

RE: 210328 Lot 116 W0

## Site Information:

Customer: Project Name: 210328 Lot/Block: Address: City:

Model: Subdivision: State:

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

Design Code: IRC2018/TPI2014 Wind Code: N/A Roof Load: 45.0 psf

Design Program: MiTek 20/20 8.4 Wind Speed: 115 mph Floor Load: N/A psf

MiTek USA, Inc.

314-434-1200

16023 Swinglev Ridge Rd Chesterfield, MO 63017

This package includes 57 individual, dated Truss Design Drawings and 0 Additional Drawings.

No. 1 2 3 4 5 6 7 8 9 10 11 12	Seal# I45128841 I45128842 I45128843 I45128844 I45128845 I45128846 I45128847 I45128848 I45128849 I45128850 I45128851 I45128851 I45128852	Truss Name B1 B2 B3 B4 B5 B6 B7 B8 B9 C1 C2 D1	Date 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021	No. 21 22 23 24 25 26 27 28 29 30 31 32	Seal# I45128861 I45128862 I45128863 I45128864 I45128865 I45128866 I45128867 I45128868 I45128869 I45128870 I45128871 I45128872	Truss Name E5 E6 E7 E8 E9 G1 G2 G3 G4 G5 J8 J9	Date 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021
8	145128848	B8	3/10/2021	21	145128868	G3	3/10/2021
9	145128849	B9	3/10/2021	29	145128869	G4	3/10/2021
10	145128850	C1	3/10/2021	30	l45128870	G5	3/10/2021
11	l45128851	C2	3/10/2021	31	l45128871	J8	3/10/2021
12	l45128852	D1	3/10/2021	32	l45128872	J9	3/10/2021
13	l45128853	D2	3/10/2021	33	l45128873	J10	3/10/2021
14	l45128854	D3	3/10/2021	34	l45128874	J11	3/10/2021
15	l45128855	D4	3/10/2021	35	l45128875	J12	3/10/2021
16	l45128856	D5	3/10/2021	36	l45128876	J13	3/10/2021
17	l45128857	E1	3/10/2021	37	l45128877	J14	3/10/2021
18	l45128858	E2	3/10/2021	38	l45128878	J14A	3/10/2021
19	l45128859	E3	3/10/2021	39	l45128879	J15	3/10/2021
20	145128860	E4	3/10/2021	40	145128880	J16	3/10/2021

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision

based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Kansas is April 30, 2022.

Kansas COA: E-943

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



Garcia, Juan



# RE: 210328 - Lot 116 W0

# MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

# Site Information:

Proie	ect Customer:	Project Name: 21	0328	
Lot/E	Block:	·,····		Subdivision:
Auui	635.			-
City,	County:			State:
No.	Seal#	Truss Name	Date	
41	l45128881	J17	3/10/2021	
42	145128882	J18	3/10/2021	
43	145128883	J19	3/10/2021	
44	145128884	J20	3/10/2021	
45	145128885	J21	3/10/2021	
46	145128886	J22	3/10/2021	
47	145128887	J23	3/10/2021	
48	145128888	J24	3/10/2021	
49	I45128889	J25	3/10/2021	
50	I45128890	J26	3/10/2021	
51	l45128891	J27	3/10/2021	
52	145128892	LAY2	3/10/2021	
53	145128893	LAY3	3/10/2021	
54	145128894	LAY4	3/10/2021	
55	145128895	V1	3/10/2021	
56	145128896	V2	3/10/2021	
57	145128897	V3	3/10/2021	



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Customer: Project Name: 210328 Lot/Block: Address: City:

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

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Design Program: MiTek 20/20 8.4 Wind Speed: 115 mph Floor Load: N/A psf

This package includes 57 individual, dated Truss Design Drawings and 0 Additional Drawings.

No. 1 2 3 4 5 6 7 8 9	Seal# I45128841 I45128842 I45128843 I45128844 I45128845 I45128846 I45128847 I45128848 I45128849	Truss Name B1 B2 B3 B4 B5 B6 B7 B8 B9	Date 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021	No. 21 22 23 24 25 26 27 28 29	Seal# I45128861 I45128862 I45128863 I45128864 I45128865 I45128866 I45128867 I45128868 I45128868 I45128869	Truss Name E5 E6 E7 E8 E9 G1 G2 G3 G4	Date 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021 3/10/2021
8 9 10	145128848 145128849	B8 B9	3/10/2021 3/10/2021	28 29 20	145128868 145128869	G3 G4	3/10/2021 3/10/2021
10 11 12	145128850 145128851	C1 C2	3/10/2021 3/10/2021 2/10/2021	30 31 22	145128870 145128871	G5 J8	3/10/2021 3/10/2021
12 13 14	145128853 145128854	D2 D3	3/10/2021 3/10/2021 3/10/2021	32 33 34	145128873 145128874	J9 J10 J11	3/10/2021 3/10/2021 3/10/2021
15 16	l45128855 l45128856	D4 D5	3/10/2021 3/10/2021	35 36	l45128875 l45128876	J12 J13	3/10/2021 3/10/2021
17 18 19 20	I45128857 I45128858 I45128859 I45128860	E1 E2 E3 F4	3/10/2021 3/10/2021 3/10/2021 3/10/2021	37 38 39 40	I45128877 I45128878 I45128879 I45128880	J14 J14A J15 J16	3/10/2021 3/10/2021 3/10/2021 3/10/2021

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc under my direct supervision

based on the parameters provided by Wheeler - Waverly.

Truss Design Engineer's Name: Garcia, Juan

My license renewal date for the state of Missouri is December 31, 2022. Missouri COA: 001193

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



MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200



# RE: 210328 - Lot 116 W0

# MiTek USA, Inc. 16023 Swingley Ridge Rd Chesterfield, MO 63017 314-434-1200

# Site Information:

Proie	ect Customer:	Project Name: 21	0328	
Lot/E	Block:	· <b>,</b>		Subdivision:
Auui	635.			-
City,	County:			State:
No.	Seal#	Truss Name	Date	
41	l45128881	J17	3/10/2021	
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45	145128885	J21	3/10/2021	
46	145128886	J22	3/10/2021	
47	145128887	J23	3/10/2021	
48	145128888	J24	3/10/2021	
49	I45128889	J25	3/10/2021	
50	I45128890	J26	3/10/2021	
51	l45128891	J27	3/10/2021	
52	145128892	LAY2	3/10/2021	
53	145128893	LAY3	3/10/2021	
54	145128894	LAY4	3/10/2021	
55	145128895	V1	3/10/2021	
56	145128896	V2	3/10/2021	
57	145128897	V3	3/10/2021	



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

#### NOTES

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

All plates are 2x4 MT20 unless otherwise indicated.

5) Gable requires continuous bottom chord bearing.

6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).

7) Gable studs spaced at 1-4-0 oc.

8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

9) \* 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.

10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 35, 20, 33, 32, 31, 30, 29, 26, 25, 24, 23, 22 except (jt=lb) 34=155, 21=145.

11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.







6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



16023 Swingley Ridge Rd Chesterfield, MO 63017



NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

4) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

5) Refer to girder(s) for truss to truss connections.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 9 except (jt=lb) 7=123.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



16023 Swingley Ridge Rd Chesterfield, MO 63017



16023 Swingley Ridge Rd Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 116 W0	
						I45128844
210328	B4	ROOF SPECIAL GIRDER	1	ົ		
				<b>_</b>	Job Reference (optional)	
Wheeler Lumber, Wav	erly, KS - 66871,		8.4	30 s Feb '	12 2021 MiTek Industries, Inc. Wed Mar 10 08:29:55 2021	Page 2
		ID:2ncXp	lsxOfbilB6	17Q?aPMz	rYWU-isEc8gE6nr8UO1ONDnE94Ar8dkWQ?4CG1mMrNW;	zcNaQ

#### NOTES-

- 12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 158 lb down and 98 lb up at 3-11-4, and 158 lb down and 98 lb up at 7-11-4, and 158 lb down and 98 lb up at 7-11-4 on top chord, and 199 lb down and 86 lb up at 2-3-0, 66 lb down at 3-11-4, 66 lb down at 5-11-4, and 66 lb down at 7-11-4 on top 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=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-8=-70, 8-9=-70, 10-17=-20

Concentrated Loads (lb)

Vert: 16=-199(F) 18=-108(F) 19=-108(F) 20=-108(F) 21=-33(F) 22=-33(F) 23=-33(F) 24=-1017(F)





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/TP11 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



8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



16023 Swingley Ridge Rd Chesterfield, MO 63017



	5-3-0	10-0-0		4-9-0			10-0-0	
Plate Offsets (X,Y)	[3:0-3-10,Edge], [10:Edge,0-2-0], [15:Edge,0-2-0], [15:Ed	lge,0-6-2]						
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0         *           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.43 BC 0.88 WB 0.65 Matrix-S	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in -0.28 -0.61 0.08 0.12	(loc) 13-14 13-14 10 13 13	l/defl L/d >999 360 >585 240 n/a n/a >999 240	PLATES MT20 Weight: 121 lb	<b>GRIP</b> 197/144 FT = 10%
LUMBER- TOP CHORD 2x4 SF 5-6: 2x BOT CHORD 2x4 SF WEBS 2x3 SF 2-15,8-	PF No.2 *Except* 6 SPF No.2 PF No.2 PF No.2 *Except* -10: 2x4 SPF No.2		BRACING TOP CHOF BOT CHOF WEBS	RD RD	Structura except er Rigid ceil 1 Row at	I wood sheathing nd verticals, and 2 ling directly applied midpt	directly applied or 3-11-1 -0-0 oc purlins (3-3-8 ma d or 9-3-4 oc bracing. 4-14, 5-11, 7-10	12 oc purlins, ax.): 3-5.
REACTIONS. (siz Max H Max U Max G	e) 15=0-3-8, 10=0-3-8 lorz 15=-213(LC 6)  plift 15=-230(LC 8), 10=-142(LC 9)  rav 15=1408(LC 1), 10=1408(LC 1)						NIE OF	MISS
FORCES.         (lb) - Max.           TOP CHORD         2-3=-           7-8=-         7-8=-           BOT CHORD         14-15	Comp./Max. Ten All forces 250 (lb) or 1868/270, 3-4=-1452/274, 4-5=-2564/37 620/115, 2-15=-1381/241, 8-10=-543/14 5=-252/439, 13-14=-379/2269, 11-13=-3	less except when shown. 3, 5-6=-1590/232, 6-7=-1 4 30/2566, 10-11=-129/140	608/267, 2				GA	JAN RCIA
WEBS 3-14: 2-14:	10/675, 4-14=-1039/191, 4-13=-16/384 56/1169, 7-10=-1237/201	., 5-11=-1699/335, 6-11=-	164/1327,				PR. NUI	MBER
<ol> <li>Unbalanced roof live</li> <li>Wind: ASCE 7-16; \ MWFRS (envelope) grip DOL=1.60</li> </ol>	a loads have been considered for this de /ult=115mph (3-second gust) Vasd=91m gable end zone; cantilever left and right	sign. ph; TCDL=6.0psf; BCDL= exposed ; end vertical lef	6.0psf; h=25ft; C t and right expose	at. II; Ex ed; Lumł	p C; Encl per DOL=	osed; 1.60 plate	AKSS/ON	VALENCIA
<ul> <li>3) Provide adequate di</li> <li>4) This truss has been</li> <li>5) * This truss has bee will fit between the b</li> <li>6) Provide mechanical</li> <li>15-230, 10-142</li> </ul>	rainage to prevent water ponding. designed for a 10.0 psf bottom chord liv n designed for a live load of 20.0psf on t vottom chord and any other members. connection (by others) of truss to bearin	e load nonconcurrent with he bottom chord in all are g plate capable of withsta	any other live loa as where a rectai nding 100 lb uplif	ads. ngle 3-6- t at jointe	0 tall by 2	2-0-0 wide t (jt=lb)	ALL STREET	GARCIA

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.



