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

Re: 4027848

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Villa Rica, GA).

Pages or sheets covered by this seal: I66869277 thru I66869280

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



July 16, 2024

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Lassiter, Frank

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

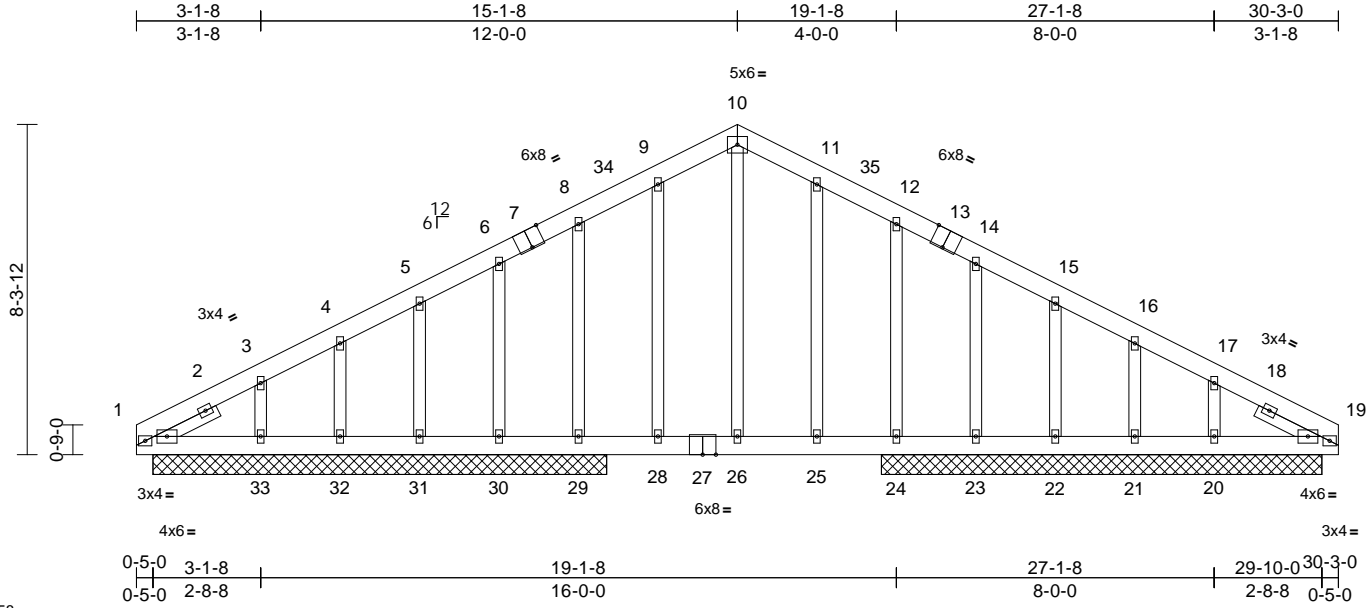
Job	Truss	Truss Type	Qty	Ply	
4027848	A01	Common Structural Gable	1	1	166869277
Job Reference (optional)					

Builders FirstSource (Villa Rica), Villa Rica, GA - 30180,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 13:39:19

Page: 1

ID:AjYl3jd7Z2dVF79xO2FoGRzIbbx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58

Plate Offsets (X, Y): [1:0-0-15,0-2-0], [7:0-4-0,Edge], [13:0-4-0,Edge], [19:0-0-15,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	-0.01	26	>999	360	MT20	244/190
Snow (Pf/Pg)	3.9/5.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.02	26	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.12	Horz(CT)	0.01	19	n/a	n/a		
BCLL	0.0*	Code	IBC2018/TPI2014	Matrix-S								
BCDL	10.0											
Weight: 237 lb											FT = 20%	

#### LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 1-8-14, Right 2x4 SP No.2 -- 1-8-14

#### BRACING

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

REACTIONS (size)	1=11-5-0, 19=11-1-0, 20=11-1-0, 21=11-1-0, 22=11-1-0, 23=11-1-0, 24=11-1-0, 29=11-5-0, 30=11-5-0, 31=11-5-0, 32=11-5-0, 33=11-5-0
Max Horiz	1=107 (LC 14)
Max Uplift	20=47 (LC 16), 21=19 (LC 16), 22=20 (LC 16), 23=40 (LC 16), 24=3 (LC 16), 29=3 (LC 16), 30=40 (LC 16), 31=20 (LC 16), 32=19 (LC 16), 33=47 (LC 16)
Max Grav	1=235 (LC 2), 19=235 (LC 2), 20=226 (LC 34), 21=136 (LC 2), 22=187 (LC 2), 23=58 (LC 34), 24=386 (LC 2), 29=386 (LC 2), 30=58 (LC 33), 31=187 (LC 2), 32=136 (LC 2), 33=226 (LC 33)

#### FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension
	1-3=299/0, 3-4=274/0, 4-5=269/0, 5-6=271/13, 6-8=254/41, 8-9=294/65, 9-10=257/88, 10-11=257/87, 11-12=294/64, 12-14=254/40, 14-15=271/12, 15-16=269/0, 16-17=273/0, 17-19=286/0

BOT CHORD	1-33=0/226, 32-33=0/226, 31-32=0/226, 30-31=0/226, 29-30=0/226, 28-29=0/226, 26-28=0/226, 25-26=0/226, 24-25=0/226, 23-24=0/226, 22-23=0/226, 21-22=0/226, 20-21=0/226, 19-20=0/226
WEBS	10-26=12/94, 9-28=51/48, 8-29=211/46, 6-30=86/54, 5-31=125/48, 4-32=111/40, 11-25=51/48, 14-23=86/54, 15-22=125/48, 16-21=111/40, 12-24=211/45, 3-33=159/82, 17-20=159/82

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=6.0psf; h=30ft; B=45ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-1-8, Interior (1) 3-1-8 to 15-1-8, Exterior(2R) 15-1-8 to 18-1-13, Interior (1) 18-1-13 to 30-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=5.0 psf; Pf=3.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 3 lb uplift at joint 29, 40 lb uplift at joint 30, 20 lb uplift at joint 31, 19 lb uplift at joint 32, 40 lb uplift at joint 23, 20 lb uplift at joint 22, 19 lb uplift at joint 21, 3 lb uplift at joint 24, 47 lb uplift at joint 33 and 47 lb uplift at joint 20.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 16,2024

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of 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, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

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314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	
4027848	A02	Common	5	1	
					Job Reference (optional)

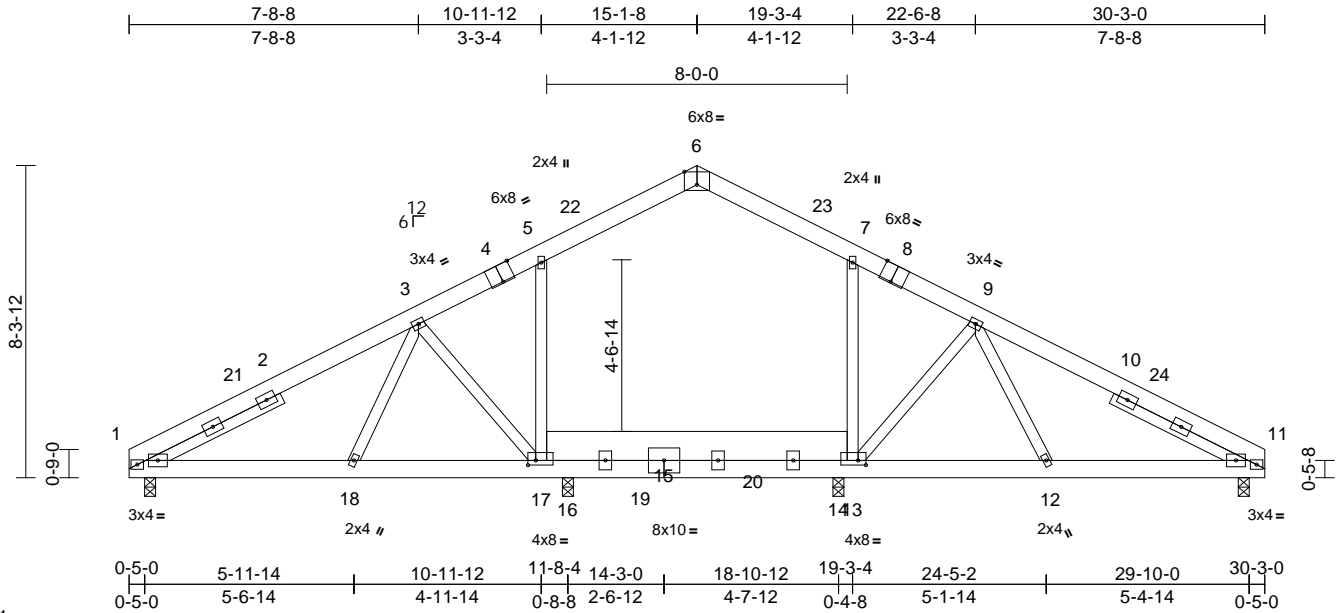
I66869278

Builders FirstSource (Villa Rica), Villa Rica, GA - 30180,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 13:39:20

