MiTek®

RE: B240005
Lot 176 HT

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Customer: Summit Homes Project Name: B240005
Lot/Block: 176 Model: Sydney - Modern Prairie
Address: 3232 SW Arbor Sound Dr Subdivision: Hawthorn Ridge
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7 - 16[Low Rise] Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 107 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I59955056	A1	8/7/2023	21	I59955076	D1	8/7/2023
2	I59955057	A2	8/7/2023	22	I59955077	D2	8/7/2023
3	I59955058	A3	8/7/2023	23	I59955078	D3	8/7/2023
4	I59955059	A4	8/7/2023	24	I59955079	D4	8/7/2023
5	I59955060	A5	8/7/2023	25	I59955080	E1	8/7/2023
6	I59955061	A6	8/7/2023	26	I59955081	E2	8/7/2023
7	I59955062	B1	8/7/2023	27	I59955082	E3	8/7/2023
8	I59955063	B2	8/7/2023	28	I59955083	E4	8/7/2023
9	I59955064	B3	8/7/2023	29	I59955084	E5	8/7/2023
10	I59955065	B4	8/7/2023	30	I59955085	G1	8/7/2023
11	I59955066	C1	8/7/2023	31	I59955086	G2	8/7/2023
12	I59955067	C2	8/7/2023	32	I59955087	G3	8/7/2023
13	I59955068	C3	8/7/2023	33	I59955088	G4	8/7/2023
14	I59955069	C4	8/7/2023	34	I59955089	G5	8/7/2023
15	I59955070	C5	8/7/2023	35	I59955090	G6	8/7/2023
16	I59955071	C6	8/7/2023	36	I59955091	G7	8/7/2023
17	I59955072	C7	8/7/2023	37	I59955092	G8	8/7/2023
18	I59955073	C8	8/7/2023	38	I59955093	G9	8/7/2023
19	I59955074	C9	8/7/2023	39	I59955094	G10	8/7/2023
20	I59955075	C10	8/7/2023	40	I59955095	H1	8/7/2023

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

Truss Design Engineer's Name: Sevier, Scott

My license renewal date for the state of Missouri is December 31, 2025.

Missouri COA: 001193

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

August 07, 2023

Sevier, Scott

MiTek®

RE: B240005 - Lot 176 HT

MiTek, Inc.
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200

Site Information:

Project Customer: Summit Homes Project Name: B240005
Lot/Block: 176 Subdivision: Hawthorn Ridge
Address: 3232 SW Arbor Sound Dr
City, County: Lee's Summit State: MO

No.	Seal#	Truss Name	Date
41	I59955096	H2	8/7/2023
42	I59955097	H3	8/7/2023
43	I59955098	H4	8/7/2023
44	I59955099	J1	8/7/2023
45	I59955100	J2	8/7/2023
46	I59955101	J3	8/7/2023
47	I59955102	J4	8/7/2023
48	I59955103	J5	8/7/2023
49	I59955104	J6	8/7/2023
50	I59955105	J7	8/7/2023
51	I59955106	J8	8/7/2023
52	I59955107	J9	8/7/2023
53	I59955108	J10	8/7/2023
54	I59955109	J11	8/7/2023
55	I59955110	J12	8/7/2023
56	I59955111	J13	8/7/2023
57	I59955112	J14	8/7/2023
58	I59955113	J15	8/7/2023
59	I59955114	J16	8/7/2023
60	I59955115	J17	8/7/2023
61	I59955116	J18	8/7/2023
62	I59955117	J19	8/7/2023
63	I59955118	J20	8/7/2023
64	I59955119	J21	8/7/2023
65	I59955120	J22	8/7/2023
66	I59955121	J23	8/7/2023
67	I59955122	J24	8/7/2023
68	I59955123	J25	8/7/2023
69	I59955124	J26	8/7/2023
70	I59955125	J27	8/7/2023
71	I59955126	J28	8/7/2023
72	I59955127	J29	8/7/2023
73	I59955128	J30	8/7/2023
74	I59955129	J31	8/7/2023
75	I59955130	J32	8/7/2023
76	I59955131	J33	8/7/2023
77	I59955132	J34	8/7/2023
78	I59955133	J35	8/7/2023
79	I59955134	J36	8/7/2023
80	I59955135	J37	8/7/2023
81	I59955136	J38	8/7/2023
82	I59955137	J39	8/7/2023
83	I59955138	J40	8/7/2023
84	I59955139	J41	8/7/2023
85	I59955140	J42	8/7/2023
86	I59955141	J43	8/7/2023
87	I59955142	J44	8/7/2023
88	I59955143	J45	8/7/2023
89	I59955144	J46	8/7/2023
90	I59955145	J47	8/7/2023
91	I59955146	J48	8/7/2023
92	I59955147	LAY1	8/7/2023
93	I59955148	LAY2	8/7/2023
94	I59955149	LAY3	8/7/2023
95	I59955150	LAY4	8/7/2023
96	I59955151	LAY5	8/7/2023
97	I59955152	LAY6	8/7/2023
98	I59955153	R1	8/7/2023
99	I59955154	V1	8/7/2023
100	I59955155	V2	8/7/2023
101	I59955156	V3	8/7/2023
102	I59955157	V4	8/7/2023
103	I59955158	V5	8/7/2023
104	I59955159	V6	8/7/2023
105	I59955160	V7	8/7/2023
106	I59955161	V8	8/7/2023
107	I59955162	V9	8/7/2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955056
B240005	A1	Half Hip Supported	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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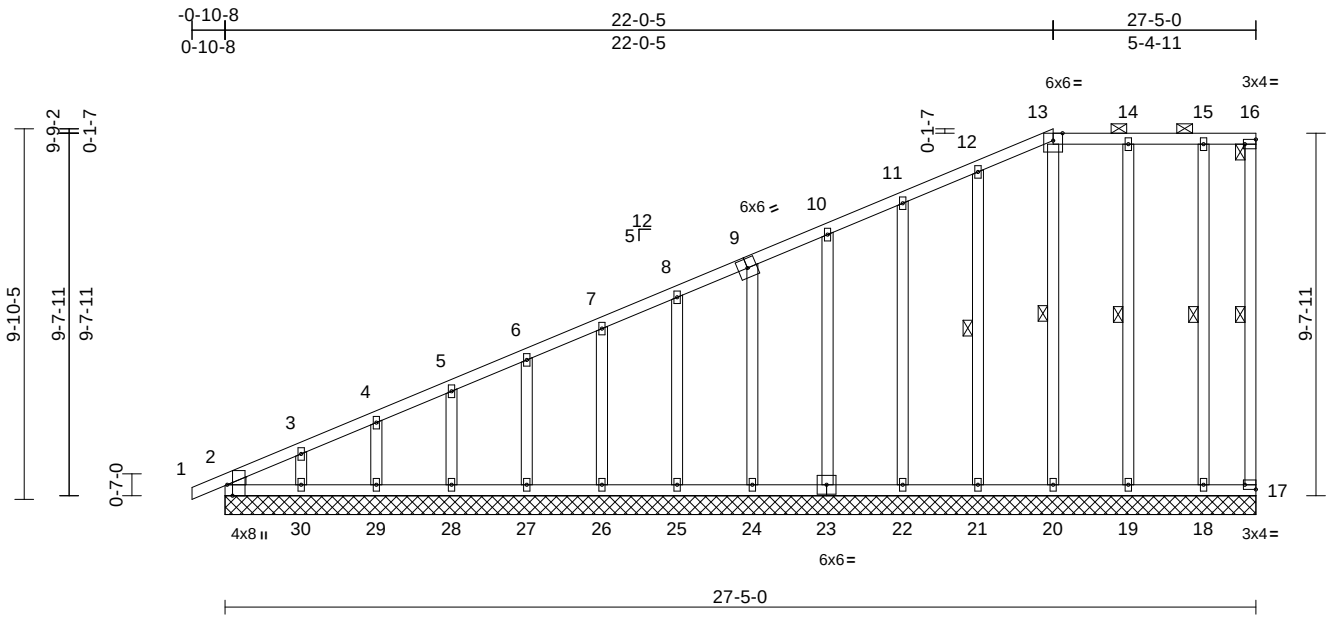

Scale = 1:61.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horz(CT)	-0.01	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 160 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
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=27-5-0, 17=27-5-0, 18=27-5-0, 19=27-5-0, 20=27-5-0, 21=27-5-0, 22=27-5-0, 23=27-5-0, 24=27-5-0, 25=27-5-0, 26=27-5-0, 27=27-5-0, 28=27-5-0, 29=27-5-0, 30=27-5-0
Max Horiz 2=409 (LC 5)
Max Uplift 17=-20 (LC 5), 18=-49 (LC 4), 19=-49 (LC 5), 20=-45 (LC 5), 21=-47 (LC 8), 22=-47 (LC 8), 23=-52 (LC 8), 24=-49 (LC 8), 25=-41 (LC 8), 26=-49 (LC 8), 27=-47 (LC 8), 28=-48 (LC 8), 29=-47 (LC 8), 30=-87 (LC 8)
Max Grav 2=212 (LC 16), 17=41 (LC 1), 18=155 (LC 22), 19=196 (LC 22), 20=167 (LC 1), 21=188 (LC 1), 22=177 (LC 1), 23=190 (LC 1), 24=179 (LC 1), 25=170 (LC 1), 26=182 (LC 1), 27=179 (LC 1), 28=180 (LC 1), 29=179 (LC 1), 30=184 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-364/37, 3-4=-315/30, 4-5=-291/28, 5-6=-266/25, 6-7=-242/23, 7-8=-224/22, 8-10=-211/30, 10-11=-183/51, 11-12=-169/78, 12-13=-152/102, 13-14=-132/102, 14-15=-132/101, 15-16=-132/101, 16-17=-101/94
BOT CHORD 2-30=-133/100, 29-30=-133/100, 28-29=-133/100, 27-28=-133/100, 26-27=-133/100, 25-26=-133/100, 24-25=-133/100, 22-24=-133/101, 21-22=-133/101, 20-21=-133/101, 19-20=-133/101, 18-19=-133/101, 17-18=-133/101
WEBS 13-20=-127/72, 12-21=-148/72, 11-22=-137/71, 10-23=-150/76, 9-24=-139/73, 8-25=-130/65, 7-26=-142/73, 6-27=-140/71, 5-28=-140/72, 4-29=-140/71, 3-30=-140/111, 14-19=-155/66, 15-18=-119/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 17, 45 lb uplift at joint 20, 47 lb uplift at joint 21, 47 lb uplift at joint 22, 52 lb uplift at joint 23, 49 lb uplift at joint 24, 41 lb uplift at joint 25, 49 lb uplift at joint 26, 47 lb uplift at joint 27, 48 lb uplift at joint 28, 47 lb uplift at joint 29, 87 lb uplift at joint 30, 49 lb uplift at joint 19 and 49 lb uplift at joint 18.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955057
B240005	A2	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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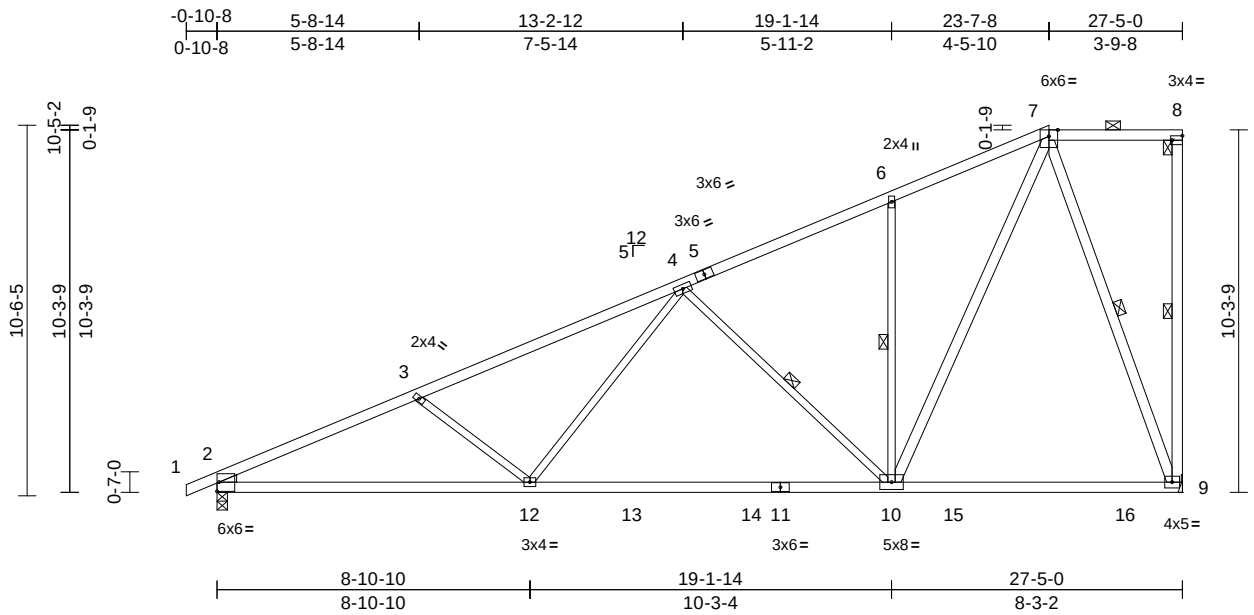

Scale = 1:65.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.25	10-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.44	10-12	>738	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	2-12	>999	240	Weight: 123 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 8-9,10-7,9-7:2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 9= Mechanical
Max Horiz 2=438 (LC 5)
Max Uplift 2=-208 (LC 8), 9=-206 (LC 8)
Max Grav 2=1351 (LC 2), 9=1341 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-2488/397, 3-4=-2229/319, 4-6=-1138/207, 6-7=-1099/296, 7-8=-147/111, 8-9=-123/79
BOT CHORD 2-12=-509/2212, 10-12=-296/1550, 9-10=-144/407
WEBS 3-12=-392/245, 4-12=-35/718, 4-10=-817/277, 6-10=-342/185, 7-10=-296/1386, 7-9=-1172/225

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 206 lb uplift at joint 9 and 208 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955058
B240005	A3	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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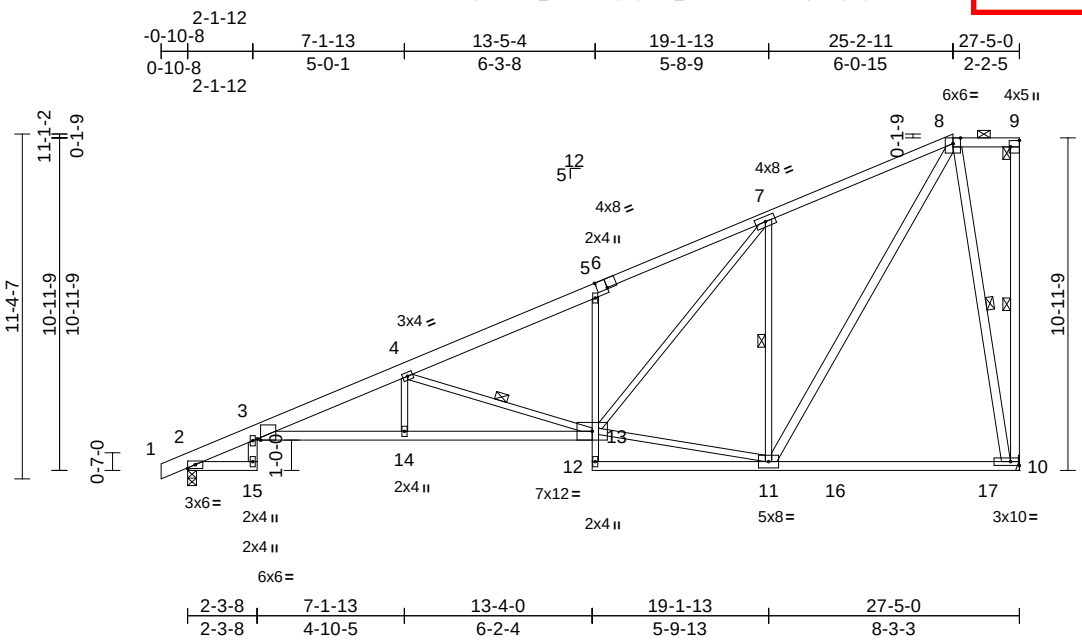

Scale = 1:75.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.36	3-14	>909	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.63	3-14	>518	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.36	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.30	3-14	>999	240	Weight: 153 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-6:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 3-13:2x4 SPF 2100F 1.8E, 5-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-10,15-3,8-11,10-8:2x4 SPF No.2

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

REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=470 (LC 5)
Max Uplift 2=-207 (LC 8), 10=-237 (LC 8)
Max Grav 2=1324 (LC 2), 10=1319 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-871/0, 3-4=-3439/567, 4-5=-2051/337, 5-7=-1994/441, 7-8=-1089/318, 8-9=-160/117, 9-10=-88/79
BOT CHORD 2-15=0/0, 3-14=-695/3303, 13-14=-694/3302, 12-13=0/77, 5-13=-335/193, 11-12=-24/52, 10-11=-127/228
WEBS 3-15=-4/91, 4-14=0/269, 4-13=-1586/384, 11-13=-149/920, 7-13=-348/1380, 7-11=-1145/407, 8-11=-350/1444, 8-10=-1145/247

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 237 lb uplift at joint 10 and 207 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955059
B240005	A4	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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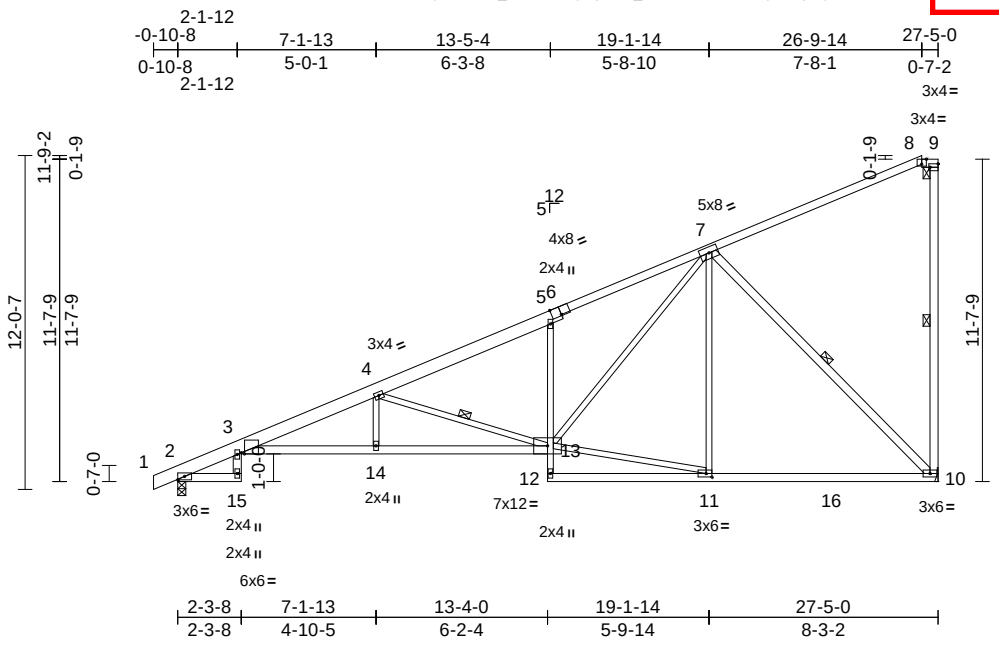

Scale = 1:83.1

Plate Offsets (X, Y): [3:0-1-6,Edge], [6:0-4-0,Edge], [8:0-2-0,Edge], [9:Edge,0-1-8], [11:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.35	3-14	>919	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.62	3-14	>525	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.36	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.33	3-14	>986	240	Weight: 141 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-6:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 3-13:2x4 SPF 2100F 1.8E, 5-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-10,15-3,10-7:2x4 SPF No.2

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

REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=470 (LC 8)
Max Uplift 2=-155 (LC 8), 10=-317 (LC 8)
Max Grav 2=1329 (LC 2), 10=1305 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-708/0, 3-4=-3463/508, 4-5=-2058/232, 5-7=-1982/322, 7-8=-140/46, 8-9=-44/19, 9-10=-244/113
BOT CHORD 2-15=0/0, 3-14=-893/3326, 13-14=-893/3326, 12-13=0/77, 5-13=-277/161, 11-12=-27/48, 10-11=-243/965
WEBS 3-15=-8/91, 4-14=0/268, 4-13=-1608/446, 11-13=-220/951, 7-13=-366/1340, 7-11=0/303, 7-10=-1354/341

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 317 lb uplift at joint 10 and 155 lb uplift at joint 2.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955060
B240005	A5	Monopitch	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:18 Page: 1
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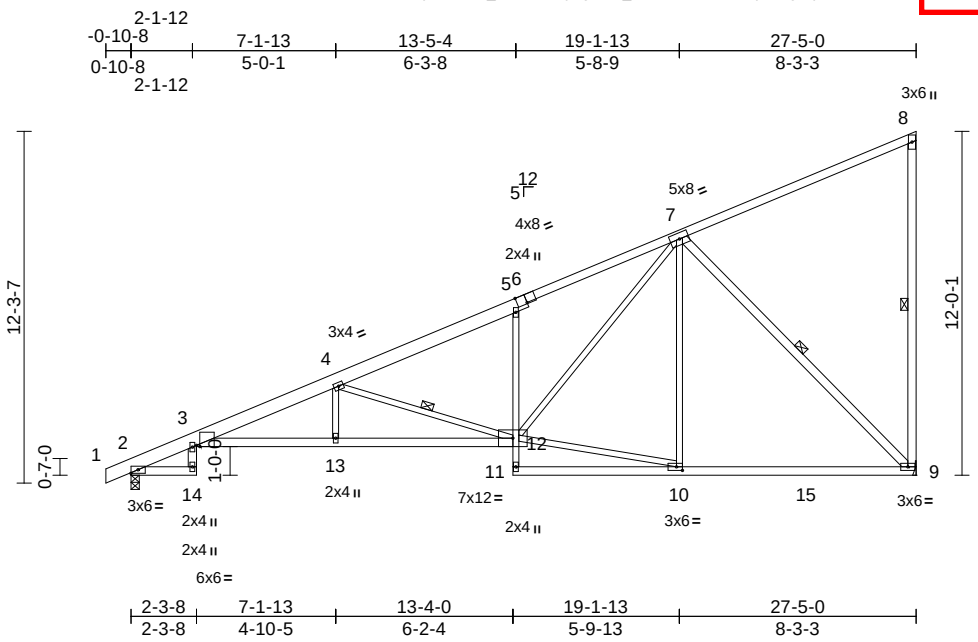

Scale = 1:80.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.35	3-13	>919	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.62	3-13	>525	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.84	Horz(CT)	0.36	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.33	3-13	>985	240	Weight: 142 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-6:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 3-12:2x4 SPF 2100F 1.8E, 5-11:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-9,14-3,9-7:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 8-9, 4-12, 7-9

REACTIONS (size) 2=0-3-8, 9= Mechanical
Max Horiz 2=481 (LC 8)
Max Uplift 2=-150 (LC 8), 9=-329 (LC 8)
Max Grav 2=1329 (LC 2), 9=1305 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/12, 2-3=-714/0, 3-4=-3463/497, 4-5=-2057/220, 5-7=-1981/309, 7-8=-147/81, 8-9=-241/124
BOT CHORD 2-14=0/0, 3-13=-895/3326, 12-13=-894/3326, 11-12=0/77, 5-12=-273/159, 10-11=-27/47, 9-10=-245/967
WEBS 3-14=-8/91, 4-13=0/268, 4-12=-1610/447, 10-12=-221/953, 7-12=-364/1336, 7-10=0/304, 7-9=-1360/344

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 329 lb uplift at joint 9 and 150 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	A6	Monopitch	1	1	I59955061 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:14 Page: 1

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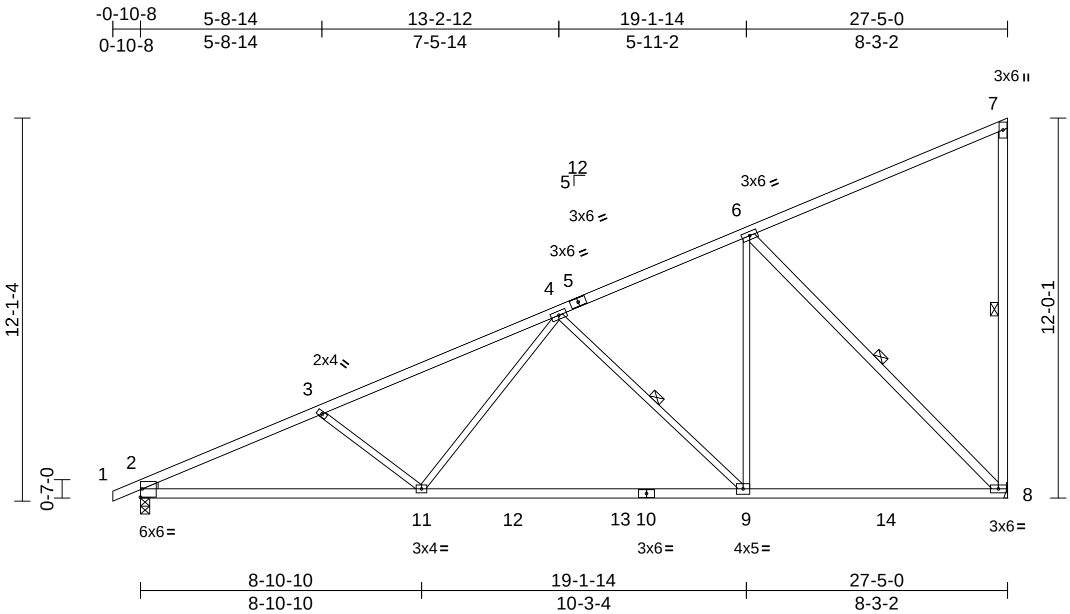

Scale = 1:72.8

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

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	0.82	Vert(LL)	-0.26	9-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.45	9-11	>721	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	9-11	>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* 7-8,8-6:2x4 SPF No.2

WEDGE Left: 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-7-10 oc bracing.
WEBS 1 Row at midpt 7-8, 4-9, 6-8

REACTIONS (size) 2=0-3-8, 8= Mechanical
Max Horiz 2=478 (LC 8)
Max Uplift 2=-150 (LC 8), 8=-329 (LC 8)
Max Grav 2=1355 (LC 2), 8=1330 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-2503/266, 3-4=-2238/181, 4-6=-1143/65, 6-7=-144/83, 7-8=-245/126
BOT CHORD 2-11=-656/2227, 9-11=-422/1549, 8-9=-239/1001
WEBS 3-11=-407/259, 4-11=-51/728, 4-9=-766/256, 6-9=-56/969, 6-8=-1412/336

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 329 lb uplift at joint 8 and 150 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955062
B240005	B1	Monopitch	7	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:14 Page: 1
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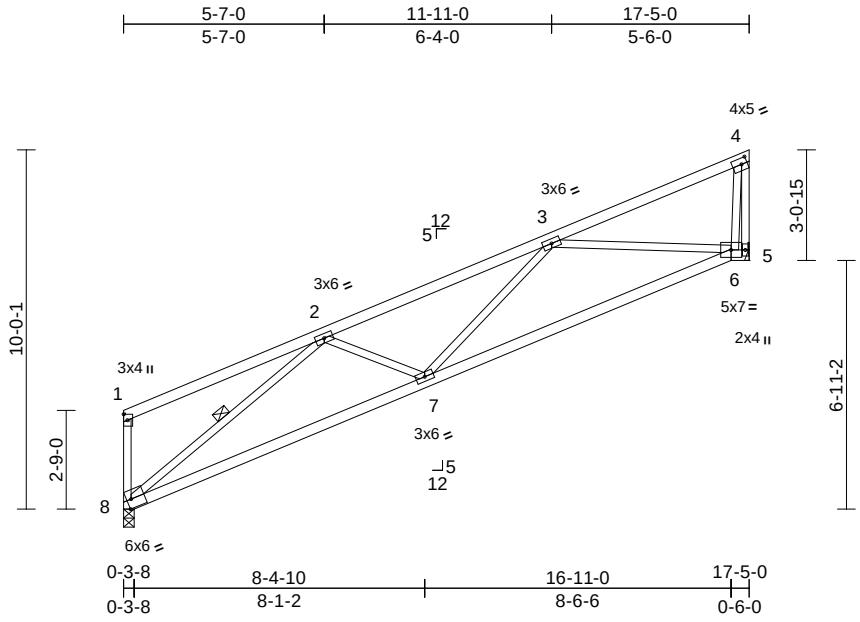

Scale = 1:64.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.13	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.29	6-7	>713	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.05	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	6-7	>999	240	Weight: 65 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-4-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-8

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Horiz 8=231 (LC 5)
Max Uplift 5=-89 (LC 8)
Max Grav 5=774 (LC 1), 8=774 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-180/42, 1-2=-105/56, 2-3=-1497/115, 3-4=-224/5, 4-5=-793/15
BOT CHORD 7-8=-287/1330, 6-7=-227/1302, 5-6=-28/28
WEBS 2-8=-1542/135, 2-7=0/254, 3-7=0/378, 3-6=-1053/210, 4-6=0/710

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
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) Bearing at joint(s) 8 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 89 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955063
B240005	B2	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:14 Page: 1
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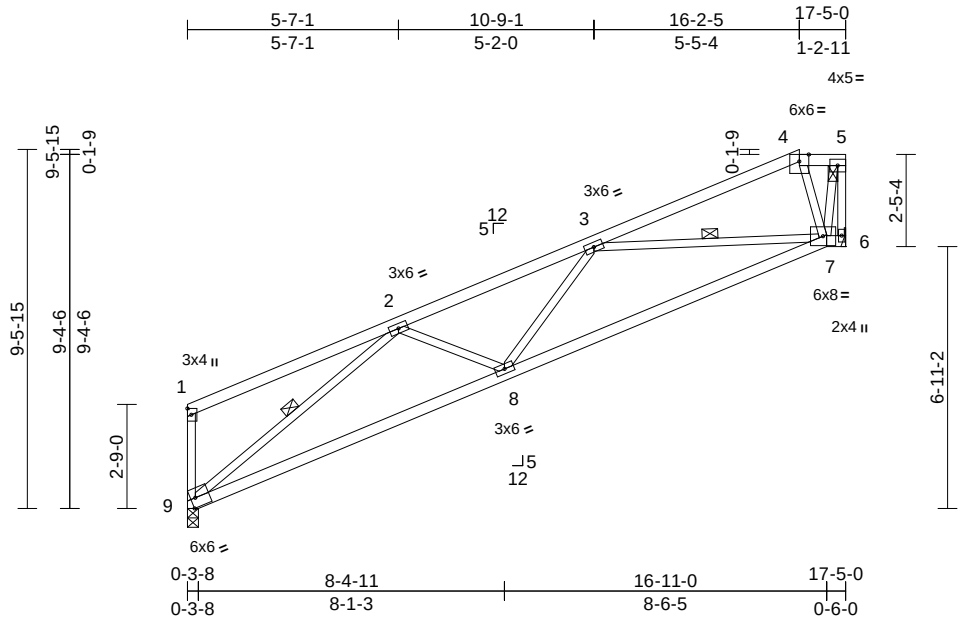

Scale = 1:61

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.13	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.28	7-8	>727	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.05	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	7-8	>999	240	Weight: 66 lb	FT = 20%

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

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

REACTIONS (size) 6= Mechanical, 9=0-3-8
Max Horiz 9=211 (LC 5)
Max Uplift 6=-74 (LC 8)
Max Grav 6=774 (LC 1), 9=774 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-9=-190/45, 1-2=-112/57, 2-3=-1508/115, 3-4=-327/23, 4-5=-170/19, 5-6=-822/0
BOT CHORD 8-9=-275/1311, 7-8=-228/1413, 6-7=-20/21
WEBS 2-9=-1514/129, 2-8=0/267, 3-8=0/282, 3-7=-1047/184, 4-7=-191/63, 5-7=-16/857

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) 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 74 lb uplift at joint 6.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955064
B240005	B3	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:15 Page: 1
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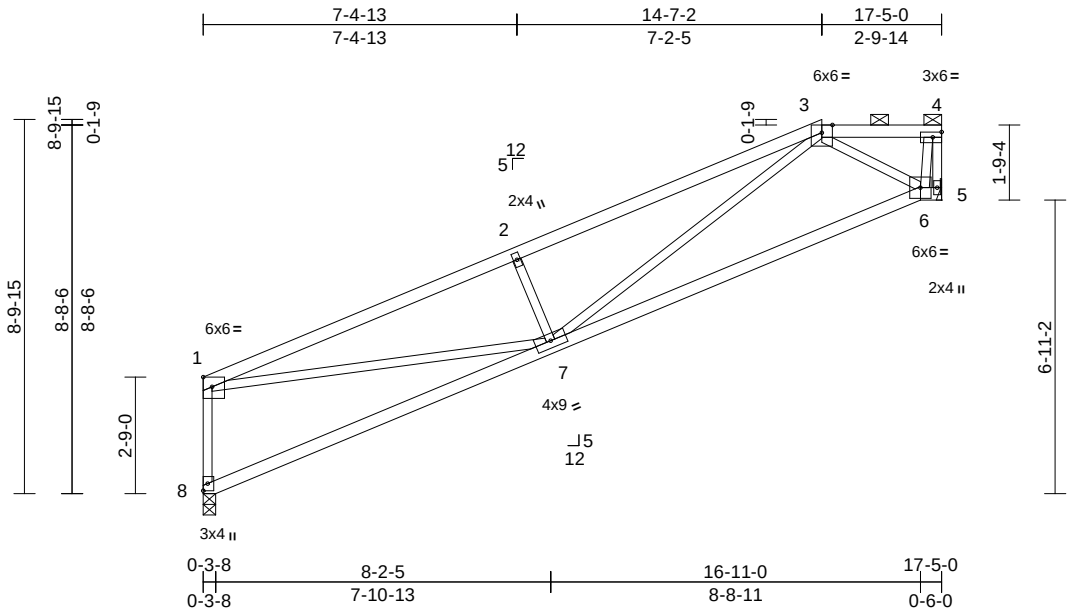

Scale = 1:54.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.14	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.32	6-7	>653	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	6-7	>999	240	Weight: 64 lb	FT = 20%

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

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

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Horiz 8=239 (LC 5)
Max Uplift 5=-162 (LC 8), 8=-79 (LC 8)
Max Grav 5=774 (LC 1), 8=774 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-8=-726/202, 1-2=-1825/405, 2-3=-1629/437, 3-4=-238/37, 4-5=-857/79
BOT CHORD 7-8=-246/118, 6-7=-246/821, 5-6=-18/23
WEBS 1-7=-313/1560, 2-7=-524/276, 3-7=-266/871, 3-6=-591/238, 4-6=-87/827

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Bearing at joint(s) 8 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 79 lb uplift at joint 8 and 162 lb uplift at joint 5.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	B4	Half Hip Girder	1	2	Job Reference (optional) I59955065

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:16 Page: 1
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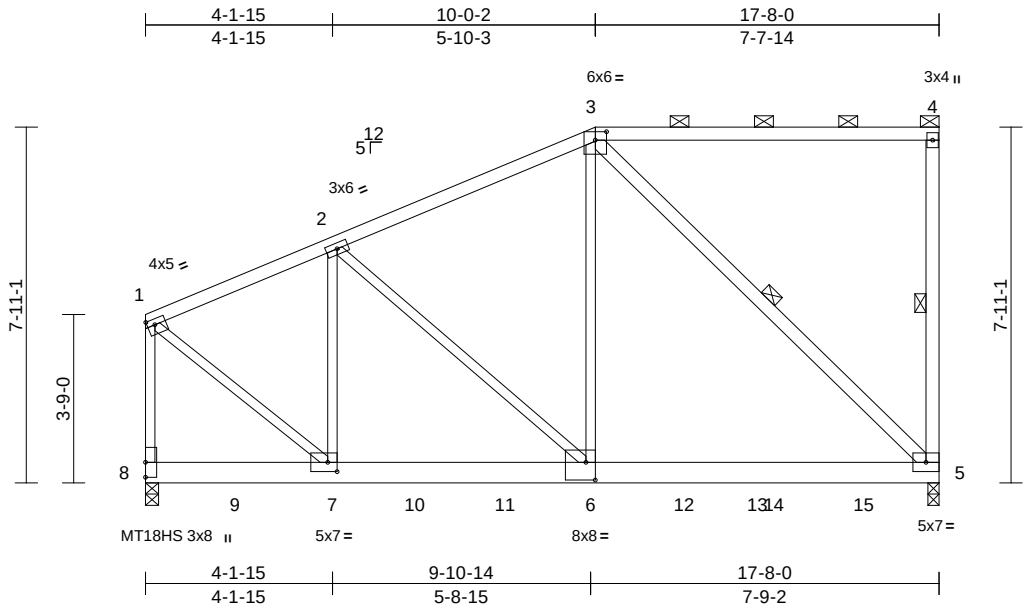

Scale = 1:51.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.15	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.27	5-6	>765	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	5-6	>999	240	Weight: 190 lb	FT = 20%

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

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

REACTIONS (size) 5=0-3-0, 8=0-3-8
Max Horiz 8=311 (LC 22)
Max Uplift 5=-416 (LC 5), 8=-324 (LC 8)
Max Grav 5=3512 (LC 1), 8=3392 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2620/256, 2-3=-2651/295, 3-4=-120/87, 4-5=-259/111, 1-8=-3083/318
BOT CHORD 7-8=-285/75, 6-7=-399/2378, 5-6=-338/2337
WEBS 2-7=-368/124, 2-6=-35/123, 3-6=-214/2809, 3-5=-3238/373, 1-7=-291/3077

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc, 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) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 416 lb uplift at joint 5 and 324 lb uplift at joint 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 667 lb down and 52 lb up at 9-7-3, 667 lb down and 58 lb up at 11-7-3, 667 lb down and 58 lb up at 13-7-3, 667 lb down and 58 lb up at 15-7-3, 667 lb down and 58 lb up at 17-7-3, 667 lb down and 58 lb up at 19-7-3, and 667 lb down and 58 lb up at 21-7-3, and 667 lb down and 58 lb up at 23-7-3 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: 1-3=-70, 3-4=-70, 5-8=-20
Concentrated Loads (lb)
Vert: 7=-667 (B), 6=-667 (B), 9=-667 (B), 10=-667 (B), 11=-667 (B), 12=-667 (B), 14=-667 (B), 15=-667 (B)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C1	HALF HIP GIRDER	1	2	Job Reference (optional) I59955066

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:16 Page: 1
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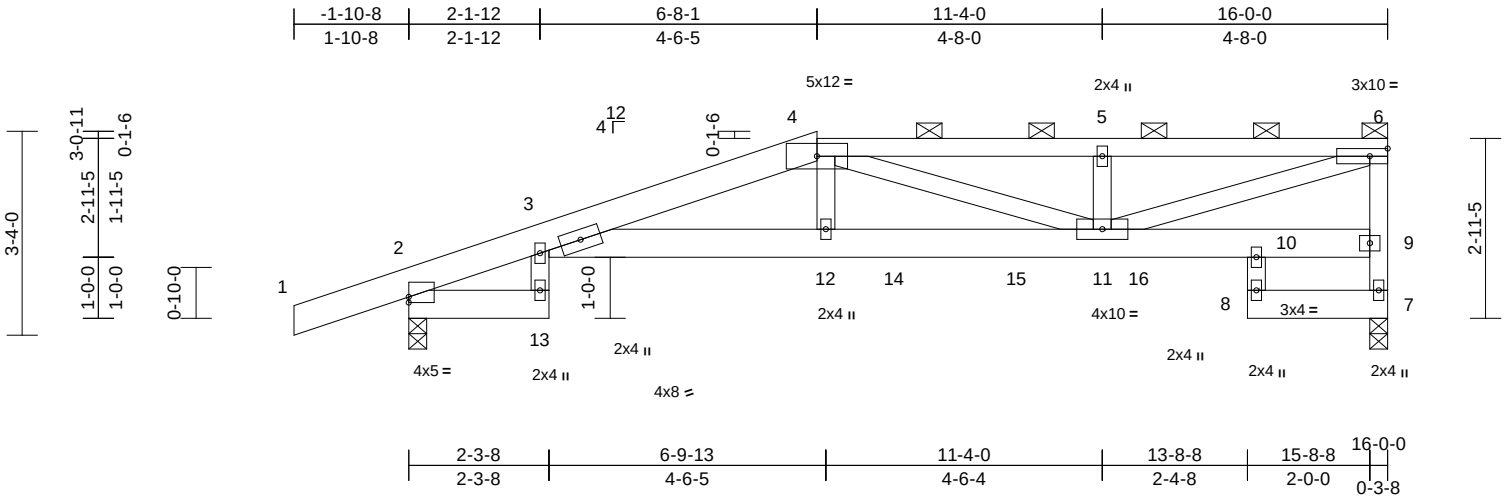