16023 Swingley Ridge Rd Chesterfield, MO 63017



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# **MiTek** 16023 Swingley Ridge Rd Chesterfield, MO 63017

March 10,2021







except end verticals. BOT CHORD

Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS. All bearings 11-4-0.

Max Horz 23=-137(LC 6) (lb) -

2x4 SPF No.2

2x4 SPF No.2

Max Uplift All uplift 100 lb or less at joint(s) 23, 14, 22, 21, 20, 17, 16, 15 Max Grav All reactions 250 lb or less at joint(s) 23, 14, 22, 21, 20, 19, 18, 17, 16, 15

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

#### NOTES-

WEBS

OTHERS

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult gualified building designer as per ANSI/TPI 1.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-4-0 oc.
- 8) 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 9) will fit between the bottom chord and any other members.
- 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 23, 14, 22, 21, 20, 17, 16, 15,
- 11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



ALL DI





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MITEK<sup>°</sup> 16023 Swingley Ridge Rd Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 116 W0	
						145128851
210328	C2	Common Girder	1	2		
				-	Job Reference (optional)	
Wheeler Lumber, Wav	erly, KS - 66871,		8.4	130 s Feb	12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:02 2021	Page 2

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:02 2021 Page 2 ID:2ncXplsxOfbjIB6I7Q?gPMzrYWU-?CBFcELV8?1Uk6Qj7ltosfeQcY0L8L3IeLYj7czcNaJ

### LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 6-8=-20

Concentrated Loads (lb)

Vert: 7=-1373(B) 9=-1373(B) 10=-1373(B) 11=-1373(B) 12=-1373(B)

![](_page_16_Picture_8.jpeg)

![](_page_17_Figure_0.jpeg)

Scale = 1:53.1

16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_17_Figure_2.jpeg)

⊢	2-3-8	6-4-5	8-5-8	15-10-2		23-2	-11		29-7-0	
Plate Offsets (X,	<u>2-3-8</u> ,Y)	[2:0-6-0,0-0-3], [3:0-1		-4,0-3-0], [7:0-4-8,0-1-7],	[8:Edge,0-0-15]	7-4-	-10		0-4-0	
LOADING (psf) TCLL 25.0 TCDL 10.0 BCLL 0.0 BCDL 10.0	*	SPACING- Plate Grip DOL Lumber DOL Rep Stress Inc Code IRC2018	2-0-0 - 1.15 1.15 r NO B/TPI2014	CSI. TC 0.59 BC 0.87 WB 0.48 Matrix-S	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in (loc) -0.15 14 -0.28 12-13 0.19 8 0.13 14	I/defl L/d >999 360 >999 240 8 n/a n/a >999 240		PLATES MT20 Weight: 299 lb	<b>GRIP</b> 197/144 FT = 10%
LUMBER- TOP CHORD BOT CHORD WEBS WEDGE Right: 2x4 SPF 1	2x6 SP 4-7: 2x 2x6 SP 5-13: 2 2x4 SP No.2	2 DSS *Except* 4 SPF 2100F 1.8E, 7- 7F No.2 *Except* x4 SPF No.2 F No.2	9: 2x4 SPF No.2		BRACING- TOP CHOR BOT CHOR	D Struc excep 2-0-0 D Rigid 6-0-0	tural wood sheath ot oc purlins (6-0-0 ceiling directly ap oc bracing: 2-16.	ing direo max.): 4 plied or	ctly applied or 5-11-7 -7. 10-0-0 oc bracing, 1	oc purlins, Except:
REACTIONS.	(size Max H Max U Max G	e) 2=0-3-8, 8=0-3-8 orz 2=112(LC 7) plift 2=-491(LC 8), 8= rav 2=2392(LC 1), 8=	-450(LC 9) ⊧2374(LC 1)						NATE OF	MISSOU
FORCES. (lb) TOP CHORD BOT CHORD WEBS	- Max. 2-3=- 7-8=- 3-15= 8-10= 4-15= 7-12=	Comp./Max. Ten Al 1513/343, 3-4=-4978/ 3933/738 =-1019/4377, 14-15=- =-555/3204 =-270/1106, 4-14=-27! =426/1848, 7-10=-57/	l forces 250 (lb) or (1102, 4-5=-5008/ 1032/4432, 5-14=- 5/1059, 12-14=-80 /639	less except when shown 1113, 5-6=-5014/1121, 6- 535/269, 12-13=-121/814 9/3949, 6-14=-228/341, 6	ı. 7=-4729/919, 4, 10-12=-553/3181 3-12=-1117/501,	,			GAI	MBER MBER
NOTES- 1) 2-ply truss to Top chords co Bottom chord Webs connect 2) All loads are o ply connection 3) Unbalanced r 4) Wind: ASCE MWFRS (env grip DOL=1.6 5) Provide adeq 6) This truss has will fit betwee 8) Provide mech 2=491, 8=450 9) This truss is o referenced sta	be con onnected is conn- cted as conside ns have roof live 7-16; V velope) 0 uate dr s been as been as been an the b nanical 0. designe andard geig reg	nected together with ed as follows: 2x6 - 2 ected as follows: 2x6 follows: 2x4 - 1 row a ared equally applied to been provided to dis loads have been con fult=115mph (3-secon gable end zone; canti designed for a 10.0 p n designed for a live k ottom chord and any connection (by others ed in accordance with ANSI/TPI 1.	10d (0.131"x3") na rows staggered at - 2 rows staggered t 0-9-0 oc. o all plies, except i stribute only loads isidered for this de d gust) Vasd=91m lever left and right rer ponding. sf bottom chord liv oad of 20.0psf on other members. o ftruss to bearir the 2018 Internation depict the size or	ails as follows: 0-9-0 oc, 2x4 - 1 row at 0 d at 0-9-0 oc, 2x4 - 1 row f noted as front (F) or bac noted as (F) or (B), unles isign. ph; TCDL=6.0psf; BCDL= e load nonconcurrent with the bottom chord in all are ng plate capable of withsta onal Residential Code sec the orientation of the purl	0-9-0 oc. at 0-9-0 oc. s otherwise indicat =6.0psf; h=25ft; Ca ft and right expose h any other live loa eas where a rectan anding 100 lb uplift ctions R502.11.1 at in along the top an	DAD CASE(S ed. t. II; Exp C; E d; Lumber D ds. gle 3-6-0 tall at joint(s) ex nd R802.10.2 d/or bottom c	i) section. Ply to Enclosed; DL=1.60 plate by 2-0-0 wide cept (jt=lb) 2 and shord.		PROFILE STO Marc	GARCIA ENSEO 952 NSAS NALENO HUI DALENO
WARNING Design valid f a truss system building design is alwaye rect	6 - Verify of for use of m. Before gn. Braci	design parameters and REAI nly with MiTek® connectors a use, the building designer ng indicated is to prevent building designer	D NOTES ON THIS ANI . This design is based of must verify the applical uckling of individual true uckling of individual true	D INCLUDED MITEK REFERENCE only upon parameters shown, an bility of design parameters and p ss web and/or chord members o paol injury and property damage	CE PAGE MII-7473 rev. 5 Id is for an individual bui properly incorporate this nly. Additional temporat	/19/2020 BEFOR Iding componen design into the c y and permaner renarding the	E USE. t, not werall ht bracing			

billing design. Dialong indicates is 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

Job	Truss	Truss Type	Qty	Ply	Lot 116 W0	
						l45128852
210328	D1	HIP GIRDER	1	2		
				-	Job Reference (optional)	
Wheeler Lumber, \	Naverly, KS - 66871,		8.4	430 s Feb	12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:05 2021	Page 2

8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:05 2021 Page 2 ID:2ncXplsxOfbjIB6I7Q?gPMzrYWU-PnsOEFNNQwP3bZ9IouQVUHGw6myPLihkKJnNkxzcNaG

#### NOTES-

11) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 123 lb down and 102 lb up at 6-9-7, 125 lb down and 77 lb up at 8-9-7, 125 lb down and 77 lb up at 12-9-7, 125 lb down and 77 lb up at 14-9-7, 125 lb down and 77 lb up at 16-9-8, 125 lb down and 77 lb up at 18-9-8, and 125 lb down and 77 lb up at 20-9-8, and 120 lb down and 77 lb up at 22-9-8 on top chord, and 368 lb down and 193 lb up at 6-4-5, 57 lb down and 32 lb up at 6-9-7, 60 lb down at 10-9-7, 60 lb down at 10-9-7, 60 lb down at 14-9-7, 60 lb down at 16-9-8, 60 lb down at 18-9-8, 60 lb down at 20-9-8, and 60 lb down at 22-9-8, and 357 lb down and 168 lb up at 23-2-11 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=1.15, Plate Increase=1.15

Uniform Loads (plf) Vert: 1-4=-70, 4-7=-70, 7-9=-70, 2-16=-20, 3-14=-20, 8-13=-20

Concentrated Loads (lb)

