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

Re: B220013
Lot 141 CB

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

Pages or sheets covered by this seal: I50049365 thru I50049393

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

Missouri COA: Engineering 001193

February 4,2022

Sevier, Scott ,Engineer

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

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A1	Common Supported Gable	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I50049365
02/10/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:08 Page: 1
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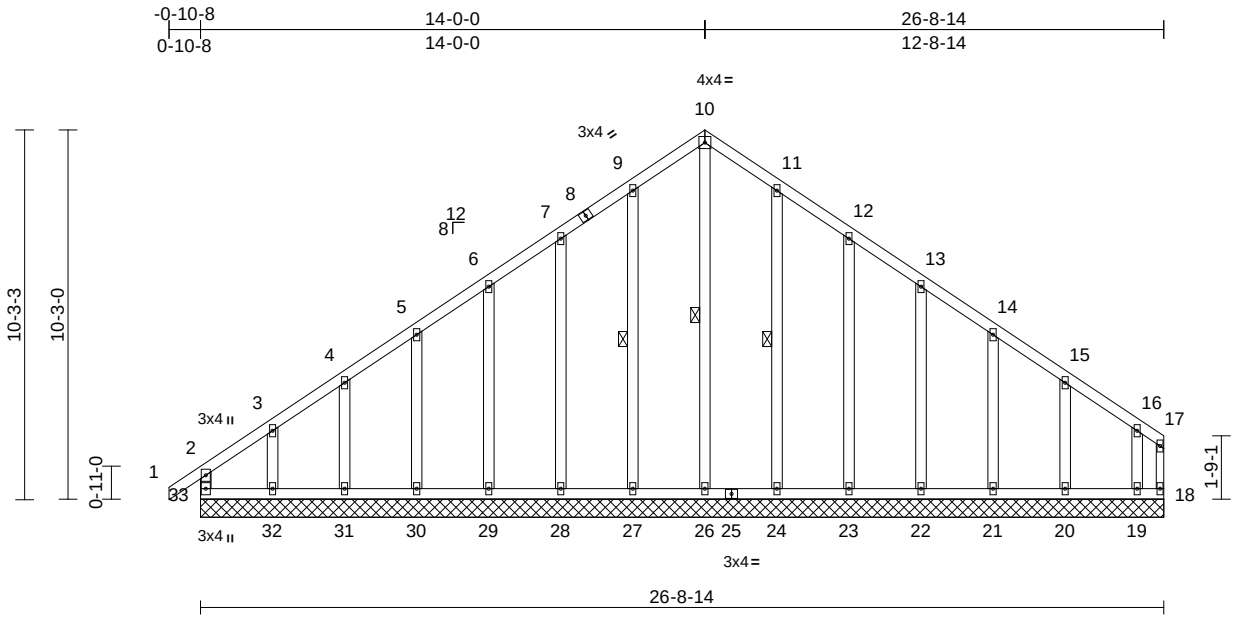

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	18	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-R							Weight: 150 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 17-18:2x3 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.
WEBS 1 Row at midpt 10-26, 9-27, 11-24

REACTIONS (lb/size) 18=3/26-8-14, 19=140/26-8-14, 20=187/26-8-14, 21=178/26-8-14, 22=181/26-8-14, 23=179/26-8-14, 24=187/26-8-14, 26=164/26-8-14, 27=187/26-8-14, 28=179/26-8-14, 29=180/26-8-14, 30=179/26-8-14, 31=184/26-8-14, 32=163/26-8-14, 33=164/26-8-14
Max Horiz 33=291 (LC 5)
Max Uplift 18=-111 (LC 7), 19=-153 (LC 9), 20=-70 (LC 9), 21=-70 (LC 9), 22=-68 (LC 9), 23=-77 (LC 9), 24=-57 (LC 9), 26=-54 (LC 7), 27=-62 (LC 8), 28=-75 (LC 8), 29=-68 (LC 8), 30=-75 (LC 8), 31=-48 (LC 8), 32=-164 (LC 8), 33=-201 (LC 4)
Max Grav 18=127 (LC 9), 19=223 (LC 16), 20=191 (LC 16), 21=186 (LC 16), 22=187 (LC 16), 23=188 (LC 16), 24=191 (LC 16), 26=332 (LC 9), 27=199 (LC 15), 28=184 (LC 15), 29=186 (LC 15), 30=191 (LC 15), 31=184 (LC 1), 32=267 (LC 15), 33=294 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-33=-242/168, 1-2=0/40, 2-3=-289/275, 3-4=-234/229, 4-5=-224/232, 5-6=-202/232, 6-7=-186/269, 7-9=-169/309, 9-10=-146/338, 10-11=-129/326, 11-12=-106/268, 12-13=-87/198, 13-14=-69/134, 14-15=-52/96, 15-16=-49/58, 16-17=-84/50, 17-18=-79/52
BOT CHORD 32-33=-59/59, 31-32=-59/59, 30-31=-59/59, 29-30=-59/59, 28-29=-59/59, 27-28=-59/59, 26-27=-59/59, 24-26=-59/59, 23-24=-59/59, 22-23=-59/59, 21-22=-59/59, 20-21=-59/59, 19-20=-59/59, 18-19=-59/59
WEBS 10-26=-308/94, 9-27=-159/86, 7-28=-144/99, 6-29=-147/92, 5-30=-149/97, 4-31=-144/83, 3-32=-185/144, 11-24=-151/81, 12-23=-147/101, 13-22=-147/93, 14-21=-146/93, 15-20=-152/97, 16-19=-147/122

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 33, 111 lb uplift at joint 18, 54 lb uplift at joint 26, 62 lb uplift at joint 27, 75 lb uplift at joint 28, 68 lb uplift at joint 29, 75 lb uplift at joint 30, 48 lb uplift at joint 31, 164 lb uplift at joint 32, 57 lb uplift at joint 24, 77 lb uplift at joint 23, 68 lb uplift at joint 22, 70 lb uplift at joint 21, 70 lb uplift at joint 20 and 153 lb uplift at joint 19.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A2	Common	2	1	Job Reference (optional) I50049366

Wheeler Lumber, Waverly, KS - 66871,

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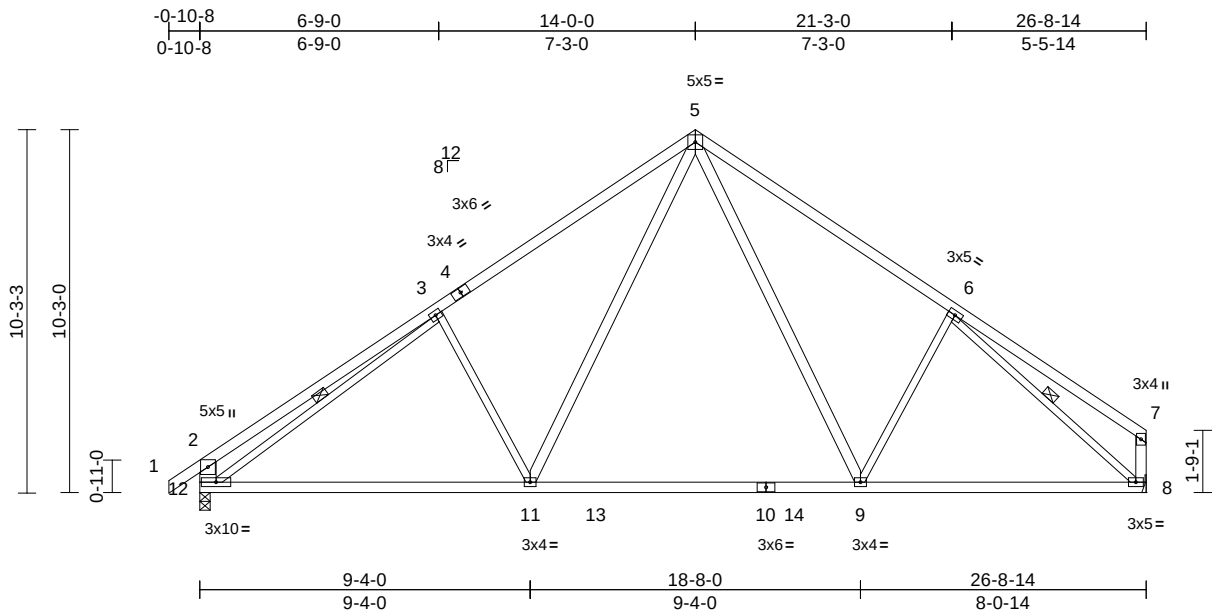

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.30	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(TL)	-0.47	9-11	>676	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.66	Horiz(TL)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.04	9-11	>999	240	Weight: 117 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-5,9-5,8-7:2x4 SPF No.2, 12-2:2x6 SPF No.2

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

REACTIONS (lb/size) 8=1185/ Mechanical, 12=1265/0-3-8
Max Horiz 12=292 (LC 5)
Max Uplift 8=-128 (LC 9), 12=-161 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-593/218, 3-5=-1394/291, 5-6=-1306/272, 6-7=-178/73, 2-12=-556/215, 7-8=-198/81
BOT CHORD 11-12=-227/1338, 9-11=-17/868, 8-9=-103/1041
WEBS 3-11=-378/302, 5-11=-165/691, 5-9=-143/526, 6-9=-242/271, 3-12=-1085/52, 6-8=-1329/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 161 lb uplift at joint 12 and 128 lb uplift at joint 8.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049367
B220013	A3	Roof Special	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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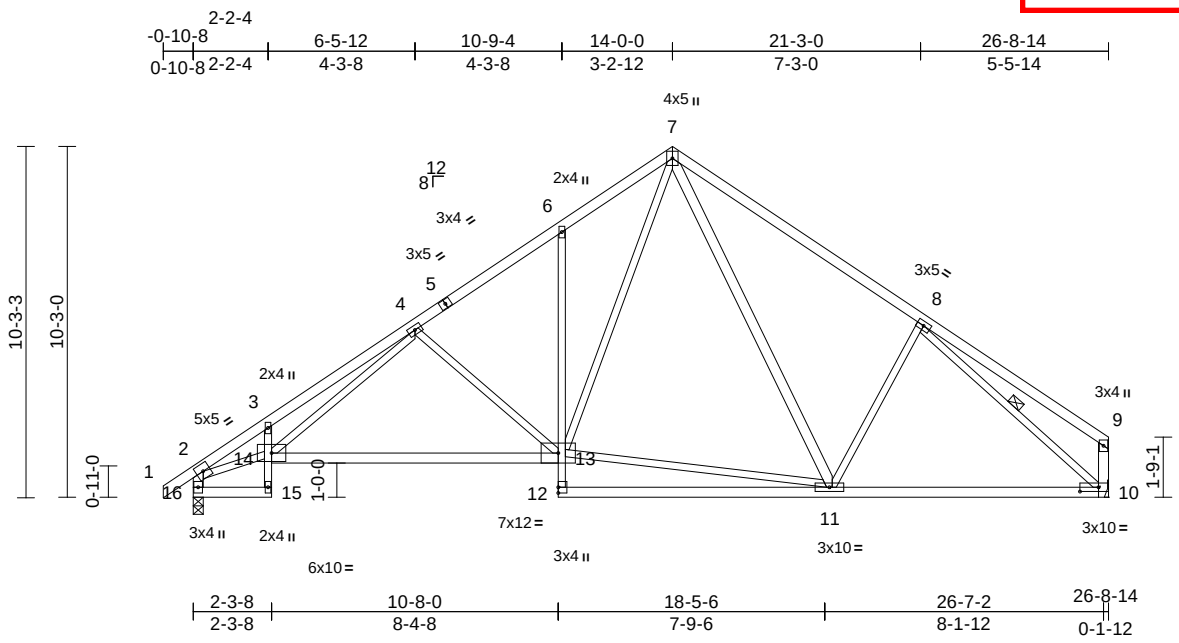

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Plate Offsets (X, Y): [10:0-6-8,0-1-8]

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	0.73	Vert(LL)	-0.18	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(TL)	-0.51	13-14	>619	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horiz(TL)	0.15	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.09	13-14	>999	240	Weight: 125 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 15-3,6-12:2x3 SPF No.2, 14-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-7,16-2,10-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 11-12.
WEBS 1 Row at midpt 8-10

REACTIONS (lb/size) 10=1189/ Mechanical, 16=1263/0-3-8
Max Horiz 16=291 (LC 5)
Max Uplift 10=-128 (LC 9), 16=-160 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2454/393, 3-4=-2554/512, 4-6=-1454/233, 6-7=-1392/347, 7-8=-1303/270, 8-9=-193/71, 2-16=-1242/197, 9-10=-206/80
BOT CHORD 15-16=-97/130, 14-15=-33/68, 3-14=-242/158, 13-14=-269/1493, 12-13=0/132, 6-13=-240/167, 11-12=-20/18, 10-11=-103/1047
WEBS 4-13=-483/232, 4-14=-255/998, 11-13=0/834, 7-13=-251/873, 7-11=-154/353, 8-11=-251/270, 2-14=-377/1990, 8-10=-1336/128

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 160 lb uplift at joint 16 and 128 lb uplift at joint 10.

