

RE: P240855-01
Roof - HR Lot 81

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

Site Information:

Customer: Clayton Properties Project Name: P240855-01
Lot/Block: 81 Model:
Address: 1535 SW Arbor Valley Subdivision: Hawthorn Ridge
City: Lee's Summit State: MO

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

Design Code: IRC2018/TPI2014 Design Program: MiTek 20/20 8.6
Wind Code: ASCE 7-16 Wind Speed: 115 mph
Roof Load: 45.0 psf Floor Load: N/A psf

This package includes 19 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I66694256	A5	7/8/2024
2	I66694257	A4	7/8/2024
3	I66694258	A3	7/8/2024
4	I66694259	A2	7/8/2024
5	I66694260	A1	7/8/2024
6	I66694261	B1	7/8/2024
7	I66694262	C3	7/8/2024
8	I66694263	C2	7/8/2024
9	I66694264	C1	7/8/2024
10	I66694265	C4	7/8/2024
11	I66694266	V1	7/8/2024
12	I66694267	V2	7/8/2024
13	I66694268	LG01	7/8/2024
14	I66694269	V3	7/8/2024
15	I66694270	V4	7/8/2024
16	I66694271	CG1	7/8/2024
17	I66694272	J1	7/8/2024
18	I66694273	V5	7/8/2024
19	I66694274	J2	7/8/2024

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

Truss Design Engineer's Name: Sevier, Scott

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

Missouri COA: 001193

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. Any project specific information included is for MiTek customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek 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 08, 2024

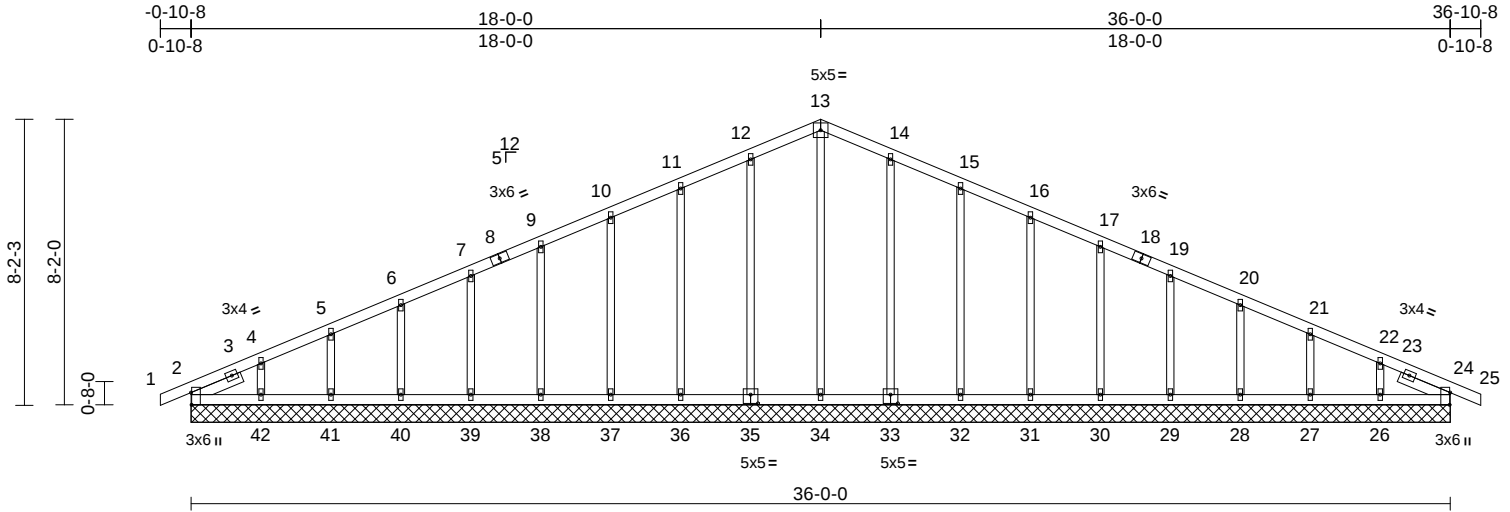
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	I66694256
P240855-01	A5	Common Supported Gable	1	1	Job Reference (optional)	

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

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Scale = 1:65.9

Plate Offsets (X, Y): [2:0-4-3,Edge], [24:0-4-3,Edge], [33:0-2-8,0-3-0], [35:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.22	Horz(CT)	0.01	24	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
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-7, Right 2x4 SP No.2 -- 1-6-7

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=36-0-0, 24=36-0-0, 26=36-0-0, 27=36-0-0, 28=36-0-0, 29=36-0-0, 30=36-0-0, 31=36-0-0, 32=36-0-0, 33=36-0-0, 34=36-0-0, 35=36-0-0, 36=36-0-0, 37=36-0-0, 38=36-0-0, 39=36-0-0, 40=36-0-0, 41=36-0-0, 42=36-0-0
Max Horiz 2=148 (LC 16)
Max Uplift 2=-27 (LC 13), 24=-3 (LC 9), 26=-80 (LC 13), 27=-52 (LC 13), 28=-55 (LC 13), 29=-54 (LC 13), 30=-55 (LC 13), 31=-54 (LC 13), 32=-58 (LC 13), 33=-50 (LC 13), 35=-52 (LC 12), 36=-57 (LC 12), 37=-54 (LC 12), 38=-55 (LC 12), 39=-54 (LC 12), 40=-55 (LC 12), 41=-51 (LC 12), 42=-93 (LC 12)
Max Grav 2=160 (LC 1), 24=160 (LC 1), 26=178 (LC 26), 27=182 (LC 1), 28=180 (LC 26), 29=180 (LC 1), 30=180 (LC 26), 31=180 (LC 1), 32=179 (LC 26), 33=189 (LC 26), 34=185 (LC 22), 35=189 (LC 25), 36=179 (LC 25), 37=180 (LC 1), 38=180 (LC 25), 39=180 (LC 1), 40=180 (LC 25), 41=182 (LC 1), 42=178 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-196/72, 4-5=-135/78, 5-6=-102/90, 6-7=-81/111, 7-9=-60/133, 9-10=-58/156, 10-11=-73/194, 11-12=-88/239, 12-13=-103/279, 13-14=-103/279, 14-15=-88/239, 15-16=-73/194, 16-17=-58/151, 17-19=-43/107, 19-20=-43/63, 20-21=-53/25, 21-22=-73/18, 22-24=-126/38, 24-25=0/0
BOT CHORD 2-42=-38/146, 41-42=-38/146, 40-41=-38/146, 39-40=-38/146, 38-39=-38/146, 37-38=-38/146, 36-37=-38/146, 34-36=-38/146, 32-34=-38/146, 31-32=-38/146, 30-31=-38/146, 29-30=-38/146, 28-29=-38/146, 27-28=-38/146, 26-27=-38/146, 24-26=-38/146
WEBS 13-34=-145/13, 12-35=-149/82, 11-36=-139/94, 10-37=-140/88, 9-38=-140/89, 7-39=-140/90, 6-40=-139/89, 5-41=-142/112, 4-42=-135/166, 14-33=-149/82, 15-32=-139/94, 16-31=-140/88, 17-30=-140/89, 19-29=-140/90, 20-28=-139/89, 21-27=-142/113, 22-26=-135/163

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 4-0-0, Exterior(2N) 4-0-0 to 18-0-0, Corner(3R) 18-0-0 to 23-0-0, Exterior(2N) 23-0-0 to 36-10-8 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.
- 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.



July 8, 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 - HR Lot 81
P240855-01	A5	Common Supported Gable	1	1	I66694256
					Job Reference (optional)

- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 52 lb uplift at joint 35, 57 lb uplift at joint 36, 54 lb uplift at joint 37, 55 lb uplift at joint 38, 54 lb uplift at joint 39, 55 lb uplift at joint 40, 51 lb uplift at joint 41, 93 lb uplift at joint 42, 50 lb uplift at joint 33, 58 lb uplift at joint 32, 54 lb uplift at joint 31, 55 lb uplift at joint 30, 54 lb uplift at joint 29, 55 lb uplift at joint 28, 52 lb uplift at joint 27, 80 lb uplift at joint 26 and 3 lb uplift at joint 24.
- 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

