



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
Development Services
LEE'S SUMMIT, MISSOURI

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

Re: 211674
1626 Plan

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: I48382954 thru I48382974

My license renewal date for the state of Missouri is December 31, 2021.

Missouri COA: Engineering 001193



October 18, 2021

Sevier, Scott ,Engineer

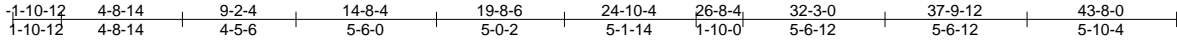
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which 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 211674	Truss A1	Truss Type Piggyback Base	Qty 3	Ply 1	1626 Plan	148382954
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:33 2021 Page 1

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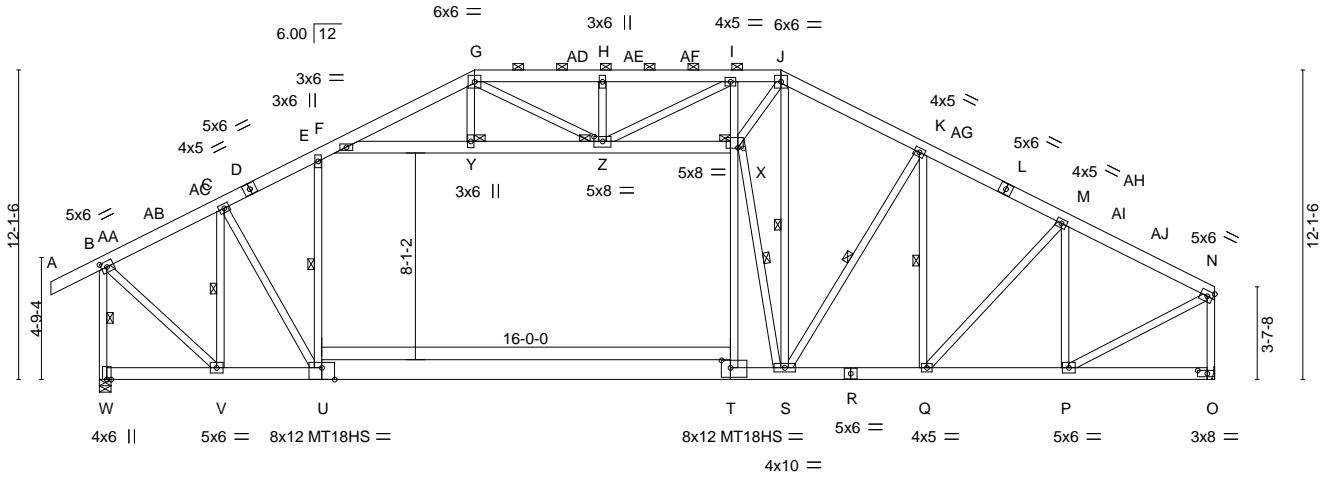


Plate Offsets (X,Y)-- [B:0-2-11,0-2-8], [O:0-4-8,0-1-8], [T:0-4-4,0-3-8], [U:0-6-0,Edge], [X:0-2-8,0-0-4], [Z:0-4-0,0-2-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.82 BC 0.84 WB 0.77 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.37 T-U >999 240 Vert(CT) -0.60 T-U >872 180 Horz(CT) 0.05 O n/a n/a Attic -0.31 T-U 613 360	MT20 MT18HS Weight: 462 lb	244/190 244/190 FT = 20%
TCDL 10.0	Rep Stress Incr YES				
BCLL 0.0	Code IRC2018/TPI2014				
BCDL 10.0					

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E *Except*
 T-U: 2x10 SP 2400F 2.0E, O-R: 2x6 SP No.1
WEBS 2x4 SP No.3 *Except*
 I-T,B-V,N-P: 2x4 SP No.2, F-X: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-13 max.): G-J.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: V-W.
WEBS 1 Row at midpt C-V, E-U, S-X, J-S, B-W, K-S, K-Q
JOINTS 1 Brace at Jt(s): X, Y, Z

REACTIONS. (size) W=0-5-8, O=Mechanical
 Max Horz W=-246(LC 10)
 Max Uplift W=-70(LC 12), O=-111(LC 13)
 Max Grav W=3071(LC 40), O=2586(LC 34)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD B-C=-2143/157, C-E=-2991/123, E-F=-2871/207, F-G=-2338/267, G-H=-3111/303, H-I=-3111/303, I-J=-3289/292, J-K=-2895/262, K-M=-3023/235, M-N=-2560/181, B-W=-2965/202, N-O=-2526/161
BOT CHORD U-V=-64/1842, T-U=0/2606, S-T=0/2563, Q-S=-8/2600, P-Q=-82/2226
WEBS C-V=-2060/0, C-U=0/1604, E-U=-432/280, T-X=0/1755, I-X=-522/390, S-X=-1305/1206, J-S=-788/774, F-Y=-1039/142, Y-Z=-1043/138, X-Z=-333/1172, B-V=0/2502, G-Z=-122/1289, H-Z=-654/153, I-Z=-726/106, J-X=-279/2033, K-S=-464/273, K-Q=-358/57, M-Q=0/651, M-P=-1129/108, N-P=-63/2520

- 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) -1-10-12 to 2-5-10, Interior(1) 2-5-10 to 8-6-2, Exterior(2R) 8-6-2 to 32-10-6, Interior(1) 32-10-6 to 39-1-14, Exterior(2E) 39-1-14 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Ceiling dead load (5.0 psf) on member(s). E-F, F-Y, Y-Z, X-Z
 - 9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. T-U
 - 10) Refer to girder(s) for truss to truss connections.
 - 11) Bearing at joint(s) W considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 12) Provide metal plate or equivalent at bearing(s) O to support reaction shown.
 - 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 70 lb uplift at joint W and 111 lb uplift



October 18, 2021

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



Job 211674	Truss A1	Truss Type Piggyback Base	Qty 3	Ply 1	1626 Plan Job Reference (optional)	I48382954
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:33 2021 Page 2
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NOTES-

- 14) 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.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 16) Attic room checked for L/360 deflection.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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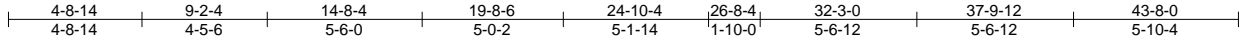
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1A	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	1626 Plan	48382955
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:35 2021 Page 1

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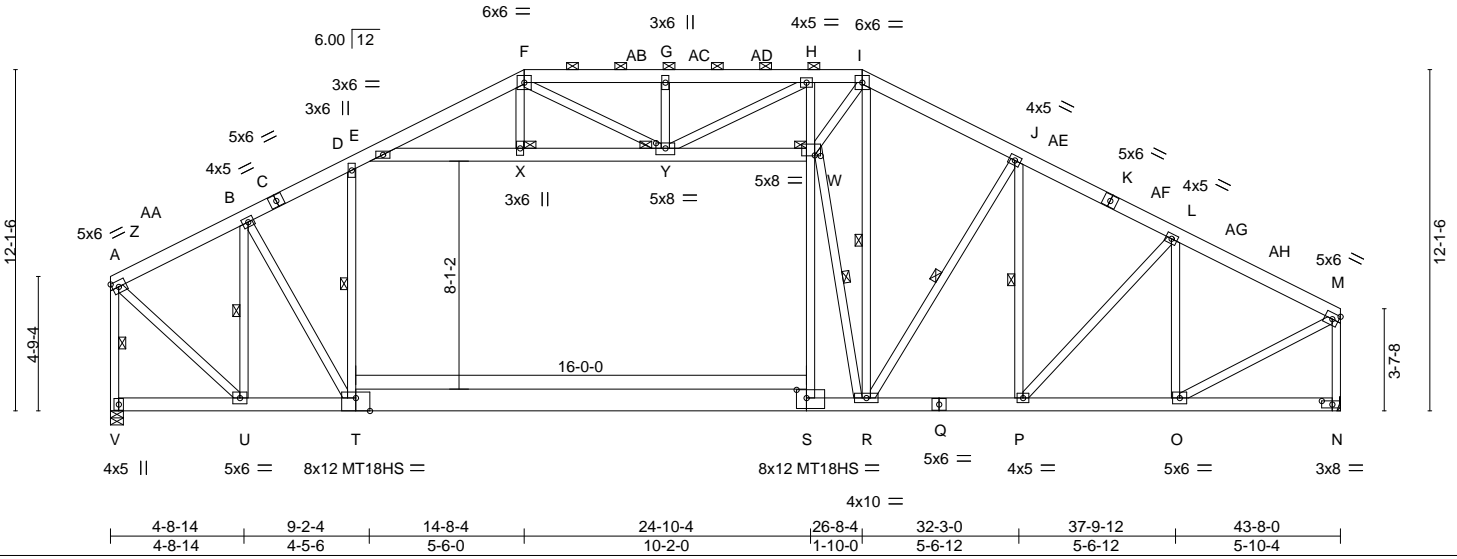


Plate Offsets (X, Y)-- [N:0-4-8,0-1-8], [S:0-4-4,0-3-8], [T:0-6-0,Edge], [W:0-2-8,0-0-4], [Y:0-4-0,0-2-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.82 BC 0.85 WB 0.77 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.37 S-T >999 240 Vert(CT) -0.60 S-T >872 180 Horz(CT) 0.05 N n/a n/a Attic -0.31 S-T 613 360	MT20 MT18HS Weight: 457 lb	244/190 244/190 FT = 20%
TCDL 10.0	Rep Stress Incr YES Code IRC2018/TPI2014				
BCLL 0.0					
BCDL 10.0					

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E *Except*
 S-T: 2x10 SP 2400F 2.0E, N-Q: 2x6 SP No.1
WEBS 2x4 SP No.3 *Except*
 H-S,A-U,M-O: 2x4 SP No.2, E-W: 2x6 SP No.1

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-14 max.): F-I.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt B-U, D-T, R-W, I-R, A-V, J-R, J-P
JOINTS 1 Brace at Jt(s): W, X, Y

REACTIONS. (size) V=0-5-8, N=Mechanical
 Max Horz V=-252(LC 8)
 Max Uplift V=-28(LC 12), N=-110(LC 13)
 Max Grav V=2951(LC 39), N=2590(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-2152/136, B-D=-3005/123, D-E=-2878/203, E-F=-2337/270, F-G=-3108/307, G-H=-3108/307, H-I=-3284/297, I-J=-2899/260, J-L=-3027/233, L-M=-2563/179, A-V=-2845/113, M-N=-2529/160
BOT CHORD T-U=-57/1864, S-T=0/2615, R-S=0/2572, P-R=-7/2603, O-P=-81/2229
WEBS B-U=-2074/0, B-T=0/1591, D-T=-411/285, S-W=0/1757, H-W=-523/388, R-W=-1329/1156, I-R=-768/797, E-X=-1049/137, X-Y=-1053/132, W-Y=-354/1162, A-U=-14/2527, F-Y=-124/1287, G-Y=-654/153, H-Y=-715/108, I-W=-293/2011, J-R=-462/274, J-P=-358/56, L-P=0/652, L-O=-1130/107, M-O=-62/2523

- 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) 0-1-12 to 4-8-14, Interior(1) 4-8-14 to 8-6-2, Exterior(2R) 8-6-2 to 32-10-6, Interior(1) 32-10-6 to 39-1-14, Exterior(2E) 39-1-14 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) All plates are MT20 plates unless otherwise indicated.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Ceiling dead load (5.0 psf) on member(s). D-E, E-X, X-Y, W-Y
 - 8) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. S-T
 - 9) Refer to girder(s) for truss to truss connections.
 - 10) Bearing at joint(s) V considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 11) Provide metal plate or equivalent at bearing(s) N to support reaction shown.
 - 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint V and 110 lb uplift at joint N.
 - 13) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and continues to conform to standard ANSI/TPI 1.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1A	Truss Type PIGGYBACK BASE	Qty 2	Ply 1	1626 Plan Job Reference (optional)	I48382955
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:35 2021 Page 2
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NOTES-

- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) Attic room checked for L/360 deflection.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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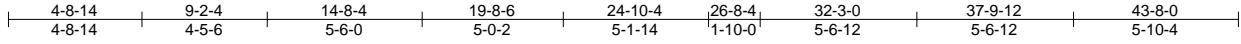
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1B	Truss Type PIGGYBACK BASE	Qty 2	Ply 2	1626 Plan	148382956
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:38 2021 Page 1

