MiTek®

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

Re: 231146
Walker / 500 NW Main

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

Pages or sheets covered by this seal: I57752840 thru I57752851

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

Missouri COA: Engineering 001193

April 14,2023

Sevier, Scott ,Engineer

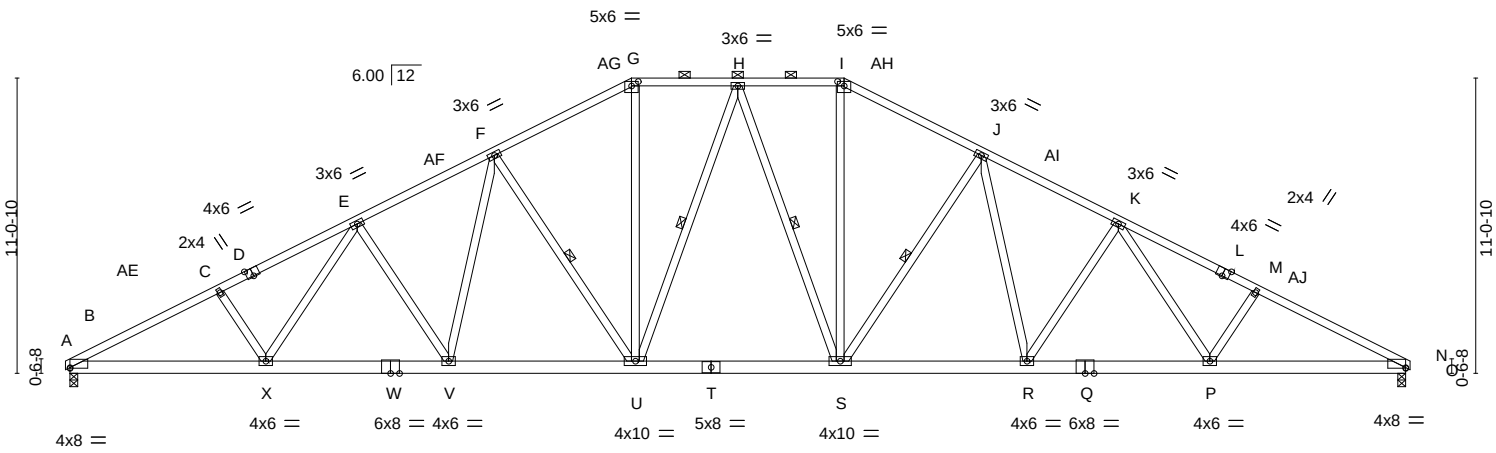
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which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

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	A1	Piggyback Base	2	1	I57752840
Heartland Truss, Inc.	Plattsburg, MO - 64477,				Job Reference (optional)

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:13 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-jdY11TJWlxCh24cIO5?v6xbCHvL5yheDsfPM8jzRBMy

0-2-0	5-7-7	10-0-1	15-10-10	21-0-4	25-0-0	28-11-12	34-1-6	39-2-15	44-4-9	50-0-0	50-2-0
0-2-0	5-7-7	5-1-10	5-1-10	5-1-10	3-11-12	3-11-12	5-1-10	5-1-10	5-1-10	5-7-7	0-2-0

Scale = 1:86.2



7-3-15	14-2-2	21-0-4	28-11-12	35-9-14	42-8-1	50-0-0
7-3-15	6-10-2	6-10-2	7-11-8	6-10-2	6-10-2	7-3-15

Plate Offsets (X,Y)-- [B:0-0-0,0-0-5], [D:0-3-0,Edge], [G:0-3-0,0-2-0], [I:0-3-0,0-2-0], [L:0-3-0,Edge], [N:0-0-0,0-0-5]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.41	S-U	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.64	S-U	>940	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.18	N	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 360 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x4 SP No.2 *Except* D-G,I-L: 2x4 SP 1650F 1.5E
BOT CHORD	2x6 SP No.1
WEBS	2x4 SP No.3

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-0-6 oc purlins, except 2-0-0 oc purlins (3-0-8 max.): G-I.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt F-U, H-U, H-S, J-S

REACTIONS. (size) B=0-3-8, N=0-3-8
Max Horz B=-180(LC 13)
Max Uplift B=-247(LC 12), N=-253(LC 13)
Max Grav B=2820(LC 33), N=2820(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	B-C=-5514/526, C-E=-5326/542, E-F=-4684/533, F-G=-3741/517, G-H=-3222/495, H-I=-3222/495, I-J=-3741/517, J-K=-4684/533, K-M=-5326/542, M-N=-5514/526
BOT CHORD	B-X=-543/4854, V-X=-419/4473, U-V=-292/3893, S-U=-154/3236, R-S=-240/3893, P-R=-317/4473, N-P=-402/4854
WEBS	C-X=-347/169, E-X=-68/379, E-V=-769/204, F-V=-96/846, F-U=-1259/258, G-U=-120/1242, H-U=-402/235, H-S=-402/235, I-S=-120/1242, J-S=-1259/258, J-R=-96/846, K-R=-769/204, K-P=-68/379, M-P=-347/169

NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-2-0 to 4-10-0, Interior(1) 4-10-0 to 13-11-6, Exterior(2R) 13-11-6 to 36-0-10, Interior(1) 36-0-10 to 45-2-0, Exterior(2E) 45-2-0 to 50-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 247 lb uplift at joint B and 253 lb uplift at joint N.
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.