LOAD CASE(S) Standard

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049368
B220013	A4	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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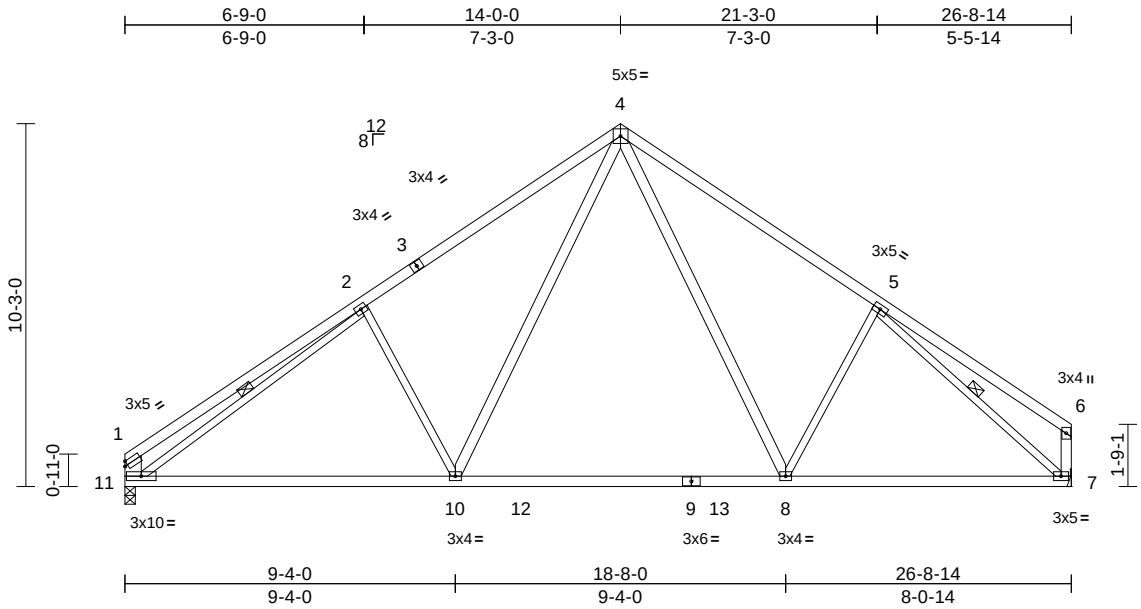

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.30	8-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(TL)	-0.47	8-10	>674	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.70	Horiz(TL)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.04	8-10	>999	240	Weight: 115 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 10-4,8-4,7-6:2x4 SPF No.2, 11-1:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-11, 5-7

REACTIONS (lb/size) 7=1186/ Mechanical, 11=1186/0-3-8
Max Horiz 11=279 (LC 5)
Max Uplift 7=-128 (LC 9), 11=-136 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-493/147, 2-4=-1402/293, 4-5=-1308/272, 5-6=-178/73, 1-11=-409/144, 6-7=-197/81
BOT CHORD 10-11=-230/1348, 8-10=-17/869, 7-8=-103/1043
WEBS 2-10=-389/306, 4-10=-168/701, 4-8=-144/526, 5-8=-243/271, 2-11=-1171/96, 5-7=-1332/125

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 136 lb uplift at joint 11 and 128 lb uplift at joint 7.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049369
B220013	A5	Roof Special Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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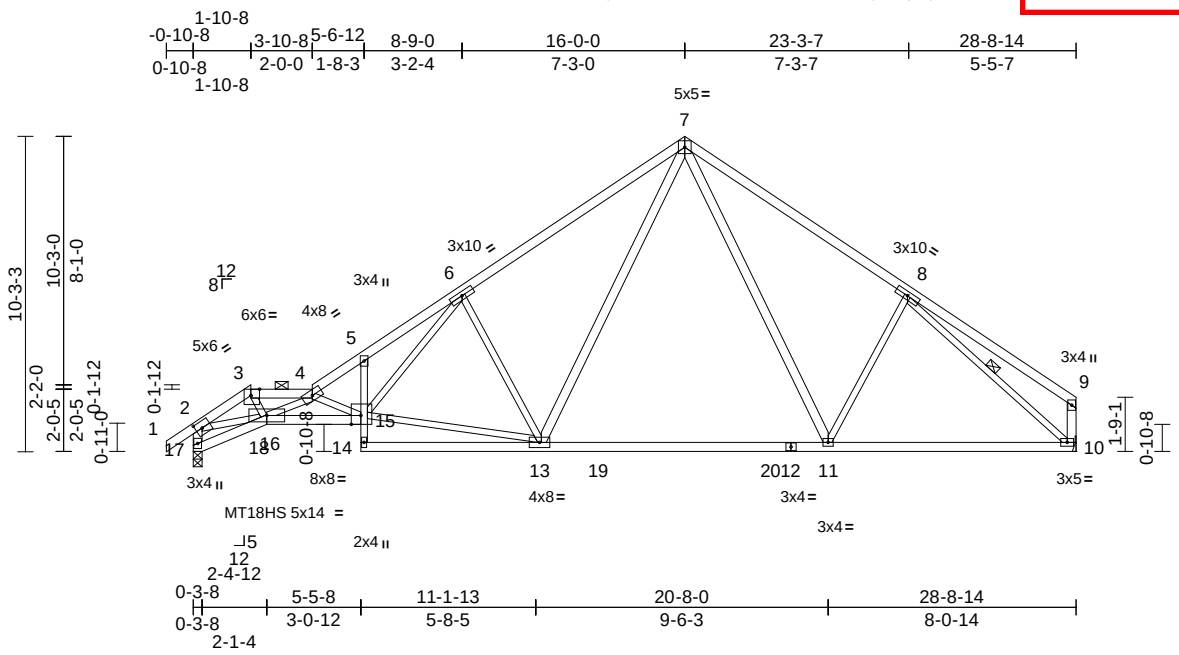

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Plate Offsets (X, Y): [2:0-2-9,0-2-8], [3:0-3-6,Edge], [15:0-3-12,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.32	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(TL)	-0.63	11-13	>546	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.73	Horiz(TL)	0.17	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.14	14	>999	240	Weight: 131 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E *Except* 17-16:2x4 SPF No.2, 5-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-7,11-7,17-2,10-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-4-2 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-8-14 oc bracing: 15-16.
WEBS 1 Row at midpt 8-10

REACTIONS (lb/size) 10=1279/ Mechanical, 17=1353/0-3-8
Max Horiz 17=292 (LC 5)
Max Uplift 10=-135 (LC 9), 17=-200 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2513/461, 3-4=-2761/514, 4-5=-3197/461, 5-6=-3056/479, 6-7=-1671/333, 7-8=-1432/280, 8-9=-180/75, 2-17=-1346/275, 9-10=-199/82
BOT CHORD 16-17=-294/355, 15-16=-820/4415, 14-15=0/81, 5-15=0/68, 13-14=-41/242, 11-13=-34/975, 10-11=-109/1141
WEBS 3-16=-228/1424, 4-16=-1864/239, 4-15=-1989/419, 13-15=-248/1592, 6-15=-254/1455, 6-13=-921/366, 7-13=-208/945, 7-11=-137/508, 2-16=-329/1937, 8-10=-1463/131, 8-11=-228/270

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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) Bearing at joint(s) 17 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 200 lb uplift at joint 17 and 135 lb uplift at joint 10.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 41 lb down and 18 lb up at 1-10-8 on top chord, and 8 lb down and 17 lb up at 1-10-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-7=-70, 7-9=-70, 16-17=-20, 15-16=-20, 10-14=-20

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

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A6	Roof Special	1	1	I50049370 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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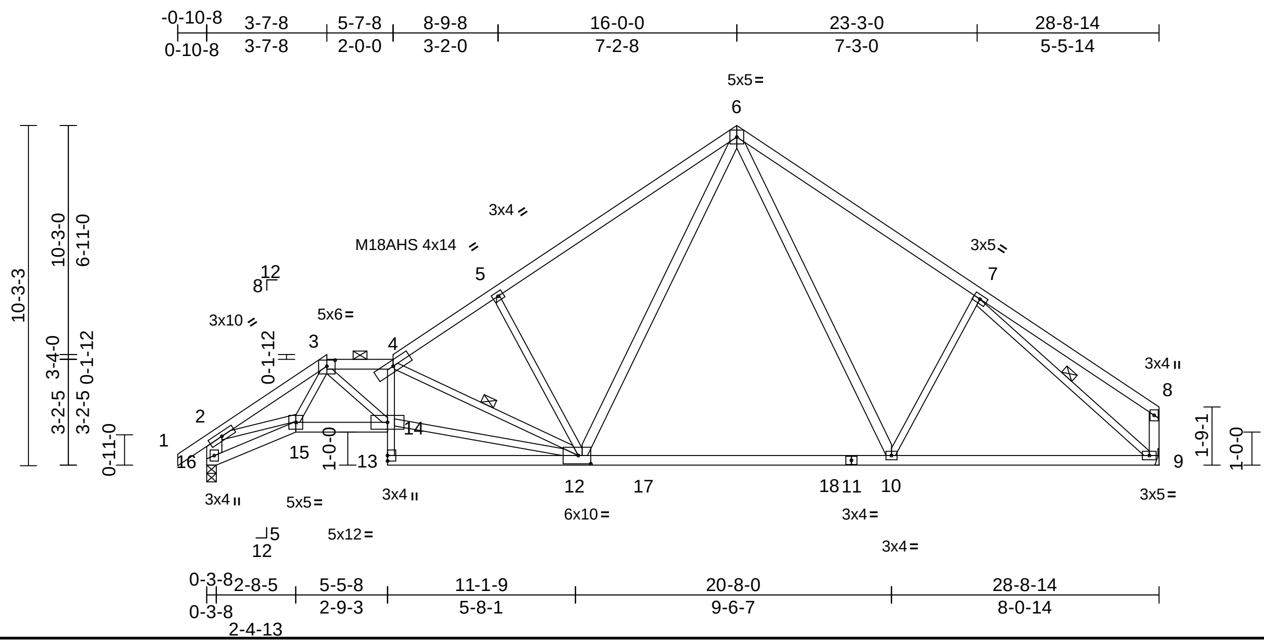

Scale = 1:69.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.32	10-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(TL)	-0.62	10-12	>551	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horiz(TL)	0.15	9	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.11	4	>999	240	Weight: 133 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 4-13:2x3 SPF No.2, 13-11,11-9:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 12-6,10-6,9-8:2x4 SPF No.2, 16-2:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-4-13 max.): 3-4.

BOT CHORD Rigid ceiling directly applied or 9-3-8 oc bracing.

WEBS 1 Row at midpt 4-12, 7-9

REACTIONS (lb/size) 9=1275/ Mechanical, 16=1355/0-3-8
Max Horiz 16=292 (LC 5)
Max Uplift 9=-133 (LC 9), 16=-184 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/43, 2-3=-2531/420, 3-4=-2739/406, 4-5=-1743/243, 5-6=-1680/332, 6-7=-1427/277, 7-8=-179/75, 2-16=-1362/280, 8-9=-198/82

BOT CHORD 15-16=-313/368, 14-15=-406/2029, 13-14=0/77, 4-14=-411/95, 12-13=-38/230, 10-12=-32/964, 9-10=-107/1137

WEBS 3-15=-84/421, 3-14=-84/1177, 12-14=-422/2589, 4-12=-1411/237, 5-12=-430/280, 6-12=-207/934, 6-10=-135/514, 2-15=-238/1927, 7-9=-1459/128, 7-10=-229/270

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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) Bearing at joint(s) 16 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 184 lb uplift at joint 16 and 133 lb uplift at joint 9.
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

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049371
B220013	A7	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:07 Page: 1
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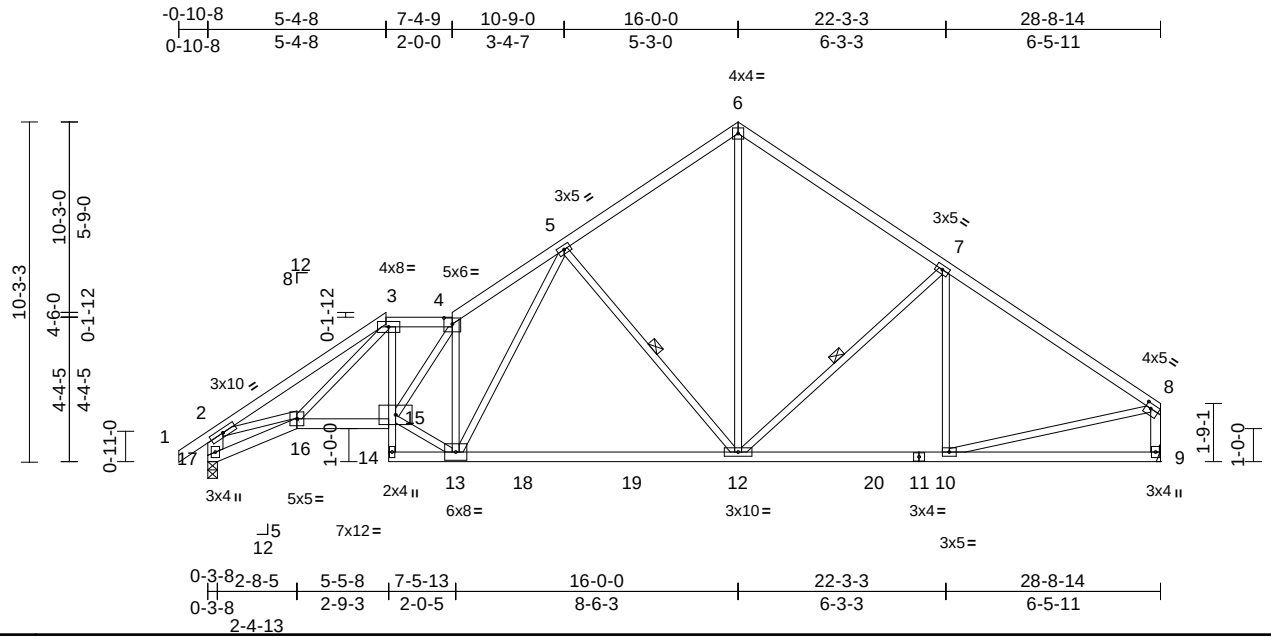


