



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

RE: 25249 - PAYNE RES. / CASON BUILDERS

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

Site Information:

Customer Info: 84 LUMBER Project Name: PAYNE RES Model: 000
Lot/Block: 000 Subdivision: 000
Address: 000, 000
City: 000 State: 000

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: License #:
Address:
City: State:

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

Design Code: FRC2020/TPI2014 Design Program: MiTek 20/20 8.4
Wind Code: ASCE 7-16 Wind Speed: 140 mph
Roof Load: 37.0 psf Floor Load: N/A psf

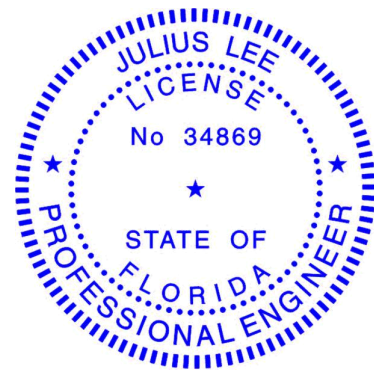
This package includes 5 individual, Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Truss Name	Date
1	T30478725	CAP1	5/3/23
2	T30478726	CAP2	5/3/23
3	T30478727	CAP3	5/3/23
4	T30478728	T1	5/3/23
5	T30478729	T2	5/3/23

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

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

Truss Design Engineer's Name: Lee, Julius
My license renewal date for the state of Florida is February 28, 2025.



Julius Lee PE No. 34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

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.

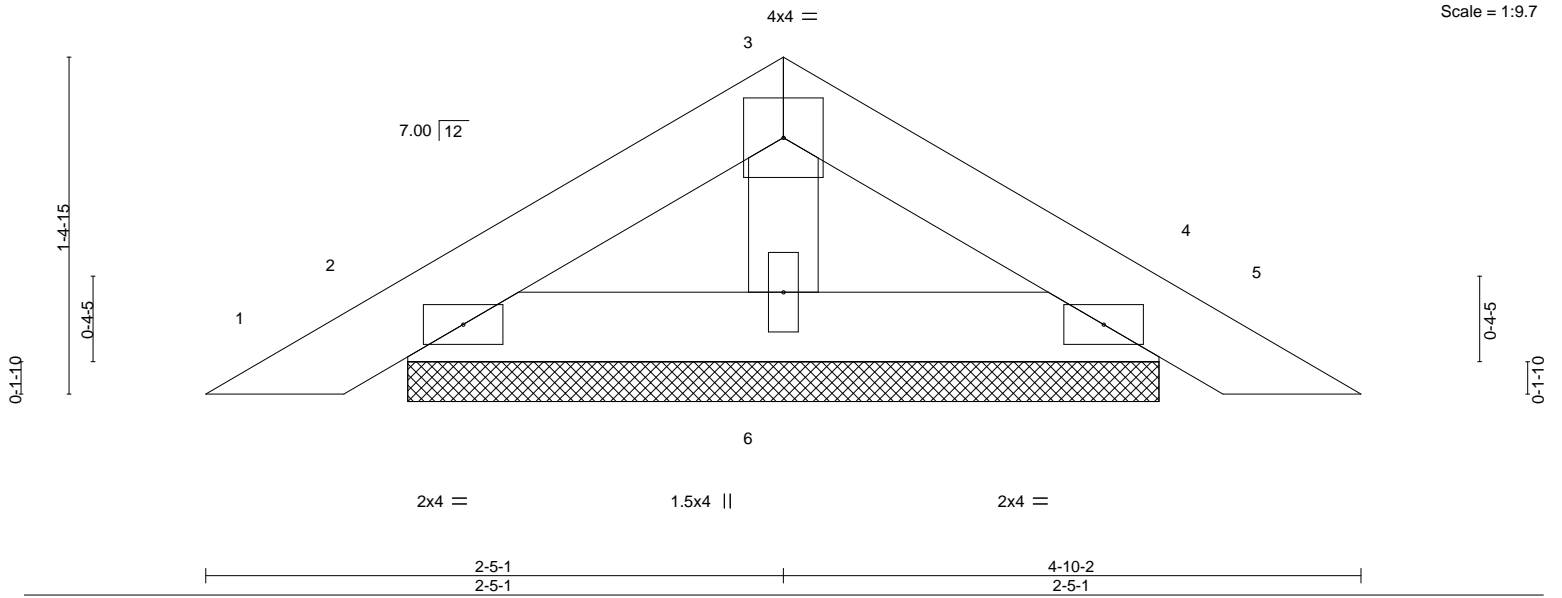
May 3, 2023

Job 25249	Truss CAP1	Truss Type Piggyback	Qty 1	Ply 1	PAYNE RES. / CASON BUILDERS Job Reference (optional)	T30478725
--------------	---------------	-------------------------	----------	----------	---	-----------

