



RE: P230371 -

Site Information:

Project Customer: Clover & Hive Project Name: Marmalade - Farmhouse

Lot/Block: 75 Subdivision: Osage

Model: Marmalade - Farmhouse

Address: 2134 SW Rutherford Dr

City: Lee's Summit

State: MO

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

Design Code: IRC2018/TPI2014

Wind Code: ASCE 7-16 Wind Speed: 115 mph

Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.6

Design Method: MWFRS (Envelope)/C-C hybrid Wind ASCE 7-16

Floor Load: N/A psf

Mean Roof Height (feet): 35

Exposure Category: C

No.	Seal#	Truss Name	Date
1	I59317008	B1	7/3/23
2	I59317009	B2	7/3/23
3	I59317010	B3	7/3/23
4	I59317011	B4	7/3/23
5	I59317012	B5	7/3/23
6	I59317013	C1	7/3/23
7	I59317014	C2	7/3/23
8	I59317015	C3	7/3/23
9	I59317016	D1	7/3/23
10	I59317017	E1	7/3/23
11	I59317018	E2	7/3/23
12	I59317019	J1	7/3/23
13	I59317020	J2	7/3/23
14	I59317021	VC1	7/3/23
15	I59317022	VC2	7/3/23
16	I59317023	VC3	7/3/23
17	I59317024	VC4	7/3/23
18	I59317025	VC5	7/3/23
19	I59317026	VE1	7/3/23
20	I59317027	VE2	7/3/23

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

Truss Design Engineer's Name: Johnson, Andrew

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

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



July 3, 2023

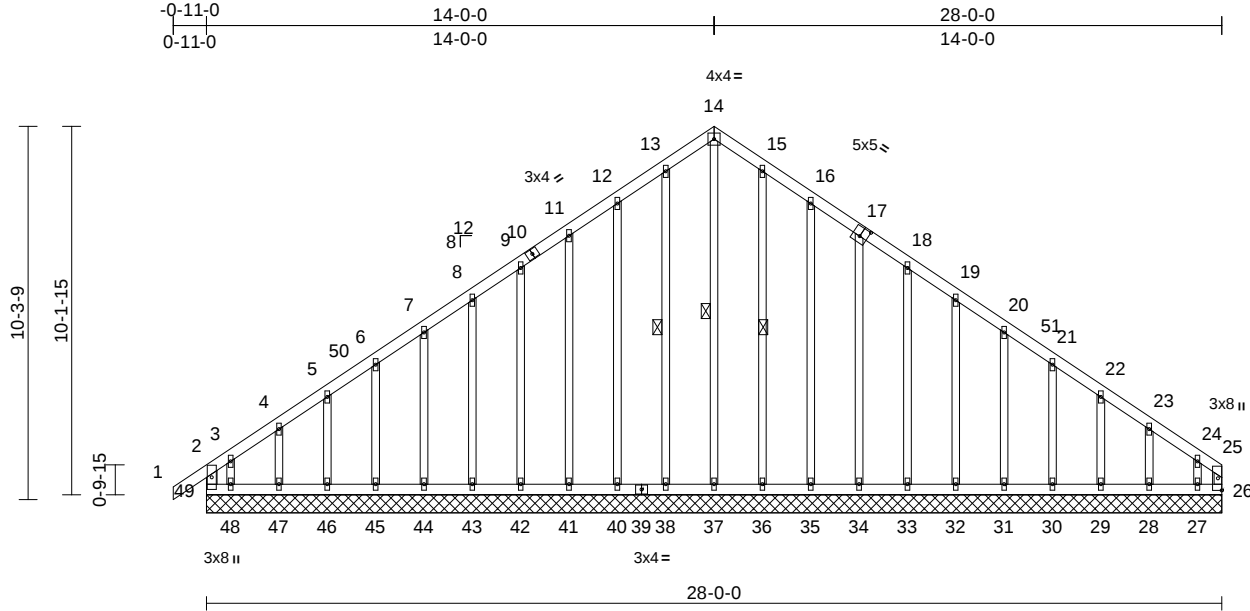
Job	Truss	Truss Type	Qty	Ply	
P230371	B1	Common Supported Gable	1	1	I59317008
Job Reference (optional)					

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

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:05

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Scale = 1:63.5

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

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	26	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
Weight: 179 lb FT = 20%											

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 25-26:2x3 SPF No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 14-37, 13-38, 15-36

REACTIONS (size)	26=28-0-0, 27=28-0-0, 28=28-0-0, 29=28-0-0, 30=28-0-0, 31=28-0-0, 32=28-0-0, 33=28-0-0, 34=28-0-0, 35=28-0-0, 36=28-0-0, 37=28-0-0, 38=28-0-0, 40=28-0-0, 41=28-0-0, 42=28-0-0, 43=28-0-0, 44=28-0-0, 45=28-0-0, 46=28-0-0, 47=28-0-0, 48=28-0-0, 49=28-0-0
	49=286 (LC 9)
Max Horiz	26=-159 (LC 11), 27=-217 (LC 13), 28=-43 (LC 13), 29=-52 (LC 13), 30=-50 (LC 13), 31=-51 (LC 13), 32=-51 (LC 13), 33=-45 (LC 13), 34=-52 (LC 13), 35=-66 (LC 13), 36=-9 (LC 13), 37=-5 (LC 11), 38=-17 (LC 12), 40=-61 (LC 12), 41=-51 (LC 12), 42=-50 (LC 12), 43=-50 (LC 12), 44=-51 (LC 12), 45=-50 (LC 12), 46=-53 (LC 12), 47=-41 (LC 12), 48=-278 (LC 12), 49=-264 (LC 10)
Max Uplift	

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-49=-246/167, 1-2=0/40, 2-3=-292/242, 3-4=-213/190, 4-5=-187/173, 5-6=-166/157, 6-7=-154/152, 7-8=-141/149, 8-9=-128/173, 9-11=-116/199, 11-12=-135/225, 12-13=-164/269, 13-14=-173/286, 14-15=-173/286, 15-16=-164/269, 16-18=-135/218, 18-19=-87/135, 19-20=-62/96, 20-21=-68/71, 21-22=-77/64, 22-23=-102/80, 23-24=-149/97, 24-25=-223/134, 25-26=-172/100, 48-49=-105/147, 47-48=-105/147, 46-47=-105/147, 45-46=-105/147, 44-45=-105/147, 43-44=-105/147, 42-43=-105/147, 41-42=-105/147, 40-41=-105/147, 38-40=-105/147, 37-38=-105/147, 36-37=-105/147, 35-36=-105/147, 34-35=-105/147, 33-34=-104/146, 32-33=-104/146, 31-32=-104/146, 30-31=-104/146, 29-30=-104/146, 28-29=-104/146, 27-28=-104/146, 26-27=-104/146
BOT CHORD	

WEBS

14-37=-231/105, 13-38=-102/33, 12-40=-96/77, 11-41=-96/67, 9-42=-96/65, 8-43=-96/66, 7-44=-96/66, 6-45=-96/66, 5-46=-96/65, 4-47=-100/68, 3-48=-119/144, 15-36=-92/25, 16-35=-103/81, 17-34=-97/68, 18-33=-91/61, 19-32=-97/67, 20-31=-96/66, 21-30=-96/66, 22-29=-96/65, 23-28=-99/68, 24-27=-111/128
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NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 27-10-12 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



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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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	I59317008
P230371	B1	Common Supported Gable	1	1	Job Reference (optional)

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

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- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 264 lb uplift at joint 49, 159 lb uplift at joint 26, 5 lb uplift at joint 37, 17 lb uplift at joint 38, 61 lb uplift at joint 40, 51 lb uplift at joint 41, 50 lb uplift at joint 42, 50 lb uplift at joint 43, 51 lb uplift at joint 44, 50 lb uplift at joint 45, 53 lb uplift at joint 46, 41 lb uplift at joint 47, 278 lb uplift at joint 48, 9 lb uplift at joint 36, 66 lb uplift at joint 35, 52 lb uplift at joint 34, 45 lb uplift at joint 33, 51 lb uplift at joint 32, 51 lb uplift at joint 31, 50 lb uplift at joint 30, 52 lb uplift at joint 29, 43 lb uplift at joint 28 and 217 lb uplift at joint 27.
- 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.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	
P230371	B2	Common	4	1	
					Job Reference (optional)