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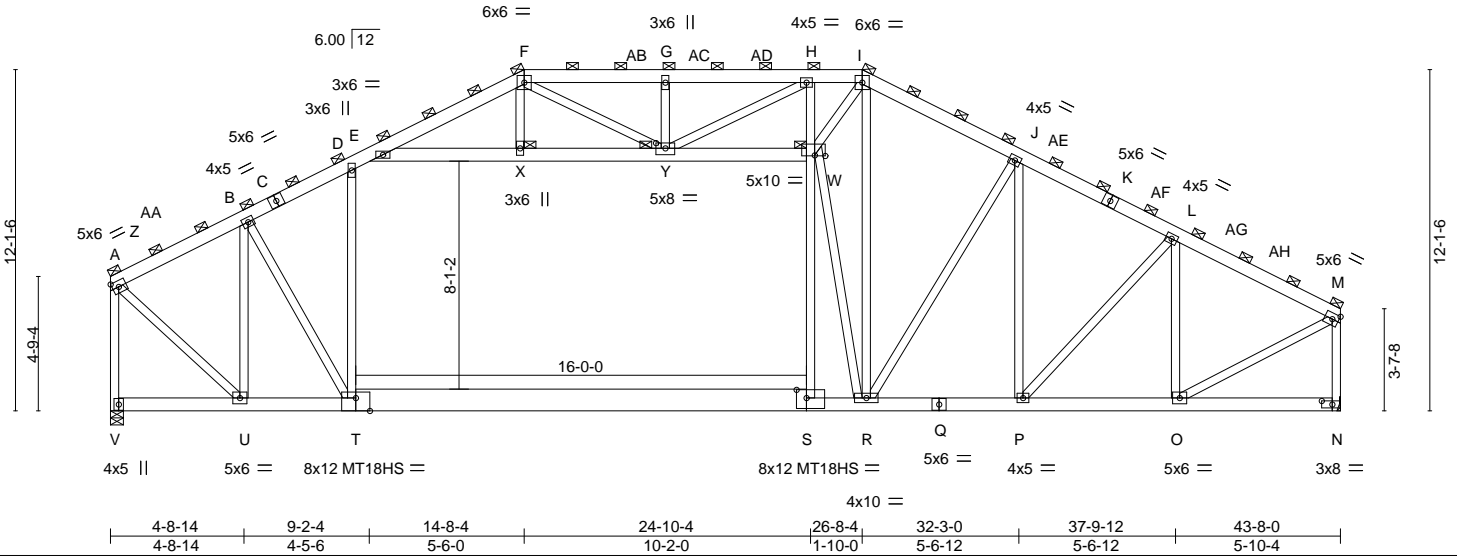


Plate Offsets (X, Y)-- [N:0-4-8,0-1-8], [S:0-4-4,0-3-8], [T:0-6-0,Edge], [W:0-4-8,0-0-4], [Y:0-4-0,0-2-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	4-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO Code IRC2018/TPI2014	TC 0.77 BC 0.93 WB 0.95 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.37 S-T >999 240 Vert(CT) -0.60 S-T >872 180 Horz(CT) 0.05 N n/a n/a Attic -0.31 S-T 613 360	MT20 MT18HS Weight: 913 lb	244/190 244/190 FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP 2400F 2.0E *Except*
 S-T: 2x10 SP 2400F 2.0E, N-Q: 2x6 SP No.1
WEBS 2x4 SP No.3 *Except*
 H-S,A-U,M-O: 2x4 SP No.2, E-W: 2x6 SP No.1

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
 (Switched from sheeted: Spacing > 2-10-0).
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
JOINTS 1 Brace at Jt(s): I, W, A, M, X, F, Y

REACTIONS. (size) V=0-5-8, N=Mechanical
 Max Horz V=-504(LC 8)
 Max Uplift V=-56(LC 12), N=-220(LC 13)
 Max Grav V=5901(LC 39), N=5179(LC 33)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-4305/273, B-D=-6010/246, D-E=-5756/406, E-F=-4674/540, F-G=-6217/615,
 G-H=-6217/615, H-I=-6569/593, I-J=-5798/520, J-L=-6053/467, L-M=-5127/359,
 A-V=-5690/227, M-N=-5059/320
BOT CHORD U-V=-381/436, T-U=-114/3728, S-T=0/5230, R-S=0/5144, P-R=-13/5206, O-P=-161/4457
WEBS B-U=-4149/0, B-T=0/3182, D-T=-823/571, S-W=0/3513, H-W=-1046/775, R-W=-2658/2312,
 I-R=-1537/1595, E-X=-2099/273, X-Y=-2107/264, W-Y=-707/2324, A-U=-29/5054,
 F-Y=-248/2573, G-Y=-1308/307, H-Y=-1429/217, I-W=-587/4022, J-R=-924/547,
 J-P=-717/113, L-P=0/1303, L-O=-2260/214, M-O=-124/5045

- NOTES-**
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
 - 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.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TC DL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) 0-1-12 to 4-8-14, Interior(1) 4-8-14 to 8-6-2, Exterior(2R) 8-6-2 to 32-10-6, Interior(1) 32-10-6 to 39-1-14, Exterior(2E) 39-1-14 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
 - 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
 - Unbalanced snow loads have been considered for this design.
 - Provide adequate drainage to prevent water ponding.
 - All plates are MT20 plates unless otherwise indicated.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Ceiling dead load (5.0 psf) on member(s). D-E, E-X, X-Y, W-Y
 - Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. S-T
 - Refer to girder(s) for truss to truss connections.



October 18, 2021

Continued on page 2

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Job 211674	Truss A1B	Truss Type PIGGYBACK BASE	Qty 2	Ply 2	1626 Plan Job Reference (optional)	I48382956
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:38 2021 Page 2
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NOTES-

- 12) Bearing at joint(s) V considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 13) Provide metal plate or equivalent at bearing(s) N to support reaction shown.
- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 56 lb uplift at joint V and 220 lb uplift at joint N.
- 15) 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.
- 16) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 17) Attic room checked for L/360 deflection.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



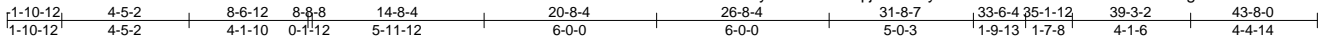
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1C	Truss Type PIGGYBACK BASE	Qty 1	Ply 2	1626 Plan	148382957
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:41 2021 Page 1

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Scale = 1:80.1

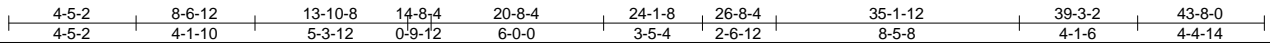
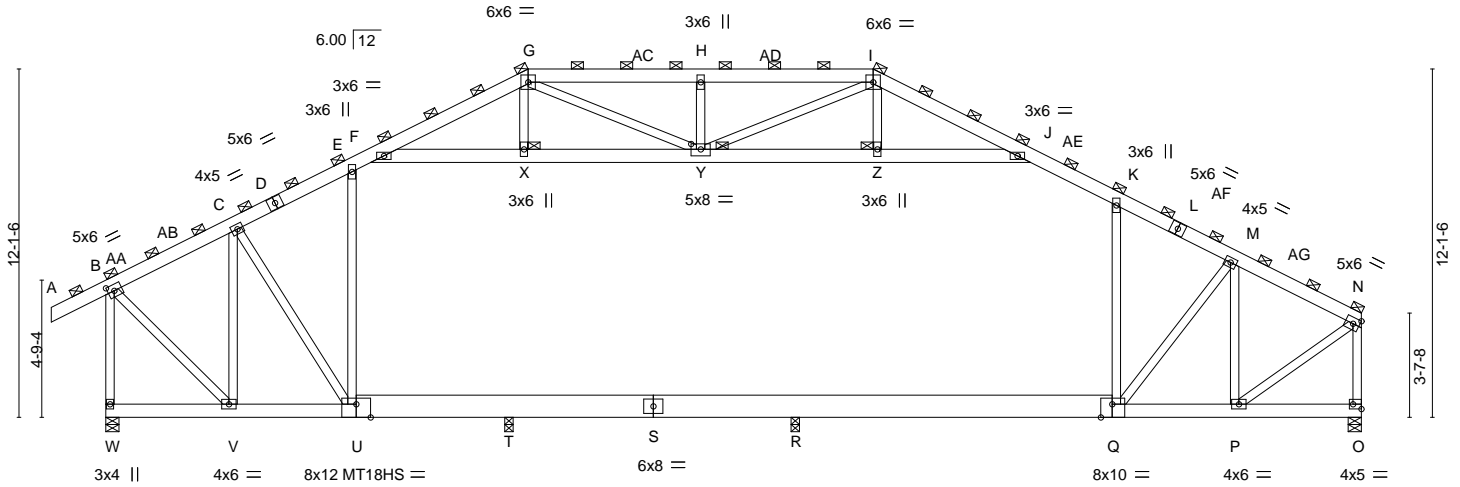


Plate Offsets (X, Y)-- [B:0-2-11,0-2-8], [O:Edge,0-2-0], [Q:0-4-12,Edge], [U:0-6-0,Edge], [Y:0-4-0,0-2-4]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	4-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.63 BC 0.98 WB 0.92 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.31 Q >764 240 Vert(CT) -0.44 Q >528 180 Horz(CT) 0.04 O n/a n/a Attic 0.21 T-U 607 360	MT20 MT18HS Weight: 856 lb	244/190 244/190 FT = 20%
TCDL 10.0	Rep Stress Incr NO Code IRC2018/TPI2014				
BCLL 0.0					
BCDL 10.0					

LUMBER-

TOP CHORD 2x6 SP No.1
 BOT CHORD 2x10 SP 2400F 2.0E *Except*
 U-W: 2x6 SP 2400F 2.0E, O-Q: 2x6 SP No.1
 WEBS 2x4 SP No.3 *Except*
 E-U,K-Q: 2x4 SP No.2, F-J: 2x6 SP No.1

BRACING-

TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals
 (Switched from sheeted: Spacing > 2-10-0).
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
 6-0-0 oc bracing: V-W.
 JOINTS 1 Brace at Jt(s): I, B, N, X, G, Y, Z

REACTIONS.

All bearings 0-5-8 except (jt=length) T=0-3-8, R=0-3-8.
 (lb) - Max Horz W=-492(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) except W=-404(LC 13), O=-415(LC 13), T=-1114(LC 38)
 Max Grav All reactions 250 lb or less at joint(s) except W=5419(LC 34), O=4755(LC 34), T=1510(LC 30), R=3520(LC 32)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-3525/579, C-E=-4855/744, E-F=-4736/863, F-G=-4177/752, G-H=-5490/1003,
 H-I=-5490/1003, I-J=-4361/786, J-K=-4962/856, K-M=-4934/662, M-N=-4119/491,
 B-W=-5240/758, N-O=-4732/493
 BOT CHORD V-W=-419/386, U-V=-277/2949, T-U=-250/4201, R-T=-256/4210, Q-R=-261/4222,
 P-Q=-338/3573
 WEBS E-U=-1139/410, F-X=-2286/479, X-Y=-2295/476, Y-Z=-2024/597, J-Z=-2016/606,
 K-Q=-1112/420, B-V=-236/4162, C-V=-3326/510, C-U=-398/2480, N-P=-364/4428,
 M-P=-2068/256, M-Q=-239/1288, G-Y=-417/2052, H-Y=-1569/355, I-Y=-382/1770

NOTES-

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x10 - 2 rows staggered at 0-9-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
- 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.
- 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) -1-10-12 to 2-5-10, Interior(1) 2-5-10 to 8-6-2, Exterior(2R) 8-6-2 to 32-10-6, Interior(1) 32-10-6 to 39-1-14, Exterior(2E) 39-1-14 to 43-6-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 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
- Unbalanced snow loads have been considered for this design.
- 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.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.



