RE: Lot 17 OS
Lot 17 OS

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

Site Information:

Customer: Project Name: Lot 17 OS
Lot/Block: Model:
Address: Subdivision:
City: State:

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

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

This package includes 38 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I47521362	A1	8/19/2021	21	I47521382	D3	8/19/2021
2	I47521363	A2	8/19/2021	22	I47521383	J1	8/19/2021
3	I47521364	A3	8/19/2021	23	I47521384	J2	8/19/2021
4	I47521365	B1	8/19/2021	24	I47521385	J3	8/19/2021
5	I47521366	B2	8/19/2021	25	I47521386	LAY1	8/19/2021
6	I47521367	B3	8/19/2021	26	I47521387	LAY2	8/19/2021
7	I47521368	B4	8/19/2021	27	I47521388	LAY3	8/19/2021
8	I47521369	B5	8/19/2021	28	I47521389	V1	8/19/2021
9	I47521370	B6	8/19/2021	29	I47521390	V2	8/19/2021
10	I47521371	B7	8/19/2021	30	I47521391	V3	8/19/2021
11	I47521372	B8	8/19/2021	31	I47521392	V4	8/19/2021
12	I47521373	B9	8/19/2021	32	I47521393	V5	8/19/2021
13	I47521374	B10	8/19/2021	33	I47521394	V6	8/19/2021
14	I47521375	B11	8/19/2021	34	I47521395	V7	8/19/2021
15	I47521376	B12	8/19/2021	35	I47521396	V8	8/19/2021
16	I47521377	C1	8/19/2021	36	I47521397	V9	8/19/2021
17	I47521378	C2	8/19/2021	37	I47521398	V10	8/19/2021
18	I47521379	C3	8/19/2021	38	I47521399	V111	8/19/2021
19	I47521380	D1	8/19/2021				
20	I47521381	D2	8/19/2021				

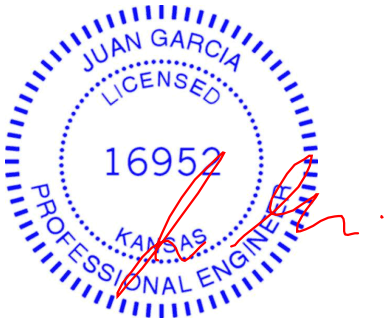
The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

Kansas COA: E-943

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



August 19, 2021

Garcia, Juan

RE: Lot 17 OS
Lot 17 OS

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

Site Information:

Customer: Project Name: Lot 17 OS
Lot/Block: Model:
Address: Subdivision:
City: State:

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

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

This package includes 38 individual, dated Truss Design Drawings and 0 Additional Drawings.

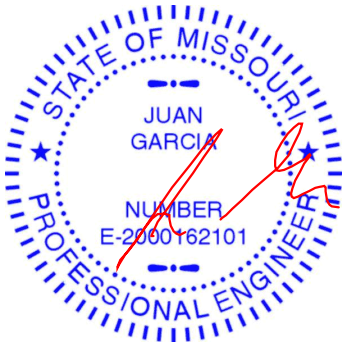
No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I47521362	A1	8/19/2021	21	I47521382	D3	8/19/2021
2	I47521363	A2	8/19/2021	22	I47521383	J1	8/19/2021
3	I47521364	A3	8/19/2021	23	I47521384	J2	8/19/2021
4	I47521365	B1	8/19/2021	24	I47521385	J3	8/19/2021
5	I47521366	B2	8/19/2021	25	I47521386	LAY1	8/19/2021
6	I47521367	B3	8/19/2021	26	I47521387	LAY2	8/19/2021
7	I47521368	B4	8/19/2021	27	I47521388	LAY3	8/19/2021
8	I47521369	B5	8/19/2021	28	I47521389	V1	8/19/2021
9	I47521370	B6	8/19/2021	29	I47521390	V2	8/19/2021
10	I47521371	B7	8/19/2021	30	I47521391	V3	8/19/2021
11	I47521372	B8	8/19/2021	31	I47521392	V4	8/19/2021
12	I47521373	B9	8/19/2021	32	I47521393	V5	8/19/2021
13	I47521374	B10	8/19/2021	33	I47521394	V6	8/19/2021
14	I47521375	B11	8/19/2021	34	I47521395	V7	8/19/2021
15	I47521376	B12	8/19/2021	35	I47521396	V8	8/19/2021
16	I47521377	C1	8/19/2021	36	I47521397	V9	8/19/2021
17	I47521378	C2	8/19/2021	37	I47521398	V10	8/19/2021
18	I47521379	C3	8/19/2021	38	I47521399	V111	8/19/2021
19	I47521380	D1	8/19/2021				
20	I47521381	D2	8/19/2021				

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

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022.

Missouri COA: 001193



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

August 19, 2021

Garcia, Juan

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/31/2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521362
Lot 17 OS	A1	Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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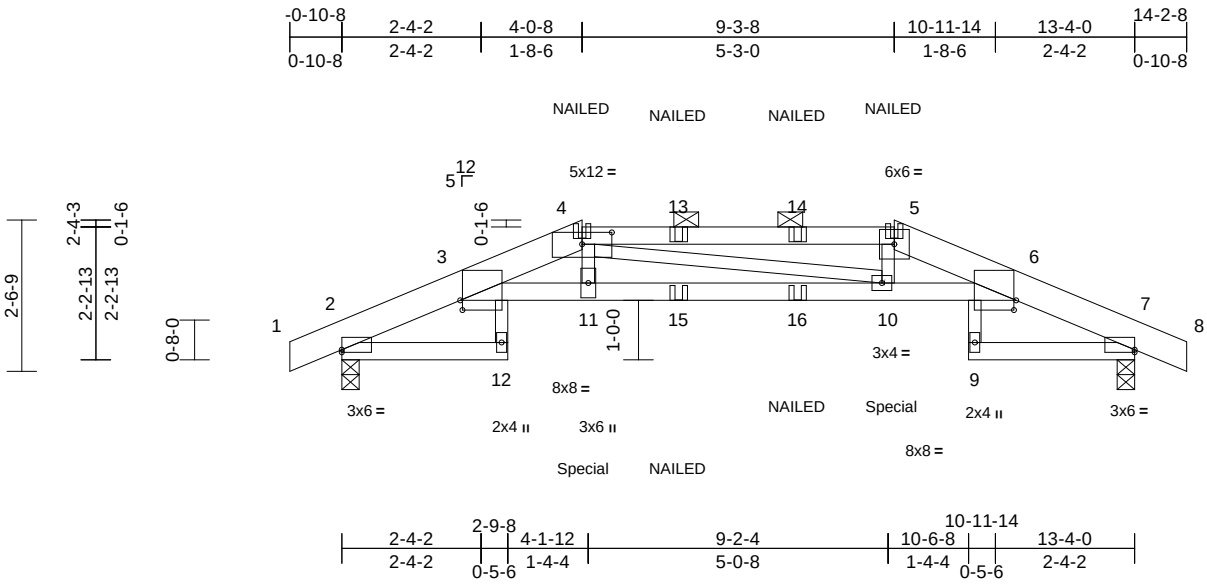

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Plate Offsets (X, Y): [2:Edge,0-0-8], [3:0-0-7,0-1-15], [4:0-6-0,0-2-6], [6:0-0-7,0-1-15], [7:Edge,0-0-8]

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	0.98	Vert(LL)	-0.23	10-11	>673	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.44	10-11	>352	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.38	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	10-11	>759	240	Weight: 49 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.4E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 3-6:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2

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

REACTIONS (lb/size) 2=1036/0-3-8, 7=1036/0-3-8
Max Horiz 2=-36 (LC 13)
Max Uplift 2=-214 (LC 8), 7=-214 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-468/137, 3-4=-3397/731, 4-5=-3344/721, 5-6=-3351/718, 6-7=-468/129, 7-8=0/6
BOT CHORD 2-12=-49/0, 3-11=-677/3342, 10-11=-681/3390, 6-10=-662/3296, 7-9=-49/0
WEBS 3-12=0/83, 6-9=0/83, 4-11=-44/421, 4-10=-147/60, 5-10=-51/431

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 214 lb uplift at joint 2 and 214 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidlines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 252 lb down and 80 lb up at 4-0-8, and 252 lb down and 80 lb up at 9-2-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-5=-70, 5-8=-70, 2-12=-20, 3-6=-20, 7-9=-20
Concentrated Loads (lb)
Vert: 4=-26 (B), 5=-26 (B), 11=-252 (B), 10=-252 (B), 13=-26 (B), 14=-26 (B), 15=-59 (B), 16=-59 (B)

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	A2	Hip	2	1	Job Reference (optional) I47521363

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 16:57:14 Page: 1
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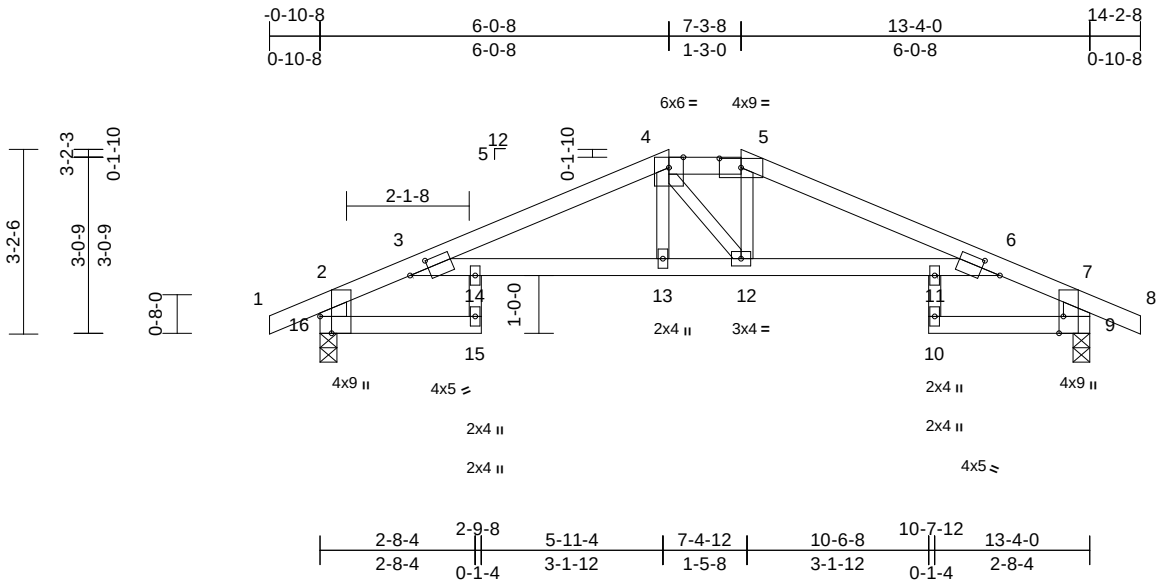

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Plate Offsets (X, Y): [3:0-4-1,0-1-10], [5:0-4-8,0-1-15], [6:0-4-1,0-1-10], [9:0-3-8,Edge], [16:0-3-8,Edge]

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	0.63	Vert(LL)	-0.18	13-14	>848	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.34	13-14	>461	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.37	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	13-14	>999	240	Weight: 43 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* 16-2,9-7:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-15 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-5 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
10-0-0 oc bracing: 11-12

REACTIONS (lb/size) 9=657/0-3-8, 16=657/0-3-8
Max Horiz 16=34 (LC 8)
Max Uplift 9=-95 (LC 9), 16=-95 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/30, 2-3=-230/67, 3-4=-1237/109, 4-5=-1128/112, 5-6=-1239/85, 6-7=-230/50, 7-8=0/30, 2-16=-688/123, 7-9=-688/118
BOT CHORD 15-16=0/0, 3-14=-60/1135, 13-14=-60/1135, 12-13=-60/1125, 11-12=-14/1137, 6-11=-14/1137, 9-10=0/0
WEBS 14-15=0/81, 10-11=0/81, 4-13=0/186, 4-12=-171/177, 5-12=-17/231

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 95 lb uplift at joint 16 and 95 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	A3	Roof Special Girder	2	4	Job Reference (optional)

I47521364

Wheeler Lumber, Waverly, KS - 66871,

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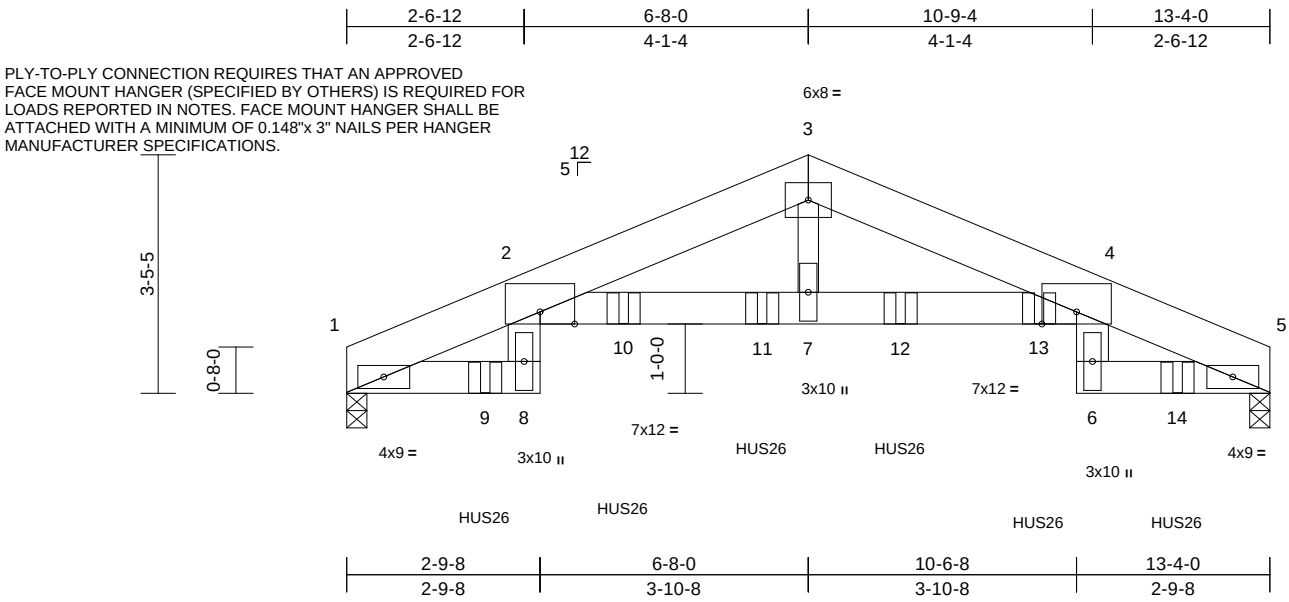

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.21	4-7	>738	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.36	4-7	>429	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.31	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	2-7	>999	240	Weight: 325 lb	FT = 10%

LUMBER
TOP CHORD 2x8 SP DSS
BOT CHORD 2x6 SP 2400F 2.0E
WEBS 2x6 SPF No.2 *Except* 3-7:2x4 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=5365/0-3-8, 5=5886/0-3-8
Max Horiz 1=30 (LC 10)
Max Uplift 1=-509 (LC 8), 5=-287 (LC 9)
Max Grav 1=5897 (LC 13), 5=6465 (LC 14)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2579/243, 2-3=-14031/788, 3-4=-14017/841, 4-5=-2572/142
BOT CHORD 1-8=0/0, 2-7=-790/14098, 4-7=-784/14125, 5-6=0/0
WEBS 2-8=-224/1914, 4-6=-35/1331, 3-7=-221/5039

NOTES
1) n/a
2) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 3 rows staggered at 0-4-0 oc.
Web connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
3) 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.
4) Unbalanced roof live loads have been considered for this design.
5) 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
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 509 lb uplift at joint 1 and 287 lb uplift at joint 5.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 12-0-0 to connect truss(es) to front face of bottom chord.
11) 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: 1-3=-70, 3-5=-70, 1-8=-20, 2-4=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 9=-1675 (F), 10=-1679 (F), 11=-1681 (F), 12=-1681 (F), 13=-1682 (F), 14=-1681 (F)

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B1	Common Supported Gable	2	1	Job Reference (optional) I47521365

Wheeler Lumber, Waverly, KS - 66871,

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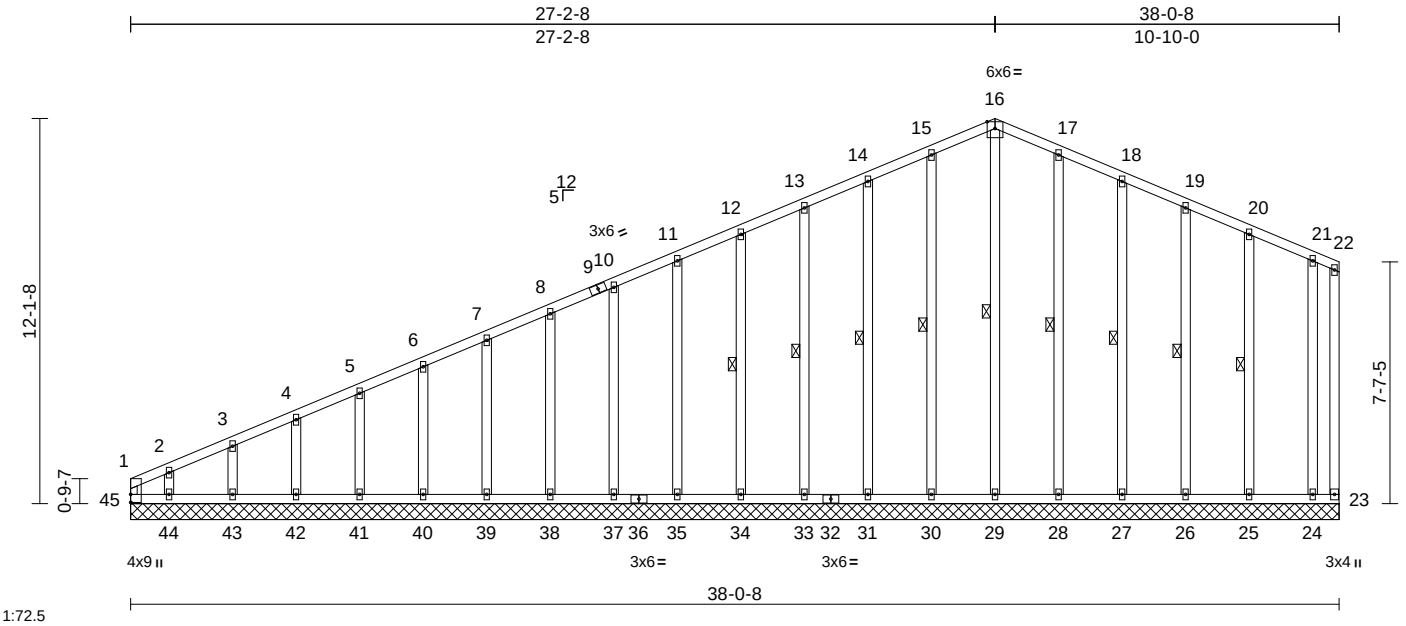

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	-0.01	23	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 249 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 22-23:2x4 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 16-29, 15-30, 14-31, 13-33, 12-34, 17-28, 18-27, 19-26, 20-25

REACTIONS (lb/size) 23=10/38-0-8, 24=134/38-0-8, 25=189/38-0-8, 26=179/38-0-8, 27=179/38-0-8, 28=187/38-0-8, 29=168/38-0-8, 30=187/38-0-8, 31=179/38-0-8, 33=180/38-0-8, 34=180/38-0-8, 35=180/38-0-8, 37=180/38-0-8, 38=180/38-0-8, 39=180/38-0-8, 40=180/38-0-8, 41=180/38-0-8, 42=179/38-0-8, 43=185/38-0-8, 44=157/38-0-8, 45=29/38-0-8
Max Horiz 45=308 (LC 5)
Max Uplift 23=-10 (LC 8), 24=-51 (LC 4), 25=-61 (LC 9), 26=-44 (LC 9), 27=-50 (LC 9), 28=-46 (LC 9), 29=-7 (LC 20), 30=-44 (LC 8), 31=-51 (LC 8), 33=-47 (LC 8), 34=-48 (LC 8), 35=-48 (LC 8), 37=-48 (LC 8), 38=-48 (LC 8), 39=-48 (LC 8), 40=-48 (LC 8), 41=-46 (LC 8), 42=-53 (LC 8), 43=-28 (LC 8), 44=-217 (LC 8), 45=-28 (LC 19)
Max Grav 23=10 (LC 1), 24=141 (LC 16), 25=189 (LC 22), 26=179 (LC 1), 27=179 (LC 22), 28=189 (LC 22), 29=178 (LC 15), 30=189 (LC 21), 31=179 (LC 21), 33=180 (LC 1), 34=180 (LC 21), 35=180 (LC 1), 37=180 (LC 21), 38=180 (LC 1), 39=180 (LC 1), 40=180 (LC 21), 41=180 (LC 1), 42=179 (LC 21), 43=185 (LC 1), 44=157 (LC 21), 45=269 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-45=-183/20, 1-2=-333/45, 2-3=-271/40, 3-4=-237/37, 4-5=-200/34, 5-6=-169/31, 6-7=-152/29, 7-8=-138/27, 8-10=-124/48, 10-11=-110/75, 11-12=-97/101, 12-13=-84/128, 13-14=-84/154, 14-15=-85/182, 15-16=-84/206, 16-17=-82/206, 17-18=-80/184, 18-19=-77/159, 19-20=-89/135, 20-21=-109/112, 21-22=-146/116, 22-23=-133/106
BOT CHORD 44-45=-106/80, 43-44=-106/80, 42-43=-106/80, 41-42=-106/80, 40-41=-106/80, 39-40=-106/80, 38-39=-106/80, 37-38=-106/80, 35-37=-106/80, 34-35=-106/80, 33-34=-106/80, 31-33=-106/80, 30-31=-106/80, 29-30=-106/80, 28-29=-106/80, 27-28=-106/80, 26-27=-106/80, 25-26=-106/80, 24-25=-106/80, 23-24=-106/80
WEBS 16-29=-138/31, 15-30=-149/68, 14-31=-139/75, 13-33=-140/71, 12-34=-140/72, 11-35=-140/72, 10-37=-140/72, 8-38=-140/72, 7-39=-140/72, 6-40=-140/72, 5-41=-140/71, 4-42=-139/73, 3-43=-144/65, 2-44=-122/146, 17-28=-149/70, 18-27=-139/74, 19-26=-139/69, 20-25=-148/81, 21-24=-102/97

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.

