



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

RE: 4552247 - GILCHRIST RES.

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

Site Information:

Customer Info: G. BUZBEE, INC. Project Name: Gilchrist Res. Model: Custom
Lot/Block: N/A Subdivision: N/A
Address: 285 Riverside Ave., N/A
City: Columbia Cty State: FL

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: FBC2023/TPI2014 Design Program: MiTek 20/20 8.8
Wind Code: ASCE 7-22 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 9 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.

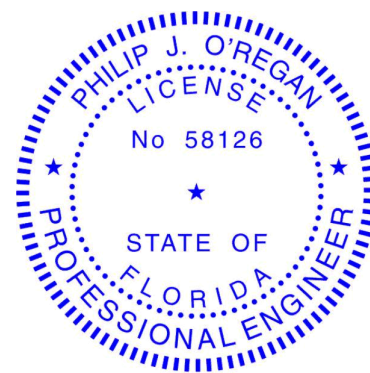
No.	Seal#	Truss Name	Date
1	T37080898	CJ01	4/22/25
2	T37080899	CJ02	4/22/25
3	T37080900	CJ03	4/22/25
4	T37080901	CJ04	4/22/25
5	T37080902	EJ01	4/22/25
6	T37080903	HJ04	4/22/25
7	T37080904	HJ05	4/22/25
8	T37080905	T01	4/22/25
9	T37080906	T02	4/22/25



This item has been digitally signed and sealed by ORegan, Philip, PE on the date adjacent to the seal.
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 Builders FirstSource-Lake City, FL.

Truss Design Engineer's Name: ORegan, Philip
My license renewal date for the state of Florida is February 28, 2027.



Philip J. O'Regan PE No.58126
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.

April 22, 2025

ORegan, Philip

1 of 1

Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080898
4552247	CJ01	Flat	3	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:07 2025 Page 1

ID:2pg3n5BlmDagLzdv7fOdX5zOSQs-ZxsWu_APWpjXTFa6JW06TGHueuYsmHhYmFUOGhzOQKQ

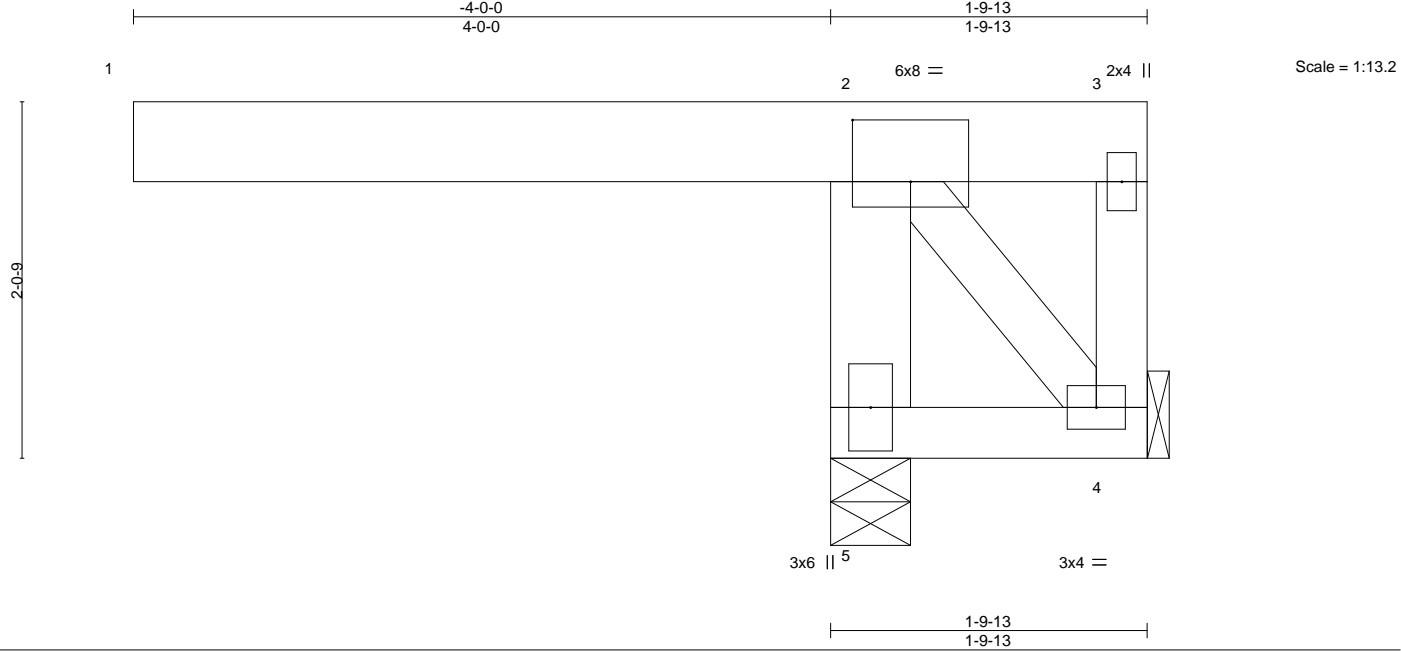


Plate Offsets (X,Y)--		[2:0-4-0,0-4-4]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.69
TCDL 10.0	Lumber DOL	1.25	BC 0.02
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.01
BCDL 10.0	Code	FBC2023/TPI2014	Matrix-MP
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.00 5 >999 240
			Vert(CT) -0.00 5 >999 180
			Horz(CT) 0.00 4 n/a n/a
			PLATES GRIP
			MT20 244/190
			Weight: 24 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 1-9-13 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 2-5: 2x6 SP No.2	