Scale = 1:37.7

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

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	0.72	Vert(LL)	-0.16	3-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.28	3-12	>677	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.41	Horz(CT)	0.19	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	3-12	>999	240	Weight: 152 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.4E *Except* 4-6:2x4 SPF No.2
BOT CHORD 2x6 SPF No.2 *Except* 10-8:2x4 SPF No.2
WEBS 2x4 SPF No.2

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

REACTIONS (size) 2=0-3-8, 7=0-3-8
Max Horiz 2=120 (LC 26)
Max Uplift 2=-394 (LC 4), 7=-390 (LC 4)
Max Grav 2=1405 (LC 1), 7=1518 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/18, 2-3=-681/138, 3-4=-4262/1092, 4-5=-3374/896, 5-6=-3374/896, 7-9=-1475/395, 6-9=-1264/350
BOT CHORD 2-13=0/0, 3-12=-1056/4092, 11-12=-1076/4185, 10-11=-88/209, 9-10=-94/226, 8-10=-4/25, 7-8=-17/13
WEBS 3-13=-40/211, 4-12=-214/986, 4-11=-856/243, 5-11=-317/164, 6-11=-874/3350

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 390 lb uplift at joint 7 and 394 lb uplift at joint 2.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 450 lb down and 145 lb up at 6-8-1, 230 lb down and 73 lb up at 7-11-4, 230 lb down and 73 lb up at 9-11-4, and 230 lb down and 73 lb up at 11-11-4, and 230 lb down and 71 lb up at 13-10-4 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, 2-13=-20, 3-10=-20, 7-8=-20
Concentrated Loads (lb)
Vert: 10=-230 (F), 12=-450 (F), 14=-230 (F), 15=-230 (F), 16=-230 (F)

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955067
B240005	C2	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:16 Page: 1
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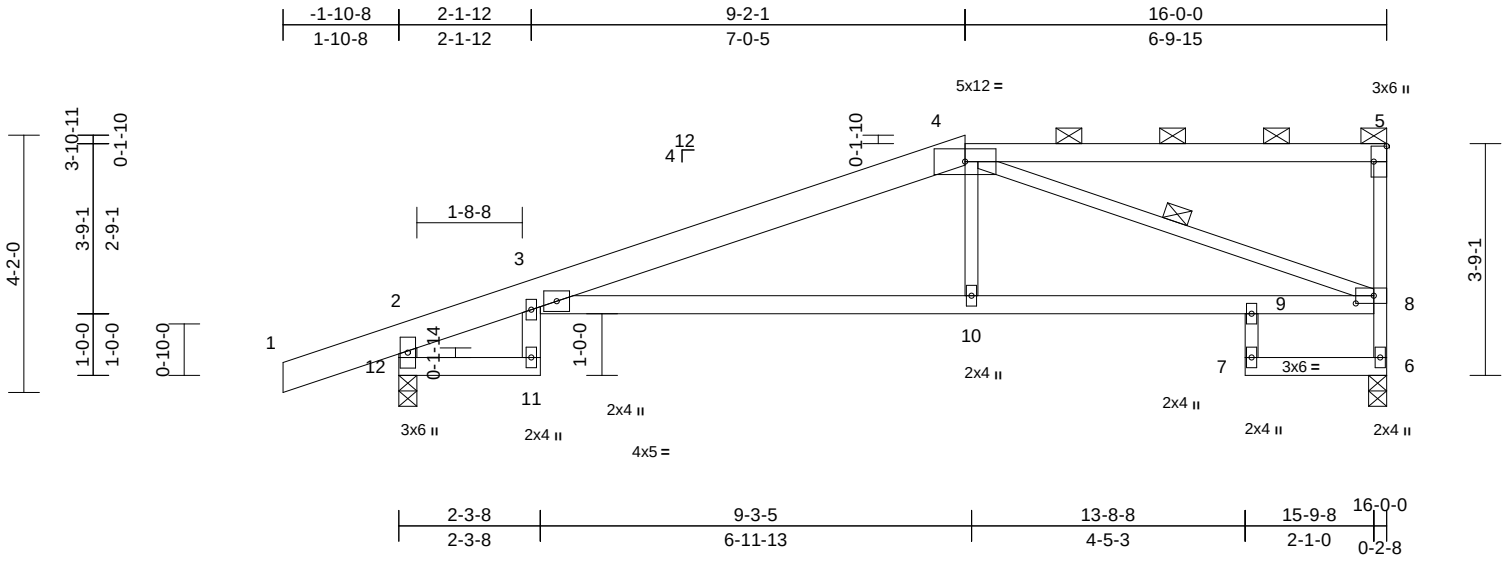

Scale = 1:37.3

Plate Offsets (X, Y): [3:0-0-11,0-0-15], [5:Edge,0-2-8], [8:0-3-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.28	3-10	>670	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.55	3-10	>342	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.60	Horz(CT)	0.32	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.24	3-10	>789	240	Weight: 61 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.4E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-7:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 11-3,12-2:2x4 SPF No.2

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

REACTIONS (size) 6=0-3-8, 12=0-3-8
Max Horiz 12=166 (LC 5)
Max Uplift 6=-134 (LC 4), 12=-216 (LC 4)
Max Grav 6=700 (LC 1), 12=859 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-263/11, 3-4=-1296/218, 4-5=-64/35, 6-8=-673/147, 5-8=-221/89, 2-12=-857/235
BOT CHORD 11-12=0/0, 3-10=-212/1223, 9-10=-207/1229, 8-9=-214/1232, 7-9=0/34, 6-7=-6/10
WEBS 3-11=-3/52, 4-10=0/317, 4-8=-1250/226

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 6 and 216 lb uplift at joint 12.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	C3	Half Hip	1	**2**	Job Reference (optional)	I59955068

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:17 Page: 1

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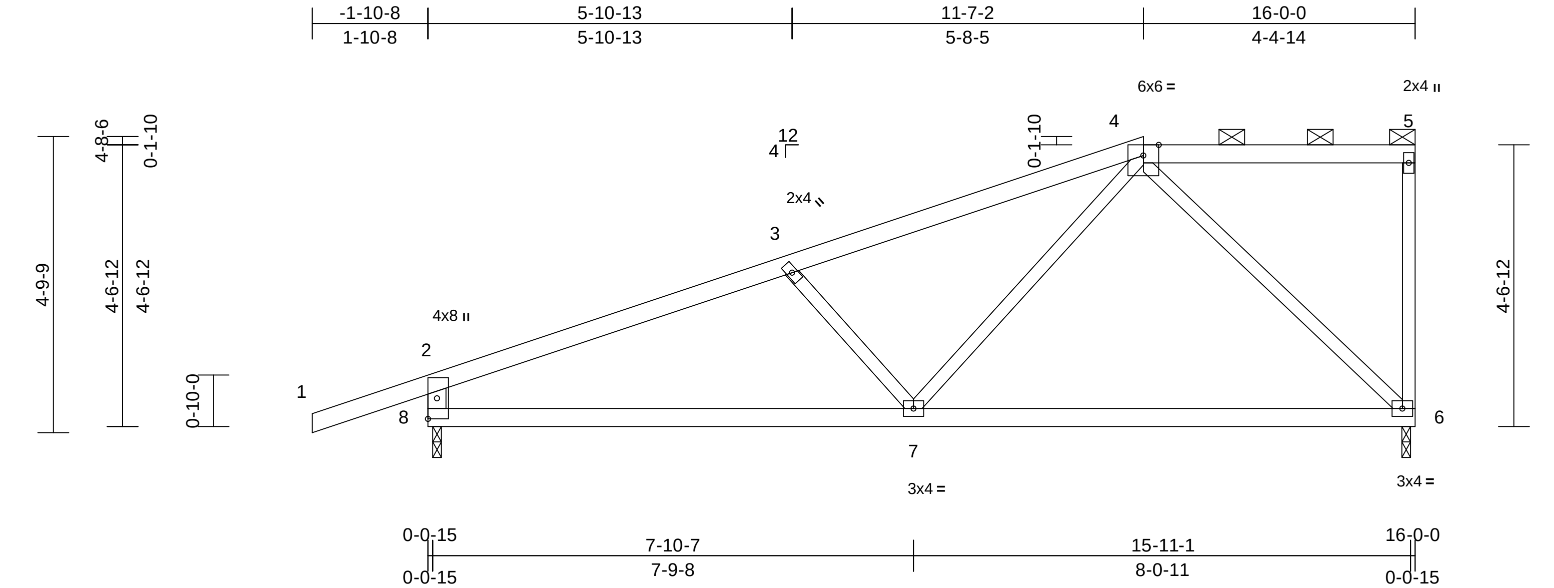

Scale = 1:37.4

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	0.47	Vert(LL)	-0.06	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.14	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	6-7	>999	240	Weight: 110 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x4 SPF No.2

BRACING

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

REACTIONS (size) 6=0-1-11, 8=0-1-11
Max Horiz 8=200 (LC 7)
Max Uplift 6=-138 (LC 4), 8=-212 (LC 4)
Max Grav 6=700 (LC 1), 8=859 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/45, 2-3=-1169/214, 3-4=-929/168, 4-5=-67/47, 5-6=-142/57, 2-8=-764/245
BOT CHORD 7-8=-209/1024, 6-7=-121/504
WEBS 3-7=-305/194, 4-7=-45/504, 4-6=-696/169

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 6, 8.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 6 and 212 lb uplift at joint 8.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C4	Half Hip	1	1	I59955069 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:17 Page: 1

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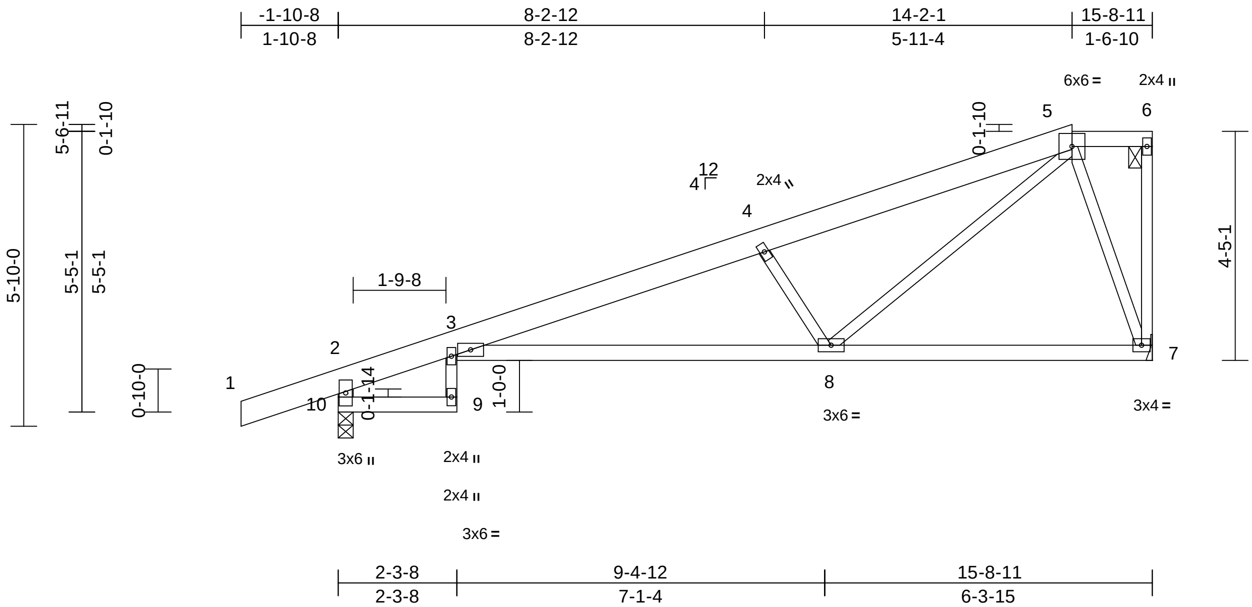

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Plate Offsets (X, Y): [3:0-0-3,0-0-7]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.22	3-8	>852	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.45	3-8	>409	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.22	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	3-8	>999	240	Weight: 64 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SPF No.2 *Except* 5-6:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 9-3:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x4 SPF No.2

BRACING

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

REACTIONS (size) 7= Mechanical, 10=0-3-8
Max Horiz 10=168 (LC 5)
Max Uplift 7=-40 (LC 4), 10=-89 (LC 4)
Max Grav 7=687 (LC 1), 10=847 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/45, 2-3=-284/0, 3-4=-1524/95, 4-5=-1212/78, 5-6=-55/37, 6-7=-50/13, 2-10=-851/106
BOT CHORD 9-10=-5/11, 3-9=-4/60, 3-8=-109/1459, 7-8=-39/216
WEBS 4-8=-723/151, 5-8=-52/1136, 5-7=-644/60

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 7 and 89 lb uplift at joint 10.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C5	Monopitch	7	1	I59955070 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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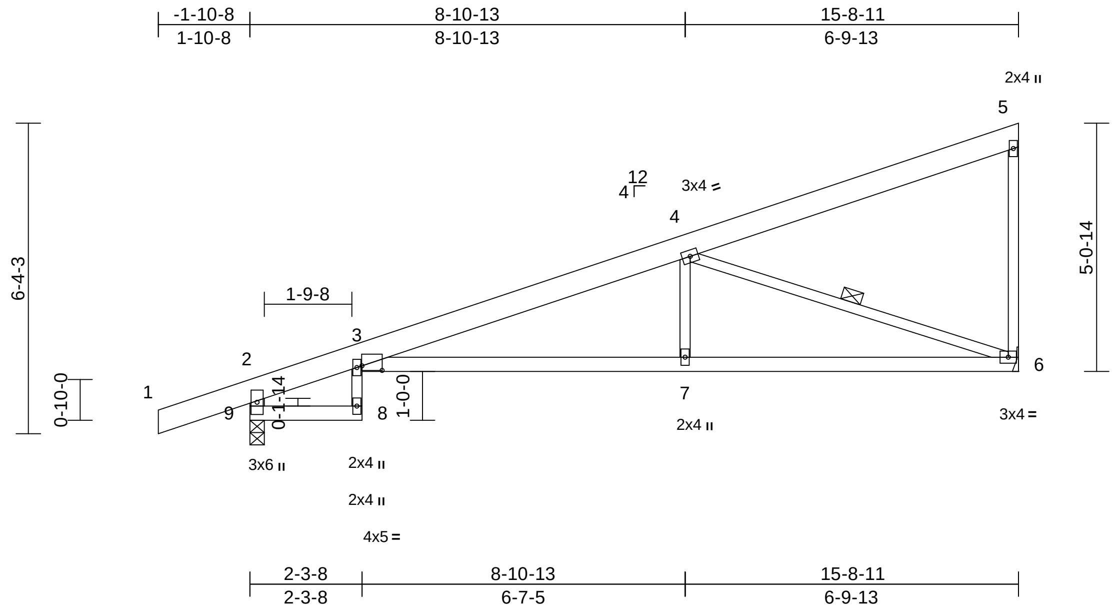

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Plate Offsets (X, Y): [3:0-4-15,0-1-2]

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	1.00	Vert(LL)	-0.25	3-7	>758	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.48	3-7	>389	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.69	Horz(CT)	0.25	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.16	3-7	>999	240	Weight: 63 lb	FT = 20%

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

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

REACTIONS (size) 6= Mechanical, 9=0-3-8
Max Horiz 9=186 (LC 5)
Max Uplift 6=-46 (LC 8), 9=-87 (LC 4)
Max Grav 6=687 (LC 1), 9=847 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-297/0, 3-4=-1416/64, 4-5=-138/28, 5-6=-155/40, 2-9=-851/105
BOT CHORD 8-9=-6/11, 3-8=-5/60, 3-7=-82/1344, 6-7=-81/1344
WEBS 4-7=0/311, 4-6=-1421/124

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 6 and 87 lb uplift at joint 9.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C6	Monopitch	3	1	I59955071 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,
Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:18 Page: 1
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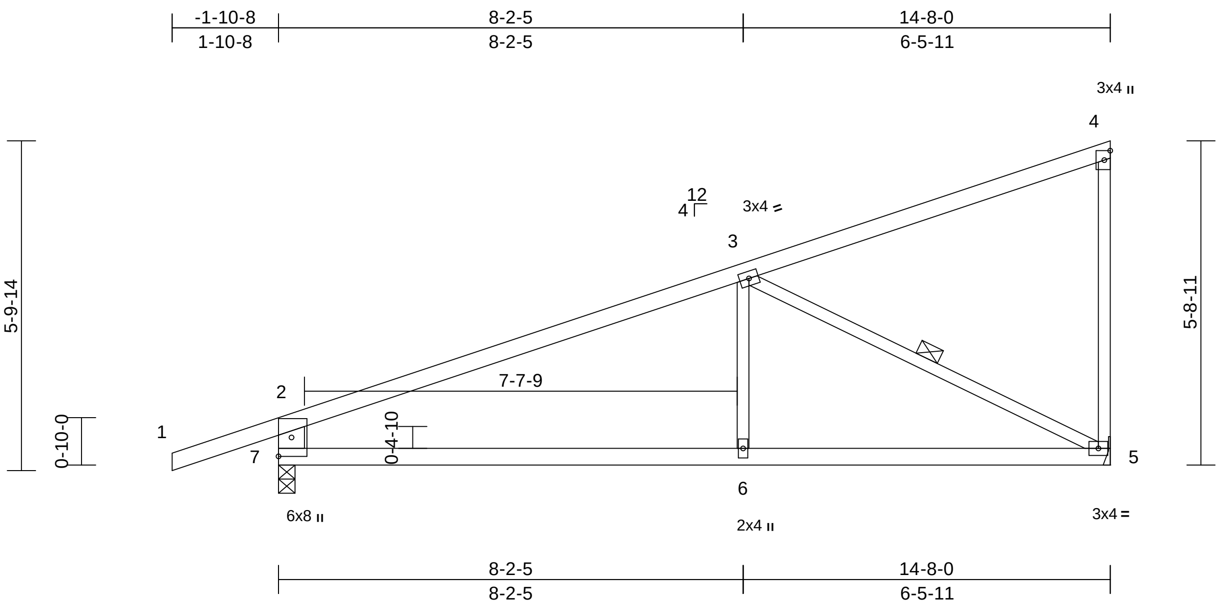

Scale = 1:40.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.09	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.18	6-7	>934	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.43	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	5-6	>999	240	Weight: 50 lb	FT = 10%

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=190 (LC 5)
Max Uplift 5=-43 (LC 8), 7=-89 (LC 4)
Max Grav 5=634 (LC 1), 7=803 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-928/38, 3-4=-134/36, 4-5=-179/35, 2-7=-715/134
BOT CHORD 6-7=-49/789, 5-6=-49/789
WEBS 3-6=0/317, 3-5=-873/89

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 43 lb uplift at joint 5 and 89 lb uplift at joint 7.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C7	Monopitch	5	1	Job Reference (optional) I59955072

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:13 Page: 1
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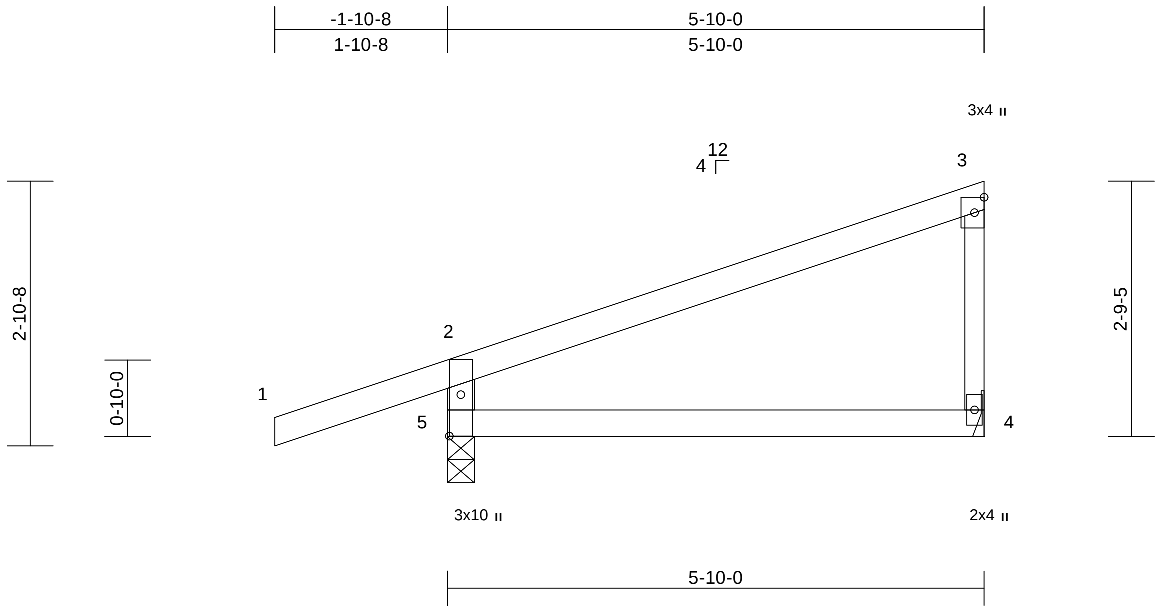

Scale = 1:25

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

Loading	(psf)	**Spacing**	2-0-0	**CSI**		**DEFL**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.04	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.08	4-5	>846	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 18 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=120 (LC 5)
Max Uplift 4=-49 (LC 8), 5=-138 (LC 4)
Max Grav 4=226 (LC 1), 5=418 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/45, 2-3=-121/15, 3-4=-163/75, 2-5=-370/176
BOT CHORD 4-5=-28/38

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 4 and 138 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C8	Half Hip	1	1	Job Reference (optional) I59955073

Wheeler Lumber, Waverly, KS - 66871,

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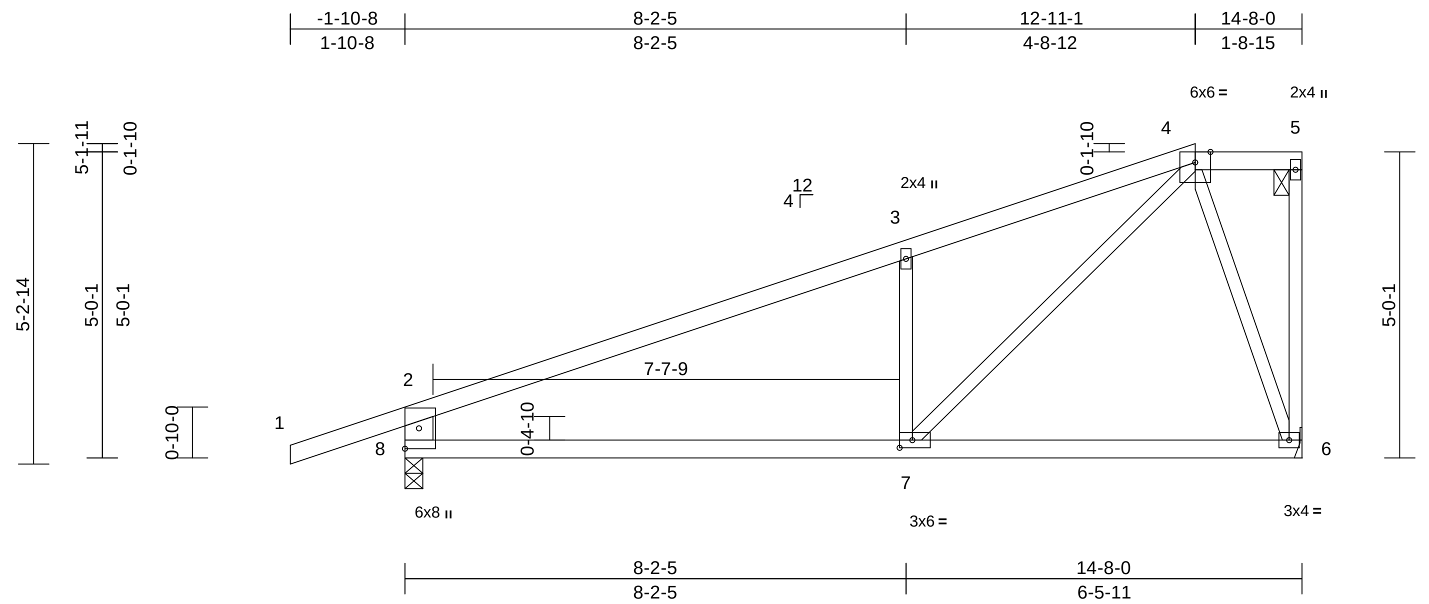

Scale = 1:37.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.09	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.18	7-8	>933	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	6-7	>999	240	Weight: 52 lb	FT = 10%

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

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

REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=220 (LC 5)
Max Uplift 6=-129 (LC 4), 8=-201 (LC 4)
Max Grav 6=634 (LC 1), 8=803 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-913/142, 3-4=-873/232, 4-5=-72/53, 5-6=-51/35, 2-8=-718/247
BOT CHORD 7-8=-141/772, 6-7=-71/191
WEBS 3-7=-439/240, 4-7=-210/826, 4-6=-573/133

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 129 lb uplift at joint 6 and 201 lb uplift at joint 8.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	C9	Roof Special	1	1	I59955074 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:19 Page: 1

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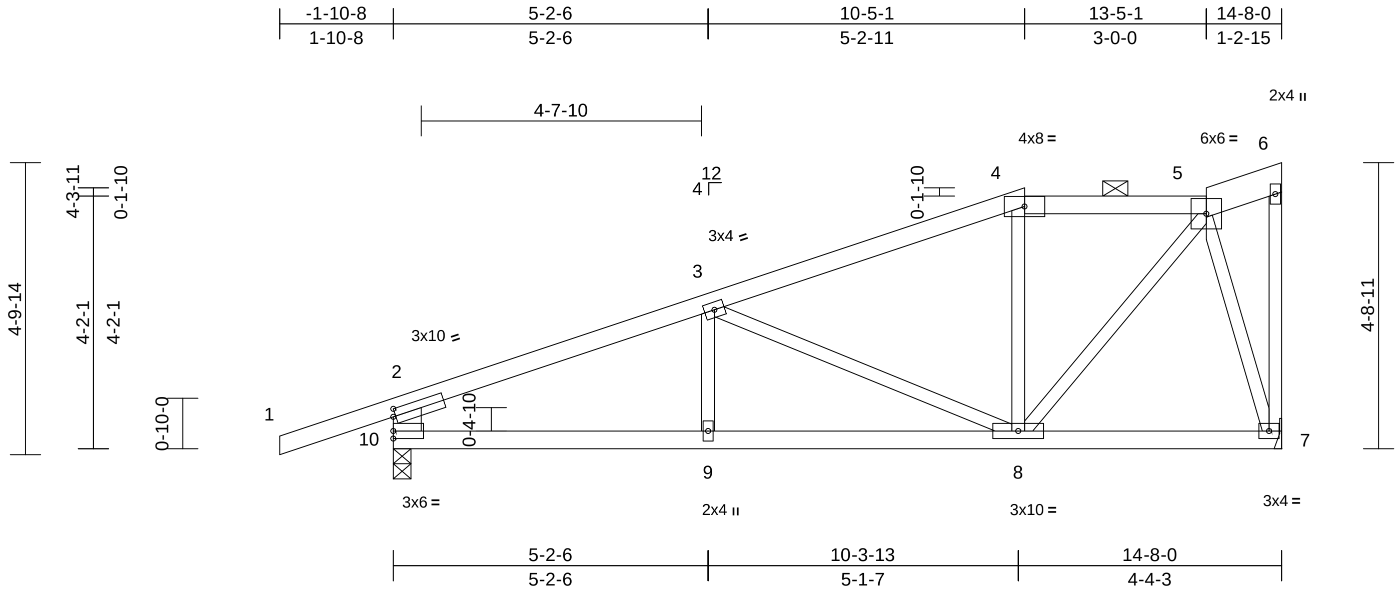

Scale = 1:38.1

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

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	0.82	Vert(LL)	-0.09	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.16	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	8-9	>999	240	Weight: 58 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 5-6:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2:2x6 SP DSS

BRACING

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

REACTIONS (size) 7= Mechanical, 10=0-3-8
Max Horiz 10=203 (LC 5)
Max Uplift 7=-130 (LC 8), 10=-204 (LC 4)
Max Grav 7=634 (LC 1), 10=803 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-998/169, 3-4=-584/119, 4-5=-522/138, 5-6=-65/39, 6-7=-31/17, 2-10=-697/219
BOT CHORD 9-10=-180/869, 8-9=-180/869, 7-8=-50/170
WEBS 3-9=0/159, 3-8=-385/125, 4-8=-151/89, 5-8=-110/563, 5-7=-600/144

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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 130 lb uplift at joint 7 and 204 lb uplift at joint 10.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955075
B240005	C10	Roof Special Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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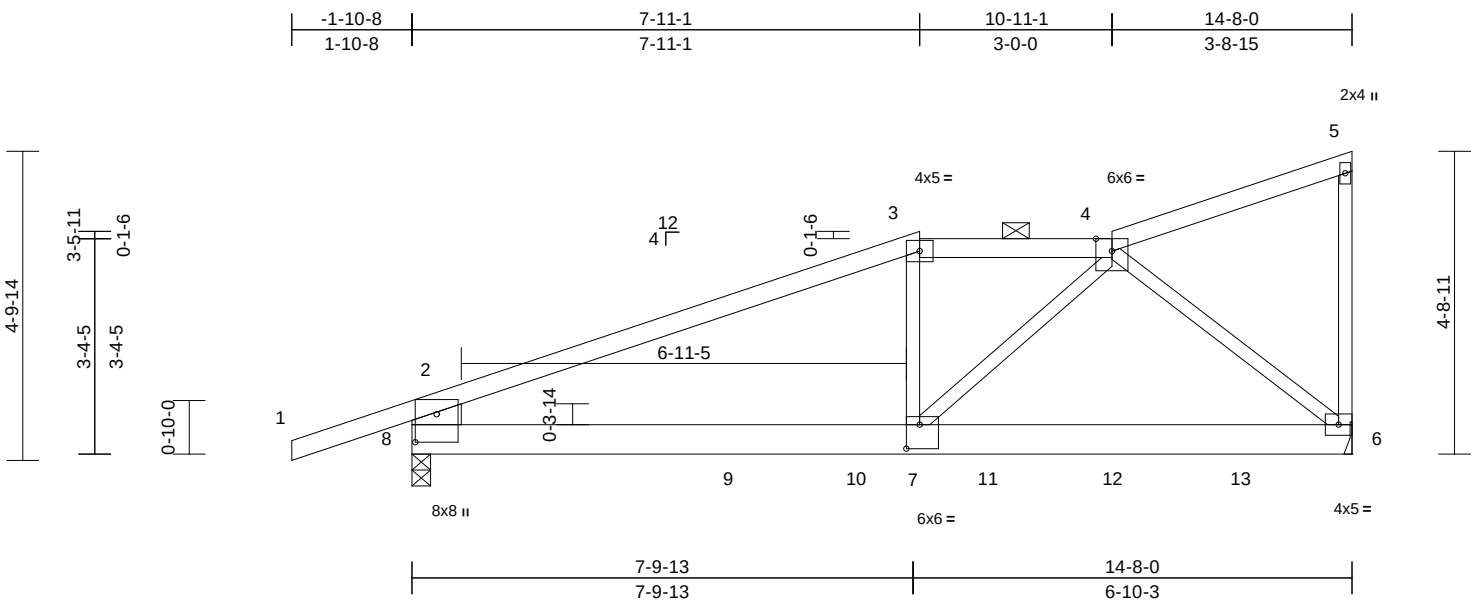

Scale = 1:35.9

Plate Offsets (X, Y): [7:0-2-8,0-4-8], [8:0-5-4,0-4-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.11	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.20	6-7	>862	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.81	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	6-7	>999	240	Weight: 60 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-3:2x4 SPF 2100F 1.8E
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 8-2:2x10 SP DSS

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

REACTIONS (size) 6= Mechanical, 8=0-3-8
Max Horiz 8=204 (LC 22)
Max Uplift 6=-358 (LC 8), 8=-378 (LC 4)
Max Grav 6=1363 (LC 1), 8=1356 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/50, 2-3=-2027/482, 3-4=-1816/488, 4-5=-104/32, 5-6=-117/50, 2-8=-1097/370
BOT CHORD 7-8=-454/1826, 6-7=-276/1120
WEBS 3-7=-81/371, 4-7=-248/973, 4-6=-1437/411

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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 358 lb uplift at joint 6 and 378 lb uplift at joint 8.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 388 lb down and 124 lb up at 4-11-4, 211 lb down and 55 lb up at 6-11-4, 211 lb down and 68 lb up at 8-11-13, and 238 lb down and 75 lb up at 10-11-4, and 238 lb down and 75 lb up at 12-11-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 6-8=-20
Concentrated Loads (lb)
Vert: 9=-388 (B), 10=-211 (B), 11=-211 (B), 12=-238 (B), 13=-238 (B)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955076
B240005	D1	Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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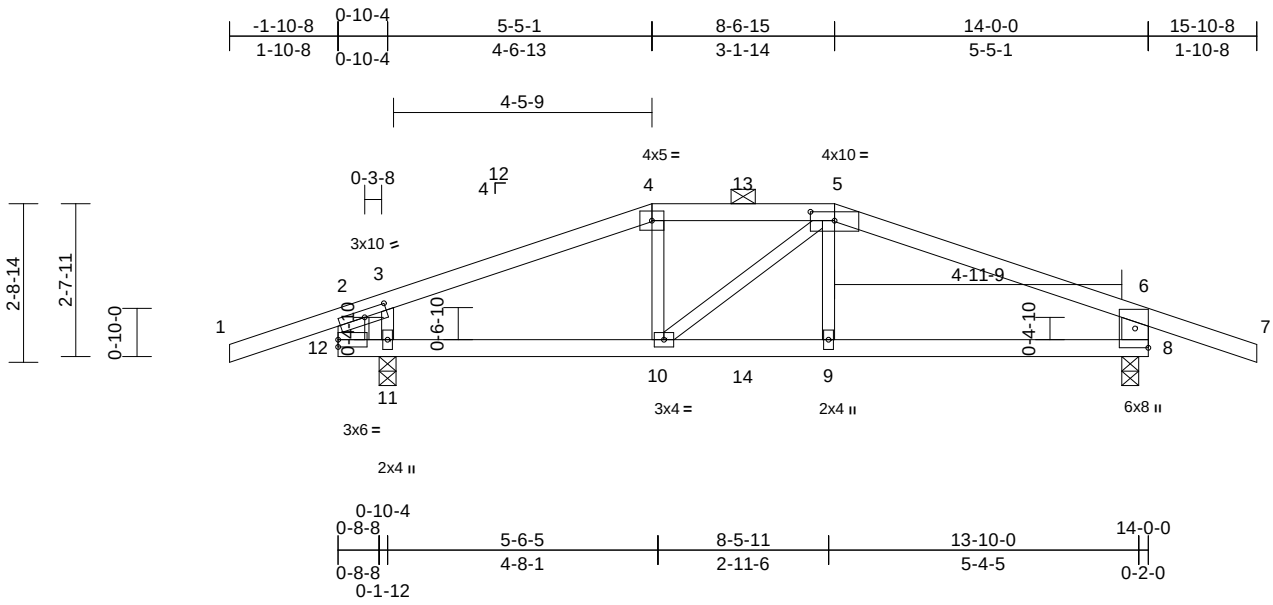

Scale = 1:39.8

Plate Offsets (X, Y): [2:0-4-11,0-1-8], [5:0-5-0,0-1-13]

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	0.69	Vert(LL)	-0.15	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.25	9-10	>615	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	9-10	>999	240	Weight: 46 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF 2100F 1.8E *Except* 4-5:2x4 SPF No.2
BOT CHORD 2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 12-2,8-6:2x6 SP DSS

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

REACTIONS (lb/size) 8=888/0-3-8, 11=978/0-3-8
Max Horiz 11=22 (LC 8)
Max Uplift 8=-276 (LC 5), 11=-311 (LC 4)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-909/221, 3-4=-1026/279, 4-13=-895/272, 5-13=-895/272, 5-6=-1173/307, 2-12=-347/76, 6-8=-779/290
BOT CHORD 11-12=-194/889, 10-11=-179/889, 10-14=-211/1036, 9-14=-211/1036, 8-9=-210/1025
WEBS 5-9=-30/285, 3-11=-423/213

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 276 lb uplift at joint 8 and 311 lb uplift at joint 11.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 60 lb down and 57 lb up at 7-0-0 on top chord, and 205 lb down and 81 lb up at 5-5-1, and 27 lb down at 7-0-0, and 205 lb down and 81 lb up at 8-6-15 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 4-5=-70, 5-6=-70, 6-7=-70, 8-12=-20
Concentrated Loads (lb)
Vert: 10=-156 (F), 9=-156 (F), 13=-28 (F), 14=-12 (F)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955077
B240005	D2	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:20 Page: 1
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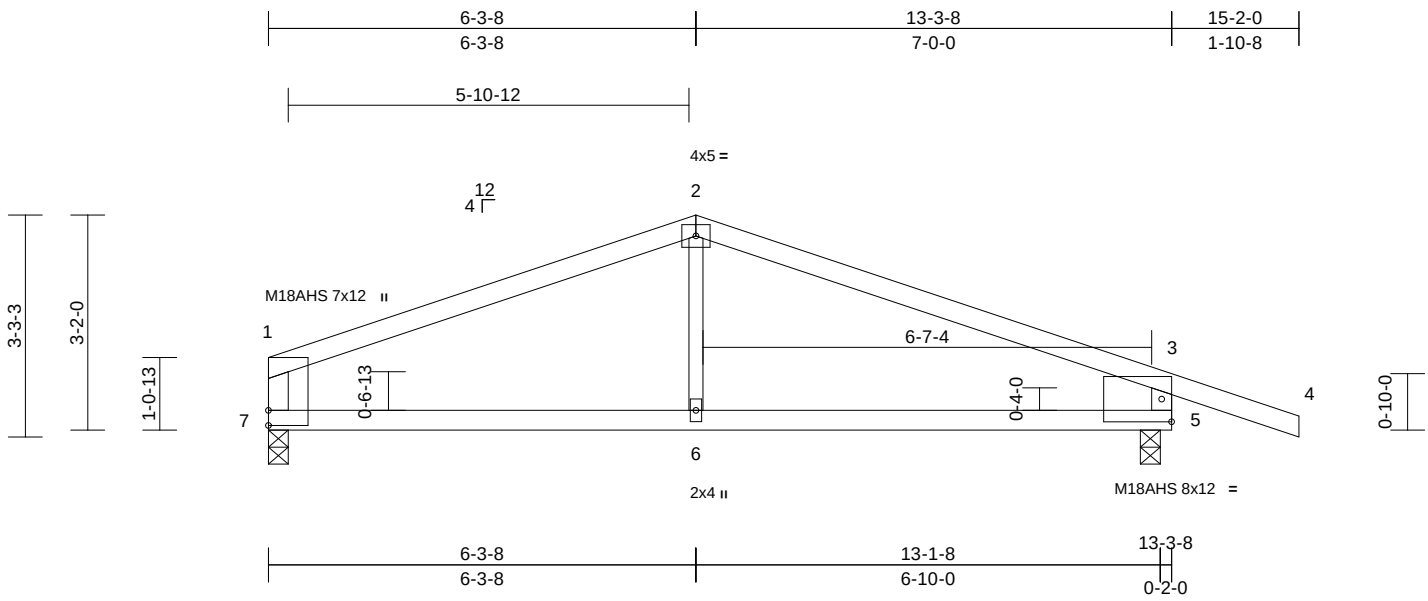