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Scale = 1:61.4

Plate Offsets (X, Y): [1:0-0-15,0-2-0], [4:0-4-0,Edge], [6:0-4-0,Edge], [8:0-4-0,Edge], [11:0-0-15,0-2-0], [13:0-2-8,0-1-8], [17:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.01	1-18	>999	360	MT20	244/190
Snow (Pf/Pg)	3.9/5.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.02	1-18	>999	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.01	11	n/a	n/a		
BCLL	0.0 *	Code	IBC2018/TPI2014	Matrix-S								
BCDL	10.0											
											Weight: 237 lb	FT = 20%

**LUMBER**

TOP CHORD 2x6 SP No.2  
 BOT CHORD 2x6 SP No.2 \*Except\* 17-13:2x10 SP DSS  
 WEBS 2x4 SP No.2  
 SLIDER Left 2x4 SP No.2 -- 4-0-1, Right 2x4 SP No.2 -- 3-11-15

**BRACING**

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

**REACTIONS**

(size) 1=0-3-8, 11=0-3-8, 14=0-3-8, 16=0-3-8  
 Max Horiz 1=-107 (LC 14)  
 Max Uplift 1=-32 (LC 16), 11=-31 (LC 16)  
 Max Grav 1=548 (LC 27), 11=549 (LC 28), 14=908 (LC 28), 16=983 (LC 27)

**FORCES**

(lb) - Maximum Compression/Maximum Tension  
 TOP CHORD 1-3=-705/61, 3-5=-309/91, 5-6=-310/122, 6-7=-310/122, 7-9=-309/90, 9-11=-704/58  
 BOT CHORD 1-18=0/599, 17-18=0/502, 16-17=0/509, 14-16=-11/223, 13-14=-20/574, 12-13=-6/482, 11-12=0/546  
 WEBS 3-18=0/260, 9-12=0/258, 5-17=-198/57, 7-13=-199/58, 3-17=-458/121, 9-13=-450/121

**NOTES**

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

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
 Vasd=91mph; TCDL=4.2psf; BCDL=6.0psf; h=30ft; B=45ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-2-1, Interior (1) 3-2-1 to 15-1-8, Exterior(2R) 15-1-8 to 18-1-13, Interior (1) 18-1-13 to 30-1-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=5.0 psf; Pf=3.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- 200.0lb AC unit load placed on the bottom chord, 15-1-8 from left end, supported at two points, 3-0-0 apart.
- All plates are 4x6 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 1 and 31 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 16, 2024