REACTIONS. (size) 5=0-5-8, 4=Mechanical
Max Horz 5=-45(LC 10)
Max Uplift 5=-516(LC 8), 4=-370(LC 1)
Max Grav 5=795(LC 1), 4=282(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-781/1012, 3-4=-483/384

- NOTES-**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCdL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 4) Provide adequate drainage to prevent water ponding.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) * 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.
 - 7) Refer to girder(s) for truss to truss connections.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=516, 4=370.
 - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 4-5=-20

This item has been digitally signed and sealed by ORegan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080899
4552247	CJ02	Monopitch	2	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:08 2025 Page 1

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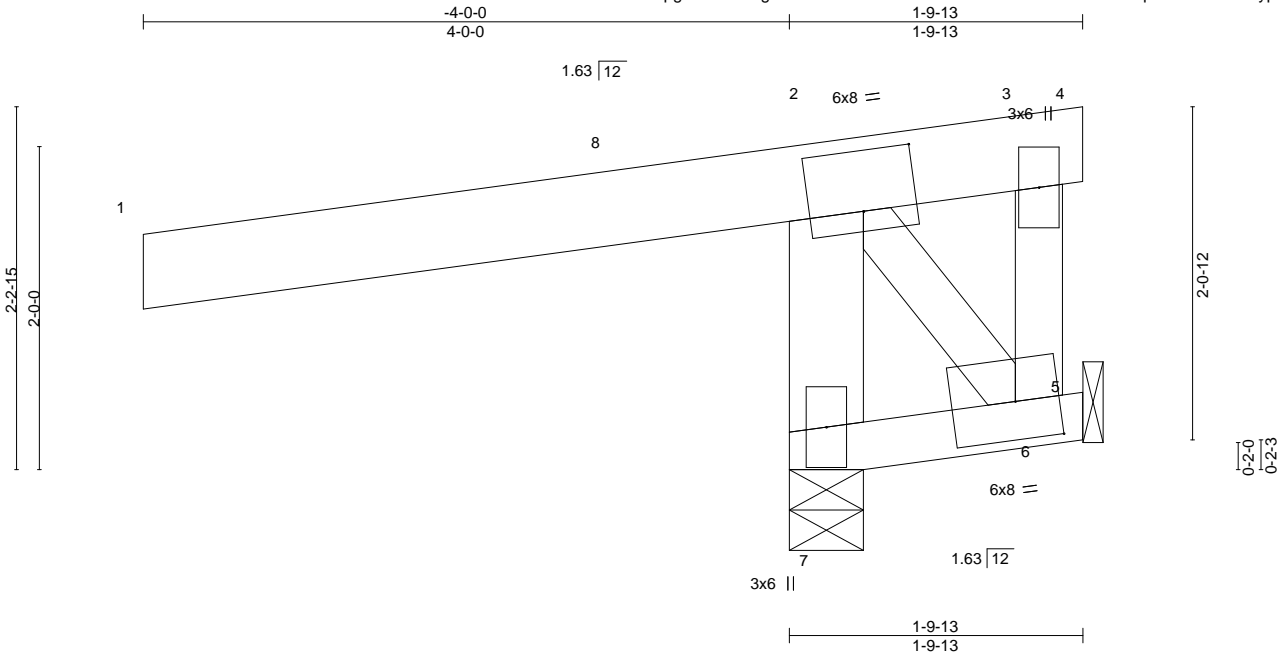


Plate Offsets (X,Y)--		[2:0-4-0,0-4-8], [6:0-3-4,0-2-14]								
LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.91	Vert(LL)	-0.00	7	>999	240	MT20	244/190
TCDL 10.0	Lumber DOL	1.25	BC 0.02	Vert(CT)	-0.00	7	>999	180		
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.03	Horz(CT)	-0.00	6	n/a	n/a		
BCDL 10.0	Code FBC2023/TPI2014		Matrix-MP						Weight: 24 lb	FT = 20%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-9-13 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS.

(size) 7=0-5-8, 6=Mechanical
Max Horz 7=49(LC 9)
Max Uplift 7=-500(LC 8), 6=-402(LC 1)
Max Grav 7=830(LC 1), 6=263(LC 8)

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

TOP CHORD 2-7=-817/1231, 3-6=-769/421

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TC DL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -4-0-0 to -1-0-0, Zone1 -1-0-0 to 1-9-13 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=500, 6=402.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 3-4=-30(F=-10), 5-7=-20

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

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

Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080900
4552247	CJ03	Flat	1	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:08 2025 Page 1