Scale = 1:33.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.10	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.22	5-6	>718	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.06	5-6	>999	240	Weight: 37 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-1:2x4 SP No.2, 5-3:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 5=0-3-8, 7=0-3-8
Max Horiz 7=-45 (LC 5)
Max Uplift 5=-178 (LC 5), 7=-82 (LC 4)
Max Grav 5=737 (LC 1), 7=574 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-766/101, 2-3=-777/106, 3-4=0/45, 1-7=-469/114, 3-5=-646/217
BOT CHORD 6-7=-28/651, 5-6=-28/651
WEBS 2-6=0/232

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 7 and 178 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

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AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955078
B240005	D3	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:20 Page: 1
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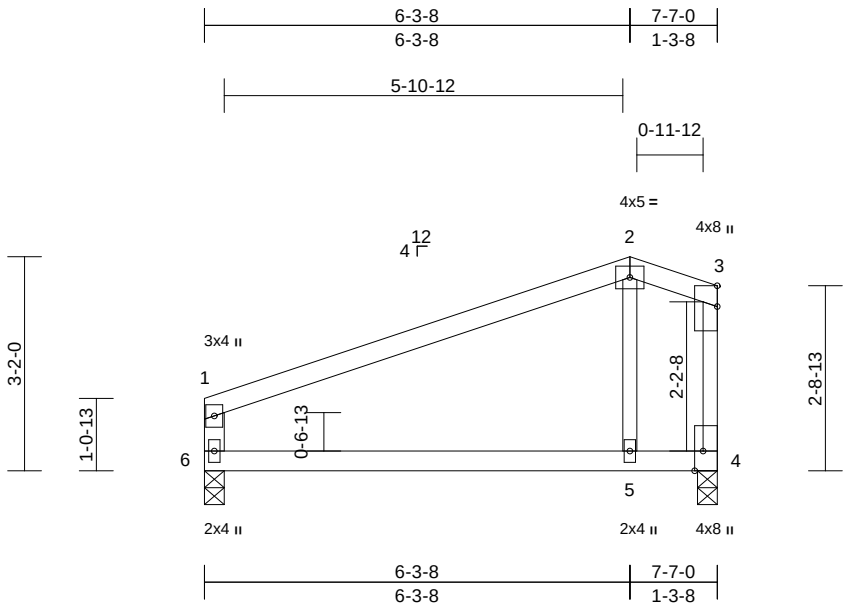

Scale = 1:34.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.07	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.17	5-6	>529	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.06	5-6	>999	240	Weight: 23 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 6-1:2x4 SP No.3

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

REACTIONS (size) 4=0-3-8, 6=0-3-8
Max Horiz 6=100 (LC 5)
Max Uplift 4=-55 (LC 4), 6=-53 (LC 4)
Max Grav 4=330 (LC 1), 6=330 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-186/28, 2-3=-149/51, 3-4=-142/5, 1-6=-257/90
BOT CHORD 5-6=-36/110, 4-5=-36/110
WEBS 2-5=-114/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 53 lb uplift at joint 6 and 55 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955079
B240005	D4	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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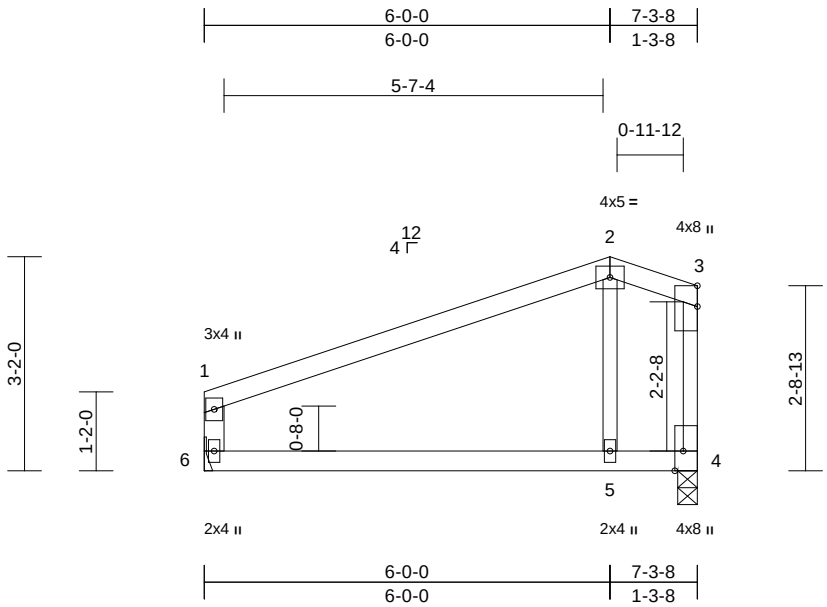

Scale = 1:34.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.06	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.14	5-6	>595	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	5-6	>999	240	Weight: 22 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 6-1:2x4 SP No.3

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

REACTIONS (size) 4=0-3-8, 6= Mechanical
Max Horiz 6=99 (LC 5)
Max Uplift 4=-52 (LC 4), 6=-51 (LC 4)
Max Grav 4=317 (LC 1), 6=317 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-172/28, 2-3=-139/50, 3-4=-138/8, 1-6=-245/86
BOT CHORD 5-6=-37/100, 4-5=-37/100
WEBS 2-5=-111/94

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 6 and 52 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	E1	Roof Special Girder	1	1	I59955080 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:21 Page: 1

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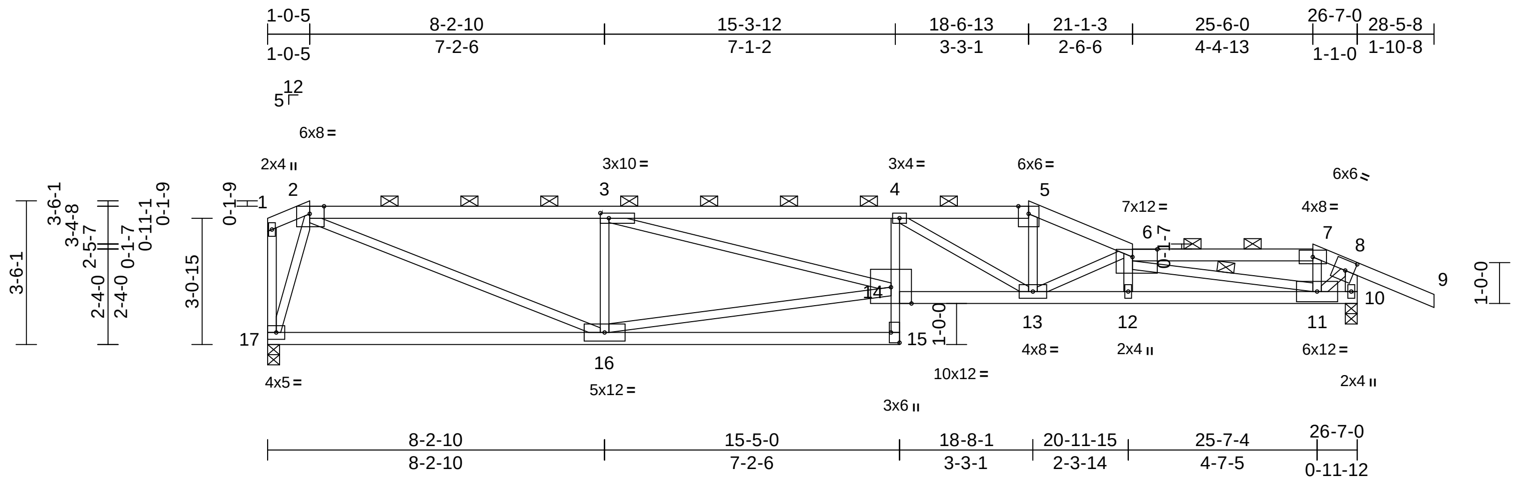

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Plate Offsets (X, Y): [2:0-4-3,Edge], [3:0-2-8,0-1-8], [6:0-7-4,0-2-4], [8:0-2-9,0-3-0], [15:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.36	14	>870	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.65	13-14	>485	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.93	Horz(CT)	0.13	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.29	15	>999	240	Weight: 103 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 2-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 15-4:2x3 SPF No.2, 14-10:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 10-8:2x4 SPF No.2

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

REACTIONS (size) 10=0-3-8, 17=0-3-8
Max Horiz 17=-121 (LC 6)
Max Uplift 10=-315 (LC 5), 17=-202 (LC 5)
Max Grav 10=1217 (LC 1), 17=1176 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-73/32, 2-3=-2283/439, 3-4=-3857/721, 4-5=-3013/531, 5-6=-3360/578, 6-7=-968/189, 7-8=-1041/202, 8-9=0/54, 1-17=-72/113, 8-10=-1439/322
BOT CHORD 16-17=-52/370, 15-16=-20/213, 14-15=0/118, 4-14=0/210, 13-14=-656/3879, 12-13=-705/4368, 11-12=-714/4385, 10-11=-111/55
WEBS 2-16=-354/2087, 3-16=-1008/310, 14-16=-361/2095, 3-14=-294/1634, 4-13=-1120/230, 5-13=-186/1181, 6-13=-1415/249, 6-12=-175/84, 6-11=-3560/591, 7-11=-115/175, 2-17=-1241/325, 8-11=-259/1405

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 315 lb uplift at joint 10 and 202 lb uplift at joint 17.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 56 lb down and 51 lb up at 32-10-11 on top chord, and 144 lb down and 855 lb up at 32-9-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-5=-70, 5-6=-70, 6-7=-70, 7-8=-70, 8-9=-70, 15-17=-20, 10-14=-20
Concentrated Loads (lb)
Vert: 7=51 (F), 11=68 (F)

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

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955081
B240005	E2	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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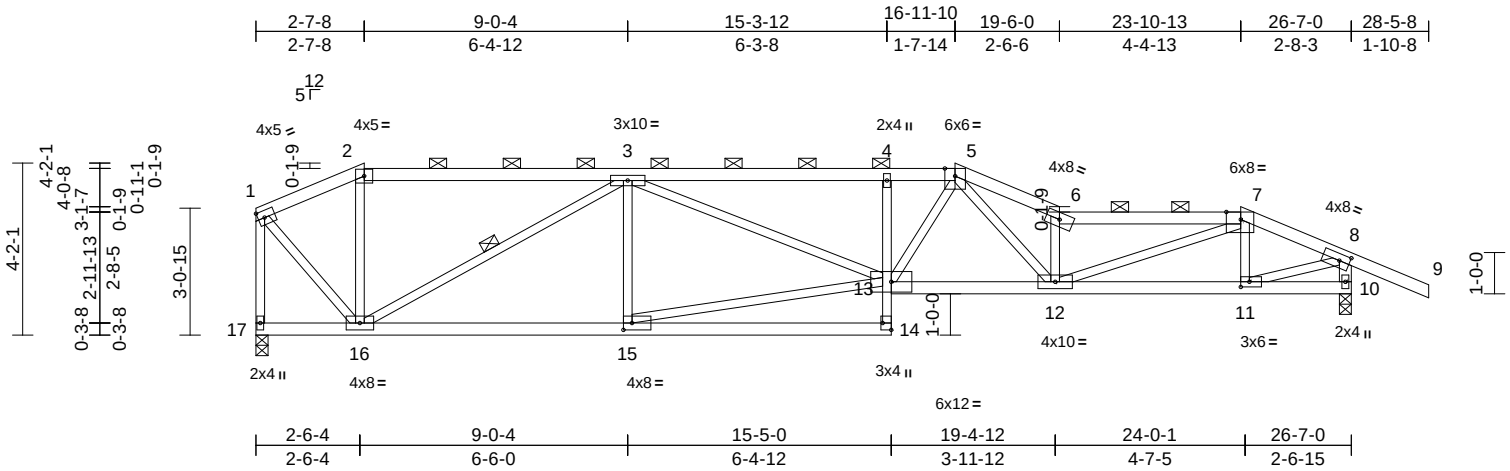

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Plate Offsets (X, Y): [7:0-4-3,Edge], [8:0-2-15,0-2-0], [11:0-2-8,0-1-8], [14:Edge,0-2-8], [15:0-2-8,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.22	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.41	12-13	>772	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.09	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.17	12-13	>999	240	Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 14-4:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-8:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-11-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-6-11 max.): 2-5, 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
9-11-1 oc bracing: 12-13
6-0-0 oc bracing: 10-11.
WEBS 1 Row at midpt 3-16

REACTIONS (size) 10=0-3-8, 17=0-3-8
Max Horiz 17=-119 (LC 6)
Max Uplift 10=-236 (LC 5), 17=-176 (LC 5)
Max Grav 10=1332 (LC 1), 17=1180 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-790/157, 2-3=-727/159, 3-4=-2756/492, 4-5=-2777/493, 5-6=-3625/586, 6-7=-3420/537, 7-8=-1656/239, 8-9=0/54, 1-17=-1176/181, 8-10=-1312/245
BOT CHORD 16-17=-18/83, 15-16=-291/1941, 14-15=-6/136, 13-14=0/112, 4-13=-412/155, 12-13=-351/2509, 11-12=-184/1528, 10-11=-13/45
WEBS 2-16=-50/106, 3-16=-1418/249, 3-15=-158/133, 13-15=-289/1827, 3-13=-130/893, 5-13=-120/600, 5-12=-175/1246, 6-12=-1608/312, 7-12=-322/2031, 7-11=-384/113, 1-16=-168/1106, 8-11=-233/1589

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 176 lb uplift at joint 17 and 236 lb uplift at joint 10.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955082
B240005	E3	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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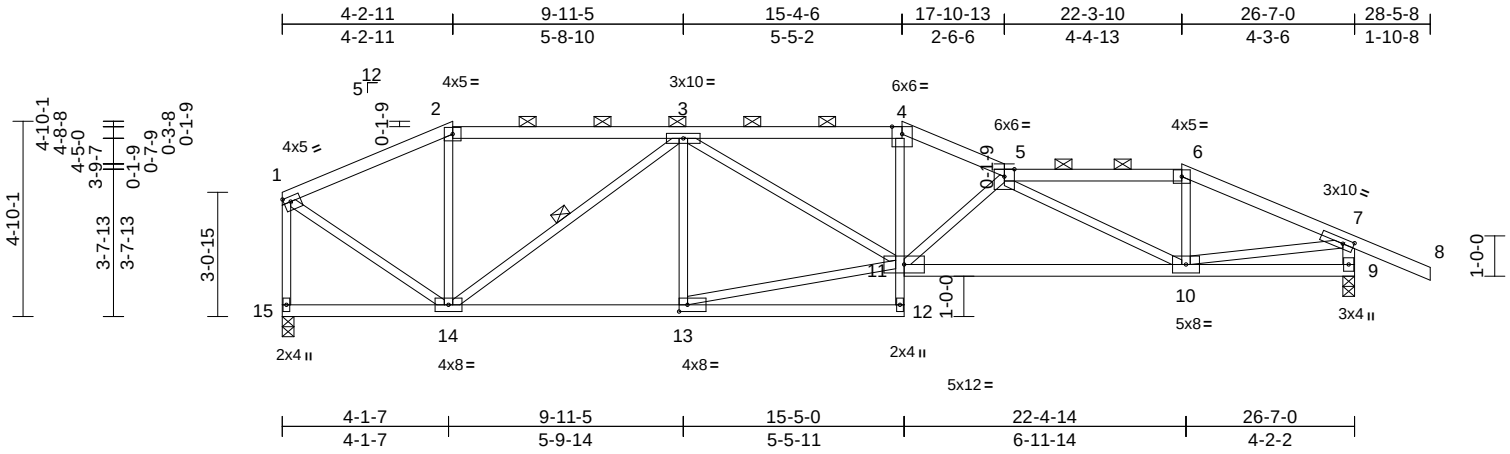

Scale = 1:57.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.15	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.31	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.81	Horz(CT)	0.08	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	10-11	>999	240	Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 12-4:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-7-2 max.): 2-4, 5-6.
BOT CHORD Rigid ceiling directly applied or 9-5-7 oc bracing.
WEBS 1 Row at midpt 3-14

REACTIONS (size) 9=0-3-8, 15=0-3-8
Max Horiz 15=-118 (LC 6)
Max Uplift 9=-219 (LC 5), 15=-153 (LC 5)
Max Grav 9=1332 (LC 1), 15=1180 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1052/187, 2-3=-932/189, 3-4=-2175/366, 4-5=-2384/382, 5-6=-1677/242, 6-7=-1891/247, 7-8=0/54, 1-15=-1147/172, 7-9=-1298/229
BOT CHORD 14-15=-18/80, 13-14=-223/1702, 12-13=-20/70, 11-12=0/94, 4-11=-61/667, 10-11=-382/2758, 9-10=-14/84
WEBS 2-14=0/164, 3-14=-1002/171, 3-13=-191/114, 11-13=-206/1660, 3-11=-78/567, 5-11=-801/185, 5-10=-1227/241, 6-10=0/404, 1-14=-147/1120, 7-10=-197/1639

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 15 and 219 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955083
B240005	E4	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:22 Page: 1
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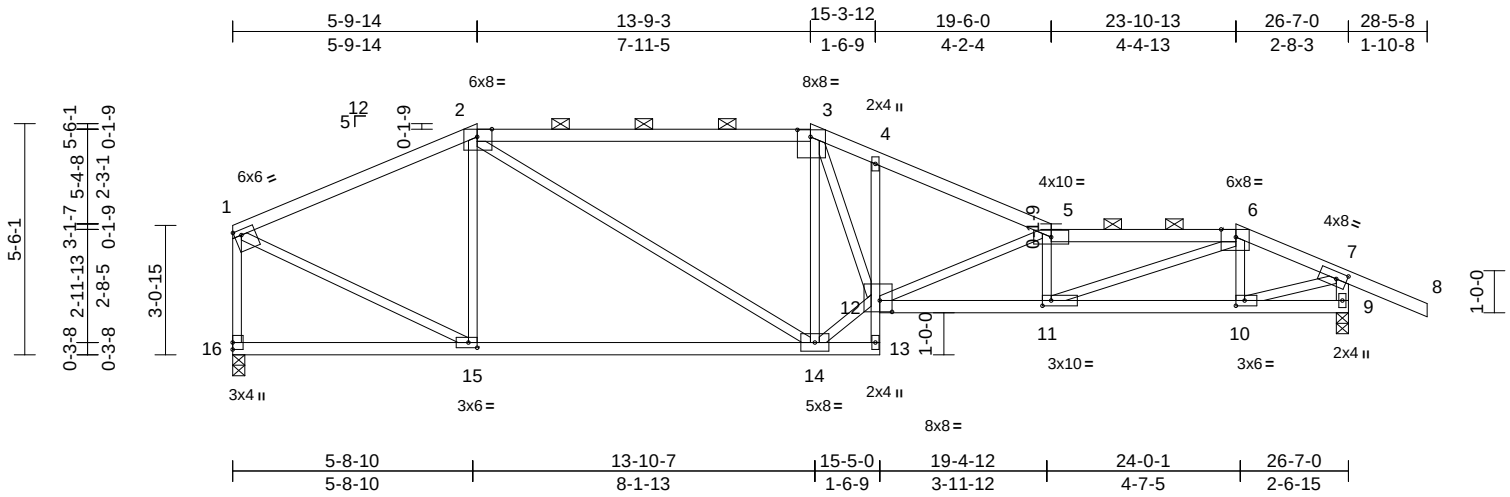

Scale = 1:54.9

Plate Offsets (X, Y): [1:0-2-0,0-1-8], [2:0-4-3,Edge], [3:0-3-12,0-2-0], [6:0-4-3,Edge], [7:0-2-15,0-2-0], [10:0-2-8,0-1-8], [11:0-2-8,0-1-8], [12:0-3-8,0-3-4], [15:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.20	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.37	11-12	>860	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.09	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	11-12	>999	240	Weight: 108 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 2-3:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 13-4:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SP No.3

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

REACTIONS (size) 9=0-3-8, 16=0-3-8
Max Horiz 16=-116 (LC 6)
Max Uplift 9=-207 (LC 5), 16=-124 (LC 5)
Max Grav 9=1332 (LC 1), 16=1180 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1223/185, 2-3=-1567/263, 3-4=-2224/318, 4-5=-2374/315, 5-6=-3432/428, 6-7=-1656/196, 7-8=0/54, 1-16=-1135/149, 7-9=-1314/216
BOT CHORD 15-16=-17/80, 14-15=-74/1080, 13-14=-24/74, 12-13=-119/0, 4-12=-4/177, 11-12=-366/3392, 10-11=-142/1526, 9-10=-13/47
WEBS 2-15=-379/151, 2-14=-105/650, 3-14=-1162/224, 12-14=-135/1789, 3-12=-221/1608, 5-12=-1369/213, 5-11=-680/153, 6-11=-251/2046, 6-10=-379/101, 1-15=-125/1169, 7-10=-191/1586

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 16 and 207 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	E5	Roof Special Girder	1	1	I59955084 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:23 Page: 1

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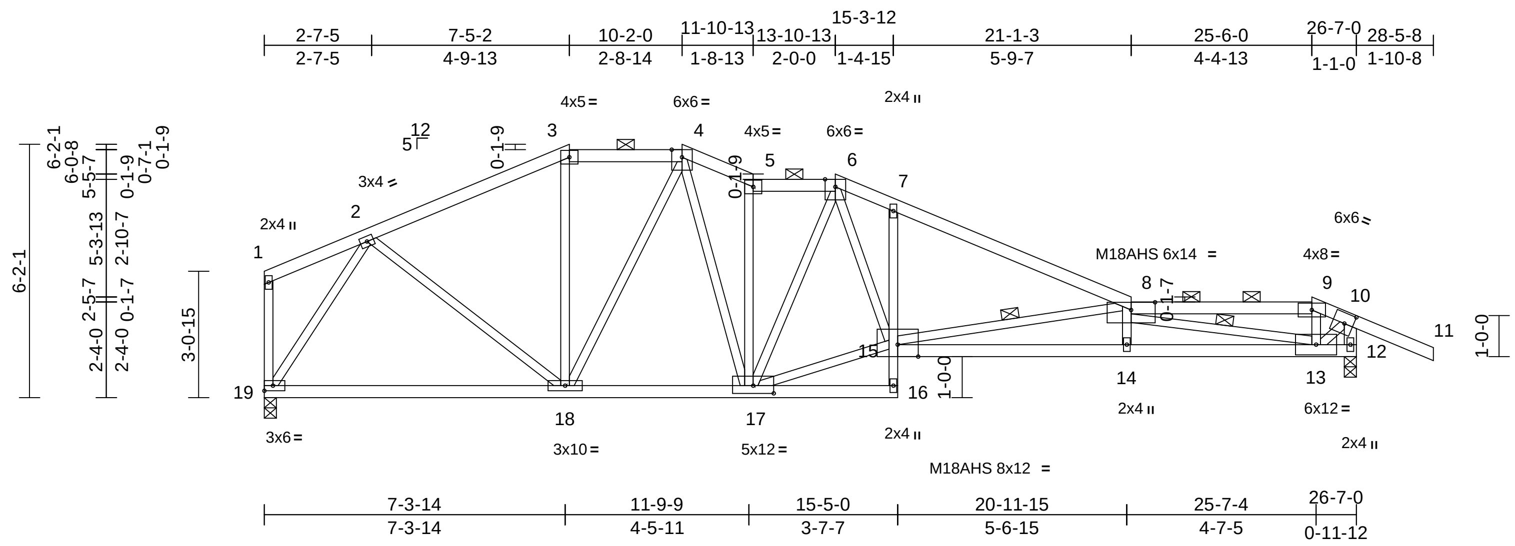

Scale = 1:56.1

Plate Offsets (X, Y): [8:0-7-0,0-2-4], [10:0-2-9,0-3-0], [17:0-6-0,0-2-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.34	14-15	>930	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.63	14-15	>500	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.12	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.26	14-15	>999	240	Weight: 118 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 *Except* 16-7:2x3 SPF No.2, 15-12:2x4 SPF 2100F 1.8E

WEBS 2x3 SPF No.2 *Except* 12-10:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins (4-8-15 max.): 3-4, 5-6, 8-9.

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

WEBS 1 Row at midpt 8-15, 8-13

REACTIONS (size) 12=0-3-8, 19=0-3-8
Max Horiz 19=-115 (LC 6)
Max Uplift 12=-287 (LC 9), 19=-99 (LC 8)
Max Grav 12=1217 (LC 1), 19=1176 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-60/42, 2-3=-1244/173, 3-4=-1085/176, 4-5=-1635/293, 5-6=-1493/252, 6-7=-2352/417, 7-8=-2425/347, 8-9=-944/189, 9-10=-1023/200, 10-11=0/54, 1-19=-45/21, 10-12=-1417/297

BOT CHORD 18-19=-58/681, 17-18=-66/1255, 16-17=-13/30, 15-16=0/66, 7-15=-277/187, 14-15=-627/4472, 13-14=-636/4474, 12-13=-110/57

WEBS 2-18=-16/534, 3-18=-18/228, 4-18=-460/125, 4-17=-190/834, 5-17=-706/160, 6-17=-577/108, 15-17=-127/1737, 6-15=-269/1390, 8-15=-2331/405, 8-14=-23/139, 8-13=-3688/515, 9-13=-130/172, 2-19=-1262/163, 10-13=-243/1370

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 287 lb uplift at joint 12 and 99 lb uplift at joint 19.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 56 lb down and 51 lb up at 32-10-11 on top chord, and 144 lb down and 855 lb up at 32-9-10 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 6-8=-70, 8-9=-70, 9-10=-70, 10-11=-70, 16-19=-20, 12-15=-20
Concentrated Loads (lb)
Vert: 9=51 (B), 13=68 (B)

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955085
B240005	G1	Half Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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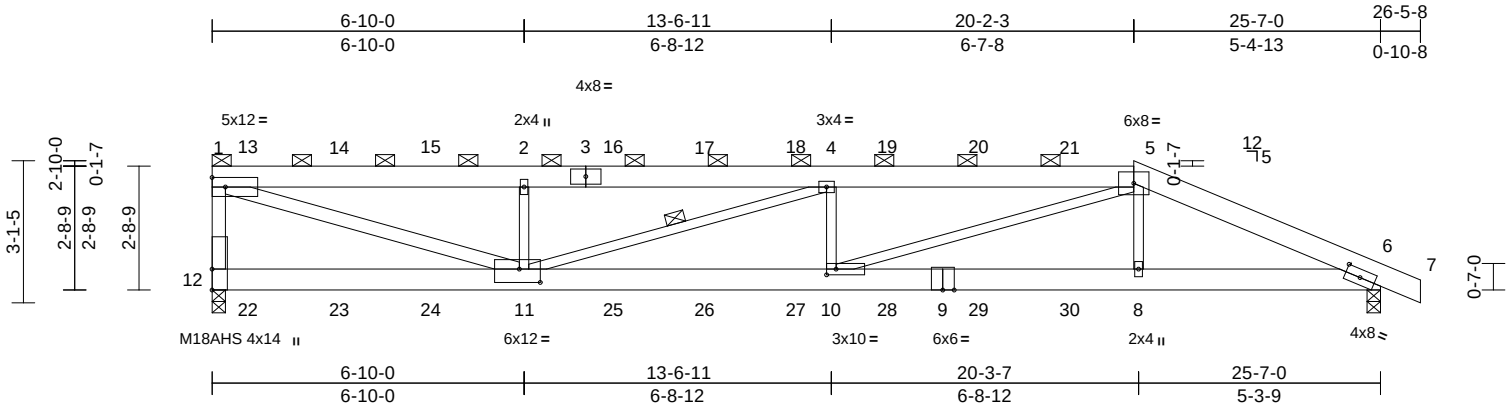

Scale = 1:50.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.32	10-11	>955	360	M18AHS	142/136
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.58	10-11	>519	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.09	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.28	10-11	>999	240	Weight: 120 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF No.2 *Except* 3-5:2x6 SPF 1650F 1.4E
BOT CHORD 2x6 SPF 1650F 1.4E *Except* 9-6:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1:2x4 SPF No.2, 11-1:2x4 SPF 2100F 1.8E

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-10 oc purlins, except end verticals, and 2-0-0 oc purlins (2-5-12 max.): 1-5.
BOT CHORD Rigid ceiling directly applied or 8-0-10 oc bracing.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 6=0-3-8, 12=0-3-8
Max Horiz 12=-103 (LC 4)
Max Uplift 6=-397 (LC 5), 12=-428 (LC 4)
Max Grav 6=2050 (LC 1), 12=2127 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-1968/488, 1-2=-4781/982, 2-4=-4781/982, 4-5=-6027/1242, 5-6=-4514/876, 6-7=0/18
BOT CHORD 11-12=-10/169, 10-11=-1163/6024, 8-10=-749/4048, 6-8=-749/4074
WEBS 1-11=-992/4906, 2-11=-868/400, 4-11=-1311/280, 4-10=-470/305, 5-10=-438/2189, 5-8=-6/604

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 428 lb uplift at joint 12 and 397 lb uplift at joint 6.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 134 lb down and 74 lb up at 0-9-8, 126 lb down and 76 lb up at 2-9-8, 126 lb down and 76 lb up at 4-9-8, 126 lb down and 76 lb up at 6-9-8, 126 lb down and 76 lb up at 8-9-8, 126 lb down and 76 lb up at 10-9-8, 126 lb down and 76 lb up at 12-9-8, 126 lb down and 76 lb up at 14-9-8, and 126 lb down and 76 lb up at 16-9-8, and 126 lb down and 76 lb up at 18-9-8 on top chord, and 74 lb down at 0-9-8, 67 lb down at 2-9-8, 67 lb down at 4-9-8, 67 lb down at 6-9-8, 67 lb down at 8-9-8, 67 lb down at 10-9-8, 67 lb down at 12-9-8, 67 lb down at 14-9-8, 67 lb down at 16-9-8, and 67 lb down at 18-9-8, and 354 lb down and 107 lb up at 20-2-3 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-7=-70, 6-12=-20
Concentrated Loads (lb)
Vert: 11=-43 (F), 2=-103 (F), 8=-354 (F), 13=-115 (F), 14=-103 (F), 15=-103 (F), 16=-103 (F), 17=-103 (F), 18=-103 (F), 19=-103 (F), 20=-103 (F), 21=-103 (F), 22=-47 (F), 23=-43 (F), 24=-43 (F), 25=-43 (F), 26=-43 (F), 27=-43 (F), 28=-43 (F), 29=-43 (F), 30=-43 (F)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	G2	Roof Special	1	1	Job Reference (optional)	I59955086

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:25 Page: 1
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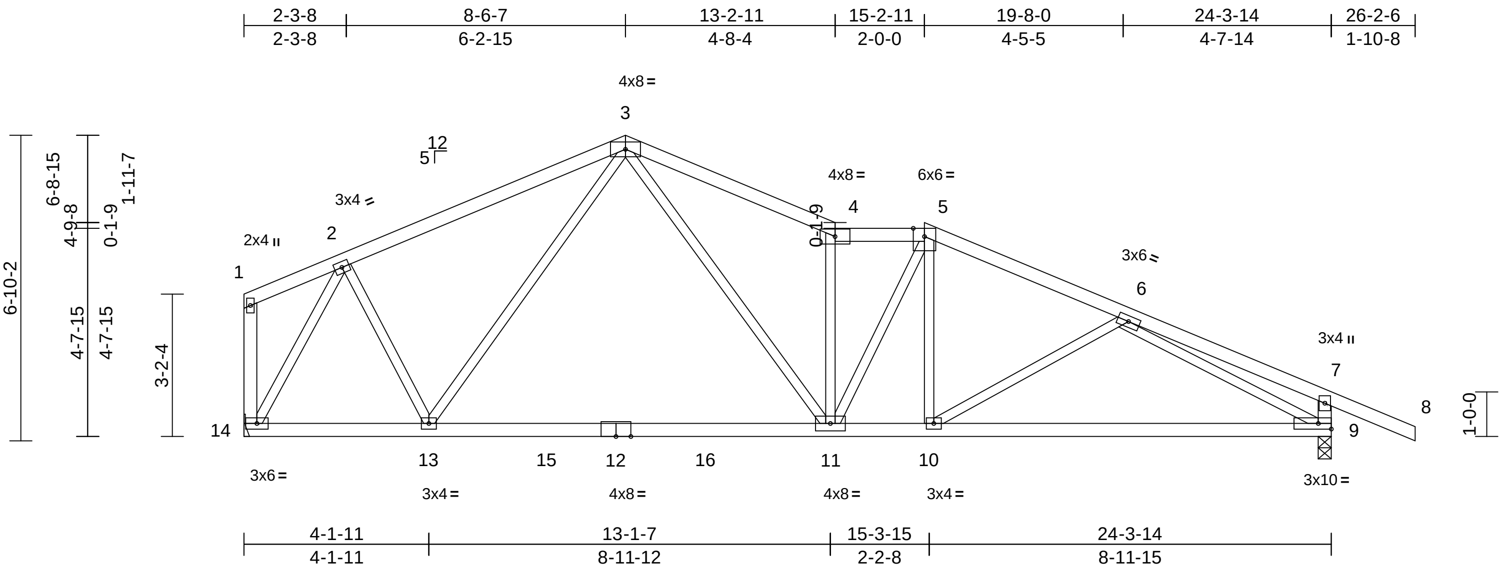

Scale = 1:51.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.25	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.43	11-13	>674	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	11	>999	240	Weight: 102 lb	FT = 10%

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

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

REACTIONS (size) 9=0-3-8, 14= Mechanical
Max Horiz 14=-111 (LC 4)
Max Uplift 9=-50 (LC 9)
Max Grav 9=1251 (LC 2), 14=1141 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-39/76, 2-3=-1007/49, 3-4=-1742/104, 4-5=-1587/59, 5-6=-1656/52, 6-7=-324/0, 7-8=0/54, 1-14=-21/43, 7-9=-384/51
BOT CHORD 13-14=0/630, 11-13=0/960, 10-11=0/1485, 9-10=-34/1492
WEBS 2-13=0/533, 3-13=-260/56, 3-11=-47/1058, 4-11=-832/92, 5-11=-9/239, 5-10=0/208, 2-14=-1321/27, 6-9=-1489/97, 6-10=-97/102

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955087
B240005	G3	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:26 Page: 1
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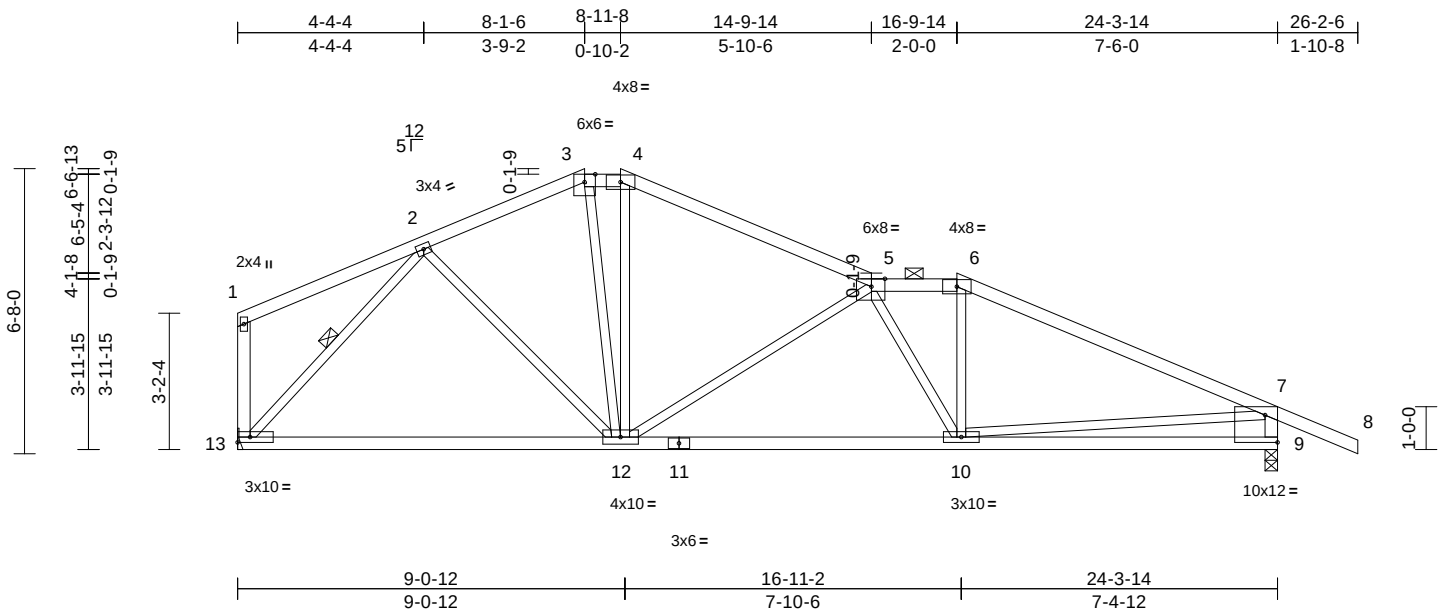

Scale = 1:53.9

Plate Offsets (X, Y): [5:0-3-13,Edge], [9:Edge,0-7-11]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.16	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.33	12-13	>883	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.04	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.03	10-12	>999	240	Weight: 101 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-1:2x4 SPF No.2, 9-7:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-15 oc purlins, except end verticals, and 2-0-0 oc purlins (4-7-0 max.): 3-4, 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-13

REACTIONS (size) 9=0-3-8, 13= Mechanical
Max Horiz 13=-110 (LC 4)
Max Uplift 9=-49 (LC 9)
Max Grav 9=1229 (LC 1), 13=1075 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-102/46, 2-3=-1089/57, 3-4=-1008/64, 4-5=-1169/44, 5-6=-1483/66, 6-7=-1723/43, 7-8=0/54, 1-13=-149/30, 7-9=-1157/88
BOT CHORD 12-13=0/795, 10-12=0/1635, 9-10=-65/430
WEBS 2-12=0/313, 3-12=-44/384, 4-12=-16/189, 5-12=-745/97, 5-10=-310/27, 6-10=0/337, 2-13=-1136/18, 7-10=0/1068

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955088
B240005	G4	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:26 Page: 1
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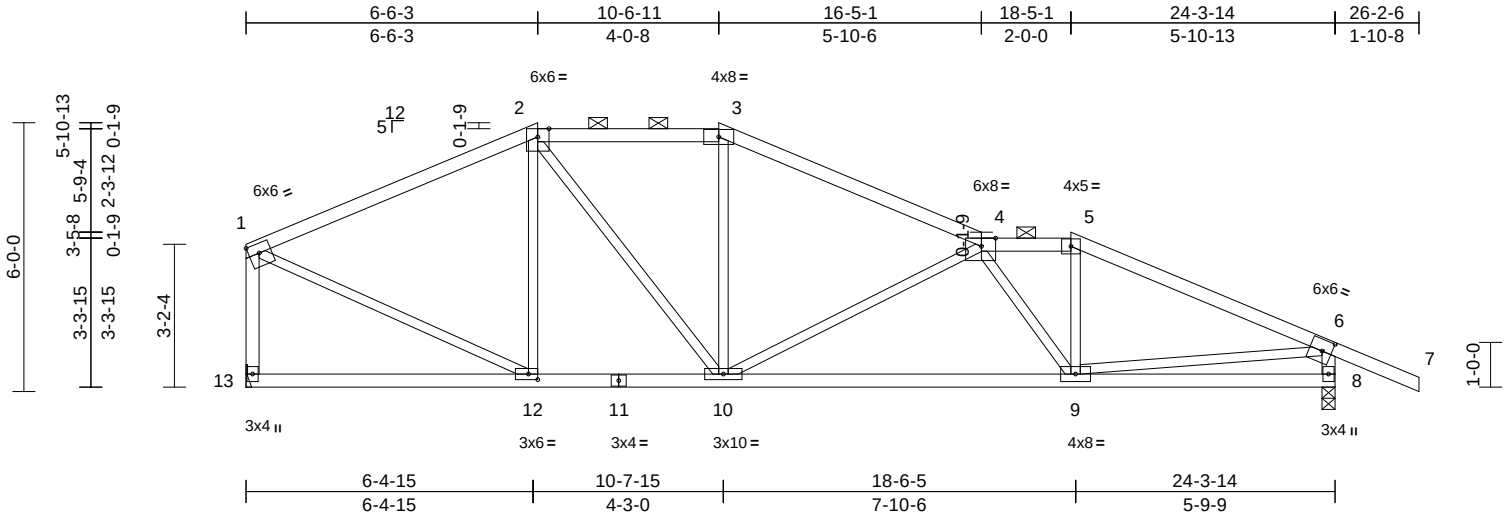