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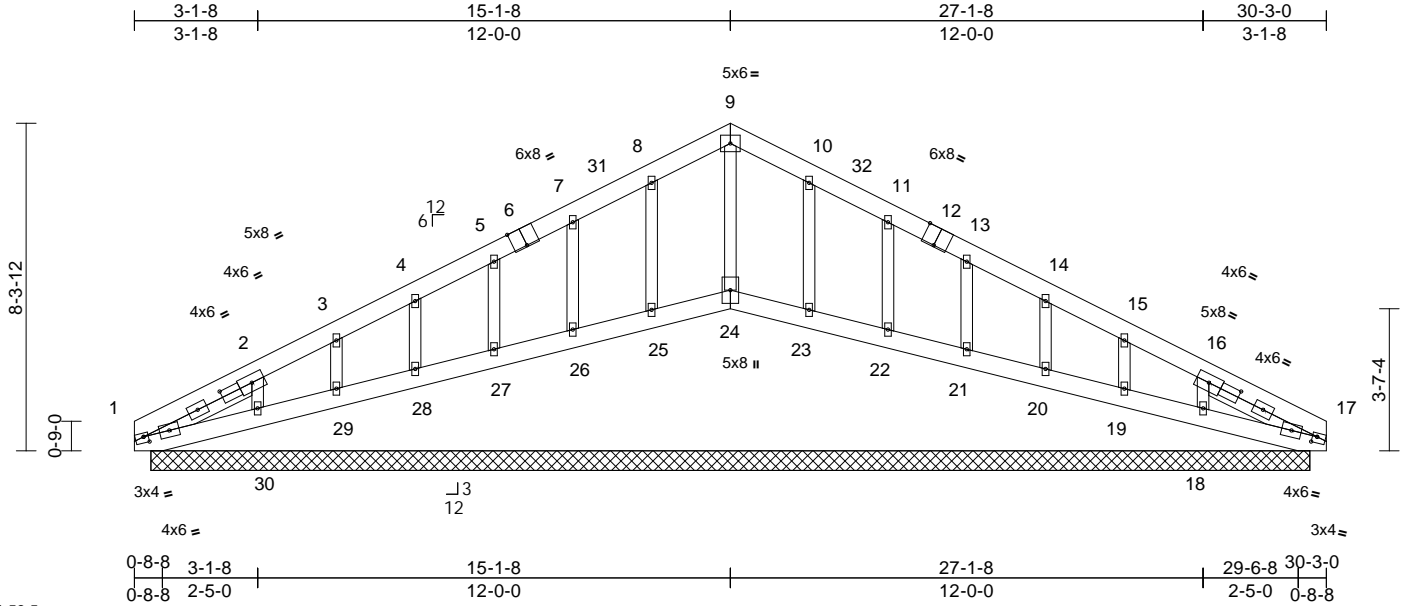
Job	Truss	Truss Type	Qty	Ply	
4027848	A04	Scissor	1	1	I66869279
Job Reference (optional)					

Builders FirstSource (Villa Rica), Villa Rica, GA - 30180,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 13:39:20

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Scale = 1:58.5

Plate Offsets (X, Y): [1:0-5-1,0-2-0], [1:2-2-14,0-2-0], [1:0-1-7,0-1-13], [6:0-4-0,Edge], [12:0-4-0,Edge], [17:0-5-1,0-2-0], [17:2-2-14,0-2-0], [17:0-1-7,0-1-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.04	Vert(LL)	n/a	-	n/a	999	MT20
Snow (Pf/Pg)	3.9/5.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	17	n/a	n/a	
BCLL	0.0*	Code	IBC2018/TPI2014	Matrix-S							
BCDL	10.0										
Weight: 205 lb FT = 20%											

#### LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.2
OTHERS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 3-0-14, Right 2x4 SP No.2 -- 3-0-14

#### 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=29-5-0, 17=29-5-0, 18=29-5-0, 19=29-5-0, 20=29-5-0, 21=29-5-0, 22=29-5-0, 23=29-5-0, 24=29-5-0, 25=29-5-0, 26=29-5-0, 27=29-5-0, 28=29-5-0, 29=29-5-0, 30=29-5-0
Max Horiz	1=109 (LC 14)
Max Uplift	18=43 (LC 16), 19=21 (LC 16), 20=23 (LC 16), 21=23 (LC 16), 22=27 (LC 16), 23=13 (LC 16), 25=13 (LC 16), 26=27 (LC 16), 27=23 (LC 16), 28=23 (LC 16), 29=21 (LC 16), 30=43 (LC 16)

Max Grav	1=129 (LC 28), 17=110 (LC 2), 18=242 (LC 34), 19=136 (LC 34), 20=165 (LC 34), 21=159 (LC 2), 22=159 (LC 34), 23=169 (LC 34), 24=155 (LC 27), 25=169 (LC 33), 26=159 (LC 33), 27=159 (LC 2), 28=165 (LC 33), 29=136 (LC 33), 30=242 (LC 33)
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FORCES	(lb) - Maximum Compression/Maximum Tension
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TOP CHORD	1-2=-104/99, 2-3=-87/70, 3-4=-75/67, 4-5=-70/65, 5-7=-63/91, 7-8=-78/118, 8-9=-94/142, 9-10=-94/140, 10-11=-78/117, 11-13=-58/89, 13-14=-40/62, 14-15=-37/35, 15-16=-48/20, 16-17=-63/58
BOT CHORD	1-30=-45/74, 29-30=-46/72, 28-29=-45/73, 27-28=-45/73, 26-27=-45/73, 25-26=-45/73, 24-25=-45/72, 23-24=-45/72, 22-23=-45/73, 21-22=-45/73, 20-21=-45/73, 19-20=-45/73, 18-19=-46/72, 17-18=-45/74
WEBS	9-24=-101/28, 8-25=-127/57, 7-26=-120/51, 5-27=-120/47, 4-28=-123/48, 3-29=-106/42, 10-23=-127/57, 11-22=-120/51, 13-21=-120/47, 14-20=-123/48, 15-19=-106/42, 16-18=-175/80, 2-30=-175/79