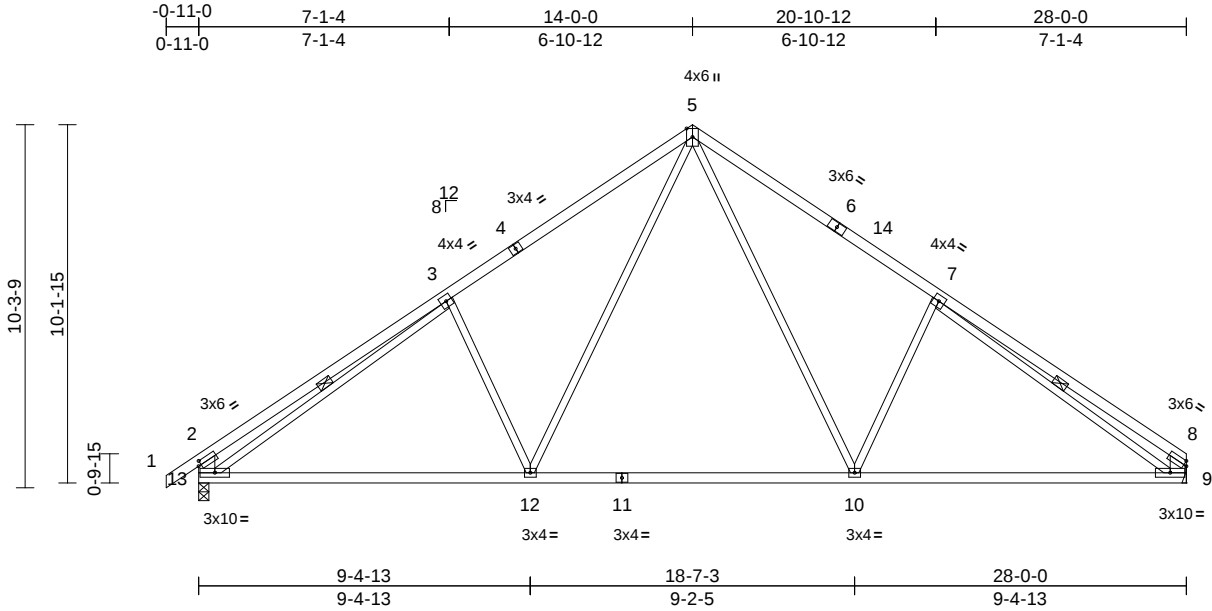
I59317009

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

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Scale = 1:65.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.16	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.33	12-13	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
											Weight: 135 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x3 SPF No.2 *Except* 13-2,9-8:2x6 SPF No.2

BRACING

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

WEBS 1 Row at midpt 3-13, 7-9

REACTIONS (size) 9= Mechanical, 13=0-3-8
 Max Horiz 13=297 (LC 9)
 Max Uplift 9=-173 (LC 13), 13=-202 (LC 12)
 Max Grav 9=1238 (LC 1), 13=1321 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/44, 2-3=-739/302, 3-5=-1488/355,
 5-7=-1496/359, 7-8=-601/203,
 2-13=-655/283, 8-9=-488/191
 BOT CHORD 12-13=-259/1296, 10-12=-36/874,
 9-10=-154/1276
 WEBS 5-10=-209/636, 7-10=-426/335,
 5-12=-205/626, 3-12=-413/330,
 3-13=-960/63, 7-9=-1101/126

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 27-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Bearings are assumed to be: Joint 13 SP No.2 crushing capacity of 565 psi.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 13 and 173 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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



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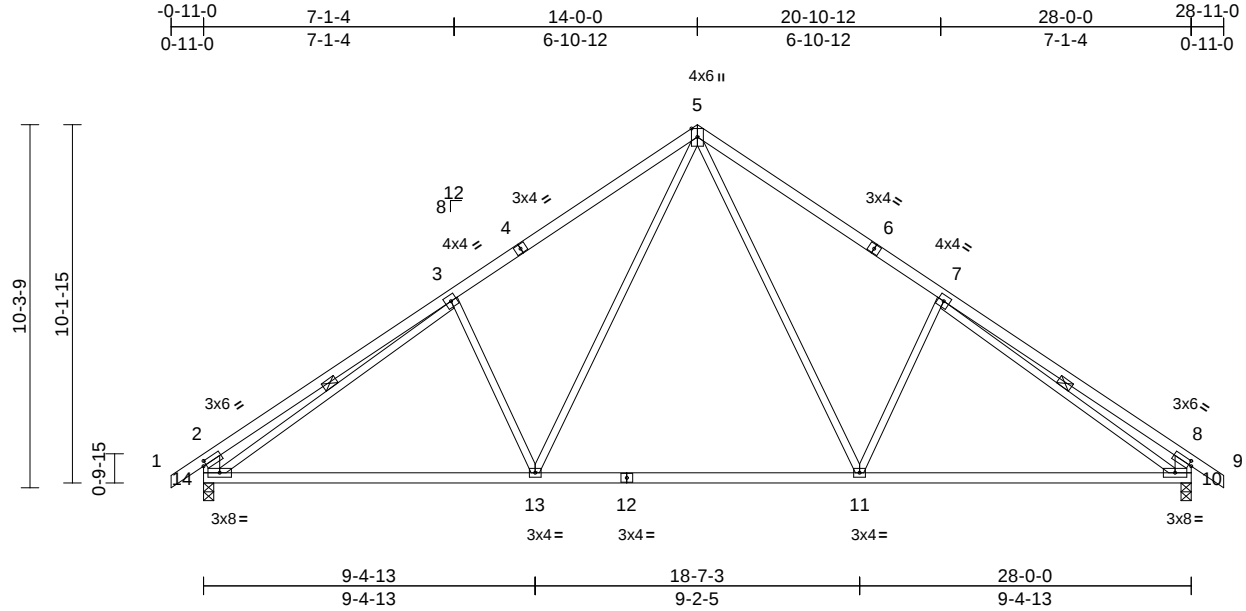
Job	Truss	Truss Type	Qty	Ply	
P230371	B3	Common	3	1	I59317010
Job Reference (optional)					

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

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Scale = 1:65.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.16	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.33	13-14	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 137 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x4 SP No.2
 WEBS 2x3 SPF No.2 *Except* 14-2,10-8:2x6 SPF No.2

BRACING

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

WEBS 1 Row at midpt 3-14, 7-10

REACTIONS (size) 10=0-3-8, 14=0-3-8
 Max Horiz 14=-305 (LC 10)
 Max Uplift 10=-202 (LC 13), 14=-202 (LC 12)
 Max Grav 10=1320 (LC 1), 14=1320 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/44, 2-3=-739/302, 3-5=-1485/355, 5-7=-1485/355, 7-8=-739/302, 8-9=0/44, 2-14=-655/283, 8-10=-655/283
 BOT CHORD 13-14=-244/1305, 11-13=-22/872, 10-11=-106/1264
 WEBS 5-11=-205/625, 7-11=-413/329, 5-13=-205/625, 3-13=-413/329, 3-14=-956/61, 7-10=-956/61

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to 19-0-0, Interior (1) 19-0-0 to 28-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 14 and 202 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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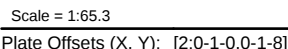
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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



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LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 13-2:2x6 SPF No.2, 9-8:2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 3-3-7 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 3-13, 7-9
REACTIONS	(size) 9= Mechanical, 13=0-3-8 Max Horiz 13=299 (LC 9) Max Uplift 9=170 (LC 13), 13=-201 (LC 12) Max Grav 9=1228 (LC 1), 13=1312 (LC 1)
FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/44, 2-3=-737/302, 3-5=-1473/353, 5-7=-1463/354, 7-8=-476/174, 2-13=-653/283, 8-9=-412/171
BOT CHORD	12-13=-258/1285, 10-12=-35/861, 9-10=-156/1237
WEBS	5-10=-203/607, 7-10=-399/329, 5-12=-205/627, 3-12=-414/330, 3-13=-947/60, 7-9=-1197/144

- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) Bearings are assumed to be: Joint 13 SP No.2 crushing capacity of 565 psi.
- 5) Refer to girder(s) for truss to truss connections.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 201 lb uplift at joint 13 and 170 lb uplift at joint 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- ## NOTES
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCFL=6.0psf; BCFL=6.0psf; h=35ft;
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
 exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0,
 Interior (1) 4-1-0 to 14-0-0, Exterior(2R) 14-0-0 to
 19-0-0, Interior (1) 19-0-0 to 27-6-12 zone; cantilever left
 and right exposed ; end vertical left and right
 exposed;C-C for members and forces & MWFRS for
 reactions shown; Lumber DOL=1.60 plate grip
 DOL=1.60



July 3, 2023



WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1473 (Rev. 3/29/2020) 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