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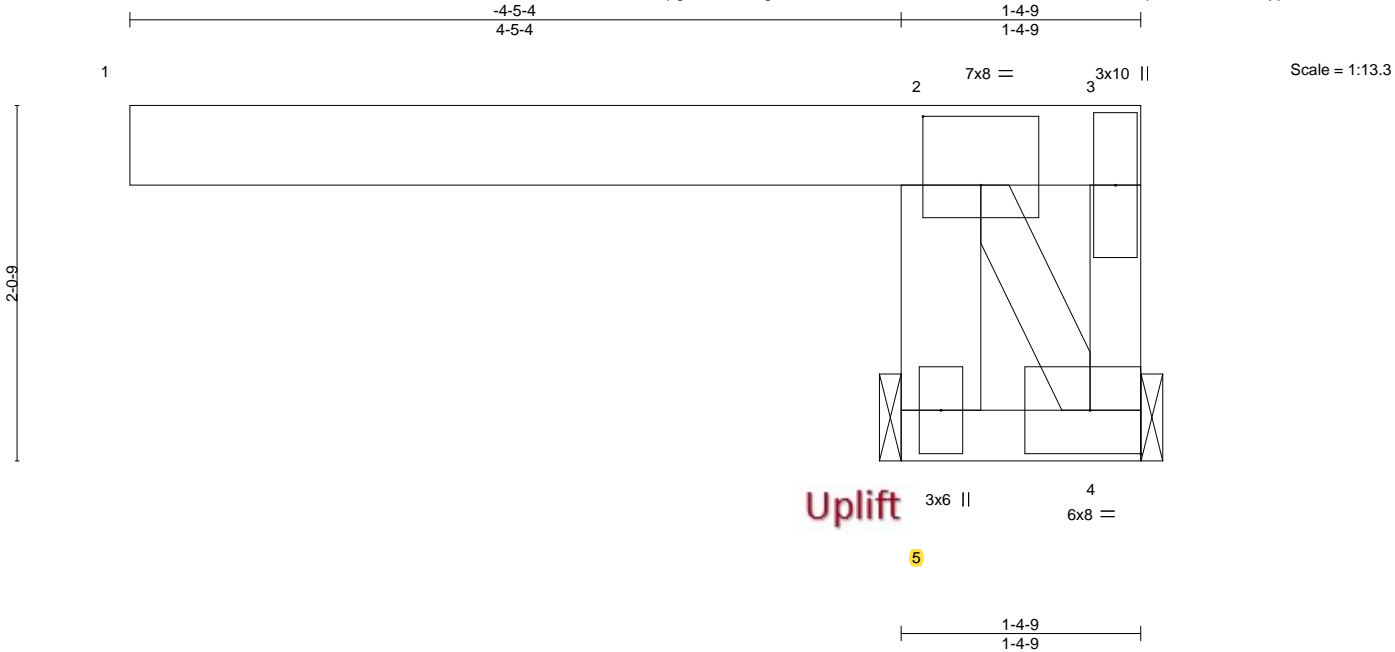


Plate Offsets (X,Y)--		[2:0-4-0,0-4-12]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.87
TCDL 10.0	Lumber DOL	1.25	BC 0.01
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.02
BCDL 10.0	Code	FBC2023/TPI2014	Matrix-MP
			DEFL.
			in (loc) l/defl L/d
			Vert(LL) -0.00 5 >999 240
			Vert(CT) -0.00 5 >999 180
			Horz(CT) 0.00 4 n/a n/a
			PLATES GRIP
			MT20 244/190
			Weight: 23 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 1-4-9 oc purlins, except end verticals.
BOT CHORD 2x4 SP No.2	BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 2-5: 2x6 SP No.2	

REACTIONS. (size) 5=Mechanical, 4=Mechanical
Max Horz 5=-45(LC 10)
Max Uplift 5=-796(LC 8), 4=-714(LC 1)
Max Grav 5=1131(LC 1), 4=523(LC 8)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-1121/1500, 3-4=-947/724

- NOTES-
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 zone; 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
 - 3) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 4) Provide adequate drainage to prevent water ponding.
 - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 6) * 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.
 - 7) Refer to girder(s) for truss to truss connections.
 - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=796, 4=714.
 - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 4-5=-20

This item has been digitally signed and sealed by O'Regan, Philip, PE on the date indicated here. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

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

Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080901
4552247	CJ04	Roof Special	2	1	Job Reference (optional)	

Builders FirstSource (Lake City,FL),

Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:08 2025 Page 1

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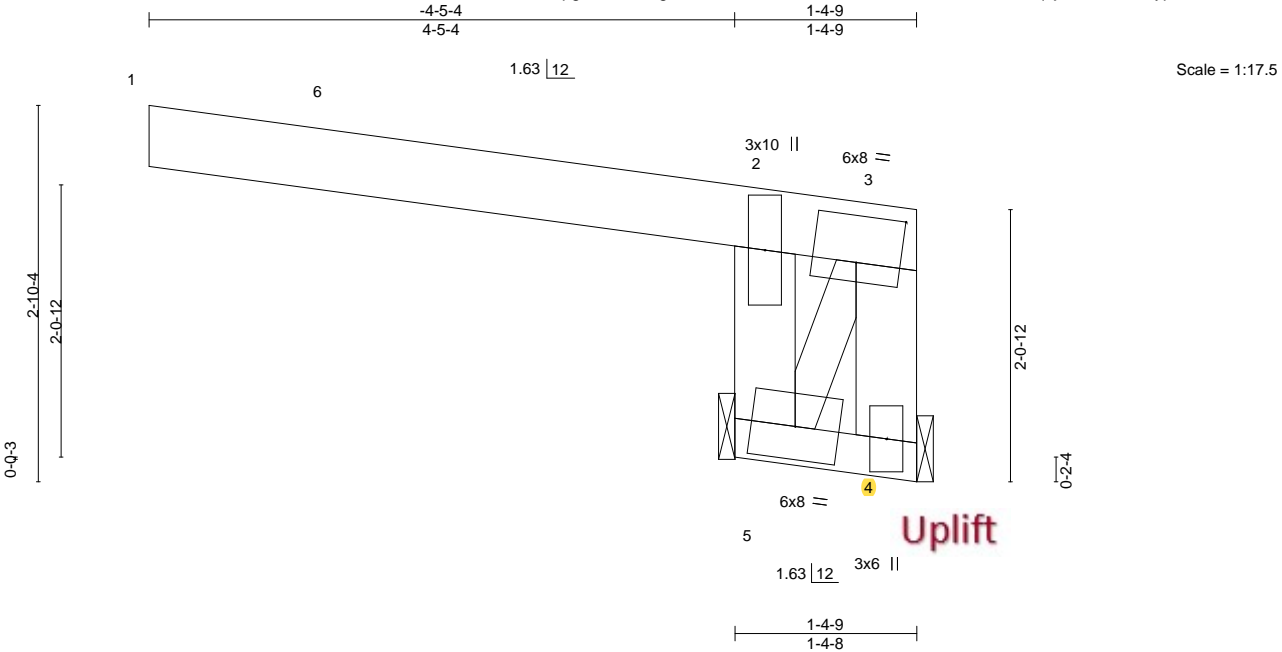


