



RE: P230144-01 - Roof - Osage Lot 54

**Site Information:**

Project Customer: Clover & Hive Project Name: Twin Honeydew - Farmhouse

Lot/Block: 54

Subdivision: Osage

Model:

Address: TBD

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	I57460008	A1	3/29/23
2	I57460009	A2	3/29/23
3	I57460010	A3	3/29/23
4	I57460011	A4	3/29/23
5	I57460012	A5	3/29/23
6	I57460013	A6	3/29/23
7	I57460014	B1	3/29/23
8	I57460015	B2	3/29/23
9	I57460016	C1	3/29/23
10	I57460017	C2	3/29/23
11	I57460018	C3	3/29/23
12	I57460019	C4	3/29/23
13	I57460020	D1	3/29/23
14	I57460021	D2	3/29/23
15	I57460022	PB1	3/29/23
16	I57460023	PB2	3/29/23
17	I57460024	V1	3/29/23
18	I57460025	V2	3/29/23
19	I57460026	V3	3/29/23
20	I57460027	V4	3/29/23
21	I57460028	V5	3/29/23
22	I57460029	V6	3/29/23
23	I57460030	V7	3/29/23
24	I57460031	V8	3/29/23

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

Truss Design Engineer's Name: Nathan Fox

My license renewal date for the state of Missouri is December 31, 2024.

**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.



March 29, 2023

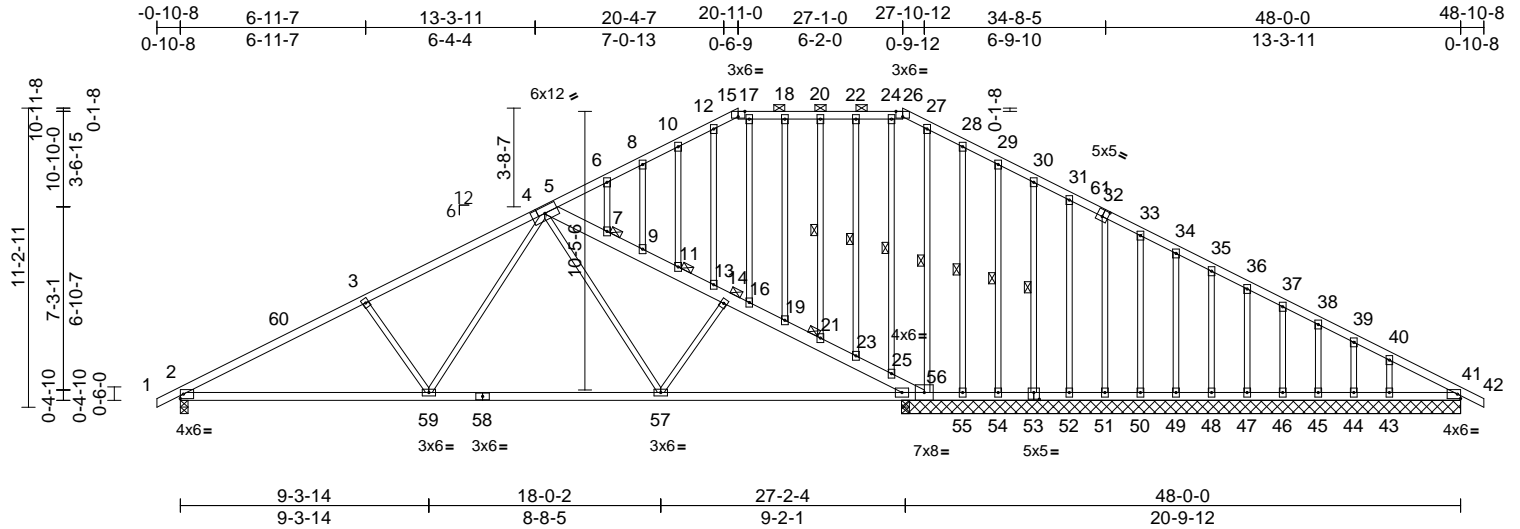
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460008
P230144-01	A1	Piggyback Base Structural Gable	2	1	Job Reference (optional)	

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

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Scale = 1:86.4

Plate Offsets (X, Y): [15:0-3-0,Edge], [26:0-3-0,Edge], [32:0-2-8,0-3-0], [53:0-2-8,0-3-0]

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	0.75	Vert(LL)	-0.20	2-59	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.43	2-59	>771	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.35	Horz(CT)	0.07	56	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S								
Weight: 312 lb											FT = 20%	

**LUMBER**  
TOP CHORD 2x4 SP No.2 \*Except\* 56-5:2x6 SPF 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 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 15-26, 5-56.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except: 8-11-14 oc bracing: 2-59 10-0-0 oc bracing: 57-59 2-2-0 oc bracing: 56-57.

**WEBS**  
1 Row at midpt 20-21, 22-23, 24-25, 27-56, 28-55, 29-54, 30-53

**JOINTS**  
1 Brace at Jt(s): 14, 21, 11, 7

**REACTIONS** (size)  
2=0-3-8, 41=20-11-8, 43=20-11-8, 44=20-11-8, 45=20-11-8, 46=20-11-8, 47=20-11-8, 48=20-11-8, 49=20-11-8, 50=20-11-8, 51=20-11-8, 52=20-11-8, 53=20-11-8, 54=20-11-8, 55=20-11-8, 56=20-11-8  
Max Horiz 2=204 (LC 12)  
Max Uplift 2=225 (LC 12), 41=29 (LC 25), 43=91 (LC 13), 44=28 (LC 13), 45=42 (LC 13), 46=41 (LC 13), 47=41 (LC 13), 48=41 (LC 13), 49=41 (LC 13), 50=42 (LC 13), 51=41 (LC 13), 52=39 (LC 13), 53=46 (LC 13), 54=23 (LC 13), 55=509 (LC 25), 56=162 (LC 12)

**FORCES**  
(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/17, 2-3=1983/353, 3-5=1735/359, 5-6=43/246, 6-8=12/263, 8-10=0/277, 10-12=0/296, 12-15=17/249, 15-17=15/234, 17-18=13/242, 18-20=13/242, 20-22=13/242, 22-24=13/242, 24-26=10/244, 26-27=47/223, 27-28=0/312, 28-29=6/254, 29-30=9/233, 30-31=7/227, 31-33=27/219, 33-34=46/203, 34-35=64/198, 35-36=83/198, 36-37=101/198, 37-38=120/198, 38-39=144/200, 39-40=170/189, 40-41=240/230, 41-42=0/17, 5-7=1799/395, 7-9=1829/416, 9-11=1862/436, 11-13=1892/457, 13-14=1977/479, 14-16=2050/498, 16-19=2125/504, 19-21=2155/510, 21-23=2187/516, 23-25=2216/523, 25-56=2226/522  
BOT CHORD 2-59=415/1683, 57-59=190/1108, 56-57=274/1789, 55-56=193/244, 54-55=193/244, 52-54=193/244, 51-52=193/244, 50-51=194/244, 49-50=194/244, 48-49=194/244, 47-48=194/244, 46-47=194/244, 45-46=194/244, 44-45=194/244, 43-44=194/244, 41-43=194/244

**WEBS**  
3-59=411/269, 5-59=138/643, 5-57=9/737, 14-57=551/143, 20-21=74/35, 22-23=67/38, 24-25=49/21, 27-56=367/24, 28-55=12/84, 29-54=87/60, 30-53=98/56, 31-52=92/56, 32-51=93/56, 33-50=95/58, 34-49=93/57, 35-48=93/57, 36-47=93/57, 37-46=93/57, 38-45=97/59, 39-44=69/41, 40-43=174/115, 18-19=73/40, 16-17=169/20, 12-13=190/48, 10-11=67/47, 8-9=73/46, 6-7=60/41

**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 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-1-14, Interior (1) 34-1-14 to 48-10-8 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



March 29, 2023

Continued on page 2

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

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 the design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component**

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54
P230144-01	A1	Piggyback Base Structural Gable	2	1	I57460008
Job Reference (optional)					

- 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 3x4 MT20 unless otherwise indicated.
- 6) Gable studs spaced at 1-4-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 225 lb uplift at joint 2, 162 lb uplift at joint 56, 29 lb uplift at joint 41, 509 lb uplift at joint 55, 23 lb uplift at joint 54, 46 lb uplift at joint 53, 39 lb uplift at joint 52, 41 lb uplift at joint 51, 42 lb uplift at joint 50, 41 lb uplift at joint 49, 41 lb uplift at joint 48, 41 lb uplift at joint 47, 41 lb uplift at joint 46, 42 lb uplift at joint 45, 28 lb uplift at joint 44 and 91 lb uplift at joint 43.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 10) 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

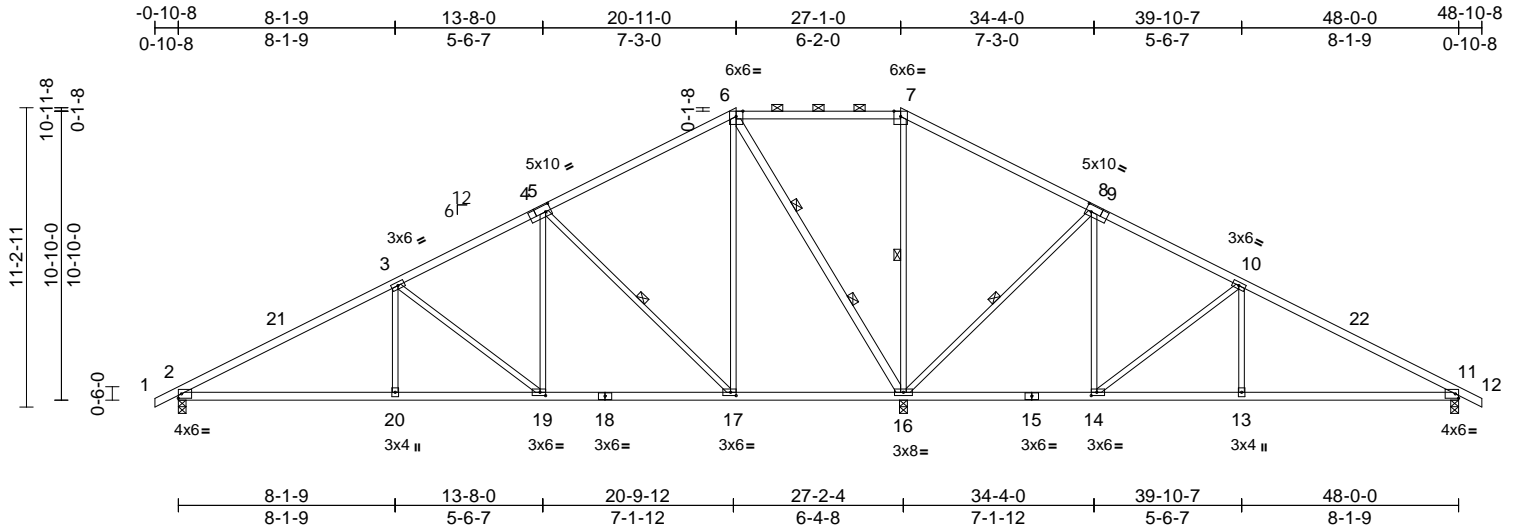
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460009
P230144-01	A2	Piggyback Base	6	1	Job Reference (optional)	