Scale = 1:51.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.11	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.25	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.03	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	9-10	>999	240	Weight: 98 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-1:2x4 SPF No.2, 8-6:2x4 SP No.3

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

REACTIONS (size) 8=0-3-8, 13= Mechanical
Max Horiz 13=-110 (LC 4)
Max Uplift 8=-44 (LC 9)
Max Grav 8=1229 (LC 1), 13=1075 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1089/37, 2-3=-1179/55, 3-4=-1358/35, 4-5=-1518/44, 5-6=-1743/26, 6-7=0/54, 1-13=-1012/21, 6-8=-1176/70
BOT CHORD 12-13=-12/101, 10-12=0/936, 9-10=0/1818, 8-9=-35/237
WEBS 2-12=-314/58, 2-10=-31/483, 3-10=0/235, 4-10=-723/94, 4-9=-534/46, 5-9=0/406, 1-12=0/963, 6-9=0/1306

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

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955089
B240005	G5	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:26 Page: 1
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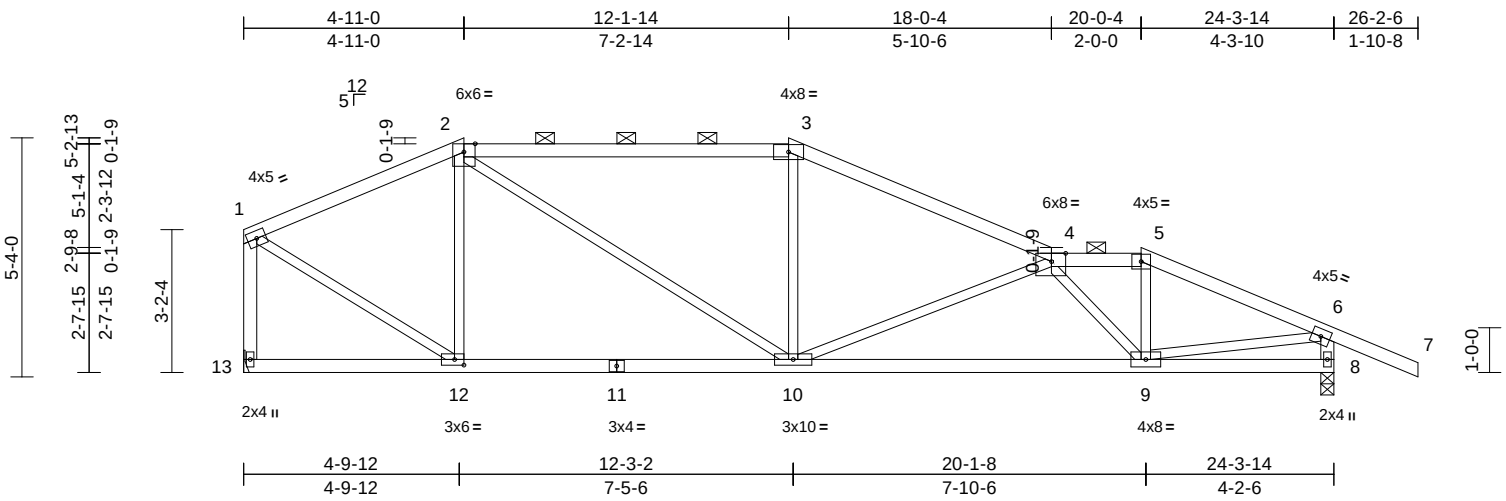

Scale = 1:51.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.10	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.23	9-10	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.04	9-10	>999	240	Weight: 94 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 2-3:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 13-1:2x4 SPF No.2, 8-6:2x4 SP No.3

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

REACTIONS (size) 8=0-3-8, 13= Mechanical
Max Horiz 13=-110 (LC 4)
Max Uplift 8=-39 (LC 5), 13=-3 (LC 4)
Max Grav 8=1229 (LC 1), 13=1075 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1001/45, 2-3=-1383/48, 3-4=-1573/35, 4-5=-1479/22, 5-6=-1684/8, 6-7=0/54, 1-13=-1039/21, 6-8=-1191/52
BOT CHORD 12-13=-20/90, 10-12=0/886, 9-10=0/2003, 8-9=-10/96
WEBS 2-12=-414/83, 2-10=-24/647, 3-10=0/256, 4-10=-671/98, 4-9=-800/53, 5-9=0/458, 1-12=-7/1009, 6-9=0/1427

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 13 and 39 lb uplift at joint 8.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	G6	Roof Special	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I59955090
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

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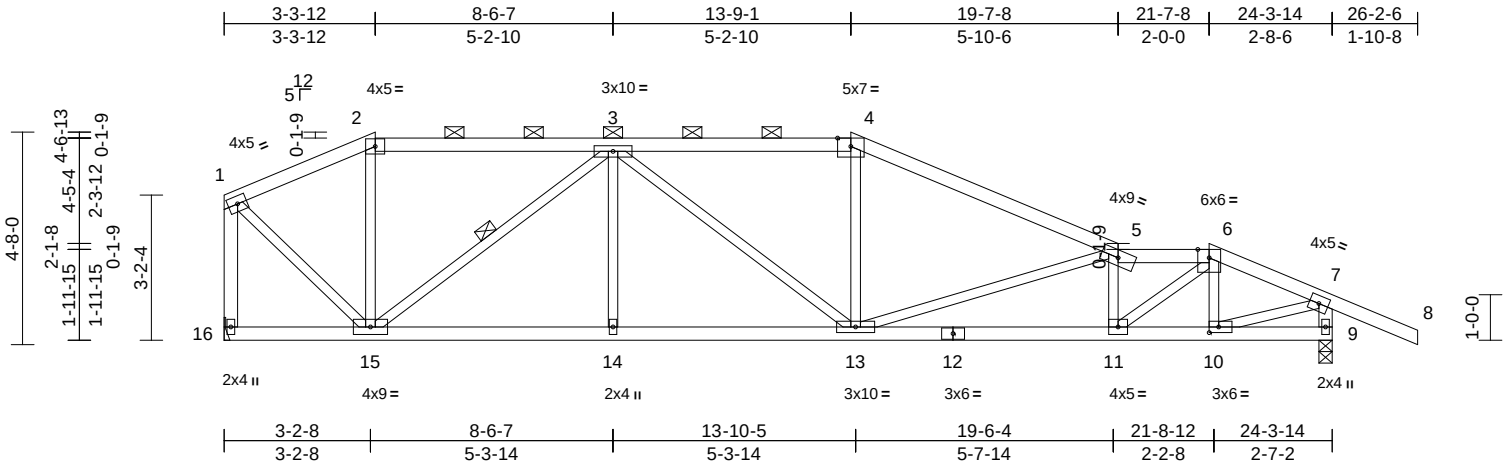

Scale = 1:50.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.10	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.19	11-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	11-13	>999	240	Weight: 98 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SPF No.2, 16-1:2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-13 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-1 max.): 2-4, 5-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-15

REACTIONS (size) 9=0-3-8, 16= Mechanical
Max Horiz 16=-139 (LC 4)
Max Uplift 9=-189 (LC 5), 16=-143 (LC 4)
Max Grav 9=1229 (LC 1), 16=1075 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-802/148, 2-3=-714/150, 3-4=-1543/254, 4-5=-1754/249, 5-6=-2290/279, 6-7=-1446/163, 7-8=0/54, 7-9=-1187/203, 1-16=-1053/151
BOT CHORD 15-16=-21/112, 14-15=-147/1463, 13-14=-147/1463, 11-13=-217/2246, 10-11=-107/1319, 9-10=0/52
WEBS 2-15=-24/115, 3-15=-972/154, 3-14=0/210, 3-13=-96/115, 4-13=0/336, 5-13=-730/180, 5-11=-747/160, 6-11=-155/1266, 6-10=-367/61, 7-10=-155/1340, 1-15=-135/972

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 16 and 189 lb uplift at joint 9.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	G7	Roof Special Girder	1	1	Job Reference (optional) I59955091

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:8:27 Page: 1
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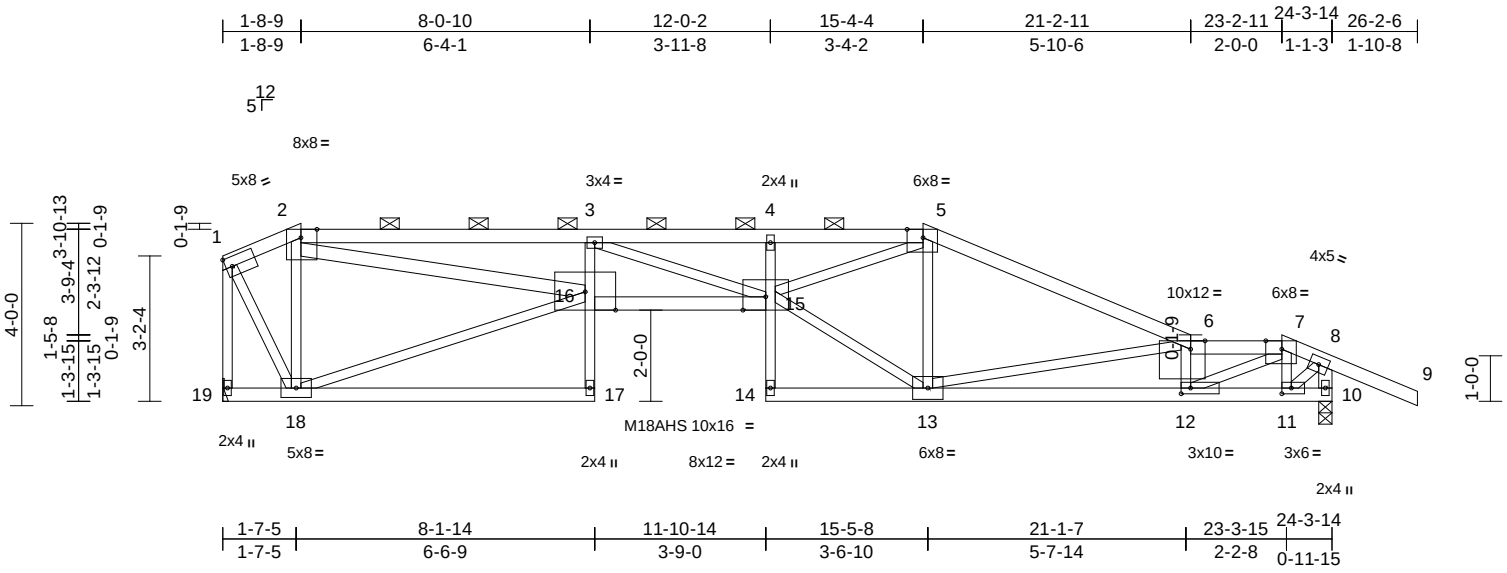

Scale = 1:50.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.38	15-16	>766	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.68	15-16	>425	240	M18AHS	142/136
BCLL	0.0*	Rep Stress Incr	NO	WB	0.96	Horz(CT)	0.34	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.28	15-16	>999	240	Weight: 105 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 2-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2 *Except* 17-3,4-14:2x3 SPF No.2, 16-15:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 16-2,10-8:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-9-9 max.): 2-5, 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 11-12,10-11.

REACTIONS (size) 10=0-3-8, 19= Mechanical
Max Horiz 19=-139 (LC 4)
Max Uplift 10=-264 (LC 5), 19=-171 (LC 4)
Max Grav 10=1167 (LC 1), 19=1075 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-512/105, 2-3=-4374/710, 3-4=-4308/644, 4-5=-4247/642, 5-6=-1957/295, 6-7=-2505/344, 7-8=-800/148, 8-9=0/54, 1-19=-1102/148, 8-10=-1179/277
BOT CHORD 18-19=-20/114, 17-18=-2/73, 16-17=0/114, 3-16=-351/156, 15-16=-595/4430, 14-15=0/41, 4-15=-272/93, 13-14=-8/51, 12-13=-294/2420, 11-12=-95/766, 10-11=-64/49
WEBS 2-18=-980/219, 16-18=-12/476, 2-16=-605/3931, 3-15=-313/73, 13-15=-216/1975, 5-15=-377/2736, 5-13=-742/152, 6-13=-695/193, 6-12=-914/192, 7-12=-260/2007, 7-11=-867/69, 1-18=-158/1072, 8-11=-164/962

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 171 lb uplift at joint 19 and 264 lb uplift at joint 10.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 55 lb down and 8 lb up at 29-5-11 on top chord, and 141 lb down and 834 lb up at 29-4-11 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, 2-5=-70, 5-6=-70, 6-7=-70, 7-8=-70, 8-9=-70, 17-19=-20, 15-16=-20, 10-14=-20
Concentrated Loads (lb)
Vert: 11=66 (B)

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955092
B240005	G8	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:28 Page: 1
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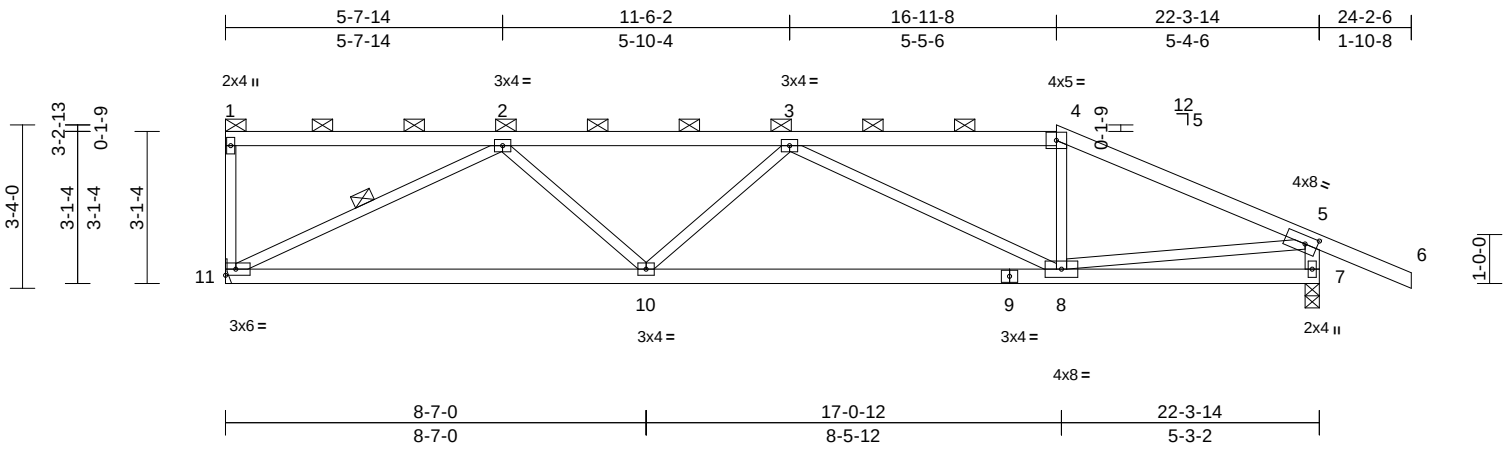

Scale = 1:47

Plate Offsets (X, Y): [5:0-2-15,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.14	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.31	10-11	>859	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.05	8-10	>999	240	Weight: 79 lb	FT = 10%

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

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

REACTIONS (size) 7=0-3-8, 11= Mechanical
Max Horiz 11=-104 (LC 6)
Max Uplift 7=-60 (LC 5), 11=-50 (LC 4)
Max Grav 7=1141 (LC 1), 11=987 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-167/38, 1-2=-53/22, 2-3=-1834/57, 3-4=-1381/48, 4-5=-1577/39, 5-6=0/54, 5-7=-1096/81
BOT CHORD 10-11=-52/1505, 8-10=-57/1969, 7-8=-21/158
WEBS 2-11=-1649/122, 2-10=0/501, 3-10=-187/97, 3-8=-729/85, 4-8=0/316, 5-8=-9/1244

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 11 and 60 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955093
B240005	G9	Half Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:28 Page: 1
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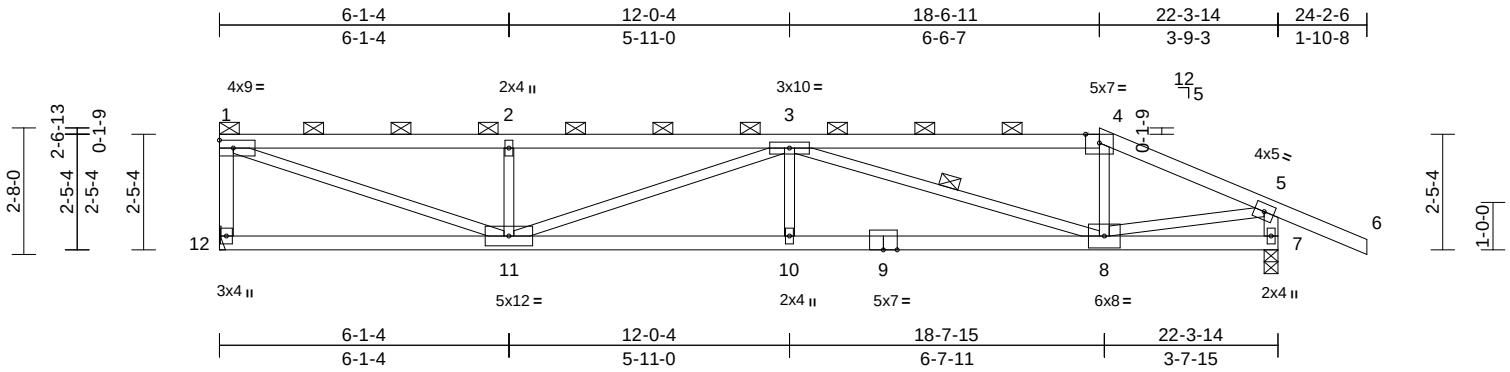

Scale = 1:48.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.18	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.33	10-11	>812	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	10-11	>999	240	Weight: 79 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1,7-5:2x4 SPF No.2

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

REACTIONS (size) 7=0-3-8, 12= Mechanical
Max Horiz 12=-82 (LC 4)
Max Uplift 7=-70 (LC 5), 12=-50 (LC 4)
Max Grav 7=1139 (LC 1), 12=985 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-12=-922/80, 1-2=-2094/110, 2-3=-2094/110, 3-4=-1357/60, 4-5=-1520/52, 5-6=0/54, 5-7=-1113/81
BOT CHORD 11-12=0/96, 10-11=-81/2617, 8-10=-81/2617, 7-8=0/42
WEBS 1-11=-108/2145, 2-11=-423/101, 3-10=0/252, 4-8=0/298, 5-8=-38/1390, 3-11=-556/35, 3-8=-1360/88

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 50 lb uplift at joint 12 and 70 lb uplift at joint 7.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955094
B240005	G10	Half Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:29 Page: 1
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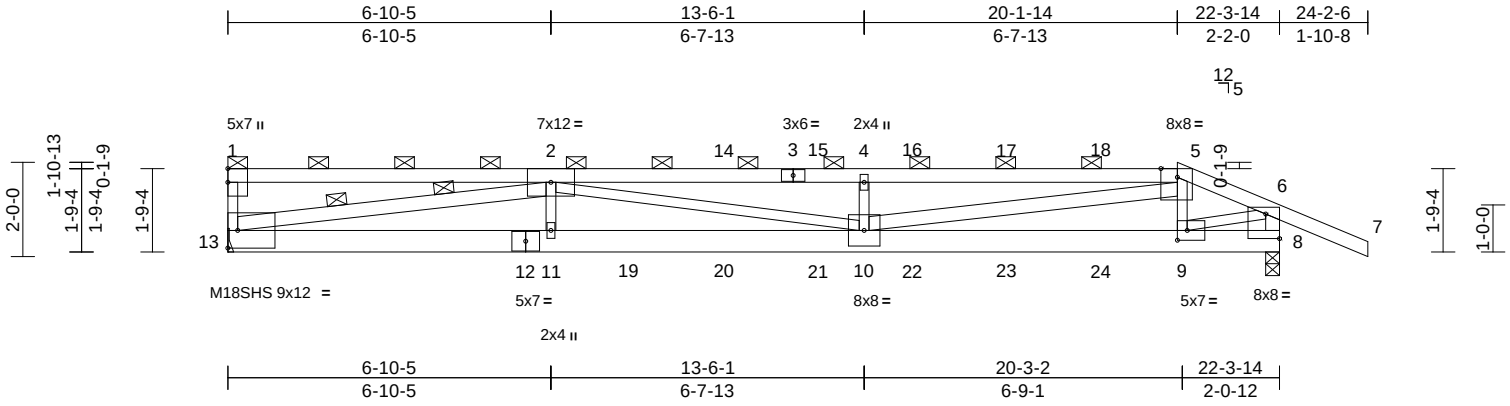

Scale = 1:48.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.96	Vert(LL)	-0.38	10-11	>697	360	M18SHS	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.69	10-11	>383	240	MT20	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.82	Horz(CT)	0.07	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	10-11	>841	240	Weight: 94 lb	FT = 20%

LUMBER

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

BOT CHORD 2x6 SPF No.2 *Except* 12-8:2x6 SPF 1650F 1.4E

WEBS 2x3 SPF No.2 *Except* 13-2,10-5:2x4 SPF No.2, 8-6:2x4 SPF 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-5 oc purlins, except end verticals, and 2-0-0 oc purlins (2-8-3 max.): 1-5.

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

WEBS 2 Rows at 1/3 pts 2-13

REACTIONS (size) 8=0-3-8, 13= Mechanical
Max Horiz 13=-75 (LC 6)
Max Uplift 8=-280 (LC 5), 13=-219 (LC 4)
Max Grav 8=1237 (LC 1), 13=1144 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-13=-224/87, 1-2=-163/53, 2-4=-4359/845, 4-5=-4359/845, 5-6=-1628/322, 6-7=0/54, 6-8=-1267/274

BOT CHORD 11-13=-761/4201, 10-11=-761/4201, 9-10=-273/1546, 8-9=-6/107

WEBS 2-13=-4123/787, 2-11=0/387, 2-10=-48/383, 4-10=-482/208, 5-9=-366/132, 6-9=-316/1616, 5-10=-549/2874

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) All plates are MT20 plates unless otherwise indicated.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 219 lb uplift at joint 13 and 280 lb uplift at joint 8.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 65 lb down and 26 lb up at 10-6-7, 65 lb down and 26 lb up at 12-6-7, 65 lb down and 26 lb up at 14-6-7, and 65 lb down and 26 lb up at 16-6-7, and 65 lb down and 26 lb up at 18-6-7 on top chord, and 250 lb down and 49 lb up at 8-6-2, 19 lb down at 10-6-7, 19 lb down at 12-6-7, 19 lb down at 14-6-7, 19 lb down at 16-6-7, and 19 lb down at 18-6-7, and 92 lb down and 37 lb up at 20-1-14 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-6=-70, 6-7=-70, 8-13=-20
Concentrated Loads (lb)
Vert: 9=6 (B), 14=-2 (B), 15=-2 (B), 16=-2 (B), 17=-2 (B), 18=-2 (B), 19=-250 (B), 20=0 (B), 21=0 (B), 22=0 (B), 23=0 (B), 24=0 (B)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955095
B240005	H1	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:29 Page: 1
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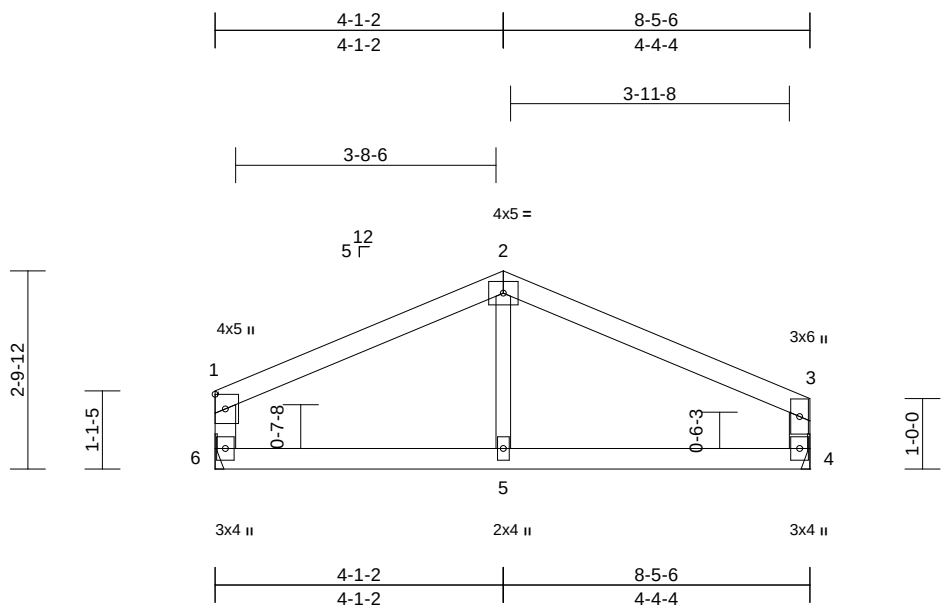

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.03	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 23 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 6= Mechanical
Max Horiz 6=-27 (LC 4)
Max Uplift 4=-5 (LC 9), 6=-4 (LC 8)
Max Grav 4=367 (LC 1), 6=367 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-371/21, 2-3=-373/19, 1-6=-285/29, 3-4=-289/32
BOT CHORD 5-6=0/284, 4-5=0/284
WEBS 2-5=0/122

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 4 lb uplift at joint 6 and 5 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	H2	Common	2	1	Job Reference (optional)	I59955096

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:30 Page: 1

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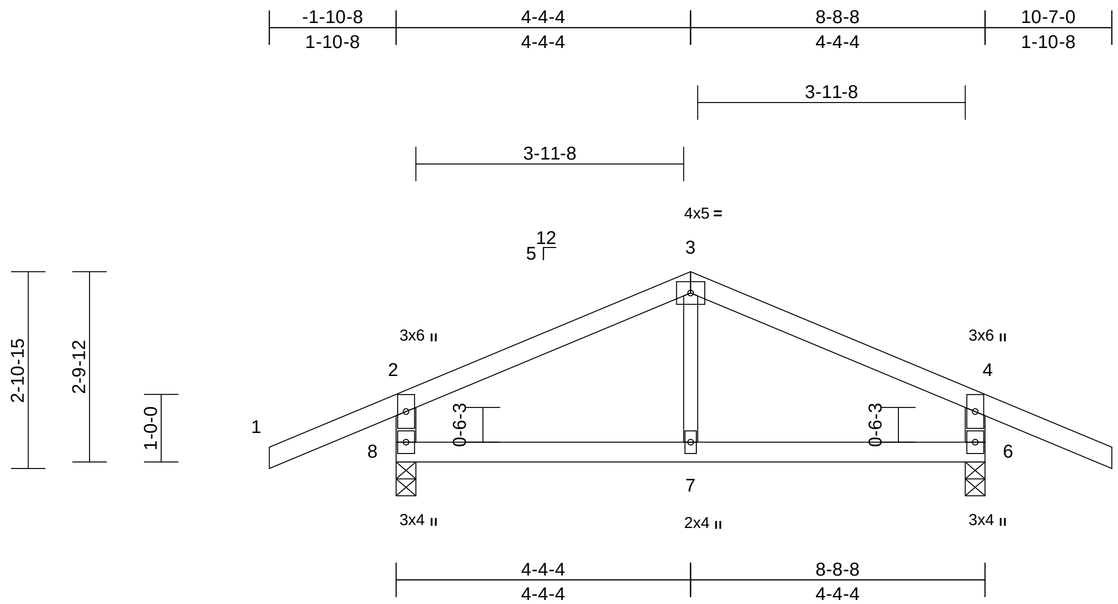

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.03	7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	7-8	>999	240	Weight: 29 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 (size) 6=0-3-8, 8=0-3-8
Max Horiz 8=-23 (LC 6)
Max Uplift 6=-97 (LC 9), 8=-97 (LC 8)
Max Grav 6=520 (LC 1), 8=520 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-343/51, 3-4=-343/51, 4-5=0/54, 2-8=-447/123, 4-6=-447/123
BOT CHORD 7-8=0/245, 6-7=0/245
WEBS 3-7=0/141

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

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955097
B240005	H3	Hip	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:30 Page: 1
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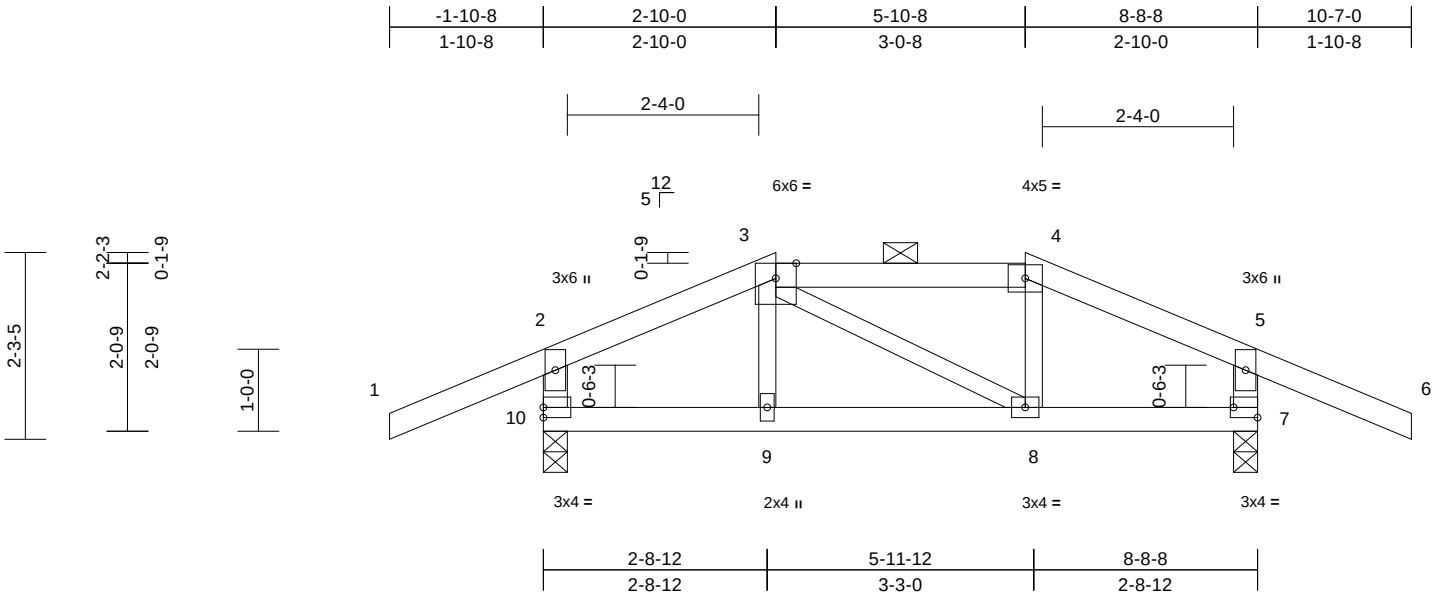

Scale = 1:28.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.04	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.02	8-9	>999	240	Weight: 32 lb	FT = 10%

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

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

REACTIONS (size) 7=0-3-8, 10=0-3-8
Max Horiz 10=-24 (LC 6)
Max Uplift 7=-107 (LC 5), 10=-107 (LC 4)
Max Grav 7=520 (LC 1), 10=520 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-360/48, 3-4=-272/54, 4-5=-360/48, 5-6=0/54, 2-10=-434/113, 5-7=-434/113
BOT CHORD 9-10=0/272, 8-9=0/272, 7-8=0/272
WEBS 3-9=-6/82, 3-8=-15/17, 4-8=-9/83

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 10 and 107 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	H4	Hip Girder	1	1	I59955098 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,
Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:31 Page: 1
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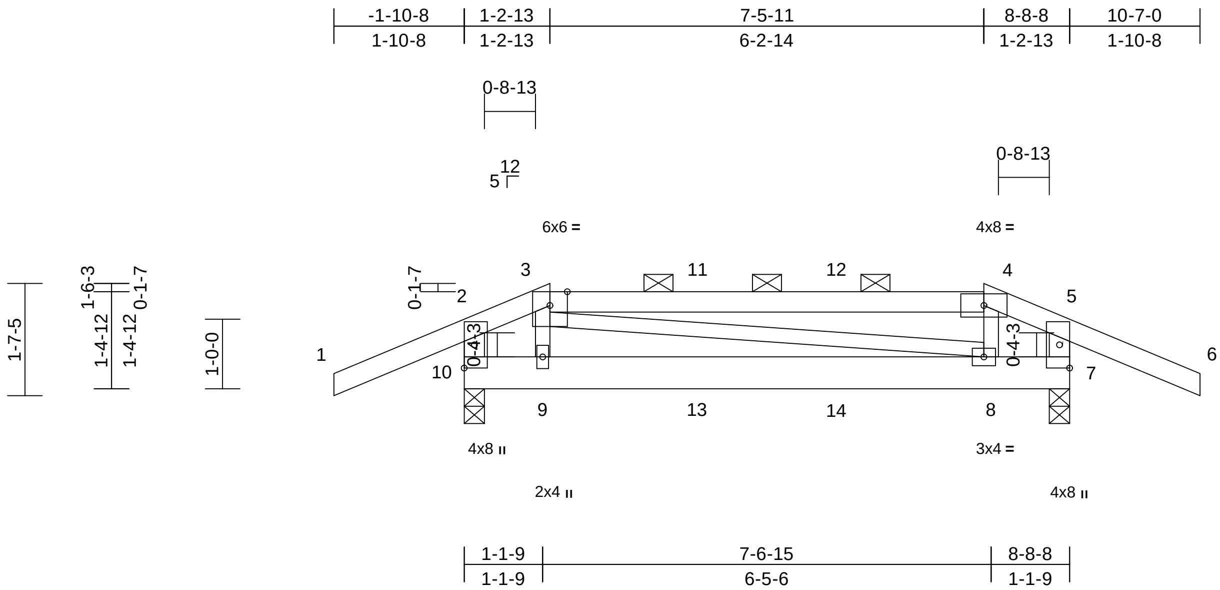

Scale = 1:33.1

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	0.61	Vert(LL)	-0.02	8-9	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.04	8-9	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.09	Horz(CT)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	-0.02	8-9	>999	240	Weight: 38 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x4 SPF No.2

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

REACTIONS (size) 7=0-3-8, 10=0-3-8
Max Horiz 10=24 (LC 7)
Max Uplift 7=-349 (LC 28), 10=-349 (LC 29)
Max Grav 7=481 (LC 17), 10=481 (LC 18)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=-396/370, 3-4=-345/253, 4-5=-390/369, 5-6=0/54, 2-10=-305/201, 5-7=-311/208
BOT CHORD 9-10=-308/370, 8-9=-260/376, 7-8=-298/357
WEBS 3-9=-476/113, 3-8=-60/56, 4-8=-492/124

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 349 lb uplift at joint 10 and 349 lb uplift at joint 7.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 45 lb down and 12 lb up at 1-2-13, 50 lb down and 11 lb up at 3-4-4, and 50 lb down and 11 lb up at 5-4-4, and 45 lb down and 12 lb up at 7-5-11 on top chord, and 112 lb down and 689 lb up at 1-2-13, 14 lb down and 16 lb up at 3-4-4, and 14 lb down and 16 lb up at 5-4-4, and 112 lb down and 689 lb up at 7-4-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 5-6=-70, 7-10=-20
Concentrated Loads (lb)
Vert: 9=50 (B), 8=50 (B)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955099
B240005	J1	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:31 Page: 1
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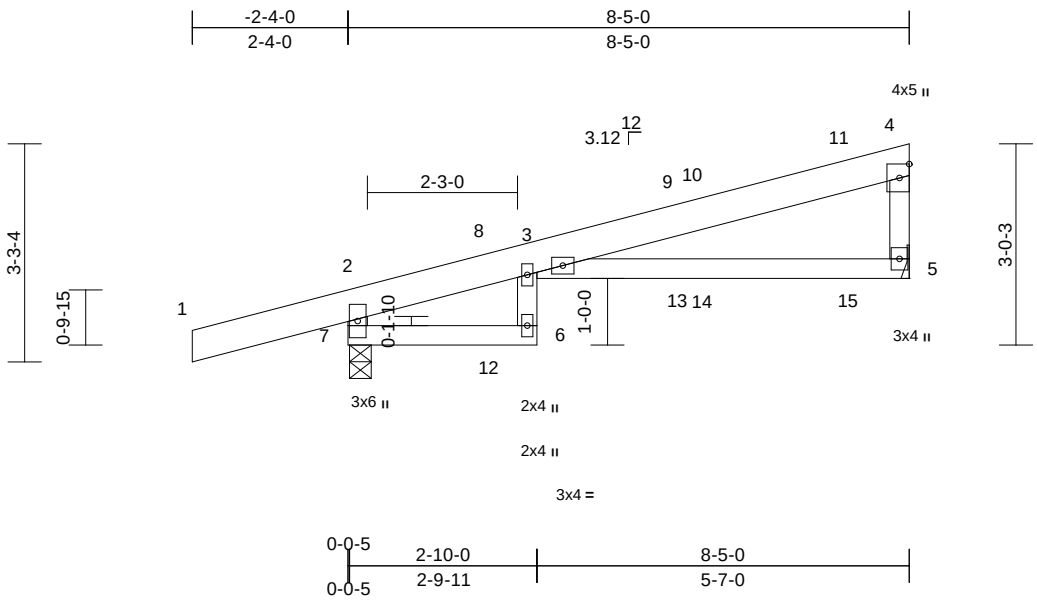

Scale = 1:34.5

Plate Offsets (X, Y): [3:0-2-10,0-0-5]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.11	3-5	>878	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.21	3-5	>468	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.09	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.10	3-5	>956	240	Weight: 32 lb	FT = 10%

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

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

REACTIONS (size) 5= Mechanical, 7=0-3-14
Max Horiz 7=106 (LC 5)
Max Uplift 5=-126 (LC 8), 7=-172 (LC 4)
Max Grav 5=482 (LC 1), 7=575 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/44, 2-3=-159/11, 3-4=-206/30, 4-5=-339/125, 2-7=-555/188
BOT CHORD 6-7=-4/16, 3-6=0/60, 3-5=-47/164

