MiTek®

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

RE: P240761-01 - Roof - HT Lot 196

Site Information:

Project Customer: Clayton Properties Project Name: Carbondale - Craftsman 3 Car
Lot/Block: 196 Subdivision: Hawthorne Ridge
Model:
Address: 3219 SW Arbor Sound Dr.
City: Lee's Summit State: MO

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

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

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

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I66865793	D04A	7/16/24	35	I66865827	V01	7/16/24
2	I66865794	D01	7/16/24	36	I66865828	V06	7/16/24
3	I66865795	D02	7/16/24	37	I66865829	V02	7/16/24
4	I66865796	D03	7/16/24	38	I66865830	CJ02	7/16/24
5	I66865797	D04	7/16/24	39	I66865831	CJ03	7/16/24
6	I66865798	D05	7/16/24	40	I66865832	CJ04	7/16/24
7	I66865799	D06	7/16/24	41	I66865833	T4	7/16/24
8	I66865800	E01	7/16/24	42	I66865834	T3	7/16/24
9	I66865801	E03	7/16/24	43	I66865835	T2	7/16/24
10	I66865802	LG02	7/16/24	44	I66865836	CJ05	7/16/24
11	I66865803	B01	7/16/24	45	I66865837	CJ06	7/16/24
12	I66865804	B02	7/16/24	46	I66865838	RX01	7/16/24
13	I66865805	B03	7/16/24	47	I66865839	V09	7/16/24
14	I66865806	F08	7/16/24	48	I66865840	LG07	7/16/24
15	I66865807	F07	7/16/24	49	I66865841	CJ1	7/16/24
16	I66865808	F06	7/16/24	50	I66865842	V03	7/16/24
17	I66865809	F05	7/16/24	51	I66865843	V07	7/16/24
18	I66865810	F01	7/16/24	52	I66865844	J07	7/16/24
19	I66865811	F04	7/16/24	53	I66865845	J08	7/16/24
20	I66865812	F03	7/16/24	54	I66865846	J15	7/16/24
21	I66865813	F02	7/16/24	55	I66865847	J21G	7/16/24
22	I66865814	GR1	7/16/24	56	I66865848	J20	7/16/24
23	I66865815	LG05	7/16/24	57	I66865849	J19	7/16/24
24	I66865816	C01	7/16/24	58	I66865850	J18	7/16/24
25	I66865817	C02	7/16/24	59	I66865851	J17	7/16/24
26	I66865818	LG03	7/16/24	60	I66865852	J26	7/16/24
27	I66865819	LG04	7/16/24	61	I66865853	J27	7/16/24
28	I66865820	V04	7/16/24	62	I66865854	J1	7/16/24
29	I66865821	LG06	7/16/24	63	I66865855	J04	7/16/24
30	I66865822	V05	7/16/24	64	I66865856	J12	7/16/24
31	I66865823	G2	7/16/24	65	I66865857	V08	7/16/24
32	I66865824	G1	7/16/24	66	I66865858	J06	7/16/24
33	I66865825	G3	7/16/24	67	I66865859	J09	7/16/24
34	I66865826	G4	7/16/24	68	I66865860	J16	7/16/24

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

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

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

July 16,2024
Nathan Fox

MiTek®

RE: P240761-01 - Roof - HT Lot 196

MiTek, Inc.
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Chesterfield, MO 63017
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No.	Seal#	Truss Name	Date
69	I66865861	J23	7/16/24
70	I66865862	J30	7/16/24
71	I66865863	J25	7/16/24
72	I66865864	J28	7/16/24
73	I66865865	J14	7/16/24
74	I66865866	J2	7/16/24
75	I66865867	J05	7/16/24
76	I66865868	J10	7/16/24
77	I66865869	J33	7/16/24
78	I66865870	J11	7/16/24
79	I66865871	J24	7/16/24
80	I66865872	J29	7/16/24

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	D04a	Hip	1	2	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66865793
LEE'S SUMMIT, MISSOURI
08/06/2024

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

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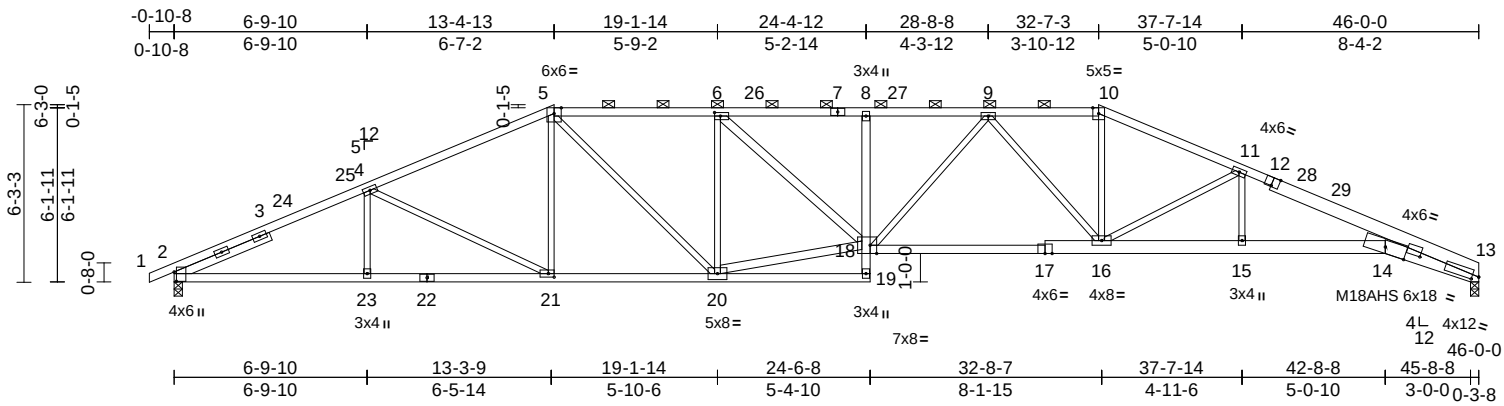

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Plate Offsets (X, Y): [2:0-3-15,0-0-15], [6:0-2-8,0-1-8], [12:0-3-0,Edge], [13:0-2-13,0-1-13], [13:2-2-5,0-0-3], [18:0-2-12,Edge], [21:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.45	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.83	14-15	>666	180	M18AHS	186/179
BCLL	0.0	Rep Stress Incr	YES	WB	0.47	Horz(CT)	0.40	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 465 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 12-13:2x6 SPF No.2
BOT CHORD	2x4 SP No.2 *Except* 14-13,17-14:2x6 SP 2400F 2.0E
WEBS	2x3 SPF No.2 *Except* 20-18,18-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-7-13

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (5-6-11 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 13=0-3-8
Max Horiz 2=112 (LC 12)
Max Uplift 2=-311 (LC 8), 13=-282 (LC 9)
Max Grav 2=2125 (LC 1), 13=2063 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-4254/636, 4-5=-3713/641, 5-6=-3972/755, 6-8=-4851/885, 8-9=-4881/887, 9-10=-4008/681, 10-11=-4421/719, 11-13=-6023/881
BOT CHORD	2-23=-513/3764, 21-23=-513/3764, 20-21=-452/3354, 19-20=-44/200, 18-19=0/100, 8-18=-330/146, 16-18=-663/4570, 15-16=-722/5417, 14-15=-722/5417, 13-14=-732/5361
WEBS	4-23=0/263, 4-21=-472/236, 5-21=-32/383, 5-20=-209/1032, 6-20=-1280/323, 18-20=-552/3838, 6-18=-189/1218, 10-16=-176/1369, 11-16=-1581/330, 11-15=-71/1072, 9-18=-84/591, 9-16=-1004/266

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 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) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-4-13, Exterior(2R) 13-4-13 to 20-5-10, Interior (1) 20-5-10 to 32-7-3, Exterior(2R) 32-7-3 to 39-8-1, Interior (1) 39-8-1 to 45-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All plates are 3x6 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 13 SP 2400F 2.0E crushing capacity of 805 psi.
10) Bearing at joint(s) 13 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 282 lb uplift at joint 13 and 311 lb uplift at joint 2.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865794
P240761-01	D01	Hip Girder	1	3	Job Reference (optional)	

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

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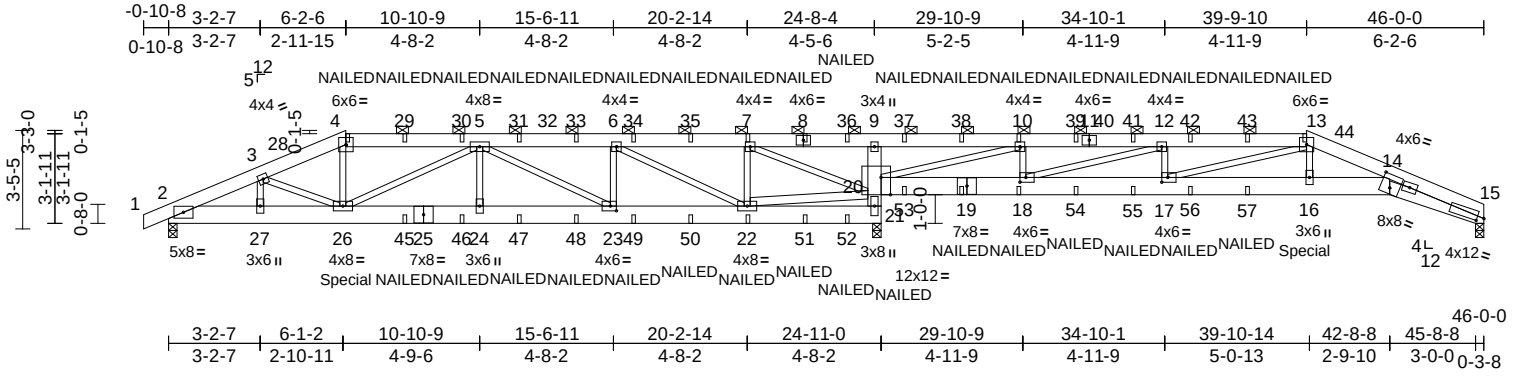

Scale = 1:80.6

Plate Offsets (X, Y): [14:0-4-0,0-5-9], [15:0-2-13,0-1-13], [17:0-2-8,0-2-0], [18:0-2-8,0-2-0], [20:0-4-0,Edge], [23:0-2-8,0-2-0]

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	0.99	Vert(LL)	-0.16	14-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.50	Vert(CT)	-0.29	14-16	>887	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.46	Horz(CT)	0.16	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 733 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SPF No.2 *Except* 21-9,14-15:2x6 SPF No.2
WEBS 2x3 SPF No.2 *Except* 20-22:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 4-13.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 21-22,20-21,18-20.

REACTIONS (size) 2=0-3-8, 15=0-3-8, 21=0-3-8
Max Horiz 2=66 (LC 12)
Max Uplift 2=-471 (LC 12), 15=-315 (LC 9), 21=-1319 (LC 9)
Max Grav 2=1559 (LC 25), 15=1071 (LC 26), 21=4446 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-2924/918, 3-4=-3029/1029, 4-5=-2778/970, 5-6=-2266/888, 6-7=-125/246, 7-9=-1216/4508, 9-10=-1317/4733, 10-12=-204/353, 12-13=-2551/658, 13-14=-3385/922, 14-15=-478/192
BOT CHORD 2-27=-823/2586, 26-27=-823/2586, 24-26=-1086/3164, 23-24=-1086/3164, 22-23=-820/2266, 21-22=-1222/345, 20-21=-4349/1349, 9-20=-878/426, 18-20=-353/358, 17-18=-585/2549, 16-17=-768/3219, 14-16=-765/3210
WEBS 3-27=-126/81, 3-26=-179/351, 4-26=-140/678, 5-26=-457/213, 5-24=0/310, 5-23=-1087/326, 6-23=-62/687, 6-22=-2644/828, 7-22=-213/1217, 7-20=-4567/1421, 10-20=-4585/1190, 10-18=-95/980, 12-18=-3033/875, 12-17=0/436, 13-17=-713/296, 13-16=-111/689, 20-22=-413/1154

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc, 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) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-2-6, Exterior(2R) 6-2-6 to 13-3-4, Interior (1) 13-3-4 to 39-9-10, Exterior(2E) 39-9-10 to 45-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearings are assumed to be: Joint 2 SPF No.2 crushing capacity of 425 psi, Joint 21 SPF No.2 crushing capacity of 425 psi.
8) Bearing at joint(s) 15 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 315 lb uplift at joint 15, 471 lb uplift at joint 2 and 1319 lb uplift at joint 21.
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) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.

July 16,2024

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	D01	Hip Girder	1	3	Job Reference (optional)

13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 351 lb down and 122 lb up at 6-2-6, and 374 lb down and 112 lb up at 39-8-14 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, 4-13=-70, 13-15=-70, 2-21=-20, 14-20=-20
   Concentrated Loads (lb)
   Vert: 4=-97 (B), 8=-97 (B), 19=-58 (B), 26=-351 (B), 22=-29 (B), 7=-97 (B), 10=-69 (B), 18=-58 (B), 13=-69 (B), 16=-374 (B), 29=-97 (B), 30=-97 (B), 31=-97 (B), 33=-97 (B), 34=-97 (B), 35=-97 (B), 36=-97 (B), 37=-69 (B), 38=-69 (B), 39=-69 (B), 41=-69 (B), 42=-69 (B), 43=-69 (B), 45=-29 (B), 46=-29 (B), 47=-29 (B), 48=-29 (B), 49=-29 (B), 50=-29 (B), 51=-29 (B), 52=-29 (B), 53=-58 (B), 54=-58 (B), 55=-58 (B), 56=-58 (B), 57=-58 (B)

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	D02	Hip	1	1	Job Reference (optional)

I66865795

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

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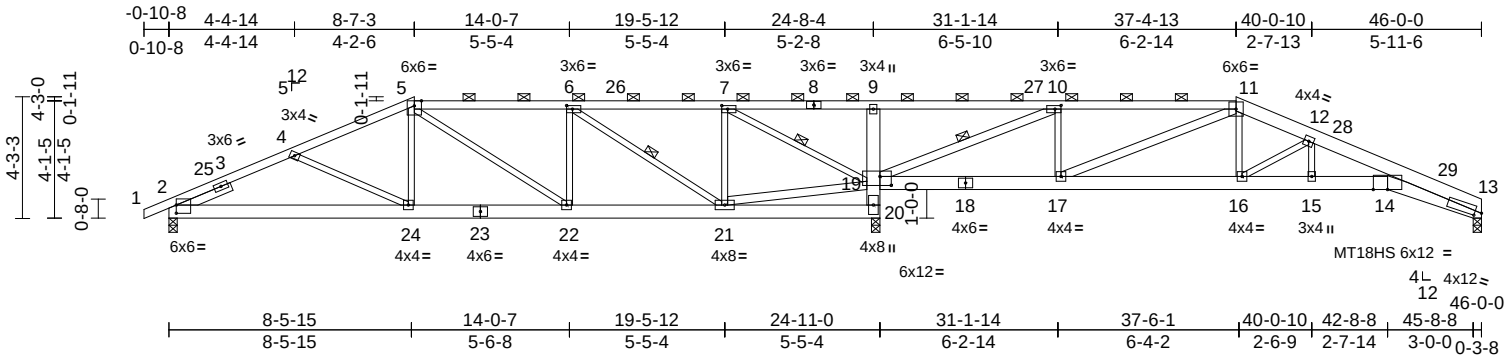

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Plate Offsets (X, Y): [2:Edge,0-3-7], [6:0-2-8,0-1-8], [7:0-2-8,0-1-8], [10:0-2-8,0-1-8], [13:0-2-13,0-1-13], [13:2-5-5,0-0-7], [19:0-4-12,0-3-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.15	14-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.29	14-15	>880	180	MT18HS	113/123
BCLL	0.0	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.13	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 236 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 11-13:1 1/2" x 5 1/2" 2.0E Microllam® LVL
BOT CHORD 2x6 SPF No.2 *Except* 14-13:1 1/2" x 5 1/2" 2.0E Microllam® LVL
WEBS 2x3 SPF No.2 *Except* 19-10,17-11,19-21:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-0-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-2-6 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 20-21 4-5-4 oc bracing: 19-20.
WEBS 1 Row at midpt 7-19, 10-19, 6-21

REACTIONS (size) 2=0-3-8, 13=0-3-8, 20=0-3-8, (req. 0-3-15)
Max Horiz 2=74 (LC 16)
Max Uplift 2=-160 (LC 8), 13=-121 (LC 13), 20=-473 (LC 9)
Max Grav 2=1011 (LC 25), 13=728 (LC 26), 20=2491 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-1694/308, 4-5=-1431/253, 5-6=-1215/299, 6-7=-394/146, 7-9=-203/1630, 9-10=-204/1655, 10-11=-457/156, 11-12=-1211/241, 12-13=-1958/319
BOT CHORD 2-24=-257/1463, 22-24=-145/1272, 21-22=-188/1212, 20-21=-227/40, 19-20=-2437/498, 9-19=-427/187, 17-19=-41/456, 16-17=-105/1107, 15-16=-222/1714, 14-15=-222/1714, 13-14=-236/1732
WEBS 4-24=-215/190, 5-24=0/323, 7-19=-2082/385, 10-19=-2241/390, 10-17=0/462, 11-17=-733/126, 11-16=-51/368, 6-22=0/266, 5-22=-141/42, 6-21=-1054/184, 7-21=-32/620, 19-21=-66/575, 12-16=-709/206, 12-15=-11/518

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-2-10, Interior (1) 4-2-10 to 8-7-3, Exterior(2R) 8-7-3 to 15-8-1, Interior (1) 15-8-1 to 37-4-13, Exterior(2R) 37-4-13 to 44-5-10, Interior (1) 44-5-10 to 45-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) WARNING: Required bearing size at joint(s) 20 greater than input bearing size.
7) Bearings are assumed to be: Joint 2 SPF No.2 crushing capacity of 425 psi, Joint 20 SPF No.2 crushing capacity of 425 psi, Joint 13 Trus Joist® LVL 2.0 E crushing capacity of 750 psi.
8) Bearing at joint(s) 13 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 121 lb uplift at joint 13, 160 lb uplift at joint 2 and 473 lb uplift at joint 20.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865796
P240761-01	D03	Hip	1	1	Job Reference (optional)	

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:00 Page: 1
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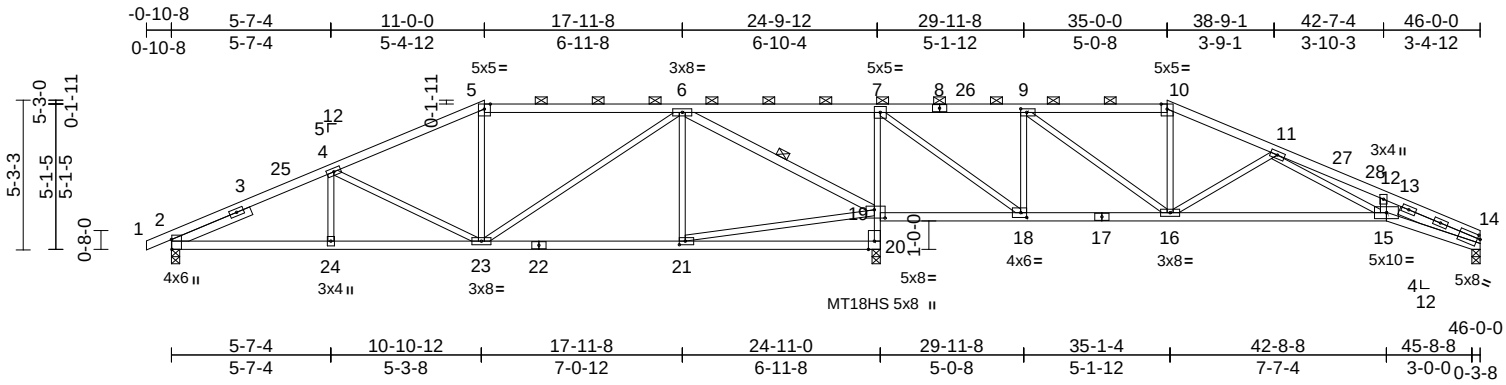

Scale = 1:81

Plate Offsets (X, Y): [2:0-4-3,Edge], [9:0-2-8,0-1-8], [14:0-1-2,0-1-8], [18:0-2-8,0-2-0], [19:0-4-8,0-3-8], [21:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.14	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.33	15-16	>760	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.10	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 215 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 5-8:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2 *Except* 20-7:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 19-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-0-0, Right 2x4 SP No.2 -- 3-0-13

BRACING

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

REACTIONS (size) 2=0-3-8, 14=0-3-8, 20=0-3-8
Max Horiz 2=-95 (LC 13)
Max Uplift 2=-181 (LC 12), 14=-142 (LC 13), 20=-436 (LC 9)
Max Grav 2=999 (LC 25), 14=687 (LC 26), 20=2586 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-1690/281, 4-5=-1190/236, 5-6=-1040/242, 6-7=-118/1545, 7-9=0/176, 9-10=-608/169, 10-11=-711/158, 11-12=-2348/496, 12-14=-2568/440
BOT CHORD	2-24=-271/1466, 23-24=-271/1466, 21-23=-65/564, 20-21=-12/16, 19-20=-2526/471, 7-19=-1452/340, 18-19=-1549/307, 16-18=-164/135, 15-16=-160/1148, 14-15=-354/2308
WEBS	4-24=0/213, 4-23=-497/195, 5-23=-38/128, 6-23=-106/681, 6-21=0/273, 19-21=-77/570, 6-19=-2139/339, 7-18=-260/1723, 9-18=-895/206, 9-16=-115/890, 10-16=-46/88, 12-15=0/233, 11-16=-635/242, 11-15=-214/1184

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 11-0-0, Exterior(2R) 11-0-0 to 17-11-8, Interior (1) 17-11-8 to 35-0-0, Exterior(2R) 35-0-0 to 42-0-14, Interior (1) 42-0-14 to 45-10-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 14 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 142 lb uplift at joint 14, 181 lb uplift at joint 2 and 436 lb uplift at joint 20.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	D04	Hip	1	1	Job Reference (optional)

I66865797

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

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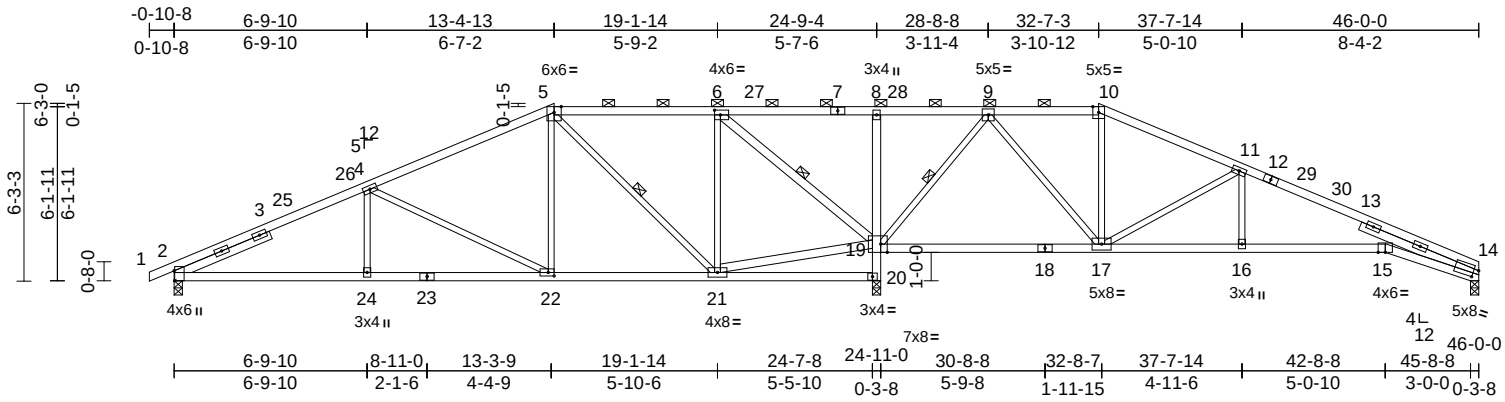

Scale = 1:81.2

Plate Offsets (X, Y): [2:0-4-3,Edge], [6:0-2-8,0-2-0], [14:0-2-1,0-3-6], [19:0-2-12,Edge], [22:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.33	15-16	>764	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.63	15-16	>403	180		
BCLL	0.0	Rep Stress Incr	YES	WB	1.00	Horz(CT)	0.20	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 225 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2 *Except* 12-14:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 21-19,19-6:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-7-13, Right 2x4 SP No.2 -- 4-6-4

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (2-2-0 max.): 5-10.
BOT CHORD	Rigid ceiling directly applied or 3-1-4 oc bracing.
WEBS	1 Row at midpt 5-21, 6-19, 9-19

REACTIONS (size) 2=0-3-8, 14=0-3-8, 20=0-3-8
Max Horiz 2=-114 (LC 13)
Max Uplift 2=-229 (LC 12), 14=-154 (LC 13), 20=-365 (LC 9)
Max Grav 2=888 (LC 25), 14=438 (LC 26), 20=3044 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-1398/381, 4-5=-680/284, 5-6=0/734, 6-8=-28/2244, 8-9=-32/2255, 9-10=0/441, 10-11=0/530, 11-14=-488/293
BOT CHORD	2-24=-370/1201, 22-24=-370/1201, 21-22=-164/534, 20-21=-112/0, 19-20=-2997/394, 8-19=-341/149, 17-19=-1245/166, 16-17=-160/367, 15-16=-160/367, 14-15=-176/359
WEBS	4-24=0/288, 4-22=-771/240, 5-22=-35/466, 5-21=-1100/110, 6-21=-16/1000, 19-21=-634/213, 6-19=-2167/256, 10-17=-430/43, 11-17=-894/301, 11-16=0/270, 9-19=-1603/210, 9-17=-103/1265

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-4-13, Exterior(2R) 13-4-13 to 20-5-10, Interior (1) 20-5-10 to 32-7-3, Exterior(2R) 32-7-3 to 39-8-1, Interior (1) 39-8-1 to 45-10-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 3x6 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Bearing at joint(s) 14, 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 154 lb uplift at joint 14, 229 lb uplift at joint 2 and 365 lb uplift at joint 20.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	D05	Hip	1	1	Job Reference (optional) I66865798

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

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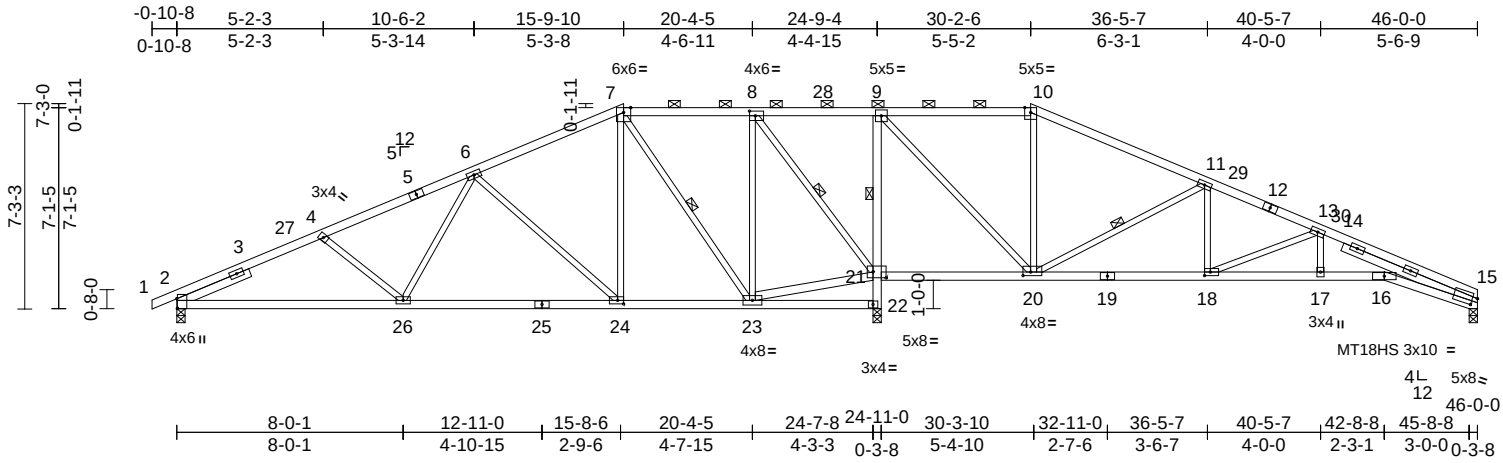

Scale = 1:81.5

Plate Offsets (X, Y): [2:0-4-3,Edge], [8:0-2-8,0-2-0], [15:0-2-1,0-3-6], [18:0-2-8,0-1-8], [20:0-3-4,0-1-8], [21:0-5-8,0-2-8], [24:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.22	16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.40	16	>631	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.12	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 229 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 21-23:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-9-4, Right 2x4 SP No.2 -- 5-2-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-6 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-10.
BOT CHORD Rigid ceiling directly applied or 3-2-14 oc bracing. Except:
1 Row at midpt 9-21
WEBS 1 Row at midpt 7-23, 8-21, 11-20

REACTIONS (size) 2=0-3-8, 15=0-3-8, 22=0-3-8
Max Horiz 2=-132 (LC 13)
Max Uplift 2=-220 (LC 12), 15=-136 (LC 13), 22=-348 (LC 9)
Max Grav 2=928 (LC 25), 15=477 (LC 26), 22=2998 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-1514/394, 4-6=-1245/332, 6-7=-490/356, 7-8=-3/757, 8-9=-84/1793, 9-10=0/645, 10-11=0/781, 11-13=-256/194, 13-15=-995/302
BOT CHORD 2-26=-414/1310, 24-26=-259/902, 23-24=-317/372, 22-23=-72/13, 21-22=-2959/416, 9-21=-1575/282, 20-21=-1795/387, 18-20=-38/220, 17-18=-192/835, 16-17=-192/835, 15-16=-205/848
WEBS 7-24=-94/614, 7-23=-1134/140, 8-21=-1856/259, 9-20=-240/1671, 10-20=-647/125, 11-20=-906/282, 11-18=0/343, 8-23=-99/1172, 21-23=-708/300, 4-26=-324/189, 6-26=-20/455, 6-24=-725/249, 13-18=-667/183, 13-17=0/299

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 15-9-10, Exterior(2R) 15-9-10 to 22-10-7, Interior (1) 22-10-7 to 30-2-6, Exterior(2R) 30-2-6 to 37-3-4, Interior (1) 37-3-4 to 45-10-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 15, 22 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 136 lb uplift at joint 15, 220 lb uplift at joint 2 and 348 lb uplift at joint 22.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865799
P240761-01	D06	Hip	1	1	Job Reference (optional)	

08/06/2024

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

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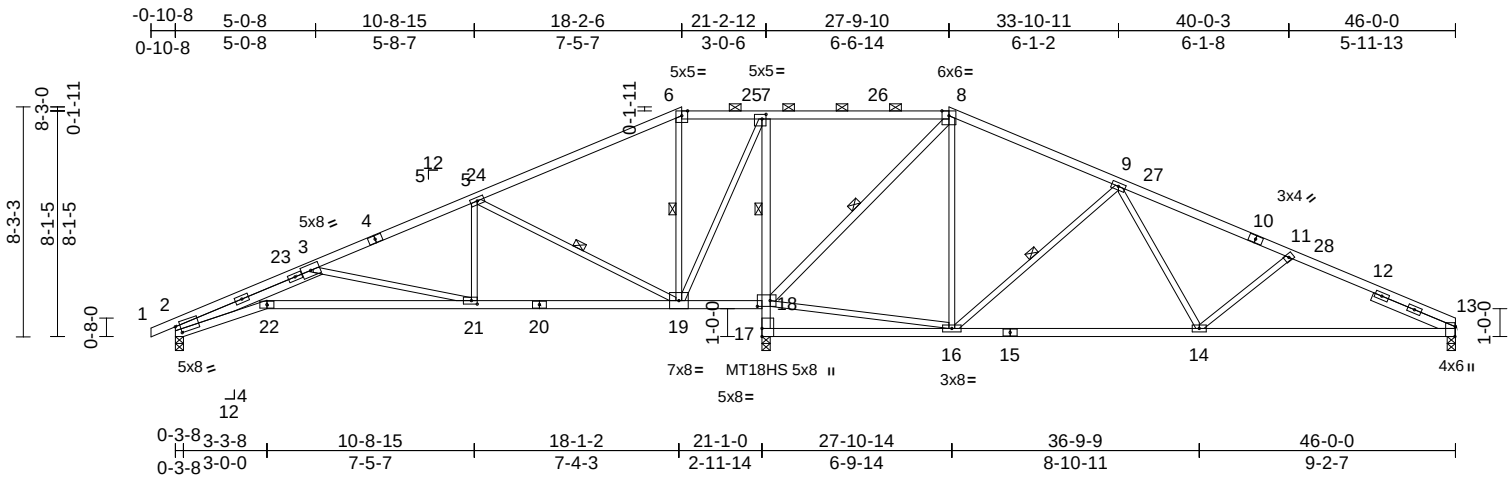