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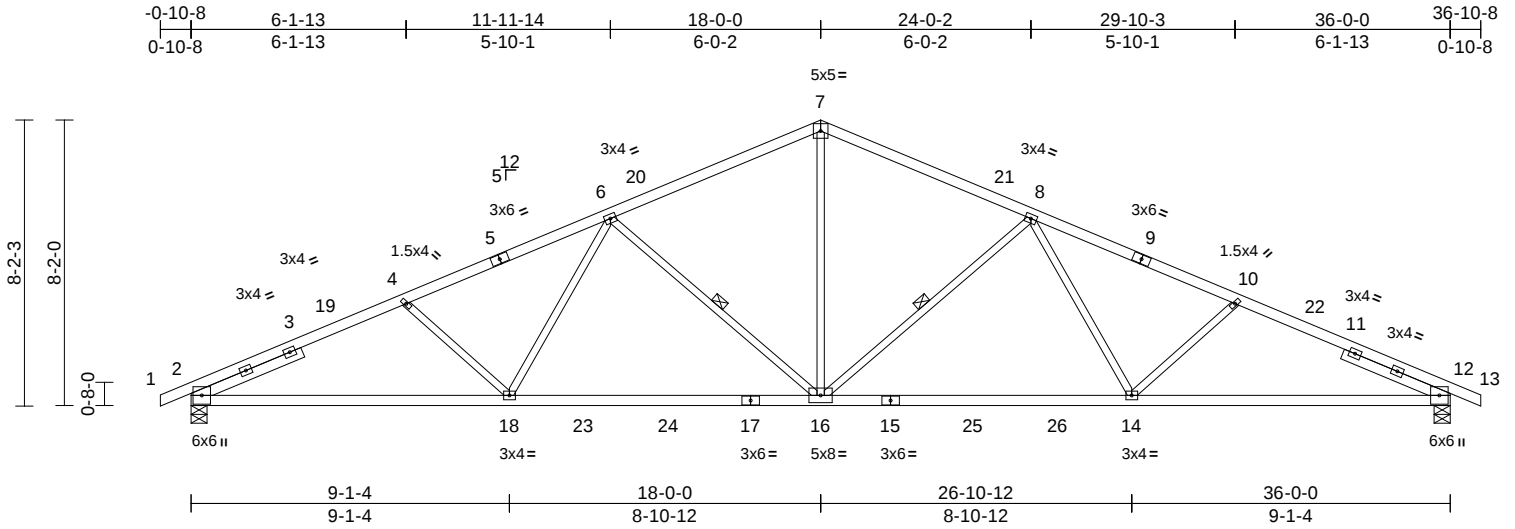
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	A4	Common	18	1	Job Reference (optional)	I66694257

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Scale = 1:65.9

Plate Offsets (X, Y): [2:0-3-11,0-0-11], [12:0-3-11,0-0-11]

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	0.63	Vert(LL)	-0.31	14-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.53	14-16	>808	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.48	Horz(CT)	0.15	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 159 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 1-5,9-13:2x4 SP 1650F 1.5E
BOT CHORD 2x4 SP 1650F 1.5E
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-5-1, Right 2x4 SP No.2 -- 3-3-9

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-7-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 9-9-0 oc bracing.

WEBS 1 Row at midpt 6-16, 8-16

REACTIONS (size) 2=0-5-8, 12=0-5-8
Max Horiz 2=148 (LC 12)
Max Uplift 2=-275 (LC 12), 12=-275 (LC 13)
Max Grav 2=1752 (LC 2), 12=1752 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/0, 2-4=-3328/512, 4-6=-3103/471, 6-7=-2247/433, 7-8=-2247/433, 8-10=-3102/471, 10-12=-3326/512, 12-13=0/0

BOT CHORD 2-18=-530/2942, 16-18=-360/2581, 14-16=-289/2581, 12-14=-383/2941

WEBS 7-16=-156/1367, 4-18=-273/212, 6-18=-33/542, 6-16=-790/287, 8-16=-791/287, 8-14=-33/541, 10-14=-272/212

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8,
Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to
23-0-0, Interior (1) 23-0-0 to 36-10-8 zone; cantilever left
and right exposed; end vertical left and right
exposed; C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) 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) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members, with BCDL = 10.0psf.
- 6) All bearings are assumed to be SP 1650F 1.5E crushing
capacity of 565 psi.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 275 lb uplift at
joint 2 and 275 lb uplift at joint 12.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 8, 2024

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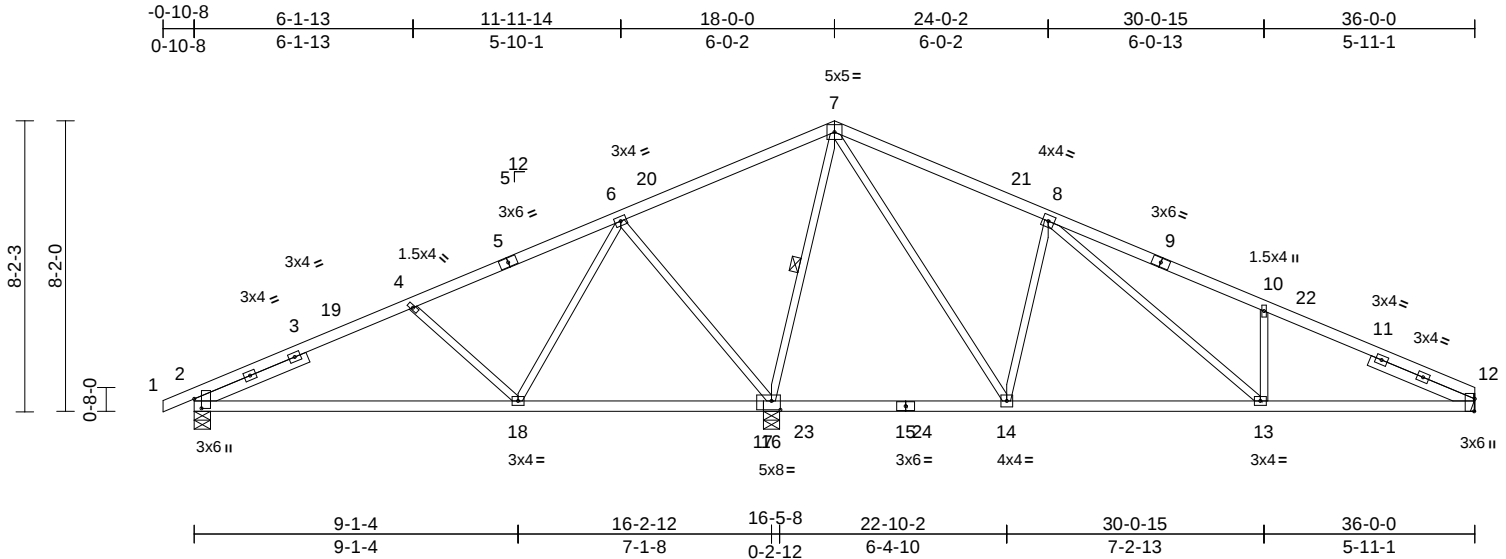
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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694258
P240855-01	A3	Common	8	1	Job Reference (optional)	

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Page: 1



Scale = 1:64.8

Plate Offsets (X, Y): [2:0-3-3,0-2-7], [12:0-4-3,Edge], [17:0-3-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.17	2-18	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.35	2-18	>560	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.02	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 163 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-5-1, Right 2x4 SP No.2 -- 3-2-2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-5 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 7-16

REACTIONS (size) 2=0-5-8, 12= Mechanical, 16=0-5-8
Max Horiz 2=148 (LC 12)
Max Uplift 2=-137 (LC 12), 12=-173 (LC 13), 16=-251 (LC 12)
Max Grav 2=620 (LC 25), 12=741 (LC 28), 16=2181 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-762/200, 4-6=-434/132, 6-7=0/693, 7-8=-460/294, 8-10=-1221/421, 10-12=-1237/305

BOT CHORD 2-18=-250/631, 16-18=-215/172, 14-16=-286/172, 13-14=-31/487, 12-13=-199/1060

WEBS 7-16=-1358/208, 4-18=-426/233, 6-18=-61/631, 6-16=-783/284, 8-14=-692/315, 7-14=-261/1035, 8-13=-224/811, 10-13=-374/230

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 18-0-0, Exterior(2R) 18-0-0 to 23-0-0, Interior (1) 23-0-0 to 36-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 5) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi, Joint 16 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 137 lb uplift at joint 2, 251 lb uplift at joint 16 and 173 lb uplift at joint 12.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



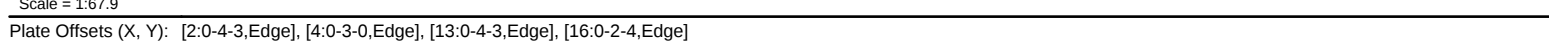
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Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 E Apr 26 2024 Print: 8.630 E Apr 26 2024 MiTek Industries, Inc. Mon Jul 08 10:16:38 Page: 1
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LUMBER		BOT CHORD	2-18=-133/373, 17-18=-171/290, 17-21=-355/186, 16-21=-355/186, 15-16=-1/372, 15-22=-1/372, 14-22=-1/372, 13-14=-227/1048
TOP CHORD	2x4 SP 1650F 1.5E *Except* 1-4,10-13:2x4 SP No.2		
BOT CHORD	2x4 SP 1650F 1.5E *Except* 16-15:2x4 SP No.2	WEBS	5-18=0/291, 5-17=-725/310, 6-9=0/368, 9-16=-996/274, 9-14=-84/834, 11-14=-466/269
WEBS	2x3 SPF No.2		
SLIDER	Left 2x4 SP No.2 -- 4-0-10, Right 2x4 SP No.2 -- 3-10-0		
BRACING		NOTES	
TOP CHORD	Structural wood sheathing directly applied or 4-9-2 oc purlins, except end verticals. Except: 6-0-0 oc bracing: 6-8	1)	Unbalanced roof live loads have been considered for this design.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.	2)	Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 16-1-4, Exterior(2E) 15-1-8 to 20-1-8, Interior (1) 20-1-8 to 36-0-0 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
WEBS	1 Row at midpt 6-17, 9-16	3)	This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
REACTIONS	All bearings 0-5-8. except 17=0-3-8, 13= Mechanical	4)	* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
	(lb) - Max Horiz 2=-149 (LC 17)	5)	Refer to girder(s) for truss to truss connections.
	Max Uplift All uplift 100 (lb) or less at joint(s) except 2=-118 (LC 12), 13=-184 (LC 13), 16=-208 (LC 13), 17=-180 (LC 12)	6)	Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 117 lb uplift at joint 2, 179 lb uplift at joint 17, 183 lb uplift at joint 13 and 208 lb uplift at joint 16.
	Max Grav All reactions 250 (lb) or less at joint (s) except 2=484 (LC 25), 13=793 (LC 28), 16=1649 (LC 2), 17=671 (LC 27)	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.
FORCES	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	LOAD CASE(S)	Standard
TOP CHORD	2-3=-485/163, 3-19=-395/168, 4-19=-309/183, 4-5=-288/187, 5-20=0/419, 6-20=0/489, 6-16=-633/169, 6-8=-268/217, 9-10=-791/291, 10-11=-929/275, 11-24=-1071/348, 12-24=-1135/331, 12-13=-1227/326		