Vert: 14=-45(F) 5=-93(F) 15=-424(F) 10=-357(F) 17=-82(F) 18=-93(F) 19=-93(F) 20=-93(F) 21=-93(F) 22=-93(F) 23=-93(F) 24=-93(F) 25=-45(F) 26=-45(F) 27=-45(F) 28=-45(F) 29=-45(F) 30=-45(F) 31=-45(F) 31=-45(F)

![](_page_18_Picture_10.jpeg)

![](_page_19_Figure_0.jpeg)

2-3-8	8-5-8	14-9-8	20-11-	-5		29-7-0	
Plate Offsets (X,Y)	[2:0-3-8,Edge], [3:0-1-4,0-0-0], [6:0-4-1	5,Edge], [10:Edge,0-3-4]	0-1-1	3		0-7-11	
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.64 BC 0.65 WB 0.87 Matrix-S	<b>DEFL.</b> in Vert(LL) -0.27 Vert(CT) -0.53 Horz(CT) 0.30 Wind(LL) 0.21	i (loc) l/defl 15-16 >999 15-16 >664 10 n/a 15-16 >999	L/d 360 240 n/a 240	PLATES MT20 Weight: 135 II	<b>GRIP</b> 197/144 p FT = 10%
LUMBER- TOP CHORD 2x6 SI 4-6: 2: BOT CHORD 2x4 SI 3-15: 2: WEBS 2x3 SI 8-10: 2: WEDGE Left: 2x4 SPF No.2	P DSS *Except* x6 SPF No.2, 6-9: 2x4 SPF No.2 PF No.2 *Except* 2x4 SPF 2100F 1.8E, 4-14: 2x3 SPF No. PF No.2 *Except* 2x4 SPF No.2	2	BRACING- TOP CHORD BOT CHORD	Structural wood except end ver Rigid ceiling di	d sheathing di ticals, and 2-0 rectly applied	rectly applied or 3-10 -0 oc purlins (5-0-1 n or 10-0-0 oc bracing.	-5 oc purlins, 1ax.): 4-6.
REACTIONS. (siz Max H Max L Max C	te) 2=0-3-8, 10=0-3-8 Horz 2=156(LC 7) Jplift 2=-131(LC 8), 10=-131(LC 9) Grav 2=1390(LC 1), 10=1390(LC 1)					NIXATE.O	MISSOUTH
FORCES.         (lb) - Max.           TOP CHORD         2-3=           7-8=         7-8=           BOT CHORD         3-16           WEBS         13-1	Comp./Max. Ten All forces 250 (lb) or -876/97, 3-4=-2344/196, 4-5=-1981/207, -552/61, 8-10=-468/99 =-227/2017, 15-16=-228/2021, 4-15=-28 5=-191/1891, 5-13=-579/232, 6-13=-184	less except when shown. 5-6=-1875/177, 6-7=-1808 /563, 12-13=-51/1508, 10- /582, 6-12=0/295, 7-10=-1-	/142, 2=-95/1579 !41/135			* G/ PP NL PD E-200	ARCIA
<ul> <li>NOTES-</li> <li>1) Unbalanced roof liv</li> <li>2) Wind: ASCE 7-16; ' MWFRS (envelope, grip DOL=1.60</li> <li>3) Provide adequate d</li> <li>4) This truss has beer</li> <li>5) * This truss has beat has been the l</li> <li>6) Provide mechanical 2=131, 10=131.</li> <li>7) This truss is design referenced standard</li> <li>8) Graphical purlin rep</li> </ul>	e loads have been considered for this de Vult=115mph (3-second gust) Vasd=91m gable end zone; cantilever left and right rainage to prevent water ponding. I designed for a 10.0 psf bottom chord liv en designed for a live load of 20.0psf on to pottom chord and any other members. I connection (by others) of truss to bearin ed in accordance with the 2018 Internation d ANSI/TPI 1. resentation does not depict the size or th	sign. ph; TCDL=6.0psf; BCDL=6 exposed ; end vertical left e load nonconcurrent with he bottom chord in all area ig plate capable of withstar onal Residential Code sect he orientation of the purlin a	i.0psf; h=25ft; Cat. II; E and right exposed; Lur any other live loads. s where a rectangle 3- ding 100 lb uplift at joir ons R502.11.1 and R8 llong the top and/or boi	xp C; Enclosed; nber DOL=1.60 p 6-0 tall by 2-0-0 v nt(s) except (jt=lb 02.10.2 and ttom chord.	olate wide )	The solution of the solution o	NALENGIA NGARCIA DENSEO 6952

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

![](_page_19_Figure_3.jpeg)

March 10,2021

16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_20_Figure_0.jpeg)

	4-10-0	10-11-2	1		18-7-14		1		24-9-0	2	9-7-0	
	4-10-0	6-1-2	I		7-8-11				6-1-2	4-	10-0	
Plate Offsets (X,Y)	[9:Edge,0-6-0], [1	0:0-2-8,0-1-8], [14:0-2	-8,0-1-8], [15	:Edge,0-6-0]								
LOADING (psf)	SPACING	- 2-0-0	CSI.		DEFL	in	(loc)	l/defl	l /d	PLATES	GRIP	
TCLI 25.0	Plate Grin		TC	0.69	Vert(LL)	-0.16	11-13	<u>_</u> 000	360	MT20	197/144	
TCDI 10.0	Lumbor D(	DOL 1.15	PC	0.03	Vort(CT)	0.10	11 12	>000	240	101120	131/144	
	Lumber Do	JL 1.15		0.73		-0.29	11-13	>999	240			
BOLL 0.0	Rep Stress	SINCI YES	VVB	0.48	HOIZ(CT)	0.06	9	n/a	n/a	141 - 1 - 100		
BCDL 10.0	Code IRC	2018/1912014	Matro	<-S	Wind(LL)	0.05	13-14	>999	240	Weight: 120	1b $FI = 10\%$	
					PRACINIC							
					BRACING-		<u>.</u>				10 ľ	
TOP CHORD 2x	4 SPF No.2 "Except"	_			TOP CHOR	KD	Structu	ral wood	sheathing di	rectly applied or 3-9-	13 oc purlins,	
4-	5: 2x4 SPF 2100F 1.8	E					except	end verti	cals, and 2-0	-0 oc purlins (4-10-1	4 max.): 4-5.	
BOT CHORD 2x	4 SPF No.2				BOT CHOR	RD	Rigid c	eiling dire	ectly applied	or 10-0-0 oc bracing		
WEBS 2x	3 SPF No.2 *Except*				WEBS		1 Row	at midpt	4	l-11		
4-	11,2-15,7-9: 2x4 SPF I	No.2										
REACTIONS.	(size) 15=0-3-8, 9=	0-3-8										
M	ax Horz 15=198(LC 7	·)										
M	ax Uplift 15=-153(LC 8	8), 9=-153(LC 9)										
M	ax Grav 15=1443(LC	2), 9=1435(LC 2)								110	FMISSI	
	,	,, , ,								N'XE.		<u> </u>
FORCES. (lb) - M	Max Comp /Max Ten	- All forces 250 (lb) or	less except	when shown						N.R		1
TOP CHORD	2-3=-2063/199 3-4=-1	774/172 4-5=-1445/20	0.5-6=-175	8/172 6-7=-2	051/199							5-
	2.15-1352/177 7-0	13/5/177	0,00=110	0/112, 01-2	001/100,					- 0:	JUAN 🔅	
	10= 1002/111, 1 0= 14 15= 174/476 12 14	10-10/1709 11 12- 0	2/1/59 10 1	1_ 00/1712	10- 42/242					G G	ARCIA :	1-
	14-13=-174/470, 13-14	P=-201/1/90, 11-13=-0	3/1430, 10-1	1=-99/1712, 3	9-10=-43/343					- ×:		★ -
WEBS 3	3-13=-409/190, 4-13=-	3/505, 5-11=0/466, 6-1	11=-412/190,	2-14=-04/13	80,						:	
	-10=-56/1378									- 7: NI		<u>a</u> -
										- D:		4-
NOTES-										- O: E-20	00162101	1-
<ol> <li>Unbalanced roc</li> </ol>	of live loads have been	considered for this de	sign.							1	71:	~
2) Wind: ASCE 7-	16; Vult=115mph (3-se	econd gust) Vasd=91m	ph; TCDL=6	.0psf; BCDL=	6.0psf; h=25ft; Ca	at. II; Ex		closed;		1.80.		×1
MWFRS (envel	ope) gable end zone; o	cantilever left and right	exposed; e	nd vertical lef	t and right expose	d; Lum	ber DO	L=1.60 pl	ate	1.0/0	MALEN'	

- grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 15=153, 9=153.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

![](_page_20_Figure_9.jpeg)

MITEK<sup>\*</sup> 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_21_Figure_0.jpeg)

	6-6-8	13-2-9	16-4-7	23-0-8	29-7-0
1	6-6-8	6-8-1	3-1-14	6-8-1	6-6-8
Plate Offsets (X,Y)	[5:0-4-8,0-1-7], [9:Edge,0-6-0]	, [10:0-2-8,0-1-8], [14:0-2-8,0-1-	8], [15:Edge,0-6-0]		
LOADING (psf)	SPACING- 2-1	0-0 <b>CSI.</b>	DEFL.	in (loc) I/defl L/d	PLATES GRIP
TCDL         10.0           BCLL         0.0 *	Lumber DOL 1 Rep Stress Incr Y	15 BC 0.49 ES WB 0.81	Vert(CT) Horz(CT	-0.18 13-14 >999 240 ) 0.05 9 n/a n/a	13//144
BCDL 10.0	Code IRC2018/TPI201	4 Matrix-S	Wind(LL)	0.05 13-14 >999 240	Weight: 124 lb FT = 10%

LUMBER-		BRACING-	
TOP CHORD	2x4 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 3-7-5 oc purlins,
BOT CHORD	2x4 SPF No.2		except end verticals, and 2-0-0 oc purlins (5-2-5 max.): 4-5.
WEBS	2x3 SPF No.2 *Except*	BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
	2-15,7-9: 2x4 SPF No.2	WEBS	1 Row at midpt 4-12
REACTIONS.	(size) 15=0-3-8. 9=0-3-8		

Max Horz 15=233(LC 7) Max Uplift 15=-171(LC 8), 9=-171(LC 9) Max Grav 15=1390(LC 1), 9=1390(LC 1)