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Scale = 1:86.4

Plate Offsets (X, Y): [4:0-2-8,0-3-0], [9:0-2-8,0-3-0], [14:0-2-8,0-1-8], [17:0-2-8,0-1-8], [19:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.13	2-20	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.30	2-20	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.90	Horz(CT)	0.04	16	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 232 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 1-4,9-12:2x4 SP 1650F 1.5E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x3 SPF No.2 \*Except\* 16-6:2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.  
 WEBS 1 Row at midpt 5-17, 7-16, 8-16  
 WEBS 2 Rows at 1/3 pts 6-16

#### REACTIONS

(size) 2=0-3-8, 11=0-3-8, 16=0-3-8  
 Max Horiz 2=204 (LC 16)  
 Max Uplift 2=-198 (LC 12), 11=-184 (LC 13), 16=-303 (LC 12)  
 Max Grav 2=1034 (LC 25), 11=688 (LC 26), 16=2926 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-2=0/17, 2-3=-1516/257, 3-5=-897/222, 5-6=-208/210, 6-7=0/837, 7-8=-39/1050, 8-10=-153/416, 10-11=-784/227, 11-12=0/17  
 BOT CHORD 2-20=-313/1232, 19-20=-313/1232, 17-19=-132/719, 16-17=-154/329, 14-16=-353/186, 13-14=-101/586, 11-13=-101/586  
 WEBS 3-20=0/306, 3-19=-652/228, 5-19=-62/507, 5-17=-900/320, 6-17=-142/765, 6-16=-1468/284, 7-16=-874/181, 8-16=-915/321, 8-14=-62/516, 10-14=-680/229, 10-13=0/309

#### 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 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-4-0, Interior (1) 34-4-0 to 48-10-8 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 2, 303 lb uplift at joint 16 and 184 lb uplift at joint 11.
- 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.
- 7) 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



March 29, 2023

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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, DSB-89 and BCSI Building Component

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 Chesterfield, MO 63017

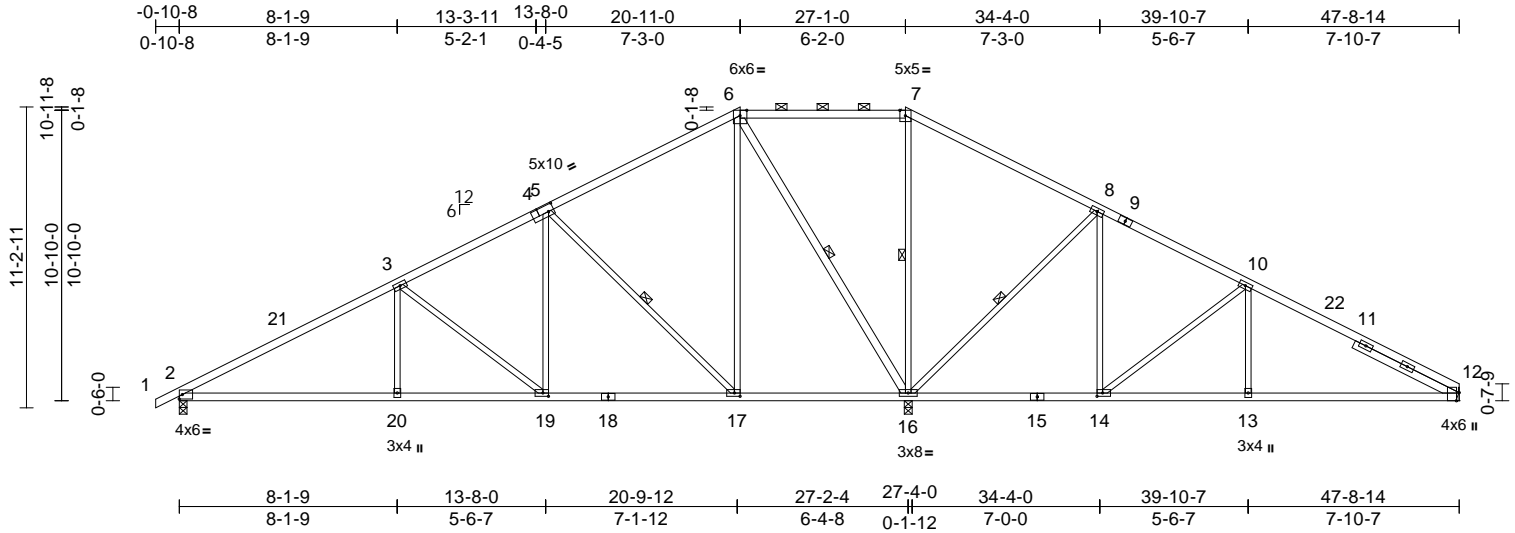
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	
P230144-01	A3	Piggyback Base	2	1	Job Reference (optional)	I57460010

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Scale = 1:85.9

Plate Offsets (X, Y): [4:0-2-8,0-3-0], [12:0-3-10,Edge], [14:0-2-8,0-1-8], [17:0-2-8,0-1-8], [19:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	1.00	Vert(LL)	-0.13	2-20	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.30	2-20	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.96	Horz(CT)	0.05	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 236 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP No.2 \*Except\* 4-1:2x4 SP 1650F 1.5E  
 BOT CHORD 2x4 SP No.2  
 WEBS 2x3 SPF No.2 \*Except\* 16-6:2x4 SP No.2  
 SLIDER Right 2x4 SP No.2 -- 4-4-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except  
 2-0-0 oc purlins (10-0-0 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 7-16, 6-16, 8-16, 5-17  
**REACTIONS** (size) 2=0-3-8, 12= Mechanical, 16=0-3-8  
 Max Horiz 2=209 (LC 12)  
 Max Uplift 2=-213 (LC 12), 12=-202 (LC 13), 16=-269 (LC 12)  
 Max Grav 2=1057 (LC 25), 12=695 (LC 26), 16=2770 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 6-7=0/666, 1-2=0/17, 2-3=-1565/289, 3-5=-947/269, 5-6=-258/231, 7-8=0/857, 8-10=-332/351, 10-12=-913/317  
 BOT CHORD 2-20=-345/1275, 19-20=-345/1275, 17-19=-166/763, 16-17=-71/251, 14-16=-295/219, 13-14=-167/719, 12-13=-167/719  
 WEBS 3-20=0/306, 6-17=-142/763, 7-16=-787/148, 10-13=0/297, 6-16=-1391/267, 5-19=-61/504, 3-19=-647/227, 8-14=-53/500, 8-16=-912/319, 10-14=-645/212, 5-17=-896/319

#### 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 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-4-0, Interior (1) 34-4-0 to 47-8-14 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
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 12, 213 lb uplift at joint 2 and 269 lb uplift at joint 16.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 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



March 29, 2023

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

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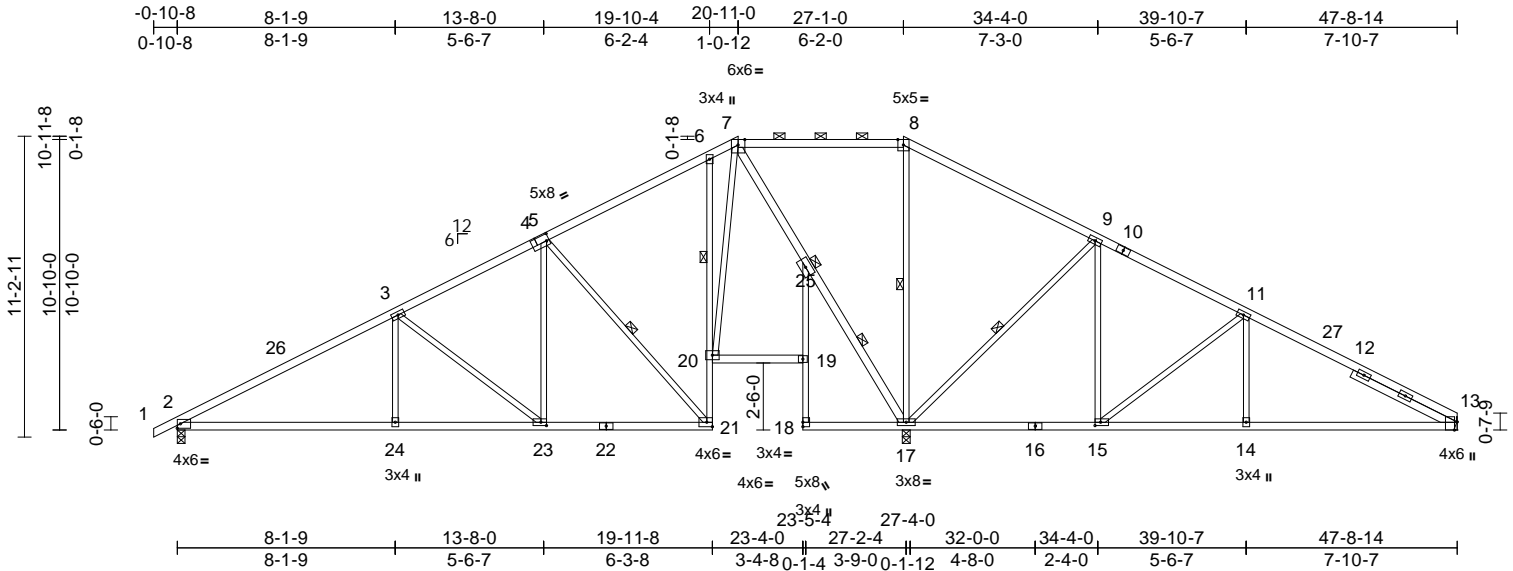
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460011
P230144-01	A4	Piggyback Base	2	1	Job Reference (optional)	

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

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Scale = 1:85.9

Plate Offsets (X, Y): [4:0-1-4,0-3-0], [13:0-3-10,Edge], [15:0-2-8,0-1-8], [23:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.13	2-24	>999	240	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.30	2-24	>999	180	
BCLL	0.0	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.07	17	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 247 lb FT = 20%											

#### LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-1,10-13:2x4 SP 1650F 1.5E
BOT CHORD	2x4 SP No.2 *Except* 21-6,25-18:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 17-7:2x4 SP No.2
SLIDER	Right 2x4 SP No.2 -- 4-4-0

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except 2-0-0 oc purlins (10-0-0 max.): 7-8.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except:
1 Row at midpt	6-20
WEBS	1 Row at midpt 8-17, 17-25, 9-17, 5-21
JOINTS	1 Brace at Jt(s): 25

#### REACTIONS

(size)	2=0-3-8, 13= Mechanical, 17=0-3-8
Max Horiz	2=208 (LC 16)
Max Uplift	2=-235 (LC 12), 13=-361 (LC 13), 17=-217 (LC 12)
Max Grav	2=972 (LC 25), 13=686 (LC 26), 17=2879 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/17, 2-3=-1387/396, 3-5=-757/435, 5-6=-214/474, 6-7=-218/500, 7-8=0/897, 8-9=0/1051, 9-11=-313/628, 11-13=-895/647
BOT CHORD	2-24=-389/1120, 23-24=-389/1120, 21-23=-199/587, 20-21=-177/683, 6-20=-245/187, 19-20=-84/25, 18-19=-16/14, 19-25=0/61, 17-18=-62/23, 15-17=-511/203, 14-15=-456/704, 13-14=-456/704
WEBS	3-24=0/309, 8-17=-858/76, 11-14=0/300, 7-25=-1388/240, 17-25=-1425/228, 5-23=-65/506, 3-23=-672/239, 9-15=-45/497, 9-17=-908/313, 11-15=-655/192, 5-21=-824/274, 7-20=-326/962