July 8, 2024

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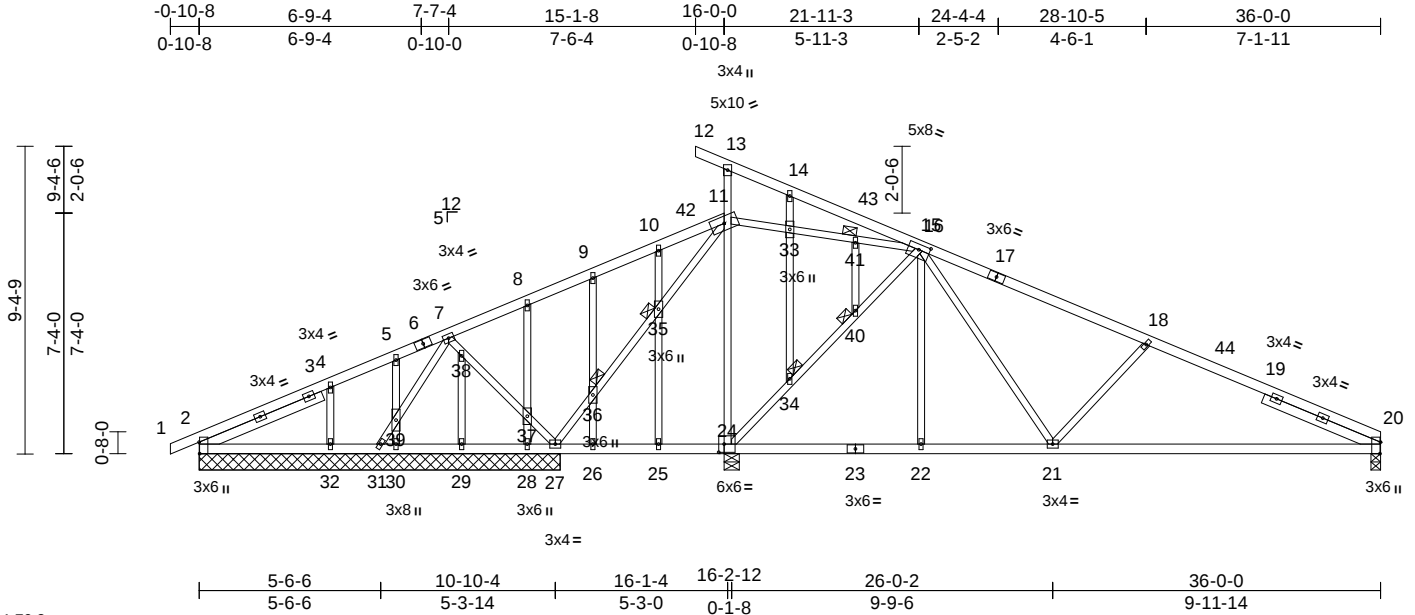
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694260
P240855-01	A1	Roof Special Structural Gable	1	1	Job Reference (optional)	

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

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Page: 1

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Scale = 1:70.2

Plate Offsets (X, Y): [2:0-4-3,Edge], [15:0-4-0,0-2-0], [20:0-4-3,Edge], [24:0-2-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.26	20-21	>908	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.54	20-21	>445	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.59	Horz(CT)	0.02	20	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 197 lb	FT = 20%

LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 4-0-10, Right 2x4 SP No.2 -- 3-10-0

WEBS 11-33=0/419, 33-41=0/398, 15-41=0/407, 24-34=-1062/275, 34-40=-1024/256, 16-40=-986/228, 15-16=-3/344, 16-21=-127/743, 18-21=-499/285

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 4-0-0, Interior (1) 4-0-0 to 16-1-4, Exterior(2E) 15-1-8 to 20-1-8, Interior (1) 20-1-8 to 36-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 28, 29, 30, 32 except (jt=lb) 20=155, 27=225, 31=224, 24=247.
- 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 4-11-9 oc purlins, except end verticals. Except: 6-0-0 oc bracing: 11-13
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 22-24,21-22 2-2-0 oc bracing: 20-21.
JOINTS	1 Brace at Jt(s): 34, 35, 36, 40, 41
REACTIONS	All bearings 11-0-0. except 20=0-3-8, 24=0-5-8 (lb) - Max Horiz 2=-147 (LC 17) Max Uplift All uplift 100 (lb) or less at joint(s) 2, 28, 29, 30, 32 except 20=155 (LC 13), 24=-247 (LC 13), 27=-225 (LC 12), 31=-225 (LC 28) Max Grav All reactions 250 (lb) or less at joint (s) 2, 28, 29, 30, 31 except 20=777 (LC 28), 24=1558 (LC 2), 27=550 (LC 1), 32=360 (LC 2)
FORCES	(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD	7-8=-56/428, 8-9=-6/407, 9-10=0/420, 10-42=0/414, 11-42=0/441, 11-24=-534/127, 16-17=-762/229, 17-18=-865/215, 18-44=-1018/292, 19-44=-1081/276, 19-20=-1162/270
BOT CHORD	26-27=-395/264, 25-26=-395/264, 24-25=-395/264, 23-24=0/343, 22-23=0/343, 21-22=0/340, 20-21=-177/998



July 8,2024

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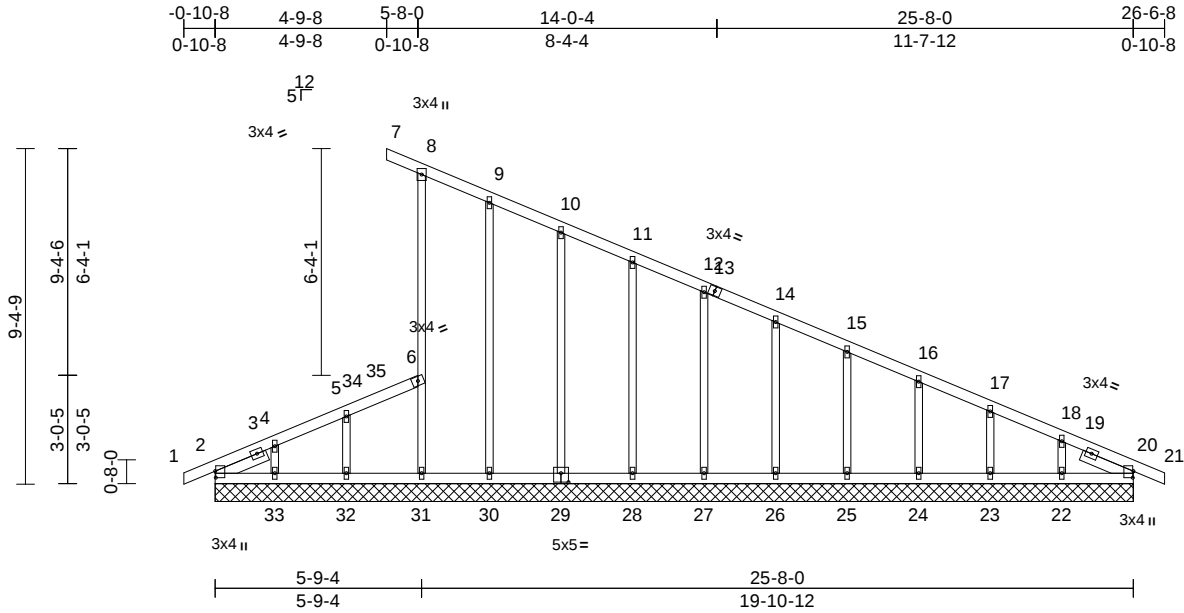
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	I66694261
P240855-01	B1	Roof Special Supported Gable	1	1	Job Reference (optional)	

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

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Scale = 1:64.4

Plate Offsets (X, Y): [2:0-2-3,0-0-3], [20:0-2-3,0-0-3], [29:0-2-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(CT)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	20	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 129 lb FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
OTHERS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 1-6-8, Right 2x4 SP No.2 -- 1-6-7

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. Except: 6-0-0 oc bracing: 6-8
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 10-0-0 oc bracing: 2-33,32-33,31-32.