Duley Truss, Dunnellon, FL - 34430,

8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:22 2023 Page 1

ID:LWOUBsDNwCbVNagGiDIH2HzSBiP-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f
4-10-2
4-10-2



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.05	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.02	Vert(LL) 0.00 4 n/r 120		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.02	Vert(CT) 0.00 4 n/r 120		
BCDL 10.0	Rep Stress Incr YES	Matrix-P	Horz(CT) 0.00 4 n/a n/a		
	Code FRC2020/TPI2014			Weight: 14 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2D
BOT CHORD 2x4 SP No.2D
WEBS 2x4 SP No.3

BRACING-

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

REACTIONS.

(size) 2=3-1-13, 4=3-1-13, 6=3-1-13
Max Horz 2=-41(LC 10)
Max Uplift 2=-78(LC 12), 4=-78(LC 12)
Max Grav 2=96(LC 1), 4=96(LC 1), 6=102(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) 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
- Gable requires continuous bottom chord bearing.
- 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 78 lb uplift at joint 2 and 78 lb uplift at joint 4.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

May 3, 2023

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

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

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PAYNE RES. / CASON BUILDERS	T30478726
25249	CAP2	Piggyback	11	1	Job Reference (optional)	

Duley Truss, Dunnellon, FL - 34430,

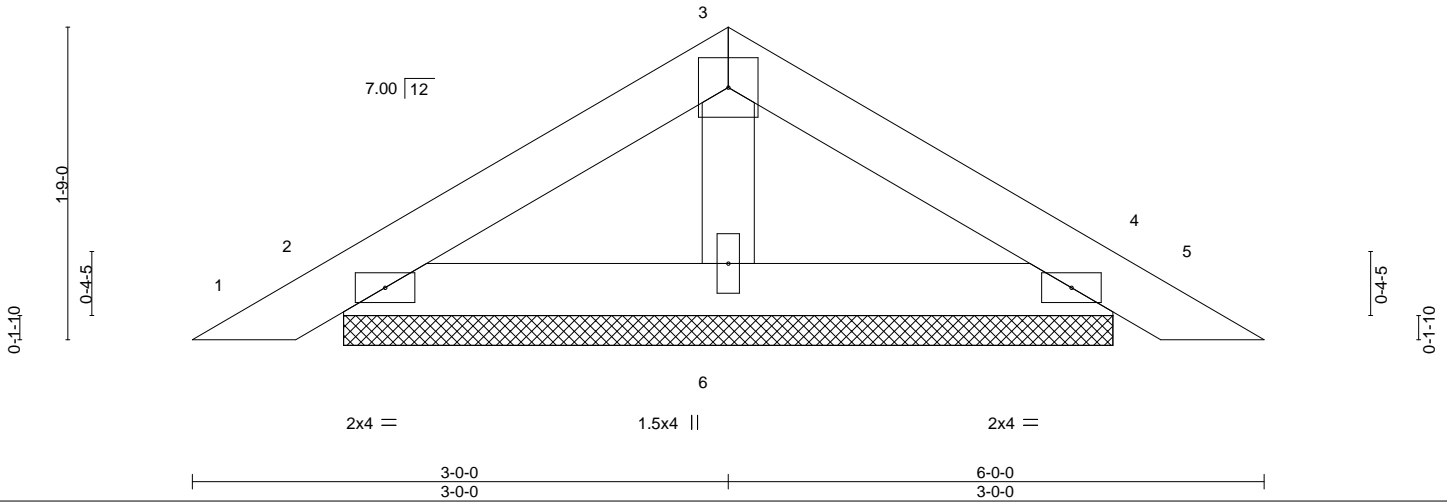
8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:23 2023 Page 1

ID:LWOUbsDNwCbVNagGiDIH2HzSBiP-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCdoi7J4zJC?f