STATE OF MISSOURI JUAN GARCIA NUMBER E-2000162101 PROFESSIONAL ENGINEER

JUAN GARCIA LICENSED 16952 KANSAS PROFESSIONAL ENGINEER

August 19,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B1	Common Supported Gable	2	1	Job Reference (optional)

I47521365

6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 45, 10 lb uplift at joint 23, 7 lb uplift at joint 29, 44 lb uplift at joint 30, 51 lb uplift at joint 31, 47 lb uplift at joint 33, 48 lb uplift at joint 34, 48 lb uplift at joint 35, 48 lb uplift at joint 37, 48 lb uplift at joint 38, 48 lb uplift at joint 39, 48 lb uplift at joint 40, 46 lb uplift at joint 41, 53 lb uplift at joint 42, 28 lb uplift at joint 43, 217 lb uplift at joint 44, 46 lb uplift at joint 28, 50 lb uplift at joint 27, 44 lb uplift at joint 26, 61 lb uplift at joint 25 and 51 lb uplift at joint 24.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521366
Lot 17 OS	B2	Common	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:15 Page: 1
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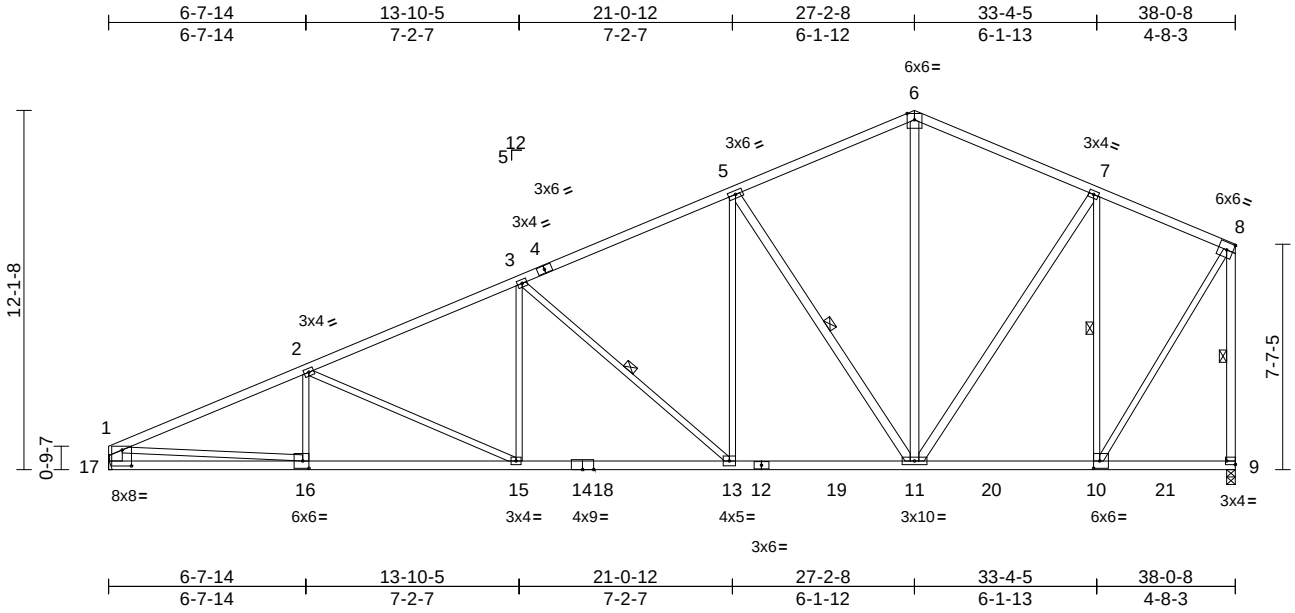

Scale = 1:77.8

Plate Offsets (X, Y): [9:Edge,0-1-8], [10:0-2-8,0-3-0], [16:0-2-8,0-3-0], [17:0-3-12,0-6-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.25	13-15	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.43	13-15	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.10	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	15-16	>999	240	Weight: 185 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-1:2x6 SPF No.2, 9-8,11-5,11-6,11-7:2x4 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 2-2-0 oc bracing.
WEBS 1 Row at midpt 8-9, 5-11, 7-10, 3-13

REACTIONS (lb/size) 9=1695/0-3-8, 17=1695/ Mechanical
Max Horiz 17=308 (LC 7)
Max Uplift 9=-190 (LC 8), 17=-255 (LC 8)
Max Grav 9=1867 (LC 2), 17=1799 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3374/479, 2-3=-2907/436, 3-5=-2132/361, 5-6=-1392/295, 6-7=-1388/312, 7-8=-938/196, 1-17=-1679/287, 8-9=-1783/221
BOT CHORD 16-17=-305/529, 15-16=-587/3050, 13-15=-425/2613, 11-13=-234/1893, 10-11=-120/831, 9-10=-104/79
WEBS 8-10=-143/1572, 5-13=-87/906, 5-11=-1237/322, 6-11=-113/691, 7-11=-96/708, 7-10=-1111/190, 3-13=-956/254, 1-16=-299/2532, 2-16=-96/128, 2-15=-505/178, 3-15=0/505

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) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 17 and 190 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.

LOAD CASE(S) Standard

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521367
Lot 17 OS	B3	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:16 Page: 1
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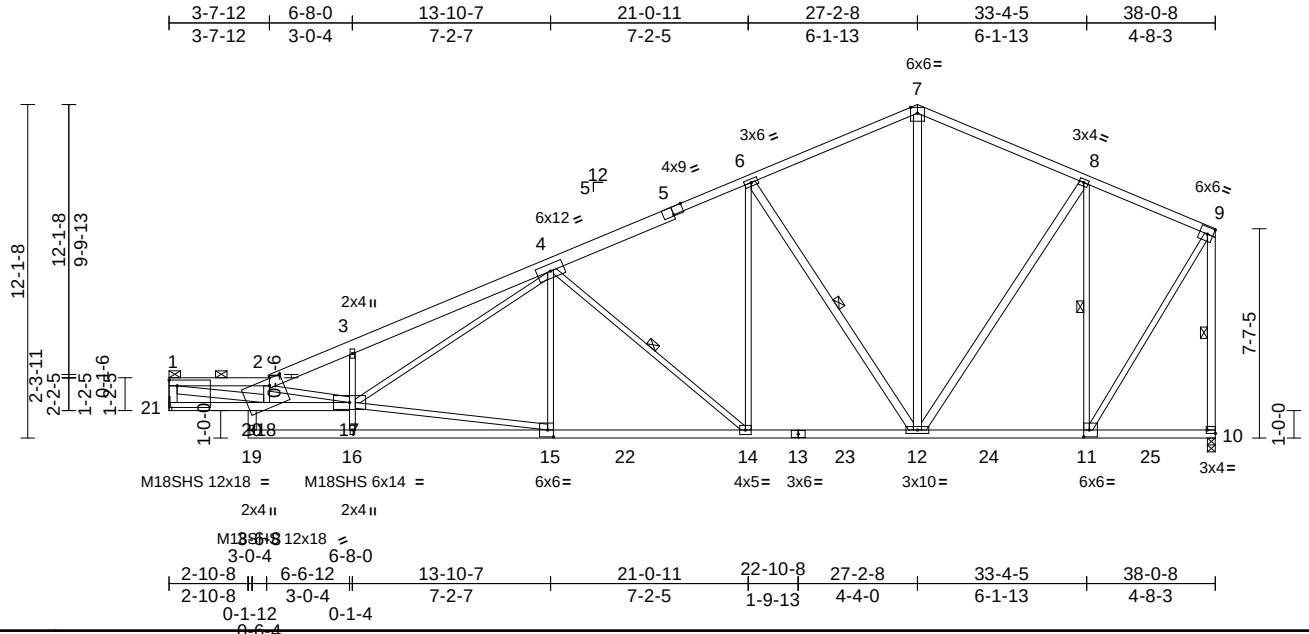

Scale = 1:83.8

Plate Offsets (X, Y): [5:0-4-8,Edge], [10:Edge,0-1-8], [11:0-2-8,0-3-0], [15:0-2-8,0-3-0], [20:0-6-0,0-3-0], [21: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	0.60	Vert(LL)	-0.40	15-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.71	15-16	>642	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.13	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.26	15-16	>999	240	Weight: 207 lb	FT = 10%

LUMBER

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

BOT CHORD 2x4 SPF No.2 *Except* 21-17:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 21-1,20-19,12-6,12-7,12-8,10-9:2x4 SPF No.2, 18-1:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-1 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-11 max.): 1-2.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
2-2-0 oc bracing: 14-15.

WEBS 1 Row at midpt 4-14, 6-12, 9-10, 8-11

REACTIONS (lb/size) 10=1699/0-3-8, 21=1699/ Mechanical
Max Horiz 21=291 (LC 7)
Max Uplift 10=-184 (LC 8), 21=-262 (LC 8)
Max Grav 10=1877 (LC 2), 21=1848 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-21=-1665/265, 1-2=-5842/796, 2-3=-5022/692, 3-4=-5004/799, 4-6=-2162/352, 6-7=-1399/288, 7-8=-1398/307, 8-9=-943/193, 9-10=-1793/215

BOT CHORD 20-21=-268/332, 18-20=-268/332, 17-18=-980/6018, 16-19=0/0, 15-16=-15/152, 14-15=-415/2698, 12-14=-222/1905, 11-12=-117/836, 10-11=-103/79

WEBS 19-20=0/54, 1-18=-782/5700, 15-17=-404/2569, 4-17=-434/2301, 4-15=-155/142, 4-14=-1045/255, 6-14=-86/953, 6-12=-1241/309, 7-12=-105/688, 8-12=-93/717, 9-11=-138/1580, 8-11=-1114/186, 16-17=0/235, 3-17=-345/194, 2-17=-1459/219, 2-18=-1548/257

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) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 262 lb uplift at joint 21 and 184 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.
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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521368
Lot 17 OS	B4	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:16 Page: 1
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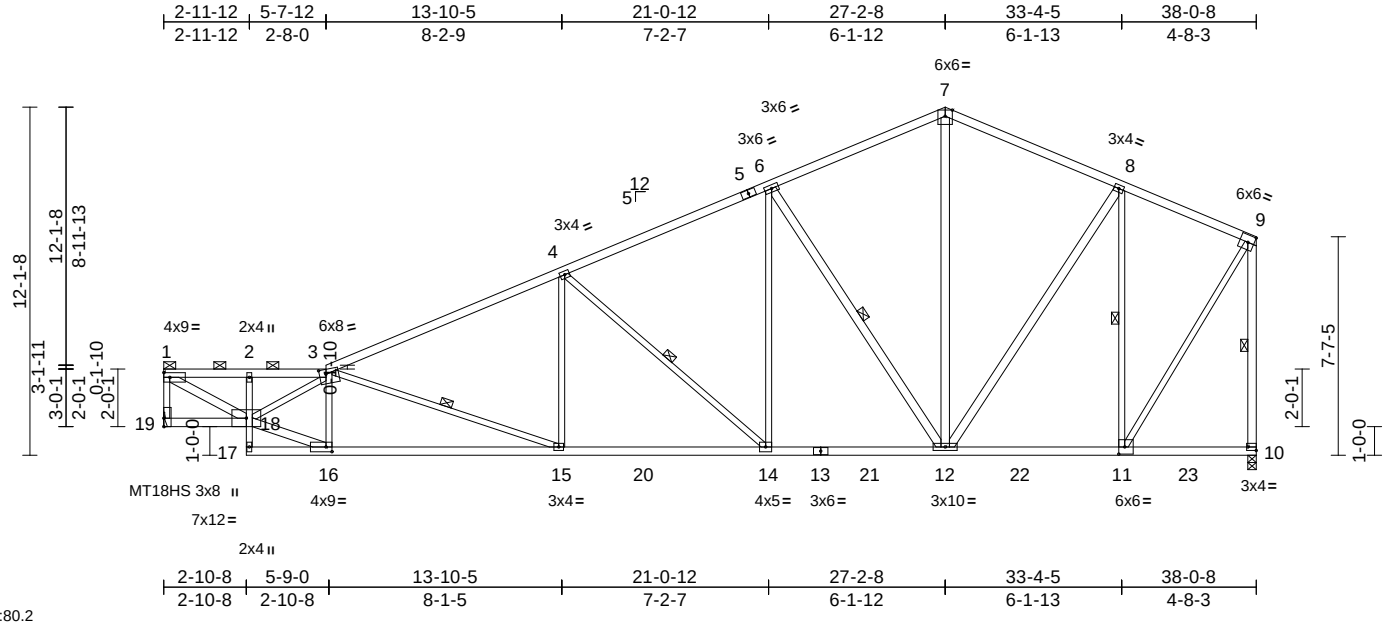

Scale = 1:80.2

Plate Offsets (X, Y): [3:0-2-12,0-2-0], [10:Edge,0-1-8], [11:0-2-8,0-3-0], [16:0-2-8,0-2-0]

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)	-0.22	15-16	>999	360	MT18HS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.42	15-16	>999	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	15-16	>999	240	Weight: 191 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E

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

WEBS 2x3 SPF No.2 *Except* 18-1,12-6,12-7,12-8,10-9,16-18:2x4 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 (3-4-2 max.): 1-3.

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

WEBS 1 Row at midpt 3-15, 4-14, 6-12, 9-10, 8-11

REACTIONS (lb/size) 10=1701/0-3-8, 19=1701/ Mechanical
Max Horiz 19=234 (LC 7)
Max Uplift 10=-4 (LC 8), 19=-51 (LC 8)
Max Grav 10=1873 (LC 2), 19=1804 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-19=-1719/66, 1-2=-2745/66, 2-3=-2730/64, 3-4=-2964/87, 4-6=-2146/110, 6-7=-1396/121, 7-8=-1394/131, 8-9=-941/83, 9-10=-1789/33

BOT CHORD 18-19=-214/56, 17-18=-5/22, 2-18=-162/39, 16-17=-15/124, 15-16=-112/3180, 14-15=-81/2654, 12-14=-26/1901, 11-12=-35/834, 10-11=-87/66

WEBS 1-18=-82/3149, 3-18=-611/0, 3-15=-569/34, 4-15=0/503, 4-14=-1000/98, 6-14=0/930, 6-12=-1240/123, 7-12=-23/690, 8-12=-4/713, 9-11=0/1577, 8-11=-1115/61, 3-16=-934/122, 16-18=-108/3288

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 51 lb uplift at joint 19 and 4 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.
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

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B5	Roof Special	2	1	Job Reference (optional) I47521369

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:17 Page: 1
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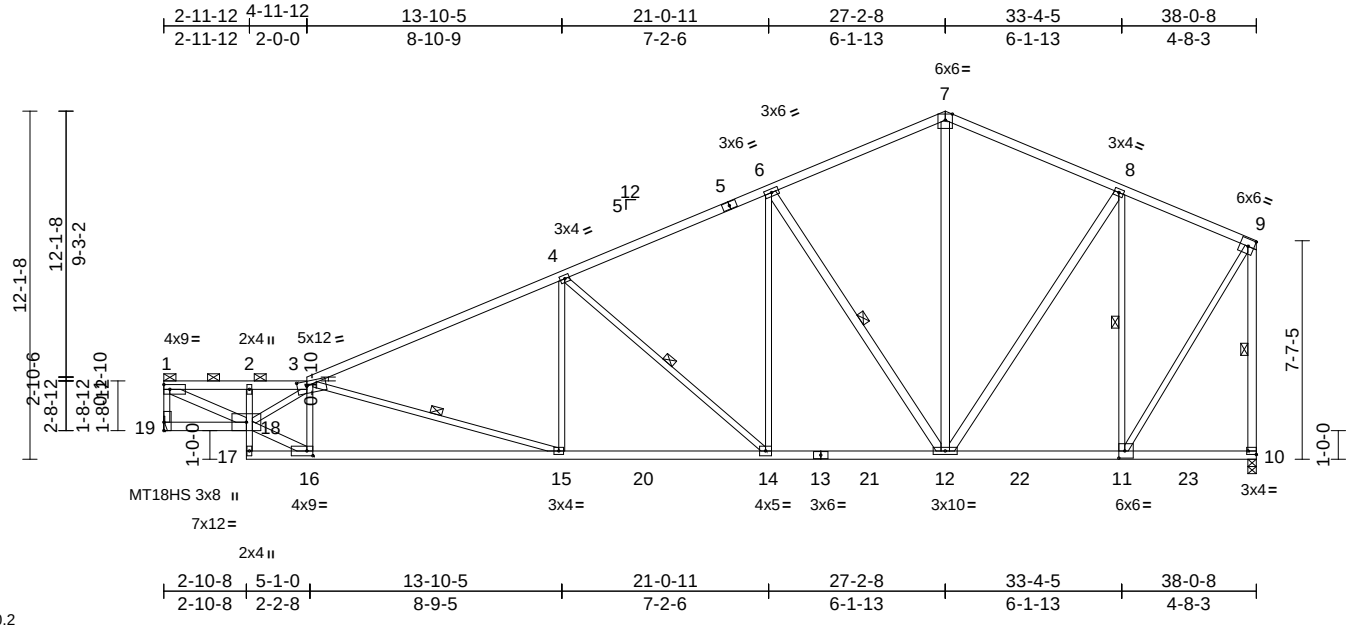


Scale = 1:80.2

Plate Offsets (X, Y): [3:0-4-0,0-2-0], [10:Edge,0-1-8], [11:0-2-8,0-3-0], [16:0-2-8,0-2-0]

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	1.00	Vert(LL)	-0.25	15-16	>999	360	MT18HS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.47	15-16	>962	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	15-16	>999	240	Weight: 189 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E

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

WEBS 2x3 SPF No.2 *Except* 18-1,10-9,16-18,12-6,12-7,12-8:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-11-6 max.): 1-3.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 17-18.