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Plate Offsets (X, Y): [2:0-2-1,0-3-6], [7:0-1-12,0-2-0], [13:0-4-3,Edge], [18:0-5-8,0-2-8], [21:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.31	21-22	>822	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.61	21-22	>415	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.16	17	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 233 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 1650F 1.5E *Except* 1-4,10-13:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 18-8:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 5-8-1, Right 2x4 SP No.2 -- 3-2-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-15 oc purlins, except
2-0-0 oc purlins (10-0-0 max.): 6-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
3-11-7 oc bracing: 18-19
2-11-13 oc bracing: 17-18.
1 Row at midpt 7-18
WEBS 1 Row at midpt 6-19, 8-18, 9-16, 5-19

REACTIONS (size) 2=0-3-8, 13=0-3-8, 17=0-3-8, (req. 0-3-15)
Max Horiz 2=149 (LC 12)
Max Uplift 2=-100 (LC 13), 13=-275 (LC 13), 17=-397 (LC 12)
Max Grav 2=373 (LC 25), 13=804 (LC 26), 17=3312 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-3=-216/322, 3-5=-34/561, 5-6=-215/1583, 6-7=-121/1375, 7-8=-253/2051, 8-9=-173/935, 9-11=-1012/502, 11-13=-1346/573
BOT CHORD 2-22=-321/135, 21-22=-262/152, 19-21=-447/38, 18-19=-2062/451, 17-18=-3259/430, 7-18=-1844/340, 16-17=-96/49, 14-16=-569/621, 13-14=-440/1161
WEBS 6-19=-889/214, 7-19=-325/1648, 16-18=-763/268, 8-18=-2066/220, 8-16=-84/820, 9-16=-855/286, 9-14=-24/555, 11-14=-438/217, 3-21=-523/287, 5-21=0/415, 5-19=-1100/337

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-2-6, Exterior(2R) 18-2-6 to 25-3-4, Interior (1) 25-3-4 to 27-9-10, Exterior(2R) 27-9-10 to 34-10-7, Interior (1) 34-10-7 to 46-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are MT20 plates unless otherwise indicated.
5) All plates are 3x6 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) WARNING: Required bearing size at joint(s) 17 greater than input bearing size.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 397 lb uplift at joint 17, 275 lb uplift at joint 13 and 100 lb uplift at joint 2.
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
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	E01	Hip	1	1	Job Reference (optional) I66865800

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

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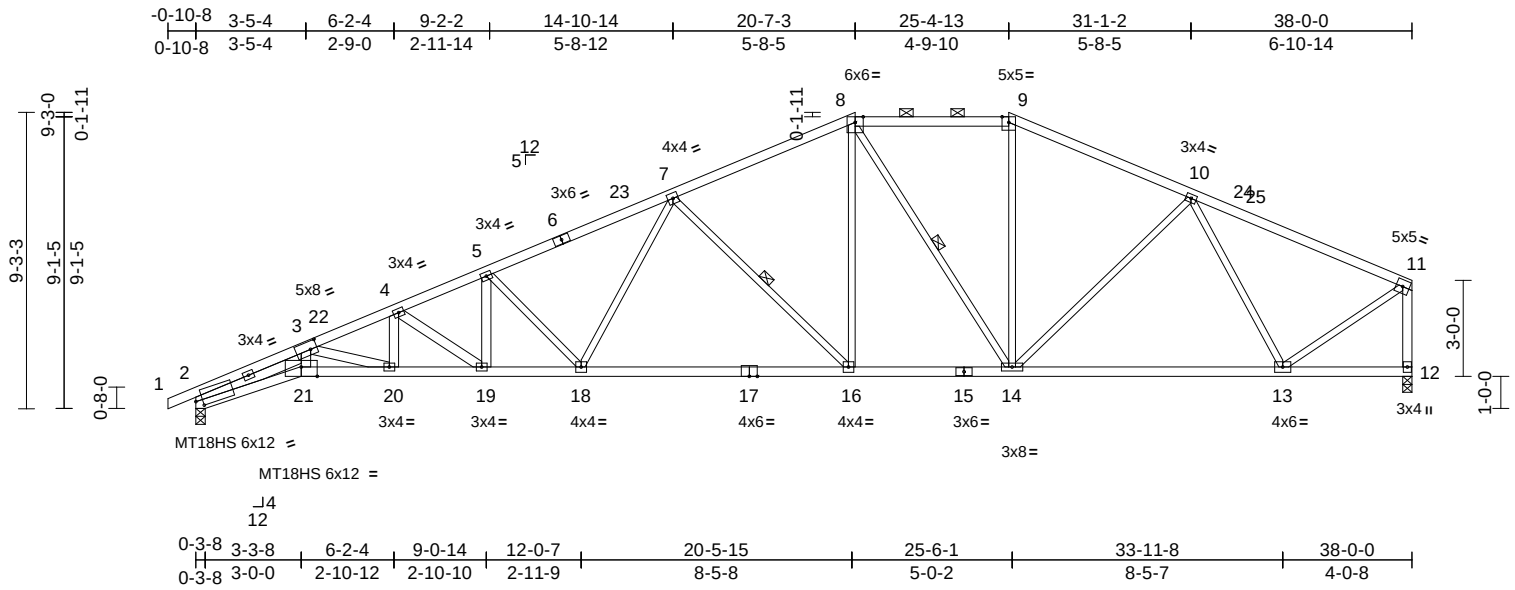

Scale = 1:72

Plate Offsets (X, Y): [2:0-2-9,0-2-4], [3:0-2-8,0-3-0], [21:0-6-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.31	18-19	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.61	16-18	>745	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.85	Horz(CT)	0.28	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 193 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-6:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 15-12,17-15:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 12-11,5-19,20-4,3-20,4-19,3-21:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-7-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-10 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-3 max.): 8-9.
BOT CHORD Rigid ceiling directly applied or 7-0-9 oc bracing.
WEBS 1 Row at midpt 8-14, 7-16

REACTIONS (lb/size) 2=1768/0-3-8, 12=1698/0-3-8
Max Horiz 2=202 (LC 12)
Max Uplift 2=-300 (LC 12), 12=-202 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-7126/1357, 3-22=-4856/845, 4-22=-4837/855, 4-5=-4060/715, 5-6=-3492/577, 6-23=-3421/578, 7-23=-3351/593, 7-8=-2295/463, 8-9=-1815/422, 9-10=-2052/423, 10-24=-1362/281, 24-25=-1392/273, 11-25=-1526/264, 11-12=-1677/283
BOT CHORD 2-21=-1407/6461, 20-21=-1262/5777, 19-20=-894/4513, 18-19=-709/3717, 17-18=-532/2768, 16-17=-532/2768, 15-16=-349/2038, 14-15=-349/2038, 13-14=-334/1730
WEBS 8-16=-163/844, 8-14=-552/158, 9-14=-59/408, 11-13=-196/1575, 5-18=-814/294, 7-18=-134/851, 7-16=-1015/340, 10-14=-15/310, 10-13=-865/237, 5-19=-118/527, 4-20=-77/498, 3-20=-1315/384, 4-19=-961/224, 3-21=-392/2014

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-7-3, Exterior(2E) 20-7-3 to 25-4-13, Exterior(2R) 25-4-13 to 32-5-10, Interior (1) 32-5-10 to 37-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 300 lb uplift at joint 2 and 202 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865801
P240761-01	E03	Roof Special	3	1	Job Reference (optional)	

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

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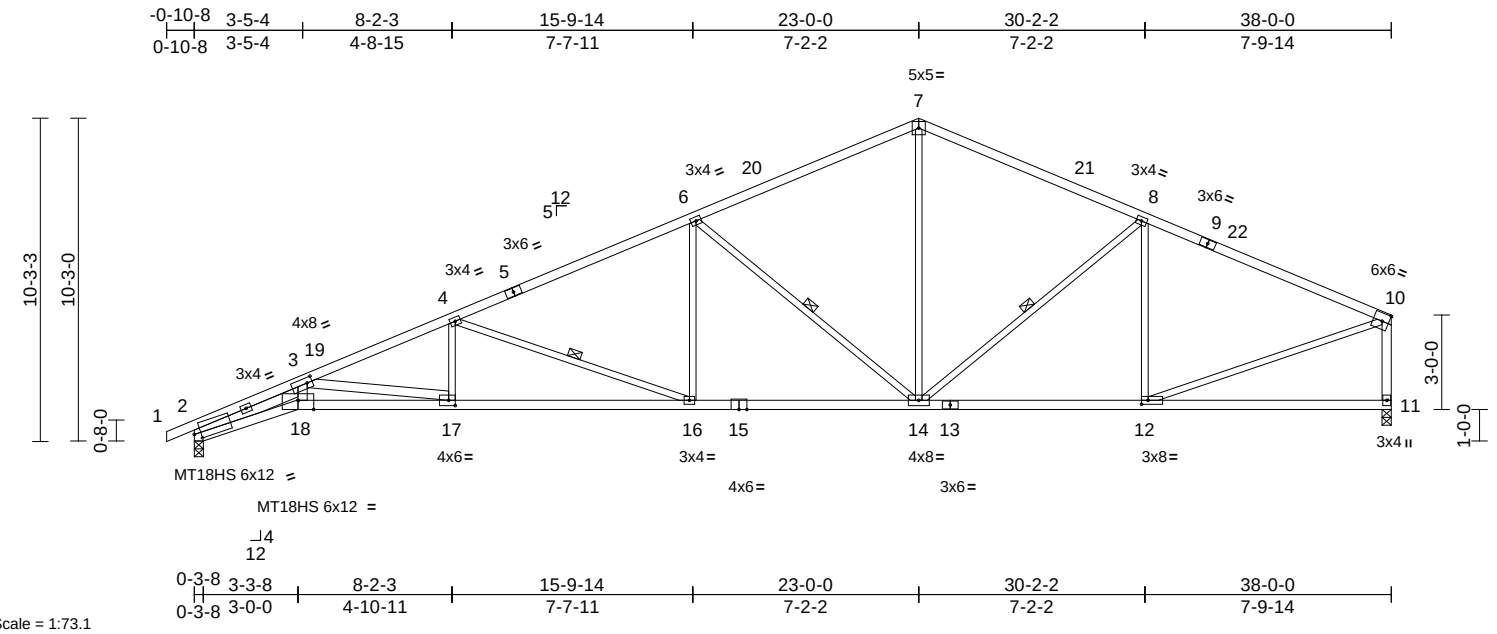

Scale = 1:73.1

Plate Offsets (X, Y): [2:0-2-9,0-2-4], [3:0-2-0,0-2-0], [12:0-2-8,0-1-8], [17:0-2-8,0-2-0], [18:0-6-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.36	17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.78	Vert(CT)	-0.68	16-17	>665	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.32	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 182 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5,9-10:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 2400F 2.0E *Except* 13-11,15-13:2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 11-10,3-17,18-3:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-7-7

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-8-4 oc bracing.
WEBS 1 Row at midpt 8-14, 6-14, 4-16

REACTIONS (lb/size) 2=1768/0-3-8, 11=1698/0-3-8
Max Horiz 2=222 (LC 12)
Max Uplift 2=-315 (LC 12), 11=-226 (LC 13)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-7340/1495, 3-19=-4363/782, 4-19=-4358/801, 4-5=-3014/500, 5-6=-2913/532, 6-20=-1989/399, 7-20=-1881/428, 7-21=-1881/428, 8-21=-1990/399, 8-9=-1882/362, 9-22=-1933/350, 10-22=-2068/342, 10-11=-1625/318
BOT CHORD 2-18=-1559/6679, 17-18=-1400/5967, 16-17=-844/4023, 15-16=-486/2689, 14-15=-486/2689, 13-14=-323/1824, 12-13=-323/1824
WEBS 7-14=-145/1006, 8-14=-295/182, 8-12=-474/195, 10-12=-280/1856, 6-14=-1238/378, 6-16=-44/634, 4-16=-1418/403, 4-17=-19/509, 3-17=-1971/563, 3-18=-436/2111

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 23-0-0, Exterior(2R) 23-0-0 to 28-0-0, Interior (1) 28-0-0 to 37-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 226 lb uplift at joint 11 and 315 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	LG02	Lay-In Gable	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
I66865802
08/06/2024

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

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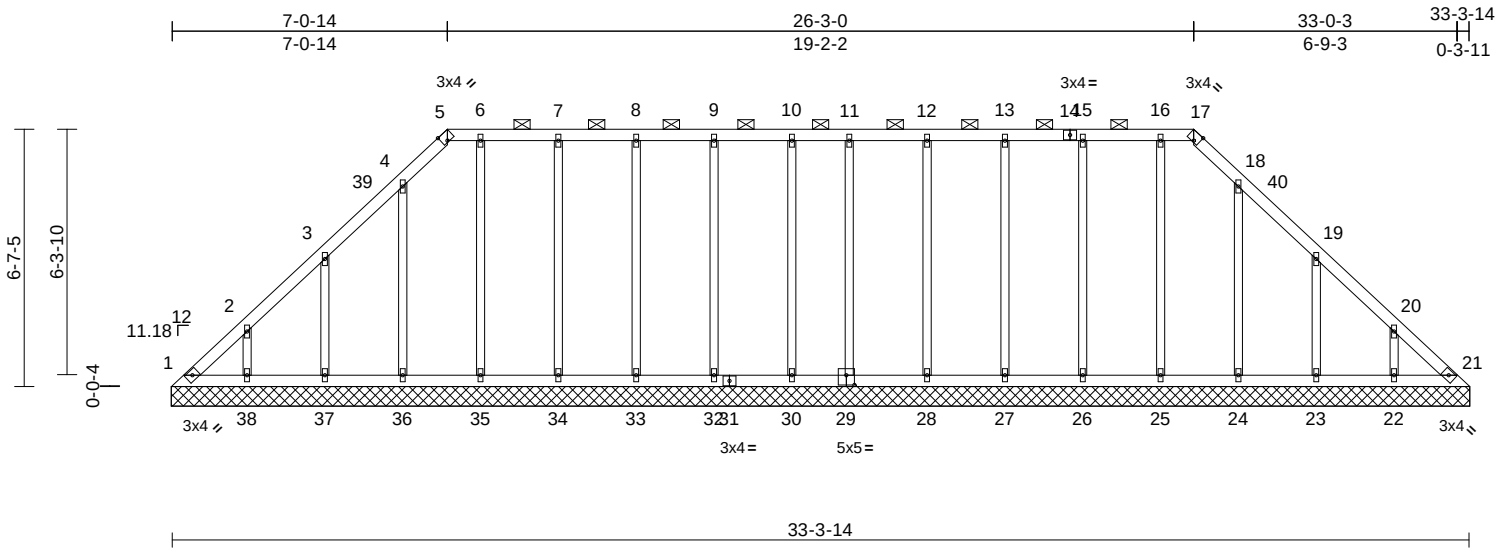

Scale = 1:59.2

Plate Offsets (X, Y): [5:0-1-10,Edge], [17:0-1-10,Edge], [29:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.01	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 170 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-17.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=33-4-7, 21=33-4-7, 22=33-4-7, 23=33-4-7, 24=33-4-7, 25=33-4-7, 26=33-4-7, 27=33-4-7, 28=33-4-7, 29=33-4-7, 30=33-4-7, 32=33-4-7, 33=33-4-7, 34=33-4-7, 35=33-4-7, 36=33-4-7, 37=33-4-7, 38=33-4-7
Max Horiz 1=176 (LC 9)
Max Uplift 1=-64 (LC 10), 21=-26 (LC 11), 22=-111 (LC 13), 23=-129 (LC 13), 24=-63 (LC 13), 25=-16 (LC 9), 26=-45 (LC 8), 27=-39 (LC 9), 28=-40 (LC 9), 29=-33 (LC 8), 30=-34 (LC 9), 32=-40 (LC 8), 33=-39 (LC 9), 34=-50 (LC 8), 35=-35 (LC 9), 36=-75 (LC 12), 37=-126 (LC 12), 38=-112 (LC 12)
Max Grav 1=151 (LC 12), 21=126 (LC 22), 22=196 (LC 20), 23=205 (LC 20), 24=177 (LC 20), 25=167 (LC 26), 26=186 (LC 25), 27=179 (LC 26), 28=186 (LC 25), 29=153 (LC 26), 30=151 (LC 25), 32=185 (LC 26), 33=179 (LC 25), 34=185 (LC 26), 35=168 (LC 25), 36=190 (LC 19), 37=202 (LC 19), 38=197 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-241/154, 2-3=-146/117, 3-4=-117/90, 4-5=-82/112, 5-6=-55/105, 6-7=-55/105, 7-8=-55/105, 8-9=-55/105, 9-10=-55/105, 10-11=-55/105, 11-12=-55/105, 12-13=-55/105, 13-15=-55/105, 15-16=-55/105, 16-17=-55/105, 17-18=-79/106, 18-19=-86/55, 19-20=-119/61, 20-21=-202/98
BOT CHORD 1-38=-71/171, 37-38=-71/171, 36-37=-71/171, 35-36=-71/171, 34-35=-71/171, 33-34=-71/171, 32-33=-71/171, 30-32=-71/171, 28-30=-72/171, 27-28=-72/171, 26-27=-72/171, 25-26=-72/171, 24-25=-72/171, 23-24=-72/171, 22-23=-72/171, 21-22=-72/171
WEBS 2-38=-153/130, 3-37=-162/151, 4-36=-150/99, 6-35=-128/59, 7-34=-145/74, 8-33=-140/63, 9-32=-143/65, 10-30=-119/54, 11-29=-119/54, 12-28=-143/65, 13-27=-140/62, 15-26=-145/69, 16-25=-127/40, 18-24=-137/86, 19-23=-166/154, 20-22=-153/130

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-7 to 5-4-7, Interior (1) 5-4-7 to 7-1-2, Exterior(2R) 7-1-2 to 13-11-6, Interior (1) 13-11-6 to 26-3-4, Exterior(2E) 26-3-4 to 33-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 64 lb uplift at joint 1, 26 lb uplift at joint 21, 112 lb uplift at joint 38, 126 lb uplift at joint 37, 75 lb uplift at joint 36, 35 lb uplift at joint 35, 50 lb uplift at joint 34, 39 lb uplift at joint 33, 40 lb uplift at joint 32, 34 lb uplift at joint 30, 33 lb uplift at joint 29, 40 lb uplift at joint 28, 39 lb uplift at joint 27, 45 lb uplift at joint 26, 16 lb uplift at joint 25, 63 lb uplift at joint 24, 129 lb uplift at joint 23 and 111 lb uplift at joint 22.

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER
July 16,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865802
P240761-01	LG02	Lay-In Gable	1	1	Job Reference (optional)	

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

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865803
P240761-01	B01	Hip Girder	1	2	Job Reference (optional)	

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

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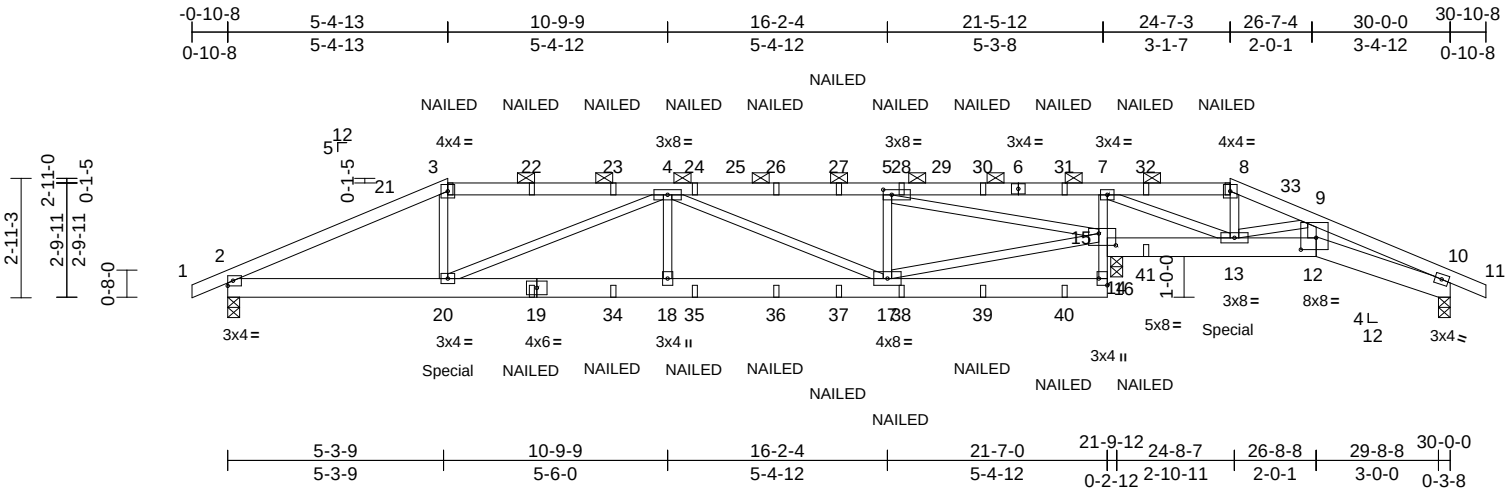

Scale = 1:56.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	0.09	17-18	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.15	17-18	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 266 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2 *Except* 16-7:2x3 SPF No.2
WEBS 2x3 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except
2-0-0 oc purlins (6-0-0 max.): 3-8.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 14-15,13-14.

REACTIONS (size) 2=0-3-8, 10=0-3-8, 14=0-3-8
Max Horiz 2=-49 (LC 13)
Max Uplift 2=-445 (LC 8), 10=-97 (LC 34), 14=-812 (LC 8)
Max Grav 2=1507 (LC 25), 10=331 (LC 26), 14=2523 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-2928/918, 3-4=-2546/858, 4-5=-2266/802, 5-7=-212/878, 7-8=-26/107, 8-9=-49/133, 9-10=-603/147, 10-11=0/3
BOT CHORD 2-20=-781/2575, 18-20=-1081/3326, 17-18=-1081/3326, 16-17=-11/58, 15-16=0/157, 7-15=-959/410, 14-15=-2161/743, 13-14=-1006/371, 12-13=-78/441, 10-12=-92/512
WEBS 3-20=-152/773, 4-20=-924/339, 4-18=0/347, 4-17=-1181/391, 5-17=0/323, 15-17=-739/2268, 5-15=-3170/1027, 7-13=-299/1048, 8-13=-203/113, 9-13=-521/172, 9-12=-26/268

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.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x3 - 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 5-4-13, Exterior(2R) 5-4-13 to 12-5-10, Interior (1) 12-5-10 to 24-7-3, Exterior(2E) 24-7-3 to 30-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
8) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 445 lb uplift at joint 2, 97 lb uplift at joint 10 and 812 lb uplift at joint 14.
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) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 275 lb down and 91 lb up at 5-4-13, and 264 lb down and 98 lb up at 24-6-7 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, 3-8=-70, 8-11=-70, 2-16=-20, 12-15=-20, 10-12=-20
Concentrated Loads (lb)

July 16,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	B01	Hip Girder	1	**2**	Job Reference (optional)

Vert: 3=-73 (F), 19=-23 (F), 20=-275 (F), 13=-264 (F), 8=-64 (F), 22=-73 (F), 23=-73 (F), 24=-73 (F), 26=-73 (F), 27=-73 (F), 28=-73 (F), 30=-73 (F), 31=-73 (F), 32=-64 (F), 34=-23 (F), 35=-23 (F), 36=-23 (F), 37=-23 (F), 38=-23 (F), 39=-23 (F), 40=-23 (F), 41=-26 (F)

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865804
P240761-01	B02	Hip	1	1	Job Reference (optional)	

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

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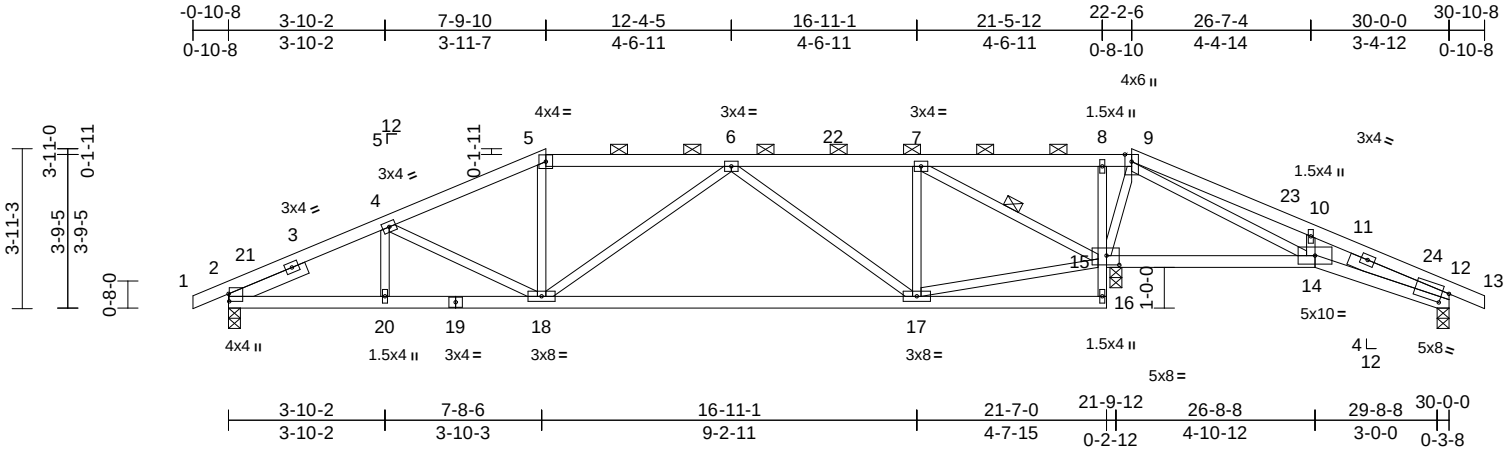

Scale = 1:56.6

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.16	17-18	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.68	Vert(CT)	-0.35	17-18	>737	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.56	Horz(CT)	0.03	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 137 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 16-8:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-0-9, Right 2x4 SP No.2 -- 2-7-13

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

REACTIONS (size) 2=0-3-8, 12=0-3-8, 15=0-3-8
Max Horiz 2=67 (LC 16)
Max Uplift 2=-152 (LC 8), 12=-82 (LC 13), 15=-267 (LC 9)
Max Grav 2=955 (LC 25), 12=199 (LC 26), 15=1718 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-1615/277, 4-5=-1374/245, 5-6=-1239/244, 6-7=-699/188, 7-8=-84/846, 8-9=-89/848, 9-10=-105/293, 10-12=-96/337, 12-13=-4/0
BOT CHORD 2-20=-207/1384, 18-20=-207/1384, 17-18=-217/1197, 16-17=-54/0, 15-16=0/39, 8-15=-339/120, 14-15=-712/193, 12-14=-302/111
WEBS 5-18=0/246, 9-15=-487/148, 10-14=-325/167, 9-14=-233/798, 6-18=-29/177, 7-17=-13/448, 7-15=-1581/264, 15-17=-77/738, 6-17=-681/179, 4-18=-170/149, 4-20=0/68

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 3-10-2, Interior (1) 3-10-2 to 7-9-10, Exterior(2R) 7-9-10 to 14-10-7, Interior (1) 14-10-7 to 22-2-6, Exterior(2R) 22-2-6 to 29-3-4, Interior (1) 29-3-4 to 30-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Bearing at joint(s) 12 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 152 lb uplift at joint 2, 267 lb uplift at joint 15 and 82 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	B03	Hip	1	1	Job Reference (optional) I66865805

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:21:37 Page: 1
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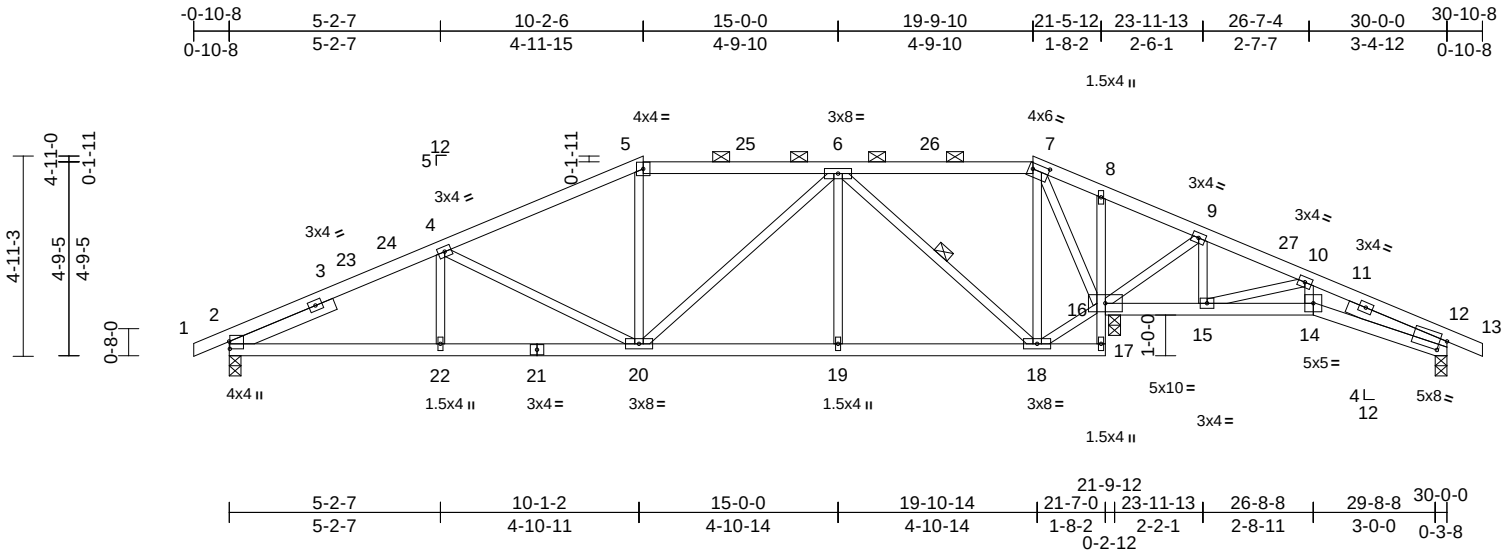

Scale = 1:56.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.06	20-22	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.42	Vert(CT)	-0.11	20-22	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.03	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 143 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 17-8:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-9-7, Right 2x4 SP No.2 -- 2-7-13

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

REACTIONS (size) 2=0-3-8, 12=0-3-8, 16=0-3-8
Max Horiz 2=86 (LC 16)
Max Uplift 2=-168 (LC 12), 12=-95 (LC 13), 16=-196 (LC 9)
Max Grav 2=976 (LC 25), 12=278 (LC 26), 16=1611 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-1653/298, 4-5=-1199/258, 5-6=-1050/267, 6-7=-103/109, 7-8=0/586, 8-9=-27/613, 9-10=-7/292, 10-12=-356/139, 12-13=-4/0
BOT CHORD 2-22=-245/1433, 20-22=-245/1433, 19-20=-104/840, 18-19=-104/840, 17-18=-52/5, 16-17=-11/0, 8-16=-171/80, 15-16=-234/93, 14-15=-71/239, 12-14=-79/279
WEBS 4-22=0/204, 4-20=-438/176, 5-20=0/177, 6-20=-82/317, 6-18=-1036/179, 7-18=-105/741, 16-18=0/185, 7-16=-1268/206, 10-14=0/153, 6-19=0/201, 9-16=-385/116, 9-15=-2/184, 10-15=-424/133