#### 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 20-11-0, Exterior(2E) 20-11-0 to 27-1-0, Exterior(2R) 27-1-0 to 34-4-0, Interior (1) 34-4-0 to 47-8-14 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
- Provide adequate drainage to prevent water ponding.
- All plates are 3x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 361 lb uplift at joint 13, 217 lb uplift at joint 17 and 235 lb uplift at joint 2.
- 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



March 29, 2023

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

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

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

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



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Chesterfield, MO 63017

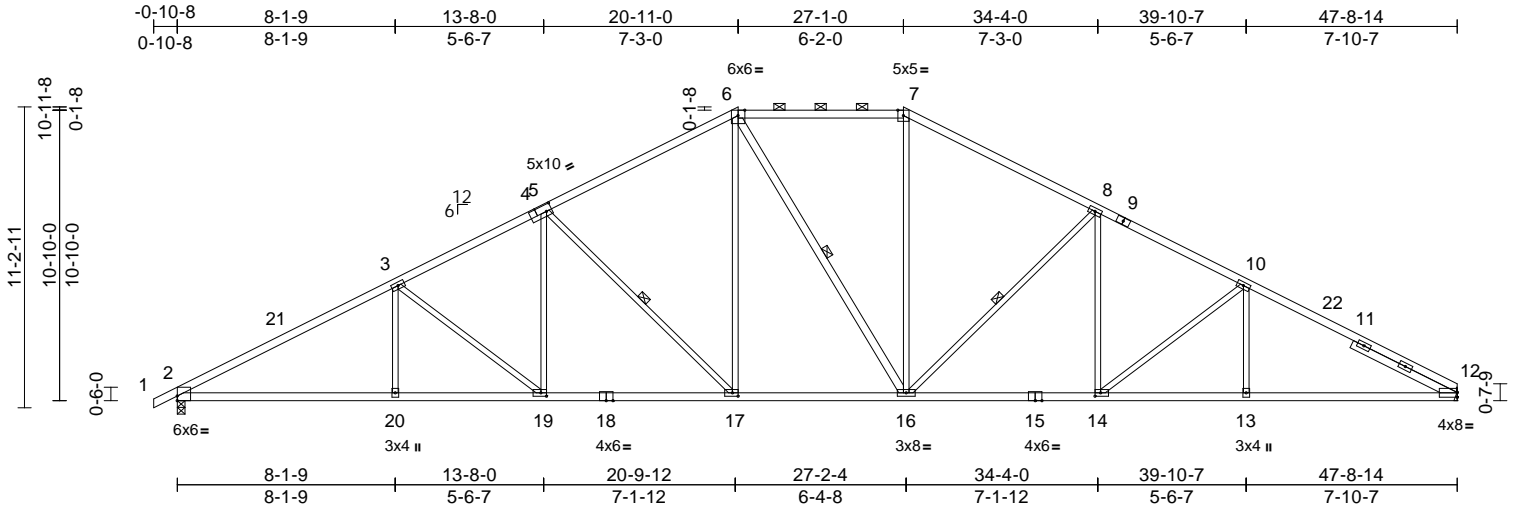
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460012
P230144-01	A5	Piggyback Base	10	1	Job Reference (optional)	

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:06

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Scale = 1:85.9

Plate Offsets (X, Y): [2:Edge,0-2-1], [4:0-2-8,0-3-0], [12:Edge,0-2-2], [14:0-2-8,0-1-8], [17:0-2-8,0-1-8], [19:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.26	17-19	>999	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.52	17-19	>999	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.78	Horz(CT)	0.23	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 236 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SP 1650F 1.5E \*Except\* 6-7:2x4 SP No.2, 4-1:2x4 SP 2400F 2.0E  
 BOT CHORD 2x4 SP 1650F 1.5E  
 WEBS 2x3 SPF No.2 \*Except\* 16-6:2x4 SP No.2  
 SLIDER Right 2x4 SP No.2 -- 4-4-0

#### BRACING

TOP CHORD Structural wood sheathing directly applied, except  
 2-0-0 oc purlins (2-2-0 max.): 6-7.  
 BOT CHORD Rigid ceiling directly applied or 9-5-5 oc bracing.

WEBS 1 Row at midpt 6-16, 8-16, 5-17

REACTIONS (size) 2=0-3-8, 12= Mechanical  
 Max Horiz 2=209 (LC 12)  
 Max Uplift 2=-329 (LC 12), 12=-301 (LC 13)  
 Max Grav 2=2214 (LC 1), 12=2141 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-4013/582, 3-5=-3436/597,  
 5-6=-2786/564, 6-7=-2384/555,  
 7-8=-2786/561, 8-10=-3407/589,  
 10-12=-3902/581  
 BOT CHORD 2-20=-562/3436, 19-20=-562/3436,  
 17-19=-390/2991, 16-17=-176/2387,  
 14-16=-325/2984, 13-14=-406/3344,  
 12-13=-406/3344  
 WEBS 3-20=0/300, 6-17=-139/733, 7-16=-82/727,  
 10-13=0/280, 6-16=-280/273, 5-19=-56/467,  
 3-19=-577/216, 8-14=-47/428,  
 8-16=-842/314, 10-14=-482/200,  
 5-17=-847/315

#### 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 20-11-0, Exterior(2E) 20-11-0 to  
 27-1-0, Exterior(2R) 27-1-0 to 34-4-0, Interior (1) 34-4-0  
 to 47-8-14 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
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 3x6 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom  
 chord live load nonconcurrent with any other live loads.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to  
 bearing plate capable of withstanding 301 lb uplift at  
 joint 12 and 329 lb uplift at joint 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.
- 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



March 29, 2023

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

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

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

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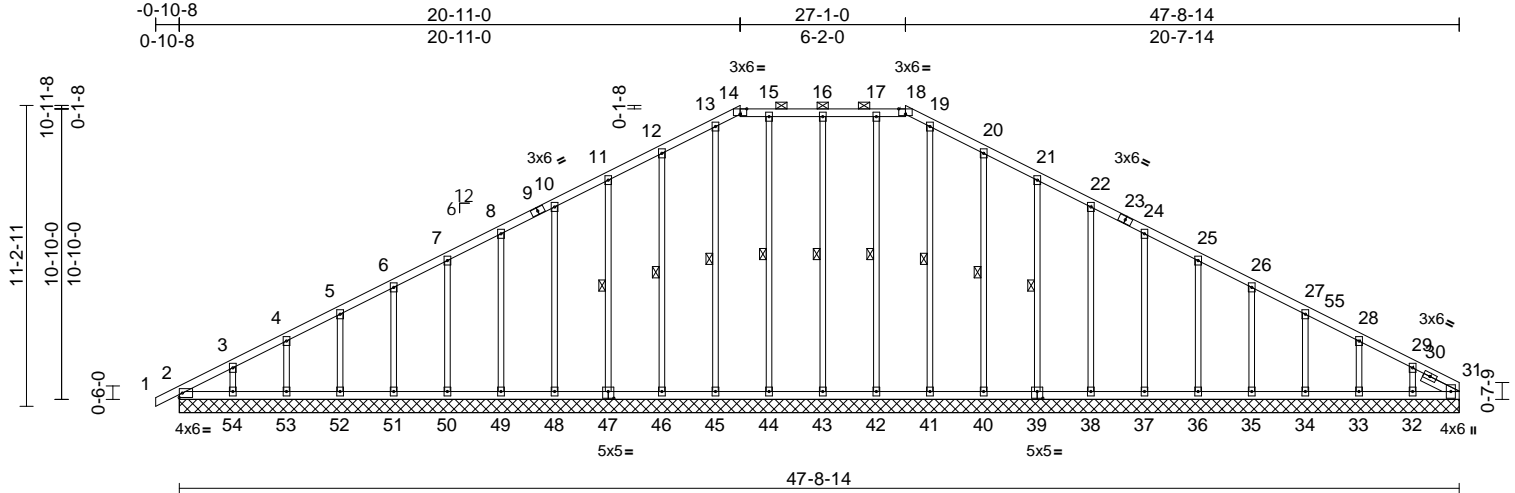
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460013
P230144-01	A6	Piggyback Base Supported Gable	2	1	Job Reference (optional)	

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

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Scale = 1:85.9

Plate Offsets (X, Y): [14:0-3-0,Edge], [18:0-3-0,Edge], [31:0-3-2,0-1-12], [39:0-2-8,0-3-0], [47:0-2-8,0-3-0]

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	0.13	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	n/a	-	n/a	999	244/190
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.02	31	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 267 lb FT = 20%											

<b>LUMBER</b>		Max Grav	2=178 (LC 21), 31=119 (LC 22), 32=179 (LC 26), 33=182 (LC 1), 34=180 (LC 26), 35=180 (LC 1), 36=180 (LC 26), 37=180 (LC 1), 38=180 (LC 26), 39=180 (LC 26), 40=180 (LC 1), 41=174 (LC 26), 42=177 (LC 26), 43=183 (LC 26), 44=177 (LC 25), 45=176 (LC 22), 46=180 (LC 1), 47=180 (LC 25), 48=180 (LC 25), 49=180 (LC 1), 50=180 (LC 1), 51=180 (LC 25), 52=180 (LC 1), 53=179 (LC 25), 54=181 (LC 25)	WEBS	16-43=143/107, 17-42=137/33, 19-41=134/0, 20-40=140/112, 21-39=140/96, 22-38=140/96, 24-37=140/96, 25-36=140/97, 26-35=140/96, 27-34=139/106, 28-33=142/147, 29-32=137/191, 15-44=137/36, 13-45=136/8, 12-46=140/112, 11-47=140/96, 10-48=140/96, 8-49=140/96, 7-50=140/96, 6-51=140/97, 5-52=140/97, 4-53=140/123, 3-54=138/171
TOP CHORD	2x4 SP No.2				
BOT CHORD	2x4 SP No.2				
OTHERS	2x3 SPF No.2				
SLIDER	Right 2x4 SP No.2 -- 1-5-12				
<b>BRACING</b>					
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 14-18.				
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.				
WEBS	1 Row at midpt	16-43, 17-42, 19-41, 20-40, 21-39, 15-44, 13-45, 12-46, 11-47			
<b>REACTIONS</b> (size)		2=47-8-14, 31=47-8-14, 32=47-8-14, 33=47-8-14, 34=47-8-14, 35=47-8-14, 36=47-8-14, 37=47-8-14, 38=47-8-14, 39=47-8-14, 40=47-8-14, 41=47-8-14, 42=47-8-14, 43=47-8-14, 44=47-8-14, 45=47-8-14, 46=47-8-14, 47=47-8-14, 48=47-8-14, 49=47-8-14, 50=47-8-14, 51=47-8-14, 52=47-8-14, 53=47-8-14, 54=47-8-14			
Max Horiz	2=209 (LC 12)				
Max Uplift	2=26 (LC 8), 32=103 (LC 13), 33=59 (LC 13), 34=62 (LC 13), 35=61 (LC 13), 36=61 (LC 13), 37=61 (LC 13), 38=61 (LC 13), 39=60 (LC 13), 40=74 (LC 13), 42=9 (LC 9), 43=58 (LC 8), 44=12 (LC 9), 46=71 (LC 12), 47=61 (LC 12), 48=61 (LC 12), 49=61 (LC 12), 50=61 (LC 12), 51=61 (LC 12), 52=61 (LC 12), 53=61 (LC 12), 54=87 (LC 12)				
<b>FORCES</b>		(lb) - Maximum Compression/Maximum Tension			
TOP CHORD		1-2=0/17, 2-3=-295/92, 3-4=-229/87, 4-5=-181/97, 5-6=-136/110, 6-7=-110/135, 7-8=-84/162, 8-10=-71/190, 10-11=-88/234, 11-12=-106/287, 12-13=-127/347, 13-14=-126/341, 14-15=-119/341, 15-16=-118/342, 16-17=-118/342, 17-18=-119/341, 18-19=-126/341, 19-20=-127/347, 20-21=-106/287, 21-22=-88/234, 22-24=-69/180, 24-25=-56/126, 25-26=-56/72, 26-27=-74/27, 27-28=-100/27, 28-29=-146/43, 29-31=-232/67			
BOT CHORD		2-54=-59/225, 53-54=-59/225, 52-53=-59/225, 51-52=-59/225, 50-51=-59/225, 49-50=-59/225, 48-49=-59/225, 46-48=-59/225, 45-46=-59/225, 44-45=-59/225, 43-44=-59/225, 42-43=-59/225, 41-42=-59/225, 40-41=-59/225, 38-40=-59/225, 37-38=-59/225, 36-37=-59/225, 35-36=-59/225, 34-35=-59/225, 33-34=-59/225, 32-33=-59/225, 31-32=-59/225			