Scale = 1:69.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.19	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(TL)	-0.47	12-13	>730	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.69	Horiz(TL)	0.12	9	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.09	12-13	>999	240	Weight: 128 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 3-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-2:2x6 SPF No.2, 9-8:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-12 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-3 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
9-9-9 oc bracing: 16-17
6-0-0 oc bracing: 14-15.
WEBS 1 Row at midpt 5-12, 7-12

REACTIONS (lb/size) 9=1275/ Mechanical, 17=1355/0-3-8
Max Horiz 17=292 (LC 5)
Max Uplift 9=-133 (LC 9), 17=-184 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-2439/409, 3-4=-1787/319, 4-5=-2021/329, 5-6=-1212/243, 6-7=-1242/256, 7-8=-1486/176, 2-17=-1405/321, 8-9=-1212/166
BOT CHORD 16-17=-366/503, 15-16=-334/1912, 14-15=-107/0, 3-15=-61/1029, 13-14=-22/47, 12-13=-185/1394, 10-12=-71/1147, 9-10=-43/104
WEBS 3-16=-110/318, 13-15=-271/2051, 4-15=-199/228, 4-13=-1532/362, 5-13=-127/754, 5-12=-676/266, 6-12=-149/873, 7-12=-389/220, 7-10=-136/91, 2-16=-92/1683, 8-10=-61/1073

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Bearing at joint(s) 17 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 184 lb uplift at joint 17 and 133 lb uplift at joint 9.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A8	Roof Special	1	1	Job Reference (optional)

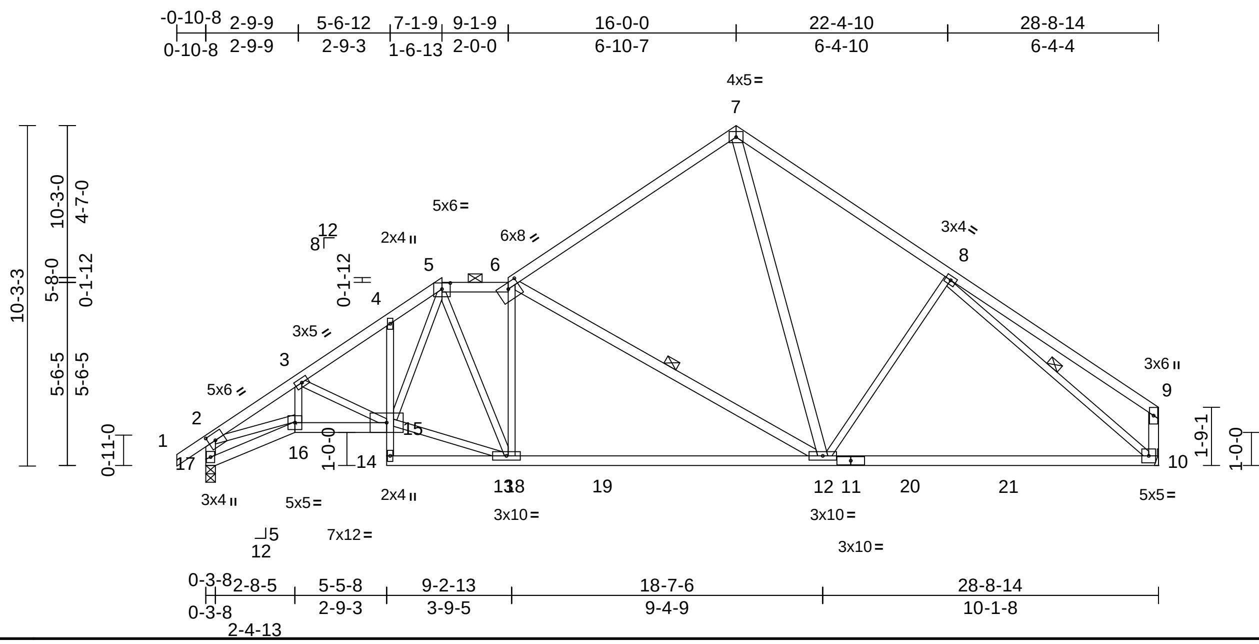
I50049372

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/10/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:07 Page: 1

ID:v7sUetWXC8KjFieN33J5hWzuPOy-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:69.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.80	Vert(LL)	-0.20	10-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.55	Vert(TL)	-0.48	10-12	>716	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.86	Horiz(TL)	0.12	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.07	12-13	>999	240	Weight: 135 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 4-14:2x3 SPF No.2, 14-11,11-10:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 12-6,12-7,17-2,10-9:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-5-14 max.): 5-6.

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

WEBS 1 Row at midpt 6-12, 8-10

REACTIONS (lb/size) 10=1279/ Mechanical, 17=1353/0-3-8

Max Horiz 17=292 (LC 5)

Max Uplift 10=-133 (LC 9), 17=-183 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-2562/440, 3-4=-2069/329, 4-5=-2016/390, 5-6=-1514/255, 6-7=-1112/234, 7-8=-1357/249, 8-9=-327/107, 2-17=-1354/268, 9-10=-318/120

BOT CHORD 16-17=-296/364, 15-16=-468/2204, 14-15=-10/9, 4-15=-113/100, 13-14=-22/57, 12-13=-222/1574, 10-12=-91/1126

WEBS 3-16=-72/384, 3-15=-479/181, 13-15=-208/1486, 5-15=-244/836, 5-13=-91/386, 6-13=-523/156, 6-12=-843/261, 7-12=-123/853, 8-12=-258/267, 2-16=-292/1941, 8-10=-1344/126

NOTES

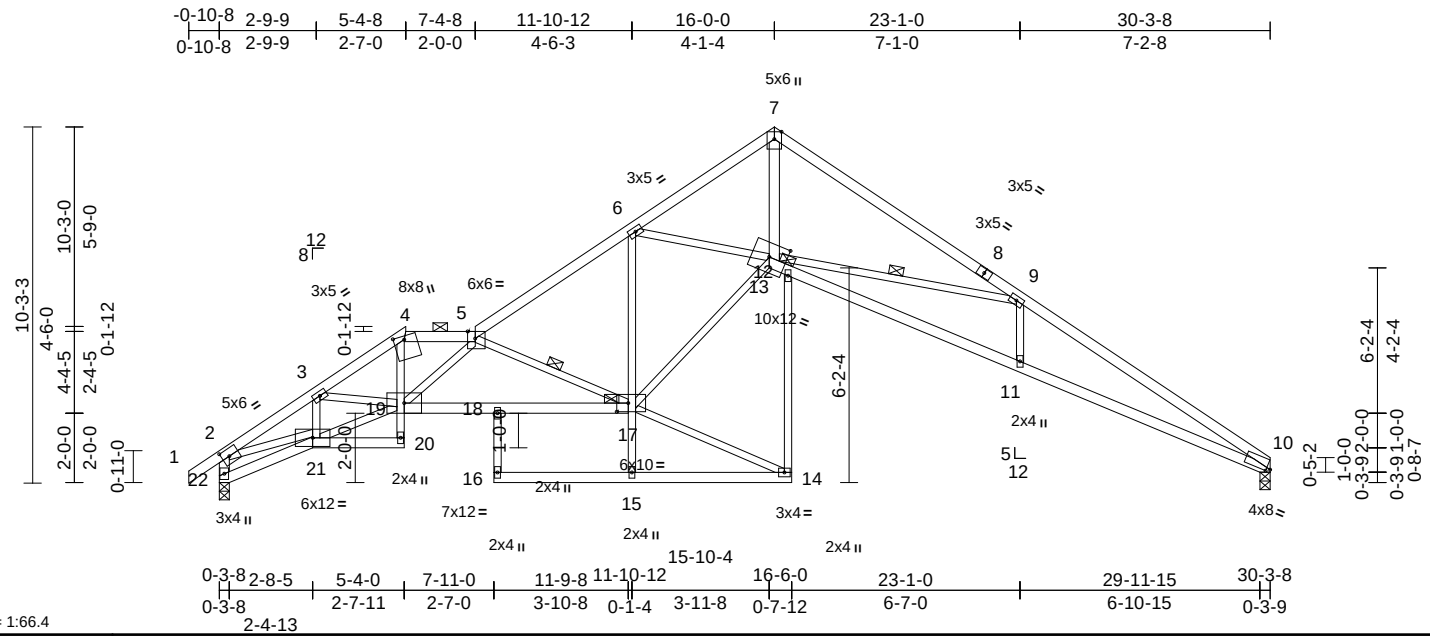
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) The Fabrication Tolerance at joint 6 = 6%
5) The solid section of the plate is required to be placed over the splice line at joint(s) 11.
6) Plate(s) at joint(s) 11 checked for a plus or minus 5 degree rotation about its center.
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) Refer to girder(s) for truss to truss connections.
10) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 17 and 133 lb uplift at joint 10.
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

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

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A9	Roof Special	1	1	Job Reference (optional)



Scale = 1:66.4

Plate Offsets (X, Y): [2:0-2-9,0-2-8], [4:0-1-4,0-3-12], [5:0-2-10,Edge], [10:0-1-5,0-0-15], [13:0-6-0,0-4-12], [17:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.40	11-12	>892	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(TL)	-0.99	11-12	>365	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horiz(TL)	0.88	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.26	11-12	>999	240	Weight: 135 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 7-8:2x4 SPF 2100F 1.8E, 8-10:2x4 SPF 2400F 2.0E

BOT CHORD 2x4 SPF No.2 *Except* 20-4,18-16,14-12:2x3 SPF No.2, 19-17,13-10:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 22-2,13-7:2x4 SPF No.2

BRACING

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

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

WEBS 1 Row at midpt 5-17, 9-13

JOINTS 1 Brace at Jt(s): 17, 13

REACTIONS (lb/size) 10=1349/0-3-8, 22=1423/0-3-8
Max Horiz 22=-273 (LC 6)
Max Uplift 10=-149 (LC 9), 22=-188 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-2696/449, 3-4=-3313/527, 4-5=-2691/451, 5-6=-2347/315, 6-7=-3441/333, 7-9=-3361/331, 9-10=-4728/339, 2-22=-1427/274

BOT CHORD 21-22=-271/374, 20-21=-42/103, 19-20=0/68, 4-19=-227/1592, 18-19=-557/3440, 17-18=-549/3418, 16-18=0/46, 15-16=-8/22, 14-15=-5/28, 12-14=0/73, 12-13=-204/4148, 11-12=-243/4125, 10-11=-237/4143

WEBS 3-21=-543/110, 19-21=-479/2285, 3-19=0/556, 5-19=-1053/158, 5-17=-1719/391, 9-13=-1238/546, 9-11=0/339, 2-21=-294/2024, 6-13=0/911, 15-17=0/226, 6-17=-1121/123, 13-17=-294/2752, 7-13=-266/3284, 14-17=-31/3

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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) Bearing at joint(s) 22, 10 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 188 lb uplift at joint 22 and 149 lb uplift at joint 10.
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

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049374
B220013	A10	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:08 Page: 1
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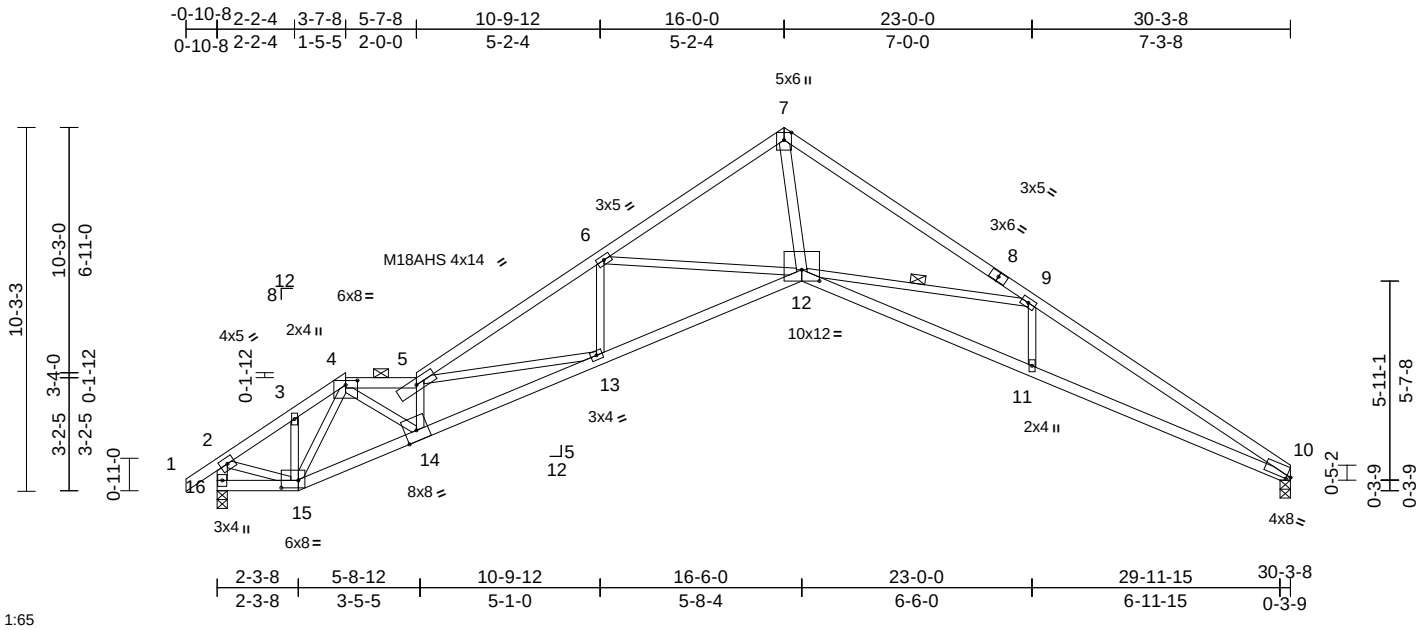

Scale = 1:65

Plate Offsets (X, Y): [4:0-4-0,0-1-9], [10:0-1-5,0-0-15], [12:0-6-0,0-3-13], [15:0-5-12,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.40	11-12	>911	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(TL)	-0.91	11-12	>397	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.97	Horiz(TL)	0.82	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.26	12-13	>999	240	Weight: 111 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 7-8:2x4 SPF 2100F 1.8E, 8-10:2x4 SPF 2400F 2.0E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 16-15:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 12-7,16-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-9-9 max.): 4-5.