WEBS 1 Row at midpt 9-10, 3-15, 4-14, 6-12, 8-11

REACTIONS (lb/size) 10=1701/0-3-8, 19=1701/ Mechanical
Max Horiz 19=235 (LC 7)
Max Uplift 10=-4 (LC 8), 19=-51 (LC 8)
Max Grav 10=1873 (LC 2), 19=1804 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-19=-1712/65, 1-2=-3235/77, 2-3=-3211/71, 3-4=-2982/88, 4-6=-2147/112, 6-7=-1396/121, 7-8=-1395/132, 8-9=-941/84, 9-10=-1789/33

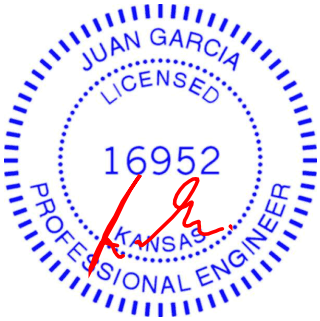
BOT CHORD 18-19=-208/72, 17-18=-46/2, 2-18=-81/23, 16-17=-19/139, 15-16=-115/3211, 14-15=-84/2663, 12-14=-26/1899, 11-12=-35/834, 10-11=-87/66

WEBS 1-18=-90/3546, 3-18=-133/0, 9-11=0/1577, 3-16=-1264/150, 16-18=-113/3464, 3-15=-585/33, 4-15=0/491, 4-14=-1015/101, 6-14=0/935, 6-12=-1236/123, 7-12=-23/688, 8-12=-5/714, 8-11=-1115/61

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 51 lb uplift at joint 19 and 4 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.
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



August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521370
Lot 17 OS	B6	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:17 Page: 1
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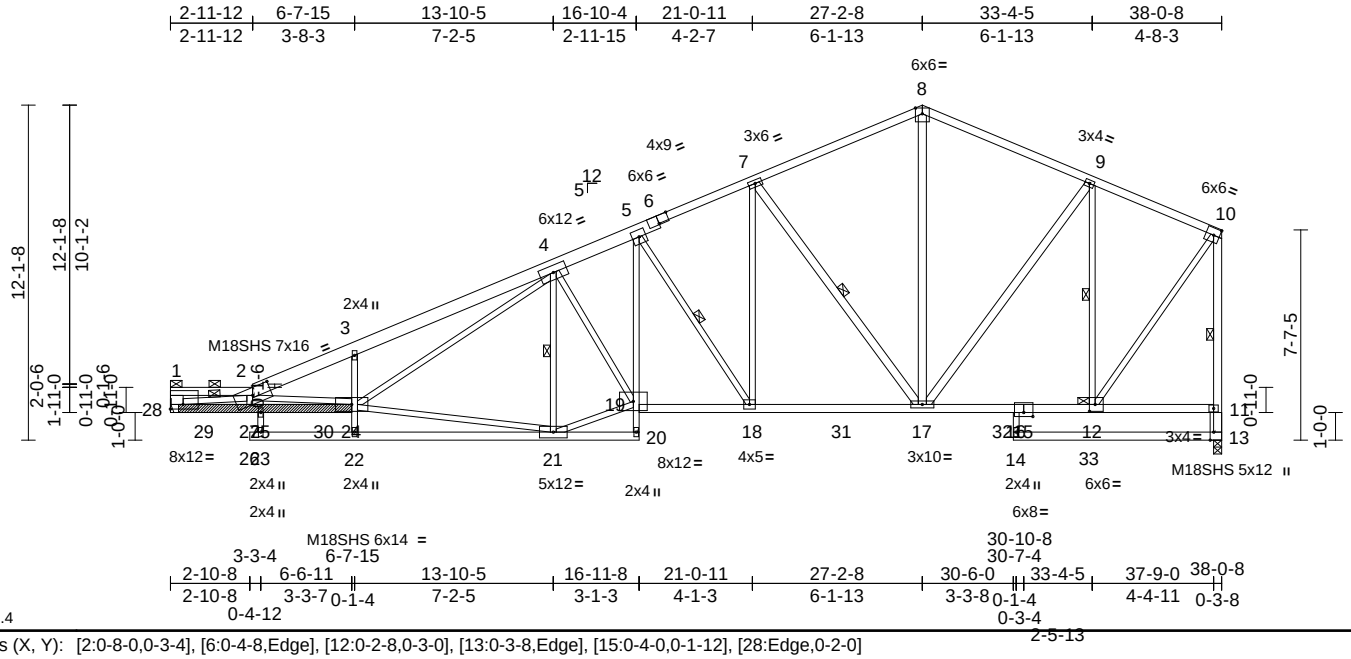

Scale = 1:83.4

Plate Offsets (X, Y): [2:0-8-0,0-3-4], [6:0-4-8,Edge], [12:0-2-8,0-3-0], [13:0-3-8,Edge], [15:0-4-0,0-1-12], [28:Edge,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	0.60	Vert(LL)	-0.44	21-22	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.99	Vert(CT)	-0.77	21-22	>585	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.23	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.20	21-22	>999	240	Weight: 228 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 2-6:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 28-24:2x4 SPF 2400F 2.0E, 20-5:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 28-1:2x6 SP DSS, 13-10,17-7,17-8,9-17:2x4 SPF No.2
LBR SCAB 28-24 SPF 2400F 2.0E one side

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-10-9 oc purlins, except end verticals, and 2-0-0 oc purlins (4-10-3 max.): 1-2.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
10-0-0 oc bracing: 25-27
WEBS 1 Row at midpt 4-21, 10-13, 7-17, 9-12, 5-18, 2-28
JOINTS 1 Brace at Jt(s): 1, 12

REACTIONS (lb/size) 13=1696/0-3-8, 28=1702/ Mechanical
Max Horiz 28=237 (LC 7)
Max Uplift 13=-4 (LC 8), 28=-45 (LC 8)
Max Grav 13=1951 (LC 2), 28=1843 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-28=-266/28, 1-2=-957/24, 2-3=-4961/125, 3-4=-4950/213, 4-5=-3020/131, 5-7=-2333/118, 7-8=-1543/113, 8-9=-1543/125, 9-10=-1070/82, 11-13=-1801/54, 10-11=-1810/49
BOT CHORD 27-28=-208/5717, 25-27=-217/5809, 24-25=-217/5809, 23-26=0/0, 22-23=0/0, 21-22=0/155, 20-21=-10/59, 19-20=0/9, 5-19=-50/1102, 18-19=-56/2712, 17-18=-32/2123, 16-17=-48/952, 12-16=-48/952, 11-12=-101/81, 13-14=0/0
WEBS 14-16=0/171, 4-21=-1131/115, 19-21=-77/2789, 4-19=-24/120, 7-18=-5/1009, 7-17=-1285/129, 8-17=-16/797, 9-17=0/702, 9-12=-1098/42, 10-12=-10/1612, 5-18=-1068/83, 2-24=-1256/29, 22-24=0/244, 3-24=-400/133, 21-24=-83/2520, 2-27=-576/53, 4-24=-136/2294, 2-28=-4880/90, 23-25=0/55

NOTES

1) Attached 6-3-3 scab 24 to 28, front face(s) 2x4 SPF 2400F 2.0E with 1 row(s) of 10d (0.131"x3") nails spaced 9" o.c.except : starting at 1-7-1 from end at joint 28, nail 1 row(s) at 7" o.c. for 2-4-12; starting at 4-3-4 from end at joint 28, nail 1 row(s) at 7" o.c. for 2-0-0.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Refer to girder(s) for truss to truss connections.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 28 and 4 lb uplift at joint 13.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521371
Lot 17 OS	B7	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:13 Page: 1
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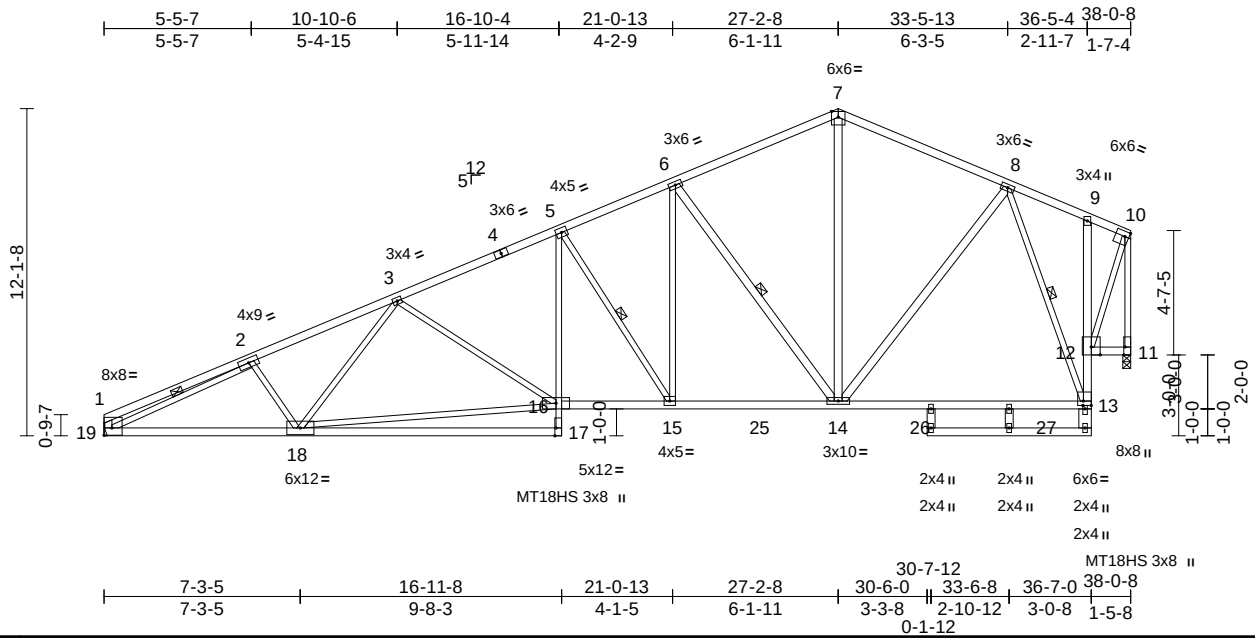

Scale = 1:85.4

Plate Offsets (X, Y): [1:Edge,0-3-4], [10:Edge,0-2-4], [11:0-3-8,Edge], [13:Edge,0-2-0], [13:0-1-8,0-1-0], [17:0-3-8,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	0.87	Vert(LL)	-0.35	17-18	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.68	17-18	>668	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.26	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	15-16	>999	240	Weight: 201 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-5:2x3 SPF No.2, 21-22,12-11:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-21,14-6,19-1,14-7,23-24,8-14:2x4 SPF No.2, 13-22:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-14, 5-15, 8-13, 2-19

REACTIONS (lb/size) 11=1701/0-3-8, 19=1701/ Mechanical
Max Horiz 19=209 (LC 5)
Max Uplift 11=-10 (LC 8), 19=-44 (LC 8)
Max Grav 11=1837 (LC 2), 19=1777 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-652/64, 2-3=-3280/103, 3-5=-2843/131, 5-6=-2295/131, 6-7=-1511/114, 7-8=-1513/126, 8-9=-449/68, 9-10=-530/51, 1-19=-410/58, 10-11=-1559/36
BOT CHORD 18-19=-223/2989, 17-18=0/348, 16-17=0/183, 5-16=-2/677, 15-16=-117/2565, 14-15=-65/2080, 13-14=-19/884, 12-13=0/1536, 9-12=-1/34, 11-12=-50/39
WEBS 6-14=-1261/143, 10-12=-3/1362, 3-16=-490/100, 7-14=-16/767, 5-15=-891/97, 6-15=-30/1006, 8-14=0/757, 8-13=-1418/47, 3-18=-10/193, 2-18=-114/109, 16-18=-225/2592, 2-19=-2758/34

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) 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) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 11 and 44 lb uplift at joint 19.
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

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521372
Lot 17 OS	B8	Roof Special	10	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:18 Page: 1
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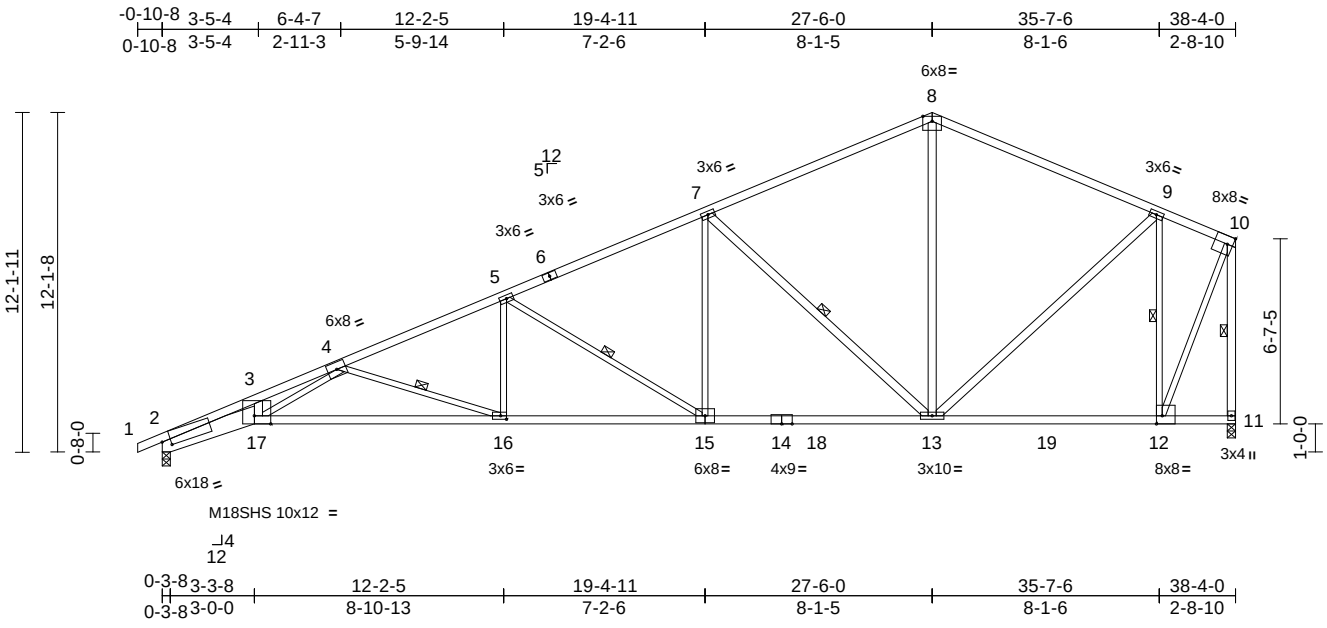

Scale = 1:82.3

Plate Offsets (X, Y): [2:0-3-11,0-2-5], [10:0-2-5,Edge], [12:0-2-8,Edge], [16:0-2-8,0-1-8], [17:0-7-0,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	0.95	Vert(LL)	-0.55	16-17	>827	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-1.01	16-17	>452	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.32	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.35	16-17	>999	240	Weight: 179 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-6:2x4 SPF 2400F 2.0E
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-17:2x8 SP DSS, 15-14:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-3,11-10,13-8,13-9,7-13:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 10-11, 9-12, 5-15, 7-13, 4-16

REACTIONS (lb/size) 2=1784/0-3-8, 11=1711/0-3-8
Max Horiz 2=294 (LC 5)
Max Uplift 2=-283 (LC 8), 11=-192 (LC 8)
Max Grav 2=1853 (LC 2), 11=1845 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/9, 2-3=-8290/1388, 3-4=-7577/1339, 4-5=-3797/578, 5-7=-2670/435, 7-8=-1549/290, 8-9=-1547/315, 9-10=-692/146, 10-11=-1858/202
BOT CHORD 2-17=-1496/7622, 16-17=-1004/4794, 13-16=-605/3445, 12-13=-113/656, 11-12=-90/70
WEBS 3-17=-109/1059, 10-12=-184/1746, 8-13=-68/700, 9-13=-121/929, 9-12=-1379/265, 5-15=-1230/289, 7-15=-65/934, 7-13=-1441/374, 5-16=-21/718, 4-16=-1416/418, 4-17=-478/2683

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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 283 lb uplift at joint 2 and 192 lb uplift at joint 11.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B9	Roof Special	2	1	Job Reference (optional) I47521373

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 16:57:19 Page: 1
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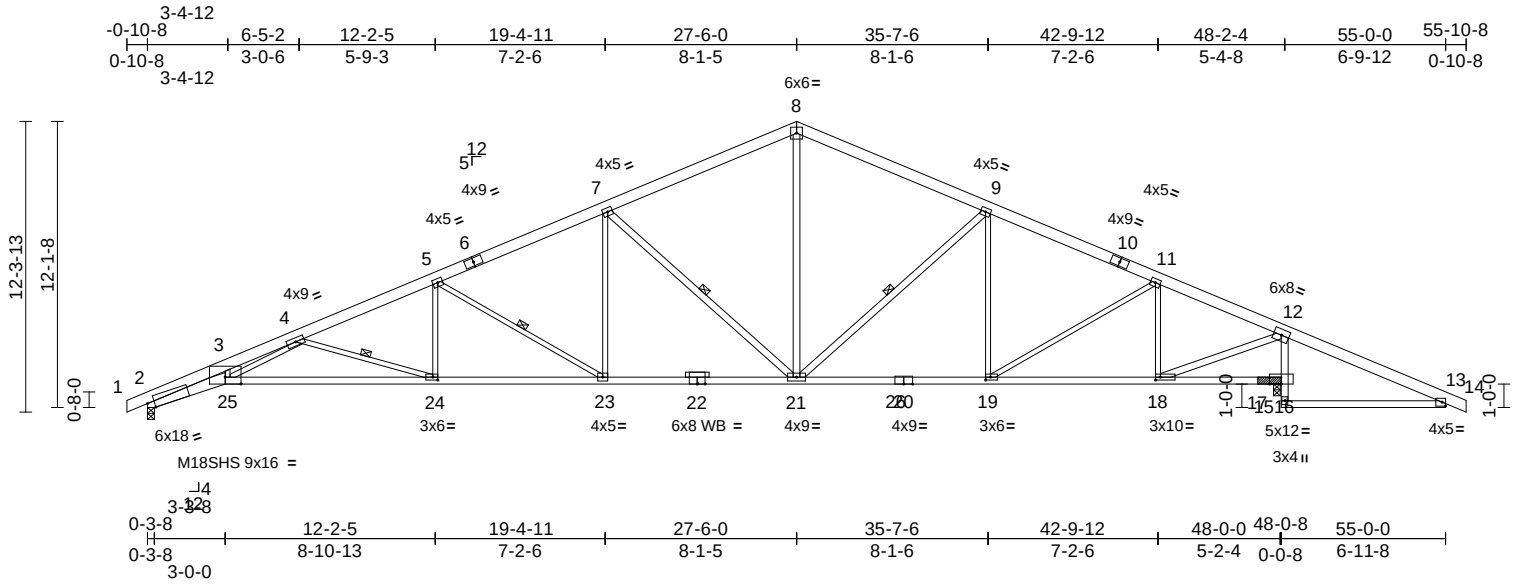

