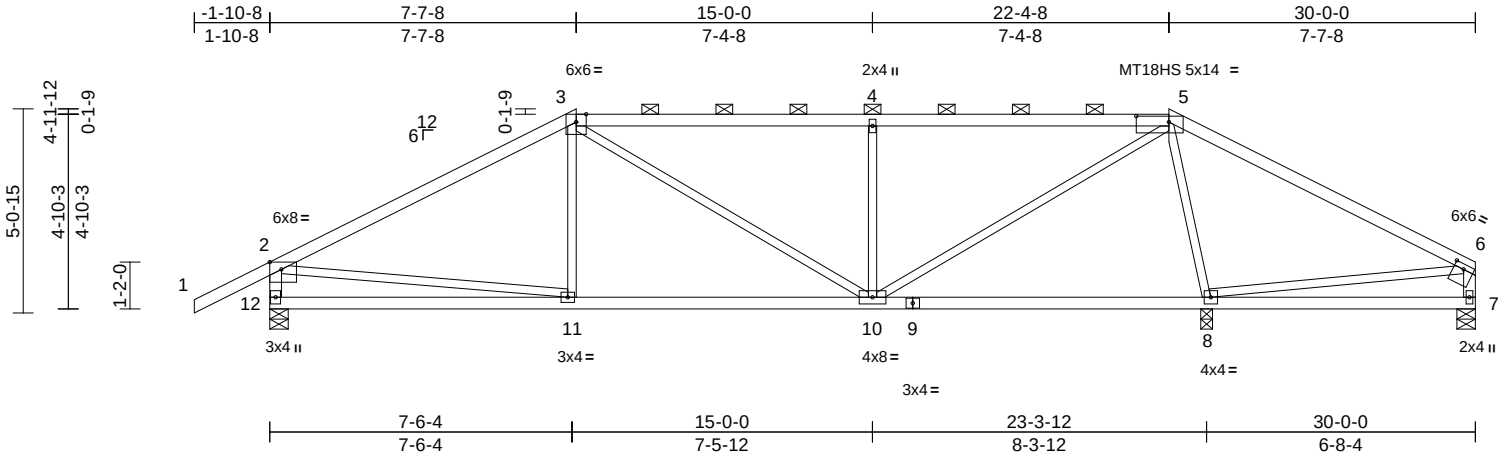
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060730
210568	G4	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:35 Page: 1
ID:z9trK7jUrwCv38aqe0OOoQyKYmj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7547JC?P



Scale = 1:57.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.09	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.18	8-10	>999	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	10-11	>999	240	Weight: 110 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,7-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-3 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 8-10.

REACTIONS (lb/size) 7=115/0-5-8, 8=1559/0-3-8, 12=1142/0-5-8
Max Horiz 12=102 (LC 7)
Max Uplift 7=-90 (LC 9), 8=-154 (LC 4), 12=-148 (LC 8)
Max Grav 7=145 (LC 16), 8=1559 (LC 1), 12=1142 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1354/171, 3-4=-1154/226, 4-5=-1154/226, 5-6=-70/400, 2-12=-1072/188, 6-7=-95/134
BOT CHORD 11-12=-193/330, 10-11=-153/1099, 8-10=-52/32, 7-8=-115/230
WEBS 3-11=0/239, 3-10=-121/195, 4-10=-603/249, 5-10=-236/1381, 2-11=-111/785, 6-8=-488/126, 5-8=-1350/245

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 148 lb uplift at joint 12, 90 lb uplift at joint 7 and 154 lb uplift at joint 8.
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 14,2022

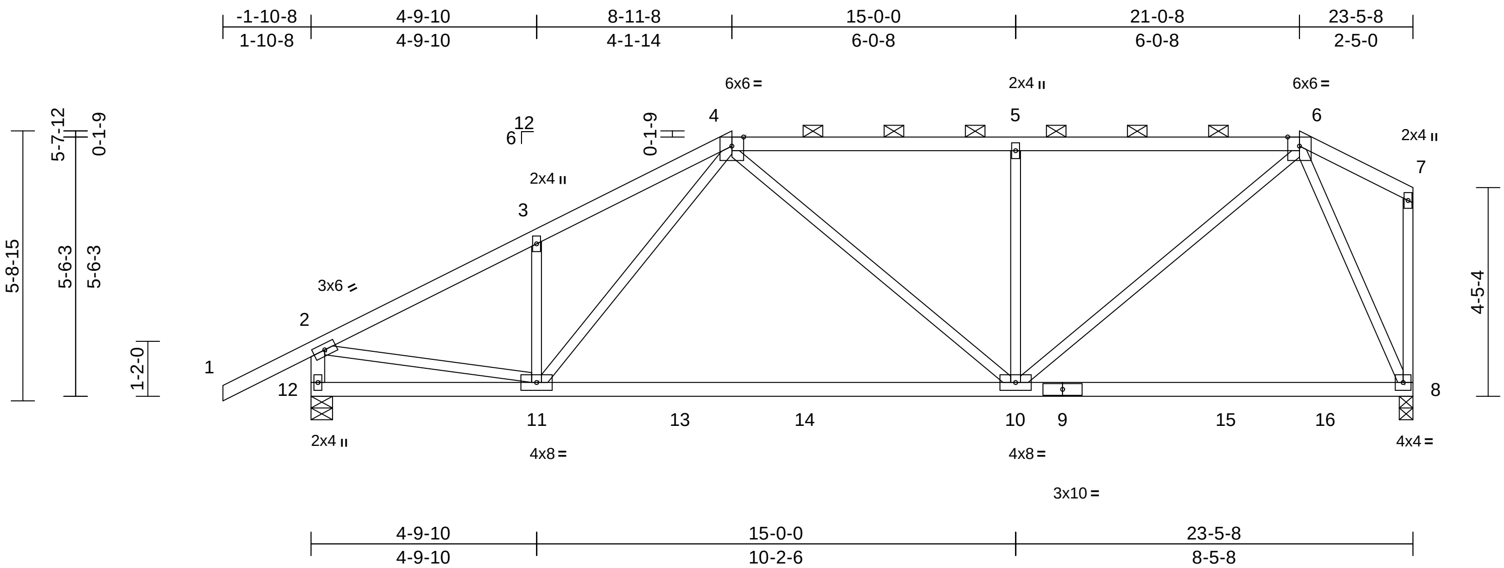
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	G5	Hip	1	1	I53060731 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:36 Page: 1

ID:8TSjwSEOGe9aG?W8Icg0A_yKYnL-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:49

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)	-0.30	10-11	>923	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.53	10-11	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240	Weight: 94 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-15 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-5 max.): 4-6.

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

REACTIONS (lb/size) 8=1038/0-3-8, 12=1192/0-5-8
Max Horiz 12=204 (LC 7)
Max Uplift 8=-124 (LC 5), 12=-153 (LC 8)
Max Grav 8=1112 (LC 2), 12=1223 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/63, 2-3=-1562/118, 3-4=-1536/219, 4-5=-1237/167, 5-6=-1237/167, 6-7=-94/66, 2-12=-1195/162, 7-8=-91/39

BOT CHORD 11-12=-204/87, 10-11=-231/1114, 8-10=-116/422

WEBS 5-10=-507/206, 6-8=-1015/216, 2-11=-10/1318, 3-11=-273/180, 4-11=-92/410, 4-10=-59/254, 6-10=-135/1088

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 12 and 124 lb uplift at joint 8.
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

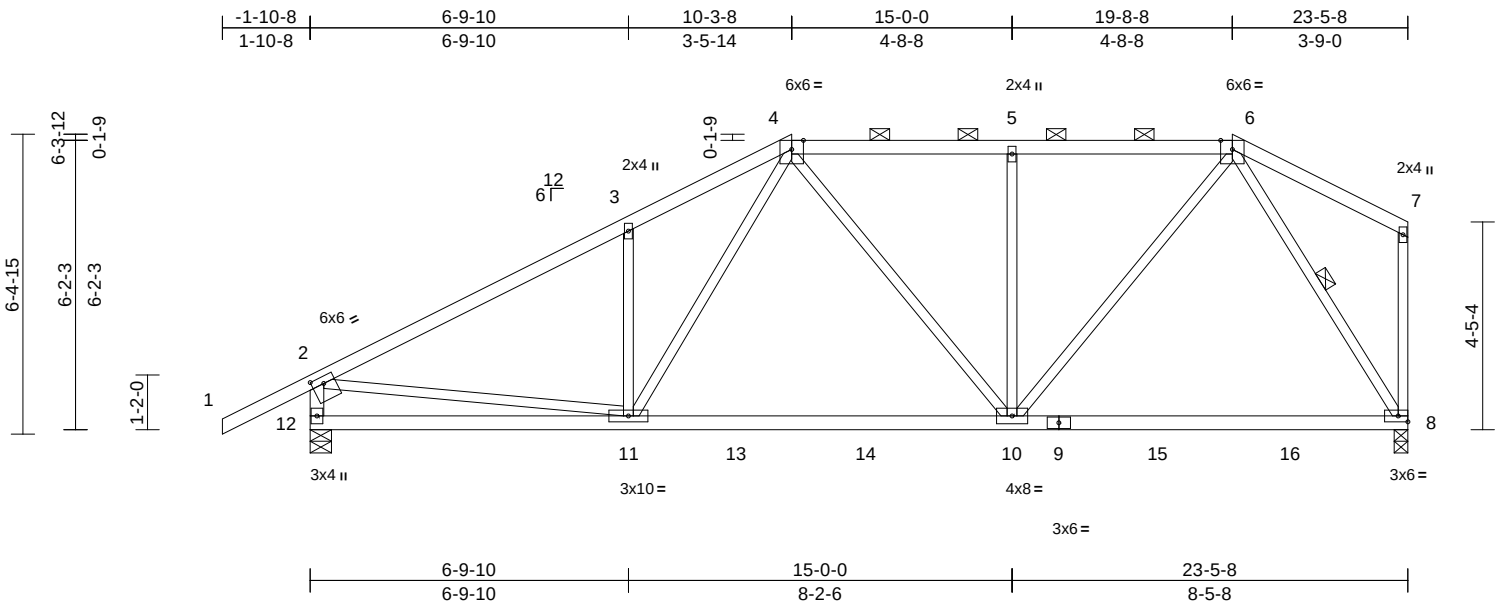
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060732
210568	G6	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:35 Page: 1
ID:6mBSFJAmIPlistWTLvd9H8yKYq?-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi734zJC?



Scale = 1:49.2

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

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	0.54	Vert(LL)	-0.20	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.34	8-10	>811	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240	Weight: 98 lb	FT = 10%

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

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

REACTIONS (lb/size) 8=1038/0-3-8, 12=1192/0-5-8
Max Horiz 12=213 (LC 7)
Max Uplift 8=-84 (LC 5), 12=-164 (LC 8)
Max Grav 8=1122 (LC 2), 12=1225 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1542/148, 3-4=-1494/264, 4-5=-1085/128, 5-6=-1085/128, 6-7=-119/81, 2-12=-1129/198, 7-8=-138/54
BOT CHORD 11-12=-223/277, 10-11=-190/1054, 8-10=-120/556
WEBS 3-11=-353/220, 6-8=-1024/172, 2-11=-8/1080, 5-10=-403/162, 4-11=-154/508, 4-10=-55/147, 6-10=-87/867

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 164 lb uplift at joint 12 and 84 lb uplift at joint 8.
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
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

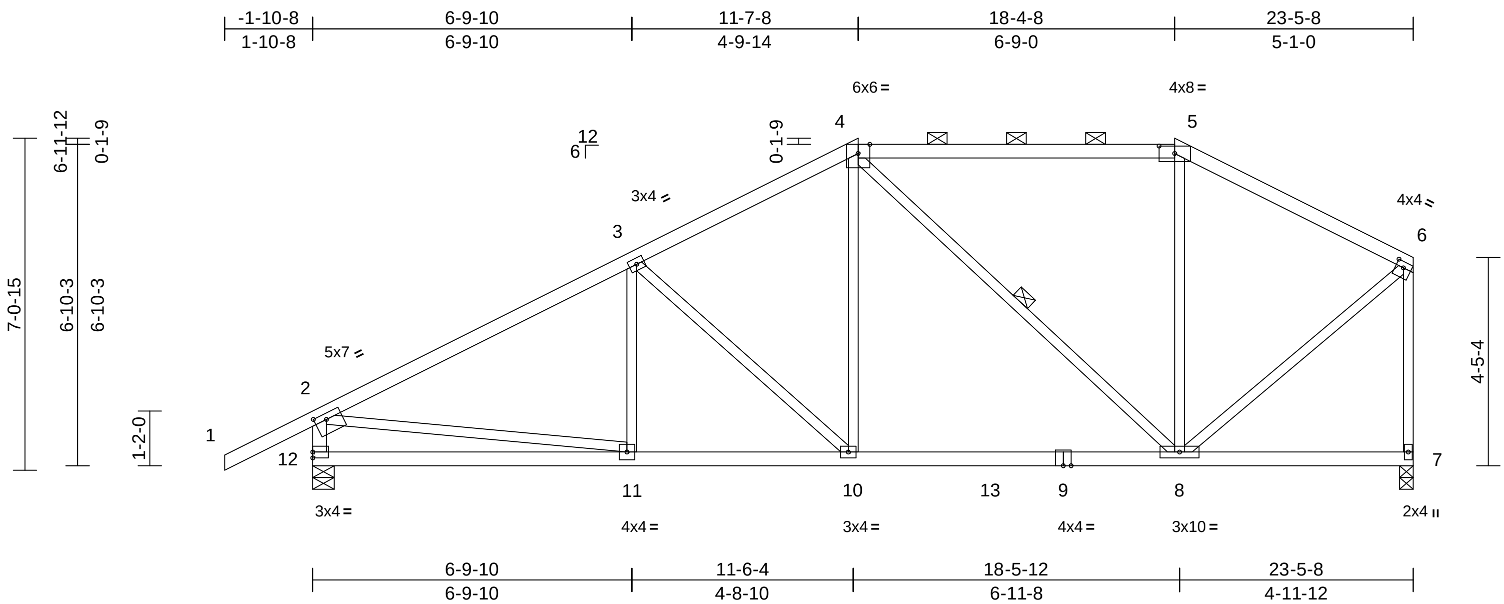
July 14,2022

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/20/2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	
210568	G7	Hip	1	1	Job Reference (optional)	I53060733

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:36 Page: 1
ID:WXHJAvbfcfiW6VrFXqmuK0yKYql-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:49.1

Plate Offsets (X, Y): [2:0-3-0,0-1-8], [5:0-4-0,0-1-15], [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	0.74	Vert(LL)	-0.09	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.17	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.40	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	10-11	>999	240	Weight: 99 lb	FT = 10%

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

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

REACTIONS (lb/size) 7=1038/0-3-8, 12=1192/0-5-8
Max Horiz 12=221 (LC 7)
Max Uplift 7=-73 (LC 9), 12=-174 (LC 8)
Max Grav 7=1093 (LC 2), 12=1214 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1504/172, 3-4=-1185/169, 4-5=-683/113, 5-6=-801/107, 2-12=-1122/211, 6-7=-1034/89
BOT CHORD 11-12=-225/296, 10-11=-181/1262, 8-10=-150/999, 7-8=-56/44
WEBS 3-11=-28/140, 3-10=-371/164, 4-10=-41/493, 4-8=-474/92, 5-8=-180/104, 6-8=-83/887, 2-11=0/1033

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 174 lb uplift at joint 12 and 73 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

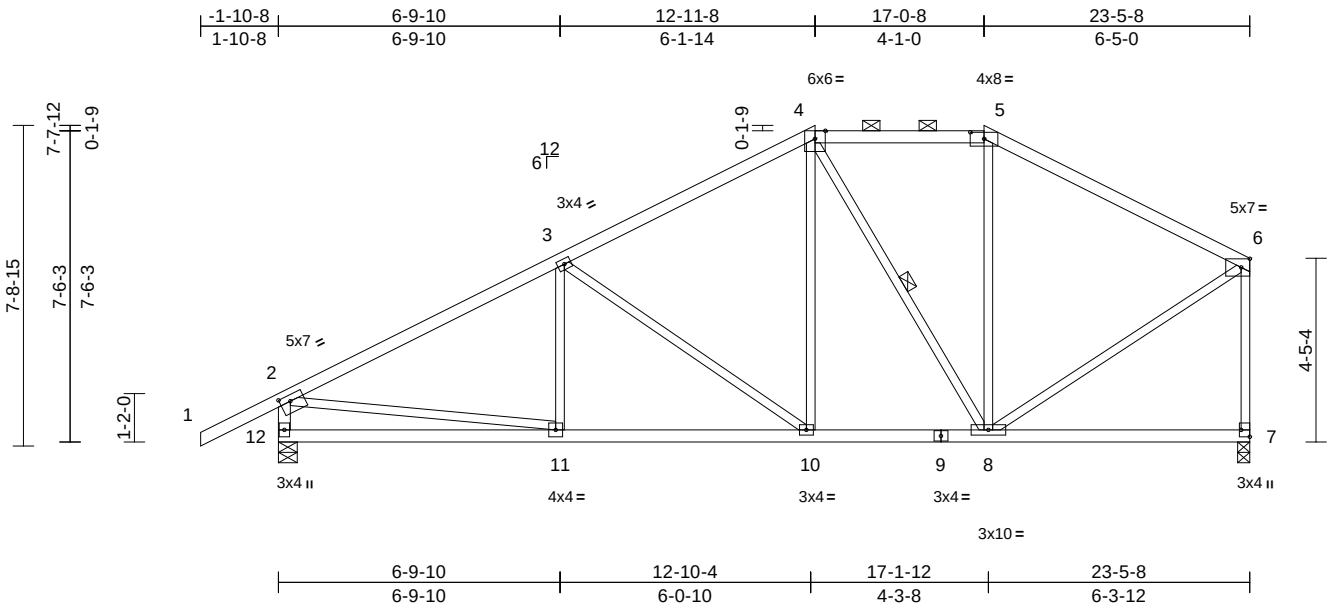
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060734
210568	G8	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:37 2022 Page: 1
ID:6h4l_3L6JWALiQJPMdPCXoyKYr3-RfC?PsB70Hq3NSgPqnL8w3uITXbGXWrCDoI?34zJC?f



Scale = 1:55.6

Plate Offsets (X, Y): [2:0-3-0,0-1-12], [5:0-4-0,0-1-15], [7: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	0.67	Vert(LL)	-0.05	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.11	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	10-11	>999	240	Weight: 101 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2:2x4 SPF 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 (6-0-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-8

REACTIONS (lb/size) 7=1038/0-3-8, 12=1192/0-5-8
Max Horiz 12=230 (LC 5)
Max Uplift 7=-87 (LC 9), 12=-181 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1464/188, 3-4=-1039/171, 4-5=-676/143, 5-6=-844/136, 2-12=-1126/216, 6-7=-981/115
BOT CHORD 11-12=-226/231, 10-11=-190/1216, 8-10=-109/831, 7-8=-55/43
WEBS 3-11=-11/184, 3-10=-473/187, 4-10=-54/365, 4-8=-385/98, 5-8=-141/116, 6-8=-52/786, 2-11=-19/1037

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 12 and 87 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

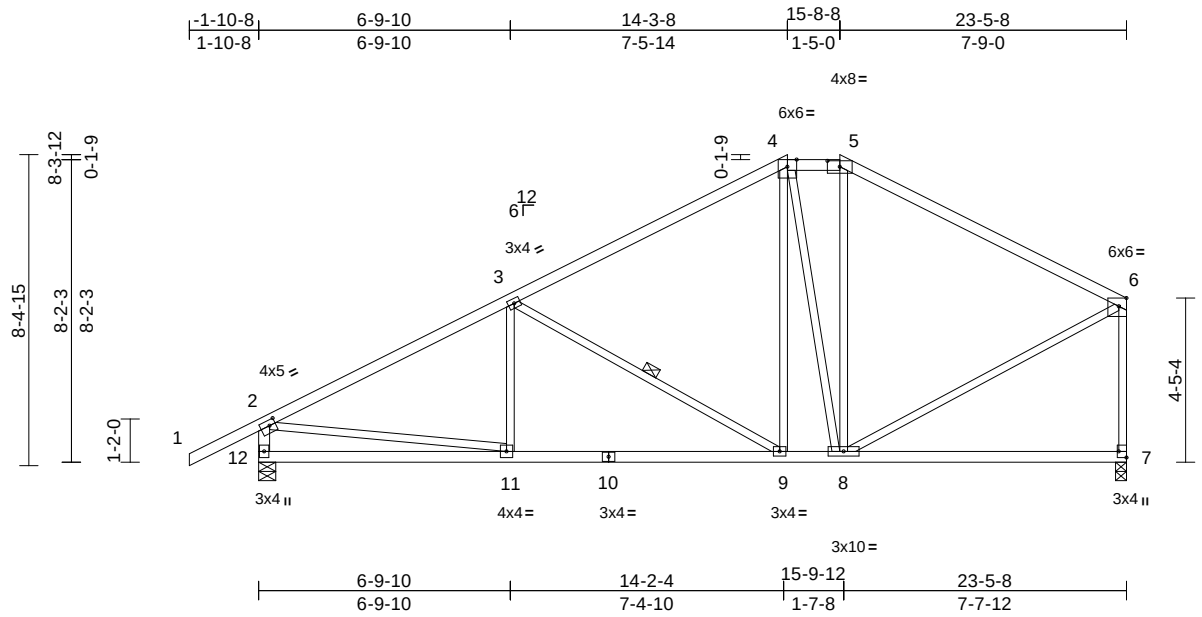
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	G9	Hip	1	1	Job Reference (optional) I53060735

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:37 Page: 1
ID:sP_UyMq7RImS2pX8L587HkyKYrk-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoiTJ4z9C?f



Scale = 1:62.3

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [5:0-4-0,0-1-15], [6:0-2-8,Edge], [7: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	0.74	Vert(LL)	-0.10	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.20	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.65	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	9-11	>999	240	Weight: 104 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 5-6:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2:2x4 SPF No.2

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

REACTIONS (lb/size) 7=1038/0-3-8, 12=1192/0-5-8
Max Horiz 12=239 (LC 7)
Max Uplift 7=-99 (LC 9), 12=-188 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-1481/203, 3-4=-965/166, 4-5=-704/175, 5-6=-895/166, 2-12=-1129/221, 6-7=-971/135
BOT CHORD 11-12=-227/208, 9-11=-218/1238, 8-9=-66/751, 7-8=-53/42
WEBS 3-11=-4/207, 3-9=-575/216, 4-9=-66/342, 4-8=-410/137, 5-8=-188/233, 6-8=-50/768, 2-11=-49/1096

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 188 lb uplift at joint 12 and 99 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