REACTIONS (size)
2=25-8-0, 20=25-8-0, 22=25-8-0, 23=25-8-0, 24=25-8-0, 25=25-8-0, 26=25-8-0, 27=25-8-0, 28=25-8-0, 29=25-8-0, 30=25-8-0, 31=25-8-0, 32=25-8-0, 33=25-8-0
Max Horiz 2=-307 (LC 9)
Max Uplift 2=-40 (LC 11), 22=-111 (LC 13), 23=-49 (LC 13), 24=-56 (LC 13), 25=-54 (LC 13), 26=-54 (LC 13), 27=-55 (LC 13), 28=-53 (LC 13), 29=-64 (LC 13), 30=-45 (LC 9), 31=-173 (LC 13), 32=-51 (LC 9), 33=-102 (LC 12)
Max Grav 2=165 (LC 22), 20=206 (LC 20), 22=180 (LC 1), 23=181 (LC 26), 24=180 (LC 1), 25=180 (LC 26), 26=180 (LC 1), 27=180 (LC 26), 28=180 (LC 1), 29=182 (LC 26), 30=167 (LC 1), 31=206 (LC 1), 32=190 (LC 1), 33=158 (LC 25)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-262/116, 4-5=-207/105, 5-6=-208/139, 6-31=-166/347, 6-8=-142/241, 7-8=-26/0, 8-9=-104/79, 9-10=-130/60, 10-11=-157/71, 11-12=-200/86, 12-14=-243/101, 14-15=-287/116, 15-16=-330/131, 16-17=-374/147, 17-18=-414/161, 18-20=-504/191, 20-21=0/0
BOT CHORD 2-33=-161/464, 32-33=-161/464, 31-32=-161/464, 30-31=-169/459, 28-30=-169/459, 27-28=-169/459, 26-27=-169/459, 25-26=-169/459, 24-25=-169/459, 23-24=-169/459, 22-23=-169/459, 20-22=-169/459, 18-22=-137/227, 17-23=-142/105, 16-24=-140/91, 15-25=-140/89, 14-26=-140/89, 12-27=-140/89, 11-28=-140/88, 10-29=-142/117, 9-30=-128/122, 5-32=-148/130, 4-33=-121/161
WEBS

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 5-9-4, Corner(3E) 4-9-8 to 9-8-0, Exterior(2N) 9-8-0 to 26-6-8 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) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.

7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 31, 40 lb uplift at joint 2, 111 lb uplift at joint 22, 49 lb uplift at joint 23, 56 lb uplift at joint 24, 54 lb uplift at joint 25, 54 lb uplift at joint 26, 55 lb uplift at joint 27, 53 lb uplift at joint 28, 64 lb uplift at joint 29, 45 lb uplift at joint 30, 51 lb uplift at joint 32 and 102 lb uplift at joint 33.
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 8, 2024

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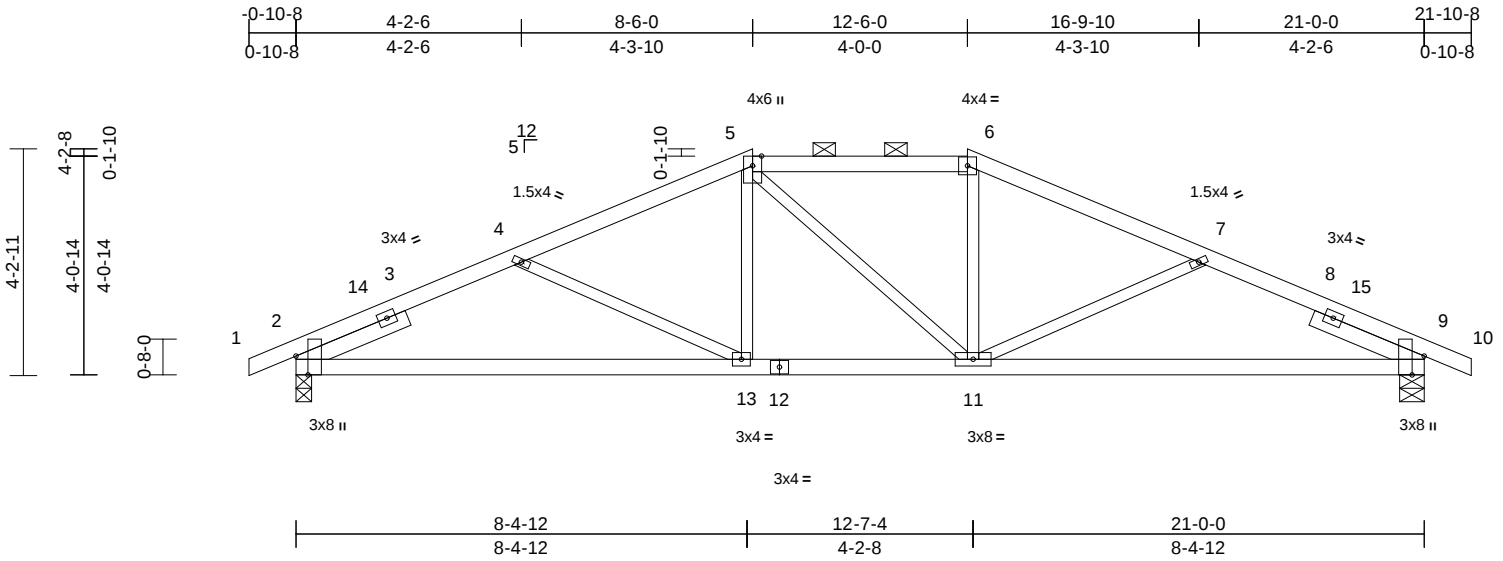
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	C3	Hip	1	1	Job Reference (optional)	I66694262

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

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Scale = 1:42.9

Plate Offsets (X, Y): [2:0-4-3,Edge], [9:0-4-3,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	0.38	Vert(LL)	-0.15	2-13	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.31	2-13	>825	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.05	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 92 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 2-2-11, Right 2x4 SP No.2 -- 2-2-11

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-5 oc purlins, except 2-0-0 oc purlins (5-0-0 max.): 5-6.
BOT CHORD Rigid ceiling directly applied or 9-11-10 oc bracing.

REACTIONS (size) 2=0-3-8, 9=0-5-8
Max Horiz 2=-72 (LC 17)
Max Uplift 2=-152 (LC 12), 9=-152 (LC 13)
Max Grav 2=1006 (LC 1), 9=1006 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-1699/414, 4-5=-1437/318, 5-6=-1276/326, 6-7=-1437/318, 7-9=-1699/414, 9-10=0/0

BOT CHORD 2-13=-327/1465, 11-13=-173/1275, 9-11=-317/1465

WEBS 5-13=-3/266, 5-11=-134/135, 6-11=0/266, 4-13=-229/191, 7-11=-229/192

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 4-0-2, Interior (1) 4-0-2 to 8-6-0, Exterior(2E) 8-6-0 to 12-6-0, Exterior(2R) 12-6-0 to 19-6-14, Interior (1) 19-6-14 to 21-10-8 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

- 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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 152 lb uplift at joint 2 and 152 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



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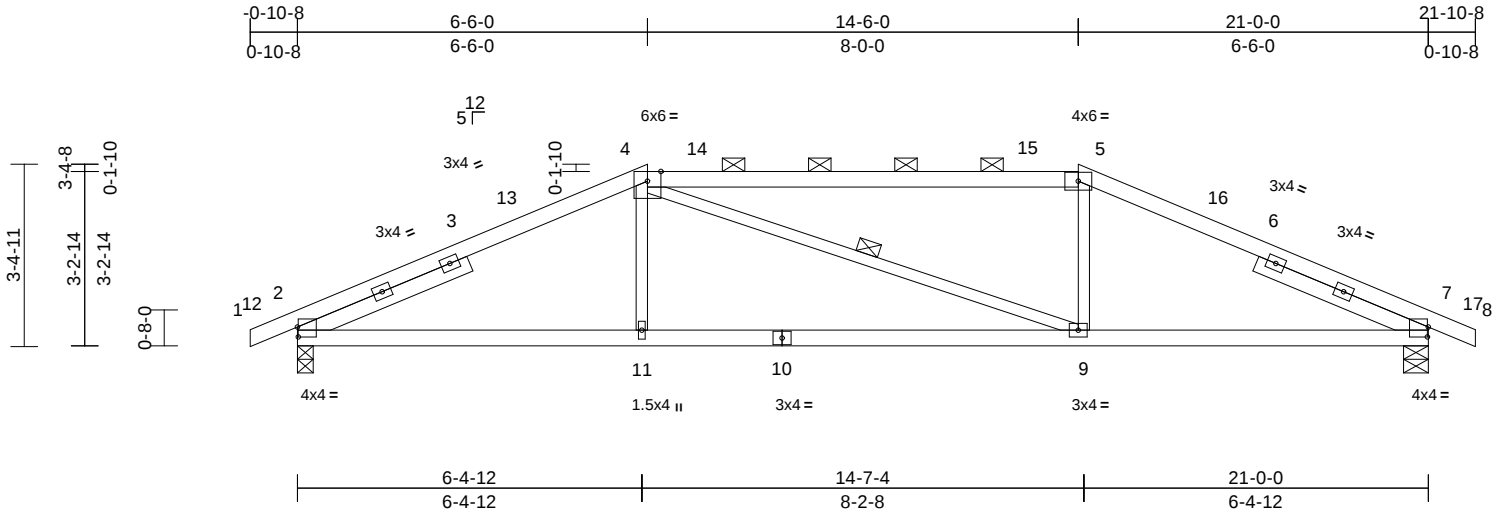
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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	C2	Hip	1	1	Job Reference (optional)	166694263