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 5 and 172 lb uplift at joint 7.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 72 lb down and 134 lb up at 3-0-9, 63 lb down and 36 lb up at 3-3-12, 108 lb down and 57 lb up at 5-10-8, and 92 lb down and 48 lb up at 6-2-15, and 97 lb down and 59 lb up at 8-5-4 on top chord, and 18 lb down and 21 lb up at 3-0-9, 3 lb down at 3-3-12, at 5-10-8, and 22 lb down and 23 lb up at 6-2-15, and 63 lb down and 18 lb up at 8-5-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 6-7=-20, 3-5=-20
Concentrated Loads (lb)
Vert: 8=35 (B), 9=-39 (F), 10=-1 (B), 11=-63 (F), 14=-20 (B), 15=-63 (F)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955100
B240005	J2	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:31 Page: 1
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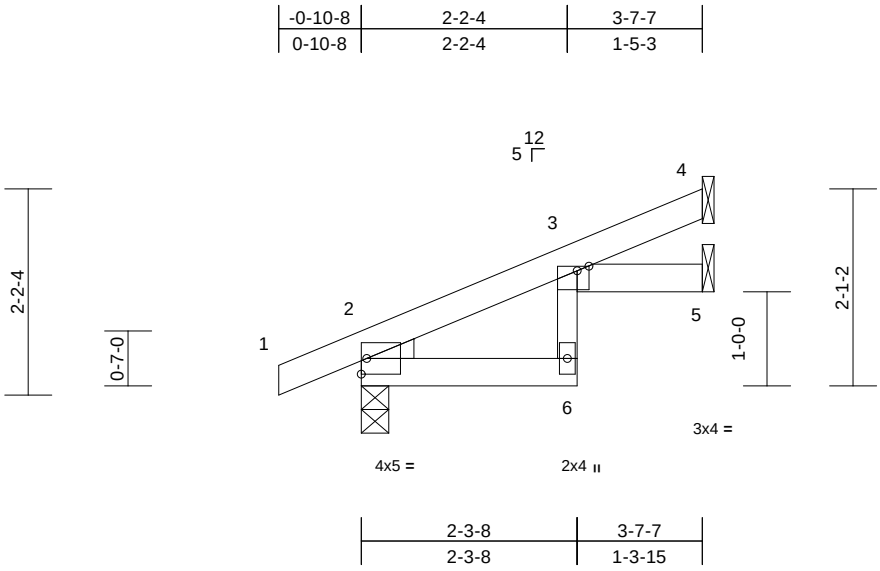

Scale = 1:24.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	-0.02	6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.03	6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.02	6	>999	240	Weight: 11 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=75 (LC 8)
Max Uplift 2=-37 (LC 8), 4=-52 (LC 8)
Max Grav 2=236 (LC 1), 4=129 (LC 1), 5=27 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-78/0, 3-4=-26/46
BOT CHORD 2-6=0/0, 3-5=-3/3
WEBS 3-6=0/41

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 52 lb uplift at joint 4 and 37 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955101
B240005	J3	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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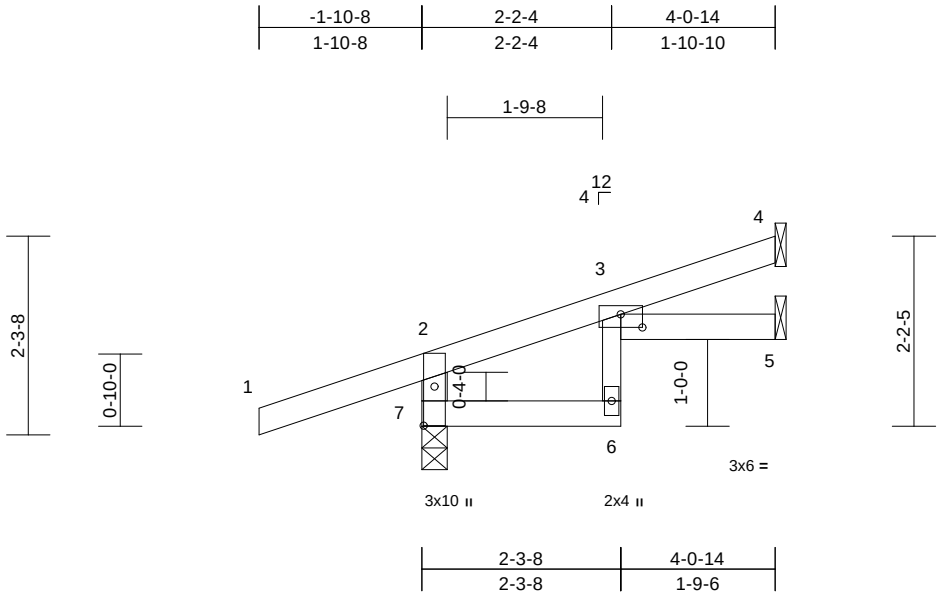

Scale = 1:26.6

Plate Offsets (X, Y): [3:0-3-0,0-1-13], [7:0-5-6,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	3	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	6	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.01	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.02	6	>999	240	Weight: 13 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5= Mechanical, 7=0-3-8
Max Horiz 7=79 (LC 4)
Max Uplift 4=-34 (LC 8), 5=-4 (LC 8), 7=-122 (LC 4)
Max Grav 4=85 (LC 1), 5=60 (LC 3), 7=352 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-320/135, 1-2=0/45, 2-3=-59/0, 3-4=-17/23
BOT CHORD 6-7=0/0, 3-5=-8/4
WEBS 3-6=0/40

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 122 lb uplift at joint 7, 34 lb uplift at joint 4 and 4 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955102
B240005	J4	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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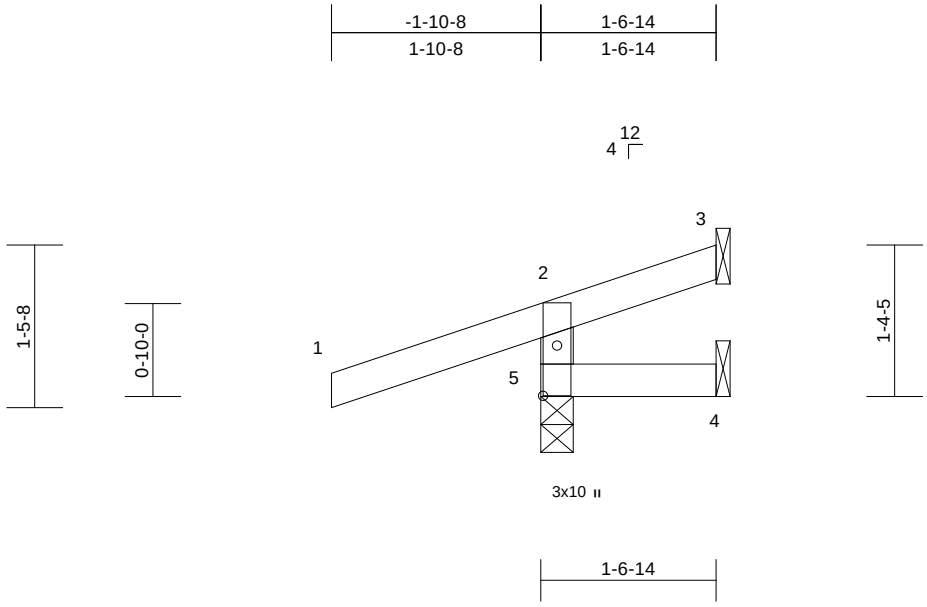

Scale = 1:20.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-6-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=46 (LC 4)
Max Uplift 3=-22 (LC 1), 4=-16 (LC 1), 5=-143 (LC 4)
Max Grav 3=16 (LC 4), 4=18 (LC 4), 5=306 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/142, 1-2=0/45, 2-3=-38/4
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 143 lb uplift at joint 5, 16 lb uplift at joint 4 and 22 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955103
B240005	J5	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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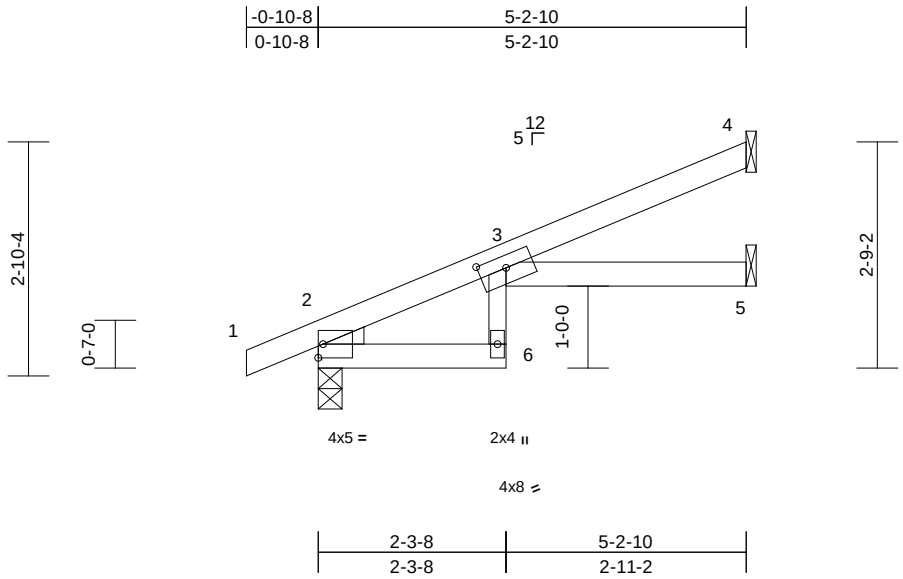

Scale = 1:28.1

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

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	0.48	Vert(LL)	-0.06	3-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.10	3-5	>583	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.07	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.06	3-5	>966	240	Weight: 15 lb	FT = 10%

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

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

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=102 (LC 8)
Max Uplift 2=-44 (LC 8), 4=-58 (LC 8), 5=-6 (LC 8)
Max Grav 2=304 (LC 1), 4=135 (LC 1), 5=87 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-138/0, 3-4=-35/44
BOT CHORD 2-6=-3/13, 3-6=-5/68, 3-5=-5/3

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 4, 44 lb uplift at joint 2 and 6 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J6	Jack-Open	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I59955104
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

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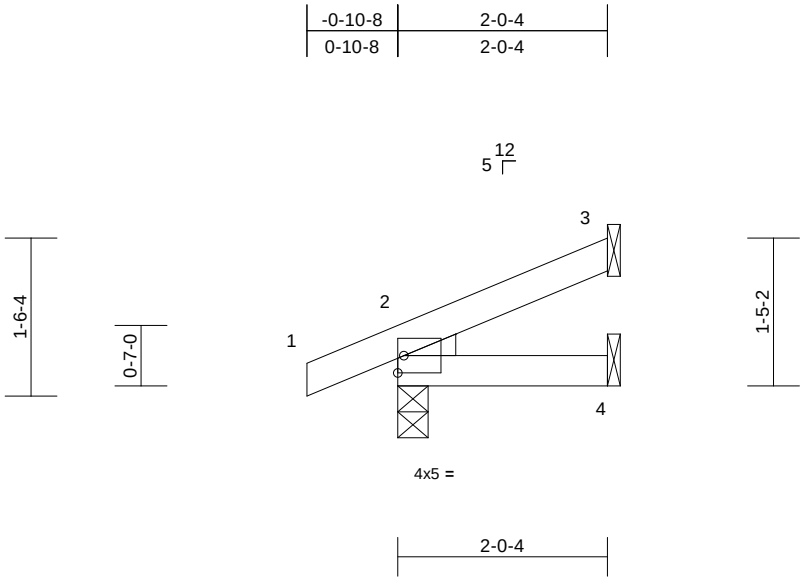

Scale = 1:22.2

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

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=48 (LC 8)
Max Uplift 2=-36 (LC 4), 3=-33 (LC 8)
Max Grav 2=173 (LC 1), 3=43 (LC 1), 4=36 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-46/16
BOT CHORD 2-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 33 lb uplift at joint 3 and 36 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955105
B240005	J7	Jack-Closed	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:38 Page: 1
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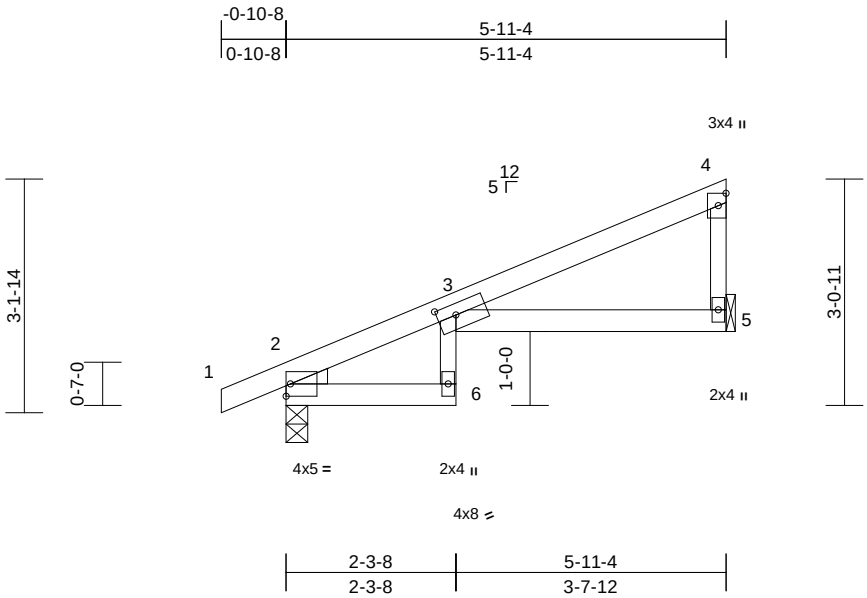

Scale = 1:31.1

Plate Offsets (X, Y): [3:0-3-0,0-1-13]

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	0.60	Vert(LL)	-0.10	6	>711	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.17	6	>397	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.11	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.10	6	>705	240	Weight: 18 lb	FT = 10%

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

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

REACTIONS (size) 2=0-3-8, 5= Mechanical
Max Horiz 2=104 (LC 5)
Max Uplift 2=-58 (LC 8), 5=-61 (LC 8)
Max Grav 2=334 (LC 1), 5=250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-169/0, 3-4=-85/14, 4-5=-166/65
BOT CHORD 2-6=-1/7, 3-6=0/63, 3-5=-22/54

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 5 and 58 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J8	Jack-Closed	1	1	I59955106 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:38 Page: 1

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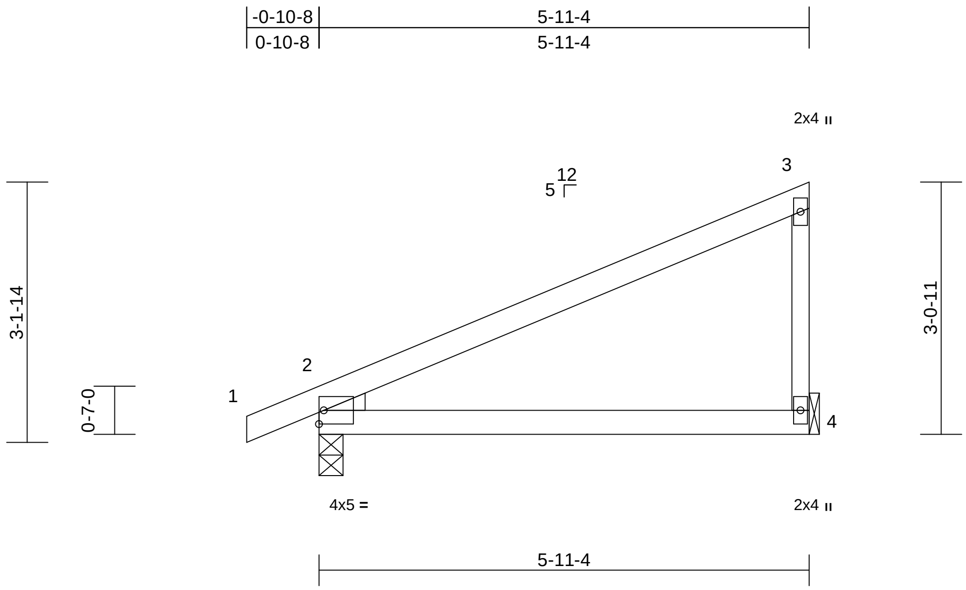

Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.60	Vert(LL)	-0.06	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.13	2-4	>544	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 18 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 4= Mechanical
Max Horiz 2=120 (LC 5)
Max Uplift 2=-60 (LC 8), 4=-59 (LC 8)
Max Grav 2=334 (LC 1), 4=250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-107/66, 3-4=-193/93
BOT CHORD 2-4=-38/29

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 4 and 60 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J9	Jack-Closed	1	1	Job Reference (optional) I59955107

Wheeler Lumber, Waverly, KS - 66871,

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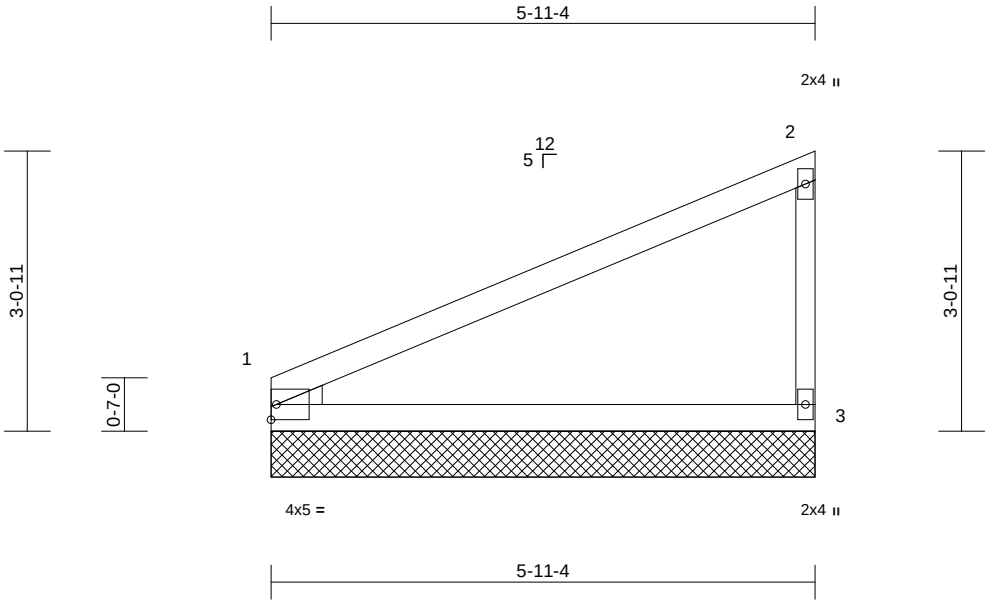

Scale = 1:25.1

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	0.67	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 1=5-11-4, 3=5-11-4
Max Horiz 1=118 (LC 5)
Max Uplift 1=-36 (LC 8), 3=-62 (LC 8)
Max Grav 1=263 (LC 1), 3=263 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-105/69, 2-3=-204/97
BOT CHORD 1-3=-38/29

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Gable requires continuous bottom chord bearing.
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 62 lb uplift at joint 3 and 36 lb uplift at joint 1.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955108
B240005	J10	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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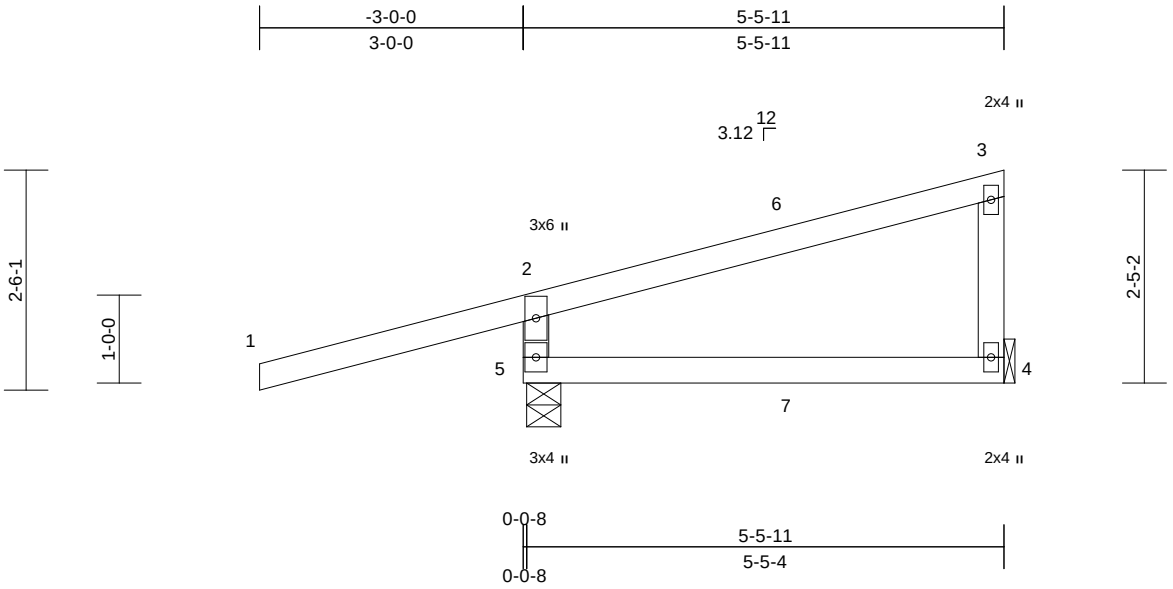

Scale = 1:26.2

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	0.82	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.02	4-5	>999	240	Weight: 19 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-5-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-4-11
Max Horiz 5=103 (LC 5)
Max Uplift 4=-38 (LC 8), 5=-216 (LC 4)
Max Grav 4=149 (LC 1), 5=506 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-445/242, 1-2=0/55, 2-3=-103/19, 3-4=-112/68
BOT CHORD 4-5=-28/68

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 216 lb uplift at joint 5 and 38 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 55 lb down and 94 lb up at 2-11-15, and 78 lb down and 36 lb up at 3-0-9 on top chord, and 10 lb down and 16 lb up at 2-11-15, and 9 lb down and 7 lb up at 3-0-9 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 6=26 (B), 7=7 (F)

August 7,2023

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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955109
B240005	J11	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:34 Page: 1
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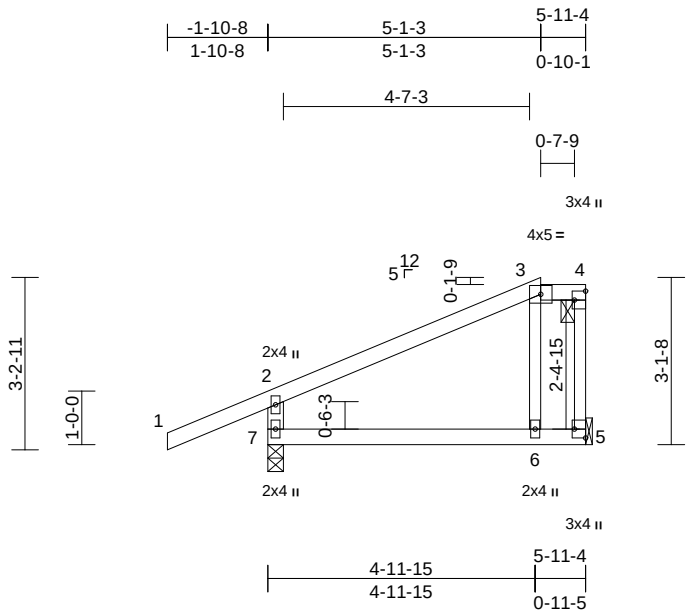

Scale = 1:43

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.03	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.06	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	6-7	>999	240	Weight: 21 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 7-2:2x4 SPF 2400F 2.0E

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=131 (LC 5)
Max Uplift 5=-43 (LC 5), 7=-89 (LC 8)
Max Grav 5=231 (LC 1), 7=423 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-361/119, 1-2=0/54, 2-3=-132/16, 3-4=-62/40, 4-5=-106/1
BOT CHORD 6-7=-31/41, 5-6=-34/44
WEBS 3-6=-82/84

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 7 and 43 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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

August 7,2023

MiTek®
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Chesterfield, MO 63017
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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955110
B240005	J12	Jack-Closed Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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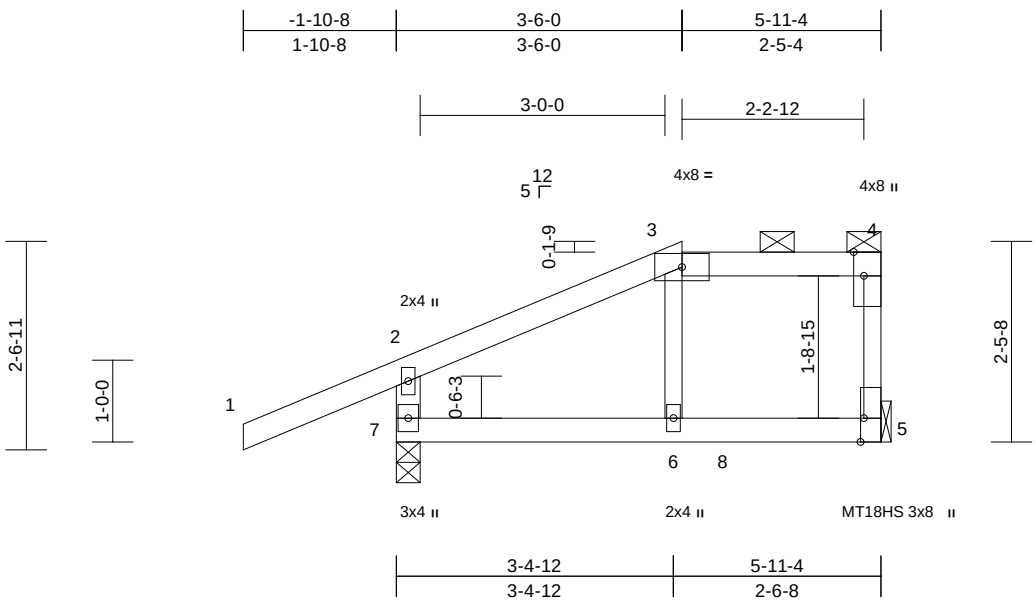

Scale = 1:28.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.07	6-7	>922	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.13	6-7	>518	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.07	6-7	>944	240	Weight: 20 lb	FT = 10%

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

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=102 (LC 5)
Max Uplift 5=-112 (LC 5), 7=-131 (LC 4)
Max Grav 5=408 (LC 1), 7=526 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-403/130, 1-2=0/54, 2-3=-228/52, 3-4=-143/57, 4-5=-196/64
BOT CHORD 6-7=-60/141, 5-6=-61/138
WEBS 3-6=-34/145

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 131 lb uplift at joint 7 and 112 lb uplift at joint 5.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) 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) 135 lb down and 53 lb up at 3-6-0, and 157 lb down and 50 lb up at 4-0-0 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, 5-7=-20
Concentrated Loads (lb)
Vert: 6=-123 (F), 8=-157 (F)

August 7,2023

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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955111
B240005	J13	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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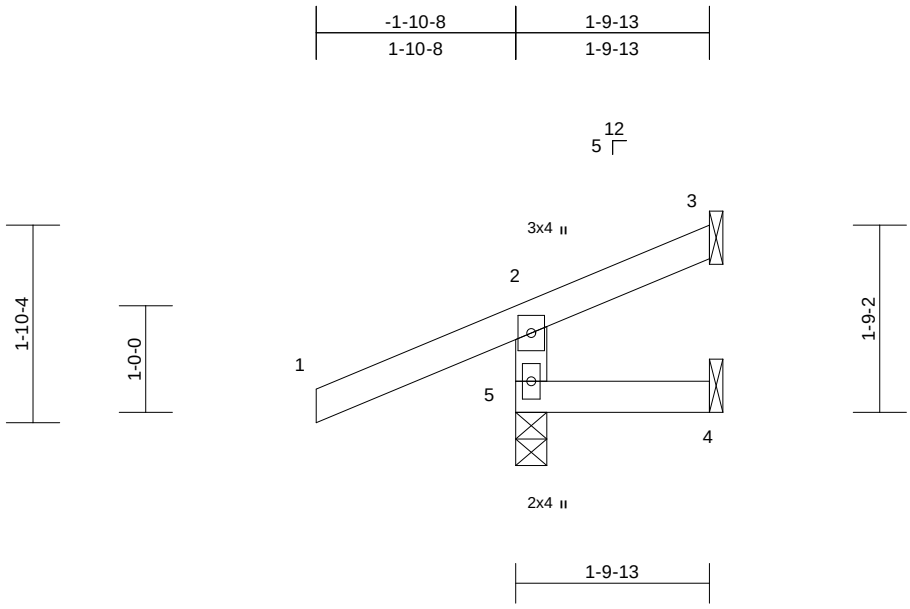

Scale = 1:21.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=53 (LC 5)
Max Uplift 3=-14 (LC 8), 4=-7 (LC 1), 5=-87 (LC 4)
Max Grav 3=4 (LC 4), 4=24 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/96, 1-2=0/54, 2-3=-46/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 5, 7 lb uplift at joint 4 and 14 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J14	Jack-Closed	1	1	I59955112 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:36 Page: 1
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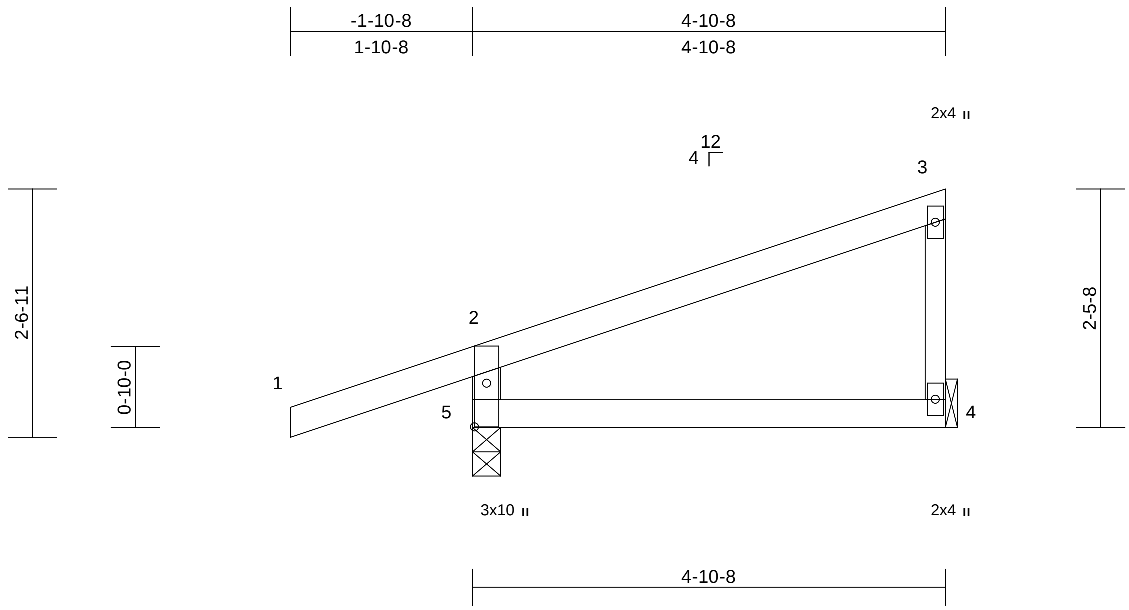

Scale = 1:23.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.04	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 16 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=106 (LC 5)
Max Uplift 4=-38 (LC 8), 5=-134 (LC 4)
Max Grav 4=177 (LC 1), 5=380 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-336/164, 1-2=0/45, 2-3=-98/17, 3-4=-129/60
BOT CHORD 4-5=-25/25

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 134 lb uplift at joint 5 and 38 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955113
B240005	J15	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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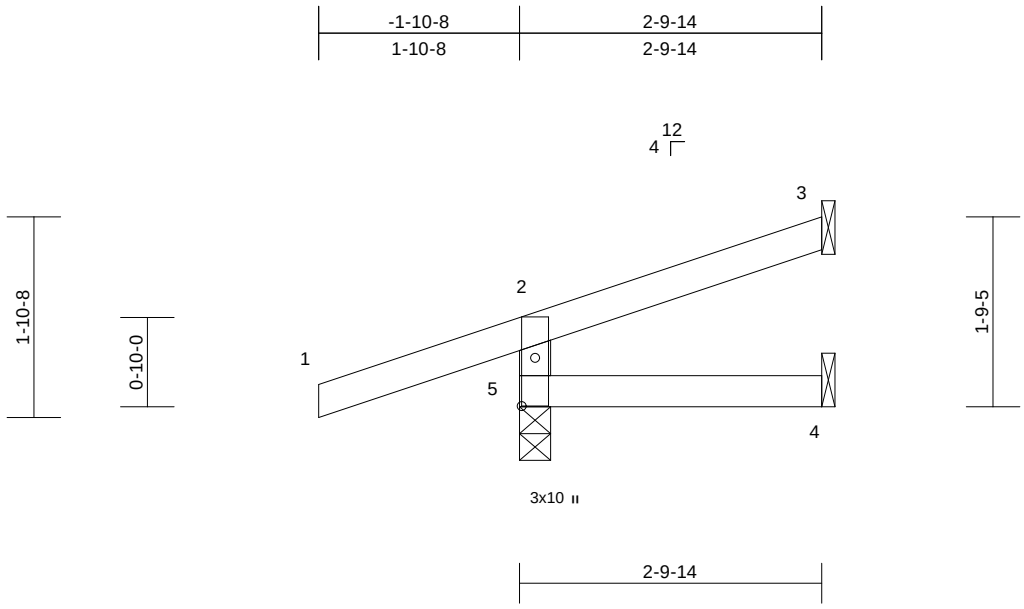

Scale = 1:21.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=62 (LC 4)
Max Uplift 3=-31 (LC 8), 5=-124 (LC 4)
Max Grav 3=52 (LC 1), 4=44 (LC 3), 5=314 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-273/139, 1-2=0/45, 2-3=-42/11
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 5 and 31 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955114
B240005	J16	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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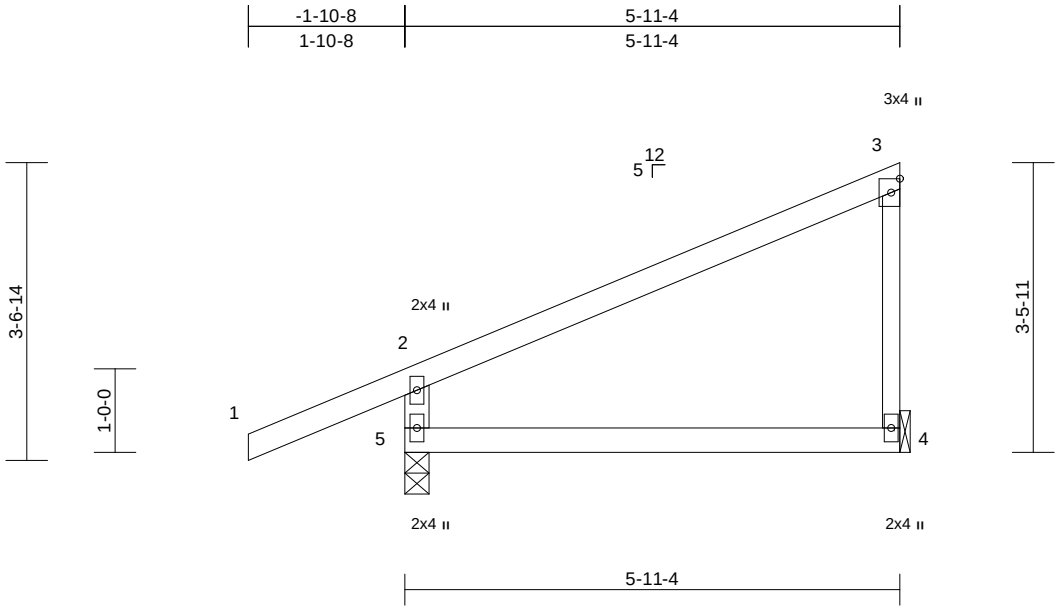

Scale = 1:27.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.04	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.09	4-5	>773	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 19 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=150 (LC 5)
Max Uplift 4=-56 (LC 8), 5=-85 (LC 8)
Max Grav 4=231 (LC 1), 5=423 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-373/129, 1-2=0/54, 2-3=-138/37, 3-4=-167/81
BOT CHORD 4-5=-41/31

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
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 85 lb uplift at joint 5 and 56 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J17	Jack-Closed	2	1	I59955115 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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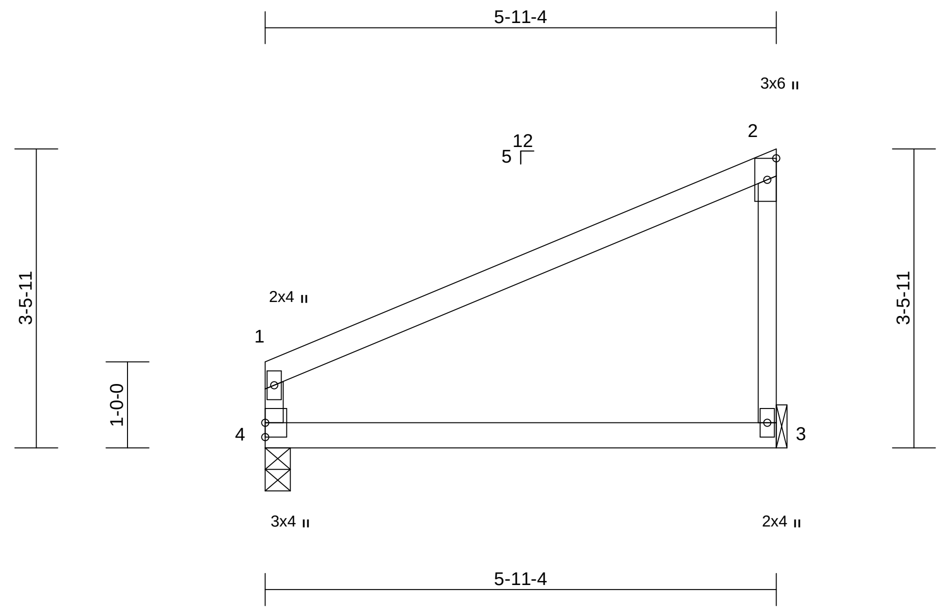

Scale = 1:26.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.05	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.10	3-4	>707	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	3-4	>999	240	Weight: 17 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4=0-3-8
Max Horiz 4=133 (LC 5)
Max Uplift 3=-63 (LC 8), 4=-33 (LC 8)
Max Grav 3=258 (LC 1), 4=258 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-212/76, 1-2=-139/38, 2-3=-189/89
BOT CHORD 3-4=-41/38

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss is not designed to support a ceiling and is not intended for use where aesthetics are a consideration.
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 33 lb uplift at joint 4 and 63 lb uplift at joint 3.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955116
B240005	J18	Diagonal Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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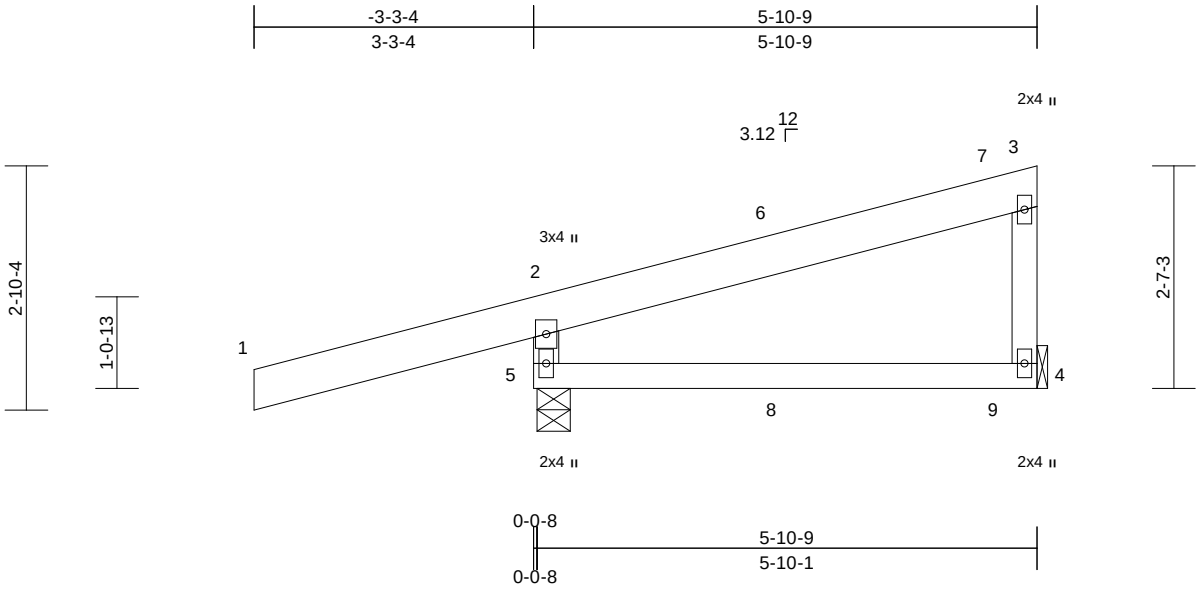