October 18, 2021

Job 211674	Truss A1C	Truss Type PIGGYBACK BASE	Qty 1	Ply 2	1626 Plan Job Reference (optional)	I48382957
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:41 2021 Page 2
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NOTES-

- 11) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. T-U, R-T, Q-R
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 404 lb uplift at joint W, 415 lb uplift at joint O and 1114 lb uplift at joint T.
- 13) 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.
- 14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 15) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
- 16) Attic room checked for L/360 deflection.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



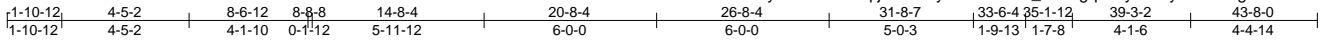
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1D	Truss Type Piggyback Base	Qty 3	Ply 1	1626 Plan	48382958
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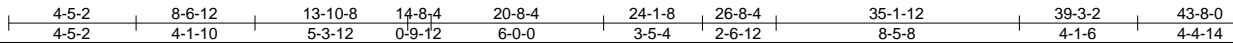
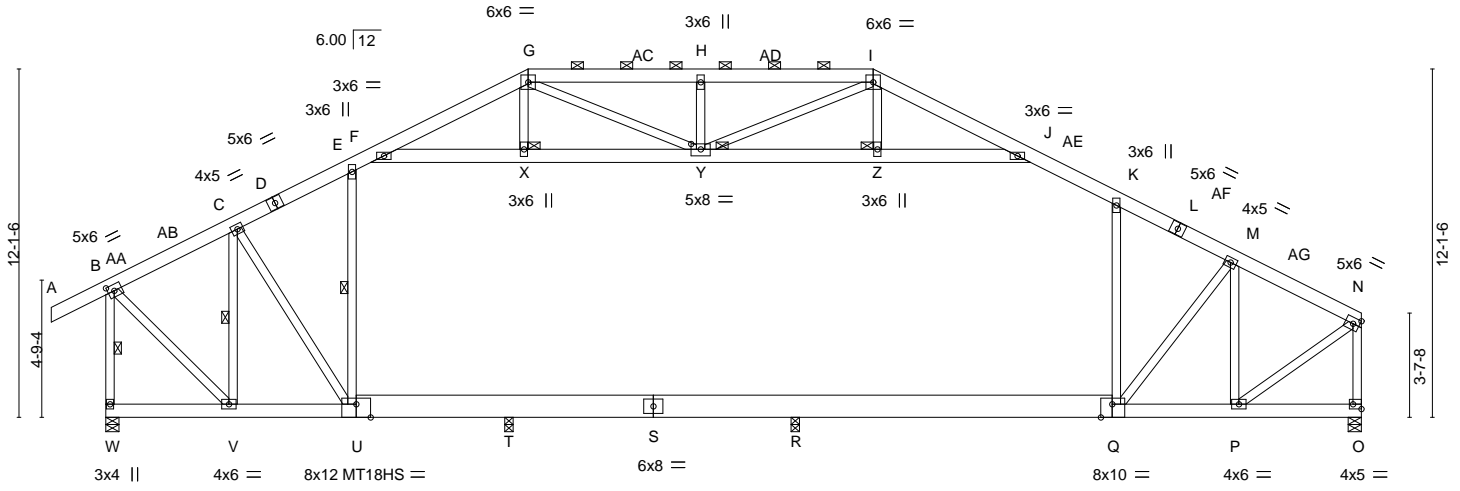
Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:43 2021 Page 1

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Scale = 1:80.1



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.64 BC 0.89 WB 0.92 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.31 Q >764 240 Vert(CT) -0.44 Q >528 180 Horz(CT) 0.04 O n/a n/a Attic 0.21 T-U 607 360	MT20 MT18HS Weight: 428 lb	244/190 244/190 FT = 20%
TCDL 10.0	Rep Stress Incr YES				
BCLL 0.0	Code IRC2018/TPI2014				
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-6-10 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-13 max.): G-I
BOT CHORD 2x10 SP 2400F 2.0E *Except* U-W: 2x6 SP 2400F 2.0E, O-Q: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: V-W.
WEBS 2x4 SP No.3 *Except* E-U,K-Q: 2x4 SP No.2, F-J: 2x6 SP No.1	WEBS 1 Row at midpt E-U, B-W, C-V
	JOINTS 1 Brace at Jt(s): X, Y, Z

REACTIONS. All bearings 0-5-8 except (jt=length) T=0-3-8, R=0-3-8.
 (lb) - Max Horz W=-246(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) except W=-202(LC 13), O=-208(LC 13), T=-557(LC 38)
 Max Grav All reactions 250 lb or less at joint(s) except W=2710(LC 34), O=2378(LC 34), T=755(LC 30), R=1760(LC 32)


FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-1763/289, C-E=-2427/372, E-F=-2368/431, F-G=-2089/376, G-H=-2745/501, H-I=-2745/501, I-J=-2180/393, J-K=-2481/428, K-M=-2467/331, M-N=-2060/246, B-W=-2620/379, N-O=-2366/247
 BOT CHORD U-V=-139/1474, T-U=-125/2101, R-T=-128/2105, Q-R=-130/2111, P-Q=-169/1786
 WEBS E-U=-570/205, F-X=-1143/240, X-Y=-1147/238, Y-Z=-1012/299, J-Z=-1008/303, K-Q=-556/210, B-V=-118/2081, C-V=-1663/255, C-U=-199/1240, N-P=-182/2214, M-P=-1034/128, M-Q=-119/644, G-Y=-209/1026, H-Y=-784/177, I-Y=-191/885

- 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) -1-10-12 to 2-5-10, Interior(1) 2-5-10 to 8-6-2, Exterior(2R) 8-6-2 to 32-10-6, Interior(1) 32-10-6 to 39-1-14, Exterior(2E) 39-1-14 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Ceiling dead load (5.0 psf) on member(s). E-F, J-K, F-X, X-Y, Y-Z, J-Z
 - 9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. T-U, R-T, Q-R
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint W, 208 lb uplift at joint O and 557 lb uplift at joint T.
 - 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.
 - 13) Attic room checked for L/360 deflection.



October 18, 2021

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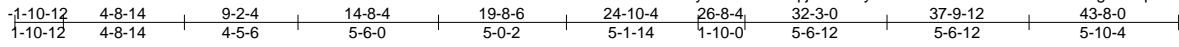
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1G	Truss Type Piggyback Base	Qty 1	Ply 1	1626 Plan	148382959
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:45 2021 Page 1

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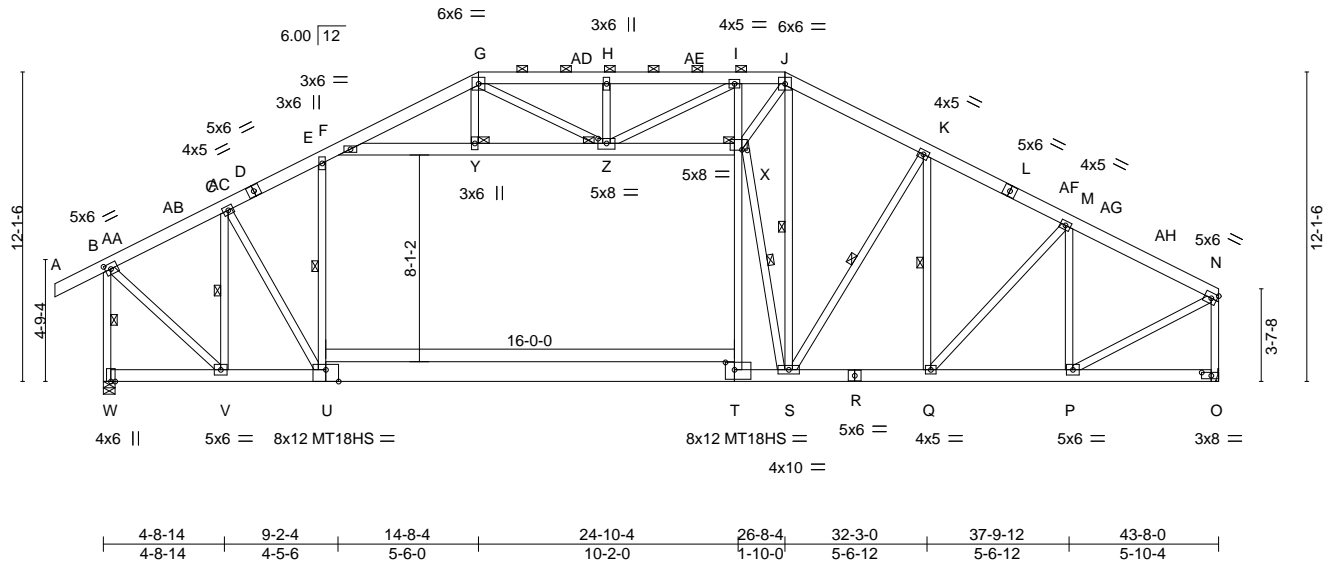


Plate Offsets (X,Y)--	[B:0-2-11,0-2-8], [O:0-4-8,0-1-8], [T:0-4-4,0-3-8], [U:0-6-0,Edge], [X:0-2-8,0-0-4], [Z:0-4-0,0-2-4]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.82 BC 0.84 WB 0.77 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.37 T-U >999 240 Vert(CT) -0.60 T-U >872 180 Horz(CT) 0.05 O n/a n/a Attic -0.31 T-U 613 360	MT20 MT18HS Weight: 462 lb	244/190 244/190 FT = 20%
TCDL 10.0	Rep Stress Incr YES Code IRC2018/TPI2014				
BCLL 0.0					
BCDL 10.0					

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 4-5-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-13 max.): G-J.
BOT CHORD 2x6 SP 2400F 2.0E *Except* T-U: 2x10 SP 2400F 2.0E, O-R: 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: V-W.
WEBS 2x4 SP No.3 *Except* I-T,B-V,N-P: 2x4 SP No.2, F-X: 2x6 SP No.1	WEBS 1 Row at midpt C-V, E-U, S-X, J-S, B-W, K-S, K-Q
	JOINTS 1 Brace at Jt(s): X, Y, Z

REACTIONS. (size) W=0-5-8, O=Mechanical
 Max Horz W=-246(LC 10)
 Max Uplift W=-10(LC 12), O=-57(LC 13)
 Max Grav W=3071(LC 40), O=2586(LC 34)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-2143/326, C-E=-2991/338, E-F=-2871/427, F-G=-2338/422, G-H=-3111/512, H-I=-3111/512, I-J=-3289/382, J-K=-2895/498, K-M=-3023/493, M-N=-2560/409, B-W=-2965/455, N-O=-2526/419
 BOT CHORD U-V=-64/1842, T-U=0/2606, S-T=0/2563, Q-S=-95/2600, P-Q=-175/2226
 WEBS C-V=-2060/3, C-U=0/1604, E-U=-432/280, T-X=0/1755, I-X=-522/390, S-X=-1305/1206, J-S=-785/774, F-Y=-1039/142, Y-Z=-1043/138, X-Z=-333/1172, B-V=-85/2502, G-Z=-122/1291, H-Z=-654/155, I-Z=-726/106, J-X=-279/2053, K-S=-464/285, K-Q=-361/57, M-Q=0/657, M-P=-1129/194, N-P=-244/2520

- 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) -1-10-12 to 3-0-14, Exterior(2N) 3-0-14 to 9-8-10, Corner(3R) 9-8-10 to 19-8-6, Exterior(2N) 19-8-6 to 21-8-10, Corner(3R) 21-8-10 to 31-7-14, Exterior(2N) 31-7-14 to 38-6-10, Corner(3E) 38-6-10 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) Provide adequate drainage to prevent water ponding.
 - 6) All plates are MT20 plates unless otherwise indicated.
 - 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 8) Ceiling dead load (5.0 psf) on member(s). E-F, F-Y, Y-Z, X-Z
 - 9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. T-U
 - 10) Refer to girder(s) for truss to truss connections.
 - 11) Bearing at joint(s) W considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 12) Provide metal plate or equivalent at bearing(s) O to support reaction shown.



October 18, 2021

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1G	Truss Type Piggyback Base	Qty 1	Ply 1	1626 Plan Job Reference (optional)	I48382959
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:45 2021 Page 2
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NOTES-

- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint W and 57 lb uplift at joint O.
- 14) 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.
- 15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 16) Attic room checked for L/360 deflection.