April 14,2023

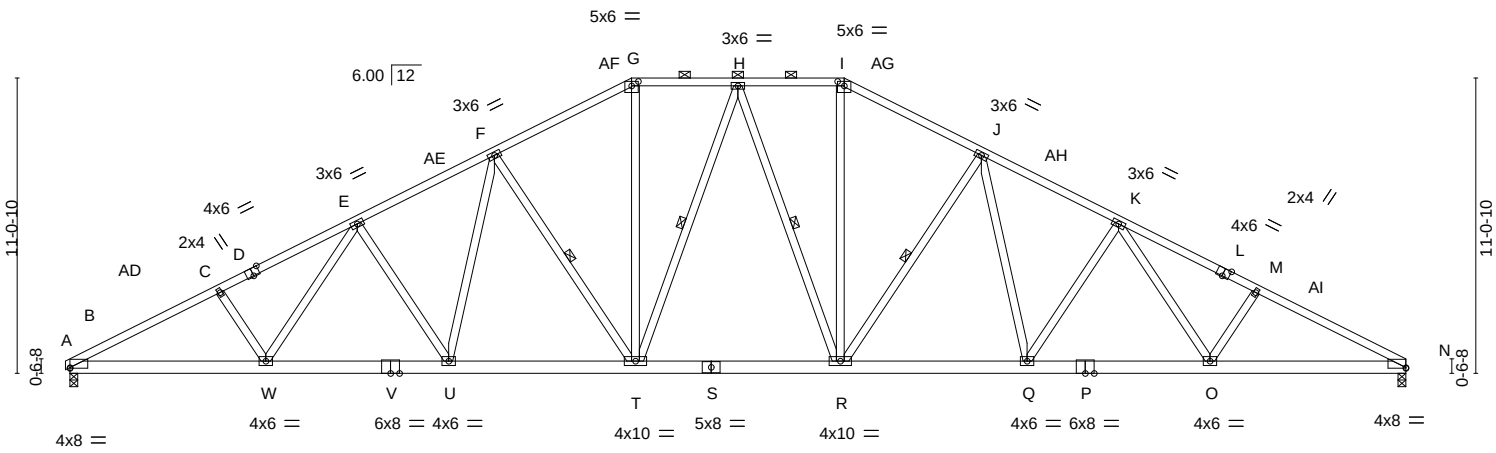
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main	
231146	A1A	PIGGYBACK BASE	13	1		I57752841
					Job Reference (optional)	

Heartland Truss, Inc. Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:15 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-g?fnS9KnqYSPHNmgVW2NBMhXNi1ZQb8WJzuSDczRBMw

0-2-0	5-7-7	10-0-1	15-10-10	21-0-4	25-0-0	28-11-12	34-1-6	39-2-15	44-4-9	50-0-0
0-2-0	5-7-7	5-1-10	5-1-10	5-1-10	3-11-12	3-11-12	5-1-10	5-1-10	5-1-10	5-7-7

Scale = 1:86.2



7-3-15	14-2-2	21-0-4	28-11-12	35-9-14	42-8-1	50-0-0
7-3-15	6-10-2	6-10-2	7-11-8	6-10-2	6-10-2	7-3-15

Plate Offsets (X,Y)-- [B:0-0-0,0-0-5], [D:0-3-0,Edge], [G:0-3-0,0-2-0], [I:0-3-0,0-2-0], [L:0-3-0,Edge], [N:0-0-0,0-0-5]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.41	R-T	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.82	Vert(CT)	-0.64	R-T	>940	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.63	Horz(CT)	0.18	N	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 359 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2 *Except* D-G,I-L: 2x4 SP 1650F 1.5E
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 1-11-7 oc purlins, except 2-0-0 oc purlins (3-0-8 max.): G-I.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt F-T, H-T, H-R, J-R

REACTIONS. (size) B=0-3-8, N=0-3-8
Max Horz B=177(LC 12)
Max Uplift B=-247(LC 12), N=-249(LC 13)
Max Grav B=2820(LC 33), N=2808(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-5514/526, C-E=-5326/543, E-F=-4684/533, F-G=-3741/517, G-H=-3222/495, H-I=-3222/495, I-J=-3741/517, J-K=-4684/534, K-M=-5326/544, M-N=-5514/527
BOT CHORD B-W=-544/4854, U-W=-420/4473, T-U=-293/3893, R-T=-154/3236, Q-R=-240/3893, O-Q=-318/4473, N-O=-403/4854
WEBS C-W=-347/169, E-W=-68/379, E-U=-769/204, F-U=-96/846, F-T=-1259/258, G-T=-120/1242, H-T=-402/234, H-R=-401/235, I-R=-120/1242, J-R=-1260/258, J-Q=-96/846, K-Q=-769/204, K-O=-68/379, M-O=-347/169

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-2-0 to 4-10-0, Interior(1) 4-10-0 to 13-11-6, Exterior(2R) 13-11-6 to 36-0-10, Interior(1) 36-0-10 to 45-0-0, Exterior(2E) 45-0-0 to 50-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 247 lb uplift at joint B and 249 lb uplift at joint N.
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.

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main	
231146	A1G	GABLE	2	1		I57752842
					Job Reference (optional)	

Heartland Truss, Inc. Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:20 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-0zTgVsOve45iO8fel3dYuQOaojws5x3FTFbDupzRBMr

0-2-0 21-0-4 28-11-12 50-0-0 50-2-0
0-2-0 21-0-4 7-11-8 21-0-4 0-2-0

Scale = 1:87.7

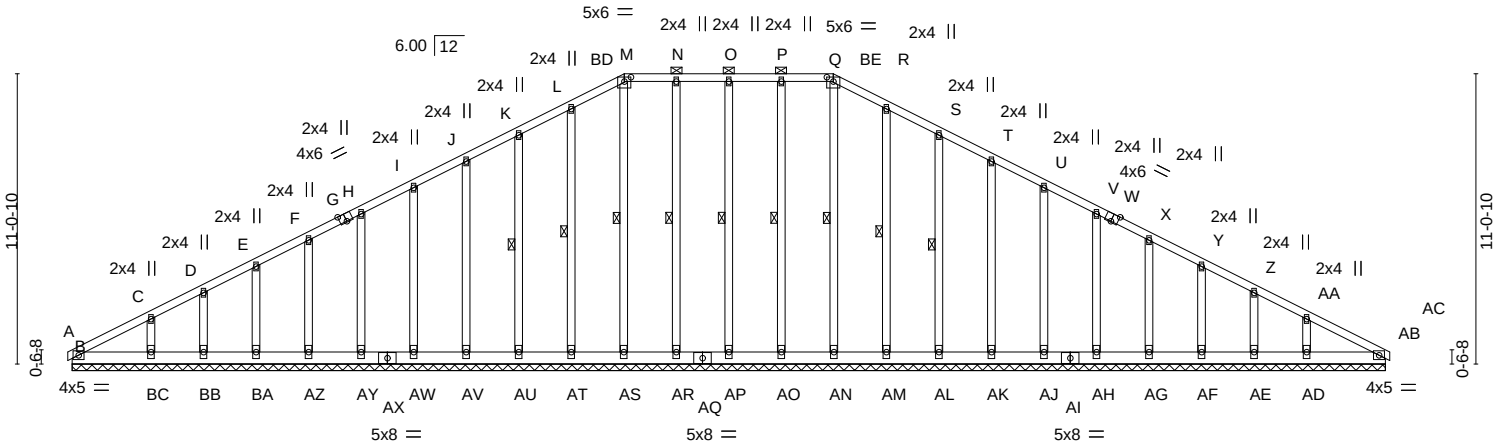


Plate Offsets (X,Y)-- [G:0-3-0,Edge], [M:0-3-0,0-2-0], [Q:0-3-0,0-2-0], [W:0-3-0,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	-0.00	AB	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	AB	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.01	AB	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 419 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): M-Q.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt O-AP, N-AR, M-AS, L-AT, K-AU, P-AO, Q-AN, R-AM, S-AL