Scale = 1:97.6

Plate Offsets (X, Y): [2:0-3-9,Edge], [18:0-2-8,0-1-8], [19:0-2-8,0-1-8], [24:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.61	24-25	>940	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-1.11	24-25	>520	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.42	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.38	24-25	>999	240	Weight: 280 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 1-6,10-14:2x6 SP DSS
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 2-25:2x6 SPF 1650F 1.4E, 25-22:2x4 SPF 2400F 2.0E, 15-13:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 21-8,21-9,18-12,7-21:2x4 SPF No.2
OTHERS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-7-12 oc purlins.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 9-21, 5-23, 7-21, 4-24

REACTIONS (lb/size) 2=2181/0-3-8, 16=2888/(0-3-8 + bearing block), (req. 0-4-12)
Max Horiz 2=209 (LC 12)
Max Uplift 2=-323 (LC 8), 16=-387 (LC 9)
Max Grav 2=2279 (LC 2), 16=3021 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-9443/1393, 3-4=-8287/1290, 4-5=-5142/700, 5-7=-3908/547, 7-8=-2739/399, 8-9=-2739/425, 9-11=-3031/342, 11-12=-2301/227, 12-13=-231/821, 13-14=0/6
BOT CHORD 2-25=-1439/8585, 24-25=-1097/6348, 23-24=-675/4686, 21-23=-420/3542, 19-21=-141/2736, 18-19=-98/2044, 16-18=-913/316, 15-16=-21/126, 12-16=-2804/449, 13-15=-620/235
WEBS 3-25=-209/1925, 8-21=-153/1596, 9-21=-497/223, 12-18=-292/3159, 9-19=-233/125, 11-19=-65/808, 11-18=-1001/193, 5-24=-25/808, 5-23=-1337/299, 7-23=-67/981, 7-21=-1487/377, 4-24=-1739/441, 4-25=-282/1770

NOTES
1) 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 16 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF No.2.
2) Unbalanced roof live loads have been considered for this design.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 323 lb uplift at joint 2 and 387 lb uplift at joint 16.
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

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B10	Roof Special Supported Gable	1	1	Job Reference (optional) I47521374

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:10 Page: 1
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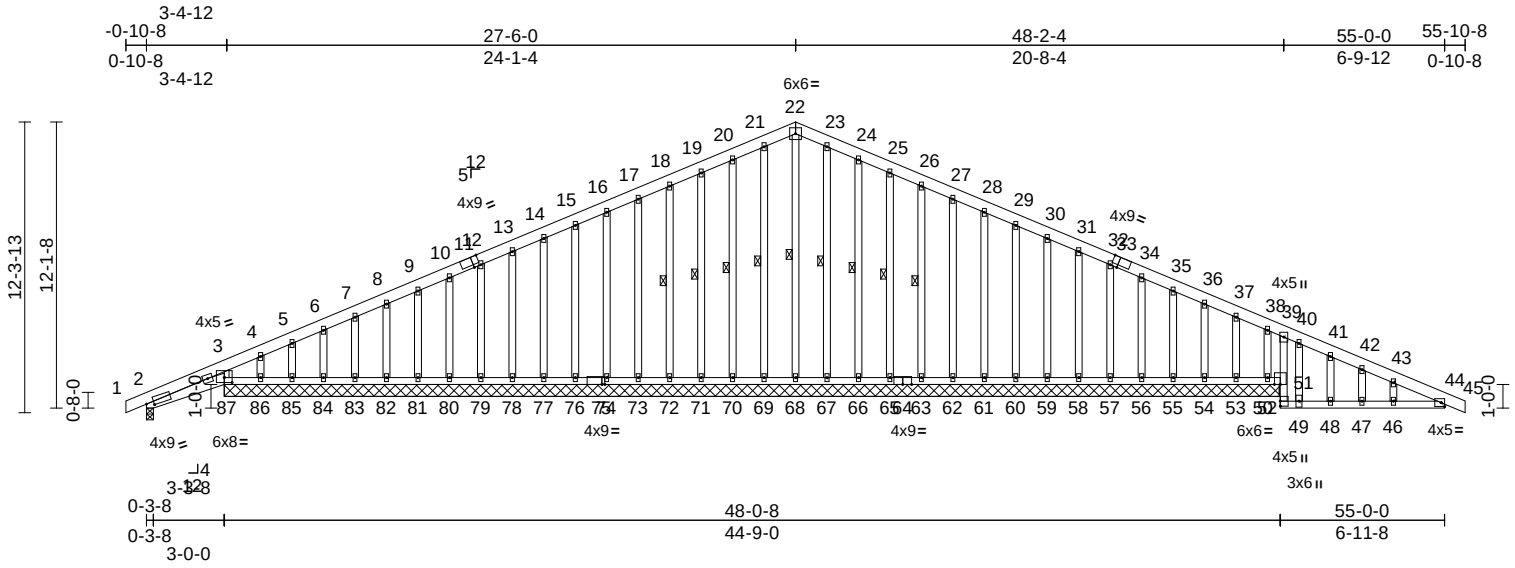

Scale = 1:97.6

Plate Offsets (X, Y): [2:0-3-13,0-1-9], [11:0-3-2,Edge], [33:0-3-2,Edge], [75:0-1-8,Edge], [87:0-4-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	0.00	52-53	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.52	44	>175	120		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.27	Horz(CT)	-0.06	52	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.00	52-53	>999	240	Weight: 406 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-87:2x6 SPF No.2, 39-50:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-3-11 oc bracing.
WEBS 1 Row at midpt 22-68, 21-69, 20-70, 19-71, 18-72, 23-67, 24-66, 25-65, 26-63

REACTIONS (lb/size) 2=60/0-3-8, 52=1411/44-8-8, 53=-928/44-8-8, 54=222/44-8-8, 55=117/44-8-8, 56=127/44-8-8, 57=117/44-8-8, 58=120/44-8-8, 59=120/44-8-8, 60=120/44-8-8, 61=120/44-8-8, 62=121/44-8-8, 63=118/44-8-8, 65=105/44-8-8, 66=110/44-8-8, 67=263/44-8-8, 68=542/44-8-8, 69=263/44-8-8, 70=110/44-8-8, 71=105/44-8-8, 72=118/44-8-8, 73=121/44-8-8, 74=120/44-8-8, 76=120/44-8-8, 77=120/44-8-8, 78=120/44-8-8, 79=120/44-8-8, 80=120/44-8-8, 81=120/44-8-8, 82=120/44-8-8, 83=120/44-8-8, 84=121/44-8-8, 85=109/44-8-8, 86=150/44-8-8, 87=26/44-8-8
Max Horiz 2=209 (LC 12)
Max Uplift 2=-68 (LC 9), 52=-401 (LC 5), 53=-928 (LC 1), 54=-53 (LC 9), 55=-31 (LC 9), 56=-33 (LC 9), 57=-31 (LC 9), 58=-32 (LC 9), 59=-32 (LC 9), 60=-32 (LC 9), 61=-32 (LC 9), 62=-32 (LC 9), 63=-32 (LC 9), 65=-36 (LC 9), 66=-36 (LC 9), 67=-8 (LC 5), 69=-4 (LC 5), 70=-36 (LC 8), 71=-36 (LC 8), 72=-32 (LC 8), 73=-32 (LC 8), 74=-32 (LC 8), 76=-32 (LC 8), 77=-32 (LC 8), 78=-32 (LC 8), 79=-32 (LC 8), 80=-32 (LC 8), 81=-32 (LC 8), 82=-32 (LC 8), 83=-32 (LC 8), 84=-32 (LC 8), 85=-31 (LC 8), 86=-23 (LC 8), 87=-121 (LC 22)
Max Grav 2=144 (LC 21), 52=1411 (LC 1), 53=298 (LC 5), 54=222 (LC 1), 55=117 (LC 22), 56=127 (LC 1), 57=117 (LC 22), 58=120 (LC 1), 59=120 (LC 22), 60=120 (LC 22), 61=120 (LC 1), 62=121 (LC 1), 63=118 (LC 1), 65=106 (LC 22), 66=112 (LC 22), 67=263 (LC 1), 68=542 (LC 1), 69=263 (LC 1), 70=118 (LC 21), 71=115 (LC 21), 72=119 (LC 21), 73=121 (LC 1), 74=120 (LC 1), 76=120 (LC 21), 77=120 (LC 21), 78=120 (LC 1), 79=120 (LC 1), 80=120 (LC 21), 81=120 (LC 21), 82=120 (LC 21), 83=120 (LC 1), 84=121 (LC 1), 85=117 (LC 21), 86=150 (LC 1), 87=162 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/10, 2-3=-309/978, 3-4=-249/871, 4-5=-230/868, 5-6=-216/873, 6-7=-199/872, 7-8=-183/872, 8-9=-167/872, 9-10=-151/872, 10-12=-134/872, 12-13=-118/872, 13-14=-102/872, 14-15=-86/872, 15-16=-69/872, 16-17=-53/872, 17-18=-37/872, 18-19=-20/872, 19-20=-4/878, 20-21=0/882, 21-22=0/827, 22-23=0/828, 23-24=0/882, 24-25=-7/879, 25-26=-25/873, 26-27=-43/873, 27-28=-61/873, 28-29=-78/873, 29-30=-96/873, 30-31=-114/873, 31-32=-131/873, 32-34=-149/873, 34-35=-167/873, 35-36=-186/882, 36-37=-205/880, 37-38=-145/621, 38-39=-257/949, 39-40=-257/972, 40-41=-201/772, 41-42=-206/730, 42-43=-212/696, 43-44=-225/667, 44-45=0/6

Continued on page 2

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B10	Roof Special Supported Gable	1	1	Job Reference (optional) I47521374

BOT CHORD 2-87=-876/323, 86-87=-790/293, 85-86=-789/293, 84-85=-789/293, 83-84=-789/293, 82-83=-789/293, 81-82=-789/293, 80-81=-789/293, 79-80=-789/293, 78-79=-789/293, 77-78=-789/293, 76-77=-789/293, 74-76=-789/293, 73-74=-789/293, 72-73=-789/293, 71-72=-789/293, 70-71=-789/293, 69-70=-789/293, 68-69=-789/293, 67-68=-789/293, 66-67=-789/293, 65-66=-789/293, 63-65=-789/293, 62-63=-789/293, 61-62=-789/293, 60-61=-789/293, 59-60=-789/293, 58-59=-789/293, 57-58=-789/293, 56-57=-789/293, 55-56=-789/293, 54-55=-789/293, 53-54=-789/293, 52-53=-789/293, 51-52=-789/293, 50-51=-384/132, 39-51=-534/180, 49-50=-612/234, 48-49=-612/234, 47-48=-612/234, 46-47=-612/234, 44-46=-612/234

WEBS 22-68=-516/7, 21-69=-236/20, 20-70=-92/52, 19-71=-88/52, 18-72=-93/48, 17-73=-94/48, 16-74=-94/48, 15-76=-93/48, 14-77=-93/48, 13-78=-93/48, 12-79=-93/48, 10-80=-93/48, 9-81=-93/48, 8-82=-93/48, 7-83=-94/48, 6-84=-95/48, 5-85=-90/46, 4-86=-103/39, 23-67=-236/24, 24-66=-85/52, 25-65=-79/52, 26-63=-92/48, 27-62=-94/48, 28-61=-94/48, 29-60=-93/48, 30-59=-93/48, 31-58=-93/48, 32-57=-92/48, 34-56=-93/48, 35-55=-117/53, 36-54=-99/49, 37-53=-174/592, 38-52=-948/284, 40-49=-164/476, 41-48=-5/42, 42-47=-9/27, 43-46=-17/43, 3-87=-258/128

LOAD CASE(S) Standard

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 68 lb uplift at joint 2, 121 lb uplift at joint 87, 4 lb uplift at joint 69, 36 lb uplift at joint 70, 36 lb uplift at joint 71, 32 lb uplift at joint 72, 32 lb uplift at joint 73, 32 lb uplift at joint 74, 32 lb uplift at joint 76, 32 lb uplift at joint 77, 32 lb uplift at joint 78, 32 lb uplift at joint 79, 32 lb uplift at joint 80, 32 lb uplift at joint 81, 32 lb uplift at joint 82, 32 lb uplift at joint 83, 32 lb uplift at joint 84, 31 lb uplift at joint 85, 23 lb uplift at joint 86, 8 lb uplift at joint 67, 36 lb uplift at joint 66, 36 lb uplift at joint 65, 32 lb uplift at joint 63, 32 lb uplift at joint 62, 32 lb uplift at joint 61, 32 lb uplift at joint 60, 32 lb uplift at joint 59, 32 lb uplift at joint 58, 31 lb uplift at joint 57, 33 lb uplift at joint 56, 31 lb uplift at joint 55, 53 lb uplift at joint 54, 928 lb uplift at joint 53 and 401 lb uplift at joint 52.
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.

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/31/2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B11	Roof Special Supported Gable	1	1	Job Reference (optional) I47521375

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:20 Page: 1
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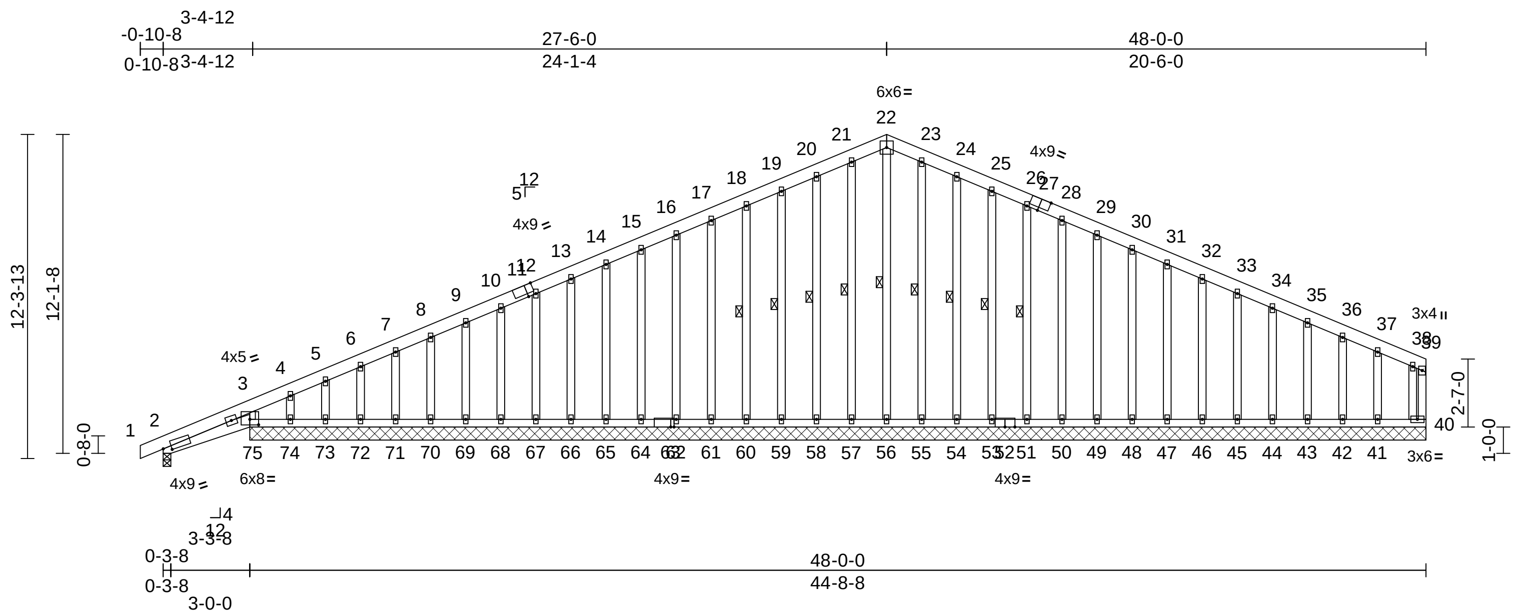

Scale = 1:87.6

Plate Offsets (X, Y): [2:0-3-13,0-1-9], [11:0-3-2,Edge], [27:0-4-8,Edge], [63:0-1-8,Edge], [75:0-4-0,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	2-75	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	2-75	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	40	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.00	2-75	>999	240	Weight: 374 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 2-75:2x6 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-75:2x3 SPF No.2
OTHERS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-75.
WEBS 1 Row at midpt 22-56, 21-57, 20-58, 19-59, 18-60, 23-55, 24-54, 25-53, 26-51

REACTIONS (lb/size) 2=204/0-3-8, 40=84/44-8-8, 41=127/44-8-8, 42=120/44-8-8, 43=120/44-8-8, 44=120/44-8-8, 45=120/44-8-8, 46=120/44-8-8, 47=120/44-8-8, 48=120/44-8-8, 49=120/44-8-8, 50=120/44-8-8, 51=120/44-8-8, 53=120/44-8-8, 54=121/44-8-8, 55=121/44-8-8, 56=112/44-8-8, 57=121/44-8-8, 58=121/44-8-8, 59=120/44-8-8, 60=120/44-8-8, 61=120/44-8-8, 62=120/44-8-8, 64=120/44-8-8, 65=120/44-8-8, 66=120/44-8-8, 67=120/44-8-8, 68=120/44-8-8, 69=120/44-8-8, 70=120/44-8-8, 71=120/44-8-8, 72=120/44-8-8, 73=123/44-8-8, 74=88/44-8-8, 75=260/44-8-8
Max Horiz 2=240 (LC 8)
Max Uplift 2=-31 (LC 9), 40=-4 (LC 8), 41=-92 (LC 9), 42=-27 (LC 9), 43=-31 (LC 9), 44=-32 (LC 9), 45=-32 (LC 9), 46=-32 (LC 9), 47=-32 (LC 9), 48=-32 (LC 9), 49=-32 (LC 9), 50=-31 (LC 9), 51=-32 (LC 9), 53=-38 (LC 9), 54=-37 (LC 9), 58=-36 (LC 8), 59=-36 (LC 8), 60=-32 (LC 8), 61=-32 (LC 8), 62=-32 (LC 8), 64=-32 (LC 8), 65=-32 (LC 8), 66=-32 (LC 8), 67=-32 (LC 8), 68=-32 (LC 8), 69=-32 (LC 8), 70=-32 (LC 8), 71=-32 (LC 8), 72=-32 (LC 8), 73=-31 (LC 8), 74=-22 (LC 8), 75=-88 (LC 8)
Max Grav 2=204 (LC 1), 40=91 (LC 18), 41=130 (LC 22), 42=120 (LC 1), 43=120 (LC 1), 44=120 (LC 1), 45=120 (LC 22), 46=120 (LC 1), 47=120 (LC 22), 48=120 (LC 22), 49=120 (LC 1), 50=120 (LC 1), 51=120 (LC 1), 53=121 (LC 22), 54=123 (LC 22), 55=121 (LC 1), 56=154 (LC 18), 57=121 (LC 1), 58=123 (LC 21), 59=121 (LC 21), 60=120 (LC 1), 61=120 (LC 1), 62=120 (LC 1), 64=120 (LC 21), 65=120 (LC 21), 66=120 (LC 1), 67=120 (LC 1), 68=120 (LC 21), 69=120 (LC 1), 70=120 (LC 1), 71=120 (LC 21), 72=120 (LC 21), 73=123 (LC 1), 74=88 (LC 21), 75=260 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-287/126, 3-4=-196/94, 4-5=-177/102, 5-6=-160/115, 6-7=-143/129, 7-8=-125/143, 8-9=-108/157, 9-10=-90/171, 10-12=-73/185, 12-13=-56/198, 13-14=-50/212, 14-15=-50/226, 15-16=-50/240, 16-17=-50/254, 17-18=-50/268, 18-19=-50/282, 19-20=-50/298, 20-21=-51/313, 21-22=-47/307, 22-23=-46/302, 23-24=-48/298, 24-25=-46/271, 25-26=-43/245, 26-28=-41/220, 28-29=-40/196, 29-30=-38/171, 30-31=-36/147, 31-32=-34/126, 32-33=-32/110, 33-34=-30/93, 34-35=-28/77, 35-36=-31/62, 36-37=-39/48, 37-38=-64/32, 38-39=-29/40, 39-40=-22/98