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 10-2-6, Exterior(2R) 10-2-6 to 17-3-4, Interior (1) 17-3-4 to 19-9-10, Exterior(2R) 19-9-10 to 26-7-4, Interior (1) 26-7-4 to 30-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Bearing at joint(s) 12 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 168 lb uplift at joint 2, 196 lb uplift at joint 16 and 95 lb uplift at joint 12.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F08	Hip	1	1	Job Reference (optional) I66865806

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

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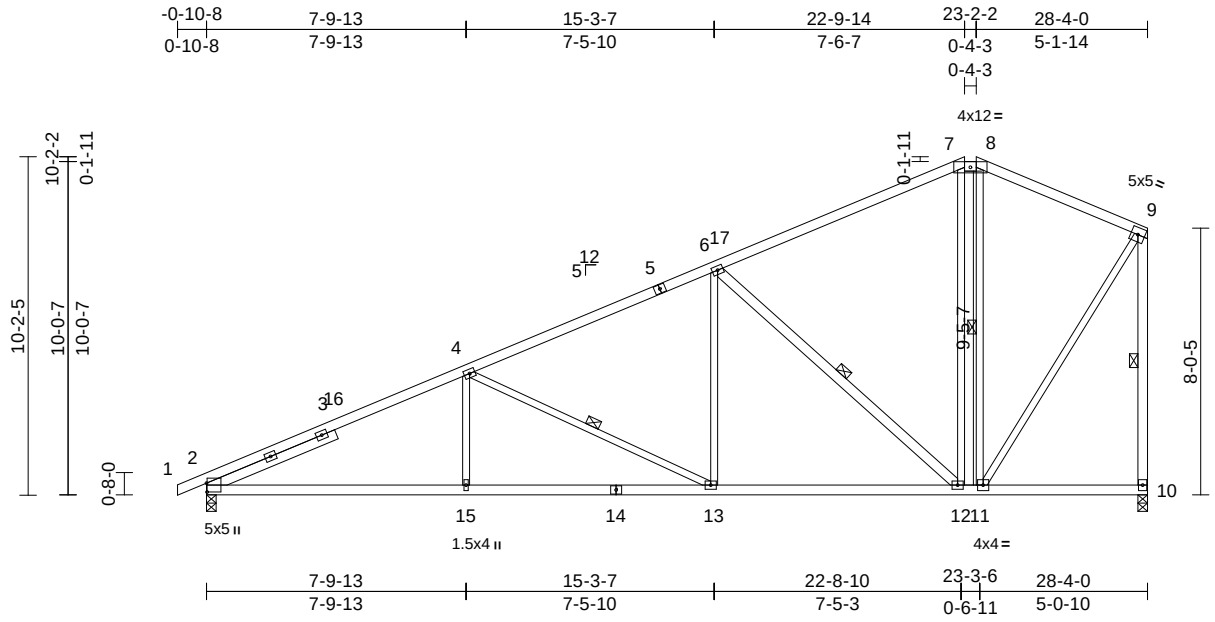

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Plate Offsets (X, Y): [2:0-3-3,0-0-3]

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	0.90	Vert(LL)	-0.13	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.28	12-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.53	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 159 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 12-6,10-9:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 4-2-6

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.): 7-8.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-13, 6-12, 8-11, 9-10

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=359 (LC 9)
Max Uplift 2=-254 (LC 12), 10=-221 (LC 12)
Max Grav 2=1331 (LC 1), 10=1267 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-2357/420, 4-6=-1603/327, 6-7=-735/261, 7-8=-570/274, 8-9=-664/269, 9-10=-1262/293
BOT CHORD 2-15=-556/2062, 13-15=-556/2062, 12-13=-424/1395, 11-12=-244/570, 10-11=-151/165
WEBS 4-15=0/315, 4-13=-743/248, 6-13=-26/537, 6-12=-1117/350, 7-12=0/365, 8-11=-310/141, 9-11=-256/1055

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 22-9-14, Exterior(2E) 22-9-14 to 28-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 3x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 254 lb uplift at joint 2 and 221 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F07	Hip	1	1	Job Reference (optional) I66865807

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

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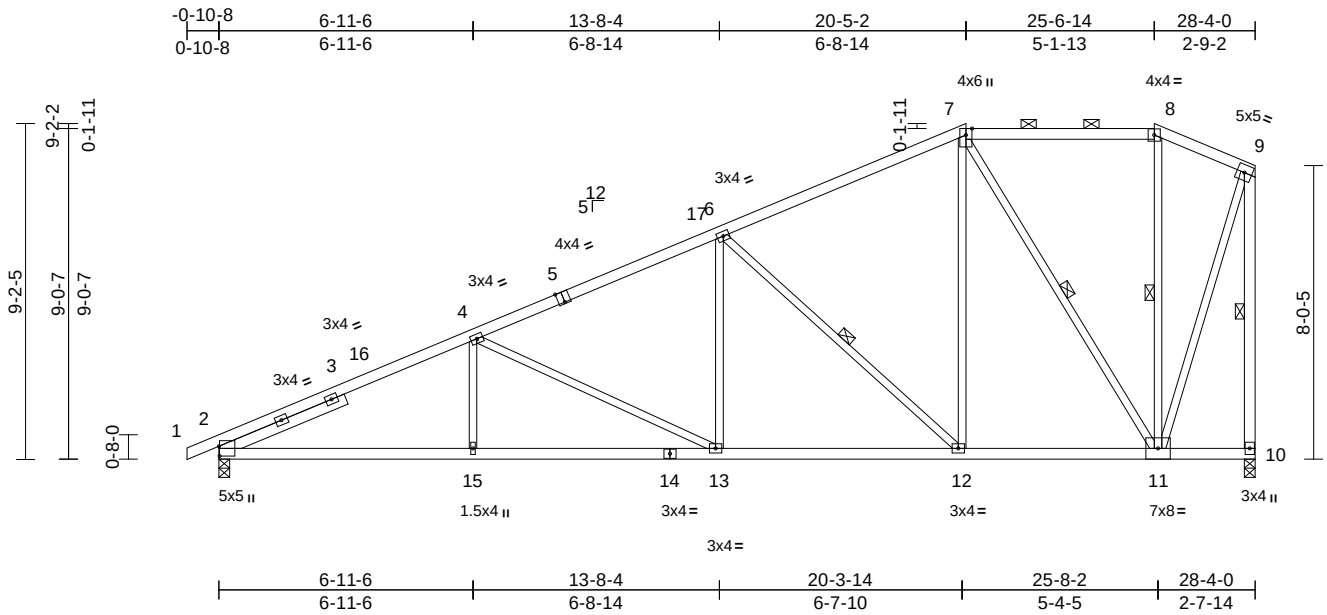

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Plate Offsets (X, Y): [2:0-3-3,0-0-3], [5:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.11	13-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.66	Vert(CT)	-0.23	13-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 154 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 10-9:2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-8-12

BRACING

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

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=361 (LC 11)
Max Uplift 2=-249 (LC 12), 10=-187 (LC 9)
Max Grav 2=1331 (LC 1), 10=1267 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-2397/419, 4-6=-1744/338, 6-7=-1005/281, 7-8=-361/235, 8-9=-400/249, 9-10=-1245/259
BOT CHORD	2-15=-588/2101, 13-15=-588/2101, 12-13=-472/1534, 11-12=-313/830, 10-11=-151/166
WEBS	4-15=0/283, 4-13=-630/217, 6-13=-14/455, 6-12=-943/304, 7-12=-128/762, 7-11=-962/238, 8-11=-208/145, 9-11=-271/1094

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 20-5-2, Exterior(2E) 20-5-2 to 28-2-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 3x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 2 and 187 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	
P240761-01	F06	Hip	1	1	Job Reference (optional)	I66865808

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:02 Page: 1
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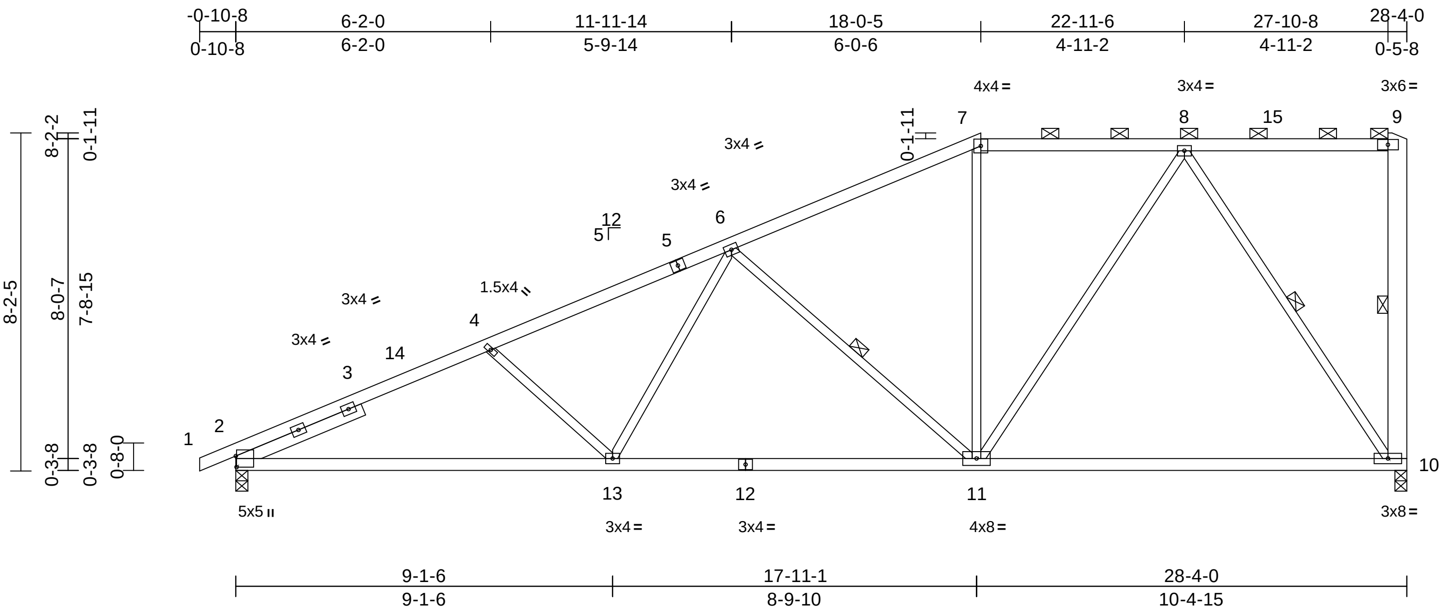

Scale = 1:55.8

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

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	0.58	Vert(LL)	-0.28	10-11	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.57	10-11	>596	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 141 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-9:2x6 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-3-11

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

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=361 (LC 9)
Max Uplift 2=-240 (LC 12), 10=-240 (LC 9)
Max Grav 2=1327 (LC 1), 10=1264 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-2371/434, 4-6=-2090/373, 6-7=-1264/291, 7-8=-1088/295, 8-9=-170/163, 9-10=-160/76
BOT CHORD 2-13=-627/2080, 11-13=-513/1661, 10-11=-274/693
WEBS 7-11=0/218, 8-11=-133/722, 8-10=-1213/318, 4-13=-295/216, 6-13=-44/449, 6-11=-774/292

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-5, Exterior(2R) 18-0-5 to 25-1-2, Interior (1) 25-1-2 to 28-1-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 240 lb uplift at joint 2 and 240 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
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F05	Half Hip	1	1	I66865809 Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:02 Page: 1

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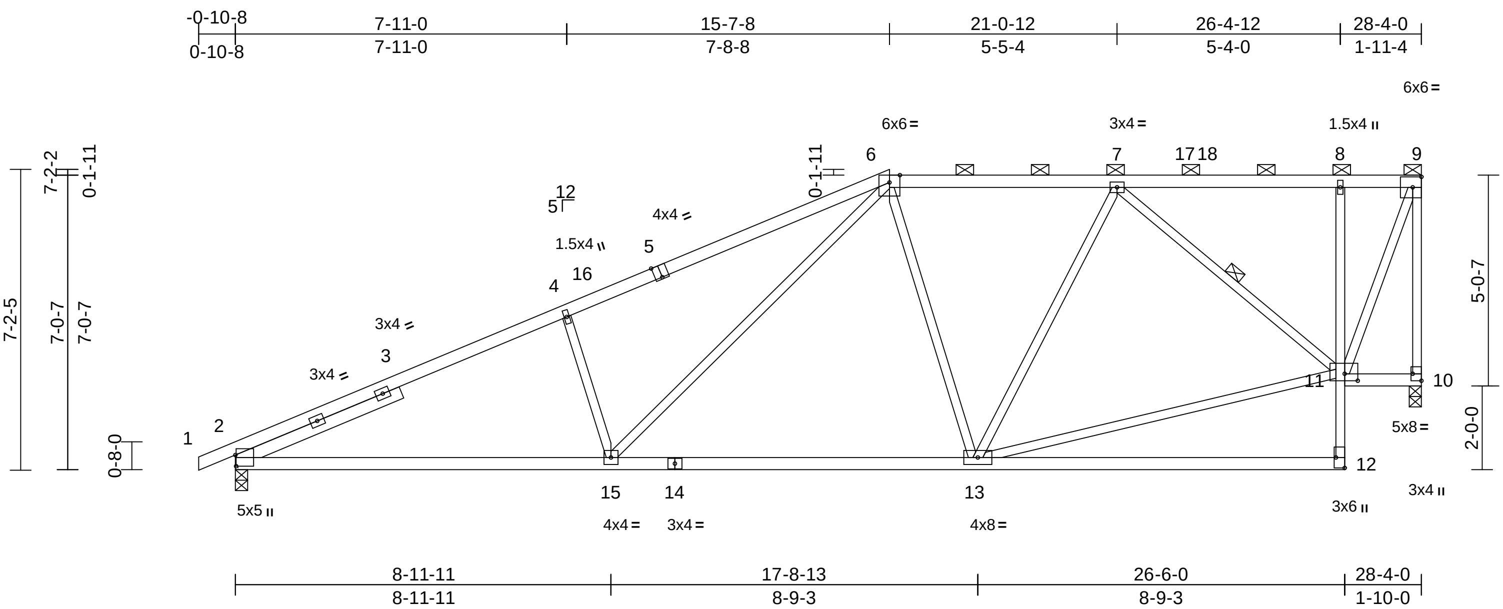

Scale = 1:55

Plate Offsets (X, Y): [2:0-3-3,0-0-3], [5:0-2-0,Edge], [10:Edge,0-2-8], [11:0-3-12,0-2-0], [12: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	0.88	Vert(LL)	-0.17	2-15	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.36	2-15	>937	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 141 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 5-6:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2 *Except* 12-8:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 4-3-2

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

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=279 (LC 9)
Max Uplift 2=-227 (LC 12), 10=-250 (LC 9)
Max Grav 2=1333 (LC 1), 10=1269 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-2356/377, 4-6=-2199/442, 6-7=-1248/294, 7-8=-471/177, 8-9=-467/175, 9-10=-1211/255
BOT CHORD 2-15=-544/2066, 13-15=-349/1323, 12-13=0/72, 11-12=0/152, 8-11=-289/146, 10-11=-95/106
WEBS 4-15=-461/306, 6-15=-259/872, 6-13=-270/183, 7-13=-35/293, 11-13=-317/1122, 7-11=-906/182, 9-11=-272/1284

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 15-7-8, Exterior(2R) 15-7-8 to 22-8-6, Interior (1) 22-8-6 to 28-2-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 250 lb uplift at joint 10 and 227 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F01	Half Hip Girder	1	3	Job Reference (optional) I66865810

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

Run: 8.63 E Apr 26 2024 Print: 8.630 E Apr 26 2024 MiTek Industries, Inc. Tue Jul 16 13:06:19 Page: 1
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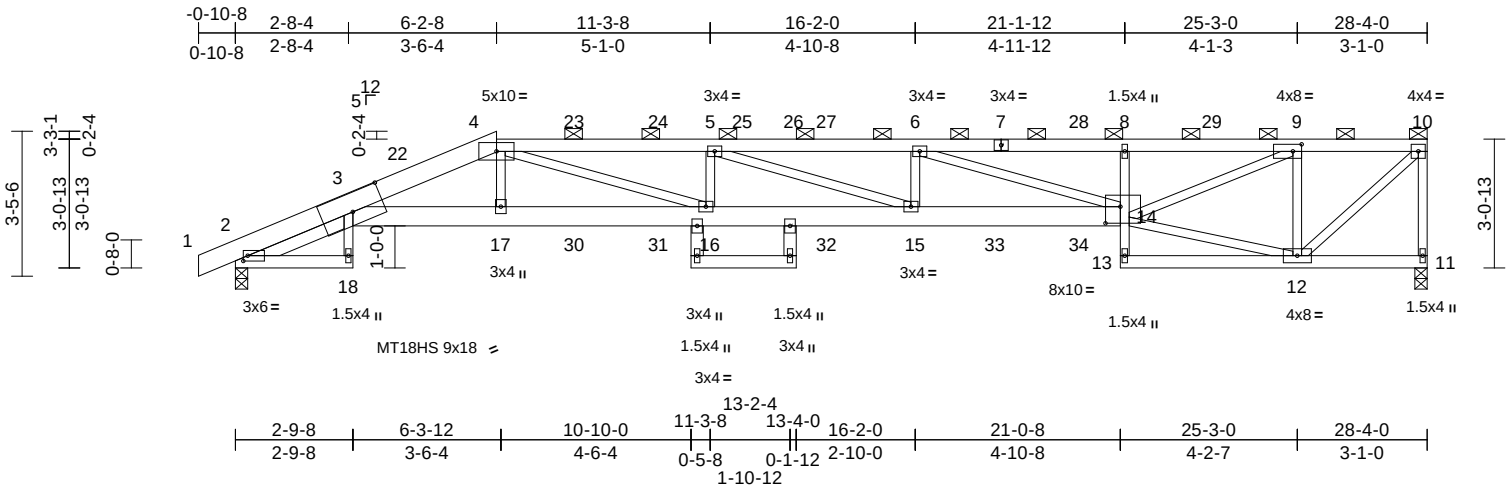

Scale = 1:54.8

Plate Offsets (X, Y): [2:0-1-4,0-1-8], [3:0-9-0,0-5-5], [9:0-2-8,0-2-0], [14:0-4-4,0-4-12]

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	0.63	Vert(LL)	0.42	15-16	>794	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.73	15-16	>465	180	MT18HS	113/123
BCLL	0.0	Rep Stress Incr	Yes	WB	0.79	Horz(CT)	0.33	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 455 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-4:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 3-14:1 1/2" x 5 1/2" 2.0E Microllam® LVL, 8-13:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 19-16,20-21:2x4 SP No.2
SLIDER Left 2x4 SP 2400F 2.0E -- 2-5-13

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

REACTIONS (lb/size) 2=2949/0-3-8, 11=2520/0-3-8
Max Horiz 2=131 (LC 9)
Max Uplift 2=-930 (LC 8), 11=-759 (LC 9)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1388/482, 3-22=-10081/3406, 4-22=-10043/3420, 4-23=-12264/4133, 23-24=-12266/4133, 5-24=-12268/4133, 5-25=-11777/3767, 25-26=-11777/3767, 26-27=-11777/3767, 6-27=-11777/3767, 6-7=-9141/2875, 7-28=-9141/2875, 8-28=-9141/2875, 8-29=-8996/2827, 9-29=-8996/2827, 9-10=-2601/816, 10-11=-2482/764
BOT CHORD 3-17=-3367/9700, 17-30=-3412/9837, 30-31=-3412/9837, 16-31=-3412/9837, 16-32=-4182/12266, 15-32=-4182/12266, 15-33=-3816/11777, 33-34=-3816/11777, 14-34=-3816/11777, 8-14=-368/207, 12-13=-131/408
WEBS 9-12=-2939/976, 9-14=-2227/6916, 10-12=-1069/3529, 12-14=-706/2269, 4-17=-513/1514, 5-16=-416/180, 6-15=-6/414, 4-16=-832/2672, 5-15=-517/460, 6-14=-2783/946

NOTES
1) 3-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-5-0 oc, 2x6 - 2 rows staggered at 0-6-0 oc, 2x3 - 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-2-8, Exterior(2R) 6-2-8 to 13-3-5, Interior (1) 13-3-5 to 28-2-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) All plates are MT20 plates unless otherwise indicated.
7) All plates are 3x4 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 759 lb uplift at joint 11 and 930 lb uplift at joint 2.
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) 77 lb down and 75 lb up at 6-2-8, 49 lb down and 75 lb up at 8-0-12, 49 lb down and 75 lb up at 10-0-12, 92 lb down and 118 lb up at 12-0-12, 65 lb down and 101 lb up at 14-0-12, 65 lb down and 101 lb up at 16-0-12, and 65 lb down and 101 lb up at 18-0-12, and 83 lb down and 105 lb up at 20-0-12 on top chord, and 520 lb down and 217 lb up at 6-0-12, 520 lb down and 217 lb up at 8-0-12, 520 lb down and 217 lb up at 10-0-12, 59 lb down at 14-0-12, 59 lb down at 16-0-12, 59 lb down at 18-0-12, and 50 lb down at 20-0-12, and 591 lb down and 195 lb up at 21-1-12 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

July 16,2024

Continued on page 2

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F01	Half Hip Girder	1	3	Job Reference (optional)

1) Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-4=-70, 4-10=-70, 2-18=-20, 3-14=-20,
11-13=-20
Concentrated Loads (lb)
Vert: 4=-49 (B), 7=-65 (B), 14=-591 (B), 17=-520 (B),
6=-65 (B), 15=-55 (B), 23=-49 (B), 24=-49 (B),
25=-92 (B), 27=-65 (B), 28=-83 (B), 30=-520 (B),
31=-520 (B), 32=-55 (B), 33=-55 (B), 34=-38 (B)

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865811
P240761-01	F04	Half Hip	1	1	Job Reference (optional)	

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:02 Page: 1
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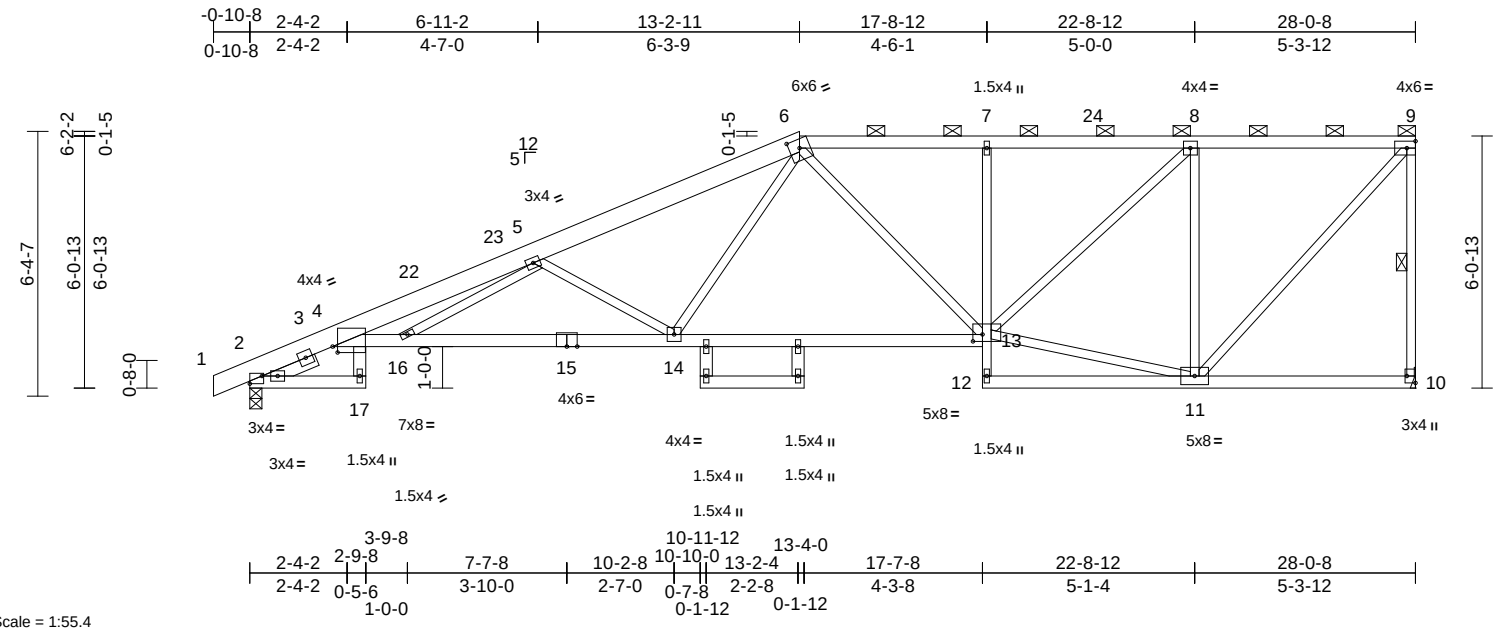

Plate Offsets (X, Y): [2:0-2-9,0-1-8], [2:Edge,0-2-4], [4:0-1-7,0-1-11], [6:0-3-0,0-2-9], [10:Edge,0-2-8], [13:0-2-12,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.79	Vert(LL)	-0.24	17	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.44	13-14	>759	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.28	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 154 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP 2400F 2.0E *Except* 6-9:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 4-15:2x4 SP 2400F 2.0E, 7-12:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 4-17,18-20,19-21:2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-4-7

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

REACTIONS (size) 2=0-3-8, 10= Mechanical
Max Horiz 2=272 (LC 9)
Max Uplift 2=-204 (LC 12), 10=-255 (LC 9)
Max Grav 2=1337 (LC 1), 10=1250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-668/166, 4-5=-3793/601, 5-6=-2563/401, 6-7=-1724/356, 7-8=-1715/356, 8-9=-956/258, 9-10=-1204/272
BOT CHORD 2-17=-38/0, 4-16=-897/3574, 14-16=-901/3195, 13-14=-501/1812, 12-13=0/83, 7-13=-339/153, 11-12=-30/28, 10-11=-113/127
WEBS 6-14=-124/851, 6-13=-130/117, 11-13=-230/947, 8-13=-234/1049, 8-11=-1125/338, 9-11=-283/1417, 5-14=-1081/389, 5-16=0/542, 4-17=0/67

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 13-2-11, Exterior(2R) 13-2-11 to 20-3-9, Interior (1) 20-3-9 to 27-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 255 lb uplift at joint 10 and 204 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.

LOAD CASE(S) Standard

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F03	Half Hip	1	1	Job Reference (optional) I66865812

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:02 Page: 1

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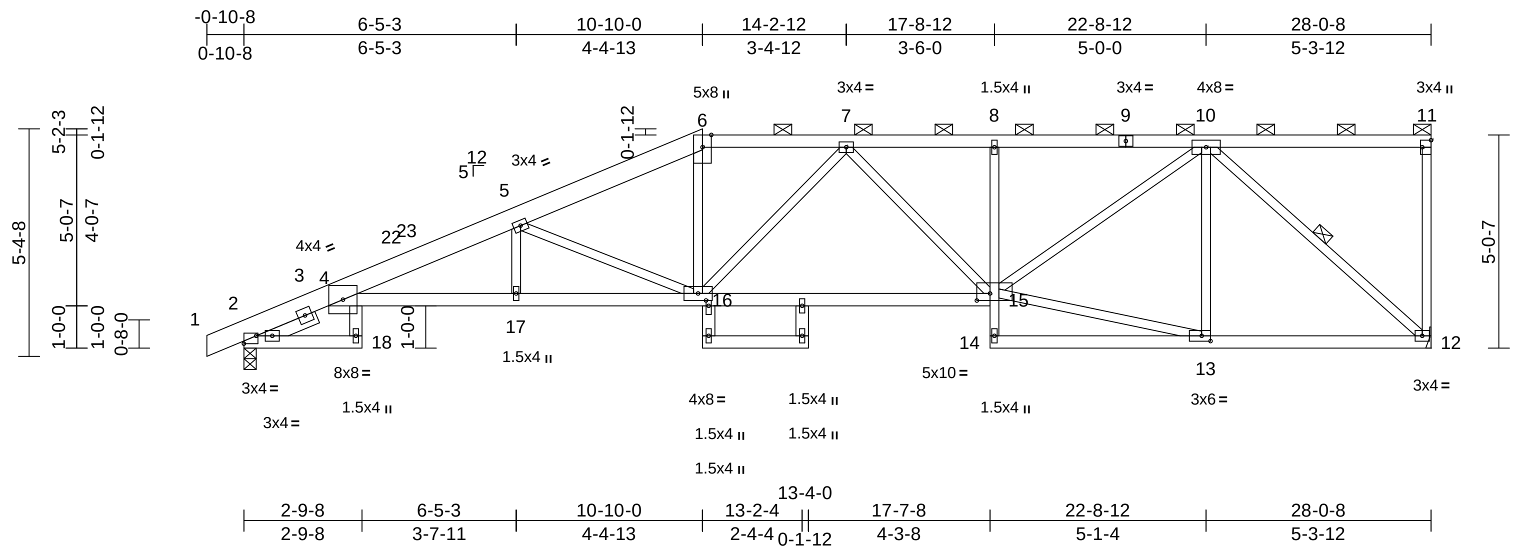

Scale = 1:54.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.27	18	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.49	4-17	>684	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.74	Horz(CT)	0.33	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 148 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-6:2x6 SP 2400F 2.0E

BOT CHORD 2x4 SP No.2 *Except* 4-15:2x4 SP 1650F 1.5E, 6-16,8-14:2x3 SPF No.2

WEBS 2x3 SPF No.2 *Except* 19-16,20-21:2x4 SP No.2

SLIDER Left 2x4 SP No.2 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-4-4 oc purlins, except end verticals, and 2-0-0 oc purlins (3-8-3 max.): 6-11.