REACTIONS. All bearings 50-0-0.
(lb) - Max Horz B=181(LC 16)
Max Uplift All uplift 100 lb or less at joint(s) AP, AR, AT, AU, AV, AW, AY, AZ, BA, BB, BC, AO, AM, AL, AK, AJ, AH, AG, AF, AE, AD
Max Grav All reactions 250 lb or less at joint(s) B, AB, AS, BA, BB, AN, AF, AE except AP=277(LC 32), AR=291(LC 32), AT=295(LC 33), AU=276(LC 33), AV=278(LC 33), AW=278(LC 33), AY=278(LC 33), AZ=282(LC 33), BC=278(LC 33), AO=291(LC 32), AM=295(LC 33), AL=276(LC 33), AK=278(LC 33), AJ=278(LC 33), AH=278(LC 33), AG=282(LC 33), AD=278(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-258/78, K-L=-96/254, L-M=-115/302, M-N=-106/287, N-O=-106/287, O-P=-106/287, P-Q=-106/287, Q-R=-115/302, R-S=-96/254
WEBS N-AR=-251/54, L-AT=-255/82, P-AO=-251/54, R-AM=-255/82

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-2-0 to 5-0-0, Exterior(2N) 5-0-0 to 16-0-4, Corner(3R) 16-0-4 to 33-11-12 , Exterior(2N) 33-11-12 to 45-0-0, Corner(3E) 45-0-0 to 50-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) Provide adequate drainage to prevent water ponding.
6) All plates are 3x6 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) AP, AR, AT, AU, AV, AW, AY, AZ, BA, BB, BC, AO, AM, AL, AK, AJ, AH, AG, AF, AE, AD.
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.

April 14,2023

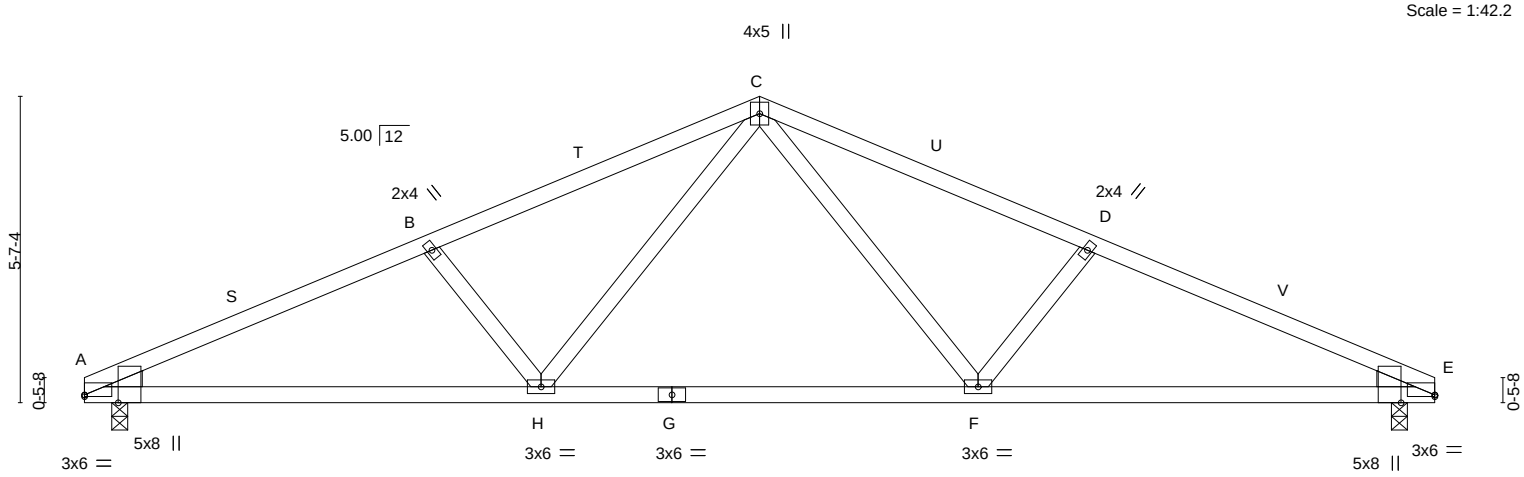
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	B1	Roof Special	4	1	I57752843
Heartland Truss, Inc.	Plattsburg, MO - 64477,				Job Reference (optional)

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:22 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-yLbQwYQAAiLQdSo0QUg0zrTlgXPPZrXYwZ4KzizRBMp

6-4-4	12-4-4	18-4-4	24-8-8
6-4-4	6-0-0	6-0-0	6-4-4

Scale = 1:42.2



0-6-0	8-4-4	16-4-4	24-2-8	24-8-8
0-6-0	7-10-4	7-11-15	7-10-4	0-6-0

Plate Offsets (X,Y)-- [A:0-0-0,0-0-6], [A:0-1-11,Edge], [E:0-0-0,0-0-6], [E:0-1-11,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.71	Vert(LL)	-0.15	F-H	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.88	Vert(CT)	-0.30	F-H	>979	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horz(CT)	0.06	E	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 108 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 3-5-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) A=0-3-8, E=0-3-8
Max Horz A=-87(LC 17)
Max Uplift A=-125(LC 12), E=-125(LC 13)
Max Grav A=1151(LC 18), E=1151(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-2067/321, B-C=-1805/309, C-D=-1805/309, D-E=-2067/321
BOT CHORD A-H=-234/1839, F-H=-113/1200, E-F=-230/1839
WEBS C-F=-78/645, D-F=-486/197, C-H=-78/645, B-H=-486/197

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior(1) 3-0-0 to 9-4-4, Exterior(2R) 9-4-4 to 15-4-4, Interior(1) 15-4-4 to 21-8-8, Exterior(2E) 21-8-8 to 24-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) A=125, E=125.
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.