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=6.0psf; h=30ft; B=45ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-0-0 to 3-1-8, Interior (1) 3-1-8 to 15-1-8, Exterior(2R) 15-1-8 to 18-1-13, Interior (1) 18-1-13 to 30-3-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=5.0 psf; Pf=3.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.

- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 13 lb uplift at joint 25, 27 lb uplift at joint 26, 23 lb uplift at joint 27, 23 lb uplift at joint 28, 21 lb uplift at joint 29, 13 lb uplift at joint 23, 27 lb uplift at joint 22, 23 lb uplift at joint 21, 23 lb uplift at joint 20, 21 lb uplift at joint 19, 43 lb uplift at joint 18 and 43 lb uplift at joint 30.
- Non Standard bearing condition. Review required.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 16,2024

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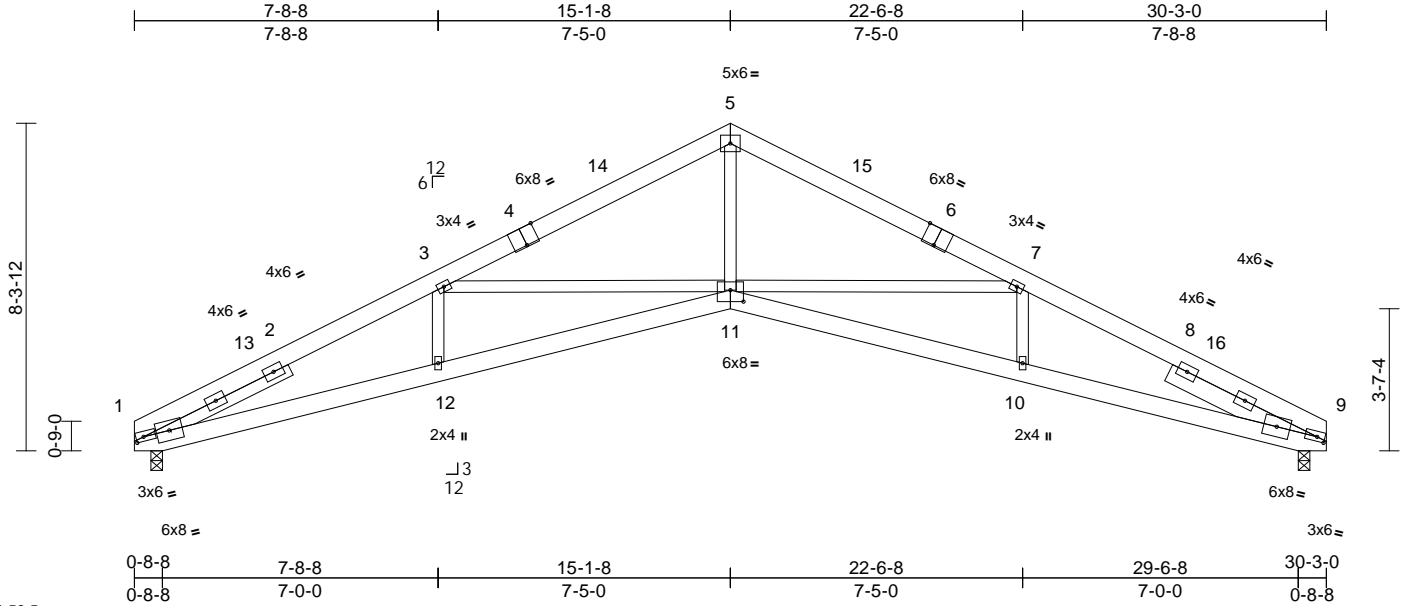
Job	Truss	Truss Type	Qty	Ply	Job Reference (optional)
4027848	A05	Scissor	21	1	I66869280