 **WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.**

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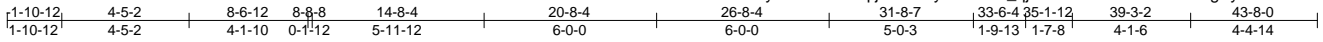
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss A1GA	Truss Type Piggyback Base	Qty 1	Ply 1	1626 Plan	148382960
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:47 2021 Page 1

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Scale = 1:80.1

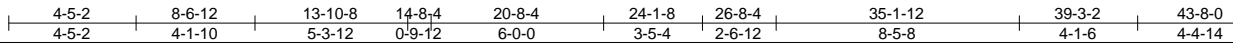
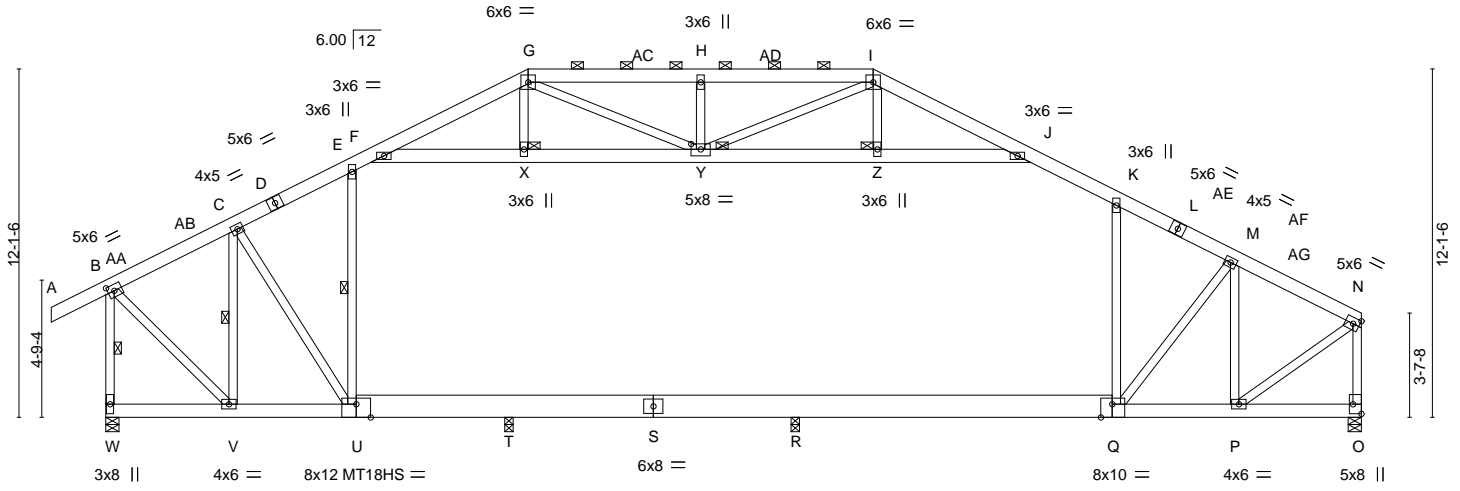


Plate Offsets (X, Y)-- [B:0-2-11,0-2-8], [O:Edge,0-3-8], [Q:0-4-12,Edge], [U:0-6-0,Edge], [Y:0-4-0,0-2-4]

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 0.64	Vert(LL)	-0.31	Q	>764	MT20	244/190
(Roof Snow=25.0)	Lumber DOL	1.15	BC 0.89	Vert(CT)	-0.44	Q	>528	MT18HS	244/190
TCDL 10.0	Rep Stress Incr	YES	WB 0.92	Horz(CT)	0.04	O	n/a		
BCLL 0.0	Code IRC2018/TPI2014		Matrix-MS	Attic	0.21	T-U	607		
BCDL 10.0								Weight: 428 lb	FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.1
 BOT CHORD 2x10 SP 2400F 2.0E *Except*
 U-W: 2x6 SP 2400F 2.0E, O-Q: 2x6 SP No.1
 WEBS 2x4 SP No.3 *Except*
 E-U,K-Q: 2x4 SP No.2, F-J: 2x6 SP No.1

BRACING-

TOP CHORD Structural wood sheathing directly applied or 4-6-10 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-13 max.): G-I.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: V-W.
 WEBS 1 Row at midpt E-U, B-W, C-V
 JOINTS 1 Brace at Jt(s): X, Y, Z

REACTIONS.

All bearings 0-5-8 except (jt=length) T=0-3-8, R=0-3-8.
 (lb) - Max Horz W=-246(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) except W=-144(LC 13), O=-152(LC 13), T=-557(LC 38)
 Max Grav All reactions 250 lb or less at joint(s) except W=2710(LC 34), O=2378(LC 34), T=755(LC 30), R=1760(LC 32)

FORCES.

(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-1763/462, C-E=-2427/615, E-F=-2368/671, F-G=-2089/488, G-H=-2745/648, H-I=-2745/648, I-J=-2180/507, J-K=-2481/667, K-M=-2467/567, M-N=-2060/453, B-W=-2620/643, N-O=-2366/504
 BOT CHORD U-V=-158/1474, T-U=-217/2101, R-T=-216/2105, Q-R=-218/2111, P-Q=-235/1786
 WEBS E-U=-570/178, F-X=-1143/248, X-Y=-1147/246, Y-Z=-1012/299, J-Z=-1008/303, K-Q=-556/176, B-V=-263/2081, C-V=-1663/262, C-U=-176/1240, N-P=-348/2214, M-P=-1034/219, M-Q=-119/644, G-Y=-209/1026, H-Y=-784/191, I-Y=-191/885

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) -1-10-12 to 3-0-14, Exterior(2N) 3-0-14 to 9-8-10, Corner(3R) 9-8-10 to 19-7-14, Exterior(2N) 19-7-14 to 21-8-10, Corner(3R) 21-8-10 to 31-7-14, Exterior(2N) 31-7-14 to 38-6-10, Corner(3E) 38-6-10 to 43-6-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) Provide adequate drainage to prevent water ponding.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) Ceiling dead load (5.0 psf) on member(s). E-F, J-K, F-X, X-Y, Y-Z, J-Z
- 9) Bottom chord live load (40.0 psf) and additional bottom chord dead load (10.0 psf) applied only to room. T-U, R-T, Q-R
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint W, 152 lb uplift at joint O and 557 lb uplift at joint T.
- 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.



October 18, 2021

2D/3D representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job 211674	Truss A1GA	Truss Type Piggyback Base	Qty 1	Ply 1	1626 Plan Job Reference (optional)	I48382960
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:47 2021 Page 2
ID:0FUyeDdDlxuQTqtjlxezWhyTED?-lci_qj5TNvKhLTGeaiuh7cvKugEycKwN0BaK1ryT93M

NOTES-

13) Attic room checked for L/360 deflection.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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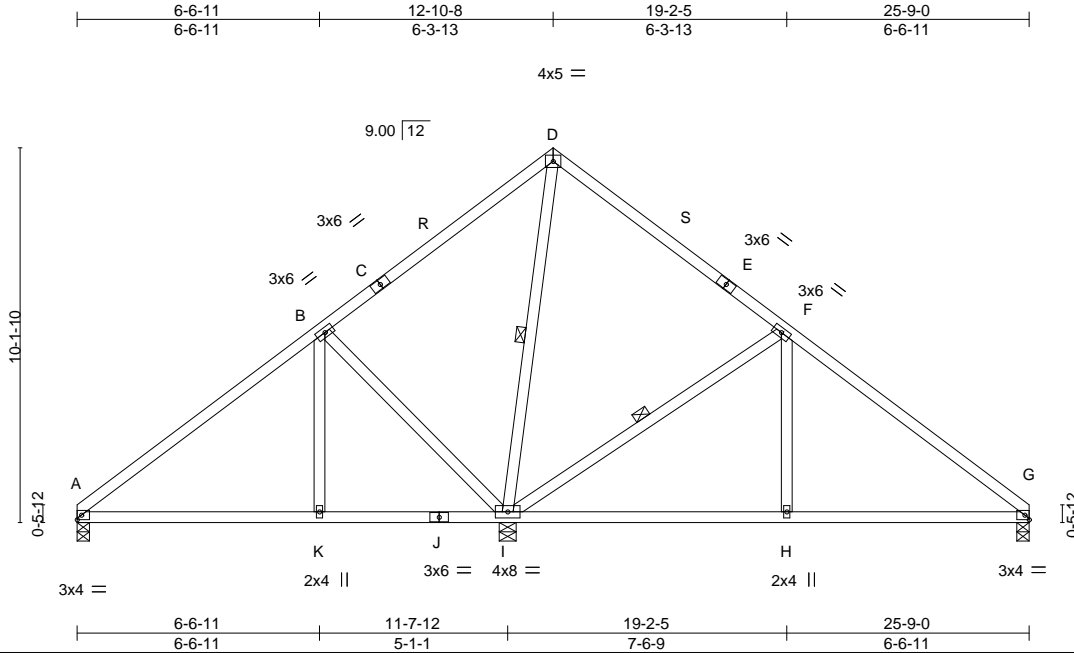
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss B1	Truss Type GABLE	Qty 2	Ply 1	1626 Plan	148382961
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:48 2021 Page 1

ID:0FUyeDdDlxuQTqjlxezWhyTED?-mpGM12558DTYzdzq7bDwfqSPI3gnLr?XFrKtalyT93L



Scale = 1:62.3

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	TC 0.92 BC 0.47 WB 0.61 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.06 H-I >999 240 Vert(CT) -0.12 H-I >999 180 Horz(CT) 0.01 A n/a n/a	MT20	244/190
TCDL 10.0				Weight: 139 lb	FT = 20%
BCLL 0.0					
BCDL 10.0					

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 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.
WEBS 1 Row at midpt D-I, F-I

REACTIONS. (size) A=0-4-0, I=0-5-8, G=0-4-0
Max Horz A=241(LC 9)
Max Uplift A=-46(LC 12), I=-111(LC 12), G=-85(LC 13)
Max Grav A=518(LC 18), I=1239(LC 1), G=648(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-580/107, B-D=-145/261, F-G=-798/121
BOT CHORD A-K=-129/413, I-K=-129/413, H-I=0/556, G-H=0/556
WEBS D-I=-488/0, F-I=-669/239, B-I=-617/250, F-H=0/315

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 9-10-8, Exterior(2R) 9-10-8 to 15-10-8, Interior(1) 15-10-8 to 22-9-0, Exterior(2E) 22-9-0 to 25-9-0 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 46 lb uplift at joint A, 111 lb uplift at joint I and 85 lb uplift at joint G.
- 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.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss B1A	Truss Type Roof Special Girder	Qty 1	Ply 2	1626 Plan	148382962
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Heartland Truss, Inc., Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:50 2021 Page 1

ID:0FUyeDdDlxuQTqjlxzWhyTED?-jBO6Sk7MgqjGCx_DF0GOKFXwOtOXpgxqi9p_eAyT93J

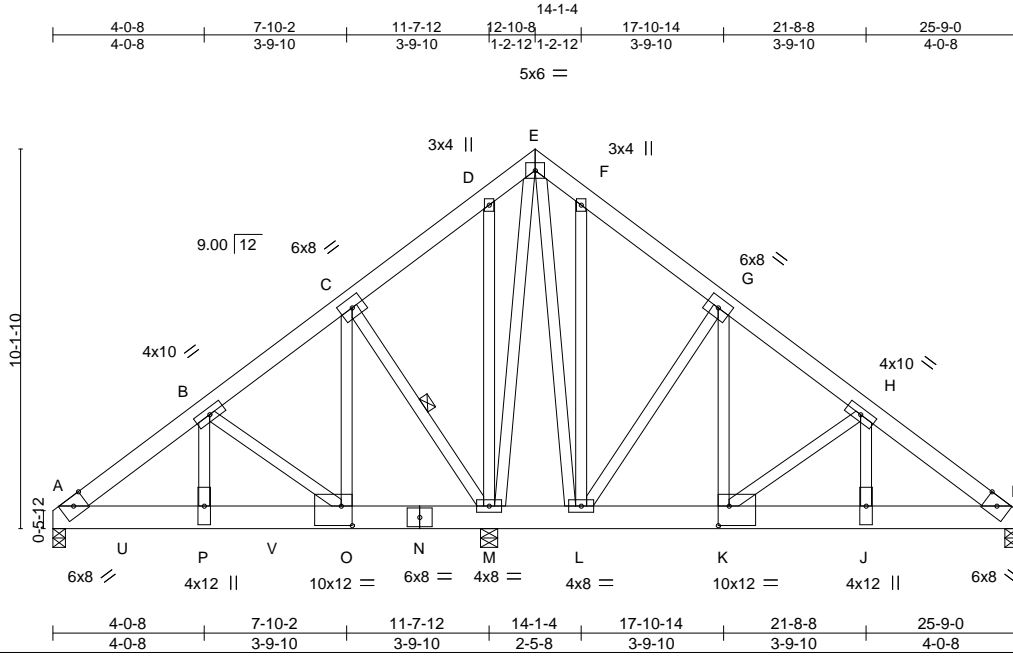


Plate Offsets (X,Y)--	[K:0-3-8,0-6-4], [O:0-3-8,0-6-4]				
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.24 BC 0.32 WB 0.90 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.05 O-P >999 240 Vert(CT) -0.09 O-P >999 180 Horz(CT) 0.01 M n/a n/a	MT20	244/190
TCDL 10.0	Rep Stress Incr NO				
BCLL 0.0	Code IRC2018/TPI2014				
BCDL 10.0				Weight: 518 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD 2x8 SP 2400F 2.0E	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except*	WEBS 1 Row at midpt C-M
G-K,C-O: 2x4 SP No.2	