Plate Offsets (X,Y)--		[3:0-4-0,0-4-4]									
LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL. in (loc) l/defl L/d			PLATES GRIP		
TCLL	20.0	Plate Grip DOL	1.25	TC	0.92	Vert(LL)	-0.00	5	>999	240	MT20 244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.01	Vert(CT)	-0.00	5	>999	180	
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.04	Horz(CT)	0.00	4	n/a	n/a	
BCDL	10.0	Code FBC2023/TPI2014		Matrix-MP							Weight: 24 lb FT = 20%

LUMBER-

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

BRACING-

TOP CHORD Structural wood sheathing directly applied or 1-4-9 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=Mechanical
Max Horz 5=-62(LC 10)
Max Uplift 4=-787(LC 1), 5=-641(LC 8)
Max Grav 4=445(LC 8), 5=1197(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-1187/1638, 3-4=-1188/796

NOTES-

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TC DL=4.2psf; BC DL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone2 zone; 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
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=787, 5=641.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 4-5=-20

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16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

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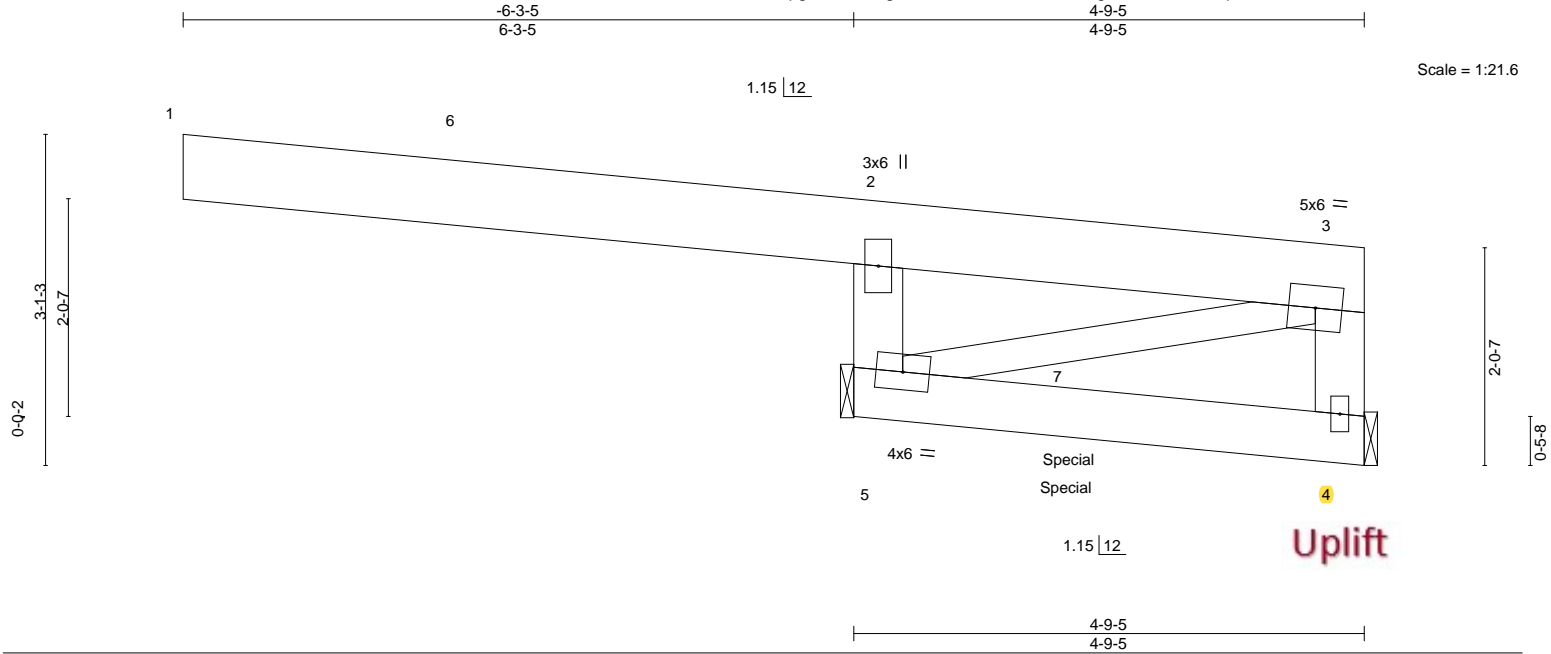
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall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

MiTek®

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Chesterfield, MO 63017
314.434.1200 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080903
4552247	HJ04	Roof Special Girder	2	2	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055, 8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:09 2025 Page 1
ID:2pg3n5BlmDagLzdV7fOdX5zOSQs-VJ_GJgCf1QzFiYkUQxqaYhMMzh1sEBGrDZzVLazOQKO