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

WEBS 1 Row at midpt 10-12

REACTIONS (size) 2=0-3-8, 12= Mechanical
Max Horiz 2=224 (LC 9)
Max Uplift 2=-191 (LC 8), 12=-261 (LC 9)
Max Grav 2=1337 (LC 1), 12=1250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-4=-664/157, 4-5=-3456/595, 5-6=-2495/425, 6-7=-2210/403, 7-8=-2182/451, 8-10=-2172/453, 10-11=-104/107, 11-12=-151/73

BOT CHORD 2-18=-29/0, 4-18=0/67, 4-17=-835/3308, 16-17=-835/3308, 15-16=-532/2313, 6-16=-80/737, 14-15=0/84, 8-15=-284/130, 13-14=-28/48, 12-13=-282/1165

WEBS 13-15=-260/1139, 10-15=-265/1258, 10-13=-113/133, 10-12=-1563/322, 5-16=-1188/347, 7-16=-291/112, 7-15=-192/101, 5-17=0/158

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 10-10-0, Exterior(2R) 10-10-0 to 17-8-12, Interior (1) 17-8-12 to 27-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 261 lb uplift at joint 12 and 191 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.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	F02	Half Hip	1	1	Job Reference (optional) I66865813

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

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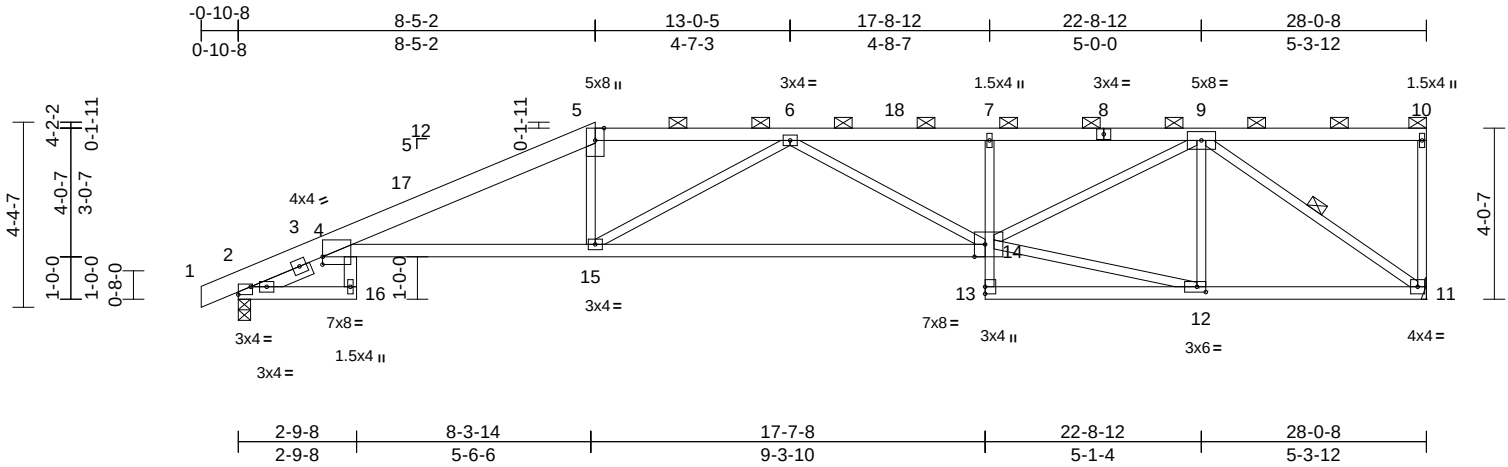

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Plate Offsets (X, Y): [2:0-2-9,0-1-8], [2:Edge,0-2-4], [4:0-0-1,0-2-3], [12:0-2-8,0-1-8], [14:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.89	Vert(LL)	-0.37	16	>905	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.73	14-15	>454	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.72	Horz(CT)	0.43	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 131 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2 *Except* 1-5:2x6 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2 *Except* 4-14:2x4 SP 1650F 1.5E, 7-13:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-0

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

REACTIONS (size) 2=0-3-8, 11= Mechanical
Max Horiz 2=177 (LC 9)
Max Uplift 2=-212 (LC 8), 11=-266 (LC 9)
Max Grav 2=1337 (LC 1), 11=1250 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-4=-664/150, 4-5=-2969/482, 5-6=-2755/492, 6-7=-2995/616, 7-9=-2962/619, 9-10=-86/85, 10-11=-154/72
BOT CHORD 2-16=-29/0, 4-16=0/67, 4-15=-559/2771, 14-15=-735/3137, 13-14=0/85, 7-14=-328/148, 12-13=-51/69, 11-12=-343/1473
WEBS 12-14=-298/1432, 9-14=-363/1699, 9-12=-174/139, 9-11=-1796/377, 6-14=-164/118, 5-15=-5/501, 6-15=-595/222

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 8-5-2, Exterior(2R) 8-5-2 to 15-5-15, Interior (1) 15-5-15 to 27-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
6) Refer to girder(s) for truss to truss connections.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 266 lb uplift at joint 11 and 212 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	GR1	Roof Special Girder	1	2	Job Reference (optional) I66865814

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

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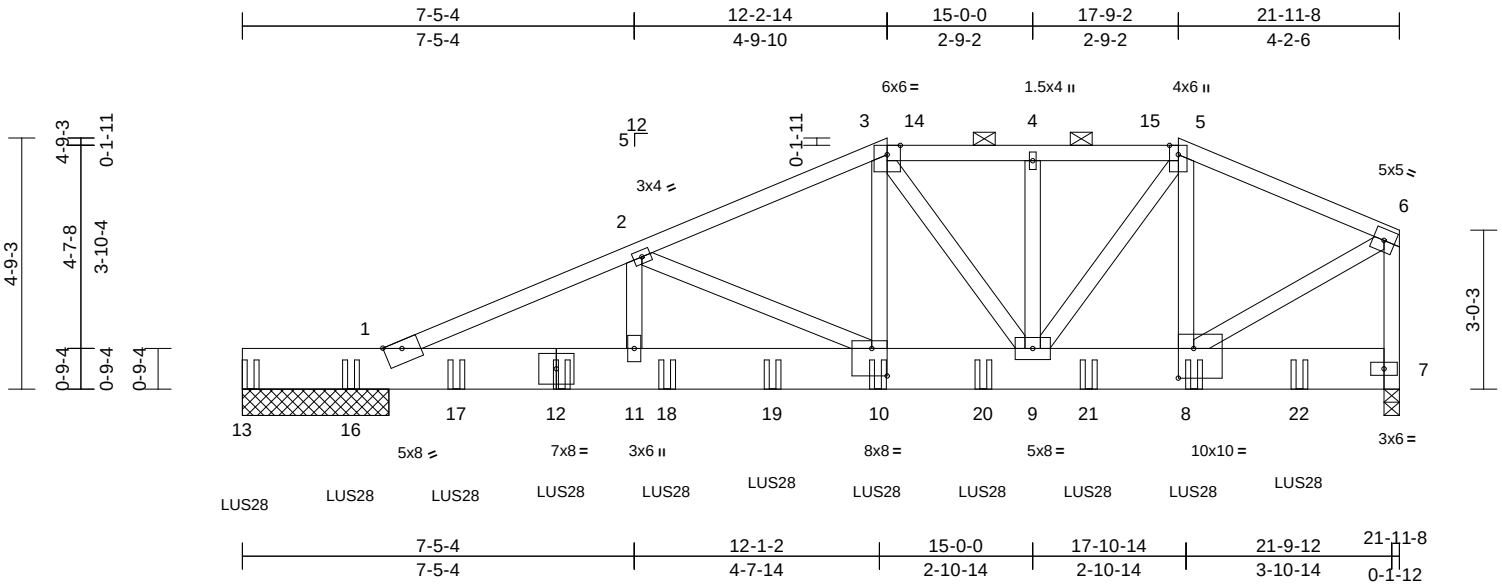

Scale = 1:43.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.10	10-11	>999	240	MT20	185/148
TCDL	10.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.18	10-11	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.95	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 272 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x10 HF No.2
WEBS 2x4 SPF No.3 *Except* 7-6:2x4 SP No.2

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

REACTIONS (size) 1=2-9-6, 7=0-3-8, 13=2-9-6
Max Horiz 13=114 (LC 9)
Max Uplift 1=-1218 (LC 12), 7=-784 (LC 9), 13=-136 (LC 1)
Max Grav 1=6856 (LC 1), 7=4458 (LC 1), 13=58 (LC 33)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-7241/1389, 2-3=-6029/1210, 3-4=-5000/1050, 4-5=-5000/1050, 5-6=-4003/830, 6-7=-3950/814
BOT CHORD 1-13=-183/124, 1-11=-1385/6501, 10-11=-1385/6501, 9-10=-1136/5436, 8-9=-773/3687, 7-8=-60/77
WEBS 2-11=-162/1006, 2-10=-1087/291, 3-10=-484/2721, 3-9=-815/191, 4-9=-391/136, 5-9=-477/2405, 5-8=-642/204, 6-8=-842/4284

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.
Bottom chords connected as follows: 2x10 - 2 rows staggered 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 2-7-13 to 7-5-4, Interior (1) 7-5-4 to 12-2-14, Exterior(2R) 12-2-14 to 17-2-14, Interior (1) 17-2-14 to 17-9-2, Exterior(2E) 17-9-2 to 21-9-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Provide adequate drainage to prevent water ponding.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Bearings are assumed to be: Joint 13 HF No.2 crushing capacity of 405 psi, Joint 7 SP No.2 crushing capacity of 565 psi.
8) Bearing at joint(s) 7 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 1218 lb uplift at joint 1, 136 lb uplift at joint 13 and 784 lb uplift at joint 7.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
12) Use Simpson Strong-Tie LUS28 (6-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-0-12 from the left end to 20-0-12 to connect truss(es) to back face of bottom chord.
13) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 5-6=-70, 7-13=-20
Concentrated Loads (lb)
Vert: 13=-863 (B), 12=-854 (B), 10=-854 (B), 8=-854 (B), 16=-854 (B), 17=-854 (B), 18=-854 (B), 19=-854 (B), 20=-854 (B), 21=-854 (B), 22=-854 (B)

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	LG05	Lay-In Gable	1	1	Job Reference (optional) I66865815

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

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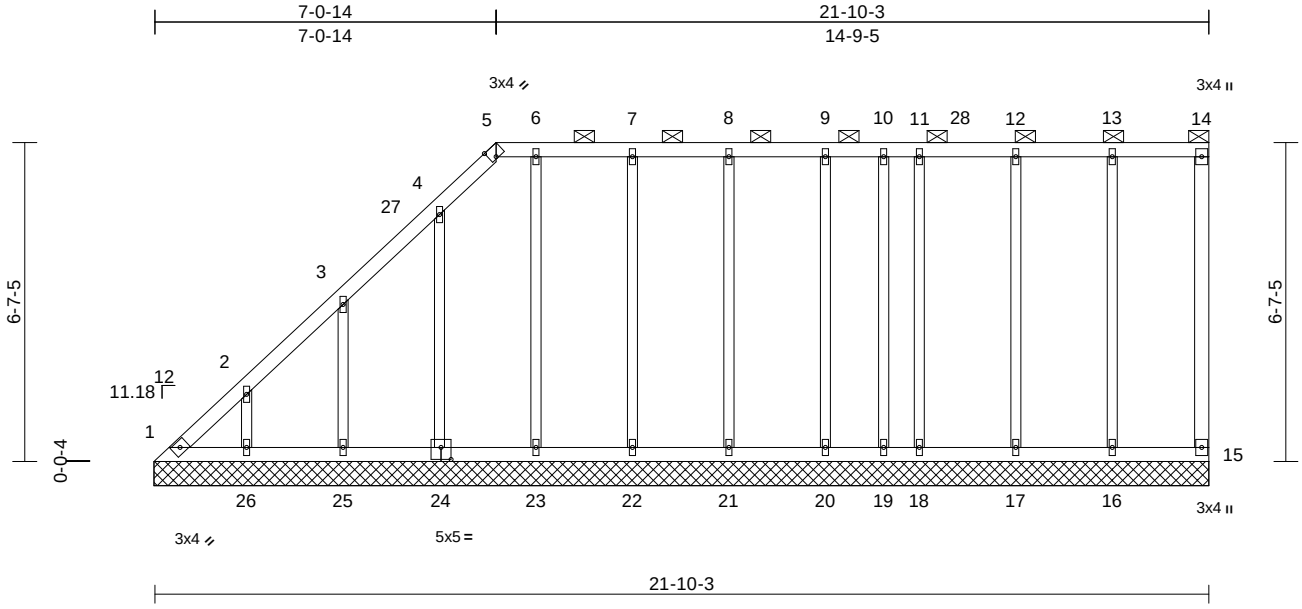

Scale = 1:47.8

Plate Offsets (X, Y): [5:0-1-10,Edge], [24:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.15	Horiz(TL)	0.00	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 122 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3
OTHERS 2x3 SPF No.2

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

REACTIONS (size) 1=21-10-7, 15=21-10-7, 16=21-10-7, 17=21-10-7, 18=21-10-7, 19=21-10-7, 20=21-10-7, 21=21-10-7, 22=21-10-7, 23=21-10-7, 24=21-10-7, 25=21-10-7, 26=21-10-7
Max Horiz 1=269 (LC 9)
Max Uplift 1=-83 (LC 10), 15=-19 (LC 9), 16=-46 (LC 8), 17=-45 (LC 9), 18=-27 (LC 8), 19=-24 (LC 9), 20=-30 (LC 8), 21=-42 (LC 9), 22=-53 (LC 8), 23=-83 (LC 9), 24=-80 (LC 12), 25=-124 (LC 12), 26=-111 (LC 12)
Max Grav 1=185 (LC 9), 15=70 (LC 1), 16=186 (LC 26), 17=186 (LC 1), 18=129 (LC 26), 19=68 (LC 1), 20=147 (LC 26), 21=186 (LC 1), 22=182 (LC 26), 23=181 (LC 1), 24=203 (LC 19), 25=199 (LC 19), 26=196 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-446/277, 2-3=-348/236, 3-4=-248/200, 4-5=-153/150, 5-6=-128/138, 6-7=-128/138, 7-8=-128/138, 8-9=-128/138, 9-10=-128/138, 10-11=-128/138, 11-12=-128/138, 12-13=-128/138, 13-14=-128/138, 14-15=-76/67
BOT CHORD 1-26=-127/139, 25-26=-127/139, 23-25=-128/139, 22-23=-128/139, 21-22=-128/139, 20-21=-128/139, 19-20=-128/139, 18-19=-128/139, 17-18=-128/139, 16-17=-128/139, 15-16=-128/139
WEBS 2-26=-153/130, 3-25=-159/150, 4-24=-163/161, 6-23=-152/121, 7-22=-142/77, 8-21=-145/67, 9-20=-111/51, 10-19=-60/27, 11-18=-96/44, 12-17=-146/71, 13-16=-145/90

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-7 to 5-4-7, Interior (1) 5-4-7 to 7-1-2, Exterior(2R) 7-1-2 to 13-11-1, Interior (1) 13-11-1 to 21-8-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 1, 19 lb uplift at joint 15, 111 lb uplift at joint 26, 124 lb uplift at joint 25, 80 lb uplift at joint 24, 83 lb uplift at joint 23, 53 lb uplift at joint 22, 42 lb uplift at joint 21, 30 lb uplift at joint 20, 24 lb uplift at joint 19, 27 lb uplift at joint 18, 45 lb uplift at joint 17 and 46 lb uplift at joint 16.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865816
P240761-01	C01	Common Supported Gable	1	1	Job Reference (optional)	

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

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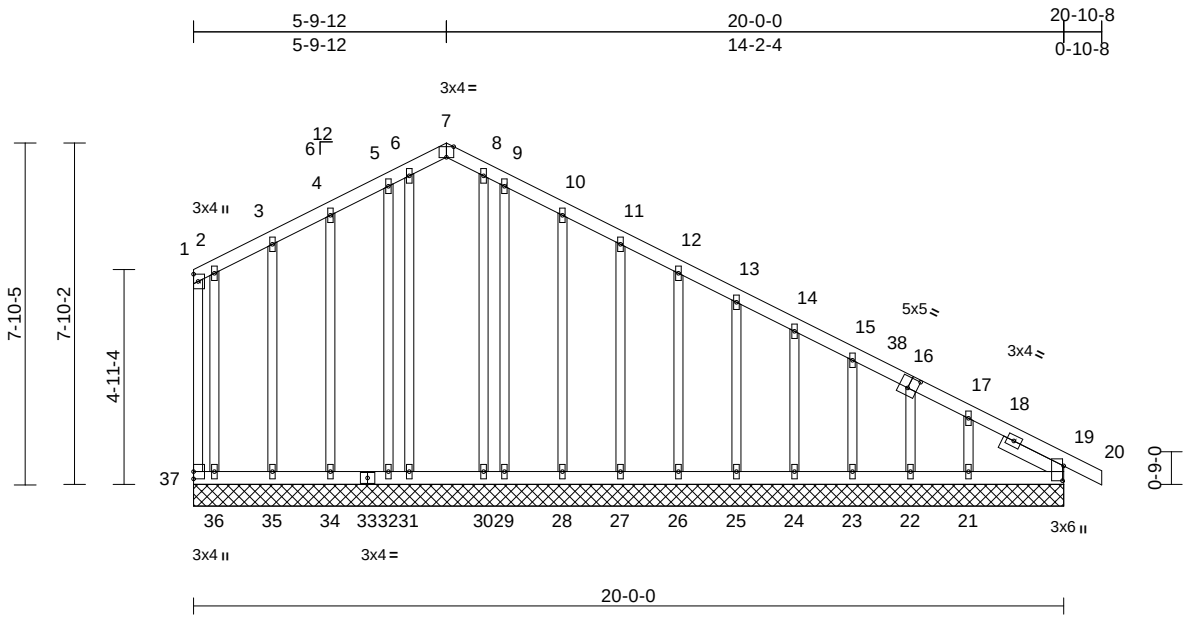

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Plate Offsets (X, Y): [7:0-2-0,Edge], [16:0-2-8,0-3-0], [19:0-4-1,0-0-5]

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	0.35	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	19	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 129 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Right 2x4 SP No.2 -- 1-7-2

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) 19=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0, 25=20-0-0, 26=20-0-0, 27=20-0-0, 28=20-0-0, 29=20-0-0, 30=20-0-0, 31=20-0-0, 32=20-0-0, 34=20-0-0, 35=20-0-0, 36=20-0-0, 37=20-0-0
Max Horiz 37=-248 (LC 8)
Max Uplift 19=-36 (LC 9), 21=-113 (LC 13), 22=-24 (LC 13), 23=-43 (LC 13), 24=-41 (LC 13), 25=-41 (LC 13), 26=-40 (LC 13), 27=-41 (LC 13), 28=-51 (LC 13), 29=-31 (LC 13), 30=-7 (LC 10), 32=-31 (LC 12), 34=-46 (LC 12), 35=-56 (LC 12), 36=-76 (LC 9), 37=-42 (LC 10)
Max Grav 19=199 (LC 19), 21=170 (LC 26), 22=106 (LC 1), 23=123 (LC 26), 24=119 (LC 1), 25=120 (LC 26), 26=120 (LC 1), 27=121 (LC 1), 28=120 (LC 26), 29=76 (LC 26), 30=117 (LC 20), 31=109 (LC 20), 32=76 (LC 25), 34=120 (LC 25), 35=128 (LC 1), 36=140 (LC 19), 37=27 (LC 9)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-37=-109/146, 1-2=-134/181, 2-3=-130/186, 3-4=-133/210, 4-5=-152/260, 5-6=-156/283, 6-7=-136/242, 7-8=-135/242, 8-9=-156/283, 9-10=-152/260, 10-11=-134/212, 11-12=-122/175, 12-13=-130/138, 13-14=-141/130, 14-15=-151/143, 15-17=-175/162, 17-19=-266/207, 19-20=0/0
BOT CHORD 36-37=-176/254, 35-36=-176/254, 34-35=-176/254, 32-34=-176/254, 31-32=-176/254, 30-31=-176/254, 29-30=-176/254, 28-29=-176/254, 27-28=-176/254, 26-27=-176/254, 25-26=-176/254, 24-25=-176/254, 23-24=-176/254, 22-23=-176/254, 21-22=-176/254, 19-21=-176/254
WEBS 6-31=-102/38, 8-30=-102/38, 5-32=-64/64, 4-34=-92/108, 3-35=-101/123, 2-36=-67/82, 9-29=-64/45, 10-28=-92/93, 11-27=-95/67, 12-26=-93/67, 13-25=-93/68, 14-24=-93/67, 15-23=-95/73, 16-22=-86/79, 17-21=-128/169

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 8-5-12 to 13-4-0, Exterior(2N) 13-4-0 to 14-2-4, Corner(3R) 14-2-4 to 19-2-4, Exterior(2N) 19-2-4 to 29-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 37, 36 lb uplift at joint 19, 7 lb uplift at joint 30, 31 lb uplift at joint 32, 46 lb uplift at joint 34, 56 lb uplift at joint 35, 76 lb uplift at joint 36, 31 lb uplift at joint 29, 51 lb uplift at joint 28, 41 lb uplift at joint 27, 40 lb uplift at joint 26, 41 lb uplift at joint 25, 41 lb uplift at joint 24, 43 lb uplift at joint 23, 24 lb uplift at joint 22 and 113 lb uplift at joint 21.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	C02	Common	11	1	I66865817 Job Reference (optional)

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

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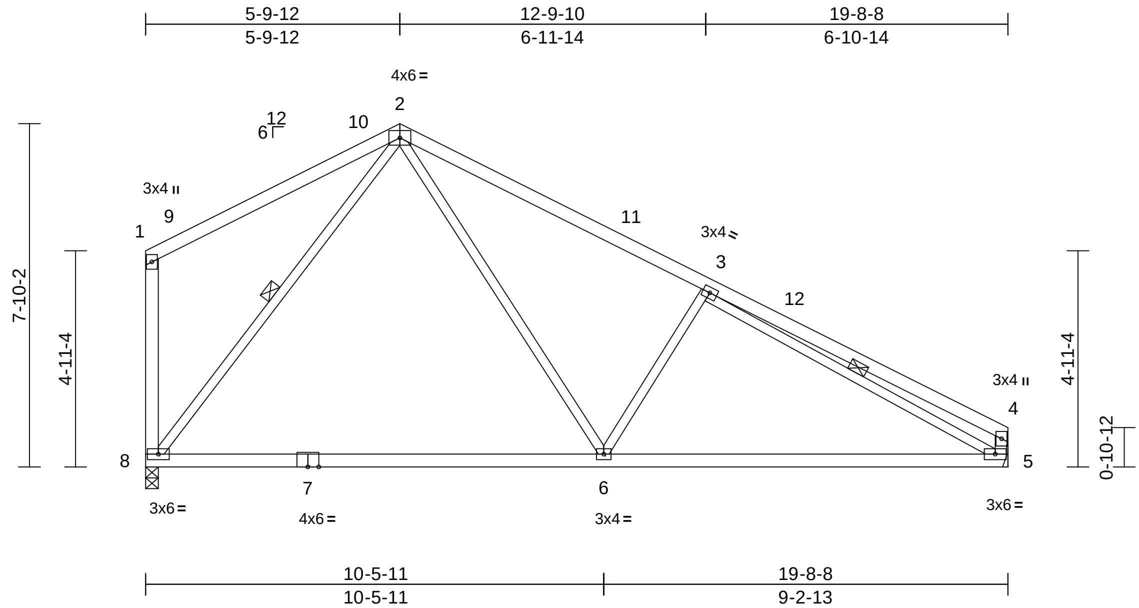

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.28	6-8	>843	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.56	6-8	>415	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.02	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 94 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 5-4,8-1:2x4 SP No.2

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

REACTIONS (size) 5= Mechanical, 8=0-3-8
Max Horiz 8=-246 (LC 8)
Max Uplift 5=-146 (LC 13), 8=-128 (LC 13)
Max Grav 5=874 (LC 1), 8=874 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-190/214, 2-3=-1044/353, 3-4=-449/168, 4-5=-365/166, 1-8=-216/191
BOT CHORD 6-8=-22/468, 5-6=-228/1040
WEBS 2-6=-139/694, 3-6=-432/295, 3-5=-839/169, 2-8=-723/289

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 8-6-4 to 13-6-4, Interior (1) 13-6-4 to 14-2-4, Exterior(2R) 14-2-4 to 19-2-4, Interior (1) 19-2-4 to 27-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: Joint 8 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 5 and 128 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.

LOAD CASE(S) Standard

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865818
P240761-01	LG03	Lay-In Gable	1	1	Job Reference (optional)	

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

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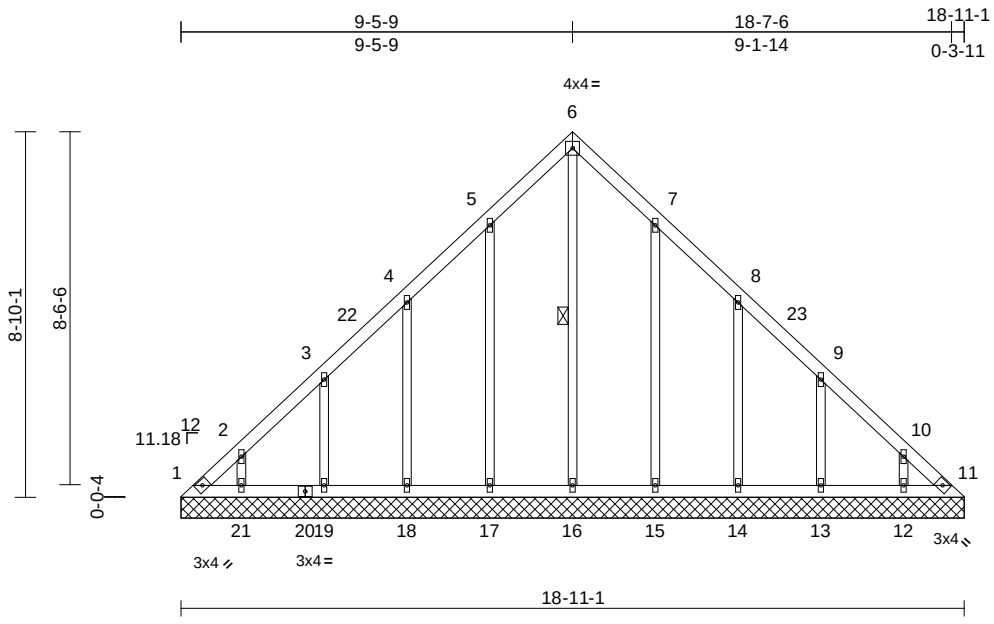

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 95 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 6-16

REACTIONS (size) 1=18-11-1, 11=18-11-1, 12=18-11-1, 13=18-11-1, 14=18-11-1, 15=18-11-1, 16=18-11-1, 17=18-11-1, 18=18-11-1, 19=18-11-1, 21=18-11-1
Max Horiz 1=237 (LC 9)
Max Uplift 1=-108 (LC 10), 11=-69 (LC 11), 12=-101 (LC 13), 13=-117 (LC 13), 14=-119 (LC 13), 15=-110 (LC 13), 17=-113 (LC 12), 18=-118 (LC 12), 19=-117 (LC 12), 21=-101 (LC 12)
Max Grav 1=212 (LC 12), 11=186 (LC 13), 12=175 (LC 20), 13=204 (LC 20), 14=198 (LC 20), 15=206 (LC 20), 16=194 (LC 13), 17=209 (LC 19), 18=197 (LC 19), 19=204 (LC 19), 21=175 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-321/194, 2-3=-231/163, 3-4=-157/121, 4-5=-134/123, 5-6=-128/178, 6-7=-128/161, 7-8=-91/84, 8-9=-115/64, 9-10=-192/106, 10-11=-283/137
BOT CHORD 1-21=-97/219, 19-21=-97/219, 18-19=-97/219, 17-18=-97/219, 16-17=-97/219, 15-16=-97/219, 14-15=-97/219, 13-14=-97/219, 12-13=-97/219, 11-12=-97/219
WEBS 6-16=-170/69, 5-17=-169/137, 4-18=-157/142, 3-19=-163/142, 2-21=-137/119, 7-15=-166/134, 8-14=-158/143, 9-13=-163/142, 10-12=-138/119

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-7 to 5-5-13, Interior (1) 5-5-13 to 9-5-13, Exterior(2R) 9-5-13 to 14-5-13, Interior (1) 14-5-13 to 18-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 108 lb uplift at joint 1, 69 lb uplift at joint 11, 113 lb uplift at joint 17, 118 lb uplift at joint 18, 117 lb uplift at joint 19, 101 lb uplift at joint 21, 110 lb uplift at joint 15, 119 lb uplift at joint 14, 117 lb uplift at joint 13 and 101 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	LG04	Lay-In Gable	1	1	Job Reference (optional) I66865819

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:07 Page: 1
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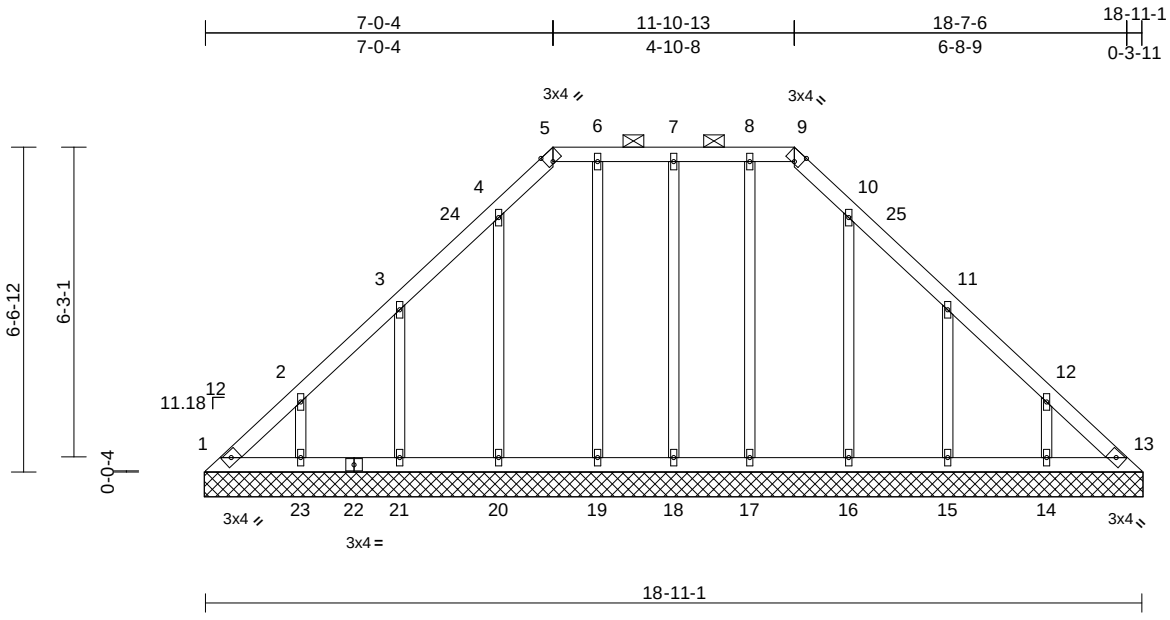

Scale = 1:46.6

Plate Offsets (X, Y): [5:0-1-10,Edge], [9:0-1-10,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	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.01	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%

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

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

REACTIONS (size) 1=18-11-10, 13=18-11-10, 14=18-11-10, 15=18-11-10, 16=18-11-10, 17=18-11-10, 18=18-11-10, 19=18-11-10, 20=18-11-10, 21=18-11-10, 23=18-11-10
Max Horiz 1=-175 (LC 8)
Max Uplift 1=-59 (LC 10), 13=-32 (LC 11), 14=-111 (LC 13), 15=-129 (LC 13), 16=-63 (LC 13), 17=-8 (LC 9), 18=-46 (LC 8), 19=-25 (LC 9), 20=-72 (LC 12), 21=-126 (LC 12), 23=-112 (LC 12)
Max Grav 1=150 (LC 12), 13=136 (LC 22), 14=196 (LC 20), 15=205 (LC 20), 16=177 (LC 20), 17=143 (LC 26), 18=137 (LC 26), 19=143 (LC 25), 20=187 (LC 19), 21=203 (LC 19), 23=197 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-239/146, 2-3=-154/108, 3-4=-118/82, 4-5=-90/101, 5-6=-56/95, 6-7=-56/95, 7-8=-56/95, 8-9=-56/95, 9-10=-90/100, 10-11=-99/48, 11-12=-135/69, 12-13=-213/106
BOT CHORD 1-23=-78/179, 21-23=-78/179, 20-21=-78/179, 19-20=-78/179, 18-19=-78/179, 17-18=-78/179, 16-17=-78/179, 15-16=-78/179, 14-15=-78/179, 13-14=-78/179
WEBS 2-23=-153/130, 3-21=-164/151, 4-20=-146/96, 6-19=-107/47, 7-18=-109/64, 8-17=-107/30, 10-16=-136/87, 11-15=-166/154, 12-14=-153/130

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-7 to 5-4-7, Interior (1) 5-4-7 to 7-0-9, Exterior(2E) 7-0-9 to 18-7-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 1.5x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 0-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 1, 32 lb uplift at joint 13, 112 lb uplift at joint 23, 126 lb uplift at joint 21, 72 lb uplift at joint 20, 25 lb uplift at joint 19, 46 lb uplift at joint 18, 8 lb uplift at joint 17, 63 lb uplift at joint 16, 129 lb uplift at joint 15 and 111 lb uplift at joint 14.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865820
P240761-01	V04	Valley	1	1	Job Reference (optional)	