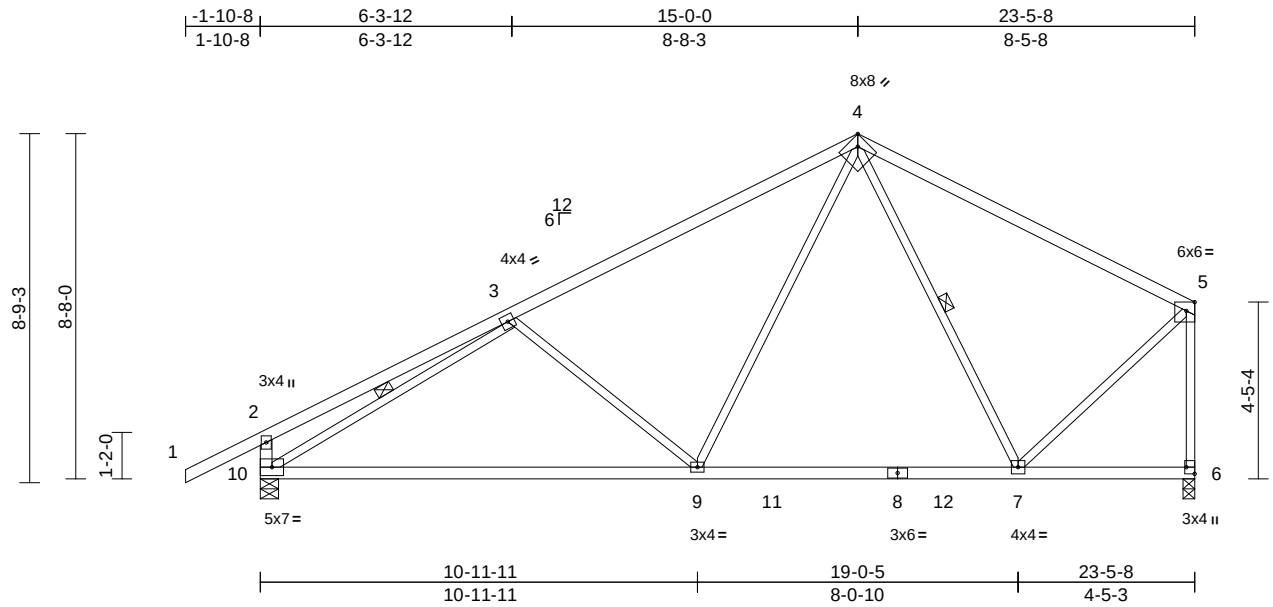
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060736
210568	G10	Common	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:38 Page: 1
ID:JirtB0P6E2uBuhWSQJ0SVryKYta-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7542JC?f



Scale = 1:57.8

Plate Offsets (X, Y): [4:0-2-11,Edge], [5:0-2-8,Edge], [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	0.85	Vert(LL)	-0.26	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.53	9-10	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	7-9	>999	240	Weight: 93 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 8-6:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-5-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-7, 3-10

REACTIONS (lb/size) 6=1038/0-3-8, 10=1192/0-5-8
Max Horiz 10=244 (LC 7)
Max Uplift 6=-105 (LC 9), 10=-189 (LC 8)
Max Grav 6=1110 (LC 2), 10=1218 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-349/32, 3-4=-1258/199, 4-5=-759/152, 2-10=-403/116, 5-6=-1061/121
BOT CHORD 9-10=-291/1281, 7-9=-53/749, 6-7=-62/37
WEBS 4-7=-396/101, 4-9=-66/683, 3-9=-434/298, 3-10=-1253/242, 5-7=-35/790

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 189 lb uplift at joint 10 and 105 lb uplift at joint 6.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

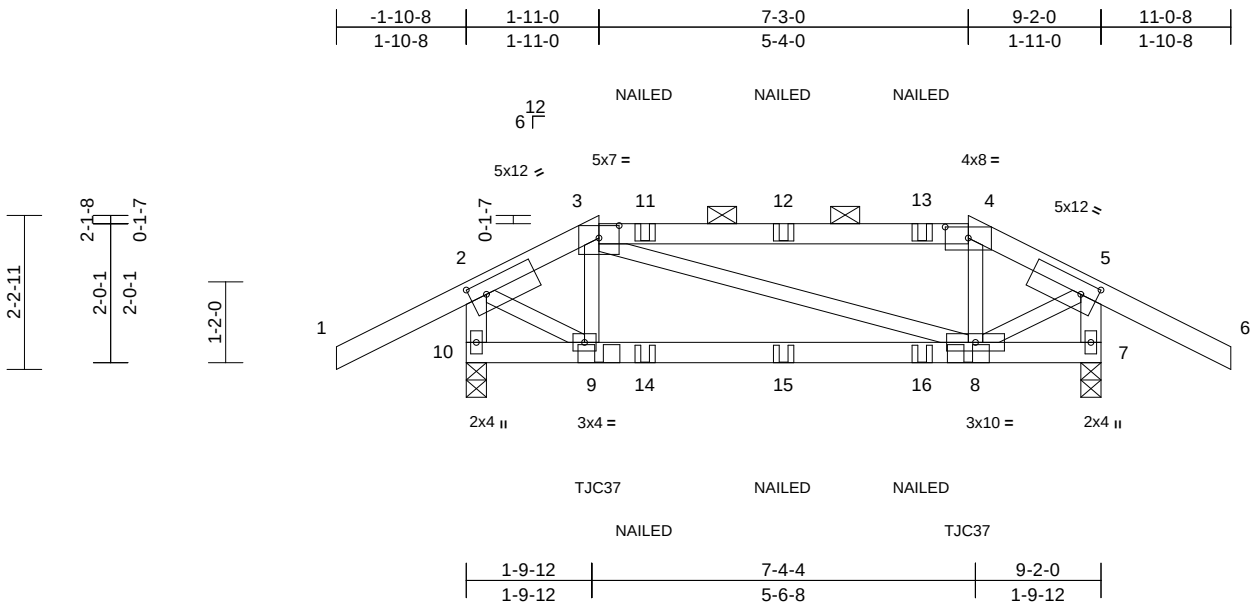
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	H1	Hip Girder	1	1	Job Reference (optional) I53060737

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:38 Page: 1
ID:M1F9cAeszQ1xLmn8IUIaJOyKZKy-RfC?PsB70Hq3NSgPqnL8w3uITXbGXWrCDoI?34zJC?f



Scale = 1:33.3

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

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	0.53	Vert(LL)	-0.03	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.05	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.13	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.01	8-9	>999	240	Weight: 38 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x4 SPF No.2

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

REACTIONS (lb/size) 7=456/0-3-8, 10=456/0-3-8
Max Horiz 10=-59 (LC 6)
Max Uplift 7=-275 (LC 9), 10=-275 (LC 8)
Max Grav 7=500 (LC 16), 10=500 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-396/242, 3-4=-352/237, 4-5=-396/242, 5-6=0/63, 2-10=-519/259, 5-7=-518/258
BOT CHORD 9-10=-102/56, 8-9=-216/379, 7-8=-101/22
WEBS 3-9=-283/79, 3-8=-20/22, 4-8=-282/78, 2-9=-241/488, 5-8=-241/488

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 275 lb uplift at joint 10 and 275 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Use Simpson Strong-Tie TJC37 (6 nail, 30-90) or equivalent at 1-11-0 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
10) Use Simpson Strong-Tie TJC37 (6 nail 90-150) or equivalent at 7-3-0 from the left end to connect truss(es) to front face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
11) Fill all nail holes where hanger is in contact with lumber.
12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
13) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 7-10=-20
Concentrated Loads (lb)
Vert: 9=140 (F), 8=140 (F), 11=-26 (F), 12=-26 (F), 13=-26 (F), 14=-11 (F), 15=-11 (F), 16=-11 (F)

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

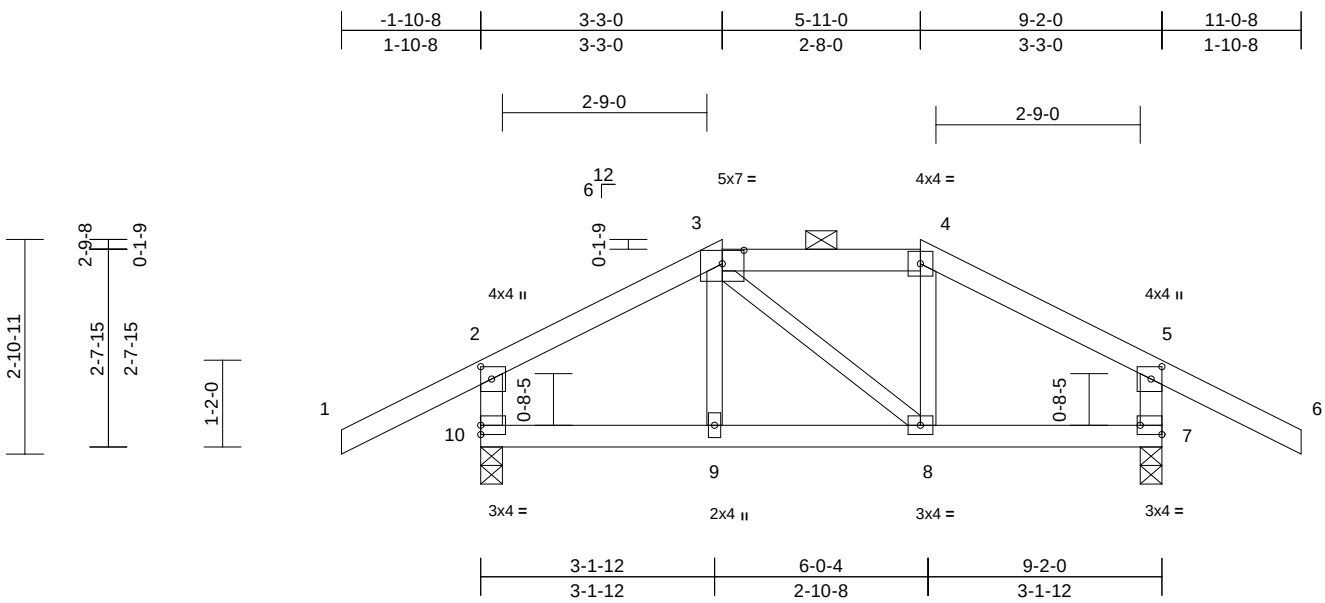
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060738
210568	H2	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:39 Page: 1
ID:0K_i8HoO86YEnciR??VOowyKZKm-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDon7J42JC?f



Scale = 1:31

Plate Offsets (X, Y): [2:0-2-0,0-1-12], [3:0-3-8,0-2-3], [5:0-2-0,0-1-12], [7:Edge,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	0.43	Vert(LL)	-0.04	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.08	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	8-9	>999	240	Weight: 35 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x4 SPF No.2

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

REACTIONS (lb/size) 7=541/0-3-8, 10=541/0-3-8
Max Horiz 10=-68 (LC 6)
Max Uplift 7=-88 (LC 9), 10=-88 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-356/35, 3-4=-245/50, 4-5=-356/34, 5-6=0/63, 2-10=-454/108, 5-7=-454/108
BOT CHORD 9-10=-14/245, 8-9=-15/245, 7-8=0/245
WEBS 3-9=0/84, 3-8=-31/32, 4-8=-11/84

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 88 lb uplift at joint 10 and 88 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

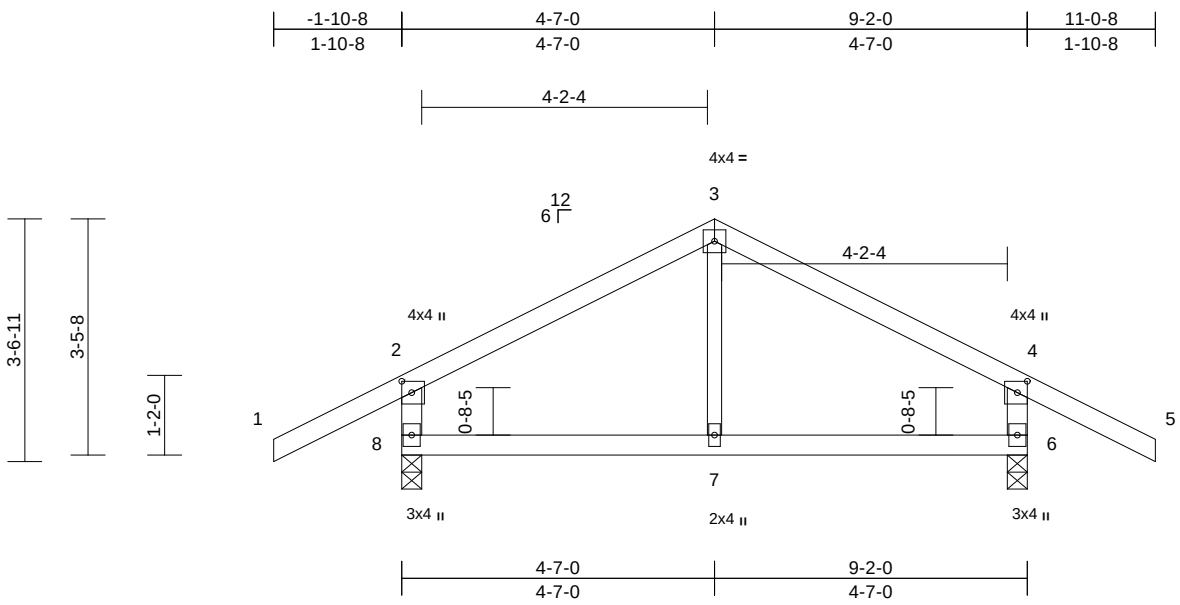
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060739
210568	H3	Common	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:39 Page: 1
ID:BS8sR2wHYUxgcI2Z8pCzkFyKZKb-RfC?PsB70Hq3NSgPqnL8w3uITXbCXWrCDonJ4zJC?f



Scale = 1:33.8

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

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	0.44	Vert(LL)	-0.03	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	7-8	>999	240	Weight: 31 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 7-3:2x3 SPF No.2

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

REACTIONS (lb/size) 6=541/0-3-8, 8=541/0-3-8
Max Horiz 8=-77 (LC 6)
Max Uplift 6=-97 (LC 9), 8=-97 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/63, 2-3=-346/62, 3-4=-346/62, 4-5=0/63, 2-8=-465/127, 4-6=-465/127
BOT CHORD 7-8=0/225, 6-7=0/225
WEBS 3-7=0/150

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 97 lb uplift at joint 8 and 97 lb uplift at joint 6.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

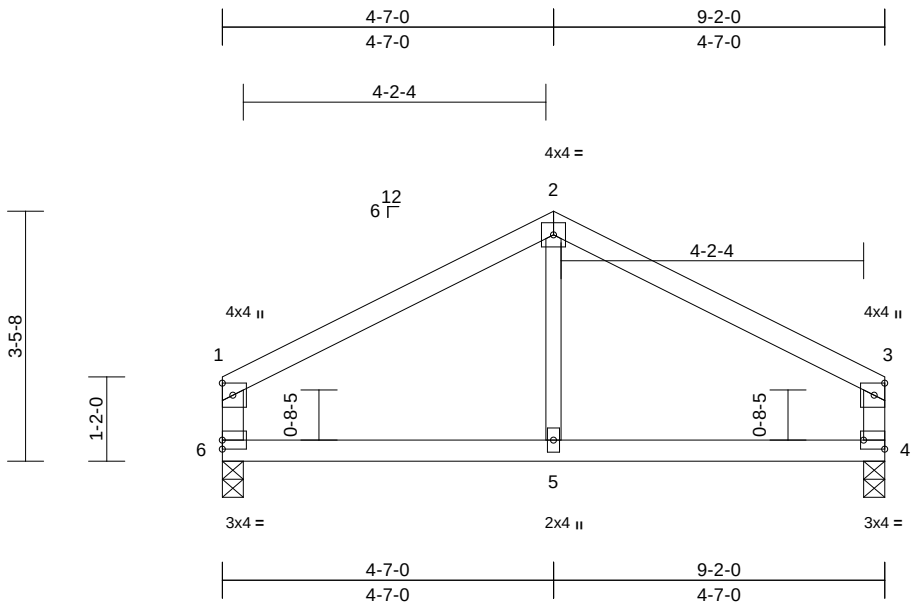
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060740
210568	H4	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:39 Page: 1
ID:NZJ0lp3BzsJ6Q_OgHdvYhZyKZKQ-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ4zJC?f



Scale = 1:31.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.04	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.07	5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	5-6	>999	240	Weight: 26 lb	FT = 10%

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

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

REACTIONS (lb/size) 4=399/0-3-8, 6=399/0-3-8
Max Horiz 6=-64 (LC 4)
Max Uplift 4=-48 (LC 9), 6=-48 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-387/67, 2-3=-387/67, 1-6=-317/76, 3-4=-317/76
BOT CHORD 5-6=-7/274, 4-5=-7/274
WEBS 2-5=0/139

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 6 and 48 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

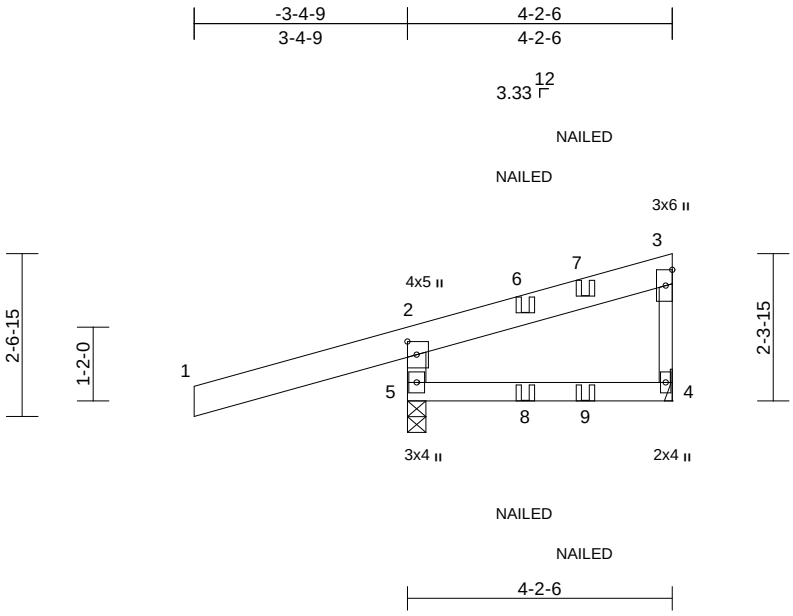
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060741
210568	J1	Diagonal Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:40 Page: 1
ID:i0PvCq8wyPUvnqVhRxFjOqyKbK8-RfC?PsB70Hq3NSgPqnL8w3uITXbGhWrCDoi794zJC?f



Scale = 1:36.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.01	4-5	>999	240	Weight: 25 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

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

REACTIONS (lb/size) 4=-188/ Mechanical, 5=969/0-3-8
Max Horiz 5=100 (LC 7)
Max Uplift 4=-261 (LC 21), 5=-343 (LC 4)
Max Grav 4=159 (LC 24), 5=969 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-911/344, 1-2=-11/133, 2-3=-87/29, 3-4=-120/242
BOT CHORD 4-5=-63/44

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 343 lb uplift at joint 5 and 261 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 6=42 (F), 8=25 (F), 9=4 (B)

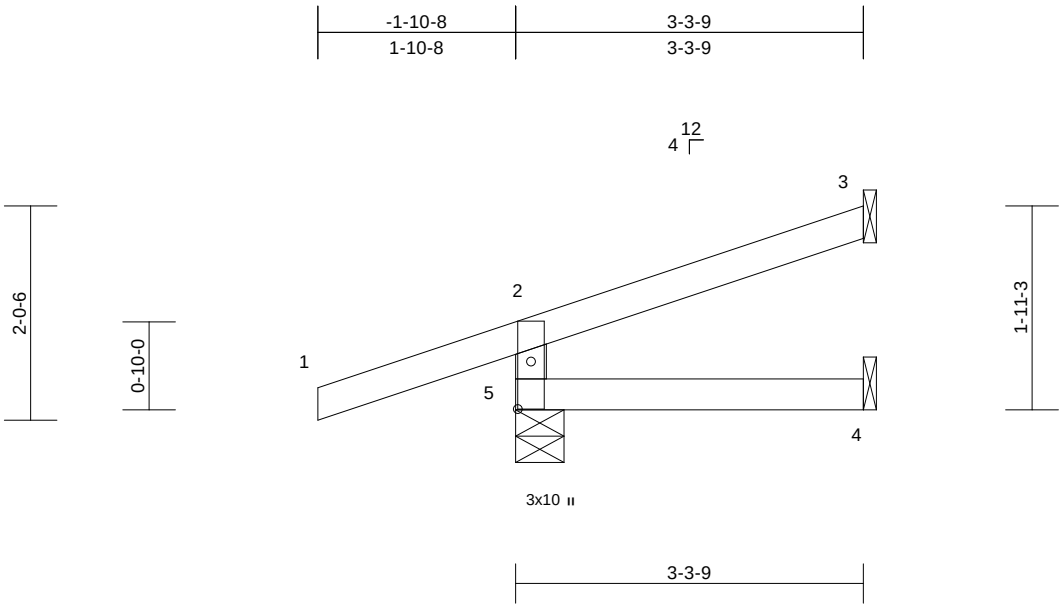
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060742
210568	J2	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:40 Page: 1
ID:_0hQr9B?KRf_QqYitZsQEOyKbLM-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoIY34zJC?f



Scale = 1:21.8

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 10 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=73/ Mechanical, 4=20/ Mechanical, 5=327/0-5-8
Max Horiz 5=69 (LC 4)
Max Uplift 3=-40 (LC 8), 5=-123 (LC 4)
Max Grav 3=73 (LC 1), 4=54 (LC 3), 5=327 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-285/142, 1-2=0/45, 2-3=-45/16
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 5 and 40 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

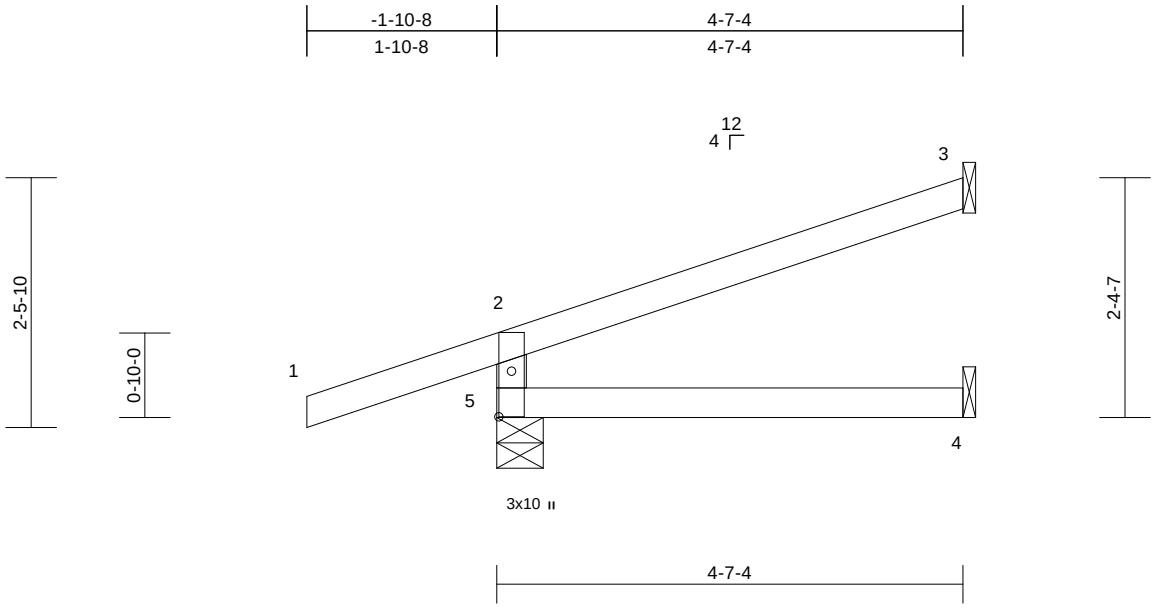
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060743
210568	J3	Jack-Open	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:40 Page: 1
ID:L_UJutF78zHGWcQfg6RcxRyKbLH-RfC?PsB70Hq3NSgPqnL8w3uITXbCXWrCDonJ4zJC?f