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



March 29, 2023

Continued on page 2

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Chesterfield, MO 63017



Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54
P230144-01	A6	Piggyback Base Supported Gable	2	1	I57460013
					Job Reference (optional)

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

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- 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 20-11-0, Corner(3R) 20-11-0 to  
26-0-0, Exterior(2N) 26-0-0 to 27-1-0, Corner(3R) 27-1-0  
to 32-0-0, Exterior(2N) 32-0-0 to 47-8-14 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
- 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) Provide adequate drainage to prevent water ponding.
- 5) All plates are 3x4 MT20 unless otherwise indicated.
- 6) Gable requires continuous bottom chord bearing.
- 7) Gable studs spaced at 2-0-0 oc.
- 8) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 9) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 26 lb uplift at joint  
2, 58 lb uplift at joint 43, 9 lb uplift at joint 42, 74 lb uplift  
at joint 40, 60 lb uplift at joint 39, 61 lb uplift at joint 38,  
61 lb uplift at joint 37, 61 lb uplift at joint 36, 61 lb uplift  
at joint 35, 62 lb uplift at joint 34, 59 lb uplift at joint 33,  
103 lb uplift at joint 32, 12 lb uplift at joint 44, 71 lb uplift  
at joint 46, 61 lb uplift at joint 47, 61 lb uplift at joint 48,  
61 lb uplift at joint 49, 61 lb uplift at joint 50, 61 lb uplift  
at joint 51, 61 lb uplift at joint 52, 61 lb uplift at joint 53  
and 87 lb uplift at joint 54.
- 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.
- 11) 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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**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**



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Chesterfield, MO 63017

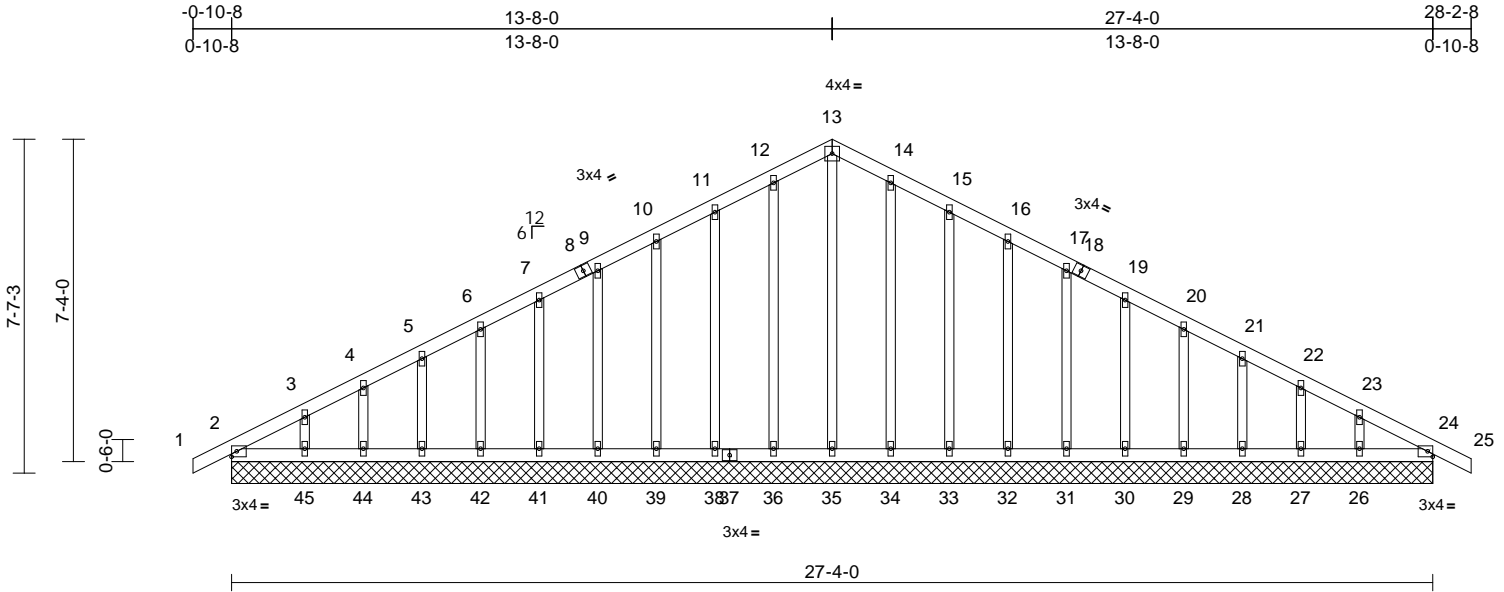
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460014
P230144-01	B1	Common Supported Gable	2	1	Job Reference (optional)	

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

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Scale = 1:52.4

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	0.07	Vert(LL)	n/a	-	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	999		
BCLL	0.0	Rep Stress Incr	YES	WB	0.18	Horz(CT)	0.01	24	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 145 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) 2=27-4-0, 24=27-4-0, 26=27-4-0, 27=27-4-0, 28=27-4-0, 29=27-4-0, 30=27-4-0, 31=27-4-0, 32=27-4-0, 33=27-4-0, 34=27-4-0, 35=27-4-0, 36=27-4-0, 38=27-4-0, 39=27-4-0, 40=27-4-0, 41=27-4-0, 42=27-4-0, 43=27-4-0, 44=27-4-0, 45=27-4-0  
Max Horiz 2=137 (LC 13)  
Max Uplift 2=26 (LC 8), 24=4 (LC 9), 26=57 (LC 13), 27=40 (LC 13), 28=41 (LC 13), 29=41 (LC 13), 30=41 (LC 13), 31=41 (LC 13), 32=41 (LC 13), 33=48 (LC 13), 34=21 (LC 13), 36=27 (LC 12), 38=46 (LC 12), 39=41 (LC 12), 40=41 (LC 12), 41=41 (LC 12), 42=41 (LC 12), 43=41 (LC 12), 44=40 (LC 12), 45=63 (LC 12)  
Max Grav 2=150 (LC 1), 24=150 (LC 1), 26=130 (LC 26), 27=117 (LC 26), 28=121 (LC 1), 29=120 (LC 26), 30=120 (LC 26), 31=120 (LC 1), 32=120 (LC 1), 33=121 (LC 26), 34=123 (LC 26), 35=145 (LC 22), 36=123 (LC 25), 38=121 (LC 25), 39=120 (LC 1), 40=120 (LC 1), 41=120 (LC 25), 42=120 (LC 25), 43=121 (LC 1), 44=117 (LC 25), 45=130 (LC 25)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 13-14=89/255, 14-15=80/230, 15-16=66/191, 16-17=53/155, 17-19=41/119, 19-20=34/83, 20-21=35/48, 21-22=51/20, 22-23=74/22, 23-24=123/45, 24-25=0/17, 1-2=0/17, 2-3=181/64, 3-4=131/67, 4-5=99/76, 5-6=76/89, 6-7=59/107, 7-9=50/126, 9-10=53/155, 10-11=66/191, 11-12=80/230, 12-13=89/255  
BOT CHORD 2-45=40/160, 44-45=40/160, 43-44=40/160, 42-43=40/160, 41-42=40/160, 40-41=40/160, 39-40=40/160, 38-39=40/160, 36-38=40/160, 35-36=40/160, 34-35=40/160, 33-34=40/160, 32-33=40/160, 31-32=40/160, 30-31=40/160, 29-30=40/160, 28-29=40/160, 27-28=40/160, 26-27=40/160, 24-26=40/160  
WEBS 13-35=148/26, 12-36=96/43, 11-38=95/74, 10-39=93/64, 9-40=93/64, 7-41=93/64, 6-42=93/64, 5-43=94/82, 4-44=92/99, 3-45=99/122, 14-34=96/40, 15-33=95/74, 16-32=93/64, 17-31=93/64, 19-30=93/64, 20-29=93/64, 21-28=94/82, 22-27=92/99, 23-26=99/119

#### 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 4-4-0, Exterior(2N) 4-4-0 to 13-8-0, Corner(3R) 13-8-0 to 18-8-0, Exterior(2N) 18-8-0 to 28-2-8 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 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 2, 27 lb uplift at joint 36, 46 lb uplift at joint 38, 41 lb uplift at joint 39, 41 lb uplift at joint 40, 41 lb uplift at joint 41, 41 lb uplift at joint 42, 41 lb uplift at joint 43, 40 lb uplift at joint 44, 63 lb uplift at joint 45, 21 lb uplift at joint 34, 48 lb uplift at joint 33, 41 lb uplift at joint 32, 41 lb uplift at joint 31, 41 lb uplift at joint 30, 41 lb uplift at joint 29, 41 lb uplift at joint 28, 40 lb uplift at joint 27, 57 lb uplift at joint 26 and 4 lb uplift at joint 24.
- 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