LOADING (psf)	SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plate Grip DOL	1.25	TC 0.19	Vert(LL)	-0.06	4-5	>898	240	MT20
TCDL 10.0	Lumber DOL	1.25	BC 0.89	Vert(CT)	0.07	4-5	>714	180	244/190
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.01	Horz(CT)	0.00	4	n/a	n/a	
BCDL 10.0	Code FBC2023/TPI2014		Matrix-MP						
								Weight: 112 lb	FT = 20%

LUMBER-
TOP CHORD 2x8 SP 2400F 2.0E
BOT CHORD 2x6 SP No.2
WEBS 2x6 SP No.2 *Except*
3-5: 2x4 SP No.3

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-9-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. (size) 4=Mechanical, 5=Mechanical
Max Horz 5=-69(LC 6)
Max Uplift 4=-801(LC 25), 5=-612(LC 4)
Max Grav 4=478(LC 32), 5=1095(LC 44)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-5=-949/417

NOTES-

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs 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.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) interior zone; end vertical left exposed; porch left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- 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.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 4=801, 5=612.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 467 lb down and 815 lb up at 2-0-7, and 547 lb down and 743 lb up at 2-0-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 4-5=-20

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Philip J. O'Regan PE No.58126
MiTek Inc. DBA MiTek USA FL Cert 6634
16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.
4552247	HJ04	Roof Special Girder	2	2	T37080903
					Job Reference (optional)

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 7=580(F=277, B=304)

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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080904
4552247	HJ05	Roof Special Girder	2	2	Job Reference (optional)	

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:10 2025 Page 1

ID:2pg3n5BlmDagLzdv7fOdX5zOSQs-zWYeX0DHok56Kilh_eLp5uvX75UTzeX_SDi3t0zOQKN

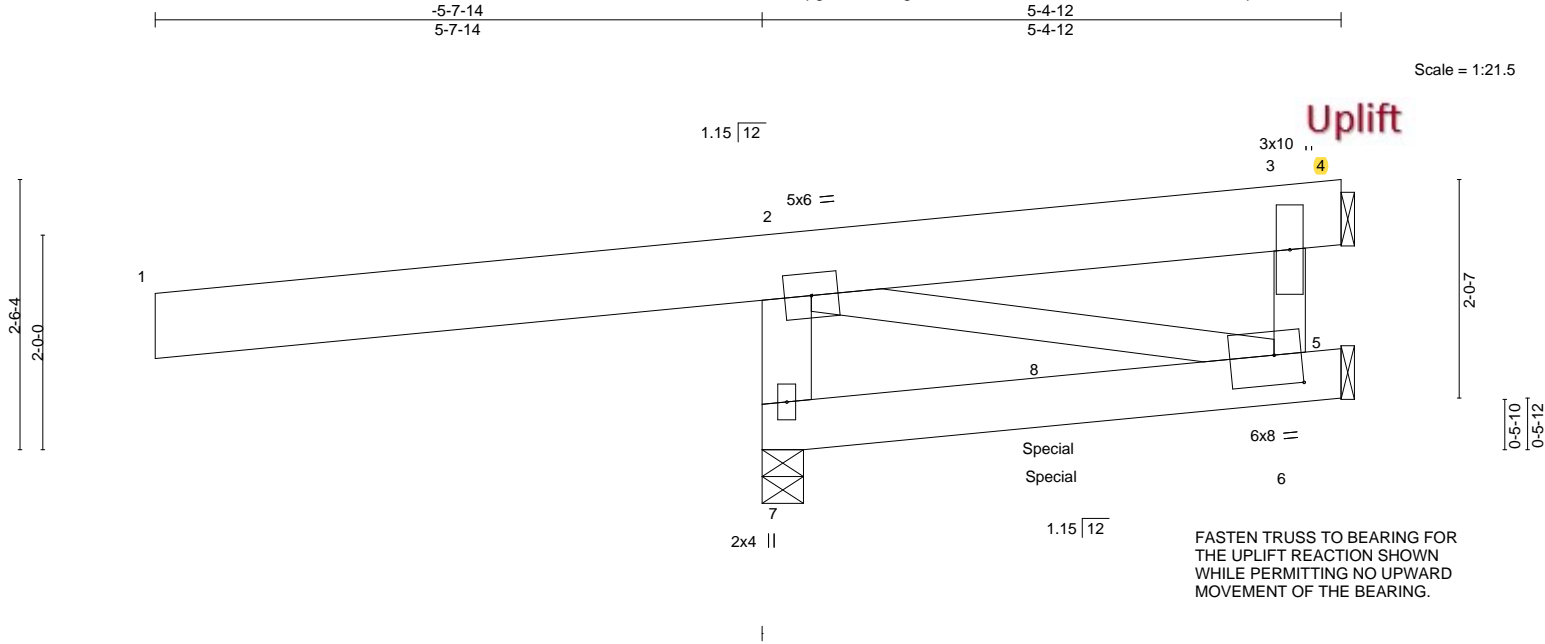


Plate Offsets (X,Y)--		[6:0-3-1,0-3-5]	
LOADING (psf)	SPACING-	2-0-0	CSI.
TCLL 20.0	Plate Grip DOL	1.25	TC 0.16
TCDL 10.0	Lumber DOL	1.25	BC 0.41
BCLL 0.0 *	Rep Stress Incr	NO	WB 0.01
BCDL 10.0	Code	FBC2023/TPI2014	Matrix-MP
		DEFL.	in (loc) l/defl L/d
		Vert(LL)	0.03 6-7 >999 240
		Vert(CT)	0.04 6-7 >999 180
		Horz(CT)	-0.00 4 n/a n/a
		PLATES	GRIP
		MT20	244/190
		Weight: 115 lb	FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x8 SP 2400F 2.0E	TOP CHORD Structural wood sheathing directly applied or 5-4-12 oc purlins, except end verticals.
BOT CHORD 2x6 SP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except* 2-7: 2x6 SP No.2	