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

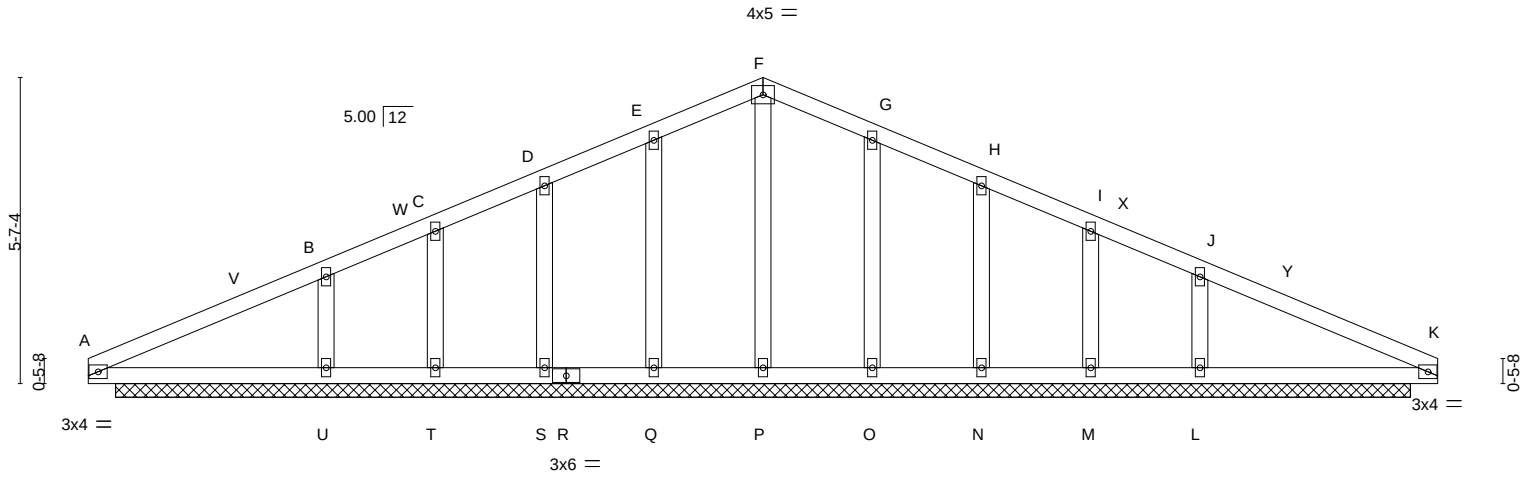
Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	B1G	Roof Special Supported Gable	1	1	I57752844

Job Reference (optional)

Heartland Truss, Inc. Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:24 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-vkiBLERQiJb7tmyPXviU3GZ9kLDn1mlrOtZR1azRBMn

12-4-4 | 24-8-8
12-4-4 | 12-4-4

Scale = 1:42.2



24-2-8 | 24-8-8
24-2-8 | 0-6-0

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.31	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	-0.01	L	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 120 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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

REACTIONS. All bearings 23-8-8.
(lb) - Max Horz U=-89(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) Q, S, T, U, O, N, M, L
Max Grav All reactions 250 lb or less at joint(s) T, M except P=437(LC 1), Q=264(LC 18), S=309(LC 18), U=551(LC 18), O=264(LC 19), N=309(LC 19), L=551(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-157/440, B-C=-51/362, C-D=-34/395, D-E=0/390, E-F=0/385, F-G=0/385, G-H=0/390, H-I=-34/395, I-J=-51/362, J-K=-157/440
BOT CHORD A-U=-334/187, T-U=-334/187, S-T=-334/187, Q-S=-334/187, P-Q=-334/187, O-P=-334/187, N-O=-334/187, M-N=-334/187, L-M=-334/187, K-L=-334/187
WEBS F-P=-395/18, B-U=-372/212, J-L=-372/212

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 9-4-4, Corner(3R) 9-4-4 to 15-4-4, Exterior(2N) 15-4-4 to 21-8-8, Corner(3E) 21-8-8 to 24-8-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) Q, S, T, U, O, N, M, L.
9) N/A
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.

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	C1	COMMON	11	1	I57752845
Heartland Truss, Inc.	Plattsburg, MO - 64477,				Job Reference (optional)

8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:25 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-NwGZYZS2Tdj_UwXb5cDjbT5EukSRmC7_dXJ_Z1zRBMm

0-2-0 5-7-2 11-0-0 16-4-14 22-0-0 22-2-0
0-2-0 5-7-2 5-4-14 5-4-14 5-7-2 0-2-0

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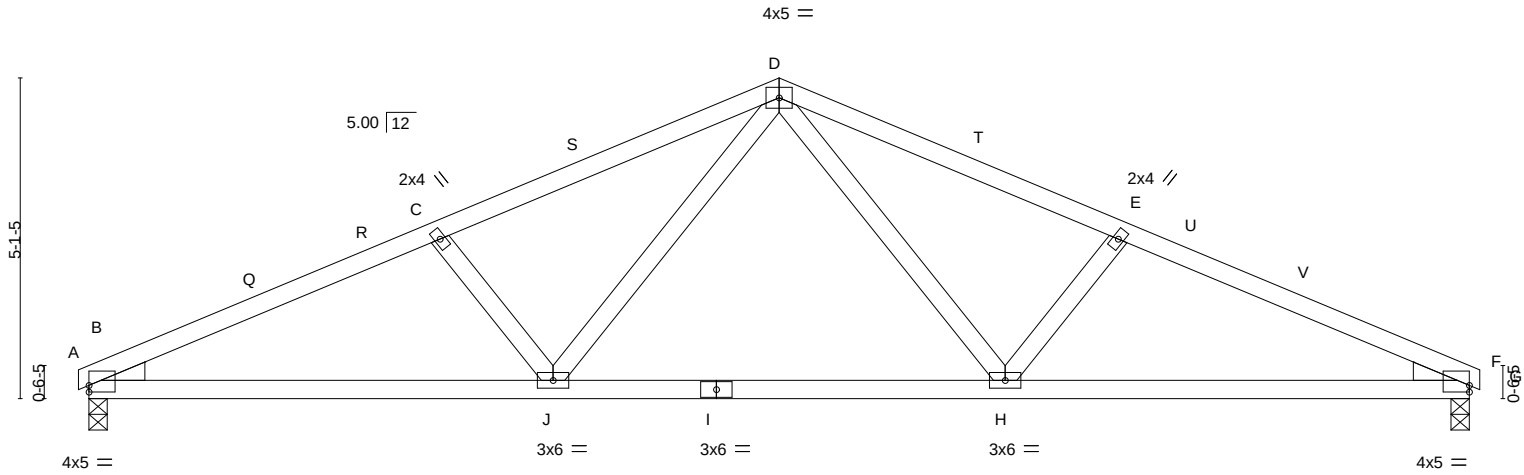