Scale = 1:22.8

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

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	0.28	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.03	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 14 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-7-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=123/ Mechanical, 4=42/ Mechanical, 5=372/0-5-8
Max Horiz 5=87 (LC 4)
Max Uplift 3=-61 (LC 8), 5=-123 (LC 4)
Max Grav 3=123 (LC 1), 4=80 (LC 3), 5=372 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-326/156, 1-2=0/45, 2-3=-61/29
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 5 and 61 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

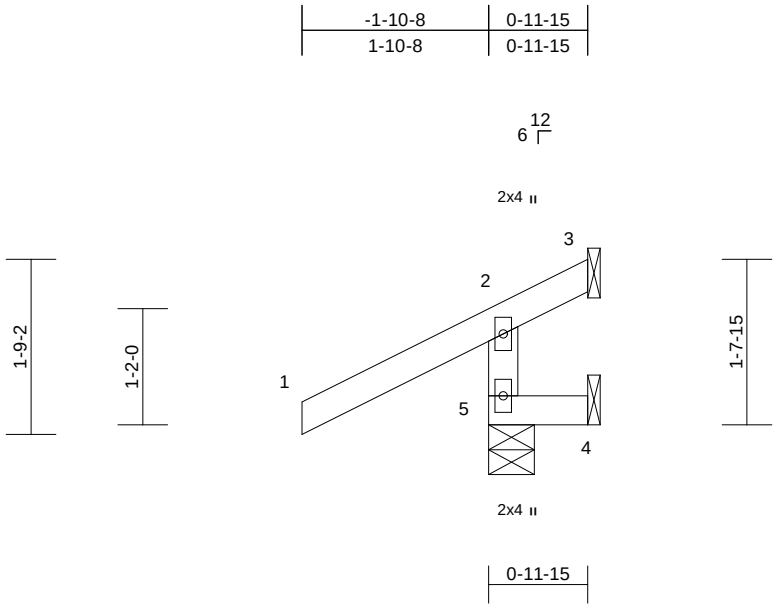
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060744
210568	J4	Jack-Open	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:41 2022 Page: 1
ID:hxICxaJGzVvZdNIdSf1neVyKbLC-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J42JC?f



Scale = 1:23.1

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	0.29	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=-106/ Mechanical, 4=-28/ Mechanical, 5=350/0-5-8
Max Horiz 5=50 (LC 5)
Max Uplift 3=-106 (LC 1), 4=-28 (LC 1), 5=-75 (LC 8)
Max Grav 3=24 (LC 4), 4=7 (LC 6), 5=350 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-306/90, 1-2=0/63, 2-3=-73/10
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 5, 28 lb uplift at joint 4 and 106 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

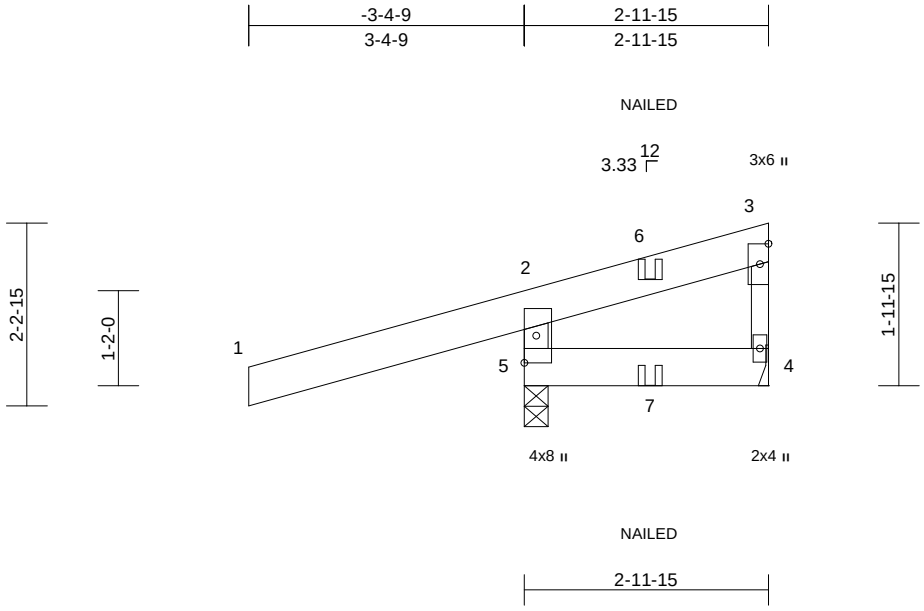
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J5	Diagonal Hip Girder	1	1	Job Reference (optional) I53060745

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:41 2022 Page: 1
ID:Y4S9RafKWpDAH1ZjGh?1zByKbIB-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ4zJC?f



Scale = 1:28.3

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)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 24 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS
BOT CHORD 2x6 SP DSS
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-3-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 4=-362/ Mechanical, 5=1095/0-3-8
Max Horiz 5=96 (LC 7)
Max Uplift 4=-363 (LC 21), 5=-368 (LC 4)
Max Grav 4=172 (LC 24), 5=1095 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-1015/372, 1-2=-11/133, 2-3=-83/29, 3-4=-135/326
BOT CHORD 4-5=-72/39

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 368 lb uplift at joint 5 and 363 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 7=10 (B)

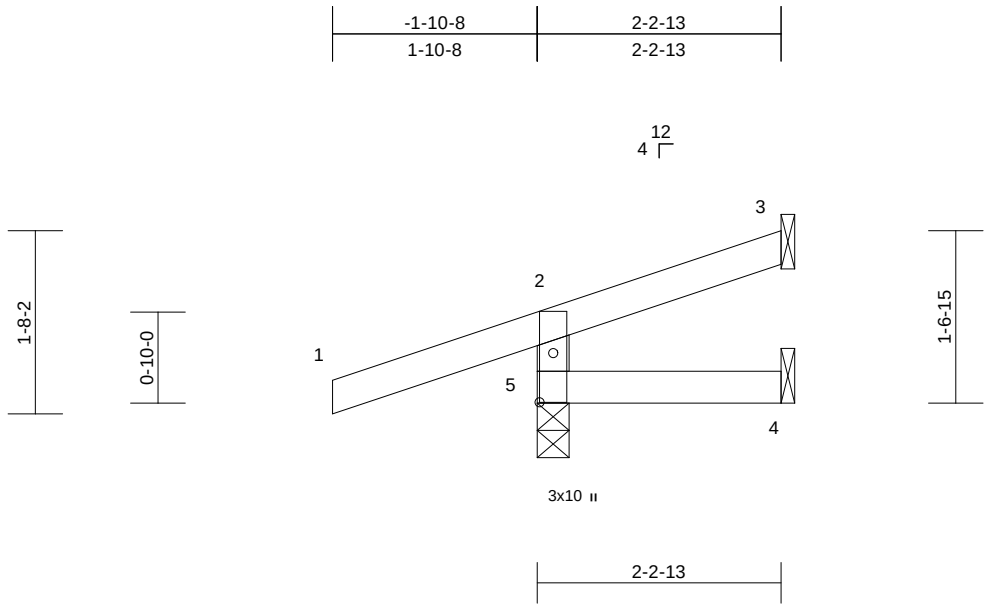
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060746
210568	J6	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:41 2022 Page: 1
ID:q3lg4viPurPFw2bjhJblolyKbJP-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:21.1

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=21/ Mechanical, 4=-1/ Mechanical, 5=303/0-3-8
Max Horiz 5=54 (LC 4)
Max Uplift 3=-19 (LC 8), 4=-1 (LC 1), 5=-130 (LC 4)
Max Grav 3=21 (LC 1), 4=32 (LC 3), 5=303 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/137, 1-2=0/45, 2-3=-38/2
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 5, 19 lb uplift at joint 3 and 1 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

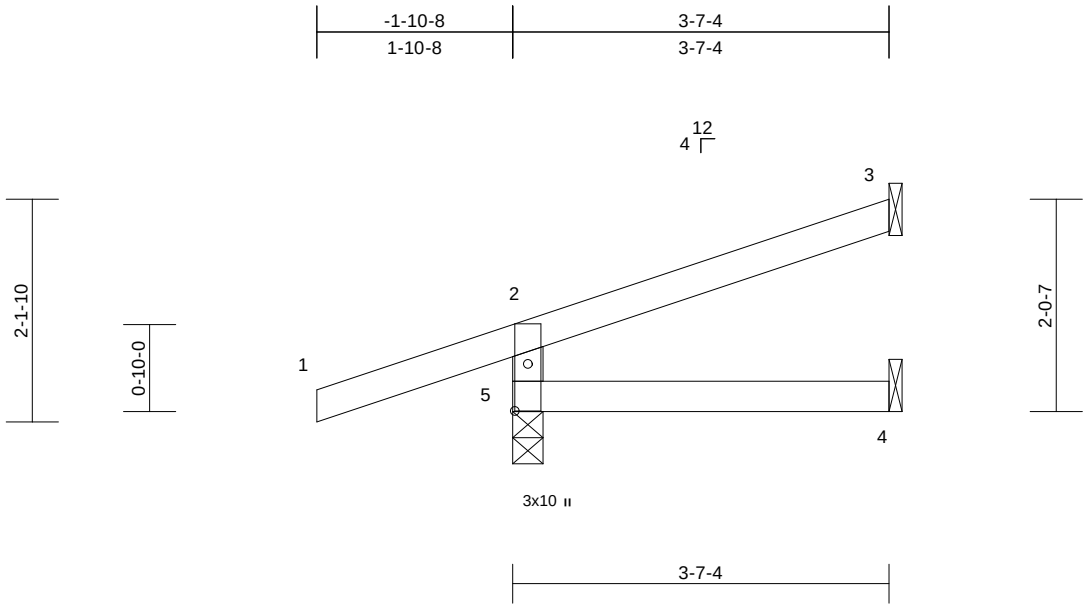
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060747
210568	J7	Jack-Open	9	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:41 2022 Page: 1
ID:xIV9EXfuqcupRRlySTXoevyKbJT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J42JG?f



Scale = 1:22.1

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

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	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 11 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=85/ Mechanical, 4=26/ Mechanical, 5=336/0-3-8
Max Horiz 5=73 (LC 4)
Max Uplift 3=-45 (LC 8), 5=-122 (LC 4)
Max Grav 3=85 (LC 1), 4=60 (LC 3), 5=336 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-294/145, 1-2=0/45, 2-3=-49/19
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 5 and 45 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

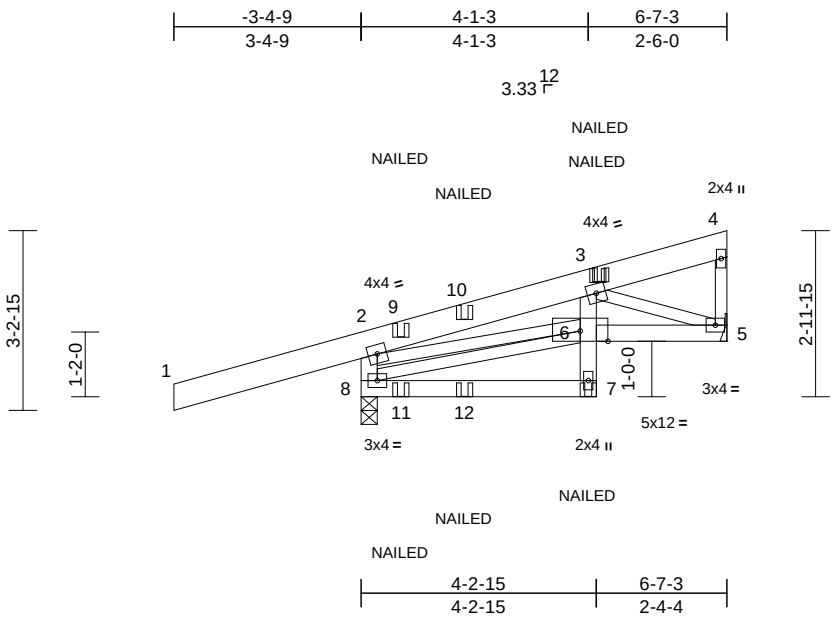
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060748
210568	J8	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:42 Page: 1
ID:qUaXGj4vKGLFBHX3iZZsoNyKbCT-RfC?PsB70Hq3NSgPqnL8w3ulTXbCKWrCDoh?J42JC?f



Scale = 1:41.6

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)	0.01	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.02	6	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.22	Horz(CT)	-0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	-0.02	7	>999	240	Weight: 43 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF 2400F 2.0E *Except* 7-3:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-10-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 5=55/ Mechanical, 8=904/0-3-8
Max Horiz 8=112 (LC 5)
Max Uplift 5=-51 (LC 20), 8=-276 (LC 4)
Max Grav 5=145 (LC 24), 8=904 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-887/310, 1-2=-11/133, 2-3=-455/476, 3-4=-27/48, 4-5=-198/60
BOT CHORD 7-8=-50/42, 6-7=0/68, 3-6=0/111, 5-6=-584/464
WEBS 6-8=-130/52, 2-6=-530/503, 3-5=-479/626

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 276 lb uplift at joint 8 and 51 lb uplift at joint 5.
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) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) 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, 2-4=-70, 7-8=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 1=-250, 7=9 (F), 3=-6 (B), 9=40 (B), 10=42 (F), 12=25 (F)

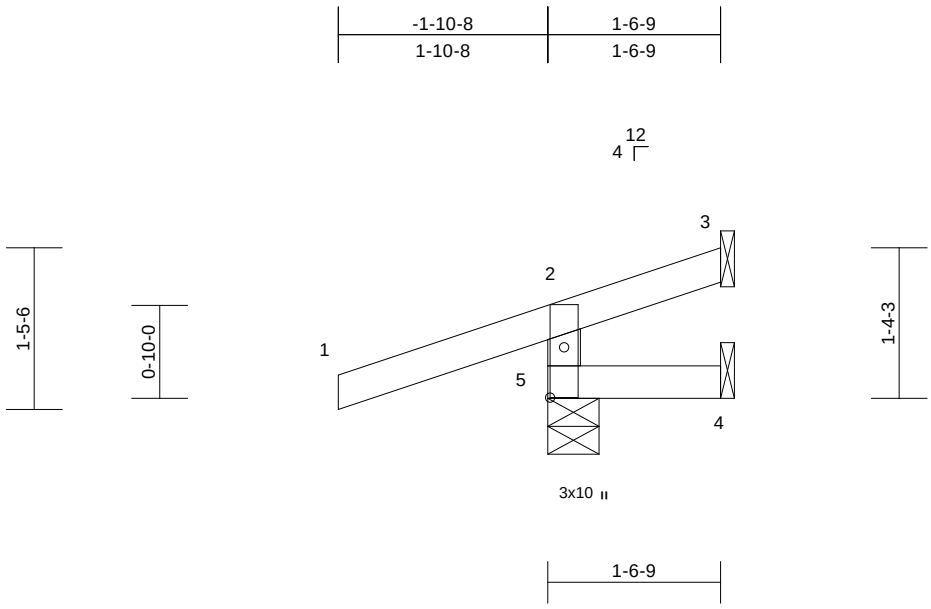
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060749
210568	J9	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:42 Page: 1
ID:lFXjGXtBtXkRBvurrZmPlHyKbE1-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J4zJC?f



Scale = 1:20.6

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=-24/ Mechanical, 4=-16/ Mechanical, 5=307/0-5-8
Max Horiz 5=46 (LC 4)
Max Uplift 3=-24 (LC 1), 4=-16 (LC 1), 5=-144 (LC 4)
Max Grav 3=17 (LC 4), 4=18 (LC 4), 5=307 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-263/143, 1-2=0/45, 2-3=-38/5
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 5, 16 lb uplift at joint 4 and 24 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

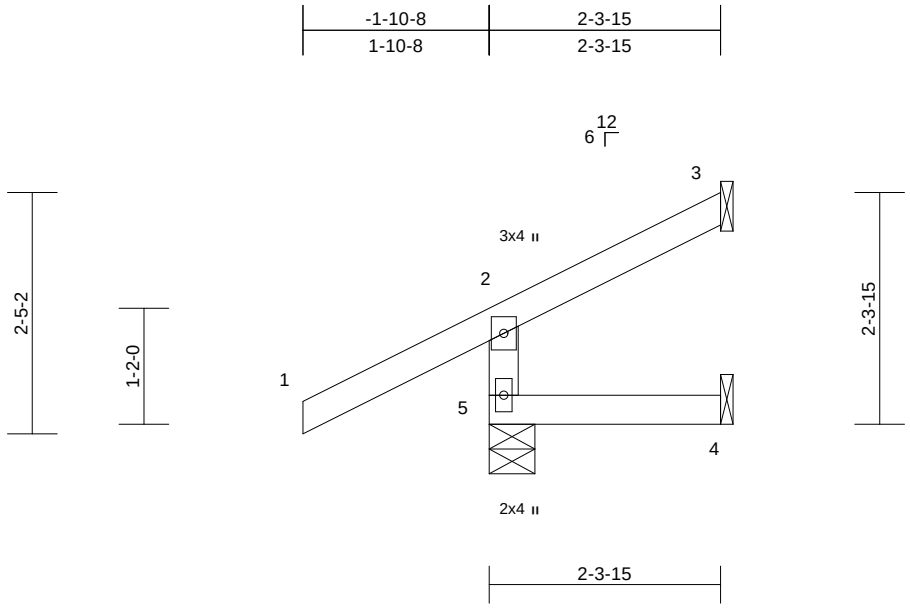
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060750
210568	J10	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:42 Page: 1
ID:w5AS0ToQHh_HT_RhVIf?V0yKbE7-RfC?PsB70Hq3NSgPqnL8w3ulTXbCKWrCDon?J42JC?f



Scale = 1:23.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-3-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=24/ Mechanical, 4=4/ Mechanical, 5=304/0-5-8
Max Horiz 5=66 (LC 5)
Max Uplift 3=-32 (LC 8), 5=-52 (LC 8)
Max Grav 3=25 (LC 15), 4=35 (LC 3), 5=304 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-265/75, 1-2=0/63, 2-3=-55/6
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 5 and 32 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

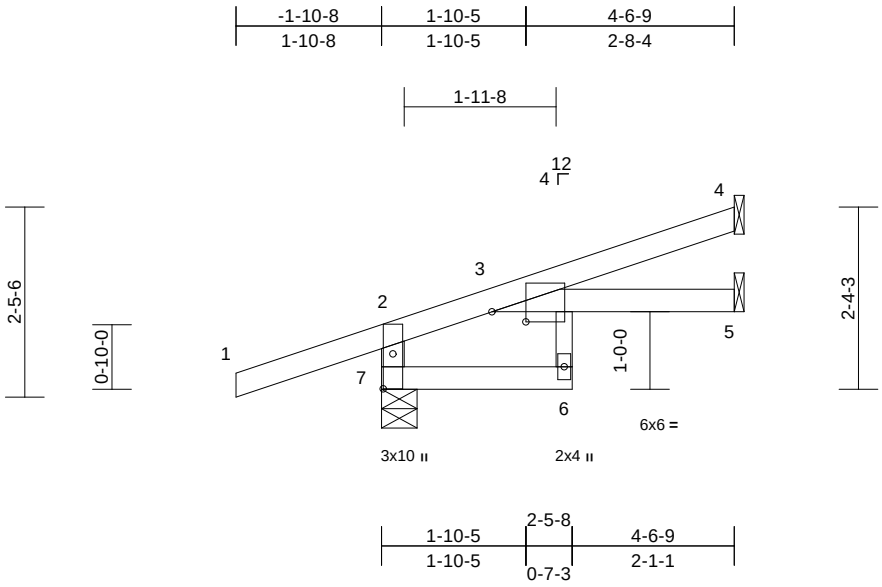
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060751
210568	J11	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:43 Page: 1
ID:lz?IijfWtJbrfI5aLUzQYiyKbEI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?I



Scale = 1:29.7

Plate Offsets (X, Y): [3:0-5-4,0-1-9], [7:0-5-6,0-1-8]

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	0.28	Vert(LL)	-0.03	6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.06	6	>818	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.03	6	>999	240	Weight: 15 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 6-3:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 4=113/ Mechanical, 5=57/ Mechanical, 7=381/0-5-8
Max Horiz 7=86 (LC 4)
Max Uplift 4=-46 (LC 8), 7=-116 (LC 4)
Max Grav 4=113 (LC 1), 5=80 (LC 3), 7=381 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-350/129, 1-2=0/45, 2-3=-57/11, 3-4=-32/29
BOT CHORD 6-7=-44/0, 3-5=0/0
WEBS 3-6=0/63

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 116 lb uplift at joint 7 and 46 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

July 14,2022

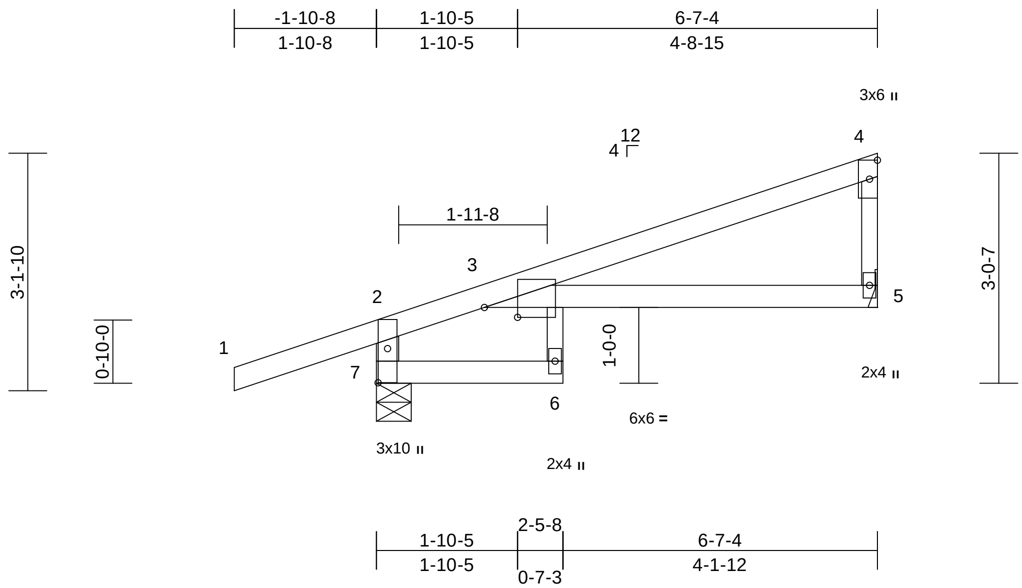
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J12	Jack-Closed	6	1	Job Reference (optional) I53060752

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:48 Page: 1
ID:RwpNYBWUZwIyw53YUpHwtNyKbH3-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:30.4

Plate Offsets (X, Y): [3:0-5-4,0-1-9], [7:0-5-6,0-1-8]

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	0.50	Vert(LL)	-0.10	6	>758	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.21	6	>358	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.10	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.09	6	>862	240	Weight: 21 lb	FT = 10%

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

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

REACTIONS (lb/size) 5=269/ Mechanical, 7=464/0-5-8
Max Horiz 7=87 (LC 5)
Max Uplift 5=-16 (LC 8), 7=-68 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-439/81, 1-2=0/45, 2-3=-104/0, 3-4=-120/5, 4-5=-182/41
BOT CHORD 6-7=-46/0, 3-5=-12/80
WEBS 3-6=0/67

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 7 and 16 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

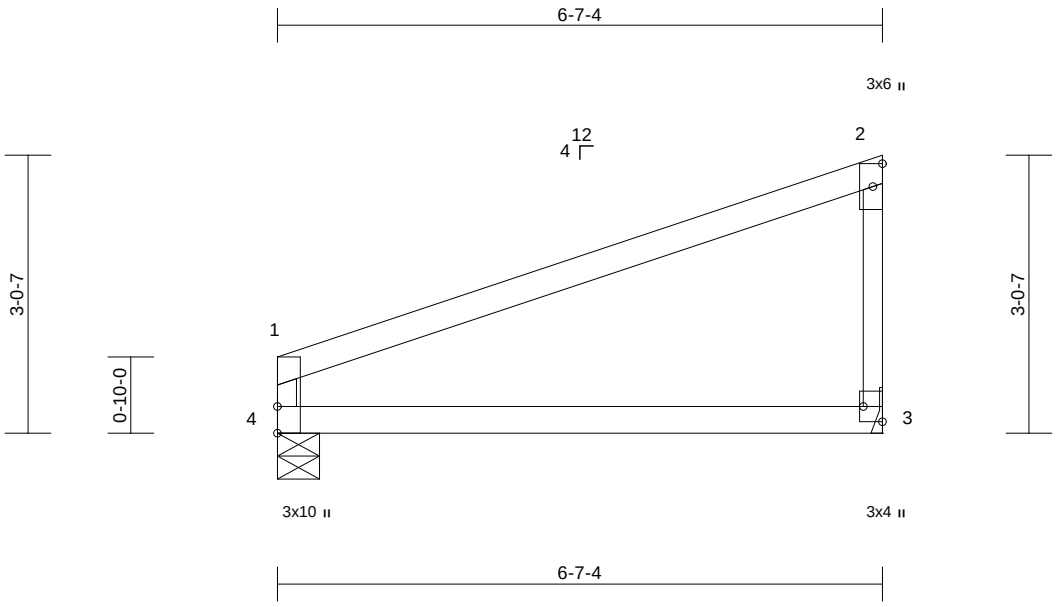
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060753
210568	J13	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:43 Page: 1
ID:ryRf2b82sPOMiKBbAoEe7ryKbHY-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7J4zJC?