REACTIONS. (size) 7=0-4-10, 4=Mechanical, 5=Mechanical
Max Horz 7=51(LC 5)
Max Uplift 7=-571(LC 4), 4=-1141(LC 30), 5=-668(LC 42)
Max Grav 7=837(LC 46), 4=953(LC 42), 5=793(LC 30)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-7=-812/540, 3-6=-1220/1035

- NOTES-
- 1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x8 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
 - 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - 3) Unbalanced roof live loads have been considered for this design.
 - 4) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCCL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - 5) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
 - 7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
 - 8) Refer to girder(s) for truss to truss connections.
 - 9) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=571, 4=1141, 5=668.
 - 11) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
 - 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 249 lb down and 398 lb up at 2-7-14, and 284 lb down and 398 lb up at 2-7-14 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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Date:

April 22,2025

LOAD CASE(S) Standard
Continued on page 2

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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.
4552247	HJ05	Roof Special Girder	2	2	T37080904

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:10 2025 Page 2
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LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-3=-70(F=-10), 3-4=-70(F=-10), 5-7=-20
Concentrated Loads (lb)
Vert: 8=302(F=151, B=151)

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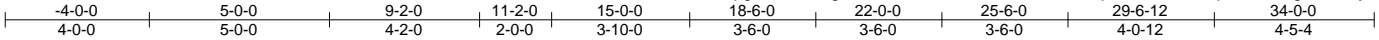
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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.
4552247	T01	Roof Special Girder	2	2	T37080905

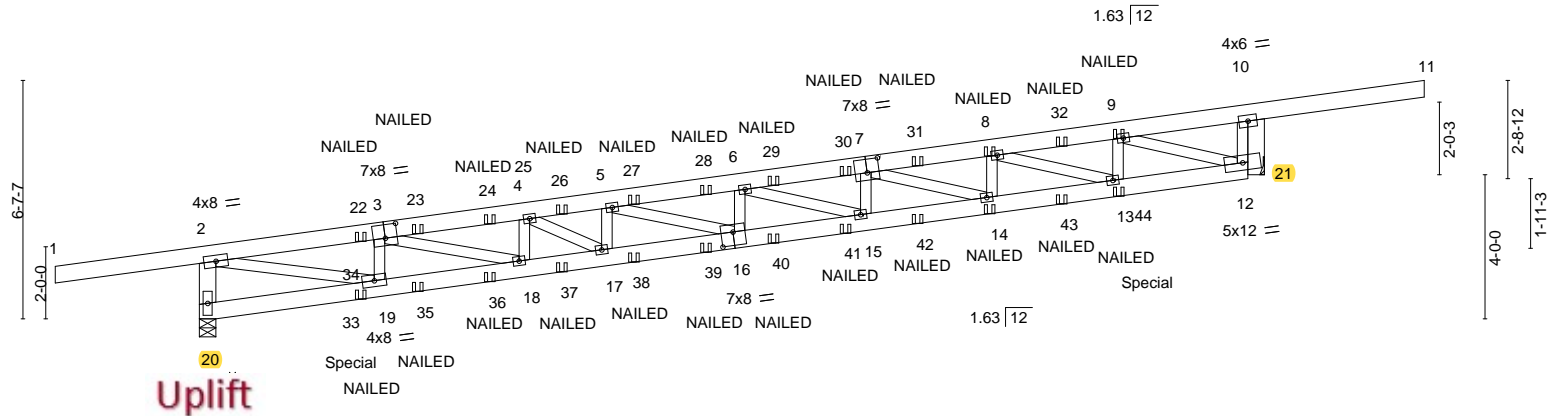
Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:12 2025 Page 1

ID:2pg3n5BlmDagLzdvt7fOdX5zOSQs-vufPxEYKLLqZ0S353OHAIJ_pOv7CRNgHwXB9yvzOQKL



Scale: 3/16"=1'



		5-0-0		9-2-0		11-2-0		15-0-0		18-6-0		22-0-0		25-6-0		29-6-12	
		5-0-0		4-2-0		2-0-0		3-10-0		3-6-0		3-6-0		3-6-0		4-0-12	
Plate Offsets (X,Y)--		[3:0-4-0,0-4-8], [7:0-4-0,0-4-8], [16:0-4-0,0-4-8]															
LOADING (psf)		SPACING-		2-0-0		CSI.		DEFL.		in (loc)		l/defl		L/d		PLATES GRIP	
TCLL 20.0		Plate Grip DOL		1.25		TC 0.43		Vert(LL)		-0.27 16		>999		240		MT20 244/190	
TCDL 10.0		Lumber DOL		1.25		BC 0.52		Vert(CT)		-0.38 16-17		>914		180			
BCLL 0.0 *		Rep Stress Incr		NO		WB 0.73		Horz(CT)		0.06 21		n/a		n/a			
BCDL 10.0		Code FBC2023/TPI2014				Matrix-MS										Weight: 438 lb FT = 20%	

LUMBER-

TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3 *Except*
2-20,10-12: 2x6 SP No.2

BRACING-

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

REACTIONS.