7-4-12 14-7-4 22-0-0
7-4-12 7-2-7 7-4-12

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.11	H-J	>999	240	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.22	H-J	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.28	Horz(CT)	0.05	F	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 97 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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

REACTIONS. (size) B=0-3-8, F=0-3-8
Max Horz B=-79(LC 13)
Max Uplift B=-107(LC 12), F=-113(LC 13)
Max Grav B=1058(LC 19), F=1058(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-2044/341, C-D=-1762/325, D-E=-1762/325, E-F=-2044/341
BOT CHORD B-J=-258/1821, H-J=-125/1141, F-H=-258/1821
WEBS D-H=-79/668, E-H=-508/187, D-J=-78/668, C-J=-508/187

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-2-0 to 2-10-0, Interior(1) 2-10-0 to 8-0-0, Exterior(2R) 8-0-0 to 14-0-0, Interior(1) 14-0-0 to 19-2-0, Exterior(2E) 19-2-0 to 22-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) B=107, F=113.
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.

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	C1G	GABLE	2	1	I57752846
					Job Reference (optional)

Heartland Truss, Inc. Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:27 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-JJOJzFUI?EzikDh_C1FBguAmmYIFE8iH4qo5evzRBMk

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0-2-0 11-0-0 11-0-0 0-2-0

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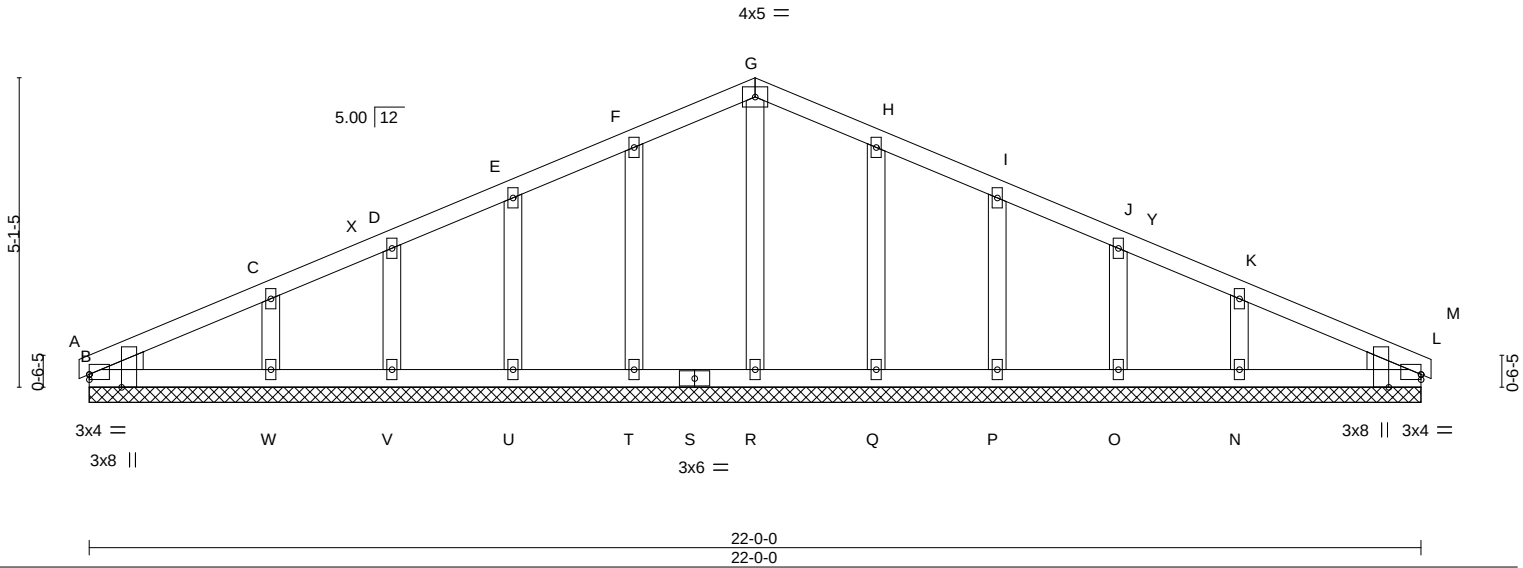

22-0-0
22-0-0

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.11	Vert(LL)	-0.00	L	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.00	L	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	L	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 107 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
WEDGE
Left: 2x4 SP No.3 , Right: 2x4 SP No.3

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. All bearings 22-0-0.
(lb) - Max Horz B=83(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) B, T, U, V, W, Q, P, O, N
Max Grav All reactions 250 lb or less at joint(s) B, L, R, V, O except T=268(LC 19), U=264(LC 19), W=276(LC 1), Q=268(LC 20), P=264(LC 20), N=276(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -0-2-0 to 3-0-0, Exterior(2N) 3-0-0 to 8-0-0, Corner(3R) 8-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 19-0-0, Corner(3E) 19-0-0 to 22-2-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
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) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, T, U, V, W, Q, P, O, N.
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.

