

RE: P240705-01 - Roof

Site Information:

Project Customer: Clayton Properties Project Name: Somerset - Farmhouse
Lot/Block: 80 Subdivision: Hawthorne Ridge
Model:

Address: 1539 South West Arbor Valley Drive

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

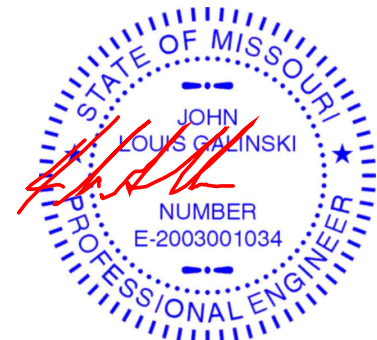
No.	Seal#	Truss Name	Date
1	I66932369	C03	7/19/24
2	I66932370	C02	7/19/24
3	I66932371	C01	7/19/24
4	I66932372	D7	7/19/24
5	I66932373	D6	7/19/24
6	I66932374	D5	7/19/24
7	I66932375	D4	7/19/24
8	I66932376	D3	7/19/24
9	I66932377	D2	7/19/24
10	I66932378	D1	7/19/24
11	I66932379	E1	7/19/24
12	I66932380	E2	7/19/24
13	I66932381	E3	7/19/24
14	I66932382	GR1	7/19/24
15	I66932383	B02	7/19/24
16	I66932384	B01	7/19/24
17	I66932385	V1	7/19/24
18	I66932386	V8	7/19/24
19	I66932387	V2	7/19/24
20	I66932388	V9	7/19/24
21	I66932389	V3	7/19/24
22	I66932390	V10	7/19/24
23	I66932391	B03	7/19/24
24	I66932392	V4	7/19/24
25	I66932393	V11	7/19/24
26	I66932394	V15	7/19/24
27	I66932395	V5	7/19/24
28	I66932396	V12	7/19/24
29	I66932397	V16	7/19/24
30	I66932398	V6	7/19/24
31	I66932399	V13	7/19/24
32	I66932400	V17	7/19/24
33	I66932401	V7	7/19/24
34	I66932402	V14	7/19/24

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

Truss Design Engineer's Name: Galinski, John

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

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 19,2024

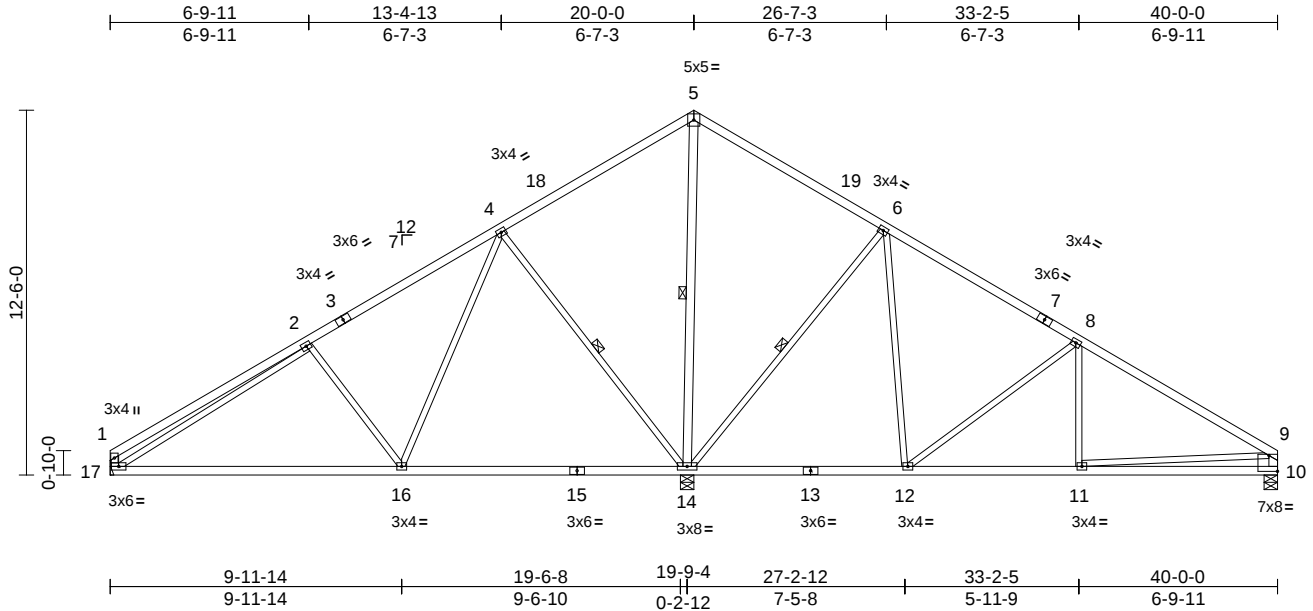
Job	Truss	Truss Type	Qty	Ply	Roof	RELEASE FOR CONSTRUCTION
P240705-01	C03	Common	6	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						166932369
						LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:29 Page: 1

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07/25/2024



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.20	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.41	16-17	>580	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 203 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2 *Except* 14-5,17-1,10-9:2x4 SP No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-0-4 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 4-14, 5-14, 6-14
REACTIONS (size)	
	10=0-5-8, 14=0-5-8, 17= Mechanical
	Max Horiz 17=348 (LC 11)
	Max Uplift 10=-136 (LC 13), 14=-332 (LC 12), 17=-93 (LC 12)
	Max Grav 10=711 (LC 26), 14=2324 (LC 1), 17=687 (LC 25)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-518/158, 2-4=-567/144, 4-5=0/595, 5-6=0/576, 6-8=-410/172, 8-9=-901/182, 1-17=-421/161, 9-10=-647/173
BOT CHORD	16-17=-256/695, 14-16=-229/278, 12-14=-77/219, 11-12=-71/685, 10-11=-105/309
WEBS	2-16=-433/283, 4-16=-107/605, 4-14=-821/352, 5-14=-902/82, 2-17=-324/88, 6-12=-64/470, 6-14=-839/338, 8-12=-574/231, 8-11=0/249, 9-11=0/378

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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 39-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Bearings are assumed to be: , Joint 14 SP No.2 crushing capacity of 565 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 332 lb uplift at joint 14, 93 lb uplift at joint 17 and 136 lb uplift at joint 10.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

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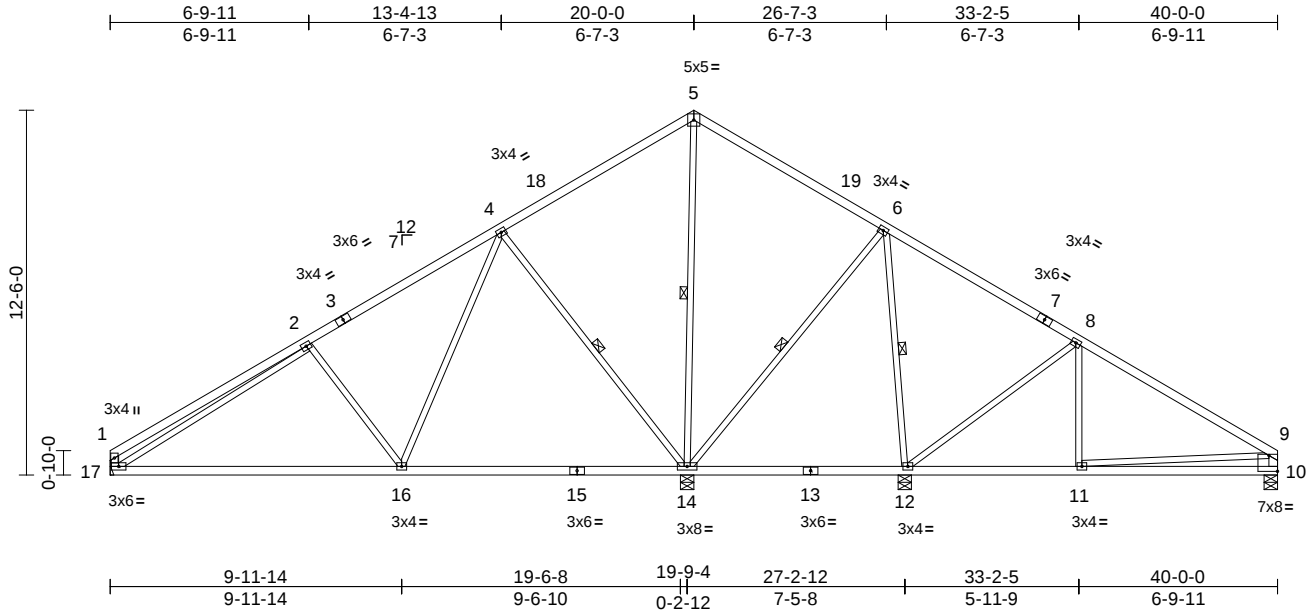
Job	Truss	Truss Type	Qty	Ply	Roof	RELEASE FOR CONSTRUCTION
P240705-01	C02	Common	3	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						166932370
						LEE'S SUMMIT, MISSOURI

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

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07/25/2024



Scale = 1:79

Plate Offsets (X, Y): [10:Edge,0-6-8]												
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	0.67	Vert(LL)	-0.20	16-17	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.41	16-17	>581	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 195 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 17-1,10-9:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. Except:
6-0-0 oc bracing: 12-14.
WEBS 1 Row at midpt 4-14, 5-14, 6-14, 6-12

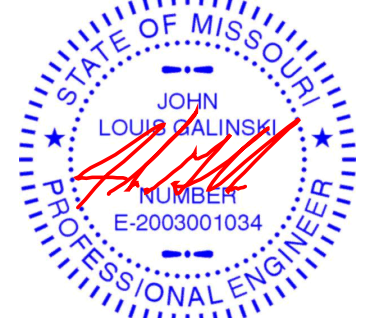
REACTIONS (size) 10=0-5-8, 12=0-5-8, 14=0-5-8, 17= Mechanical
Max Horiz 17=348 (LC 9)
Max Uplift 10=84 (LC 13), 12=198 (LC 13), 14=336 (LC 12), 17=95 (LC 12)
Max Grav 10=503 (LC 26), 12=850 (LC 26), 14=1620 (LC 1), 17=736 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-530/158, 2-4=-654/166, 4-5=-50/411, 5-6=-1/372, 6-8=-29/286, 8-9=-544/93, 1-17=-430/162, 9-10=-440/121
BOT CHORD 16-17=-227/821, 14-16=-138/344, 12-14=-222/186, 11-12=0/378, 10-11=-99/283
WEBS 2-16=-423/283, 4-16=-107/596, 4-14=-816/352, 5-14=-694/79, 6-14=-190/177, 6-12=-384/129, 8-12=-599/238, 8-11=0/266, 2-17=-401/59, 9-11=-62/105

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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 20-0-0, Exterior(2R) 20-0-0 to 25-0-0, Interior (1) 25-0-0 to 39-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Bearings are assumed to be: , Joint 14 SP No.2 crushing capacity of 565 psi, Joint 12 SP No.2 crushing capacity of 565 psi, Joint 10 SP No.2 crushing capacity of 565 psi.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 336 lb uplift at joint 14, 198 lb uplift at joint 12, 95 lb uplift at joint 17 and 84 lb uplift at joint 10.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19,2024

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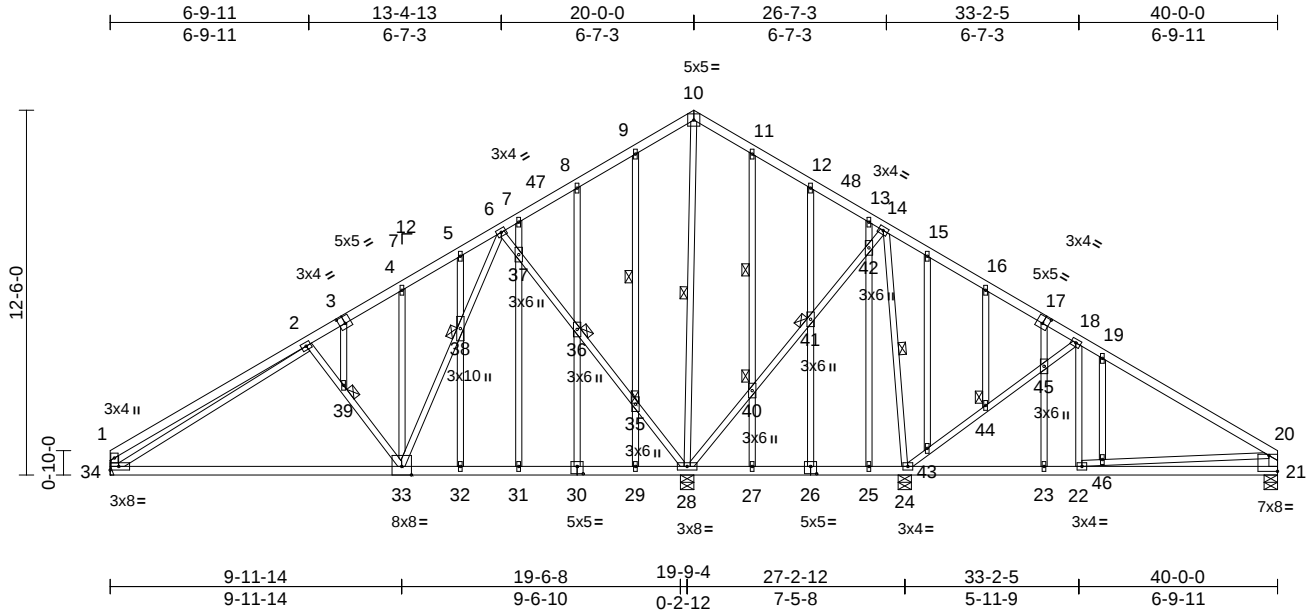
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	C01	Common Structural Gable	1	1	Job Reference (optional)

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.23	33-34	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.47	33-34	>506	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.02	21	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 270 lb	FT = 20%

LUMBER		WEBS	2-39=-392/257, 33-39=-390/253, 33-38=-170/615, 6-38=-175/616, 6-37=-901/364, 36-37=-790/314, 35-36=-804/319, 28-35=-807/322, 10-28=-573/0, 28-40=-146/135, 40-41=-150/134, 41-42=-132/125, 14-42=-157/143, 14-24=-411/109, 24-43=-624/253, 43-44=-601/235, 44-45=-574/220, 18-45=-610/242, 18-22=-40/280, 2-34=-335/48, 22-46=-152/192, 20-46=-136/175, 9-35=-141/77, 29-35=-138/72, 8-36=-79/74, 30-36=-61/68, 7-37=-88/276, 31-37=-27/142, 5-38=-56/0, 32-38=-63/0, 4-33=-77/87, 3-39=-5/2, 11-40=-108/60, 27-40=-114/61, 12-41=-70/73, 26-41=-40/61, 13-42=-59/129, 25-42=-36/83, 15-43=-39/27, 16-44=-46/26, 17-45=0/23, 23-45=-53/53, 19-46=-76/76	7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
TOP CHORD	2x4 SP No.2			8) Bearings are assumed to be: , Joint 28 SP No.2 crushing capacity of 565 psi, Joint 24 SP No.2 crushing capacity of 565 psi, Joint 21 SP No.2 crushing capacity of 565 psi.
BOT CHORD	2x4 SP No.2			9) Refer to girder(s) for truss to truss connections.
WEBS	2x3 SPF No.2 *Except* 34-1,21-20:2x4 SP No.2			10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 359 lb uplift at joint 28, 234 lb uplift at joint 24, 79 lb uplift at joint 34 and 51 lb uplift at joint 21.
OTHERS	2x3 SPF No.2			11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
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.			
WEBS	1 Row at midpt 10-28, 14-24, 9-35, 11-40			
JOINTS	1 Brace at Jt(s): 35, 36, 38, 39, 40, 41, 44			
REACTIONS	(size) 21=0-5-8, 24=0-5-8, 28=0-5-8, 34= Mechanical 34=348 (LC 8) Max Horiz 21=51 (LC 13), 24=234 (LC 13), 28=359 (LC 12), 34=79 (LC 12) Max Grav 21=456 (LC 26), 24=910 (LC 26), 28=1655 (LC 1), 34=722 (LC 25)			