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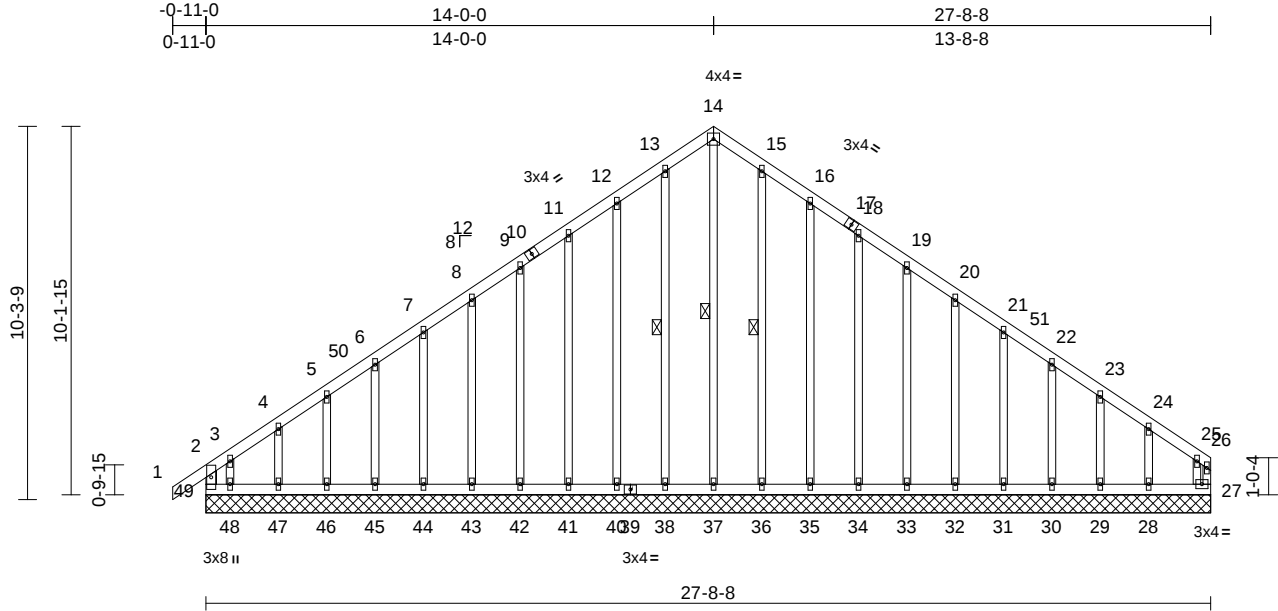
Job	Truss	Truss Type	Qty	Ply	
P230371	B5	Common Supported Gable	1	1	Job Reference (optional)
					I59317012

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

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Scale = 1:63.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.12	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.23	Horz(CT)	0.01	27	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 178 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 26-27:2x3 SPF No.2
OTHERS	2x3 SPF No.2

BRACING

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

WEBS 1 Row at midpt 14-37, 13-38, 15-36

REACTIONS	(size)	27=27-8-8, 28=27-8-8, 29=27-8-8, 30=27-8-8, 31=27-8-8, 32=27-8-8, 33=27-8-8, 34=27-8-8, 35=27-8-8, 36=27-8-8, 37=27-8-8, 38=27-8-8, 40=27-8-8, 41=27-8-8, 42=27-8-8, 43=27-8-8, 44=27-8-8, 45=27-8-8, 46=27-8-8, 47=27-8-8, 48=27-8-8, 49=27-8-8
	Max Horiz	49=298 (LC 9)
	Max Uplift	27=64 (LC 11), 28=174 (LC 13), 29=23 (LC 13), 30=57 (LC 13), 31=51 (LC 13), 32=52 (LC 13), 33=51 (LC 13), 34=53 (LC 13), 35=67 (LC 13), 36=5 (LC 13), 37=26 (LC 11), 38=17 (LC 12), 40=64 (LC 12), 41=53 (LC 12), 42=52 (LC 12), 43=52 (LC 12), 44=52 (LC 12), 45=51 (LC 12), 46=54 (LC 12), 47=42 (LC 12), 48=297 (LC 9), 49=305 (LC 8)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-49=-275/199, 1-2=0/41, 2-3=-320/271, 3-4=-235/213, 4-5=-208/195, 5-6=-195/186, 6-7=-182/182, 7-8=-169/180, 8-9=-155/207, 9-11=-142/233, 11-12=-157/260, 12-13=-188/304, 13-14=-195/320, 14-15=-195/320, 15-16=-188/304, 16-18=-157/252, 18-19=-132/207, 19-20=-106/164, 20-21=-81/120, 21-22=-59/80, 22-23=-69/53, 23-24=-73/54, 24-25=-166/104, 25-26=-25/33, 26-27=-113/156
BOT CHORD	48-49=-92/119, 47-48=-92/119, 46-47=-92/119, 45-46=-92/119, 44-45=-92/119, 43-44=-92/119, 42-43=-92/119, 41-42=-92/119, 40-41=-92/119, 38-40=-92/119, 37-38=-92/119, 36-37=-92/119, 35-36=-92/119, 34-35=-92/119, 33-34=-92/119, 32-33=-92/119, 31-32=-92/119, 30-31=-92/119, 29-30=-92/119, 28-29=-92/119, 27-28=-92/119

WEBS

14-37=-262/124, 13-38=-106/33, 12-40=-99/80, 11-41=-99/69, 9-42=-99/68, 8-43=-99/68, 7-44=-99/68, 6-45=-99/68, 5-46=-99/67, 4-47=-103/71, 3-48=-131/147, 15-36=-95/21, 16-35=-104/83, 18-34=-99/69, 19-33=-99/67, 20-32=-99/68, 21-31=-99/68, 22-30=-101/71, 23-29=-92/53, 24-28=-149/158, 25-27=-254/162

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 14-0-0, Corner(3R) 14-0-0 to 19-0-0, Exterior(2N) 19-0-0 to 27-7-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60



July 3, 2023

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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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	Truss	Truss Type	Qty	Ply	I59317012
P230371	B5	Common Supported Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:09

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- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 1-4-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 305 lb uplift at joint 49, 64 lb uplift at joint 27, 26 lb uplift at joint 37, 17 lb uplift at joint 38, 64 lb uplift at joint 40, 53 lb uplift at joint 41, 52 lb uplift at joint 42, 52 lb uplift at joint 43, 52 lb uplift at joint 44, 51 lb uplift at joint 45, 54 lb uplift at joint 46, 42 lb uplift at joint 47, 297 lb uplift at joint 48, 5 lb uplift at joint 36, 67 lb uplift at joint 35, 53 lb uplift at joint 34, 51 lb uplift at joint 33, 52 lb uplift at joint 32, 51 lb uplift at joint 31, 57 lb uplift at joint 30, 23 lb uplift at joint 29 and 174 lb uplift at joint 28.
- 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.

LOAD CASE(S) Standard

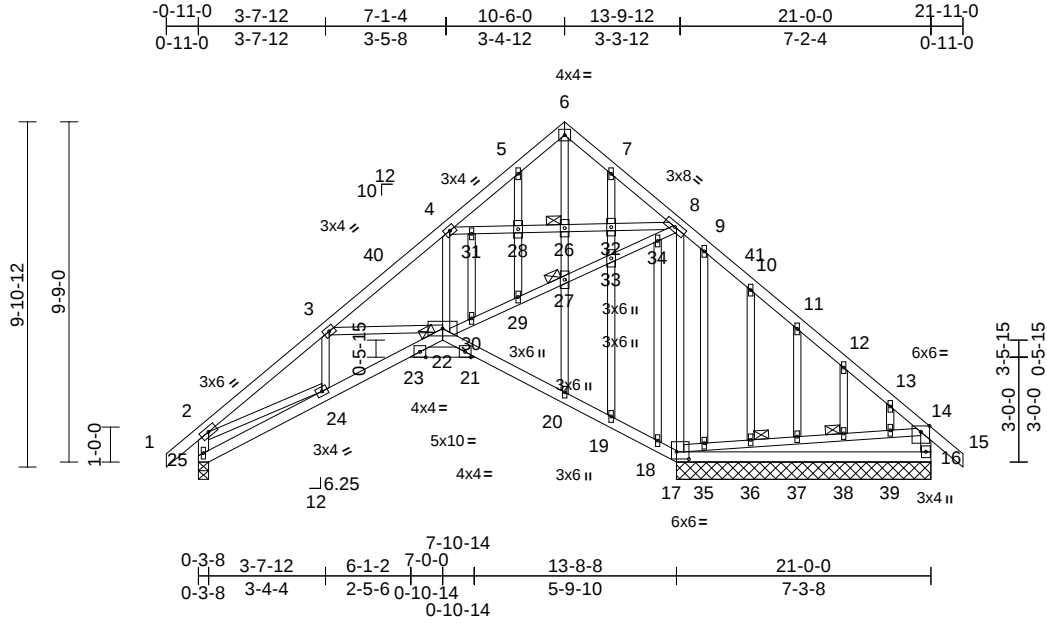
Job	Truss	Truss Type	Qty	Ply	
P230371	C1	Roof Special	1	1	I59317013
Job Reference (optional)					