Scale = 1:25.2

Plate Offsets (X, Y): [3: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	0.62	Vert(LL)	-0.07	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.15	3-4	>526	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	3-4	>999	240	Weight: 18 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=288/ Mechanical, 4=288/0-5-8
Max Horiz 4=89 (LC 5)
Max Uplift 3=-21 (LC 8), 4=-9 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-238/52, 1-2=-137/13, 2-3=-209/54
BOT CHORD 3-4=-20/60

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 4 and 21 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

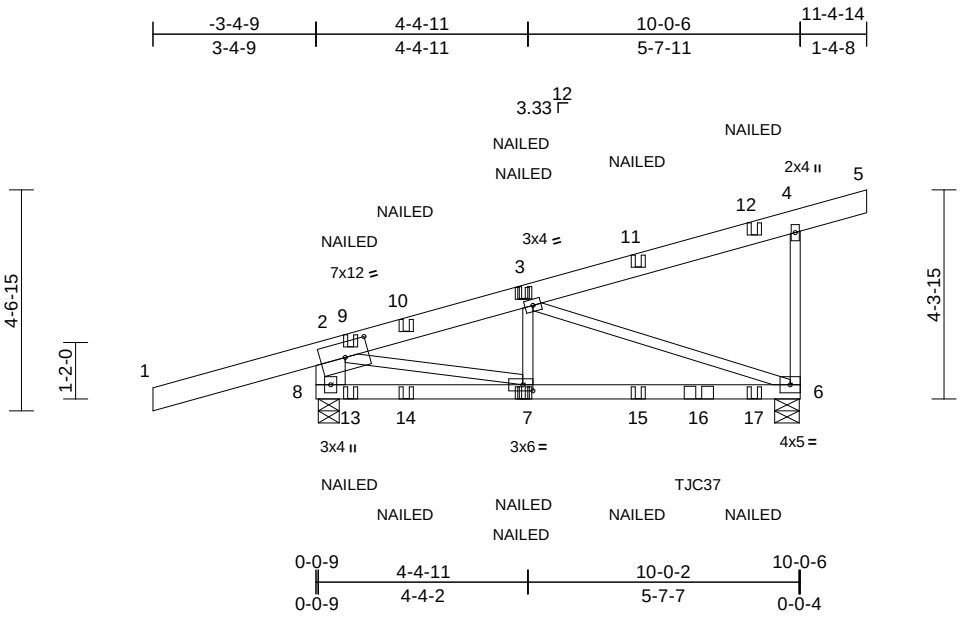
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J14	Diagonal Hip Girder	1	1	Job Reference (optional) I53060754

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:44 Page: 1
ID:DVHpqdD?585MNEQ1x9EqKCyKb8P-RfC?PsB70Hq3NSgPqnL8w3ulTXIGKWrCDof7J4zJC?f



Scale = 1:47.7

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

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	0.69	Vert(LL)	-0.09	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.18	6-7	>649	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.43	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	6-7	>999	240	Weight: 61 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x8 SP DSS

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

REACTIONS (lb/size) 6=681/0-6-2, 8=1048/0-5-3
Max Horiz 8=187 (LC 5)
Max Uplift 6=-246 (LC 5), 8=-314 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-1064/324, 1-2=-11/136, 2-3=-607/207, 3-4=-123/41, 4-5=-28/0, 4-6=-355/168
BOT CHORD 7-8=-1086/379, 6-7=-237/527
WEBS 2-7=-340/1249, 3-7=-101/171, 3-6=-503/220

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 314 lb uplift at joint 8 and 246 lb uplift at joint 6.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
6) Use Simpson Strong-Tie TJC37 (6 nail, 30-90) or equivalent at 9-2-3 from the left end to connect truss(es) to front face of bottom chord, skewed 56.3 deg.to the left, sloping 0.0 deg. down.
7) Fill all nail holes where hanger is in contact with lumber.
8) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
10) 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, 2-4=-70, 4-5=-70, 6-8=-20
Concentrated Loads (lb)
Vert: 1=-250, 7=4 (F=-5, B=9), 3=-2 (F), 9=40 (F), 10=42 (B), 11=-3 (B), 12=-53 (B), 14=25 (B), 15=-4 (B), 16=-273 (F), 17=-28 (B)

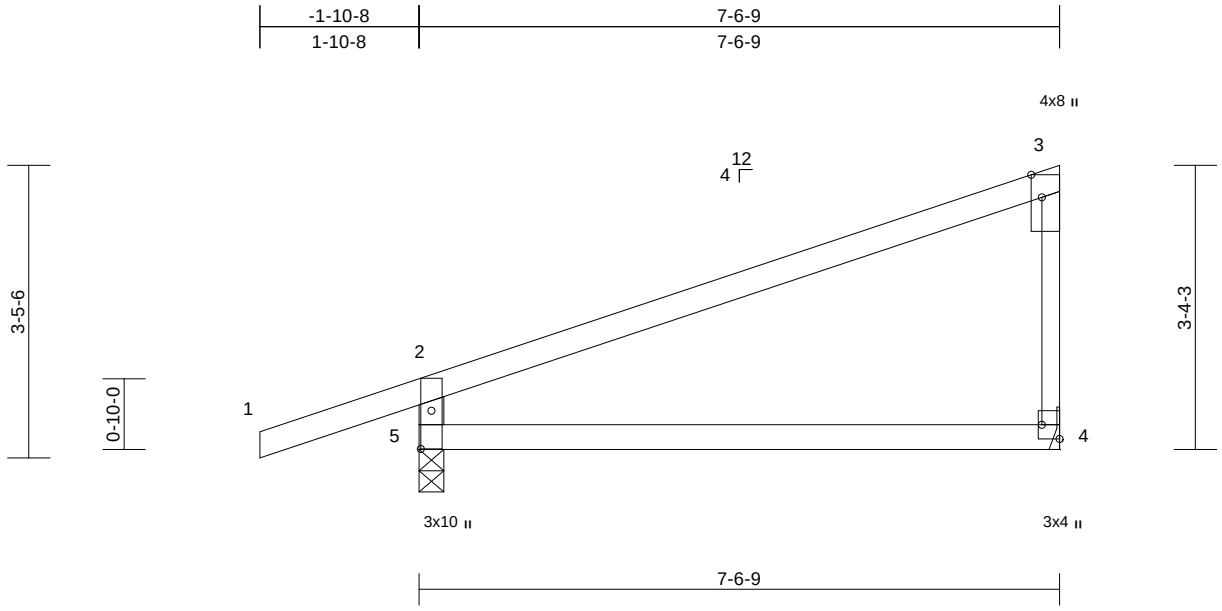
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060755
210568	J15	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:44 Page: 1
ID:G12M8hN5aeHH_U3aqSzQVRyKb9V-RfC?PsB70Hq3NSgPqnL8w3ulTXhGKWrCDof7J4zJC1f



Scale = 1:27.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.11	4-5	>781	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.45	Vert(CT)	-0.24	4-5	>372	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.04	4-5	>999	240	Weight: 23 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

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

REACTIONS (lb/size) 4=309/ Mechanical, 5=489/0-3-8
Max Horiz 5=145 (LC 5)
Max Uplift 4=-67 (LC 8), 5=-147 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-432/200, 1-2=0/45, 2-3=-162/15, 3-4=-221/100
BOT CHORD 4-5=-35/61

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 147 lb uplift at joint 5 and 67 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

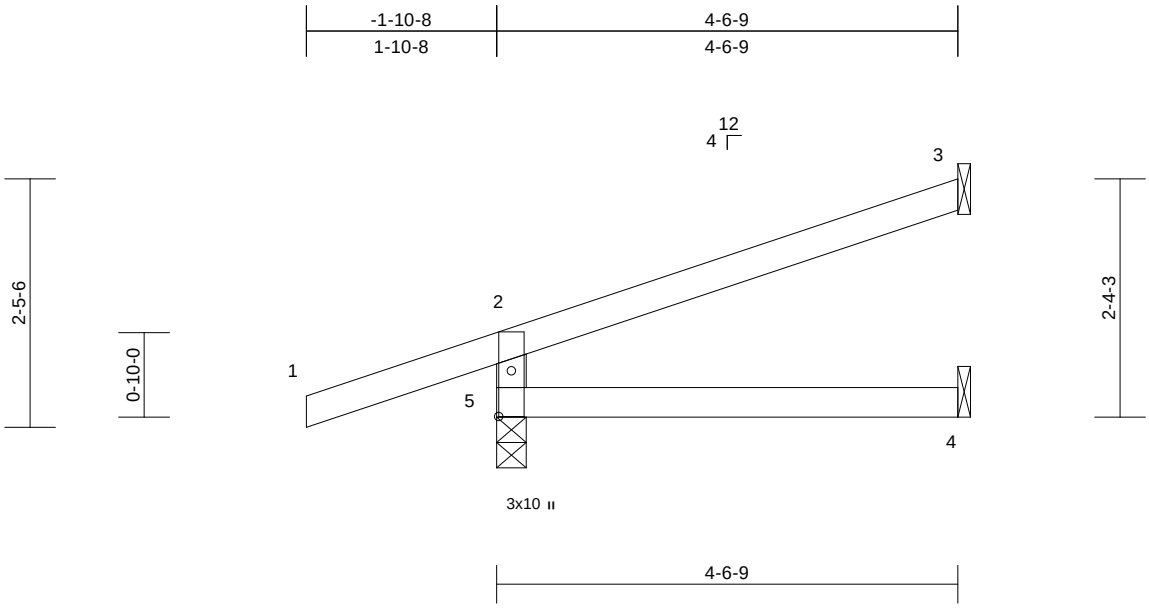
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060756
210568	J16	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:44 Page: 1
ID:NGprIKKaWPmsVsmpbdvUKbyKb9Z-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?Y



Scale = 1:22.7

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

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	0.28	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.03	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 13 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=121/ Mechanical, 4=41/ Mechanical, 5=370/0-3-8
Max Horiz 5=86 (LC 4)
Max Uplift 3=-60 (LC 8), 5=-123 (LC 4)
Max Grav 3=121 (LC 1), 4=79 (LC 3), 5=370 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-324/156, 1-2=0/45, 2-3=-60/29
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 123 lb uplift at joint 5 and 60 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

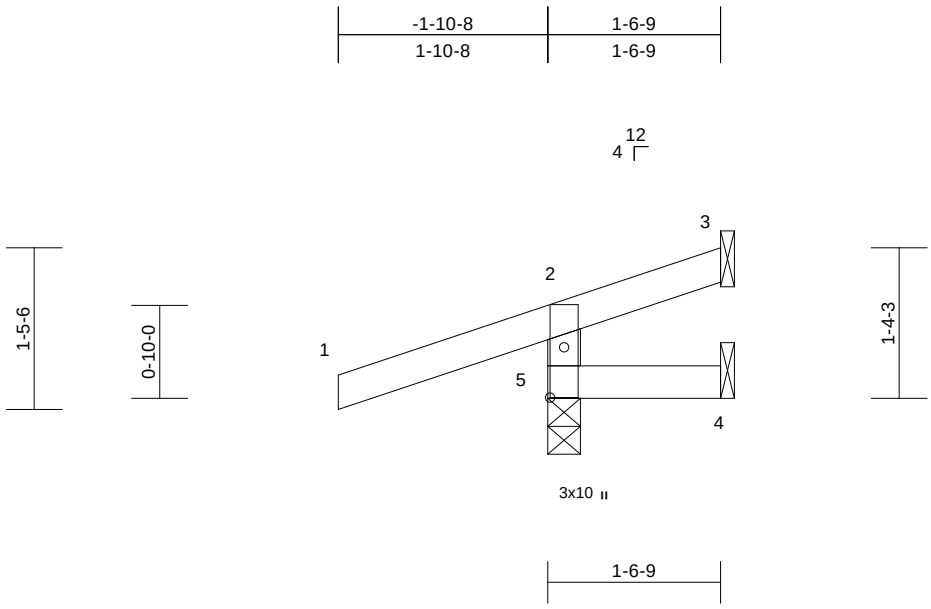
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060757
210568	J17	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:44 Page: 1
ID:zh7igIliDUOHeP1EwULnjzyKb9c-RfC?PsB70Hq3NSgPqnL8w3uITXbGKV?rCDoi7J4zJC?I



Scale = 1:20.6

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=-24/ Mechanical, 4=-16/ Mechanical, 5=307/0-3-8
Max Horiz 5=46 (LC 4)
Max Uplift 3=-24 (LC 1), 4=-16 (LC 1), 5=-144 (LC 4)
Max Grav 3=17 (LC 4), 4=18 (LC 4), 5=307 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-263/143, 1-2=0/45, 2-3=-38/5
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 5, 16 lb uplift at joint 4 and 24 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

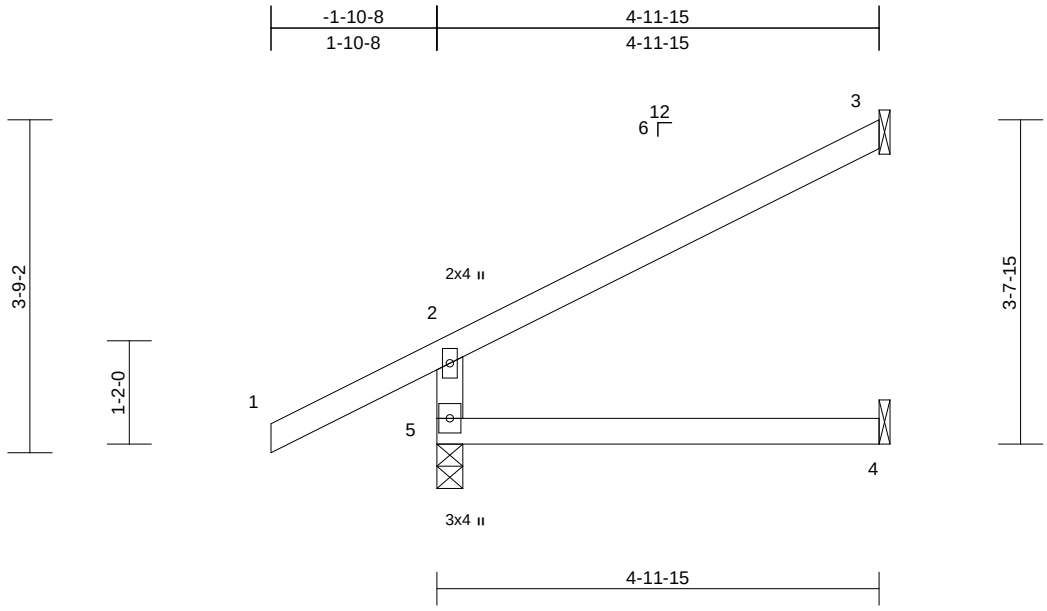
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060758
210568	J18	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:ckKpcaEZPym_Ye8G7xlc0vyKb9h-RfC?PsB70Hq3NSgPqnL8w3uITXbGkWrCDoi7342JC?



Scale = 1:26

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	4-5	>999	240	Weight: 15 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=137/ Mechanical, 4=48/ Mechanical, 5=387/0-3-8
Max Horiz 5=120 (LC 8)
Max Uplift 3=-85 (LC 8), 5=-51 (LC 8)
Max Grav 3=137 (LC 1), 4=88 (LC 3), 5=387 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-339/99, 1-2=0/63, 2-3=-98/46
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 5 and 85 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

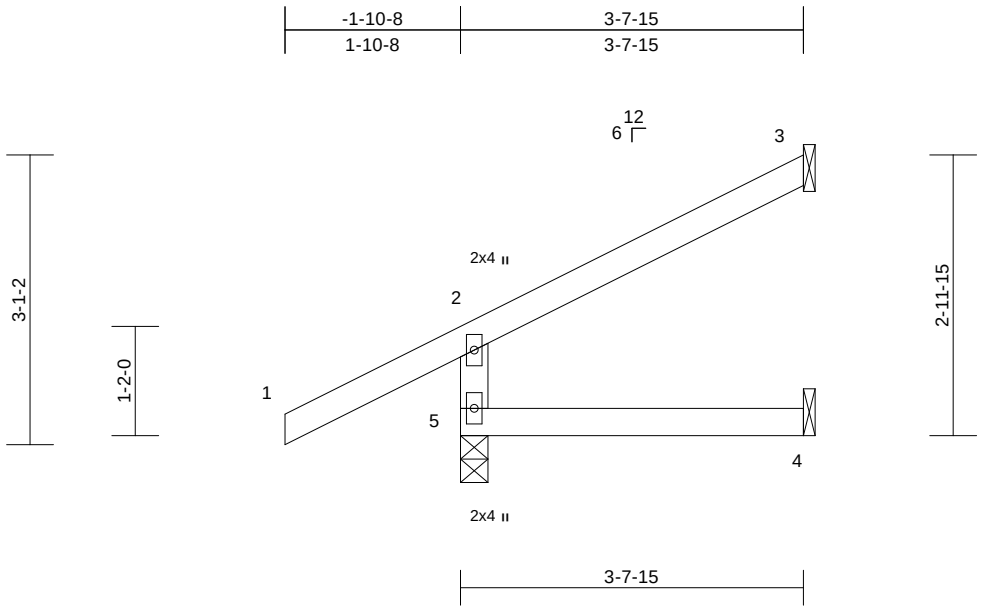
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060759
210568	J19	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:ky4InDB2LjGZ30rVu5hgr3yKb9l-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4zC?f



Scale = 1:24.6

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	0.29	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 12 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=87/ Mechanical, 4=27/ Mechanical, 5=338/0-3-8
Max Horiz 5=93 (LC 8)
Max Uplift 3=-60 (LC 8), 5=-50 (LC 8)
Max Grav 3=87 (LC 1), 4=62 (LC 3), 5=338 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-296/85, 1-2=0/63, 2-3=-74/28
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 5 and 60 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

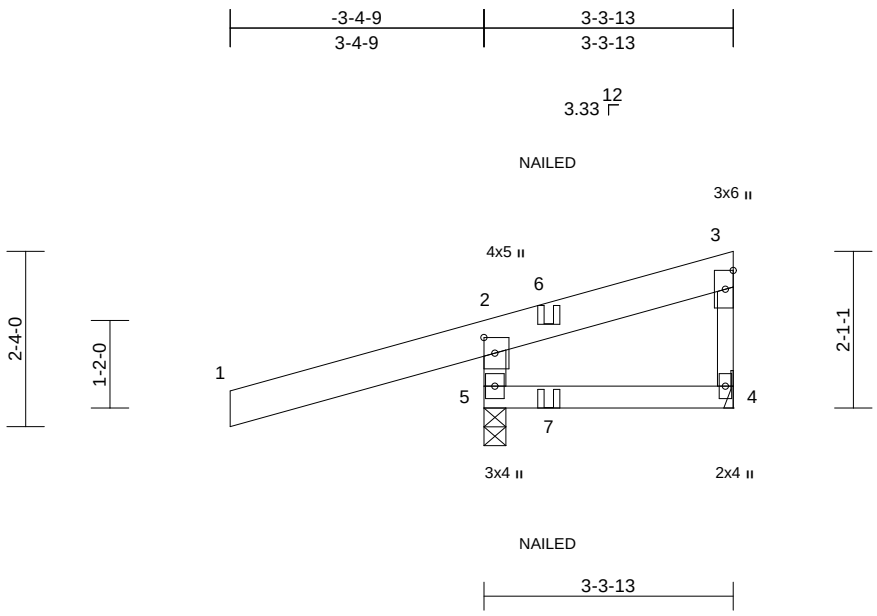
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J20	Diagonal Hip Girder	2	1	Job Reference (optional) I53060760

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:zB3G7MUseovd34Adw0XrTxyKb1c-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiTJ4z5C?f



Scale = 1:30.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-6-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 4=-300/ Mechanical, 5=1035/0-3-8
Max Horiz 5=104 (LC 7)
Max Uplift 4=-328 (LC 21), 5=-370 (LC 4)
Max Grav 4=129 (LC 24), 5=1035 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-964/384, 1-2=-11/133, 2-3=-84/24, 3-4=-98/313
BOT CHORD 4-5=-69/38

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 370 lb uplift at joint 5 and 328 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 6=38 (F)