FORCES	(lb) - Maximum Compression/Maximum Tension	NOTES
TOP CHORD	1-2=558/163, 2-4=620/111, 4-5=532/158, 5-6=474/160, 6-7=55/198, 7-8=64/390, 8-9=31/408, 9-10=0/401, 10-11=0/386, 11-12=0/363, 12-13=0/323, 13-14=14/235, 14-15=0/352, 15-16=2/322, 16-18=38/265, 18-19=274/66, 19-20=456/23, 1-34=448/167, 20-21=392/89	7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 8) Bearings are assumed to be: , Joint 28 SP No.2 crushing capacity of 565 psi, Joint 24 SP No.2 crushing capacity of 565 psi, Joint 21 SP No.2 crushing capacity of 565 psi. 9) Refer to girder(s) for truss to truss connections. 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 359 lb uplift at joint 28, 234 lb uplift at joint 24, 79 lb uplift at joint 34 and 51 lb uplift at joint 21. 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.
BOT CHORD	33-34=210/772, 32-33=134/306, 31-32=134/306, 29-31=134/306, 28-29=134/306, 27-28=271/239, 25-27=271/239, 24-25=271/239, 23-24=0/301, 22-23=0/301, 21-22=113/328	LOAD CASE(S) Standard



July 19,2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	D7	Common Supported Gable	1	1	Job Reference (optional)

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RELEASE FOR CONSTRUCTION

AS NOTED FOR PLAN REVIEW

DEVELOPMENT SERVICES

166932372

LEE'S SUMMIT, MISSOURI

- 9) Bearing at joint(s) 40 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 42 lb uplift at joint 36, 25 lb uplift at joint 34, 67 lb uplift at joint 33, 53 lb uplift at joint 32, 55 lb uplift at joint 30, 54 lb uplift at joint 29, 54 lb uplift at joint 27, 54 lb uplift at joint 26, 54 lb uplift at joint 25, 54 lb uplift at joint 24, 56 lb uplift at joint 23, 49 lb uplift at joint 22, 75 lb uplift at joint 21, 66 lb uplift at joint 19 and 2136 lb uplift at joint 40.
- 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

07/25/2024

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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	D6	Common	6	1		

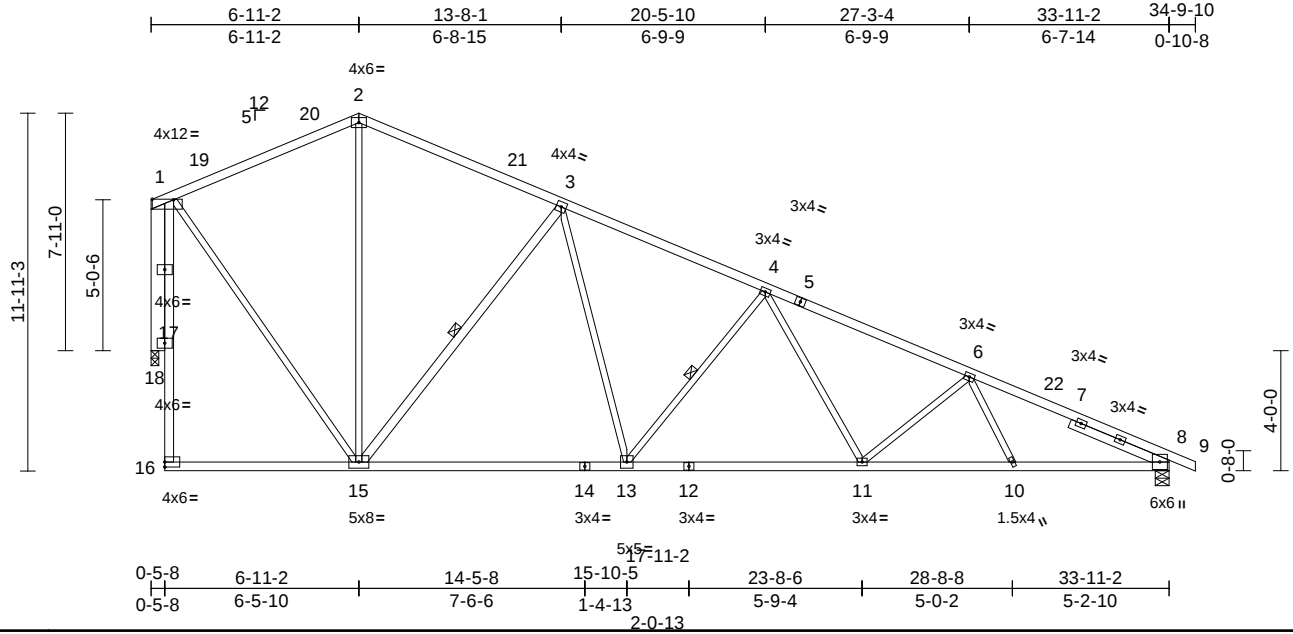
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932373
LEE'S SUMMIT, MISSOURI

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Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:30 Page: 1

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07/25/2024



Scale = 1:76.8									
Plate Offsets (X, Y): [1:0-8-8,Edge], [8:0-3-11,0-0-11]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.90	Vert(LL)	-0.15 11-13	>999	240
TCDL	10.0	Lumber DOL	1.15	BC	0.80	Vert(CT)	-0.35 13-15	>999	180
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.76 8	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S					
						PLATES		GRIP	
						MT20		197/144	
						Weight: 192 lb FT = 20%			

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 15-3:2x4 SP No.2,
16-1:2x4 SP 1650F 1.5E
OTHERS 2x6 SPF No.2
SLIDER Right 2x4 SP No.2 -- 3-6-9

BRACING
TOP CHORD Structural wood sheathing directly applied or
2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-7-8 oc
bracing.
WEBS 1 Row at midpt 3-15, 4-13

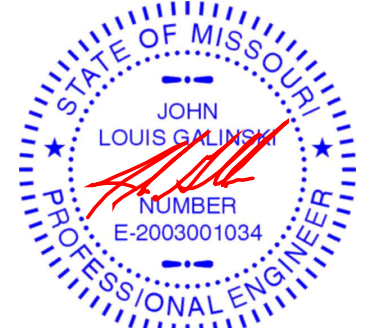
REACTIONS (size) 8=0-5-8, 18=0-3-2
Max Horiz 18=359 (LC 13)
Max Uplift 8=320 (LC 13), 18=237 (LC 13)
Max Grav 8=1583 (LC 1), 18=1478 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=872/346, 2-3=891/315, 3-4=1854/457,
4-6=2589/562, 6-8=2999/575, 8-9=0/0,
16-17=0/105, 1-17=0/105
BOT CHORD 15-16=58/262, 13-15=71/1429,
11-13=270/2099, 10-11=465/2612,
8-10=437/2647
WEBS 2-15=135/279, 3-15=1158/383,
1-15=147/1101, 3-13=126/816,
4-13=773/301, 4-11=75/457, 6-11=404/211,
6-10=0/194, 1-18=1486/255

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) 0-7-4 to 5-7-4,
Interior (1) 5-7-4 to 6-11-2, Exterior(2R) 6-11-2 to
11-11-2, Interior (1) 11-11-2 to 34-9-10 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) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 5) Bearings are assumed to be: Joint 18 SPF No.2
crushing capacity of 425 psi, Joint 8 SP No.2 crushing
capacity of 565 psi.
- 6) Bearing at joint(s) 18 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 320 lb uplift at
joint 8 and 237 lb uplift at joint 18.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



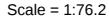
July 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	D4	Common	3	1		

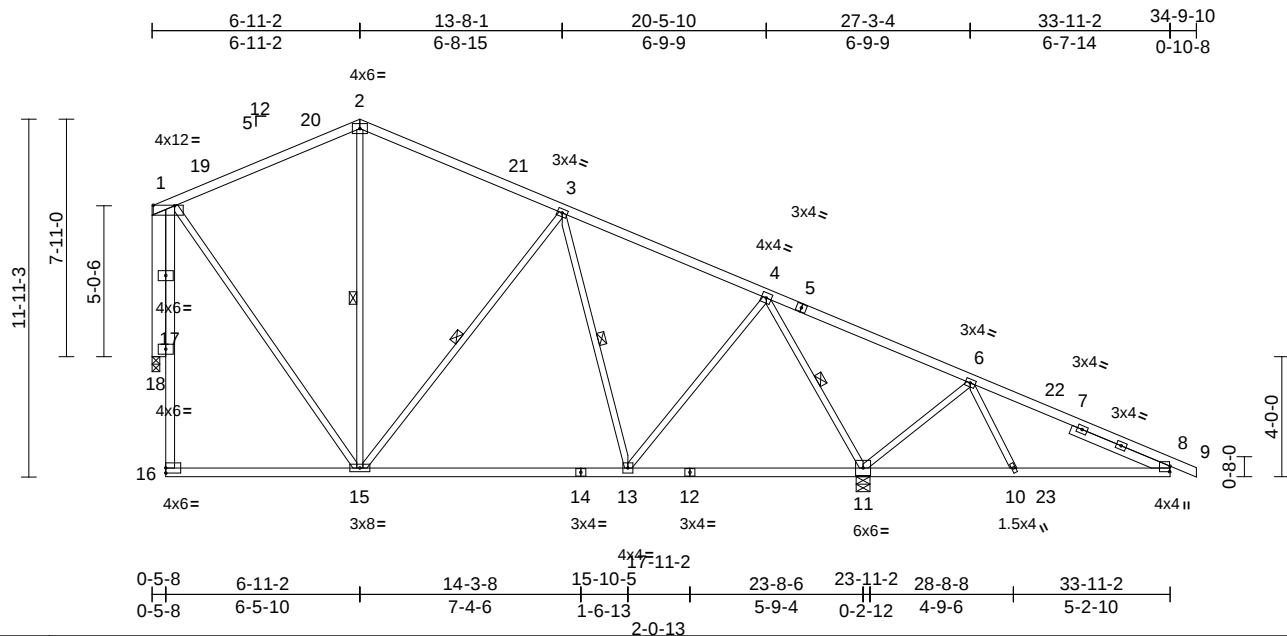
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932375
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:30 Page: 1

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07/25/2024



Scale = 1:76.8

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.10	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.22	13-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.78	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
Weight: 185 lb											FT = 20%	

LUMBER

TOP CHORD	2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP 1650F 1.5E
WEBS	2x3 SPF No.2 *Except* 16-1:2x4 SP 1650F 1.5E
OTHERS	2x6 SPF No.2
SLIDER	Right 2x4 SP No.2 -- 3-6-9

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.

WEBS	1 Row at midpt	2-15, 3-15, 3-13, 4-11
------	----------------	------------------------

REACTIONS	(size)	11=0-5-8, 18=0-3-2
	Max Horiz	18=359 (LC 13)
	Max Uplift	11=463 (LC 9), 18=99 (LC 13)
	Max Grav	11=2270 (LC 1), 18=791 (LC 1)

FORCES

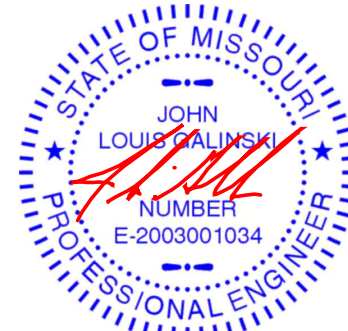
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-439/259, 2-3=-456/227, 3-4=-367/156, 4-6=-1061/1350, 6-8=-568/764, 8-9=0/0, 16-17=0/100, 1-17=0/100
BOT CHORD	15-16=-81/269, 13-15=0/391, 11-13=-274/731, 10-11=-660/725, 8-10=-598/561
WEBS	2-15=-175/95, 1-15=-19/469, 3-15=-175/166, 3-13=-489/445, 4-13=-391/823, 4-11=-1932/858, 6-11=-675/551, 6-10=-378/233, 1-18=-796/99

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) 0-7-4 to 5-7-4,
Interior (1) 5-7-4 to 6-11-2, Exterior(2R) 6-11-2 to
11-11-2, Interior (1) 11-11-2 to 34-9-10 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) 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 18 SPF No.2
crushing capacity of 425 psi, Joint 11 SP 1650F 1.5E
crushing capacity of 565 psi.
- 5) Bearing at joint(s) 18 considers parallel to grain value
using ANSI/TPI 1 angle to grain formula. Building
designer should verify capacity of bearing surface.
- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 463 lb uplift at
joint 11 and 99 lb uplift at joint 18.
- 7) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	D3	Common	4	1		

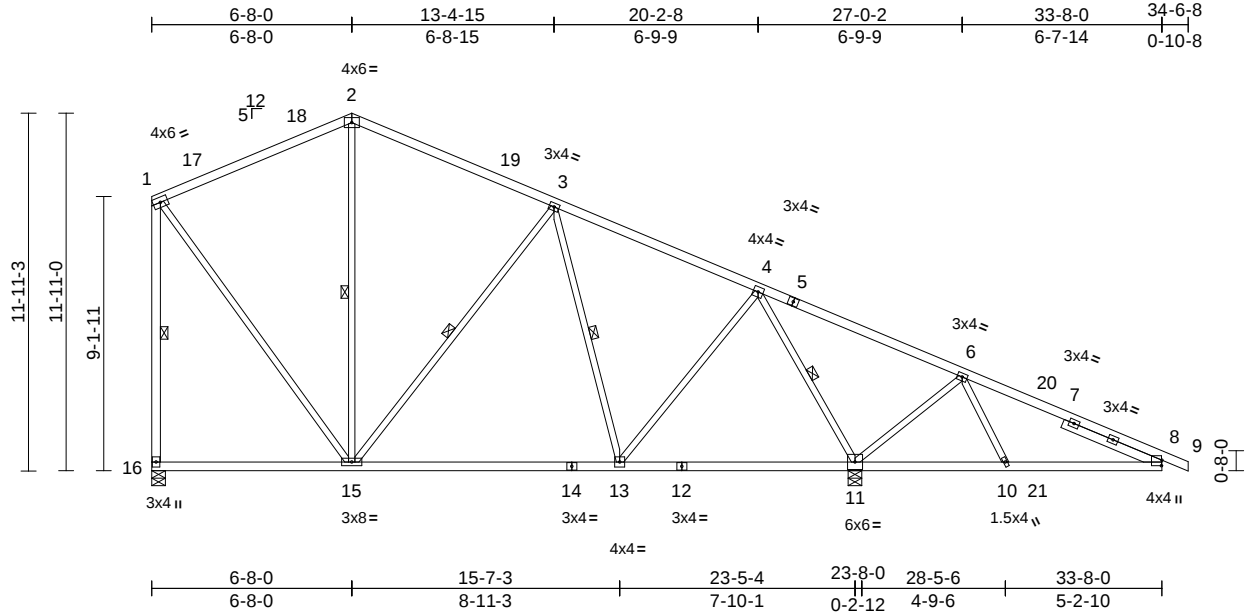
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:30 Page: 1

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932376
LEE'S SUMMIT, MISSOURI

07/25/2024



Scale = 1:76.8

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.11	13-15	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.58	Vert(CT)	-0.22	13-15	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.86	Horz(CT)	0.01	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 176 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 16-1:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 3-6-9

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 2-15, 1-16, 3-15, 3-13, 4-11

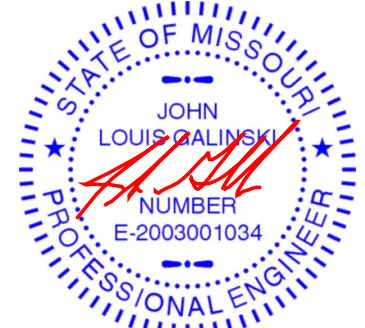
REACTIONS (size) 11=0-5-8, 16=0-5-8
Max Horiz 16=-409 (LC 8)
Max Uplift 11=-462 (LC 9), 16=-156 (LC 12)
Max Grav 11=2260 (LC 1), 16=818 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-428/199, 2-3=-443/176, 3-4=-363/125, 4-6=-1061/1350, 6-8=-568/765, 8-9=0/0, 1-16=-766/175
BOT CHORD 15-16=-272/430, 13-15=0/402, 11-13=-277/710, 10-11=-660/725, 8-10=-598/561
WEBS 2-15=-193/226, 1-15=-109/519, 3-15=-195/183, 3-13=-485/466, 4-13=-419/815, 4-11=-1922/902, 6-11=-675/551, 6-10=-378/233

- 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) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 34-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are 3x4 MT20 unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 16 and 462 lb uplift at joint 11.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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