Scale = 1:26.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	0.05	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.04	4-5	>999	240	Weight: 26 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-10-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-4-11
Max Horiz 5=109 (LC 5)
Max Uplift 4=-61 (LC 8), 5=-244 (LC 4)
Max Grav 4=222 (LC 15), 5=545 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-505/262, 1-2=0/60, 2-3=-121/37, 3-4=-149/87
BOT CHORD 4-5=-26/69

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 244 lb uplift at joint 5 and 61 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 77 lb down and 25 lb up at 2-9-5, and 68 lb down and 65 lb up at 2-9-11, and 66 lb down and 49 lb up at 5-4-7 on top chord, and 36 lb down and 110 lb up at 2-9-5, and 10 lb down and 16 lb up at 2-9-11, and 25 lb down at 5-4-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-22 (F), 8=38 (B), 9=-7 (F)

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955117
B240005	J19	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:37 Page: 1
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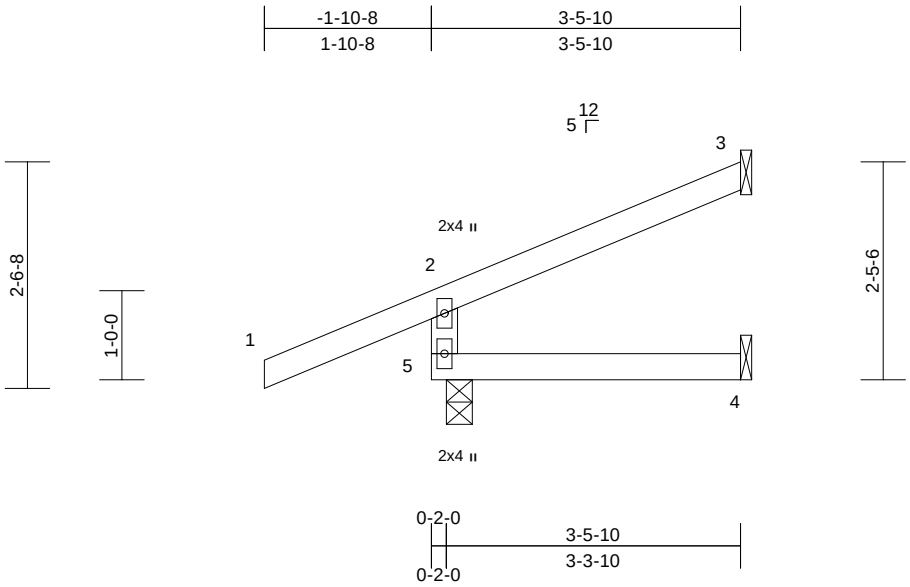

Scale = 1:25.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 11 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=74 (LC 8)
Max Uplift 3=-49 (LC 8), 5=-71 (LC 4)
Max Grav 3=79 (LC 1), 4=58 (LC 3), 5=332 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-290/95, 1-2=0/54, 2-3=-59/22
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 5 and 49 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955118
B240005	J20	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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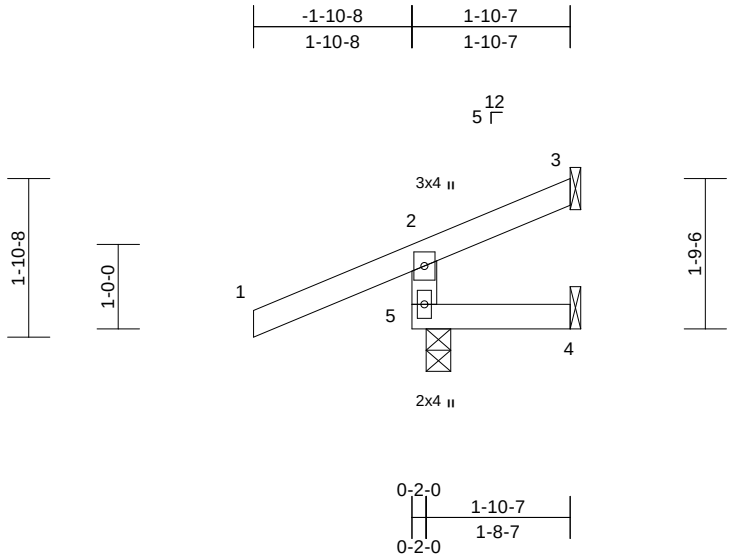

Scale = 1:27.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=53 (LC 5)
Max Uplift 3=-16 (LC 8), 4=-6 (LC 1), 5=-86 (LC 4)
Max Grav 3=5 (LC 19), 4=25 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-262/95, 1-2=0/54, 2-3=-46/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 6 lb uplift at joint 4, 16 lb uplift at joint 3 and 86 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955119
B240005	J21	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:38 Page: 1
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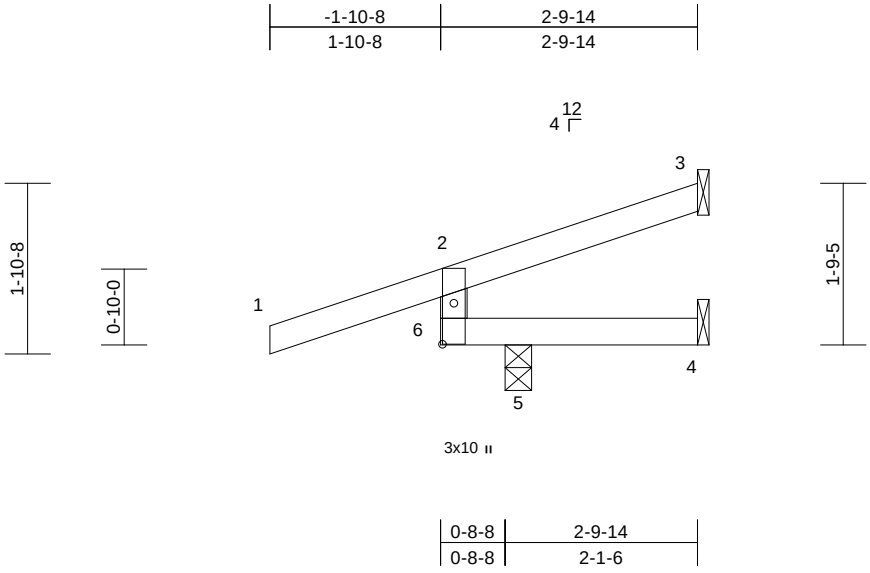

Scale = 1:25.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.01	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=62 (LC 4)
Max Uplift 3=-25 (LC 8), 4=-78 (LC 1), 5=-187 (LC 4)
Max Grav 3=25 (LC 1), 4=55 (LC 4), 5=430 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-6=-300/150, 1-2=0/45, 2-3=-50/2
BOT CHORD 5-6=-12/62, 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 3, 78 lb uplift at joint 4 and 187 lb uplift at joint 5.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955120
B240005	J22	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:38 Page: 1
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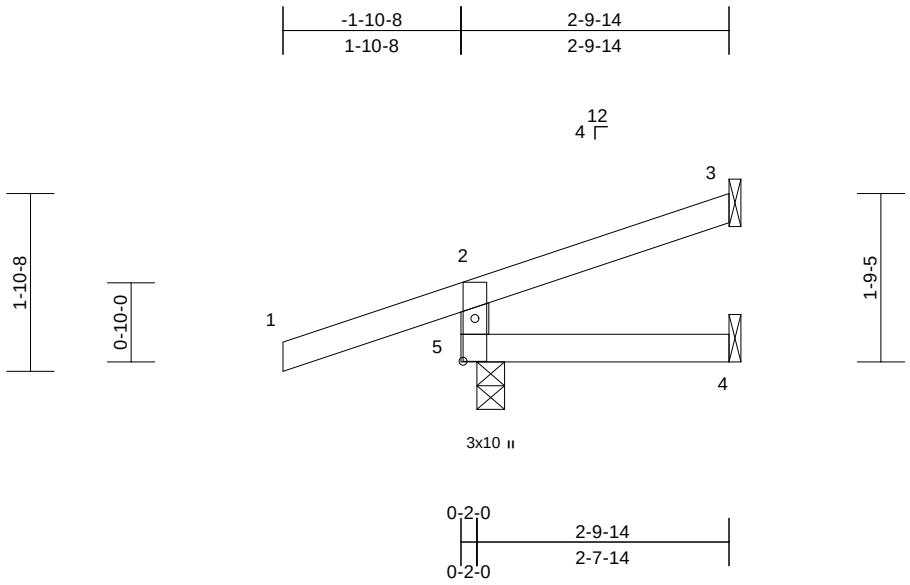

Scale = 1:24.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-9-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=62 (LC 4)
Max Uplift 3=-31 (LC 8), 5=-124 (LC 4)
Max Grav 3=52 (LC 1), 4=44 (LC 3), 5=314 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-273/139, 1-2=0/45, 2-3=-42/11
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 5 and 31 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955121
B240005	J23	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:38 Page: 1
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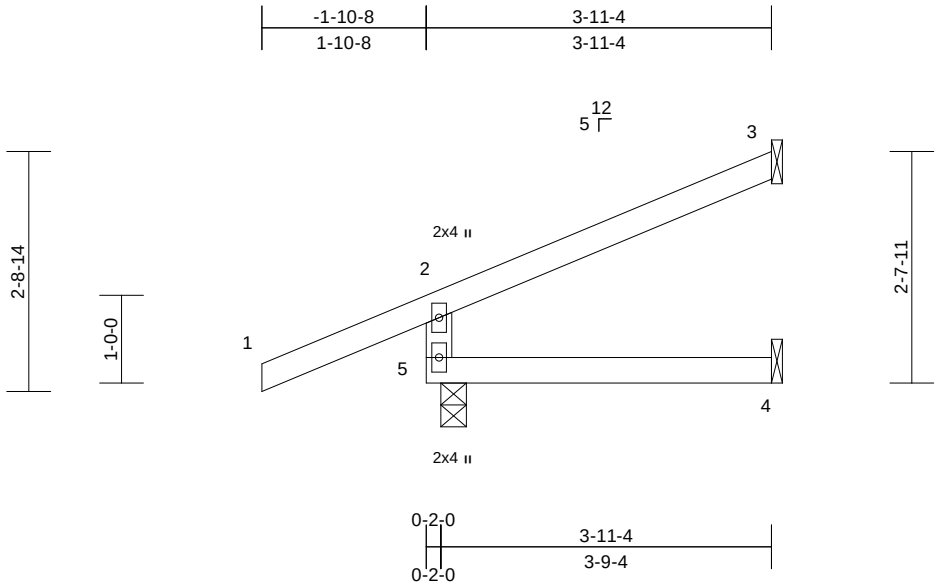

Scale = 1:26.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 12 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-11-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=82 (LC 8)
Max Uplift 3=-57 (LC 8), 5=-69 (LC 4)
Max Grav 3=98 (LC 1), 4=67 (LC 3), 5=348 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-305/97, 1-2=0/54, 2-3=-66/28
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 69 lb uplift at joint 5 and 57 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J24	Diagonal Hip Girder	1	1	I59955122 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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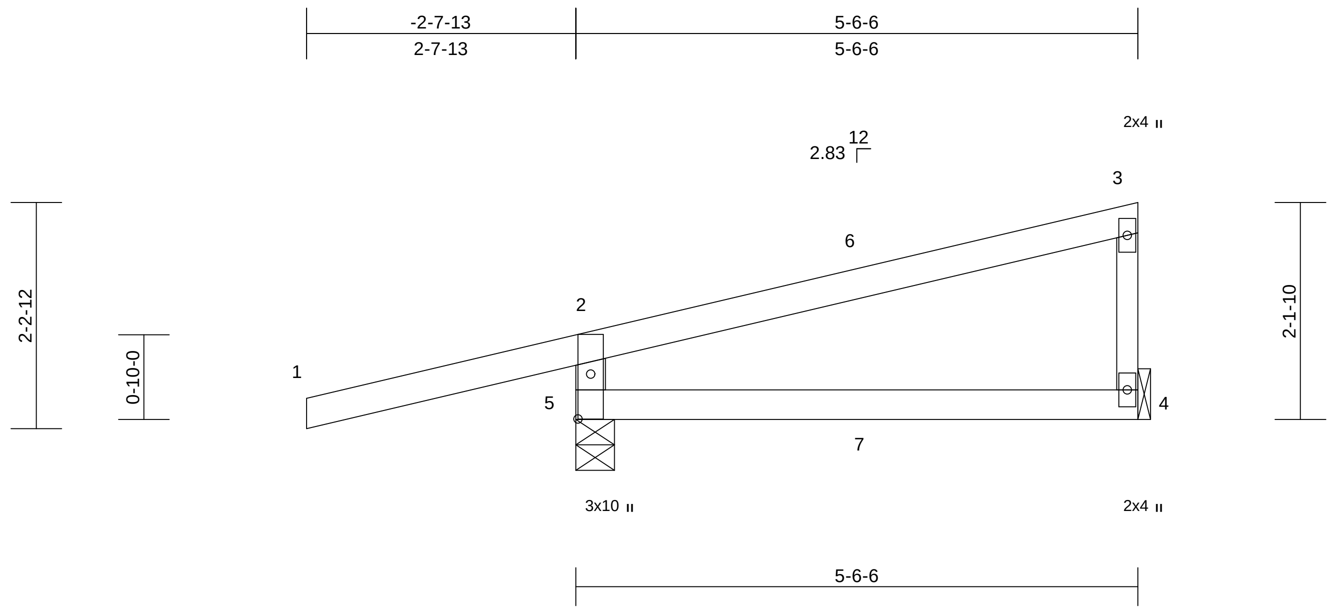

Scale = 1:22.7

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

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	0.63	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.02	4-5	>999	240	Weight: 18 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-4-9
Max Horiz 5=88 (LC 5)
Max Uplift 4=-31 (LC 8), 5=-186 (LC 4)
Max Grav 4=186 (LC 1), 5=485 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-429/217, 1-2=0/45, 2-3=-113/9, 3-4=-137/62
BOT CHORD 4-5=-19/61

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 186 lb uplift at joint 5 and 31 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 70 lb down and 11 lb up at 2-9-8, and 70 lb down and 11 lb up at 2-9-8 on top chord, and 14 lb down and 16 lb up at 2-9-8, and 14 lb down and 16 lb up at 2-9-8 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

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

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955123
B240005	J25	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:39 Page: 1
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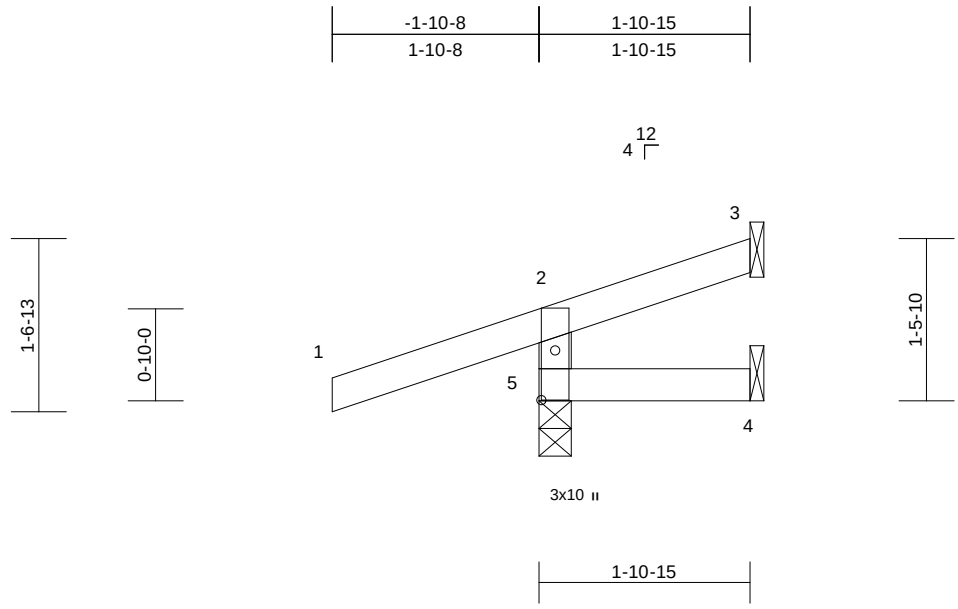

Scale = 1:20.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=51 (LC 4)
Max Uplift 3=-13 (LC 8), 4=-7 (LC 1), 5=-134 (LC 4)
Max Grav 3=5 (LC 18), 4=26 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-260/138, 1-2=0/45, 2-3=-37/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 5, 7 lb uplift at joint 4 and 13 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J26	Jack-Closed	2	1	I59955124 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,
Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:39 Page: 1
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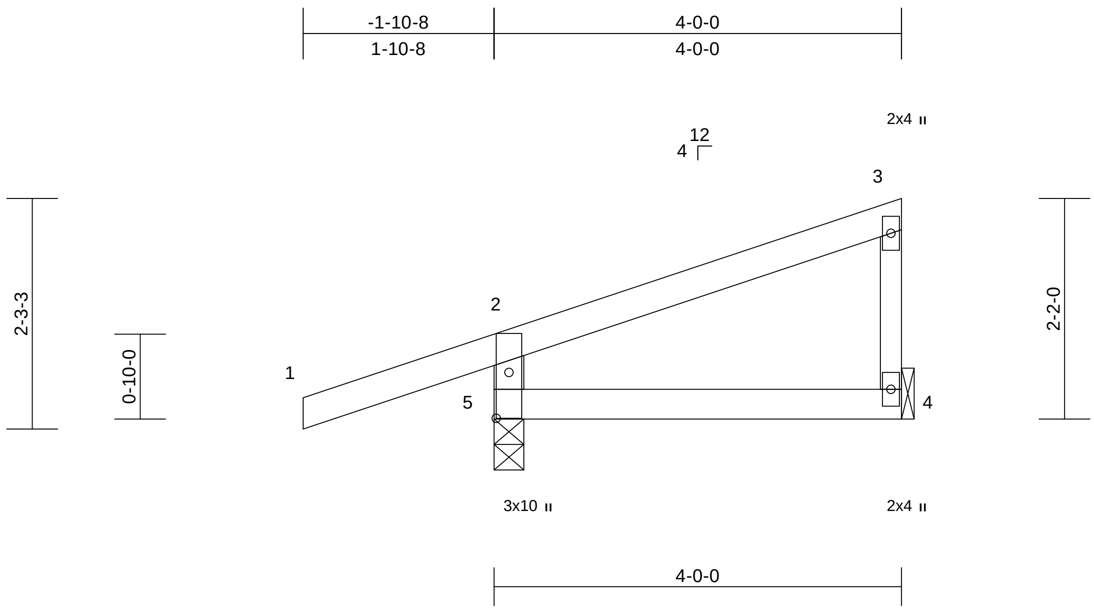

Scale = 1:22.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 13 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=93 (LC 5)
Max Uplift 4=-27 (LC 8), 5=-132 (LC 4)
Max Grav 4=131 (LC 1), 5=348 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-308/154, 1-2=0/45, 2-3=-77/10, 3-4=-96/46
BOT CHORD 4-5=-23/19

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 132 lb uplift at joint 5 and 27 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955125
B240005	J27	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:39 Page: 1
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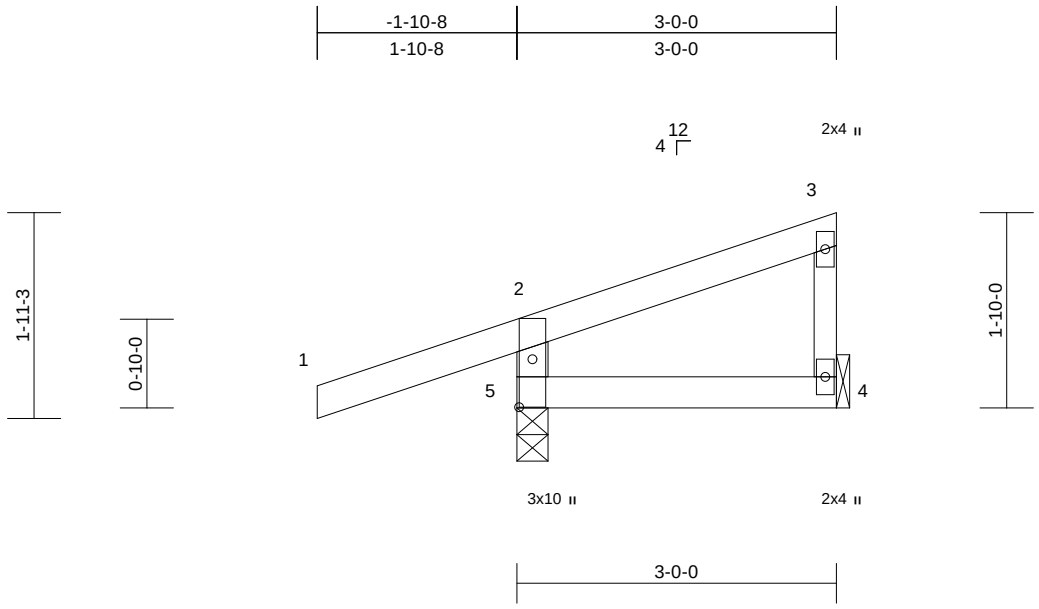

Scale = 1:21.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 11 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=78 (LC 5)
Max Uplift 4=-17 (LC 5), 5=-133 (LC 4)
Max Grav 4=72 (LC 1), 5=317 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-279/145, 1-2=0/45, 2-3=-53/14, 3-4=-55/29
BOT CHORD 4-5=-21/21

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 5 and 17 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

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02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955126
B240005	J28	Jack-Closed	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:40 Page: 1
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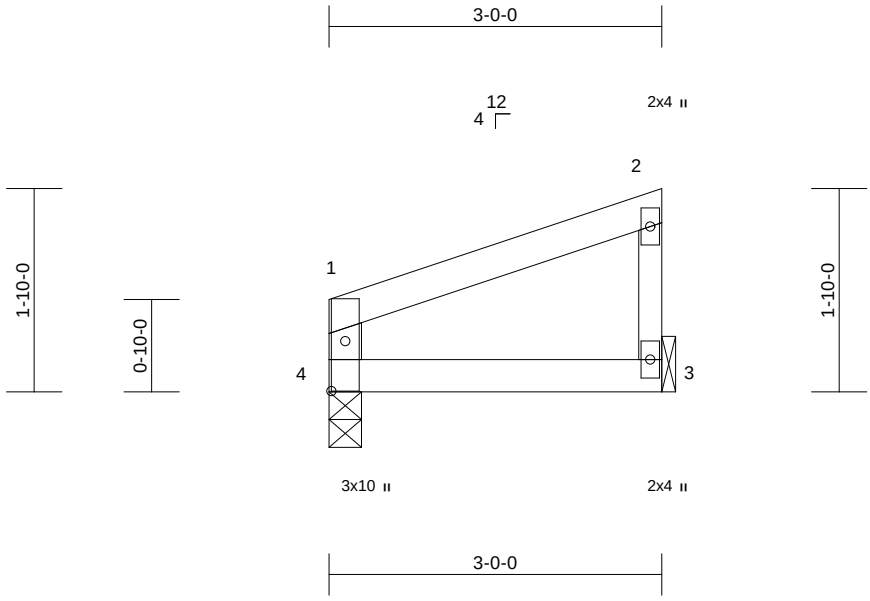

Scale = 1:20.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3-4	>999	240	Weight: 9 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4=0-3-8
Max Horiz 4=63 (LC 5)
Max Uplift 3=-28 (LC 8), 4=-19 (LC 4)
Max Grav 3=124 (LC 1), 4=124 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-102/39, 1-2=-58/11, 2-3=-91/40
BOT CHORD 3-4=-21/18

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 4 and 28 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955127
B240005	J29	Jack-Closed Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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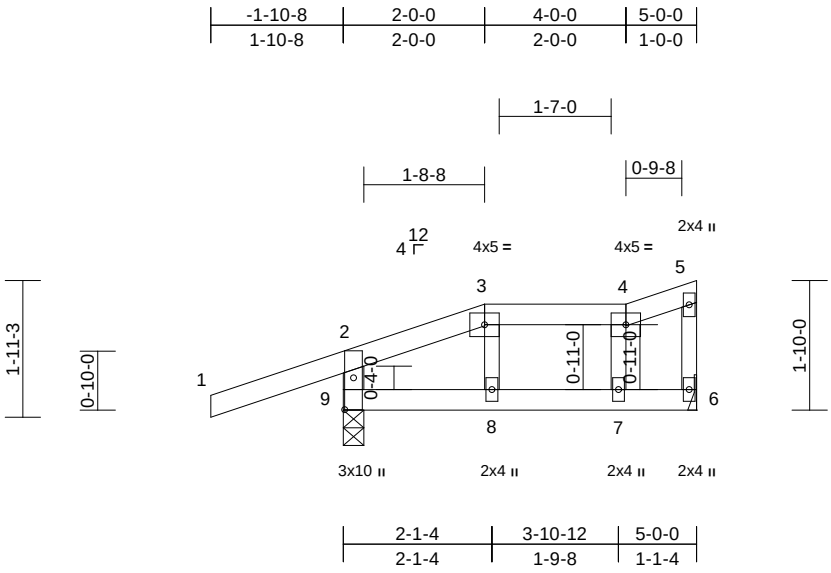

Scale = 1:32.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.01	7-8	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	7-8	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.01	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	7-8	>999	240	Weight: 17 lb	FT = 10%

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

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

REACTIONS (size) 6= Mechanical, 9=0-3-8
Max Horiz 9=78 (LC 5)
Max Uplift 6=-52 (LC 8), 9=-166 (LC 4)
Max Grav 6=170 (LC 1), 9=364 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-9=-301/156, 1-2=0/45, 2-3=-112/30, 3-4=-67/27, 4-5=-57/28, 5-6=-83/34
BOT CHORD 8-9=-35/55, 7-8=-32/55, 6-7=-33/55
WEBS 3-8=-10/41, 4-7=-77/55

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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 166 lb uplift at joint 9 and 52 lb uplift at joint 6.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 59 lb down and 126 lb up at 2-0-0 on top chord, and 29 lb down and 60 lb up at 2-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 6-9=-20
Concentrated Loads (lb)
Vert: 3=35 (B)

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

August 7,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J30	Jack-Closed	1	1	I59955128 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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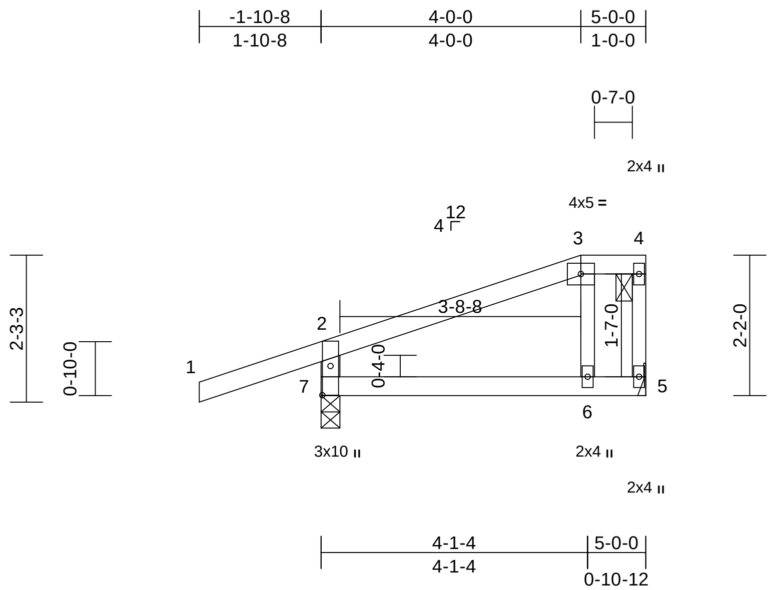

Scale = 1:35.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.03	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	6-7	>999	240	Weight: 17 lb	FT = 10%

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

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

REACTIONS (size) 5= Mechanical, 7=0-3-8
Max Horiz 7=95 (LC 7)
Max Uplift 5=-32 (LC 5), 7=-137 (LC 4)
Max Grav 5=184 (LC 1), 7=385 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-326/156, 1-2=0/45, 2-3=-101/12, 3-4=-46/25, 4-5=-71/7
BOT CHORD 6-7=-26/42, 5-6=-23/38
WEBS 3-6=-76/62

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * 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 137 lb uplift at joint 7 and 32 lb uplift at joint 5.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

August 7,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J31	Jack-Closed	1	1	I59955129 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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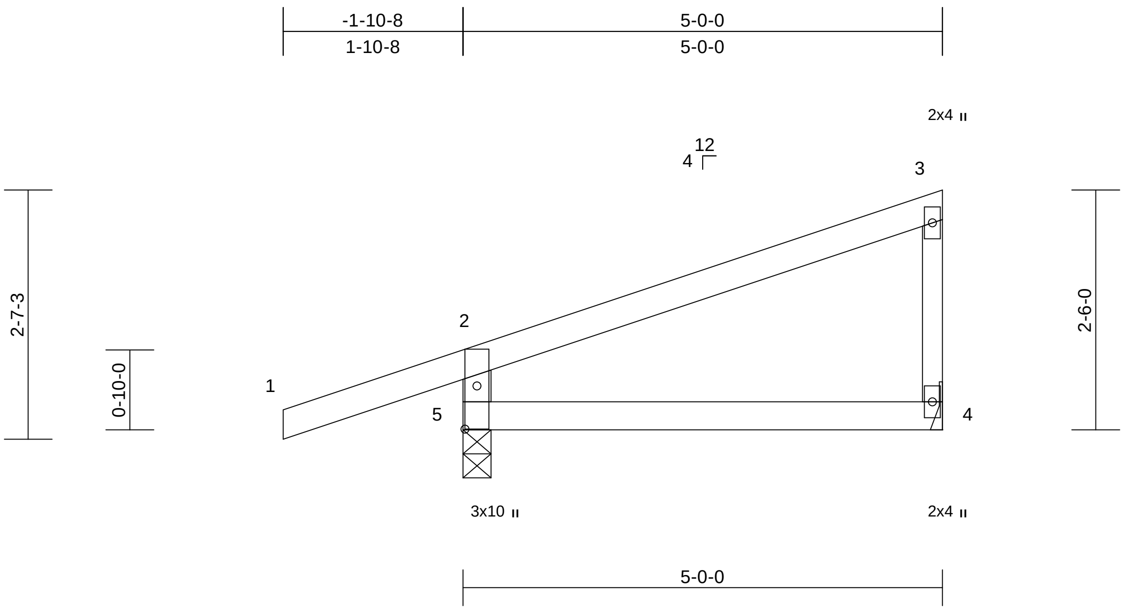

Scale = 1:24

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(CT)	-0.04	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 16 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=107 (LC 5)
Max Uplift 4=-40 (LC 8), 5=-134 (LC 4)
Max Grav 4=184 (LC 1), 5=385 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-340/166, 1-2=0/45, 2-3=-101/17, 3-4=-134/62
BOT CHORD 4-5=-25/27

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 134 lb uplift at joint 5 and 40 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J32	Jack-Closed	6	1	I59955130 Job Reference (optional)

RELEASE FOR CONSTRUCTION
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LEE'S SUMMIT, MISSOURI
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

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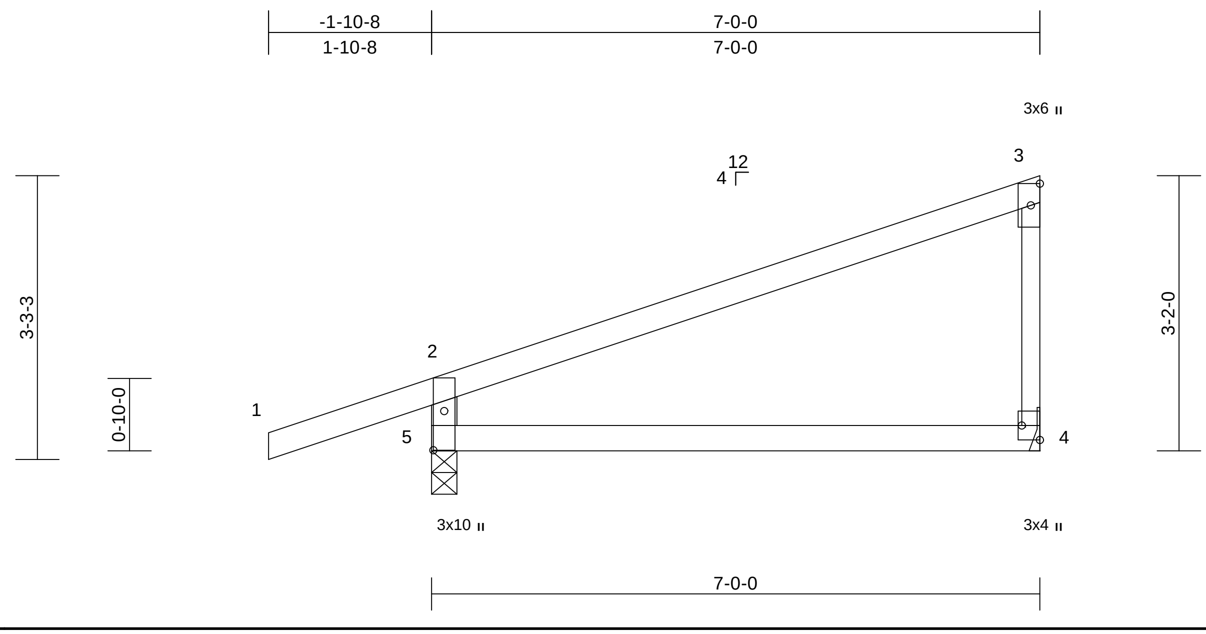

Scale = 1:26.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	-0.08	4-5	>985	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.17	4-5	>472	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	4-5	>999	240	Weight: 21 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=137 (LC 5)
Max Uplift 4=-62 (LC 8), 5=-144 (LC 4)
Max Grav 4=283 (LC 1), 5=466 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-412/192, 1-2=0/45, 2-3=-149/14, 3-4=-202/92
BOT CHORD 4-5=-33/54

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 5 and 62 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J33	Diagonal Hip Girder	1	1	I59955131 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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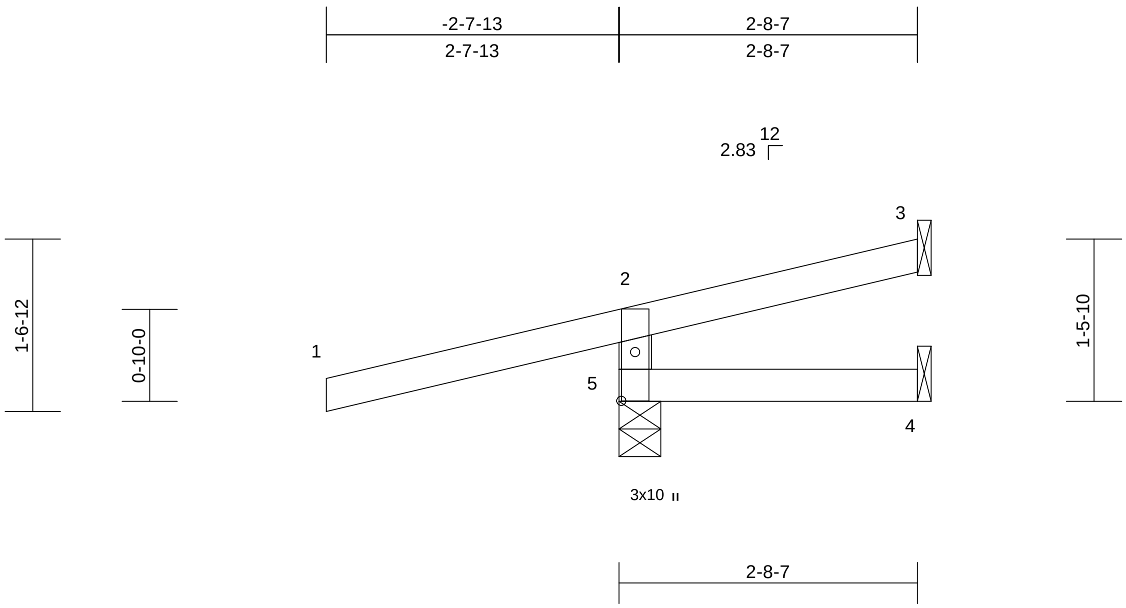

Scale = 1:20.9

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

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	0.61	Vert(LL)	0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.01	4-5	>999	240	Weight: 10 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-4-9
Max Horiz 5=51 (LC 7)
Max Uplift 3=-42 (LC 17), 4=-26 (LC 1), 5=-158 (LC 4)
Max Grav 3=23 (LC 4), 4=28 (LC 4), 5=276 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-232/141, 1-2=-7/34, 2-3=-22/5
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 158 lb uplift at joint 5, 42 lb uplift at joint 3 and 26 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 46 lb down and 16 lb up at -2-7-13, and 46 lb down and 16 lb up at -2-7-13 on top chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Concentrated Loads (lb)
Vert: 1=-71 (F=-36, B=-36)
Trapezoidal Loads (lb/ft)
Vert: 1=0 (F=35, B=35)-to-2=-49 (F=11, B=11), 2=-5 (F=33, B=33)-to-3=-49 (F=10, B=10), 5=0 (F=10, B=10)-to-4=-14 (F=3, B=3)

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J34	Diagonal Hip Girder	1	1	I59955132 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:41 Page: 1
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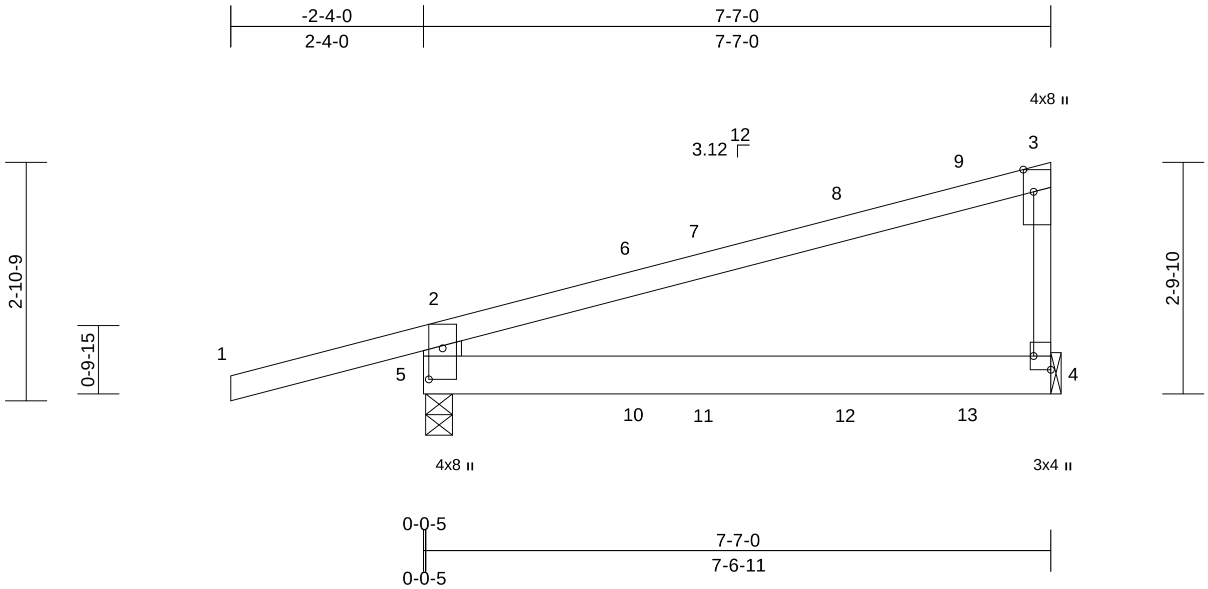