July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

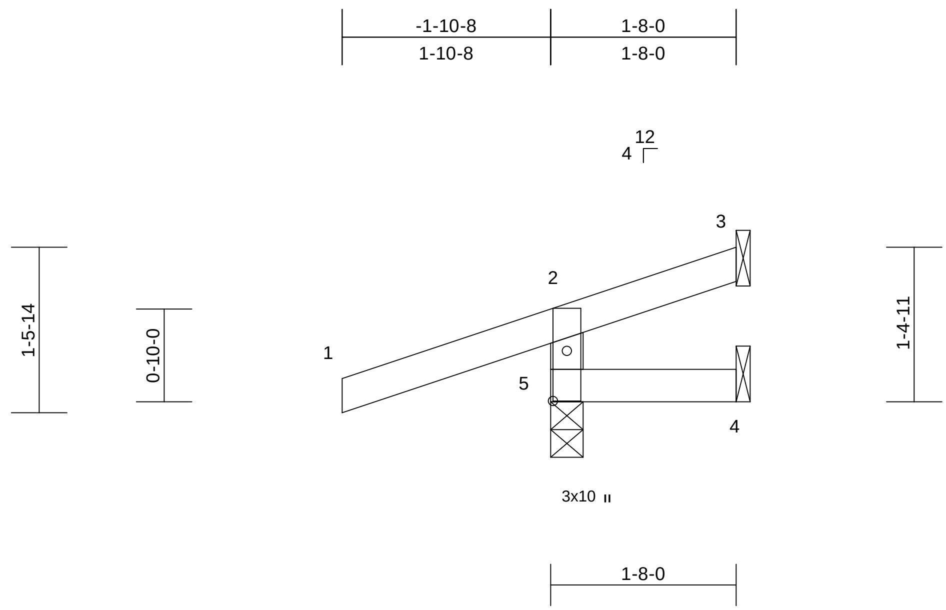
Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J22	Jack-Open	2	1	Job Reference (optional) I53060761

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1

ID:ByJzmVKCZ6TujkZQUeL5FPyKb4O-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:20.7

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=-14/ Mechanical, 4=-13/ Mechanical, 5=304/0-3-8
Max Horiz 5=47 (LC 4)
Max Uplift 3=-14 (LC 1), 4=-13 (LC 1), 5=-140 (LC 4)
Max Grav 3=11 (LC 4), 4=20 (LC 3), 5=304 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-261/140, 1-2=0/45, 2-3=-38/3
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 140 lb uplift at joint 5, 13 lb uplift at joint 4 and 14 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

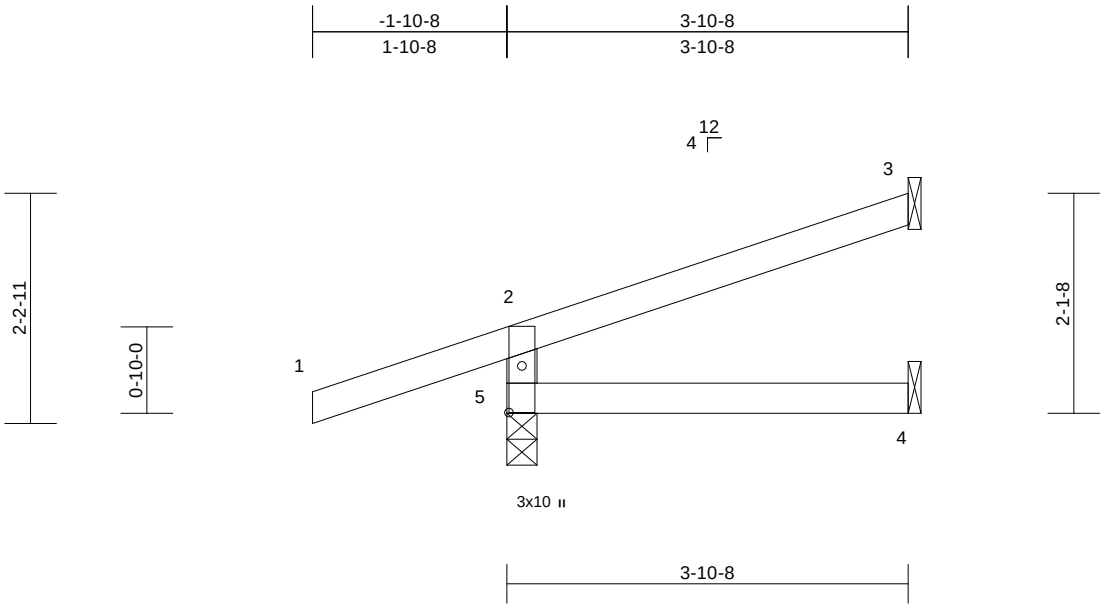
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060762
210568	J23	Jack-Open	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:bW_6OXN4s1sTaBI?Amuot1yKb4L-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoiFJ4z5C?f



Scale = 1:22.2

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

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	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 12 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=96/ Mechanical, 4=30/ Mechanical, 5=345/0-3-8
Max Horiz 5=77 (LC 4)
Max Uplift 3=-49 (LC 8), 5=-122 (LC 4)
Max Grav 3=96 (LC 1), 4=65 (LC 3), 5=345 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-302/148, 1-2=0/45, 2-3=-52/22
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 5 and 49 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

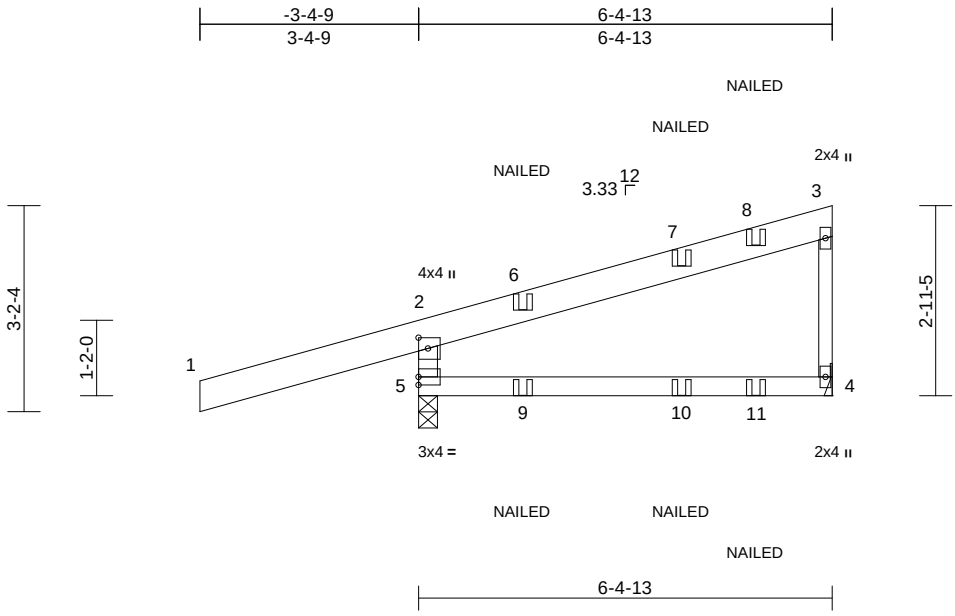
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060763
210568	J24	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:jZKtGbxZoTnoiQO1Q8EqHxyKb3c-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi7J4zJC?



Scale = 1:35.6

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

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	0.65	Vert(LL)	-0.04	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.07	4-5	>993	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.02	4-5	>999	240	Weight: 34 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 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 (lb/size) 4=108/ Mechanical, 5=988/0-3-8
Max Horiz 5=126 (LC 7)
Max Uplift 4=-58 (LC 20), 5=-312 (LC 4)
Max Grav 4=196 (LC 21), 5=988 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-914/348, 1-2=-11/133, 2-3=-128/31, 3-4=-124/92
BOT CHORD 4-5=-40/54

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 312 lb uplift at joint 5 and 58 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 8=-50 (B), 9=10 (B), 10=9 (F), 11=-15 (B)

July 14,2022

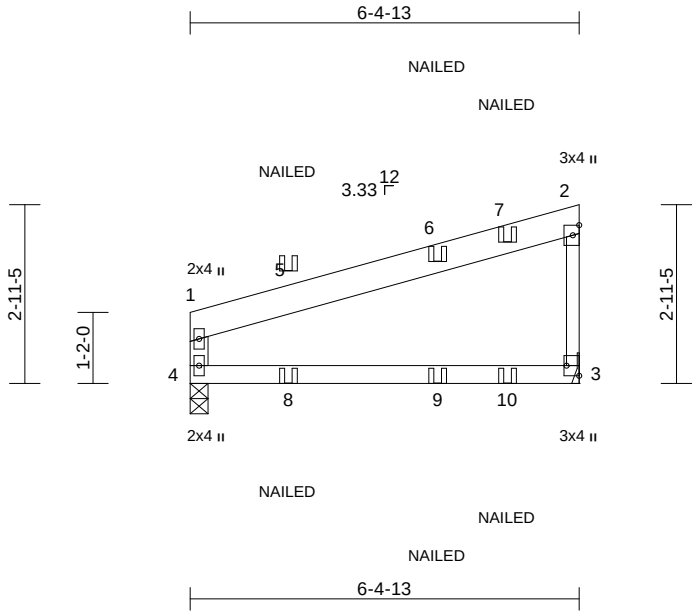
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/20/2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060764
210568	J25	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:1?ME?Frc7WD9CxdSJO4PpmyKb2R-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDbf7J4zJC?



Scale = 1:37.9

Plate Offsets (X, Y): [3: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	0.36	Vert(LL)	-0.06	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.12	3-4	>609	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	3-4	>999	240	Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 2-3:2x3 SPF No.2

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

REACTIONS (lb/size) 3=330/ Mechanical, 4=282/0-3-8
Max Horiz 4=106 (LC 5)
Max Uplift 3=-82 (LC 8), 4=-51 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-230/94, 1-2=-124/27, 2-3=-250/120
BOT CHORD 3-4=-27/44

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 4 and 82 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidlines.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 3-4=-20
Concentrated Loads (lb)
Vert: 7=-50 (F), 8=10 (F), 9=-4 (B), 10=-15 (F)

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

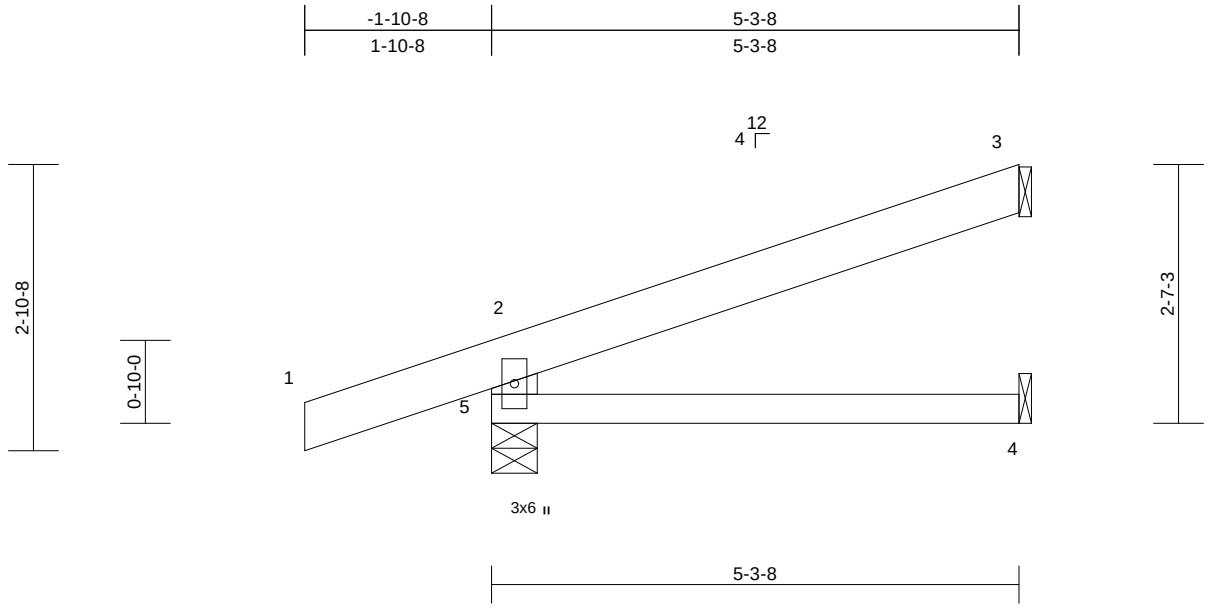
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060765
210568	J26	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:XHyIPK9MPJFfaqenJm5MpxyKb5v-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoiY34zJC?f



Scale = 1:23.1

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	0.15	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.04	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 20 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=151/ Mechanical, 4=43/ Mechanical, 5=403/0-5-8
Max Horiz 5=97 (LC 4)
Max Uplift 3=-71 (LC 8), 5=-131 (LC 4)
Max Grav 3=151 (LC 1), 4=82 (LC 3), 5=403 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-347/168, 1-2=0/47, 2-3=-67/37
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 131 lb uplift at joint 5 and 71 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

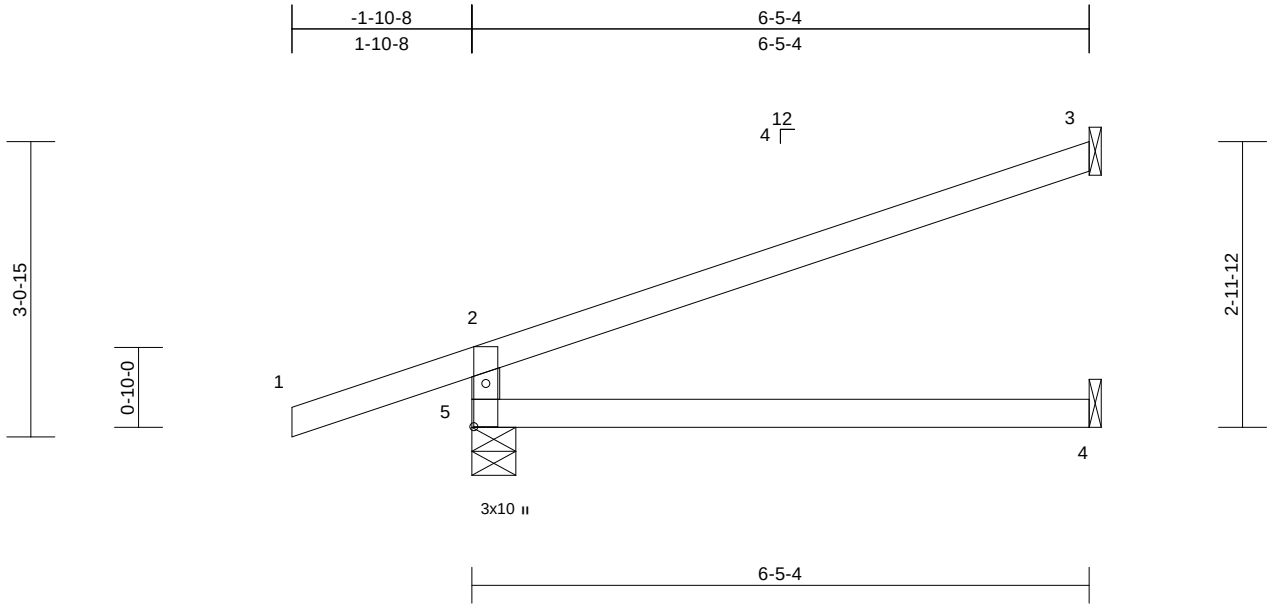
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060766
210568	J27	Jack-Open	11	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:45 Page: 1
ID:AK8PMd5DbmdMT3mpWDWB6uyKb6_-RfC?PsB70Hq3NSgPqnL8w3ulTKbGKWrCDoiTJ42JC?f



Scale = 1:24

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.07	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.15	4-5	>503	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.04	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	4-5	>999	240	Weight: 18 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=188/ Mechanical, 4=70/ Mechanical, 5=445/0-5-8
Max Horiz 5=112 (LC 4)
Max Uplift 3=-88 (LC 8), 5=-129 (LC 4)
Max Grav 3=188 (LC 1), 4=115 (LC 3), 5=445 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-390/180, 1-2=0/45, 2-3=-85/46
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 5 and 88 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

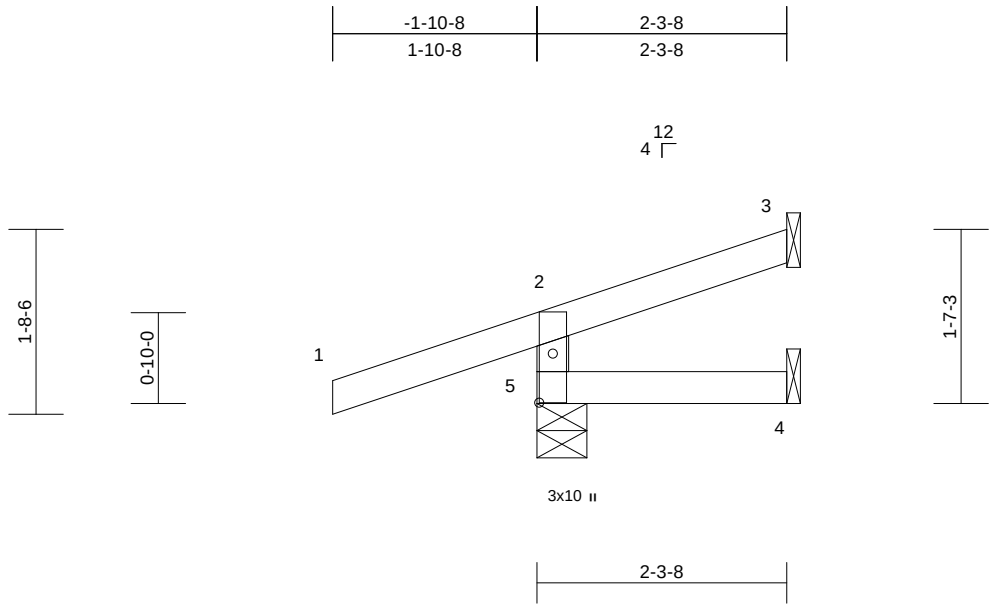
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060767
210568	J28	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:47 Page: 1
ID:pMLWJv24mE?3NHtsjgw0PqyKb63-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDonJ4zJC?f



Scale = 1:21.1

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

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	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-3-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=25/ Mechanical, 4=1/ Mechanical, 5=304/0-5-8
Max Horiz 5=55 (LC 4)
Max Uplift 3=-20 (LC 8), 5=-129 (LC 4)
Max Grav 3=25 (LC 1), 4=33 (LC 3), 5=304 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-263/137, 1-2=0/45, 2-3=-38/3
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 5 and 20 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

July 14,2022

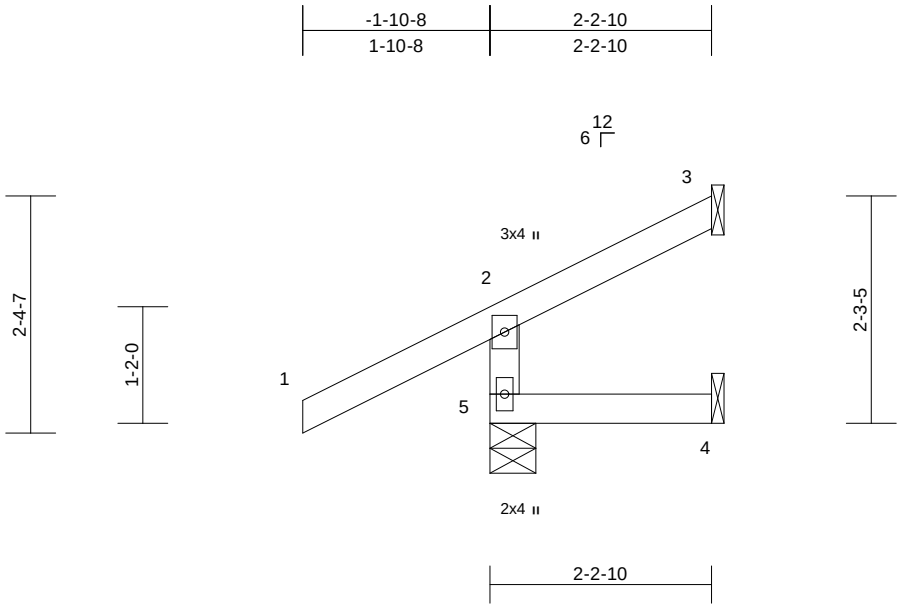
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	J29	Jack-Open	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I53060768
07/20/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:47 Page: 1
ID:xb60TY_ai?Ueuga5Uqr4F_yKb67-RfC?PsB70Hq3NSgPqnL8w3uITXbGKVrCDoi7J42JC?f



Scale = 1:23.1

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	0.29	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=18/ Mechanical, 4=1/ Mechanical, 5=303/0-5-8
Max Horiz 5=64 (LC 5)
Max Uplift 3=-29 (LC 8), 5=-53 (LC 8)
Max Grav 3=19 (LC 15), 4=32 (LC 3), 5=303 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-264/75, 1-2=0/63, 2-3=-55/4
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 53 lb uplift at joint 5 and 29 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

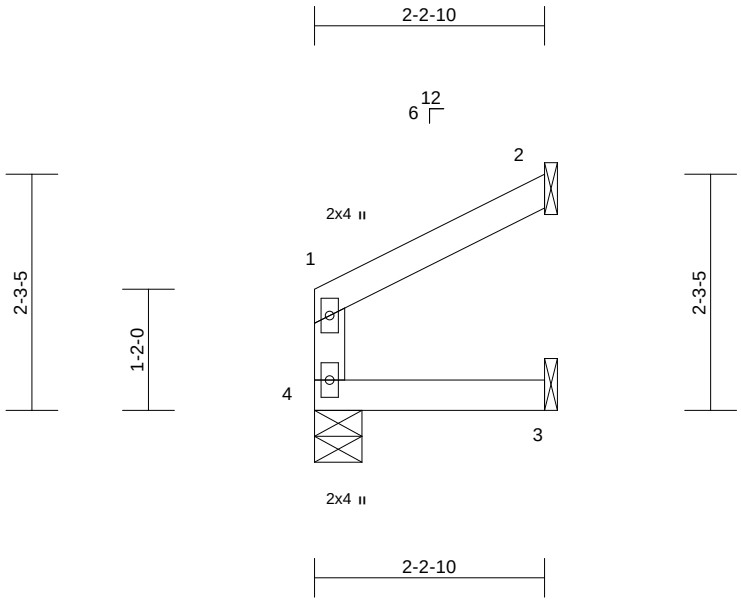
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060769
210568	J30	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:47 Page: 1
ID:2qsVdAx3fn_CQ3GJF_n758yKb6B-RfC?PsB70Hq3NSgPqnL8w3uITXbGCWrCDoi794zJC?f



Scale = 1:22.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3-4	>999	240	Weight: 6 lb	FT = 10%

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

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

REACTIONS (lb/size) 2=66/ Mechanical, 3=24/ Mechanical, 4=90/0-5-8
Max Horiz 4=45 (LC 5)
Max Uplift 2=-43 (LC 8)
Max Grav 2=66 (LC 1), 3=39 (LC 3), 4=90 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-74/15, 1-2=-40/23
BOT CHORD 3-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

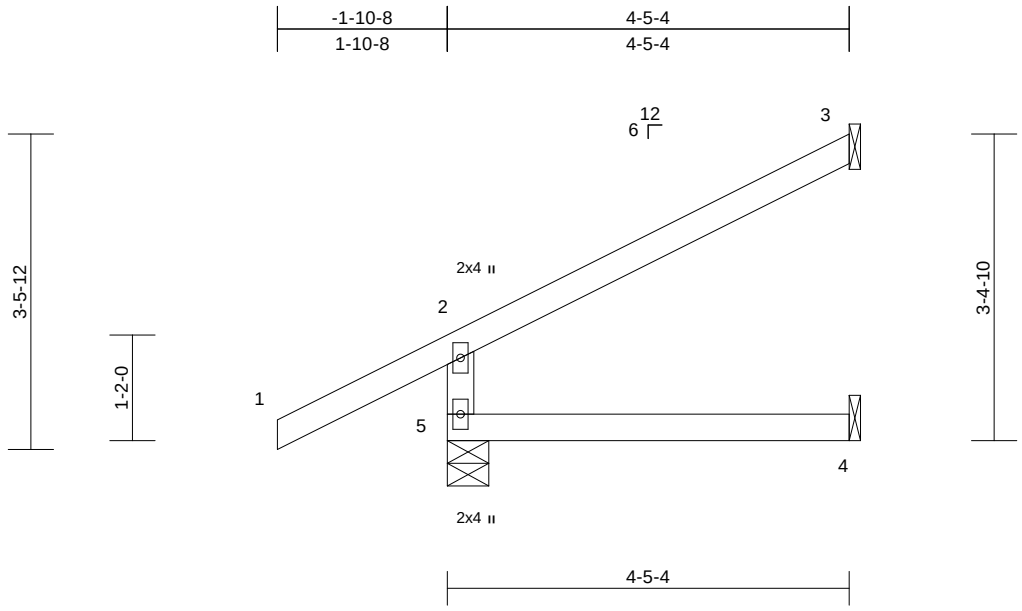
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060770
210568	J31	Jack-Open	16	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:47 Page: 1
ID:HHNTyRr2XJ_LSqfnnIdFmTyKb6J-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi734zJC?