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	V1	Valley	1	1	I57752847
					Job Reference (optional)

Heartland Truss, Inc., Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:28 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-nVyhAbUxmY5ZLNGAmlmQD6jrYydVzbOQJUXfALzRBMj

9-7-14 | 19-3-12
9-7-14 | 9-7-14

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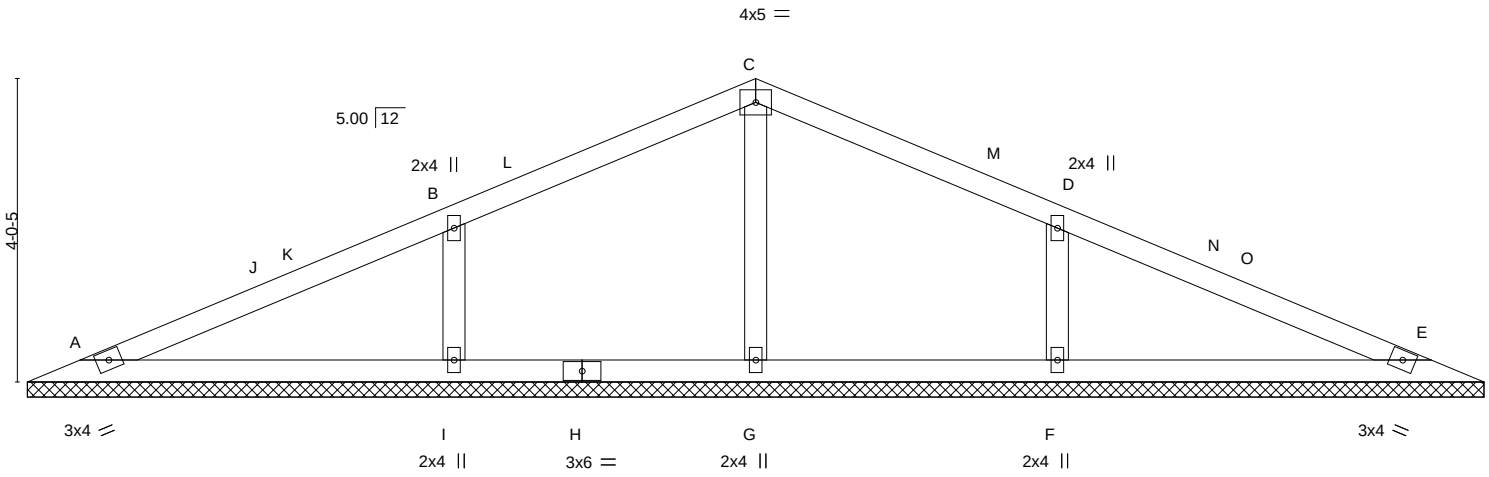

19-3-12
19-3-12

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.19	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.00	E	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 68 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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. All bearings 19-3-12.
(lb) - Max Horz A=63(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) A, E except I=-122(LC 12), F=-122(LC 13)
Max Grav All reactions 250 lb or less at joint(s) A, E except G=271(LC 19), I=660(LC 18), F=660(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-I=-540/184, D-F=-540/184

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Interior(1) 3-8-12 to 6-7-14, Exterior(2R) 6-7-14 to 12-7-14, Interior(1) 12-7-14 to 15-7-0, Exterior(2E) 15-7-0 to 18-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, E except (jt=lb) I=122, F=122.
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.

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

April 14,2023

MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	V2	GABLE	1	1	I57752848
					Job Reference (optional)

Heartland Truss, Inc., Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:29 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-FiW4OxVZXrDQzXrMKSIfmJG3RMzDi27aX8HCiozRBMi

7-3-1 | 14-6-2
7-3-1 | 7-3-1

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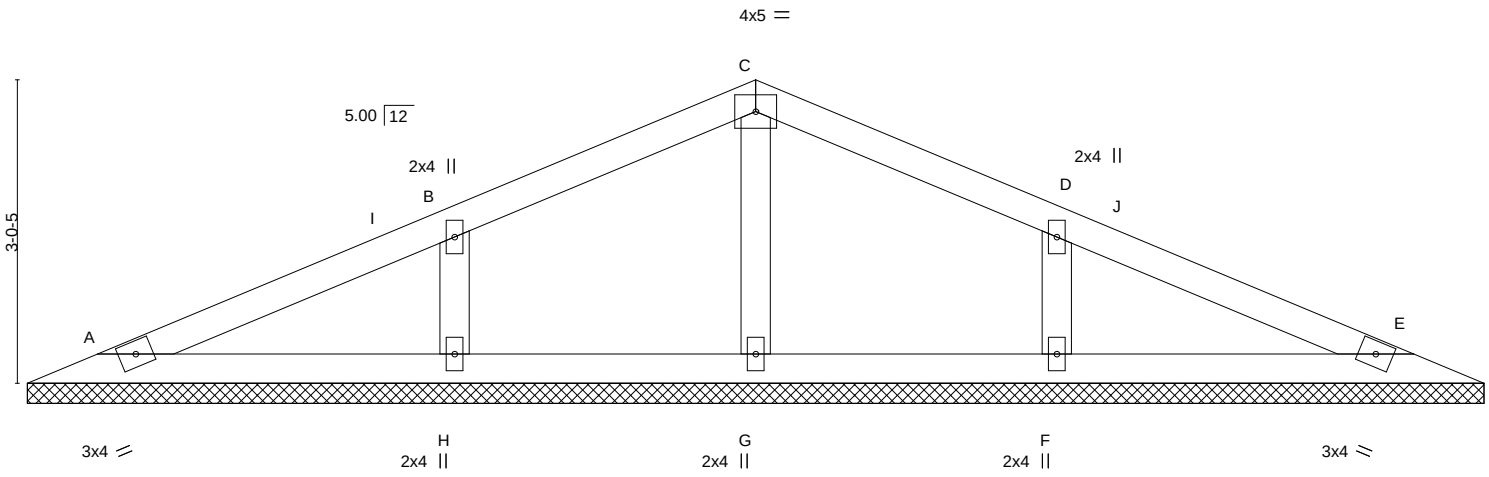


14-6-2
14-6-2

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	E	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 50 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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. All bearings 14-6-2.
(lb) - Max Horz A=46(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) A, E, H, F
Max Grav All reactions 250 lb or less at joint(s) A, E, G except H=508(LC 18), F=508(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-H=-417/175, D-F=-417/175

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Interior(1) 3-8-12 to 4-3-1, Exterior(2R) 4-3-1 to 10-3-1, Interior(1) 10-3-1 to 10-9-6, Exterior(2E) 10-9-6 to 13-9-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, E, H, F.
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.