REACTIONS. (size) A=0-4-0, I=0-4-0, M=0-5-8
 Max Horz A=-238(LC 8)
 Max Uplift A=-704(LC 11), I=-596(LC 16), M=-1421(LC 10)
 Max Grav A=4699(LC 16), I=185(LC 10), M=8641(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD A-B=-5698/886, B-C=-1932/345, C-D=-281/1836, D-E=-154/1479, E-F=-157/1459,
 F-G=-228/1609, G-H=-263/1347, H-I=-292/1154
 BOT CHORD A-P=-761/4554, O-P=-761/4554, M-O=-194/1526, L-M=-1203/423, K-L=-1048/302,
 J-K=-887/260, I-J=-887/260
 WEBS E-L=-412/124, F-L=-480/118, G-L=-653/206, G-K=-53/424, H-K=-323/129, E-M=-1257/151,
 D-M=-742/168, C-M=-5179/961, C-O=-1001/6110, B-O=-3845/715, B-P=-679/4338

- NOTES-**
- 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 0-4-0 oc.
 Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 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.
 - 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; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
 - 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
 - Unbalanced snow loads have been considered for this design.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 704 lb uplift at joint A, 596 lb uplift at joint I and 1421 lb uplift at joint M.
 - 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.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 2130 lb down and 353 lb up at 1-10-8, 2130 lb down and 353 lb up at 3-10-8, 2130 lb down and 353 lb up at 5-10-8, and 2130 lb down and 353 lb up at 7-10-8, and 2130 lb down and 353 lb up at 9-10-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.



October 18, 2021

LOAD CASE(S) Standard

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss B1A	Truss Type Roof Special Girder	Qty 1	Ply 2	1626 Plan Job Reference (optional)	I48382962
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:50 2021 Page 2
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LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: A-E=-70, E-I=-70, A-I=-20

Concentrated Loads (lb)

Vert: N=-2130(B) O=-2130(B) P=-2130(B) U=-2130(B) V=-2130(B)

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss B1G	Truss Type GABLE	Qty 1	Ply 1	1626 Plan	148382963
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:51 2021 Page 1
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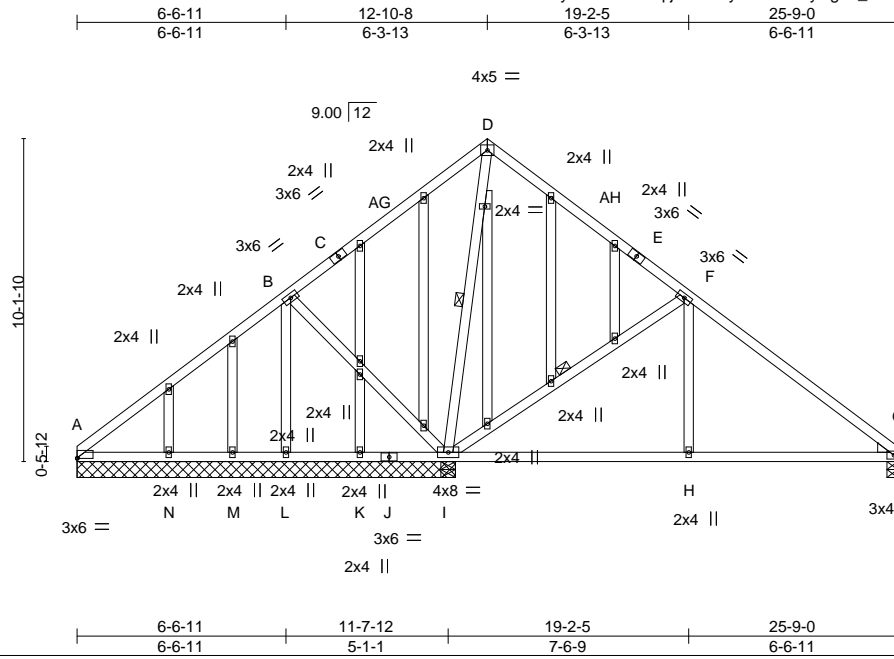


Plate Offsets (X,Y)-- [A:0-0-0,0-0-3]						
LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP	
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.91 BC 0.46 WB 0.30 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.06 H-I >999 240 Vert(CT) -0.11 H-I >999 180 Horz(CT) 0.01 G n/a n/a	MT20	244/190	
TCDL 10.0	Rep Stress Incr YES Code IRC2018/TPI2014					Weight: 193 lb FT = 20%
BCLL 0.0						
BCDL 10.0						

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	WEBS 1 Row at midpt D-I, F-I
OTHERS 2x4 SP No.3	
WEDGE	
Right: 2x4 SP No.3	

REACTIONS. All bearings 11-10-8 except (jt=length) G=0-4-0.
 (lb) - Max Horz A=241(LC 9)
 Max Uplift All uplift 100 lb or less at joint(s) A, I, L, G, M, N
 Max Grav All reactions 250 lb or less at joint(s) K, M, N, A except A=264(LC 18),
 I=1074(LC 19), I=996(LC 1), L=418(LC 18), G=650(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD A-B=-287/133, F-G=-800/115
 BOT CHORD H-I=0/558, G-H=0/558
 WEBS D-I=-485/0, F-I=-667/240, B-L=-353/103, F-H=0/312

- 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 9-10-8, Exterior(2R) 9-10-8 to 15-10-8, Interior(1) 15-10-8 to 22-9-0, Exterior(2E) 22-9-0 to 25-9-0 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) Gable studs spaced at 2-0-0 oc.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, I, L, G, M, N, A.
 - 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.



October 18, 2021

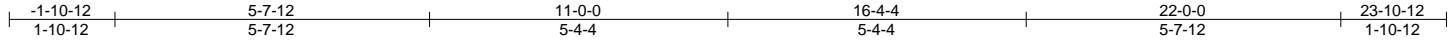
Job 211674	Truss C1	Truss Type Common	Qty 11	Ply 1	1626 Plan	148382964
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:53 2021 Page 1

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Job Reference (optional)



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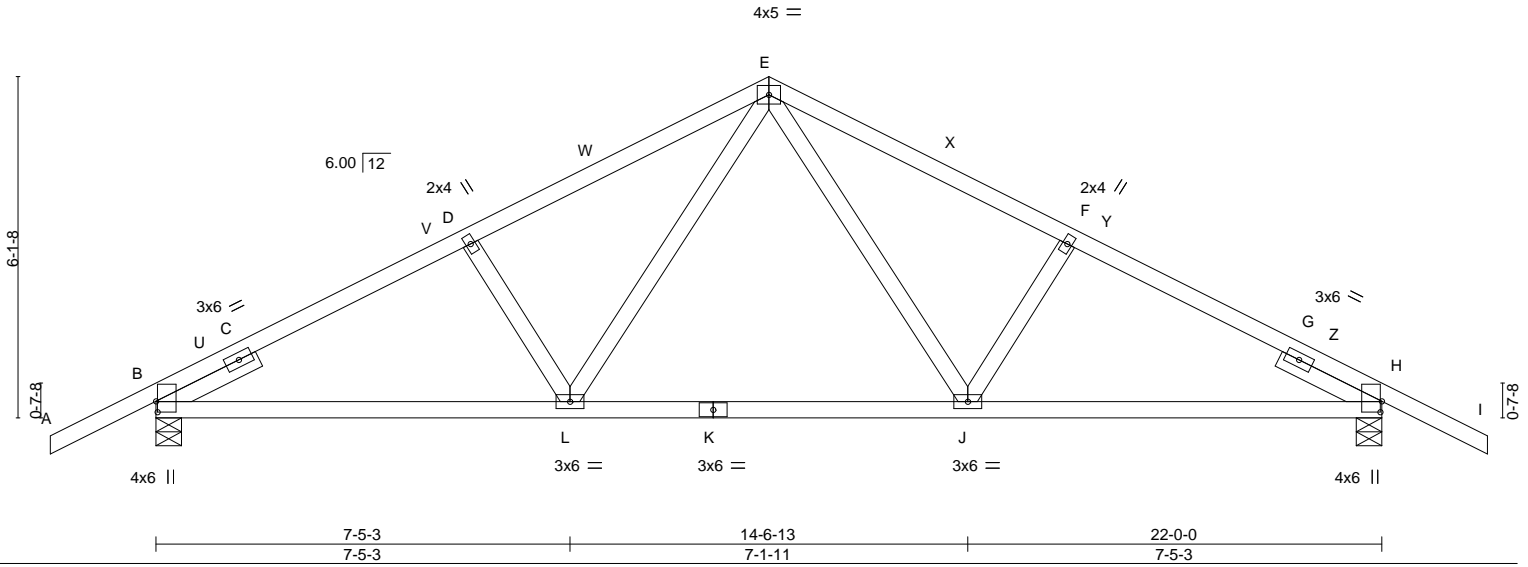


Plate Offsets (X,Y)--	[B:0-2-5,0-0-5], [H:0-2-5,0-0-5]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.83 BC 0.62 WB 0.24 Matrix-MS	in (loc) l/defl L/d Vert(LL) -0.08 J-L >999 240 Vert(CT) -0.17 J-L >999 180 Horz(CT) 0.04 H n/a n/a	MT20	244/190
TCDL 10.0	Rep Stress Incr YES				
BCLL 0.0	Code IRC2018/TPI2014				
BCDL 10.0				Weight: 111 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x4 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3	
SLIDER Left 2x4 SP No.3 2-0-0, Right 2x4 SP No.3 2-0-0	

REACTIONS. (size) B=0-5-8, H=0-5-8
 Max Horz B=108(LC 12)
 Max Uplift B=-147(LC 12), H=-147(LC 13)
 Max Grav B=1179(LC 19), H=1179(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-D=-1562/258, D-E=-1505/275, E-F=-1505/275, F-H=-1562/258
 BOT CHORD B-L=-164/1447, J-L=-25/923, H-J=-97/1447
 WEBS D-L=-441/183, E-L=-85/589, E-J=-85/589, F-J=-441/183

- 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) -1-10-12 to 1-1-4, Interior(1) 1-1-4 to 8-0-0, Exterior(2R) 8-0-0 to 14-0-0, Interior(1) 14-0-0 to 20-10-12, Exterior(2E) 20-10-12 to 23-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) 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) except (jt=lb) B=147, H=147.
 - 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.