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

TOP CHORD 2-3=-1985/221, 3-4=-1512/204, 4-5=-1196/229, 5-6=-1513/204, 6-7=-1985/221,

2-15=-1325/205, 7-9=-1324/205

- BOT CHORD 14-15=-250/637, 13-14=-216/1620, 12-13=-32/1195, 10-12=-90/1620, 9-10=-135/506
- WEBS 3-13=-544/218, 4-13=-62/389, 5-12=-52/379, 6-12=-541/218, 2-14=0/1120, 7-10=0/1118

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 15=171, 9=171.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

![](_page_21_Figure_18.jpeg)

![](_page_21_Picture_19.jpeg)

![](_page_22_Figure_0.jpeg)

![](_page_22_Figure_1.jpeg)

![](_page_22_Picture_2.jpeg)

![](_page_23_Figure_0.jpeg)

- 6-17: 2x3 SPF No.2, 13-17: 2x4 SPF 2100F 1.8E WEBS 2x3 SPF No.2 \*Except\* 7-16,11-13: 2x4 SPF No.2
- REACTIONS. (size) 2=0-3-8, 13=0-3-8 Max Horz 2=252(LC 7) Max Uplift 2=-179(LC 8), 13=-213(LC 9) Max Grav 2=1493(LC 1), 13=1476(LC 1)

FORCES. (Ib) - Max. Comp./Max. Ten. - All forces 250 (Ib) or less except when shown. TOP CHORD 2-3=-887/192, 3-4=-2751/335, 4-6=-2004/263, 6-7=-1864/359, 7-8=-2303/462, 8-9=-2294/277, 9-10=-1521/224, 10-11=-1752/239, 11-13=-1424/221 BOT CHORD 3-19=-364/2481, 18-19=-362/2481, 15-16=-358/3024, 14-15=-354/3027 4-18=-1019/281, 16-18=-62/1218, 7-18=-230/965, 7-16=-326/1019, 8-16=-518/308, WFBS 9-16=-1151/262, 9-14=-1914/243, 10-14=-139/815, 11-14=-154/1358

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

\* 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 5) will fit between the bottom chord and any other members.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=179, 13=213.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPL1

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 131 lb down and 68 lb up at 29-9-9 on top chord, and 12 lb down and 10 lb up at 29-8-13 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

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

#### 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 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-74/3 rev. 5/19/2020 BEFORE USE. Design valid for use only with MITER® 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

![](_page_23_Picture_18.jpeg)

ALL DI

![](_page_23_Picture_19.jpeg)

March 10.2021

Job	Truss	Truss Type	Qty	Ply	Lot 116 W0	
						l45128857
210328	E1	Roof Special Girder	1	1		
					Job Reference (optional)	
Wheeler Lumber, W	averly, KS - 66871,		8.4	130 s Feb	12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:10 2021	Page 2

ID:2ncXplsxOfbjlB6l7Q?gPMzrYWU-mkfHHzRWFS1LhL1GbR0gBLzjingG0uETUbU8P8zcNaB

### LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-7=-70, 7-9=-70, 9-10=-70, 10-11=-70, 11-12=-70, 2-20=-20, 3-18=-20, 13-17=-20

Concentrated Loads (lb) Vert: 14=4(F)

![](_page_24_Picture_7.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Picture_2.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_26_Picture_2.jpeg)

![](_page_27_Figure_0.jpeg)

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/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

**MiTek**<sup>®</sup>

#### 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_28_Figure_0.jpeg)

March 10,2021

![](_page_28_Picture_3.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_29_Picture_3.jpeg)

![](_page_30_Figure_0.jpeg)

	L	8-3-2	15-6-0	16-1 <sub>1</sub> 0	23-3-	·14	1		31-7-0	
		8-3-2	7-2-15	0-7-0	7-2-1	15			8-3-2	
Plate Offsets (X	(,Y)	[4:0-3-0,0-2-5], [5:0-3-0,0-2-5], [9:0-3-4	,0-2-4], [10:0-2-8,0-1-8], [14	1:0-3-4,0-2-4]						
LOADING (psf)	)	<b>SPACING-</b> 2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	)	Plate Grip DOL 1.15	TC 0.75	Vert(LL)	-0.20	12-13	>999	360	MT20	197/144
TCDL 10.0	)	Lumber DOL 1.15	BC 0.75	Vert(CT)	-0.32	12-13	>999	240		
BCLL 0.0	) *	Rep Stress Incr YES	WB 0.83	Horz(CT)	0.06	9	n/a	n/a		
BCDL 10.0	)	Code IRC2018/TPI2014	Matrix-S	Wind(LL)	0.06	13	>999	240	Weight: 138 lb	FT = 10%
LUMBER-			ll	BRACING-						
TOP CHORD	2x4 SP	E No 2 *Except*		TOP CHOR	D	Structu	iral wood	sheathing di	irectly applied or 2-2-0 o	c ourlins
	4-5. 21	SPE No 2				evcent	end verti	cals and 2-(	-0.000 oc purling (6-0-0 may	(): 4-5
	2v/ SD	F No 2			D	Rigid o		ctly applied	or 9-4-6 oc bracing	
WERS	214 01	E No 2 *Excont*		WERS	D	1 Dow	ot midnt	solly applied	4 12 6 12	
WEB3	213 OF	V SPE No 2 2 14 7 0: 206 SPE No 2		WEBS		IROW	at mupt		4-12, 0-12	
	4-13. 2	X4 3FF N0.2, 2-14,7-9. 2X0 3FF N0.2								
PEACTIONS	(cize	14-0.2.9.0-0.2.9								
REACTIONS.	(SIZE)	= 14 = 0.3 - 0.3 = 0.3 - 0.3 - 0.3 = 0.3 - 0.3 = 0.3 - 0.3 = 0.3								
		DIZ = 14 = -271(LC - 6)								
	Max O	p(111 + 14 = -191(10 + 6), 9 = -191(10 + 9)							N'OF	MICH
	wax G	12V 14 = 1609(LC 15), 9 = 1599(LC 16)							NEOF	WISS .
									101	
TORCES. (ID)	- iviax.	Comp./Max. Ten All forces 250 (ID) 0	r less except when shown.	04/044					SAL.	. 0
TOP CHORD	2-3=-	2230/240, 3-4=-2289/461, 4-5=-1285/2	58, 5-6=-1604/253, 6-7=-22	201/244,					20: JU	AN
DOTOUODD	2-14=	-1482/235, 7-9=-1463/237							CAF	RCIA :
BOT CHORD	13-14	=-389/1012, 12-13=-29/1354, 10-12=-8	31/1770, 9-10=-245/841						- *:	:*=
WEBS	3-13=	-579/351, 4-13=-327/1041, 4-12=-200/	418, 5-12=-123/579, 6-12=-	-726/251,						: =
	6-10=	0/268, 2-13=0/1119, 7-10=0/1090							- D: NUIN	
									D: NUN	
NOTES-									- O. E-2000	162101
<ol> <li>Unbalanced i</li> </ol>	roof live	loads have been considered for this de	esign.						1	
2) Wind: ASCE	7-16; V	ult=115mph (3-second gust) Vasd=91n	nph; TCDL=6.0psf; BCDL=6	6.0psf; h=25ft; Ca	at. II; E	xp C; Er	nclosed;		1. So	
MWFRS (env	velope)	gable end zone; cantilever left and righ	t exposed ; end vertical left	and right expose	d; Lun	nber DO	L=1.60 pl	ate	I,ON	ALEN
grip DOL=1.6	60								1111	670
3) Provide adeq	quate dra	ainage to prevent water ponding.								
4) This truss ha	s been	designed for a 10.0 psf bottom chord liv	e load nonconcurrent with	any other live loa	ds.					um.

5) \* 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.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 14=191, 9=191.

7) This trues is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

![](_page_30_Figure_6.jpeg)

NITEK 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_31_Figure_0.jpeg)

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/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

MiTek

March 10,2021

![](_page_31_Picture_3.jpeg)

![](_page_32_Figure_0.jpeg)

	8-3-2	15-9-8	19-4-8	24-0-3	31-3	3-14	
	8-3-2	7-6-6	3-7-0	4-7-11	7-3	3-11	
Plate Offsets (X,Y)	[14:0-2-8,0-1-8], [15:0-3-4,0-2-4]						
LOADING (psf) TCLL 25.0 TCDL 10.0	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15	<b>CSI.</b> TC 0.74 BC 0.86	<b>DEFL.</b> Vert(LL) -0 Vert(CT) -0	in (loc) l/de .17 10-11 >99 .31 10-11 >99	efl L/d 99 360 99 240	<b>PLATES</b> MT20	<b>GRIP</b> 197/144
BCLL 0.0 * BCDL 10.0	Rep Stress Incr YES Code IRC2018/TPI2014	WB 0.87 Matrix-S	Horz(CT) 0 Wind(LL) 0	.10 9 n .07 10-11 >99	/a n/a 99 240	Weight: 133 lb	FT = 10%
LUMBER- TOP CHORD 2x4 SF BOT CHORD 2x4 SF 5-12: 2 WEBS 2x3 SF 2-15: 2	PF No.2 PF No.2 *Except* 2x3 SPF No.2 PF No.2 *Except* 2x6 SPF No.2	I	BRACING- TOP CHORD BOT CHORD WEBS	Structural w except end Rigid ceiling 6-0-0 oc bra 1 Row at mi	ood sheathing dir verticals, and 2-0- directly applied o cing: 12-13. dpt 3	ectly applied or 2-2-0 c -0 oc purlins (6-0-0 ma or 10-0-0 oc bracing, f	oc purlins, x.): 7-8. Except:
REACTIONS. (siz Max H Max U Max G	e) 9=Mechanical, 15=0-3-8 lorz 15=222(LC 5) Jplift 9=-14(LC 9), 15=-24(LC 8) Grav 9=1450(LC 14), 15=1591(LC 13)					NILE OF	MISS
FORCES. (lb) - Max. TOP CHORD 2-3=- 2-15=	Comp./Max. Ten All forces 250 (lb) or -2208/39, 3-4=-1542/91, 4-5=-1984/135, =-1461/69	less except when shown. 5-6=-2008/52, 6-7=-2708/20	),			S. JU	AN P
BOT CHORD 14-19 WEBS 3-14: 6-10	5=-221/935, 13-14=-54/1923, 5-11=-340, =0/322, 3-13=-793/128, 4-13=-18/348, 1 )=0/410, 7-10=-594/61, 7-9=-3066/64, 2-	'128, 10-11=0/2301, 9-10=-5 I-13=0/1313, 4-11=-99/1241 I4=0/1098	52/2859 , 6-11=-814/75,				
NOTES- 1) Unbalanced roof live 2) Wind: ASCE 7-16; V MWFRS (envelope) 3) Provide adequate di 4) This truss has been 5) * This truss has been will fit between the b 6) Refer to girder(s) for 7) Provide mechanical 8) This truss is designed	e loads have been considered for this de /ult=115mph (3-second gust) Vasd=91m ; cantilever left and right exposed ; end v rainage to prevent water ponding. designed for a 10.0 psf bottom chord liv in designed for a live load of 20.0psf on t bottom chord and any other members, wi r truss to truss connections. connection (by others) of truss to bearin ed in accordance with the 2018 Internation 4 ANSI/TPI 1	sign. ph; TCDL=6.0psf; BCDL=6.0 ertical left and right exposed e load nonconcurrent with ar he bottom chord in all areas th BCDL = 10.0psf. g plate capable of withstand nal Residential Code sectio	Opsf; h=25ft; Cat. I l; Lumber DOL=1. ny other live loads where a rectangle ing 100 lb uplift at ns R502.11.1 and	l; Exp C; Enclose 60 plate grip DOI 3-6-0 tall by 2-0 joint(s) 9, 15. R802.10.2 and	ed; _=1.60 -0 wide	E-2000	GARCIA