BOT CHORD Rigid ceiling directly applied or 9-5-5 oc bracing.

WEBS 1 Row at midpt 9-12

REACTIONS (lb/size) 10=1349/0-3-8, 16=1423/0-3-8
Max Horiz 16=-272 (LC 6)
Max Uplift 10=-149 (LC 9), 16=-188 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-1551/198, 3-4=-1492/248, 4-5=-4024/602, 5-6=-3995/518, 6-7=-2955/274, 7-9=-3455/328, 9-10=-4706/343, 2-16=-1396/200

BOT CHORD 15-16=-237/289, 14-15=-377/1873, 13-14=-698/4199, 12-13=-461/3546, 11-12=-242/4114, 10-11=-240/4122

WEBS 3-15=-63/76, 4-15=-1110/143, 4-14=-391/2822, 5-14=-2500/413, 5-13=-628/224, 6-13=0/365, 6-12=-927/361, 7-12=-217/3049, 9-12=-1132/528, 9-11=0/306, 2-15=-121/1230

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 10 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 188 lb uplift at joint 16 and 149 lb uplift at joint 10.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049375
B220013	A11	Roof Special Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:09 Page: 1
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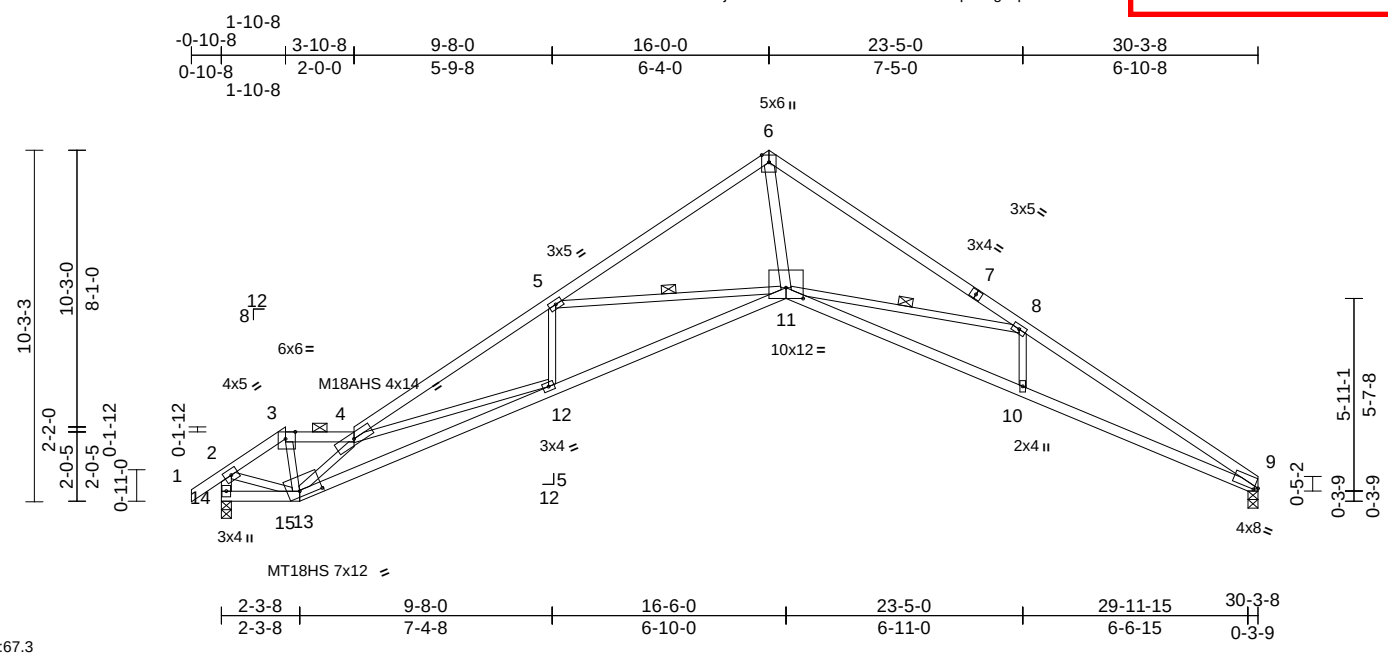

Plate Offsets (X, Y): [3:0-3-6,Edge], [9:0-1-5,0-0-15], [11:0-6-0,0-3-13], [13:0-7-12,0-2-0]

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	0.96	Vert(LL)	-0.39	11-12	>934	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(TL)	-0.90	10-11	>398	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	NO	WB	0.77	Horiz(TL)	0.79	9	n/a	n/a	MT18HS	197/144
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.27	11-12	>999	240	Weight: 109 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 4-6:2x4 SPF 2100F 1.8E, 6-7,7-9:2x4 SPF 2400F 2.0E

BOT CHORD 2x4 SPF 2100F 1.8E *Except* 14-13:2x4 SPF No.2

WEBS 2x3 SPF No.2 *Except* 11-6,14-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-9-13 max.): 3-4.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-9-8 oc bracing: 12-13.

WEBS 1 Row at midpt 5-11, 8-11

REACTIONS (lb/size) 9=1349/0-3-8, 14=1423/0-3-8
Max Horiz 14=-272 (LC 6)
Max Uplift 9=-151 (LC 9), 14=-205 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/40, 2-3=-1602/204, 3-4=-1481/203, 4-5=-4235/566, 5-6=-3000/272, 6-8=-3473/332, 8-9=-4742/361, 2-14=-1386/199

BOT CHORD 13-14=-243/286, 12-13=-798/4174, 11-12=-553/3764, 10-11=-251/4152, 9-10=-246/4154

WEBS 3-13=-71/735, 4-13=-3529/620, 4-12=-431/238, 5-12=0/354, 5-11=-1117/431, 6-11=-195/3007, 8-11=-1167/555, 8-10=0/301, 2-13=-128/1297

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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) The Fabrication Tolerance at joint 13 = 2%
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) 9 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 205 lb uplift at joint 14 and 151 lb uplift at joint 9.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 41 lb down and 18 lb up at 1-10-8 on top chord, and 7 lb down and 16 lb up at 1-10-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-6=-70, 6-9=-70, 13-14=-20, 11-13=-20, 9-11=-20

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

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049376
B220013	A12	Scissor	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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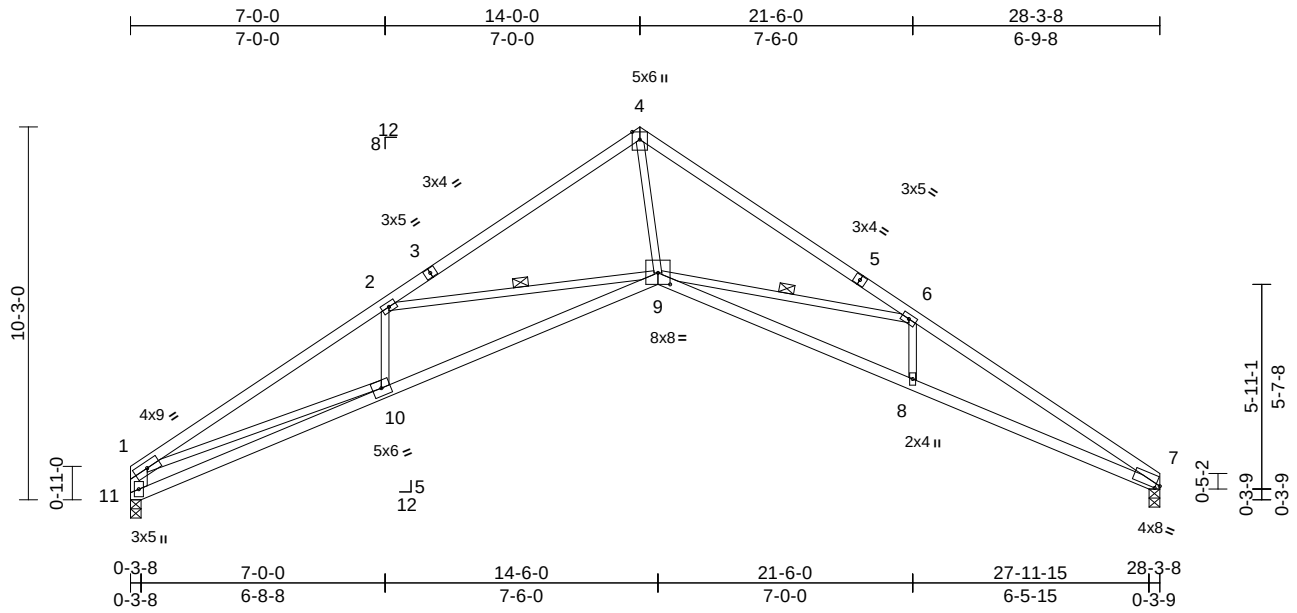

Scale = 1:63.3

Plate Offsets (X, Y): [7:0-1-5,0-1-3], [9:0-4-0,0-3-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.33	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(TL)	-0.82	9-10	>411	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.88	Horiz(TL)	0.75	7	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.21	9-10	>999	240	Weight: 99 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 11-1:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
8-2-15 oc bracing: 9-10.
WEBS 1 Row at midpt 2-9, 6-9

REACTIONS (lb/size) 7=1256/0-3-8, 11=1256/0-3-8
Max Horiz 11=-267 (LC 6)
Max Uplift 7=-143 (LC 9), 11=-141 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-3431/477, 2-4=-2674/223, 4-6=-3069/279, 6-7=-4363/335, 1-11=-1345/271
BOT CHORD 10-11=-276/641, 9-10=-502/3044, 8-9=-207/3818, 7-8=-204/3818
WEBS 2-10=-131/127, 2-9=-778/420, 4-9=-128/2562, 6-9=-1195/563, 6-8=0/299, 1-10=-219/2462

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 11, 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 11 and 143 lb uplift at joint 7.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049377
B220013	A13	Scissor	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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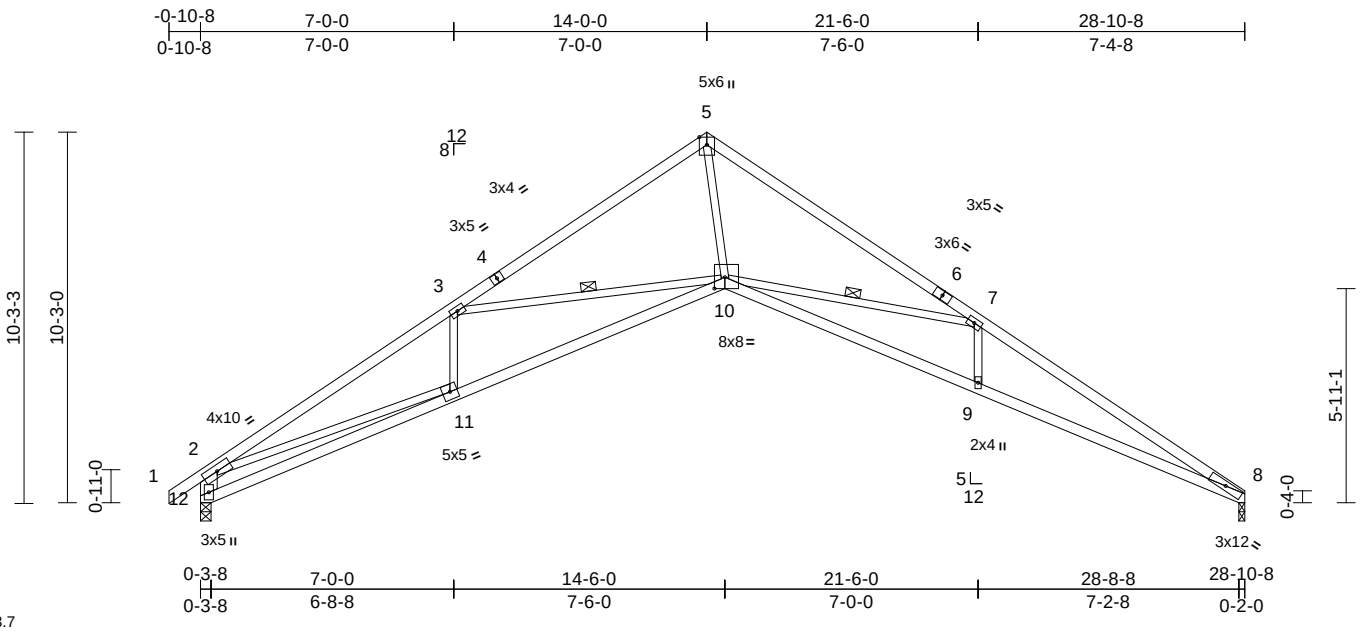

Scale = 1:63.7

Plate Offsets (X, Y): [10:0-3-8,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.38	9-10	>892	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(TL)	-0.91	10-11	>378	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.93	Horiz(TL)	0.85	8	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.23	9-10	>999	240	Weight: 102 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 6-8:2x4 SPF 2400F 2.0E, 1-4:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 10-8:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 12-2:2x6 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-5-2 oc bracing.
WEBS 1 Row at midpt 3-10, 7-10