08/06/2024

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

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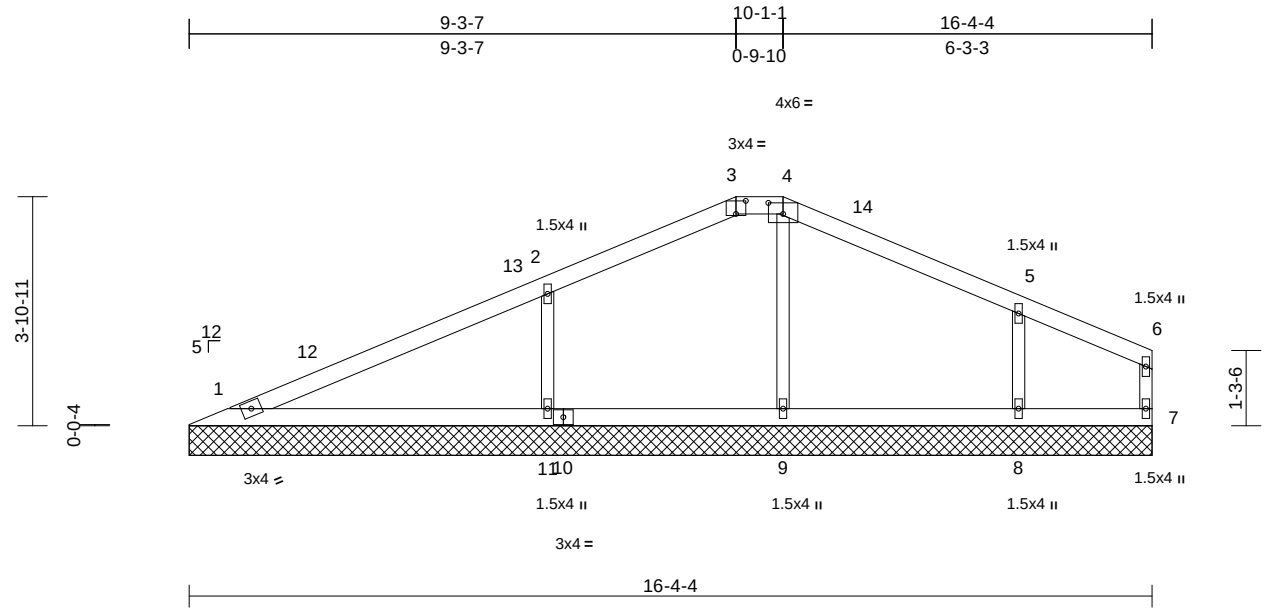

Scale = 1:39.1

Plate Offsets (X, Y): [3:0-2-0,0-2-11], [4:0-3-0,0-2-4]

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	0.43	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.08	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 56 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, 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) 1=16-4-4, 7=16-4-4, 8=16-4-4, 9=16-4-4, 11=16-4-4
Max Horiz 1=71 (LC 12)
Max Uplift 1=-25 (LC 12), 7=-4 (LC 12), 8=-122 (LC 13), 11=-153 (LC 12)
Max Grav 1=201 (LC 25), 7=53 (LC 1), 8=344 (LC 26), 9=299 (LC 1), 11=520 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-80/82, 2-3=-83/135, 3-4=-63/133, 4-5=-70/111, 5-6=-34/45, 6-7=-40/17
BOT CHORD 1-11=-24/43, 9-11=-24/43, 8-9=-24/43, 7-8=-24/43
WEBS 4-9=-233/58, 2-11=-395/244, 5-8=-271/197

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 9-4-1, Exterior(2E) 9-4-1 to 16-3-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 4-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 4 lb uplift at joint 7, 153 lb uplift at joint 11 and 122 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

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	LG06	Lay-In Gable	1	1	Job Reference (optional)

I66865821

08/06/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:07 Page: 1
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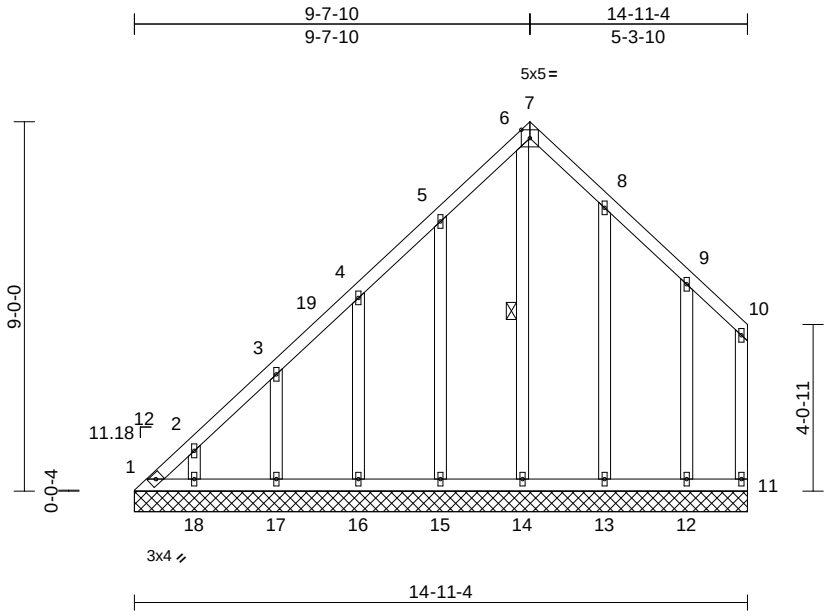

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.20	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 96 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3
OTHERS 2x4 SPF 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.
WEBS 1 Row at midpt 6-14

REACTIONS (size) 1=14-11-4, 11=14-11-4, 12=14-11-4, 13=14-11-4, 14=14-11-4, 15=14-11-4, 16=14-11-4, 17=14-11-4, 18=14-11-4
Max Horiz 1=298 (LC 9)
Max Uplift 1=-175 (LC 10), 11=-36 (LC 12), 12=-123 (LC 13), 13=-84 (LC 13), 14=-152 (LC 11), 15=-129 (LC 12), 16=-115 (LC 12), 17=-118 (LC 12), 18=-101 (LC 12)
Max Grav 1=237 (LC 9), 11=77 (LC 20), 12=198 (LC 20), 13=190 (LC 26), 14=295 (LC 8), 15=204 (LC 19), 16=196 (LC 19), 17=205 (LC 19), 18=174 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-348/293, 2-3=-304/263, 3-4=-272/246, 4-5=-242/240, 5-6=-255/324, 6-7=-79/86, 7-8=-239/304, 8-9=-198/240, 9-10=-135/149, 10-11=-116/116
BOT CHORD 1-18=-83/91, 17-18=-83/91, 16-17=-83/91, 15-16=-83/91, 14-15=-83/91, 13-14=-83/91, 12-13=-83/91, 11-12=-83/91
WEBS 5-15=-164/162, 4-16=-156/145, 3-17=-164/143, 2-18=-137/119, 6-14=-353/219, 8-13=-149/108, 9-12=-143/150

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-7 to 5-5-12, Interior (1) 5-5-12 to 9-7-15, Exterior(2E) 9-7-15 to 14-9-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 175 lb uplift at joint 1, 36 lb uplift at joint 11, 129 lb uplift at joint 15, 115 lb uplift at joint 16, 118 lb uplift at joint 17, 101 lb uplift at joint 18, 152 lb uplift at joint 14, 84 lb uplift at joint 13 and 123 lb uplift at joint 12.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	V05	Valley	1	1	Job Reference (optional) I66865822

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

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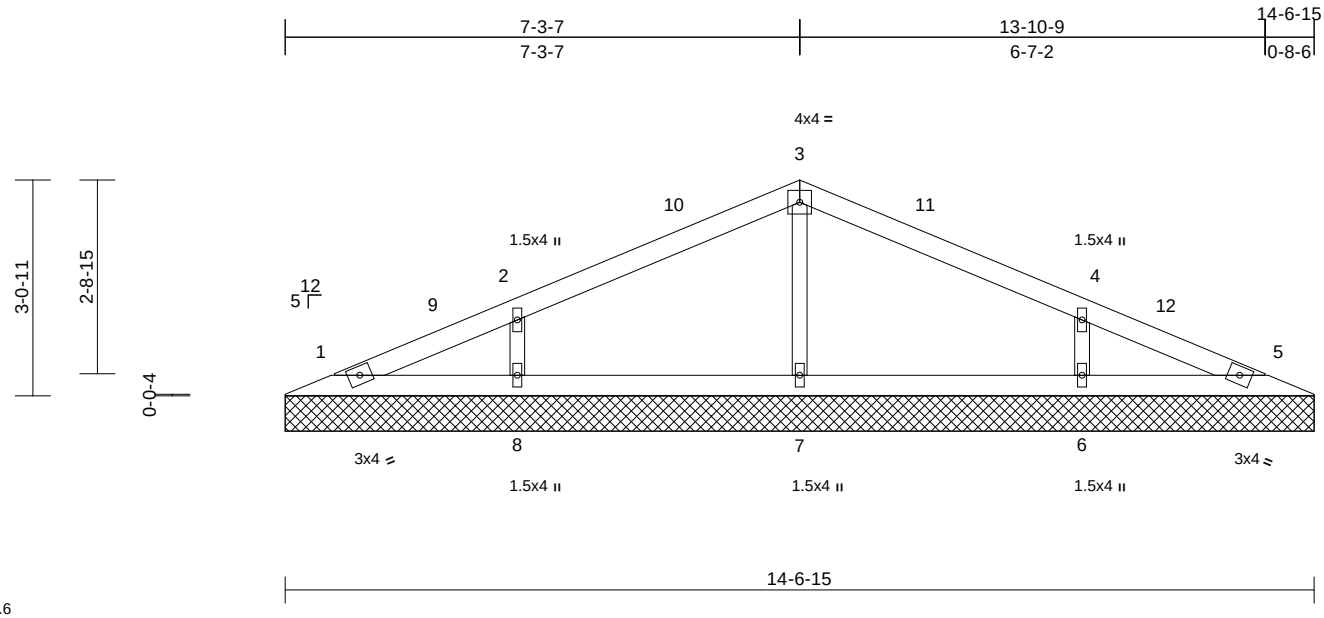

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 46 lb	FT = 20%

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

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

REACTIONS (size) 1=14-6-15, 5=14-6-15, 6=14-6-15, 7=14-6-15, 8=14-6-15
Max Horiz 1=52 (LC 16)
Max Uplift 1=-11 (LC 13), 5=-4 (LC 13), 6=-114 (LC 13), 7=-3 (LC 12), 8=-114 (LC 12)
Max Grav 1=84 (LC 1), 5=84 (LC 1), 6=356 (LC 26), 7=322 (LC 1), 8=356 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-66/40, 2-3=-87/103, 3-4=-87/95, 4-5=-49/30
BOT CHORD 1-8=-3/42, 7-8=-3/42, 6-7=-3/42, 5-6=-3/42
WEBS 3-7=-239/102, 2-8=-283/230, 4-6=-283/230

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 7-4-1, Exterior(2R) 7-4-1 to 12-4-1, Interior (1) 12-4-1 to 13-11-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11 lb uplift at joint 1, 4 lb uplift at joint 5, 3 lb uplift at joint 7, 114 lb uplift at joint 8 and 114 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865823
P240761-01	G2	Hip	1	1	Job Reference (optional)	

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

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08/06/2024

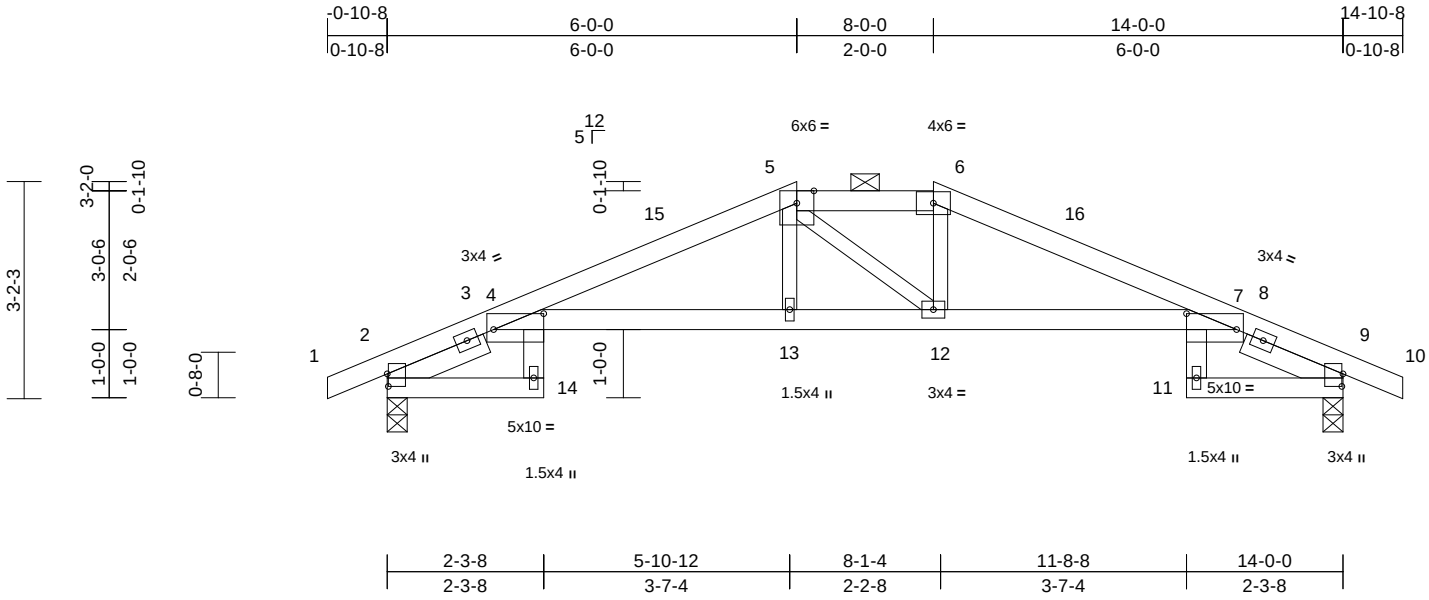

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Plate Offsets (X, Y): [2:0-2-3,0-0-3], [4:0-8-13,0-2-13], [7:0-8-13,0-2-13], [9:0-2-3,0-0-3]

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	0.86	Vert(LL)	-0.26	14	>650	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.47	14	>357	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.46	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP 2400F 2.0E *Except* 5-6:2x4 SP No.2
BOT CHORD	2x4 SP No.2 *Except* 4-7:2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-8, Right 2x4 SP No.2 -- 1-6-8

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-1-0 oc purlins, except 2-0-0 oc purlins (4-7-13 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 9=0-3-8
Max Horiz 2=53 (LC 12)
Max Uplift 2=-104 (LC 12), 9=-104 (LC 13)
Max Grav 2=704 (LC 1), 9=704 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-351/139, 4-5=-1438/397, 5-6=-1326/414, 6-7=-1439/389, 7-9=-351/131, 9-10=0/0
BOT CHORD	2-14=-22/0, 4-14=0/60, 4-13=-281/1334, 12-13=-282/1325, 7-12=-261/1335, 7-11=0/60, 9-11=-22/0
WEBS	5-13=0/194, 5-12=-167/169, 6-12=-8/216

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-0-0, Exterior(2E) 6-0-0 to 14-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 104 lb uplift at joint 2 and 104 lb uplift at joint 9.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	G1	Hip Girder	1	2	Job Reference (optional) I66865824

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:03 Page: 1
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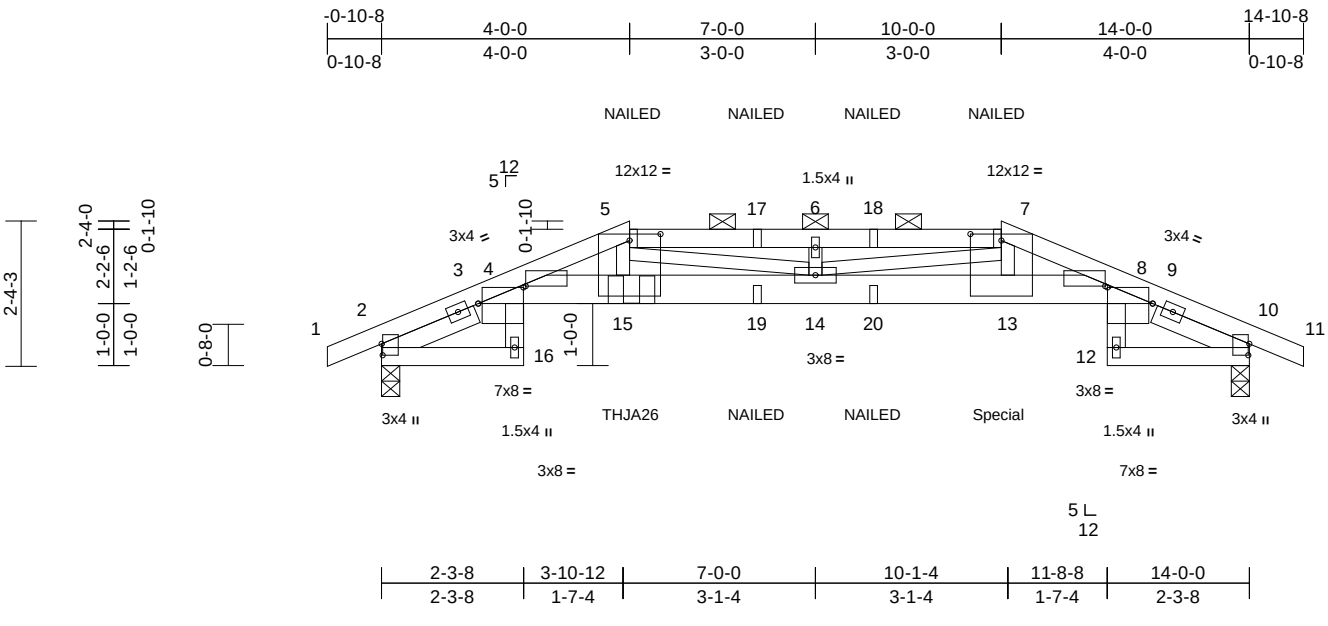

Scale = 1:37.2

Plate Offsets (X, Y): [2:0-2-3,0-0-3], [4:0-8-12,0-3-2], [4:0-9-3,0-3-6], [5:0-6-0,0-1-4], [7:0-6-0,0-1-4], [8:0-8-12,0-3-2], [8:0-9-3,0-3-6], [10:0-2-3,0-0-3]

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	0.93	Vert(LL)	-0.18	14	>932	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.32	14	>525	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.28	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 129 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E *Except* 5-7:2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 4-8:2x6 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-7-8, Right 2x4 SP No.2 -- 1-7-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-16,10-12.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=-36 (LC 17)
Max Uplift 2=-272 (LC 8), 10=-272 (LC 9)
Max Grav 2=1066 (LC 1), 10=1066 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-573/218, 4-5=-4197/1384, 5-6=-4131/1388, 6-7=-4131/1388, 7-8=-4197/1384, 8-10=-573/218, 10-11=0/0
BOT CHORD 2-16=-9/0, 4-16=-3/73, 4-15=-1243/4012, 14-15=-1212/3904, 13-14=-1212/3904, 8-13=-1243/4012, 8-12=-3/73, 10-12=-9/0
WEBS 5-15=-250/856, 7-13=-250/856, 6-14=-189/113, 5-14=-90/335, 7-14=-88/335

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.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 272 lb uplift at joint 2 and 272 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) Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Right Hand Hip) or equivalent at 4-0-6 from the left end to connect truss(es) to back face of bottom chord.
12) Fill all nail holes where hanger is in contact with lumber.
13) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
14) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 257 lb down and 102 lb up at 9-11-4 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, 4-5=-70, 5-7=-70, 7-8=-70, 8-11=-70, 2-16=-20, 4-8=-20, 10-12=-20
Concentrated Loads (lb)
Vert: 5=-30 (B), 7=-30 (B), 15=-257 (B), 13=-257 (B), 17=-30 (B), 18=-30 (B), 19=-51 (B), 20=-51 (B)

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	G3	Roof Special	2	1	Job Reference (optional)

I66865825

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

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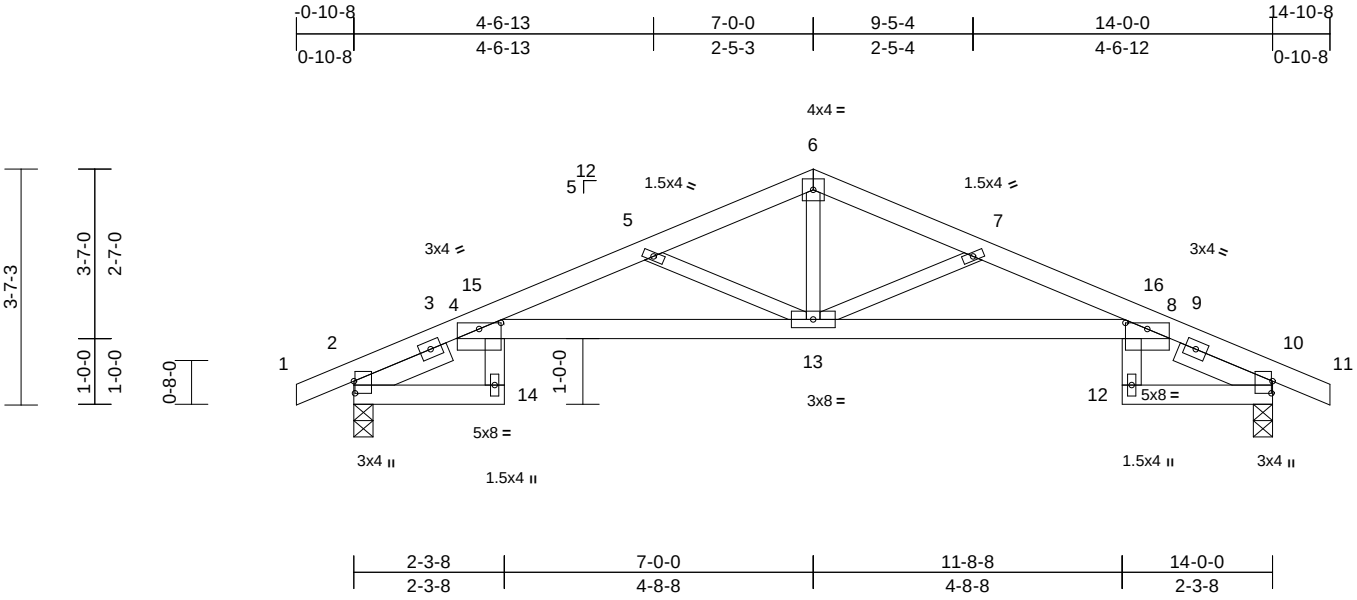

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Plate Offsets (X, Y): [2:0-2-3,0-0-3], [4:0-4-0,0-1-2], [5:0-0-0,0-0-0], [8:0-4-0,0-1-2], [10:0-2-3,0-0-3]

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	0.86	Vert(LL)	-0.20	14	>845	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.37	14	>452	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.38	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 61 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-8, Right 2x4 SP No.2 -- 1-6-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 10=0-3-8
Max Horiz 2=62 (LC 16)
Max Uplift 2=-113 (LC 12), 10=-113 (LC 13)
Max Grav 2=704 (LC 1), 10=704 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-351/155, 4-5=-1729/625, 5-6=-1164/389, 6-7=-1164/395, 7-8=-1730/612, 8-10=-351/143, 10-11=0/0
BOT CHORD 2-14=-22/0, 4-14=0/60, 4-13=-539/1669, 8-13=-509/1670, 8-12=0/60, 10-12=-22/0
WEBS 6-13=-224/803, 7-13=-716/356, 5-13=-715/364

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-4-8, Interior (1) 4-4-8 to 7-0-0, Exterior(2R) 7-0-0 to 12-0-0, Interior (1) 12-0-0 to 14-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 113 lb uplift at joint 2 and 113 lb uplift at joint 10.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865826
P240761-01	G4	Common	1	1	Job Reference (optional)	

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

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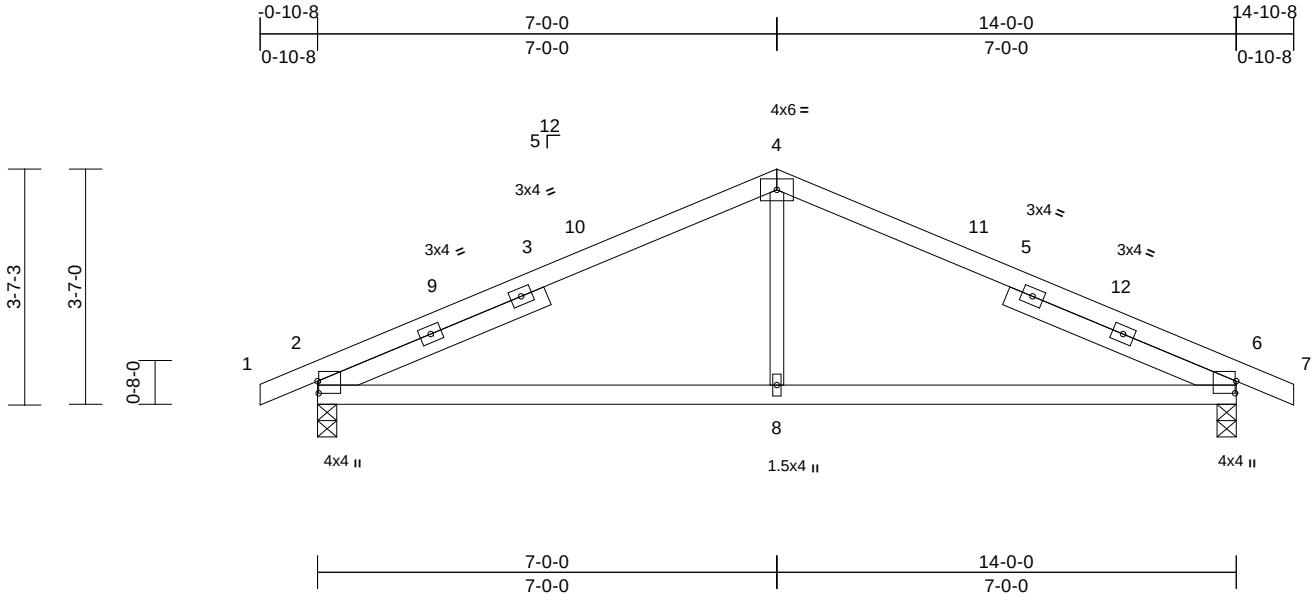

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Plate Offsets (X, Y): [2:0-2-3,0-0-3], [6:0-2-3,0-0-3]

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	0.80	Vert(LL)	-0.05	6-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.11	6-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 60 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-9-2, Right 2x4 SP No.2 -- 3-9-2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-7-9 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 6=0-3-8
Max Horiz 2=-62 (LC 13)
Max Uplift 2=-120 (LC 12), 6=-120 (LC 13)
Max Grav 2=691 (LC 1), 6=691 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/0, 2-4=-911/319, 4-6=-911/319, 6-7=0/0
BOT CHORD	2-8=-180/748, 6-8=-180/748
WEBS	4-8=0/322

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 7-0-0, Exterior(2R) 7-0-0 to 12-0-0, Interior (1) 12-0-0 to 14-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 120 lb uplift at joint 2 and 120 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

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	V01	Valley	1	1	Job Reference (optional) I66865827

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

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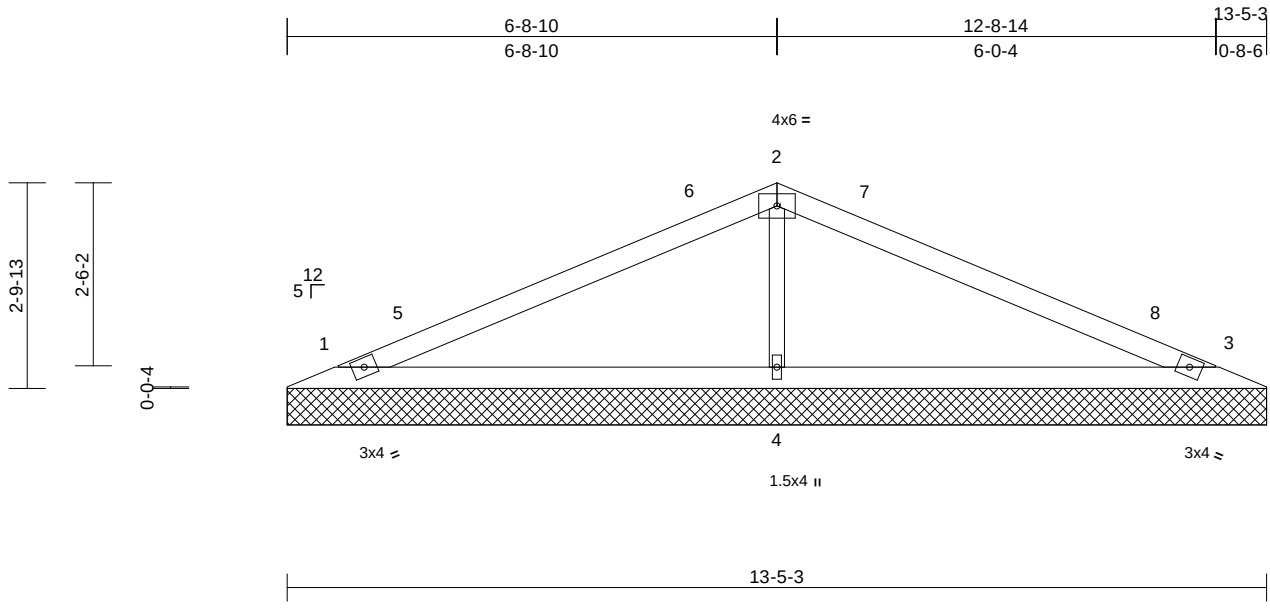


Scale = 1:31.6

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	0.62	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.09	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 41 lb	FT = 20%

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

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

REACTIONS (size) 1=13-5-3, 3=13-5-3, 4=13-5-3
Max Horiz 1=-47 (LC 17)
Max Uplift 1=-59 (LC 12), 3=-67 (LC 13), 4=-52 (LC 12)
Max Grav 1=248 (LC 25), 3=248 (LC 26), 4=595 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-127/85, 2-3=-127/78
BOT CHORD 1-4=-3/51, 3-4=-3/51
WEBS 2-4=-414/249

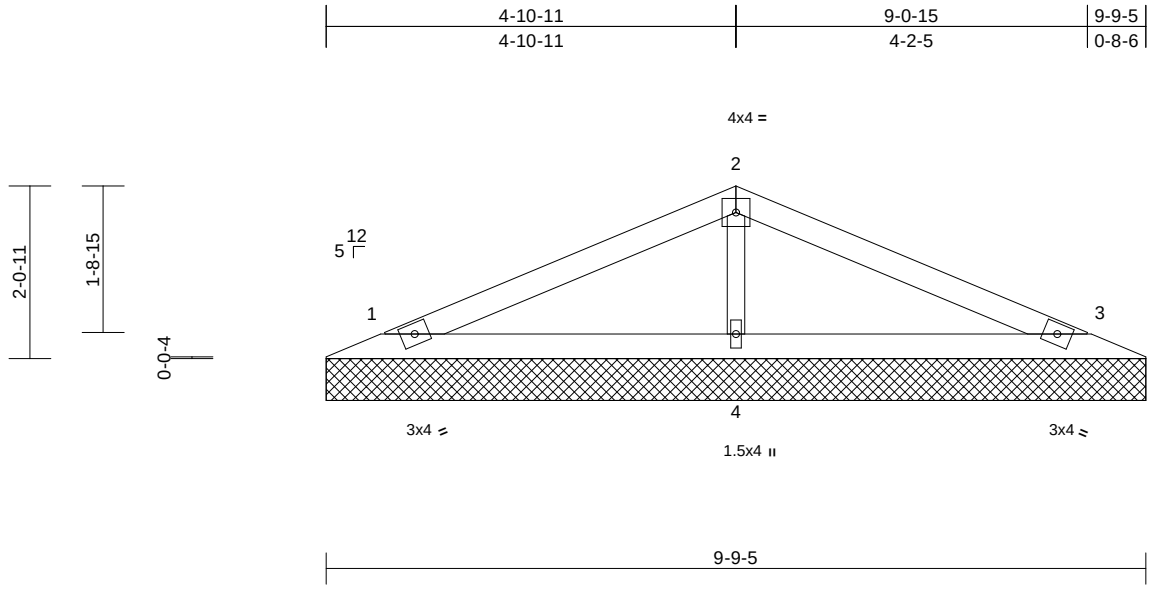
NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 6-9-3, Exterior(2R) 6-9-3 to 11-9-3, Interior (1) 11-9-3 to 12-9-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 59 lb uplift at joint 1, 67 lb uplift at joint 3 and 52 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	V06	Valley	1	1	Job Reference (optional)