April 14,2023

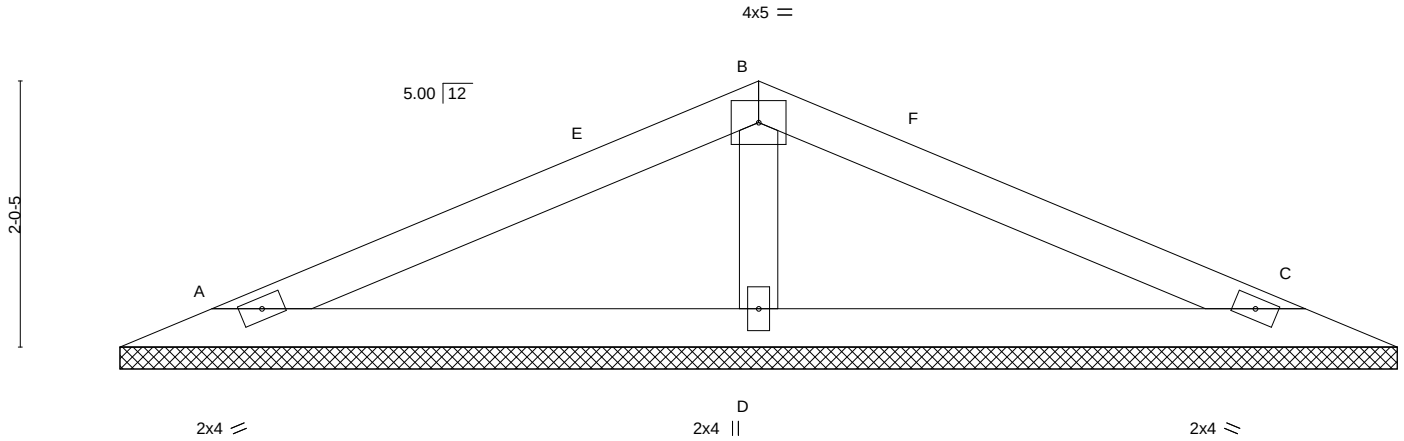
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	V3	Valley	1	1	I57752849
					Job Reference (optional)

Heartland Truss, Inc., Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:31 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-C4dqpdXp3TT8Cr_lRtK7rkLNB9eYAyvt?SmJngzRBMg

4-10-4 | 9-8-9
4-10-4 | 4-10-4

Scale = 1:17.5



9-8-9
9-8-9

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.17	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	C	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 30 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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) A=9-8-9, C=9-8-9, D=9-8-9
Max Horz A=-29(LC 13)
Max Uplift A=-31(LC 12), C=-36(LC 13), D=-21(LC 12)
Max Grav A=235(LC 18), C=235(LC 19), D=414(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-D=-290/183

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-8-12 to 3-8-12, Exterior(2R) 3-8-12 to 5-11-13, Exterior(2E) 5-11-13 to 8-11-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, C, D.
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.

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

April 14,2023

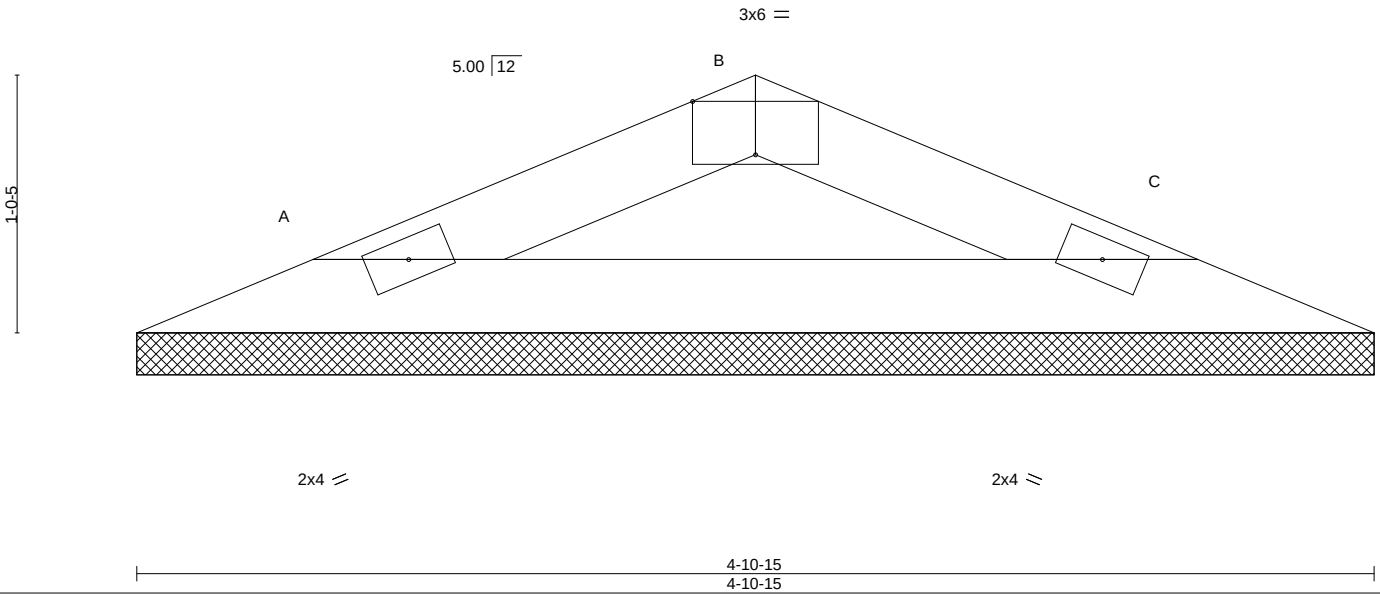
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	V4	Valley	1	1	I57752850
					Job Reference (optional)

Heartland Truss, Inc., Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:32 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-gGBC0zYRqmb?q_Zx?arMNyud2Z_5vQA0E6VsJ7zRBMf

2-5-8 | 4-10-15
2-5-8 | 2-5-8

Scale = 1:9.1



4-10-15
4-10-15

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

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.15	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	C	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%
BCDL	10.0											

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

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

REACTIONS. (size) A=4-10-15, C=4-10-15
Max Horz A=12(LC 12)
Max Uplift A=-17(LC 12), C=-17(LC 13)
Max Grav A=169(LC 18), C=169(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end 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=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) Gable requires continuous bottom chord bearing.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, C.
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.