Builders FirstSource (Villa Rica), Villa Rica, GA - 30180,

Run: 8.63 S Jul 12 2024 Print: 8.630 S Jul 12 2024 MiTek Industries, Inc. Mon Jul 15 13:39:20

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Scale = 1:58.5

Plate Offsets (X, Y): [1:0-4-1,0-3-0], [1:0-2-5,0-1-5], [4:0-4-0,Edge], [6:0-4-0,Edge], [9:0-8-11,0-3-0], [9:0-2-5,0-1-5], [11:0-4-0,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.47	Vert(LL)	-0.18	11-12	>999	360	MT20	244/190
Snow (Pf/Pg)	3.9/5.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.38	11-12	>959	240		
TCDL	10.0	Rep Stress Incr	YES	WB	0.76	Horz(CT)	0.27	9	n/a	n/a		
BCLL	0.0 *	Code	IBC2018/TPI2014	Matrix-S								
BCDL	10.0											
Weight: 202 lb											FT = 20%	

#### LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2
WEBS	2x4 SP No.2
SLIDER	Left 2x4 SP No.2 -- 4-1-3, Right 2x6 SP No.2 -- 4-1-3

#### BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-7-5 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size)	1=0-3-8, 9=0-3-8
Max Horiz	1=109 (LC 15)
Max Uplift	1=-78 (LC 16), 9=-78 (LC 16)
Max Grav	1=1198 (LC 2), 9=1198 (LC 2)

#### FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-3=-3387/202, 3-5=-2523/143, 5-7=-2523/148, 7-9=-3391/201
BOT CHORD	1-12=-122/2966, 11-12=-125/2976, 10-11=-124/2979, 9-10=-121/2969
WEBS	5-11=0/1697, 7-11=-780/154, 7-10=0/300, 3-11=-779/155, 3-12=0/301

#### NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=4.2psf; BCDL=6.0psf; h=30ft; B=45ft; L=30ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) 0-1-12 to 3-2-1, Interior (1) 3-2-1 to 15-1-8, Exterior(2R) 15-1-8 to 18-1-13, Interior (1) 18-1-13 to 30-1-4 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

- TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pg=5.0 psf; Pf=3.8 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SP No.2 crushing capacity of 565 psi.
- Bearing at joint(s) 1, 9 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 1 and 78 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



July 16,2024

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

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

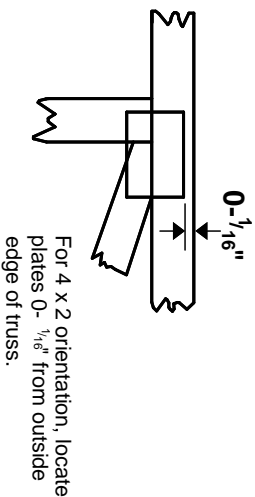
**MiTek®**

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



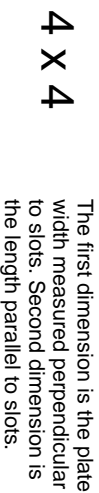
## Symbols

### PLATE LOCATION AND ORIENTATION



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

### PLATE SIZE



### LATERAL BRACING LOCATION



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

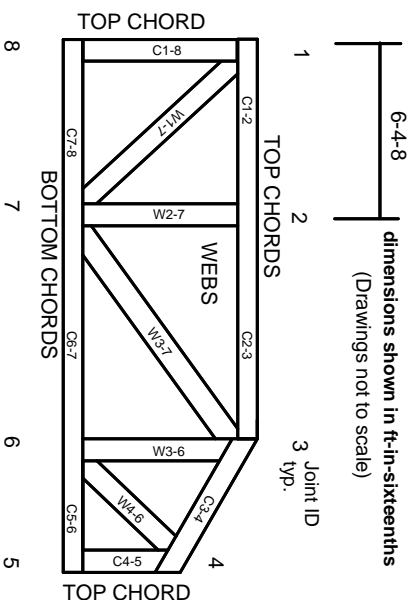
### BEARING



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

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

## Numbering System



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

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

## Product Code Approvals

ICC-ES Reports:  
ESR-1988, ESR-2362, ESR-2685, ESR-3282  
ESR-4722, ESL-1388

## Design General Notes

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

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

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# MITek®

MITek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

## General Safety Notes

**Failure to Follow Could Cause Property Damage or Personal Injury**

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