July 19, 2024

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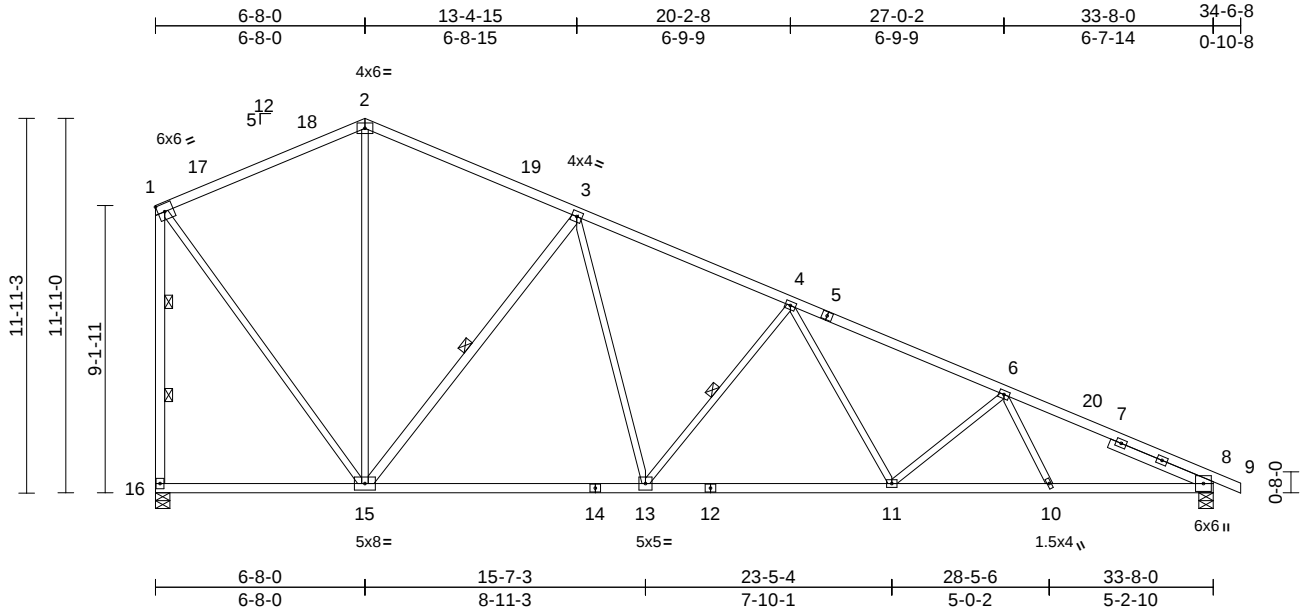
Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	D2	Common	5	1		

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932377
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:30 Page: 1
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07/25/2024



Scale = 1:73.3

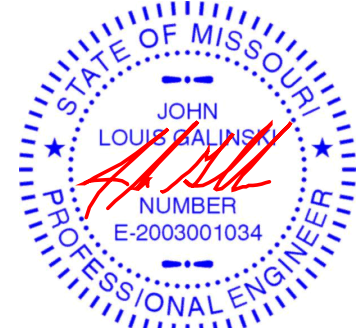
Plate Offsets (X, Y): [8:0-3-11,0-0-11]															
Loading		(psf)	Spacing		2-0-0	CSI		DEFL		in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)		25.0	Plate Grip DOL		1.15	TC		0.98	Vert(LL)	-0.15	11-13	>999	240	MT20	197/144
TCDL		10.0	Lumber DOL		1.15	BC		0.78	Vert(CT)	-0.33	13-15	>999	180		
BCLL		0.0	Rep Stress Incr		YES	WB		0.84	Horz(CT)	0.09	8	n/a	n/a		
BCDL		10.0	Code		IRC2018/TPI2014	Matrix-S								Weight: 183 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 16-1,3-15:2x4 SP No.2
SLIDER Right 2x4 SP No.2 -- 3-6-9
BRACING
TOP CHORD Structural wood sheathing directly applied or 2-4-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-0-15 oc bracing.
WEBS 1 Row at midpt 3-15, 4-13
WEBS 2 Rows at 1/3 pts 1-16
REACTIONS (size) 8=0-5-8, 16=0-5-8
Max Horiz 16=409 (LC 8)
Max Uplift 8=-298 (LC 13), 16=-260 (LC 13)
Max Grav 8=1570 (LC 1), 16=1508 (LC 1)
FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-847/320, 2-3=-862/336, 3-4=-1823/403, 4-6=-2561/508, 6-8=-2971/525, 8-9=0/0, 1-16=-1455/344
BOT CHORD 15-16=-272/430, 13-15=-69/1401, 11-13=-221/2071, 10-11=-418/2587, 8-10=-391/2622
WEBS 2-15=-68/268, 1-15=-279/1173, 3-15=-1158/386, 3-13=-135/814, 4-13=-775/301, 4-11=-75/459, 6-11=-405/216, 6-10=0/193

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-12, Interior (1) 5-1-12 to 6-8-0, Exterior(2R) 6-8-0 to 11-8-0, Interior (1) 11-8-0 to 34-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- All plates are 3x4 MT20 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 No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 260 lb uplift at joint 16 and 298 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

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



July 19,2024

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Job	Truss	Truss Type	Qty	Ply	Roof	
P240705-01	D1	Common Supported Gable	1	1	Job Reference (optional)	

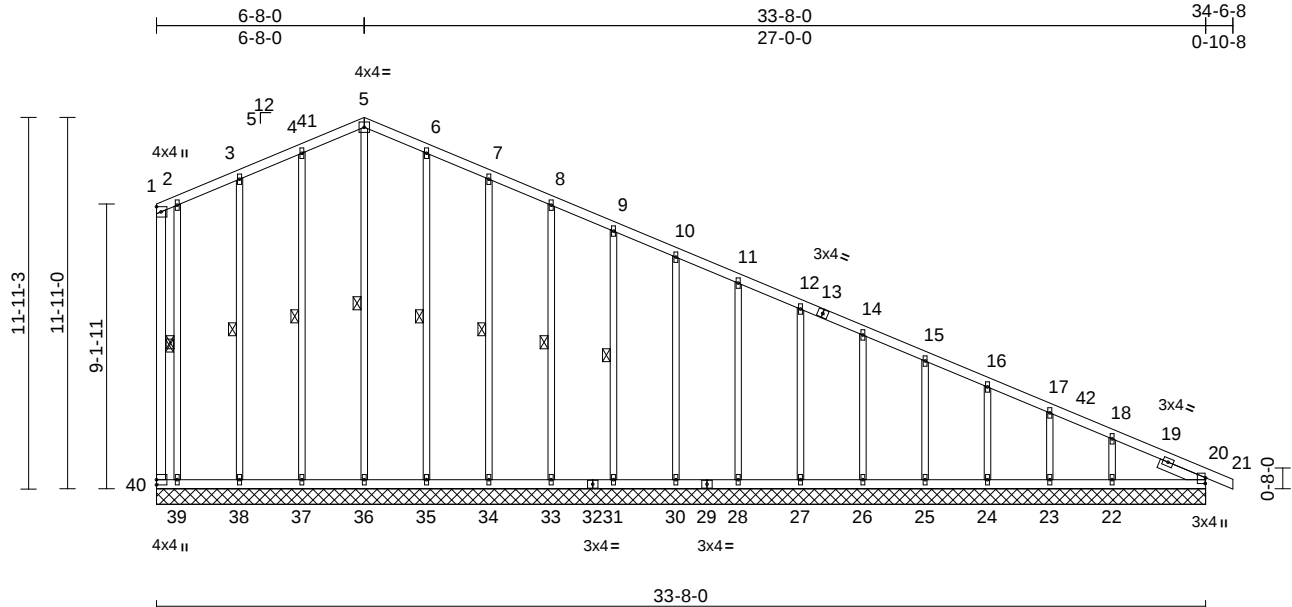
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932378
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:29 Page: 1

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07/25/2024



Scale = 1:73.9

Plate Offsets (X, Y): [20:0-2-3,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	n/a	-	n/a	999	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.02	20	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 212 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
SLIDER	Right 2x4 SP No.2 -- 1-7-2

BRACING

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

REACTIONS (size)

Max Horiz	20=33-8-0, 22=33-8-0, 23=33-8-0, 24=33-8-0, 25=33-8-0, 26=33-8-0, 27=33-8-0, 28=33-8-0, 30=33-8-0, 31=33-8-0, 33=33-8-0, 34=33-8-0, 35=33-8-0, 36=33-8-0, 37=33-8-0, 38=33-8-0, 39=33-8-0, 40=33-8-0
Max Uplift	40=-409 (LC 8)
Max Grav	22=-140 (LC 13), 23=-29 (LC 13), 24=-60 (LC 13), 25=-53 (LC 13), 26=-55 (LC 13), 27=-54 (LC 13), 28=-54 (LC 13), 30=-54 (LC 13), 31=-54 (LC 13), 33=-54 (LC 13), 34=-58 (LC 13), 35=-49 (LC 13), 36=-24 (LC 10), 37=-50 (LC 12), 38=-83 (LC 12), 39=-137 (LC 9), 40=-101 (LC 10)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-40=-254/330, 1-2=-254/332, 2-3=-214/291, 3-4=-215/318, 4-5=-231/359, 5-6=-231/359, 6-7=-220/321, 7-8=-203/275, 8-9=-188/232, 9-10=-173/203, 10-11=-177/218, 11-12=-221/233, 12-14=-264/248, 14-15=-308/264, 15-16=-351/278, 16-17=-397/296, 17-18=-428/301, 18-20=-524/350, 20-21=0/0
BOT CHORD	39-40=-312/498, 38-39=-312/498, 37-38=-312/498, 36-37=-312/498, 35-36=-312/498, 34-35=-312/498, 33-34=-312/498, 31-33=-312/498, 30-31=-312/498, 28-30=-312/498, 27-28=-312/498, 26-27=-312/498, 25-26=-312/498, 24-25=-312/498, 23-24=-312/498, 22-23=-312/498, 20-22=-312/498
WEBS	5-36=-183/90, 4-37=-147/117, 3-38=-150/180, 2-39=-184/177, 6-35=-148/89, 7-34=-140/97, 8-33=-140/89, 9-31=-140/89, 10-30=-140/89, 11-28=-140/89, 12-27=-140/89, 14-26=-140/89, 15-25=-139/88, 16-24=-143/96, 17-23=-125/70, 18-22=-192/222

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) 0-1-12 to 5-1-12, Exterior(2N) 5-1-12 to 6-8-0, Corner(3R) 6-8-0 to 11-8-0, Exterior(2N) 11-8-0 to 34-6-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- 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.
- Gable studs spaced at 2-0-0 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 101 lb uplift at joint 40, 24 lb uplift at joint 36, 50 lb uplift at joint 37, 83 lb uplift at joint 38, 137 lb uplift at joint 39, 49 lb uplift at joint 35, 58 lb uplift at joint 34, 54 lb uplift at joint 33, 54 lb uplift at joint 31, 54 lb uplift at joint 30, 54 lb uplift at joint 28, 54 lb uplift at joint 27, 55 lb uplift at joint 26, 53 lb uplift at joint 25, 60 lb uplift at joint 24, 29 lb uplift at joint 23 and 140 lb uplift at joint 22.
- 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 19, 2024

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	D1	Common Supported Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:29 Page: 2
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RELEASE FOR CONSTRUCTION

AS NOTED FOR PLAN REVIEW

DEVELOPMENT SERVICES

166932378

LEE'S SUMMIT, MISSOURI

07/25/2024

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	E1	Common Supported Gable	1	1		

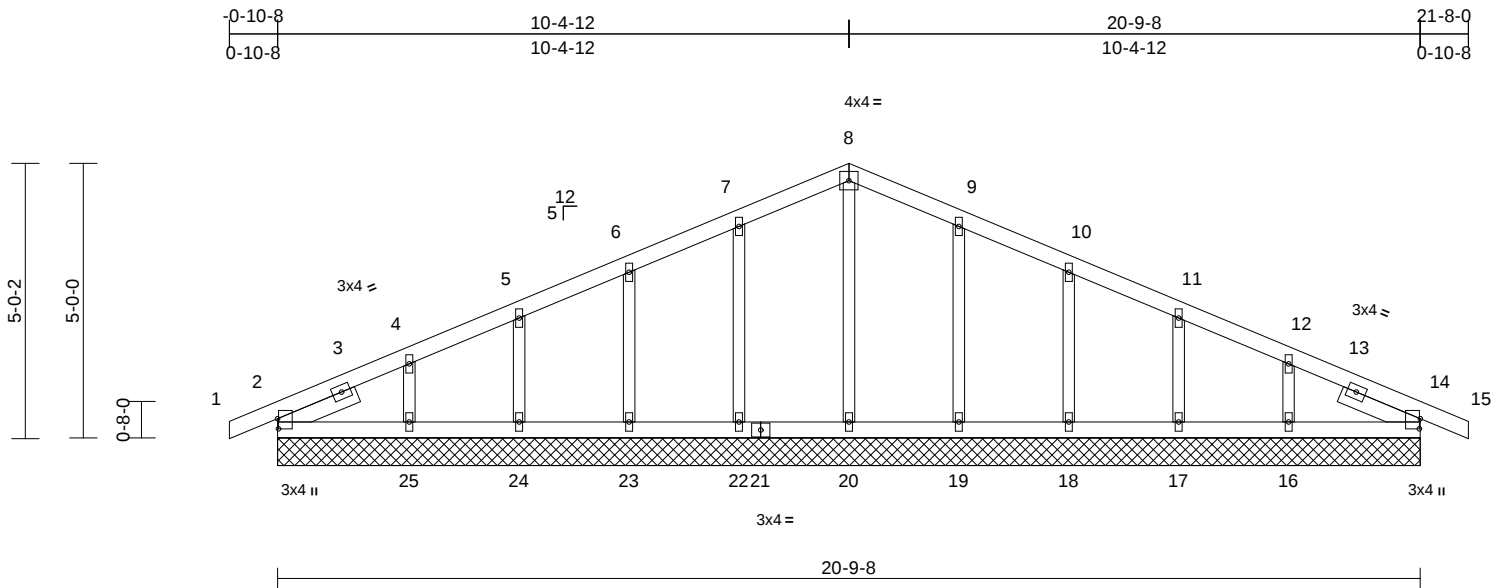
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932379
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:30 Page: 1

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07/25/2024



Scale = 1:41.9

Plate Offsets (X, Y): [2:0-2-3,0-0-3], [14:0-2-3,0-0-3]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.00	14	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
										Weight: 91 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 1-6-7, Right 2x4 SP No.2 -- 1-6-7

WEBS

8-20=-109/0, 7-22=-150/91, 6-23=-139/93,
5-24=-138/108, 4-25=-154/172,
9-19=-150/90, 10-18=-139/93,
11-17=-138/109, 12-16=-154/168

LOAD CASE(S) Standard**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

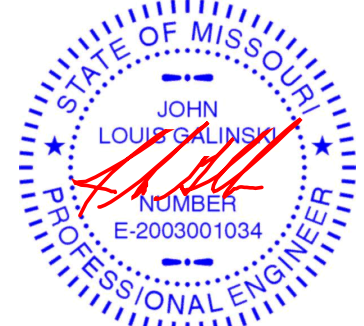
(size)	2=20-9-8, 14=20-9-8, 16=20-9-8, 17=20-9-8, 18=20-9-8, 19=20-9-8, 20=20-9-8, 22=20-9-8, 23=20-9-8, 24=20-9-8, 25=20-9-8
Max Horiz	2=89 (LC 12)
Max Uplift	2=-26 (LC 13), 14=-28 (LC 9), 16=-75 (LC 13), 17=-51 (LC 13), 18=-56 (LC 13), 19=-56 (LC 13), 22=-57 (LC 12), 23=-56 (LC 12), 24=-49 (LC 12), 25=-82 (LC 12)
Max Grav	2=178 (LC 1), 14=178 (LC 1), 16=205 (LC 26), 17=175 (LC 1), 18=180 (LC 1), 19=190 (LC 26), 20=149 (LC 22), 22=190 (LC 25), 23=180 (LC 1), 24=175 (LC 1), 25=205 (LC 25)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/0, 2-4=-116/53, 4-5=-70/69, 5-6=-52/95, 6-7=-57/140, 7-8=-73/184, 8-9=-73/184, 9-10=-57/140, 10-11=-52/96, 11-12=-53/45, 12-14=-86/15, 14-15=0/0
BOT CHORD	2-25=-15/88, 24-25=-15/88, 23-24=-15/88, 22-23=-15/88, 20-22=-15/88, 19-20=-15/88, 18-19=-15/88, 17-18=-15/88, 16-17=-15/88, 14-16=-15/88

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) 0-10-8 to 4-4-12, Exterior(2N) 4-4-12 to 10-4-12, Corner(3R) 10-4-12 to 15-4-12, Exterior(2N) 15-4-12 to 21-8-0 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.
- Gable studs spaced at 2-0-0 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 26 lb uplift at joint 2, 57 lb uplift at joint 22, 56 lb uplift at joint 23, 49 lb uplift at joint 24, 82 lb uplift at joint 25, 56 lb uplift at joint 19, 56 lb uplift at joint 18, 51 lb uplift at joint 17, 75 lb uplift at joint 16 and 28 lb uplift at joint 14.
- Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 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.