Scale = 1:25.4

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	0.29	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.03	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 14 lb	FT = 10%

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

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

REACTIONS (lb/size) 3=117/ Mechanical, 4=40/ Mechanical, 5=366/0-5-8
Max Horiz 5=76 (LC 8)
Max Uplift 3=-46 (LC 8), 5=-6 (LC 8)
Max Grav 3=117 (LC 1), 4=77 (LC 3), 5=366 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-321/44, 1-2=0/63, 2-3=-80/39
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 5 and 46 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

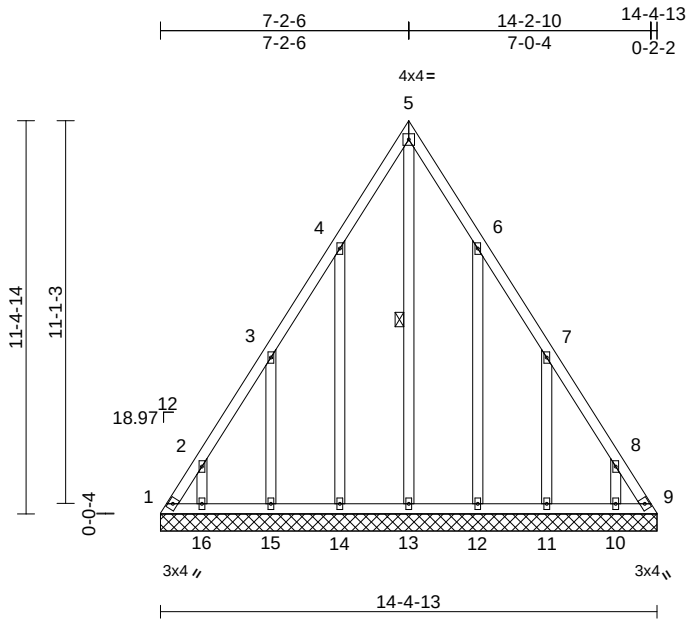
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060771
210568	LAY1	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:43 Page: 1
ID:K_dCzkspILGZgE8sg24TRVyKbbH-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoI?J4zJC?f



Scale = 1:66.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.01	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 89 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-13

REACTIONS (lb/size) 1=52/14-4-13, 9=52/14-4-13, 10=153/14-4-13, 11=185/14-4-13, 12=184/14-4-13, 13=102/14-4-13, 14=184/14-4-13, 15=185/14-4-13, 16=153/14-4-13
Max Horiz 1=-324 (LC 4)
Max Uplift 1=-283 (LC 6), 9=-249 (LC 7), 10=-200 (LC 9), 11=-248 (LC 9), 12=-239 (LC 9), 14=-240 (LC 8), 15=-247 (LC 8), 16=-200 (LC 8)
Max Grav 1=488 (LC 8), 9=467 (LC 9), 10=214 (LC 16), 11=259 (LC 16), 12=263 (LC 16), 13=255 (LC 9), 14=264 (LC 15), 15=258 (LC 15), 16=215 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-578/358, 2-3=-388/274, 3-4=-193/161, 4-5=-140/192, 5-6=-111/169, 6-7=-162/120, 7-8=-364/233, 8-9=-554/318
BOT CHORD 1-16=-171/311, 15-16=-171/311, 14-15=-171/311, 13-14=-171/311, 12-13=-171/311, 11-12=-171/311, 10-11=-171/311, 9-10=-171/311
WEBS 5-13=-231/38, 4-14=-225/264, 3-15=-217/273, 2-16=-177/214, 6-12=-223/262, 7-11=-218/273, 8-10=-177/214

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 1, 249 lb uplift at joint 9, 240 lb uplift at joint 14, 247 lb uplift at joint 15, 200 lb uplift at joint 16, 239 lb uplift at joint 12, 248 lb uplift at joint 11 and 200 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

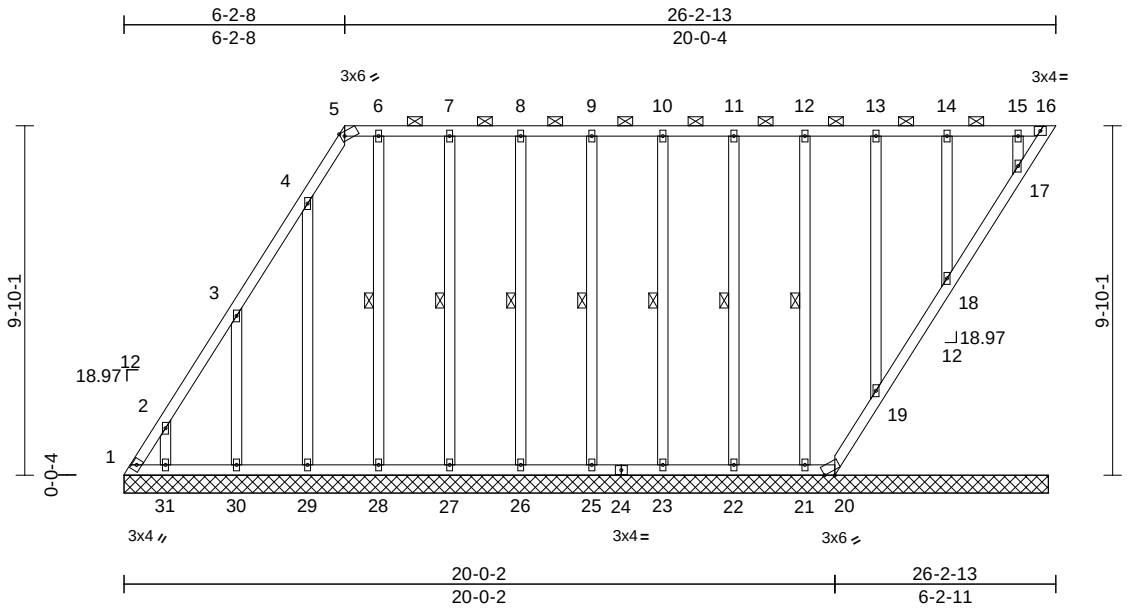
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060772
210568	LAY2	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:48 Page: 1
ID:gUTx93KH6KB1rEdMTkGcWjyKbag-RfC?PsB70Hq3NSgPqnL8w3ulTXbOKWrCDoh?J42JC?f



Scale = 1:64.9

Plate Offsets (X, Y): [5:0-1-5,Edge], [20:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	-0.01	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 175 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 5-16.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 16-17.
WEBS 1 Row at midpt 6-28, 7-27, 8-26, 9-25, 10-23, 11-22, 12-21

REACTIONS (lb/size) 1=43/26-0-5, 16=34/26-0-5, 17=151/26-0-5, 18=187/26-0-5, 19=175/26-0-5, 20=-18/26-0-5, 21=172/26-0-5, 22=182/26-0-5, 23=180/26-0-5, 25=180/26-0-5, 26=180/26-0-5, 27=182/26-0-5, 28=164/26-0-5, 29=164/26-0-5, 30=189/26-0-5, 31=151/26-0-5
Max Horiz 1=390 (LC 8)
Max Uplift 1=-219 (LC 6), 16=-87 (LC 8), 17=-29 (LC 4), 18=-34 (LC 5), 19=-40 (LC 5), 20=-40 (LC 15), 21=-38 (LC 4), 22=-33 (LC 5), 23=-34 (LC 4), 25=-34 (LC 5), 26=-33 (LC 4), 27=-38 (LC 5), 28=-26 (LC 4), 29=-174 (LC 8), 30=-260 (LC 8), 31=-196 (LC 8)
Max Grav 1=506 (LC 8), 16=52 (LC 15), 17=151 (LC 22), 18=187 (LC 1), 19=175 (LC 1), 20=97 (LC 8), 21=172 (LC 22), 22=182 (LC 1), 23=180 (LC 1), 25=180 (LC 22), 26=180 (LC 1), 27=184 (LC 22), 28=164 (LC 1), 29=214 (LC 15), 30=269 (LC 15), 31=211 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-599/281, 2-3=-413/199, 3-4=-151/77, 4-5=-81/48, 5-6=-30/55, 6-7=-30/55, 7-8=-30/55, 8-9=-30/55, 9-10=-30/55, 10-11=-30/55, 11-12=-30/55, 12-13=-30/55, 13-14=-30/55, 14-15=-30/55, 15-16=-30/55
BOT CHORD 1-31=-55/30, 30-31=-55/30, 29-30=-55/30, 28-29=-55/30, 27-28=-55/30, 26-27=-55/30, 25-26=-55/30, 23-25=-55/30, 22-23=-55/30, 21-22=-55/30, 20-21=-55/30, 19-20=-110/72, 18-19=-112/74, 17-18=-114/72, 16-17=-109/56
WEBS 2-31=-174/209, 3-30=-228/286, 4-29=-174/198, 6-28=-124/50, 7-27=-144/62, 8-26=-140/57, 9-25=-140/58, 10-23=-140/58, 11-22=-140/58, 12-21=-140/57, 13-19=-139/57, 14-18=-144/59, 15-17=-117/49

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 219 lb uplift at joint 1, 87 lb uplift at joint 16, 40 lb uplift at joint 20, 196 lb uplift at joint 31, 260 lb uplift at joint 30, 174 lb uplift at joint 29, 26 lb uplift at joint 28, 38 lb uplift at joint 27, 33 lb uplift at joint 26, 34 lb uplift at joint 25, 34 lb uplift at joint 23, 33 lb uplift at joint 22, 38 lb uplift at joint 21, 40 lb uplift at joint 19, 34 lb uplift at joint 18 and 29 lb uplift at joint 17.
10) Non Standard bearing condition. Review required.
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.

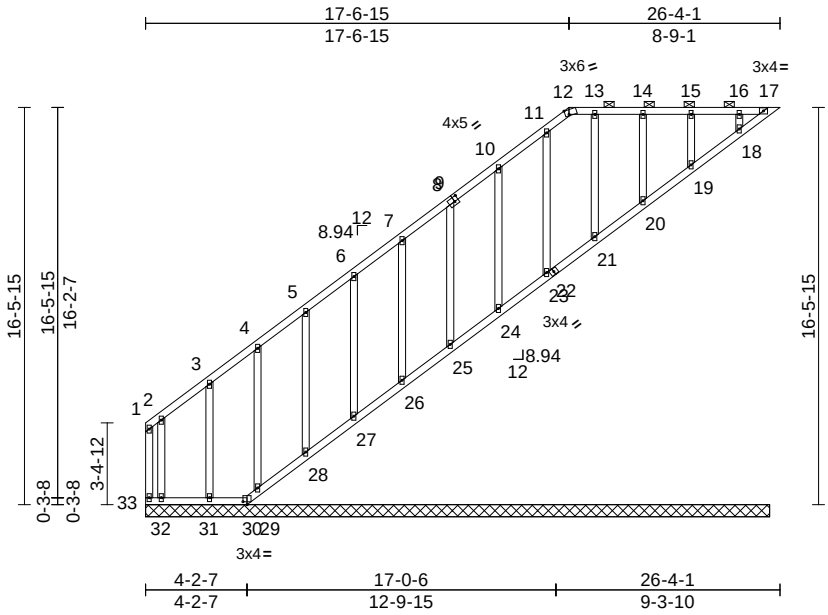
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060773
210568	LAY3	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:43 Page: 1
ID:lGabHuyKZV30wqs6Jtg2y_yKbYa-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7542JC?P



Scale = 1:95.7

Plate Offsets (X, Y): [9:0-2-0,0-2-4], [12:0-1-14,Edge], [30:0-2-0,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	-0.04	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 145 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 12-17.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 17=38/25-10-15, 18=163/25-10-15, 19=184/25-10-15, 20=178/25-10-15, 21=181/25-10-15, 23=179/25-10-15, 24=179/25-10-15, 25=180/25-10-15, 26=180/25-10-15, 27=180/25-10-15, 28=182/25-10-15, 29=172/25-10-15, 30=5/25-10-15, 31=187/25-10-15, 32=135/25-10-15, 33=-5/25-10-15
Max Horiz 33=487 (LC 8)
Max Uplift 17=-355 (LC 8), 18=-32 (LC 5), 19=-35 (LC 4), 20=-69 (LC 5), 21=-72 (LC 6), 24=-130 (LC 8), 25=-69 (LC 8), 26=-81 (LC 8), 27=-78 (LC 8), 28=-80 (LC 8), 29=-109 (LC 8), 30=-169 (LC 6), 31=-83 (LC 8), 32=-253 (LC 8), 33=-102 (LC 6)
Max Grav 17=168 (LC 6), 18=163 (LC 22), 19=184 (LC 1), 20=180 (LC 22), 21=245 (LC 17), 23=202 (LC 17), 24=208 (LC 15), 25=186 (LC 15), 26=190 (LC 15), 27=189 (LC 15), 28=191 (LC 15), 29=190 (LC 15), 30=386 (LC 8), 31=193 (LC 15), 32=232 (LC 15), 33=238 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-33=-139/5, 1-2=-126/21, 2-3=-74/52, 3-4=-99/98, 4-5=-123/149, 5-6=-150/225, 6-7=-178/301, 7-8=-206/378, 8-10=-230/448, 10-11=-272/553, 11-12=-231/483, 12-13=-220/478, 13-14=-220/478, 14-15=-220/478, 15-16=-220/478, 16-17=-220/478
BOT CHORD 32-33=-478/220, 31-32=-478/220, 30-31=-478/220, 29-30=-612/292, 28-29=-604/287, 27-28=-604/287, 26-27=-604/287, 25-26=-604/287, 24-25=-604/287, 23-24=-604/287, 21-23=-604/287, 20-21=-604/287, 19-20=-604/287, 18-19=-604/286, 17-18=-601/278
WEBS 2-32=-128/167, 3-31=-157/114, 4-29=-147/100, 5-28=-150/104, 6-27=-149/102, 7-26=-150/105, 8-25=-146/93, 10-24=-168/154, 11-23=-162/27, 13-21=-205/112, 14-20=-141/93, 15-19=-143/60, 16-18=-126/52

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

July 14,2022

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	LAY3	Lay-In Gable	1	1	Job Reference (optional) I53060773

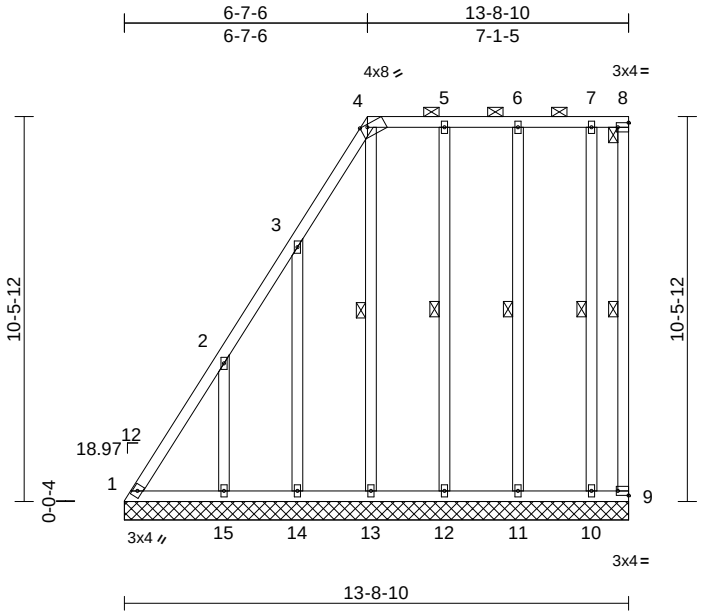
10) Bearing at joint(s) 17, 21, 20, 19, 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 33, 355 lb uplift at joint 17, 169 lb uplift at joint 30, 253 lb uplift at joint 32, 83 lb uplift at joint 31, 109 lb uplift at joint 29, 80 lb uplift at joint 28, 78 lb uplift at joint 27, 81 lb uplift at joint 26, 69 lb uplift at joint 25, 130 lb uplift at joint 24, 72 lb uplift at joint 21, 69 lb uplift at joint 20, 35 lb uplift at joint 19 and 32 lb uplift at joint 18.
12) Non Standard bearing condition. Review required.
13) 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.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060774
210568	LAY4	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:49 Page: 1
ID:W_TLFBRMhIe7GD4rILPyivyKbZF-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi794zJC?1



Scale = 1:62.7

Plate Offsets (X, Y): [4:0-2-5,Edge], [8:Edge,0-1-8], [9:Edge,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	0.49	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 106 lb	FT = 10%

LUMBER

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

BRACING

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

REACTIONS (lb/size) 1=92/13-8-10, 9=22/13-8-10, 10=138/13-8-10, 11=187/13-8-10, 12=190/13-8-10, 13=169/13-8-10, 14=166/13-8-10, 15=235/13-8-10
Max Horiz 1=402 (LC 5)
Max Uplift 1=-265 (LC 6), 9=-55 (LC 7), 10=-84 (LC 4), 11=-53 (LC 5), 12=-39 (LC 4), 13=-202 (LC 7), 14=-225 (LC 8), 15=-310 (LC 8)
Max Grav 1=441 (LC 5), 9=35 (LC 4), 10=161 (LC 18), 11=187 (LC 1), 12=190 (LC 1), 13=224 (LC 15), 14=238 (LC 15), 15=328 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-524/400, 2-3=-382/265, 3-4=-313/219, 4-5=-145/108, 5-6=-144/109, 6-7=-144/109, 7-8=-144/109, 8-9=-155/127
BOT CHORD	1-15=-148/112, 14-15=-148/112, 13-14=-148/112, 12-13=-146/110, 11-12=-146/110, 10-11=-146/110, 9-10=-146/110
WEBS	2-15=-261/321, 3-14=-207/253, 4-13=-181/241, 5-12=-151/66, 6-11=-145/65, 7-10=-106/162

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 265 lb uplift at joint 1, 55 lb uplift at joint 9, 310 lb uplift at joint 15, 225 lb uplift at joint 14, 202 lb uplift at joint 13, 39 lb uplift at joint 12, 53 lb uplift at joint 11 and 84 lb uplift at joint 10.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

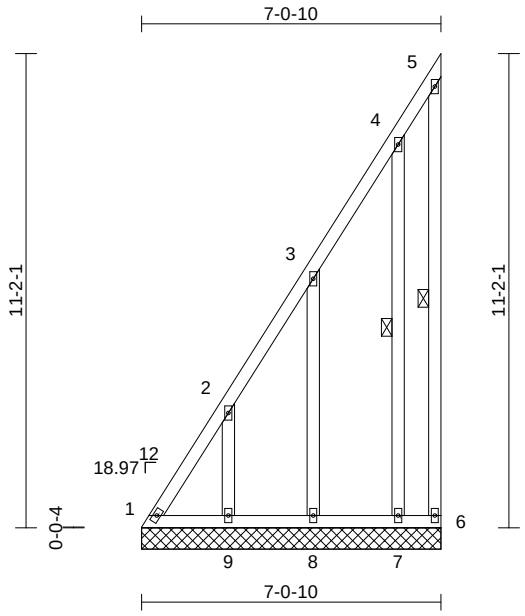
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	LAY5	Lay-In Gable	2	1	Job Reference (optional) I53060775

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:49 Page: 1
ID:?XgsJbTIQjUwbRfNKPy7B2yKbXv-RfC?PsB70Hq3NSgPqnL8w3uITXbGHWrCDoi794zJC?