6-0-0
6-0-0

Scale = 1:12.9

4x4 =



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0 Plate Grip DOL 1.25	TC 0.11	Vert(LL) 0.00	5	n/r	120	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.04	Vert(CT) 0.00	5	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.03	Horz(CT) 0.00	4	n/a	n/a		
BCDL 10.0	Code FRC2020/TPI2014	Matrix-P					Weight: 18 lb	FT = 20%

LUMBER-

TOP CHORD 2x4 SP No.2D
BOT CHORD 2x4 SP No.2D
WEBS 2x4 SP No.3

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=4-3-11, 4=4-3-11, 6=4-3-11
Max Horz 2=-52(LC 10)
Max Uplift 2=-89(LC 12), 4=-89(LC 12), 6=-10(LC 12)
Max Grav 2=117(LC 1), 4=117(LC 1), 6=145(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) 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
- Gable requires continuous bottom chord bearing.
- 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 2, 89 lb uplift at joint 4 and 10 lb uplift at joint 6.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

May 3, 2023

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

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

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

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



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PAYNE RES. / CASON BUILDERS	T30478727
25249	CAP3	Piggyback	1	1	Job Reference (optional)	

Duley Truss, Dunnellon, FL - 34430,

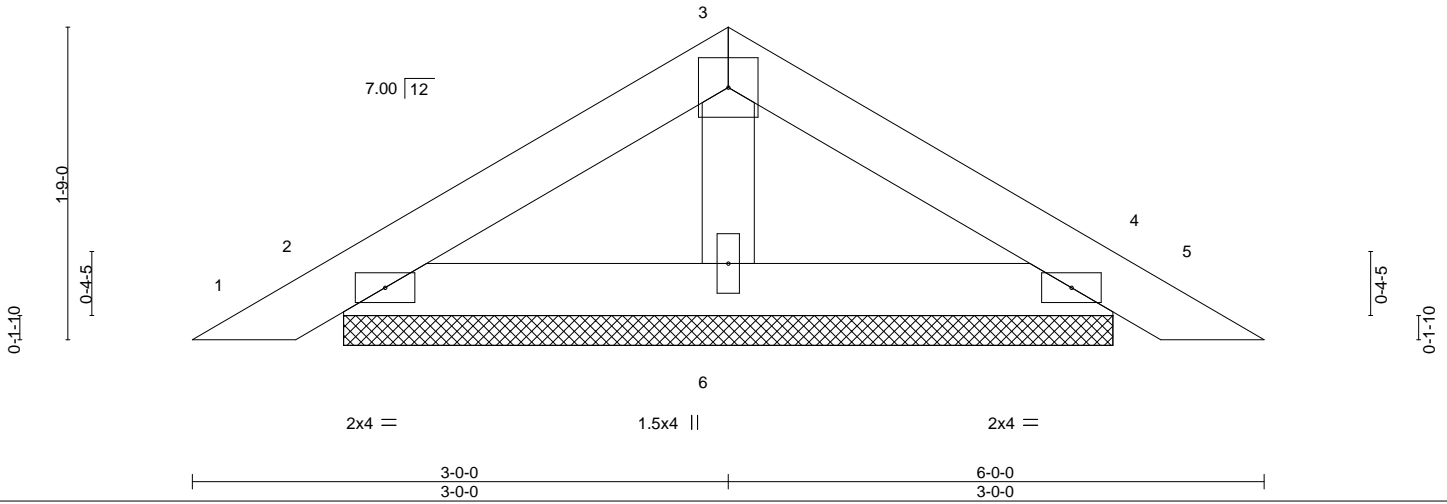
8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:24 2023 Page 1

ID:LWOUbsDNwCbVNagGiDIH2HzSBiP-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

6-0-0
6-0-0

Scale = 1:12.9

4x4 =



LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.11	Vert(LL)	0.00	5	n/r	MT20	244/190
TCDL 7.0	Plate Grip DOL 1.25	BC 0.04	Vert(CT)	0.00	5	n/r		
BCLL 0.0 *	Lumber DOL 1.25	WB 0.03	Horz(CT)	0.00	4	n/a		
BCDL 10.0	Rep Stress Incr YES	Matrix-P					Weight: 18 lb	FT = 20%
	Code FRC2020/TPI2014							

LUMBER-

TOP CHORD 2x4 SP No.2D
BOT CHORD 2x4 SP No.2D
WEBS 2x4 SP No.3

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=4-3-11, 4=4-3-11, 6=4-3-11
Max Horz 2=-52(LC 10)
Max Uplift 2=-89(LC 12), 4=-89(LC 12), 6=-10(LC 12)
Max Grav 2=117(LC 1), 4=117(LC 1), 6=145(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) 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
- Gable requires continuous bottom chord bearing.
- 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 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 89 lb uplift at joint 2, 89 lb uplift at joint 4 and 10 lb uplift at joint 6.
- See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