March 29, 2023

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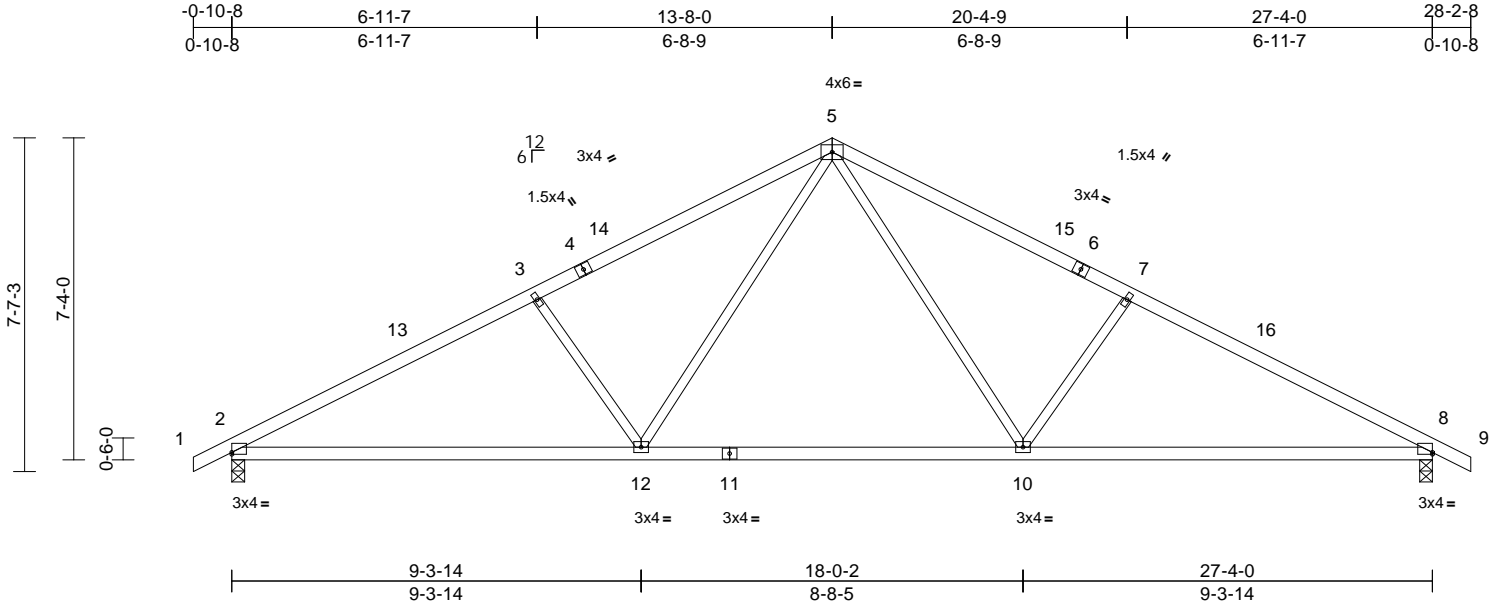
16023 Swingley Ridge Rd  
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Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460015
P230144-01	B2	Common	4	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:52.5									
Plate Offsets (X, Y): [2:Edge,0-0-9], [8:Edge,0-0-9]									
<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.77	Vert(LL)	-0.20	2-12	>999
TCDL	10.0	Lumber DOL	1.15	BC	0.91	Vert(CT)	-0.44	2-12	>737
BCLL	0.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	0.07	8	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S					
							<b>PLATES</b>	<b>GRIP</b>	
							MT20	244/190	
							Weight: 109 lb FT = 20%		

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

**BRACING**  
TOP CHORD Structural wood sheathing directly applied or 2-6-11 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-3-8, 8=0-3-8  
Max Horiz 2=-137 (LC 13)  
Max Uplift 2=-211 (LC 12), 8=-211 (LC 13)  
Max Grav 2=1288 (LC 1), 8=1288 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-0/17, 2-3=-2072/392, 3-5=-1821/403, 5-7=-1821/403, 7-8=-2072/392, 8-9=0/17  
BOT CHORD 2-12=-328/1763, 10-12=-86/1180, 8-10=-263/1763  
WEBS 5-10=-154/672, 7-10=-451/287, 5-12=-153/672, 3-12=-451/287

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 211 lb uplift at joint 2 and 211 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 13-8-0, Exterior(2R) 13-8-0 to 18-8-0, Interior (1) 18-8-0 to 28-2-8 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.



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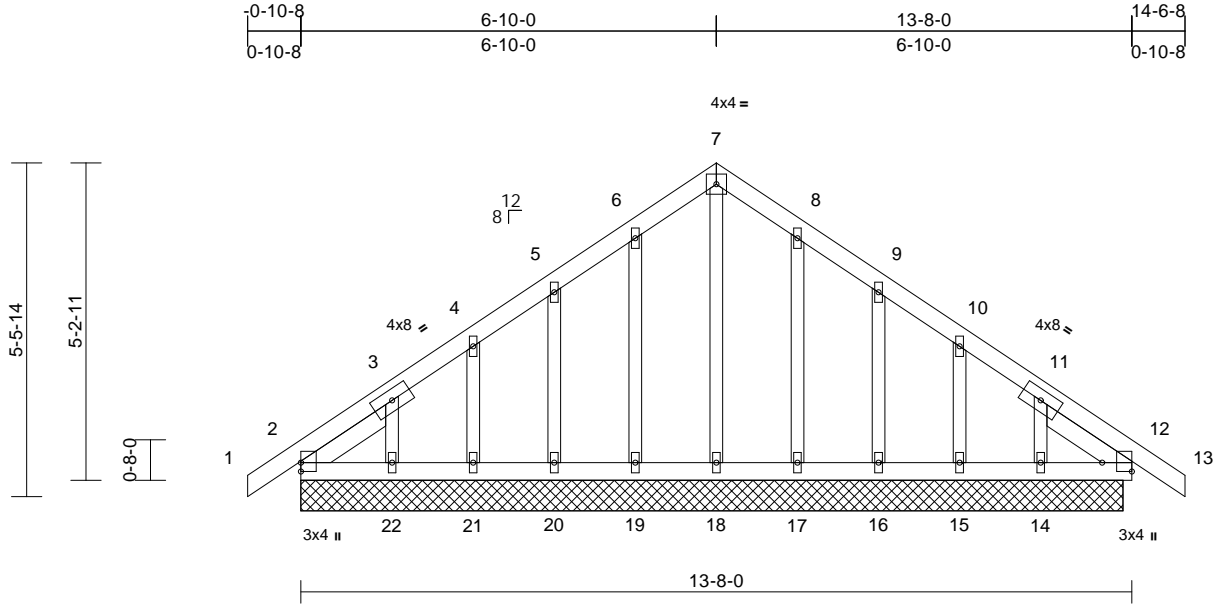
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460016
P230144-01	C1	Common Supported Gable	1	1	Job Reference (optional)	

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

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Scale = 1:37.9

Plate Offsets (X, Y): [12:Edge,0-5-14]

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	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999	
BCLL	0.0	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
										Weight: 73 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 -- 1-8-5, Right 2x4 SP No.2 -- 1-8-5

**WEBS**  
7-18=-119/26, 8-17=-100/74, 9-16=-101/107,  
10-15=-100/111, 11-14=-102/129,  
6-19=-104/73, 5-20=-99/106, 4-21=-100/111,  
3-22=-109/131

**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=13-6-4, 12=13-6-4, 14=13-6-4,  
15=13-6-4, 16=13-6-4, 17=13-6-4,  
18=13-6-4, 19=13-6-4, 20=13-6-4,  
21=13-6-4, 22=13-6-4  
Max Horiz 2=-144 (LC 10)  
Max Uplift 2=-39 (LC 8), 12=-2 (LC 9), 14=-73 (LC 13), 15=-52 (LC 13), 16=-57 (LC 13), 17=-42 (LC 13), 19=-45 (LC 12), 20=-56 (LC 12), 21=-52 (LC 12), 22=-80 (LC 12)  
Max Grav 2=159 (LC 20), 12=154 (LC 1), 14=132 (LC 20), 15=125 (LC 20), 16=128 (LC 20), 17=127 (LC 20), 18=119 (LC 22), 19=131 (LC 19), 20=126 (LC 19), 21=126 (LC 19), 22=139 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension  
TOP CHORD 7-8=-91/176, 8-9=-66/126, 9-10=-49/59, 10-11=-58/29, 11-12=-112/57, 12-13=0/16, 1-2=0/16, 2-3=-140/112, 3-4=-96/80, 4-5=-87/72, 5-6=-77/126, 6-7=-91/176  
2-22=-52/150, 21-22=-52/150, 20-21=-52/150, 19-20=-52/150, 18-19=-52/150, 17-18=-52/150, 16-17=-52/150, 15-16=-52/150, 14-15=-52/150, 12-14=-52/150

#### 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 4-2-0, Exterior(2N) 4-2-0 to 6-10-0, Corner(3R) 6-10-0 to 11-10-0, Exterior(2N) 11-10-0 to 14-6-8 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 studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 12, 39 lb uplift at joint 2, 42 lb uplift at joint 17, 57 lb uplift at joint 16, 52 lb uplift at joint 15, 73 lb uplift at joint 14, 45 lb uplift at joint 19, 56 lb uplift at joint 20, 52 lb uplift at joint 21 and 80 lb uplift at joint 22.
- N/A
- 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



March 29, 2023

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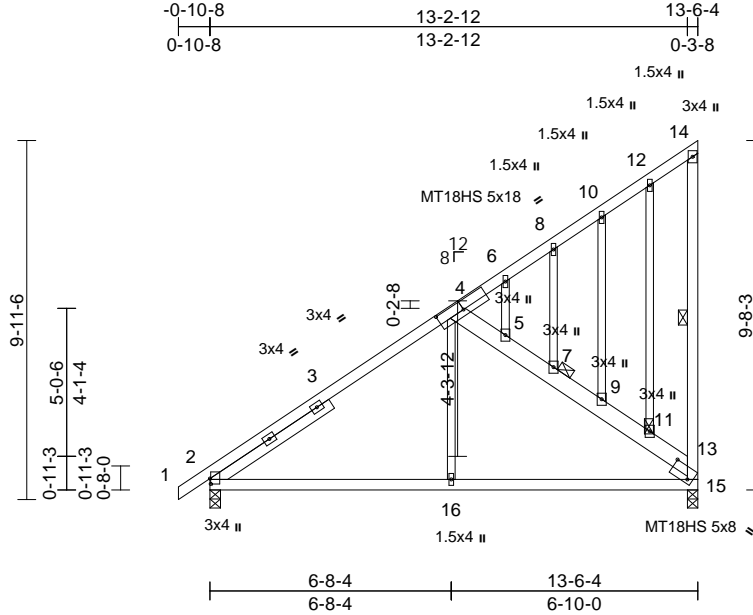
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460017
P230144-01	C2	Monopitch	1	1	Job Reference (optional)	

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

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Scale = 1:63.8

Plate Offsets (X, Y): [2:0-1-13,0-0-4], [4:0-9-0,0-3-0], [15:0-6-6,0-3-11]

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	0.65	Vert(LL)	-0.04	15-16	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.44	Vert(CT)	-0.09	2-16	>999	180	MT18HS	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.25	Horz(CT)	0.01	15	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 97 lb	FT = 20%

#### LUMBER

TOP CHORD	2x4 SP No.2 *Except* 4-13:2x6 SPF No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.2 *Except* 4-16:2x3 SPF No.2
OTHERS	2x3 SPF No.2
SLIDER	Left 2x4 SP No.2 -- 3-11-10

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 14-15
JOINTS	1 Brace at Jt(s): 11, 7

#### REACTIONS

(size)	2=0-3-8, 15=0-3-8
Max Horiz	2=399 (LC 9)
Max Uplift	2=-83 (LC 12), 15=-202 (LC 12)
Max Grav	2=665 (LC 1), 15=658 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/16, 2-6=-708/217, 6-8=-266/229, 8-10=-226/208, 10-12=-194/194, 12-14=-93/93, 13-15=-600/360, 13-14=-86/83, 4-5=-538/231, 5-7=-560/246, 7-9=-606/280, 9-11=-648/313, 11-13=-725/366
BOT CHORD	2-16=-324/568, 15-16=-328/560
WEBS	4-16=0/305, 11-12=-205/174, 9-10=-77/63, 7-8=-84/61, 5-6=-12/6