9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

16952 March 10,2021

> Mitek\* 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_33_Figure_0.jpeg)

![](_page_33_Figure_1.jpeg)

![](_page_33_Picture_3.jpeg)

![](_page_34_Figure_0.jpeg)

Plate Offsets (X,Y)	[5:0-4-8,0-1-7], [9:Edge,0-6-0], [10:0-2	2-8,0-1-8], [14:0-2-8,0-1-8], [	[15:Edge,0-6-0]		
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0         *           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.61 BC 0.62 WB 0.90 Matrix-S	DEFL. in Vert(LL) -0.11 Vert(CT) -0.22 Horz(CT) 0.06 Wind(LL) 0.06	i (loc) l/defl L/d 13-14 >999 360 13-14 >999 240 9 n/a n/a 13-14 >999 240	PLATES         GRIP           MT20         197/144           Weight: 129 lb         FT = 10%
LUMBER- TOP CHORD 2x4 S BOT CHORD 2x4 S	SPF No.2 SPF No.2		BRACING- TOP CHORD	Structural wood sheathing di except end verticals, and 2-0	rectly applied or 3-3-12 oc purlins, -0 oc purlins (4-8-2 max.): 4-5.

WEBS 2x3 SPF No.2 \*Except\* BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. 2-15,7-9: 2x4 SPF No.2 WEBS 4-11 1 Row at midpt REACTIONS. (size) 15=0-3-8, 9=0-5-8 Max Horz 15=233(LC 7)

Max Uplift 15=-175(LC 8), 9=-175(LC 9) Max Grav 15=1550(LC 15), 9=1547(LC 16)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. 2-3=-2219/228, 3-4=-1751/209, 4-5=-1418/234, 5-6=-1745/209, 6-7=-2213/228, TOP CHORD

- 2-15=-1442/209, 7-9=-1438/209
- BOT CHORD 14-15=-250/734, 13-14=-222/1964, 11-13=-37/1450, 10-11=-96/1831, 9-10=-134/575
- WEBS 3-13=-603/219, 4-13=-50/568, 5-11=-30/533, 6-11=-603/219, 2-14=0/1306, 7-10=0/1301

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Provide adequate drainage to prevent water ponding.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 15=175, 9=175.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

![](_page_34_Figure_17.jpeg)

![](_page_34_Picture_18.jpeg)

MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_35_Figure_0.jpeg)

Plate Offsets (X,Y)	[4:0-4-8,0-1-7], [6:0-4-8,0-1-7], [10:Edge	e,0-6-0], [11:0-2-8,0-1-8], [1	5:0-2-8,0-1-8], [16:Edge	e,0-6-0]			
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0         *           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.62 BC 0.58 WB 0.51 Matrix-S	DEFL.         in           Vert(LL)         -0.31           Vert(CT)         -0.53           Horz(CT)         0.05           Wind(LL)         0.05	(loc) l/defl 12-14 >999 12-14 >713 10 n/a 14 >999	L/d 360 240 n/a 240	PLATES MT20 Weight: 127 lb	<b>GRIP</b> 197/144 FT = 10%
LUMBER- TOP CHORD 2x4 S BOT CHORD 2x4 S WEBS 2x3 S 2-16,i OTHERS 2x3 S	SPF No.2 SPF 2100F 1.8E SPF No.2 *Except* 8-10: 2x4 SPF No.2 SPF No.2		BRACING- TOP CHORD BOT CHORD WEBS	Structural wood except end ver Rigid ceiling diu 1 Row at midpt	I sheathing dir icals, and 2-0 ectly applied o 5	rectly applied or 3-1-15 -0 oc purlins (4-5-9 ma or 10-0-0 oc bracing. 5-14, 5-12	oc purlins, x.): 4-6.
REACTIONS. (si Max Max Max	ze) 16=0-3-8, 10=0-5-8 Horz 16=198(LC 7) Uplift 16=-155(LC 8), 10=-155(LC 9) Grav 16=1537(LC 2), 10=1537(LC 2)					NIE OF	MISS
FORCES. (lb) - Max TOP CHORD 2-3= 7-8=	k. Comp./Max. Ten All forces 250 (lb) or =-2210/206, 3-4=-1962/171, 4-5=-1615/19 =-2210/206, 2-16=-1433/181, 8-10=-1433	less except when shown. 98, 5-6=-1615/198, 6-7=-19 /180	62/171,			S. JU	AN D
BOT CHORD 15- WEBS 3-14 2-1	16=-170/520, 14-15=-208/1898, 12-14=-1 4=-371/199, 4-14=0/648, 5-14=-372/192, 4 5=-71/1474, 8-11=-64/1474	17/1736, 11-12=-105/1851, 5-12=-372/192, 6-12=0/648	, 10-11=-42/387 3, 7-12=-371/199,				
NOTES- 1) Unbalanced roof liv 2) Wind: ASCE 7-16; MWFRS (envelope grip DOL=1.60	ve loads have been considered for this de Vult=115mph (3-second gust) Vasd=91m s) gable end zone; cantilever left and right	sign. ph; TCDL=6.0psf; BCDL=6 exposed ; end vertical left ;	i.0psf; h=25ft; Cat. II; E≀ and right exposed; Lum	kp C; Enclosed; ber DOL=1.60 p	late		ALENGINI

- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 16=155, 10=155.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

![](_page_35_Figure_8.jpeg)

MITEK 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_36_Figure_0.jpeg)

1	8-7-11	15-9-8	2	2-11-5	1	31-7-0	1
	8-7-11	7-1-13	· · ·	7-1-13		8-7-11	1
Plate Offsets (X V)	[2:Edge 0-3-4] [10:Edge 0-3-4]						
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0	SPACING-2-0-0Plate Grip DOL1.15Lumber DOL1.15Rep Stress IncrYESCode IRC2018/TPI2014	<b>CSI.</b> TC 0.86 BC 0.65 WB 0.95 Matrix-S	DEFL.         ii           Vert(LL)         -0.13           Vert(CT)         -0.27           Horz(CT)         0.08           Wind(LL)         0.08	n (loc) l/defl 3 10-11 >999 7 10-11 >999 9 10 n/a 3 13 >999	L/d 360 240 n/a 240	PLATES MT20 Weight: 121 lb	<b>GRIP</b> 197/144 FT = 10%
LUMBER-		11	BRACING-	Oleventurel		(h 1	
TOP CHORD 2X4 SP	'F NO.2		TOP CHORD	Structural wood	sneathing dire	ectly applied or 3-11-	2 oc purlins,
BOT CHORD 2x4 SP	'F No.2			except end vert	icals, and 2-0-	0 oc purlins (2-2-0 m	ax.): 4-6.
WEBS 2x3 SP	'F No.2 *Except*		BOT CHORD	Rigid ceiling dir	ectly applied o	r 10-0-0 oc bracing.	
2-15 8-	10: 2x4 SPE No 2			• •		0	
2 10,0							
REACTIONS. (size Max H Max U Max G	e) 15=0-3-8, 10=0-5-8 orz 15=163(LC 7) plift 15=-132(LC 8), 10=-132(LC 9) rav 15=1480(LC 1), 10=1480(LC 1)						MIST
FORCES (Ib) - Max	Comp /Max Ten - All forces 250 (lb) or	less excent when shown				NE	
	E79/62 2 4 1060/176 4 5 2126/226	E 6 2126/226 6 7 106	0/176			N. Q	
10P CHORD 2-3=-	570/03, 3-4=-1909/170, 4-3=-2130/220,	5-6=-2136/226, 6-7=-196	9/170,			S.A.	. 0-
	578/63, 2-15=-486/100, 8-10=-486/100					20: JI	JAN
BOT CHORD 14-15	=-237/1702, 13-14=-191/1644, 11-13=-	77/1644, 10-11=-96/1702				- : GA	PCIA -
WEBS 4-14=	=0/313, 4-13=-209/711, 5-13=-610/245,	6-13=-209/711, 6-11=0/31	3,				
3-15=	-1567/140. 7-10=-1567/141						
NOTES-						ED: NU	MBER C
1) Unbalanced roof live	loads have been considered for this de	sian				- F-200	0162101
	(ult 115 mark (2 accord suct) ) (and 01m		Construction Office Cast III	Two C. Englaged			0102101
2) Wind: ASCE 7-16; V MWFRS (envelope)	gable end zone; cantilever left and right	exposed ; end vertical left	t and right exposed; Lui	mber DOL=1.60 p	late	1.00	G
arip DOL=1.60	<b>5</b>		<b>3</b> • <b>1</b> • • , •			1,5/0	IN ENIN
3) Provide adequate dr	ainage to prevent water ponding						VAL
4) This trues has been	designed for a 10.0 per bettern abord liv	a load popoonaurrant with	any other live loads				THUE
<ul><li>4) This truss has been</li><li>5) * This truss has been</li></ul>	n designed for a live load of 20.0psf on t	the bottom chord in all are	any other live loads. as where a rectangle 3-	-6-0 tall by 2-0-0 v	vide		
will fit between the b	ottom chord and any other members		<b>3</b> · ·	· · · · · , · · · ,			
6) Provide mechanical	connection (by others) of truss to bearing	a plate capable of withsta	nding 100 lb unlift at ioi	nt(s) excent (it-lb	)	ALIAN	GARC
15-132 10-132	connection (by others) of trass to beam	ig plate capable of withsta	nung 100 ib upint at joi	III(3) except (JI-ID	)	N 30	······································
7) This trues is designed	ad in accordance with the 2018 Internation	onal Residential Code sec	tions R502 11 1 and R8	202 10 2 and			ENSE
referenced standard	ANSI/TPI 1	Shari tesideriliar code sec		02.10.2 and		2 / Y	
8) Graphical purlin rep	esentation does not denict the size or the	e orientation of the purlin	along the top and/or bo	ttom chord		2 1	A 5
	esentation does not depict the size of th		along the top and/or bo	atom choru.		1 1 0	052 =
							0902 : E
						- Di	
						- 7.	M : W.S
						- Q. 1. K.	10 S . S .
						18.1	INSA
						1,001	ENT
							NAL
							11111 States
							1 40 0004