May 3, 2023

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

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

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

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



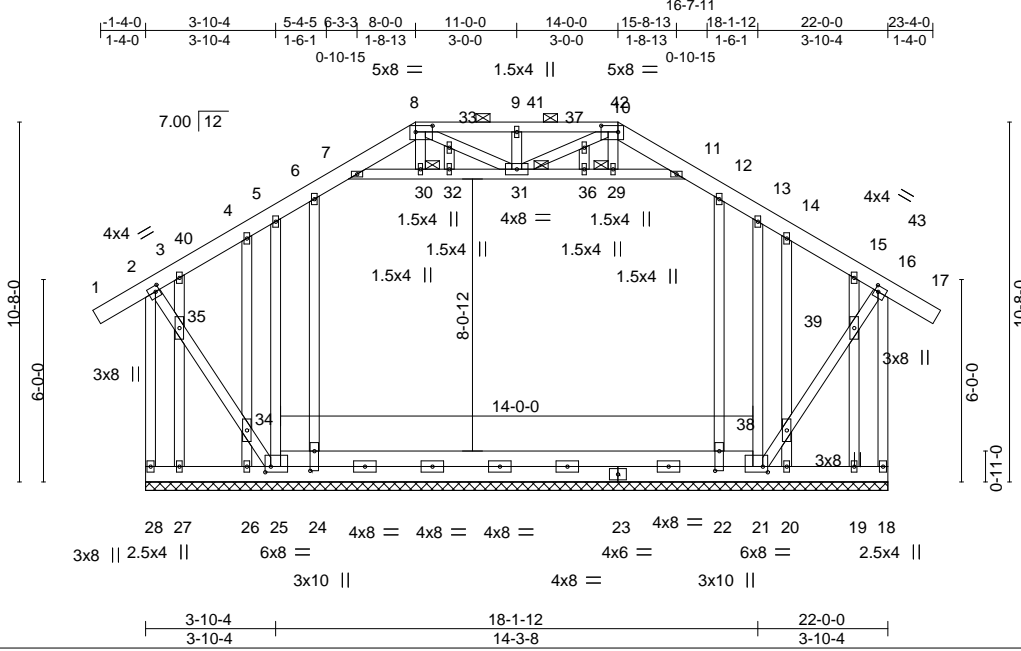
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PAYNE RES. / CASON BUILDERS	T30478728
25249	T1	GABLE	2	1	Job Reference (optional)	

Duley Truss, Dunnellon, FL - 34430,

8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:26 2023 Page 1

ID:LWOUbsDNwCbVNagGiDIH2HzSBiP-RIC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC?F



Scale = 1:168.3

Plate Offsets (X,Y)--	[2:0-1-8,0-2-0], [8:0-6-0,0-2-4], [10:0-6-0,0-2-4], [16:0-1-4,0-2-0], [21:0-1-12,0-2-0], [22:0-7-0,0-1-8], [24:0-7-0,0-1-8], [25:0-2-0,0-2-0]
-----------------------	---

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.43	Vert(LL) -0.00	16-17	n/r	120	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.17	Vert(CT) -0.01	16-17	n/r	120		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.59	Horz(CT) -0.00	18	n/a	n/a		
BCDL 10.0	Code FRC2020/TPI2014	Matrix-S					Weight: 290 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.1 *Except* 8-10: 2x4 SP No.2D	TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 8-10.
BOT CHORD 2x6 SP No.1	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3	JOINTS 1 Brace at Jt(s): 29, 30, 31
OTHERS 2x4 SP No.3	