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

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Scale = 1:66

Plate Offsets (X, Y): [17:0-4-4,0-2-8]

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.08	16-17	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.16	16-17	>542	180	
BCLL	0.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.05	16	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 149 lb FT = 20%											

LUMBER		
TOP CHORD	2x4 SP No.2	
BOT CHORD	2x4 SP No.2	
WEBS	2x3 SPF No.2 *Except* 25-2,16-14:2x4 SP No.2	
OTHERS	2x3 SPF No.2	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.	
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.	
JOINTS	1 Brace at Jt(s): 22, 26, 27, 36, 38	
REACTIONS		
(size)	16=7-3-8, 17=7-3-8, 25=0-3-8	
Max Horiz	25=-290 (LC 10)	
Max Uplift	16=-152 (LC 8), 17=-221 (LC 12), 25=-100 (LC 13)	
Max Grav	16=241 (LC 26), 17=1338 (LC 1), 25=513 (LC 1)	
FORCES		
(lb) - Maximum Compression/Maximum Tension		
TOP CHORD	1-2=0/46, 2-3=-775/156, 3-4=-511/65, 4-5=-230/27, 5-6=-162/52, 6-7=-186/62, 7-8=-246/55, 8-9=-47/467, 9-10=-64/519, 10-11=-66/469, 11-12=-72/432, 12-13=-89/407, 13-14=-96/318, 14-15=0/46, 2-25=-516/167, 14-16=-172/193	
BOT CHORD	24-25=-301/373, 23-24=-252/819, 22-23=-179/833, 21-23=-101/9, 21-22=-306/218, 20-21=-339/171, 19-20=-333/175, 18-19=-341/161, 17-18=-357/150, 16-17=-212/353	

WEBS		
8-17=-858/162, 2-24=-8/485,		
17-35=-633/280, 35-36=-608/283,		
36-37=-607/280, 37-38=-605/279,		
38-39=-602/276, 14-39=-611/283,		
4-22=-38/86, 3-24=-54/51, 3-22=-241/196,		
22-30=-175/832, 29-30=-178/846,		
27-29=-183/858, 27-33=-177/842,		
33-34=-181/875, 8-34=-192/862,		
4-31=-271/157, 28-31=-270/158,		
26-28=-270/157, 26-32=-270/158,		
8-32=-271/158, 6-26=-3/108, 26-27=0/114,		
20-27=0/101, 5-28=-50/35, 28-29=-28/18,		
30-31=-35/12, 7-32=-48/8, 32-33=-72/8,		
19-33=-22/17, 18-34=-46/15, 9-35=-122/22,		
10-36=-34/41, 11-37=-27/19, 12-38=-54/44,		
13-39=-83/112		

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 10-6-0, Exterior(2R) 10-6-0 to 15-6-0, Interior (1) 15-6-0 to 21-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - Bearing at joint(s) 25 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint 25, 221 lb uplift at joint 17 and 152 lb uplift at joint 16.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



July 3, 2023

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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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

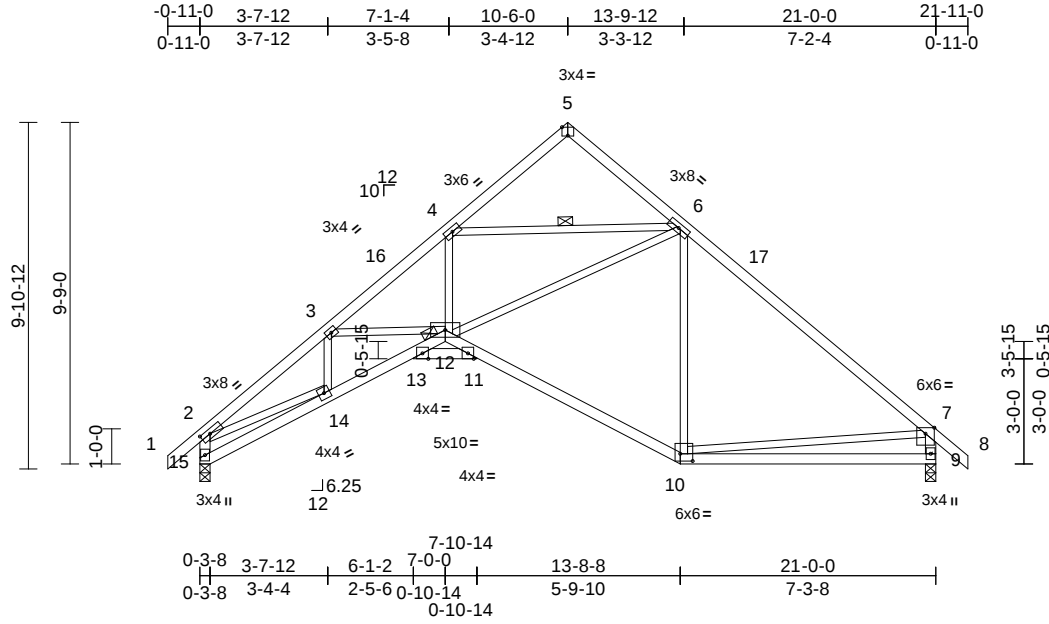
Job	Truss	Truss Type	Qty	Ply	
P230371	C2	Roof Special	6	1	
					I59317014
					Job Reference (optional)

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

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Scale = 1:65.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.09	9-10	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.47	Vert(CT)	-0.19	9-10	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.58	Horz(CT)	0.14	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 115 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-2,9-7:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-6
JOINTS 1 Brace at Jt(s): 12

REACTIONS

(size) 9=0-3-8, 15=0-3-8
Max Horiz 15=300 (LC 10)
Max Uplift 9=142 (LC 13), 15=142 (LC 12)
Max Grav 9=1006 (LC 1), 15=1006 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/48, 2-3=-1891/347, 3-4=-1961/286, 4-5=-209/45, 5-6=-237/73, 6-7=-1056/197, 7-8=0/48, 2-15=-1016/256, 7-9=-934/221
BOT CHORD 14-15=-309/416, 13-14=-365/1778, 12-13=-229/1799, 11-13=-250/0, 11-12=0/821, 10-11=-31/786, 9-10=-227/415
WEBS 6-10=-250/76, 2-14=-147/1309, 7-10=-65/377, 4-12=-38/857, 3-14=-276/60, 3-12=-29/172, 6-12=-178/994, 4-6=-1369/328

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 10-6-0, Exterior(2R) 10-6-0 to 15-6-0, Interior (1) 15-6-0 to 21-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 142 lb uplift at joint 15 and 142 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
P230371	C3	Common Girder	1	2	Job Reference (optional)

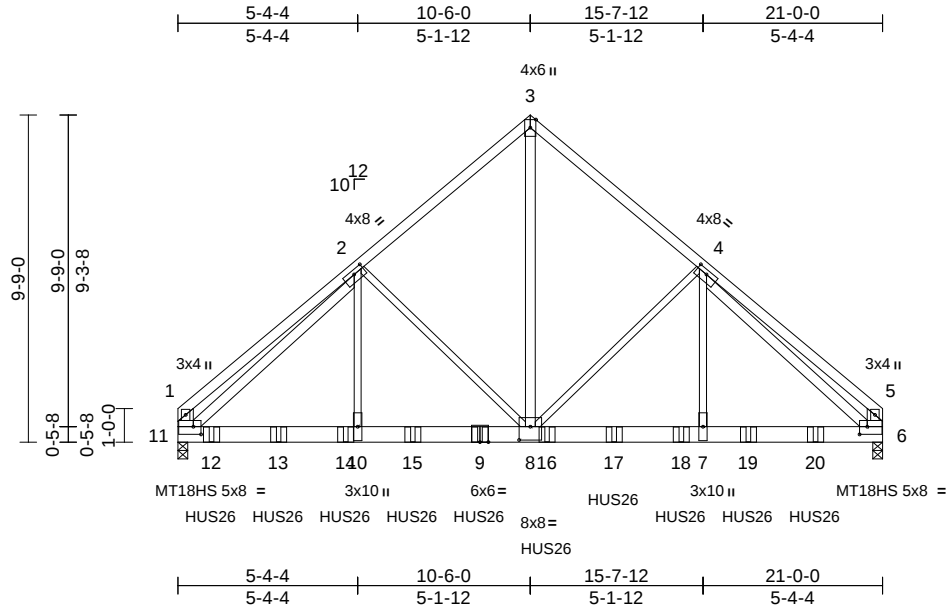
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Scale = 1:68.7