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 29 lb	FT = 20%

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

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

REACTIONS (size) 1=9-9-5, 3=9-9-5, 4=9-9-5
Max Horiz 1=-33 (LC 13)
Max Uplift 1=-41 (LC 12), 3=-47 (LC 13), 4=-36 (LC 12)
Max Grav 1=173 (LC 25), 3=173 (LC 26), 4=414 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/57, 2-3=-88/62
BOT CHORD 1-4=-2/36, 3-4=-2/36
WEBS 2-4=-288/213

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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 41 lb uplift at joint 1, 47 lb uplift at joint 3 and 36 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	V02	Valley	1	1	I66865829 Job Reference (optional)

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

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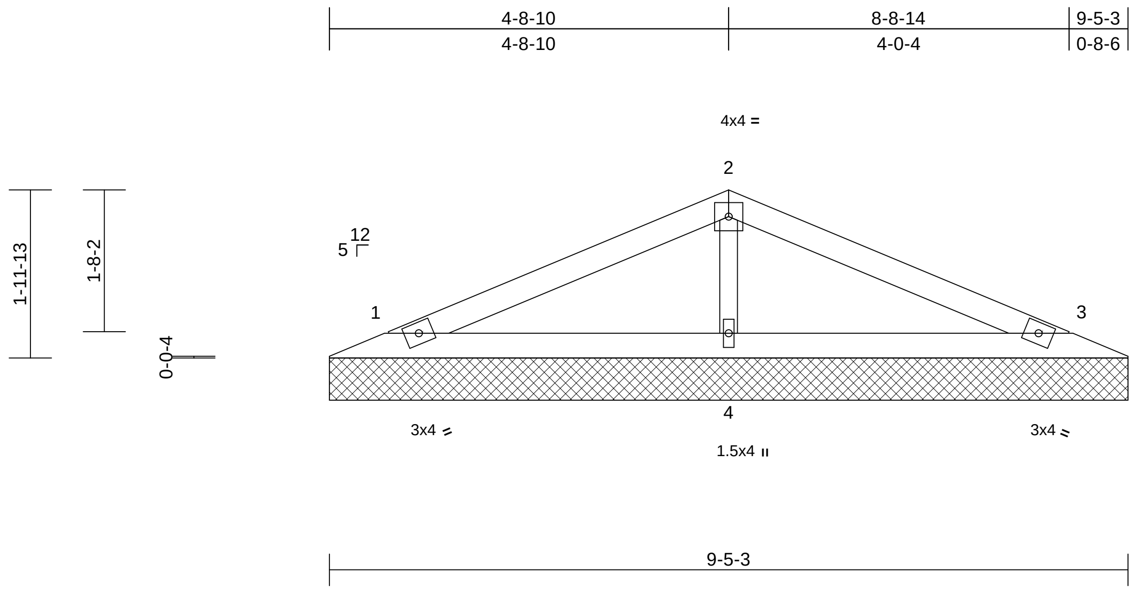

Scale = 1:27.2

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	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 28 lb	FT = 20%

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

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

REACTIONS (size) 1=9-5-3, 3=9-5-3, 4=9-5-3
Max Horiz 1=-32 (LC 17)
Max Uplift 1=-39 (LC 12), 3=-45 (LC 13), 4=-34 (LC 12)
Max Grav 1=166 (LC 25), 3=166 (LC 26), 4=397 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-85/55, 2-3=-85/60
BOT CHORD 1-4=-2/34, 3-4=-2/34
WEBS 2-4=-276/208

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 39 lb uplift at joint 1, 45 lb uplift at joint 3 and 34 lb uplift at joint 4.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	CJ02	Diagonal Hip Girder	1	1	Job Reference (optional)

I66865830

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

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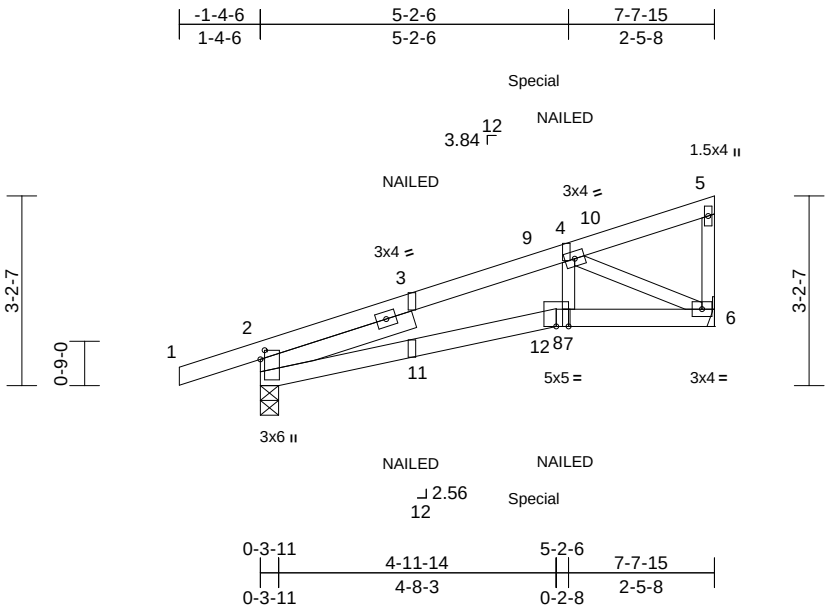

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Plate Offsets (X, Y): [2:0-1-14,0-0-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.03	2-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.05	2-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-8-14

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-2-0 oc bracing.

REACTIONS (size) 2=0-3-11, 6= Mechanical
Max Horiz 2=118 (LC 9)
Max Uplift 2=-148 (LC 8), 6=-115 (LC 12)
Max Grav 2=458 (LC 1), 6=347 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-4=-724/409, 4-5=-54/40, 5-6=-62/53
BOT CHORD 2-8=-521/615, 7-8=-503/592, 6-7=-503/592
WEBS 4-7=-55/273, 4-6=-649/525

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-4-6 to 5-8-7, Exterior(2R) 5-8-7 to 7-6-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 115 lb uplift at joint 6 and 148 lb uplift at joint 2.
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) N/A
9) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 39 lb down and 97 lb up at 4-7-10 on top chord, and 13 lb down at 4-7-10 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: 1-5=-70, 2-8=-20, 6-8=-20
Concentrated Loads (lb)
Vert: 8=-5 (F), 4=-7 (F), 9=-7 (B), 12=-12 (B)

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	CJ03	Diagonal Hip Girder	1	1	Job Reference (optional)

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

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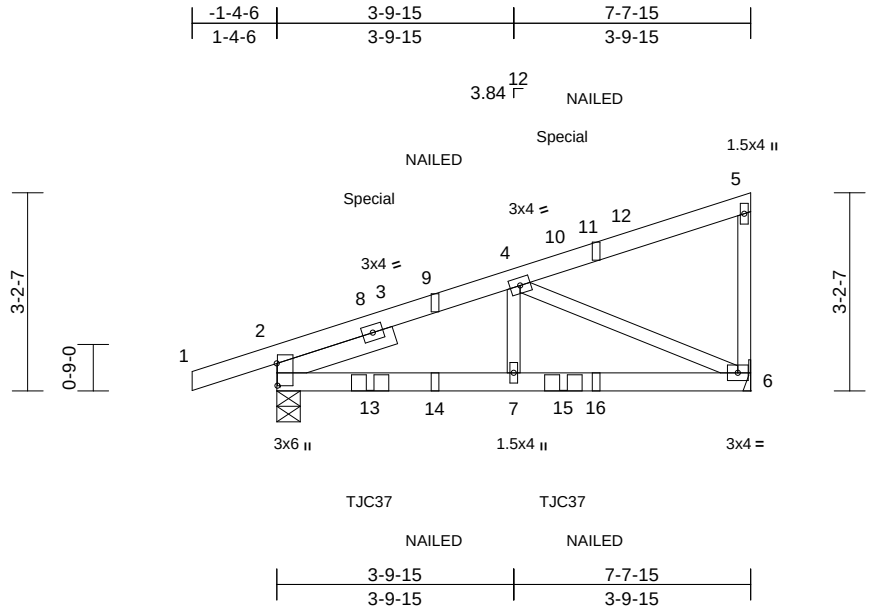

Scale = 1:37.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.01	2-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.21	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 35 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-0-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-5-3 oc bracing.

REACTIONS (size) 2=0-4-9, 6= Mechanical
Max Horiz 2=136 (LC 9)
Max Uplift 2=-161 (LC 8), 6=-121 (LC 12)
Max Grav 2=456 (LC 1), 6=353 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-548/284, 4-5=-113/78, 5-6=-119/131
BOT CHORD 2-7=-390/444, 6-7=-390/444
WEBS 4-7=0/202, 4-6=-487/383

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-4-6 to 5-8-7, Exterior(2R) 5-8-7 to 7-6-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 6 and 161 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.
7) Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent spaced at 3-1-8 oc max. starting at 1-6-2 from the left end to 4-7-10 to connect truss(es) to front face of bottom chord.
8) Fill all nail holes where hanger is in contact with lumber.
9) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 150 lb down and 30 lb up at 1-6-2, and 40 lb down and 106 lb up at 4-7-10 on top 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, 2-6=-20
Concentrated Loads (lb)
Vert: 10=-11 (F), 11=-12 (B), 15=-5 (F), 16=-6 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	CJ04	Diagonal Hip Girder	1	1	Job Reference (optional) I66865832

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

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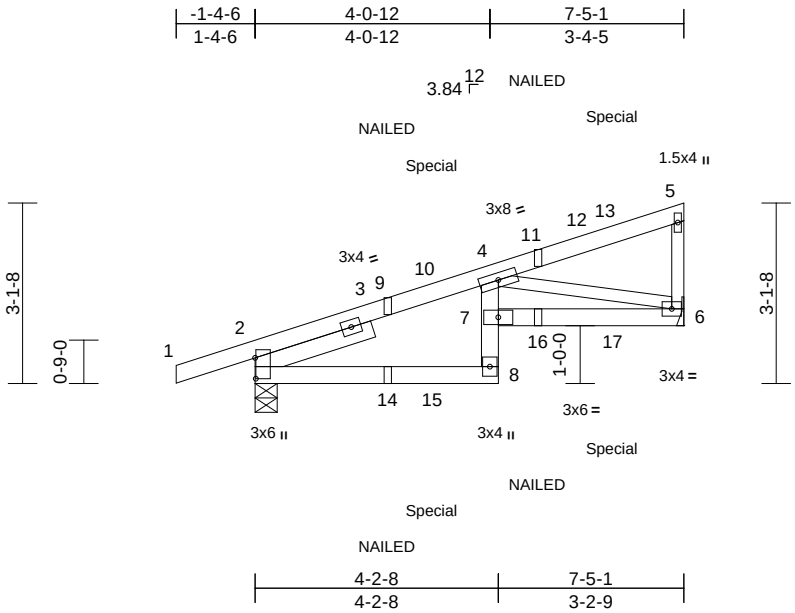

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Plate Offsets (X, Y): [2:0-4-5,0-0-2]

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	0.25	Vert(LL)	0.06	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.08	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.30	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-1-12

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

REACTIONS (size) 2=0-4-9, 6= Mechanical
Max Horiz 2=114 (LC 9)
Max Uplift 2=-162 (LC 8), 6=-175 (LC 12)
Max Grav 2=479 (LC 1), 6=461 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-556/308, 4-5=-106/39, 5-6=-120/114
BOT CHORD 2-8=-380/436, 7-8=0/90, 4-7=-32/175, 6-7=-825/1001
WEBS 4-6=-989/795

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-4-6 to 5-8-7, Exterior(2R) 5-8-7 to 7-3-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 175 lb uplift at joint 6 and 162 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.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 22 lb down and 80 lb up at 3-0-14, and 49 lb down and 81 lb up at 6-2-6 on top chord, and 6 lb down at 3-0-14, and 64 lb down and 33 lb up at 6-2-6 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 2-8=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 13=-27 (F), 16=-95 (B), 17=-64 (F)

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865833
P240761-01	T4	Roof Special	1	1	Job Reference (optional)	

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

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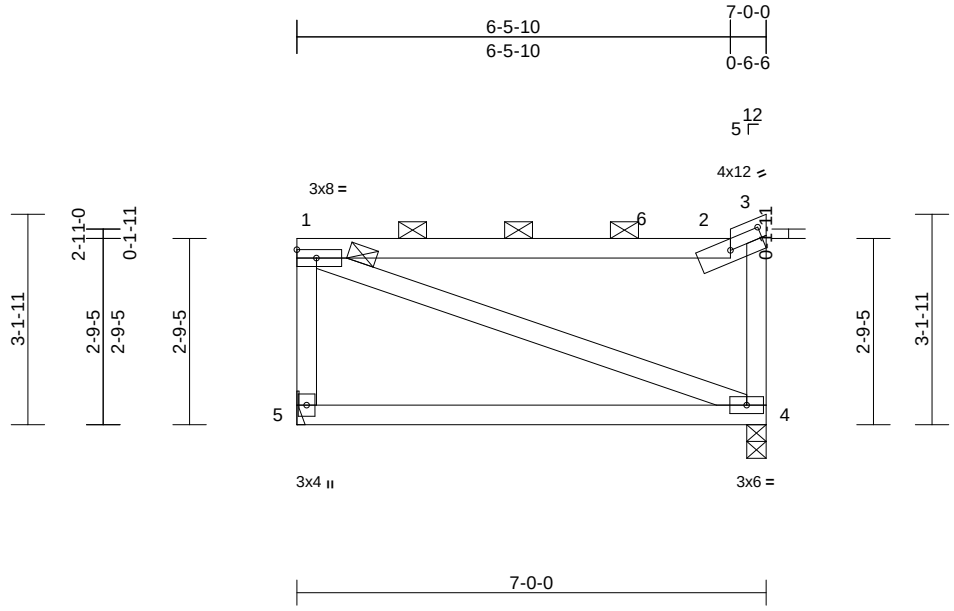

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Plate Offsets (X, Y): [2:0-6-1,0-1-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.07	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.40	Vert(CT)	-0.14	4-5	>561	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 34 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

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

REACTIONS (size) 4=0-3-8, 5= Mechanical
Max Horiz 5=115 (LC 9)
Max Uplift 4=-52 (LC 12), 5=-83 (LC 8)
Max Grav 4=302 (LC 1), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-234/222, 1-2=-107/86, 2-3=-89/76, 3-4=-235/167
BOT CHORD 4-5=-174/202
WEBS 1-4=-113/121

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: , Joint 4 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 83 lb uplift at joint 5 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.
8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865834
P240761-01	T3	Roof Special	1	1	Job Reference (optional)	

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

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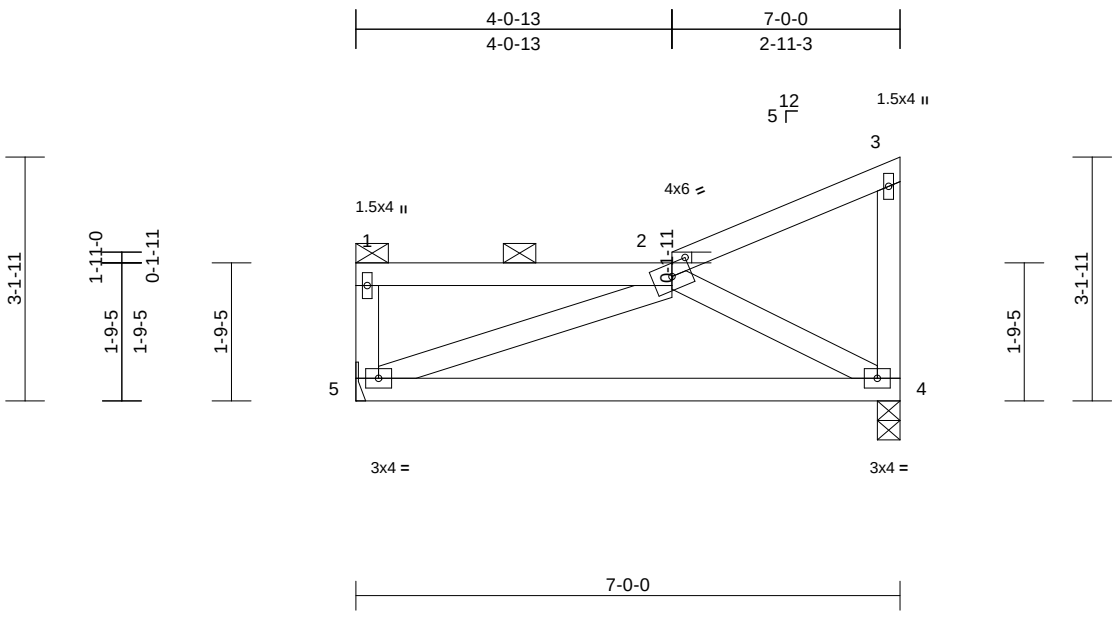

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Plate Offsets (X, Y): [2:0-3-0,0-1-15]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.12	4-5	>663	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.60	Vert(CT)	-0.24	4-5	>331	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 33 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

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

REACTIONS (size) 4=0-3-8, 5= Mechanical
Max Horiz 5=121 (LC 9)
Max Uplift 4=-69 (LC 12), 5=-63 (LC 12)
Max Grav 4=302 (LC 1), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-137/114, 1-2=-32/35, 2-3=-96/76, 3-4=-98/118
BOT CHORD 4-5=-234/247
WEBS 2-5=-266/217, 2-4=-283/222

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 4-0-13, Interior (1) 4-0-13 to 6-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: , Joint 4 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 5 and 69 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	T2	Roof Special	1	1	Job Reference (optional)

I66865835

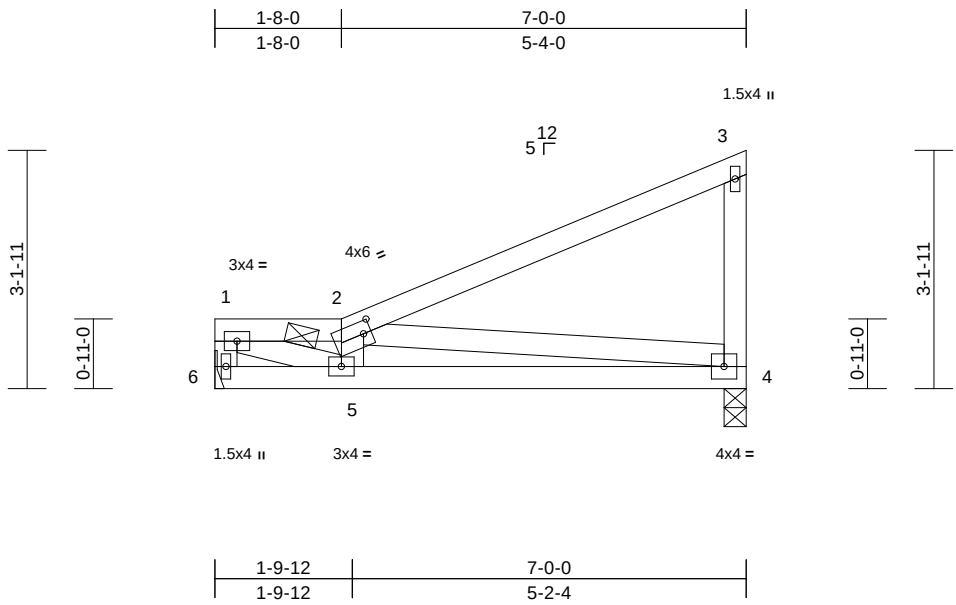

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Plate Offsets (X, Y): [2:0-1-4,0-2-0]

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	0.62	Vert(LL)	-0.03	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.35	Vert(CT)	-0.07	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.33	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 32 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

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

REACTIONS (size) 4=0-3-8, 6= Mechanical
Max Horiz 6=126 (LC 9)
Max Uplift 4=-77 (LC 12), 6=-55 (LC 12)
Max Grav 4=302 (LC 1), 6=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-286/101, 1-2=-628/142, 2-3=-135/97, 3-4=-182/199
BOT CHORD 5-6=-245/162, 4-5=-289/589
WEBS 1-5=-162/671, 2-5=-172/133, 2-4=-593/251

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 1-8-0, Interior (1) 1-8-0 to 6-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Provide adequate drainage to prevent water ponding.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearings are assumed to be: , Joint 4 SP No.2 crushing capacity of 565 psi.
5) Refer to girder(s) for truss to truss connections.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 6 and 77 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

July 16,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	CJ05	Diagonal Hip Girder	1	1	Job Reference (optional) I66865836

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

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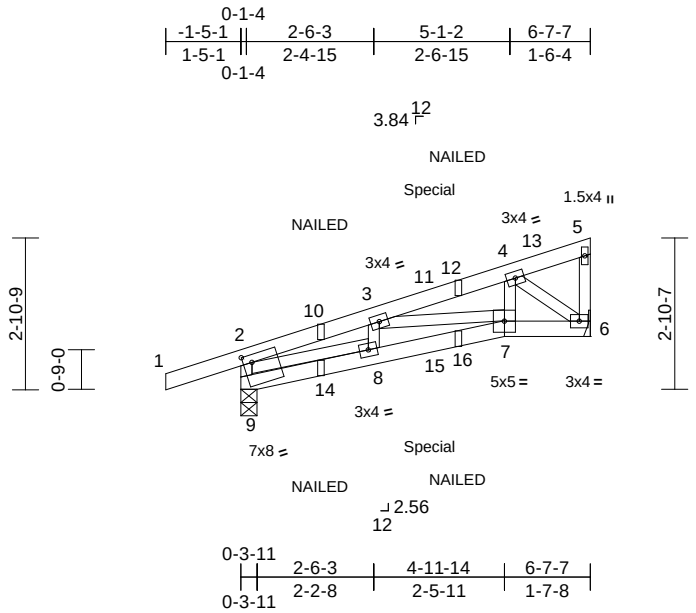

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Plate Offsets (X, Y): [9:0-2-0,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	0.01	7-8	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	7-8	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.15	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 30 lb	FT = 20%

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

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

REACTIONS (size) 6= Mechanical, 9=0-3-11
Max Horiz 9=99 (LC 9)
Max Uplift 6=-89 (LC 12), 9=-152 (LC 8)
Max Grav 6=269 (LC 1), 9=385 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/33, 2-3=-496/368, 3-4=-349/267, 4-5=-39/36, 5-6=-44/42
BOT CHORD 8-9=-264/103, 7-8=-517/456, 6-7=-310/301
WEBS 4-7=-113/153, 4-6=-379/364, 2-9=-358/433, 3-7=-134/180, 3-8=-54/105, 2-8=-243/441

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-5-1 to 5-7-13, Exterior(2R) 5-7-13 to 6-6-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 9 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) 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.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 6 and 152 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) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 27 lb down and 88 lb up at 3-7-2 on top chord, and 9 lb down at 3-7-2 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: 1-5=-70, 7-9=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 10=29 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865837
P240761-01	CJ06	Diagonal Hip Girder	1	1	Job Reference (optional)	

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

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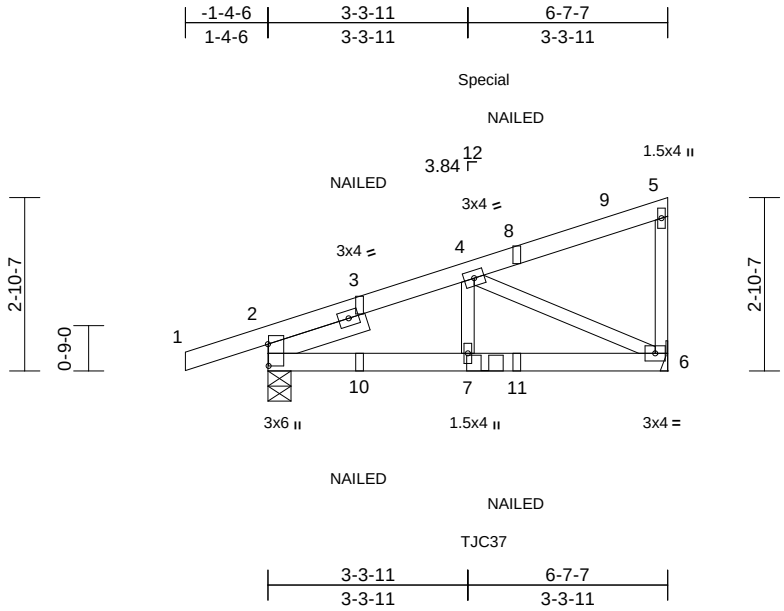

Scale = 1:38.1

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

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	0.20	Vert(LL)	0.01	7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.15	Vert(CT)	-0.01	2-7	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.12	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 31 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-8-12

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) 2=0-4-9, 6= Mechanical
Max Horiz 2=120 (LC 9)
Max Uplift 2=-133 (LC 8), 6=-86 (LC 12)
Max Grav 2=399 (LC 1), 6=283 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1/0, 2-4=-424/238, 4-5=-91/59, 5-6=-100/119
BOT CHORD 2-7=-337/330, 6-7=-337/330
WEBS 4-7=0/157, 4-6=-364/332

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-4-6 to 5-8-7, Exterior(2R) 5-8-7 to 6-6-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 86 lb uplift at joint 6 and 133 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.
7) Use Simpson Strong-Tie TJC37 (4 nail,90-150) or equivalent at 3-7-2 from the left end to connect truss(es) to back face of bottom chord, skewed 50.2 deg.to the right, sloping 0.0 deg. down.
8) Fill all nail holes where hanger is in contact with lumber.
9) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 28 lb down and 89 lb up at 3-7-2 on top 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, 2-6=-20

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	RX01	Flat Girder	1	2	Job Reference (optional)

I66865838

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

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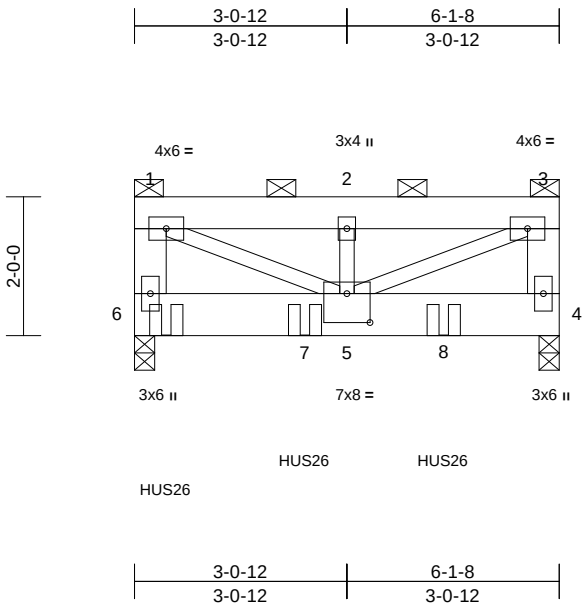

Scale = 1:33.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	-0.01	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.02	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.32	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 68 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SPF No.2
BOT CHORD 2x8 SPF No.2
WEBS 2x3 SPF No.2 *Except* 6-1,3-4:2x6 SPF No.2

BRACING
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-3, 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=-60 (LC 8)
Max Uplift 4=-378 (LC 9), 6=-561 (LC 8)
Max Grav 4=1657 (LC 1), 6=2552 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-6=-1030/438, 1-2=-1673/554, 2-3=-1673/554, 3-4=-1030/438
BOT CHORD 5-6=-84/87, 4-5=-30/33
WEBS 1-5=-648/1884, 2-5=-111/378, 3-5=-648/1884

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-6-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) Provide adequate drainage to prevent water ponding.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 561 lb uplift at joint 6 and 378 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) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
10) Use Simpson Strong-Tie HUS26 (14-16d Girder, 4-16d Truss) or equivalent spaced at 2-0-0 oc max. starting at 0-5-8 from the left end to 4-5-8 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 4-6=-20
Concentrated Loads (lb)
Vert: 6=-1238 (B), 7=-1230 (B), 8=-1230 (B)

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865839
P240761-01	V09	Valley	1	1	Job Reference (optional)	

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

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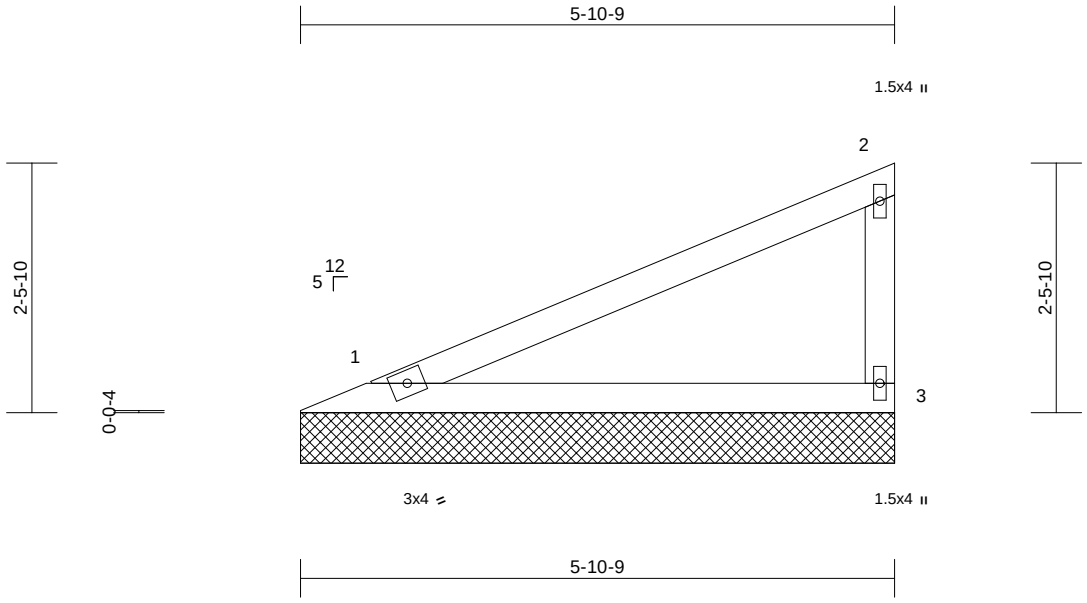

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

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

REACTIONS (size) 1=5-10-9, 3=5-10-9
Max Horiz 1=98 (LC 9)
Max Uplift 1=-40 (LC 12), 3=-59 (LC 12)
Max Grav 1=226 (LC 1), 3=226 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-127/86, 2-3=-176/202
BOT CHORD 1-3=-43/47

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 40 lb uplift at joint 1 and 59 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865840
P240761-01	LG07	Lay-In Gable	1	1	Job Reference (optional)	

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

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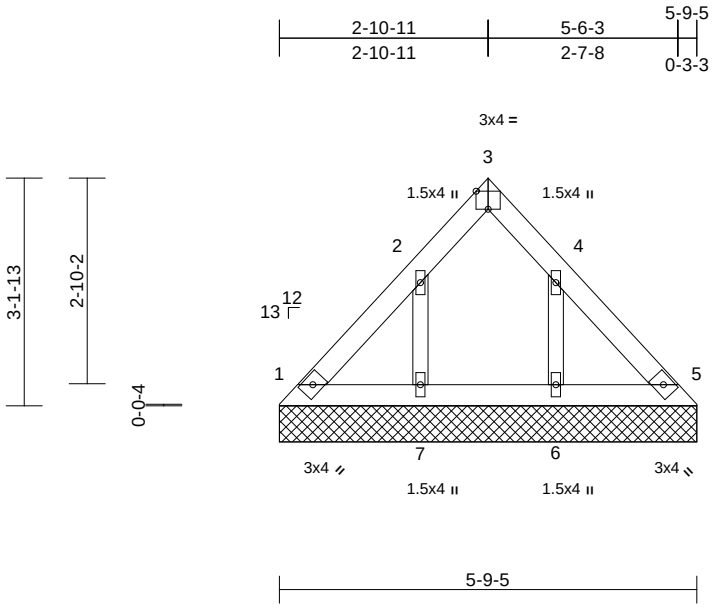