REACTIONS. All bearings 22-0-0.
 (lb) - Max Horz 28=-482(LC 10)
 Max Uplift All uplift 100 lb or less at joint(s) 27, 19 except 28=-289(LC 8), 25=-916(LC 19), 21=-965(LC 18), 18=-270(LC 9)
 Max Grav All reactions 250 lb or less at joint(s) 21, 26, 27, 20, 19 except 28=456(LC 19), 18=437(LC 18), 24=1403(LC 18), 22=1361(LC 20)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
 TOP CHORD 6-7=-293/299, 7-8=-594/305, 8-9=-696/405, 9-10=-696/404, 10-11=-594/306, 11-12=-293/299, 2-28=-423/336, 16-18=-404/312
 BOT CHORD 27-28=-448/367, 26-27=-448/367, 25-26=-448/367, 24-25=-201/351, 22-24=-238/283, 21-22=-201/351
 WEBS 7-30=-79/394, 30-32=-77/396, 31-32=-77/396, 31-36=-88/396, 29-36=-88/396, 11-29=-90/394, 2-35=-240/383, 34-35=-244/403, 25-34=-246/400, 21-38=-221/381, 38-39=-218/384, 16-39=-216/365, 6-24=-504/135, 12-22=-504/126

- NOTES-**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2E) -1-5-6 to 1-6-10, Interior(1) 1-6-10 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior(1) 12-2-15 to 14-0-0, Exterior(2R) 14-0-0 to 18-1-12, Interior(1) 18-1-12 to 23-5-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
 - Provide adequate drainage to prevent water ponding.
 - All plates are 2x4 MT20 unless otherwise indicated.
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2-0-0 oc.
 - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
 - Ceiling dead load (5.0 psf) on member(s). 6-7, 11-12, 7-30, 30-32, 31-32, 31-36, 29-36, 11-29; Wall dead load (5.0psf) on member(s).6-24, 12-22

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
 MiTek Inc. DBA MiTek USA FL Cert 6634
 16023 Swingley Ridge Rd. Chesterfield, MO 63017
 Date:

May 3, 2023

Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	PAYNE RES. / CASON BUILDERS	T30478728
25249	T1	GABLE	2	1	Job Reference (optional)	

Duley Truss, Dunnellon, FL - 34430,

8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:26 2023 Page 2
ID:LWOUBsDNwCbVNagGiDIHHzSBiP-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

NOTES-

- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 27, 19 except (jt=lb) 28=289, 25=916, 21=965, 18=270.
- 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 13) Attic room checked for L/360 deflection.

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
MITek Inc. DBA MITek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

May 3, 2023

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

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

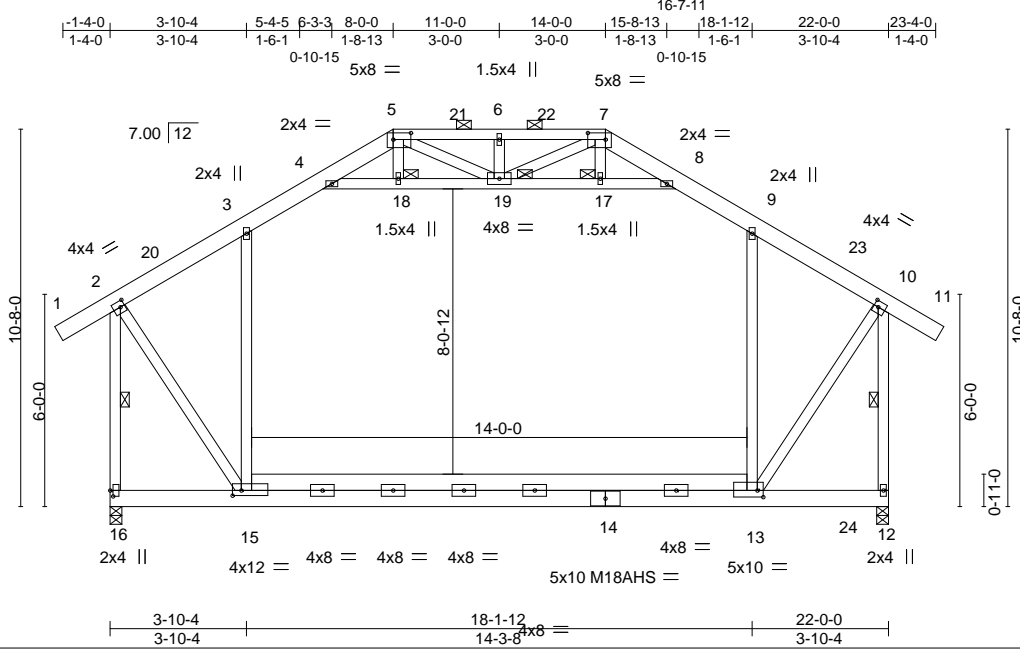
Job	Truss	Truss Type	Qty	Ply	PAYNE RES. / CASON BUILDERS	T30478729
25249	T2	ATTIC	11	1		