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

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Page: 1



Scale = 1:42.8

Plate Offsets (X, Y): [2:0-0-3,0-2-3], [7:0-0-3,0-2-3]

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	0.75	Vert(LL)	-0.11	9-11	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.25	9-11	>999	180	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.05	7	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
										Weight: 89 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2 *Except* 4-5:2x4 SP 2400F 2.0E
BOT CHORD 2x4 SP No.2
WEBS 2x3 SPF No.2
SLIDER Left 2x4 SP No.2 -- 3-5-3, Right 2x4 SP No.2 -- 3-5-3

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-7-13 oc purlins, except 2-0-0 oc purlins (4-8-7 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 4-9
REACTIONS (size) 2=0-3-8, 7=0-5-8
Max Horiz 2=57 (LC 16)
Max Uplift 2=-154 (LC 8), 7=-154 (LC 9)
Max Grav 2=1006 (LC 1), 7=1006 (LC 1)

FORCES

TOP CHORD 1-2=0/0, 2-4=-1707/352, 4-5=-1479/372, 5-7=-1709/352, 7-8=0/0
BOT CHORD 2-11=-244/1483, 9-11=-247/1478, 7-9=-234/1485
WEBS 4-11=0/311, 4-9=-169/171, 5-9=0/311

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 6-6-0, Exterior(2R) 6-6-0 to 13-6-14, Interior (1) 13-6-14 to 14-6-0, Exterior(2R) 14-6-0 to 21-6-14, Interior (1) 21-6-14 to 21-10-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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 154 lb uplift at joint 2 and 154 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.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



July 8, 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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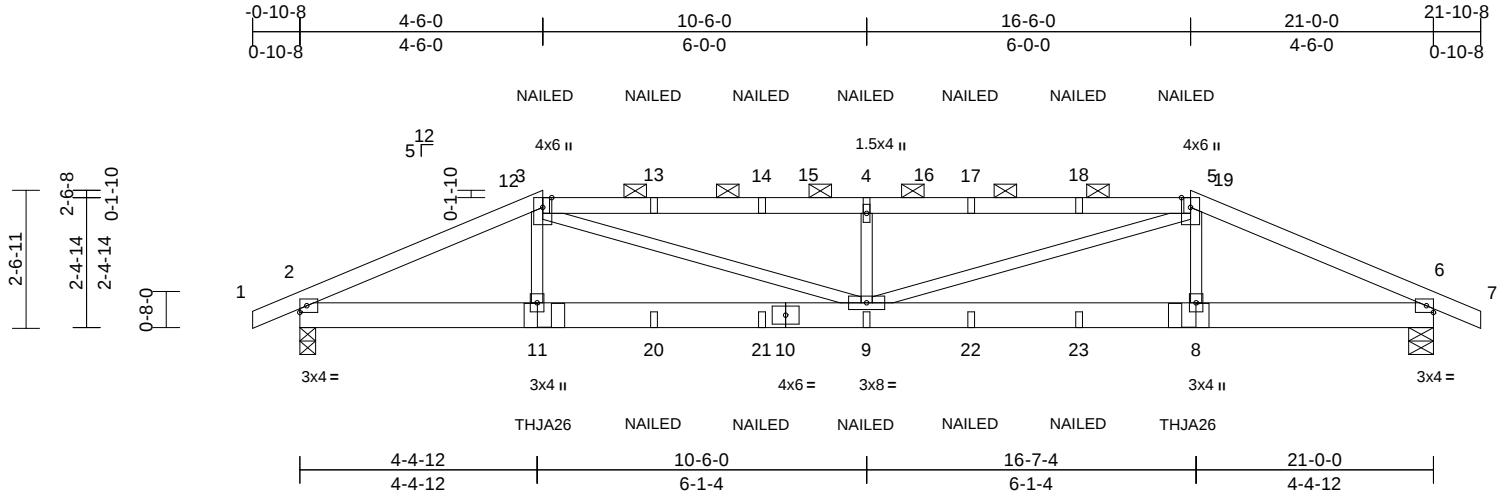
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694264
P240855-01	C1	Hip Girder	1	2	Job Reference (optional)	

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

Run: 8.63 S Jun 17 2024 Print: 8.630 S Jun 17 2024 MiTek Industries, Inc. Fri Jul 05 12:09:31

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Scale = 1:42.7

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	0.61	Vert(LL)	-0.11	9	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.20	9	>999	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.26	Horz(CT)	0.03	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 175 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x6 SPF No.2
WEBS 2x3 SPF No.2

BRACING

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

REACTIONS

(size) 2=0-3-8, 6=0-5-8
Max Horiz 2=41 (LC 33)
Max Uplift 2=-432 (LC 8), 6=-438 (LC 9)
Max Grav 2=1599 (LC 1), 6=1610 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-3215/930, 3-4=-4170/1268, 4-5=-4170/1268, 5-6=-3185/919, 6-7=0/6
BOT CHORD 2-11=-776/2841, 9-11=-776/2819, 8-9=-763/2783, 6-8=-764/2805
WEBS 3-11=-13/471, 3-9=-447/1492, 4-9=-827/450, 5-9=-457/1527, 5-8=-13/470

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TC DL=6.0psf; BC DL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8,
Interior (1) 4-1-8 to 4-6-0, Exterior(2R) 4-6-0 to 11-6-14,
Interior (1) 11-6-14 to 16-6-0, Exterior(2E) 16-6-0 to
21-10-8 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
- 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.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- All bearings are assumed to be SPF No.2 crushing
capacity of 425 psi.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 432 lb uplift at
joint 2 and 438 lb uplift at joint 6.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.
- Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply, Left
Hand Hip) or equivalent at 4-6-6 from the left end to
connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie THJA26 (THJA26 on 2 ply,
Right Hand Hip) or equivalent at 16-5-10 from the left
end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails
per NDS guidelines.

LOAD CASE(S)

- Standard
- Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.15

Uniform Loads (lb/ft)

Vert: 1-3=-70, 3-5=-70, 5-7=-70, 7-6=-70, 2-6=-20

Concentrated Loads (lb)

Vert: 3=-79 (F), 5=-79 (F), 11=-263 (F), 9=-24 (F),
4=-79 (F), 8=-263 (F), 13=-79 (F), 14=-79 (F),
17=-79 (F), 18=-79 (F), 20=-24 (F), 21=-24 (F),
22=-24 (F), 23=-24 (F)



July 8, 2024

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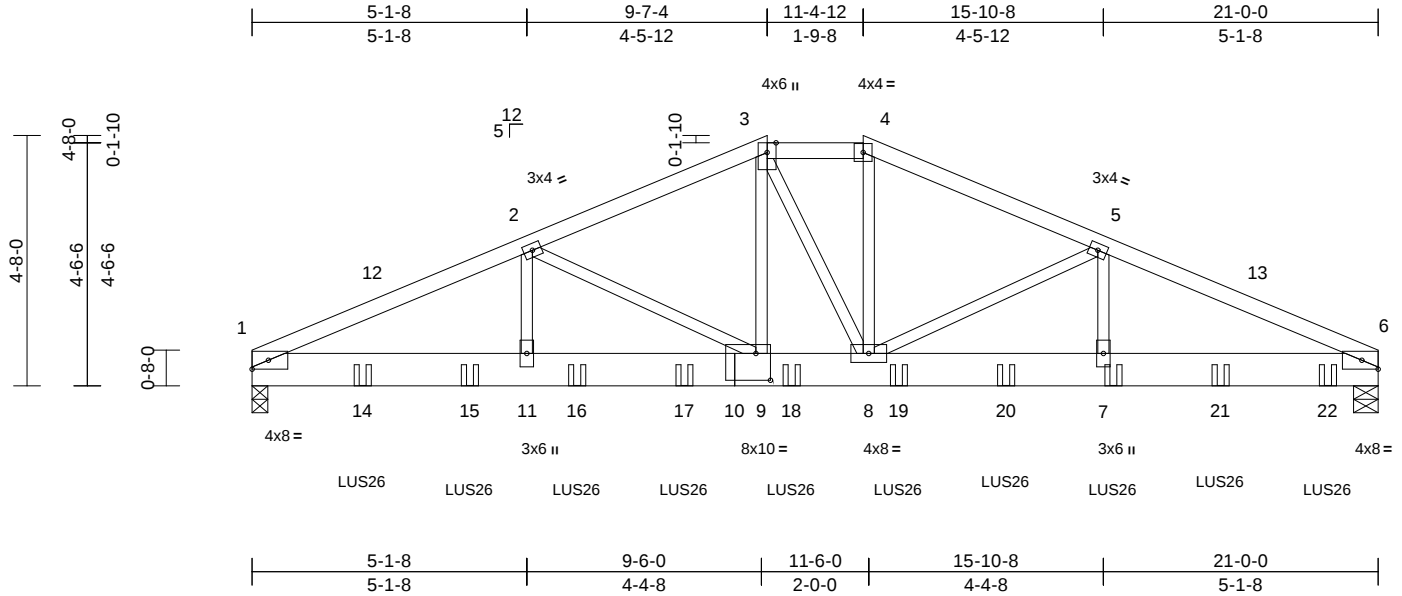
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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694265
P240855-01	C4	Hip Girder	1	3	Job Reference (optional)	