![](_page_36_Picture_2.jpeg)

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![](_page_37_Figure_0.jpeg)

10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 125 lb down and 77 lb up at 7-9-7, 125 lb down and 77 lb up at 9-9-7, 125 lb down and 77 lb up at 11-9-7, 125 lb down and 77 lb up at 13-9-7, 125 lb down and 77 lb up at 15-9-8, 125 lb down and 77 lb up at 17-9-8, 125 lb down and 77 lb up at 19-9-8, and 125 lb down and 77 lb up at 21-9-8, and 125 lb down and 77 lb up at 23-9-8 on top chord, and 429 lb down and 221 lb up at 6-4-5, 60 lb down at 7-9-7, 60 lb down at 9-9-7, 60 lb down at 11-9-7, 60 lb down at 13-9-7, 60 lb down at 15-9-8, 60 lb down at 17-9-8, 60 lb down at 19-9-8, 60 Ib down at 21-9-8, and 60 lb down at 23-9-8, and 429 lb down and 221 lb up at 25-2-11 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Odhimute book SE(S) section, loads applied to the face of the truss are noted as front (F) or back (B)

🗼 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-74/3 rev. 5/19/2020 BEFORE USE. Design valid for use only with MITER® 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

![](_page_37_Picture_4.jpeg)

16023 Swingley Ridge Rd Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 116 W0
					I45128870
210328	G5	Hip Girder	1	1	
					Job Reference (optional)
Wheeler Lumber, Way	verly, KS - 66871,		8.4	30 s Feb 1	2 2021 MiTek Industries, Inc. Wed Mar 10 08:30:28 2021 Page 2

ID:2ncXplsxOfbjlB6l7Q?gPMzrYWU-ECl437fp0\_los6PjfDLuv8jnp1o2E1o7dOr515zcNZv

### LOAD CASE(S) Standard

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

Uniform Loads (plf) Vert: 1-3=-70, 3-6=-70, 6-8=-70, 2-7=-20

Concentrated Loads (lb)

Vert: 11=-45(B) 13=-429(B) 9=-429(B) 14=-93(B) 15=-93(B) 16=-93(B) 17=-93(B) 19=-93(B) 20=-93(B) 21=-93(B) 22=-93(B) 22=-93(B) 23=-45(B) 25=-45(B) 25=-45(B) 26=-45(B) 27=-45(B) 29=-45(B) 30=-45(B) 30=-45(B)

![](_page_38_Picture_8.jpeg)

![](_page_39_Figure_0.jpeg)

4-10-8
4-9-12

Plate Offsets (X, Y)	[5:0-5-6,0-1-8]		
LOADING (psf)	SPACING- 2-0-0 Plate Grin DOI 1.15	<b>CSI.</b> TC 0.35	DEFL. in (loc) I/defl L/d PLATES GRIP
TCDL 10.0 BCLL 0.0 *	Lumber DOL 1.15 Rep Stress Incr NO	BC 0.20 WB 0.00	Vert(CT) -0.04 4-5 >999 240 Horz(CT) -0.00 4 n/a n/a
BCDL 10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL)         0.01         4-5         >999         240         Weight: 16 lb         FT = 10%
LUMBER-			BRACING-

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 WEBS 2x4 SPF No.2 \*Except\* 3-4: 2x3 SPF No.2

TOP CHORD except end verticals. BOT CHORD

Structural wood sheathing directly applied or 4-10-8 oc purlins, Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-6-5, 4=Mechanical Max Horz 5=96(LC 5) Max Uplift 5=-148(LC 4), 4=-63(LC 5)

Max Grav 5=395(LC 1), 4=222(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-5=-351/175

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 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.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 5=148
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 64 lb down and 21 lb up at 2-8-8, and 105 lb down and 83 lb up at 4-1-0 on top chord, and 7 lb down and 10 lb up at 2-8-8, and 30 lb down at 4-1-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-2=-70, 2-3=-70, 4-5=-20 Concentrated Loads (lb) Vert: 7=-43(F) 8=5(B) 9=-15(F)

![](_page_39_Picture_22.jpeg)

11111 MIS

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![](_page_39_Picture_23.jpeg)

![](_page_40_Figure_0.jpeg)

![](_page_40_Picture_1.jpeg)

TOP CHORD

BOT CHORD

3x10 ||

			. = 0		
Plate Offsets (X,Y)	[5:0-5-10,0-1-8]				
LOADING (psf)	SPACING- 2-0-0	CSI.	DEFL. in (loc)	) l/defl L/d	PLATES GRIP
TCLL 25.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL) 0.00 5	5 >999 360	MT20 197/144
TCDL 10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) -0.00 5	5 >999 180	
BCLL 0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 3	3 n/a n/a	
BCDL 10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.00 5	5 >999 240	Weight: 5 lb FT = 10%
LUMBER-			BRACING-		

LUMBER-

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

REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=43(LC 8) Max Uplift 5=-14(LC 8), 3=-22(LC 8), 4=-5(LC 8)

Max Grav 5=153(LC 1), 3=17(LC 15), 4=17(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_40_Picture_16.jpeg)

11111 MIS

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Structural wood sheathing directly applied or 1-2-3 oc purlins,

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

except end verticals.

![](_page_40_Picture_17.jpeg)

![](_page_41_Figure_0.jpeg)

			4-7-5					
LOADING         (psf)         SF           TCLL         25.0         PH           TCDL         10.0         Lu           BCLL         0.0 *         Re           BCDL         10.0         Columna	PACING- 2-0-0 ate Grip DOL 1.15 Imber DOL 1.15 ep Stress Incr YES ode IRC2018/TPI2014	CSI. TC 0.33 BC 0.20 WB 0.00 Matrix-P	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in (loc) 0.02 2-4 0.05 2-4 0.00 3 0.00 2	l/defl >999 >999 n/a	L/d 360 240 n/a 240	PLATES MT20 Weight: 12 lb	<b>GRIP</b> 197/144 FT = 10%

TOP CHORD

BOT CHORD

LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=75(LC 4) Max Uplift 3=-74(LC 8), 2=-72(LC 4)

Max Grav 3=146(LC 1), 2=278(LC 1), 4=88(LC 3)

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

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

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

3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

# JUAN GARCIA NUMBER E-2000162101 SS/ONAL ENGINE 16952 To CANSAS 16952 March 10,2021

MIS

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Structural wood sheathing directly applied or 4-7-5 oc purlins.

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

16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_42_Figure_0.jpeg)

			<u> </u>						
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0         *           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	CSI. TC 0.50 BC 0.30 WB 0.00 Matrix-P	DEFL. Vert(LL) - Vert(CT) - Horz(CT) - Wind(LL)	in -0.05 -0.09 -0.00 0.00	(loc) 2-4 2-4 3 2	l/defl >999 >675 n/a	L/d 360 240 n/a 240	PLATES MT20 Weight: 14 lb	<b>GRIP</b> 197/144 FT = 10%

TOP CHORD

BOT CHORD

### LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=87(LC 4) Max Uplift 3=-90(LC 8), 2=-76(LC 4)

Max Grav 3=178(LC 1), 2=316(LC 1), 4=106(LC 3)

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

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

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

3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3, 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

# 

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Structural wood sheathing directly applied or 5-6-0 oc purlins.

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

![](_page_42_Picture_16.jpeg)

![](_page_43_Figure_0.jpeg)

			5-6-0 5-6-0						
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0         *           BCDL         10.0	SPACING- 2-0-0 Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr NO Code IRC2018/TPI2014	CSI. TC 0.60 BC 0.77 WB 0.00 Matrix-P	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in -0.10 -0.19 -0.00 0.07	(loc) 1-3 1-3 3 1-3	l/defl >616 >334 n/a >901	L/d 360 240 n/a 240	PLATES MT20 Weight: 21 lb	<b>GRIP</b> 197/144 FT = 10%

TOP CHORD

BOT CHORD

#### LUMBER-

TOP CHORD 2x4 SPF No 2 BOT CHORD 2x6 SP DSS WEBS

2x4 SPF No.2

REACTIONS. (size) 1=0-3-8, 3=Mechanical Max Horz 1=85(LC 5) Max Uplift 1=-157(LC 4), 3=-155(LC 8) Max Grav 1=1162(LC 1), 3=1037(LC 1)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 1=157.3=155.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 865 lb down and 120 lb up at 1-6-12, and 865 lb down and 120 lb up at 3-6-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
- Uniform Loads (plf) Vert: 1-2=-70. 1-3=-20
- Concentrated Loads (lb)
  - Vert: 4=-865(F) 5=-865(F)

![](_page_43_Picture_21.jpeg)

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Structural wood sheathing directly applied or 5-6-0 oc purlins,

Rigid ceiling directly applied or 6-1-2 oc bracing.

except end verticals.

MiTek 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_44_Figure_0.jpeg)

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 \*Except\* 5-6: 2x6 SPF No.2 WEBS 2x4 SPF No.2 \*Except\* 4-5: 2x3 SPF No.2

BRACING-TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 8=0-4-7, 5=Mechanical Max Horz 8=167(LC 5)

Max Uplift 8=-118(LC 8), 5=-163(LC 5) Max Grav 8=488(LC 1), 5=398(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-8=-440/137. 2-3=-489/113

BOT CHORD 7-8=-169/334

#### NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate arip DOL=1.60

2) All plates are MT20 plates unless otherwise indicated.

3) 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 4) will fit between the bottom chord and any other members.