Plate Offsets (X, Y): [2:0-3-14,0-1-8], [4:0-3-14,0-1-8], [6:0-2-12,0-2-12], [8:0-4-0,0-4-12], [11:0-2-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	-0.10	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	-0.18	7-8	>999	180	MT18HS	244/190
BCLL	0.0	Rep Stress Incr	NO	WB	0.94	Horz(CT)	0.04	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
											Weight: 289 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
 BOT CHORD 2x6 SP 2400F 2.0E
 WEBS 2x3 SPF No.2 *Except* 8-3,11-2,6-4:2x4 SP No.2, 11-1,6-5:2x6 SP 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-9-4 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 6=0-3-8, 11=0-3-8
 Max Horiz 11=271 (LC 11)
 Max Uplift 6=-981 (LC 13), 11=-1069 (LC 12)
 Max Grav 6=6672 (LC 1), 11=7262 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-2639/500, 2-3=-5446/952, 3-4=-5446/952, 4-5=-2537/484, 1-11=-1804/378, 5-6=-1739/369
 BOT CHORD 10-11=-902/5671, 8-10=-902/5671, 7-8=-823/5649, 6-7=-823/5649
 WEBS 3-8=-1063/6460, 4-8=-2198/518, 4-7=-397/3061, 2-8=-2229/522, 2-10=-399/3092, 2-11=-5246/736, 4-6=-5325/746

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
 Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc.
 Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
 Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 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.

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 5-4-4, Interior (1) 5-4-4 to 10-6-0, Exterior(2R) 10-6-0 to 15-7-12, Interior (1) 15-7-12 to 20-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1069 lb uplift at joint 11 and 981 lb uplift at joint 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 1-0-0 from the left end to 19-0-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
 Uniform Loads (lb/ft)
 Vert: 1-3=-70, 3-5=-70, 6-11=-20
 Concentrated Loads (lb)

Vert: 9=-1208 (B), 12=-1211 (B), 13=-1208 (B), 14=-1208 (B), 15=-1208 (B), 16=-1208 (B), 17=-1208 (B), 18=-1208 (B), 19=-1208 (B), 20=-1208 (B)



July 3, 2023

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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



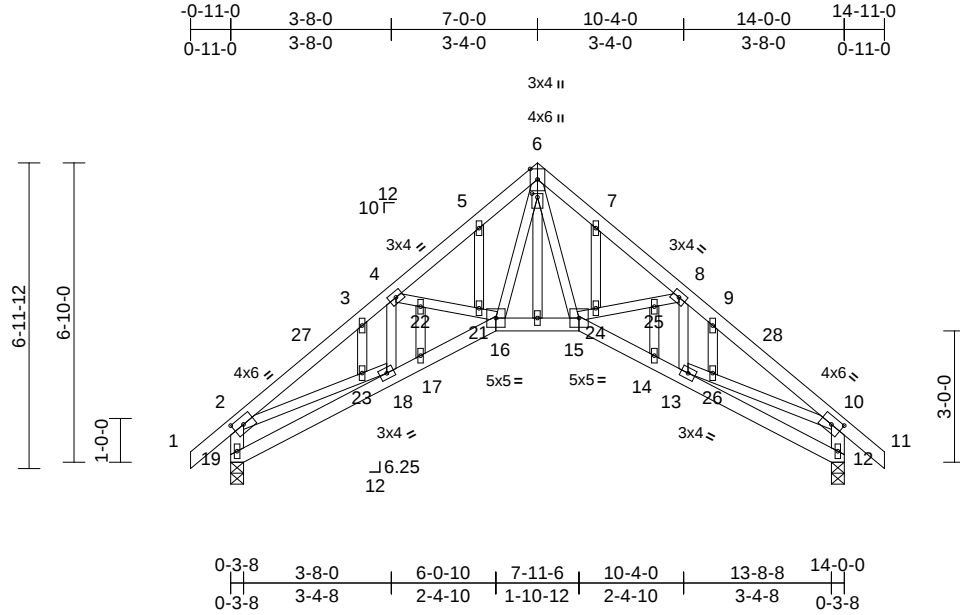
16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job P230371	Truss D1	Truss Type Roof Special	Qty 1	Ply 1	Job Reference (optional) I59317016
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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Scale = 1:52.6

Plate Offsets (X, Y): [2:0-2-14,0-2-0], [6:0-1-0,0-1-8], [10:0-2-14,0-2-0]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.04	15-16	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.08	15-16	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.41	Horz(CT)	0.09	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 84 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 19-2,12-10:2x4 SP No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-2-7 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size) 12=0-3-8, 19=0-3-8
	Max Horiz 19=212 (LC 11)
	Max Uplift 12=98 (LC 13), 19=98 (LC 12)
	Max Grav 12=670 (LC 1), 19=670 (LC 1)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/46, 2-3=-1167/210, 3-4=-953/227, 4-5=-995/166, 5-6=-929/224, 6-7=-922/214, 7-8=-995/166, 8-9=-938/198, 9-10=-1167/185, 10-11=0/46, 2-19=-701/204, 10-12=-700/213
BOT CHORD	18-19=-215/345, 17-18=-145/1044, 16-17=-148/1052, 15-16=-22/648, 14-15=-60/920, 13-14=-58/913, 12-13=-40/178
WEBS	6-15=-88/521, 6-16=-143/598, 2-23=-13/697, 18-23=-13/662, 13-26=-24/662, 10-26=-25/697, 4-22=-150/155, 21-22=-152/151, 16-21=-166/178, 4-18=-246/20, 15-24=-188/190, 24-25=-168/161, 8-25=-167/165, 8-13=-251/32, 5-21=-43/73, 17-22=0/21, 3-23=0/164, 7-24=-52/79, 14-25=-1/23, 9-26=0/169

NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-11-0 to 4-1-0, Interior (1) 4-1-0 to 7-0-0, Exterior(2R) 7-0-0 to 12-0-0, Interior (1) 12-0-0 to 14-11-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 19, 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 98 lb uplift at joint 19 and 98 lb uplift at joint 12.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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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



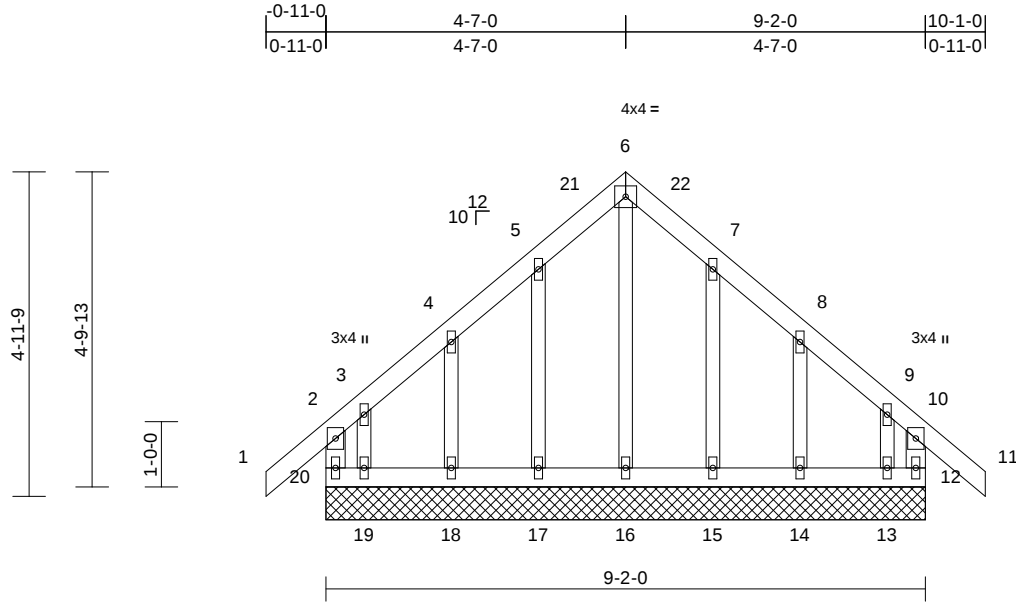
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	159317017
P230371	E1	Common Supported Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:12
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Scale = 1:35.2