Duley Truss, Dunnellon, FL - 34430,

8.430 s Jan 6 2022 MiTek Industries, Inc. Wed May 3 14:41:28 2023 Page 1

ID:LWOUbsDNwCbVNagGiDIH2HzSBiP-RiC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC7f

Job Reference (optional)



Scale = 1:65.1

Plate Offsets (X,Y)-- [2:0-1-8,0-2-0], [5:0-6-0,0-2-4], [7:0-6-0,0-2-4], [10:0-1-8,0-2-0], [13:0-2-0,0-2-4], [15:0-3-0,0-1-12], [16:0-2-0,0-1-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL 1.25	TC 0.47	Vert(LL) -0.30	13-15	>862	240	MT20	244/190
TCDL 7.0	Lumber DOL 1.25	BC 0.91	Vert(CT) -0.42	13-15	>623	180	M18AHS	186/179
BCLL 0.0 *	Rep Stress Incr YES	WB 0.56	Horz(CT) 0.00	12	n/a	n/a		
BCDL 10.0	Code FRC2020/TPI2014	Matrix-MS	Attic -0.27	13-15	627	360		
							Weight: 229 lb	FT = 20%

LUMBER-

TOP CHORD 2x6 SP No.1 *Except*
5-7: 2x4 SP No.2D
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.3

BRACING-

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 5-7.
BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.
WEBS 1 Row at midpt 2-16, 10-12
JOINTS 1 Brace at Jt(s): 17, 18, 19

REACTIONS.

(size) 16=0-4-0, 12=0-4-0
Max Horz 16=-484(LC 10)
Max Uplift 16=-232(LC 12), 12=-232(LC 12)
Max Grav 16=1476(LC 18), 12=1507(LC 19)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD 2-3=-904/222, 3-4=-835/329, 4-5=-598/372, 5-6=-701/455, 6-7=-701/455, 7-8=-598/371, 8-9=-833/329, 9-10=-907/222, 2-16=-1748/337, 10-12=-1754/336
BOT CHORD 15-16=-458/376, 13-15=-177/839
WEBS 3-15=-382/208, 9-13=-382/208, 4-18=-633/111, 18-19=-627/114, 17-19=-616/114, 8-17=-623/111, 2-15=-181/1485, 10-13=-181/1484, 7-19=-212/288, 5-19=-212/296

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=108mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp C; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2E) -1-5-6 to 1-6-10, Interior(1) 1-6-10 to 8-0-0, Exterior(2R) 8-0-0 to 12-2-15, Interior(1) 12-2-15 to 14-0-0, Exterior(2R) 14-0-0 to 18-1-12, Interior(1) 18-1-12 to 23-5-6 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Ceiling dead load (5.0 psf) on member(s). 3-4, 8-9, 4-18, 18-19, 17-19, 8-17; Wall dead load (5.0psf) on member(s). 3-15, 9-13
- Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 13-15
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=232, 12=232.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Attic room checked for L/360 deflection.

This item has been electronically signed and sealed by Lee, Julius, PE using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Julius Lee PE No.34869
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

May 3, 2023

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

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

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

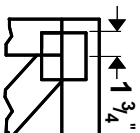
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



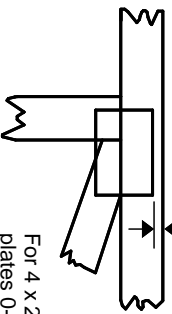
16023 Swingley Ridge Rd
Chesterfield, MO 63017

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- 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

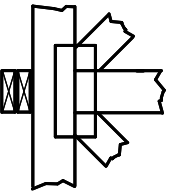
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

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



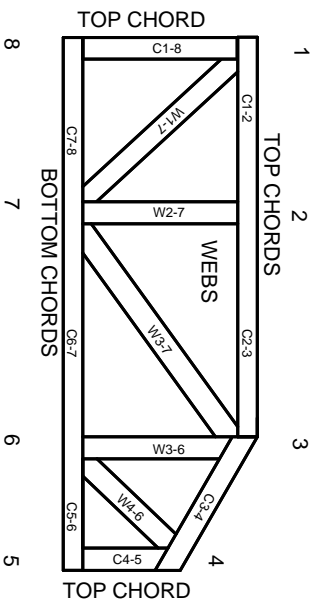
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

© 2012 MITek® All Rights Reserved



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 T or 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/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 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/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.



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