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

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Page: 1



Scale = 1:43

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.09	9-11	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.16	9-11	>999	180	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.25	Horz(CT)	0.04	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 311 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 6'-0-0 oc purlins, except 2'-0-0 oc purlins (6'-0-0 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS

(size) 1=0-3-8, 6=0-5-8
Max Horiz 1=78 (LC 33)
Max Uplift 1=-1028 (LC 12), 6=-1117 (LC 13)
Max Grav 1=4373 (LC 1), 6=4721 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-8438/2085, 2-3=-6374/1617, 3-4=-5880/1533, 4-5=-6458/1637, 5-6=-8307/2055
BOT CHORD 1-11=-1843/7587, 9-11=-1843/7587, 8-9=-1348/5804, 7-8=-1803/7446, 6-7=-1803/7446
WEBS 3-9=-492/2003, 3-8=-99/306, 4-8=-542/2165, 2-9=-1996/565, 5-8=-1751/509, 2-11=-380/1822, 5-7=-347/1664

NOTES

- 3-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 0-5-0 oc.
Web connected as follows: 2x3 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-8, Interior (1) 5-1-8 to 9-7-4, Exterior(2E) 9-7-4 to 11-4-12, Exterior(2R) 11-4-12 to 18-5-10, Interior (1) 18-5-10 to 20-9-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SPF No.2 crushing capacity of 425 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1028 lb uplift at joint 1 and 1117 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie LUS26 (4-10d Girder, 4-10d Truss) or equivalent spaced at 2'-0-0 oc max. starting at 2'-0-12 from the left end to 4'-0-12 to connect truss(es) to back face of bottom chord.
- 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 6'-0-12 from the left end to 20'-0-12 to connect truss(es) to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-6=-70, 1-6=-20
Concentrated Loads (lb)
Vert: 7=-715 (B), 14=-758 (B), 15=-758 (B), 16=-715 (B), 17=-715 (B), 18=-715 (B), 19=-715 (B), 20=-715 (B), 21=-715 (B), 22=-718 (B)



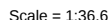
July 8, 2024

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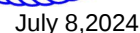
LUMBER	
TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
OTHERS	2x3 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
REACTIONS	
(size)	1=19-5-3, 5=19-5-3, 6=19-5-3, 7=19-5-3, 9=19-5-3
Max Horiz	1=71 (LC 16)
Max Uplift	1=-19 (LC 12), 5=-31 (LC 13), 6=-154 (LC 13), 9=-154 (LC 12)
Max Grav	1=189 (LC 1), 5=189 (LC 1), 6=500 (LC 26), 7=250 (LC 1), 9=500 (LC 25)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-88/79, 2-3=-90/118, 3-4=-90/114, 4-5=-66/64
BOT CHORD	1-9=-11/56, 7-9=-11/56, 6-7=-11/56, 5-6=-11/56
WEBS	3-7=-195/30, 2-9=-381/231, 4-6=-381/231

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
 Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
 Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
 exterior zone and C-C Exterior(2E) 0-9-1 to 5-9-3,
 Interior (1) 5-9-3 to 9-9-3, Exterior(2R) 9-9-3 to 14-9-3,
 Interior (1) 14-9-3 to 18-9-6 zone; cantilever left and
 right exposed ; end vertical left and right exposed; C-C
 for members and forces & MWFRS for reactions shown;
 Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
 only. For studs exposed to wind (normal to the face),
 see Standard Industry Gable End Details as applicable,
 or consult qualified building designer as per ANSI/TPI 1.

- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 4-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1, 31 lb uplift at joint 5, 154 lb uplift at joint 9 and 154 lb uplift at joint 6.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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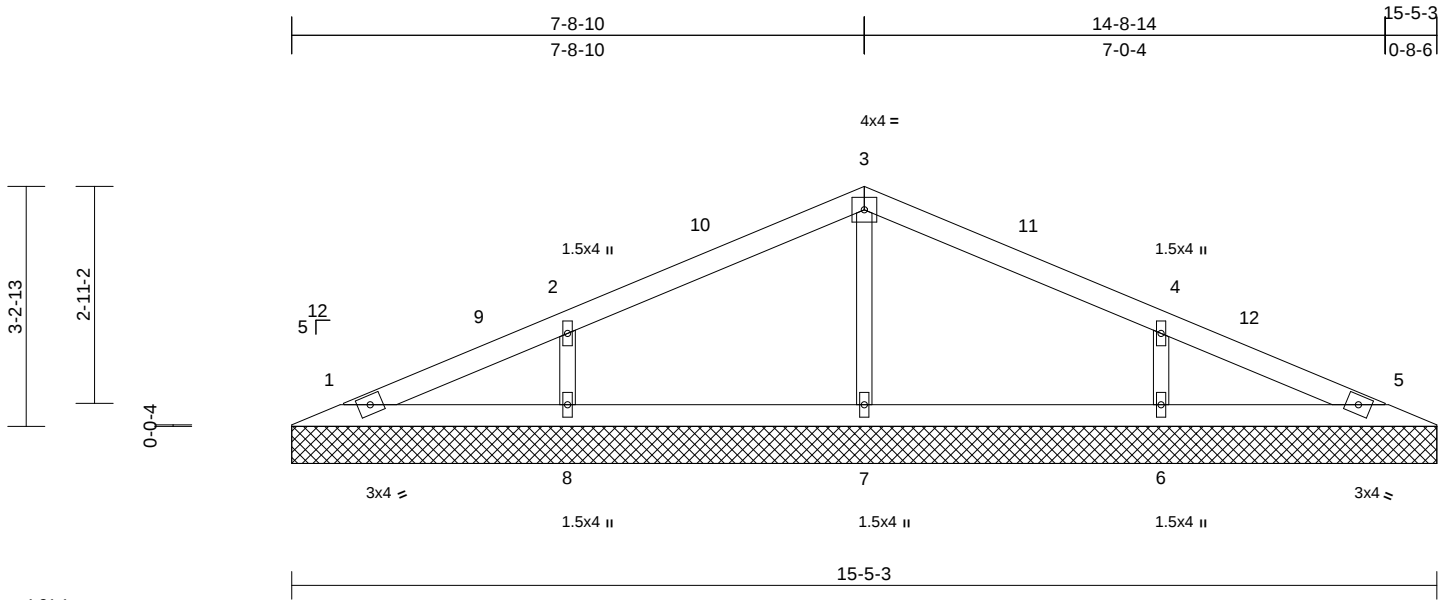
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694267
P240855-01	V2	Valley	1	1	Job Reference (optional)	

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

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Scale = 1:31.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.22	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	0.00	5	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 49 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=15-5-3, 5=15-5-3, 6=15-5-3, 7=15-5-3, 8=15-5-3
Max Horiz 1=-55 (LC 17)
Max Uplift 1=-12 (LC 13), 5=-10 (LC 13), 6=-119 (LC 13), 8=-120 (LC 12)
Max Grav 1=106 (LC 1), 5=106 (LC 1), 6=375 (LC 26), 7=315 (LC 1), 8=375 (LC 25)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-71/46, 2-3=-87/104, 3-4=-87/98, 4-5=-53/35