Loading	(psf)	Spacing	1-11-4	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.10	Horz(CT)	0.00	12	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R						Weight: 51 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)	12=9-2-0, 13=9-2-0, 14=9-2-0, 15=9-2-0, 16=9-2-0, 17=9-2-0, 18=9-2-0, 19=9-2-0, 20=9-2-0
Max Horiz	20=155 (LC 11)
Max Uplift	12=-115 (LC 9), 13=-130 (LC 8), 14=-69 (LC 13), 15=-54 (LC 13), 17=-55 (LC 12), 18=-69 (LC 12), 19=-153 (LC 9), 20=-148 (LC 8)
Max Grav	12=191 (LC 19), 13=148 (LC 11), 14=127 (LC 20), 15=131 (LC 20), 16=144 (LC 22), 17=132 (LC 19), 18=126 (LC 19), 19=174 (LC 10), 20=219 (LC 20)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-20=-154/102, 1-2=0/46, 2-3=-106/102, 3-4=-68/72, 4-5=-64/167, 5-6=-103/242, 6-7=-103/240, 7-8=-64/166, 8-9=-51/67, 9-10=-84/80, 10-11=0/46, 10-12=-138/104
BOT CHORD	19-20=-75/112, 18-19=-75/112, 17-18=-75/112, 16-17=-75/112, 15-16=-75/112, 14-15=-75/112, 13-14=-75/112, 12-13=-75/112
WEBS	6-16=-214/50, 5-17=-106/128, 4-18=-104/171, 3-19=-105/75, 7-15=-105/128, 8-14=-104/171, 9-13=-103/72

NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-11-0 to 4-1-0, Exterior(2N) 4-1-0 to 4-7-0, Corner(3R) 4-7-0 to 9-7-0, Exterior(2N) 9-7-0 to 10-1-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- All plates are 1.5x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 148 lb uplift at joint 20, 115 lb uplift at joint 12, 55 lb uplift at joint 17, 69 lb uplift at joint 18, 153 lb uplift at joint 19, 54 lb uplift at joint 15, 69 lb uplift at joint 14 and 130 lb uplift at joint 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.

LOAD CASE(S) Standard



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



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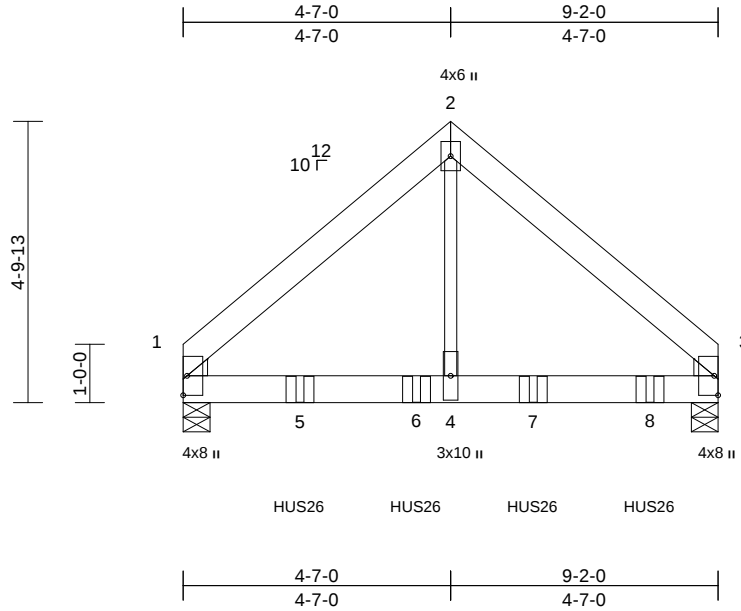
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
P230371	E2	Common Girder	1	2	I59317018

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

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Scale = 1:39.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.03	3-4	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.32	Vert(CT)	-0.05	3-4	>999	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.55	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=0-5-8, 3=0-5-8
Max Horiz 1=120 (LC 11)
Max Uplift 1=-379 (LC 12), 3=-450 (LC 13)
Max Grav 1=2594 (LC 1), 3=3061 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-2641/483, 2-3=-2635/500
BOT CHORD 1-4=-251/1850, 3-4=-251/1850
WEBS 2-4=-452/3212

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: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 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.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP 2400F 2.0E crushing capacity of 805 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 379 lb uplift at joint 1 and 450 lb uplift at joint 3.
- 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.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 8-0-0 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 1-3=-20
Concentrated Loads (lb)
Vert: 5=-1218 (B), 6=-1218 (B), 7=-1218 (B), 8=-1218 (B)



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16023 Swingley Ridge Rd
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Job	Truss	Truss Type	Qty	Ply	
P230371	J1	Monopitch	1	1	Job Reference (optional)

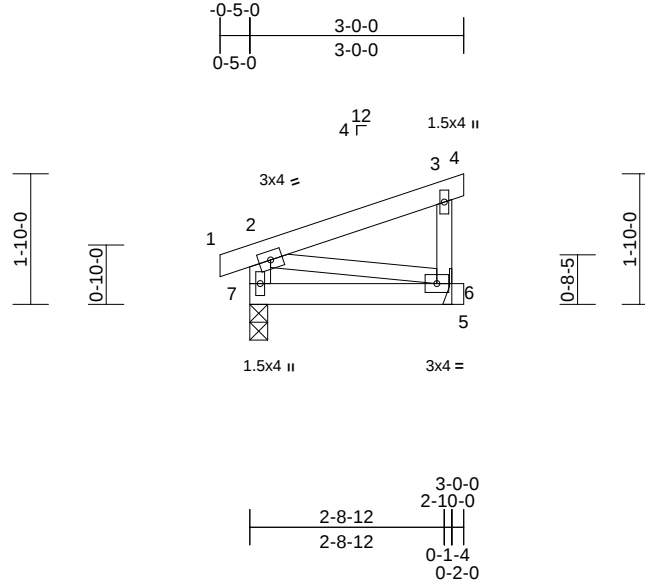
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Scale = 1:32.3

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.12	Vert(LL)	0.01	6-7	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(CT)	0.01	6-7	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 6= Mechanical, 7=0-3-0

Max Horiz 7=44 (LC 9)
Max Uplift 6=-69 (LC 8), 7=-61 (LC 8)
Max Grav 6=120 (LC 1), 7=154 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-54/21, 3-4=-2/0, 3-6=-89/139,
2-7=-130/131

BOT CHORD 6-7=-118/33, 5-6=0/0

WEBS 2-6=-34/121

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed; end vertical left exposed; porch left
and right exposed; C-C for members and forces &
MWFRS for reactions shown; Lumber DOL=1.60 plate
grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) Truss to be fully sheathed from one face or securely
braced against lateral movement (i.e. diagonal web).
- 4) Gable studs spaced at 1-4-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) Bearings are assumed to be: Joint 7 SP No.2 crushing
capacity of 565 psi.

- 7) Refer to girder(s) for truss to truss connections.
 - 8) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 69 lb uplift at joint
6 and 61 lb uplift at joint 7.
 - 9) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



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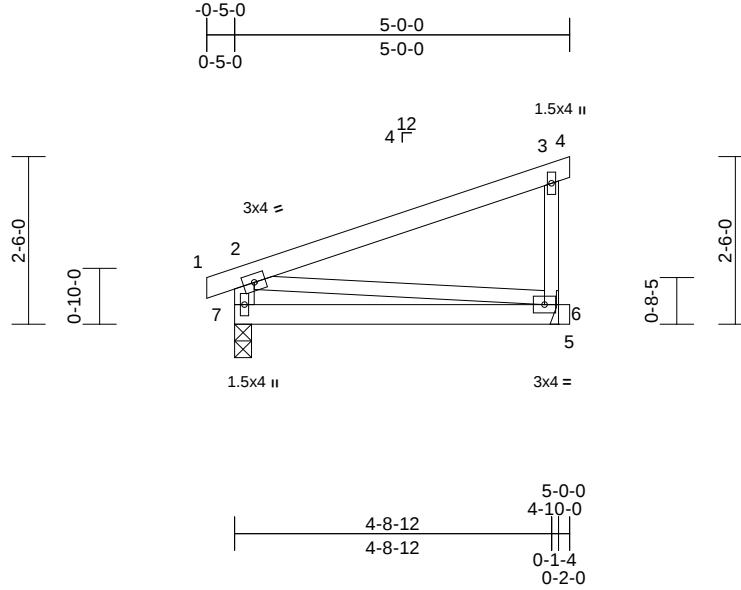
Job	Truss	Truss Type	Qty	Ply	
P230371	J2	Monopitch	3	1	I59317020
Job Reference (optional)					

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Scale = 1:34.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	0.10	6-7	>549	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.49	Vert(CT)	0.08	6-7	>651	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%