July 19, 2024

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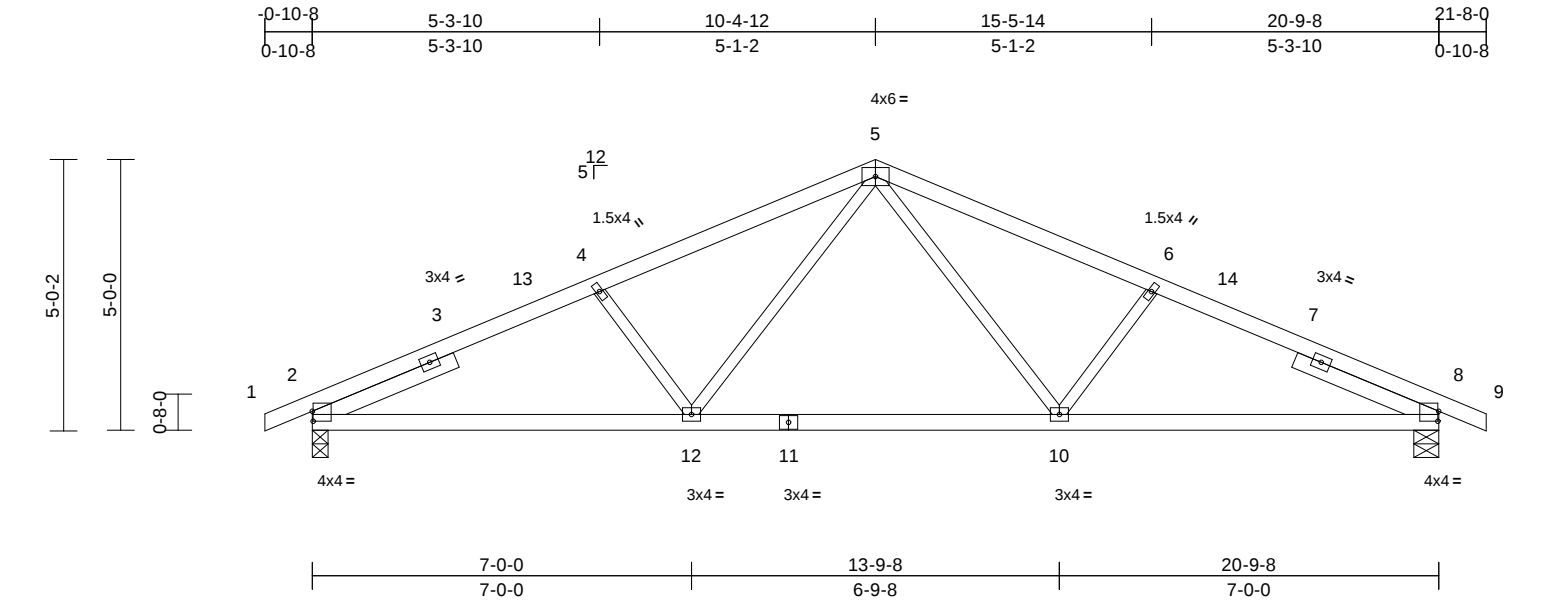
Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	E2	Common	4	1		

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932380
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:51
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07/25/2024



Scale = 1:42.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	-0.07	10-12	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.54	Vert(CT)	-0.14	2-12	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.04	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 90 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-10-1, Right 2x4 SP No.2 -- 2-10-1

BRACING
TOP CHORD Structural wood sheathing directly applied or 4'-0-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

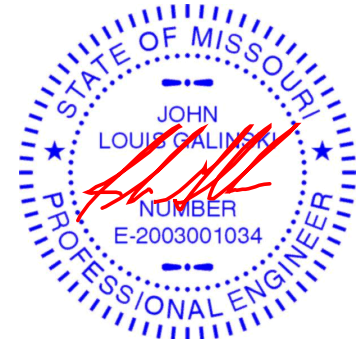
REACTIONS (size) 2=0-3-8, 8=0-5-8
Max Horiz 2=89 (LC 16)
Max Uplift 2=-168 (LC 12), 8=-168 (LC 13)
Max Grav 2=997 (LC 1), 8=997 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-1679/408, 4-5=-1482/390, 5-6=-1482/390, 6-8=-1679/408, 8-9=0/0
BOT CHORD 2-12=-311/1458, 10-12=-147/1044, 8-10=-302/1458
WEBS 5-10=-96/477, 6-10=-299/201, 5-12=-96/477, 4-12=-299/200

- 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 168 lb uplift at joint 2 and 168 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

- 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'-10'-8 to 4'-1'-8, Interior (1) 4'-1'-8 to 10'-4'-12, Exterior(2R) 10'-4'-12 to 15'-6'-15, Interior (1) 15'-6'-15 to 21'-8'-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.



July 19, 2024

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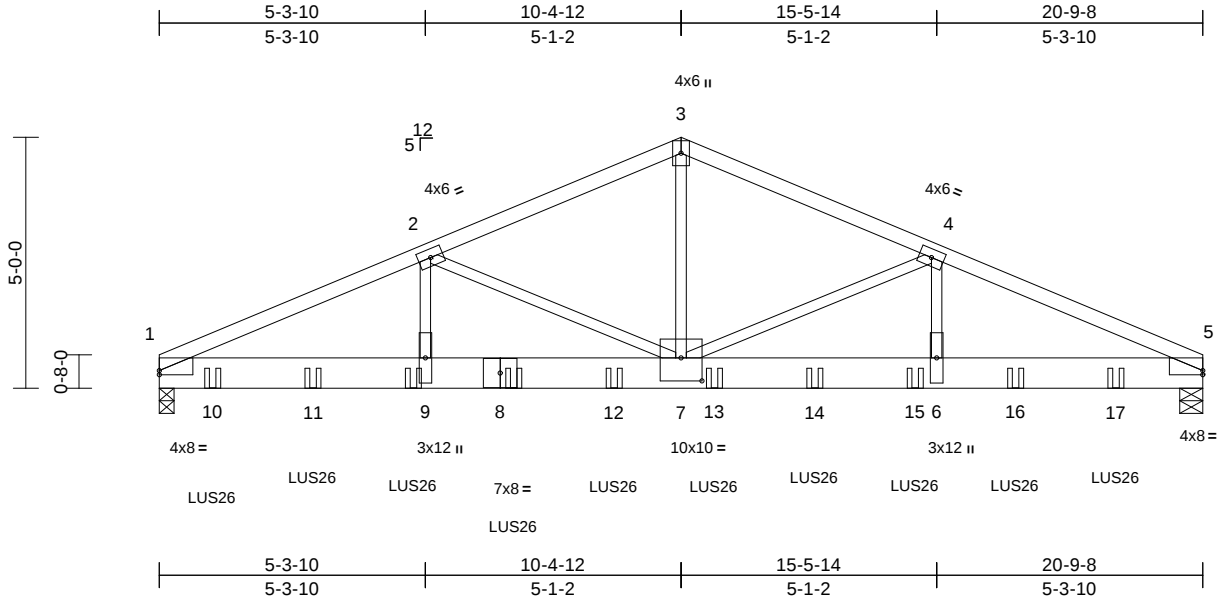
Job	Truss	Truss Type	Qty	Ply	Roof	RELEASE FOR CONSTRUCTION
P240705-01	E3	Common Girder	1	2	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						166932381
						LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:31 Page: 1

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07/25/2024



Scale = 1:45.9									
Plate Offsets (X, Y): [1:Edge,0-1-0], [5:Edge,0-1-0], [7:0-5-0,0-5-8]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.72	Vert(LL)	-0.14	7-9	>999
TCDL	10.0	Lumber DOL	1.15	BC	0.94	Vert(CT)	-0.24	7-9	>999
BCLL	0.0	Rep Stress Incr	NO	WB	0.68	Horz(CT)	0.06	5	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S					
						PLATES		GRIP	
						MT20		197/144	
						Weight: 196 lb FT = 20%			

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

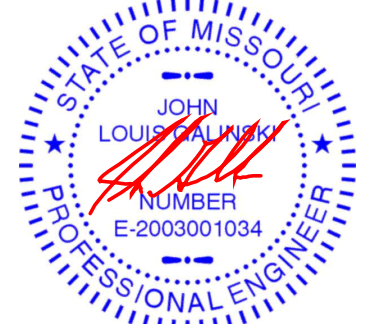
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-3-8, 5=0-5-8
Max Horiz 1=86 (LC 12)
Max Uplift 1=-675 (LC 12), 5=-655 (LC 13)
Max Grav 1=4494 (LC 1), 5=4193 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8063/1361, 2-3=-5676/1027, 3-4=-5676/1027, 4-5=-7801/1343
BOT CHORD 1-9=-1183/7252, 7-9=-1183/7252, 6-7=-1157/6995, 5-6=-1157/6995
WEBS 2-9=-196/1866, 2-7=-2340/453, 3-7=-627/3959, 4-7=-2058/434, 4-6=-188/1681

NOTES
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-8-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.

- 4) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-1-12 to 5-3-10,
Interior (1) 5-3-10 to 10-4-12, Exterior(2R) 10-4-12 to
15-5-14, Interior (1) 15-5-14 to 20-6-12 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
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SPF No.2 crushing
capacity of 425 psi.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 675 lb uplift at
joint 1 and 655 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d
Truss, Single Ply Girder) or equivalent spaced at 2-0-0
oc max. starting at 1-0-12 from the left end to 19-0-12 to
connect truss(es) to front face of bottom chord.
- 10) Fill all nail holes where hanger is in contact with lumber.
- LOAD CASE(S)** Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-5=-70, 1-5=-20
Concentrated Loads (lb)
Vert: 8=-716 (F), 9=-716 (F), 10=-702 (F), 11=-716
(F), 12=-667 (F), 13=-667 (F), 14=-667 (F), 15=-667
(F), 16=-667 (F), 17=-667 (F)



July 19,2024

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Job	Truss	Truss Type	Qty	Ply	Roof	
P240705-01	GR1	Flat Girder	1	2	Job Reference (optional)	

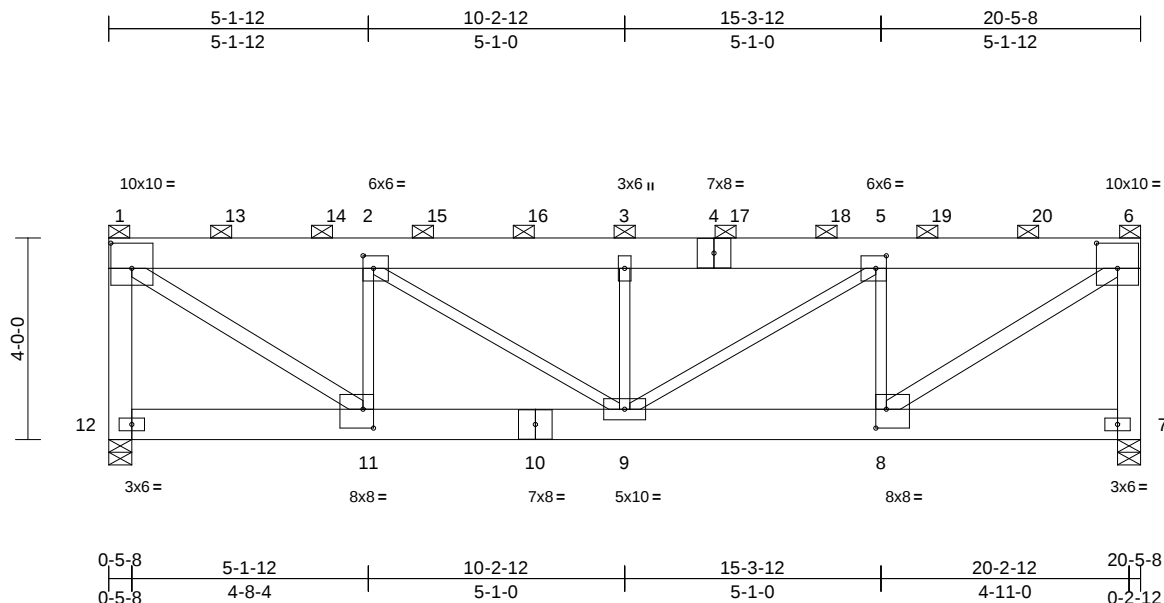
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932382
LEE'S SUMMIT, MISSOURI

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

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07/25/2024



Scale = 1:45.7

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.14	8-9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.25	8-9	>943	180		
BCLL	0.0	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 277 lb	FT = 20%

LUMBER

TOP CHORD 2x8 SPF No.2
BOT CHORD 2x8 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-1,6-7:2x6 SPF No.2, 6-8,11-1:2x4 SP 1650F 1.5E

BRACING

TOP CHORD 2-0-0 oc purlins (4-7-7 max.): 1-6, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 7=0-5-8, 12=0-5-8
Max Horiz 12=139 (LC 8)
Max Uplift 7=3223 (LC 9), 12=925 (LC 8)
Max Grav 7=7021 (LC 1), 12=6334 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-12=-6212/1097, 1-2=-7367/1354, 2-3=-10579/1890, 3-5=-10579/1890, 5-6=-8400/1523, 6-7=-6851/3384

BOT CHORD 11-12=-204/238, 9-11=-1451/7367, 8-9=-1556/8400, 7-8=-102/279

WEBS 6-8=-1768/9870, 2-11=-4823/968, 1-11=-1591/8732, 2-9=-716/3863, 3-9=-3696/734, 5-9=-518/2620, 5-8=-5548/1093

NOTES

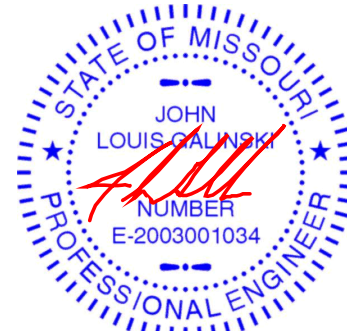
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x8 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 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.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- 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 SPF No.2 crushing capacity of 425 psi.
- Bearing at joint(s) 12, 7 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 925 lb uplift at joint 12 and 3223 lb uplift at joint 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.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 746 lb down and 74 lb up at 0-2-12, 721 lb down and 67 lb up at 2-6-4, 721 lb down and 67 lb up at 4-6-4, 921 lb down and 167 lb up at 6-6-4, 1408 lb down and 206 lb up at 8-6-4, 1408 lb down and 206 lb up at 10-6-4, 1408 lb down and 206 lb up at 12-6-4, 1408 lb down and 206 lb up at 14-6-4, 1408 lb down and 206 lb up at 16-6-4, and 1408 lb down and 206 lb up at 18-6-4, and 6 lb down and 2123 lb up at 20-2-12 on top chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 1=-746, 6=-2, 3=-1408, 13=-721, 14=-721, 15=-921, 16=-1408, 17=-1408, 18=-1408, 19=-1408, 20=-1408



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	B02	Common	1	1	Job Reference (optional)

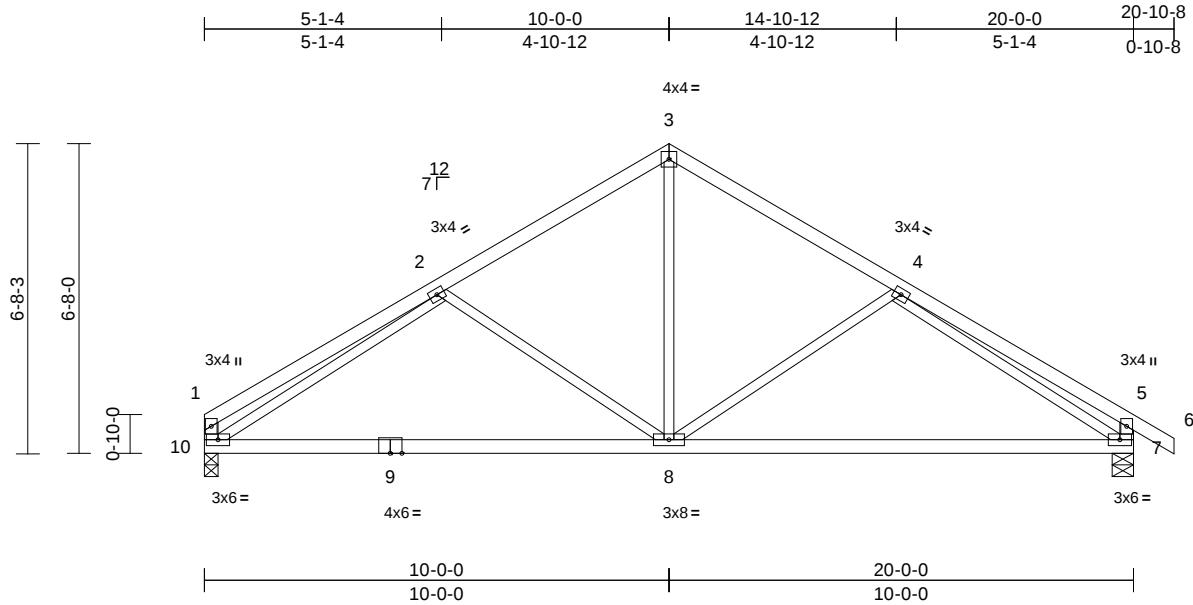
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932383
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:28 Page: 1

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07/25/2024



Scale = 1:49.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.18	7-8	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.96	Vert(CT)	-0.38	7-8	>630	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.73	Horz(CT)	0.03	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 91 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2 *Except* 10-1,7-5:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

REACTIONS (size) 7=0-5-8, 10=0-3-8
Max Horiz 10=-196 (LC 8)
Max Uplift 7=-155 (LC 13), 10=-128 (LC 12)
Max Grav 7=960 (LC 1), 10=885 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-414/70, 2-3=-939/194, 3-4=-938/192,
4-5=-466/113, 5-6=0/36, 1-10=-325/93,
5-7=-433/145

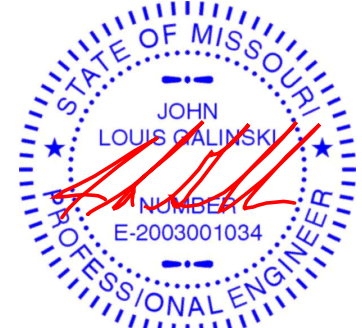
BOT CHORD 8-10=-200/973, 7-8=-114/948

WEBS 3-8=-57/523, 4-8=-305/231, 2-8=-316/235,
2-10=-818/189, 4-7=-759/157

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) 0-1-12 to 4-11-10,
Interior (1) 4-11-10 to 10-0-0, Exterior(2R) 10-0-0 to
15-0-6, Interior (1) 15-0-6 to 20-10-8 zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 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.