BOT CHORD 1-8=-4/43, 7-8=-4/43, 6-7=-4/43, 5-6=-4/43

WEBS 3-7=-235/88, 2-8=-295/222, 4-6=-295/222

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 Exterior(2E) 0-9-1 to 5-9-1, Interior (1) 5-9-1 to 7-9-3, Exterior(2R) 7-9-3 to 12-9-3, Interior (1) 12-9-3 to 14-9-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 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.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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 12 lb uplift at joint 1, 10 lb uplift at joint 5, 120 lb uplift at joint 8 and 119 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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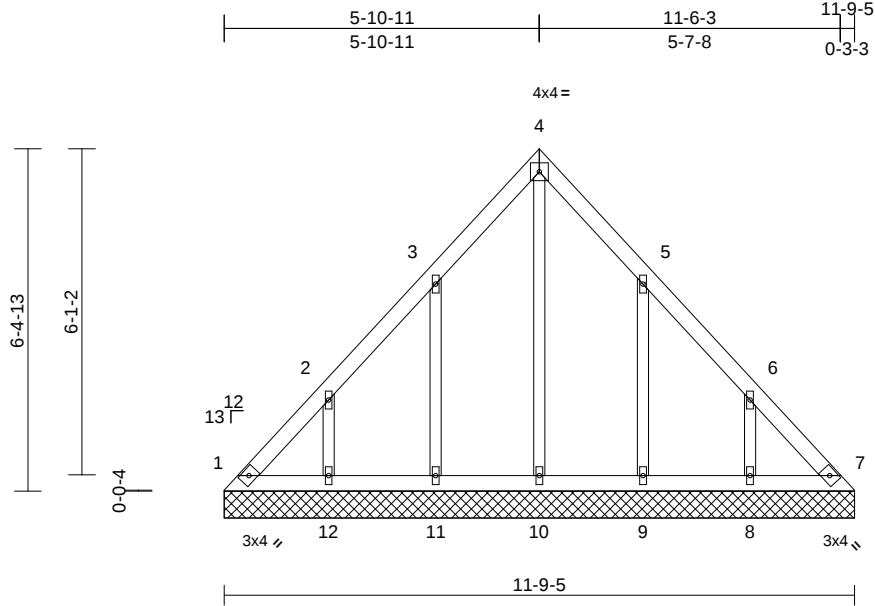
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	LG01	Lay-In Gable	1	1	Job Reference (optional)	166694268

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Scale = 1:43.1

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.04	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	7	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 55 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size) 1=11-9-5, 7=11-9-5, 8=11-9-5,
9=11-9-5, 10=11-9-5, 11=11-9-5,
12=11-9-5
Max Horiz 1=-173 (LC 8)
Max Uplift 1=-58 (LC 10), 7=-33 (LC 11),
8=-145 (LC 13), 9=-142 (LC 13),
11=-143 (LC 12), 12=-144 (LC 12)
Max Grav 1=148 (LC 21), 7=136 (LC 22),
8=210 (LC 20), 9=214 (LC 20),
10=141 (LC 22), 11=216 (LC 19),
12=210 (LC 19)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-218/139, 2-3=-137/89, 3-4=-130/119,
4-5=-130/114, 5-6=-111/55, 6-7=-196/135
BOT CHORD 1-12=-108/161, 11-12=-109/161,
10-11=-109/161, 9-10=-109/161,
8-9=-109/161, 7-8=-108/161
WEBS 2-12=-199/162, 3-11=-201/168,
4-10=-102/62, 5-9=-201/167, 6-8=-199/163

NOTES

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

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) 0-4-0 to 5-4-0,
Interior (1) 5-4-0 to 5-10-14, Exterior(2R) 5-10-14 to
10-10-14, Interior (1) 10-10-14 to 11-5-13 zone;
cantilever left and right exposed ; end vertical left and
right exposed;C-C for members and forces & MWFRS
for reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss
only. For studs exposed to wind (normal to the face),
see Standard Industry Gable End Details as applicable,
or consult qualified building designer as per ANSI/TPI 1.
- 4) All plates are 1.5x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 0-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 9) All bearings are assumed to be SP No.2 crushing
capacity of 565 psi.
- 10) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 58 lb uplift at joint
1, 33 lb uplift at joint 7, 144 lb uplift at joint 12, 143 lb
uplift at joint 11, 142 lb uplift at joint 9 and 145 lb uplift at
joint 8.
- 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 8, 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)

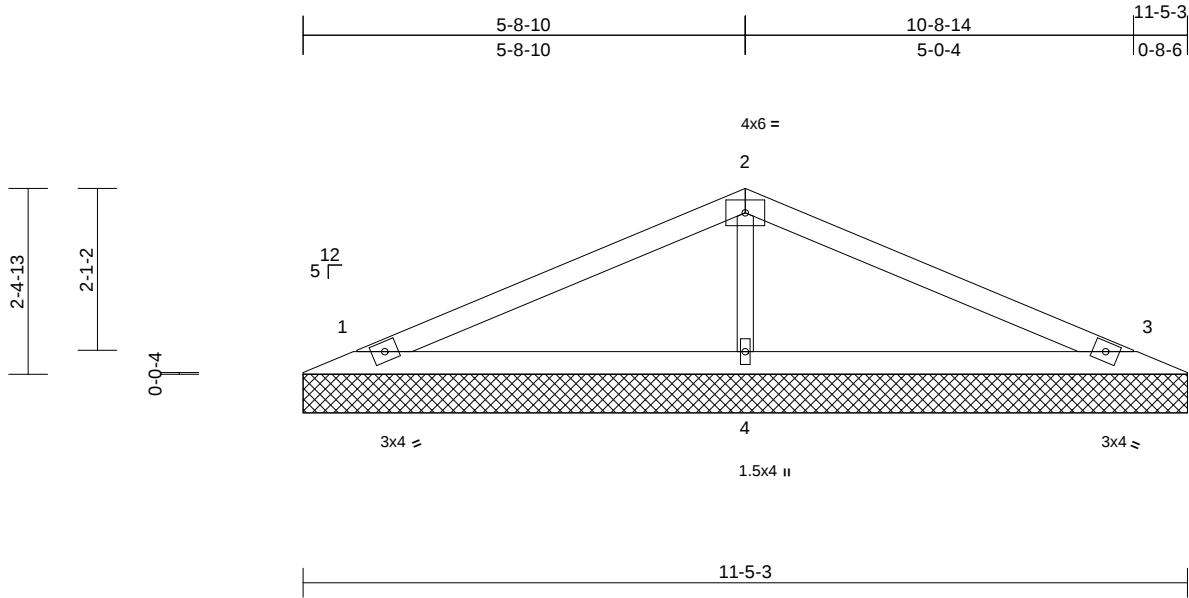
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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694269
P240855-01	V3	Valley	1	1	Job Reference (optional)	

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

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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	0.42	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.25	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: 35 lb	FT = 20%

LUMBER

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

BRACING

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

REACTIONS

(size)	1=11-5-3, 3=11-5-3, 4=11-5-3
Max Horiz	1=40 (LC 12)
Max Uplift	1=-49 (LC 12), 3=-56 (LC 13), 4=-43 (LC 12)
Max Grav	1=207 (LC 25), 3=207 (LC 26), 4=496 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-106/64, 2-3=-106/70
BOT CHORD	1-4=-3/43, 3-4=-3/43
WEBS	2-4=-345/234

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.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 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 49 lb uplift at joint 1, 56 lb uplift at joint 3 and 43 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 8, 2024

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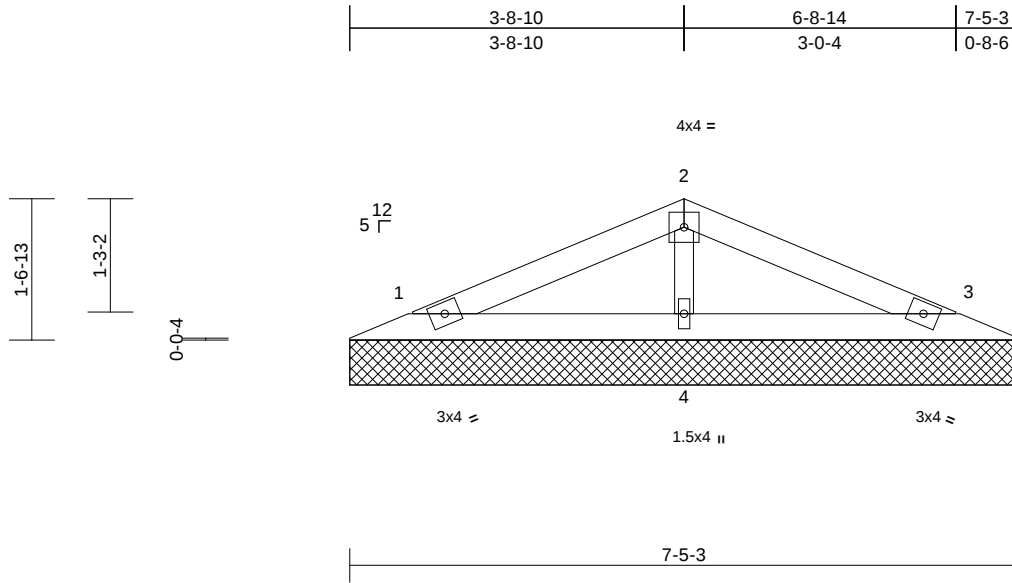
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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	166694270
P240855-01	V4	Valley	1	1	Job Reference (optional)	

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

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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	0.19	Vert(LL)	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.09	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 22 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x3 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=7-5-3, 3=7-5-3, 4=7-5-3
Max Horiz 1=24 (LC 12)
Max Uplift 1=-36 (LC 12), 3=-40 (LC 13), 4=-13 (LC 12)
Max Grav 1=137 (LC 1), 3=137 (LC 1), 4=269 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-55/43, 2-3=-55/48
BOT CHORD 1-4=-1/24, 3-4=-1/24
WEBS 2-4=-193/164

NOTES

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

- 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 36 lb uplift at joint 1, 40 lb uplift at joint 3 and 13 lb uplift at joint 4.
- 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 8, 2024