Scale = 1:54.3

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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	n/a	-	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 54 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=63/7-0-10, 6=17/7-0-10, 7=144/7-0-10, 8=186/7-0-10, 9=189/7-0-10
Max Horiz 1=429 (LC 8)
Max Uplift 1=-235 (LC 6), 6=-27 (LC 8), 7=-185 (LC 8), 8=-248 (LC 8), 9=-249 (LC 8)
Max Grav 1=596 (LC 8), 6=25 (LC 15), 7=200 (LC 15), 8=262 (LC 15), 9=265 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-724/345, 2-3=-476/229, 3-4=-226/118, 4-5=-46/15, 5-6=-22/28
BOT CHORD 1-9=0/0, 8-9=0/0, 7-8=0/0, 6-7=0/0
WEBS 2-9=-223/274, 3-8=-221/272, 4-7=-167/205

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 235 lb uplift at joint 1, 27 lb uplift at joint 6, 249 lb uplift at joint 9, 248 lb uplift at joint 8 and 185 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

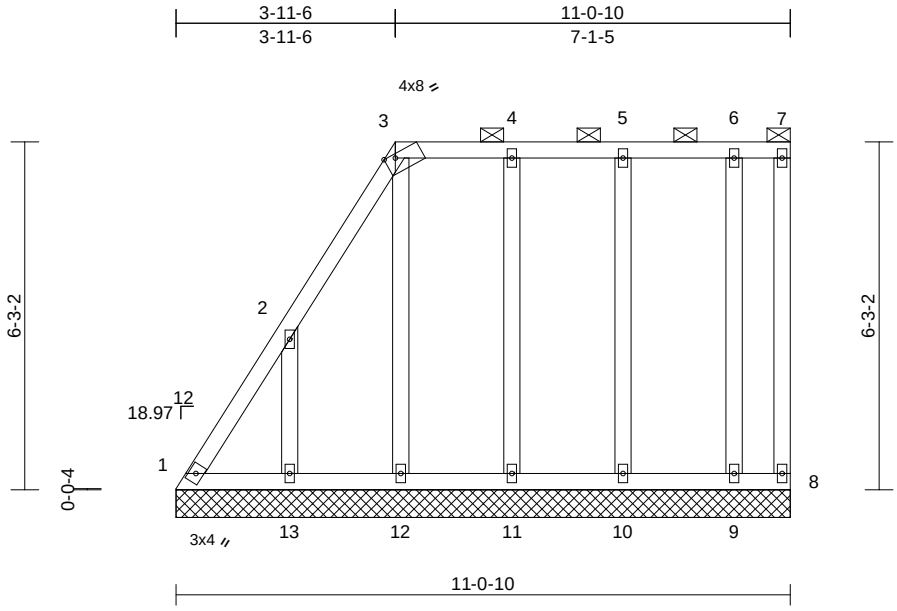
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060776
210568	LAY6	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:49 Page: 1
ID:M1XbUwymFiONmQ8s668GGGyKbXI-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDof7J4z3C4f



Scale = 1:41.5

Plate Offsets (X, Y): [3:0-2-5,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	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 64 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=66/11-0-10, 8=20/11-0-10, 9=141/11-0-10, 10=185/11-0-10, 11=192/11-0-10, 12=160/11-0-10, 13=194/11-0-10
Max Horiz 1=236 (LC 7)
Max Uplift 1=-142 (LC 6), 8=-16 (LC 5), 9=-41 (LC 4), 10=-39 (LC 5), 11=-40 (LC 4), 12=-137 (LC 5), 13=-264 (LC 8)
Max Grav 1=252 (LC 5), 8=20 (LC 1), 9=141 (LC 1), 10=185 (LC 1), 11=192 (LC 1), 12=191 (LC 15), 13=277 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-299/230, 2-3=-203/134, 3-4=-85/63, 4-5=-84/64, 5-6=-84/64, 6-7=-84/64, 7-8=-53/48
BOT CHORD 1-13=-88/66, 12-13=-88/66, 11-12=-86/65, 10-11=-86/65, 9-10=-86/65, 8-9=-86/65
WEBS 2-13=-226/278, 3-12=-153/162, 4-11=-152/63, 5-10=-144/59, 6-9=-109/76

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 1, 16 lb uplift at joint 8, 264 lb uplift at joint 13, 137 lb uplift at joint 12, 40 lb uplift at joint 11, 39 lb uplift at joint 10 and 41 lb uplift at joint 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

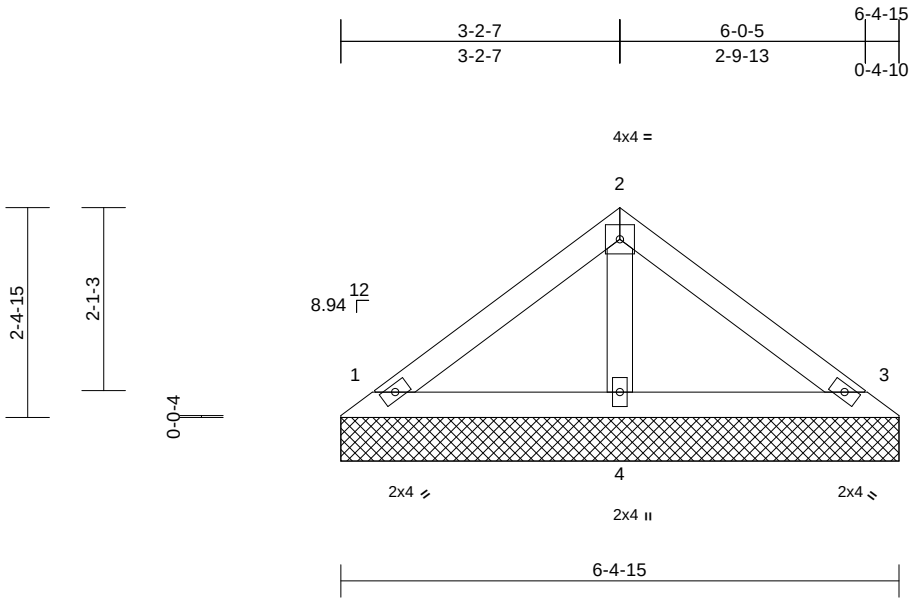
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060777
210568	LAY7	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:49 Page: 1
ID:FiS5J_RwHUuw0K1VqRs6lCyKbVN-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDon7J42JC?f



Scale = 1:26.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=140/6-4-15, 3=140/6-4-15, 4=222/6-4-15
Max Horiz 1=-54 (LC 4)
Max Uplift 1=-30 (LC 8), 3=-37 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/47, 2-3=-83/35
BOT CHORD 1-4=-12/39, 3-4=-12/39
WEBS 2-4=-153/38

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 1 and 37 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

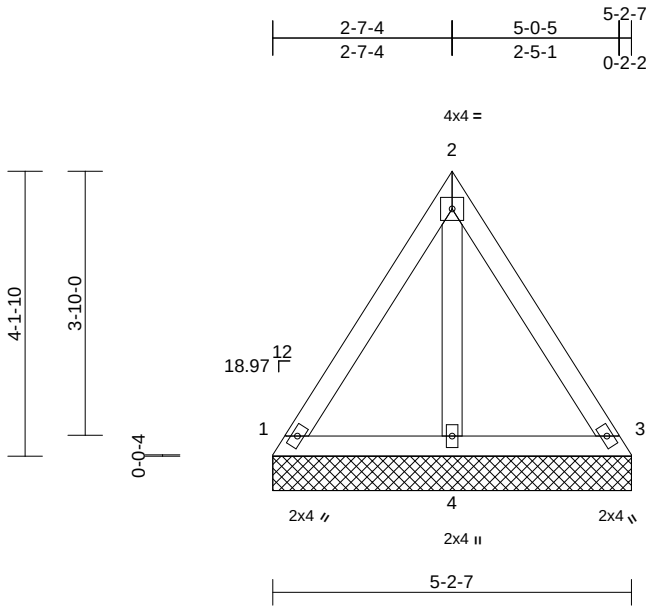
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060778
210568	LAY8	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:50 Page: 1
ID:IhAnUQAhmXnhYL5Wkb_jYHyKbX?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?P



Scale = 1:33.4

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-2-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=142/5-2-7, 3=142/5-2-7, 4=139/5-2-7
Max Horiz 1=110 (LC 5)
Max Uplift 1=-50 (LC 9), 3=-43 (LC 8)
Max Grav 1=149 (LC 16), 3=142 (LC 1), 4=140 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-133/66, 2-3=-123/58
BOT CHORD 1-4=-49/79, 3-4=-49/79
WEBS 2-4=-80/17

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 1 and 43 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

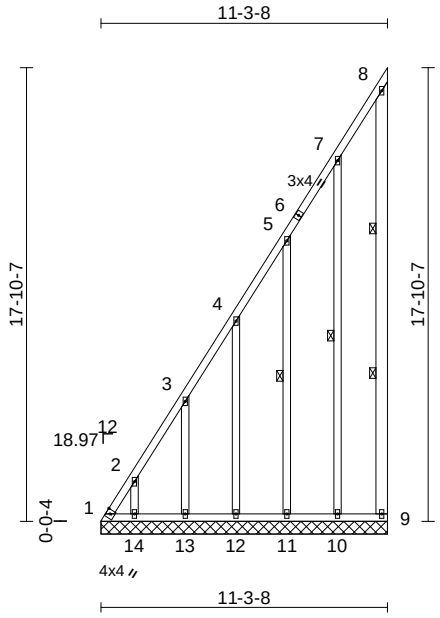
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060779
210568	LAY9	Lay-In Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:50 Page: 1
ID:ba9H4RgP67ytzejOdiDLiwyKbWM-RfC?PsB70Hq3NSgPqnL8w3uITXbGkWrCDoi7s4zJC?f



Scale = 1:90.8

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	0.12	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.00	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 112 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-11, 7-10
WEBS 2 Rows at 1/3 pts 8-9

REACTIONS (lb/size) 1=27/11-3-8, 9=67/11-3-8, 10=177/11-3-8, 11=183/11-3-8, 12=178/11-3-8, 13=185/11-3-8, 14=156/11-3-8
Max Horiz 1=697 (LC 8)
Max Uplift 1=-470 (LC 6), 9=-95 (LC 8), 10=-224 (LC 8), 11=-244 (LC 8), 12=-235 (LC 8), 13=-244 (LC 8), 14=-206 (LC 8)
Max Grav 1=1066 (LC 8), 9=95 (LC 15), 10=246 (LC 15), 11=257 (LC 15), 12=250 (LC 15), 13=259 (LC 15), 14=219 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1260/584, 2-3=-1069/499, 3-4=-820/385, 4-5=-581/276, 5-7=-336/164, 7-8=-100/67, 8-9=-79/99
BOT CHORD 1-14=-1/1, 13-14=-1/1, 12-13=-1/1, 11-12=-1/1, 10-11=-1/1, 9-10=-1/1
WEBS 2-14=-179/214, 3-13=-219/270, 4-12=-210/259, 5-11=-216/267, 7-10=-208/254

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 95 lb uplift at joint 9, 470 lb uplift at joint 1, 206 lb uplift at joint 14, 244 lb uplift at joint 13, 235 lb uplift at joint 12, 244 lb uplift at joint 11 and 224 lb uplift at joint 10.
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

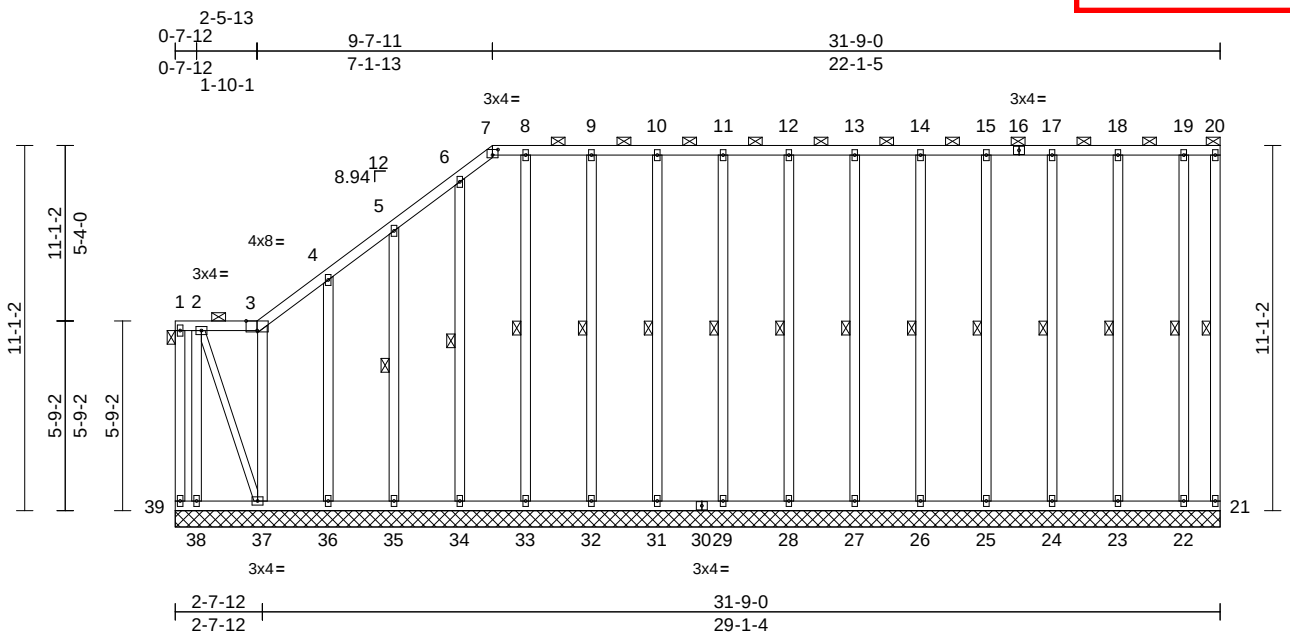
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060780
210568	LAY10	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:50 Page: 1
ID:XaWc_VSA5VjqsLQJG9pzDDyKbQB-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDu7J4zJC?



Scale = 1:70

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

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	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 269 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 2-37:2x3 SPF No.2
OTHERS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 1-3, 7-20.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 20-21, 5-35, 6-34, 8-33, 9-32, 10-31, 11-29, 12-28, 13-27, 14-26, 15-25, 17-24, 18-23, 19-22

REACTIONS (lb/size) 21=27/31-9-0, 22=142/31-9-0, 23=188/31-9-0, 24=179/31-9-0, 25=180/31-9-0, 26=180/31-9-0, 27=180/31-9-0, 28=180/31-9-0, 29=180/31-9-0, 31=180/31-9-0, 32=179/31-9-0, 33=181/31-9-0, 34=181/31-9-0, 35=176/31-9-0, 36=195/31-9-0, 37=169/31-9-0, 38=132/31-9-0, 39=2/31-9-0
Max Horiz 39=218 (LC 8)
Max Uplift 21=-11 (LC 5), 22=-25 (LC 4), 23=-36 (LC 5), 24=-33 (LC 4), 25=-34 (LC 5), 26=-34 (LC 4), 27=-34 (LC 5), 28=-34 (LC 4), 29=-34 (LC 4), 31=-34 (LC 5), 32=-36 (LC 4), 33=-33 (LC 5), 34=-71 (LC 8), 35=-80 (LC 8), 36=-88 (LC 8), 37=-454 (LC 8), 38=-130 (LC 6), 39=-60 (LC 6)
Max Grav 21=27 (LC 22), 22=142 (LC 1), 23=188 (LC 22), 24=179 (LC 1), 25=180 (LC 22), 26=180 (LC 1), 27=180 (LC 1), 28=180 (LC 1), 29=180 (LC 22), 31=180 (LC 1), 32=182 (LC 22), 33=181 (LC 1), 34=181 (LC 15), 35=188 (LC 15), 36=205 (LC 15), 37=254 (LC 15), 38=398 (LC 8), 39=142 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-39=-117/42, 1-2=-6/2, 2-3=-221/80, 3-4=-241/104, 4-5=-159/74, 5-6=-83/54, 6-7=-43/5, 7-8=0/1, 8-9=0/1, 9-10=0/1, 10-11=0/1, 11-12=0/1, 12-13=0/1, 13-14=0/1, 14-15=0/1, 15-17=0/1, 17-18=0/1, 18-19=0/1, 19-20=0/1, 20-21=-22/11
BOT CHORD 38-39=-212/77, 37-38=-212/77, 36-37=-1/0, 35-36=-1/0, 34-35=-1/0, 33-34=-1/0, 32-33=-1/0, 31-32=-1/0, 29-31=-1/0, 28-29=-1/0, 27-28=-1/0, 26-27=-1/0, 25-26=-1/0, 24-25=-1/0, 23-24=-1/0, 22-23=-1/0, 21-22=-1/0
WEBS 2-38=-406/177, 3-37=-157/31, 4-36=-166/111, 5-35=-148/104, 6-34=-141/95, 8-33=-141/57, 9-32=-142/60, 10-31=-140/58, 11-29=-140/58, 12-28=-140/58, 13-27=-140/58, 14-26=-140/58, 15-25=-140/58, 17-24=-139/57, 18-23=-147/61, 19-22=-109/45, 2-37=-226/624

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

July 14,2022

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	LAY10	Lay-In Gable	1	1	Job Reference (optional) I53060780

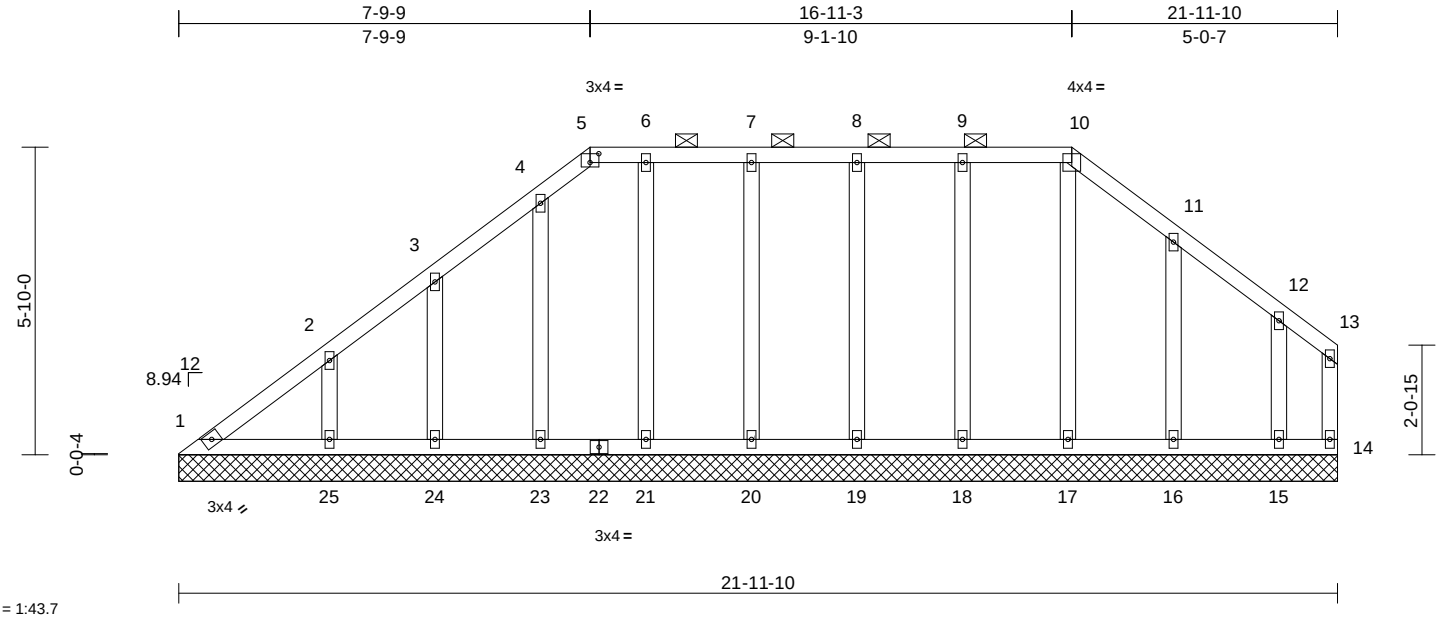
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 39, 11 lb uplift at joint 21, 130 lb uplift at joint 38, 454 lb uplift at joint 37, 88 lb uplift at joint 36, 80 lb uplift at joint 35, 71 lb uplift at joint 34, 33 lb uplift at joint 33, 36 lb uplift at joint 32, 34 lb uplift at joint 31, 34 lb uplift at joint 29, 34 lb uplift at joint 28, 34 lb uplift at joint 27, 34 lb uplift at joint 26, 34 lb uplift at joint 25, 33 lb uplift at joint 24, 36 lb uplift at joint 23 and 25 lb uplift at joint 22.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060781
210568	LAY11	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:51 2022 Page: 1
ID:5upn9k6AH5RcF9Eb9MmZ7cyKbMl-RfC?PsB70Hq3NSgPqnL8w3uITXbCKWrCDoh?J42JC?f



Scale = 1:43.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 103 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=91/21-11-10, 14=34/21-11-10, 15=140/21-11-10, 16=191/21-11-10, 17=162/21-11-10, 18=192/21-11-10, 19=178/21-11-10, 20=180/21-11-10, 21=179/21-11-10, 23=183/21-11-10, 24=163/21-11-10, 25=235/21-11-10
Max Horiz 1=169 (LC 5)
Max Uplift 1=-55 (LC 4), 15=-94 (LC 9), 16=-83 (LC 9), 17=-3 (LC 5), 18=-41 (LC 5), 19=-33 (LC 5), 20=-46 (LC 4), 21=-43 (LC 5), 23=-35 (LC 5), 24=-84 (LC 8), 25=-100 (LC 8)
Max Grav 1=140 (LC 16), 14=51 (LC 18), 15=169 (LC 16), 16=200 (LC 16), 17=163 (LC 22), 18=194 (LC 21), 19=178 (LC 1), 20=182 (LC 22), 21=179 (LC 21), 23=200 (LC 15), 24=170 (LC 15), 25=247 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-169/159, 2-3=-142/135, 3-4=-126/136, 4-5=-90/127, 5-6=-71/125, 6-7=-71/125, 7-8=-71/125, 8-9=-71/125, 9-10=-71/125, 10-11=-99/129, 11-12=-71/65, 12-13=-45/26, 13-14=-38/12
BOT CHORD 1-25=-35/30, 24-25=-35/30, 23-24=-35/30, 21-23=-35/30, 20-21=-35/30, 19-20=-35/30, 18-19=-35/30, 17-18=-35/30, 16-17=-35/31, 15-16=-35/31, 14-15=-35/31
WEBS 2-25=-188/124, 3-24=-136/109, 4-23=-158/60, 6-21=-140/67, 7-20=-142/70, 8-19=-138/57, 9-18=-154/65, 10-17=-123/27, 11-16=-160/109, 12-15=-125/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 1, 100 lb uplift at joint 25, 84 lb uplift at joint 24, 35 lb uplift at joint 23, 43 lb uplift at joint 21, 46 lb uplift at joint 20, 33 lb uplift at joint 19, 41 lb uplift at joint 18, 3 lb uplift at joint 17, 83 lb uplift at joint 16 and 94 lb uplift at joint 15.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

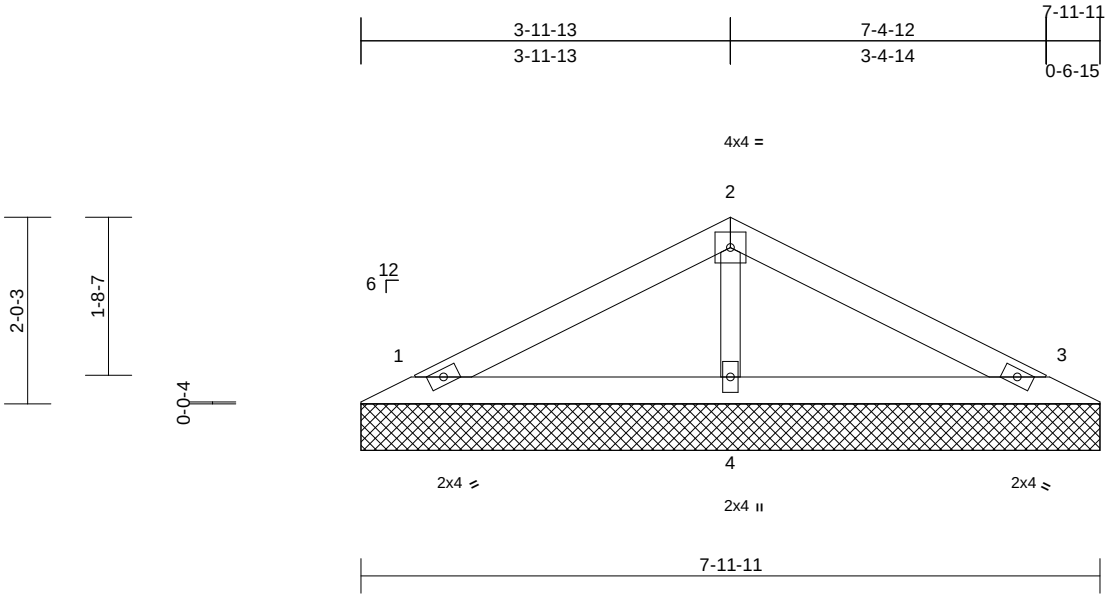
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060782
210568	V1	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:51 2022 Page: 1
ID:0H3QfGl6z4gce56AHkQui5yKbcj-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:24.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=160/7-11-11, 3=160/7-11-11, 4=292/7-11-11
Max Horiz 1=-30 (LC 9)
Max Uplift 1=-36 (LC 8), 3=-42 (LC 9), 4=-4 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-77/43, 2-3=-77/30
BOT CHORD 1-4=-1/34, 3-4=-1/34
WEBS 2-4=-207/55