- One H2.5T Simpson Strong-Tie connectors
recommended to connect truss to bearing walls due to
UPLIFT at jt(s) 10 and 7. This connection is for uplift
only and does not consider lateral forces.
- 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 19, 2024

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

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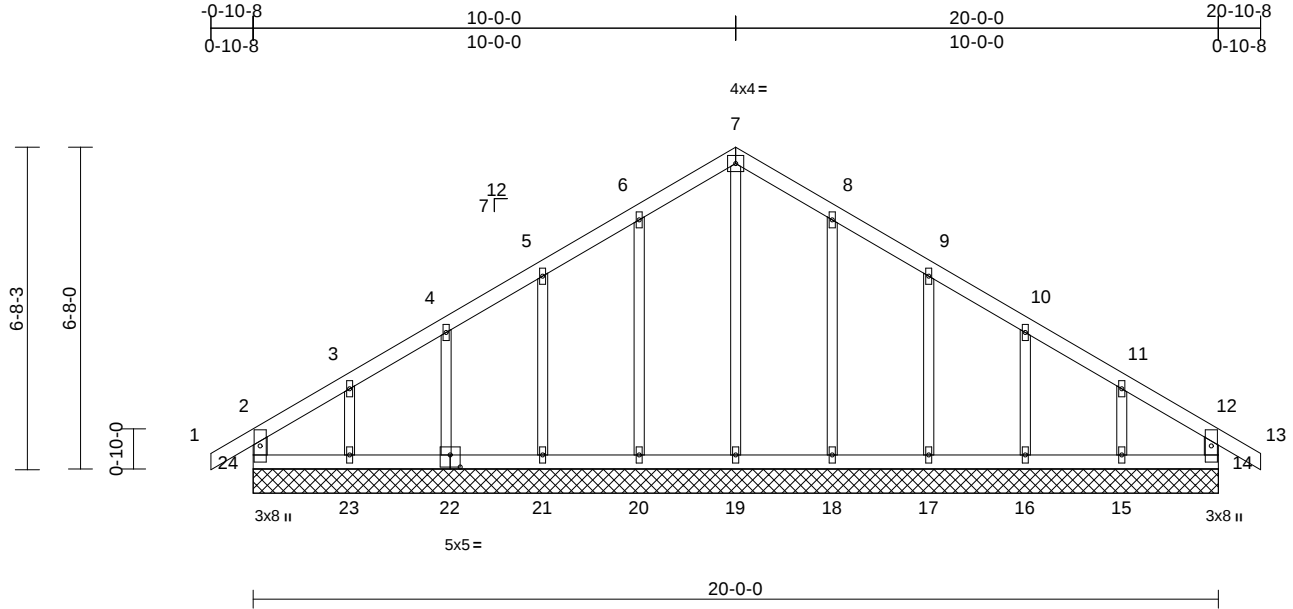
Job	Truss	Truss Type	Qty	Ply	Roof	RELEASE FOR CONSTRUCTION
P240705-01	B01	Common Supported Gable	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						166932384
						LEE'S SUMMIT, MISSOURI

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

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07/25/2024



Scale = 1:47.7									
Plate Offsets (X, Y): [22:0-2-8,0-3-0]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a 999
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	n/a	-	n/a 999
BCLL	0.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	0.00	14	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R					
						PLATES		GRIP	
						MT20		197/144	
						Weight: 94 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

WEBS	7-19=-164/37, 6-20=-156/93, 5-21=-145/103, 4-22=-144/107, 3-23=-154/121, 8-18=-155/93, 9-17=-146/104, 10-16=-146/108, 11-15=-149/123
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LOAD CASE(S) Standard

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

REACTIONS	(size)	14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0, 22=20-0-0, 23=20-0-0, 24=20-0-0
Max Horiz		24=-202 (LC 10)
Max Uplift		14=-33 (LC 9), 15=-106 (LC 13), 16=-60 (LC 13), 17=-74 (LC 13), 18=-66 (LC 13), 20=-66 (LC 12), 21=-74 (LC 12), 22=-58 (LC 12), 23=-111 (LC 12), 24=-64 (LC 8)
Max Grav		14=163 (LC 26), 15=201 (LC 20), 16=184 (LC 26), 17=186 (LC 20), 18=195 (LC 20), 19=193 (LC 22), 20=196 (LC 19), 21=184 (LC 19), 22=182 (LC 1), 23=212 (LC 19), 24=187 (LC 20)

FORCES	(lb) - Maximum Compression/Maximum Tension	
TOP CHORD		2-24=-155/88, 1-2=0/36, 2-3=-130/118, 3-4=-101/96, 4-5=-87/123, 5-6=-100/182, 6-7=-132/241, 7-8=-132/241, 8-9=-101/183, 9-10=-67/118, 10-11=-67/70, 11-12=-87/77, 12-13=0/36, 12-14=-145/84
BOT CHORD		23-24=-84/100, 21-23=-84/100, 20-21=-84/100, 19-20=-84/100, 18-19=-84/100, 17-18=-84/100, 16-17=-84/100, 15-16=-84/100, 14-15=-84/100

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) 0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 10-0-0, Corner(3R) 10-0-0 to 15-0-0, Exterior(2N) 15-0-0 to 20-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2-0-0 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 64 lb uplift at joint 24, 33 lb uplift at joint 14, 66 lb uplift at joint 20, 74 lb uplift at joint 21, 58 lb uplift at joint 22, 111 lb uplift at joint 23, 66 lb uplift at joint 18, 74 lb uplift at joint 17, 60 lb uplift at joint 16 and 106 lb uplift at joint 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.



July 19,2024

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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	V1	Valley	1	1		

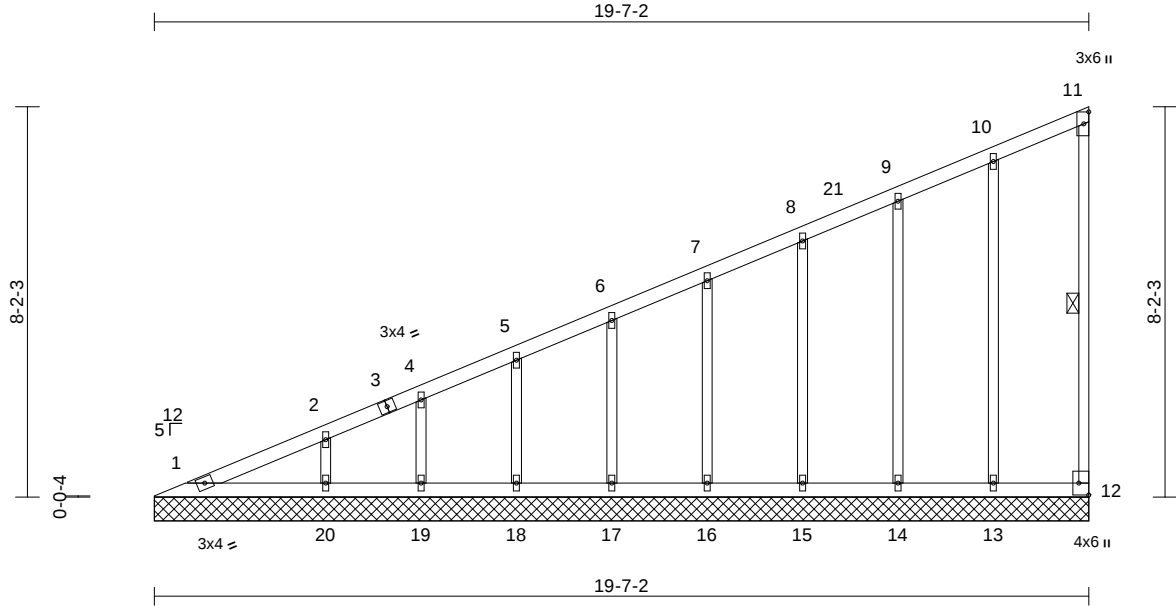
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932385
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:51 Page: 1

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07/25/2024



Scale = 1:48.3

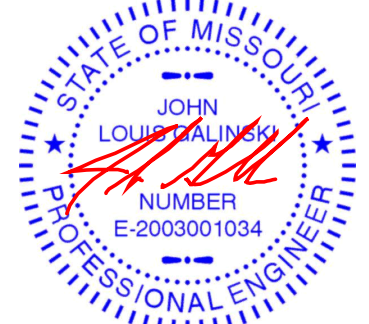
Plate Offsets (X, Y): [12:Edge,0-2-8]											
Loading		Spacing		CSI		DEFL				PLATES	GRIP
	(psf)		2-0-0				in	(loc)	l/defl	L/d	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.25	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 91 lb
											FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 11-12
REACTIONS (size)	1=19-7-2, 12=19-7-2, 13=19-7-2, 14=19-7-2, 15=19-7-2, 16=19-7-2, 17=19-7-2, 18=19-7-2, 19=19-7-2, 20=19-7-2
Max Horiz	1=366 (LC 9)
Max Uplift	12=40 (LC 9), 13=62 (LC 12), 14=50 (LC 12), 15=57 (LC 12), 16=54 (LC 12), 17=54 (LC 12), 18=56 (LC 12), 19=45 (LC 12), 20=82 (LC 12)
Max Grav	1=152 (LC 20), 12=70 (LC 1), 13=192 (LC 1), 14=179 (LC 1), 15=180 (LC 1), 16=180 (LC 1), 17=178 (LC 1), 18=187 (LC 1), 19=149 (LC 1), 20=268 (LC 1)
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-460/274, 2-4=-406/244, 4-5=-372/234, 5-6=-334/218, 6-7=-296/203, 7-8=-258/188, 8-9=-219/172, 9-10=-182/162, 10-11=-139/137, 11-12=-54/46
BOT CHORD	1-20=-154/168, 19-20=-154/168, 18-19=-154/168, 17-18=-154/168, 16-17=-154/168, 15-16=-154/168, 14-15=-154/168, 13-14=-154/168, 12-13=-154/168

WEBS 10-13=-156/154, 9-14=-140/92, 8-15=-140/77, 7-16=-140/79, 6-17=-139/78, 5-18=-145/81, 4-19=-119/68, 2-20=-201/120

- NOTES**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-7-11, Interior (1) 5-7-11 to 19-6-7 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - 3) All plates are 1.5x4 MT20 unless otherwise indicated.
 - 4) Gable requires continuous bottom chord bearing.
 - 5) Gable studs spaced at 2-0-0 oc.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) 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 40 lb uplift at joint 12, 62 lb uplift at joint 13, 50 lb uplift at joint 14, 57 lb uplift at joint 15, 54 lb uplift at joint 16, 54 lb uplift at joint 17, 56 lb uplift at joint 18, 45 lb uplift at joint 19 and 82 lb uplift at joint 20.
 - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

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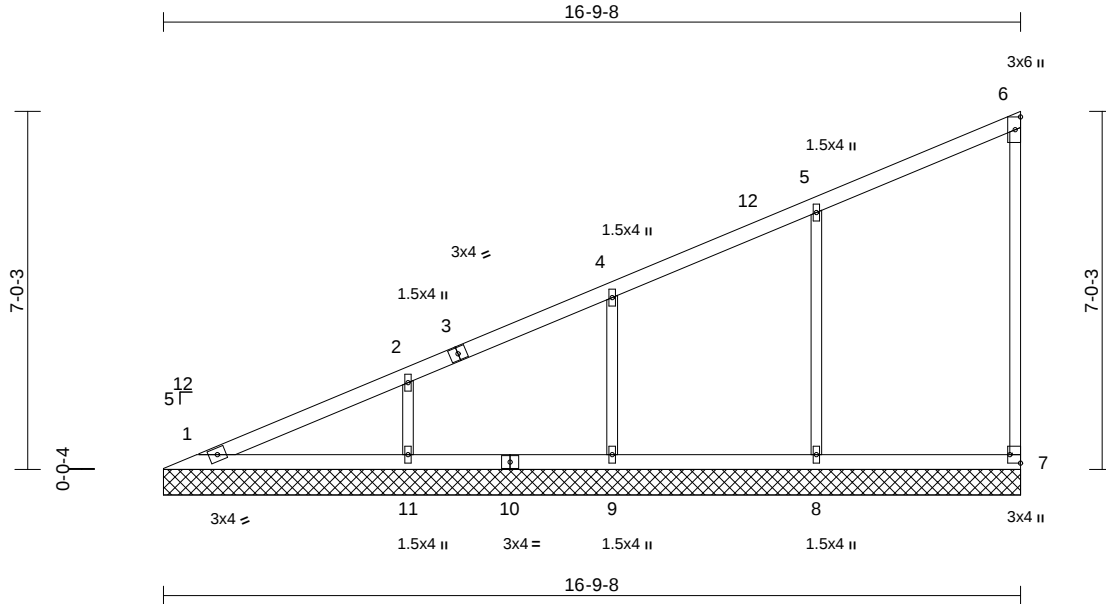
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Job	Truss	Truss Type	Qty	Ply	Roof	RELEASE FOR CONSTRUCTION
P240705-01	V2	Valley	1	1	Job Reference (optional)	AS NOTED FOR PLAN REVIEW
						DEVELOPMENT SERVICES
						166932387
						LEE'S SUMMIT, MISSOURI

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

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Scale = 1:45.1

Plate Offsets (X, Y): [7:Edge,0-2-8]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.20	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 64 lb	FT = 20%

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

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

REACTIONS (size) 1=16-9-8, 7=16-9-8, 8=16-9-8, 9=16-9-8, 11=16-9-8
Max Horiz 1=312 (LC 9)
Max Uplift 7=-41 (LC 9), 8=-120 (LC 12), 9=-102 (LC 12), 11=-126 (LC 12)
Max Grav 1=169 (LC 20), 7=141 (LC 1), 8=399 (LC 1), 9=337 (LC 1), 11=416 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-406/240, 2-4=-317/200, 4-5=-242/175, 5-6=-141/124, 6-7=-109/93
BOT CHORD 1-11=-133/145, 9-11=-133/145, 8-9=-133/145, 7-8=-133/145
WEBS 5-8=-310/224, 4-9=-264/161, 2-11=-315/198

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 16-8-14 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
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.