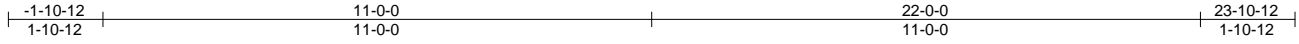


October 18, 2021

Job 211674	Truss C1G	Truss Type GABLE	Qty 1	Ply 1	1626 Plan	148382965
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8,430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:54 2021 Page 1
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Scale = 1:46.2

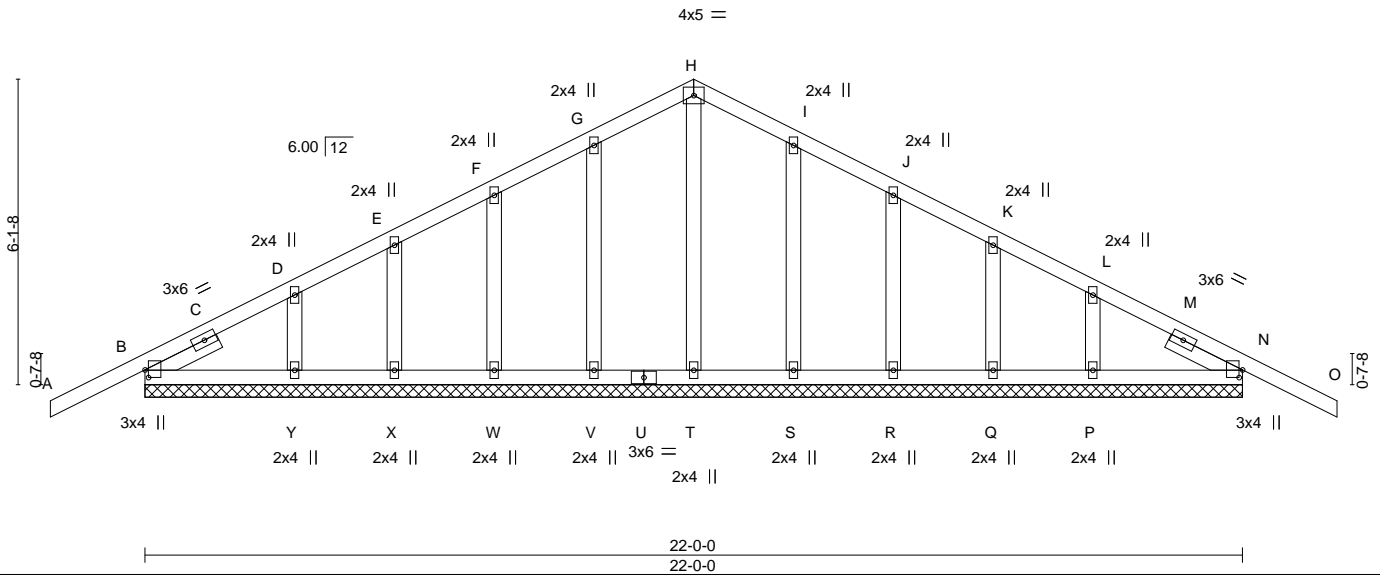


Plate Offsets (X,Y)-- [B:0-1-13,0-0-13], [N:0-1-13,0-0-13]	
LOADING (psf)	SPACING- 2-0-0
TCLL 25.0 (Roof Snow=25.0)	Plate Grip DOL 1.15
TCDL 10.0	Lumber DOL 1.15
BCLL 0.0	Rep Stress Incr YES
BCDL 10.0	Code IRC2018/TPI2014
CSI.	DEFL.
TC 0.50	in (loc) l/defl L/d
BC 0.08	Vert(LL) 0.01 O n/r 120
WB 0.11	Vert(CT) 0.00 O n/r 90
Matrix-S	Horz(CT) 0.00 N n/a n/a
PLATES	GRIP
MT20	244/190
Weight: 126 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3
SLIDER Left 2x4 SP No.3 1-7-3, Right 2x4 SP No.3 1-7-3

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

REACTIONS. All bearings 22-0-0.
(lb) - Max Horz B=108(LC 13)
Max Uplift All uplift 100 lb or less at joint(s) B, N, V, W, X, Y, S, R, Q, P
Max Grav All reactions 250 lb or less at joint(s) T, X, Y, Q, P except B=344(LC 18), N=344(LC 18), V=276(LC 19), W=265(LC 19), S=276(LC 20), R=265(LC 20)

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) -1-10-12 to 1-1-4, Exterior(2N) 1-1-4 to 8-0-0, Corner(3R) 8-0-0 to 14-0-0, Exterior(2N) 14-0-0 to 20-10-12, Corner(3E) 20-10-12 to 23-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) 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.
- 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, N, V, W, X, Y, S, R, Q, P.
- 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.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



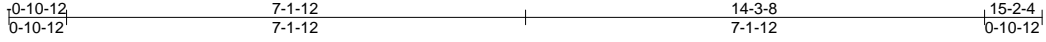
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss D1G	Truss Type Common Supported Gable	Qty 1	Ply 1	1626 Plan	I48382966
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Heartland Truss, Inc, Plattsburg, MO - 64477,

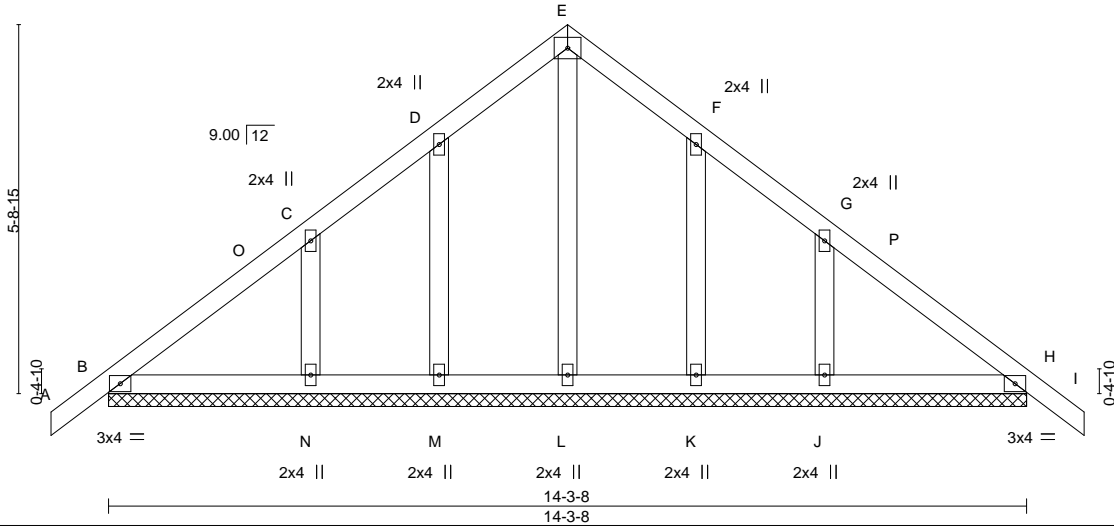
8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:55 2021 Page 1

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4x5 =

Scale = 1:35.9



LOADING (psf) TCLL 25.0 (Roof Snow=25.0) TCDL 10.0 BCLL 0.0 BCDL 10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.15 BC 0.07 WB 0.08 Matrix-S	DEFL. in (loc) l/defl L/d Vert(LL) -0.00 I n/r 120 Vert(CT) 0.00 H n/r 90 Horz(CT) 0.00 H n/a n/a	PLATES MT20 Weight: 77 lb	GRIP 244/190 FT = 20%
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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 14-3-8.
(lb) - Max Horz B=150(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) B, M, K except N=112(LC 12), J=112(LC 13)
Max Grav All reactions 250 lb or less at joint(s) B, H, L except M=267(LC 19), N=354(LC 19), K=267(LC 20), J=354(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS C-N=283/192, G-J=283/192

- 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) -0-10-12 to 2-1-4, Exterior(2N) 2-1-4 to 4-1-12, Corner(3R) 4-1-12 to 10-1-12, Exterior(2N) 10-1-12 to 12-2-4, Corner(3E) 12-2-4 to 15-2-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) 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.
 - 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, M, K except (j=lb) N=112, J=112.
 - 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.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



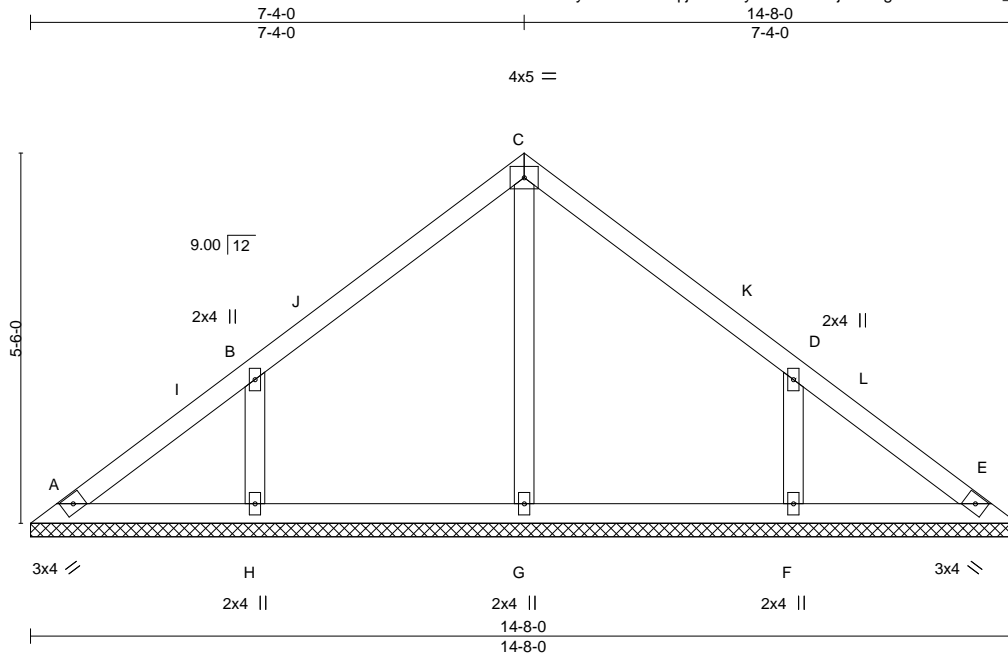
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss V1	Truss Type Valley	Qty 1	Ply 1	1626 Plan	I48382967
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:56 2021 Page 1

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Scale = 1:34.2

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0	TC 0.35	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.11	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.12	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 E n/a n/a		
	Code IRC2018/TPI2014			Weight: 61 lb	FT = 20%

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 14-8-0.
(lb) - Max Horz A=129(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) A except H=-157(LC 12), F=-157(LC 13)
Max Grav All reactions 250 lb or less at joint(s) A, E except G=302(LC 19), H=527(LC 18), F=527(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-H=-452/199, D-F=-452/199

- 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) 0-5-4 to 3-4-0, Interior(1) 3-4-0 to 4-4-0, Exterior(2R) 4-4-0 to 10-4-0, Interior(1) 10-4-0 to 11-2-12, Exterior(2E) 11-2-12 to 14-2-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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 except (jt=lb) H=157, F=157.
 - 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.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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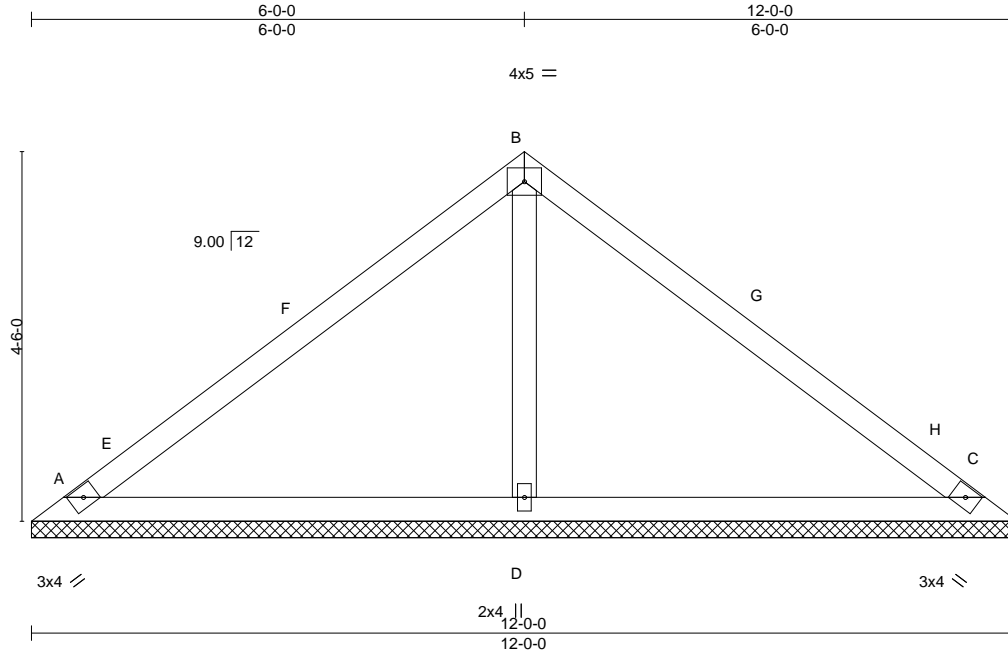
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss V2	Truss Type Valley	Qty 1	Ply 1	1626 Plan	I48382968
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:57 2021 Page 1

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Scale = 1:28.1

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0	TC 0.89	in (loc) l/defl L/d	MT20	244/190
TCDL 10.0	Plate Grip DOL 1.15	BC 0.35	Vert(LL) n/a - n/a 999		
BCLL 0.0	Lumber DOL 1.15	WB 0.13	Vert(CT) n/a - n/a 999		
BCDL 10.0	Rep Stress Incr YES	Matrix-S	Horz(CT) 0.00 C n/a n/a		
	Code IRC2018/TPI2014			Weight: 44 lb	FT = 20%

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

REACTIONS. (size) A=12-0-0, C=12-0-0, D=12-0-0
Max Horz A=-104(LC 8)
Max Uplift A=-41(LC 12), C=-54(LC 13), D=-12(LC 12)
Max Grav A=362(LC 18), C=362(LC 19), D=519(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD A-B=-268/108, B-C=-268/83
WEBS B-D=-345/110

- 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) 0-5-4 to 3-5-4, Exterior(2R) 3-5-4 to 8-6-12, Exterior(2E) 8-6-12 to 11-6-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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.