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

August 19,2021

Continued on page 2

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	B11	Roof Special Supported Gable	1	1	I47521375 Job Reference (optional)

BOT CHORD 2-75=-43/55, 74-75=-21/37, 73-74=-21/37, 72-73=-21/37, 71-72=-21/37, 70-71=-21/37, 69-70=-21/37, 68-69=-21/37, 67-68=-21/37, 66-67=-21/37, 65-66=-21/37, 64-65=-21/37, 62-64=-21/37, 61-62=-21/37, 60-61=-21/37, 59-60=-21/37, 58-59=-21/37, 57-58=-21/37, 56-57=-21/37, 55-56=-21/37, 54-55=-21/37, 53-54=-21/37, 51-53=-21/37, 50-51=-21/37, 49-50=-21/37, 48-49=-21/37, 47-48=-21/37, 46-47=-21/37, 45-46=-21/37, 44-45=-21/37, 43-44=-21/37, 42-43=-21/37, 41-42=-21/37, 40-41=-21/37

WEBS 22-56=-132/6, 21-57=-94/8, 20-58=-96/52, 19-59=-94/52, 18-60=-93/48, 17-61=-93/48, 16-62=-93/48, 15-64=-93/48, 14-65=-93/48, 13-66=-93/48, 12-67=-93/48, 10-68=-93/48, 9-69=-93/48, 8-70=-93/48, 7-71=-93/48, 6-72=-94/48, 5-73=-96/46, 4-74=-63/39, 23-55=-94/0, 24-54=-96/53, 25-53=-94/54, 26-51=-93/48, 28-50=-93/47, 29-49=-93/48, 30-48=-93/48, 31-47=-93/48, 32-46=-93/48, 33-45=-93/48, 34-44=-93/48, 35-43=-93/46, 36-42=-94/45, 37-41=-98/101, 38-40=-126/3, 3-75=-219/129

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 4 lb uplift at joint 40, 31 lb uplift at joint 2, 88 lb uplift at joint 75, 36 lb uplift at joint 58, 36 lb uplift at joint 59, 32 lb uplift at joint 60, 32 lb uplift at joint 61, 32 lb uplift at joint 62, 32 lb uplift at joint 64, 32 lb uplift at joint 65, 32 lb uplift at joint 66, 32 lb uplift at joint 67, 32 lb uplift at joint 68, 32 lb uplift at joint 69, 32 lb uplift at joint 70, 32 lb uplift at joint 71, 32 lb uplift at joint 72, 31 lb uplift at joint 73, 22 lb uplift at joint 74, 37 lb uplift at joint 54, 38 lb uplift at joint 53, 32 lb uplift at joint 51, 31 lb uplift at joint 50, 32 lb uplift at joint 49, 32 lb uplift at joint 48, 32 lb uplift at joint 47, 32 lb uplift at joint 46, 32 lb uplift at joint 45, 32 lb uplift at joint 44, 31 lb uplift at joint 43, 27 lb uplift at joint 42 and 92 lb uplift at joint 41.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521376
Lot 17 OS	B12	Roof Special	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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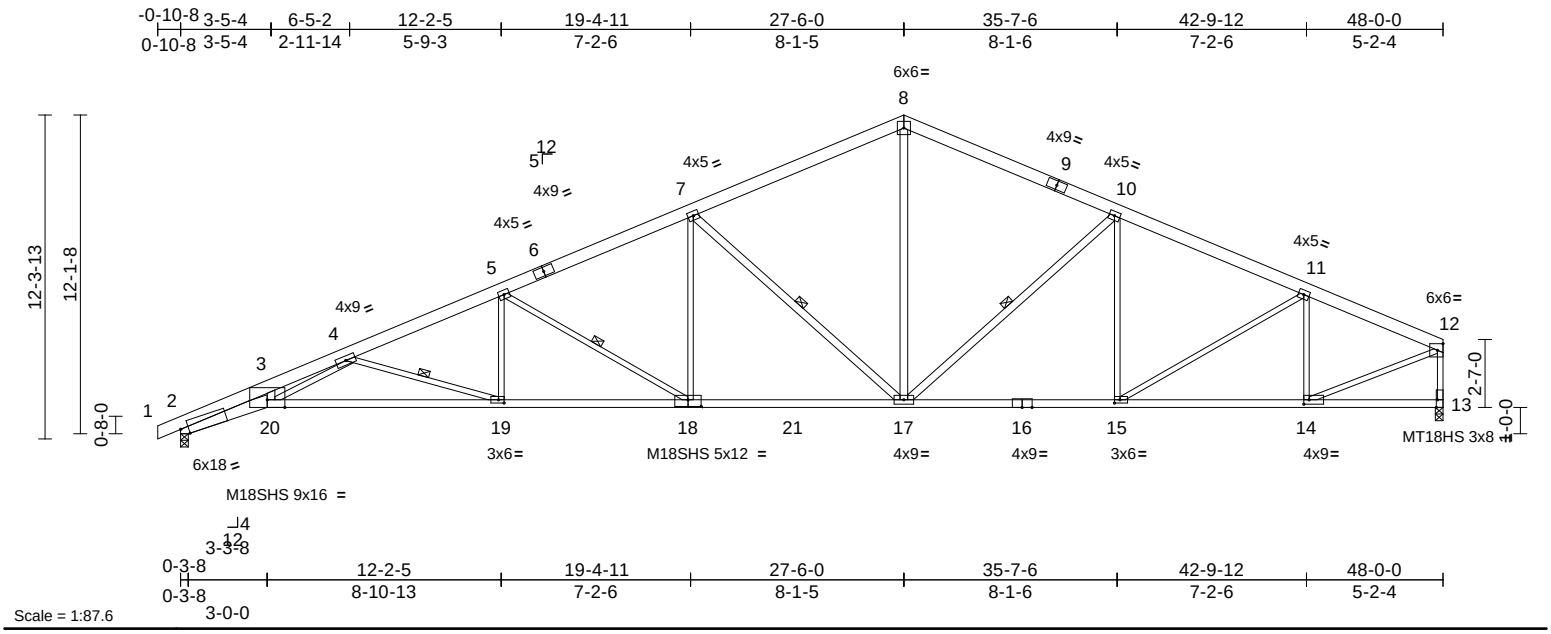

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Plate Offsets (X, Y): [2:0-3-9,Edge], [13:0-3-8,Edge], [14:0-2-8,0-2-0], [15:0-2-8,0-1-8], [18:0-6-0,0-3-0], [19:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.62	19-20	>918	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-1.13	19-20	>508	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.44	13	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.39	19-20	>999	240	Weight: 251 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 1-6,9-12:2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E *Except* 2-20:2x6 SPF 1650F 1.4E, 18-16:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 17-8,17-10,7-17,3-20:2x4 SPF No.2

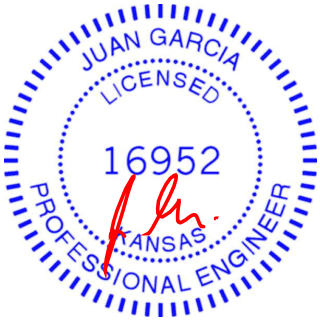
BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 10-17, 5-18, 7-17, 4-19

REACTIONS (lb/size) 2=2221/0-3-8, (req. 0-3-10), 13=2148/0-3-8, (req. 0-3-9)
Max Horiz 2=240 (LC 8)
Max Uplift 2=-322 (LC 8), 13=-244 (LC 9)
Max Grav 2=2317 (LC 2), 13=2273 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/10, 2-3=-9695/1437, 3-4=-8381/1313, 4-5=-5254/705, 5-7=-4028/550, 7-8=-2842/399, 8-10=-2843/425, 10-11=-3229/365, 11-12=-2684/288, 12-13=-2196/264
BOT CHORD 2-20=-1513/8823, 19-20=-1142/6472, 17-19=-711/4790, 15-17=-211/2917, 14-15=-251/2432, 13-14=-22/36
WEBS 8-17=-154/1675, 10-17=-626/247, 12-14=-254/2621, 5-19=-29/811, 5-18=-1334/301, 7-18=-70/989, 7-17=-1489/379, 10-15=-111/166, 11-15=-53/567, 11-14=-873/183, 3-20=-228/2038, 4-19=-1759/450, 4-20=-293/1736

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) WARNING: Required bearing size at joint(s) 2, 13 greater than input bearing size.
7) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 322 lb uplift at joint 2 and 244 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.

LOAD CASE(S) Standard



August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/31/2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	C1	Common Supported Gable	2	1	I47521377 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:22 Page: 1
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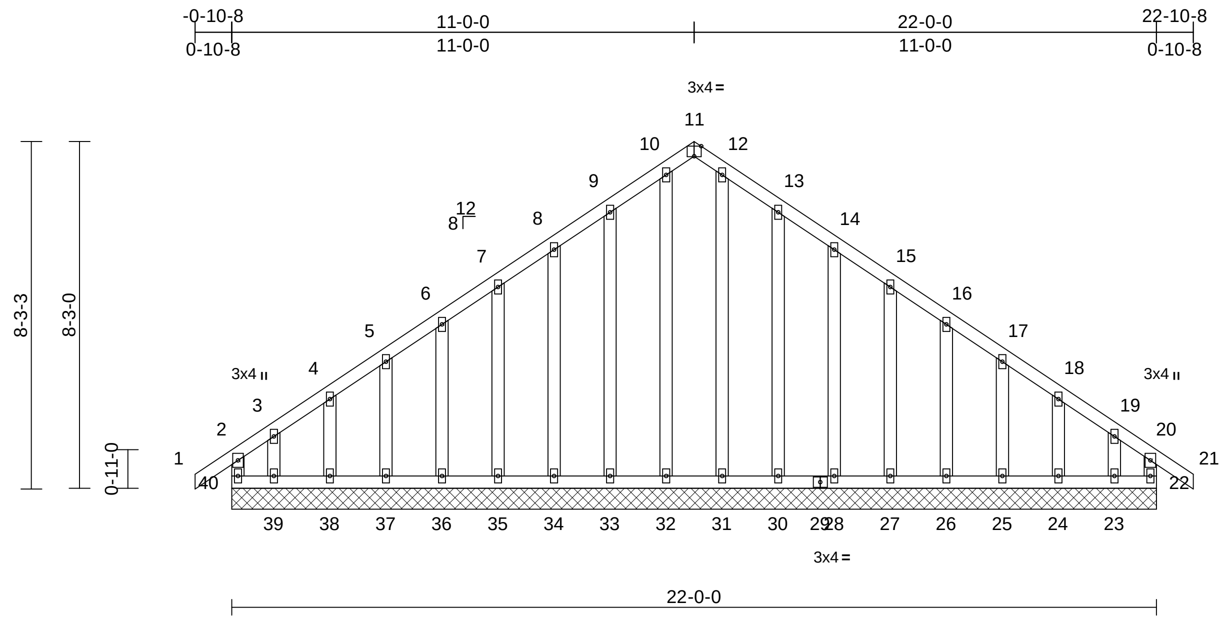

Scale = 1:54.8

Plate Offsets (X, Y): [11:0-2-0,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	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	22	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 135 lb	FT = 10%

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

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

REACTIONS (lb/size) 22=144/22-0-0, 23=56/22-0-0, 24=129/22-0-0, 25=118/22-0-0, 26=120/22-0-0, 27=120/22-0-0, 28=120/22-0-0, 30=119/22-0-0, 31=121/22-0-0, 32=121/22-0-0, 33=119/22-0-0, 34=120/22-0-0, 35=120/22-0-0, 36=120/22-0-0, 37=118/22-0-0, 38=129/22-0-0, 39=56/22-0-0, 40=144/22-0-0
Max Horiz 40=233 (LC 7)
Max Uplift 22=-86 (LC 5), 23=-155 (LC 9), 24=-32 (LC 9), 25=-50 (LC 9), 26=-46 (LC 9), 27=-46 (LC 9), 28=-47 (LC 9), 30=-67 (LC 9), 33=-65 (LC 8), 34=-47 (LC 8), 35=-46 (LC 8), 36=-46 (LC 8), 37=-51 (LC 8), 38=-30 (LC 8), 39=-176 (LC 8), 40=-145 (LC 4)
Max Grav 22=190 (LC 15), 23=148 (LC 7), 24=129 (LC 22), 25=125 (LC 16), 26=124 (LC 16), 27=125 (LC 16), 28=125 (LC 16), 30=128 (LC 16), 31=141 (LC 17), 32=152 (LC 18), 33=125 (LC 15), 34=124 (LC 15), 35=125 (LC 15), 36=124 (LC 15), 37=126 (LC 15), 38=129 (LC 21), 39=189 (LC 6), 40=237 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-40=-182/104, 1-2=0/40, 2-3=-190/167, 3-4=-130/127, 4-5=-116/113, 5-6=-104/108, 6-7=-91/122, 7-8=-79/146, 8-9=-67/172, 9-10=-56/206, 10-11=-41/152, 11-12=-37/148, 12-13=-37/188, 13-14=-30/148, 14-15=-39/123, 15-16=-48/99, 16-17=-57/74, 17-18=-70/68, 18-19=-92/81, 19-20=-155/110, 20-21=0/40, 20-22=-149/62
BOT CHORD 39-40=-103/129, 38-39=-103/129, 37-38=-103/129, 36-37=-103/129, 35-36=-103/129, 34-35=-103/129, 33-34=-103/129, 32-33=-103/129, 31-32=-103/129, 30-31=-103/129, 28-30=-103/129, 27-28=-103/129, 26-27=-103/129, 25-26=-103/129, 24-25=-103/129, 23-24=-103/129, 22-23=-103/129
WEBS 3-39=-99/115, 4-38=-100/58, 5-37=-98/63, 6-36=-98/63, 7-35=-98/62, 8-34=-98/63, 9-33=-98/81, 10-32=-125/11, 12-31=-114/0, 13-30=-101/83, 14-28=-98/64, 15-27=-98/62, 16-26=-98/63, 17-25=-97/63, 18-24=-101/59, 19-23=-84/104

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 145 lb uplift at joint 40, 86 lb uplift at joint 22, 176 lb uplift at joint 39, 30 lb uplift at joint 38, 51 lb uplift at joint 37, 46 lb uplift at joint 36, 46 lb uplift at joint 35, 47 lb uplift at joint 34, 65 lb uplift at joint 33, 67 lb uplift at joint 30, 47 lb uplift at joint 28, 46 lb uplift at joint 27, 46 lb uplift at joint 26, 50 lb uplift at joint 25, 32 lb uplift at joint 24 and 155 lb uplift at joint 23.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	C2	Common	3	1	Job Reference (optional)

I47521378

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:22 Page: 1
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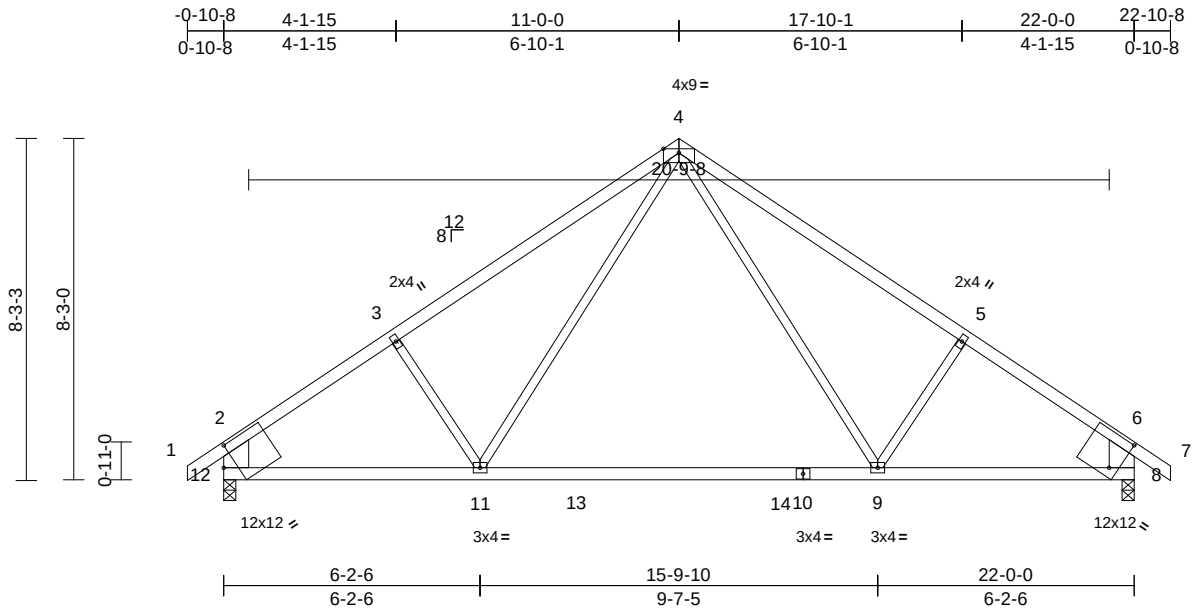

Scale = 1:55.7

Plate Offsets (X, Y): [8:0-2-7,0-9-7], [12:0-3-10,0-5-6]

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	0.85	Vert(LL)	-0.38	9-11	>678	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.63	9-11	>408	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	9-11	>999	240	Weight: 83 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 10-8:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x8 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 8=1045/0-3-8, 12=1045/0-3-8
Max Horiz 12=237 (LC 7)
Max Uplift 8=-135 (LC 9), 12=-135 (LC 8)
Max Grav 8=1139 (LC 16), 12=1139 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-1386/172, 3-4=-1270/223, 4-5=-1262/225, 5-6=-1379/174, 6-7=0/46, 2-12=-1036/151, 6-8=-1037/154
BOT CHORD 11-12=-190/1182, 9-11=-6/783, 8-9=-78/1002
WEBS 4-9=-108/548, 5-9=-228/239, 4-11=-104/561, 3-11=-235/240

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 135 lb uplift at joint 12 and 135 lb uplift at joint 8.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521379
Lot 17 OS	C3	Common	8	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:22 Page: 1
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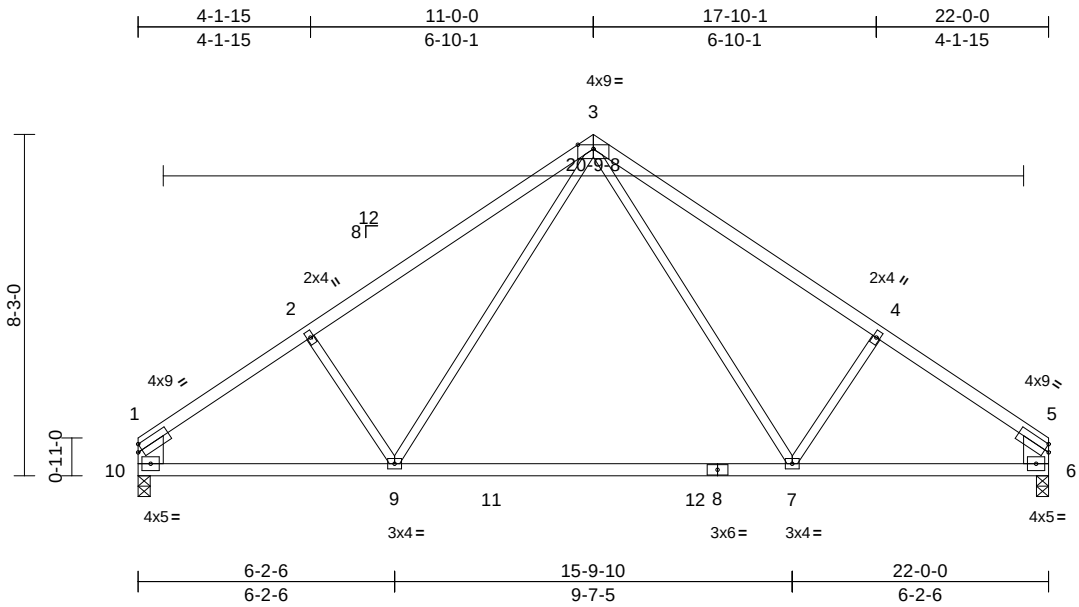