Scale = 1:27.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.81	Vert(LL)	-0.04	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.08	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 27 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-14
Max Horiz 5=115 (LC 5)
Max Uplift 4=-91 (LC 8), 5=-191 (LC 4)
Max Grav 4=380 (LC 1), 5=553 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-501/250, 1-2=0/45, 2-3=-184/28, 3-4=-261/131
BOT CHORD 4-5=-46/83

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 5 and 91 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 64 lb down and 38 lb up at 2-6-8, 77 lb down and 29 lb up at 3-4-9, and 89 lb down and 71 lb up at 5-1-4, and 101 lb down and 71 lb up at 6-6-15 on top chord, and 4 lb down at 2-6-8, 10 lb down and 8 lb up at 3-4-9, and 20 lb down at 5-1-4, and 39 lb down at 6-6-15 on bottom chord. The design/selection of such connection device (s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 8=-23 (F), 9=-52 (B), 11=8 (B), 12=-10 (F), 13=-24 (B)

August 7,2023

RELEASE FOR CONSTRUCTION
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DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955133
B240005	J35	Jack-Open	10	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:42 Page: 1
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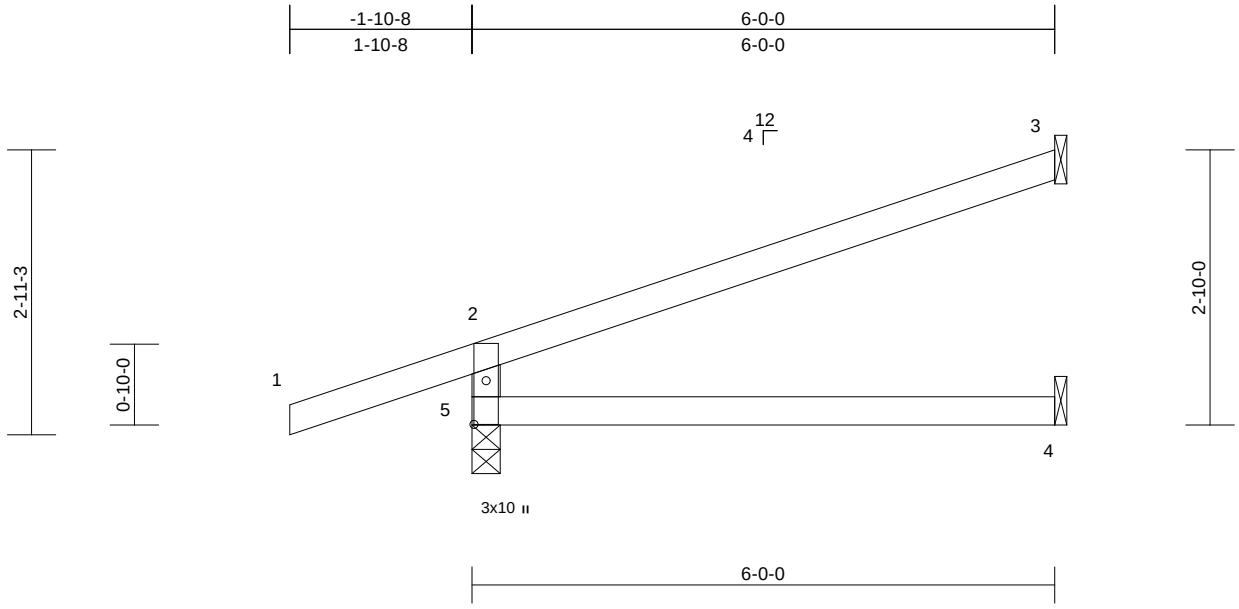

Scale = 1:23.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	-0.05	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.11	4-5	>632	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.04	4-5	>999	240	Weight: 17 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=106 (LC 4)
Max Uplift 3=-82 (LC 8), 5=-127 (LC 4)
Max Grav 3=173 (LC 1), 4=107 (LC 3), 5=427 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-374/174, 1-2=0/45, 2-3=-79/42
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 5 and 82 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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

August 7,2023

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16023 Swingley Ridge Rd.
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314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955134
B240005	J36	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:42 Page: 1
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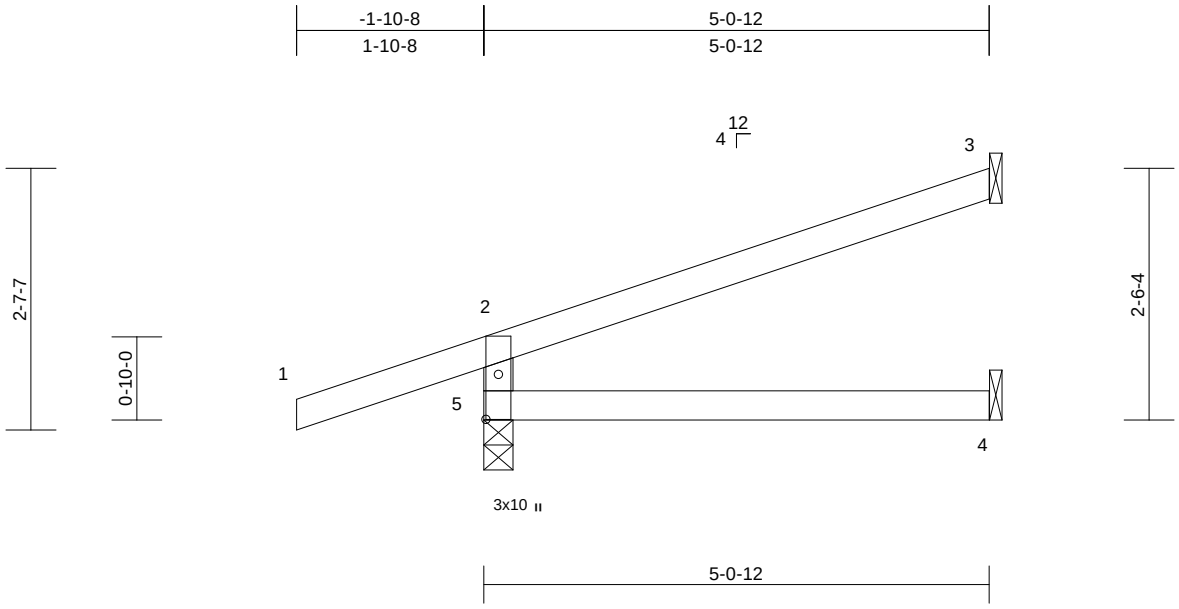

Scale = 1:23.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.30	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 15 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=93 (LC 4)
Max Uplift 3=-68 (LC 8), 5=-124 (LC 4)
Max Grav 3=140 (LC 1), 4=89 (LC 3), 5=389 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-341/162, 1-2=0/45, 2-3=-67/33
BOT CHORD 4-5=0/0

LOAD CASE(S) Standard

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 124 lb uplift at joint 5 and 68 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

August 7,2023

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DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	J37	Jack-Open	2	1	Job Reference (optional)	I59955135

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:42 Page: 1
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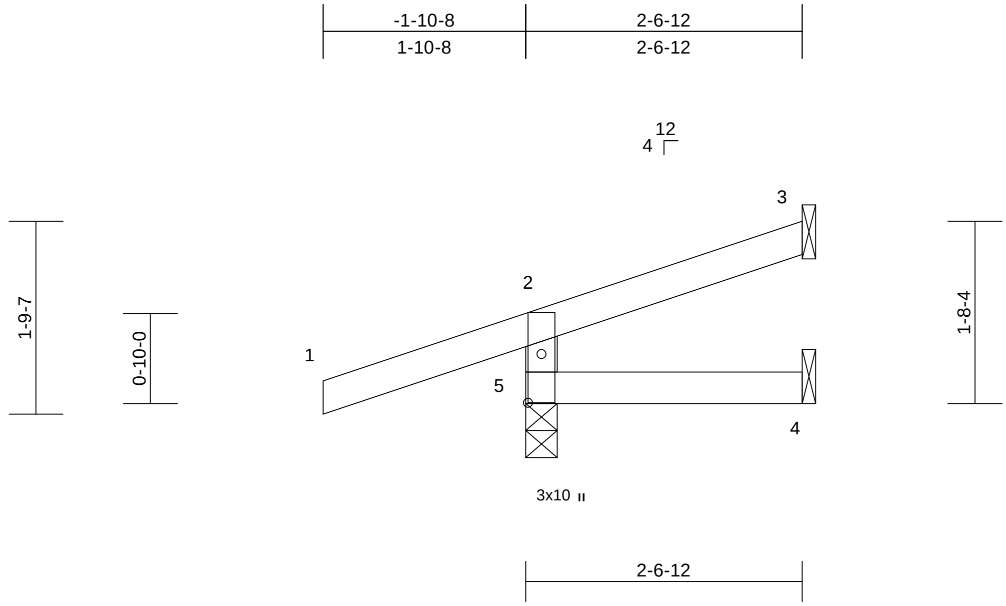

Scale = 1:21.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=59 (LC 4)
Max Uplift 3=-26 (LC 8), 5=-126 (LC 4)
Max Grav 3=39 (LC 1), 4=38 (LC 3), 5=308 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-267/137, 1-2=0/45, 2-3=-40/7
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 5 and 26 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J38	Jack-Open	1	1	Job Reference (optional) I59955136

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:42 Page: 1
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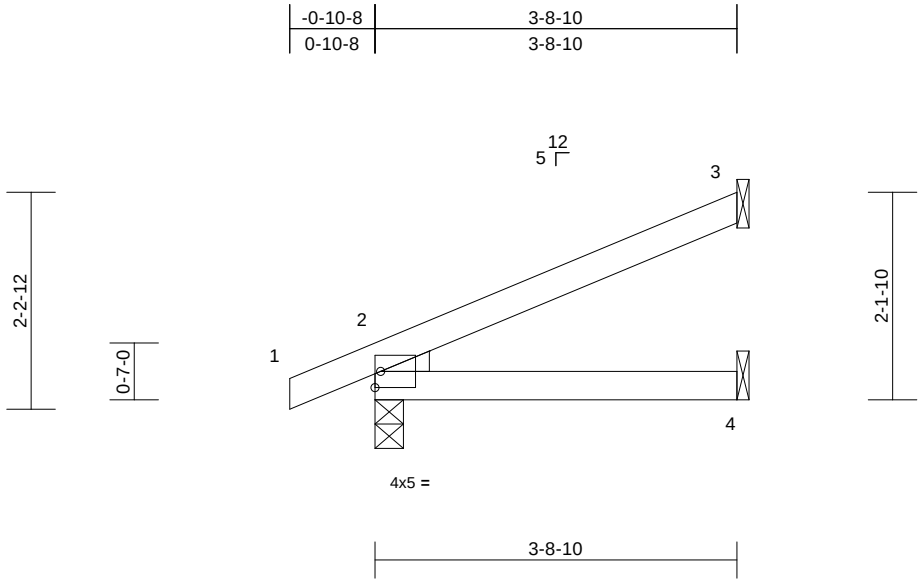

Scale = 1:23.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	-0.01	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.02	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 10 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=77 (LC 8)
Max Uplift 2=-37 (LC 8), 3=-66 (LC 8)
Max Grav 2=240 (LC 1), 3=113 (LC 1), 4=70 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-70/40
BOT CHORD 2-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 3 and 37 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcscomponents.com)

MiTek®
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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	J39	Jack-Open	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I59955137
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:48 Page: 1
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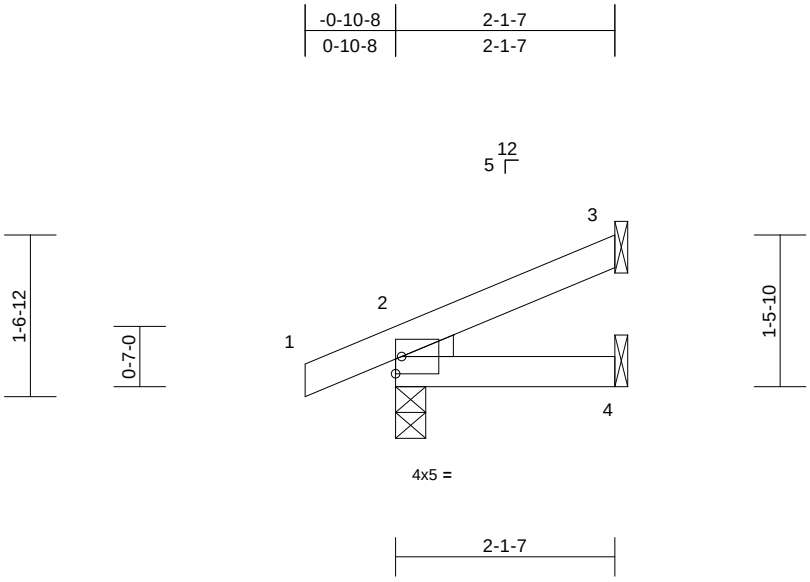

Scale = 1:22.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	0.00	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 7 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEDGE Left: 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-1-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=49 (LC 8)
Max Uplift 2=-35 (LC 4), 3=-35 (LC 8)
Max Grav 2=177 (LC 1), 3=48 (LC 1), 4=38 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-47/18
BOT CHORD 2-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 35 lb uplift at joint 3 and 35 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955138
B240005	J40	Jack-Closed Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:48 Page: 1
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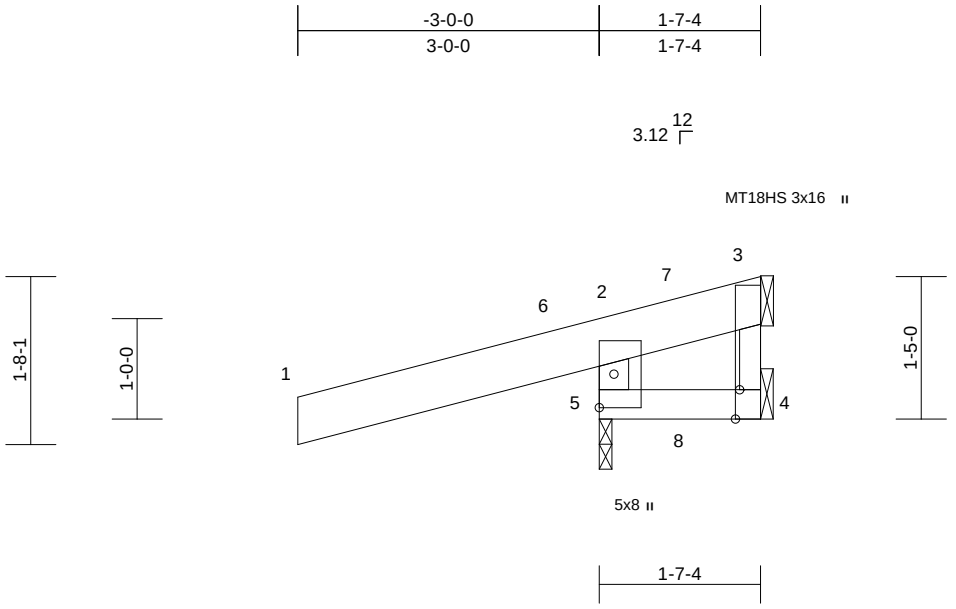

Scale = 1:22.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	5	>999	240	Weight: 11 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.4E
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-3-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-1-8
Max Horiz 5=69 (LC 7)
Max Uplift 4=-816 (LC 21), 5=-294 (LC 4)
Max Grav 4=138 (LC 4), 5=1315 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-1228/295, 1-2=0/111, 2-3=-100/27, 3-4=-122/742
BOT CHORD 4-5=-102/25

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) All plates are MT20 plates unless otherwise indicated.
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 at joint(s) 5.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 294 lb uplift at joint 5 and 816 lb uplift at joint 4.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Load case(s) 21 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:
21) User defined (1): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70 (F), 2-6=-20 (F), 2-7=-70 (F), 5-8=-20 (F)
Concentrated Loads (lb)
Vert: 1=-250

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955139
B240005	J41	Jack-Open	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:48 Page: 1
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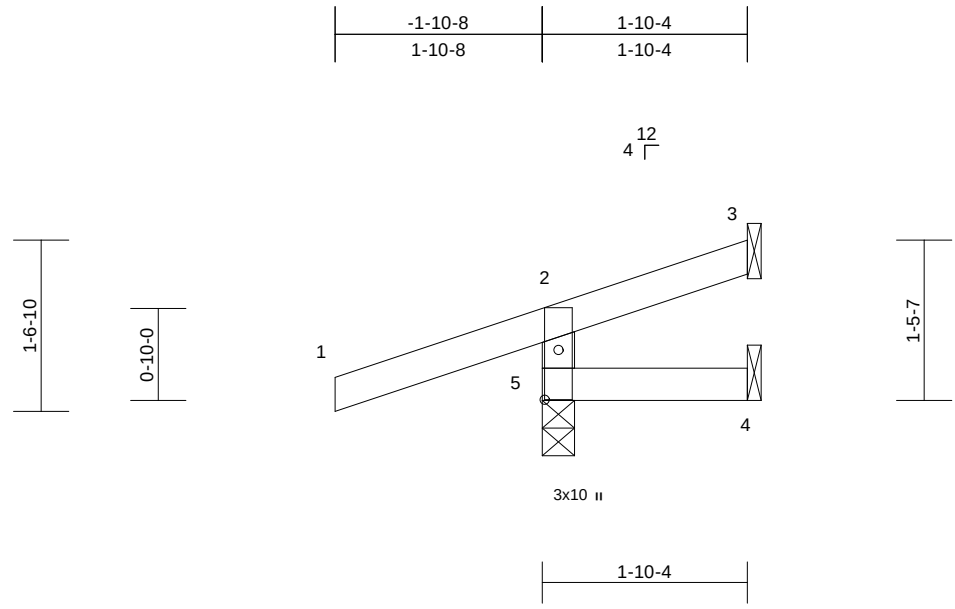

Scale = 1:20.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=50 (LC 4)
Max Uplift 3=-11 (LC 8), 4=-8 (LC 1), 5=-135 (LC 4)
Max Grav 3=4 (LC 4), 4=24 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-260/138, 1-2=0/45, 2-3=-37/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 5, 8 lb uplift at joint 4 and 11 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955140
B240005	J42	Jack-Closed Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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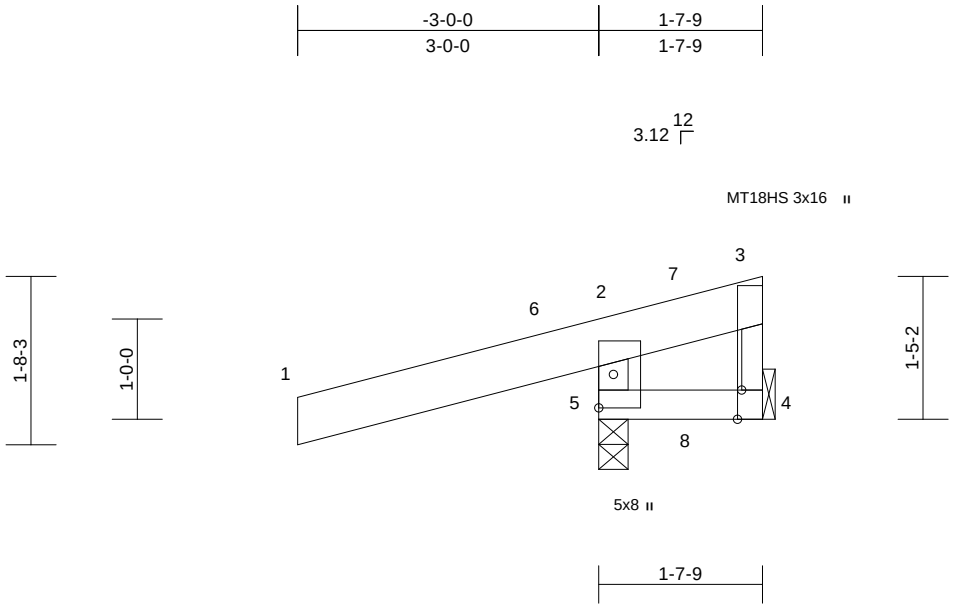

Scale = 1:23

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	0.00	4-5	>999	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	5	>999	240	Weight: 12 lb	FT = 10%

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

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=70 (LC 7)
Max Uplift 4=-795 (LC 21), 5=-291 (LC 4)
Max Grav 4=135 (LC 4), 5=1296 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-1216/293, 1-2=0/110, 2-3=-99/27, 3-4=-119/729
BOT CHORD 4-5=-101/25

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) All plates are MT20 plates unless otherwise indicated.
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 291 lb uplift at joint 5 and 795 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Load case(s) 21 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:
21) User defined (1): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70 (F), 2-6=-20 (F), 2-7=-70 (F), 5-8=-20 (F)
Concentrated Loads (lb)
Vert: 1=-250

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955141
B240005	J43	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:44 Page: 1
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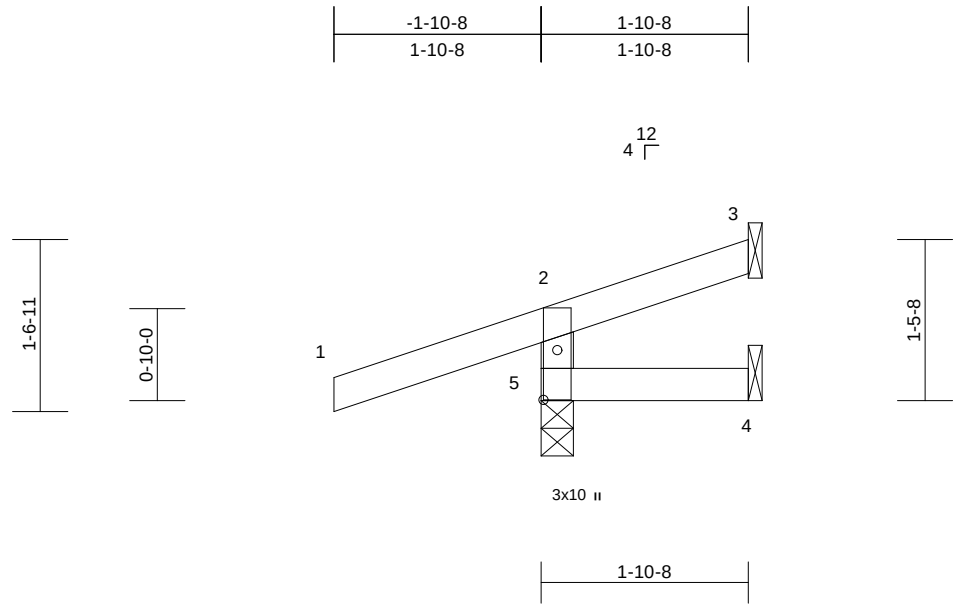

Scale = 1:20.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=50 (LC 4)
Max Uplift 3=-12 (LC 8), 4=-8 (LC 1), 5=-135 (LC 4)
Max Grav 3=4 (LC 19), 4=25 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-260/138, 1-2=0/45, 2-3=-37/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 5, 8 lb uplift at joint 4 and 12 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Wheeler Lumber, Waverly, KS - 66871,
Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:44 Page: 1
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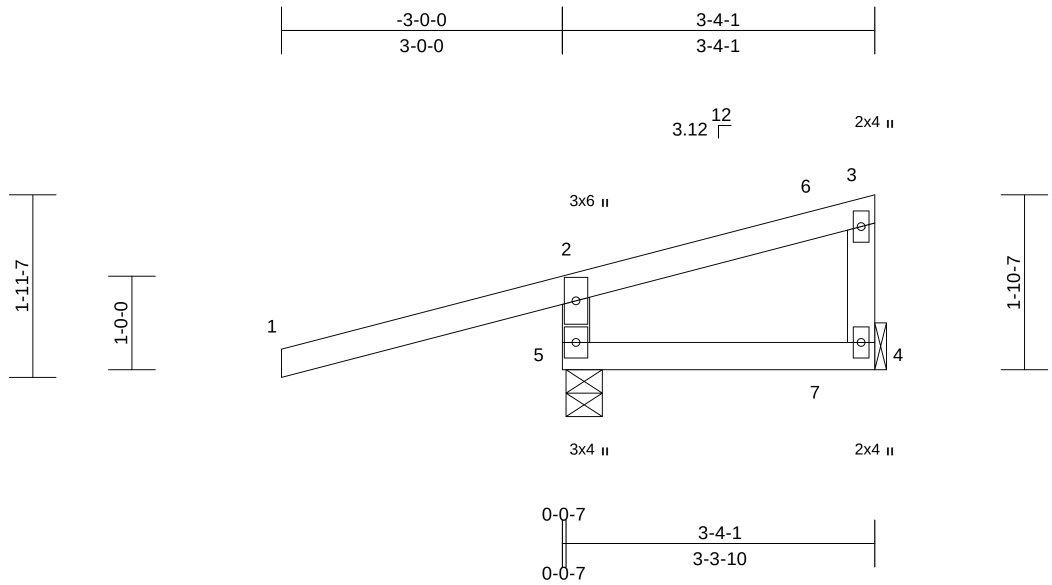

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 13 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-4-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 4= Mechanical, 5=0-4-11
Max Horiz 5=93 (LC 7)
Max Uplift 4=-13 (LC 9), 5=-221 (LC 4)
Max Grav 4=94 (LC 21), 5=470 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-411/225, 1-2=0/55, 2-3=-41/45, 3-4=-48/27
BOT CHORD 4-5=-44/55

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 5 and 13 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 54 lb down and 28 lb up at 2-8-7 on top chord, and 14 lb down and 8 lb up at 2-8-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=8 (F)

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955143
B240005	J45	Jack-Closed Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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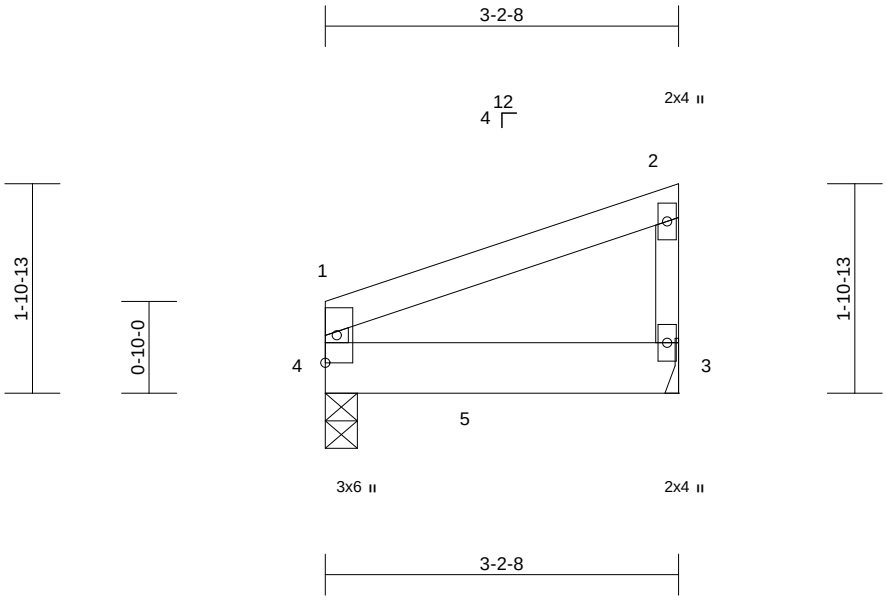

Scale = 1:20.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.14	Vert(LL)	-0.01	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.01	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3-4	>999	240	Weight: 11 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 3= Mechanical, 4=0-3-8
Max Horiz 4=63 (LC 5)
Max Uplift 3=-37 (LC 8), 4=-31 (LC 4)
Max Grav 3=270 (LC 1), 4=347 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-4=-112/43, 1-2=-71/10, 2-3=-98/44
BOT CHORD 3-4=-21/37

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 4 and 37 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 347 lb down and 17 lb up at 1-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 3-4=-20
Concentrated Loads (lb)
Vert: 5=-347 (F)

August 7,2023

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16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	J46	Jack-Open	5	1	Job Reference (optional)	I59955144

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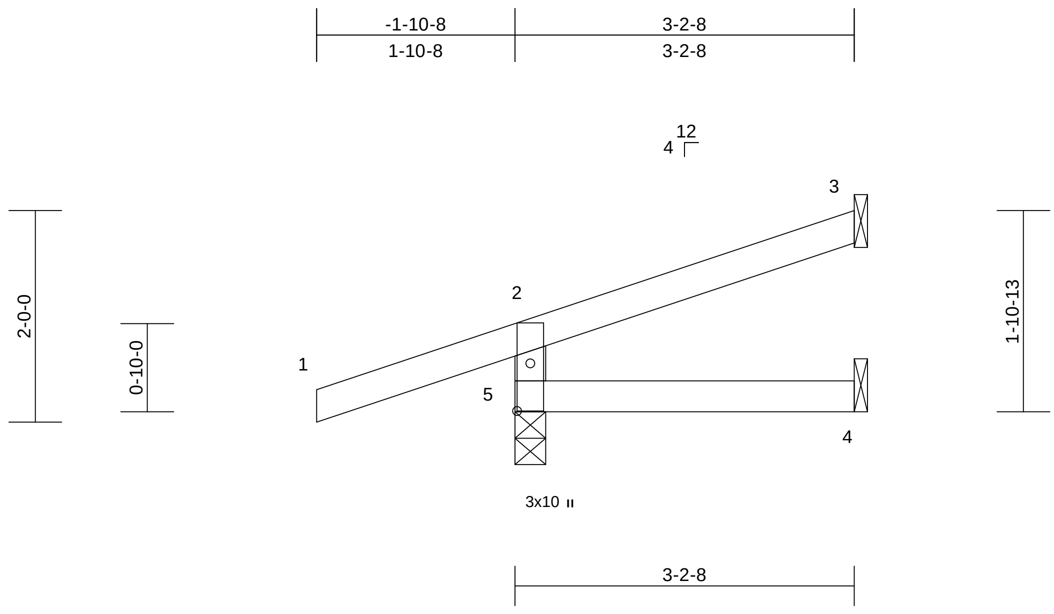

Scale = 1:21.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 10 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-3-8
Max Horiz 5=49 (LC 4)
Max Uplift 3=-23 (LC 8), 5=-76 (LC 4)
Max Grav 3=69 (LC 1), 4=52 (LC 3), 5=324 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-283/94, 1-2=0/45, 2-3=-45/15
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 5 and 23 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955145
B240005	J47	Jack-Closed Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:45 Page: 1
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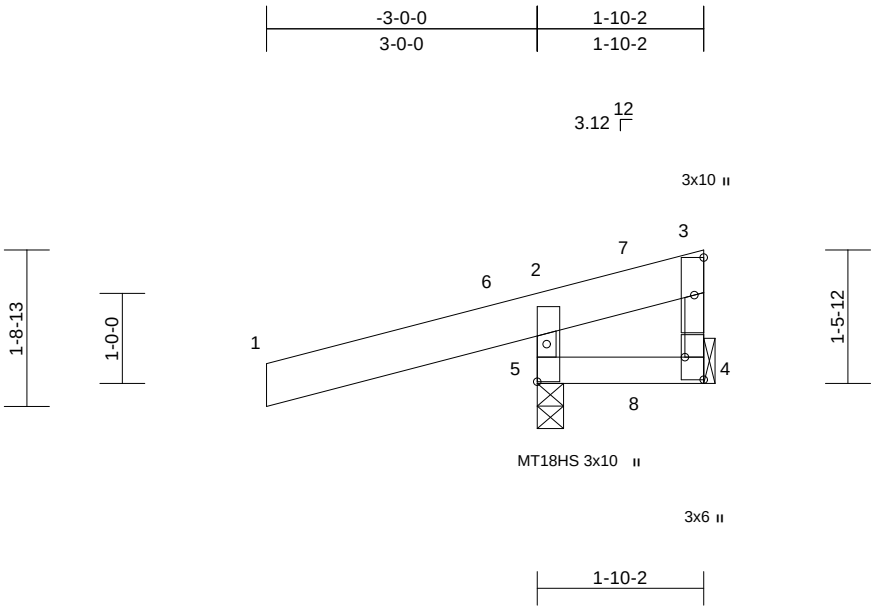

Scale = 1:25.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4-5	>999	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 12 lb	FT = 10%

LUMBER
TOP CHORD 2x6 SPF 1650F 1.4E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

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

REACTIONS (size) 4= Mechanical, 5=0-3-8
Max Horiz 5=72 (LC 7)
Max Uplift 4=-650 (LC 21), 5=-265 (LC 4)
Max Grav 4=106 (LC 4), 5=1177 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-1131/275, 1-2=0/111, 2-3=-94/28, 3-4=-97/623
BOT CHORD 4-5=-83/19

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) All plates are MT20 plates unless otherwise indicated.
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 265 lb uplift at joint 5 and 650 lb uplift at joint 4.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Load case(s) 21 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard Except:
21) User defined (1): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70 (F), 2-6=-20 (F), 2-7=-70 (F), 5-8=-20 (F)
Concentrated Loads (lb)
Vert: 1=-250

August 7,2023

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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955146
B240005	J48	Jack-Open	4	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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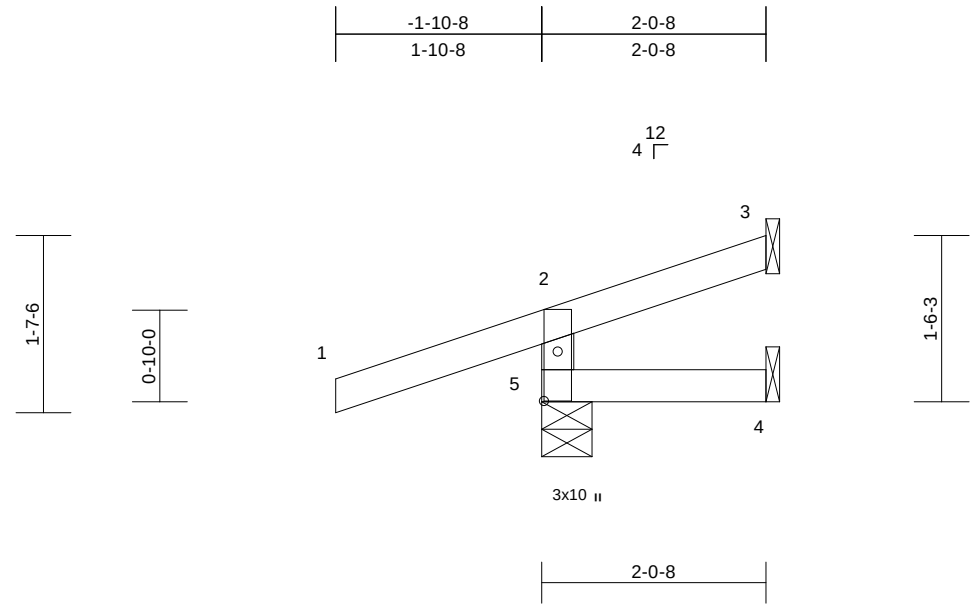

Scale = 1:21

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

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

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

REACTIONS (size) 3= Mechanical, 4= Mechanical, 5=0-5-8
Max Horiz 5=52 (LC 4)
Max Uplift 3=-15 (LC 8), 4=-5 (LC 1), 5=-133 (LC 4)
Max Grav 3=10 (LC 1), 4=27 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-260/137, 1-2=0/45, 2-3=-38/1
BOT CHORD 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 5, 15 lb uplift at joint 3 and 5 lb uplift at joint 4.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955147
B240005	LAY1	GABLE	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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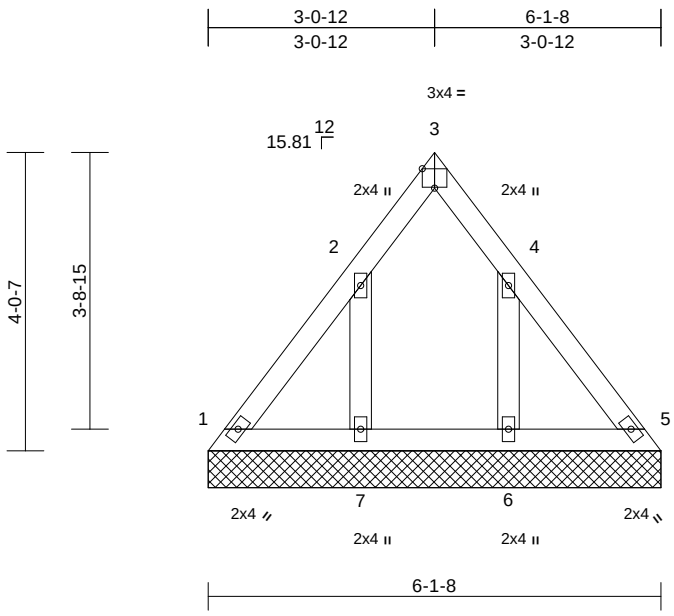

Scale = 1:31.2

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

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	0.05	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	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 10%

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

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

REACTIONS (size) 1=6-1-8, 5=6-1-8, 6=6-1-8, 7=6-1-8
Max Horiz 1=-103 (LC 4)
Max Uplift 1=-13 (LC 6), 5=-12 (LC 7), 6=-148 (LC 9), 7=-149 (LC 8)
Max Grav 1=118 (LC 17), 5=117 (LC 18), 6=207 (LC 16), 7=209 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-158/86, 2-3=-63/14, 3-4=-63/13, 4-5=-157/85
BOT CHORD 1-7=-57/132, 6-7=-57/132, 5-6=-57/132
WEBS 2-7=-167/174, 4-6=-166/173

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 1, 12 lb uplift at joint 5, 149 lb uplift at joint 7 and 148 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955148
B240005	LAY2	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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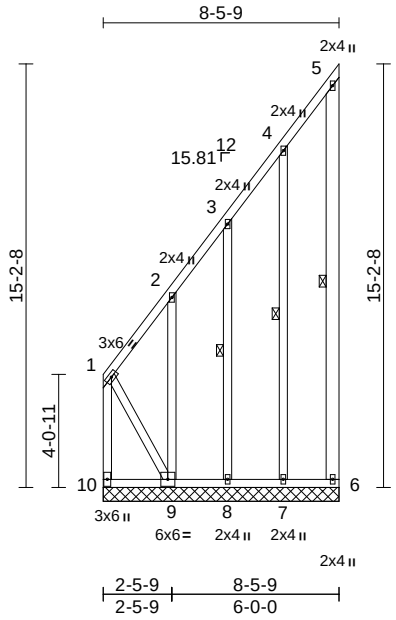

Scale = 1:82.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	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	0.21	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 101 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 5-6:2x6 SP DSS
OTHERS 2x4 SPF No.2

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

REACTIONS (size) 6=8-5-9, 7=8-5-9, 8=8-5-9, 9=8-5-9, 10=8-5-9
Max Horiz 10=569 (LC 5)
Max Uplift 6=-264 (LC 7), 7=-177 (LC 8), 8=-172 (LC 8), 9=-767 (LC 5), 10=-763 (LC 6)
Max Grav 6=232 (LC 4), 7=235 (LC 15), 8=214 (LC 15), 9=724 (LC 6), 10=1119 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-10=-1108/782, 1-2=-561/404, 2-3=-471/323, 3-4=-425/301, 4-5=-374/271, 5-6=-223/277
BOT CHORD 9-10=-550/402, 8-9=-206/156, 7-8=-206/156, 6-7=-206/156
WEBS 4-7=-192/202, 3-8=-177/194, 2-9=-226/242, 1-9=-598/790

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 763 lb uplift at joint 10, 264 lb uplift at joint 6, 177 lb uplift at joint 7, 172 lb uplift at joint 8 and 767 lb uplift at joint 9.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955149
B240005	LAY3	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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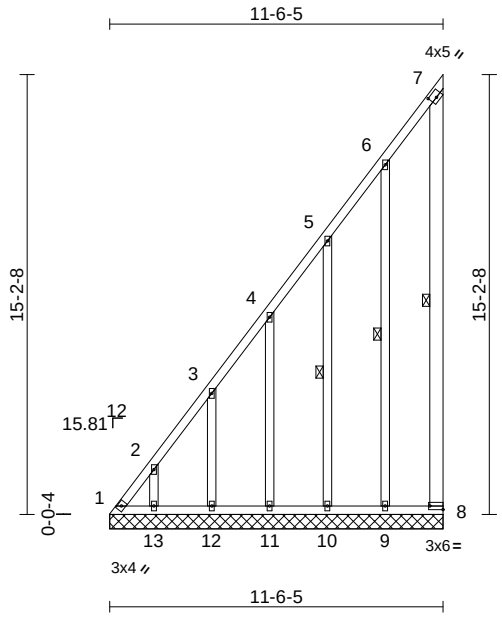