October 18, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

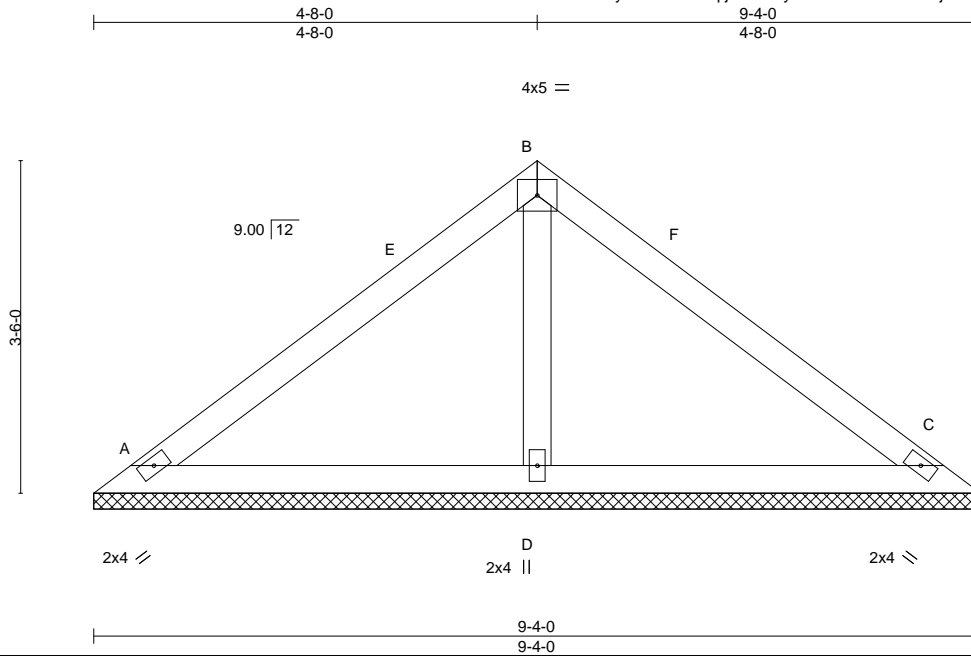


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss V3	Truss Type Valley	Qty 1	Ply 1	1626 Plan	I48382969
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:58 2021 Page 1
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Scale = 1:24.3

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	TC 0.48 BC 0.20 WB 0.07 Matrix-S	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.00 C n/a n/a	MT20	244/190
TCDL 10.0				Weight: 34 lb	FT = 20%
BCLL 0.0					
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=9-4-0, C=9-4-0, D=9-4-0
Max Horz A=79(LC 11)
Max Uplift A=-31(LC 12), C=-41(LC 13), D=-9(LC 12)
Max Grav A=295(LC 18), C=295(LC 19), D=390(LC 18)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS B-D=-258/97

- 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) 0-5-4 to 3-5-4, Exterior(2R) 3-5-4 to 5-10-12, Exterior(2E) 5-10-12 to 8-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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.



October 18, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

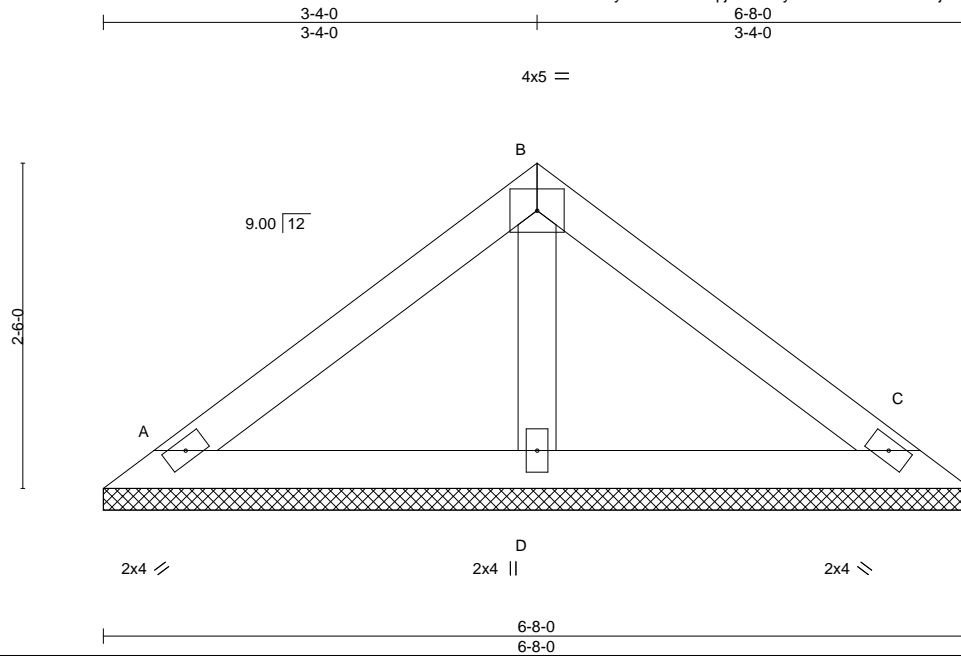


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss V4	Truss Type Valley	Qty 1	Ply 1	1626 Plan	I48382970
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:58 2021 Page 1
ID:0FUyeDdDlxuQTqtjlxezWhyTED?-Ukt88TDNoHj799bljhPG3xtHj5A6hWR?YPIPwjyT93B



Scale = 1:17.7

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	TC 0.28 BC 0.09 WB 0.03 Matrix-P	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.00 C n/a n/a	MT20	244/190
TCDL 10.0				Weight: 24 lb	FT = 20%
BCLL 0.0					
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=6-8-0, C=6-8-0, D=6-8-0
Max Horz A=54(LC 9)
Max Uplift A=28(LC 12), C=35(LC 13)
Max Grav A=203(LC 18), C=203(LC 19), D=231(LC 18)

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.



October 18, 2021

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



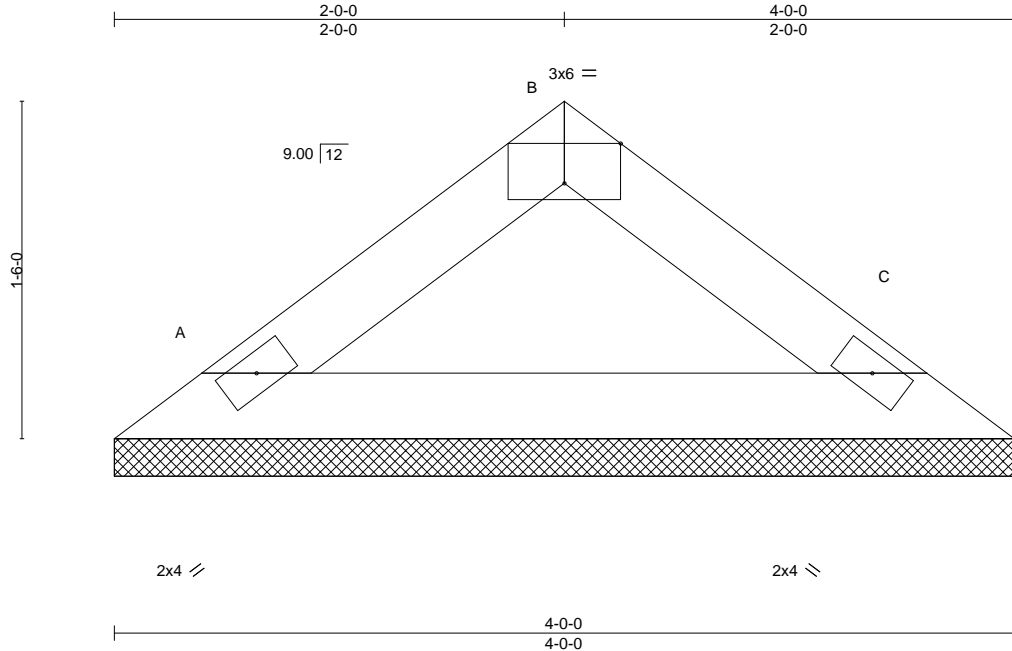
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss V5	Truss Type Valley	Qty 1	Ply 1	1626 Plan	I48382971
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:42:59 2021 Page 1

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Scale = 1:10.2

LOADING (psf)		SPACING-		CSI.		DEFL.				PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.07	in	(loc)	l/defl	L/d	MT20	244/190
(Roof Snow=25.0)		Lumber DOL	1.15	BC	0.12	Vert(LL)	n/a	-	n/a		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Vert(CT)	n/a	-	n/a		
BCLL	0.0	Code IRC2018/TPI2014		Matrix-P		Horz(CT)	0.00	C	n/a		
BCDL	10.0									Weight: 12 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 4-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) A=4-0-0, C=4-0-0
Max Horz A=29(LC 9)
Max Uplift A=13(LC 12), C=13(LC 13)
Max Grav A=160(LC 18), C=160(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.