Scale = 1:55.7

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	0.69	Vert(LL)	-0.42	7-9	>610	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.70	7-9	>367	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	7-9	>999	240	Weight: 80 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF 2400F 2.0E *Except* 8-6:2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-1,6-5:2x8 SP DSS

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

REACTIONS (lb/size) 6=963/0-3-8, 10=963/0-3-8
Max Horiz 10=-217 (LC 4)
Max Uplift 6=-107 (LC 9), 10=-107 (LC 8)
Max Grav 6=1063 (LC 16), 10=1063 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1391/172, 2-3=-1276/223, 3-4=-1263/225, 4-5=-1379/174, 1-10=-935/121, 5-6=-940/125
BOT CHORD 9-10=-205/1195, 7-9=-20/774, 6-7=-107/1014
WEBS 3-7=-108/548, 4-7=-251/241, 3-9=-104/567, 2-9=-265/244

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 107 lb uplift at joint 10 and 107 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

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	D1	Common Structural Gable	1	1	Job Reference (optional) I47521380

Wheeler Lumber, Waverly, KS - 66871,

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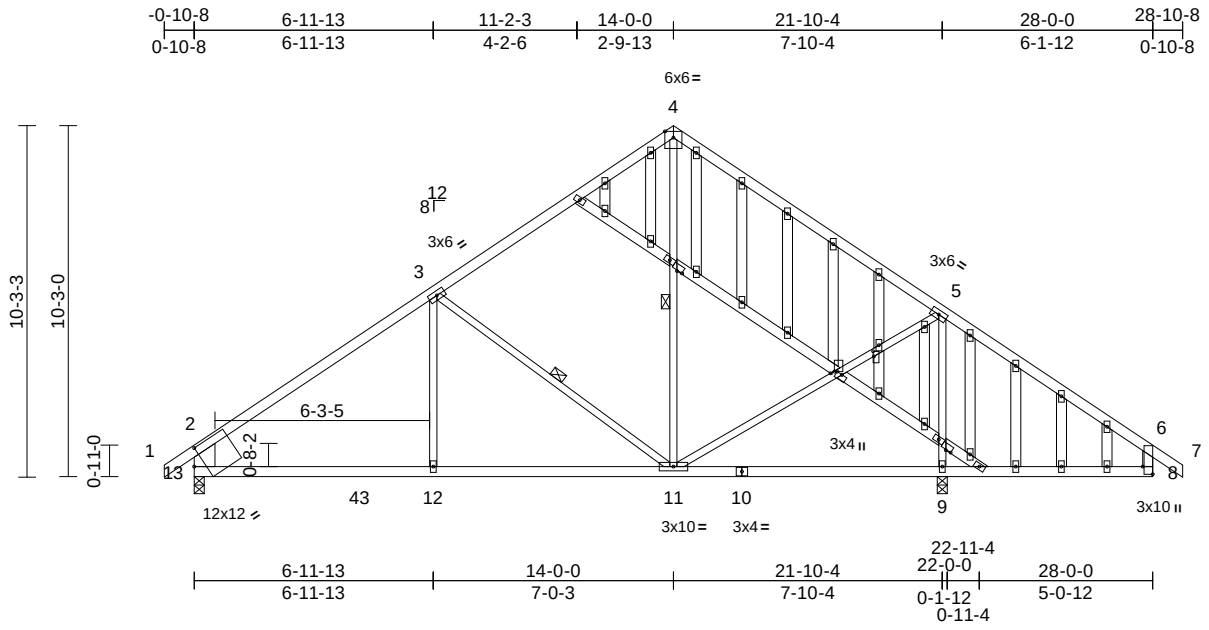

Scale = 1:67.3

Plate Offsets (X, Y): [8:Edge,0-3-8], [13:0-3-10,0-5-6], [15:0-1-13,0-0-4], [16:0-2-0,0-0-1], [16:0-0-10,0-1-6], [17:0-1-13,0-0-4], [32:0-1-12,0-0-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.11	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.20	11-12	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.02	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	11-12	>999	240	Weight: 162 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-2:2x8 SP DSS, 8-6:2x4 SPF 2400F 2.0E, 14-15,15-16,16-17,17-18:2x4 SPF No.2
OTHERS 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 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-11, 4-11

REACTIONS (lb/size) 9=1676/0-3-8, 13=958/0-3-8
Max Horiz 13=-288 (LC 6)
Max Uplift 9=-210 (LC 9), 13=-143 (LC 8)
Max Grav 9=1712 (LC 2), 13=1060 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/46, 2-3=-1169/161, 3-4=-638/168, 4-5=-685/200, 5-6=-81/549, 6-7=0/40, 2-13=-917/186, 6-8=-31/77
BOT CHORD 12-13=-167/1037, 11-12=-167/1037, 9-11=-332/128, 8-9=-332/128
WEBS 3-12=0/291, 3-11=-635/255, 4-11=-49/251, 5-9=-1485/283, 5-11=-20/911

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) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 13 and 210 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.

LOAD CASE(S) Standard

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521381
Lot 17 OS	D2	Common	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:23 Page: 1
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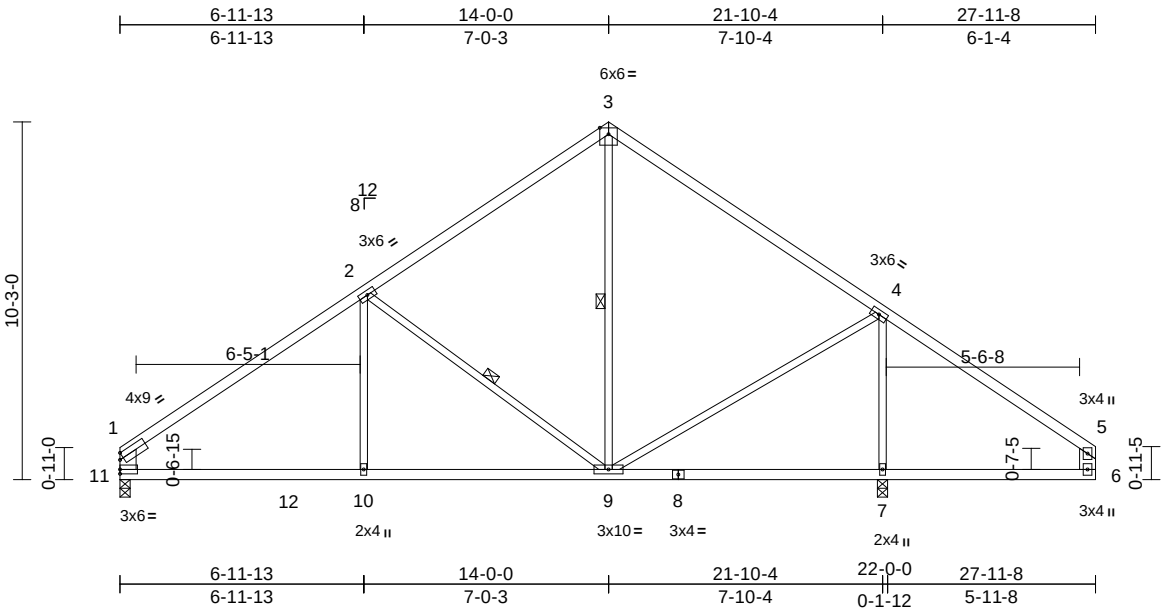

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.14	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.26	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	9-10	>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* 11-1,6-5:2x6 SP DSS

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

REACTIONS (lb/size) 7=1574/0-3-8, 11=901/0-3-8
Max Horiz 11=269 (LC 5)
Max Uplift 7=-177 (LC 9), 11=-118 (LC 8)
Max Grav 7=1626 (LC 2), 11=1003 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1199/162, 2-3=-683/180, 3-4=-718/203, 4-5=-41/412, 1-11=-842/157, 5-6=-30/71
BOT CHORD 10-11=-183/1065, 9-10=-183/1065, 7-9=-226/69, 6-7=-226/69
WEBS 2-10=0/281, 2-9=-646/256, 3-9=-52/276, 4-9=-16/856, 4-7=-1386/253

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 118 lb uplift at joint 11 and 177 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

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	D3	Common	5	1	Job Reference (optional) I47521382

Wheeler Lumber, Waverly, KS - 66871,

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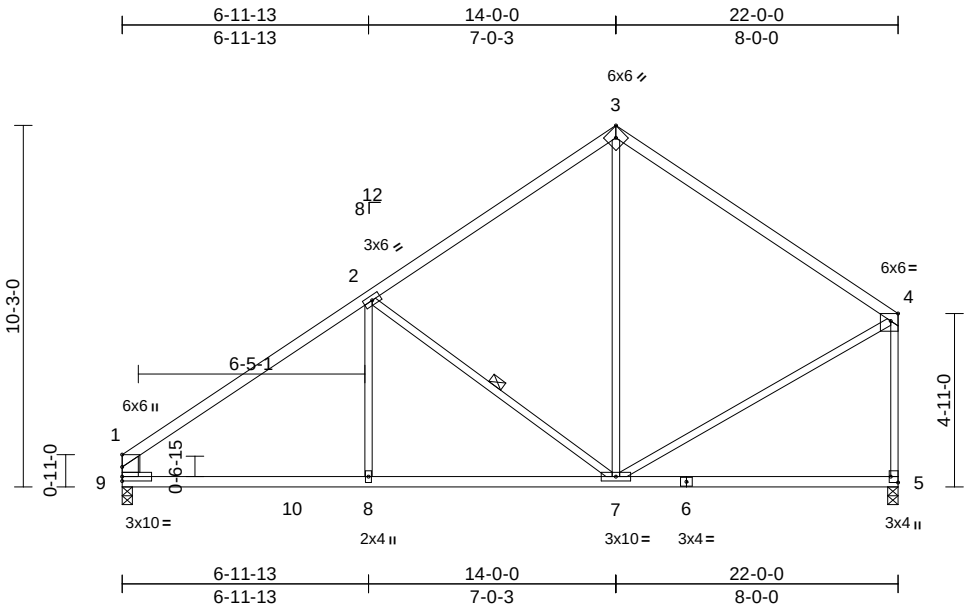

Scale = 1:65.3

Plate Offsets (X, Y): [3:0-2-15,Edge], [4:0-2-8,Edge], [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	0.87	Vert(LL)	-0.15	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.26	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.06	7-8	>999	240	Weight: 87 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 3-4:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-1:2x6 SP DSS

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-2 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-7

REACTIONS (lb/size) 5=975/0-3-8, 9=975/0-3-8
Max Horiz 9=322 (LC 7)
Max Uplift 5=-109 (LC 8), 9=-116 (LC 8)
Max Grav 5=1047 (LC 15), 9=1073 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1300/159, 2-3=-819/165, 3-4=-828/194, 1-9=-903/156, 4-5=-930/151
BOT CHORD 8-9=-193/1142, 7-8=-193/1142, 5-7=-63/45
WEBS 2-8=0/263, 2-7=-616/255, 3-7=-36/350, 4-7=-37/705

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 116 lb uplift at joint 9 and 109 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	J1	Diagonal Hip Girder	4	1	Job Reference (optional) I47521383

Wheeler Lumber, Waverly, KS - 66871,

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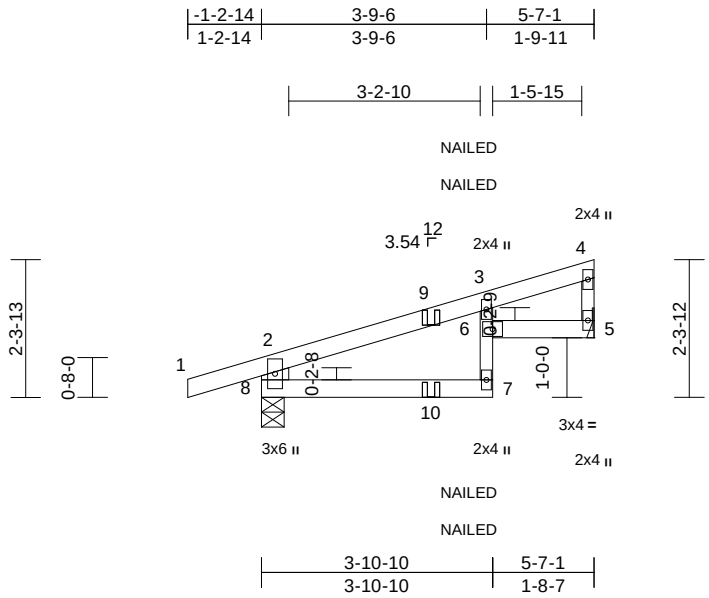

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.03	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.05	7	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	7	>999	240	Weight: 17 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-3:2x3 SPF No.2
WEBS 2x6 SPF No.2 *Except* 4-5:2x3 SPF No.2

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

REACTIONS (lb/size) 5=221/ Mechanical, 8=353/0-4-9
Max Horiz 8=77 (LC 22)
Max Uplift 5=-49 (LC 8), 8=-106 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-324/131, 1-2=0/29, 2-3=-221/28, 3-4=-80/19, 4-5=-114/33
BOT CHORD 7-8=-42/154, 6-7=0/74, 3-6=-33/51, 5-6=-17/80

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 106 lb uplift at joint 8 and 49 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) 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: 10=2 (F=1, B=1)

STATE OF MISSOURI
JUAN GARCIA
NUMBER E-2000162101
PROFESSIONAL ENGINEER

JUAN GARCIA
LICENSED
16952
KANSAS
PROFESSIONAL ENGINEER

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521384
Lot 17 OS	J2	Jack-Open	8	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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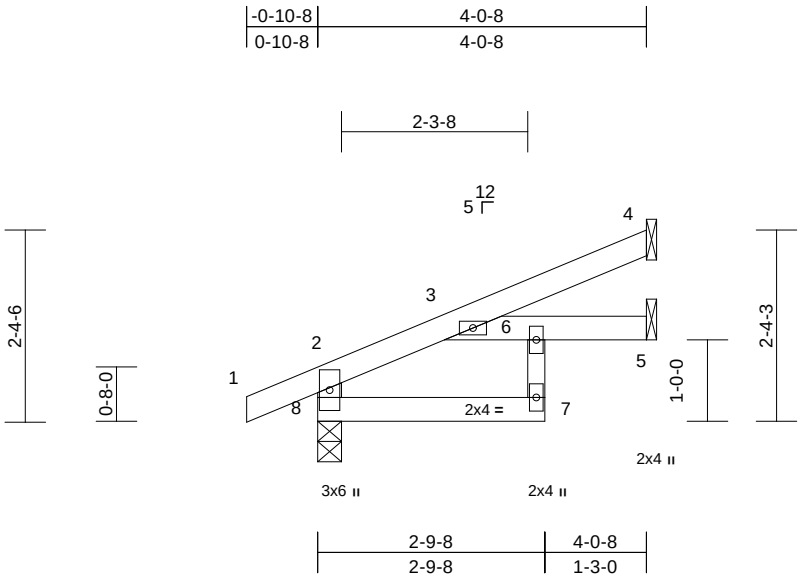

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	-0.01	3-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.02	3-6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	3-6	>999	240	Weight: 13 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 4=96/ Mechanical, 5=79/ Mechanical, 8=264/0-3-8
Max Horiz 8=74 (LC 8)
Max Uplift 4=-41 (LC 8), 5=-2 (LC 8), 8=-31 (LC 8)
Max Grav 4=96 (LC 1), 5=94 (LC 3), 8=264 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-8=-247/55, 1-2=0/27, 2-3=-131/0, 3-4=-30/31
BOT CHORD 7-8=-28/70, 6-7=0/56, 3-6=-70/28, 5-6=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 31 lb uplift at joint 8, 41 lb uplift at joint 4 and 2 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521385
Lot 17 OS	J3	Jack-Open	8	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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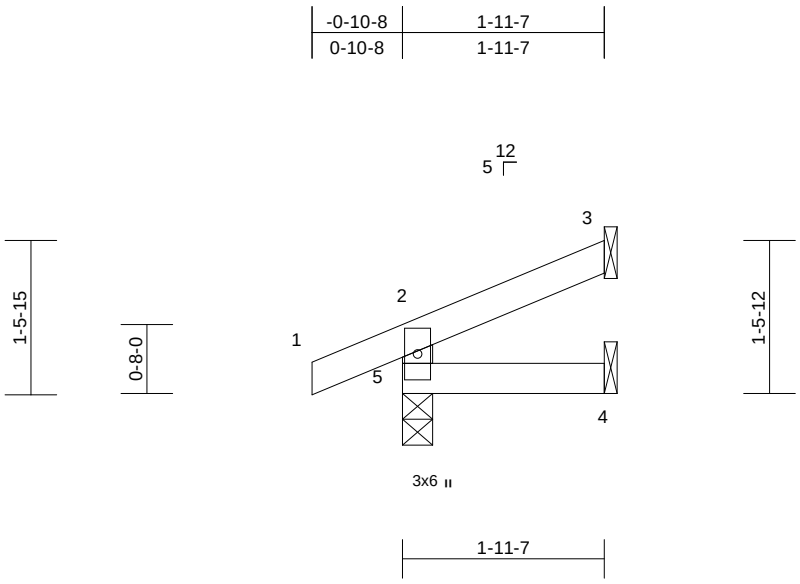

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-11-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=46/ Mechanical, 4=14/ Mechanical, 5=173/0-3-8
Max Horiz 5=39 (LC 8)
Max Uplift 3=-28 (LC 8), 5=-34 (LC 4)
Max Grav 3=46 (LC 1), 4=32 (LC 3), 5=173 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-151/48, 1-2=0/27, 2-3=-32/13
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 34 lb uplift at joint 5 and 28 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	LAY1	Lay-In Gable	2	1	Job Reference (optional) I47521386

Wheeler Lumber, Waverly, KS - 66871,

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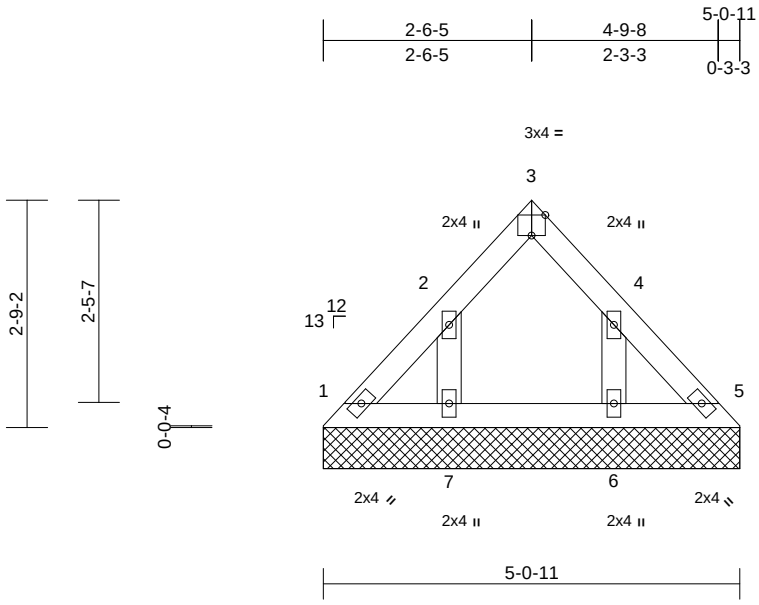