LUMBER

LOAD CASE(S) Standard

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

BRACING

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

REACTIONS (size) 6= Mechanical, 7=0-3-0
Max Horiz 7=71 (LC 8)
Max Uplift 6=-116 (LC 8), 7=-98 (LC 8)
Max Grav 6=215 (LC 1), 7=248 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/12, 2-3=-93/40, 3-4=-2/0,
3-6=-164/242, 2-7=-202/208

BOT CHORD 6-7=-183/54, 5-6=0/0

WEBS 2-6=-55/184

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed; end vertical left exposed; porch left
and right exposed; C-C for members and forces &
MWFRS for reactions shown; Lumber DOL=1.60 plate
grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) Bearings are assumed to be: Joint 7 SP No.2 crushing
capacity of 565 psi.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 116 lb uplift at joint
6 and 98 lb uplift at joint 7.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



July 3, 2023

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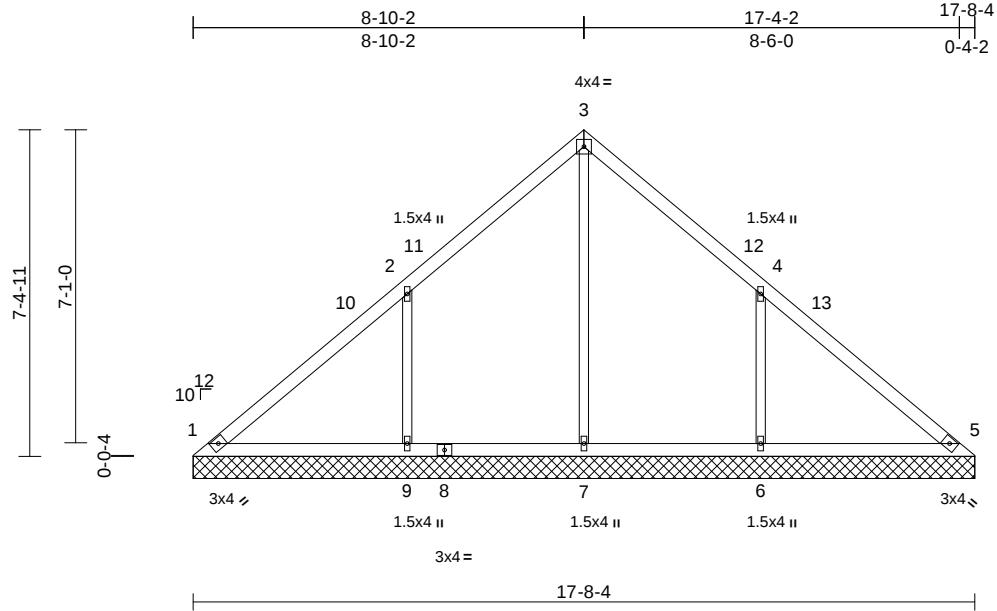
Job	Truss	Truss Type	Qty	Ply	
P230371	VC1	Valley	1	1	Job Reference (optional)
					I59317021

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Scale = 1:52.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 70 lb FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=17-8-4, 5=17-8-4, 6=17-8-4, 7=17-8-4, 9=17-8-4
Max Horiz 1=197 (LC 9)
Max Uplift 1=-16 (LC 8), 6=-259 (LC 13), 9=-259 (LC 12)
Max Grav 1=213 (LC 20), 5=197 (LC 1), 6=498 (LC 20), 7=232 (LC 22), 9=498 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-195/146, 2-3=-178/161, 3-4=-166/139, 4-5=-165/103
BOT CHORD 1-9=-70/158, 7-9=-70/158, 6-7=-70/158, 5-6=-70/158
WEBS 3-7=-164/0, 2-9=-387/305, 4-6=-387/304

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 5-4-13, Interior (1) 5-4-13 to 8-10-7, Exterior(2R) 8-10-7 to 13-10-7, Interior (1) 13-10-7 to 17-4-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 4-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 1, 259 lb uplift at joint 9 and 259 lb uplift at joint 6.
 - This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



July 3, 2023

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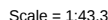
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:13 Page: 1
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LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 SPF No.2

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

REACTIONS (size) 1=14-5-14, 5=14-5-14, 6=14-5-14, 7=14-5-14, 8=14-5-14
Max Horiz 1=-160 (LC 8)
Max Uplift 1=-28 (LC 8), 5=-1 (LC 9), 6=-210 (LC 13), 8=-210 (LC 12)
Max Grav 1=157 (LC 20), 5=136 (LC 19), 6=396 (LC 20), 7=251 (LC 1), 8=396 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-165/118, 2-3=-175/137, 3-4=-166/129, 4-5=-141/75
BOT CHORD 1-8=-51/118, 7-8=-51/118, 6-7=-51/118, 5-6=-51/118
WEBS 3-7=-170/0, 2-8=-317/259, 4-6=-317/259

- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 1 lb uplift at joint 5, 210 lb uplift at joint 8 and 210 lb uplift at joint 6.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1

LOAD CASE(S) Standard

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
 exterior zone and C-C Exterior(2E) 0-4-13 to 5-4-13,
 Interior (1) 5-4-13 to 7-3-4, Exterior(2R) 7-3-4 to 12-3-4,
 Interior (1) 12-3-4 to 14-1-10 zone; cantilever left and
 right exposed ; end vertical left and right exposed; C-C
 for members and forces & MWFRS for reactions shown;
 Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
 only. For studs exposed to wind (normal to the face),
 see Standard Industry Gable End Details as applicable,
 or consult qualified building designer as per ANSI/TPI 1.



July 3, 2023



WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1475 (Rev. 3/25/2020) 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



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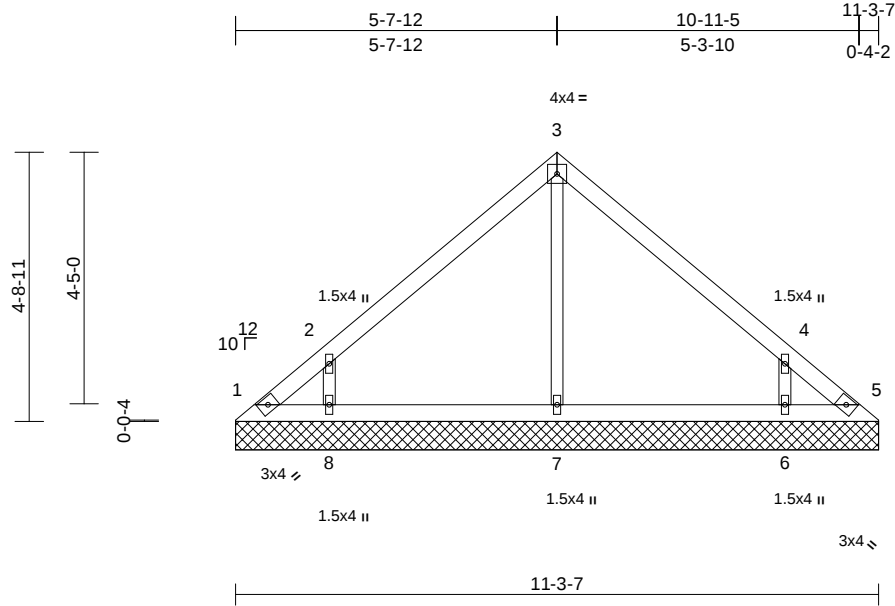
Job	Truss	Truss Type	Qty	Ply	
P230371	VC3	Valley	1	1	Job Reference (optional)

I59317023

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

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:13
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 42 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=11-3-7, 5=11-3-7, 6=11-3-7, 7=11-3-7, 8=11-3-7
Max Horiz 1=-123 (LC 8)
Max Uplift 1=-75 (LC 10), 5=-54 (LC 11), 6=-199 (LC 13), 8=-199 (LC 12)
Max Grav 1=105 (LC 12), 5=91 (LC 13), 6=365 (LC 20), 7=256 (LC 1), 8=365 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-149/112, 2-3=-171/106, 3-4=-167/115, 4-5=-126/78
BOT CHORD 1-8=-35/88, 7-8=-35/88, 6-7=-35/88, 5-6=-35/88
WEBS 3-7=-170/23, 2-8=-307/309, 4-6=-307/262

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.

- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 75 lb uplift at joint 1, 54 lb uplift at joint 5, 199 lb uplift at joint 8 and 199 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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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	Truss	Truss Type	Qty	Ply	
P230371	VC4	Valley	1	1	Job Reference (optional)

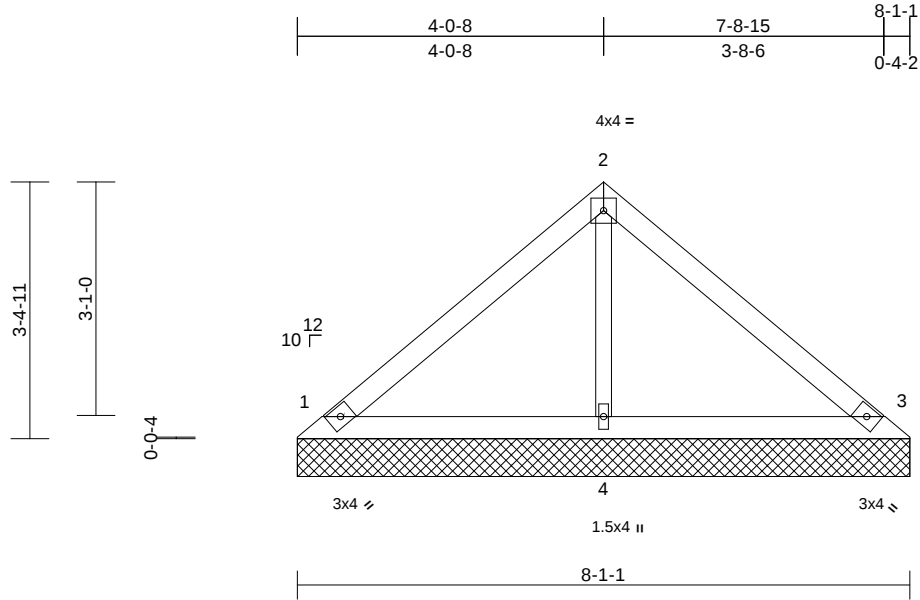
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:14

Page: 1

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Scale = 1:30.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.14	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 29 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size) 1=8-1-1, 3=8-1-1, 4=8-1-1
Max Horiz 1=85 (LC 11)
Max Uplift 1=-47 (LC 12), 3=-57 (LC 13)
Max Grav 1=199 (LC 1), 3=199 (LC 1), 4=262 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-141/78, 2-3=-133/87
BOT CHORD 1-4=-20/67, 3-4=-20/67
WEBS 2-4=-170/90

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 47 lb uplift at joint 1 and 57 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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

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Chesterfield, MO 63017

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:14 Page: 1
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LUMBER

BRACING

REACTIONS	(size)	1=4-10-11, 3=4-10-11, 4=4-10-11
	Max Horiz	1=-48 (LC 10)
	Max Uplift	1=-27 (LC 12), 3=-32 (LC 13)
	Max Grav	1=112 (LC 1), 3=112 (LC 1), 4=148 (LC 1)

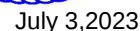
TOP CHORD 1-2=-79/53, 2-3=-75/58
BOT CHORD 1-4=-11/38, 3-4=-11/38
WFBS 2-4=-96/63

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDFL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed ; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TP1 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.

- 7) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1 and 32 lb uplift at joint 3.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1

LOAD CASE(S) Standard



WARNING: Velly design parameters are READ NOTES ON THIS AND INCLUDED WITH REFERENCE PAGE MM-1475 (Rev. 3/25/2020) 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



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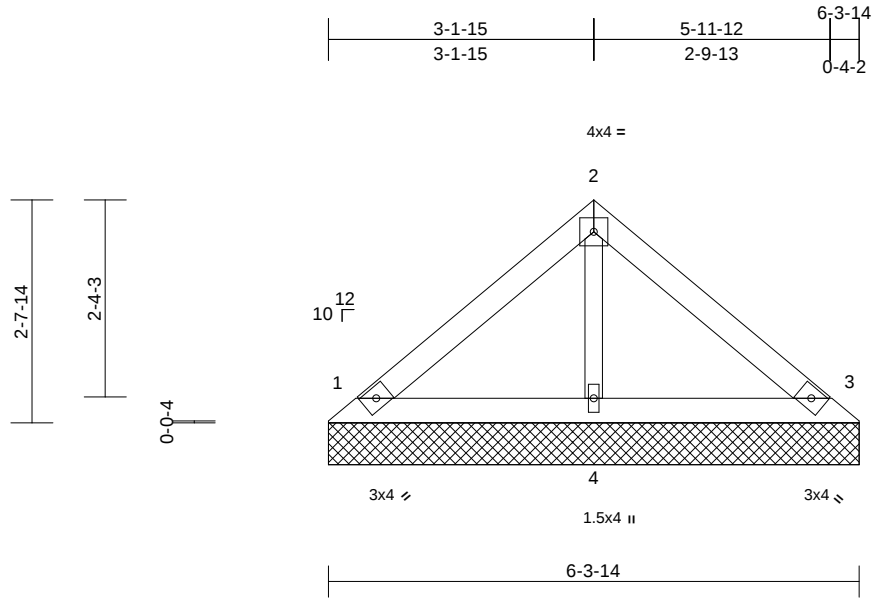
Job	Truss	Truss Type	Qty	Ply	
P230371	VE1	Valley	1	1	Job Reference (optional)
					I59317026

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

Run: 8.63 S Apr 6 2023 Print: 8.630 S Apr 6 2023 MiTek Industries, Inc. Mon Jul 03 09:57:14

Page: 1

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Scale = 1:27.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.19	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=6-3-14, 3=6-3-14, 4=6-3-14
Max Horiz 1=-65 (LC 8)
Max Uplift 1=-36 (LC 12), 3=-43 (LC 13)
Max Grav 1=151 (LC 1), 3=151 (LC 1), 4=199 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-107/67, 2-3=-101/73
BOT CHORD 1-4=-15/51, 3-4=-15/51
WEBS 2-4=-129/79

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1 and 43 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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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



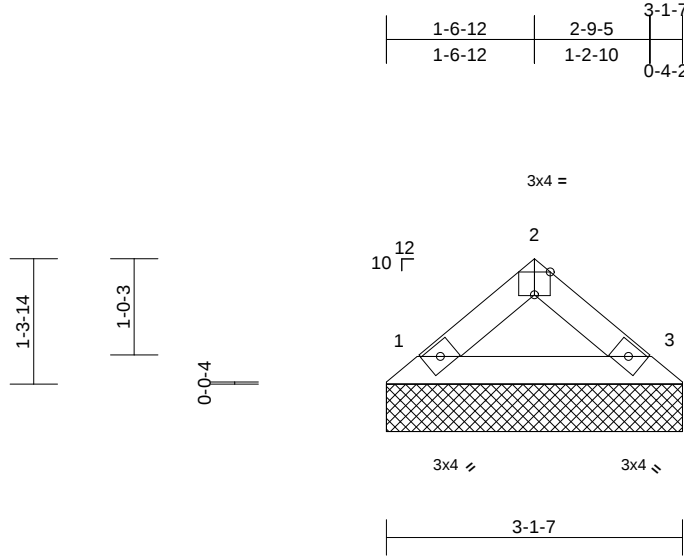
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	
P230371	VE2	Valley	1	1	I59317027
Job Reference (optional)					

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

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Page: 1



Scale = 1:24.3

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 9 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=3-1-7, 3=3-1-7
Max Horiz 1=-28 (LC 8)
Max Uplift 1=-14 (LC 12), 3=-14 (LC 13)
Max Grav 1=106 (LC 1), 3=106 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-86/62, 2-3=-86/67
BOT CHORD 1-3=-12/51

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 4-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 14 lb uplift at joint 1 and 14 lb uplift at joint 3.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 3, 2023

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

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

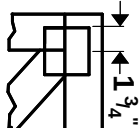
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



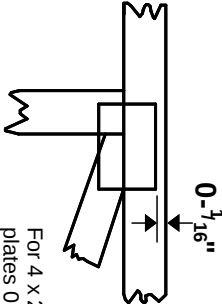
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- $\frac{3}{16}$ " from outside edge of truss.

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

*** Plate location details available in MITek 20120 software or upon request.**

PLATE SIZE

4 X 4

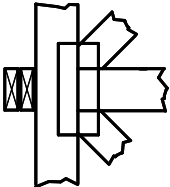
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



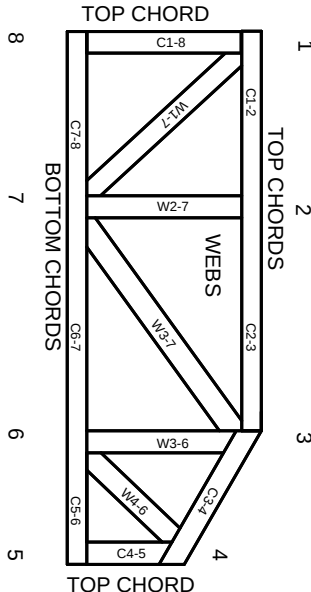
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: 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/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 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/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.