#### 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) -0-10-8 to 4-1-8,  
Interior (1) 4-1-8 to 13-4-8 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.
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- All plates are 3x4 MT20 unless otherwise indicated.
- Gable studs spaced at 1-4-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 15 and 83 lb uplift at joint 2.
- 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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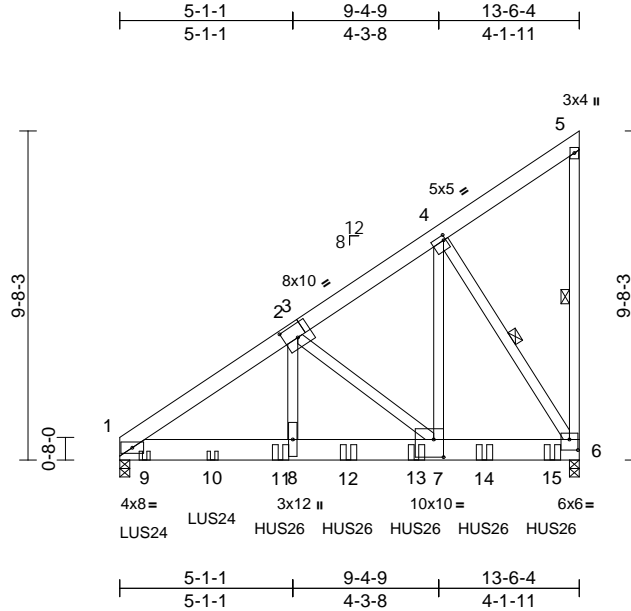
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	
P230144-01	C3	Monopitch Girder	2	2	Job Reference (optional)	I57460018

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

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Scale = 1:67.8

Plate Offsets (X, Y): [3:0-4-12,0-4-8], [4:0-0-12,0-1-12], [6:0-3-0,0-3-12], [7:0-3-8,0-6-4]

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	0.28	Vert(LL)	-0.07	7-8	>999	240	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.12	7-8	>999	180	197/144
BCLL	0.0	Rep Stress Incr	NO	WB	0.88	Horz(CT)	0.02	6	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 230 lb FT = 20%											

#### LUMBER

TOP CHORD 2x6 SPF No.2  
BOT CHORD 2x8 SP 2400F 2.0E  
WEBS 2x4 SP No.2

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 5-5-8 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 5-6, 4-6

REACTIONS (size) 1=0-3-8, 6=0-3-8  
Max Horiz 1=384 (LC 11)  
Max Uplift 1=-1114 (LC 12), 6=-1295 (LC 12)  
Max Grav 1=5505 (LC 1), 6=7639 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=-7649/1380, 2-4=-4092/753,  
4-5=-202/170, 5-6=-140/119

BOT CHORD 1-8=-1364/6186, 7-8=-1364/6186,  
6-7=-712/3362

WEBS 2-8=-767/4129, 2-7=-3636/845,  
4-7=-1199/7202, 4-6=-6288/1144

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.  
Bottom chords connected as follows: 2x8 - 4 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=35ft;  
Ke=1.00; Cat. II; Exp C; Enclosed; MWFRS (envelope)  
exterior zone and C-C Exterior(2E) 0-1-12 to 5-1-1,  
Interior (1) 5-1-1 to 13-4-8 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.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 1295 lb uplift at  
joint 6 and 1114 lb uplift at joint 1.
- This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.
- Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d  
Truss, Single Ply Girder) or equivalent spaced at 2-0-0  
oc max. starting at 0-8-12 from the left end to 2-8-12 to  
connect truss(es) to back face of bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d  
Truss) or equivalent spaced at 2-0-0 oc max. starting at  
4-8-12 from the left end to 12-8-12 to connect truss(es)  
to back face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- WARNING: The following hangers are manually applied  
but fail due to geometric and/or loading considerations:  
HUS26 on back face at 4-8-12 from the left end, HUS26  
on back face at 6-8-12 from the left end, HUS26 on back  
face at 8-8-12 from the left end, HUS26 on back face at  
10-8-12 from the left end, HUS26 on back face at  
12-8-12 from the left end.

#### LOAD CASE(S)

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

Vert: 9=-679 (B), 10=-666 (B), 11=-2121 (B),  
12=-2121 (B), 13=-2121 (B), 14=-2121 (B),  
15=-2124 (B)



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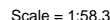
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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The seal is circular with a blue border. The outer ring contains the text "STATE OF MISSOURI" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The center of the seal contains the name "NATHANIEL FOX" and the license number "PE-2022042259". A red signature, "Nathaniel Fox", is written across the seal.

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

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-747.5 (REV. 3/19/2020) BEFORE USE.**

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



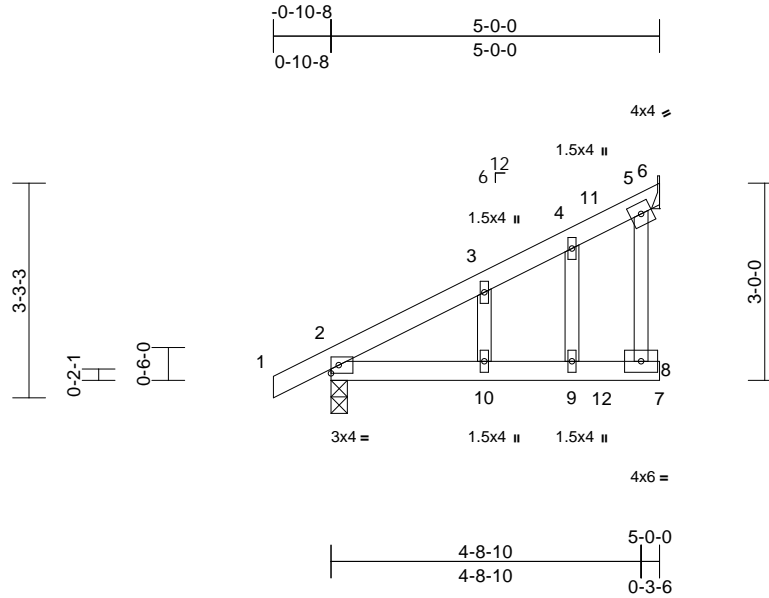
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460020
P230144-01	D1	Monopitch Supported Gable	2	1	Job Reference (optional)	

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:10

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Scale = 1:35.1

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	0.48	Vert(LL)	0.12	9-10	>493	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	0.10	9-10	>562	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.01	Horz(CT)	-0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 22 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 5-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

<b>REACTIONS</b>	(size) 2=0-3-0, 6= Mechanical
	Max Horiz 2=125 (LC 12)
	Max Uplift 2=-46 (LC 9), 6=-76 (LC 12)
	Max Grav 2=294 (LC 1), 6=211 (LC 1)

<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension
---------------	--

TOP CHORD	1-2=0/17, 2-3=-123/36, 3-4=-55/16, 4-5=-35/10, 5-6=-240/93, 5-8=-341/124
BOT CHORD	2-10=-109/38, 9-10=-109/38, 8-9=-109/38, 7-8=0/0
WEBS	4-9=-52/60, 3-10=-69/60

#### 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(3E) -0-10-8 to 4-1-8, Exterior(2N) 4-1-8 to 4-11-4 zone; cantilever left and right exposed; end vertical left exposed; porch left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable studs spaced at 1-4-0 oc.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) Refer to girder(s) for truss to truss connections.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 76 lb uplift at joint 6 and 46 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



March 29, 2023

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

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



16023 Swingley Ridge Rd  
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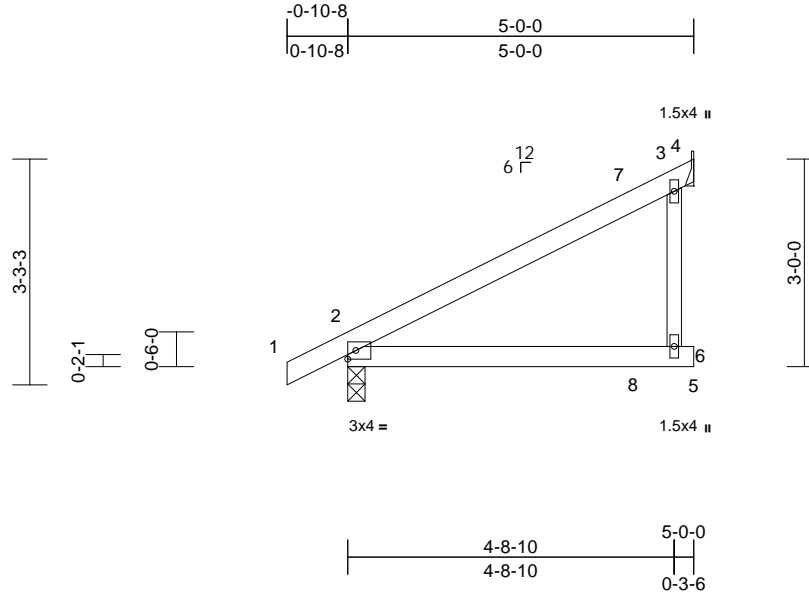
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	
P230144-01	D2	Monopitch	12	1	Job Reference (optional)	I57460021

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

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Scale = 1:33.3

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)	0.09	2-6	>634	240	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	0.07	2-6	>787	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: 19 lb	FT = 20%

#### LUMBER

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

#### BRACING

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

**REACTIONS** (size) 2=0-3-0, 4= Mechanical  
Max Horiz 2=125 (LC 12)  
Max Uplift 2=-46 (LC 9), 4=-76 (LC 12)  
Max Grav 2=294 (LC 1), 4=211 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/17, 2-3=-111/64, 3-4=-152/93,  
3-6=-160/103

BOT CHORD 2-6=0/0, 5-6=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 4-11-4 zone; cantilever left and right  
exposed; end vertical left exposed; porch left and right  
exposed; C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.60 plate grip  
DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 76 lb uplift at joint  
4 and 46 lb uplift at joint 2.
- 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.