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1, 42 lb uplift at joint 3 and 4 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

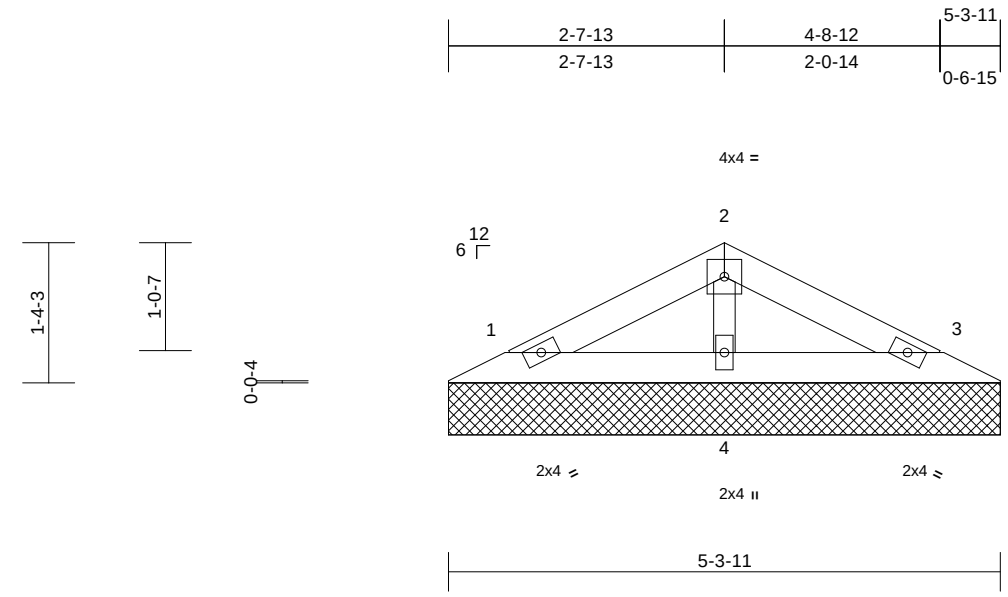
LOAD CASE(S) Standard

July 14,2022

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060783
210568	V2	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:51 2022 Page: 1
ID:NEsJj_pEncJvks_84H03P9yKbce-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKVrCDoi7J42JQ?f



Scale = 1:22.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 12 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=97/5-3-11, 3=97/5-3-11, 4=177/5-3-11
Max Horiz 1=-18 (LC 9)
Max Uplift 1=-22 (LC 8), 3=-26 (LC 9), 4=-2 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-47/26, 2-3=-47/19
BOT CHORD 1-4=-1/21, 3-4=-1/21
WEBS 2-4=-126/33

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1, 26 lb uplift at joint 3 and 2 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

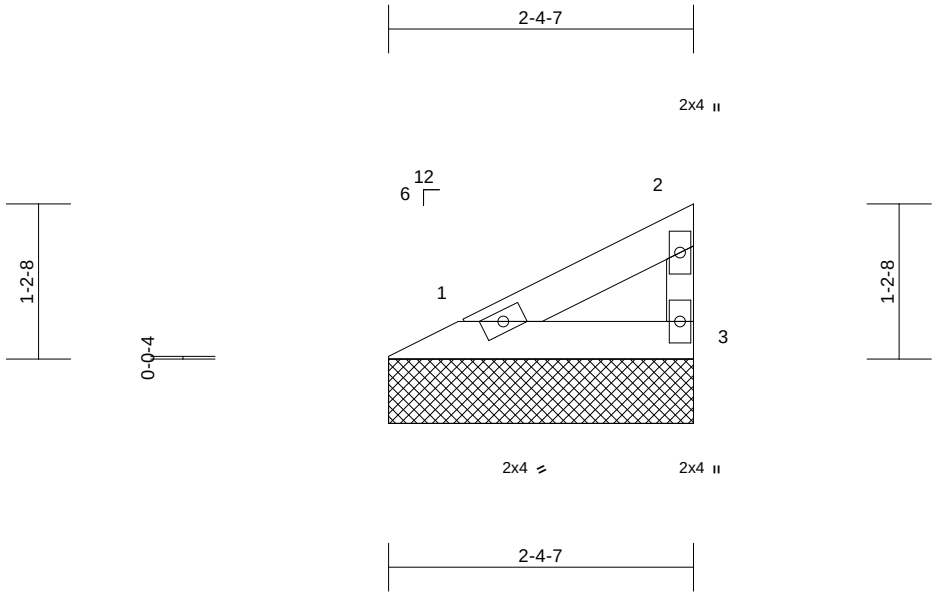
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060784
210568	V3	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:51 Page: 1
ID:npYRL?r74XhUbKjjlPZm1nyKbcb-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4ZJC?f



Scale = 1:17.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=75/2-4-7, 3=75/2-4-7
Max Horiz 1=35 (LC 5)
Max Uplift 1=-10 (LC 8), 3=-19 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-32/21, 2-3=-59/29
BOT CHORD 1-3=-12/9

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1 and 19 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

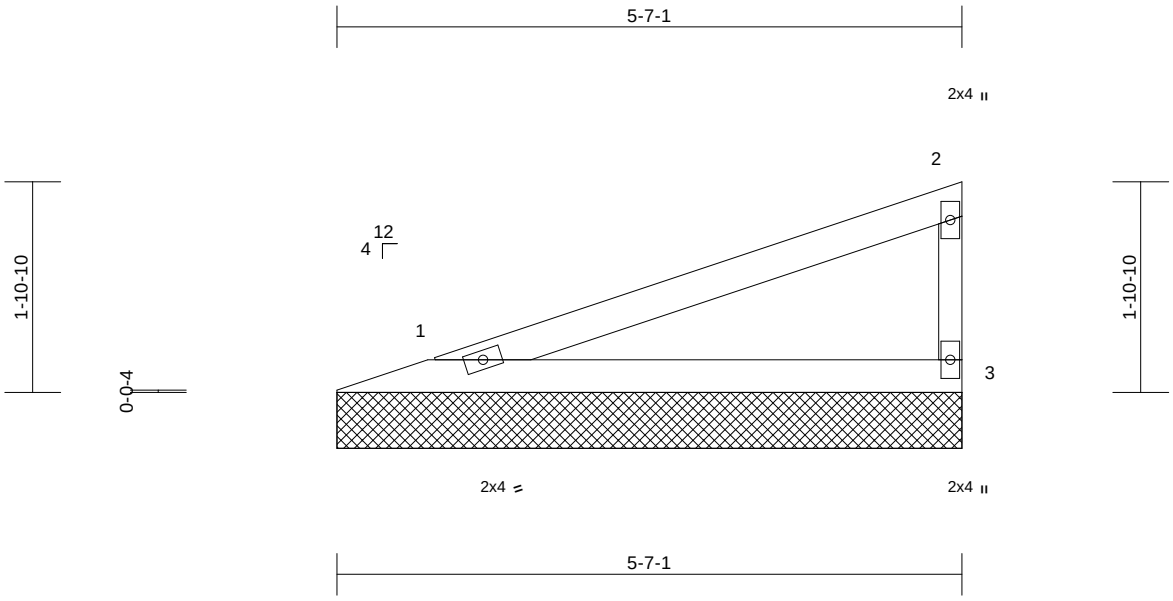
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060785
210568	V4	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:52 Page: 1
ID:fbnyBNud8mBv4x1U_FeiBdyKbcX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7S4zJC?



Scale = 1:20.6

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	0.40	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-7-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=207/5-7-1, 3=207/5-7-1
Max Horiz 1=69 (LC 5)
Max Uplift 1=-34 (LC 4), 3=-44 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-61/41, 2-3=-161/72
BOT CHORD 1-3=-22/17

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1 and 44 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

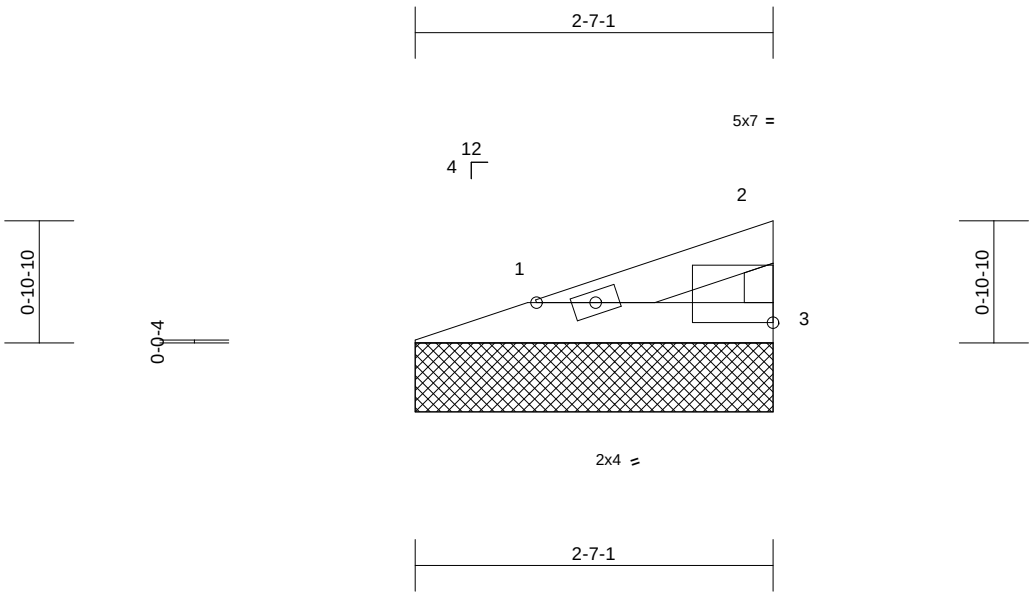
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060786
210568	V5	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:52 Page: 1
ID:qbf_QeQVlOJGkFZjtm_uj5yKZMX-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7542JC?P



Scale = 1:16.7

Plate Offsets (X, Y): [2: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	0.04	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=72/2-7-1, 3=72/2-7-1
Max Horiz 1=24 (LC 5)
Max Uplift 1=-12 (LC 4), 3=-15 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-22/15, 2-3=-56/25
BOT CHORD 1-3=-8/6

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 12 lb uplift at joint 1 and 15 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

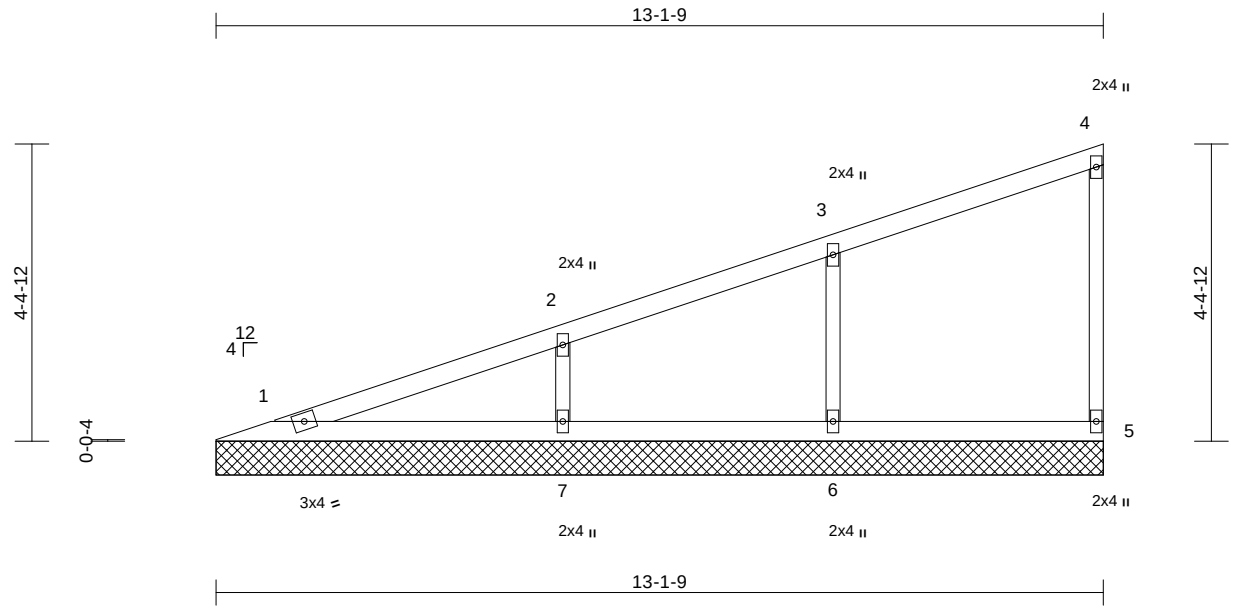
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060787
210568	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:52 Page: 1
ID:4AT5pPwWRhZUxPl3gNBPpGyKbcU-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDuI7J4zJC?4



Scale = 1:34.1

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	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 36 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 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 (lb/size) 1=155/13-1-9, 5=146/13-1-9, 6=375/13-1-9, 7=417/13-1-9
Max Horiz 1=181 (LC 5)
Max Uplift 5=-23 (LC 5), 6=-89 (LC 4), 7=-99 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-143/49, 2-3=-112/38, 3-4=-96/29, 4-5=-112/45
BOT CHORD 1-7=-57/42, 6-7=-57/42, 5-6=-57/42
WEBS 3-6=-295/136, 2-7=-316/149

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5, 89 lb uplift at joint 6 and 99 lb uplift at joint 7.
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

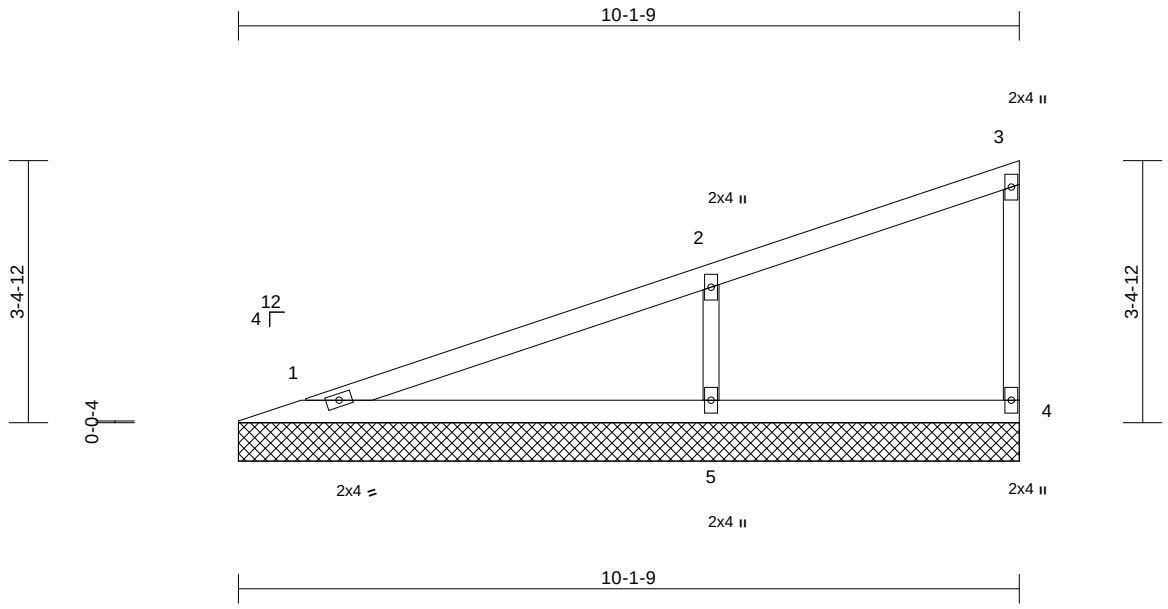
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060788
210568	V7	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:52 Page: 1
ID:yxibfm_0Uw3wQ03qvDGL_6yKbcQ-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoiTJ4z9C?f



Scale = 1:29.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 26 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 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 (lb/size) 1=190/10-1-9, 4=113/10-1-9, 5=520/10-1-9
Max Horiz 1=136 (LC 5)
Max Uplift 1=-15 (LC 4), 4=-17 (LC 5), 5=-123 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-102/64, 2-3=-89/21, 3-4=-90/37
BOT CHORD 1-5=-43/32, 4-5=-43/32
WEBS 2-5=-393/180

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1, 17 lb uplift at joint 4 and 123 lb uplift at joint 5.
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

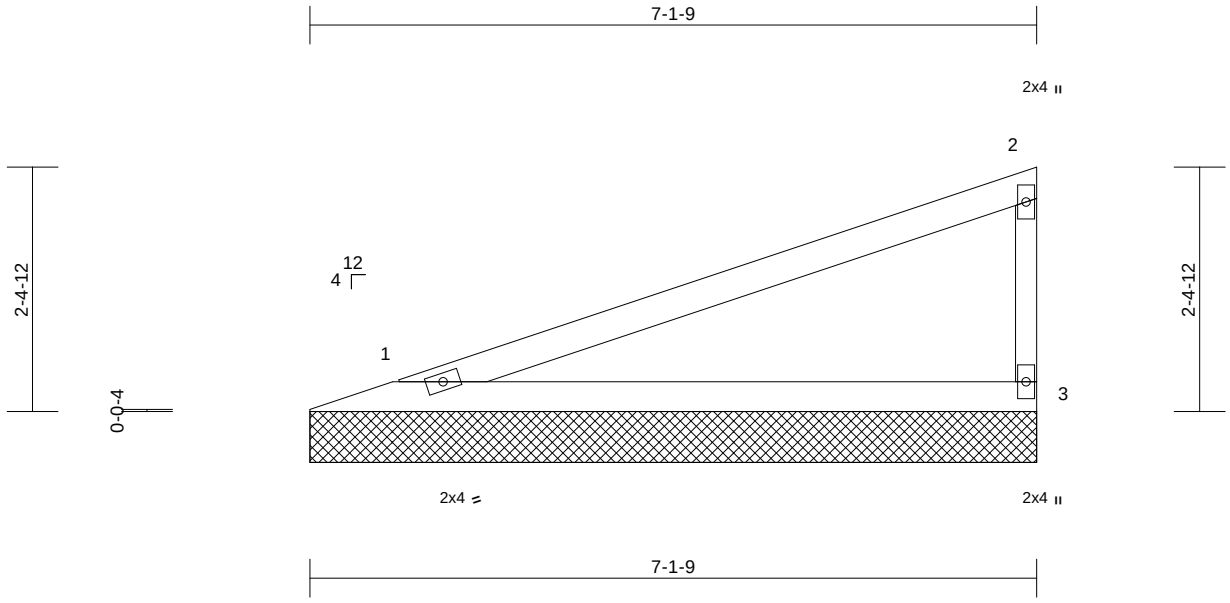
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof	I53060789
210568	V8	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:52 Page: 1
ID:NWOkHo0vnrSVHUnPaLp3bkyKbcN-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDon7J42JC?f



Scale = 1:22.6

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	0.75	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.41	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-2-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=277/7-1-9, 3=277/7-1-9
Max Horiz 1=92 (LC 7)
Max Uplift 1=-45 (LC 4), 3=-59 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-81/55, 2-3=-215/96
BOT CHORD 1-3=-29/22

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 1 and 59 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

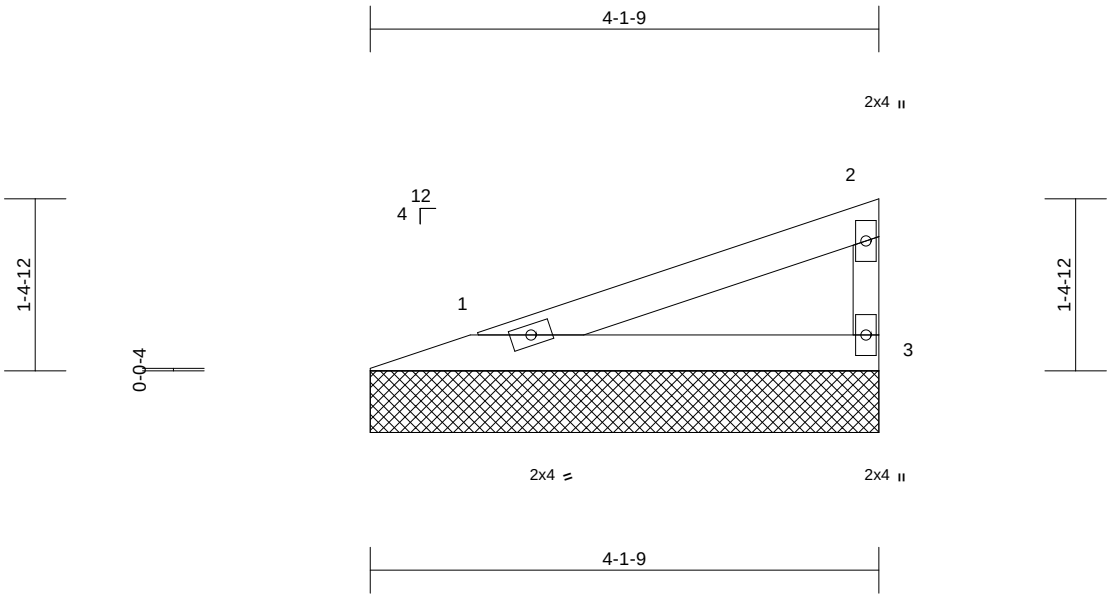
July 14,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Boyer Res. - Roof
210568	V9	Valley	1	1	Job Reference (optional) I53060790

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Wed Jul 13 07:57:58 Page: 1
ID:n53svp2n4mq38xW_FUNmDNyKbcK-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDu?J4zJC?



Scale = 1:18.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=142/4-1-9, 3=142/4-1-9
Max Horiz 1=47 (LC 5)
Max Uplift 1=-23 (LC 4), 3=-30 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-42/28, 2-3=-110/49
BOT CHORD 1-3=-15/11

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 1 and 30 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

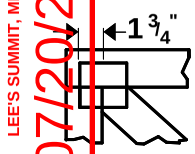
STATE OF MISSOURI
SCOTT M. SEVIER
NUMBER
PE-2001018807
PROFESSIONAL ENGINEER

July 14,2022

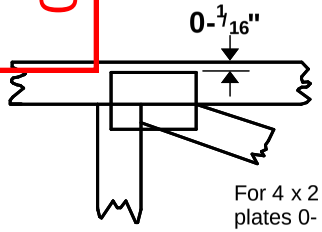
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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.

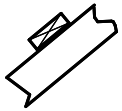
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

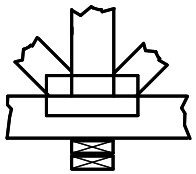
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

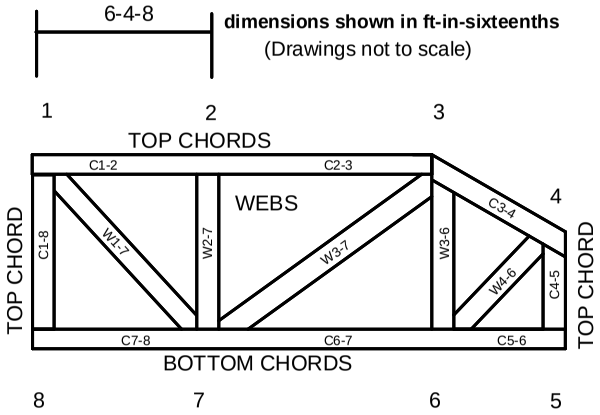


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

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.