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Plate Offsets (X, Y): [3:Edge,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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 = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-9-5, 5=5-9-5, 6=5-9-5, 7=5-9-5
Max Horiz 1=-80 (LC 8)
Max Uplift 6=-107 (LC 13), 7=-108 (LC 12)
Max Grav 1=90 (LC 21), 5=89 (LC 22), 6=177 (LC 20), 7=179 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-110/95, 2-3=-59/15, 3-4=-59/14, 4-5=-109/95
BOT CHORD 1-7=-86/104, 6-7=-86/105, 5-6=-86/104
WEBS 2-7=-173/132, 4-6=-173/132

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) 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 0-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 108 lb uplift at joint 7 and 107 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

July 16,2024

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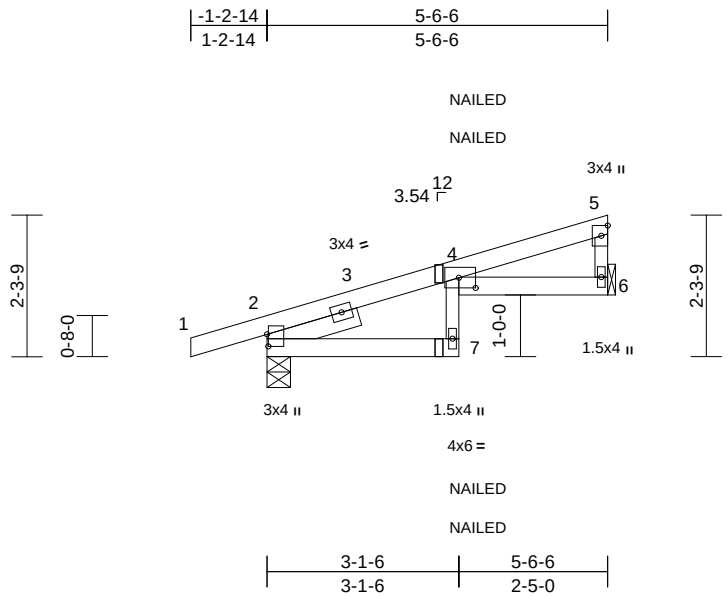
Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	CJ1	Diagonal Hip Girder	2	1	Job Reference (optional)



Scale = 1:37.4

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

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	0.84	Vert(LL)	0.13	7	>488	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.15	7	>424	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.09	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 23 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 7-4:2x3 SPF No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7

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) 2=0-4-9, 6= Mechanical
Max Horiz 2=74 (LC 9)
Max Uplift 2=-107 (LC 8), 6=-60 (LC 12)
Max Grav 2=341 (LC 1), 6=234 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-138/48, 4-5=-72/35, 5-6=-155/167
BOT CHORD 2-7=-13/17, 4-7=-13/73, 4-6=-73/68

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 6 and 107 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.
7) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
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: 1-4=-70, 4-5=-70, 2-7=-20, 4-6=-20

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	V03	Valley	1	1	Job Reference (optional) I66865842

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:08 Page: 1
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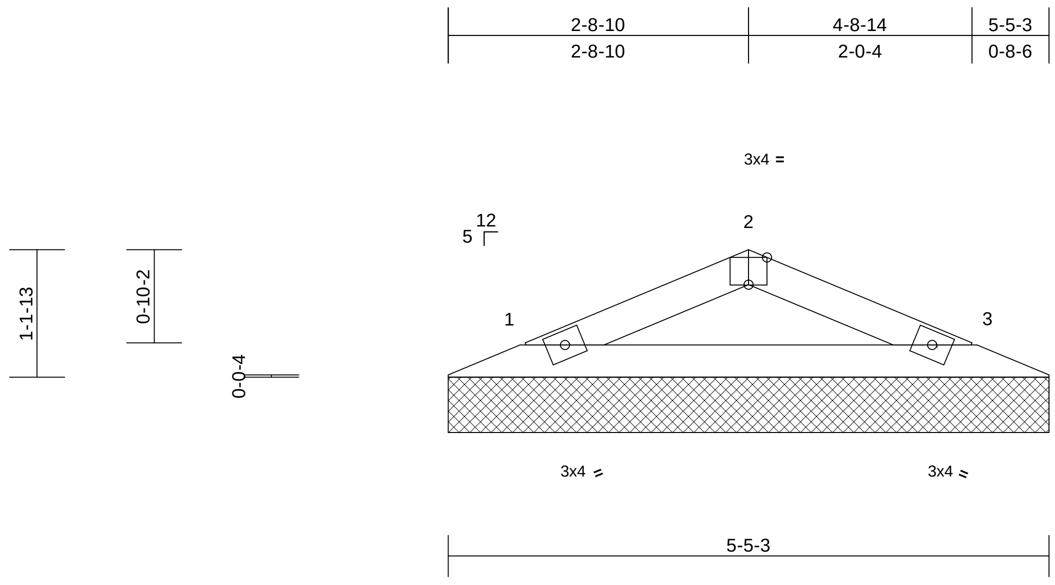

Scale = 1:20.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	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 = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

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

REACTIONS (size) 1=5-5-3, 3=5-5-3
Max Horiz 1=16 (LC 12)
Max Uplift 1=-28 (LC 12), 3=-28 (LC 13)
Max Grav 1=181 (LC 1), 3=181 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-203/185, 2-3=-203/193
BOT CHORD 1-3=-143/167

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1 and 28 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865843
P240761-01	V07	Valley	1	1	Job Reference (optional)	

08/06/2024

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

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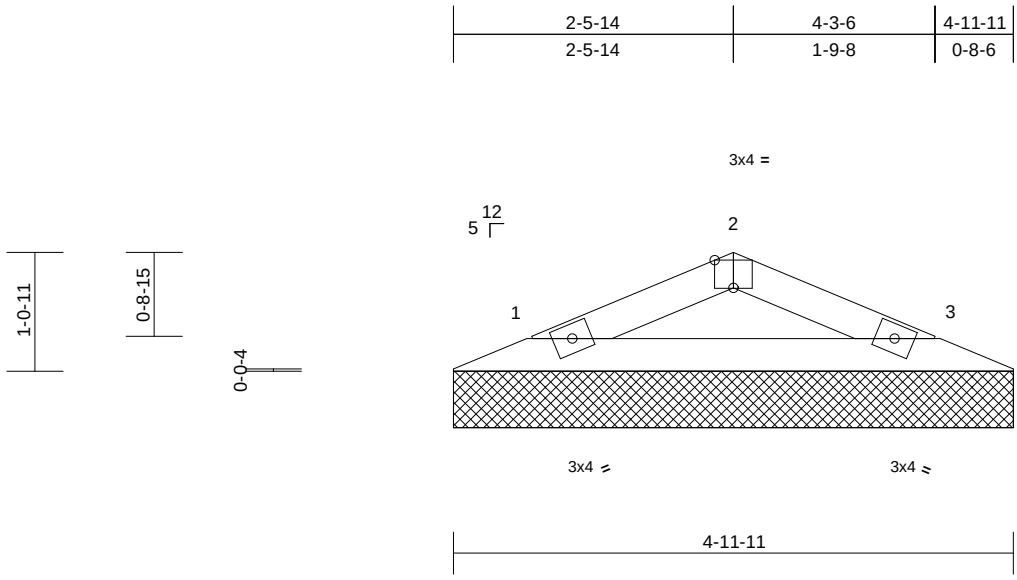

Scale = 1:20.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
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	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-11-11, 3=4-11-11
Max Horiz 1=-14 (LC 13)
Max Uplift 1=-25 (LC 12), 3=-25 (LC 13)
Max Grav 1=161 (LC 1), 3=161 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-180/167, 2-3=-180/174
BOT CHORD 1-3=-128/148

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 4-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1 and 25 lb uplift at joint 3.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865844
P240761-01	J07	Jack-Open	8	1	Job Reference (optional)	

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

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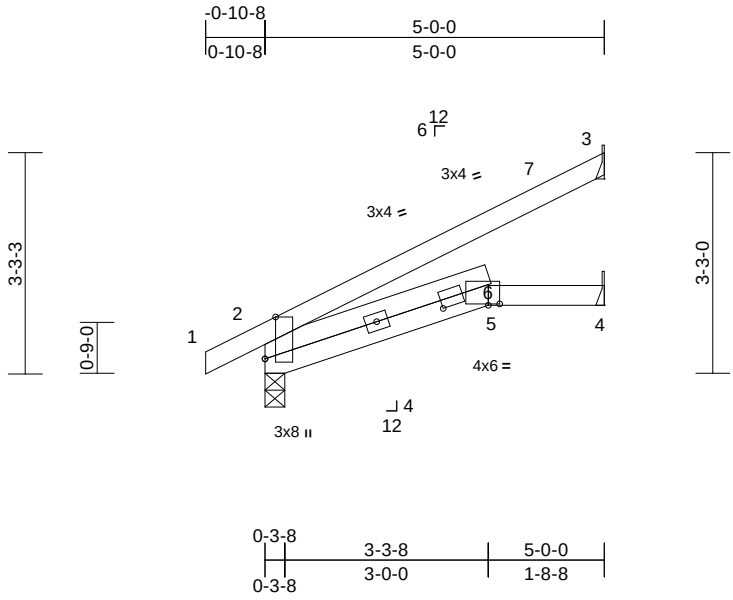

Scale = 1:34

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.03	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-6-3

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=127 (LC 12)
Max Uplift 2=-33 (LC 12), 3=-92 (LC 12)
Max Grav 2=289 (LC 1), 3=139 (LC 1), 4=102 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6/0, 2-3=-123/59
BOT CHORD 2-5=-26/12, 5-6=0/0, 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 3 and 33 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J08	Jack-Open	10	1	I66865845 Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:04

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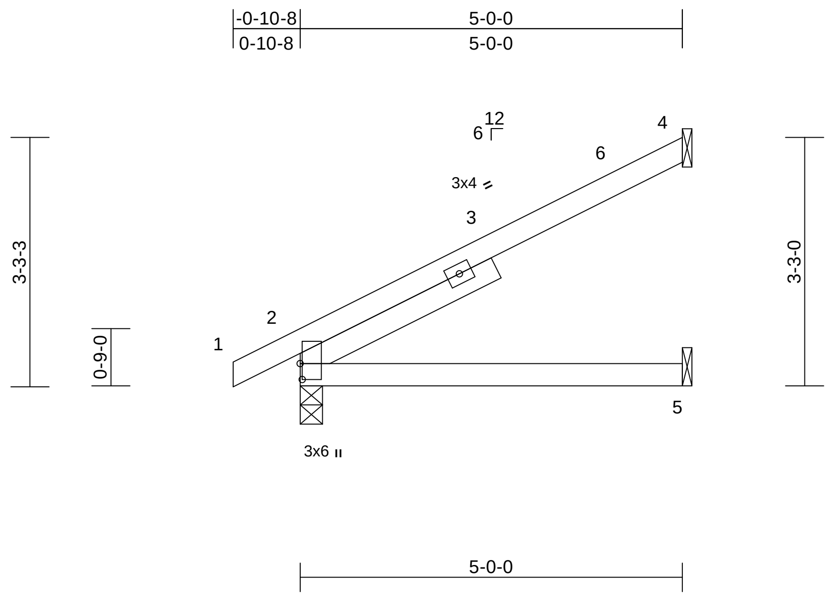

Scale = 1:30.2

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

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	0.56	Vert(LL)	-0.04	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.30	Vert(CT)	-0.07	2-5	>831	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-10-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-0-0 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=127 (LC 12)
Max Uplift 2=-35 (LC 12), 4=-114 (LC 12)
Max Grav 2=289 (LC 1), 4=167 (LC 1), 5=99 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-125/63
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-11-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 114 lb uplift at joint 4 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

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865846
P240761-01	J15	Jack-Open	1	1	Job Reference (optional)	

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

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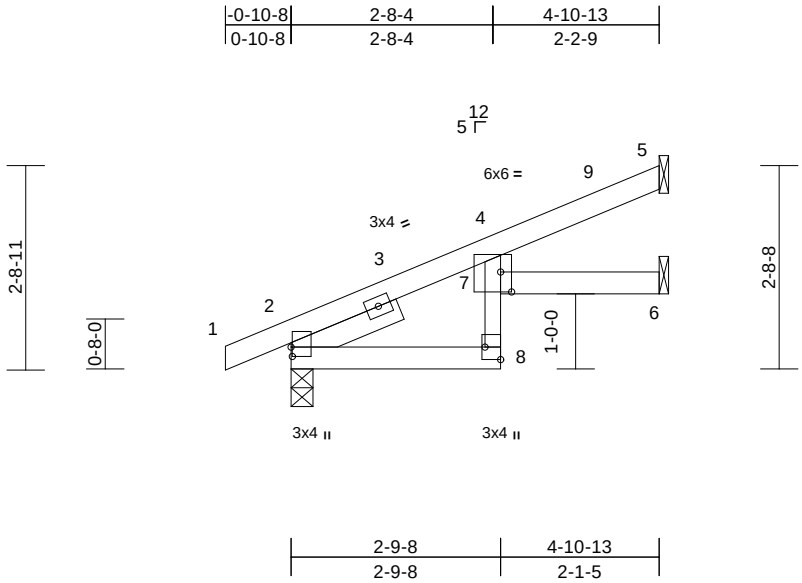

Scale = 1:30.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	0.04	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.05	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 20 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 8-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=104 (LC 12)
Max Uplift 2=-46 (LC 12), 5=-55 (LC 12), 6=-16 (LC 12)
Max Grav 2=285 (LC 1), 5=121 (LC 1), 6=91 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-269/66, 4-5=-53/41
BOT CHORD 2-8=-153/170, 7-8=-22/69, 4-7=0/70, 6-7=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-10-1 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 55 lb uplift at joint 5, 46 lb uplift at joint 2 and 16 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J21G	Jack-Closed Girder	1	1	Job Reference (optional)

I66865847

08/06/2024

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

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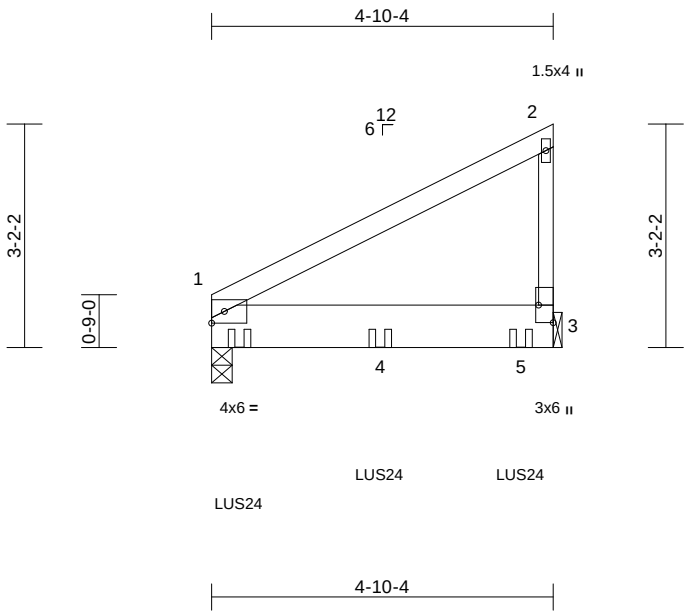

4-10-4

Scale = 1:32.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.01	1-3	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.02	1-3	>999	180		
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-P							Weight: 22 lb	FT = 20%

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

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

REACTIONS (size) 1=0-3-8, 3= Mechanical
Max Horiz 1=118 (LC 9)
Max Uplift 1=-136 (LC 12), 3=-183 (LC 12)
Max Grav 1=663 (LC 1), 3=611 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-172/115, 2-3=-165/228
BOT CHORD 1-3=-55/59

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: Joint 1 SPF No.2 crushing capacity of 425 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 136 lb uplift at joint 1 and 183 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) Use Simpson Strong-Tie LUS24 (4-10dx1 1/2 Girder, 2-10d Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 0-4-12 from the left end to 4-4-12 to connect truss(es) to back face of bottom chord.
8) Fill all nail holes where hanger is in contact with lumber.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 289 lb down and 62 lb up at 0-1-12 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, 1-3=-20
Concentrated Loads (lb)
Vert: 1=-289 (B), 4=-282 (B), 5=-288 (B)

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J20	Jack-Open	1	1	Job Reference (optional) I66865848

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:05 Page: 1
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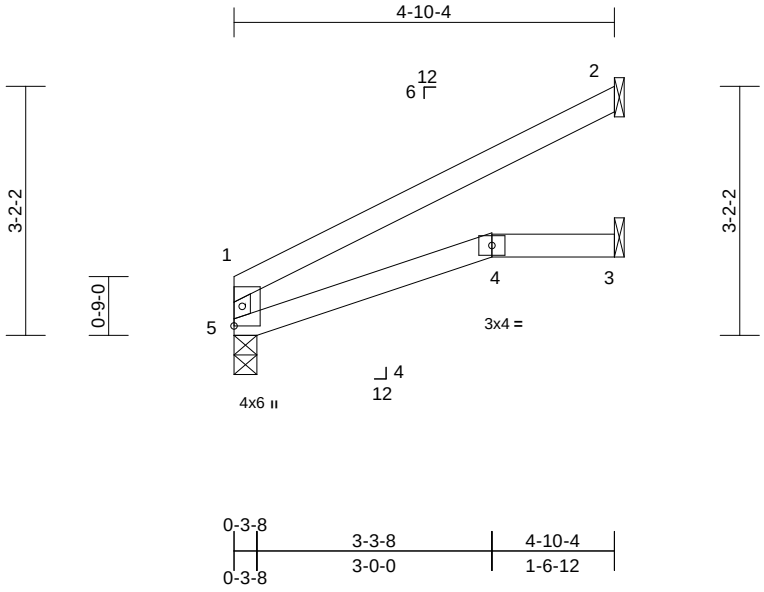

Scale = 1:29.4

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)	0.04	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	-0.05	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.03	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 16 lb	FT = 20%

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

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

REACTIONS (size) 2= Mechanical, 3= Mechanical, 5=0-3-8
Max Horiz 5=94 (LC 12)
Max Uplift 2=-94 (LC 12), 5=-9 (LC 12)
Max Grav 2=153 (LC 1), 3=90 (LC 3), 5=211 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-175/116, 1-2=-108/55
BOT CHORD 4-5=-31/7, 3-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 9 lb uplift at joint 5 and 94 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865849
P240761-01	J19	Jack-Open	3	1	Job Reference (optional)	

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

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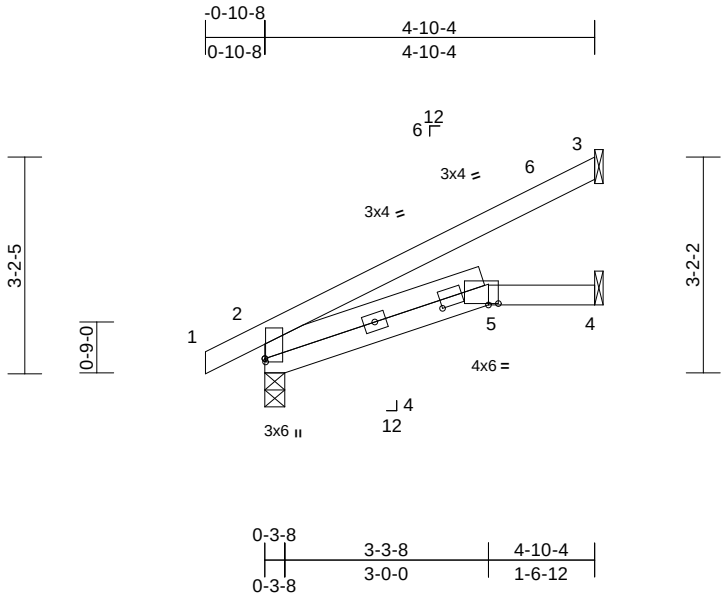

Scale = 1:33.9

Plate Offsets (X, Y): [2:0-0-9,0-0-2], [2:2-8-9,0-1-8], [5:0-1-12,0-0-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.02	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 3-4-15

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=124 (LC 12)
Max Uplift 2=-32 (LC 12), 3=-89 (LC 12)
Max Grav 2=282 (LC 1), 3=135 (LC 1), 4=99 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-6/0, 2-3=-120/58
BOT CHORD 2-5=-25/12, 4-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 3 and 32 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865850
P240761-01	J18	Jack-Open	1	1	Job Reference (optional)	

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

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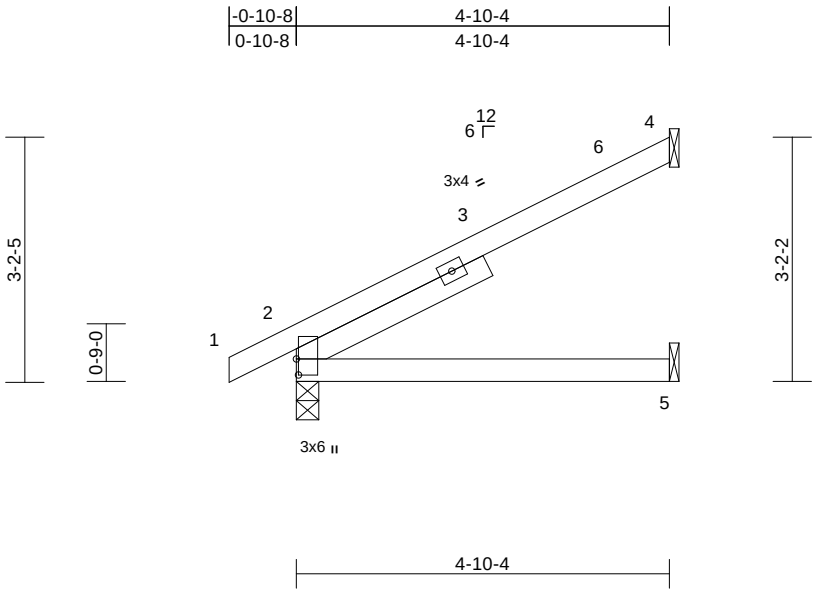

Scale = 1:30

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

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	0.52	Vert(LL)	-0.03	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(CT)	-0.06	2-5	>909	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.02	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-9-4

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-10-4 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=124 (LC 12)
Max Uplift 2=-35 (LC 12), 4=-110 (LC 12)
Max Grav 2=282 (LC 1), 4=162 (LC 1), 5=96 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-121/61
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 110 lb uplift at joint 4 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

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865851
P240761-01	J17	Jack-Open	3	1	Job Reference (optional)	

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

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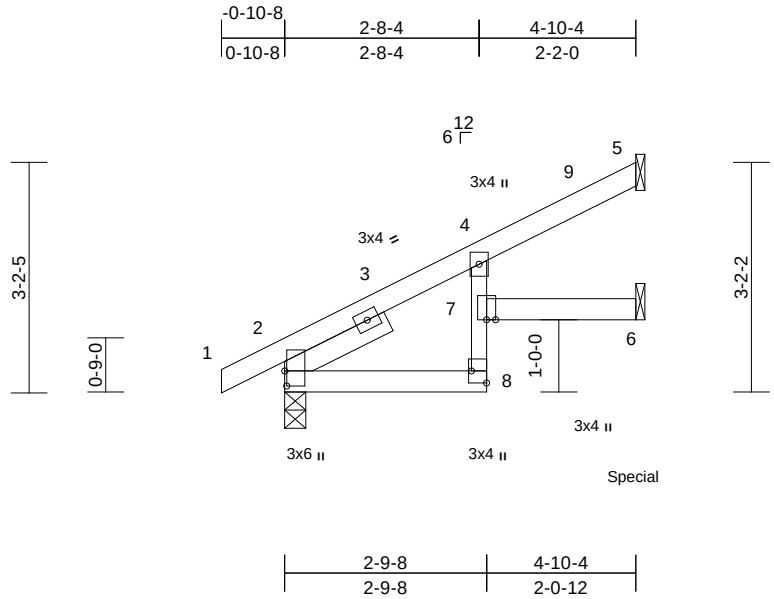

Scale = 1:31.9

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.04	6-7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.04	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 21 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 8-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-7-1

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

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=124 (LC 12)
Max Uplift 2=-35 (LC 12), 5=-60 (LC 12), 6=-205 (LC 12)
Max Grav 2=282 (LC 1), 5=119 (LC 1), 6=540 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-252/40, 4-5=-65/47
BOT CHORD 2-8=-149/146, 7-8=-23/65, 4-7=0/65, 6-7=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-9-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 5, 35 lb uplift at joint 2 and 205 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.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 449 lb down and 182 lb up at 4-9-8 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: 1-5=-70, 2-8=-20, 6-7=-20
Concentrated Loads (lb)
Vert: 6=-449 (F)

July 16,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865852
P240761-01	J26	Jack-Open	2	1	Job Reference (optional)	

08/06/2024

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

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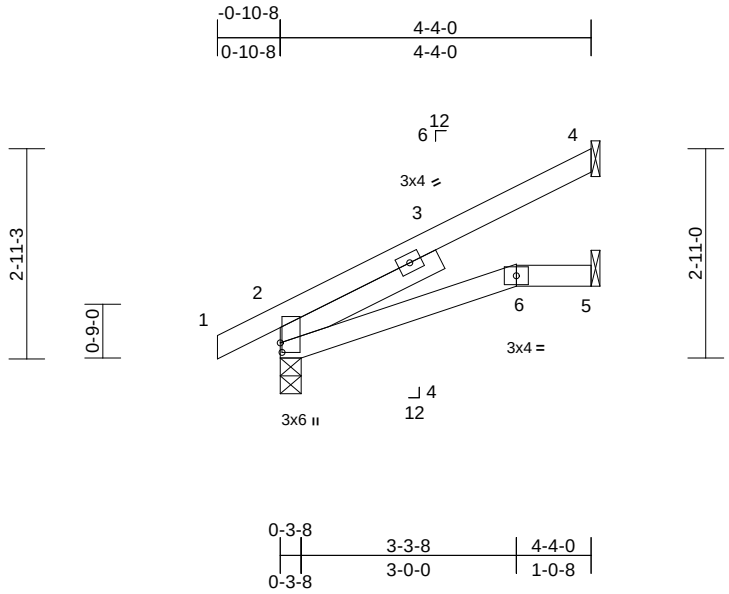

Scale = 1:32.1

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

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	0.33	Vert(LL)	0.02	2-6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.18	Vert(CT)	-0.03	2-6	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-6-3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-4-0 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=113 (LC 12)
Max Uplift 2=-32 (LC 12), 4=-85 (LC 12)
Max Grav 2=264 (LC 1), 4=134 (LC 1), 5=72 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-4=-97/52
BOT CHORD 2-6=-30/7, 5-6=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 85 lb uplift at joint 4 and 32 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

STATE OF MISSOURI
NATHANIEL FOX
NUMBER PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865853
P240761-01	J27	Jack-Open	9	1	Job Reference (optional)	

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

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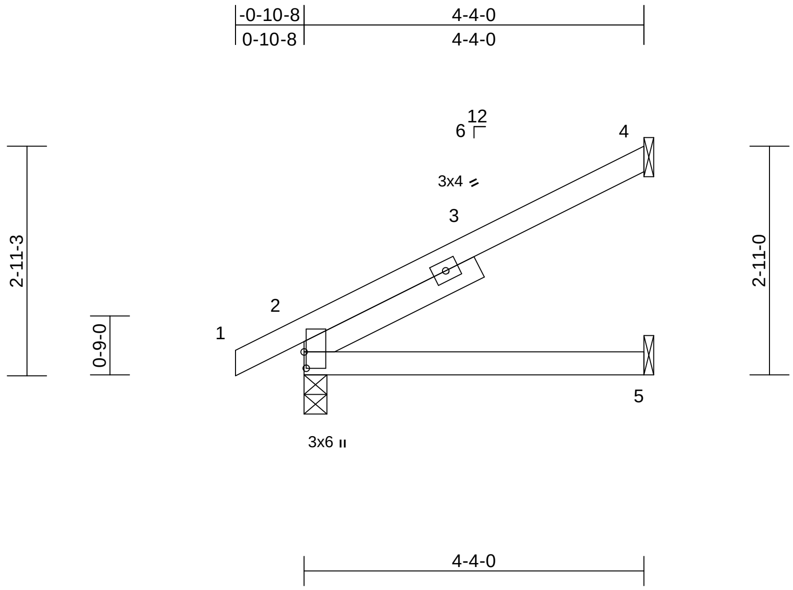

Scale = 1:29.4

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

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	0.41	Vert(LL)	-0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.04	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-5-12

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-0 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=112 (LC 12)
Max Uplift 2=-32 (LC 12), 4=-99 (LC 12)
Max Grav 2=260 (LC 1), 4=143 (LC 1), 5=85 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-109/55
BOT CHORD 2-5=0/0

NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 99 lb uplift at joint 4 and 32 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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Chesterfield, MO 63017
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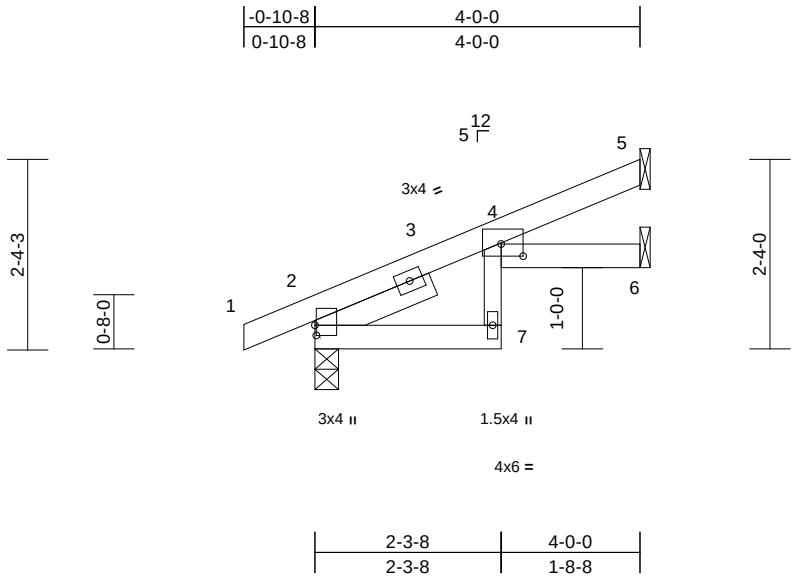
Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865854
P240761-01	J1	Jack-Open	4	1	Job Reference (optional)	



Scale = 1:28.4

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

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	0.37	Vert(LL)	0.03	7	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.04	7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 7-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7

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

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=87 (LC 12)
Max Uplift 2=-41 (LC 12), 5=-45 (LC 12), 6=-13 (LC 12)
Max Grav 2=245 (LC 1), 5=100 (LC 1), 6=71 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-114/3, 4-5=-44/34
BOT CHORD 2-7=-9/13, 4-7=-16/55, 4-6=-10/9

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 5, 41 lb uplift at joint 2 and 13 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

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865855
P240761-01	J04	Jack-Open	1	1	Job Reference (optional)	

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

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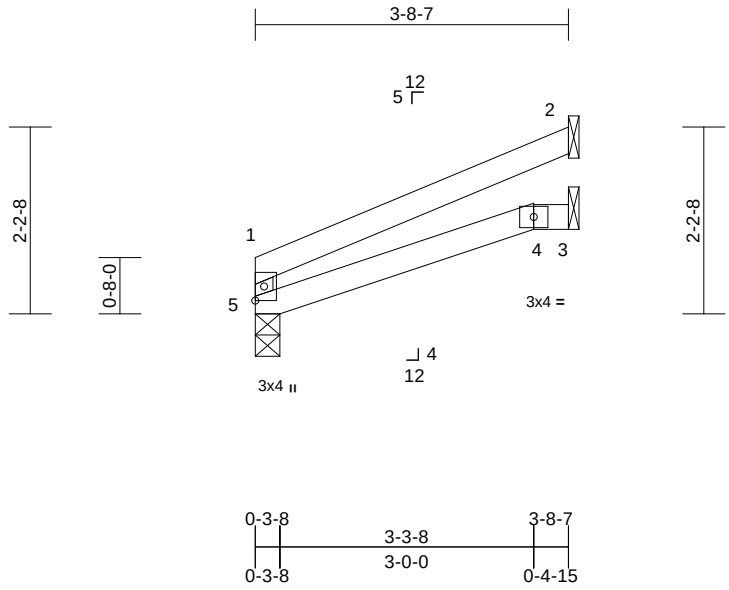