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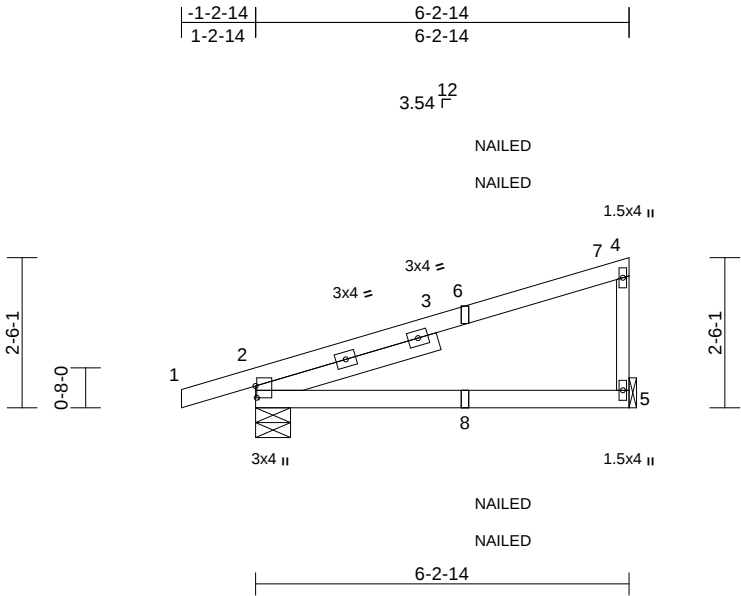
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	CG1	Diagonal Hip Girder	2	1	Job Reference (optional)	I66694271

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

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

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.08	2-5	>867	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.53	Vert(CT)	-0.17	2-5	>433	180		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 27 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2

BOT CHORD 2x4 SP No.2

WEBS 2x3 SPF No.2

SLIDER Left 2x4 SP No.2 -- 3-1-15

BRACING

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

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

REACTIONS (size) 2=0-7-0, 5= Mechanical

Max Horiz 2=102 (LC 9)

Max Uplift 2=-116 (LC 8), 5=-67 (LC 12)

Max Grav 2=371 (LC 1), 5=267 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-133/79, 4-5=-206/266

BOT CHORD 2-5=-45/49

- NOTES**
- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -1-2-14 to 5-10-0, Exterior(2R) 5-10-0 to 6-1-10 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
 - 4) Bearings are assumed to be: Joint 2 SP No.2 crushing capacity of 565 psi.
 - 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 67 lb uplift at joint 5 and 116 lb uplift at joint 2.
 - 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
 - 8) "NAILED" indicates Girder: 3-10d (0.148" x 3") toe-nails per NDS guidelines.
 - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (lb/ft) Vert: 1-4=-70, 2-5=-20



July 8, 2024

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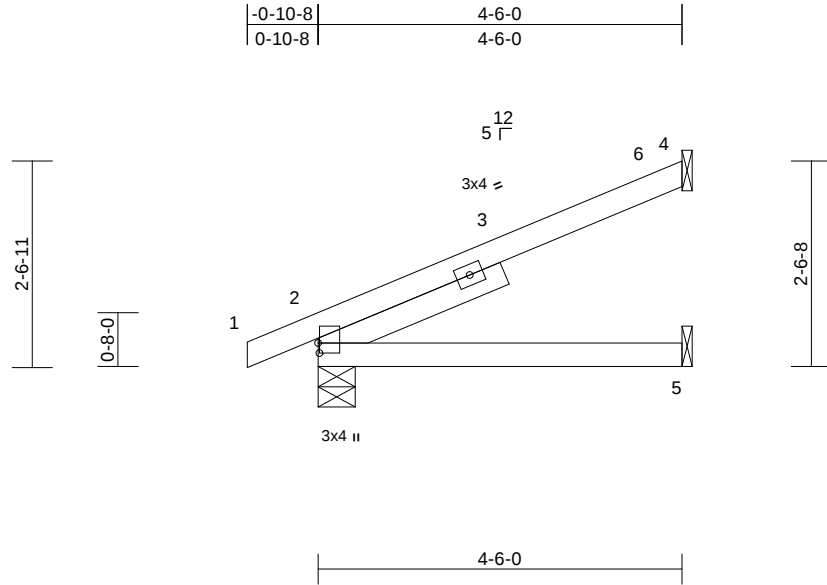
Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81	
P240855-01	J1	Jack-Open	7	1	Job Reference (optional)	I66694272

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

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Scale = 1:28.5

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.02	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.05	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
SLIDER Left 2x4 SP No.2 -- 2-5-8

BRACING

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

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5= Mechanical
Max Horiz 2=97 (LC 12)
Max Uplift 2=-44 (LC 12), 4=-92 (LC 12)
Max Grav 2=267 (LC 1), 4=149 (LC 1), 5=89 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/0, 2-4=-90/49
BOT CHORD 2-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft; Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 4-1-8, Interior (1) 4-1-8 to 4-5-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Bearings are assumed to be: , Joint 2 SP No.2 crushing capacity of 565 psi.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 4 and 44 lb uplift at joint 2.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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Job	Truss	Truss Type	Qty	Ply	Roof - HR Lot 81
P240855-01	J2	Jack-Open	4	1	Job Reference (optional)

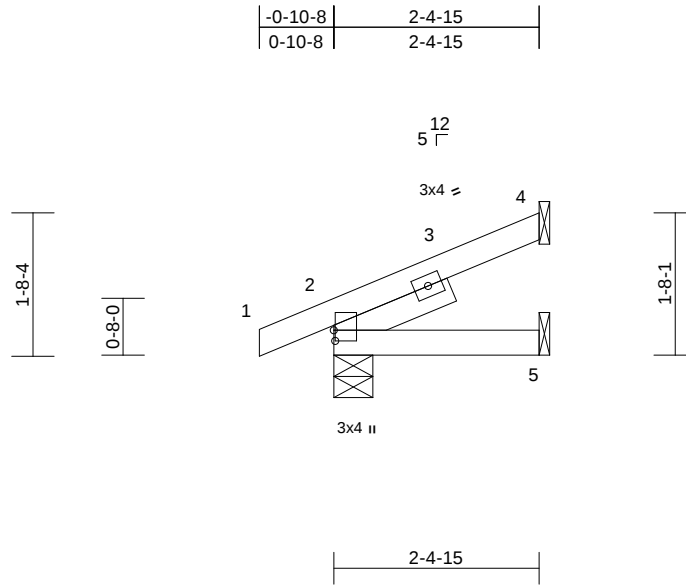
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Scale = 1:27.1

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

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	2-5	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	2-5	>999	180		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 11 lb	FT = 20%

LUMBER

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

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-4-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 2=0-5-8, 4= Mechanical, 5=
Mechanical
Max Horiz 2=59 (LC 12)
Max Uplift 2=-33 (LC 12), 4=-50 (LC 12)
Max Grav 2=178 (LC 1), 4=71 (LC 1), 5=47
(LC 3)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/0, 2-4=-57/26
BOT CHORD 2-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)
exterior zone and C-C Exterior(2E) zone; cantilever left
and right exposed ; end vertical left and right
exposed;C-C for members and forces & MWFRS for
reactions shown; Lumber DOL=1.60 plate grip
DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Bearings are assumed to be: , Joint 2 SP No.2 crushing
capacity of 565 psi.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 50 lb uplift at joint
4 and 33 lb uplift at joint 2.
- 7) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

July 8,2024

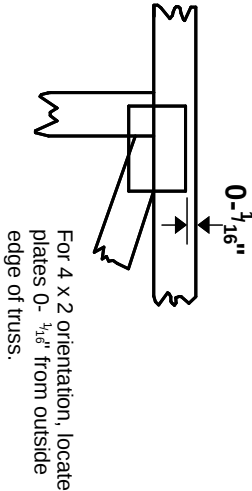
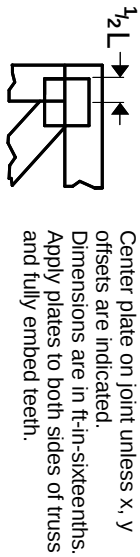
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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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Symbols

PLATE LOCATION AND ORIENTATION



For 4 x 2 orientation, locate plates 0- $\frac{1}{16}$ " from outside edge of truss.

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

PLATE SIZE

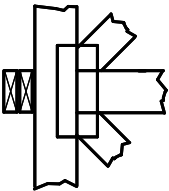
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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.

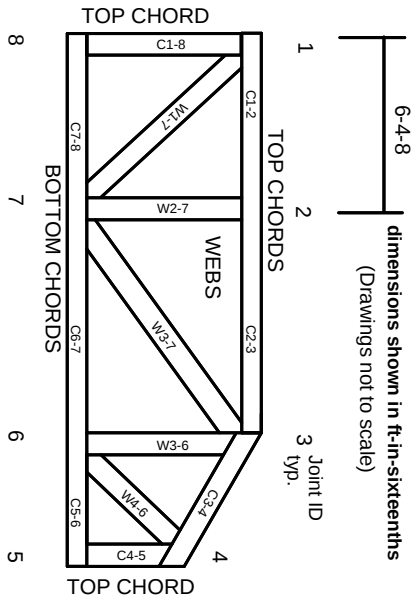
BEARING



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



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.

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