**LOAD CASE(S)** Standard



March 29, 2023

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

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



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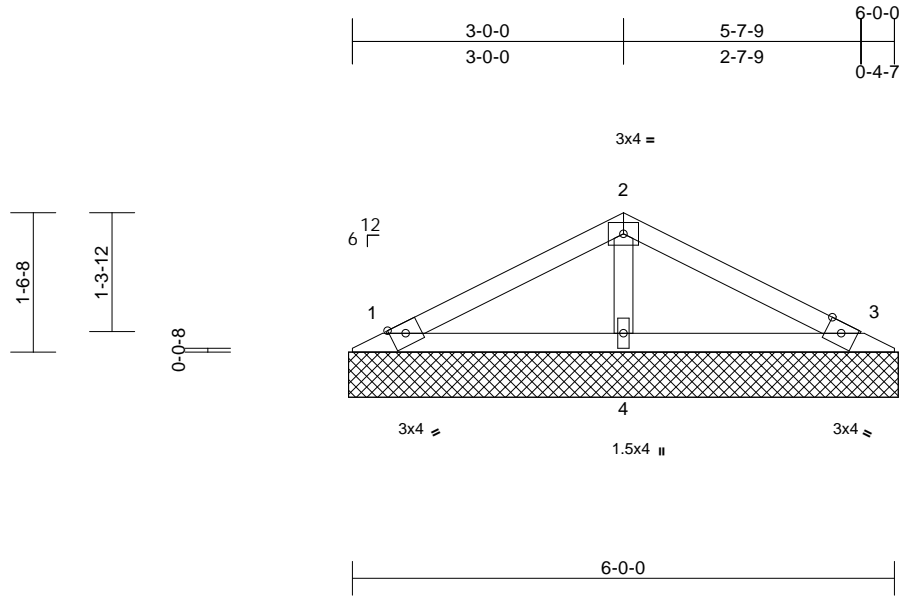
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460022
P230144-01	PB1	Piggyback	2	1	Job Reference (optional)	

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

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Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999	197/144
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: 11 lb FT = 20%

#### LUMBER

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

#### BRACING

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

#### REACTIONS

(size) 1=6-1-0, 3=6-1-0, 4=6-1-0  
Max Horiz 1=25 (LC 16)  
Max Uplift 1=31 (LC 12), 3=36 (LC 13), 4=9 (LC 12)  
Max Grav 1=120 (LC 1), 3=120 (LC 1), 4=231 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-53/44, 2-3=-53/50  
BOT CHORD 1-4=0/23, 3-4=0/23  
WEBS 2-4=-166/150

#### 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 1'-4" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 1, 36 lb uplift at joint 3 and 9 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



March 29, 2023

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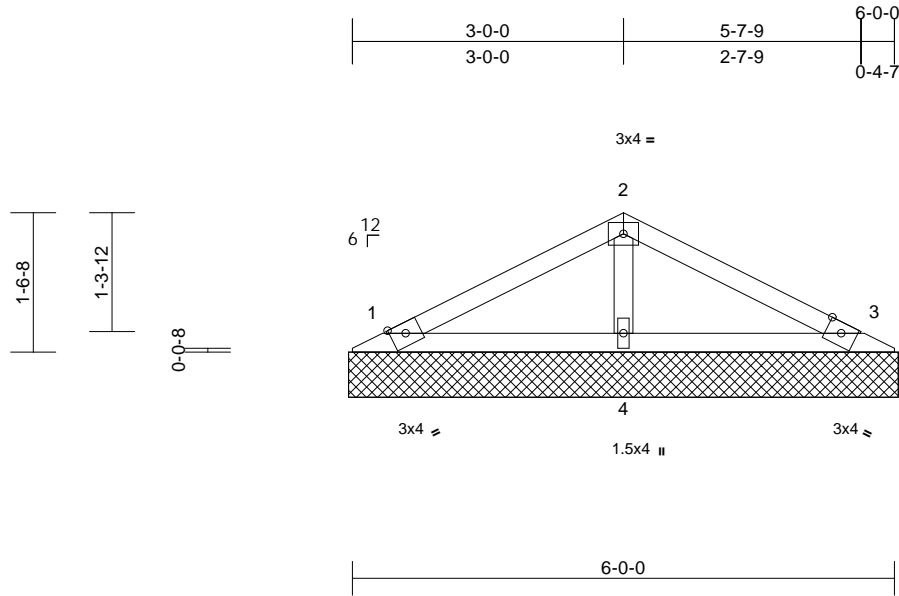
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460023
P230144-01	PB2	Piggyback	22	1	Job Reference (optional)	

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

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Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999	197/144
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: 11 lb FT = 20%

#### LUMBER

TOP CHORD 2x3 SPF No.2  
BOT CHORD 2x3 SPF 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=6-1-0, 3=6-1-0, 4=6-1-0  
Max Horiz 1=25 (LC 16)  
Max Uplift 1=31 (LC 12), 3=36 (LC 13), 4=9 (LC 12)  
Max Grav 1=120 (LC 1), 3=120 (LC 1), 4=231 (LC 1)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-53/44, 2-3=-53/50  
BOT CHORD 1-4=0/23, 3-4=0/23  
WEBS 2-4=-166/150

#### 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 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 31 lb uplift at joint 1, 36 lb uplift at joint 3 and 9 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.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

**LOAD CASE(S)** Standard



March 29, 2023

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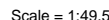
**ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

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



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Chesterfield, MO 63017

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:11 Page: 1  
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<b>LUMBER</b>	
TOP CHORD	2x3 SPF No.2
BOT CHORD	2x3 SPF No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2
<b>BRACING</b>	
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                      4-5
<b>REACTIONS</b> (size)                      1=12-0-15, 5=12-0-15, 6=12-0-15, 7=12-0-15	
	Max Horiz                      1=339 (LC 12)
	Max Uplift                      5=63 (LC 12), 6=166 (LC 12), 7=175 (LC 12)
	Max Grav                      1=187 (LC 21), 5=152 (LC 19), 6=405 (LC 19), 7=397 (LC 19)
<b>FORCES</b> (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-379/252, 2-3=-227/153, 3-4=-105/50, 4-5=-118/85
BOT CHORD	1-7=-2/4, 6-7=-2/4, 5-6=-2/4
WEBS	3-6=-322/231, 2-7=-305/226

- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 5, 166 lb uplift at joint 6 and 175 lb uplift at joint 7.
- 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) 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) 0-6-5 to 5-6-5,  
Interior (1) 5-6-5 to 12-0-1 zone; cantilever left and right  
exposed ; end vertical left 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.



March 29.2023



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

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Chesterfield, MO 63017

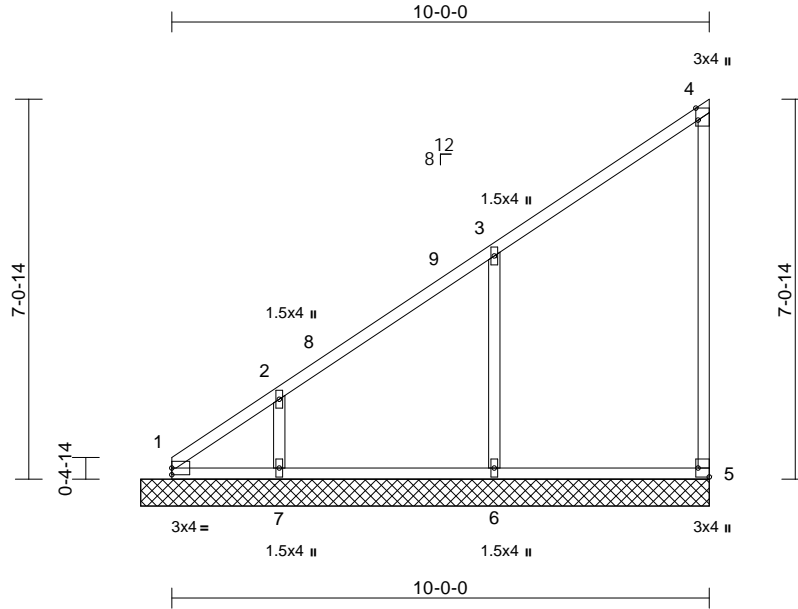
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460025
P230144-01	V2	Valley	2	1	Job Reference (optional)	

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

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Scale = 1:42.9

Plate Offsets (X, Y): [4:0-2-11,Edge], [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	0.65	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 28 lb FT = 20%

#### LUMBER

TOP CHORD	2x3 SPF No.2
BOT CHORD	2x3 SPF 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=10-6-15, 5=10-6-15, 6=10-6-15, 7=10-6-15
	Max Horiz 1=288 (LC 9)
	Max Uplift 1=-84 (LC 10), 5=-60 (LC 9), 6=-174 (LC 12), 7=-160 (LC 12)
	Max Grav 1=175 (LC 9), 5=167 (LC 19), 6=421 (LC 19), 7=323 (LC 19)

#### FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-508/323, 2-3=-362/250, 3-4=-174/147, 4-5=-131/140
BOT CHORD	1-7=-126/140, 6-7=-126/140, 5-6=-126/140
WEBS	3-6=-339/294, 2-7=-255/226

#### 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 10-6-1 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 84 lb uplift at joint 1, 60 lb uplift at joint 5, 174 lb uplift at joint 6 and 160 lb uplift at joint 7.
- 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



March 29, 2023

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

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

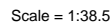
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Premier Building Supply (Springhill, KS), Spring Hills, KS - 66083, Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:12 Page: 1  
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TOP CHORD	2x3 SPF No.2
BOT CHORD	2x3 SPF No.2
WEBS	2x3 SPF No.2
OTHERS	2x3 SPF No.2

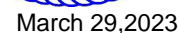
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2 lb uplift at joint 1, 51 lb uplift at joint 4 and 210 lb uplift at joint 5.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TP1 1.

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=9-0-15, 4=9-0-15, 5=9-0-15  
 Max Horiz 1=246 (LC 9)  
 Max Uplift 1=-2 (LC 8), 4=-51 (LC 9), 5=-210 (LC 12)  
 Max Grav 1=201 (LC 20), 4=145 (LC 19), 5=507 (LC 19)

	Tension
TOP CHORD	1-2=-378/257, 2-3=-166/130, 3-4=-121/132
BOT CHORD	1-5=-109/121, 4-5=-109/121
WEBS	2-5=-393/338

- 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) 0-4-3 to 5-1-5,  
Interior (1) 5-1-5 to 9-0-1 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.



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

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



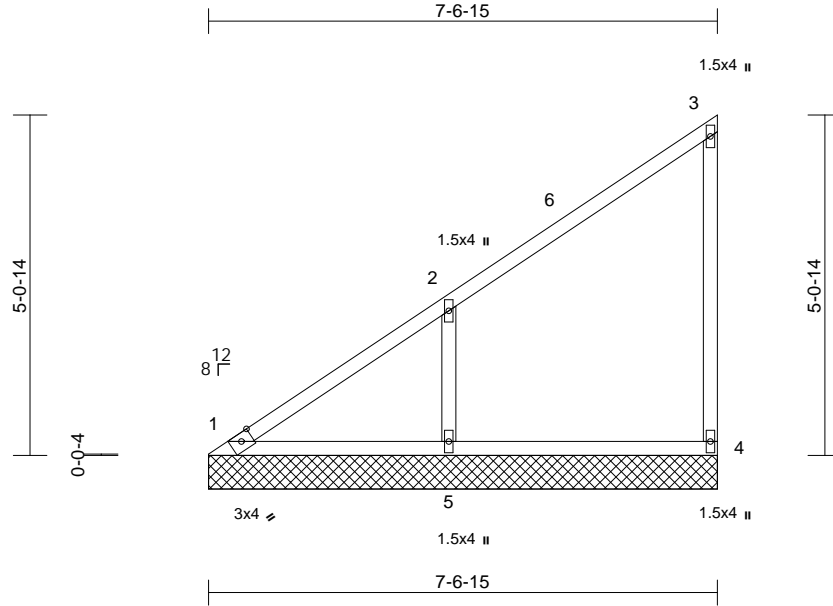
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	
P230144-01	V4	Valley	2	1	Job Reference (optional)	I57460027

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

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Page: 1



Scale = 1:34.3

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)	n/a	-	n/a	999	MT20	197/144
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	0.08	Horiz(TL)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 19 lb	FT = 20%

#### LUMBER

TOP CHORD	2x3 SPF No.2
BOT CHORD	2x3 SPF 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=7-6-15, 4=7-6-15, 5=7-6-15
Max Horiz	1=203 (LC 9)
Max Uplift	1=-15 (LC 8), 4=-46 (LC 9), 5=-176 (LC 12)
Max Grav	1=138 (LC 20), 4=157 (LC 19), 5=425 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-353/235, 2-3=-161/131, 3-4=-135/148
BOT CHORD	1-5=-94/102, 4-5=-94/102
WEBS	2-5=-335/310