- 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 41 lb uplift at joint 7, 120 lb uplift at joint 8, 102 lb uplift at joint 9 and 126 lb uplift at joint 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



July 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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MiTek®

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

Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	V9	Valley	1	1		

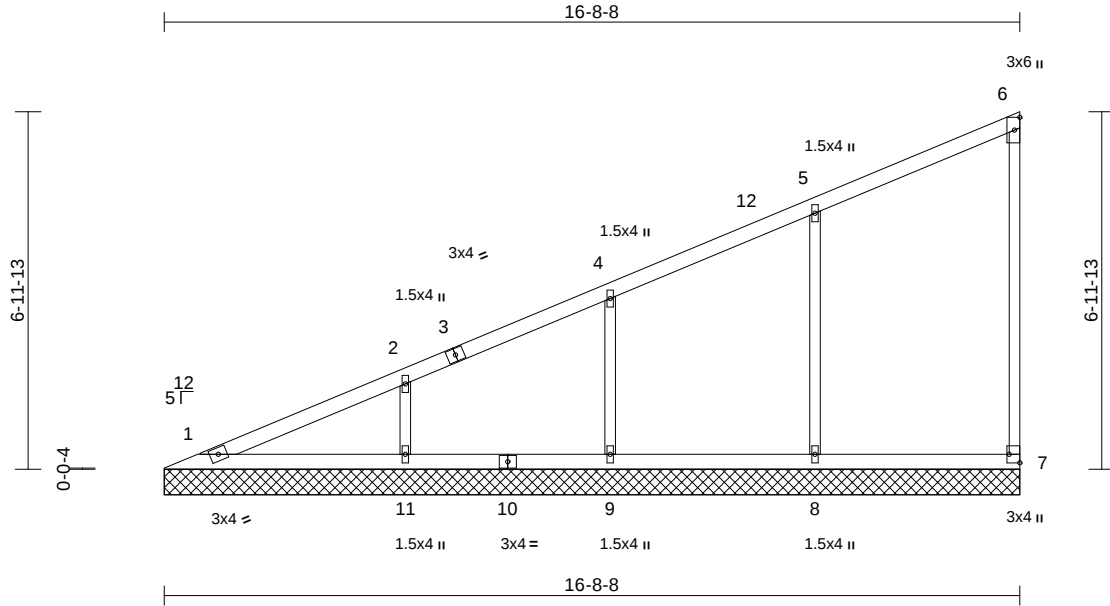
RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932388
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

ID:16aiUYptoH1hRsaSG3z?pLz?5lr-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwTCDoi7J4zJC?P

07/25/2024



Scale = 1:45
Plate Offsets (X, Y): [7:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.20	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 63 lb	FT = 20%

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

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

REACTIONS (size) 1=16-8-8, 7=16-8-8, 8=16-8-8, 9=16-8-8, 11=16-8-8
Max Horiz 1=310 (LC 9)
Max Uplift 7=-41 (LC 9), 8=-120 (LC 12), 9=-102 (LC 12), 11=-125 (LC 12)
Max Grav 1=166 (LC 20), 7=141 (LC 1), 8=398 (LC 1), 9=339 (LC 1), 11=410 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-405/239, 2-4=-317/200, 4-5=-242/175, 5-6=-141/123, 6-7=-109/93
BOT CHORD 1-11=-132/144, 9-11=-132/144, 8-9=-132/144, 7-8=-132/144
WEBS 5-8=-309/224, 4-9=-265/162, 2-11=-311/196

NOTES
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 16-7-13 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) 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 41 lb uplift at joint 7, 120 lb uplift at joint 8, 102 lb uplift at joint 9 and 125 lb uplift at joint 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



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V3	Valley	1	1	Job Reference (optional)

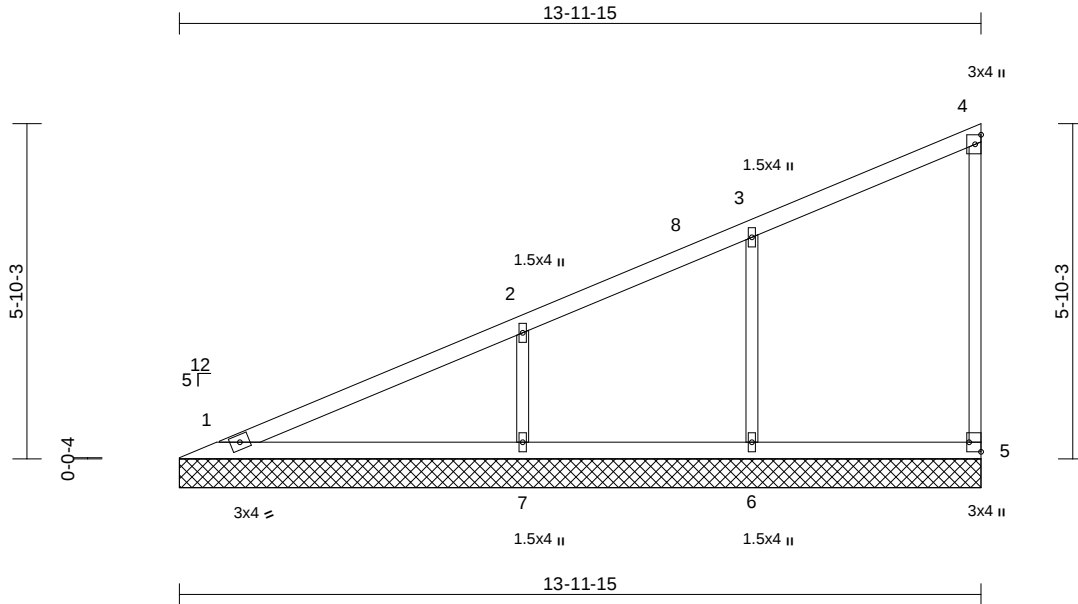
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932389
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

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07/25/2024



Scale = 1:40.2

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.22	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 51 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=13-11-15, 5=13-11-15, 6=13-11-15, 7=13-11-15
	Max Horiz	1=257 (LC 9)
	Max Uplift	5=-37 (LC 9), 6=-105 (LC 12), 7=-149 (LC 12)
	Max Grav	1=195 (LC 1), 5=150 (LC 1), 6=349 (LC 1), 7=492 (LC 1)

FORCES

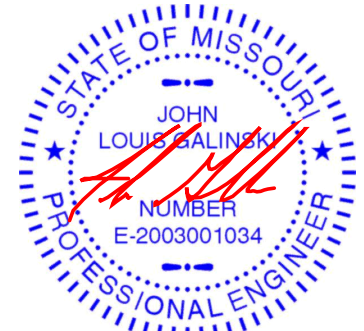
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-342/211, 2-3=-231/156, 3-4=-129/111, 4-5=-115/105
BOT CHORD	1-7=-110/121, 6-7=-110/121, 5-6=-110/121
WEBS	3-6=-276/218, 2-7=-370/260

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 6-0-8, Interior (1) 6-0-8 to 13-11-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5, 105 lb uplift at joint 6 and 149 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

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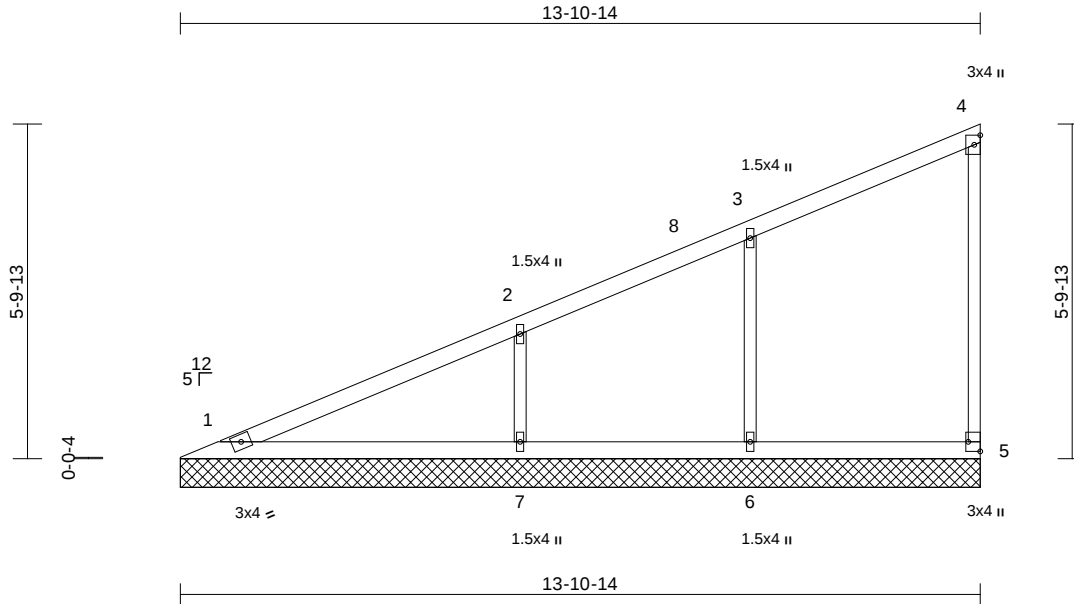
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V10	Valley	1	1	Job Reference (optional)

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

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07/25/2024



Scale = 1:40.1

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.39	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 51 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=13-10-14, 5=13-10-14, 6=13-10-14, 7=13-10-14
	Max Horiz	1=255 (LC 9)
	Max Uplift	5=-37 (LC 9), 6=-106 (LC 12), 7=-147 (LC 12)
	Max Grav	1=192 (LC 1), 5=150 (LC 1), 6=351 (LC 1), 7=486 (LC 1)

FORCES

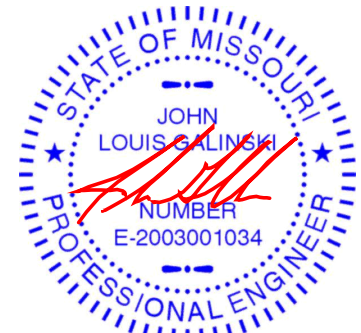
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-341/210, 2-3=-231/156, 3-4=-128/111, 4-5=-115/105
BOT CHORD	1-7=-110/120, 6-7=-110/120, 5-6=-110/120
WEBS	3-6=-278/220, 2-7=-365/257

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-11-8, Interior (1) 5-11-8 to 13-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 5, 106 lb uplift at joint 6 and 147 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

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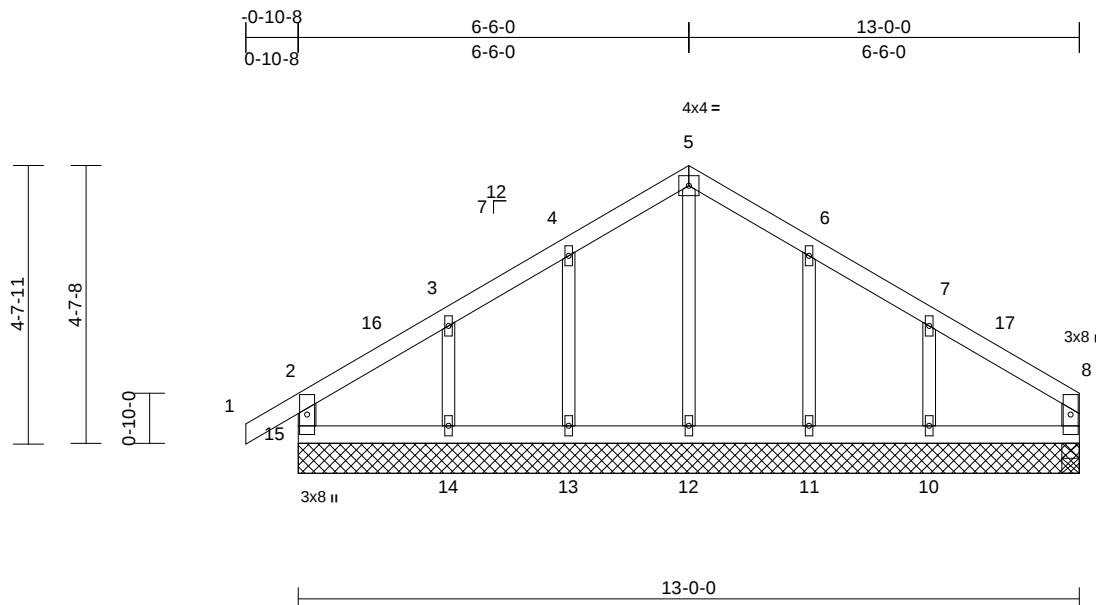
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	B03	Common Structural Gable	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:29 Page: 1

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07/25/2024



Scale = 1:38.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	14-15	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	14-15	>999	180	
BCLL	0.0	Rep Stress Incr	YES	WB	0.05	Horz(CT)	0.00	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R							
										Weight: 56 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 10-0-0 oc bracing.

REACTIONS (size)	9=13-0-0, 10=13-0-0, 11=13-0-0, 12=13-0-0, 13=13-0-0, 14=13-0-0, 15=13-0-0
	Max Horiz 15=139 (LC 9)
	Max Uplift 9=-27 (LC 12), 10=-101 (LC 13), 11=-62 (LC 13), 13=-62 (LC 12), 14=-101 (LC 12), 15=-43 (LC 13)
	Max Grav 9=109 (LC 19), 10=241 (LC 20), 11=179 (LC 20), 12=153 (LC 22), 13=186 (LC 25), 14=226 (LC 19), 15=197 (LC 1)

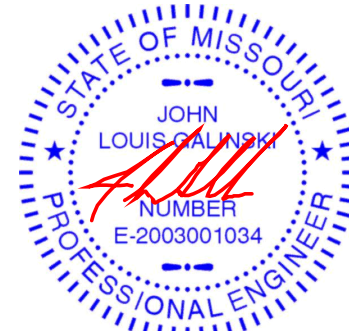
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/36, 2-3=-114/78, 3-4=-87/101, 4-5=-124/158, 5-6=-123/157, 6-7=-89/100, 7-8=-85/52, 2-15=-173/108, 8-9=-86/42
BOT CHORD	14-15=-45/60, 13-14=-45/60, 12-13=-45/60, 11-12=-45/60, 10-11=-45/60, 9-10=-45/60
WEBS	5-12=-112/22, 4-13=-150/90, 3-14=-169/118, 6-11=-145/89, 7-10=-182/120

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) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-6-0, Exterior(2R) 6-6-0 to 11-6-0, Interior (1) 11-6-0 to 12-10-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 2-0-0 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 43 lb uplift at joint 15, 27 lb uplift at joint 9, 62 lb uplift at joint 13, 101 lb uplift at joint 14, 62 lb uplift at joint 11 and 101 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

July 19, 2024

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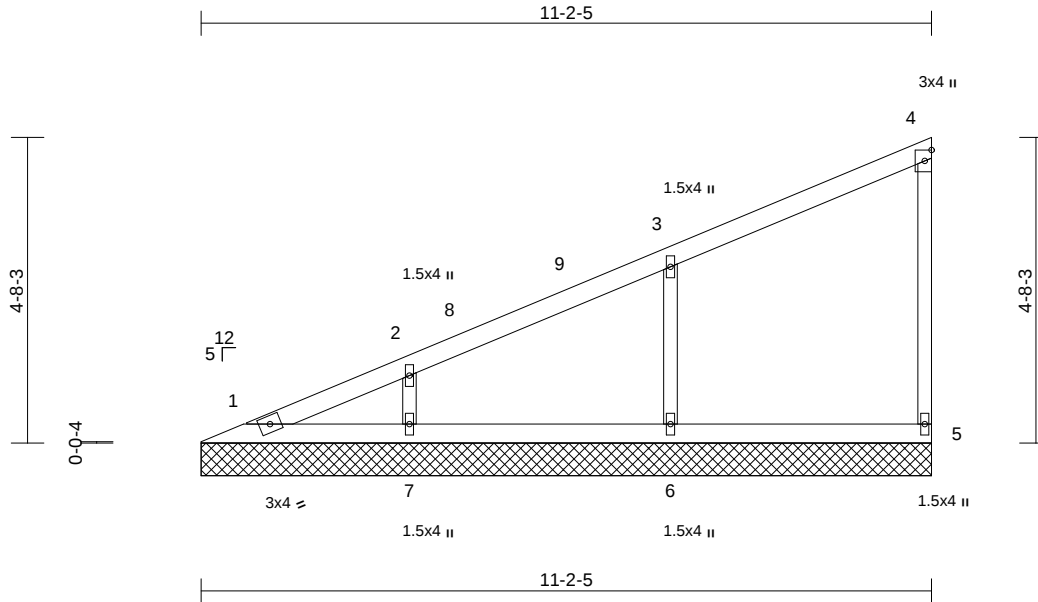
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V4	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

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07/25/2024



Scale = 1:35.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 40 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS (size)	1=11-2-5, 5=11-2-5, 6=11-2-5, 7=11-2-5
Max Horiz	1=203 (LC 9)
Max Uplift	5=-32 (LC 9), 6=-121 (LC 12), 7=-96 (LC 12)
Max Grav	1=97 (LC 20), 5=141 (LC 1), 6=402 (LC 1), 7=316 (LC 1)