April 14,2023

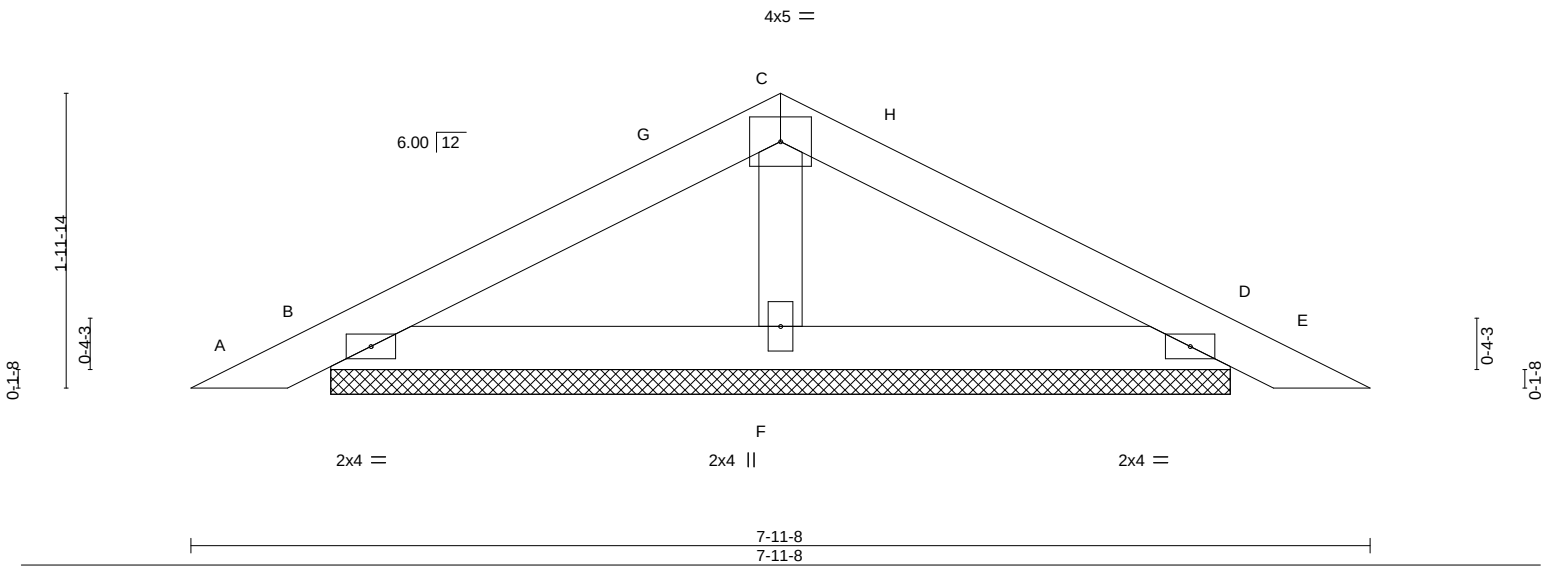
MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Walker / 500 NW Main
231146	J1	Piggyback	17	1	I57752851
					Job Reference (optional)

Heartland Truss, Inc. Plattsburg, MO - 64477, 8.430 s Jan 6 2022 MiTek Industries, Inc. Thu Apr 13 08:23:33 2023 Page 1
ID:dbdYcyjkBp4THJJuEDcjLhyC41Y-8TlaEJY3b4jsS888ZIMbw9QllzLCetj9SmFPrZzRBMe

3-11-12 | 7-11-8
3-11-12 | 3-11-12

Scale = 1:15.5



7-11-8
7-11-8

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	-0.00	E	n/r	120	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.09	Vert(CT)	-0.00	D	n/r	90		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	D	n/a	n/a		
BCLL	0.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 24 lb	FT = 20%
BCDL	10.0											

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

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) B=6-0-14, D=6-0-14, F=6-0-14
Max Horz B=31(LC 12)
Max Uplift B=-44(LC 12), D=-50(LC 13)
Max Grav B=264(LC 19), D=264(LC 20), F=259(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-3-15 to 3-3-15, Exterior(2R) 3-3-15 to 4-7-9, Exterior(2E) 4-7-9 to 7-7-9 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
2) TCLL: ASCE 7-16; Pf=25.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 25.0 psf on overhangs non-concurrent with other live loads.
5) Gable requires continuous bottom chord bearing.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) B, D.
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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

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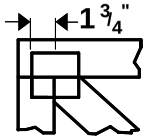
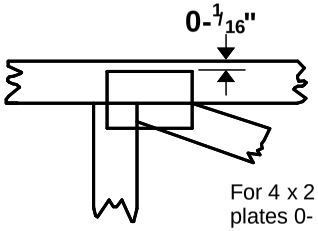
Symbols

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.

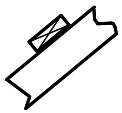
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

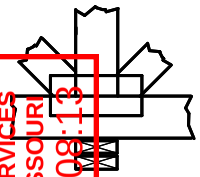
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING

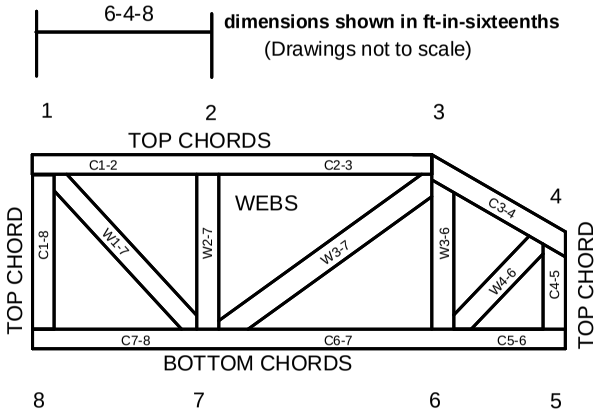


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

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