5) Refer to girder(s) for truss to truss connections.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 8=118, 5=163

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 81 lb down and 35 lb up at 2-1-10, 79 lb down and 50 lb up at 3-4-11, and 109 lb down and 65 lb up at 5-2-1, and 104 lb down and 66 lb up at 6-0-9 on top chord, and 6 lb down and 2 lb up at 2-1-10, 9 lb down and 12 lb up at 3-2-5, and 32 lb down and 36 lb up at 5-2-1, and 37 lb down and 43 lb up at 6-0-9 on bottom chord. The design/selection of such connection device(s) is the responsibility of others. 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf) Vert: 1-2=-70, 2-4=-70, 7-8=-20, 5-6=-20

#### 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 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MIT-74/3 rev. 5/19/2020 BEFORE USE. Design valid for use only with MITER® 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

![](_page_44_Figure_22.jpeg)

ALLIN

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FMIS

![](_page_44_Picture_23.jpeg)

Jo	b	Truss	Truss Type	Qty	Ply	Lot 116 W0	
							145128876
21	0328	J13	Diagonal Hip Girder	1	1	lob Reference (ontional)	
1	Vheeler Lumber, Wav	erly, KS - 66871,		8.4	30 s Feb	12 2021 MiTek Industries, Inc. Wed Mar 10 08:30:31 2021	Page 2

ID:2ncXplsxOfbjIB6I7Q?gPMzrYWU-fnRDh8hhlvhNjZ8IKLubXmLMSEtfRZhZJM4leQzcNZs

LOAD CASE(S) Standard

Concentrated Loads (lb) Vert: 7=0(F) 10=-7(B) 11=-10(F) 12=2(B) 13=-28(B) 14=-33(F)

![](_page_45_Picture_4.jpeg)

![](_page_46_Figure_0.jpeg)

Refer to girder(s) for truss to truss connections.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 5=190. 2=117.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 73 lb down and 27 lb up at 2-0-12, 81 lb down and 35 lb up at 2-1-10, 96 lb down and 72 lb up at 4-8-10, and 115 lb down and 83 lb up at 5-2-1, and 127 lb down and 129 lb up at 7-4-8 on top chord, and 7 lb down and 9 lb up at 2-0-12, 6 lb down and 2 lb up at 2-1-10, 19 lb down at 4-8-10, and 26 lb down at 5-2-1, and 53 lb down at 7-4-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

### LOAD CASE(S) Standard

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

Uniform Loads (plf)

Vert: 1-4=-70, 2-5=-20 Concentrated Loads (lb)

Vert: 9=-9(F) 10=-84(B) 11=6(F=2, B=4) 12=-4(B) 13=-14(F) 14=-26(B)

ONALE min 16952 Bonosional English March 10,2021

![](_page_46_Picture_12.jpeg)

![](_page_47_Figure_0.jpeg)

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/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

Mitek° 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_48_Figure_0.jpeg)

		2-3-0	0-0	)-4	1				
		2-3-8	3-1-	-12	1				
3:0-5-10,0-1-8]									
SPACING-	2-0-0	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
				` ´			1.000	10-11.11	

LUMBER	-					BRACING-							
BCDL	10.0	Code IRC2018/TF	PI2014	Matri	x-R	Wind(LL)	0.08	6	>758	240	Weight: 17 lb	FT = 10%	
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.05	5	n/a	n/a			
TCDL	10.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.10	5-6	>620	240			
TCLL	25.0	Plate Grip DOL	1.15	TC	0.34	Vert(LL)	-0.06	6	>999	360	MT20	197/144	
LOADING	j (pst)	SPACING-	2-0-0	CSI.		DEFL.	ın	(IOC)	I/defi	L/d	PLATES	GRIP	

TOP CHORD

BOT CHORD

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2 \*Except\* 3-7: 2x3 SPF No.2

[8

2x4 SPF No.2

WEBS

Plate Offsets (X,Y)--

REACTIONS. (size) 8=0-3-8, 4=Mechanical, 5=Mechanical Max Horz 8=157(LC 8) Max Uplift 8=-5(LC 8), 4=-94(LC 8), 5=-12(LC 8) Max Grav 8=314(LC 1), 4=162(LC 15), 5=89(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-8=-294/42

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 4, 5.

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_48_Picture_14.jpeg)

F MIS

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V2020 BEFORE USE. ng component, not sign into the overall and permanent bracing parding the **i and BCSI Building Component i b** 16023 Swingley Ridge Rd Chesterfield, MO 63017

Structural wood sheathing directly applied or 5-5-4 oc purlins,

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

except end verticals.

![](_page_49_Figure_0.jpeg)

				5-5-4		1			
Plate Off	sets (X,Y)	[5:0-5-10,0-1-8]							
LOADIN	G (psf)	SPACING- 2-0-0	CSI.	DEFL.	n (loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL 1.15	TC 0.43	Vert(LL) -0.0	3 4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.26	Vert(CT) -0.0	8 4-5	>791	240		
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) 0.0	4 3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.0	4 4-5	>999	240	Weight: 16 lb	FT = 10%

TOP CHORD

BOT CHORD

#### LUMBER-

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=110(LC 8)

Max Uplift 3=-69(LC 8)

Max Grav 5=314(LC 1), 3=168(LC 13), 4=100(LC 3)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-5=-275/28

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

3) \* 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.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_49_Picture_15.jpeg)

F MIS

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Structural wood sheathing directly applied or 5-5-4 oc purlins,

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

except end verticals.

![](_page_49_Picture_16.jpeg)

![](_page_50_Figure_0.jpeg)

TCDL         10.0           BCLL         0.0 *           BCDL         10.0	Lumber DOL 1.15 Rep Stress Incr YES Code IRC2018/TPI2014	BC 0.16 WB 0.00 Matrix-R	Vert(CT) -0.02 Horz(CT) -0.01 Wind(LL) 0.02	7 >999 240 5 n/a n/a 6 >999 240	Weight: 13 lb FT = 10%	
LUMBER- TOP CHORD 2x4 S BOT CHORD 2x4 S	PF No.2 PF No.2 *Except*		BRACING- TOP CHORD	Structural wood sheathing di	rectly applied or 3-11-2 oc purlins,	

3-7: 2x3 SPF No.2 WEBS 2x4 SPF No.2

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

REACTIONS. (size) 8=0-3-8, 4=Mechanical, 5=Mechanical Max Horz 8=116(LC 8) Max Uplift 8=-7(LC 8), 4=-58(LC 8), 5=-22(LC 8)

Max Grav 8=249(LC 1), 4=105(LC 15), 5=66(LC 15)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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 3) will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 4, 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_50_Picture_14.jpeg)

11111 MIS

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![](_page_50_Picture_16.jpeg)

![](_page_51_Figure_0.jpeg)

![](_page_51_Figure_1.jpeg)

				2-2-2	2						
ts (X,Y)	[5:0-5-10,0-1-8]										
( 0)	00.000.00			555		<i>a</i> )					
(pst)	SPACING-	2-0-0	CSI.	DEFL.	ın	(IOC)	I/defi	L/d	PLATES	GRIP	
25.0	Plate Grip DOL	1.15	TC 0.07	Vert(LL)	-0.00	5	>999	360	MT20	197/144	
10.0	Lumber DOL	1.15	BC 0.04	Vert(CT)	-0.00	4-5	>999	240			
0.0 *	Rep Stress Incr	YES	WB 0.00	Horz(CT)	-0.00	3	n/a	n/a			

Wind(LL)

BRACING-

TOP CHORD

BOT CHORD

2-2-2

0.00

>999

except end verticals.

4-5

#### LUMBER-

BCDL

Plate Offset LOADING TCLL TCDL BCLL

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

10.0

REACTIONS.

(size) 5=0-3-8, 3=Mechanical, 4=Mechanical Max Horz 5=69(LC 8)

Max Uplift 5=-10(LC 8), 3=-45(LC 8), 4=-2(LC 8) Max Grav 5=179(LC 1), 3=60(LC 15), 4=36(LC 3)

Code IRC2018/TPI2014

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

#### NOTES-

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

Matrix-R

- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_51_Picture_16.jpeg)

MI

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FT = 10%

Weight: 7 lb

![](_page_51_Picture_17.jpeg)

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/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

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

Structural wood sheathing directly applied or 2-2-2 oc purlins,

240

![](_page_52_Figure_0.jpeg)

LUMBER TOP CHO	- DRD 2x4 SF	PF No.2		BRACING- TOP CHORD	Structural wood sheathing di	rectly applied or 3-11-11 oc purlins,	
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.02	7 >999 240	Weight: 13 lb FT = 10%	
TCDL	10.0	Lumber DOL 1.15 Bop Stross Iper XES	BC 0.19	Vert(CT) -0.02	7 >999 240 5 p/2 p/2		
TCLL	25.0	Plate Grip DOL 1.15	TC 0.14	Vert(LL) -0.01	6 >999 360	MT20 197/144	

BOT CHORD 2x4 SPF No.2 \*Except\* except end verticals. 3-7: 2x3 SPF No.2 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing. WEBS 2x4 SPF No.2

#### REACTIONS. (size) 8=0-3-8, 4=Mechanical, 5=Mechanical Max Horz 8=103(LC 8) Max Uplift 8=-19(LC 8), 4=-52(LC 8), 5=-15(LC 8)

Max Grav 8=251(LC 1), 4=106(LC 15), 5=64(LC 15)

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

NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* 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 3) will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8, 4, 5.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_52_Picture_13.jpeg)

1117

11 MIS

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**MiTek** 16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_53_Figure_0.jpeg)

	. , ,			
LOADING	G (psf)	<b>SPACING-</b> 2-0-0	CSI.	DEFL. in (loc) I/defl L/d PLATES GRIP
TCLL	25.0	Plate Grip DOL 1.15	TC 0.07	Vert(LL) -0.00 5 >999 360 MT20 197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.02	Vert(CT) -0.00 5 >999 240
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.00 3 n/a n/a
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.00 5 >999 240 Weight: 6 lb FT = 10%

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 1-8-5 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-5-8, 3=Mechanical, 4=Mechanical

Max Horz 5=50(LC 8) Max Uplift 5=-19(LC 8), 3=-30(LC 8)

Max Grav 5=164(LC 1), 3=40(LC 15), 4=27(LC 3)

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

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

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

3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_53_Figure_17.jpeg)

FMIS

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16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_54_Figure_0.jpeg)

LOADING (psf)         SPACING-         2-0-0         CSI.           TCLL         25.0         Plate Grip DOL         1.15         TC         0.20           TCDL         10.0         Lumber DOL         1.15         BC         0.12           BCLL         0.0 *         Rep Stress Incr         YES         WB         0.00           BCDL         10.0         Code IRC2018/TPI2014         Matrix-R	DEFL.         in         (loc)         l/defl         L/d           Vert(LL)         -0.01         4-5         >999         360           Vert(CT)         -0.02         4-5         >999         240           Horz(CT)         -0.02         3         n/a         n/a           Wind(LL)         0.01         4-5         >999         240	PLATES         GRIP           MT20         197/144           Weight: 12 lb         FT = 10%
--	---	---

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD S e. BOT CHORD R

Structural wood sheathing directly applied or 3-11-2 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=116(LC 8) Max Uplift 5=-7(LC 8), 3=-82(LC 8)

Max Grav 5=249(LC 1), 3=122(LC 15), 4=70(LC 3)

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

#### NOTES-

 Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

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

3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_54_Picture_17.jpeg)

F MIS

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![](_page_54_Picture_18.jpeg)

![](_page_55_Figure_0.jpeg)

LOADING	G (psf)	<b>SPACING-</b> 2-0-0	CSI.	DEFL. in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL 1.15	TC 0.20	Vert(LL) -0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.13	Vert(CT) -0.02	4-5	>999	240		
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.01	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 3-11-11 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=103(LC 8) Max Uplift 5=-19(LC 8), 3=-73(LC 8)

Max Grav 5=251(LC 1), 3=122(LC 15), 4=71(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) Refer to girder(s) for truss to truss connections.

- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_55_Picture_17.jpeg)

F MIS

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![](_page_55_Picture_19.jpeg)

![](_page_56_Figure_0.jpeg)

Plate Offs	sets (X,Y)	[2:Edge,0-0-3]								
LOADING	G (psf)	SPACING- 2-0-0	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL 1.15	TC 0.16	Vert(LL)	-0.03	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.22	Vert(CT)	-0.05	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014	Matrix-P	Wind(LL)	0.00	2	****	240	Weight: 19 lb	FT = 10%

TOP CHORD

BOT CHORD

#### LUMBER-

TOP CHORD 2x6 SPF No.2 BOT CHORD 2x4 SPF No.2 WEDGE Left: 2x4 SPF No.2

REACTIONS. (size) 3=Mechanical, 2=0-3-8, 4=Mechanical

Max Horz 2=152(LC 8) Max Uplift 3=-120(LC 8), 2=-8(LC 8) Max Grav 3=165(LC 15), 2=286(LC 1), 4=92(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

4) 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) 2 except (jt=lb) 3=120.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_56_Figure_15.jpeg)

Structural wood sheathing directly applied or 4-9-10 oc purlins.

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

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

![](_page_56_Picture_17.jpeg)

March 10,2021

![](_page_57_Figure_0.jpeg)

Fiale OII	sets (A, I)	[5.0-5-10,0-1-6]		
	G (psf)	<b>SPACING-</b> 2-0-0	CSI.	DEFL. in (loc) I/defl L/d PLATES GRIP
TCLL	25.0	Plate Grip DOL 1.15	TC 0.10	Vert(LL) -0.00 4-5 >999 360 MT20 197/144
TCDL	10.0	Lumber DOL 1.15	BC 0.07	Vert(CT) -0.01 4-5 >999 240
BCLL	0.0 *	Rep Stress Incr YES	WB 0.00	Horz(CT) -0.01 3 n/a n/a
BCDL	10.0	Code IRC2018/TPI2014	Matrix-R	Wind(LL) 0.01 4-5 >999 240 Weight: 10 lb FT = 10%

TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD BOT CHORD

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

#### REACTIONS. (size) 5=0-5-8, 3=Mechanical, 4=Mechanical

Max Horz 5=93(LC 8) Max Uplift 5=-8(LC 8), 3=-64(LC 8)

Max Grav 5=212(LC 1), 3=92(LC 15), 4=53(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_57_Picture_17.jpeg)

FMIS

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![](_page_57_Picture_19.jpeg)

![](_page_58_Figure_0.jpeg)

![](_page_58_Figure_1.jpeg)

1-3-10 1-3-10

TOP CHORD

BOT CHORD

Plate Off	sets (X,Y)	[5:0-5-10,0-1-8]					-					
LOADIN	G (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	тс	0.07	Vert(LL)	0.00	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	-0.00	5	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.00	3	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI	2014	Matrix	ĸ-R	Wind(LL)	0.00	5	>999	240	Weight: 5 lb	FT = 10%
LUMBER	2-					BRACING-						

#### LUMBER-

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

REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=46(LC 8) Max Uplift 5=-13(LC 8), 3=-25(LC 8), 4=-4(LC 8)

Max Grav 5=155(LC 1), 3=24(LC 15), 4=19(LC 3)

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

#### NOTES-

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_58_Picture_18.jpeg)

11111 MIS

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Structural wood sheathing directly applied or 1-3-10 oc purlins,

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

except end verticals.

![](_page_58_Picture_19.jpeg)

![](_page_59_Figure_0.jpeg)

LOADING         (psf)         SPAC           TCLL         25.0         Plate           TCDL         10.0         Lumb           BCLL         0.0 *         Rep S           BCDL         10.0         Code	ING- 2-0-0 Grip DOL 1.15 or DOL 1.15 tress Incr NO IRC2018/TPI2014	CSI. TC 0.09 BC 0.02 WB 0.00 Matrix-R	DEFL. Vert(LL) Vert(CT) Horz(CT) Wind(LL)	in -0.00 -0.00 -0.00 0.00	(loc) 5 5 3 5	l/defl >999 >999 n/a >999	L/d 360 240 n/a 240	PLATES MT20 Weight: 7 lb	<b>GRIP</b> 197/144 FT = 10%	
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TOP CHORD2x4 SPF No.2BOT CHORD2x4 SPF No.2WEBS2x4 SPF No.2

BRACING-TOP CHORD BOT CHORD

Structural wood sheathing directly applied or 2-0-8 oc purlins, except end verticals. Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. (size) 5=0-4-7, 3=Mechanical, 4=Mechanical

Max Horz 5=63(LC 7) Max Uplift 5=-112(LC 12), 3=-22(LC 12)

Max Grav 5=70(LC 1), 3=25(LC 1), 4=26(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 3 except (jt=lb) 5=112.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 9 lb down and 3 lb up at -1-3-15, and 9 lb down and 3 lb up at -1-3-15 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
  - Concentrated Loads (lb)
  - Vert: 1=-13(F=-7, B=-7)
  - Trapezoidal Loads (plf)
    - Vert: 1=-0(F=35, B=35)-to-6=-9(F=30, B=30), 6=0(F=35, B=35)-to-2=-17(F=27, B=27), 2=-17(F=27, B=27)-to-3=-49(F=10, B=10), 5=-5(F=8, B=8)-to-4=-14(F=3, B=3)

![](_page_59_Picture_25.jpeg)

FMIS

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![](_page_59_Picture_26.jpeg)

![](_page_60_Figure_0.jpeg)

1-5-4
1-5-4

BOT CHORD

4

except end verticals.

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

Plate Offsets (X,	) [5:0-5-10,0-1-8]								
LOADING         (psf)           TCLL         25.0           TCDL         10.0           BCLL         0.0           BCDL         10.0	* SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr Code IRC2018/	2-0-0 1.15 1.15 YES TPI2014	<b>CSI.</b> TC 0.07 BC 0.02 WB 0.00 Matrix-R	<b>DEFL.</b> Vert(LL) -0.0 Vert(CT) -0.0 Horz(CT) -0.0	in (loc) 0 5 0 5 0 3	l/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20 Weight: 5 lb	<b>GRIP</b> 197/144 FT = 10%
LUMBER- TOP CHORD 2	<4 SPF No.2	-		BRACING- TOP CHORD	Structu	ural wood	sheathing di	rectly applied or 1-5-	4 oc purlins,

3x10 ||

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

REACTIONS. (size) 5=0-3-8, 3=Mechanical, 4=Mechanical

Max Horz 5=50(LC 8) Max Uplift 5=-12(LC 8), 3=-29(LC 8), 4=-4(LC 8)

Max Grav 5=158(LC 1), 3=30(LC 15), 4=22(LC 3)

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

#### NOTES-

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5, 3, 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_60_Picture_15.jpeg)

F MIS

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![](_page_60_Picture_16.jpeg)

![](_page_61_Figure_0.jpeg)

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 sand truss system. 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

![](_page_62_Figure_0.jpeg)

2020 BEFORE USE. g component, not ign into the overall and permanent bracing arding the and BCSI Building Component and BCSI Building Component

![](_page_63_Figure_0.jpeg)

![](_page_63_Picture_1.jpeg)

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/TP11 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

![](_page_64_Figure_0.jpeg)

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3, 4.

 This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

JUAN GARCIA NUMBER E-2000162101 SS/ONAL ENGINE DO SS/ONAL ENGINE 16952 DO SJONAL ENGINE March 10,2021

![](_page_64_Picture_10.jpeg)

![](_page_65_Figure_0.jpeg)

REACTIONS. (size) 1=7-3-10, 3=7-3-10, 4=7-3-10 Max Horz 1=-56(LC 4) Max Uplift 1=-36(LC 8), 3=-43(LC 9) Max Grav 1=162(LC 1), 3=162(LC 1), 4=252(LC 1)

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

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

5) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

 This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_65_Figure_11.jpeg)

MIS

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16023 Swingley Ridge Rd Chesterfield, MO 63017

![](_page_66_Figure_0.jpeg)

2x4 💋

2x4 📎

Structural wood sheathing directly applied or 3-10-6 oc purlins.

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

	<b> </b>				<u>3-10-0</u> 3-10-0					<u>3-10</u> -6 0-0-6	
late Offsets (X,Y) [2:0-2-0,Edge]											
LOADING (psf)	SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 25.0	Plate Grip DOL	1.15	тс	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL 10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	n/a	-	n/a	999		
BCLL 0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL 10.0	Code IRC2018/TP	12014	Matrix	(-P						Weight: 8 lb	FT = 10%

TOP CHORD

BOT CHORD

TOP CHORD 2x4 SPF No.2 BOT CHORD 2x4 SPF No.2

REACTIONS. 1=3-9-10, 3=3-9-10 (size) Max Horz 1=-25(LC 4) Max Uplift 1=-15(LC 8), 3=-15(LC 9) Max Grav 1=131(LC 1), 3=131(LC 1)

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

#### NOTES-

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

2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

3) Gable requires continuous bottom chord bearing.

4) 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 5) will fit between the bottom chord and any other members.

6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 3.

7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

![](_page_66_Figure_16.jpeg)

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![](_page_66_Picture_18.jpeg)

![](_page_67_Figure_0.jpeg)