#### 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) 0-4-3 to 5-4-3,  
Interior (1) 5-4-3 to 7-6-1 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) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 15 lb uplift at joint  
1, 46 lb uplift at joint 4 and 176 lb uplift at joint 5.
- 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



March 29, 2023

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017



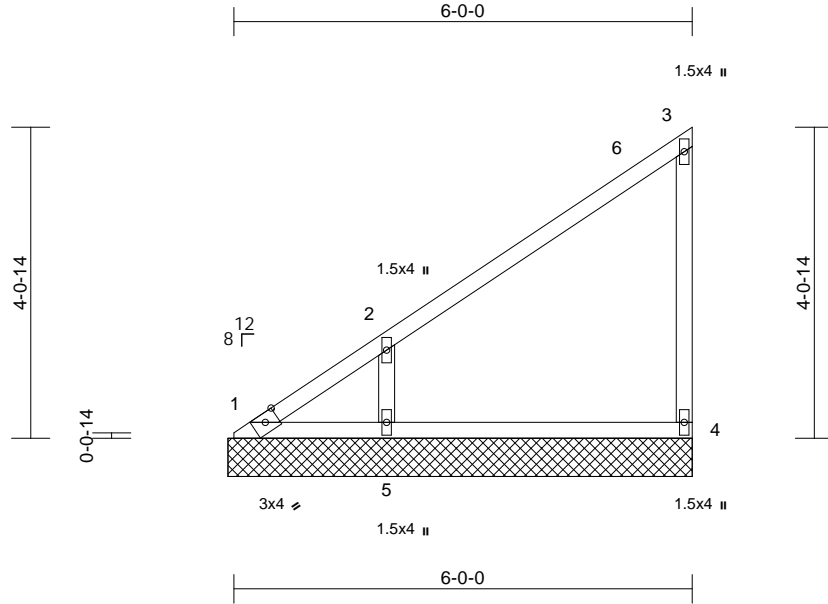
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460028
P230144-01	V5	Valley	2	1	Job Reference (optional)	

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:12

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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	0.39	Vert(LL)	n/a	-	n/a	999	MT20	197/144
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	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 14 lb	FT = 20%

#### LUMBER

TOP CHORD	2x3 SPF No.2
BOT CHORD	2x3 SPF 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=6-0-15, 4=6-0-15, 5=6-0-15
Max Horiz	1=161 (LC 9)
Max Uplift	1=-49 (LC 10), 4=-41 (LC 9), 5=-156 (LC 12)
Max Grav	1=84 (LC 9), 4=159 (LC 19), 5=378 (LC 19)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-333/217, 2-3=-155/121, 3-4=-136/154
BOT CHORD	1-5=-77/83, 4-5=-77/83
WEBS	2-5=-298/300

#### 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) 0-4-3 to 5-4-3, Interior (1) 5-4-3 to 6-0-1 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 1, 41 lb uplift at joint 4 and 156 lb uplift at joint 5.
- 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



March 29, 2023

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

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



16023 Swingley Ridge Rd  
Chesterfield, MO 63017

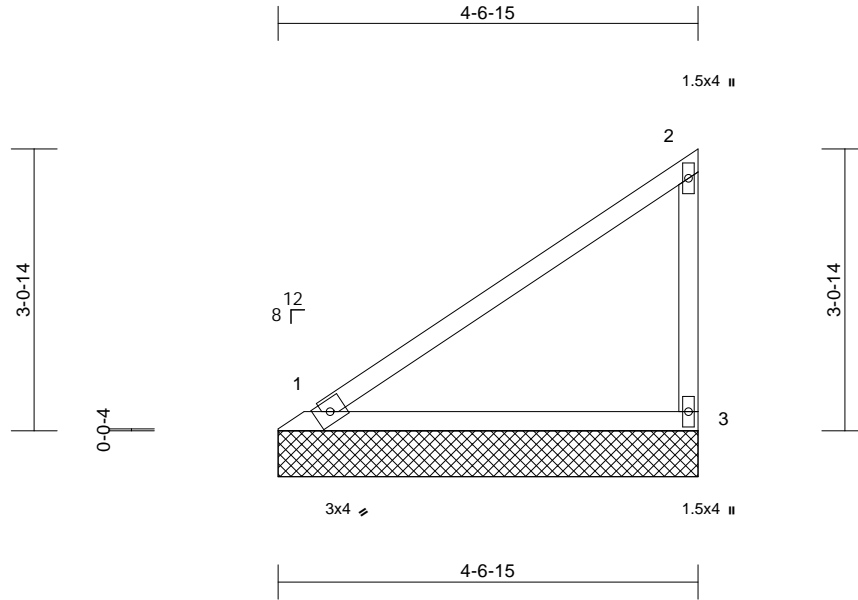
Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460029
P230144-01	V6	Valley	2	1	Job Reference (optional)	

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

Run: 8.63 S Nov 19 2022 Print: 8.630 S Nov 19 2022 MiTek Industries, Inc. Wed Mar 29 10:54:12

Page: 1

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Scale = 1:25.1

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	0.63	Vert(LL)	n/a	-	n/a	999	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.33	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: 10 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-7-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=4-6-15, 3=4-6-15  
Max Horiz 1=118 (LC 9)  
Max Uplift 1=-18 (LC 12), 3=-61 (LC 12)  
Max Grav 1=180 (LC 1), 3=197 (LC 19)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-165/122, 2-3=-158/189  
BOT CHORD 1-3=-57/62

#### 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) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 1 and 61 lb uplift at joint 3.



March 29, 2023

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

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



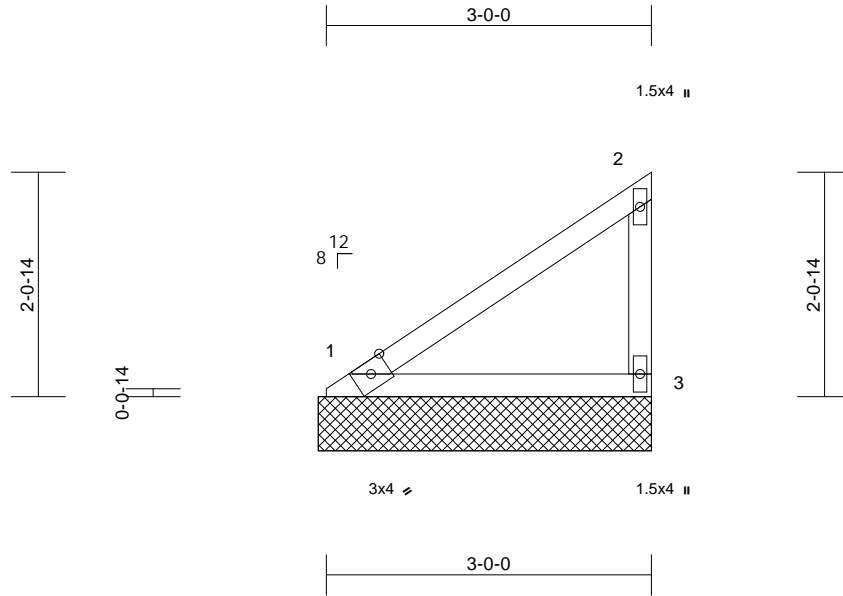
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460030
P230144-01	V7	Valley	2	1	Job Reference (optional)	

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

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Page: 1



<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	l/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	197/144
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: 6 lb	FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=3-0-15, 3=3-0-15  
Max Horiz 1=76 (LC 11)  
Max Uplift 1=-13 (LC 12), 3=-39 (LC 12)  
Max Grav 1=119 (LC 1), 3=130 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-108/80, 2-3=-107/128  
BOT CHORD 1-3=-37/40

#### 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) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 13 lb uplift at joint  
1 and 39 lb uplift at joint 3.



March 29, 2023

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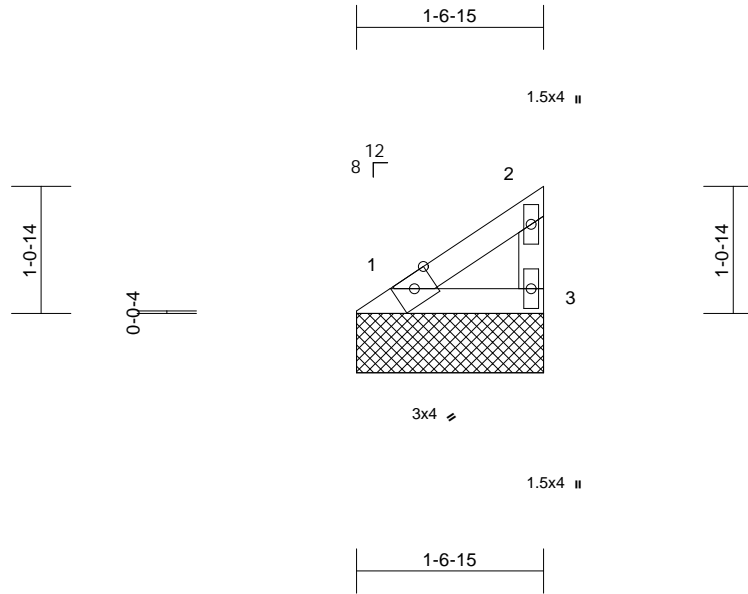
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Roof - Osage Lot 54	I57460031
P230144-01	V8	Valley	2	1	Job Reference (optional)	

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

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Page: 1



Scale = 1:19.4

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	0.04	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
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: 3 lb FT = 20%

#### LUMBER

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

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 1-7-5 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=1-6-15, 3=1-6-15

Max Horiz 1=33 (LC 9)  
Max Uplift 1=-6 (LC 12), 3=-17 (LC 12)  
Max Grav 1=52 (LC 1), 3=57 (LC 19)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-48/36, 2-3=-49/57  
BOT CHORD 1-3=-16/17

#### 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.
- Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 6 lb uplift at joint 1  
and 17 lb uplift at joint 3.



March 29, 2023

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

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

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

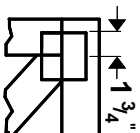
**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



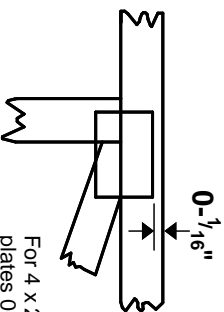
16023 Swingley Ridge Rd  
Chesterfield, MO 63017

## Symbols

### PLATE LOCATION AND ORIENTATION



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



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



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

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

### PLATE SIZE

4 X 4

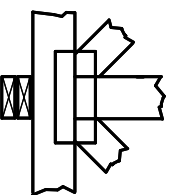
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

### LATERAL BRACING LOCATION



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

### BEARING



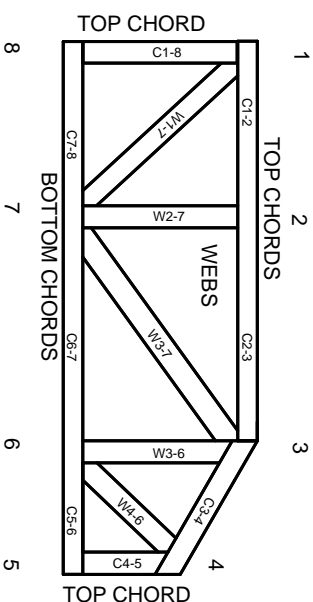
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

### Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

## Numbering System

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



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

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

### PRODUCT CODE APPROVALS

ICC-ES Reports:

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

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

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

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



## General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.