October 18, 2021

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

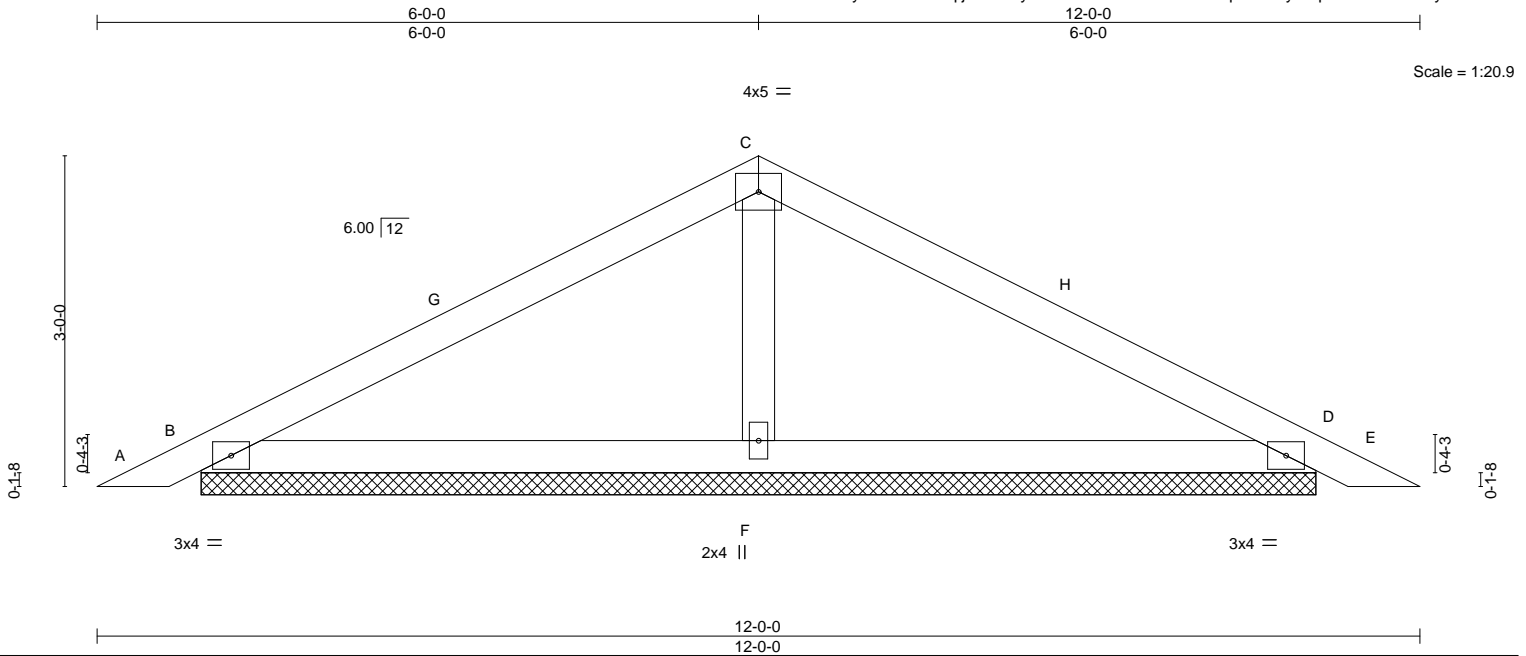


16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job 211674	Truss Z1	Truss Type Roof Special	Qty 8	Ply 1	1626 Plan	148382972
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:43:00 2021 Page 1
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	TC 0.63 BC 0.30 WB 0.08 Matrix-S	in (loc) l/defl L/d Vert(LL) -0.01 E n/r 120 Vert(CT) -0.00 D n/r 90 Horz(CT) 0.00 D n/a n/a	MT20	244/190
TCDL 10.0				Weight: 38 lb	FT = 20%
BCLL 0.0					
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=10-1-6, D=10-1-6, F=10-1-6
Max Horz B=48(LC 12)
Max Uplift B=-52(LC 12), D=-61(LC 13), F=-20(LC 12)
Max Grav B=384(LC 19), D=384(LC 20), F=503(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS C-F=-343/199

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 8-8-1, Exterior(2E) 8-8-1 to 11-8-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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, F.
- 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.



October 18, 2021

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
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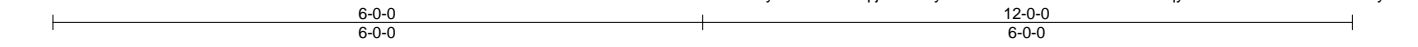
Job 211674	Truss Z1A	Truss Type ROOF SPECIAL	Qty 3	Ply 1	1626 Plan	148382973
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:43:01 2021 Page 1

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Job Reference (optional)



Scale = 1:21.3

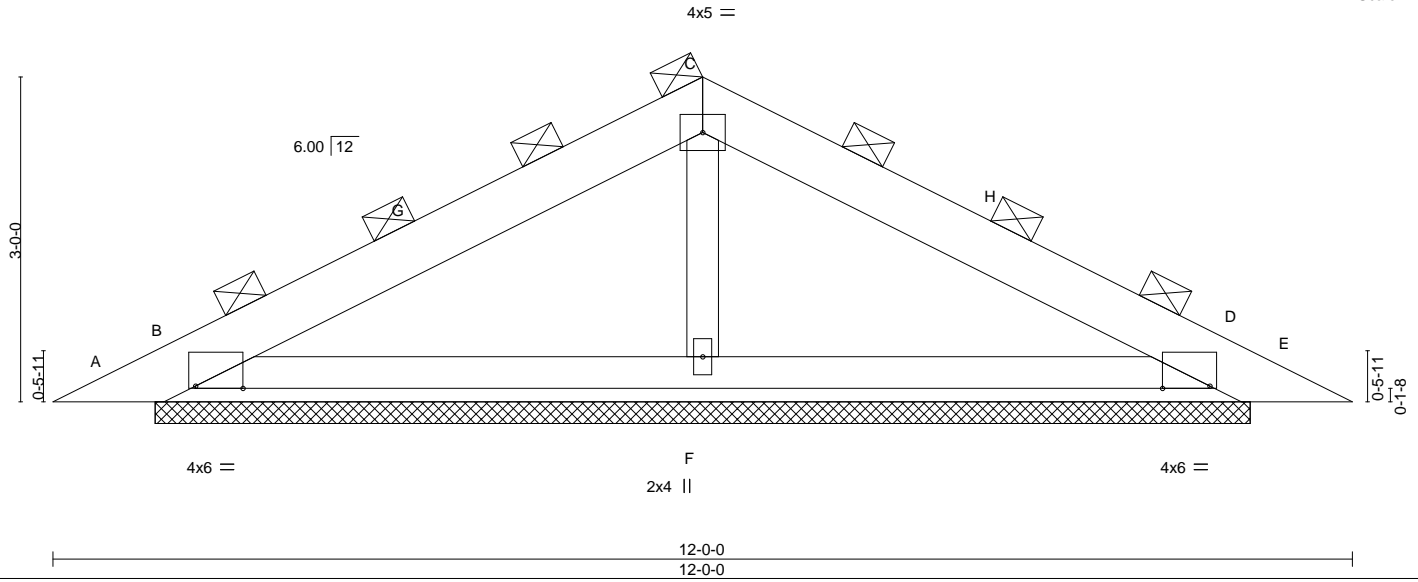


Plate Offsets (X,Y)--	[B:0-5-4,Edge], [D:0-5-4,Edge]
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LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	3-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15	TC 0.31 BC 0.31 WB 0.09 Matrix-S	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.00 E n/a n/a	MT20	244/190
TCDL 10.0	Rep Stress Incr NO				
BCLL 0.0	Code IRC2018/TPI2014				
BCDL 10.0				Weight: 48 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1	TOP CHORD 2-0-0 oc purlins (6-0-0 max.)
BOT CHORD 2x4 SP No.2	(Switched from sheeted: Spacing > 2-10-0).
OTHERS 2x4 SP No.3	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 10-1-6.
 (lb) - Max Horz A=69(LC 16)
 Max Uplift All uplift 100 lb or less at joint(s) except A=-376(LC 19), E=-376(LC 20), B=-237(LC 12), D=-230(LC 13)
 Max Grav All reactions 250 lb or less at joint(s) A, E except B=1067(LC 19), D=1067(LC 20), F=563(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD B-C=-276/150, C-D=-276/150
 WEBS C-F=-401/220

- 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) 0-6-2 to 3-6-2, Exterior(2R) 3-6-2 to 8-5-14, Exterior(2E) 8-5-14 to 11-5-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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 376 lb uplift at joint A, 376 lb uplift at joint E, 237 lb uplift at joint B and 230 lb uplift at joint 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.
 - 8) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.
 - 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

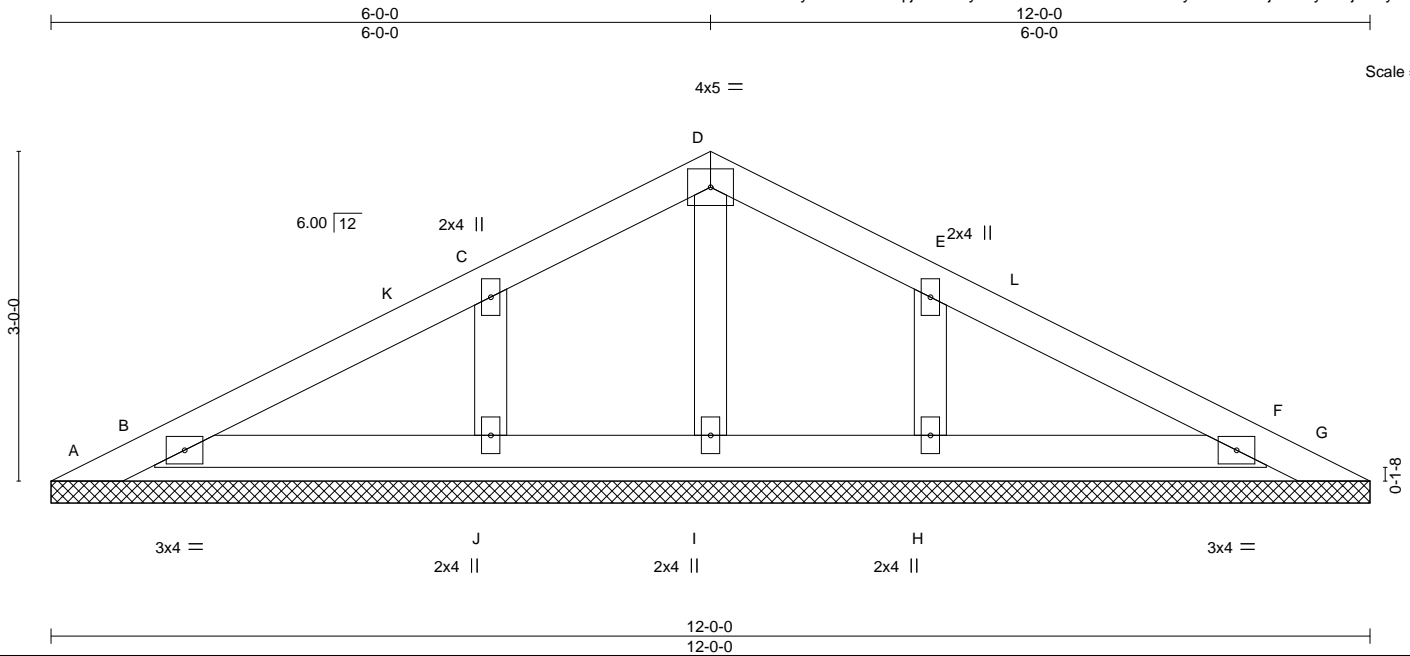


October 18, 2021

Job 211674	Truss Z1G	Truss Type GABLE	Qty 2	Ply 1	1626 Plan	48382974
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Heartland Truss, Inc, Plattsburg, MO - 64477,

8.430 s Aug 16 2021 MiTek Industries, Inc. Fri Oct 15 13:43:02 2021 Page 1
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LOADING (psf)	SPACING-	CSL	DEFL.	PLATES	GRIP
TCLL 25.0 (Roof Snow=25.0)	2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	TC 0.18 BC 0.06 WB 0.06 Matrix-S	in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.00 F n/a n/a	MT20	244/190
TCDL 10.0				Weight: 42 lb	FT = 20%
BCLL 0.0					
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 12-0-0.
(lb) - Max Horz A=48(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) A, G, B, F, J, H
Max Grav All reactions 250 lb or less at joint(s) A, G, I except B=368(LC 19), F=368(LC 20), J=376(LC 19), H=376(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS C-J=-311/178, E-H=-311/178

- 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 8-8-1, Exterior(2E) 8-8-1 to 11-8-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 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) 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) A, G, B, F, J, H.
 - 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) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.



October 18, 2021

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

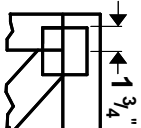
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



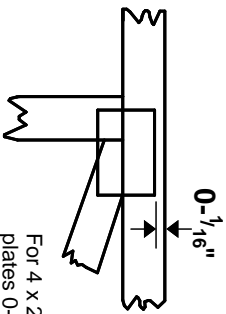
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

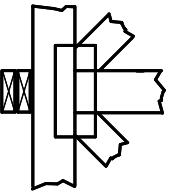
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



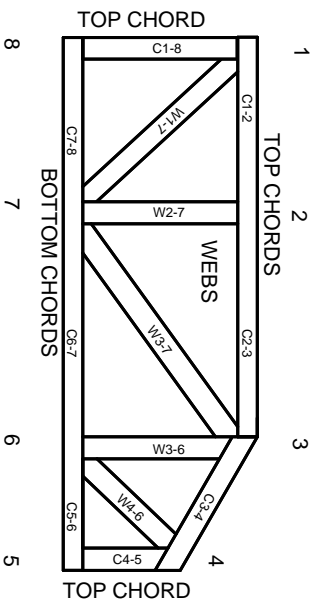
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing, Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



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.

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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 T or 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.



MITek Engineering Reference Sheet: Mill-7473 rev. 5/19/2020