REACTIONS (lb/size) 8=1284/0-2-0, 12=1364/0-3-8
Max Horiz 12=-277 (LC 6)
Max Uplift 8=-151 (LC 9), 12=-168 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/43, 2-3=-3504/468, 3-5=-2781/219, 5-7=-3201/276, 7-8=-4728/365, 2-12=-1505/331
BOT CHORD 11-12=-352/788, 10-11=-481/3089, 9-10=-229/4183, 8-9=-227/4187
WEBS 3-11=-123/128, 3-10=-739/408, 5-10=-121/2693, 7-10=-1409/598, 7-9=0/314, 2-11=-118/2379

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 8, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 8.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 151 lb uplift at joint 8 and 168 lb uplift at joint 12.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	A14	Common Supported Gable	1	1	Job Reference (optional) I50049378

Wheeler Lumber, Waverly, KS - 66871,

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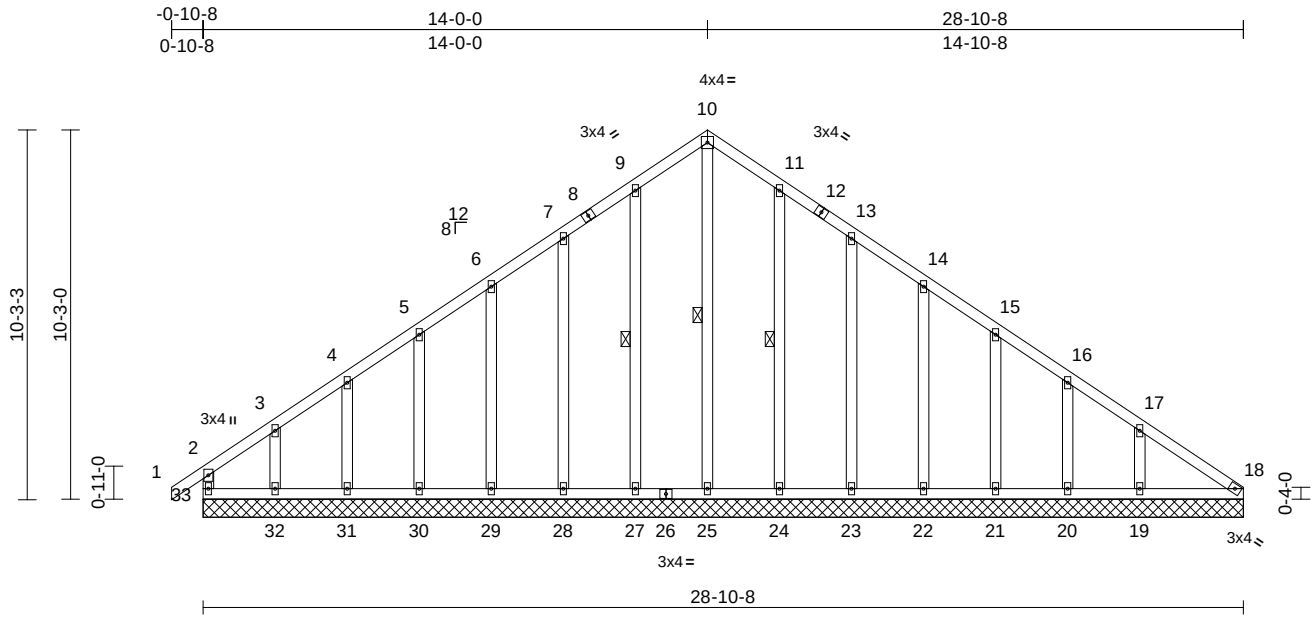

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.01	18	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S							Weight: 154 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 10-25, 9-27, 11-24

REACTIONS (lb/size) 18=106/28-10-8, 19=256/28-10-8, 20=155/28-10-8, 21=186/28-10-8, 22=179/28-10-8, 23=179/28-10-8, 24=187/28-10-8, 25=156/28-10-8, 27=187/28-10-8, 28=179/28-10-8, 29=180/28-10-8, 30=179/28-10-8, 31=185/28-10-8, 32=160/28-10-8, 33=171/28-10-8
Max Horiz 33=-275 (LC 6)
Max Uplift 18=-43 (LC 5), 19=-108 (LC 9), 20=-59 (LC 9), 21=-72 (LC 9), 22=-68 (LC 9), 23=-75 (LC 9), 24=-62 (LC 9), 27=-62 (LC 8), 28=-75 (LC 8), 29=-68 (LC 8), 30=-75 (LC 8), 31=-49 (LC 8), 32=-158 (LC 8), 33=-77 (LC 4)
Max Grav 18=148 (LC 15), 19=270 (LC 16), 20=160 (LC 16), 21=193 (LC 16), 22=186 (LC 16), 23=186 (LC 16), 24=195 (LC 16), 25=241 (LC 8), 27=195 (LC 15), 28=186 (LC 15), 29=186 (LC 15), 30=189 (LC 15), 31=185 (LC 1), 32=225 (LC 15), 33=213 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-33=-175/67, 1-2=0/40, 2-3=-184/151, 3-4=-117/108, 4-5=-107/101, 5-6=-92/138, 6-7=-79/175, 7-9=-65/214, 9-10=-54/245, 10-11=-67/251, 11-13=-80/220, 13-14=-94/181, 14-15=-108/145, 15-16=-122/121, 16-17=-141/127, 17-18=-194/173
BOT CHORD 32-33=-139/187, 31-32=-139/187, 30-31=-139/187, 29-30=-139/187, 28-29=-139/187, 27-28=-139/187, 25-27=-139/187, 24-25=-139/187, 23-24=-139/187, 22-23=-139/187, 21-22=-139/187, 20-21=-139/187, 19-20=-139/187, 18-19=-139/187
WEBS 10-25=-217/0, 9-27=-155/86, 7-28=-146/99, 6-29=-147/92, 5-30=-148/96, 4-31=-144/83, 3-32=-162/141, 11-24=-155/86, 13-23=-146/99, 14-22=-146/92, 15-21=-151/97, 16-20=-129/83, 17-19=-205/134

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 77 lb uplift at joint 33, 43 lb uplift at joint 18, 62 lb uplift at joint 27, 75 lb uplift at joint 28, 68 lb uplift at joint 29, 75 lb uplift at joint 30, 49 lb uplift at joint 31, 158 lb uplift at joint 32, 62 lb uplift at joint 24, 75 lb uplift at joint 23, 68 lb uplift at joint 22, 72 lb uplift at joint 21, 59 lb uplift at joint 20 and 108 lb uplift at joint 19.

LOAD CASE(S) Standard

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	B1	Common Supported Gable	1	1	Job Reference (optional)

I50049379

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/10/2022

Wheeler Lumber, Waverly, KS - 66871,

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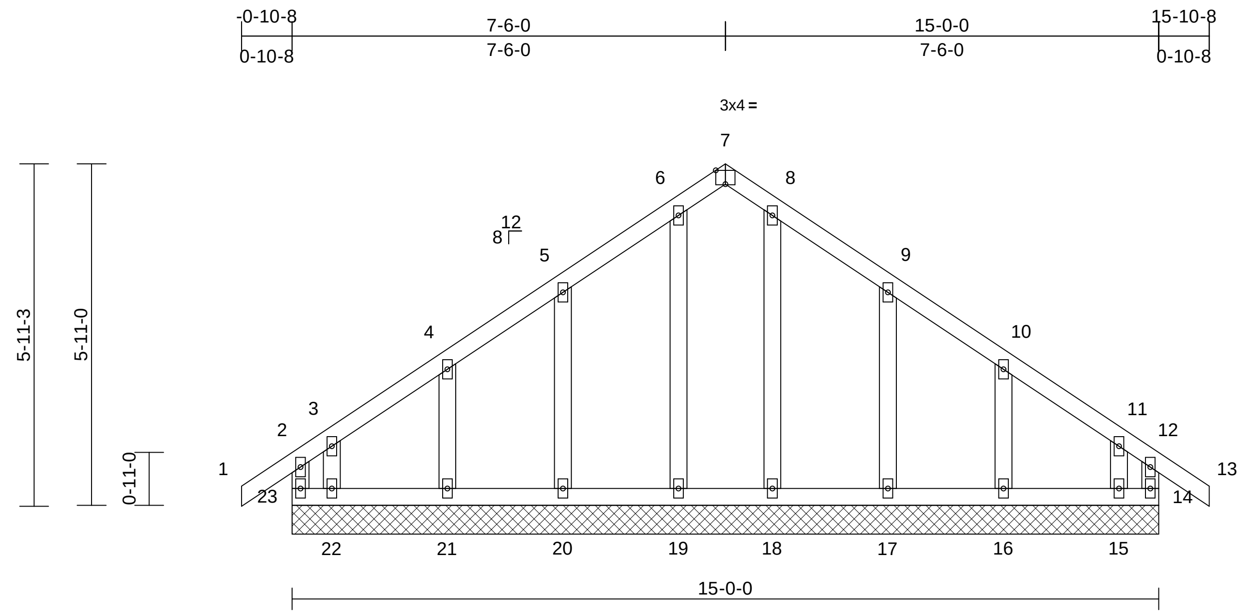

Scale = 1:39.9

Plate Offsets (X, Y): [7:0-2-0,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	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	14	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-R							Weight: 67 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) 14=121/15-0-0, 15=83/15-0-0, 16=186/15-0-0, 17=182/15-0-0, 18=161/15-0-0, 19=161/15-0-0, 20=182/15-0-0, 21=186/15-0-0, 22=83/15-0-0, 23=121/15-0-0
Max Horiz 23=172 (LC 7)
Max Uplift 14=-86 (LC 5), 15=-170 (LC 9), 16=-65 (LC 9), 17=-88 (LC 9), 20=-87 (LC 8), 21=-65 (LC 8), 22=-184 (LC 8), 23=-130 (LC 6)
Max Grav 14=164 (LC 18), 15=170 (LC 7), 16=190 (LC 16), 17=193 (LC 16), 18=161 (LC 1), 19=166 (LC 15), 20=190 (LC 15), 21=190 (LC 15), 22=202 (LC 6), 23=198 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-23=-149/83, 1-2=0/40, 2-3=-148/122, 3-4=-85/91, 4-5=-73/71, 5-6=-60/114, 6-7=-38/95, 7-8=-35/92, 8-9=-39/102, 9-10=-53/62, 10-11=-66/71, 11-12=-132/86, 12-13=0/40, 12-14=-127/55
BOT CHORD 22-23=-80/102, 21-22=-80/102, 20-21=-80/102, 19-20=-80/102, 18-19=-80/102, 17-18=-80/102, 16-17=-80/102, 15-16=-80/102, 14-15=-80/102
WEBS 6-19=-131/14, 8-18=-126/0, 5-20=-149/110, 4-21=-151/93, 3-22=-114/127, 9-17=-151/112, 10-16=-151/92, 11-15=-102/120

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 23, 86 lb uplift at joint 14, 87 lb uplift at joint 20, 65 lb uplift at joint 21, 184 lb uplift at joint 22, 88 lb uplift at joint 17, 65 lb uplift at joint 16 and 170 lb uplift at joint 15.

LOAD CASE(S) Standard

February 4,2022

MiTek®
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	C1	Common Supported Gable	1	1	Job Reference (optional) I50049380

Wheeler Lumber, Waverly, KS - 66871,

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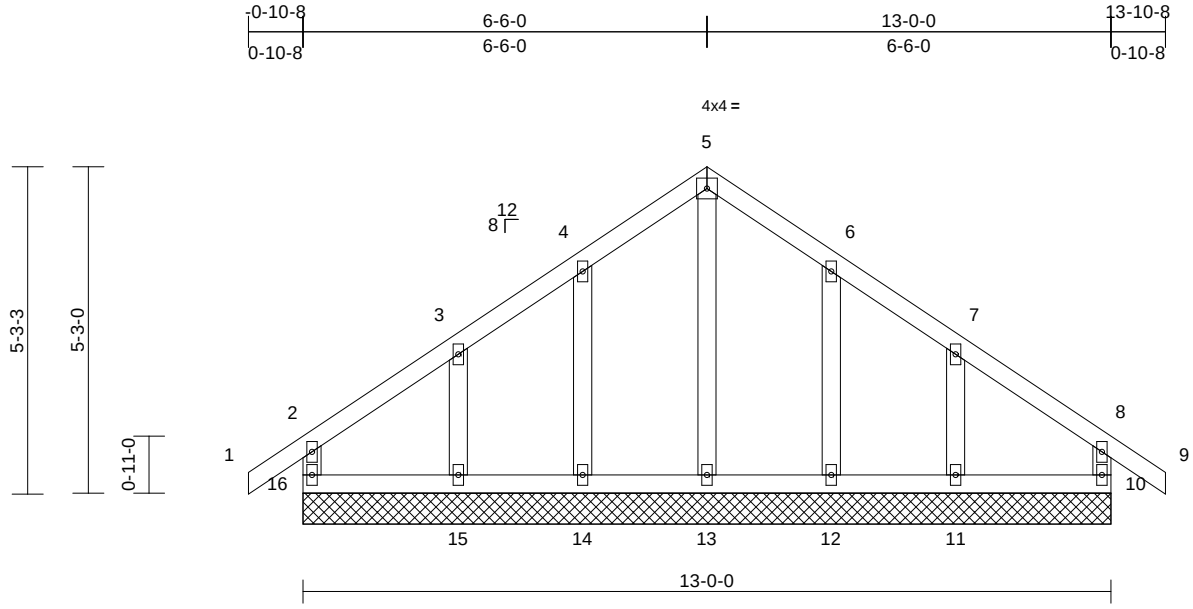

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	10	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-R							Weight: 54 lb	FT = 10%