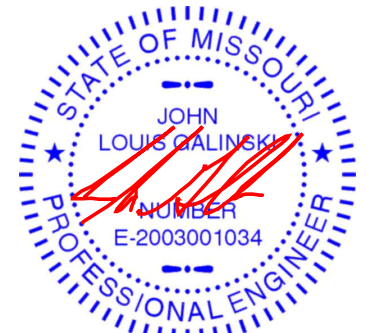
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-307/179, 2-3=-236/150, 3-4=-114/93, 4-5=-108/108
BOT CHORD	1-7=-86/96, 6-7=-86/96, 5-6=-86/96
WEBS	3-6=-313/270, 2-7=-243/206

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 11-1-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 5, 121 lb uplift at joint 6 and 96 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

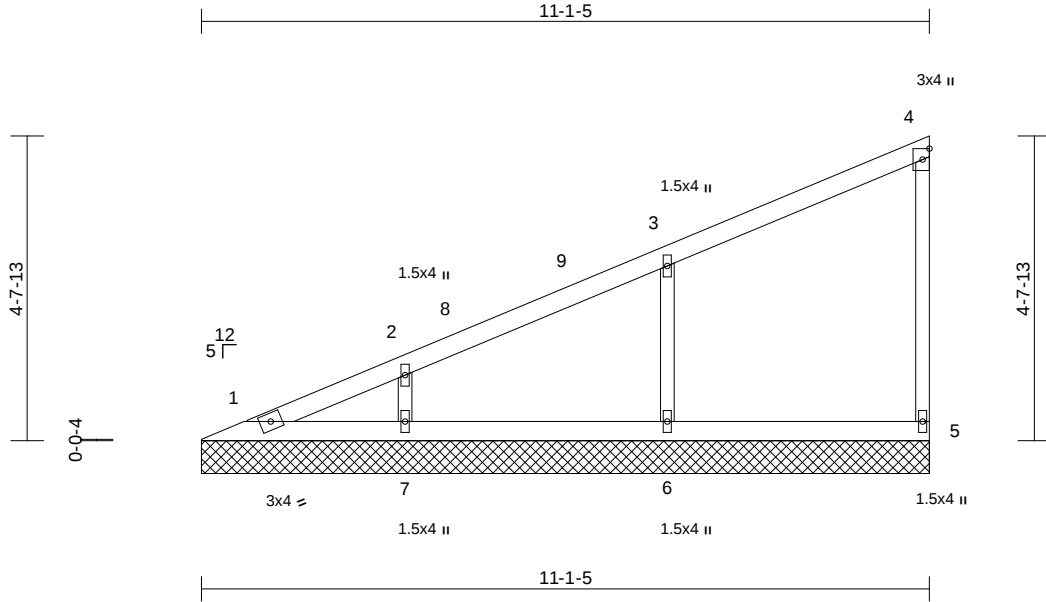
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 Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	V11	Valley	1	1		

RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932393
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32
ID:16aiUYptoH1hRsaSG3z?pLz?5lr-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKwRCDoi7Jz2JC?P



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 39 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=11-1-5, 5=11-1-5, 6=11-1-5, 7=11-1-5
	Max Horiz	1=201 (LC 9)
	Max Uplift	5=-32 (LC 9), 6=-121 (LC 12), 7=-95 (LC 12)
	Max Grav	1=93 (LC 20), 5=141 (LC 1), 6=402 (LC 1), 7=312 (LC 1)

FORCES

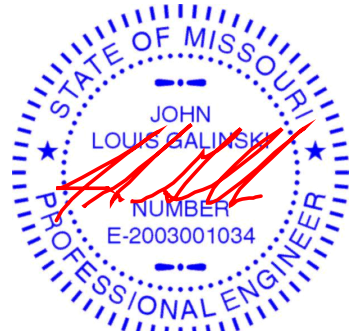
	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-306/178, 2-3=-236/149, 3-4=-114/93, 4-5=-108/108
BOT CHORD	1-7=-86/95, 6-7=-86/95, 5-6=-86/95
WEBS	3-6=-314/270, 2-7=-240/206

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1,
Interior (1) 5-9-1 to 11-0-10 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
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.

- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 32 lb uplift at joint
5, 121 lb uplift at joint 6 and 95 lb uplift at joint 7.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V15	Valley	1	1	Job Reference (optional)

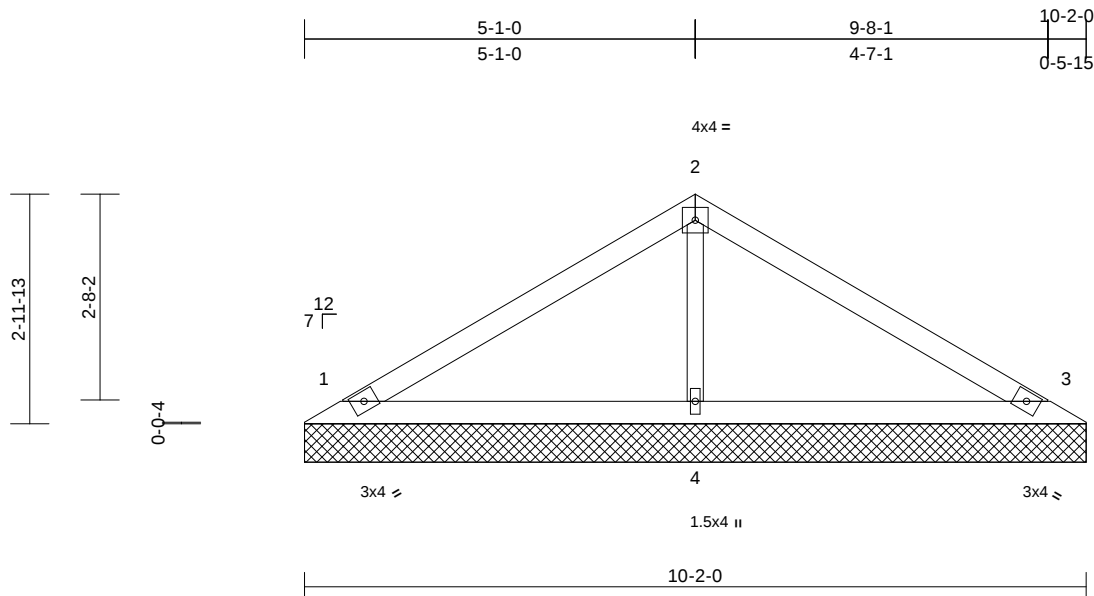
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:33

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Page: 1

07/25/2024



Scale = 1:30

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 33 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=10-2-0, 3=10-2-0, 4=10-2-0
 Max Horiz 1=-75 (LC 8)
 Max Uplift 1=-46 (LC 12), 3=-56 (LC 13), 4=-30 (LC 12)
 Max Grav 1=202 (LC 1), 3=202 (LC 1), 4=419 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

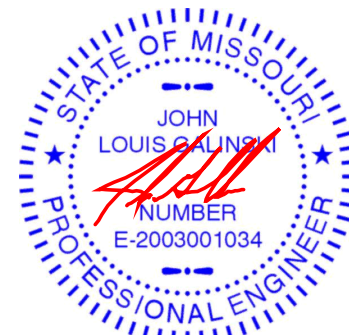
TOP CHORD 1-2=-141/72, 2-3=-139/71
 BOT CHORD 1-4=-14/65, 3-4=-14/65
 WEBS 2-4=-280/128

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 46 lb uplift at joint 1, 56 lb uplift at joint 3 and 30 lb uplift at joint 4.
- 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 19, 2024

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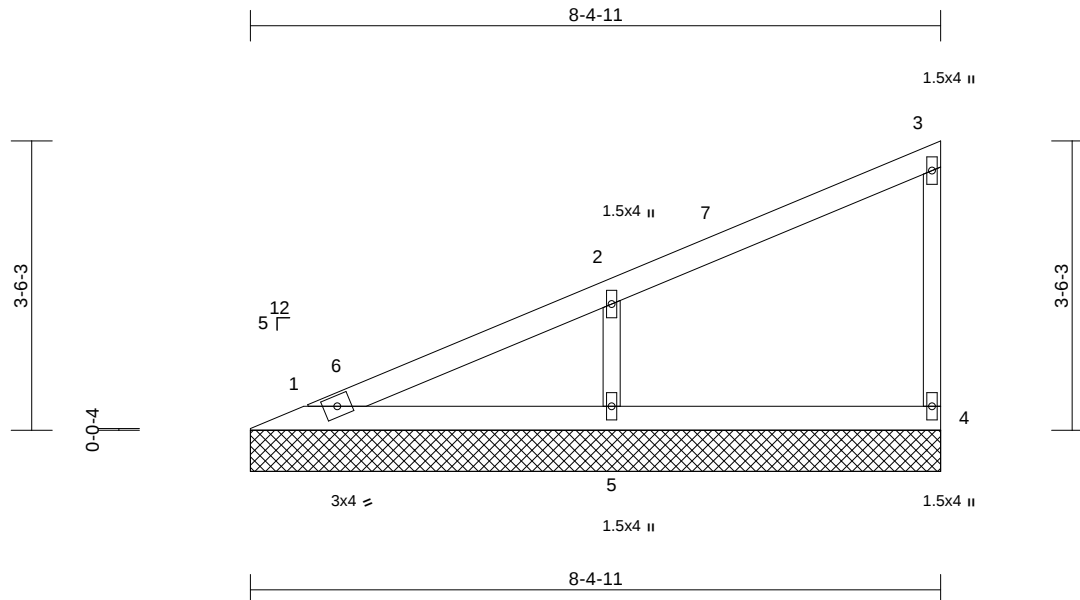
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V5	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

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07/25/2024



Scale = 1:28

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	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	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 28 lb	FT = 20%

LUMBER

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

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 4 and 129 lb uplift at joint 5.
- 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.

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.

LOAD CASE(S) Standard**REACTIONS**

(size)	1=8-4-11, 4=8-4-11, 5=8-4-11
Max Horiz	1=148 (LC 9)
Max Uplift	4=-27 (LC 9), 5=-129 (LC 12)
Max Grav	1=122 (LC 1), 4=134 (LC 1), 5=426 (LC 1)

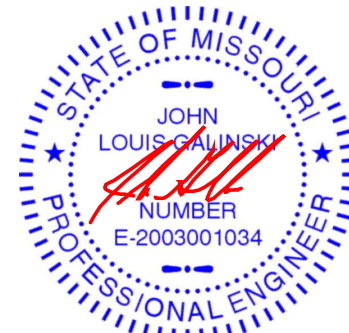
FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-240/145, 2-3=-105/81, 3-4=-104/117
BOT CHORD	1-5=-65/71, 4-5=-65/71
WEBS	2-5=-332/311

NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 8-4-1 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V12	Valley	1	1	Job Reference (optional)

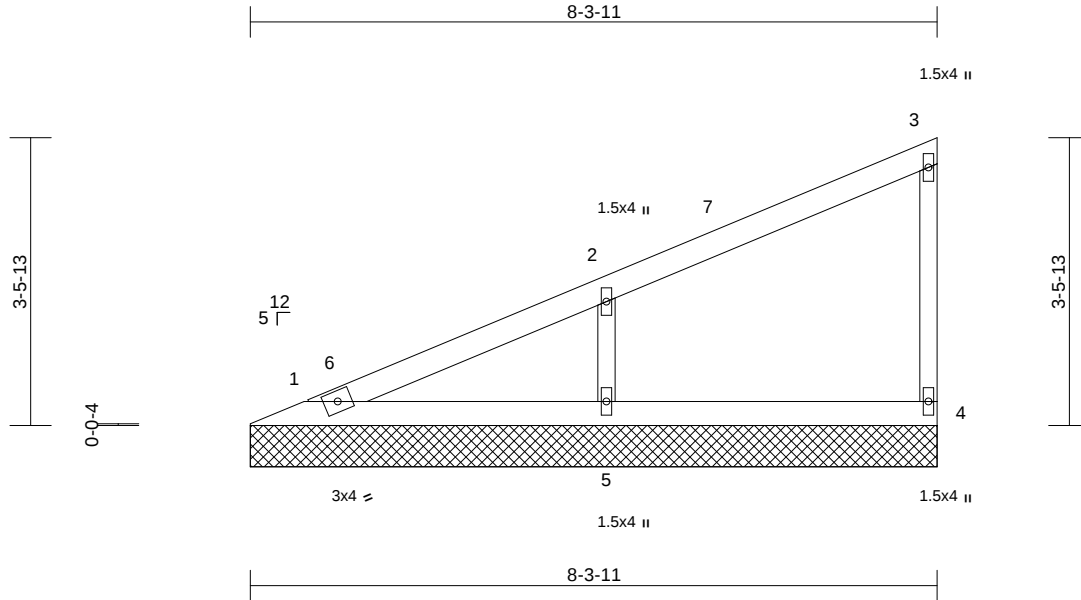
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932396
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

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07/25/2024



Scale = 1:27.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	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	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 28 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS	(size)	1=8-3-11, 4=8-3-11, 5=8-3-11
	Max Horiz	1=146 (LC 9)
	Max Uplift	4=-27 (LC 12), 5=-128 (LC 12)
	Max Grav	1=118 (LC 1), 4=135 (LC 1), 5=422 (LC 1)

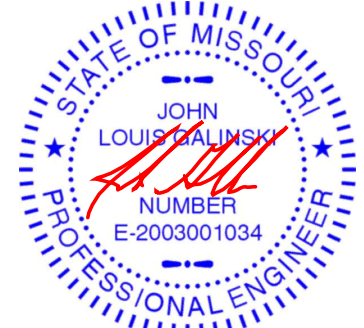
FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-239/144, 2-3=-105/80, 3-4=-105/118
BOT CHORD	1-5=-65/70, 4-5=-65/70
WEBS	2-5=-328/309

NOTES

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

- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 27 lb uplift at joint
4 and 128 lb uplift at joint 5.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	V16	Valley	1	1		

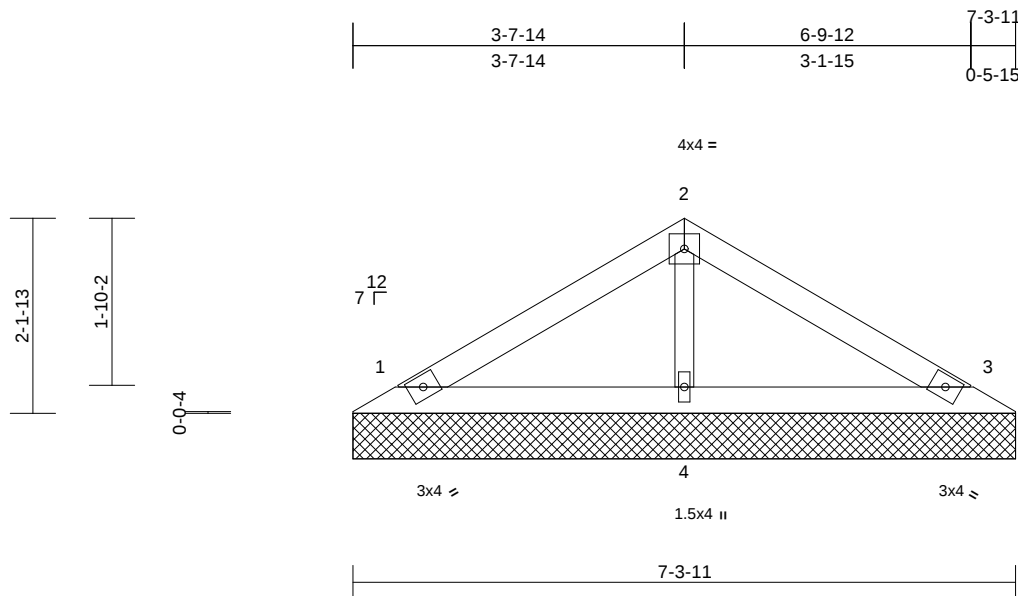
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932397
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:33 Page: 1

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07/25/2024



Scale = 1:25.4

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	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 23 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=7-3-11, 3=7-3-11, 4=7-3-11
Max Horiz 1=-51 (LC 8)
Max Uplift 1=-40 (LC 12), 3=-46 (LC 13), 4=-5 (LC 12)
Max Grav 1=154 (LC 1), 3=154 (LC 1), 4=260 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-88/55, 2-3=-84/55
BOT CHORD 1-4=-10/41, 3-4=-10/41
WEBS 2-4=-181/104

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 40 lb uplift at joint 1, 46 lb uplift at joint 3 and 5 lb uplift at joint 4.
- 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 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V6	Valley	1	1	Job Reference (optional)