Scale = 1:79.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 99 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 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 7-8, 6-9, 5-10

REACTIONS (size) 1=11-6-5, 8=11-6-5, 9=11-6-5, 10=11-6-5, 11=11-6-5, 12=11-6-5, 13=11-6-5
Max Horiz 1=574 (LC 5)
Max Uplift 1=-382 (LC 6), 8=-305 (LC 7), 9=-209 (LC 8), 10=-163 (LC 8), 11=-180 (LC 8), 12=-177 (LC 8), 13=-159 (LC 8)
Max Grav 1=578 (LC 5), 8=265 (LC 4), 9=207 (LC 15), 10=234 (LC 15), 11=221 (LC 15), 12=231 (LC 15), 13=203 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-725/519, 2-3=-644/459, 3-4=-543/382, 4-5=-463/316, 5-6=-437/310, 6-7=-259/186, 7-8=-117/136
BOT CHORD 1-13=-210/160, 12-13=-210/160, 11-12=-210/160, 10-11=-210/160, 9-10=-210/160, 8-9=-210/160
WEBS 6-9=-225/195, 5-10=-180/223, 4-11=-185/194, 3-12=-190/205, 2-13=-163/172

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 382 lb uplift at joint 1, 305 lb uplift at joint 8, 209 lb uplift at joint 9, 163 lb uplift at joint 10, 180 lb uplift at joint 11, 177 lb uplift at joint 12 and 159 lb uplift at joint 13.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955150
B240005	LAY4	Lay-In Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:8:47 Page: 1
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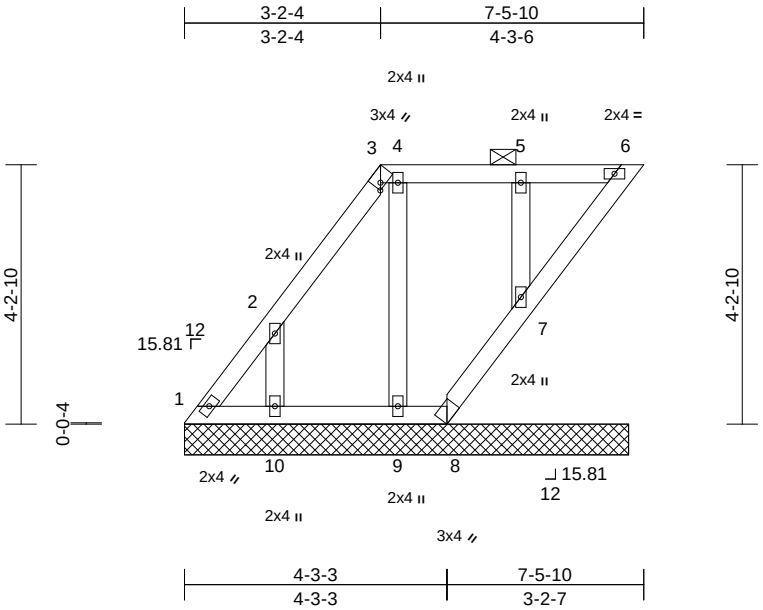

Scale = 1:37.5

Plate Offsets (X, Y): [3:0-1-3,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	0.10	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 38 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SP No.3
BOT CHORD 2x4 SP No.3
OTHERS 2x4 SP No.3

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

REACTIONS (size) 1=7-2-11, 6=7-2-11, 7=7-2-11, 8=7-2-11, 9=7-2-11, 10=7-2-11
Max Horiz 1=160 (LC 8)
Max Uplift 1=-28 (LC 6), 6=-51 (LC 8), 7=-44 (LC 4), 8=-24 (LC 15), 9=-24 (LC 5), 10=-165 (LC 8)
Max Grav 1=128 (LC 8), 6=72 (LC 1), 7=194 (LC 22), 8=60 (LC 8), 9=152 (LC 1), 10=210 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-170/74, 2-3=-75/12, 3-4=-23/39, 4-5=-23/39, 5-6=-23/39
BOT CHORD 1-10=-39/23, 9-10=-39/23, 8-9=-39/23, 7-8=-70/53, 6-7=-75/46
WEBS 5-7=-156/67, 4-9=-117/45, 2-10=-173/187

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 51 lb uplift at joint 6, 24 lb uplift at joint 8, 44 lb uplift at joint 7, 24 lb uplift at joint 9 and 165 lb uplift at joint 10.
10) N/A
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955151
B240005	LAY5	Lay-In Gable	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:47 Page: 1
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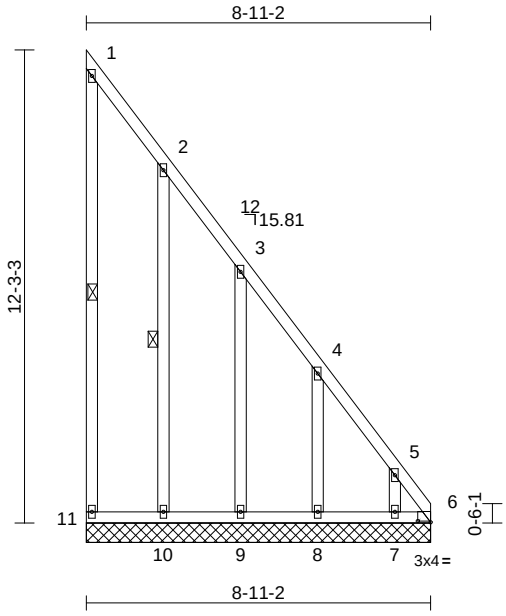

Scale = 1:59.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 64 lb	FT = 10%

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

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

REACTIONS (size) 6=8-11-2, 7=8-11-2, 8=8-11-2, 9=8-11-2, 10=8-11-2, 11=8-11-2
Max Horiz 11=-477 (LC 9)
Max Uplift 6=-268 (LC 7), 7=-205 (LC 9), 8=-181 (LC 9), 9=-173 (LC 9), 10=-186 (LC 9), 11=-65 (LC 9)
Max Grav 6=663 (LC 9), 7=208 (LC 16), 8=233 (LC 16), 9=222 (LC 16), 10=240 (LC 16), 11=83 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-11=-68/74, 1-2=-86/46, 2-3=-264/126, 3-4=-440/196, 4-5=-624/274, 5-6=-814/352
BOT CHORD 10-11=-199/477, 9-10=-199/477, 8-9=-199/477, 7-8=-199/477, 6-7=-199/477
WEBS 2-10=-197/212, 3-9=-183/197, 4-8=-191/206, 5-7=-174/225

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 11, 268 lb uplift at joint 6, 186 lb uplift at joint 10, 173 lb uplift at joint 9, 181 lb uplift at joint 8 and 205 lb uplift at joint 7.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	LAY6	Lay-In Gable	1	1	Job Reference (optional) I59955152

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:8:47 Page: 1
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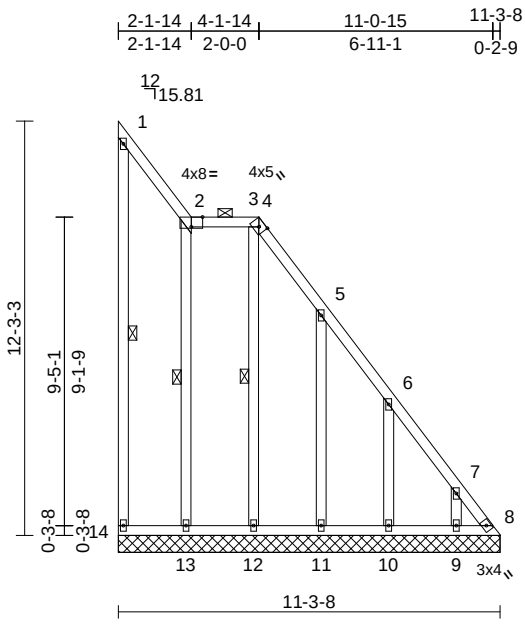

Scale = 1:68.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 79 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 2-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 1-14, 2-13, 3-12

REACTIONS (size) 8=11-3-8, 9=11-3-8, 10=11-3-8, 11=11-3-8, 12=11-3-8, 13=11-3-8, 14=11-3-8
Max Horiz 14=-477 (LC 9)
Max Uplift 8=-243 (LC 7), 9=-152 (LC 9), 10=-173 (LC 9), 11=-192 (LC 9), 12=-227 (LC 9), 14=-82 (LC 9)
Max Grav 8=606 (LC 9), 9=194 (LC 16), 10=229 (LC 16), 11=233 (LC 16), 12=196 (LC 16), 13=182 (LC 1), 14=101 (LC 16)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-14=-85/89, 1-2=-92/58, 2-3=-105/45, 3-4=-104/45, 4-5=-251/112, 5-6=-444/201, 6-7=-621/276, 7-8=-763/333
BOT CHORD 13-14=-201/476, 12-13=-201/476, 11-12=-201/476, 10-11=-201/476, 9-10=-201/476, 8-9=-201/476
WEBS 2-13=-140/18, 3-12=-156/250, 5-11=-194/216, 6-10=-188/199, 7-9=-157/165

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 82 lb uplift at joint 14, 243 lb uplift at joint 8, 227 lb uplift at joint 12, 192 lb uplift at joint 11, 173 lb uplift at joint 10 and 152 lb uplift at joint 9.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	R1	Half Hip Girder	1	2	Job Reference (optional) I59955153

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:48 Page: 1
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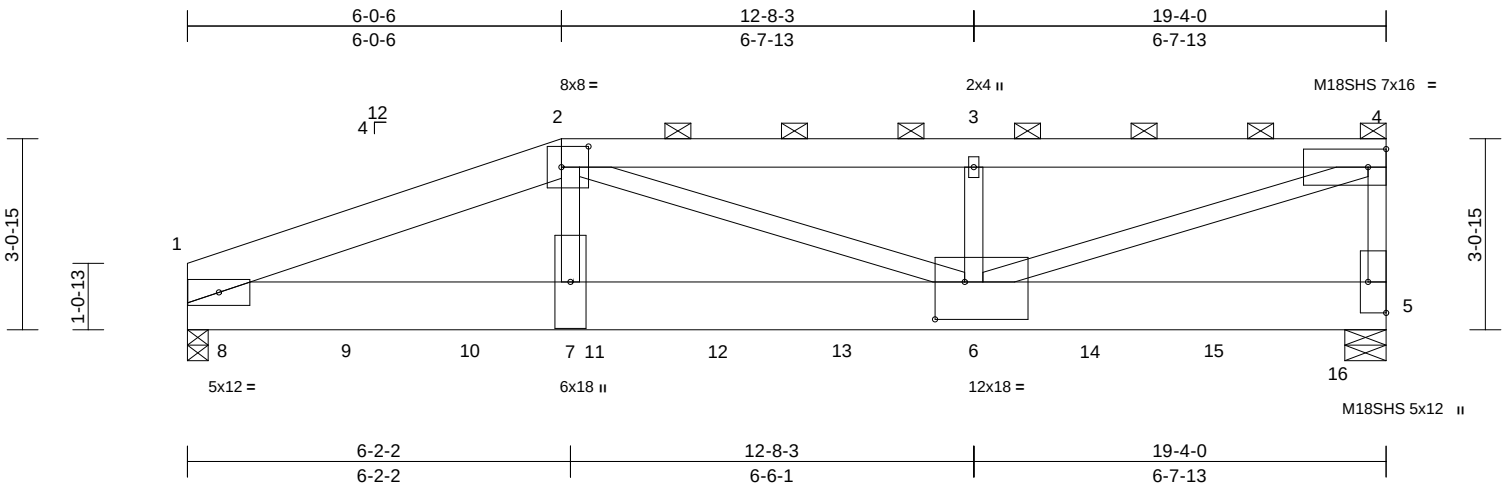

Scale = 1:37.2

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

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	0.75	Vert(LL)	-0.24	6-7	>936	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.43	6-7	>530	240	M18SHS	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.89	Horz(CT)	0.04	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.15	6-7	>999	240	Weight: 282 lb	FT = 20%

LUMBER
TOP CHORD 2x8 SP DSS *Except* 2-4:2x6 SPF 1650F 1.4E
BOT CHORD 2x10 SP 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 6-2,6-4:2x4 SPF 2100F 1.8E

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

REACTIONS (size) 1=0-4-0, 5=0-8-0
Max Horiz 1=83 (LC 20)
Max Uplift 1=-869 (LC 4), 5=-68 (LC 4)
Max Grav 1=8508 (LC 1), 5=9742 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-17577/1630, 2-3=-16202/937, 3-4=-16200/937, 4-5=-6334/394
BOT CHORD 1-7=-1510/16220, 6-7=-1555/16590, 5-6=-21/349
WEBS 2-7=-742/6151, 2-6=-415/713, 3-6=-190/294, 4-6=-974/16951

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 2 rows staggered at 0-6-0 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) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) All plates are MT20 plates unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 869 lb uplift at joint 1 and 68 lb uplift at joint 5.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) 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) 353 lb down and 12 lb up at 1-3-4, 1124 lb down and 231 lb up at 3-3-4, 754 lb down and 174 lb up at 3-3-4, 965 lb down and 62 lb up at 5-3-4, 754 lb down and 86 lb up at 5-3-4, 967 lb down and 62 lb up at 7-3-4, 754 lb down and 101 lb up at 7-3-4, 1055 lb down and 183 lb up at 9-3-4, 754 lb down and 101 lb up at 9-3-4, 1055 lb down and 155 lb up at 11-3-4, 754 lb down and 101 lb up at 11-3-4, 1055 lb down and 15 lb up at 13-3-4, 754 lb down and 101 lb up at 13-3-4, 1055 lb down at 15-3-4, 754 lb down and 101 lb up at 15-3-4, 1055 lb down at 17-3-4, 754 lb down and 101 lb up at 17-3-4, and 758 lb down and 99 lb up at 19-3-4, and 1190 lb down at 19-3-4 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: 1-2=-70, 2-4=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 6=-1810 (F=-754, B=-1055), 8=-353 (B), 9=-1878 (F=-754, B=-1124), 10=-1719 (F=-754, B=-965), 11=-1721 (F=-754, B=-967), 12=-1809 (F=-754, B=-1055), 13=-1810 (F=-754, B=-1055), 14=-1810 (F=-754, B=-1055), 15=-1810 (F=-758, B=-1059), 16=-1817 (F=-758, B=-1059)

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

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	V1	Valley	1	1	I59955154 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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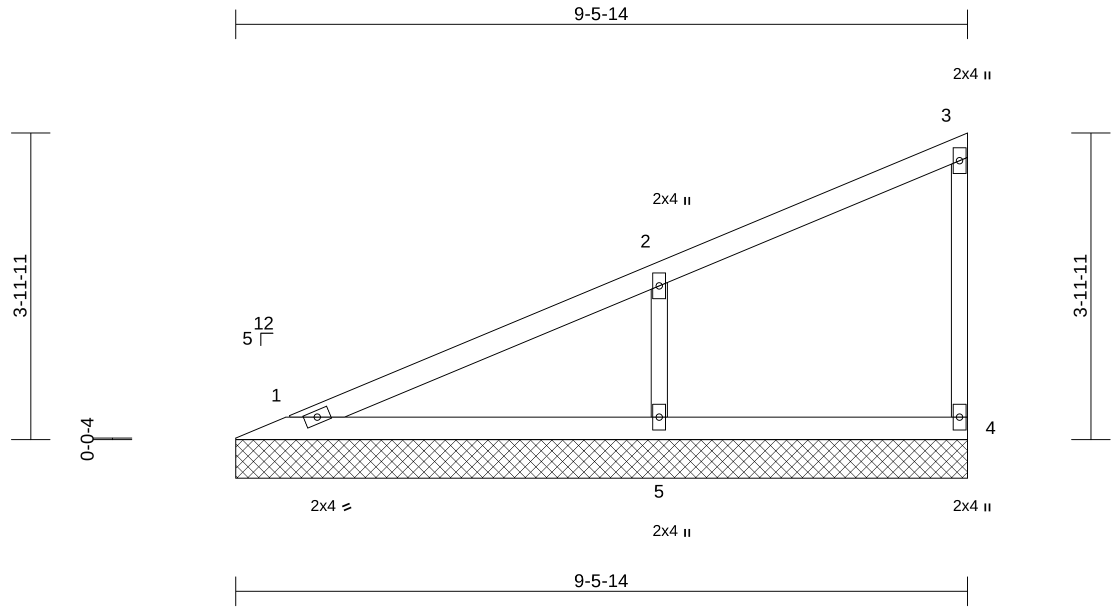

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 26 lb	FT = 10%

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

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

REACTIONS (size) 1=9-5-14, 4=9-5-14, 5=9-5-14
Max Horiz 1=158 (LC 5)
Max Uplift 4=-23 (LC 5), 5=-129 (LC 8)
Max Grav 1=172 (LC 1), 4=122 (LC 1), 5=487 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-123/71, 2-3=-106/29, 3-4=-96/39
BOT CHORD 1-5=-51/39, 4-5=-51/39
WEBS 2-5=-370/182

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 4 and 129 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	
B240005	V2	Valley	1	1	Job Reference (optional)	I59955155

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:49 Page: 1
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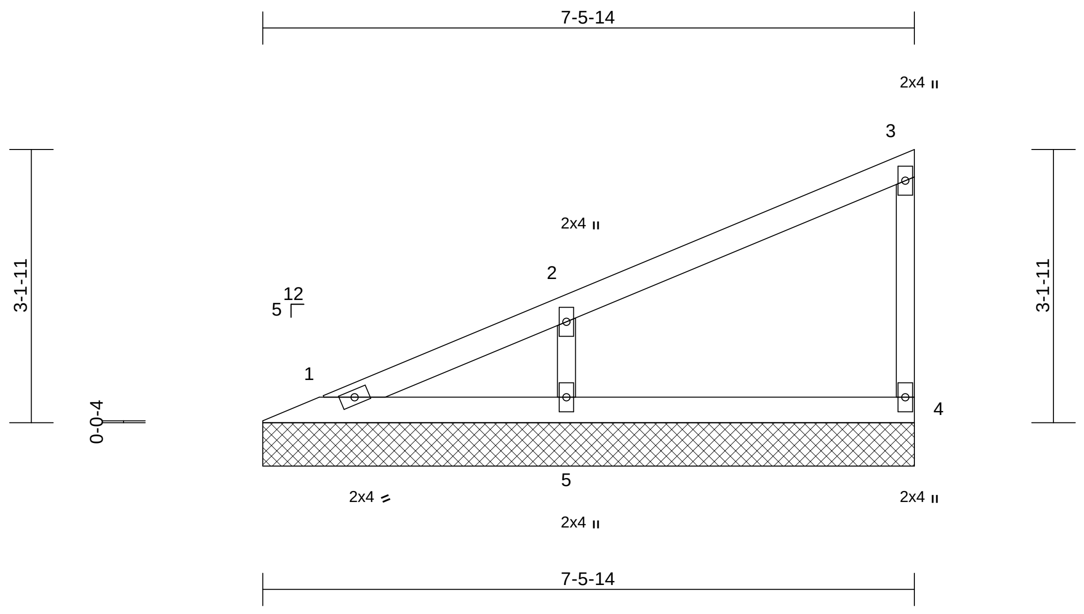

Scale = 1:26.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	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	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 10%

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

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

REACTIONS (size) 1=7-5-14, 4=7-5-14, 5=7-5-14
Max Horiz 1=122 (LC 5)
Max Uplift 4=-26 (LC 8), 5=-102 (LC 8)
Max Grav 1=81 (LC 16), 4=141 (LC 1), 5=384 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-99/52, 2-3=-92/32, 3-4=-109/44
BOT CHORD 1-5=-40/30, 4-5=-40/30
WEBS 2-5=-299/153

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 4 and 102 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955156
B240005	V3	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:38:49 Page: 1
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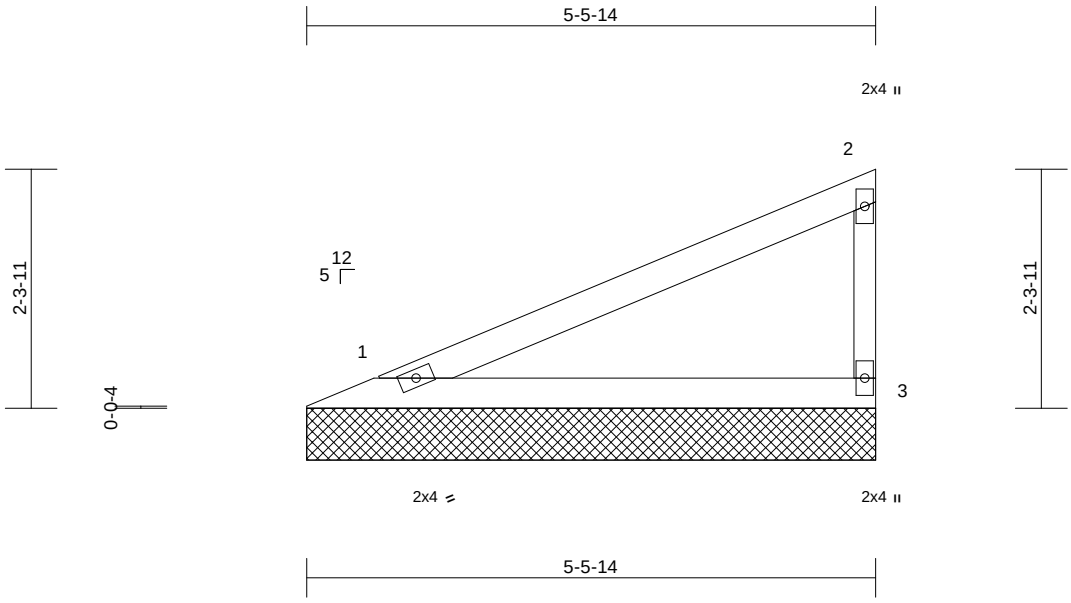

Scale = 1:22.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-6-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-5-14, 3=5-5-14
Max Horiz 1=86 (LC 5)
Max Uplift 1=-31 (LC 8), 3=-48 (LC 8)
Max Grav 1=211 (LC 1), 3=211 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-76/51, 2-3=-164/76
BOT CHORD 1-3=-28/21

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 1 and 48 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	V4	Valley	1	1	Job Reference (optional) I59955157

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:49 Page: 1
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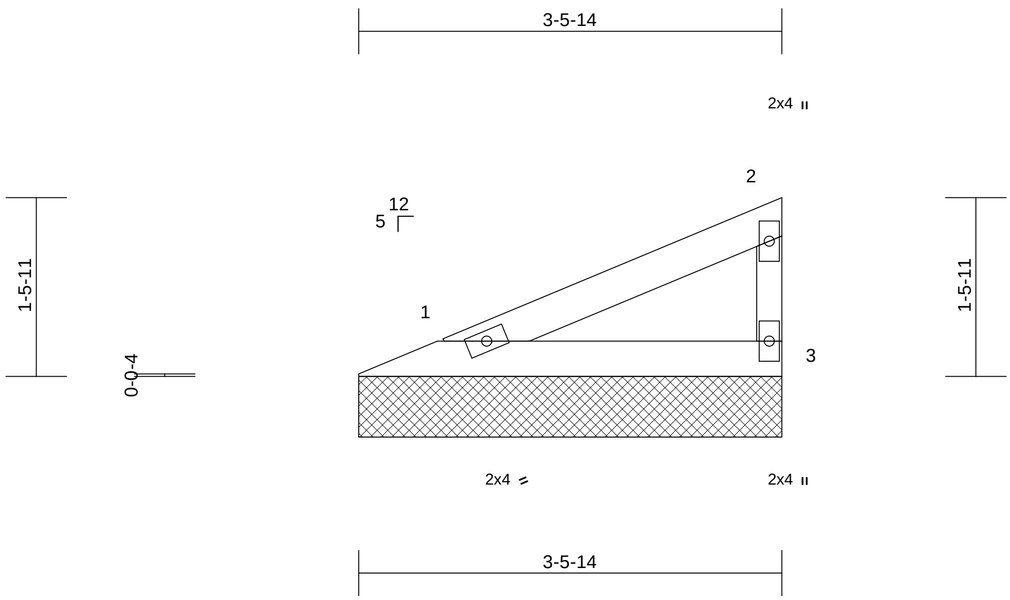

Scale = 1:19

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	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	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-5-14, 3=3-5-14
Max Horiz 1=49 (LC 5)
Max Uplift 1=-18 (LC 8), 3=-27 (LC 8)
Max Grav 1=121 (LC 1), 3=121 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-44/29, 2-3=-94/44
BOT CHORD 1-3=-16/12

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 18 lb uplift at joint 1 and 27 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	V5	Valley	1	1	I59955158 Job Reference (optional)

Wheeler Lumber, Waverly, KS - 66871,

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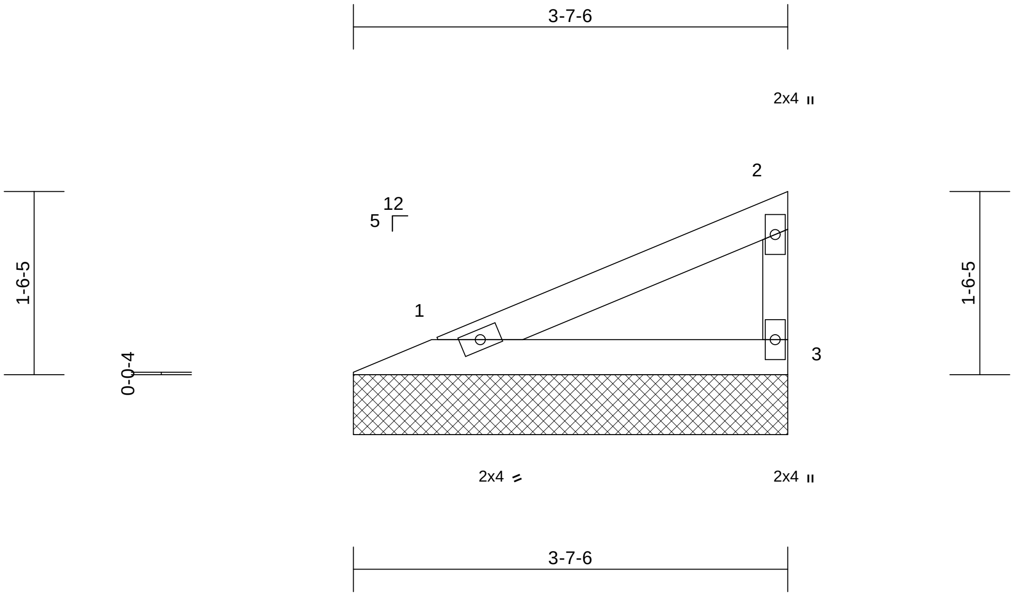

Scale = 1:19.2

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	0.14	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb	FT = 10%

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

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

REACTIONS (size) 1=3-7-6, 3=3-7-6
Max Horiz 1=52 (LC 5)
Max Uplift 1=-18 (LC 8), 3=-29 (LC 8)
Max Grav 1=126 (LC 1), 3=126 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-46/30, 2-3=-98/46
BOT CHORD 1-3=-17/13

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * 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 18 lb uplift at joint 1 and 29 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955159
B240005	V6	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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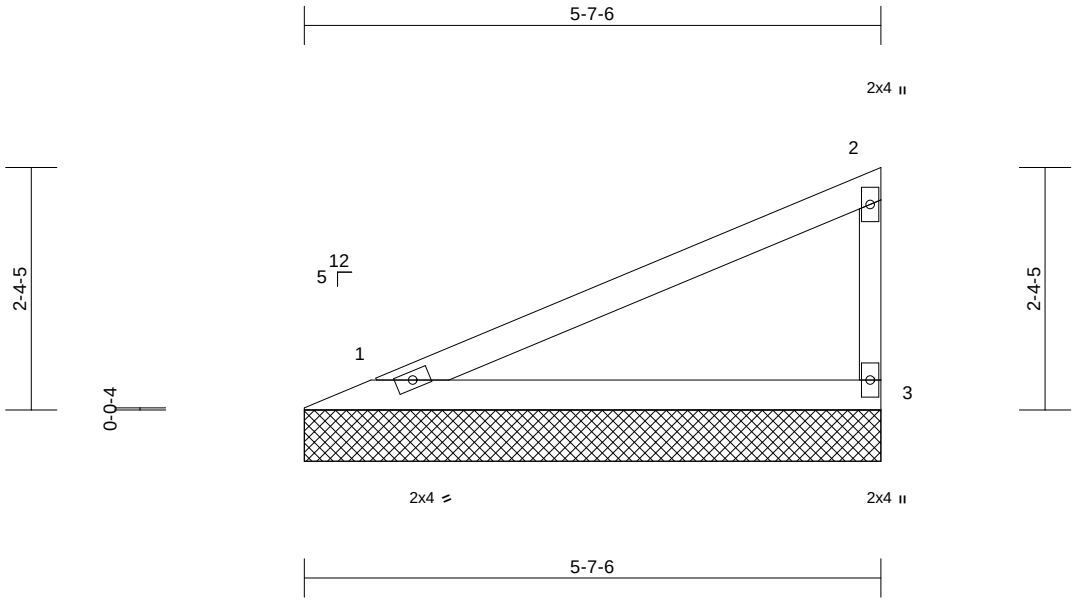

Scale = 1:22.4

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	0.44	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 10%

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

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

REACTIONS (size) 1=5-7-6, 3=5-7-6
Max Horiz 1=88 (LC 7)
Max Uplift 1=-32 (LC 8), 3=-49 (LC 8)
Max Grav 1=216 (LC 1), 3=216 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-78/52, 2-3=-168/78
BOT CHORD 1-3=-29/22

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 1 and 49 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	V7	Valley	1	1	Job Reference (optional) I59955160

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
02/13/2024

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:50 Page: 1
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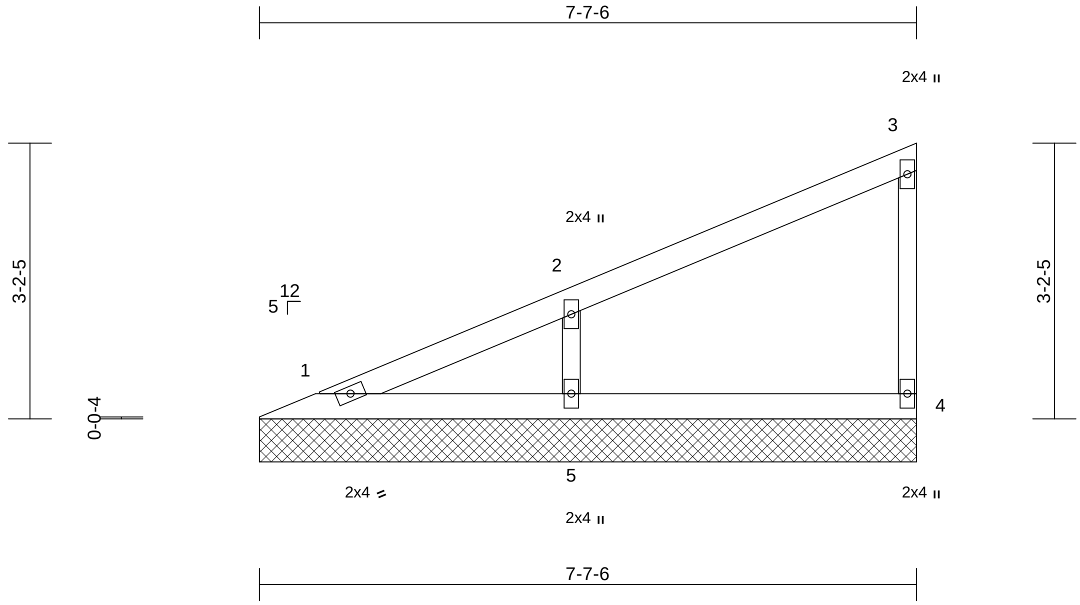

Scale = 1:26.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	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	0.05	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 20 lb	FT = 10%

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

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

REACTIONS (size) 1=7-7-6, 4=7-7-6, 5=7-7-6
Max Horiz 1=124 (LC 5)
Max Uplift 4=-25 (LC 8), 5=-103 (LC 8)
Max Grav 1=86 (LC 16), 4=140 (LC 1), 5=389 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-101/54, 2-3=-93/31, 3-4=-109/44
BOT CHORD 1-5=-40/31, 4-5=-40/31
WEBS 2-5=-303/155

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 4 and 103 lb uplift at joint 5.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT
B240005	V8	Valley	1	1	Job Reference (optional)

I59955161

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.71 S Jul 27 2023 Print: 8.710 S Jul 27 2023 MiTek Industries, Inc. Fri Aug 04 08:18:51 Page: 1

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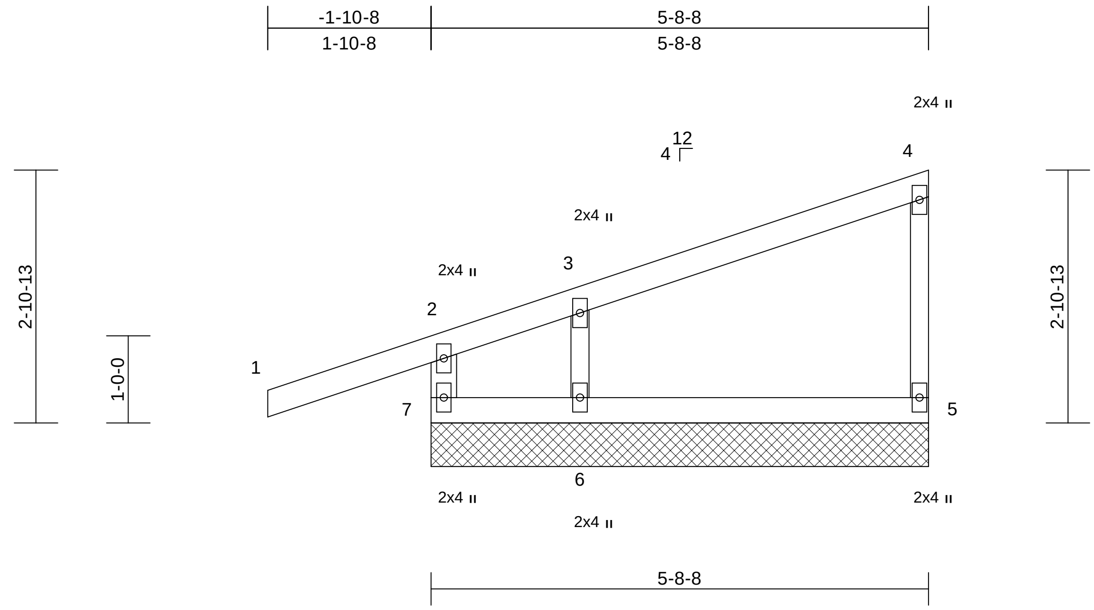

Scale = 1:26.4

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	0.28	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 19 lb	FT = 10%

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

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

REACTIONS (size) 5=5-8-8, 6=5-8-8, 7=5-8-8
Max Horiz 7=124 (LC 5)
Max Uplift 5=-28 (LC 4), 6=-76 (LC 8), 7=-102 (LC 4)
Max Grav 5=153 (LC 1), 6=232 (LC 1), 7=248 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-7=-223/102, 1-2=0/45, 2-3=-80/4, 3-4=-81/19, 4-5=-118/49
BOT CHORD 6-7=-35/25, 5-6=-35/25
WEBS 3-6=-183/115

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
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 102 lb uplift at joint 7, 28 lb uplift at joint 5 and 76 lb uplift at joint 6.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

August 7,2023

Job	Truss	Truss Type	Qty	Ply	Lot 176 HT	I59955162
B240005	V9	Valley	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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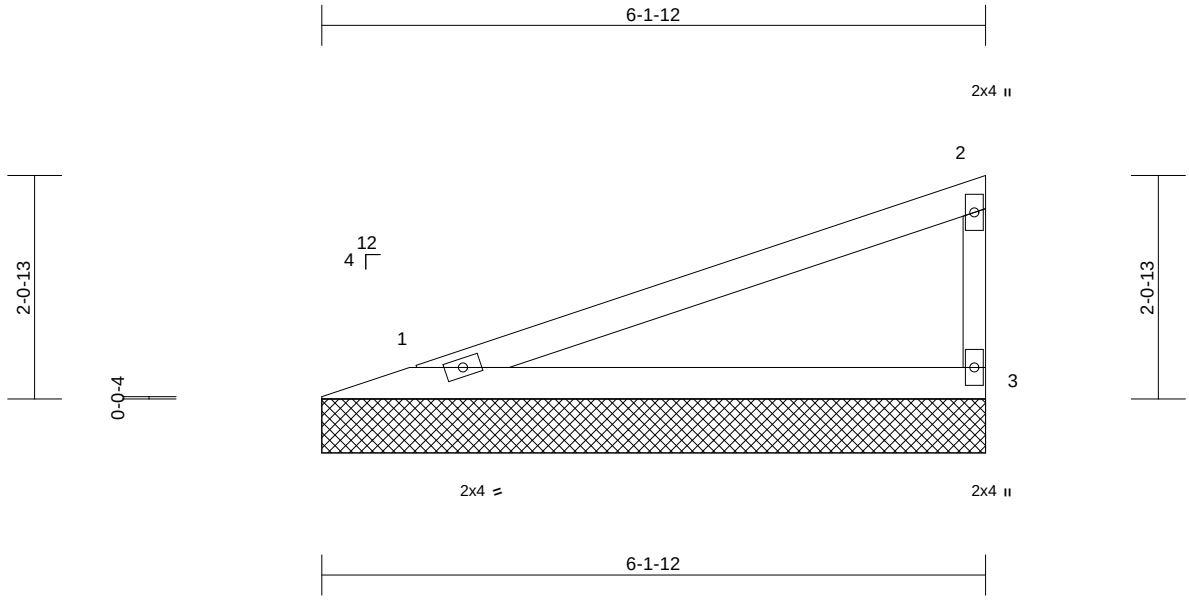


Scale = 1:21.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 10%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-2-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=6-1-12, 3=6-1-12
Max Horiz 1=77 (LC 5)
Max Uplift 1=-38 (LC 4), 3=-49 (LC 8)
Max Grav 1=232 (LC 1), 3=232 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-68/46, 2-3=-181/80
BOT CHORD 1-3=-25/19

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 1 and 49 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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

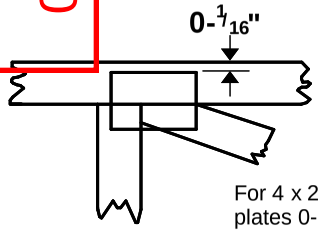
August 7,2023

MiTek®
16023 Swingley Ridge Rd.
Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

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.

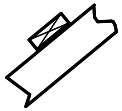
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

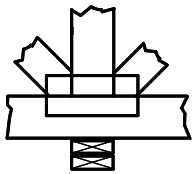
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

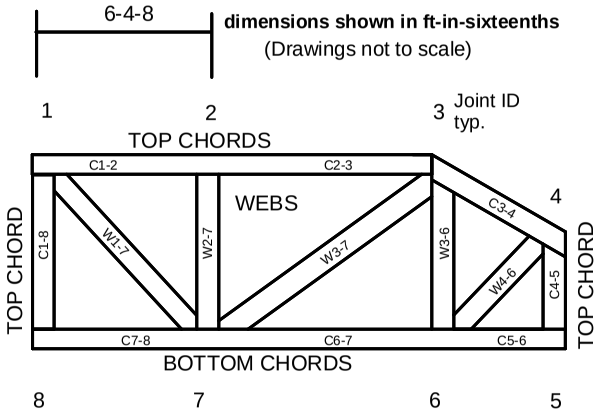


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & 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-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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®

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.