(size) 20=0-5-8, 21=Mechanical
Max Horz 20=138(LC 5)
Max Uplift 20=-1305(LC 4), 21=-794(LC 8)
Max Grav 20=2063(LC 1), 21=1702(LC 45)

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

TOP CHORD 2-20=-1837/1182, 2-3=-4003/2632, 3-4=-5601/3062, 4-5=-6183/3200, 5-6=-6460/3162, 6-7=-6030/2870, 7-8=-4935/2343, 8-9=-3103/1547, 9-10=-531/277, 10-12=-668/1330
BOT CHORD 19-20=-381/323, 18-19=-2758/4000, 17-18=-3166/5579, 16-17=-3279/6163, 15-16=-3235/6442, 14-15=-2927/6009, 13-14=-2391/4923, 12-13=-1576/3078
WEBS 2-19=-2474/3846, 3-19=-761/247, 3-18=-431/1654, 4-18=-618/287, 4-17=-147/668, 5-17=-285/164, 5-16=-234/316, 6-15=-648/320, 7-15=-112/380, 7-14=-1239/559, 8-14=-199/647, 8-13=-1939/845, 9-13=-583/1243, 9-12=-2721/1384, 10-21=-1764/830

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.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 8-14 2x4 - 1 row at 0-7-0 oc, member 9-13 2x4 - 1 row at 0-7-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
- All plates are 3x4 MT20 unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * 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.
- Refer to girder(s) for truss to truss connections.
- Bearing at joint(s) 20 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 100 lb uplift at joint(s) except (jt=lb)

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16023 Swingley Ridge Rd. Chesterfield, MO 63017
Date:

April 22,2025

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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.
4552247	T01	Roof Special Girder	2	2	T37080905

Builders FirstSource (Lake City,FL),Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:12 2025 Page 2
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- NOTES-**
- 12) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 13) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 804 lb down and 742 lb up at 4-0-0, and 492 lb down and 829 lb up at 26-0-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-2=-60, 2-10=-60, 10-11=-60, 12-20=-20

Concentrated Loads (lb)

Vert: 14=-17(F) 8=21(F) 13=-17(F) 9=21(F) 22=21(F) 23=21(F) 24=21(F) 26=21(F) 27=21(F) 28=21(F) 29=21(F) 30=21(F) 31=21(F) 32=21(F) 33=-804(F) 34=-17(F) 35=-17(F) 36=-17(F) 37=-17(F) 38=-17(F) 39=-17(F) 40=-17(F) 41=-17(F) 42=-17(F) 43=-17(F) 44=297(F)

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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.	T37080906
4552247	T02	Monopitch	23	1		

Builders FirstSource (Lake City,FL), Lake City, FL - 32055,

8.830 s Apr 11 2025 MiTek Industries, Inc. Mon Apr 21 17:49:13 2025 Page 1

ID:2pg3n5BlmDagLzdv7fOdX5zOSQs-O5Dn91FA5fThBA1GfnvWiWXtKJTEAn1Q8BxjULzOQKK

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5-0-0

9-2-0

11-2-0

15-0-0

18-6-0

22-0-0

25-6-0

29-6-12

34-0-0

4-0-0

5-0-0

4-2-0

2-0-0

3-10-0

3-6-0

3-6-0

3-6-0

4-0-12

4-5-4

Scale: 3/16"=1'