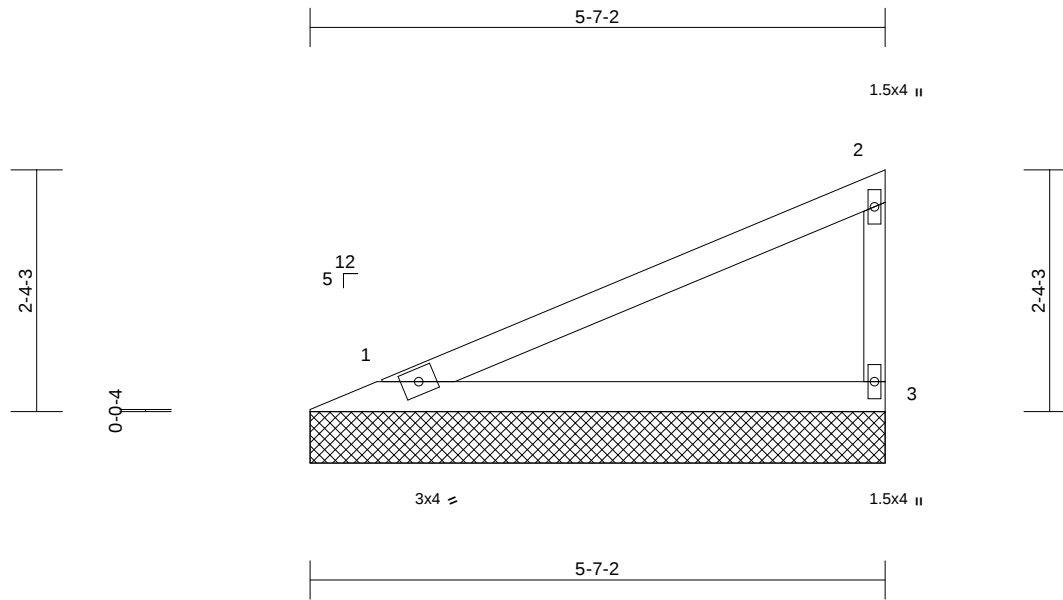
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932398
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

ID:ilcA0Wpv6Lfr5EGZtoIf8zYcsg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWfCDoi7J4Z3C?r

07/25/2024



Scale = 1:22.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 18 lb	FT = 20%

LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-7-2, 3=5-7-2

Max Horiz 1=94 (LC 9)

Max Uplift 1=-38 (LC 12), 3=-56 (LC 12)

Max Grav 1=215 (LC 1), 3=215 (LC 1)

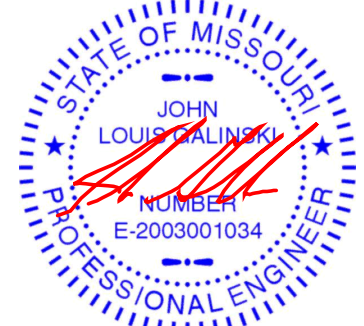
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-121/82, 2-3=-167/194

BOT CHORD 1-3=-41/45

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 38 lb uplift at joint
1 and 56 lb uplift at joint 3.



July 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

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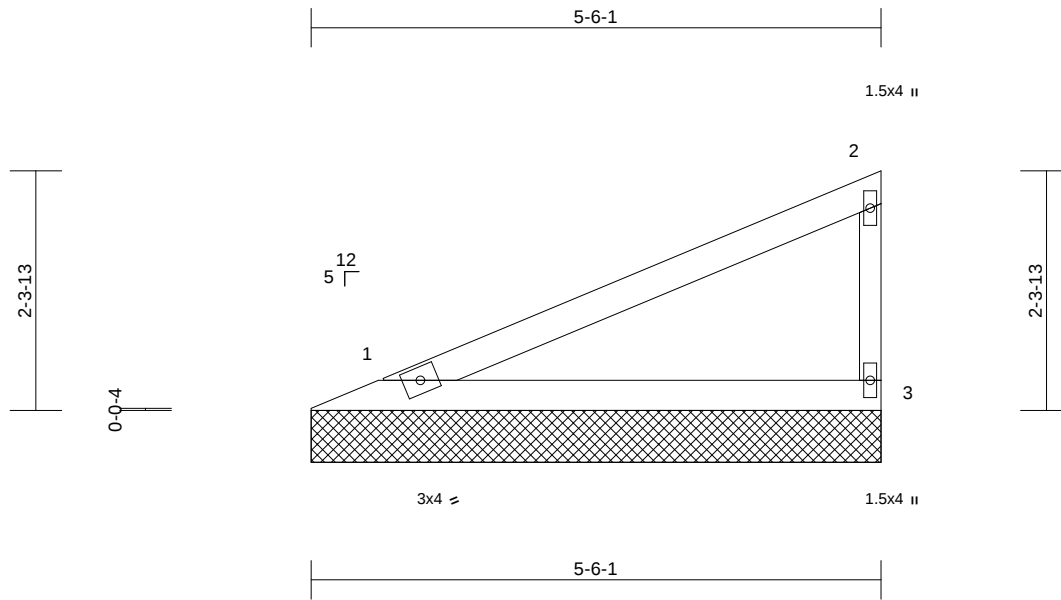
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V13	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

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07/25/2024



Scale = 1:22.3

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 17 lb	FT = 20%

LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-6-11 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=5-6-1, 3=5-6-1

Max Horiz 1=92 (LC 9)

Max Uplift 1=-37 (LC 12), 3=-55 (LC 12)

Max Grav 1=211 (LC 1), 3=211 (LC 1)

FORCES

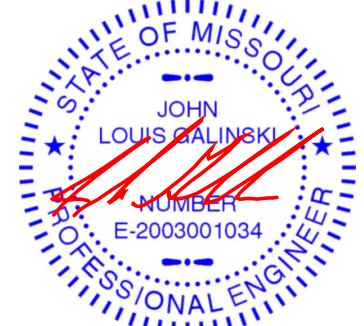
(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-119/81, 2-3=-164/191

BOT CHORD 1-3=-41/44

NOTES

- 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 37 lb uplift at joint
 1 and 55 lb uplift at joint 3.



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V17	Valley	1	1	Job Reference (optional)

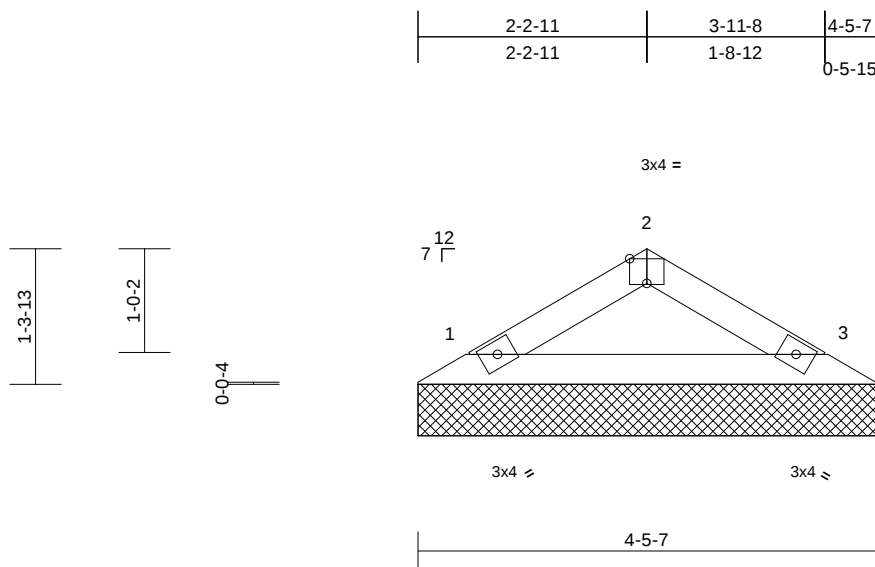
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932400
LEE'S SUMMIT, MISSOURI

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:33
ID:16aiUYptoH1hRsaSG3z?pLz?5lr-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKw(CDoi7J4zJC?P

Page: 1

07/25/2024



Scale = 1:22.4

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	0.06	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	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 13 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-6-5 oc purlins.

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

REACTIONS

(size) 1=4-5-7, 3=4-5-7

Max Horiz 1=-28 (LC 8)

Max Uplift 1=-23 (LC 12), 3=-23 (LC 13)

Max Grav 1=155 (LC 1), 3=155 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

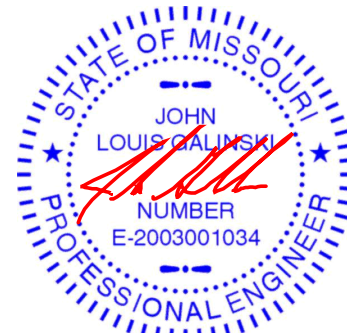
TOP CHORD 1-2=-144/102, 2-3=-144/102

BOT CHORD 1-3=-49/103

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 23 lb uplift at joint 1 and 23 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 19, 2024

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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

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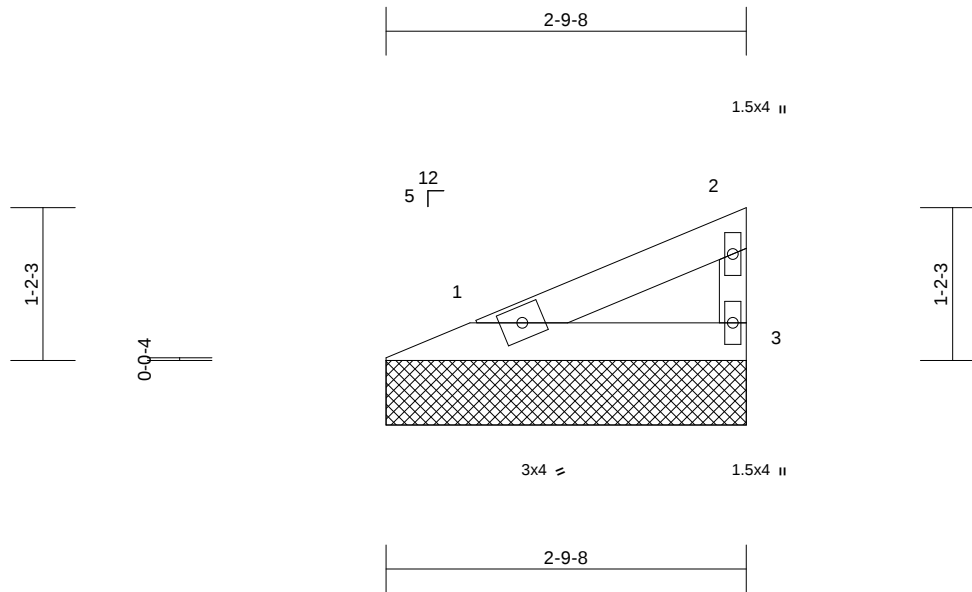
Job	Truss	Truss Type	Qty	Ply	Roof
P240705-01	V7	Valley	1	1	Job Reference (optional)

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

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Wed Jul 17 13:48:32 Page: 1

ID:ilcIA0Wpv6Lfr5EGZtoIf8zYcsg-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4Z3C?r

07/25/2024



Scale = 1:17.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb	FT = 20%

LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

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

REACTIONS (size) 1=2-9-8, 3=2-9-8

Max Horiz 1=39 (LC 9)

Max Uplift 1=-16 (LC 12), 3=-23 (LC 12)

Max Grav 1=89 (LC 1), 3=89 (LC 1)

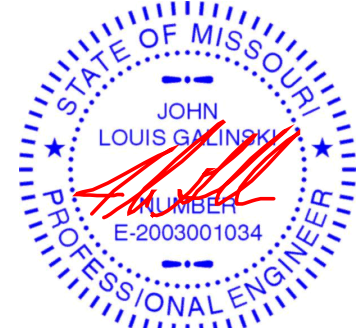
FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-51/35, 2-3=-69/82

BOT CHORD 1-3=-17/19

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
 exterior zone and C-C Exterior(2E) zone; cantilever left
 and right exposed; end vertical left and right
 exposed; C-C for members and forces & MWFRS for
 reactions shown; Lumber DOL=1.60 plate grip
 DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
 only. For studs exposed to wind (normal to the face),
 see Standard Industry Gable End Details as applicable,
 or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
 chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing
 capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to
 bearing plate capable of withstanding 16 lb uplift at joint
 1 and 23 lb uplift at joint 3.



July 19, 2024

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Job	Truss	Truss Type	Qty	Ply	Roof	Job Reference (optional)
P240705-01	V14	Valley	1	1		

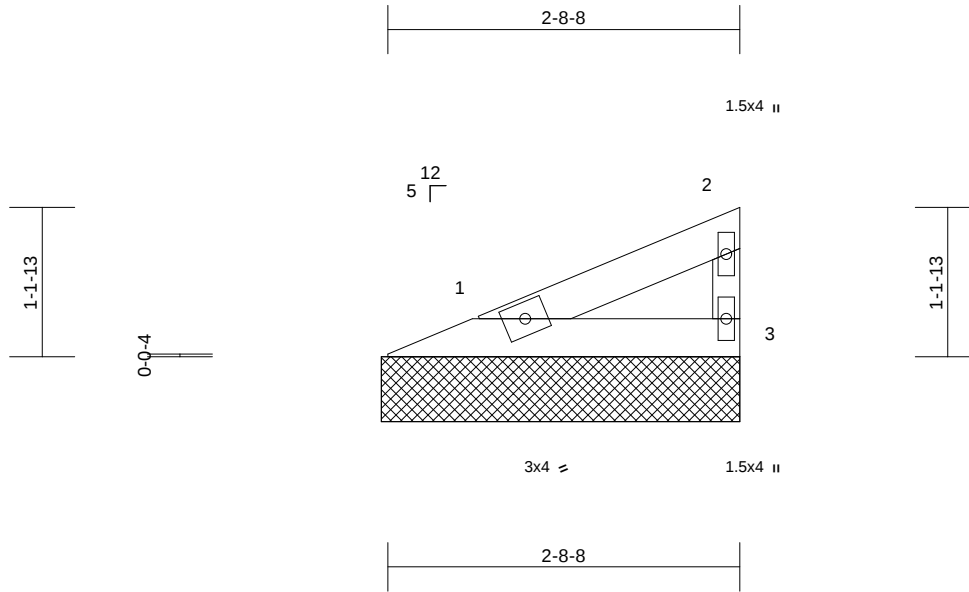
Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083,

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RELEASE FOR CONSTRUCTION
AS NOTED FOR PLAN REVIEW
DEVELOPMENT SERVICES
166932402
LEE'S SUMMIT, MISSOURI

07/25/2024



Scale = 1:17.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 8 lb FT = 20%

LUMBER

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

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

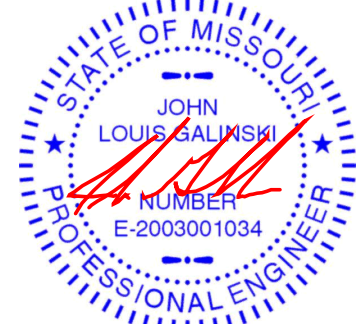
REACTIONS (size) 1=2-9-1, 3=2-9-1
Max Horiz 1=37 (LC 11)
Max Uplift 1=-15 (LC 12), 3=-22 (LC 12)
Max Grav 1=85 (LC 1), 3=85 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-49/33, 2-3=-66/79
BOT CHORD 1-3=-17/18

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed ; end vertical left and right
exposed;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 4-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 6) All bearings are assumed to be SP No.2 crushing
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 15 lb uplift at joint
1 and 22 lb uplift at joint 3.



July 19,2024

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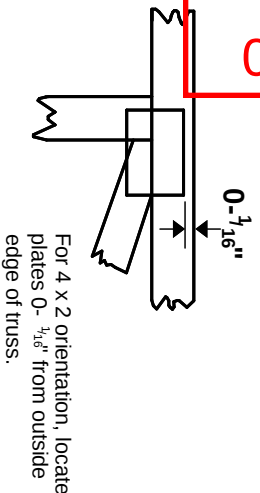
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Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

PLATE SIZE

4 X 4

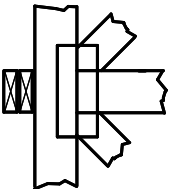
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



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

BEARING



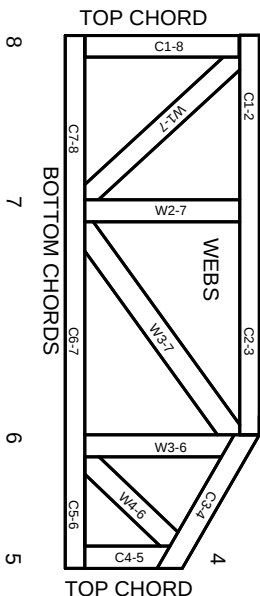
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:
ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

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

1 2 3 Joint ID typ.



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

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

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

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

Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/12/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/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.