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

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

REACTIONS (lb/size) 10=186/13-0-0, 11=196/13-0-0, 12=183/13-0-0, 13=158/13-0-0, 14=183/13-0-0, 15=196/13-0-0, 16=186/13-0-0
Max Horiz 16=-155 (LC 6)
Max Uplift 10=-44 (LC 8), 11=-102 (LC 9), 12=-63 (LC 9), 14=-62 (LC 8), 15=-105 (LC 8), 16=-50 (LC 9)
Max Grav 10=186 (LC 1), 11=228 (LC 16), 12=186 (LC 20), 13=178 (LC 18), 14=186 (LC 19), 15=234 (LC 15), 16=186 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-16=-164/60, 1-2=0/40, 2-3=-106/85, 3-4=-76/115, 4-5=-65/150, 5-6=-53/143, 6-7=-63/108, 7-8=-91/69, 8-9=0/40, 8-10=-164/55
BOT CHORD 15-16=-65/78, 14-15=-65/78, 13-14=-65/78, 12-13=-65/78, 11-12=-65/78, 10-11=-65/78
WEBS 5-13=-137/0, 4-14=-149/89, 3-15=-173/120, 6-12=-149/89, 7-11=-170/119

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 16, 44 lb uplift at joint 10, 62 lb uplift at joint 14, 105 lb uplift at joint 15, 63 lb uplift at joint 12 and 102 lb uplift at joint 11.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	D1	Common Structural Gable	1	1	Job Reference (optional) I50049381

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:10 Page: 1
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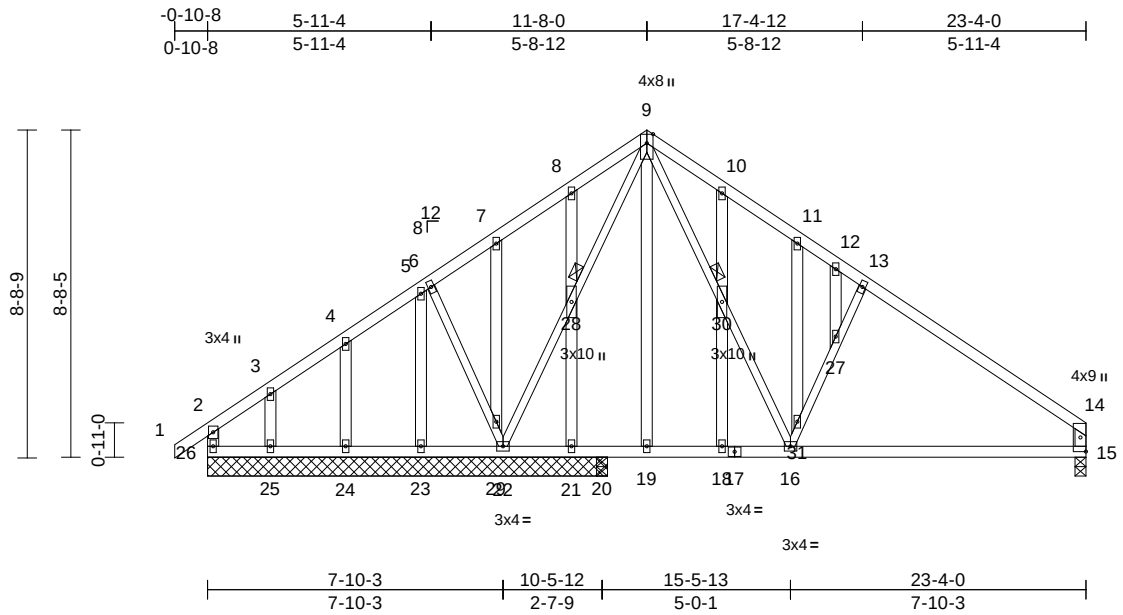

Scale = 1:61.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.09	15-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(TL)	-0.21	15-16	>719	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.26	Horiz(TL)	0.01	15	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.03	16-18	>999	240	Weight: 132 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 26-2,15-14:2x4 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.
JOINTS 1 Brace at Jt(s): 28, 30

REACTIONS (lb/size) 15=551/0-3-8, 20=358/0-3-8, 21=15/10-7-8, 22=849/10-7-8, 23=-35/10-7-8, 24=182/10-7-8, 25=216/10-7-8, 26=10/10-7-8
Max Horiz 26=237 (LC 5)
Max Uplift 15=-103 (LC 9), 21=-93 (LC 20), 22=-80 (LC 9), 23=-88 (LC 20), 24=-66 (LC 8), 25=-117 (LC 8), 26=-95 (LC 20)
Max Grav 15=551 (LC 1), 20=358 (LC 1), 21=114 (LC 19), 22=849 (LC 1), 23=64 (LC 8), 24=185 (LC 19), 25=255 (LC 15), 26=107 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-96/221, 3-4=-40/190, 4-5=-9/179, 5-6=-9/229, 6-7=0/260, 7-8=0/291, 8-9=0/278, 9-10=-390/270, 10-11=-422/233, 11-12=-394/190, 12-13=-438/196, 13-14=-593/150, 2-26=-100/77, 14-15=-471/148
BOT CHORD 25-26=-205/136, 24-25=-205/136, 23-24=-205/136, 22-23=-205/136, 21-22=-51/119, 20-21=-51/119, 19-20=-51/119, 18-19=-51/118, 16-18=-51/118, 15-16=-45/399
WEBS 9-30=-180/582, 16-30=-186/610, 16-31=-383/250, 27-31=-281/200, 13-27=-313/220, 22-28=-574/35, 9-28=-604/37, 6-29=-224/124, 22-29=-309/193, 12-27=-23/34, 9-19=-68/14, 8-28=-189/94, 21-28=-215/90, 7-29=-103/74, 5-23=-40/128, 4-24=-151/95, 3-25=-173/112, 10-30=-71/42, 18-30=-101/49, 11-31=-118/54

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 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 95 lb uplift at joint 26, 80 lb uplift at joint 22, 103 lb uplift at joint 15, 93 lb uplift at joint 21, 88 lb uplift at joint 23, 66 lb uplift at joint 24 and 117 lb uplift at joint 25.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	D2	Common Girder	1	**2**	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I50049382
LEE'S SUMMIT, MISSOURI
02/10/2022

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Thu Feb 03 10:04:11 Page: 1
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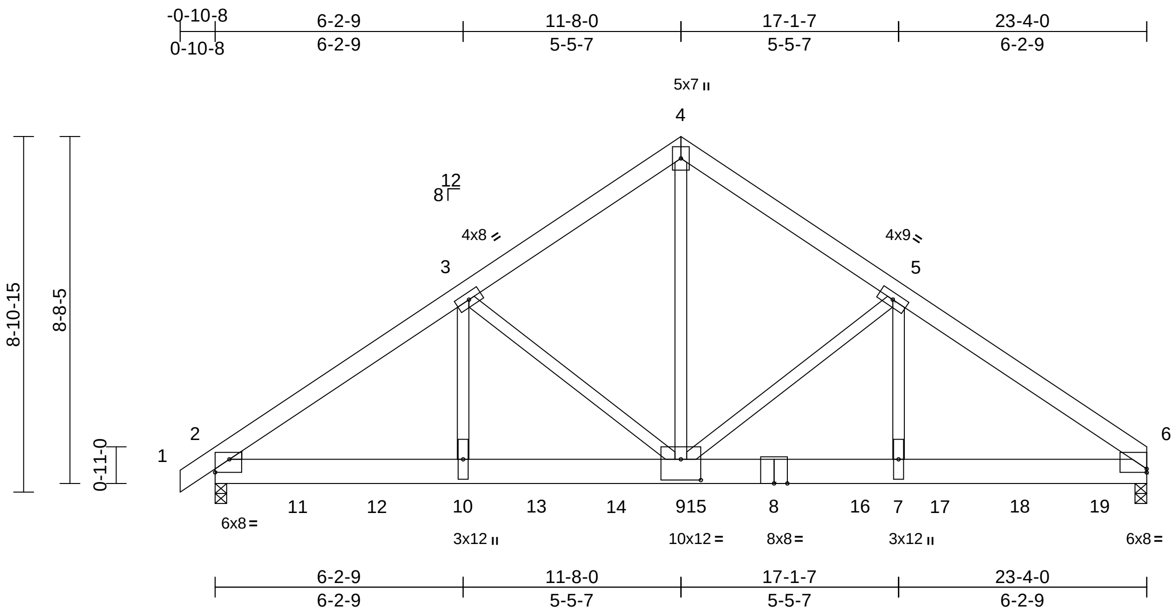

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Plate Offsets (X, Y): [2:Edge,0-3-15], [6:Edge,0-1-1], [9:0-6-0,0-6-4]

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	0.96	Vert(LL)	-0.11	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(TL)	-0.24	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.89	Horiz(TL)	0.06	6	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S		Wind(LL)	0.08	9-10	>999	240	Weight: 316 lb	FT = 10%

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

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

REACTIONS (lb/size) 2=7347/0-3-8, 6=7997/0-3-8
Max Horiz 2=216 (LC 7)
Max Uplift 2=-885 (LC 8), 6=-933 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-10151/1201, 3-4=-7037/920, 4-5=-7037/920, 5-6=-10352/1212
BOT CHORD 2-10=-1005/8106, 9-10=-1005/8106, 7-9=-895/8266, 6-7=-895/8266
WEBS 4-9=-890/7284, 5-9=-3248/536, 5-7=-371/3877, 3-9=-3041/520, 3-10=-362/3625

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-8-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) 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 933 lb uplift at joint 6 and 885 lb uplift at joint 2.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1165 lb down and 140 lb up at 2-0-12, 1169 lb down and 140 lb up at 4-0-12, 1169 lb down and 140 lb up at 6-0-12, 1169 lb down and 140 lb up at 8-0-12, 1169 lb down and 140 lb up at 10-0-12, 1165 lb down and 140 lb up at 12-0-12, 1166 lb down and 140 lb up at 14-0-12, 1259 lb down and 147 lb up at 16-2-0, 1255 lb down and 145 lb up at 18-2-0, and 1255 lb down and 145 lb up at 20-2-0, and 1259 lb down and 145 lb up at 22-2-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-6=-70, 2-6=-20
Concentrated Loads (lb)
Vert: 8=-1166 (B), 10=-1169 (B), 11=-1165 (B), 12=-1169 (B), 13=-1169 (B), 14=-1169 (B), 15=-1165 (B), 16=-1259 (B), 17=-1255 (B), 18=-1255 (B), 19=-1259 (B)

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	E1	Common Supported Gable	1	1	Job Reference (optional) I50049383

Wheeler Lumber, Waverly, KS - 66871,

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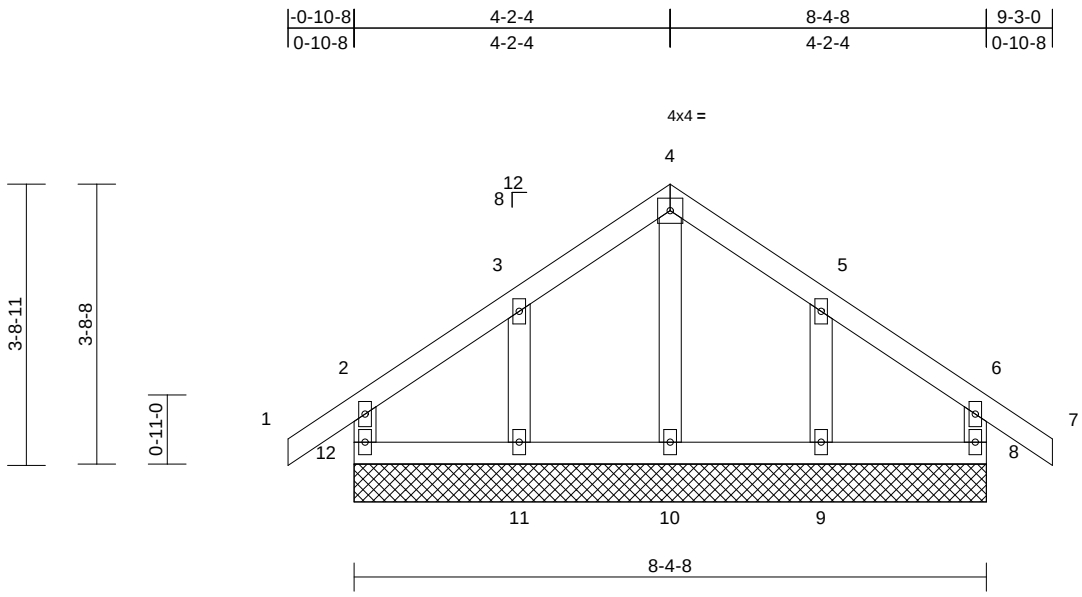

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-R							Weight: 33 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) 8=163/8-4-8, 9=187/8-4-8, 10=169/8-4-8, 11=187/8-4-8, 12=163/8-4-8
Max Horiz 12=-115 (LC 6)
Max Uplift 8=-39 (LC 8), 9=-88 (LC 9), 11=-90 (LC 8), 12=-42 (LC 9)
Max Grav 8=165 (LC 20), 9=214 (LC 16), 10=169 (LC 1), 11=218 (LC 15), 12=165 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-69/65, 3-4=-48/98, 4-5=-43/95, 5-6=-60/62, 6-7=0/40, 2-12=-146/51, 6-8=-146/53
BOT CHORD 11-12=-52/57, 10-11=-52/57, 9-10=-52/57, 8-9=-52/57
WEBS 4-10=-131/0, 3-11=-166/108, 5-9=-163/107