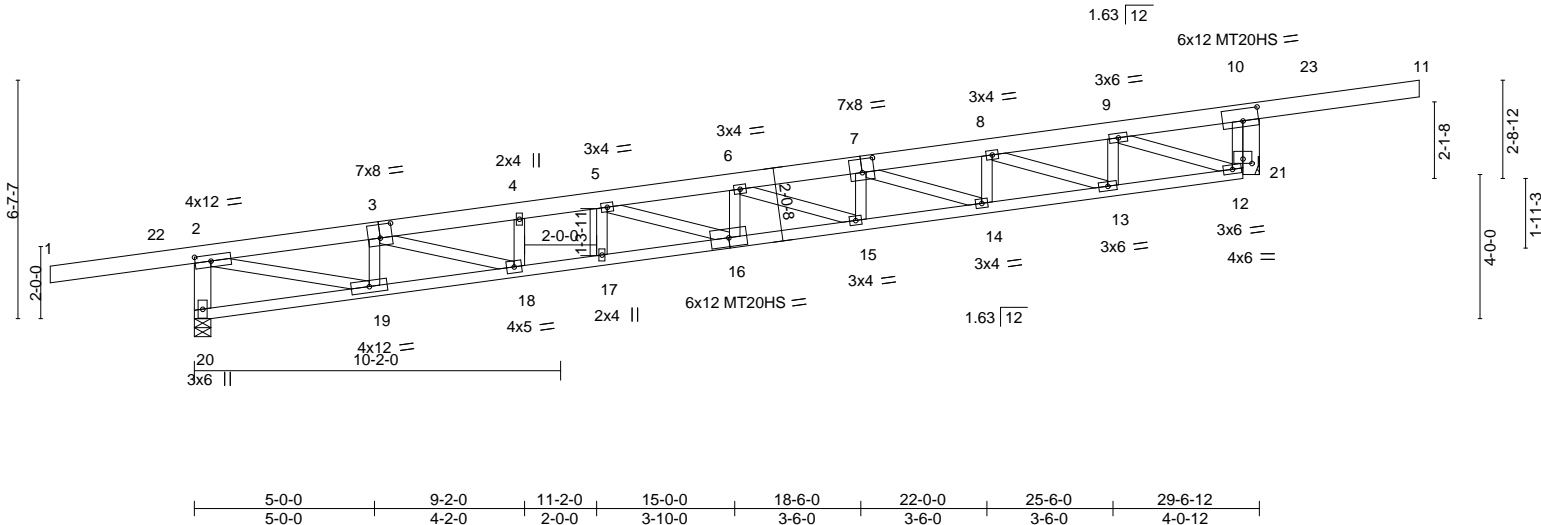


Plate Offsets (X,Y)--										[2:0-5-4,0-2-0], [3:0-4-0,0-4-8], [7:0-4-0,0-4-8], [10:0-5-4,0-4-0], [12:0-3-0,0-1-8]									
LOADING (psf)		SPACING- 2-0-0				CSI.		DEFL. in (loc) l/defl L/d				PLATES		GRIP					
TCLL	20.0	Plate Grip DOL 1.25				TC	0.87	Vert(LL)	0.35	16-17	>999	240	MT20	244/190					
TCDL	10.0	Lumber DOL 1.25				BC	0.54	Vert(CT)	-0.70	16-17	>499	180	MT20HS	187/143					
BCLL	0.0 *	Rep Stress Incr NO				WB	0.92	Horz(CT)	0.11	21	n/a	n/a							
BCDL	10.0	Code FBC2023/TPI2014				Matrix-MS								Weight: 193 lb FT = 20%					

LUMBER-	BRACING-
TOP CHORD 2x6 SP No.2	TOP CHORD Structural wood sheathing directly applied or 2-10-15 oc purlins, except end verticals.
BOT CHORD 2x4 SP 2700F 2.2E or 2x4 SP 2850F 2.0E or 2x4 SP M 31	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 2x4 SP No.3 *Except*	
2-20: 2x6 SP No.2	
OTHERS 2x6 SP No.2	

REACTIONS. (size) 20=0-5-8, 21=Mechanical
Max Horz 20=176(LC 8)
Max Uplift 20=530(LC 8), 21=-505(LC 12)
Max Grav 20=1464(LC 1), 21=1483(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-20=-1393/550, 2-3=-2355/682, 3-4=-4133/1232, 4-5=-4179/1262, 5-6=-4731/1417, 6-7=-4367/1302, 7-8=-3500/1030, 8-9=-1960/541, 9-10=-254/30, 10-12=-252/883
BOT CHORD 18-19=-862/2388, 17-18=-1370/4123, 16-17=-1375/4142, 15-16=-1534/4748, 14-15=-1389/4355, 13-14=-1100/3496, 12-13=-590/1948
WEBS 2-19=-706/2409, 3-19=-795/292, 3-18=-558/1813, 4-18=-566/213, 5-16=-175/626, 6-15=-412/152, 7-15=-45/271, 7-14=-902/303, 8-14=-117/478, 8-13=-1621/534, 9-13=-223/820, 9-12=-1772/547, 10-21=-1502/508

- NOTES-
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-22; Vult=130mph (3-second gust) Vasd=101mph; TCDL=4.2psf; BCDL=3.0psf; h=20ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (envelope) gable end zone and C-C Zone3 -4-0-0 to -1-0-0, Zone1 -1-0-0 to 34-0-0 zone; 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) Building Designer / Project engineer responsible for verifying applied roof live load shown covers rain loading requirements specific to the use of this truss component.
 - 4) All plates are MT20 plates 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) * 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.
 - 7) Refer to girder(s) for truss to truss connections.
 - 8) Bearing at joint(s) 20 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 20=530, 21=505.
 - 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

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April 22,2025

Continued on page 2

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

MiTek®
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Chesterfield, MO 63017
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Job	Truss	Truss Type	Qty	Ply	GILCHRIST RES.
4552247	T02	Monopitch	23	1	T37080906
Job Reference (optional)					

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-2=-70(F=-10), 2-10=-60, 10-11=-70(F=-10), 12-20=-20

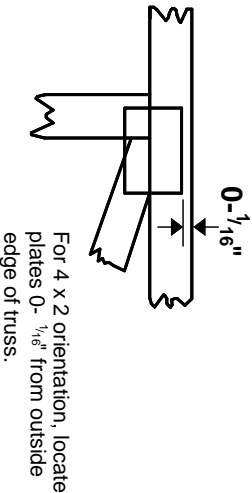
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Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 X 4

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

LATERAL BRACING LOCATION



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

BEARING

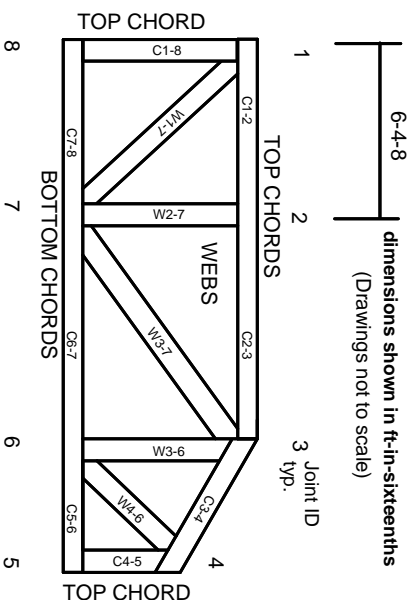


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

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

Numbering System



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

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

Product Code Approvals

ICC-ES Reports:

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

Design General Notes

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

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

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

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.