Scale = 1:27.2

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	0.24	Vert(LL)	0.01	4-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	-0.02	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 12 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 2= Mechanical, 3= Mechanical, 5=0-3-8
Max Horiz 5=57 (LC 12)
Max Uplift 2=-66 (LC 12), 5=-13 (LC 12)
Max Grav 2=116 (LC 1), 3=68 (LC 3), 5=159 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-5=-131/96, 1-2=-65/35
BOT CHORD 4-5=-19/13, 3-4=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 5 and 66 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J12	Jack-Open	1	1	Job Reference (optional)

I66865856

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

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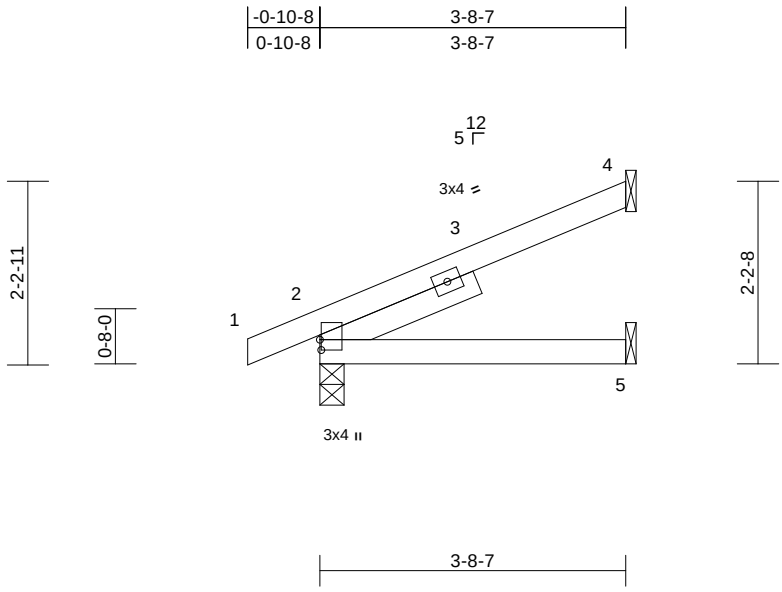

Scale = 1:27.9

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

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	0.26	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(CT)	-0.02	2-5	>999	180		
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: 16 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-0-5

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-8-7 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=82 (LC 12)
Max Uplift 2=-39 (LC 12), 4=-76 (LC 12)
Max Grav 2=232 (LC 1), 4=120 (LC 1), 5=73 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-78/38
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
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 4 and 39 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865857
P240761-01	V08	Valley	1	1	Job Reference (optional)	

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

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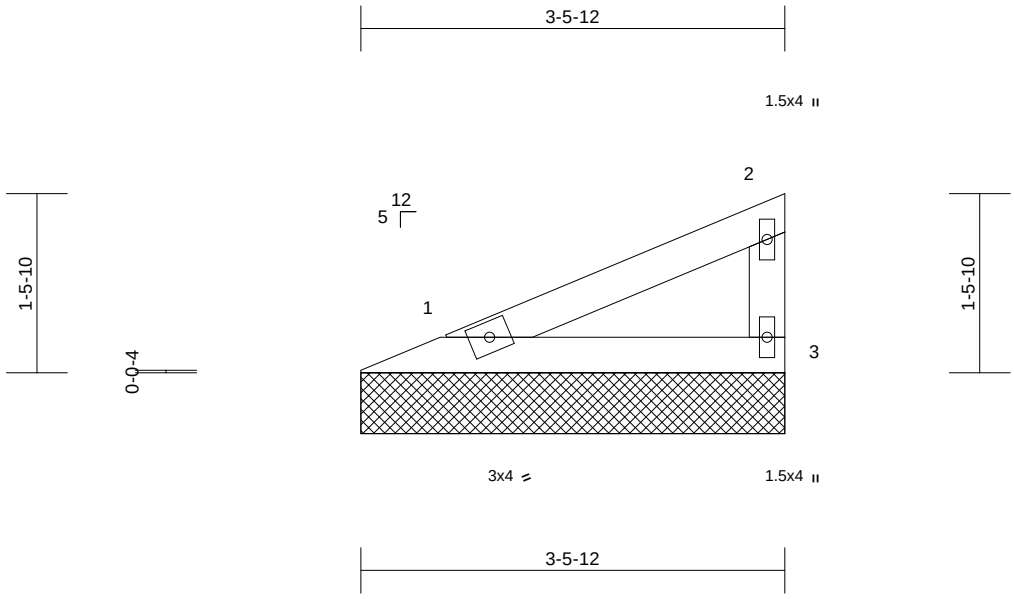

Scale = 1:18.9

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)	n/a	-	n/a	999	MT20	244/190
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	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 11 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SPF No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-5-12, 3=3-5-12
Max Horiz 1=52 (LC 9)
Max Uplift 1=-21 (LC 12), 3=-31 (LC 12)
Max Grav 1=118 (LC 1), 3=118 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-68/46, 2-3=-92/109
BOT CHORD 1-3=-23/25

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 4-0-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 1 and 31 lb uplift at joint 3.
8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

MiTek®
16023 Swingley Ridge Rd.
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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865858
P240761-01	J06	Jack-Open	1	1	Job Reference (optional)	

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

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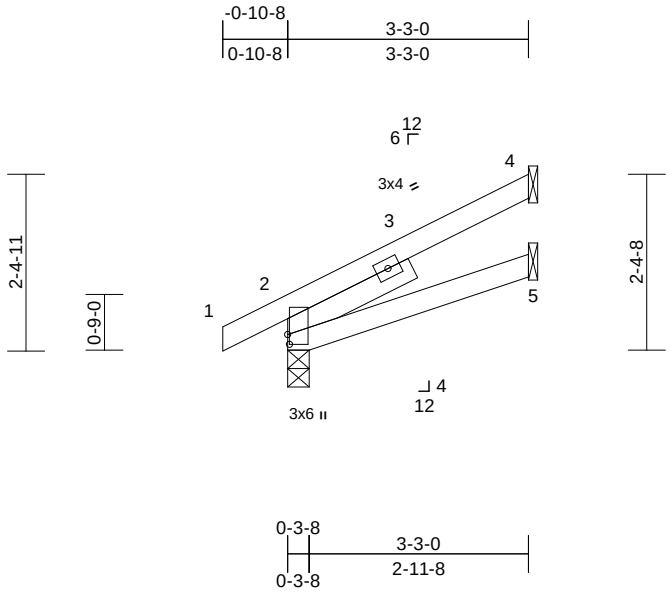

Scale = 1:31.1

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

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	0.22	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	2-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-10-15

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-0 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=89 (LC 12)
Max Uplift 2=-28 (LC 12), 4=-76 (LC 12)
Max Grav 2=218 (LC 1), 4=98 (LC 1), 5=62 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-4=-85/42
BOT CHORD 2-5=-16/16

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 4 and 28 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865859
P240761-01	J09	Jack-Open	1	1	Job Reference (optional)	

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

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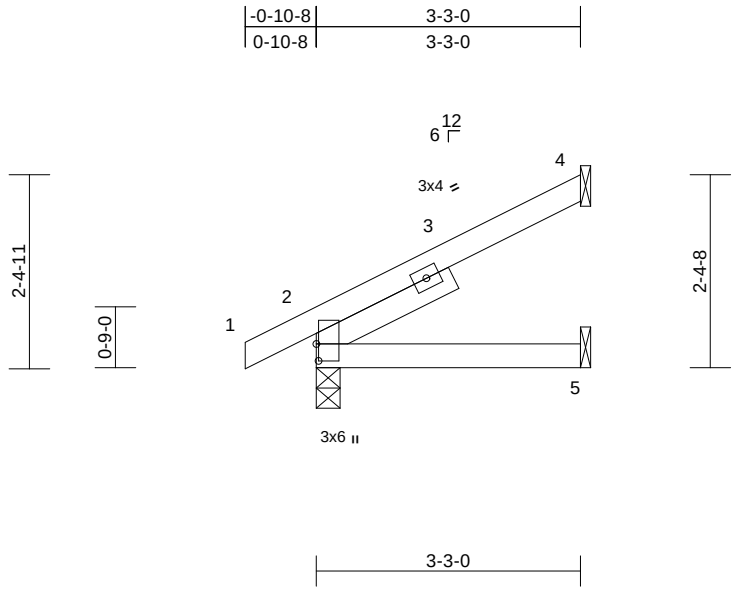

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Plate Offsets (X, Y): [2:0-2-8,0-0-5]

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	0.22	Vert(LL)	-0.01	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	-0.01	2-5	>999	180		
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: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-10-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-0 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=89 (LC 12)
Max Uplift 2=-28 (LC 12), 4=-76 (LC 12)
Max Grav 2=213 (LC 1), 4=103 (LC 1), 5=64 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-84/42
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
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 4 and 28 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865860
P240761-01	J16	Jack-Open	1	1	Job Reference (optional)	

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

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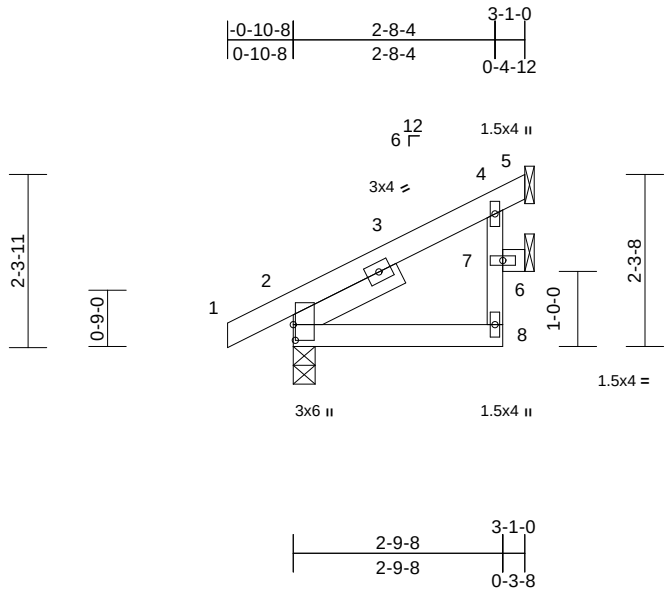

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Plate Offsets (X, Y): [2:0-2-8,0-0-5]

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	0.07	Vert(LL)	0.00	2-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	2-8	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							Weight: 15 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 8-4:2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-7-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 5= Mechanical, 6= Mechanical
Max Horiz 2=85 (LC 12)
Max Uplift 2=-28 (LC 12), 6=-66 (LC 12)
Max Grav 2=206 (LC 1), 5=12 (LC 12), 6=121 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-115/0, 4-5=-8/8
BOT CHORD 2-8=-50/49, 7-8=-4/53, 4-7=-85/138, 6-7=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 2 and 66 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865861
P240761-01	J23	Jack-Open	1	1	Job Reference (optional)	

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

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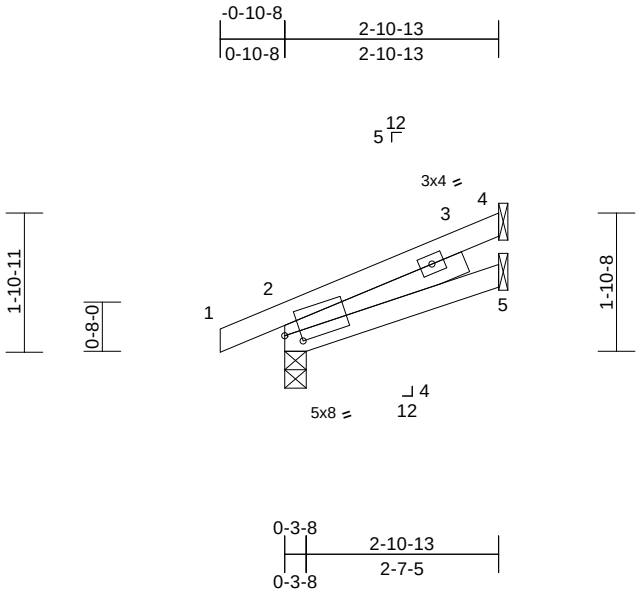

Scale = 1:31.3

Plate Offsets (X, Y): [2:0-2-9,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	2-5	>999	180		
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: 15 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-13 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=68 (LC 12)
Max Uplift 2=-35 (LC 12), 4=-60 (LC 12)
Max Grav 2=203 (LC 1), 4=84 (LC 1), 5=55 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-4=-71/30
BOT CHORD 2-5=-14/14

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 4 and 35 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865862
P240761-01	J30	Jack-Open	1	1	Job Reference (optional)	

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:06 Page: 1
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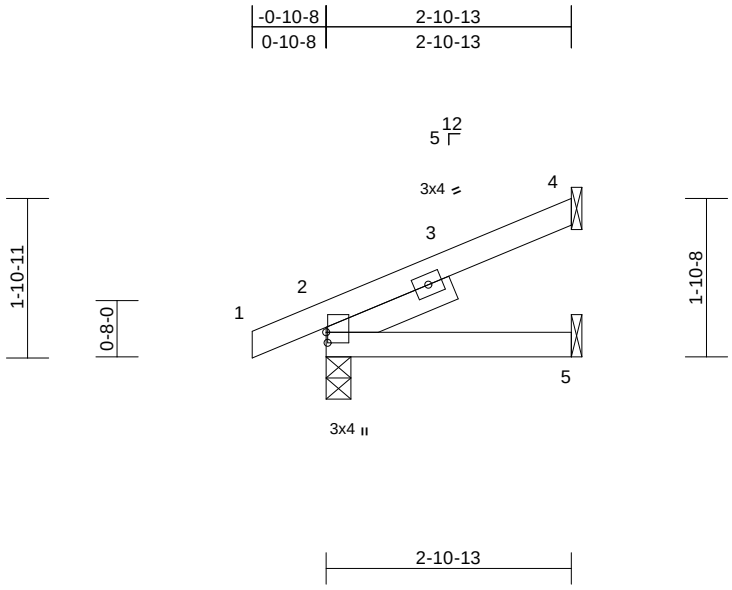

Scale = 1:27.3

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

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	0.15	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.01	2-5	>999	180		
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: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-7-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-10-13 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=68 (LC 12)
Max Uplift 2=-35 (LC 12), 4=-60 (LC 12)
Max Grav 2=198 (LC 1), 4=90 (LC 1), 5=57 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-65/30
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 60 lb uplift at joint 4 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J25	Jack-Open	1	1	Job Reference (optional)

I66865863

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

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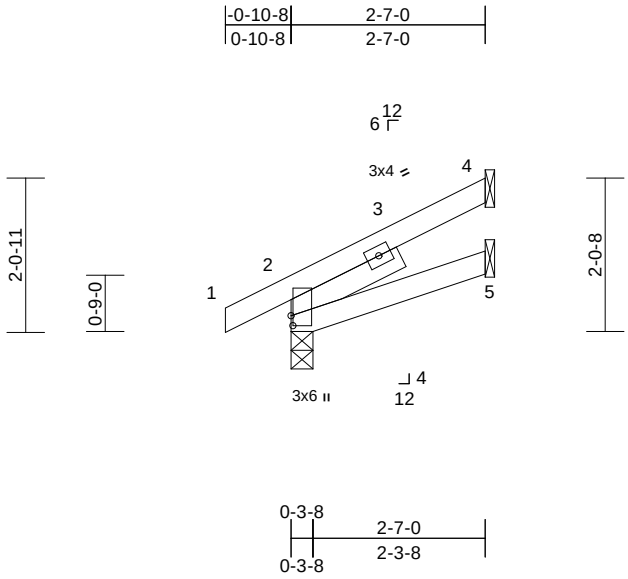

Scale = 1:30.7

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

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	0.13	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	2-5	>999	180		
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: 13 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-8-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-0 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 12)
Max Uplift 2=-25 (LC 12), 4=-61 (LC 12)
Max Grav 2=191 (LC 1), 4=72 (LC 1), 5=49 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-4=-72/34
BOT CHORD 2-5=-12/12

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 4 and 25 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865864
P240761-01	J28	Jack-Open	1	1	Job Reference (optional)	

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

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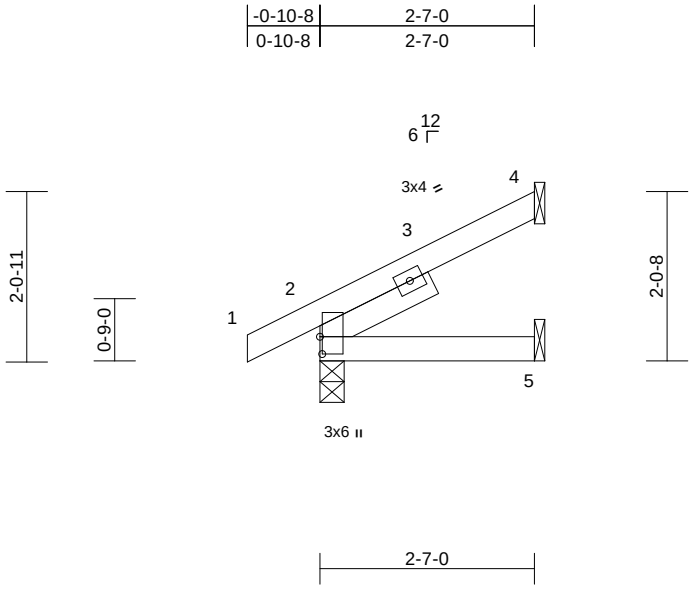

Scale = 1:27.8

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

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	0.14	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	2-5	>999	180		
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: 12 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-6-2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-7-0 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=74 (LC 12)
Max Uplift 2=-26 (LC 12), 4=-61 (LC 12)
Max Grav 2=185 (LC 1), 4=78 (LC 1), 5=50 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-70/34
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
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 4 and 26 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J14	Jack-Open	1	1	Job Reference (optional)

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
I66865865
LEE'S SUMMIT, MISSOURI
08/06/2024

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:05 Page: 1
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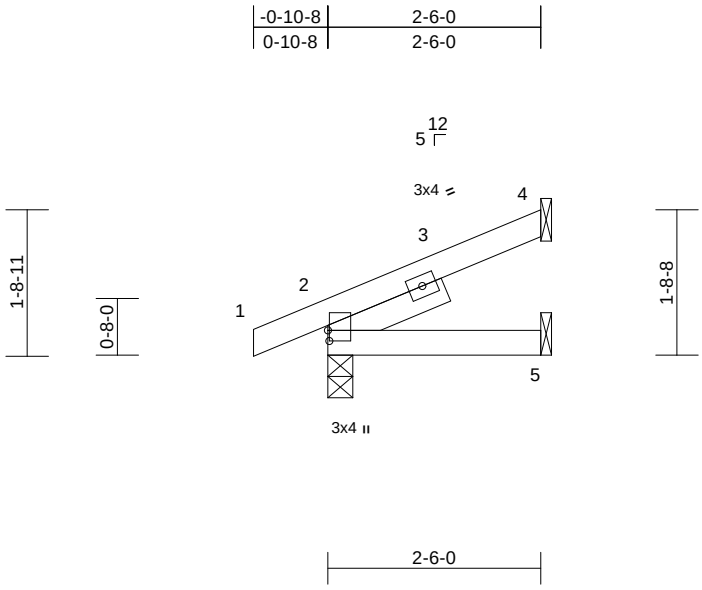

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Plate Offsets (X, Y): [2:0-1-8,0-0-3]

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	0.11	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	2-5	>999	180		
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: 12 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-9

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-0 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=60 (LC 12)
Max Uplift 2=-33 (LC 12), 4=-52 (LC 12)
Max Grav 2=182 (LC 1), 4=74 (LC 1), 5=49 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-58/27
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
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 33 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
NATHANIEL FOX
NUMBER
PE-2022042259
PROFESSIONAL ENGINEER

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865866
P240761-01	J2	Jack-Open	4	1	Job Reference (optional)	

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 12:22:04 Page: 1
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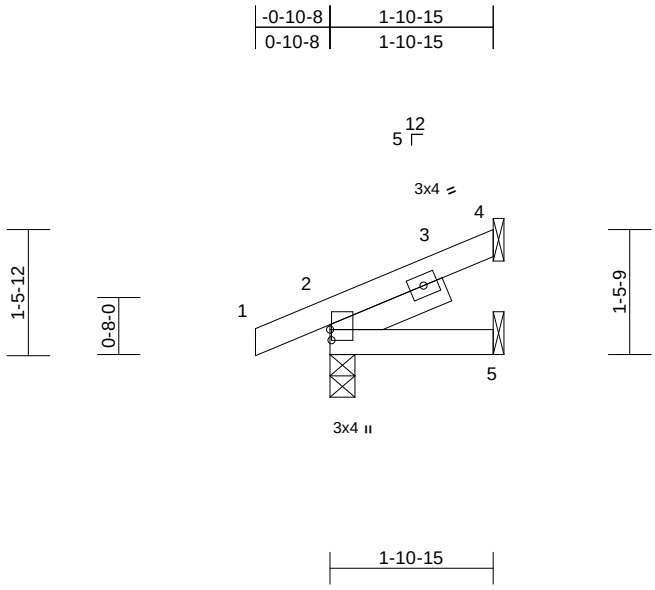

Scale = 1:27

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

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	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	2-5	>999	180		
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: 10 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-6

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-10-15 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=50 (LC 12)
Max Uplift 2=-33 (LC 8), 4=-40 (LC 12)
Max Grav 2=161 (LC 1), 4=52 (LC 1), 5=38 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-49/21
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
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 2 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865867
P240761-01	J05	Jack-Open	1	1	Job Reference (optional)	

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

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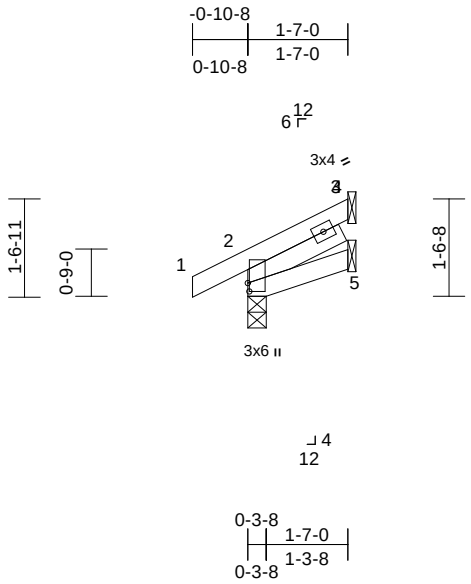


Scale = 1:36.5

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

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	0.07	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-5	>999	180		
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: 9 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-8-7

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 5= Mechanical
Max Horiz 2=54 (LC 12)
Max Uplift 2=-23 (LC 12), 3=-40 (LC 12)
Max Grav 2=156 (LC 1), 3=30 (LC 1), 5=30 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-3=-59/35, 3-4=0/0
BOT CHORD 2-5=-7/7

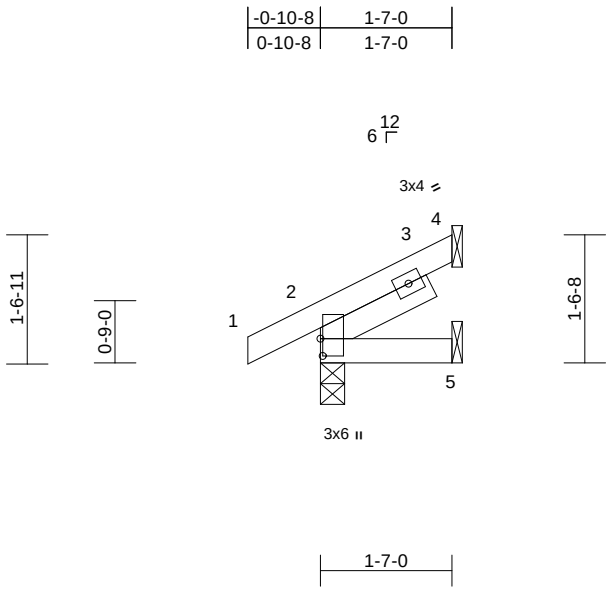
NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2 and 40 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

July 16,2024

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

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865868
P240761-01	J10	Jack-Open	1	1	Job Reference (optional)	



Scale = 1:27.8

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

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	0.06	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	2-5	>999	180		
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: 9 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-13

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-7-0 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=53 (LC 12)
Max Uplift 2=-23 (LC 12), 4=-40 (LC 12)
Max Grav 2=149 (LC 1), 4=38 (LC 1), 5=31 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-52/23
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 2 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

July 16,2024

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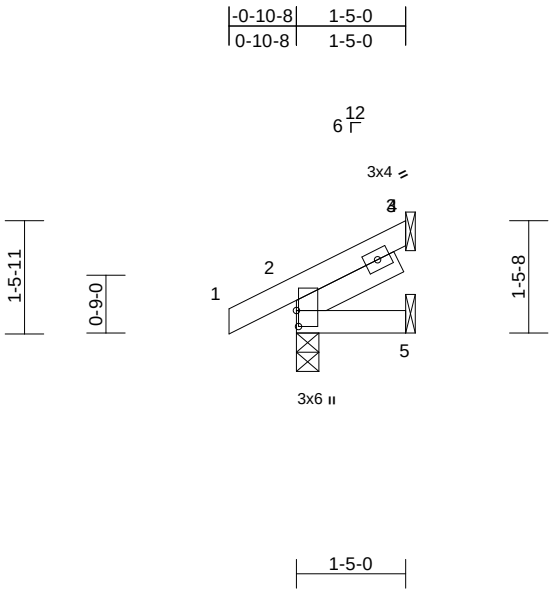
Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865869
P240761-01	J33	Jack-Open	1	1	Job Reference (optional)	



Scale = 1:29.9

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

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	0.06	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-5	>999	180		
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: 8 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-5-11

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

REACTIONS (size) 2=0-3-8, 3= Mechanical, 5= Mechanical
Max Horiz 2=50 (LC 12)
Max Uplift 2=-22 (LC 12), 3=-36 (LC 12)
Max Grav 2=144 (LC 1), 3=30 (LC 1), 5=28 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-3=-52/31, 3-4=0/0
BOT CHORD 2-5=0/0

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 2 and 36 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J11	Jack-Open	1	1	Job Reference (optional)

I66865870

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

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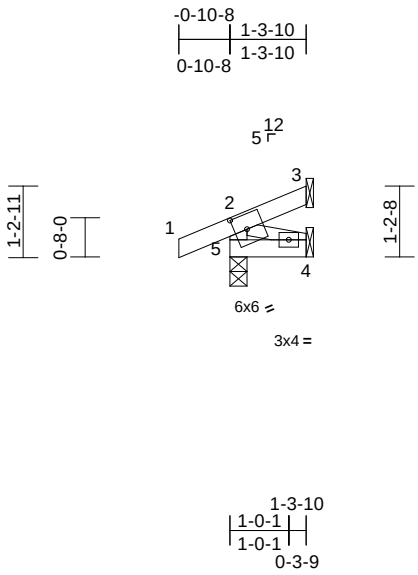

Scale = 1:39.4

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	0.00	4-5	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	4-5	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 7 lb	FT = 20%

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

BRACING
TOP CHORD Structural wood sheathing directly applied or 1-3-10 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=33 (LC 9)
Max Uplift 3=-8 (LC 12), 4=-5 (LC 12), 5=-43 (LC 8)
Max Grav 3=8 (LC 1), 4=23 (LC 3), 5=155 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-143/122, 1-2=0/27, 2-3=-28/13
BOT CHORD 4-5=-75/18
WEBS 2-4=-19/80

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 5 SP No.2 crushing capacity of 565 psi.
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, 5 lb uplift at joint 4 and 8 lb uplift at joint 3.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
08/06/2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196
P240761-01	J24	Jack-Open	1	1	I66865871 Job Reference (optional)

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

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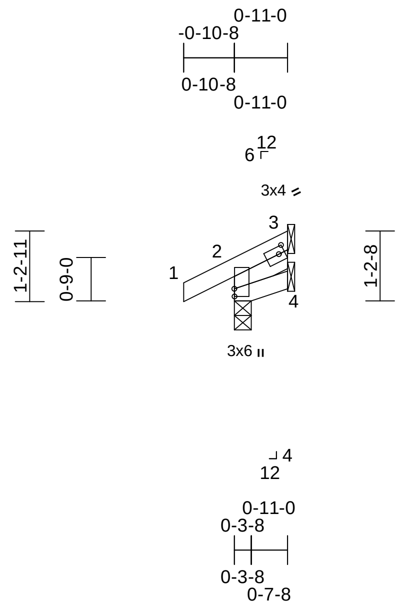

Scale = 1:39.8

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

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	0.07	Vert(LL)	0.00	2	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	2	>999	180		
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 = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-1-8

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-11-0 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=32 (LC 12)
Max Uplift 2=-30 (LC 12), 3=-15 (LC 12)
Max Grav 2=144 (LC 1), 3=3 (LC 8), 4=16 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-4/0, 2-3=-48/23
BOT CHORD 2-4=-4/4

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 3 and 30 lb uplift at joint 2.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

Job	Truss	Truss Type	Qty	Ply	Roof - HT Lot 196	I66865872
P240761-01	J29	Jack-Open	1	1	Job Reference (optional)	

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

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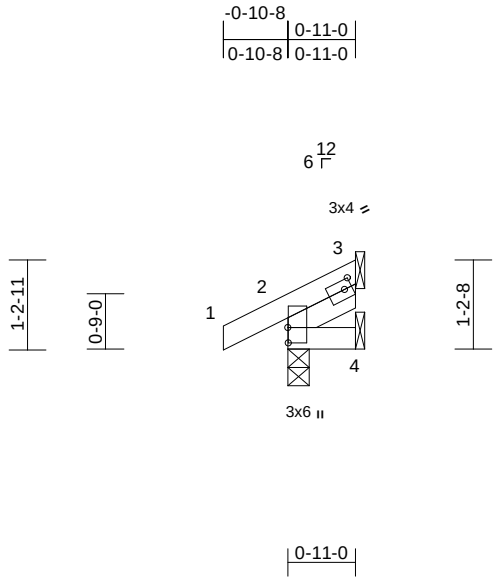

Scale = 1:31.3

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

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	0.06	Vert(LL)	0.00	2	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	2	>999	180		
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 = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 1-1-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 0-11-0 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=32 (LC 12)
Max Uplift 2=-29 (LC 12), 3=-17 (LC 12)
Max Grav 2=132 (LC 1), 3=4 (LC 19), 4=18 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-3=-38/20
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=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 3 and 29 lb uplift at joint 2.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 16,2024

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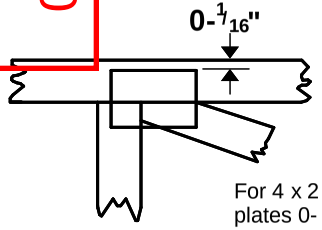
Symbols

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.

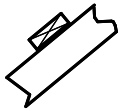
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

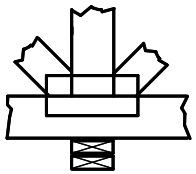
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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

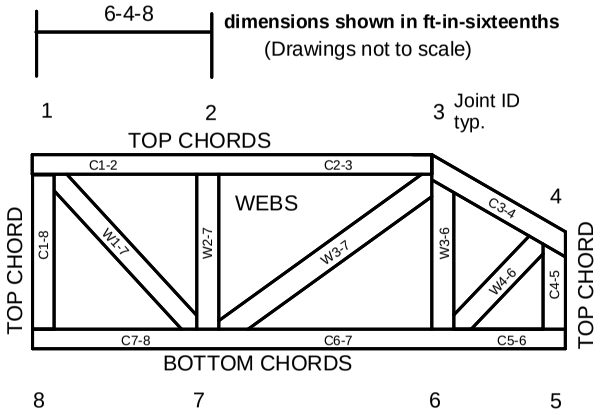


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

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®

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

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.