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 12, 39 lb uplift at joint 8, 90 lb uplift at joint 11 and 88 lb uplift at joint 9.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049384
B220013	E2	Common	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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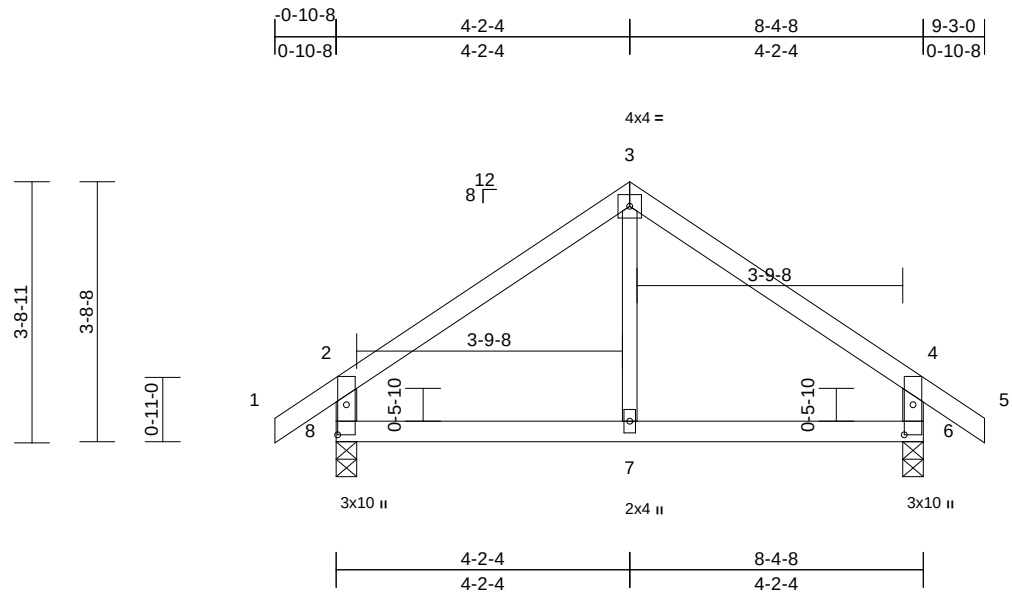

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Plate Offsets (X, Y): [6:0-5-2,0-1-8], [8:0-5-2,0-1-8]

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	0.25	Vert(LL)	-0.01	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	-0.02	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-R		Wind(LL)	-0.01	7-8	>999	240	Weight: 27 lb	FT = 10%

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

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

REACTIONS (lb/size) 6=435/0-3-8, 8=435/0-3-8
Max Horiz 8=-115 (LC 6)
Max Uplift 6=-63 (LC 9), 8=-63 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-355/70, 3-4=-355/70, 4-5=0/40, 2-8=-384/96, 4-6=-384/96
BOT CHORD 7-8=0/232, 6-7=0/232
WEBS 3-7=0/157

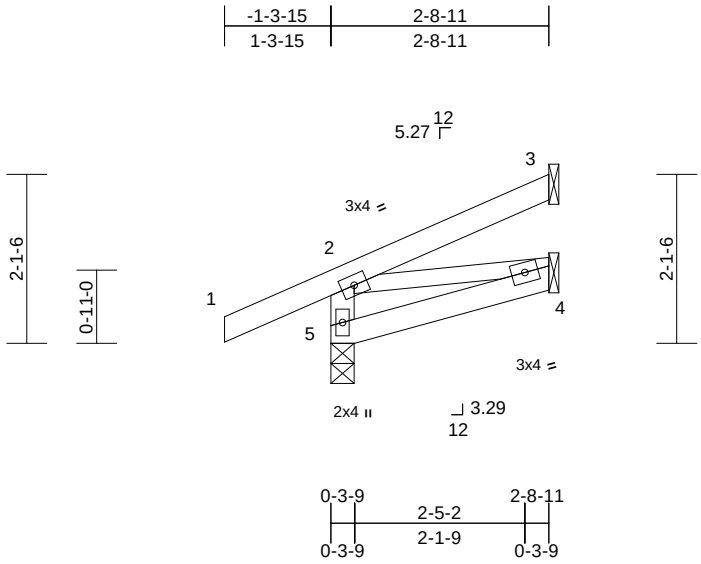
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 8 and 63 lb uplift at joint 6.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB
B220013	J1	Jack-Open Girder	1	1	Job Reference (optional)



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-P		Wind(LL)	0.00	5	>999	240	Weight: 11 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=58/ Mechanical, 4=26/ Mechanical, 5=248/0-3-8
Max Horiz 5=58 (LC 5)
Max Uplift 3=-33 (LC 8), 4=-1 (LC 8), 5=-40 (LC 8)
Max Grav 3=58 (LC 1), 4=52 (LC 3), 5=248 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-222/73, 1-2=0/41, 2-3=-48/16
BOT CHORD 4-5=-68/11
WEBS 2-4=0/63

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 5, 33 lb uplift at joint 3 and 1 lb uplift at joint 4.

LOAD CASE(S) Standard

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049386
B220013	J2	Jack-Open Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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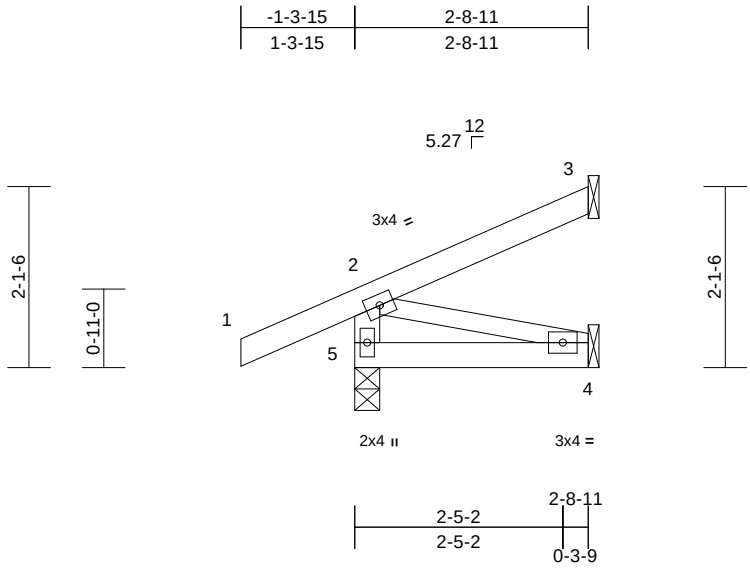

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-P							Weight: 11 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=58/ Mechanical, 4=26/ Mechanical, 5=247/0-3-8
Max Horiz 5=58 (LC 8)
Max Uplift 3=-33 (LC 8), 4=-1 (LC 8), 5=-41 (LC 8)
Max Grav 3=58 (LC 1), 4=52 (LC 3), 5=247 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-222/56, 1-2=0/41, 2-3=-48/16
BOT CHORD 4-5=-63/0
WEBS 2-4=0/65

NOTES
1) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 41 lb uplift at joint 5, 33 lb uplift at joint 3 and 1 lb uplift at joint 4.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049387
B220013	V1	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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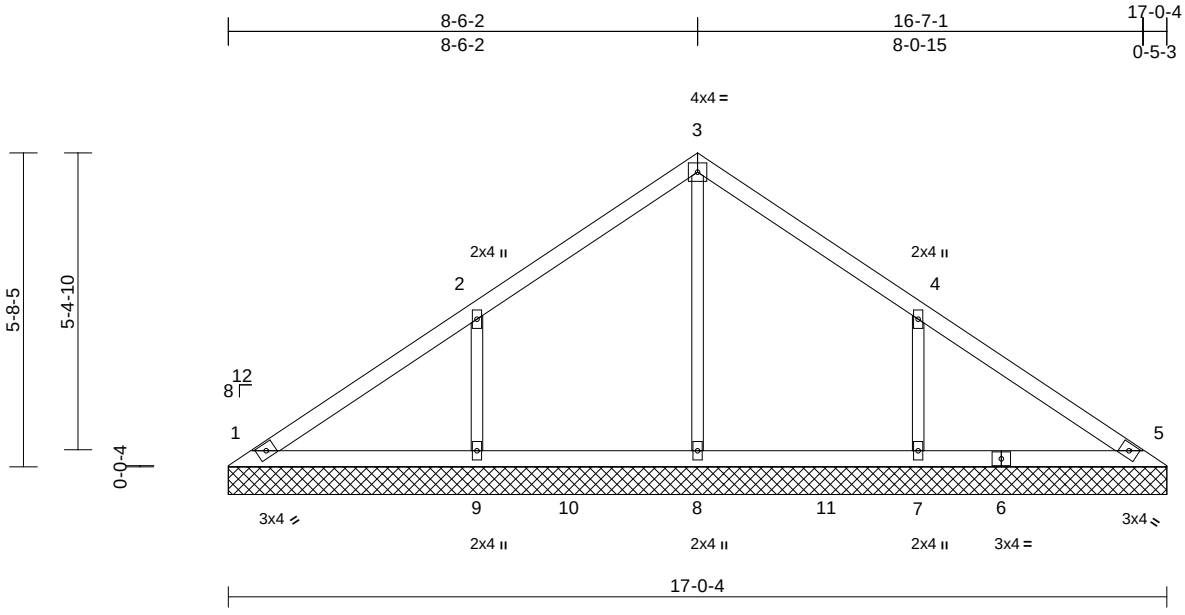

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S							Weight: 50 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=170/17-0-4, 5=170/17-0-4, 7=429/17-0-4, 8=252/17-0-4, 9=429/17-0-4
Max Horiz 1=-140 (LC 4)
Max Uplift 1=-15 (LC 9), 7=-173 (LC 9), 9=-173 (LC 8)
Max Grav 1=170 (LC 1), 5=170 (LC 1), 7=463 (LC 16), 8=354 (LC 15), 9=464 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-149/105, 2-3=-148/127, 3-4=-140/106, 4-5=-114/68
BOT CHORD 1-9=-41/95, 8-9=-41/95, 7-8=-41/95, 5-7=-41/95
WEBS 3-8=-183/0, 2-9=-347/219, 4-7=-347/219

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1, 173 lb uplift at joint 9 and 173 lb uplift at joint 7.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049388
B220013	V2	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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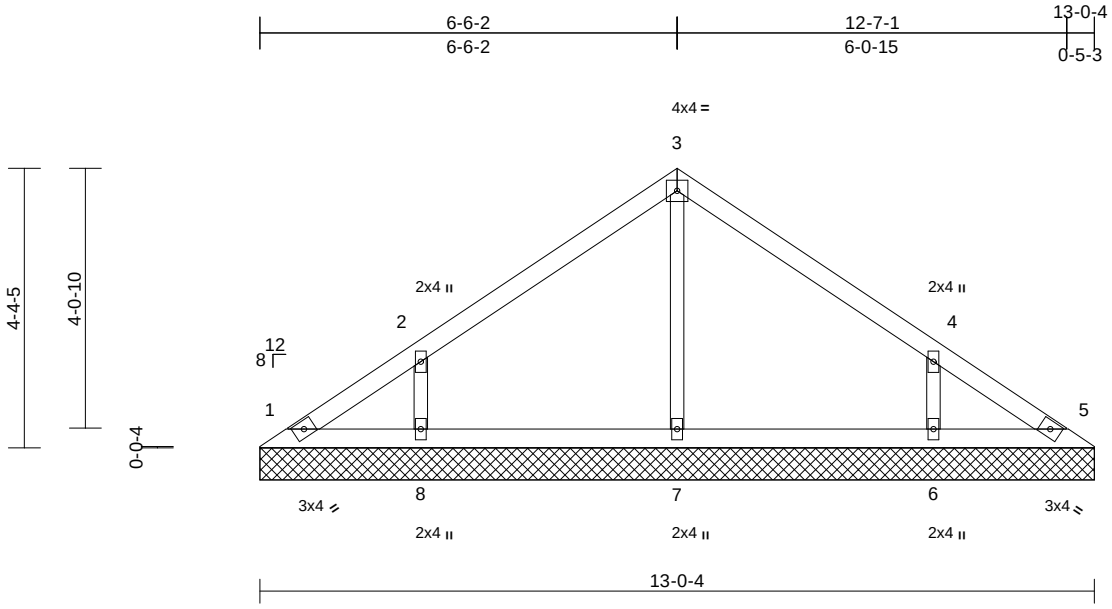

Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S							Weight: 36 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=73/13-0-4, 5=73/13-0-4, 6=330/13-0-4, 7=285/13-0-4, 8=330/13-0-4
Max Horiz 1=-106 (LC 4)
Max Uplift 1=-22 (LC 4), 5=-2 (LC 5), 6=-139 (LC 9), 8=-139 (LC 8)
Max Grav 1=91 (LC 16), 5=76 (LC 15), 6=348 (LC 16), 7=285 (LC 1), 8=348 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-112/81, 2-3=-144/97, 3-4=-140/74, 4-5=-88/46
BOT CHORD 1-8=-26/73, 7-8=-26/73, 6-7=-26/73, 5-6=-26/73
WEBS 3-7=-200/21, 2-8=-281/181, 4-6=-281/180