Scale = 1:28

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 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 5-1-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=65/5-0-11, 5=65/5-0-11, 6=134/5-0-11, 7=134/5-0-11
Max Horiz 1=-64 (LC 4)
Max Uplift 6=-78 (LC 9), 7=-79 (LC 8)
Max Grav 1=75 (LC 17), 5=74 (LC 18), 6=150 (LC 16), 7=151 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-85/42, 2-3=-67/19, 3-4=-67/18, 4-5=-84/40
BOT CHORD 1-7=-29/77, 6-7=-29/77, 5-6=-29/77
WEBS 2-7=-114/101, 4-6=-113/100

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 79 lb uplift at joint 7 and 78 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521387
Lot 17 OS	LAY2	Lay-In Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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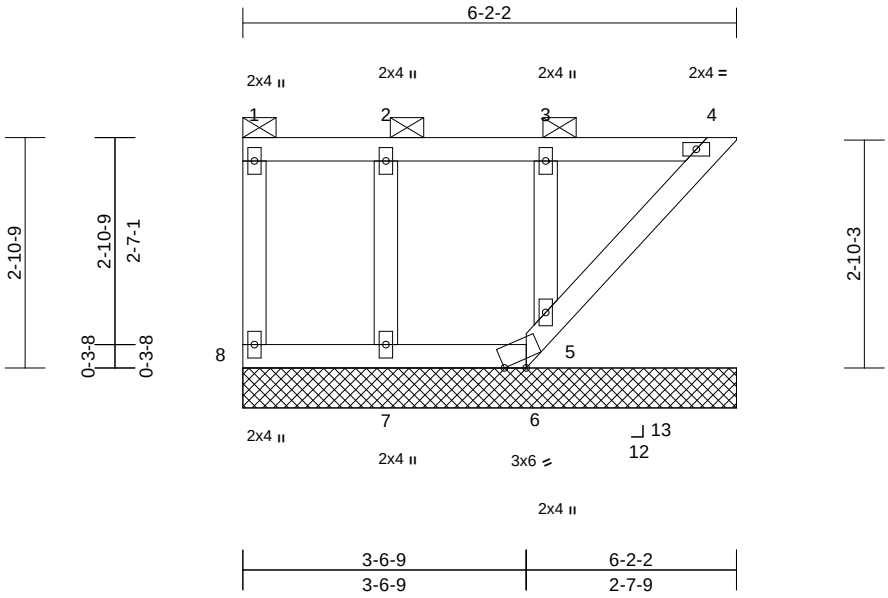

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 10%

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

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

REACTIONS (lb/size) 4=75/6-2-2, 5=228/6-2-2, 6=-22/6-2-2, 7=178/6-2-2, 8=57/6-2-2
Max Horiz 8=-74 (LC 6)
Max Uplift 4=-44 (LC 5), 5=-35 (LC 5), 6=-72 (LC 6), 7=-30 (LC 4), 8=-11 (LC 4)
Max Grav 4=76 (LC 15), 5=228 (LC 1), 6=24 (LC 5), 7=178 (LC 1), 8=57 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-45/19, 1-2=-37/28, 2-3=-37/28, 3-4=-37/28
BOT CHORD 7-8=-28/37, 6-7=-28/37, 5-6=-29/94, 4-5=-52/63
WEBS 2-7=-135/56, 3-5=-162/67

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) 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) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 8, 44 lb uplift at joint 4, 72 lb uplift at joint 6, 30 lb uplift at joint 7 and 35 lb uplift at joint 5.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 4, 5.
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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521388
Lot 17 OS	LAY3	Lay-In Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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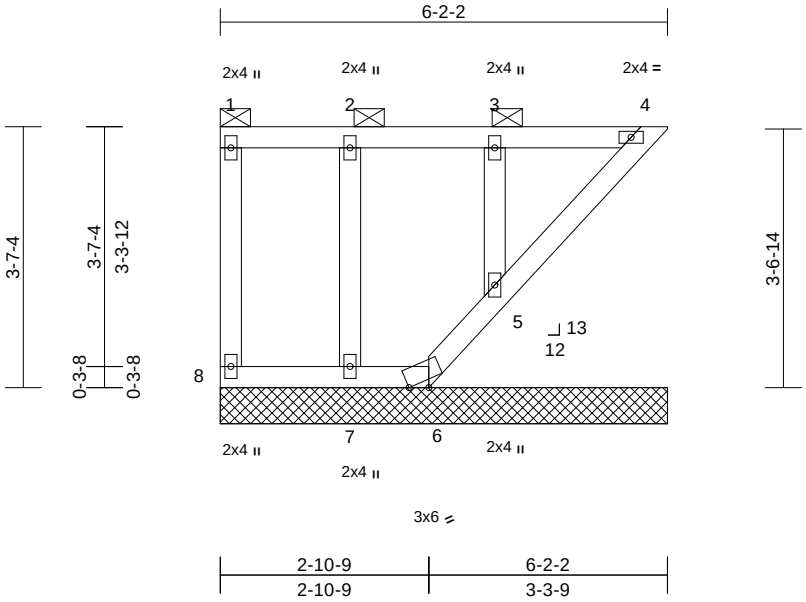


Scale = 1:31.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb	FT = 10%

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

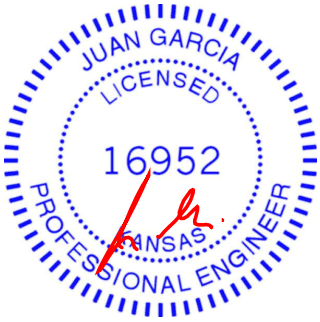
BRACING
TOP CHORD 2-0-0 oc purlins: 1-4, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 4-5.

REACTIONS (lb/size) 4=75/6-2-2, 5=206/6-2-2, 6=6/6-2-2, 7=170/6-2-2, 8=59/6-2-2
Max Horiz 8=-94 (LC 6)
Max Uplift 4=-52 (LC 5), 5=-44 (LC 5), 6=-48 (LC 6), 7=-34 (LC 4), 8=-11 (LC 4)
Max Grav 4=85 (LC 15), 5=206 (LC 1), 6=45 (LC 5), 7=170 (LC 1), 8=59 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-45/19, 1-2=-47/36, 2-3=-47/36, 3-4=-47/36
BOT CHORD 7-8=-36/47, 6-7=-36/47, 5-6=-54/86, 4-5=-64/79
WEBS 2-7=-135/55, 3-5=-163/67

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) 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) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 8, 52 lb uplift at joint 4, 48 lb uplift at joint 6, 34 lb uplift at joint 7 and 44 lb uplift at joint 5.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 4, 5.
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



August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521389
Lot 17 OS	V1	Valley	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:25 Page: 1
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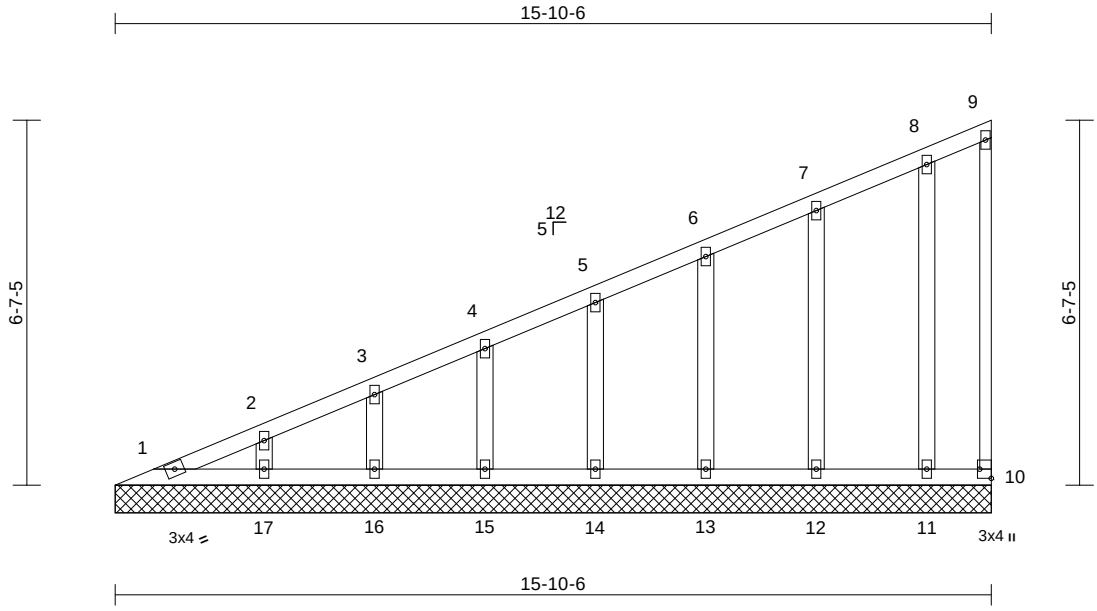

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Plate Offsets (X, Y): [10:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 66 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=70/15-10-6, 10=29/15-10-6, 11=151/15-10-6, 12=187/15-10-6, 13=179/15-10-6, 14=180/15-10-6, 15=181/15-10-6, 16=174/15-10-6, 17=202/15-10-6
Max Horiz 1=274 (LC 5)
Max Uplift 10=-37 (LC 7), 11=-45 (LC 8), 12=-46 (LC 8), 13=-49 (LC 8), 14=-47 (LC 8), 15=-48 (LC 8), 16=-46 (LC 8), 17=-54 (LC 8)
Max Grav 1=107 (LC 16), 10=31 (LC 15), 11=151 (LC 1), 12=187 (LC 1), 13=179 (LC 1), 14=180 (LC 1), 15=181 (LC 1), 16=174 (LC 1), 17=202 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-233/31, 2-3=-208/26, 3-4=-184/27, 4-5=-159/27, 5-6=-146/27, 6-7=-132/27, 7-8=-119/51, 8-9=-81/53, 9-10=-32/28
BOT CHORD 1-17=-89/67, 16-17=-89/67, 15-16=-89/67, 14-15=-89/67, 13-14=-89/67, 12-13=-89/67, 11-12=-89/67, 10-11=-89/67
WEBS 2-17=-153/77, 3-16=-137/71, 4-15=-141/72, 5-14=-140/72, 6-13=-139/71, 7-12=-146/77, 8-11=-117/70

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) 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 37 lb uplift at joint 10, 54 lb uplift at joint 17, 46 lb uplift at joint 16, 48 lb uplift at joint 15, 47 lb uplift at joint 14, 49 lb uplift at joint 13, 46 lb uplift at joint 12 and 45 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.

LOAD CASE(S) Standard

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	V2	Valley	3	1	Job Reference (optional) I47521390

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 16:57:26 Page: 1
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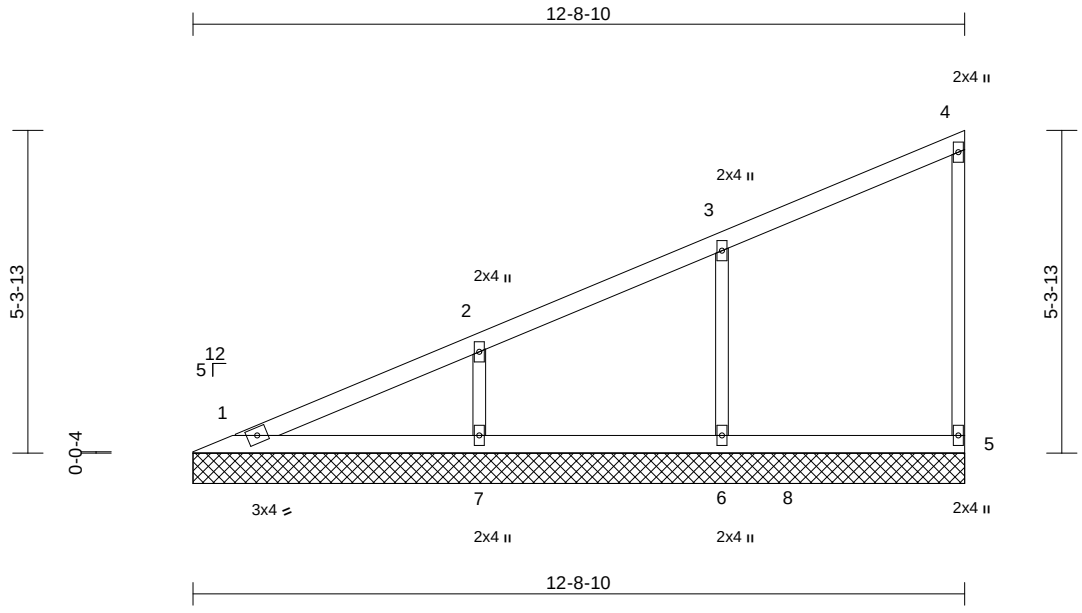

Scale = 1:38

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	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 37 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
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=145/12-8-10, 5=144/12-8-10, 6=381/12-8-10, 7=401/12-8-10
Max Horiz 1=217 (LC 7)
Max Uplift 5=-30 (LC 5), 6=-101 (LC 8), 7=-107 (LC 8)
Max Grav 1=175 (LC 16), 5=173 (LC 2), 6=412 (LC 2), 7=408 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-176/59, 2-3=-137/50, 3-4=-117/42, 4-5=-111/44
BOT CHORD 1-7=-70/53, 6-7=-70/53, 5-6=-70/53
WEBS 3-6=-299/145, 2-7=-304/155

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, with BCDL = 10.0psf.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 5, 101 lb uplift at joint 6 and 107 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	V3	Valley	3	1	I47521391 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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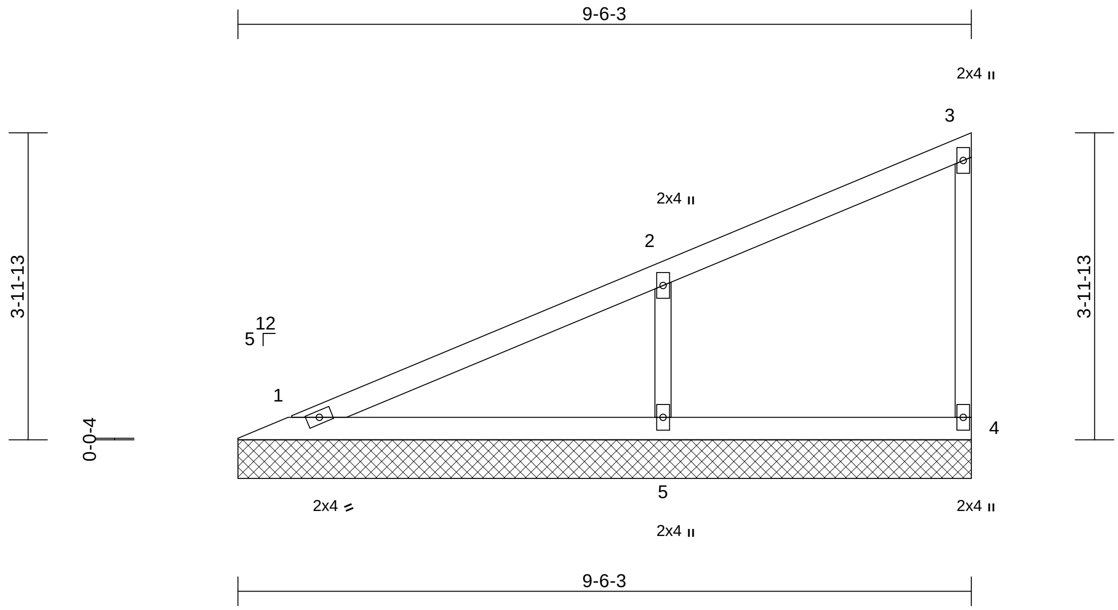

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	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

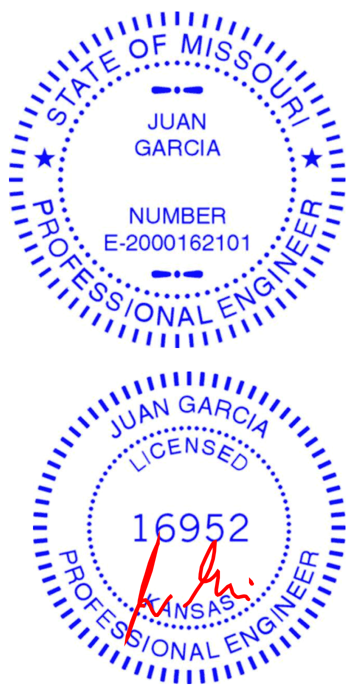
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=173/9-6-3, 4=122/9-6-3, 5=489/9-6-3
Max Horiz 1=159 (LC 5)
Max Uplift 4=-23 (LC 5), 5=-130 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-123/72, 2-3=-106/29, 3-4=-96/39
BOT CHORD 1-5=-51/39, 4-5=-51/39
WEBS 2-5=-371/182

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 4 and 130 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



August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521392
Lot 17 OS	V4	Valley	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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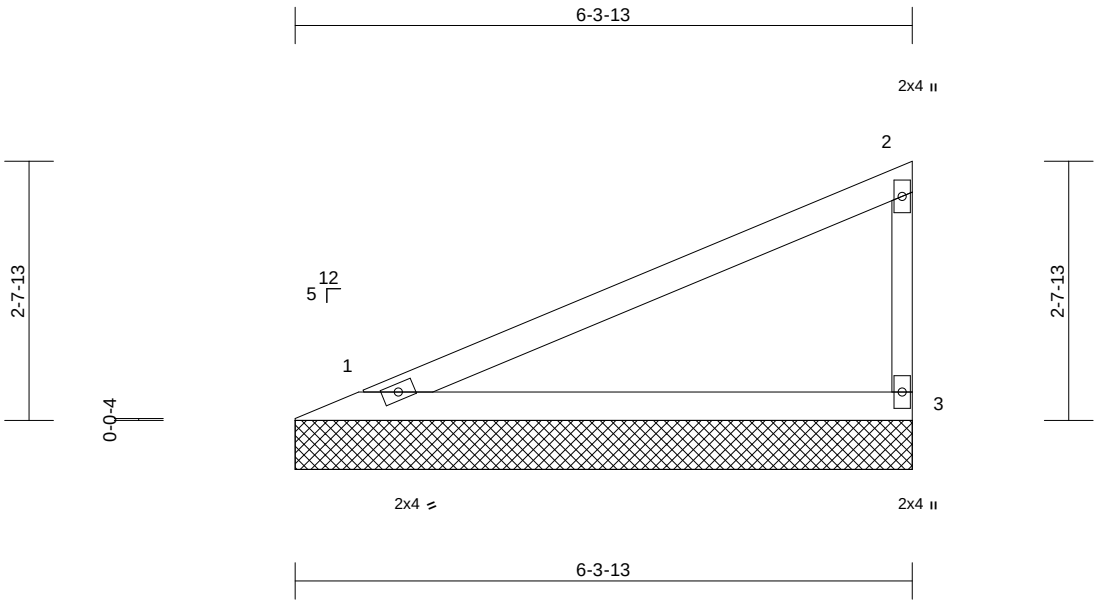

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 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 6-4-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=248/6-3-13, 3=248/6-3-13
Max Horiz 1=101 (LC 7)
Max Uplift 1=-36 (LC 8), 3=-56 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-90/60, 2-3=-193/89
BOT CHORD 1-3=-33/25

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 36 lb uplift at joint 1 and 56 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521393
Lot 17 OS	V5	Valley	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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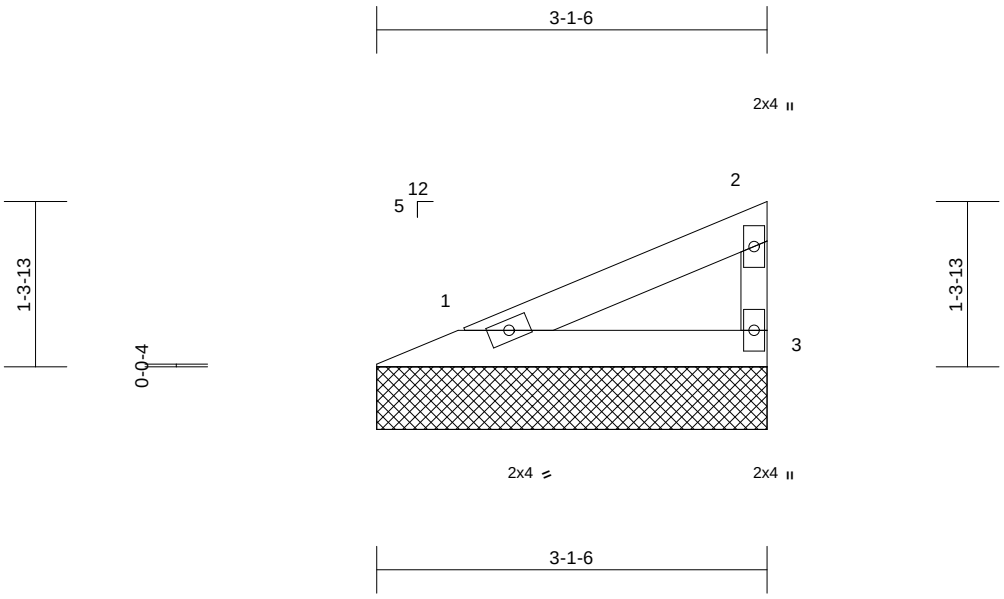

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 7 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 3-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=104/3-1-6, 3=104/3-1-6
Max Horiz 1=42 (LC 5)
Max Uplift 1=-15 (LC 8), 3=-24 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-38/25, 2-3=-81/38
BOT CHORD 1-3=-14/10

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 and 24 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521394
Lot 17 OS	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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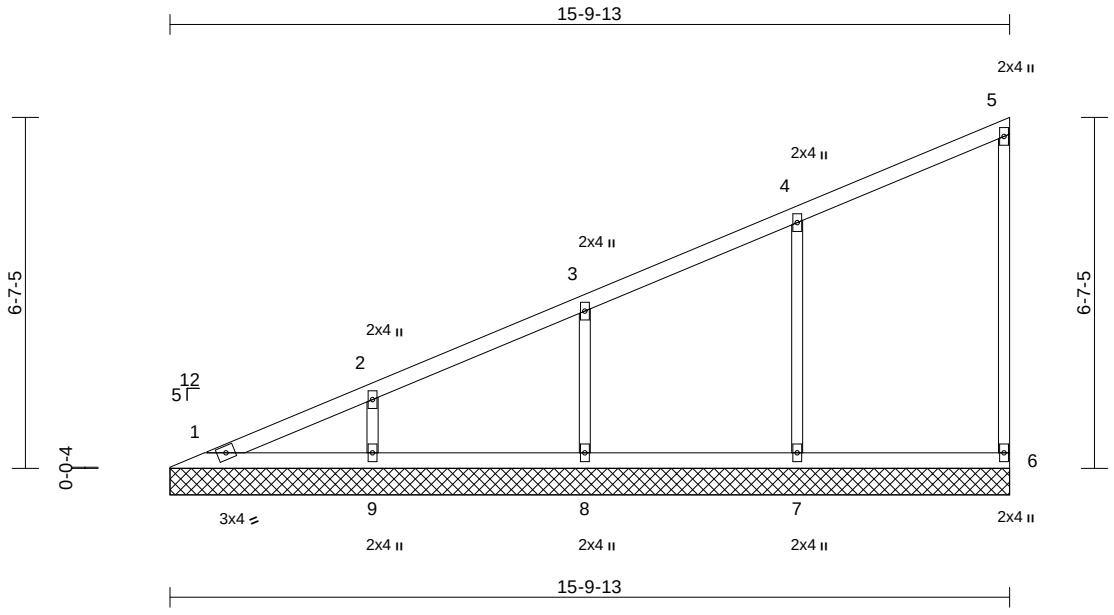

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 48 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

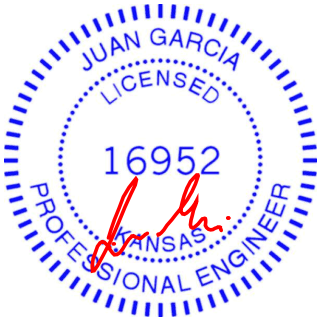
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=104/15-9-13, 6=142/15-9-13, 7=394/15-9-13, 8=353/15-9-13, 9=358/15-9-13
Max Horiz 1=274 (LC 5)
Max Uplift 6=-34 (LC 5), 7=-104 (LC 8), 8=-94 (LC 8), 9=-96 (LC 8)
Max Grav 1=149 (LC 16), 6=172 (LC 2), 7=442 (LC 2), 8=357 (LC 2), 9=369 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-230/49, 2-3=-186/52, 3-4=-154/53, 4-5=-129/55, 5-6=-110/43
BOT CHORD 1-9=-89/67, 8-9=-89/67, 7-8=-89/67, 6-7=-89/67
WEBS 4-7=-307/142, 3-8=-276/146, 2-9=-274/138

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) 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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 6, 104 lb uplift at joint 7, 94 lb uplift at joint 8 and 96 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.

LOAD CASE(S) Standard



August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	V7	Valley	1	1	Job Reference (optional) I47521395

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:22 Page: 1
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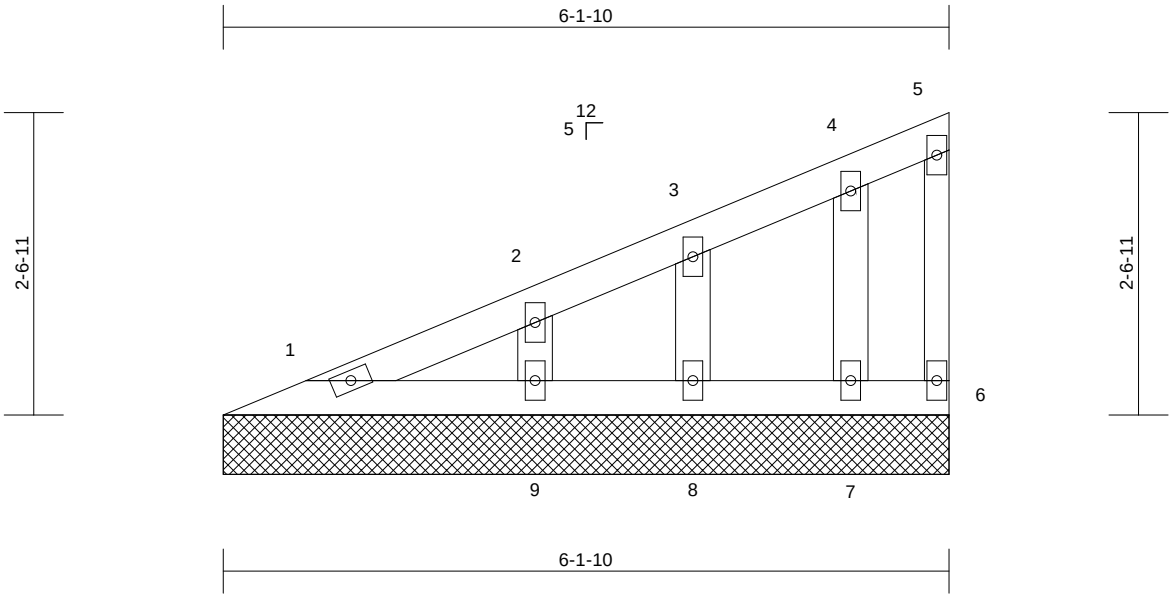

Scale = 1:19.5

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	0.05	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	0.02	Horiz(TL)	0.00	6	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
WEBS 2x3 SPF No.2
OTHERS 2x4 SPF No.2

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

REACTIONS (lb/size) 1=70/6-1-10, 6=19/6-1-10, 7=106/6-1-10, 8=106/6-1-10, 9=176/6-1-10
Max Horiz 1=96 (LC 5)
Max Uplift 6=-9 (LC 5), 7=-26 (LC 8), 8=-29 (LC 8), 9=-46 (LC 8)
Max Grav 1=70 (LC 16), 6=19 (LC 1), 7=106 (LC 1), 8=106 (LC 1), 9=176 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-78/30, 2-3=-58/14, 3-4=-49/18, 4-5=-39/23, 5-6=-15/12
BOT CHORD 1-9=-31/24, 8-9=-31/24, 7-8=-31/24, 6-7=-31/24
WEBS 2-9=-137/70, 3-8=-83/43, 4-7=-82/41

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * 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 9 lb uplift at joint 6, 46 lb uplift at joint 9, 29 lb uplift at joint 8 and 26 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

August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521396
Lot 17 OS	V8	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 16:57:27 Page: 1
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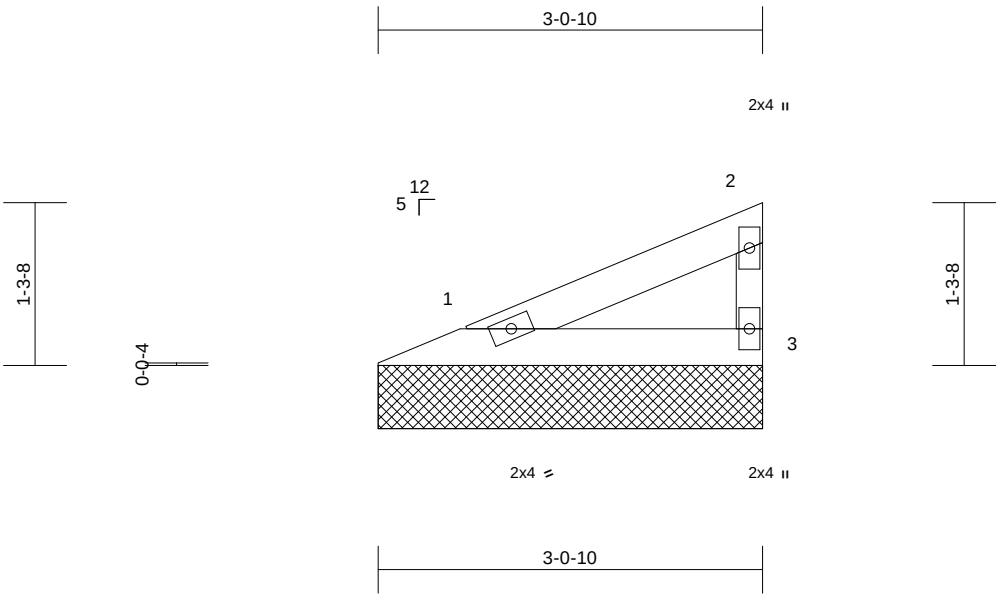

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 7 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 3-1-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=101/3-0-10, 3=101/3-0-10
Max Horiz 1=41 (LC 7)
Max Uplift 1=-15 (LC 8), 3=-23 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-37/24, 2-3=-78/36
BOT CHORD 1-3=-13/10

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 and 23 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521397
Lot 17 OS	V9	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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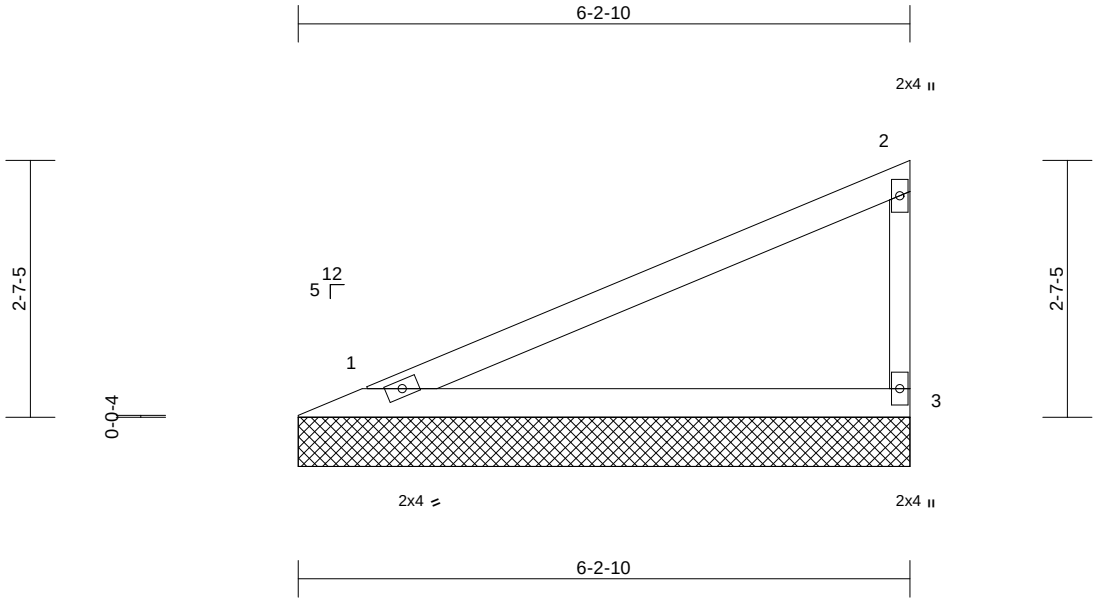

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 16 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 6-3-3 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=243/6-2-10, 3=243/6-2-10
Max Horiz 1=99 (LC 5)
Max Uplift 1=-36 (LC 8), 3=-55 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/58, 2-3=-189/88
BOT CHORD 1-3=-32/24

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 36 lb uplift at joint 1 and 55 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

August 19,2021

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS
Lot 17 OS	V10	Valley	1	1	I47521398 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/31/2021

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Jul 29 2021 Print: 8.430 S Jul 29 2021 MiTek Industries, Inc. Wed Aug 18 15:57:27 Page: 1
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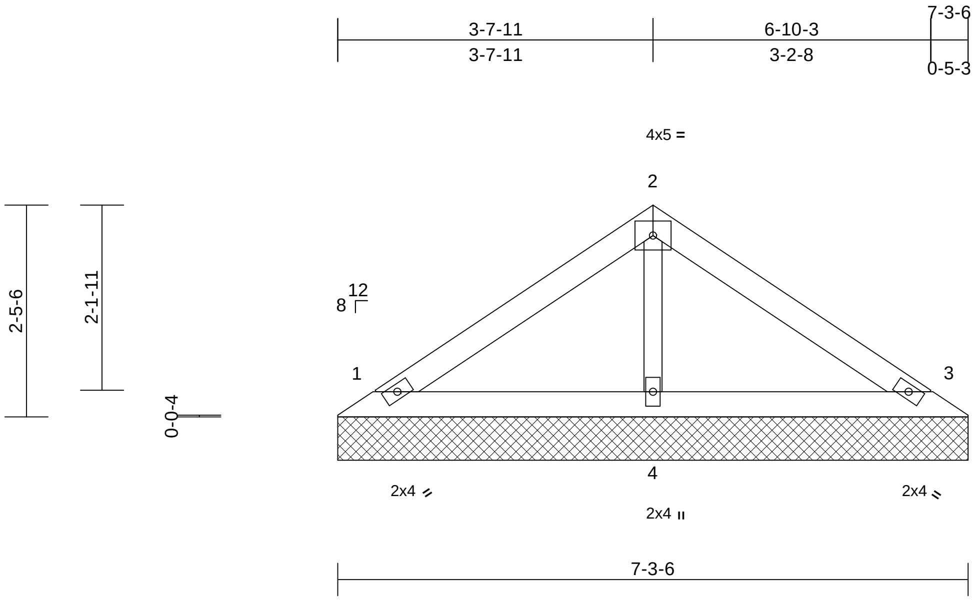

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	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

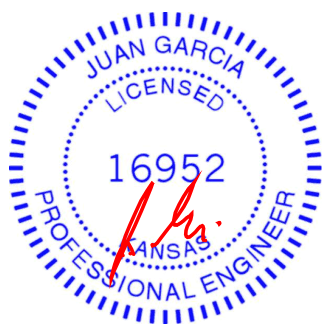
BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=162/7-3-6, 3=162/7-3-6, 4=251/7-3-6
Max Horiz 1=56 (LC 5)
Max Uplift 1=-36 (LC 8), 3=-43 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-100/51, 2-3=-96/38
BOT CHORD 1-4=-11/47, 3-4=-11/47
WEBS 2-4=-171/43

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 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



August 19,2021

Job	Truss	Truss Type	Qty	Ply	Lot 17 OS	I47521399
Lot 17 OS	V111	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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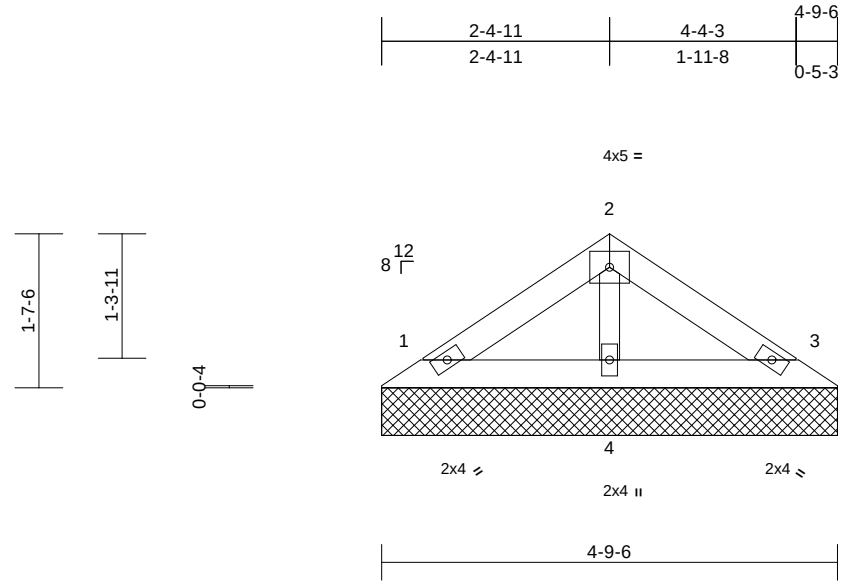


Scale = 1:24.2

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)	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	0.02	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 4-10-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=98/4-9-6, 3=98/4-9-6, 4=153/4-9-6
Max Horiz 1=-34 (LC 4)
Max Uplift 1=-22 (LC 8), 3=-26 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-61/31, 2-3=-59/23
BOT CHORD 1-4=-7/28, 3-4=-7/28
WEBS 2-4=-104/26

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 22 lb uplift at joint 1 and 26 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.

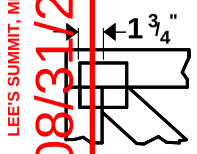
LOAD CASE(S) Standard

August 19,2021

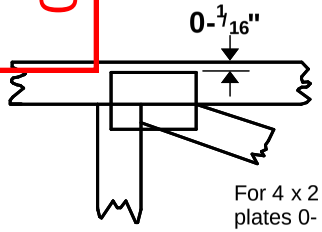
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

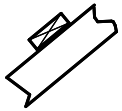
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

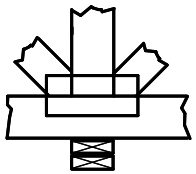
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

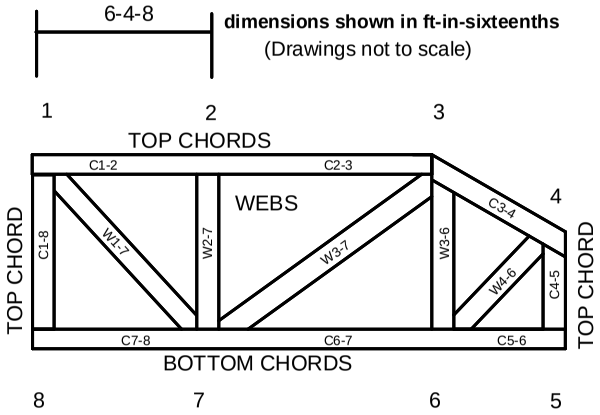


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

21.The design does not take into account any dynamic or other loads other than those expressly stated.