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1, 2 lb uplift at joint 5, 139 lb uplift at joint 8 and 139 lb uplift at joint 6.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049389
B220013	V3	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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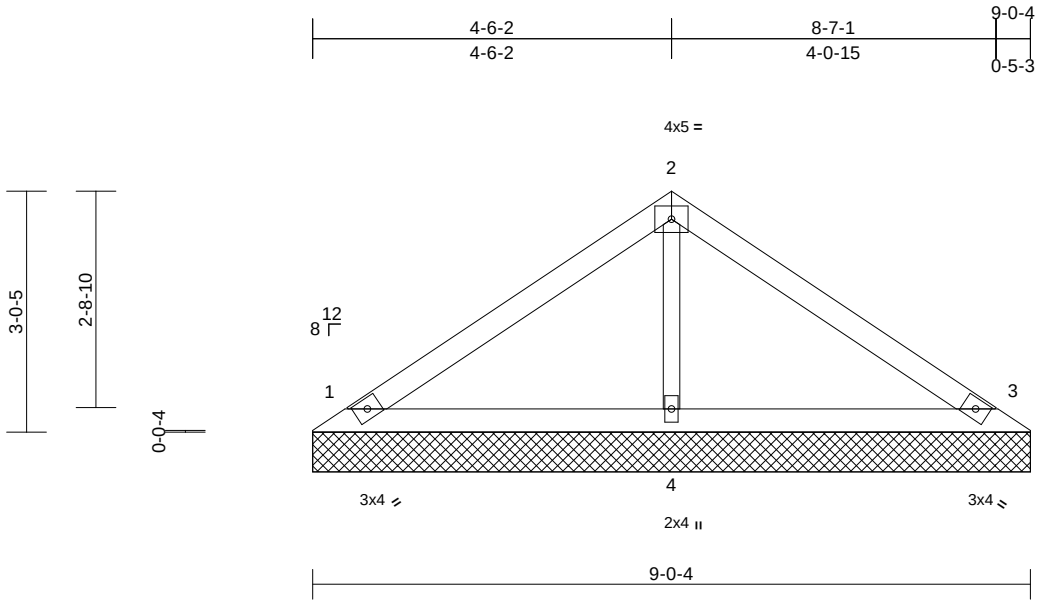

Scale = 1:29

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S							Weight: 23 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=188/9-0-4, 3=188/9-0-4, 4=355/9-0-4
Max Horiz 1=-71 (LC 4)
Max Uplift 1=-36 (LC 8), 3=-44 (LC 9), 4=-14 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-140/67, 2-3=-140/51
BOT CHORD 1-4=-14/65, 3-4=-14/65
WEBS 2-4=-231/59

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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, 44 lb uplift at joint 3 and 14 lb uplift at joint 4.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049390
B220013	V4	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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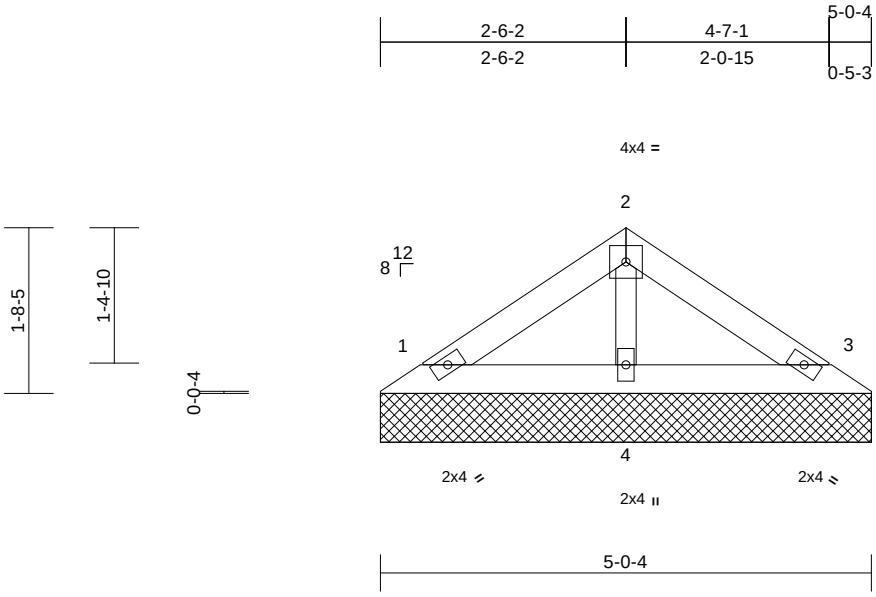

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-P							Weight: 12 lb	FT = 10%

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

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

REACTIONS (lb/size) 1=104/5-0-4, 3=104/5-0-4, 4=162/5-0-4
Max Horiz 1=36 (LC 5)
Max Uplift 1=-23 (LC 8), 3=-28 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-65/33, 2-3=-62/25
BOT CHORD 1-4=-7/30, 3-4=-7/30
WEBS 2-4=-111/28

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 23 lb uplift at joint 1 and 28 lb uplift at joint 3.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049391
B220013	V5	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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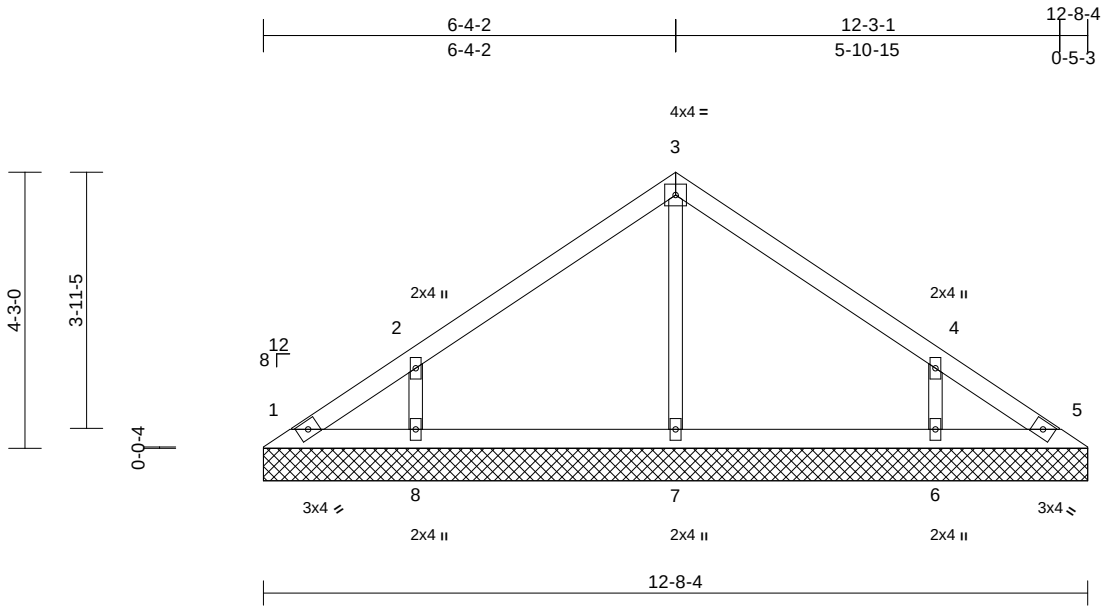

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.17	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-S							Weight: 35 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=61/12-8-4, 5=61/12-8-4, 6=326/12-8-4, 7=285/12-8-4, 8=326/12-8-4
Max Horiz 1=-103 (LC 4)
Max Uplift 1=-25 (LC 4), 5=-6 (LC 5), 6=-138 (LC 9), 8=-138 (LC 8)
Max Grav 1=82 (LC 16), 5=68 (LC 15), 6=344 (LC 16), 7=285 (LC 1), 8=345 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-108/80, 2-3=-143/95, 3-4=-140/72, 4-5=-85/46
BOT CHORD 1-8=-25/72, 7-8=-25/72, 6-7=-25/72, 5-6=-25/72
WEBS 3-7=-200/23, 2-8=-280/180, 4-6=-280/180

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 6 lb uplift at joint 5, 138 lb uplift at joint 8 and 138 lb uplift at joint 6.

LOAD CASE(S) Standard

February 4,2022

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049392
B220013	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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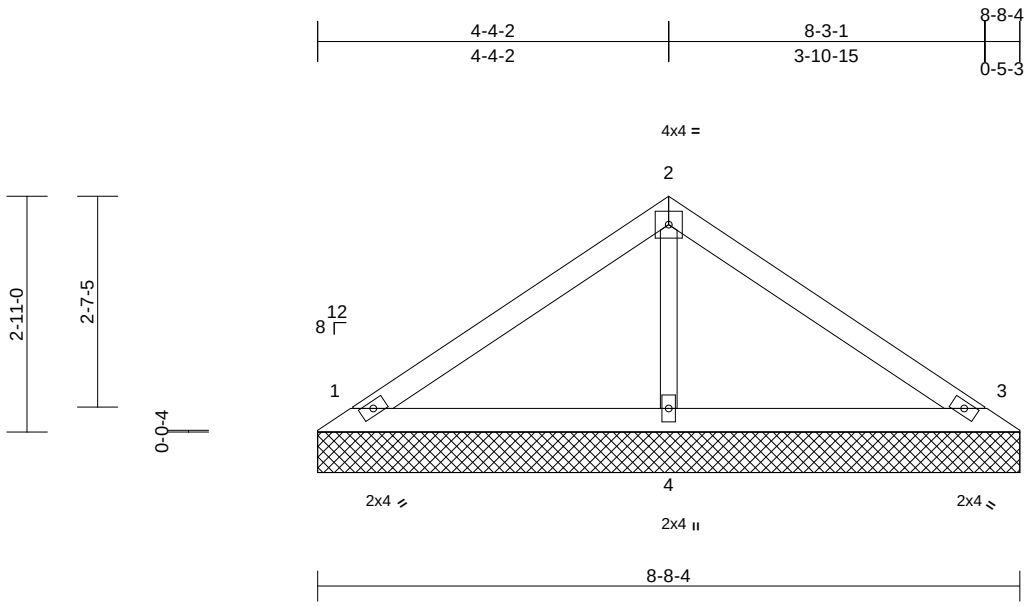

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2012/TPI2007	Matrix-P							Weight: 22 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=197/8-8-4, 3=197/8-8-4, 4=306/8-8-4
Max Horiz 1=-68 (LC 4)
Max Uplift 1=-43 (LC 8), 3=-52 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-122/62, 2-3=-118/47
BOT CHORD 1-4=-14/57, 3-4=-14/57
WEBS 2-4=-209/53

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 43 lb uplift at joint 1 and 52 lb uplift at joint 3.

LOAD CASE(S) Standard

February 4,2022

Job	Truss	Truss Type	Qty	Ply	Lot 141 CB	I50049393
B220013	V7	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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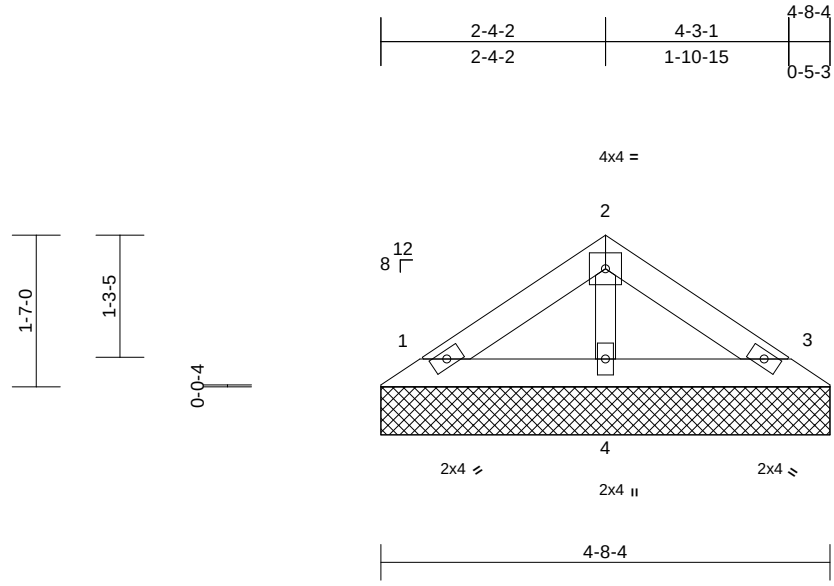


Scale = 1:24

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	IRC2012/TPI2007	Matrix-P							Weight: 11 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 4-9-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 1=96/4-8-4, 3=96/4-8-4, 4=149/4-8-4
Max Horiz 1=-33 (LC 4)
Max Uplift 1=-21 (LC 8), 3=-25 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-59/30, 2-3=-57/23
BOT CHORD 1-4=-7/28, 3-4=-7/28
WEBS 2-4=-102/26

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=115mph (3-second gust) V (IRC2012)=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 21 lb uplift at joint 1 and 25 lb uplift at joint 3.

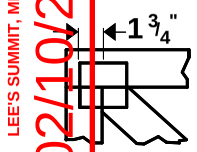
LOAD CASE(S) Standard

February 4,2022

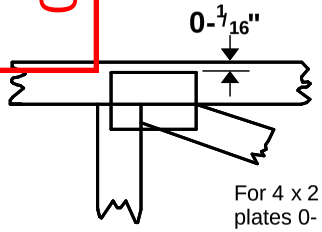
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

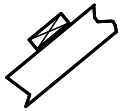
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

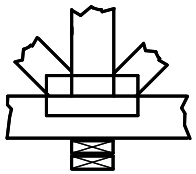
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

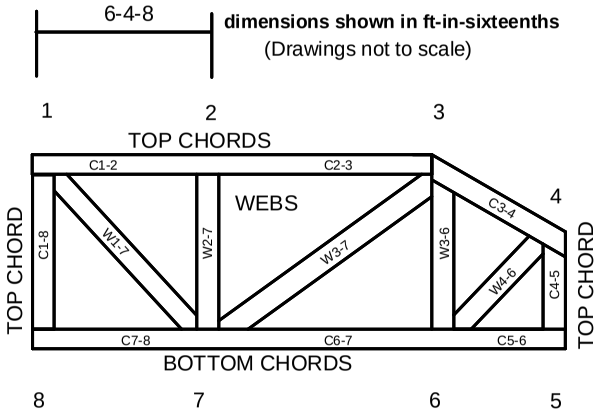


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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

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